

**APPLICATION OF THE CITY OF SAN ANTONIO,  
ACTING BY AND THROUGH THE CITY PUBLIC  
SERVICE BOARD (CPS ENERGY) TO AMEND ITS  
CERTIFICATE OF CONVENIENCE AND  
NECESSITY FOR THE PROPOSED SAT15 138 KV  
TRANSMISSION LINE PROJECT IN BEXAR  
COUNTY, TEXAS**

**DOCKET NO. 55728**

*Submit seven (7) copies of the application and all attachments supporting the application. If the application is being filed pursuant to 16 Tex. Admin. Code § 25.101(b)(3)(D) (TAC) or 16 TAC § 25.174, include in the application all direct testimony. The application and other necessary documents shall be submitted to:*

**Public Utility Commission of Texas  
Attn: Filing Clerk  
1701 N. Congress Ave.  
Austin, Texas 78711-3326**

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Note: As used herein, the term “joint application” refers to an application for proposed transmission facilities for which ownership will be divided. All applications for such facilities should be filed jointly by the proposed owners of the facilities.

- 1. Applicant (Utility) Name:** City of San Antonio, acting by and through the City Public Service Board (CPS Energy)

Certificate Number: 30031

Street Address: 500 McCullough Ave.  
San Antonio, TX 78215

Mailing Address: 500 McCullough Ave.  
San Antonio, TX 78215

- 2. Please identify all entities that will hold an ownership interest or an investment interest in the proposed project but which are not subject to the Commission’s jurisdiction.**

CPS Energy will hold the sole interest in the project that is the subject of this Application. No entities will hold an ownership or investment interest in the project that are not subject to the jurisdiction of the Public Utility Commission of Texas (PUC or Commission).

- 3. Person to Contact:** Daniel Otto  
Title/Position: Manager, S&T Regulatory Support  
Phone Number: (210) 353-4852  
500 McCullough Ave.  
San Antonio TX 78215  
Email Address: [dtotto@cpsenergy.com](mailto:dtotto@cpsenergy.com)

**Alternate Contact:** Ricardo Renteria  
Senior Director, Substation & Transmission  
Phone Number: (210) 353-6108  
Mailing Address: 500 McCullough Ave.  
San Antonio TX 78215  
Email Address: [rrenteria@cpsenergy.com](mailto:rrenteria@cpsenergy.com)

**Legal Counsel:** Kirk Rasmussen  
Phone Number: (512) 236-2310  
Mailing Address: Jackson Walker LLP  
100 Congress Avenue, Suite 1100  
Austin, TX 78701  
Email Address: [krasmussen@jw.com](mailto:krasmussen@jw.com)

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**4. Project Description:  
Name or Designation of Project**

SAT15 138 kV Transmission Line Project in Bexar County, Texas (the Proposed Project).

**Provide a general description of the project, including the design voltage rating (kV), the operating voltage (kV), the CREZ Zone(s) (if any) where the project is located (all or in part), any substations and/or substation reactive compensation constructed as part of the project, and any series elements such as sectionalizing switching devices, series line compensation, etc. For HVDC transmission lines, the converter stations should be considered to be project components and should be addressed in the project description.**

**If the project will be owned by more than one party, briefly explain the ownership arrangements between the parties and provide a description of the portion(s) that will be owned by each party. Provide a description of the responsibilities of each party for implementing the project (design, Right-of-Way acquisition, material procurement, construction, etc.).**

**If applicable, identify and explain any deviation in transmission project components from the original transmission specifications as previously approved by the Commission or recommended by a PURA § 39.151 organization.**

**General Description of Project**

The Proposed Project is a new double circuit 138 kilovolt (kV) transmission line located wholly in Bexar County, Texas. The Proposed Project consists of constructing one new substation (the Wiseman Substation) and a new double circuit 138 kV transmission line connecting the new Wiseman Substation to the electric grid from CPS Energy's existing Cagnon to Helotes 138 kV transmission line. The new transmission line will be approximately two miles (1.2 to 2.4 miles) in length depending on the route selected, a portion which may be constructed and operated outside of the municipal boundaries of the City of San Antonio (the City).

Because a portion of the Proposed Project may potentially be constructed, owned, and operated by CPS Energy outside the municipal boundaries of the City, CPS Energy is presenting this Application to the Commission that includes route evaluation and cost information for the entirety of the Proposed Project, both inside and outside of the City. Following the Commission's evaluation of the need for the Proposed Project and approval of routing outside of the City, the City will evaluate and determine the routing of the remaining portion of the Proposed Project within the City in conjunction with the Commission's decision.

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The Proposed Project will be constructed on double-circuit monopole structures. To connect the new transmission line to the existing electric transmission system, the Proposed Project will loop into the existing Cagnon to Helotes 138 kV transmission line.

Please see Figure 1-1 in the *SAT15 138 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis, Bexar County, Texas* (EA), incorporated herein by reference for all purposes and included as Attachment No. 1 to this Application, which shows the location of the Proposed Project end points.

The Proposed Project is not located, all or in part, within a Competitive Renewable Energy Zone (CREZ). No substation reactive compensation and no series elements such as sectionalizing switching devices or series line compensation will be constructed as part of the Proposed Project.

**Ownership Arrangements**

CPS Energy will hold the sole interest in the project that is the subject of this Application. CPS Energy will design, procure, construct, operate, and maintain all transmission line facilities for the Proposed Project, including all conductors, wires, structures, hardware, and rights-of-way (ROW). CPS Energy will also design, operate, construct, and maintain the transmission facilities at the new proposed electric load-serving Wiseman Substation.

To connect the new transmission line and substation to the existing electric grid, CPS Energy will loop into the existing Cagnon to Helotes 138 kV transmission line.

**Deviation from original PURA § 39.151 organization (ERCOT)**

The Proposed Project has not been submitted to a PURA § 39.151 organization for review. The Proposed Project is a Tier 4 Neutral project pursuant to the classifications established by the Electric Reliability Council of Texas (ERCOT). Accordingly, the Proposed Project is not required to be submitted to the ERCOT Regional Planning Group for review and comment. CPS Energy has concluded that the Proposed Project will not result in any violation of North American Electric Reliability Corporation (NERC) or ERCOT performance requirements.

- 5. Conductor and Structures:**
- |   |                              |
|---|------------------------------|
| <b>Conductor Size and Type:</b>                     | 795 kcmil ACSS/TW<br>“Drake” |
| <b>Number of conductors per phase:</b>              | Two conductor per phase      |
| <b>Continuous Summer Static Current Rating (A):</b> | 2,922                        |

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**Continuous Summer Static Line  
Capacity at Operating  
Voltage (MVA):** 698

**Continuous Summer Static Line  
Capacity at Design Voltage (MVA):** 698

**Type and Composition  
of Structures:** CPS Energy proposes to use 138 kV double-circuit steel monopole structures for typical tangent, angle, and dead-end structures.

**Height of Typical Structures:** The heights of typical structures proposed for the project range from 90 to 120 feet above ground.

**Explain why these structures were selected; include such factors as landowner preference, engineering considerations, and costs comparisons to alternate structures that were considered. Provide dimensional drawings of the typical structures to be used in the project.**

CPS Energy engineers selected steel monopoles as the structure type for the Proposed Project. Steel monopoles are the least-cost structure alternative, generally require a smaller footprint, and are typically the most favored structure type by landowners. For a detailed discussion of the proposed typical structures and their requirements please refer to Section 1.3.2 of the EA.

Please refer to Figures 1-2 through 1-4 in the EA for drawings of the typical structures proposed to be used for the Proposed Project.

**For joint applications, provide and separately identify the above-required information regarding structures for the portion(s) of the project owned by each applicant.**

Not applicable. This is not a joint application.

- 6. Right-of-way:**
- Miles of Right-of-Way:** Approximately two miles (1.2 to 2.4 miles) of ROW will be required for the Proposed Project.
- Miles of Circuit:** Approximately four miles (2.4 to 4.8 miles) of circuit will be required for the Proposed Project.

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**Width of Right-of-Way:** The typical ROW width for the Proposed Project is estimated to be 100 feet. For route segments parallel and adjacent to roadways, 75 feet of private easement width will be acquired and 25 feet of existing roadway easement width will be utilized for a total operating ROW of 100 feet.

**Percent of Right-of-Way Acquired/  
Donated/Available for use:** See Table Below:

<u>Route</u>	<u>% ROW Donated</u>
A	22%
B	13%
C	6%
D	5%
E	22%
F	9%
G	10%
H	21%
I	6%
J	11%
K	13%
L	13%
M	13%
N	13%
O	11%

**For joint applications, provide and separately identify the above-required information for each route for the portion(s) of the project owned by each applicant.**

Not applicable. This is not a joint application.

**Provide a brief description of the area traversed by the transmission line. Include a description of the general land uses in the area and the type of terrain crossed by the line.**

The new transmission line will connect the existing CPS Energy Cagnon to Helotes 138 kV transmission line to the proposed Wiseman Substation located southwest of the intersection of State Highway 151 and Wiseman Boulevard. The area of the Proposed Project is located primarily within the municipal boundaries of the City in south central Texas within Bexar County; however, a portion may be constructed and operated outside of the municipal boundaries of the City.

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Land uses within the study area are a mixture of urban/developed, planned land use, transportation/aviation/utility features, communication towers, and parks and recreation areas.

The study area of the Proposed Project is oriented in a north to south direction with the existing CPS Energy Cagnon to Helotes 138 kV transmission line located in the western portion of the study area and the proposed Wiseman Substation located in the southeastern portion of the study area. The study area is shown in Figure 2-1 of the EA

Specific discussion regarding natural, human, and cultural resources in the study area is set forth in the EA, Section 3.0, pages 3-1 through 3-52.

**7. Substations or Switching Stations:**

**List the name of all existing HVDC converter stations, substations or switching stations that will be associated with the new transmission line. Provide documentation showing that the owner(s) of the existing HVDC converter stations, substations and/or switching stations have agreed to the installation of the required project facilities.**

There are no existing HVDC converter stations, substations, or switching stations associated with the Proposed Project. CPS Energy is the owner of the Cagnon to Helotes 138 kV transmission line, which is the line that the Proposed Project is looping into.

**8. Estimated Schedule:**

<b><u>Estimated Dates of:</u></b>	<b><u>Start</u></b>	<b><u>Completion</u></b>
Right-of-way and Land Acquisition	December 2024	November 2025
Engineering and Design	November 2023	December 2025
Material and Equipment Procurement	July 2024	January 2026
Construction of Facilities	July 2024	January 2027
Energize Facilities	January 2027	February 2027

**9. Counties:**

**For each route, list all counties in which the route is to be constructed.**

All of the 15 alternative routes included in this Application are located wholly within Bexar County. Please refer to Figures 2-4 and 4-1 in the EA for the location of the proposed alternative route segments.

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**10. Municipalities:**

**For each route, list all municipalities in which the route is to be constructed.**

All of the alternative routes presented in the Application are located within the municipal boundaries of the City. There are no other municipalities crossed by any portion of the proposed alternative routes.

**For each applicant, attach a copy of the franchise, permit or other evidence of the city's consent held by the utility, if necessary or applicable. If franchise, permit, or other evidence of the city's consent has been previously filed, provide only the docket number of the application in which the consent was filed. Each applicant should provide this information only for the portion(s) of the project which will be owned by the applicant.**

Authority for CPS Energy to provide transmission service within Bexar County is contained in, among other dockets, Docket No. 59.

**11. Affected Utilities:**

**Identify any other electric utility served by or connected to facilities in this application.**

No other electric utility is served by or connected to the facilities proposed in this Application.

**Describe how any other electric utility will be affected and the extent of the other utilities' involvement in the construction of this project. Include any other electric utilities whose existing facilities will be utilized for the project (vacant circuit positions, ROW, substation sites and/or equipment, etc.) and provide documentation showing that the owner(s) of the existing facilities have agreed to the installation of the required project facilities.**

No other electric utility will be affected by the construction of the Proposed Project.

**12. Financing:**

**Describe the method of financing this project. For each applicant that is to be reimbursed for all or a portion of this project, identify the source and amount of the reimbursement (actual amount if known, estimated amount otherwise) and the portion(s) of the project for which the reimbursement will be made.**

CPS Energy will finance the facilities included in the Application in a manner similar to that which has been used for projects previously constructed by CPS Energy. Such



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financing may include a combination of tax-exempt commercial paper, tax-exempt private revolving note, or taxable commercial paper, and, subsequent to project completion, fixed rate debt. Interest on the debt may be capitalized until the project is in service, at which point it is intended that both the principal and interest will be serviced with Transmission Cost of Service revenues.

CPS Energy is the sole applicant, and, therefore, no other party will be reimbursed for any portion of the Proposed Project.

- 13. Estimated Costs: Provide cost estimates for each route of the proposed project using the following table. Provide a breakdown of “Other” costs by major cost category and amount. Provide the information for each route in an attachment to this application.**

Please refer to Attachment No. 2 to this Application for estimated cost for the Wiseman Substation and the transmission facilities for each alternative route presented in this Application.

- 14. Need for the Proposed Project:**  
**For a standard application, describe the need for the construction and state how the proposed project will address the need. Describe the existing transmission system and conditions addressed by this application. For projects that are planned to accommodate load growth, provide historical load data and load projections for at least five years. For projects to accommodate load growth or to address reliability issues, provide a description of the steady state load flow analysis that justifies the project. For interconnection projects, provide any documentation from a transmission service customer, generator, transmission service provider, or other entity to establish that the proposed facilities are needed.**

The area in and around the Proposed Project is comprised of both established homes and businesses and new growth and development. CPS Energy is experiencing significant load growth, especially in the northwest region of Bexar County, with some areas averaging as high as 5 percent growth annually. To provide reliable electric service to both new and existing customers in the project area and to provide electric service to a large new customer, CPS Energy needs to improve the capacity of its electric delivery facilities.

The SAT15 customer has requested capacity to serve a 168.3 MW demand by 2028. The large new customer load cannot be supported by the existing substations or overhead distribution lines in the area. Pursuant to CPS Energy’s Distribution Planning Criteria, if a requested customer load exceeds 40 MW (requiring more than two 35 kV circuits), then a new substation needs to be constructed to serve the requested customer load. In this

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instance, the requested customer load quadruples CPS Energy's established substation construction load levels. Based on CPS Energy's evaluation of available capacity on its existing transmission system to feasibly serve the new large customer load, the new Wiseman Substation will be connected to the existing transmission grid with the proposed double circuit 138 kV transmission line by looping into the existing CPS Energy Cagnon to Helotes 138 kV transmission line, approximately one to two miles to the west. The Proposed Project is needed to provide electric service to a new large load customer and CPS Energy received a valid request for service from this new large load customer.

**For projects related to a Competitive Renewable Energy Zone, the foregoing requirements are not necessary; the applicant need only provide a specific reference to the pertinent portion(s) of an appropriate commission order specifying that the facilities are needed.**

Not applicable to the Proposed Project.

**For all projects, provide any documentation of the review and recommendation of a PURA § 39.151 organization.**

As stated in response to Question 4, the Proposed Project is a Tier 4 Neutral project and was not submitted to ERCOT for review and recommendation.

**15. Alternatives to Project:**

**For a standard application, describe alternatives to the construction of this project (not routing options). Include an analysis of distribution alternatives, upgrading voltage or bundling of conductors of existing facilities, adding transformers, and for utilities that have not unbundled, distributed generation as alternatives to the project. Explain how the project overcomes the insufficiencies of the other options that were considered.**

CPS Energy considered four options to provide the requested service to the new large load customer. As stated above in response to Question 14, the requested customer load (168.3 MW) is quadruple the level for which CPS Energy must construct a new substation to serve the customer load. Accordingly, the options considered all include construction of a new Wiseman Substation and connection of that substation to the existing CPS Energy transmission system in the area.

Option 1 involved looping the CPS Energy Westover Hills to Anderson 138 kV transmission line into the new Wiseman Substation. Option 2 involved looping the CPS Energy Westover Hills to Verde Circle 138 kV transmission line into the new Wiseman Substation. Option 3 involved looping the CPS Energy Cagnon to Helotes 138 kV

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transmission line into the new Wiseman Substation. Option 4 involved looping the CPS Energy Cagnon to Anderson 138 kV transmission line into the new Wiseman Substation.

Based on the Steady-State Power Flow Analysis conducted by CPS Energy (included as Attachment No. 13 to the Application), Options 1 and 2 achieved similar performance, with both alternatives requiring numerous upgrades on multiple existing CPS Energy substations and transmission lines. These alternatives provided a low level of transfer capability. Option 3 significantly increased the transfer capability and requires upgrade of only one 138 kV transmission line to serve the new requested load. Option 4 shows an increase in transfer capability, however it requires numerous upgrades on multiple existing CPS Energy substations and transmission lines. Consequently, Option 3 performed better than the other alternatives, and requires the least amount of costly transmission line and substation upgrades. Therefore, the Proposed Project (Option 3) is the most cost-effective solution for CPS Energy to provide service to the large requested customer load.

Due to the requested capacity to serve a 168.3 MW, the location of the new large customer load, and the current transmission system configuration in the vicinity of the proposed SAT15 facility, no distribution alternatives were identified as feasible alternatives to the Proposed Project.

**16. Schematic or Diagram:**

**For a standard application, provide a schematic or diagram of the applicant's transmission system in the proximate area of the project. Show the location and voltage of existing transmission lines and substations, and the location of the construction. Locate any taps, ties, meter points, or other facilities involving other utilities on the system schematic.**

A schematic of CPS Energy's transmission system in the proximate area of the project is included with this Application as Attachment No. 4.

**17. Routing Study:**

**Provide a brief summary of the routing study that includes a description of the process of selecting the study area, identifying routing constraints, selecting potential line segments, and the selection of the routes. Provide a copy of the complete routing study conducted by the utility or consultant. State which route the applicant believes best addresses the requirements of PURA and P.U.C. Substantive Rules.**

CPS Energy retained POWER Engineers, Inc. (POWER) to prepare the EA for the Project, which is included as Attachment No. 1 to the Application. The objective of the EA was to provide information in support of this Application in addressing the requirements of PURA § 37.056(c)(4)(A)-(D), the PUC CCN Application form, and PUC Substantive Rule 25.101

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(16 TAC § 25.101). By examining existing environmental conditions, including the human and natural resources that are located in the area of the Proposed Project, the EA evaluates the environmental effects that could result from the construction, operation, and maintenance of the Proposed Project. The EA will also be used in support of any additional local, state, or federal permitting activities that may be required for the Proposed Project, including the City's evaluation of the portion of the Proposed Project within the City boundaries following the Commission's determination on the need for the project and the routing outside of the City.

To assist POWER in its evaluation, CPS Energy provided information regarding the project endpoints, the need for the project, engineering and design requirements, construction practices, and ROW requirements for the Proposed Project.

### **Selecting the Study Area**

POWER, with input and assistance from CPS Energy, delineated the study area within which to review the existing environment and to locate geographically diverse alternative routes for the Proposed Project. The boundaries of the study area were determined by the existing project endpoints (the location of the existing CPS Energy Cagnon to Helotes 138 kV transmission line and the location of the proposed Wiseman Substation), other existing ROW (e.g., roadways and existing transmission lines), and existing cultural and land use features across the study area. The final study area, shown in Figure 2-1 of the EA, is approximately 1.7 miles long by 1.5 miles wide, and encompasses an area of approximately two square miles.

### **Route Constraints**

Once the study area was defined, data related to land use, aesthetics, ecology, and cultural resources were collected by POWER through: conducting ground reconnaissance; reviewing available maps and aerial photography; reviewing previous studies conducted in the area; contacting a variety of local, state, and federal agencies; and considering criteria established in PURA § 37.056(c)(4)(A)-(D), the PUC's CCN Application form, and PUC Substantive Rule 25.101. Using this information, the locations of any sensitive features and other constraints were identified.

### **Selection of Potential Routing Segments**

Preliminary alternative route segments were identified by evaluation of the constraints mapped for the study area and then by identifying routing opportunity areas such as exiting corridors and other linear features. Through application of the PUC's routing criteria, as described above, 27 primary alternative route segments were identified and developed into

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potentially viable alternative routes for comparative purposes. These primary alternative route segments were further evaluated based on information received from government agencies, the public meeting, and additional public input. Ultimately, 15 alternative routes were identified for comparison. These routes were evaluated using 46 land use and environmental criteria. Impacts were evaluated by POWER for each identified alternative route. Additional forward progressing alternative routes may also be formed by configuring the various segments proposed in this Application in different ways.

Specific discussion regarding selection of the study area, identification of constraints, the selection of potential preliminary alternative route segments, and the alternative route analysis is set forth in the EA in Sections 2.0, 3.0, 4.0, and 5.0.

**Selection of the alternative route the applicant believes best addresses the requirements of PURA and P.U.C. Substantive Rules**

CPS Energy identified Route H as the alternative route that it believes best addresses the requirements of PURA and the PUC Substantive Rules. CPS Energy's identification of Route H is informed by a number of considerations (listed below in no particular order), including that Route H:

- Has the third lowest estimated cost of the 15 alternative routes at approximately \$35,689,497;
- Is the second shortest of the 15 alternative routes at approximately 1.24 miles in length;
- Is tied with one other alternative route for the fewest number of habitable structures within 300 feet of the route centerline at 3;
- Has the second shortest estimated length of ROW within the foreground visual zone of US and state highways at approximately 1.24 miles;
- Has the shortest length across upland woodland/brushland at approximately 0.78 mile; and
- Has the second shortest length across Edwards Aquifer Contributing Zone at approximately 1.24 miles.

Apart from identifying Route H as the route that best addresses PURA and PUC Substantive Rules for the purposes of completing this portion of the Application, CPS Energy did not rank the other alternative routes.

**18. Public Meeting or Public Open House:**

**Provide the date and location for each public meeting or public open house that was held in accordance with 16 TAC § 22.52. Provide a summary of each public meeting or public open house including the approximate number of attendants, and a copy of**

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**any survey provided to attendants and a summary of the responses received. For each public meeting or public open house provide a description of the method of notice, a copy of any notices, and the number of notices that were mailed and/or published.**

CPS Energy held an open house meeting for the Proposed Project on June 7, 2023, from 5:30 p.m. to 7:30 p.m. at Courtyard by Marriot Sea World/San Antonio in the City of San Antonio, Texas.

A summary of the open house meeting and additional information concerning the open house meeting is contained in Section 6 and Appendix B of the EA, which is Attachment No. 1 to the Application.

**19. Routing Maps:**

**Base maps should be a full scale (one inch = not more than one mile) highway map of the county or counties involved, or other maps of comparable scale denoting sufficient cultural and natural features to permit location of all routes in the field. Provide a map (or maps) showing the study area, routing constraints, and all routes or line segments that were considered prior to the selection of the routes. Identify the routes and any existing facilities to be interconnected or coordinated with the project. Identify any taps, ties, meter points, or other facilities involving other utilities on the routing map. Show all existing transmission facilities located in the study area. Include the locations of radio transmitters and other electronic installations, airstrips, irrigated pasture or cropland, parks and recreational areas, historical and archeological sites (subject to the instructions in Question 27), and any environmentally sensitive areas (subject to the instructions in Question 29).**

**Provide aerial photographs of the study area displaying the date that the photographs were taken or maps that show (1) the location of each route with each route segment identified, (2) the locations of all major public roads including, as a minimum, all federal and state roadways, (3) the locations of all known habitable structures or groups of habitable structures (see Question 19 below) on properties directly affected by any route, and (4) the boundaries (approximate or estimated according to best available information if required) of all properties directly affected by any route.**

**For each route, cross-reference each habitable structure (or group of habitable structures) and directly affected property identified on the maps or photographs with a list of corresponding landowner names and addresses and indicate which route segment affects each structure/group or property.**

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Base Maps

EA Figure 2-4 (Appendix D), titled *Primary Alternative Segments with Environmental and Land Use Constraints* (Topographic Base Map), produced at a scale of 1 inch = 500 feet, is provided in Appendix D (map pocket) in the EA. This map was produced using a U.S. Geological Survey (USGS) topographic base. It depicts the study area for the Proposed Project, locations of radio transmitters and other electronic installations, airports/airstrips, parks and recreational areas, historical sites, environmentally sensitive areas, and other constraints. Figure 2-4 also includes the alternative routes identified for the Proposed Project. For their protection, locations of archeological sites are not shown on Figure 2-4.

EA Figure 4-1 (Appendix E), titled *Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Routes* (Aerial Base Map), consists of aerial photography produced at a scale of 1 inch = 500 feet using recent aerial imagery (2022). The aerial photo-based map includes parcel boundaries identified from a review of the tax appraisal district records and combined, as appropriate, to reflect instances where multiple parcels are owned by a single individual or group in the study area. The locations of all known habitable structures within 300 feet of the centerline of the Proposed Route are also identified on Figure 4-1.

Figures 2-4 and 4-1 include sufficient cultural and natural features to permit location of each proposed route segment in the field, and they depict existing electric transmission lines and major public roads located within the study area.

A map showing the study area and all preliminary route segments in a format similar to EA Figure 4-1 were presented at the public open house meeting.

**Directly Affected Property Maps**

Attachment No. 6 to this Application includes five maps (utilizing aerial photography) that identify directly affected properties, tract IDs, and the location of habitable structures (including labels) within at least 300 feet of the centerline of each primary alternative route segment included in the Application and approximate parcel boundary lines (based on tax appraisal district records). These maps show the location of each proposed alternative route with each route segment identified, and the locations of all major public roads. Attachment No. 5 to this Application is an overview map of the Attachment No. 6 maps showing the entire study area and the location of each of the five Attachment No. 6 maps.

Attachment No. 8 to this Application is a list of directly affected landowners that were provided notice of the Application that cross-references each habitable structure, or group of habitable structures, and directly affected properties identified on the maps provided in Attachment No. 6 with a list of tract IDs and corresponding landowner names and addresses. Landowner names and addresses were obtained by review of information obtained from the Bexar County Appraisal District.

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**20. Permits:**

**List any and all permits and/or approvals required by other governmental agencies for the construction of the proposed project. Indicate whether each permit has been obtained.**

Upon approval of the Application by the PUC, the following permits/approvals would be required and obtained prior to the commencement of construction:

- The City will evaluate and determine the routing of the remaining portion of the Proposed Project within the City in conjunction with the routing identified in the Commission's decision.
- Where the approved route of the transmission line crosses a state-maintained road of highway, CPS Energy will obtain a permit from the Texas Department of Transportation (TxDOT). If any portion of the transmission line will be accessed from a state-maintained road or highway, CPS Energy will obtain a permit from TxDOT.
- Where the transmission line crosses a state-owned riverbed or navigable stream, CPS Energy will obtain a Miscellaneous Easement (ME) from the General Land Office (GLO).
- Since more than one acre will be disturbed during construction of the project, a Storm Water Pollution Prevention Plan (SWPPP) will be necessary. Further, because more than five acres will be disturbed, a Notice of Intent (NOI) will be prepared by CPS Energy for the Texas Commission on Environmental Quality (TCEQ). The controls specified in the SWPPP will be monitored in the field.
- Upon approval of the Application and prior to construction, a detailed Natural Resources Assessment (NRA) and Cultural Resources Assessment (CRA) will be performed on the approved route. Depending on the results of these assessments, permits or regulatory approvals may be required from the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), TCEQ, or Texas Historical Commission/State Historic Preservation Officer. Such permits or regulatory approvals will be obtained by CPS Energy prior to construction.
- After alignments and structure locations/heights are designed and engineered, CPS Energy will make a final determination of the need for Federal Aviation Administration (FAA) notification, based on structure locations and designs. In some areas, if necessary, CPS Energy could use lower-than-typical structure



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heights and could add marking and/or lighting to certain structures to avoid or accommodate FAA requirements.

- CPS Energy will report the status of the Proposed Project to the PUC on CPS Energy's Monthly Construction Progress Report, beginning with the first report following the filing of a CCN application, and in each subsequent monthly progress report until construction is completed and actual project costs have been reported. As required by the PUC, CPS Energy will submit locational and attribute data for the new facilities along the approved route after it is constructed.
- ROW permits will be obtained from Bexar County and the City as needed.

**21. Habitable structures:**

**For each route list all 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 within 300 feet of the centerline if the proposed project will be constructed for operation at 230kV or less, or within 500 feet of the centerline if the proposed project will be constructed for operation at greater than 230kV. Provide a general description of each habitable structure and its distance from the centerline of the route. In cities, towns or rural subdivisions, houses can be identified in groups. Provide the number of habitable structures in each group and list the distance from the centerline of the route to the closest and the farthest habitable structure in the group. Locate all listed habitable structures or groups of structures on the routing map.**

The locations of habitable structures within 300 feet of the centerline of each route segment are listed and described with the approximate distance from the route segment centerline in Appendix C, Tables 4-6 through 4-20 of the EA and are shown on Figure 4-1 in Appendix E of the EA. The total numbers of habitable structures for the 15 alternative routes are provided in the table below. Column two designates the number of identified existing habitable structures within 300 feet of the ROW centerline.

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Alternative Route	Total number of habitable structures within 300 feet of the centerline
A	17
B	23
C	21
D	22
E	14
F	14
G	3
H	3
I	20
J	20
K	19
L	21
M	21
N	19
O	20

**22. Electronic Installations:**

**For each route, list all commercial AM radio transmitters located within 10,000 feet of the center line of the route, and all FM radio transmitters, microwave relay stations, or other similar electronic installations located within 2,000 of the center line of the route. Provide a general description of each installation and its distance from the center line of the route. Locate all listed installations on a routing map.**

There are no known commercial AM radio transmitters located within 10,000 feet of any of the 15 alternative routes. There are two known communication towers (FM radio transmitters, microwave towers, or other electronic communications towers) that are located within 2,000 feet of the alternative routes. A listing, description, and approximate distance from the centerline of each of the alternative routes are presented in Table 4-4 and in Appendix C, Tables 4-6 through 4-20 of the EA, and the locations of these electronic installations are shown in Figures 2-4 (Appendix D) and 4-1 (Appendix E) of the EA.

For additional information on electronic installations, see Section 3.2.4 and Section 4.2.4 of the EA. The Proposed Project is not anticipated to have any significant impacts on existing communication towers.

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**23. Airstrips:**

**For each route, list all known private airstrips within 10,000 feet of the center line of the project. List all airports registered with the Federal Aviation Administration (FAA) with at least one runway more than 3,200 feet in length that are located within 20,000 feet of the center line of any route. For each such airport, indicate whether any transmission structures will exceed a 100:1 horizontal slope (one foot in height for each 100 feet in distance) from the closest point of the closest runway. List all listed airports registered with the FAA having no runway more than 3,200 feet in length that are located within 10,000 feet of the center line of any route. For each such airport, indicate whether any transmission structures will exceed a 50:1 horizontal slope from the closest point of the closest runway. List all heliports located within 5,000 feet of the center line of any route. For each such heliport, indicate whether any transmission structures will exceed a 25:1 horizontal slope from the closest point of the closest landing and takeoff area of the heliport. Provide a general description of each listed private airstrip, registered airport, and heliport; and state the distance of each from the center line of each route. Locate and identify all listed airstrips, airports, and heliports on a routing map.**

POWER's review of federal and state aviation/airport maps and directories, aerial photo interpretation and reconnaissance surveys, as well as information received from the TxDOT Division of Aviation, identified no FAA registered public or military airport with a runway longer than 3,200 feet within 20,000 feet of any of the alternative routes, and no FAA registered public or military airports with runways shorter than 3,200 feet within 10,000 feet of any of the alternative routes. No private airstrips were identified within 10,000 feet of the centerline of any of the alternative routes. One private heliport, Christus Santa Rosa Westover Hill Heliport, was identified within 5,000 feet of the centerline of all of the alternative routes. The Proposed Project is not anticipated to have any significant impacts on existing airstrips or heliports.

Each airport/airstrip/heliport is listed and described with the approximate distance from the centerline of each of the alternative routes in Appendix C, Tables 4-6 through 4-20 of the EA. These facilities are shown on Figures 2-4 (Appendix D) and 4-1 (Appendix E) of the EA.

For additional information on airports/airstrips, see Section 3.2.3 and Section 4.2.3 of the EA. No significant impacts to these airports/airstrips/heliports are anticipated from construction of the Proposed Project. Following approval of a route by the PUC, CPS Energy will make a final determination of the need for FAA notification, based on specific route location and structure design. The result of this notification, and any subsequent coordination with FAA, could include changes in the line design and/or potential requirements to mark and/or light the structures.

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**24. Irrigation Systems:**

**For each route identify any pasture or cropland irrigated by traveling irrigation systems (rolling or pivot type) that will be traversed by the route. Provide a description of the irrigated land and state how it will be affected by each route (number and type of structures etc.). Locate any such irrigated pasture or cropland on a routing map.**

Based on POWER's review of aerial photography and field reconnaissance, none of the 15 alternative routes for the Proposed Project cross any known cropland or pastureland irrigated by traveling irrigation systems, either rolling or pivot type.

**25. Notice:**

**Notice is to be provided in accordance with 16 TAC 22.52.**

- A. Provide a copy of the written direct notice to owners of directly affected land. Attach a list of the names and addresses of the owners of directly affected land receiving notice.**

A copy of the written notice, with attachments, mailed to owners of directly affected land is included as Attachment No. 7 to the Application. A list of the names and addresses of those owners of directly affected land to whom notice was mailed by first-class mail is included as Attachment No. 8 to this Application. Landowners of record and their mailing addresses were determined by review of information obtained from the Bexar County Appraisal District.

- B. Provide a copy of the written notice to utilities that are located within five miles of the routes.**

No other electric utilities are located within five miles of any of the alternative routes proposed in the Application.

- C. Provide a copy of the written notice to county and municipal authorities, and the Department of Defense Siting Clearinghouse. Notice to the DoD Siting Clearinghouse should be provided at the email address found at <http://www.acq.osd.mil/dodsc/>.**

A copy of the written notice sent to county and municipal authorities, including the Department of Defense Siting Clearinghouse (or, as it is currently known, the Military Aviation and Installation Assurance Siting Clearinghouse) (the "Clearinghouse") is included as Attachment No. 9 to this Application. The names and addresses of county and municipal authorities and the Clearinghouse to whom

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the written notices were sent are included in Attachment No. 10 to this Application. The Texas Office of Public Utility Counsel will be hand delivered a notice of the Application in accordance with the provisions of 16 TAC 22.74(b).

- D. Provide a copy of the notice that is to be published in newspapers of general circulation in the counties in which the facilities are to be constructed. Attach a list of the newspapers that will publish the notice for this application. After the notice is published, provide the publisher's affidavits and tear sheets.**

A copy of the public notice that will be published in the *San Antonio Express News* (a newspaper of general circulation in Bexar County where the transmission facilities are to be constructed) within one week after the Application is filed with the PUC is included as Attachment No. 11 to the Application. A publisher's affidavit and tear sheet will be filed with the PUC showing proof of notice as soon as available after filing of the Application.

**For a CREZ application, in addition to the requirements of 16 TAC § 22.52 the applicant shall, not less than twenty-one (21) days before the filing of the application, submit to the Commission staff a "generic" copy of each type of alternative published and written notice for review. Staff's comments, if any, regarding the alternative notices will be provided to the applicant not later than seven days after receipt by Staff of the alternative notices. Applicant may take into consideration any comments made by Commission staff before the notices are published or sent by mail.**

Not applicable.

**26. Parks and Recreation Areas:**

**For each route, list all parks and recreational areas owned by a governmental body or an organized group, club, or church and located within 1,000 feet of the center line of the route. Provide a general description of each area and its distance from the center line. Identify the owner of the park or recreational area (public agency, church, club, etc.). List the sources used to identify the parks and recreational areas. Locate the listed sites on a routing map.**

POWER reviewed USGS topographic maps, TxDOT county highway maps, recent aerial photography, and field reconnaissance to identify parks and recreation areas within the study area. Based on this review, POWER identified one park or recreation area, Northwest Village College Disc Golf Course (NVC Disc Golf Course), within the study area. Five of the alternative routes included in the Application cross a portion of the NVC Disc Golf Course. The NVC Disc Golf Course is located within 1,000 feet of the centerline of all the alternative routes. The Proposed Project is not anticipated to have any significant impacts on the use of parks and recreation facilities.

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**27. Historical and Archeological Sites:**

**For each route, list all historical and archeological sites known to be within 1,000 feet of the center line of the route. Include a description of each site and its distance from the center line. List the sources (national, state or local commission or societies) used to identify the sites. Locate all historical sites on a routing map. For the protection of the sites, archeological sites need not be shown on maps.**

POWER conducted a literature review and records search at the Texas Historical Commission and The Texas Archeological Research Laboratory at the University of Texas at Austin to identify known historical and archeological sites located within 1,000 feet of the centerline of each of the 15 alternative routes. For more information regarding site descriptions and the evaluation of the historical and archeological sites located within the study area, see Section 3.5 and Section 4.5 of the EA.

Based on POWER's review, no recorded archeological sites are located within the ROW of any of the alternative routes. One archeological site is located within 1,000 feet of the centerline of four of the alternative routes. The site (41BX1958) is listed and described with the approximate distance from the centerline of the alternative routes in Appendix C, Tables 4-10 through 4-13 of the EA of the EA. For the protection of the site, it is not shown on Figure 4-1. The description of the site is included in Section 4.5.3 of the EA. The Proposed Project is not anticipated to have any significant impacts on the archeological site identified within 1,000 feet.

**28. Coastal Management Program:**

**For each route, indicate whether the route is located, either in whole or in part, within the coastal management program boundary as defined in 31 TAC §503.1. If any route is, either in whole or in part, within the coastal management program boundary, indicate whether any part of the route is seaward of the Coastal Facilities Designation Line as defined in 31 TAC §19.2(a)(21). Using the designations in 31 TAC §501.3(b), identify the type(s) of Coastal Natural Resource Area(s) impacted by any part of the route and/or facilities.**

No part of any primary alternative route is located within the Coastal Management Program boundary, as defined in 31 TAC § 27.1(a).

**29. Environmental Impact:**

**Provide copies of any and all environmental impact studies and/or assessments of the project. If no formal study was conducted for this project, explain how the routing and construction of this project will impact the environment. List the sources used to identify the existence or absence of sensitive environmental areas. Locate any environmentally sensitive areas on a routing map. In some instances, the location of the environmentally sensitive areas or the location of protected or endangered species**

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**should not be included on maps to ensure preservation of the areas or species. Within seven days after filing the application for the project, provide a copy of each environmental impact study and/or assessment to the Texas Parks and Wildlife Department (TPWD) for its review at the address below. Include with this application a copy of the letter of transmittal with which the studies/assessments were or will be sent to the TPWD.**

**Wildlife Habitat Assessment Program  
Wildlife Division  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744**

**The applicant shall file an affidavit confirming that the letter of transmittal and studies/assessments were sent to TPWD.**

The EA describes the natural resources, cultural resources, land uses, and other sensitive areas that may occur within the study area. The EA also describes how the Proposed Project may impact such resources. Specifically, the EA includes data obtained from TPWD, including the Texas Natural Diversity Database (TXNDD) and a list of Ecologically Significant Stream Segments (ESSS) in the study area.

CPS Energy will deliver a copy of the EA to TPWD on the date the Application is filed. A copy of the letter of transmittal of the EA to TPWD is provided as Attachment No. 12.

**30. Affidavit**

*Attach a sworn affidavit from a qualified individual authorized by the applicant to verify and affirm that, to the best of their knowledge, all information provided, statements made, and matters set forth in this application and attachments are true and correct.*

A sworn affidavit is attached below.

**AFFIDAVIT OF DANIEL T. OTTO**

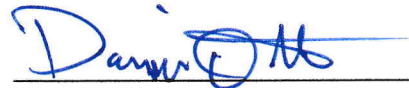
**STATE OF TEXAS**

§  
§  
§

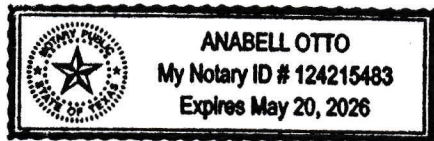
Before me, the undersigned authority, Daniel T. Otto, being first duly sworn, deposes and states:

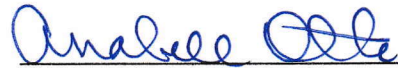
“My name is Daniel T. Otto. I am the Substation and Transmission (S&T) Regulatory Support Manager for CPS Energy (CPS Energy). I am over the age of twenty-one, and am competent to make the following affidavit:

On behalf of CPS Energy and in my capacity as the S&T Regulatory Support Manager, I am authorized to file and verify the CCN Application for CPS Energy. I am personally familiar with the documents filed with this application, and I have complied with all the requirements contained in the application; furthermore, all such statements made and matters set forth therein with respect to CPS Energy are true and correct.”

  
\_\_\_\_\_  
Daniel Otto  
Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public in and for the State of Texas, this 2<sup>nd</sup> day of November, 2023.



  
\_\_\_\_\_  
Notary Public



# **Attachment 1**

November 2023

## CPS ENERGY

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# SAT15 138 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis *Bexar County, Texas*

**PROJECT NUMBER:**

169772

**PROJECT CONTACT:**

Lisa Barko Meaux

**EMAIL:**

[lisa.barko@powereng.com](mailto:lisa.barko@powereng.com)

**PHONE:**

281-765-5507



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*SAT15 138 kV Transmission Line Project*

**PREPARED FOR:** CPS ENERGY  
**PREPARED BY:** POWER ENGINEERS, INC.  
HOUSTON, TEXAS

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- B** Public Involvement
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## ACRONYMS AND ABBREVIATIONS

AM radio	Amplitude modulation radio
amsl	above mean sea level
BEG	Bureau of Economic Geology
BGEPA	Bald and Golden Eagle Protection Act
BMP(s)	Best Management Practice(s)
BP	Before Present
CCN	Certificate of Convenience and Necessity
C.F.R.	Code of Federal Regulations
CLF	civilian labor force
CMP	Costal Management Program
CMZ	Coastal Management Zone
CPS Energy	City Public Service Board
CWA	Clean Water Act
DoD	Department of Defense
EA	Environmental Assessment and Alternative Route Analysis
EAA	Edwards Aquifer Authority
EOR	Element of occurrence record
ESA	Endangered Species Act
ESSS	Ecologically Significant Stream Segments
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FM	Farm-to-Market Road
FM radio	Frequency modulation radio
GIS	Geographic Information Systems
GLO	Texas General Land Office
HCP	Habitat Conservation Plan
HPA	high probability area
HTC	Historic Texas Cemeteries
IH	Interstate Highway
IPaC	Information for Planning and Consultation
kcmil	thousand circular mils
kV	kilovolt
MBTA	Migratory Bird Treaty Act
MVA	Megavolt-amperes
NCED	National Conservation Easement Database
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NOT	Notice of Termination
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWP	Nationwide Permit
NWSRS	National Wild and Scenic Rivers System

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OHP	City of San Antonio Office of Historic Preservation
OTHM	Official Texas Historical Marker
POWER	POWER Engineers, Inc.
Project	SAT15 138 kV Transmission Line
PUC	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
ROW	right-of-way
RRC	Railroad Commission of Texas
SAL	State Antiquities Landmark
San Antonio	City of San Antonio
SAWS	San Antonio Water System
SEP	Southern Edwards Plateau
SH	State Highway
SHPO	State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code
TARL	Texas Archeological Research Laboratory
TASA	Texas Archeological Sites Atlas
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
THSA	Texas Historical Sites Atlas
TLC	Texas Land Conservancy
TNRC	Texas Natural Resource Code
TPWD	Texas Parks and Wildlife Department
TSS	Texas Speleological Survey
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
TXNDD	Texas Natural Diversity Database
TXSDC	Texas State Data Center
U.S.C.	United States Code
US Hwy	United States Highway
US	United States
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

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## **1.0 DESCRIPTION OF THE PROPOSED PROJECT**

### **1.1 Scope of the Project**

The City of San Antonio, acting by and through City Public Service Board (CPS Energy) is proposing to construct a new double-circuit 138 kilovolt (kV) transmission line in Bexar County (Figure 1-1). The SAT15 138 kV Transmission Line project (Project) will connect the existing CPS Energy Cagnon to Helotes 138 kV transmission line to the proposed Wiseman Substation located approximately 0.40 mile southwest of the intersection of State Highway (SH) 151 and Wiseman Boulevard. The proposed Wiseman Substation is needed to provide reliable electric service to the Project area as a result of a new large customer load in the area. Depending on which route is approved for the Project, the total length of the transmission line will be approximately one to two miles, a portion which, may be constructed and operated outside of the municipal boundaries of the City of San Antonio (San Antonio or City). The right-of-way (ROW) necessary to safely operate the Project on private property will be approximately 75 to 100 feet in width depending on the location. The Project is scheduled to be in service by winter of 2027.

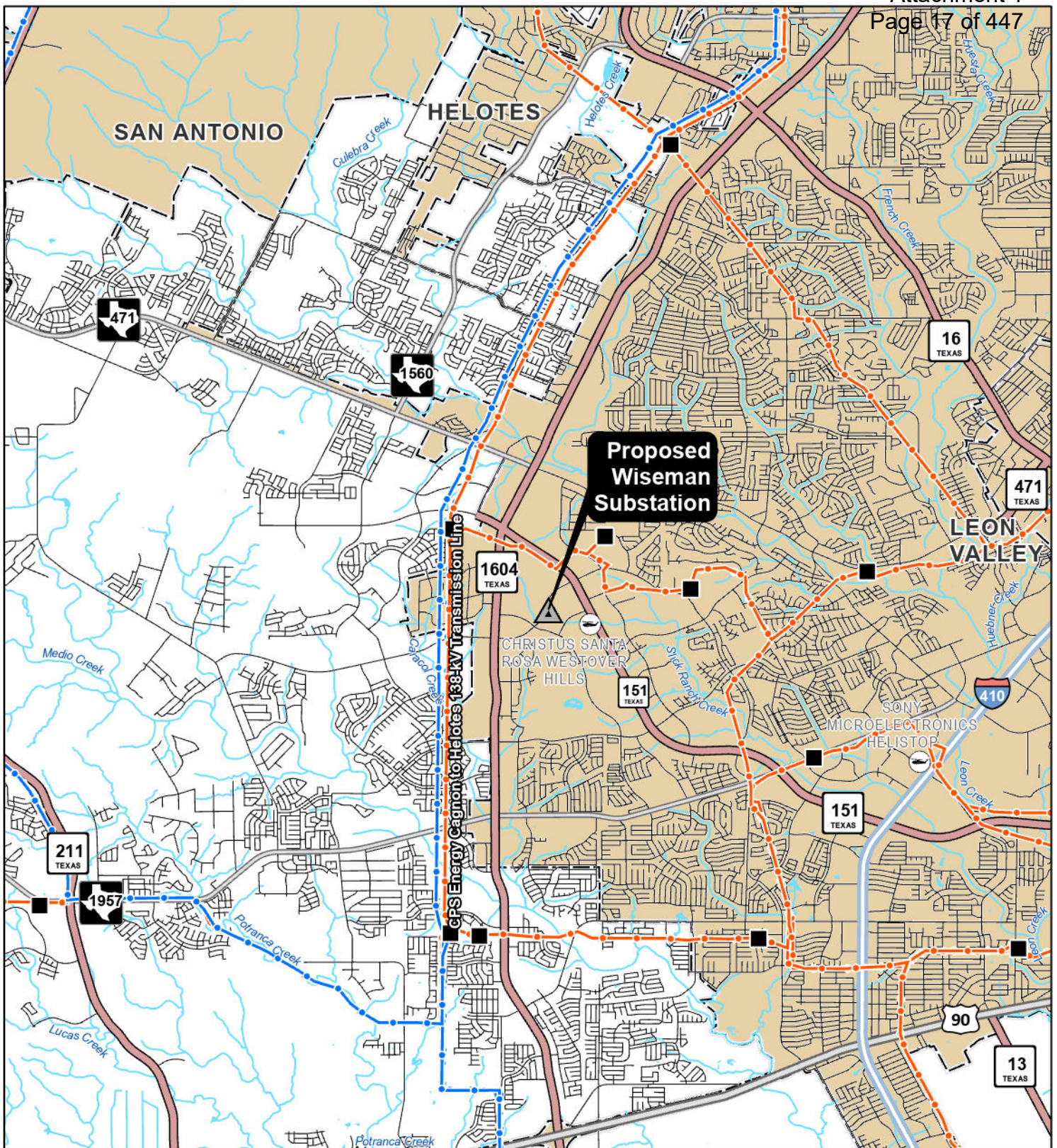
Because a portion of the Project may potentially be constructed, owned, and operated by CPS Energy outside the municipal boundaries of San Antonio, CPS Energy intends to present the Public Utility Commission of Texas (PUC) with an application to amend its Certificate of Convenience and Necessity (CCN) that includes route evaluation and cost information for the entirety of the Project, both inside and outside of San Antonio. Following the PUC's evaluation of the need for the Project and approval of routing outside of San Antonio, the City will evaluate and determine the routing of the portion of the Project within the City.

CPS Energy contracted with POWER Engineers, Inc. (POWER) to prepare this Environmental Assessment and Alternative Route Analysis (EA) for the Project. The EA will support CPS Energy's CCN application to be submitted to the PUC and the City's evaluation of the Project following the PUC's decision. The EA may also be used to support any additional federal, state, or local permitting activities that might be required in association with construction of the Project.

The EA discusses and documents the environmental and land use constraints identified within the Project study area, routing methodologies, and public involvement. The EA additionally provides an evaluation of alternative routes for the Project from an environmental and land-use perspective. CPS Energy will use the data presented in the EA in identifying an alternative route that best addresses the requirements under the Public Utility Regulatory Act (PURA) and 16 Texas Administrative Code (TAC) § 25.101.



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<ul style="list-style-type: none"> <li> Project Substation</li> <li> Existing Substation</li> <li> Existing 138kV Transmission Line</li> <li> Existing 345kV Transmission Line</li> <li> Interstate Highway</li> <li> US Highway</li> <li> State Highway</li> </ul>	<ul style="list-style-type: none"> <li> FM Road</li> <li> County / Local Road</li> <li> Heliport</li> <li> River / Stream</li> <li> Waterbody</li> <li> City Limit</li> </ul>	<p>CPS ENERGY SAT 15 138 KV TRANSMISSION LINE PROJECT <b>FIGURE 1-1</b> PROJECT VICINITY</p> <p></p> <p>0 1 2 Miles</p> <p> </p> <p>000042 Date: 10/23/2023</p>
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To assist POWER in its evaluation of the Project, CPS Energy provided POWER with information regarding potential Project endpoints, substation siting vicinity, the need for the Project, proposed construction practices, transmission line design, clearing methods, ROW requirements, and maintenance procedures.

## **1.2 Purpose and Need**

The area in and around the Project is comprised of both established homes and businesses and new growth and development. To provide reliable electric service to both new and existing customers in the Project area and to provide electric service to a large new customer, CPS Energy needs to improve the capacity of its electric delivery facilities. The large new customer load cannot be supported by the existing substations or overhead distribution lines in the area. Based on CPS Energy's evaluation of available capacity on its existing transmission system to feasibly serve the new large customer load, the new Wiseman Substation will be connected to the existing transmission grid with the proposed double circuit 138 kV transmission line by looping into the existing CPS Energy Cagnon to Helotes 138 kV transmission line, approximately one to two miles to the west.

## **1.3 Description of Proposed Design**

A general description of the transmission line and substation design is provided below. Some details of the proposed installation will be determined following approval of a specific route.

### **1.3.1 Transmission Line Design**

The Project will be operated as a 138 kV transmission line with 795 thousand circular mils (kcmil) aluminum conductor, steel-reinforced Drake, with two conductors per phase and one static wire per circuit. In most areas, the transmission line will be installed on new structures and within new easements. ROW widths will typically be 100 feet to accommodate constraints and to meet engineering clearance specifications. Where a route is parallel to an existing road ROW, 25 feet of road ROW will be used in conjunction with 75 feet of new private easement rights for a total transmission ROW clearance of 100 feet.

The Project will be rated for operation at 1,848 Amperes, yielding a nominal 441-Megavolt amperes (MVA) capacity. The configurations of the conductor and shield wire will provide adequate clearance for operation at 138 kV, considering icing and wind conditions. The Project will be designed and constructed to meet or exceed the specifications set forth in the current edition of the National Electrical Safety Code (NESC) and will comply with all applicable state and federal statutes and regulations.

### **1.3.2 Typical Transmission Line Structures and Easements**

For most segments of the proposed routes, CPS Energy proposes to use 138 kV double-circuit pole structures for typical tangent, angle, and dead-end structures. The geometries of the proposed typical tangent, angle, and dead-end structures are shown on Figures 1-2 through 1-4. Where the Project loops into the existing CPS Energy Cagnon to Helotes 138 kV transmission line, H-frame structures are anticipated to be used. All structure geometries are illustrative. In some areas shorter than typical, taller than typical, or alternative structure types may be utilized. Actual structure types may differ slightly based on newer or different designs available at the time of construction.

The Project will be constructed in new ROW, within easements typically 100 feet in width, using spans that typically range from approximately 600 to 1,000 feet. Where a route is parallel to an existing road ROW, 25 feet of road ROW will be used in conjunction with 75 feet of new private easement rights for a total transmission ROW clearance of 100 feet. In some areas, easement width and span length could be more or less than the typical depending on terrain and other engineering considerations. Access easements and/or temporary construction easements may be needed in some areas.

### **1.3.3 Substation Design**

The proposed Wiseman Substation will be designed as a four-unit site with two 138/35 kV, 100-MVA transformer and two 1-feeder switchgear. The substation will be looped into the existing CPS Energy Cagnon to Helotes 138 kV transmission line, requiring two 138 kV line terminals. The substation will be designed with a breaker and a half configuration and a 2000-A bus. It will also be configured for future installation of a 138 kV capacitor bank. Figure 1-5 shows an example of a substation layout similar to what will be constructed at the Wiseman site.

### **1.3.4 Construction Schedule**

CPS Energy plans to construct the Project between June 2024 and February 2027. The specific construction schedule will be refined as the substation site and ROW is acquired and surveyed, engineering designs are finalized, and any necessary species accommodations are considered. The transmission line and substation are proposed to be constructed by a combination of contractor and CPS Energy crews.

## **1.4 Construction Considerations**

Projects of this type require clearing, structure assembly and erection, conductor and shield wire installation, and clean up 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. All disturbed areas as a result of construction activity will be restored and re-vegetated with native grass.
3. Soil disturbance during construction will be minimized and erosion control devices will be utilized where necessary. The Project will comply with Texas Commission on Environmental Quality (TCEQ), Bexar County, and the City of San Antonio 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 utilized to prevent soil or road erosion. Construction of access roads and drainage structures required for the Project will comply with any applicable local, 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.
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).
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.

#### **1.4.1 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 in accordance with the San Antonio tree ordinance requirements. Trees and brush that are removed will be mulched and spread in the ROW to help stabilize the ground and prevent erosion. CPS Energy does not generally intend to use herbicides in ROW clearing and preparation. Landowners' preferences will be considered if other methods of ROW clearing are preferred.

### **1.4.2 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 drilled pier foundation. After the foundations have cured sufficiently, crews will set the structures and install the conductor and shield wire suspension 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.

### **1.4.3 Conductor and Shield Wire Installation**

The conductors and shield wires are typically installed via a tensioning system. Conductor and shield wires are pulled by ropes and held tight by tensioner to keep the wires from coming in contact with the ground and other objects that could be damaging to the wire. Guard structures (bucket trucks or temporary wood-pole structures) will be installed where the transmission line crosses overhead electric power lines, overhead telephone lines, roadways, or other areas requiring sag. After the wire is pulled, it is placed in suspension and dead-end clamped for permanent attachment. In some areas, use of helicopters may be utilized for conductor and shield wire installation.

### **1.4.4 Cleanup**

The cleanup operation typically involves returning disturbed areas to as close to the original contour as possible, the removal of debris, and the restoration of any items damaged by construction of the Project. Upon the completion of the construction work, all scrap, trash, excavated materials, waste materials, and debris resulting from construction of the transmission line will be promptly removed. All construction equipment and materials will be removed from the site, and waste disposal will be conducted in a legal manner. All disturbed areas will be re-vegetated with native grass seed mixture.

## **1.5 Maintenance Considerations**

Following construction, CPS Energy will periodically inspect the substation, transmission line ROW, structures, and line to ensure the safe and reliable operation of the facilities. The primary maintenance for the completed Project will be the removal or trimming of trees that pose a potential danger to the

conductors or structures. Preservation of natural resources requires a thoughtful, comprehensive maintenance program. The following factors are key components of CPS Energy's maintenance program that will be utilized for the Project.

1. Native vegetation, particularly that of value to fish and wildlife that does not have the potential to grow close enough to the transmission line so as to pose a hazard to the safe operation and maintenance of the transmission line, will be allowed to grow in 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. A cover of vegetation will be maintained within the ROW in a manner that minimizes erosion and does not interfere with the safe and reliable operation of the transmission facilities.
3. If used, United States Environmental Protection Agency (USEPA)-approved herbicides will be carefully selected to have a minimal effect on desirable indigenous plant life, and selective application will be used whenever appropriate during maintenance inspections.
4. CPS Energy performs routine maintenance inspections at appropriate intervals. Routine maintenance will be performed, when possible, when access roads are firm or dry.
5. 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, on the basis of erosion control, native shrubs or grasses may be planted.
6. CPS Energy intends for the ROW to be utilized for compatible uses as long as the activity does not impact public safety or inhibit the safe operation and maintenance of the electrical system. The results of natural resources and cultural resources assessments will be followed as necessary and appropriate during maintenance of the ROW.

## **1.6 Agency Actions**

If the proposed transmission line is located within, or across, the ROW of any county or state-maintained road or highway, CPS Energy will obtain the appropriate permit(s) from the controlling governing entity. Since more than one acre will be cleared or disturbed during construction, a Stormwater Pollution Prevention Plan (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. Permits or regulatory approvals may also be required from the TCEQ, Texas Historical Commission (THC), United States Army Corps of Engineers (USACE), and the United States Fish and Wildlife



Service (USFWS). Following the identification of environmental and ROW concerns, appropriate measures will be taken during engineering design 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. Numerous federal, state, and local regulatory agencies and organizations have developed rules and regulations regarding the routing and potential impacts associated with the construction of the Project. This section describes the major regulatory agencies and additional issues that are involved in project planning and permitting of transmission lines in Texas. POWER solicited comments from various regulatory entities during the development of this document, and records of correspondence and additional discussions with these agencies and organizations are provided in Appendix A.

### **1.6.1 Public Utility Commission of Texas**

The PUC regulates CPS Energy's construction, installation, or extension of transmission lines in Texas outside of the San Antonio municipal boundaries under Sections 37.051(g) and 37.056(c)(4)(A)-(D) of PURA. In addition to the specific legislative requirements in PURA, the PUC regulatory guidelines for routing transmission lines in Texas include:

- 16 TAC 25.101(b)(3)(B) (including the PUC's policy of prudent avoidance)
- 16 TAC 22.52(a)(4)
- The PUC's CCN application requirements
- PUC precedent related to transmission line applications

This EA has been prepared by POWER in support of CPS Energy's CCN application for this Project to be filed at the PUC for its consideration and subsequent evaluation by San Antonio for the portion of the Project within the City.

### **1.6.2 United States Army Corps of Engineers**

The USACE is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 United States Code [U.S.C.] § 403) and Section 404 of the Clean Water Act (CWA) (33 U.S.C. § 1344) to implement these statutes. Under Section 10, the USACE regulates all work or structures in or affecting the course, condition, or capacity of navigable waters of the United States (US). The intent of this law is to protect the navigable capacity of waters important to interstate commerce. Under Section 404, the USACE regulates the discharge of dredged and fill material into all waters of the US, including associated

wetlands. The intent of this law is to protect the “waters of the US” and aquatic ecosystems from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical, and biological integrity.

The Project is located within the jurisdiction of the USACE – Fort Worth District. Review of the National Hydrography Dataset (NHD) and National Wetland Inventory (NWI) maps indicate surface waters of the US and associated areas of potential wetlands may occur within the study area. Upon PUC and San Antonio approval of a complete route for the Project, additional coordination, jurisdictional wetland verifications and permitting with the USACE – Fort Worth District for a Section 404 Permit might be required. Based on the Project footprint and construction techniques proposed, the construction of the Project will likely meet the criteria for the Nationwide Permit (NWP) No. 57, which applies to activities associated with any cable, line, or wire for the transmission of electrical energy. A Section 10 permit is not anticipated for this Project.

### **1.6.3 United States Fish and Wildlife Service**

The USFWS is charged with the responsibility for enforcement of federal wildlife laws and providing comments on proposed construction projects with a federal nexus under the National Environmental Policy Act (NEPA) and within the framework of several federal laws including the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA). With respect to the 57.6 acre San Antonio Water System (SAWS) Anderson Pump Station (APS) Karst Preserve located within the study area, USFWS has binding authority over clearing, excavation, or construction activity on or under the surface of the designated area.

POWER requested a USFWS Information for Planning and Conservation (IPaC) review and official species list to identify potentially occurring federally protected species and designated critical habitats within the study area (Project Code: 2023-0069935). POWER also reviewed the Texas Natural Diversity Database (TXNDD) records of federal- and state-listed species occurrences, rare vegetation communities, and/or species of concern. POWER considered these listings during the route development process.

Because the Project area is located within Karst Zones 1 and 2, a karst survey must be performed in accordance with the USFWS, Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys for Endangered Karst Invertebrates in Central Texas. Should a karst feature be observed during the initial survey, a Section 10(a)(1)(A) permit would be required to facilitate excavation of the feature to determine the presence of suitable endangered karst invertebrate habitat. If suitable

habitat exists, a karst invertebrate survey and subsequent report would be required by the Section 10(a)(1)(A) permit.

Upon PUC and San Antonio approval of a complete route for the Project and prior to construction, surveys will be completed as determined necessary and appropriate to identify any potentially suitable habitat for federally listed species. If suitable habitat is identified, then informal consultation with the USFWS – Austin Ecological Services Field Office might need to occur to determine the need for any required species-specific surveys and/or permitting under Section 10 of the ESA.

#### **1.6.4 Federal Aviation Administration**

According to Federal Aviation Administration (FAA) regulations, Title 14 Code of Federal Regulations (C.F.R.) Part 77.9 the construction of a transmission line requires FAA notification if a transmission tower structure height will exceed 200 feet or the height of an imaginary surface extending outward and upward at one of the following slopes:

- A 100:1 slope for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport described in paragraph (d) of 14 C.F.R. Part 77.9 having at least one runway longer than 3,200 feet, excluding heliports;
- A 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of a public or military airport described in paragraph (d) of 14 C.F.R. Part 77.9 where its longest runway is no longer than 3,200 feet in length, excluding heliports; or
- A 25:1 slope for a horizontal distance of 5,000 feet for a heliport described in paragraph (d) of 14 C.F.R. Part 77.9.

Paragraph (d) of 14 C.F.R. Part 77.9 includes public-use airports listed in the Airport/Facility Directory (currently the Chart Supplement), public-use or military airports under construction, airports operated by a federal agency or the Department of Defense (DoD), or an airport or heliport with at least one FAA-approved instrument approach procedure.

Notification is not required for structures that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height and will be located in a congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation.

The PUC CCN application also requires listing private airports within 10,000 feet of any alternative route centerline. It is not currently anticipated that any route for the Project will require FAA notification. Following PUC and San Antonio approval of a complete route for the Project, CPS Energy will make a final determination of the need for FAA notification, based on specific structure locations and design. If any of the FAA notification criteria are met for the approved route, a Notice of Proposed Construction or Alteration, FAA Form 7460-1, will be completed and submitted to the FAA Southwest Regional Office in Fort Worth, Texas, at least 30 days prior to construction. The result of this notification, and any subsequent coordination with the FAA, could include changes in line design and/or potential requirements to mark and/or light the structures.

### **1.6.5 Texas Parks and Wildlife Department**

The Texas Parks and Wildlife Department (TPWD) is the state agency with the primary responsibility for protecting the state's fish and wildlife resources in accordance with Texas Parks and Wildlife Code Section 12.0011(b). POWER solicited comment from TPWD during the scoping phase of the Project, and a copy of this EA will be submitted to TPWD when the CCN application is filed with the PUC. Once the PUC and San Antonio approves a complete route for the Project, additional coordination with TPWD may be necessary to determine the need for any additional surveys, and to avoid or minimize any potential adverse impacts to sensitive habitats, threatened or endangered species, and other state regulated fish and wildlife resources.

### **1.6.6 Floodplain Management**

Floodplain maps published by the Federal Emergency Management Agency (FEMA) were reviewed to identify the mapped 100-year floodplains within the study area. The mapped 100-year floodplains are typically associated with the larger creeks and streams or within the boundaries of a river. The 100-year floodplain represents a flood event that has a one percent chance of being equaled or exceeded for any given year. The construction of the proposed transmission line is not anticipated to create any significant permanent changes in the existing topographical grades and will not substantially increase the stormwater runoff within the study area due to increased areas of impermeable surfaces. Additional coordination with the study area counties floodplain administrators may be required after PUC and San Antonio route approval to determine if any permits or mitigation is necessary.

### **1.6.7 Texas Commission on Environmental Quality**

The TCEQ is the state agency with the primary responsibility for protecting the state's water quality. Construction of the Project will require a Texas Pollution Discharge Elimination System General

Construction Permit (TXR150000) as implemented by the TCEQ under the provisions of Section 402 of the CWA and Chapter 26 of the Texas Water Code. More than five acres of land disturbance is anticipated during construction of the Project for all alternative routes; therefore, the construction will be considered a “Large Construction Project” under TXR150000. A SWPPP will be developed and implemented during construction activities, a site notice will be posted, and notification sent to the Municipal Separate Sewer System Operator (if applicable). The submittal of a Notice of Intent (NOI) and Notice of Termination (NOT) to the TCEQ is also required for large construction projects.

### **1.6.8 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 C.F.R. Part 60) or under state guidance (TAC, Title 13, Part 2, Chapter 26.7-8). The THC was contacted by POWER to identify known cultural resource sites within the study area boundary. POWER also reviewed Texas Archeological Research Laboratory (TARL) records for known locations of cultural resource sites. Once a route is approved by the PUC and San Antonio, additional coordination with the THC might determine the need for any archeological surveys or additional permitting requirements under the Antiquities Code of Texas (Texas Natural Resource Code (TNRC), Title 9, Chapter 191). Even if no surveys are required, CPS Energy proposes to implement an unanticipated discovery procedure during construction activities. If artifacts are discovered during construction, activities will cease near the discovery, and CPS Energy will notify the State Historic Preservation Office (SHPO) for additional consultation.

### **1.6.9 Texas Department of Transportation**

POWER notified the Texas Department of Transportation (TxDOT) of the Project during the development of the EA. If the route approved by the PUC and San Antonio crosses or occupies TxDOT ROW, it will be constructed in accordance with the rules, regulations, and policies of TxDOT. Best Management Practices (BMPs) will be used as required to minimize erosion and sedimentation resulting from construction. Revegetation will occur as required under the “Revegetation Special Provisions” and contained in TxDOT Form 1023 (Rev. 9-93). Traffic control measures will comply with applicable portions of the Texas Manual of Uniform Traffic Control Devices.

### **1.6.10 Texas General Land Office**

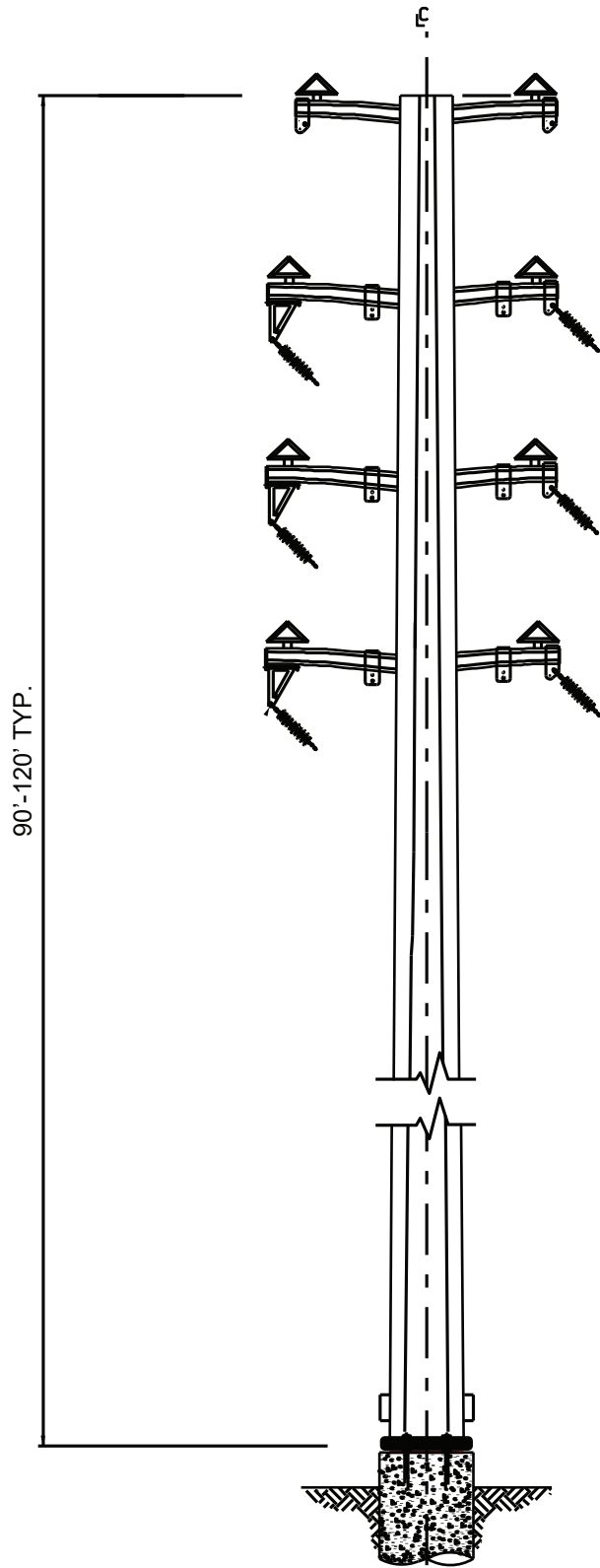
The Texas General Land Office (GLO) requires a miscellaneous easement for ROWs within any state-owned riverbeds or navigable streams or tidally influenced waters. Coordination with the GLO will be completed after PUC and San Antonio approval of a route.

### **1.6.11 City of San Antonio**

The Project area is within the municipal boundaries of San Antonio. Therefore, San Antonio has approval authority regarding the routing, construction, and operation of the Project within the City boundaries. Subsequent to the PUC's consideration of the Project need and routing outside of the City boundaries, San Antonio will consider and approve the remaining portion of the Project within the City. Furthermore, San Antonio has jurisdiction on tree mitigation according to San Antonio Unified Development Code Section 35-523. Throughout the process of designing the Project and clearing property for the safe and reliable operation of the transmission line and substation, CPS Energy will make every effort to save tree canopy and heritage trees where possible. The construction of the Project will require a tree permit from San Antonio upon approval of a route by the PUC and San Antonio.

### **1.6.12 Bexar County**

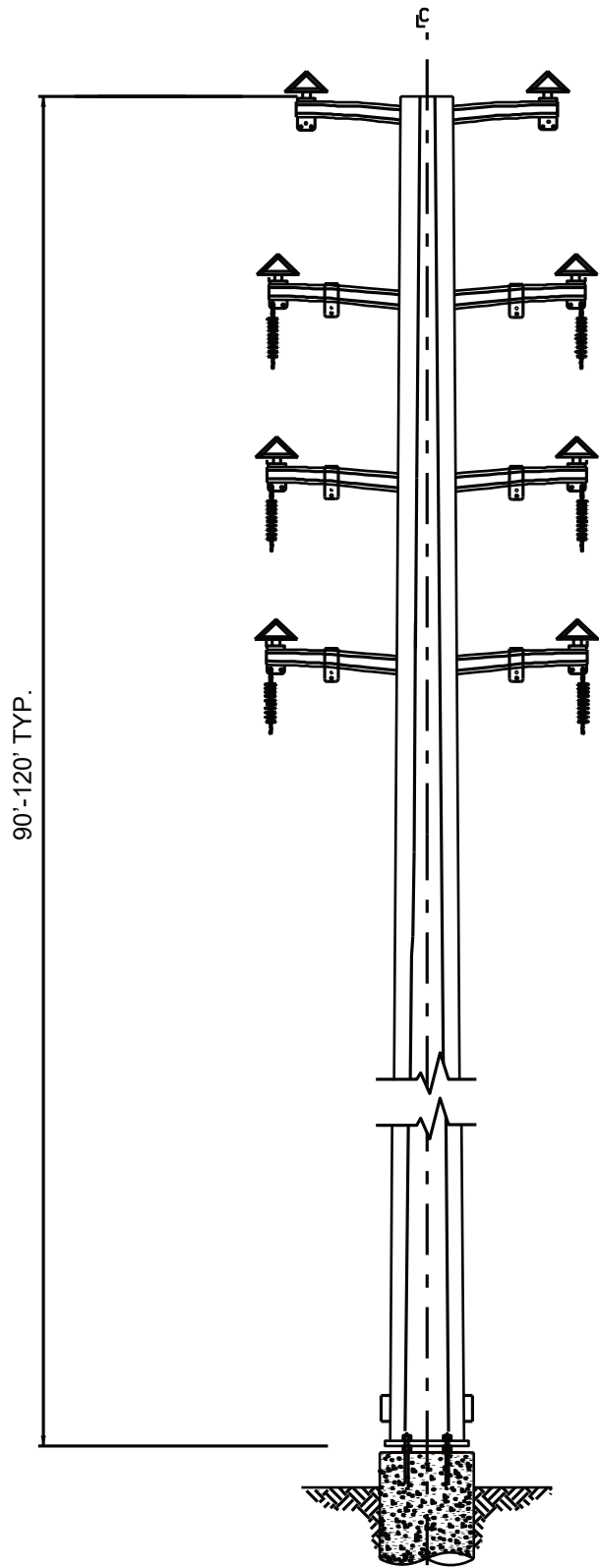
Bexar County will require a Storm Water Quality Permit, Post Construction Permit, and Floodplain Permit for the construction of the Project, as applicable. In addition to the permits listed above, construction of the substation will also require a Site Development permit from the Bexar County Fire Marshal's office. These permits will be completed after PUC and San Antonio approval of the Project route.



SAT15 138 KV TRANSMISSION LINE PROJECT

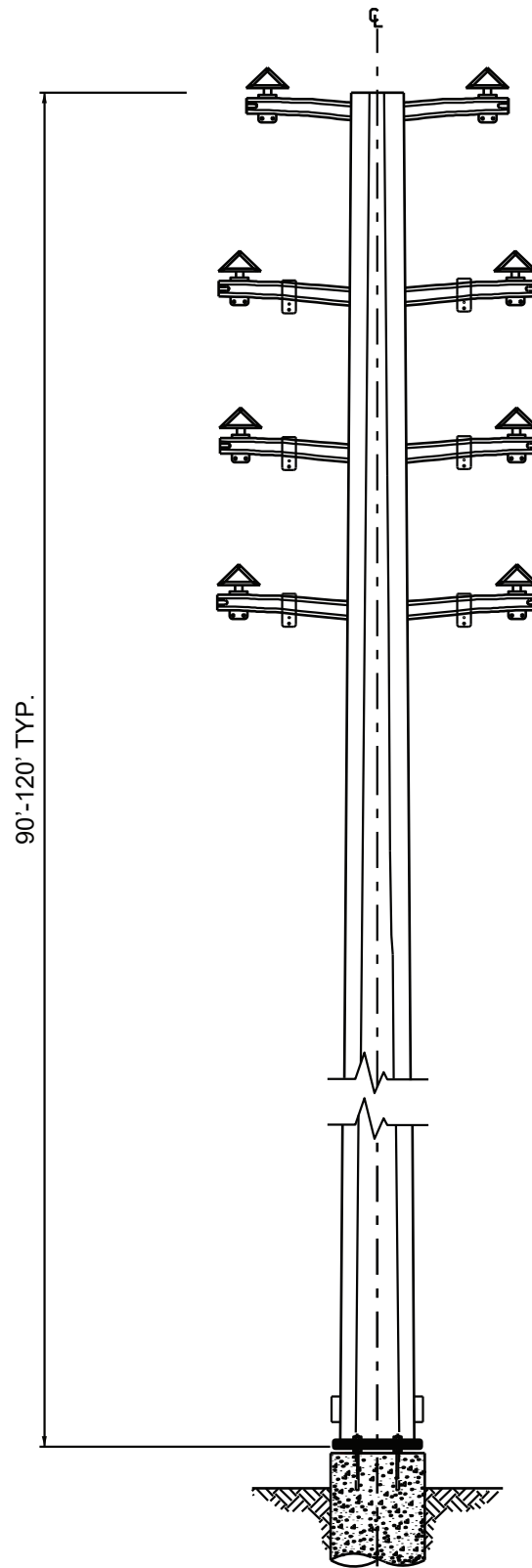
Figure 1-2

Typical 138 kV Double Circuit Running Angle Structure



SAT15 138 KV TRANSMISSION LINE PROJECT  
**Figure 1-3**  
**Typical 138 kV Double Circuit Tangent Structure**

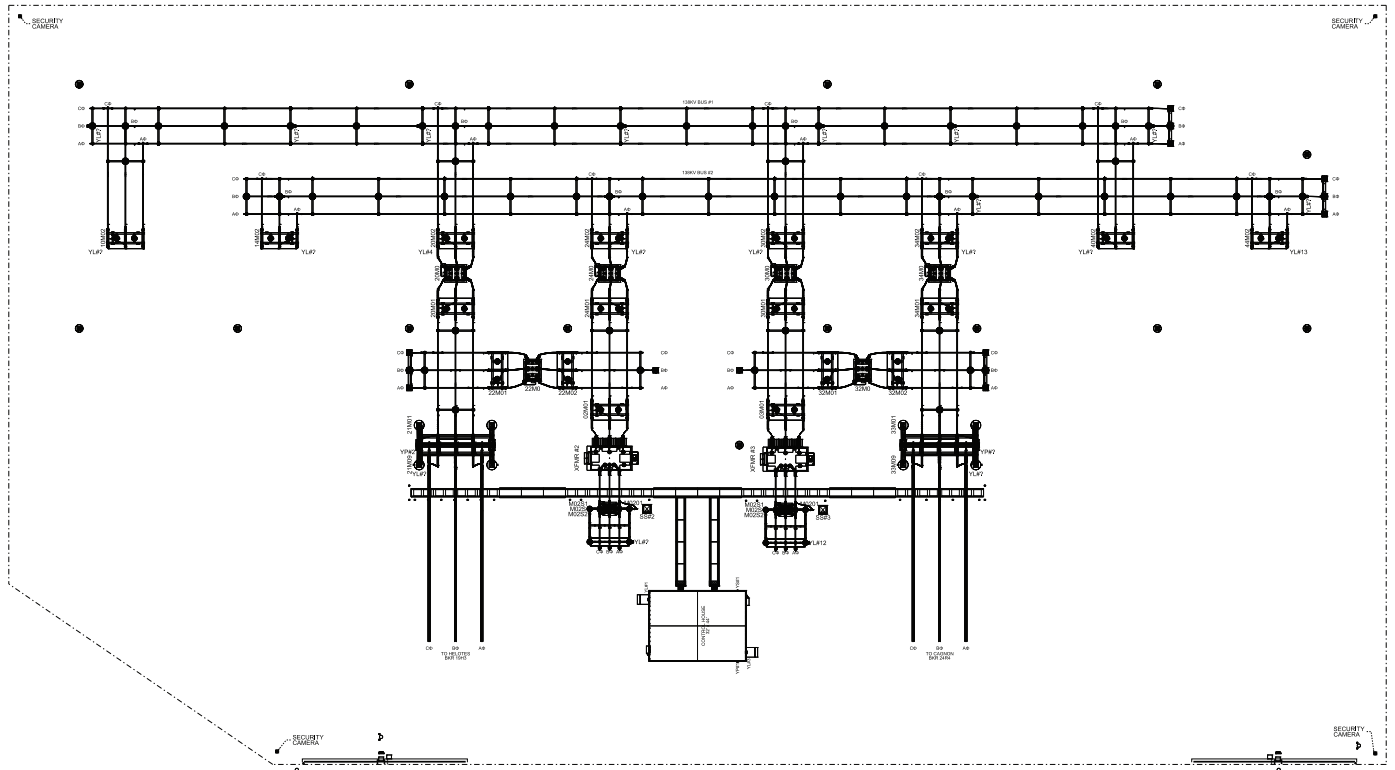




SAT15 138 KV TRANSMISSION LINE PROJECT

Figure 1-4

Typical 138 kV Double Circuit Dead-end Structure



### SAT15 138 KV TRANSMISSION LINE PROJECT

Figure 1-5

Typical Substation Layout



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## **2.0 ALTERNATIVE ROUTE SELECTION METHODOLOGY**

### **2.1 Objective of Study**

The objective of this EA is to develop and evaluate alternative transmission line routes that provide geographic diversity and comply with Section 37.056(c)(4)(A)-(D) of PURA, the PUC's Substantive Rules located at 16 TAC § 25.101(b)(3)(B), including the PUC's policy of prudent avoidance, the PUC's CCN application requirements, the precedent established by the PUC for transmission line certification projects, and CPS Energy's transmission line routing manual. The study methodology utilized by POWER for this EA included study area delineation based on the Project endpoints; identification and characterization of existing land use and environmental constraints; and routing opportunity located within the study area. POWER identified potentially affected resources and considered each during the route development process. Input from regulatory agencies, local officials, and the public meeting was also considered during the route development process. Modifications, deletions, and additions of preliminary segments were made while considering resource sensitivities and public input.

Feasible and geographically diverse alternative routes were then selected for analysis and comparison using evaluation criteria to determine potential impacts to existing land use and environmental resources. CPS Energy also will consider all of the certification criteria in PURA and the PUC Substantive Rules, engineering and construction constraints, grid reliability and security issues, and estimated costs to identify one alternative route that they believe best addresses the requirements of PURA and PUC Substantive Rules. This alternative route, as well as other alternative routes that provide geographic diversity and sufficient routing options, will all be submitted to the PUC in the CCN application and subsequently to San Antonio following the PUC's evaluation for the portion of the Project within the City boundaries.

### **2.2 Study Area Delineation**

The study area needed to include a large enough area within which a sufficient number of geographically diverse alternative routes could be developed between the proposed substation site and the existing CPS Energy Cagnon to Helotes 138 kV transmission line. The study area POWER developed in coordination with CPS Energy is approximately 1.7 miles long, 1.5 miles wide at its widest point, and encompasses approximately two square miles in western Bexar County (see Figure 2-1).

### **2.3 Data Collection and Constraints Mapping**

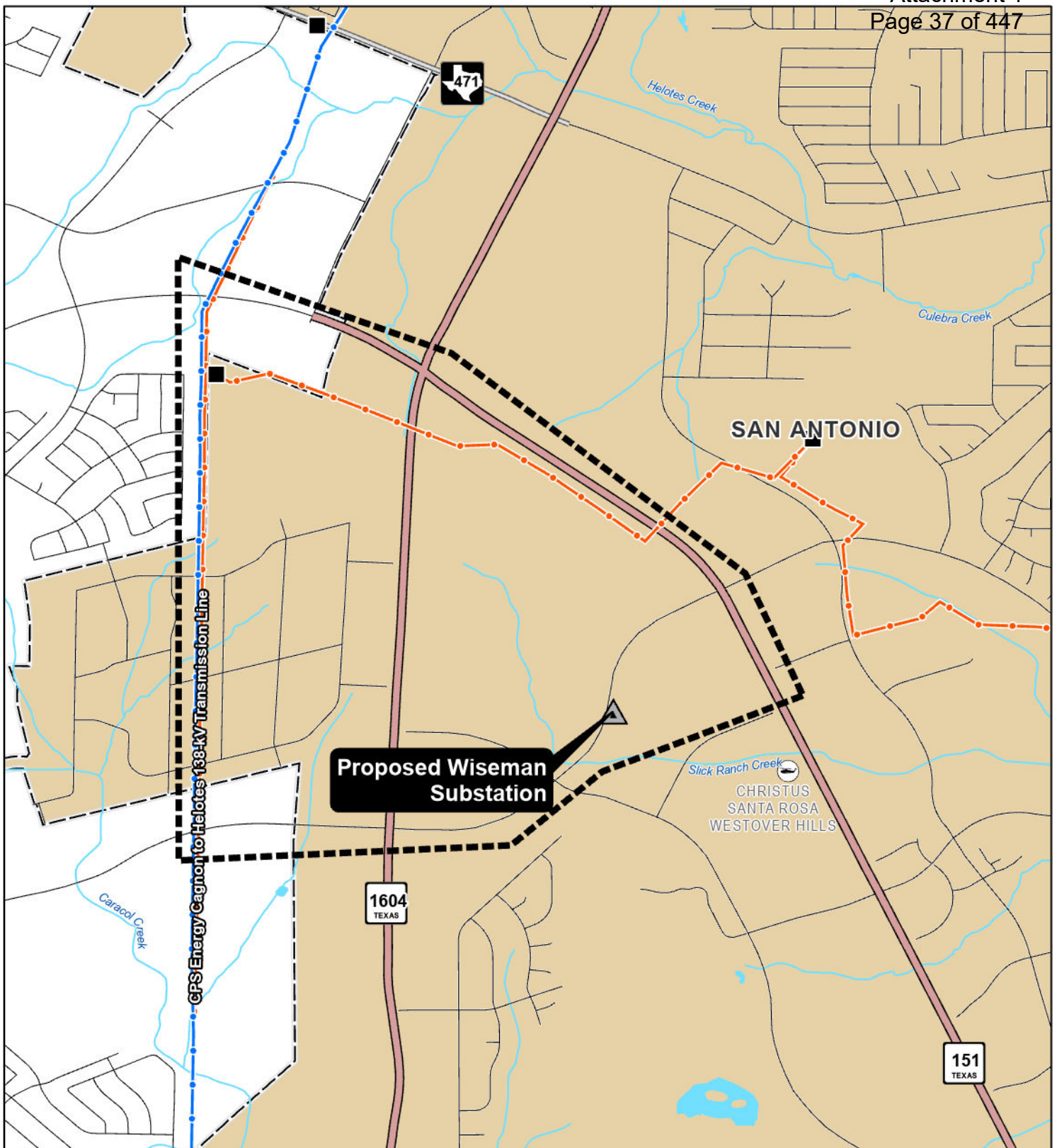
After delineation of the study area, a constraint map was prepared and used to initially display resource data and constraints for the Project area. The constraint map provides a broad overview of various resource locations indicating both routing constraints and areas of potential routing opportunities.













Several methodologies were utilized to collect and review environmental and land use data, including incorporation of readily available Geographic Information System (GIS) coverage with associated metadata; review of maps and published literature; and review of files and records from numerous federal, state, and local agencies. Data collected for each resource area was mapped within the study area utilizing GIS layers. The conditions of the existing environment are discussed throughout Section 3.0 of this document. Section 5.0 and Appendix A provide information regarding correspondence with agencies and officials.

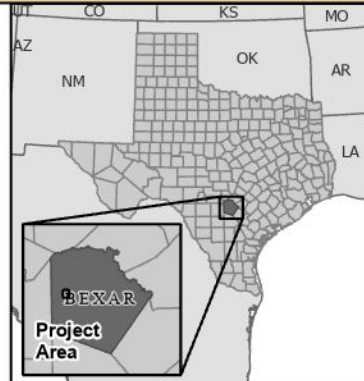
Maps and/or data layers reviewed include (but are not limited to) United States Geological Survey (USGS) 7.5 minute topographic maps, NWI maps, TxDOT county highway maps, and recent aerial photography. USGS topographic maps and aerial photography (December 2022) were used as the background for the environmental and land use constraint maps (see Appendices C and D [map pockets]).

Data typically displayed on the constraint map includes, but is not limited to:


- Major land jurisdictions and uses.
- Major roads, including local roads, county roads, Farm-to-Market (FM) roads, United States Highways (US Hwy), State Highways (SH), and Interstate Highways (IH).
- Existing transmission line and pipeline corridors.
- Airports, private airstrips, and heliports.
- Communication towers.
- Recreational areas.
- Major political subdivision boundaries.
- Lakes, reservoirs, rivers, streams, canals, and ponds.
- FEMA 100-year floodplains.
- NWI mapped wetlands.
- Mobile irrigation systems.
- Wells (including identifiable water, oil, and gas).
- Special Management Areas.





- |  |   |
|--|---|
|  Study Area Boundary              |  FM Road             |
|  Project Substation               |  County / Local Road |
|  Existing Substation              |  Heliport            |
|  Existing 138kV Transmission Line |  River / Stream      |
|  Existing 345kV Transmission Line |  Waterbody           |
|  State Highway                    |  City Limit          |



CPS ENERGY SAT 15  
138 KV TRANSMISSION LINE  
PROJECT  
**FIGURE 2-1  
STUDY AREA**



0 0.25 0.5  
Miles

000062  
Date: 10/17/2023

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## 2.4 Agency Consultation

In consultation with CPS Energy, POWER developed a list of federal, state, and local regulatory agencies, elected officials, and organizations to receive a consultation letter regarding the Project. The purpose of the letter was to inform the various agencies and officials of the Project and provide them with an opportunity to provide information regarding resources and potential issues within the study area. A list of agencies contacted, and a summary of responses are included in Section 5.0. Copies of all correspondence with the various state/federal regulatory agencies and local/county officials and departments are included in Appendix A.

## 2.5 Field Reconnaissance

Reconnaissance surveys of the study area (from public viewpoints) were conducted by POWER personnel to confirm the findings of the research and data collection activities, identified changes in land use occurring after the date of the aerial photography and to identify potential unknown constraints that may not have been previously noted in the data. CPS Energy conducted an initial reconnaissance review of the study area on April 26, 2023, and provided information back to POWER regarding their findings. Reconnaissance surveys of the study area were conducted by POWER personnel on May 11, 2023, and June 7, 2023. CPS Energy personnel have made additional reconnaissance trips to the study area during the preparation of this EA.

## 2.6 Selection of Preliminary Route Segments

Preliminary alternative route segments were identified by POWER with input from CPS Energy by using the environmental and land use constraint map while considering resource sensitivity. The preliminary route segments were developed based upon maximizing the use of opportunity areas while avoiding areas of higher environmental constraint or conflicting land uses. Existing aerial photography and USGS topographic maps were used in conjunction with constraints superimposed to identify potential locations of preliminary route segment centerlines.

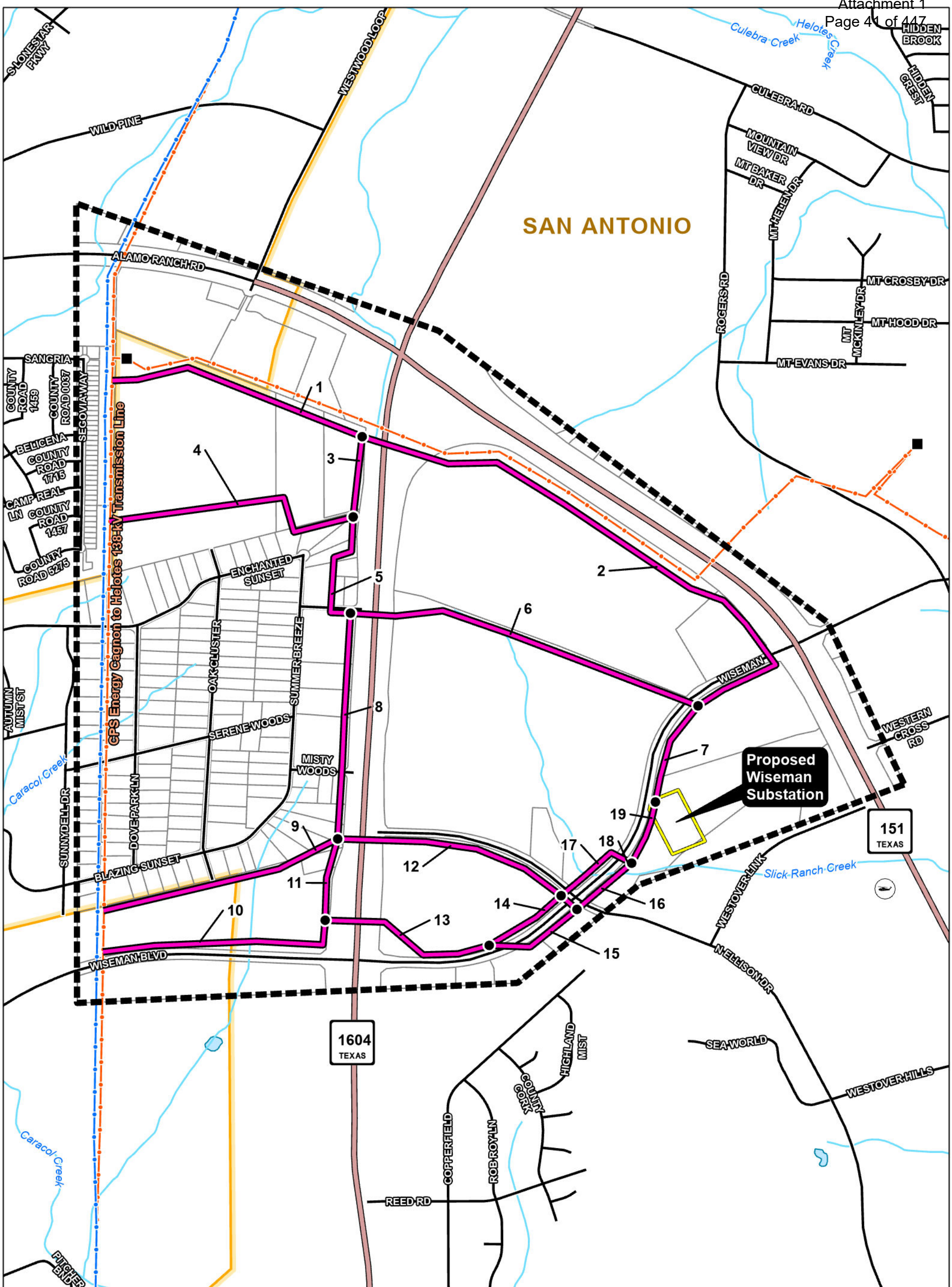
The preliminary alternative route segments were presented to CPS Energy for review and comment. The preliminary alternative route segments were reviewed in accordance with PURA § 37.056 (c)(4)(A)-(D), 16 TAC § 25.101, including the PUC's policy of prudent avoidance, and consistency with CPS Energy's transmission line routing manual. It was POWER's intent to identify an adequate number of environmentally acceptable and geographically diverse preliminary alternative route segments while considering such factors as community values, recreational and park areas, historical and aesthetic values, environmental integrity, engineering constraints, costs, route length utilizing and parallel to existing compatible corridors or parallel to apparent property boundaries, and prudent avoidance. The process was iterative. CPS Energy and POWER continually reviewed the preliminary alternative route segments and made refinements as more information became available.



## **2.7 Open House Public Meeting**

CPS Energy and POWER ultimately identified 19 preliminary alternative route segments that were then presented to the public at an open house meeting held on June 7, 2023. The 19 preliminary alternative route segments presented at the open house meeting are shown on Figure 2-2. Following the open house, CPS Energy continued to receive feedback from mailed questionnaire responses, emails, phone calls, and an additional landowner-requested meeting.

Based on input, comments, and information received by CPS Energy and POWER during and subsequent to the public open house meeting, POWER conducted an analysis of the public input received. The purpose of the public input analysis was to identify and evaluate the comments and additional information received at and following the public open house meeting. Information obtained during the analysis was used to determine any issues that would warrant modifications to the existing preliminary alternative route segments and/or the identification of new route segments that were not presented at the public meeting. A summary of the formal questionnaire responses obtained at and following the open house meeting is presented in Section 6.0. Copies of the public open house notice letter with map, brochure, frequently asked questions, and questionnaire provided in association with the open house are located in Appendix B.



<p><b>Project Components</b></p> <ul style="list-style-type: none"> <li>Study Area</li> <li>Preliminary Alternative Segment, Node, and Label</li> <li>Project Substation</li> </ul> <p><b>Existing Utility Features</b></p> <ul style="list-style-type: none"> <li>Existing Substations</li> <li>Existing 138kV Transmission Line</li> <li>Existing 345kV Transmission Line</li> </ul>	<ul style="list-style-type: none"> <li>State Highway</li> <li>FM Road</li> <li>County / Local Road</li> <li>Helipoint</li> </ul>	<p><b>Surface Waters</b></p> <ul style="list-style-type: none"> <li>NHD River / Stream</li> <li>NHD Waterbody</li> </ul> <p><b>Administrative Features</b></p> <ul style="list-style-type: none"> <li>City Limit</li> <li>Parcel Boundary</li> </ul>	<p>UT CO KS MO IA AZ NM OK AR LA MS TX</p> <p><b>BEXAR</b> Project Area</p>	<p>CPS ENERGY SAT15 138 KV TRANSMISSION LINE PROJECT</p> <p><b>FIGURE 2-2 PRELIMINARY SEGMENTS PRESENTED AT OPEN HOUSE MEETING</b></p> <p>0 1,000 2,000 Feet</p> <p><b>POWER</b> 000066 VEERS</p> <p>Date: 10/17/2023</p>
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## 2.8 Alternative Route Selection

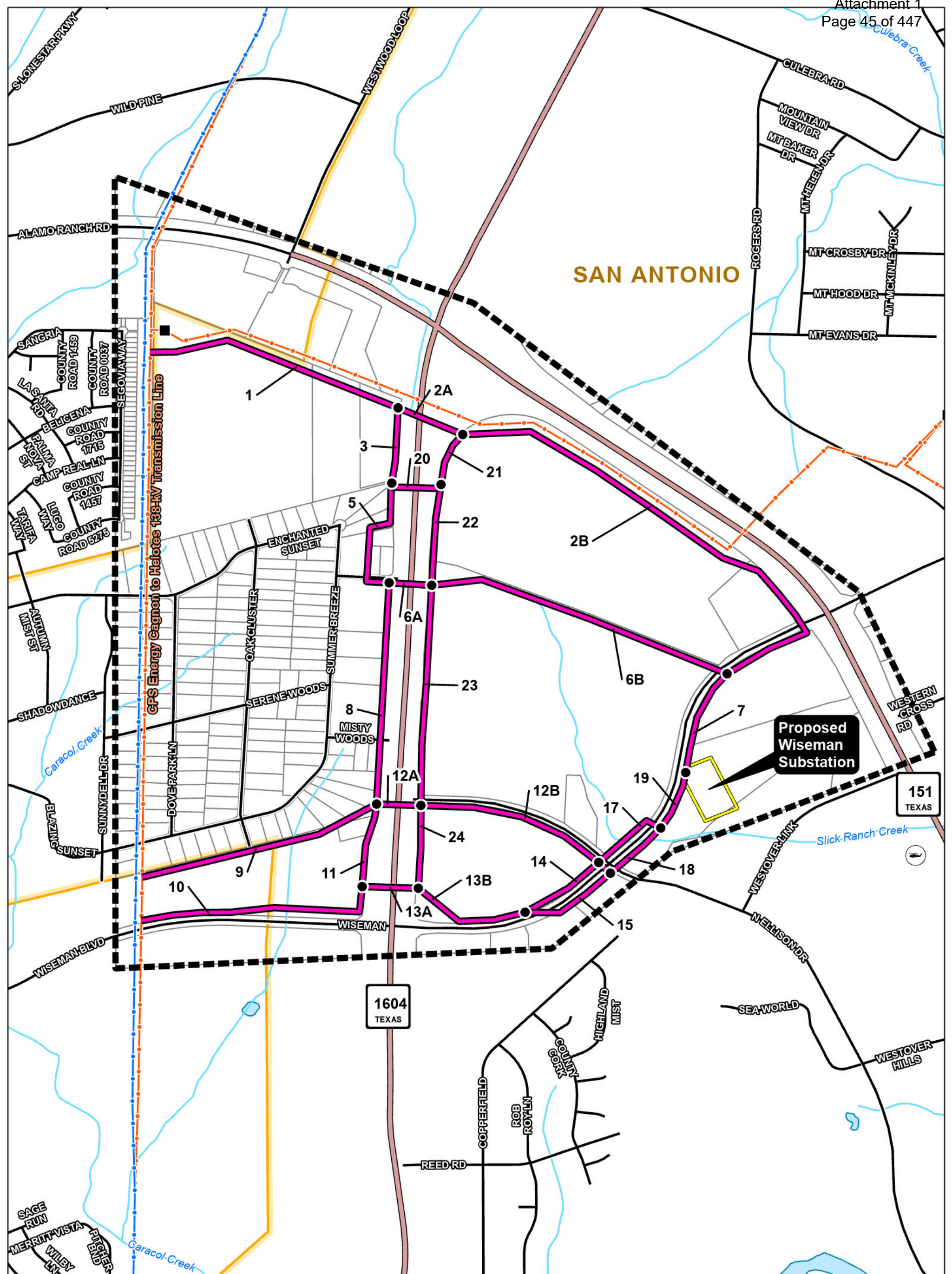
POWER's objective in performing the routing study for the Project was to develop and evaluate numerous primary alternative segments that would form an adequate number of overall reasonable and geographically diverse alternative routes that reflect all of the previously discussed routing considerations.

As noted previously, the study area for this Project is a nearly triangle shaped area approximately 1.7 miles north to south and 1.5 miles east to west and encompasses approximately two square miles in western Bexar County. Following the open house, it was determined that the original study area remained sufficient for development of alternative routes for the Project. Considering the distance to the Project endpoints, the amount of area encompassed, and routing constraints and opportunities (developed areas, active, ongoing development, existing transmission facilities, and current land uses, etc.) the 15 alternative routes evaluated in this EA represent an adequate number of reasonable, viable, geographically varied alternative routes for an approximately one to two mile project.

Environmental/land use criteria data was collected for all of the primary alternative segments that were used to develop the 15 alternative routes. Additionally, potentially directly affected landowners along all of the 26 primary alternative segments (both outside and within the City) will receive formal notification regarding the Project from CPS Energy at the time of the filing of the application with the PUC. Therefore, to the extent necessary, various additional alternative routes could be formulated by different combinations of the primary alternative segments. The 26 primary alternative segments included in the application for consideration by the PUC and subsequently by San Antonio within the City boundaries are depicted on Figure 2-3 and in Appendices D and E. The primary alternative segments comprising each of the 15 alternative routes are presented in Table 2-1.

**TABLE 2-1 PRIMARY ALTERNATIVE ROUTE COMPOSITION AND LENGTH**

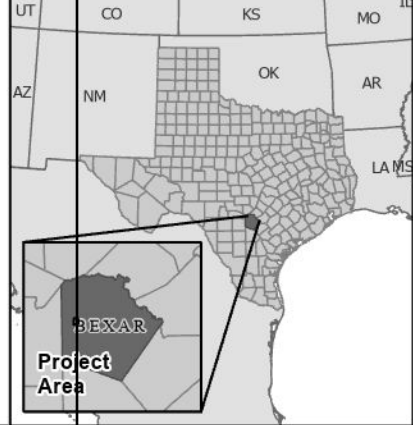
PRIMARY ALTERNATIVE ROUTES	ALTERNATIVE ROUTE SEGMENT COMPOSITION	TOTAL LENGTH IN MILES
A	1-2A-2B-7	1.82
B	1-3-5-6A-6B-7	1.83
C	1-3-5-8-12A-12B-17-19	2.13
D	1-3-5-8-11-13A-13B-14-17-19	2.36
E	9-12A-12B-16-18-19	1.20
F	9-11-13A-13B-14-17-19	1.43
G	10-13A-13B-14-17-19	1.25
H	10-13A-13B-15-18-19	1.24
I	1-3-20-22-23-24-13B-14-17-19	2.28
J	1-3-20-22-23-24-13B-15-18-19	2.28
K	1-3-20-22-23-12B-16-18-19	2.08
L	1-3-20-22-6B-7	1.77
M	1-2A-21-22-6B-7	1.77
N	1-2A-21-22-23-12B-16-18-19	2.07
O	1-2A-21-22-23-24-13B-15-18-19	2.27



- Project Components**
- Study Area
  - Primary Alternative Segment, Node, and Label
  - Project Substation
- Existing Utility Features**
- Existing Substations
  - Existing 138kV Transmission Line
  - Existing 345kV Transmission Line

- State Highway
- FM Road
- County / Local Road
- Heliport

- Surface Waters**
- NHD River / Stream
  - NHD Waterbody
- Administrative Features**
- City Limit
  - Parcel Boundary



CPS ENERGY SAT15  
138 KV TRANSMISSION LINE  
PROJECT  
**FIGURE 2-3**  
**RESULTING PRIMARY SEGMENTS**  
**FOLLOWING THE OPEN**  
**HOUSE MEETING**

0 1,000 2,000  
Feet

Date: 10/17/2023

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## 2.9 Alternative Route Evaluation

In evaluating each of the 15 alternative routes, a variety of environmental criteria were considered. These criteria were selected because of their relevance to public and regulatory environmental concerns associated with the construction of transmission lines in a suburban setting. Many of these criteria are factors addressed by PURA § 37.056(c)(4), 16 TAC § 25.101(b)(3)(B) for granting of a CCN, CPS Energy’s transmission line routing manual, as well as relevant questions in the PUC’s CCN application. The environmental criteria evaluated for this EA are presented in Table 2-2. The 15 alternative routes are shown in relation to environmental and other land use constraints on a USGS topographic based map in Appendix D and in relation to habitable structures and other land use features on an aerial imagery base map in Appendix E, and constitute, for the purposes of this analysis, the alternative routes evaluated in this EA. The analysis of each alternative route involved inventorying and tabulating the number or quantity of each environmental criterion located along each alternative route (e.g., number of habitable structures within 300 feet, length parallel to roads). The number or amount of each factor was determined by POWER using GIS layers, maps, recent aerial photography, and field verification from publicly accessible areas where practical. Potential environmental impacts are addressed in Section 4.0 of this report.

The advantages and disadvantages of each alternative route were then evaluated by POWER. Specifically, POWER conducted an evaluation that was a comparison of 15 alternative routes based upon the measurement of land use, aesthetics, ecology, and cultural resource criteria addressed in Section 4.0. This information was made available to CPS Energy, along with its evaluation of engineering, construction, maintenance, operational factors, and cost to determine CPS Energy’s recommendation of a route that best addresses the requirements of PURA and PUC Substantive Rules.

**TABLE 2-2 LAND USE AND ENVIRONMENTAL EVALUATION CRITERIA**

EVALUATION CRITERIA	
Land Use	
1	Length of alternative route (miles)
2	Number of habitable structures <sup>1</sup> within 300 feet of the route centerline
3	Length of ROW using existing transmission line ROW
4	Length of ROW parallel and adjacent to existing transmission line ROW
5	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)
6	Length of ROW parallel and adjacent to apparent property lines <sup>2</sup> (or other natural or cultural features, etc.)
7	Sum of evaluation criteria 4, 5, and 6
8	Percent of evaluation criteria 4, 5, and 6
9	Length of ROW across parks/recreational areas <sup>3</sup>
10	Number of additional parks/recreational areas <sup>3</sup> within 1,000 feet of ROW centerline
11	Length of ROW across cropland
12	Length of ROW across pasture/rangeland
13	Length of ROW across land irrigated by traveling systems (rolling or pivot type)
14	Length of route across conservation easements and/or mitigation banks (Special Management Area)
15	Length of route across gravel pits, mines, or quarries
16	Length of ROW parallel and adjacent to pipelines <sup>4</sup>
17	Number of pipeline crossings <sup>4</sup>



**TABLE 2-2 LAND USE AND ENVIRONMENTAL EVALUATION CRITERIA**

EVALUATION CRITERIA	
18	Number of transmission line crossings
19	Number of IH, US and state highway crossings
20	Number of FM or RM road crossings
21	Number of FAA registered public/military airports <sup>5</sup> with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline
22	Number of FAA registered public/military airports <sup>5</sup> having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline
23	Number of private airstrips within 10,000 feet of the ROW centerline
24	Number of heliports within 5,000 feet of the ROW centerline
25	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline
26	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
27	Number of identifiable existing water wells within 200 feet of the ROW centerline
28	Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)
Aesthetics	
29	Estimated length of ROW within foreground visual zone <sup>6</sup> of IH, US and state highways
30	Estimated length of ROW within foreground visual zone <sup>6</sup> of FM/RM roads
31	Estimated length of ROW within foreground visual zone <sup>6[7]</sup> of parks/recreational areas <sup>3</sup>
Ecology	
32	Length of ROW through upland woodlands/brushlands
33	Length of ROW through bottomland/riparian woodlands
34	Length of ROW across NWI mapped wetlands
35	Length of ROW across critical habitat of federally listed endangered or threatened species
36	Length of ROW across open water (lakes, ponds)
37	Number of stream and river crossings
38	Length of ROW parallel (within 100 feet) to streams or rivers
39	Length of ROW across Edwards Aquifer Contributing Zone
40	Length of ROW across FEMA mapped 100-year floodplain
Cultural Resources	
41	Number of cemeteries within 1,000 feet of the ROW centerline and substation site
42	Number of recorded cultural resource sites crossed by ROW
43	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline
44	Number of NRHP listed properties crossed by ROW
45	Number of additional NRHP listed properties within 1,000 feet of ROW centerline
46	Length of ROW across areas of high archeological site potential

**Notes:** All length measurements are shown in miles unless noted otherwise.

<sup>1</sup> 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 within 300 feet of the centerline of a transmission project of 230 kV or less.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> Only steel pipelines six inches and greater in diameter carrying petrochemicals were quantified in the pipeline crossing and paralleling calculations.

<sup>5</sup> As listed in the Chart Supplement South Central US (FAA 2023b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.

<sup>6</sup> 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.

<sup>7</sup> 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.

### **3.0 NATURAL RESOURCES/ENVIRONMENTAL INTEGRITY**

#### **3.1 Natural Resources/Environmental Integrity**

Resource inventory data were collected for physiography, geology, soils, surface waters, wetlands, and ecological resource areas. These data were obtained from readily available sources and mapped within the study area utilizing GIS layers. Additional data collection activities consisted of file and record reviews conducted utilizing the various state and federal regulatory agencies, a review of published literature, and review of various maps and aerial photographs. Maps and data layers reviewed include USGS 7.5-minute topographic maps, aerial imagery, BEG Geologic Atlas, NWI maps, TxDOT county highway maps, and county appraisal district land parcel boundary maps.

##### **3.1.1 Physiography and Geology**

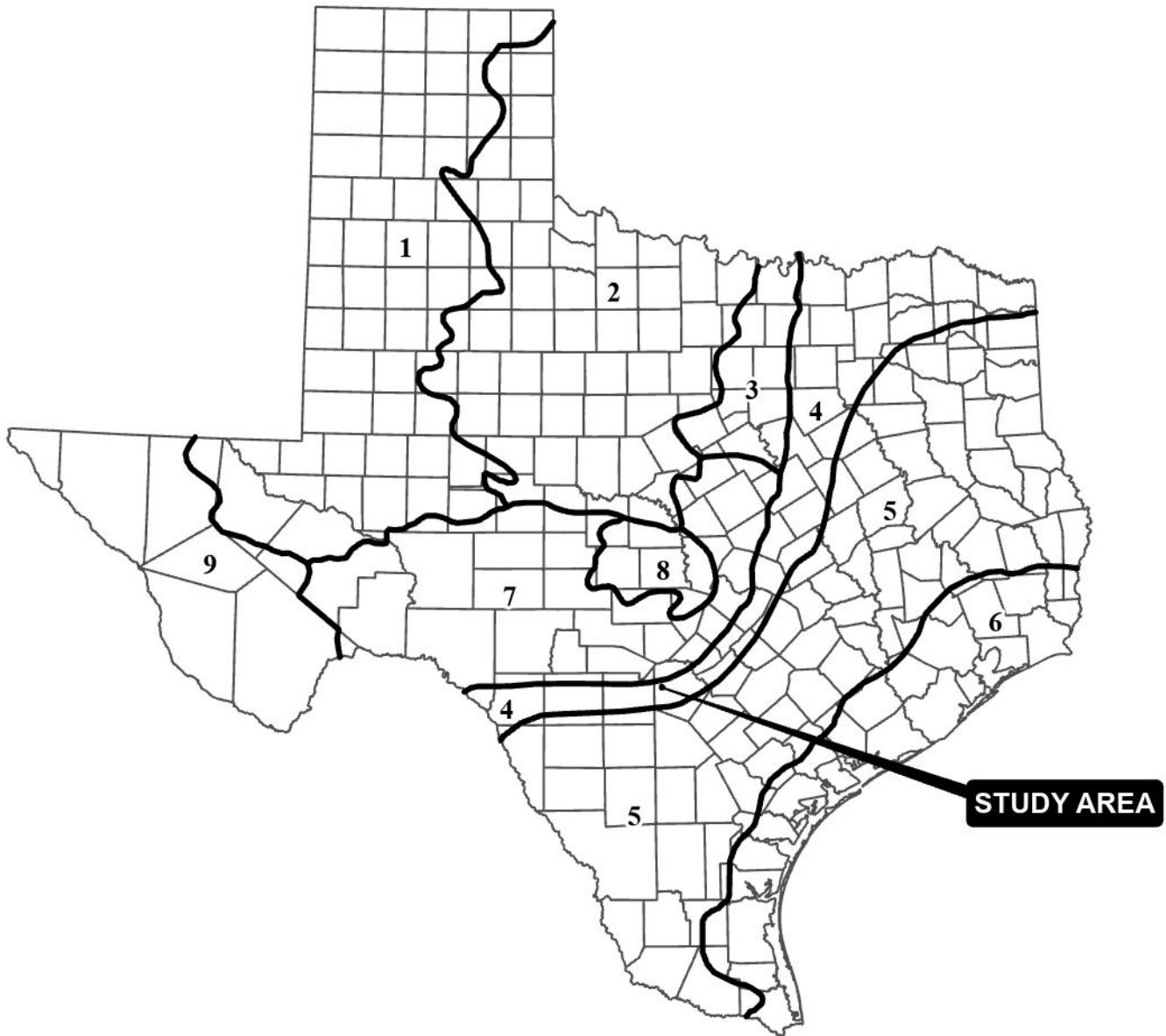
As shown in Figure 3-1, the study area is located within the Blackland Prairies physiographic subprovince (BEG 1996). The Blackland Prairies is generally characterized by a gently rolling terrain over chalk and marl bedrock with elevations ranging between 450 and 1,000 feet amsl (BEG 1996). Elevations within the study area generally decrease from northwest to southeast and range between approximately 900 and 1,005 feet amsl (USGS 2023b).

The BEG (1981) geologic atlas maps were reviewed for geologic formations that occur within the study area. The underlying geologic formation include Austin Chalk (BEG 1981; USGS 2023a). The Austin Chalk unit is comprised of chalk and marl with thickness ranges between 325 to 420 feet (BEG 1981; USGS 2023a).

##### **Significant Geological Features**



Several geological features potentially affecting construction and operation of a transmission line were reviewed within the study area. Geological related issues reviewed include karst areas with known karst/cave locations, fault lines, and subsurface contamination. No faults were identified within the study area (BEG 1981; USGS 2023a).

The geology within the study area is conducive to the formation of karst features and caves due to the dissolution of limestone, creating underground fissures and caverns (Griffith et al. 2007). Because of the limestone geology of the Edwards Plateau, karst features may be common in this region and may occur within the study area (Texas Speleological Survey [TSS] 2007). Review of TSS did not identify any named caves occurring within the study area (TSS 1962). Additional undocumented cave formations or karst features have the potential to occur in the study area.



Source: Texas Bureau of Economic Geology, 1996

**Legend**

-  Physiographic Region Boundary
- 1 High Plains
- 2 North-Central Plains
- 3 Grand Prairie
- 4 Blackland Prairies
- 5 Interior Coastal Plains
- 6 Gulf Coastal Prairies
- 7 Edwards Plateau
- 8 Central Texas Uplift
- 9 Trans-Pecos Basin and Range
-  County Boundary

**CPS ENERGY SAT15  
138 KV TRANSMISSION LINE  
PROJECT**

**FIGURE 3-1**  
LOCATION OF THE STUDY AREA  
IN RELATION TO THE  
PHYSIOGRAPHIC  
REGIONS OF TEXAS



Date: 10/17/2023

Subsurface contamination (soils or groundwater) from previous commercial activities or dumps/landfills may require additional considerations during transmission routing and/or may create a potential hazard during construction activities. Review of the Superfund/National Priority List (USEPA 2023a), Texas’ Index of Superfund sites (TCEQ 2023a and 2023b), and state solid waste facilities data (TCEQ 2023c) did not indicate any superfund or active landfill sites within the study area.

Review of the Railroad Commission of Texas ([RRC] 2023a, 2023b, and 2023c) and BEG (2019) data did not indicate any historical or current coal/uranium mining activities within the study area.

### 3.1.2 Soils

#### **Soil Associations**

Natural Resources Conservation Service (NRCS) Web Soil Survey data was reviewed for Bexar County. Descriptions of soil associations occurring within the study area are summarized in Table 3-1. A soil association is a group of soils defined as a single unit that is geographically associated in a characteristic repeating pattern (NRCS 2023).

**TABLE 3-1 MAPPED SOIL UNITS OCCURRING WITHIN THE STUDY AREA**

SOIL MAP UNIT	LANDFORM	HYDRIC	PRIME FARMLAND
Lewisville silty clay, 1 to 3 percent slopes	Stream terraces	No	All areas are prime farmland
Eckrant cobbly clay, 1 to 8 percent slopes	Ridges	No	Not prime farmland
Eckrant very cobbly clay, 5 to 15 percent slopes	Ridges and blackslopes	No	Not prime farmland

Source: NRCS 2023.

#### **Hydric Soils**

The National Technical Committee for Hydric Soils defines hydric soils as soils formed under conditions of saturation, flooding, or ponding long enough during growing seasons to develop anaerobic conditions in the upper soil horizons. These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support growth and reproduction of hydrophytic vegetation (NRCS 2023).

Map units dominantly comprised of hydric soils might have small inclusions of non-hydric soils in higher areas of the landform. Conversely, map units dominated by non-hydric soils might have small inclusions of hydric soils in lower areas of the landform. According to NRCS (2023) Web Soil Survey data for Bexar County none of the soils mapped within the study area are considered hydric.

### **Prime Farmland**

The Secretary of Agriculture within 7 U.S.C. § 4201 defines prime farmland soils as those soils with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Prime farmlands have the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed with acceptable farming methods. Additional potential prime farmlands contain soils that meet most of the prime farmland requirements but lack the installation of water management facilities or sufficient natural moisture. The United States Department of Agriculture (USDA) would consider these soils prime farmland if such practices were installed. One soil series, Lewisville silty clay, 1 to 3 percent slopes, that occurs within the study area is designated as prime farmland.

Construction of transmission line projects are typically not subject to requirements of the Farmland Protection Policy Act unless they are associated with federal funding. The NRCS responded to POWER's solicitation for information in a letter dated June 7, 2023, stating, "soil erosion is a main concern and erosion prevention practices are recommended. There is some degree of potential soil erosion in the Project area, especially with slopes ranging up to 15 percent. The majority of the soils in the Project area have an indurated bedrock layer within 20 inches of the soil surface." These limitations may require additional consideration in equipment required for construction as well as site selection. We strongly encourage the use of acceptable erosion control methods during the construction of this project" (see Appendix A).

### **3.1.3 Surface Water**

The study area is located within the San Antonio River Basin and within the Medina Sub-Basin (USEPA 2023b). Slick Ranch Creek, two unnamed tributaries to Caracol Creek and one unnamed tributary Culbera Creek occur within the study area (USGS 2023b). Additional unnamed surface waters include two ponds located within the study area. Review of the 2022 Texas Water Development Board (TWDB) State Water Plan and the 2016 Regional Water Plan for South Central Texas did not indicate any proposed surface water developments within the study area (TWDB 2022; South Central Texas Regional Water Planning Group 2022).

### **Special Status Waters**

Under 31 TAC § 357.43 and 31 TAC § 358.2, TPWD has designated Ecologically Significant Stream Segments (ESSS) based on habitat value, threatened and endangered species, species diversity, and aesthetic value criteria (TPWD 2023a). No designated ESSS were identified within the study area (TPWD 2023a).

In accordance with Section 303(d) and 304(a) of the CWA, the TCEQ identifies surface waters for which effluent limitations are not stringent enough to meet water quality standards and for which the associated pollutants are suitable for measurement by total maximum daily load. Review of TCEQ's (2022) Texas Integrated Report of

Surface Water Quality does not indicate any surface waters within the study area that do not meet their water quality standards.

### **3.1.4 Groundwater**

The study area is located within the Edwards Aquifer Artesian Zone (Edwards Aquifer Authority [EAA] 2023a) and District 6 and 7 of the EAA (2023b) jurisdictional area. The EAA has regulatory jurisdiction in Bexar County and authorizes groundwater withdrawals for municipal, industrial, and irrigation purposes. The study area is not located within a Subchapter Regulated Area as defined by the EAA Rules (2019). Due to the study area's location occurring outside the Edwards Aquifer Recharge, Transition, and Contributing Zones, the proposed Project does not need to be reviewed by the TCEQ (2020) Edwards Aquifer Protection Program prior to the start of construction.

The major ground water aquifers mapped within the study area include the Edwards Balcones Fault Zone (subcrop) and Trinity (subcrop) aquifers. The Trinity Aquifer consists primarily of limestone, sand, clay, gravel, and various conglomerates. The average freshwater saturated thickness is approximately 1,900 feet with total dissolved solids, sulfates, and chloride increasing with the depth of the aquifer (TWDB 2011). The Edwards-Balcones Aquifer average thickness fluctuates between 200 and 600 feet with an average saturated thickness of over 560 feet. Water quality ranges from fresh to slightly saline, with salinity typically increasing westward within the Trinity Group (TWDB 2011). Other ground water resources include numerous domestic and public supply water wells (TWDB 2023a and 1975).

### **3.1.5 Floodplains**

FEMA's Flood Insurance Rate Maps and National Flood Hazard Layer were reviewed for the study area. The 100-year floodplains are primarily associated with Slick Ranch Creek and two unnamed tributaries to Caracol Creek. The 100-year flood (1.0 percent flood or base flood) represents a flood event that has a 1.0 percent chance of being equaled or exceeded for any given year (FEMA 2023).

### **3.1.6 Wetlands**

NWI mapped wetland data are based on topography and interpretation of infrared satellite data and color aerial photographs and are classified under the Cowardin Classification System (Cowardin et al. 1979). No NWI mapped wetlands were identified within the study area (USFWS 2023a).

### **3.1.7 Coastal Management Program**

The PUC must comply with Coastal Management Program (CMP) policies when approving CCNs for electric transmission lines that are located within the Coastal Management Zone (CMZ) under the Coastal Zone

Management Act of 1972. The study area is not located within the CMZ boundary as defined in 31 TAC § 503.1 and this excludes the Project from CMP conditions.

### **3.1.8 Vegetation**

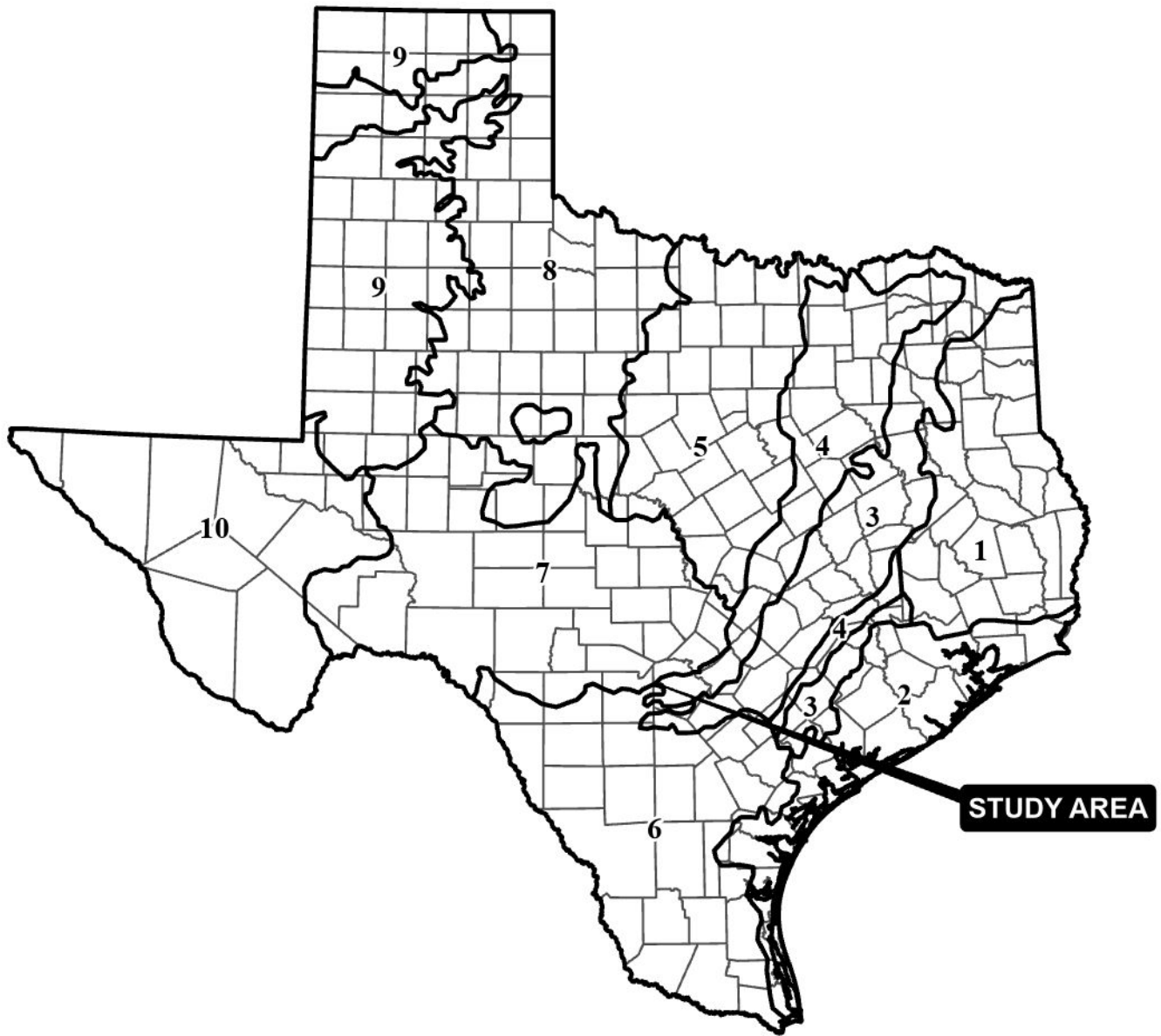
Data and information on ecological resources within the study area were obtained from a variety of sources, including aerial photograph interpretation, field reconnaissance surveys, correspondence with the USFWS, TPWD, and published literature and technical reports. All biological resource data for the study area was mapped utilizing GIS.

#### **Ecological Region**

The study area is located within the USEPA Edwards Plateau Level III Ecoregion and within the Balcones Canyonlands Level IV Ecoregion (Griffith et al. 2007). As shown in Figure 3-2, the study area is located within the Edwards Plateau Vegetational Area (Gould et al. 1960). A general description of the historical climax vegetation community of the Balcones Canyonlands ecoregion is included below. For the vegetation community, plant species composition and density are dependent on location, hydrology, soils, and disturbance history or land management activities.

#### **Balcones Canyonlands Ecoregion**

The Balcones Canyonland Ecoregion forms the southern border of the Edwards Plateau and is distinctly unique due to the extent of the escarpments. This region is highly dissected by streams, springs, and rivers, and serves as an important recharge zone for the Edwards Aquifer. Plant communities vary in the Balcones Canyonlands and occur along soil and moisture gradients, from evergreen woodlands on slopes, to deciduous north-slope forest, to mesic riparian forest. Sheltered canyons support slippery elm (*Ulmus rubra*), Ohio buckeye (*Aesculus glabra*), boxelder (*Acer negundo*), bigtooth maple (*Acer grandidentatum*), Carolina basswood (*Tilia americana*), and escarpment black cherry (*Prunus serotina* var. *exima*). Relict species such as baldcypress (*Taxodium distichum*) and black willow (*Salix nigra*) may also occur along major streams. Westward canyons support more arid species such as Ashe juniper (*Juniperus asheii*), sumac (*Rhus* spp.), Texas sotol (*Dasyilirion texanum*), acacia (*Acacia* spp.), honey mesquite (*Prosopis glandulosa*), and cenizo (*Leucophyllum frutescens*). Oak savannas composed of Texas live oak (*Quercus fusiformis*), Texas oak (*Quercus buckleyi*), ashe juniper, cedar elm (*Ulmus crassifolia*), and escarpment black cherry occur on ridgetops and benches between canyons and drainages. With the cessation of wildfires in recent times, Ashe juniper has invaded much of the oak savanna, but where these grasslands still persist species such as threeawns (*Aristida* spp.) and grammas (*Bouteloua* ssp.) are dominant (Griffith et al. 2007).





**STUDY AREA**



Source: Gould, et. al., 1960.

**Legend**

-  Vegetational Areas Boundary
- 1 Pinewoods
- 2 Gulf Prairies and Marshes
- 3 Post Oak Savannah
- 4 Blackland Prairies
- 5 Cross Timbers and Prairies
- 6 South Texas Plains
- 7 Edwards Plateau
- 8 Rolling Plains
- 9 High Plains
- 10 Trans-Pecos
-  County Boundary

**CPS ENERGY SAT15  
138 KV TRANSMISSION LINE  
PROJECT**

**FIGURE 3-2**

LOCATION OF THE STUDY AREA  
IN RELATION TO THE  
VEGETATIONAL  
AREAS OF TEXAS



Date: 10/17/2023



Using the TPWD Texas Ecosystem Analytical Mapper, numerous ecological systems were identified as potentially occurring within the study area. These ecological systems include Urban Low Intensity, Urban High Intensity, Barren, Blackland Prairie: Disturbance or Tame Grassland, Edwards Plateau: Live Oak Motte and Woodland, Edwards Plateau: Oak – Hardwood Motte and Woodland, Edwards Plateau: Ashe Juniper – Live Oak Shrubland, Edwards Plateau: Ashe Juniper Motte and Woodland, Edwards Plateau: Deciduous Oak / Evergreen Motte and Woodland, Edwards Plateau: Savanna Grassland, and Edwards Plateau: Shin Oak Shrubland (TPWD 2023d).

#### *Urban Low Intensity*

Urban Low Intensity ecological type is defined as areas that are built-up but not entirely covered impervious cover (TPWD 2023d).

#### *Urban High Intensity*

Urban High Intensity vegetation community type is defined as built-up areas that are dominated by impervious cover (TPWD 2023d).

#### *Barren*

Barren is defined as areas that have little-to-no vegetational cover (TPWD 2023d).

#### *Blackland Prairie: Disturbance or Tame Grassland*

Blackland Prairie: Disturbance or Tame Grassland vegetation community type is dominated by Bermuda grass (*Cynodon dactylon*), kleingrass (*Panicum coloratum*), King Ranch bluestem (*Bothriochloa ischaemum* var. *songarica*), Johnsongrass (*Sorghum halepense*), western ragweed (*Ambrosia psilostachya*), and common broomweed (*Amphiachyris dracunculoides*) (TPWD 2023d).

#### *Edwards Plateau: Live Oak Motte and Woodland*

Edwards Plateau: Live Oak Motte and Woodlands species include Texas live oak or Ashe juniper dominating the overstory with cedar elm, common hackberry (*Celtis occidentalis*), sandpaper oak (*Quercus vaseyana*), honey mesquite, Texas persimmon (*Diospyros texana*), and algerita (*Mahonia trifoliolata*) being common components (TPWD 2023d).

#### *Edwards Plateau: Oak – Hardwood Motte and Woodland*

Edwards Plateau: Oak – Hardwood Motte and Woodland dominate canopy species include Texas oak, cedar elm, common hackberry, post oak (*Quercus stellata*), sandpaper oak, or pecan (*Carya illinoensis*). Dominate

understory components of this ecological type include prairie sumac (*Rhus lanceolata*), Texas persimmon, sandpaper oak, and stretchberry (*Forestiera pubescens*) (TPWD 2023d).

*Edwards Plateau: Ashe Juniper-Live Oak Shrubland*

Edwards Plateau: Ashe Juniper-Live Oak Shrubland species composition is dominated by Ashe juniper, Texas live oak, sandpaper oak, bastard oak (*Quercus sinuata* var. *breviloba*), algerita, Texas persimmon, Texas mountain-laurel (*Dermatophyllum secundiflorum*), honey mesquite, and cactus apple (*Opuntia engelmannii*) (TPWD 2023d).

*Edwards Plateau: Ashe Juniper Motte and Woodland*

Edwards Plateau: Ashe Juniper Motte and Woodland vegetation community dominate species include Ashe juniper, Texas live oak, Lacey oak (*Quercus laceyi*), bastard oak, algerita, and Texas persimmon (TPWD 2023d).

*Edwards Plateau: Deciduous Oak/Evergreen Motte and Woodland*

Edwards Plateau: Deciduous Oak/Evergreen Motte and Woodland vegetation community dominate species include Texas live oak, bastard oak, Lacey oak, Texas red oak (*Quercus buckleyi*), Ashe juniper, cedar elm, common hackberry, Texas persimmon, Texas mountain laurel, algerita, and honey mesquite (TPWD 2023d).

*Edwards Plateau: Savanna Grassland*

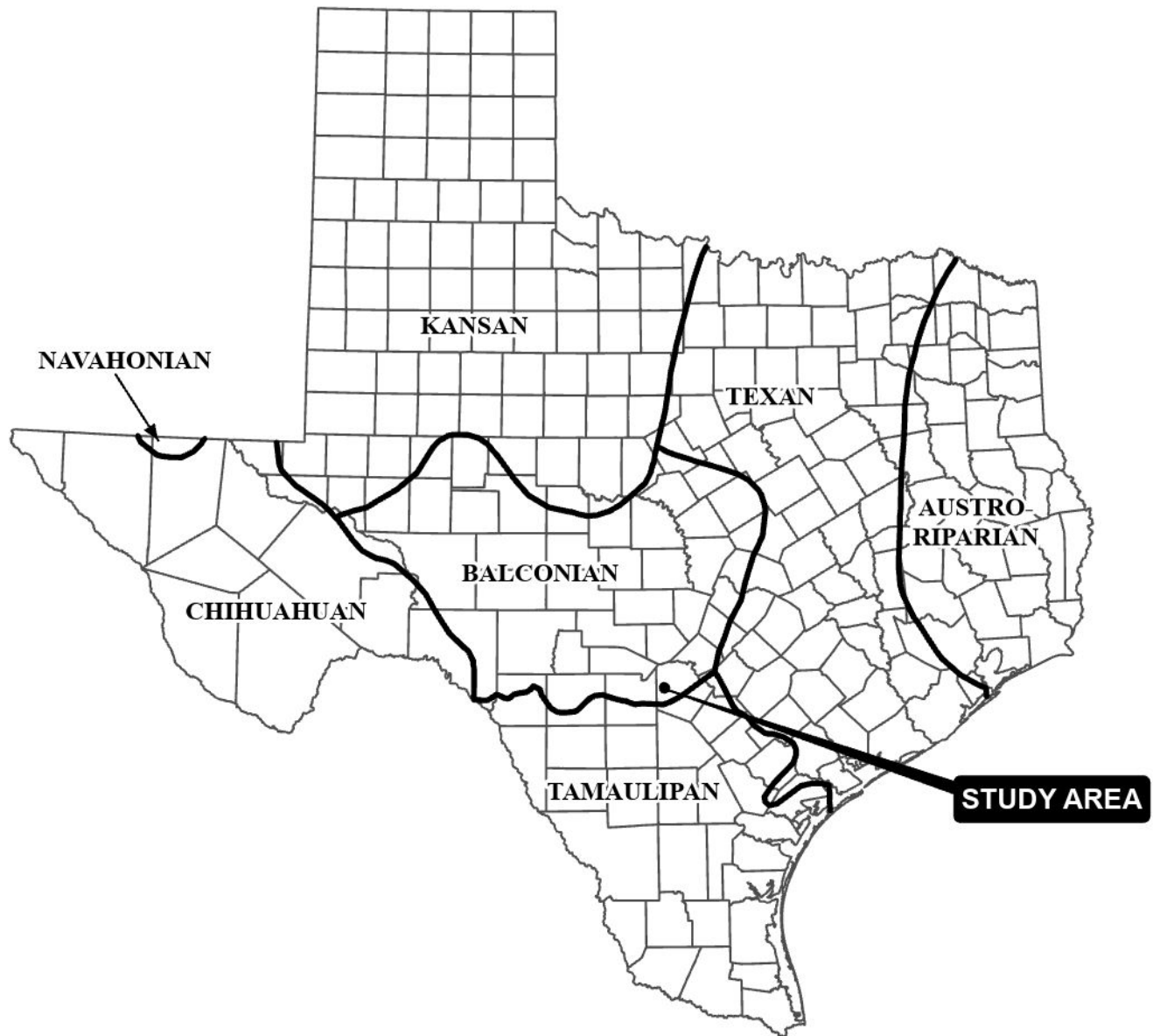
Edwards Plateau: Savanna Grassland vegetation community dominate species include yellow bluestem (*Bothriochloa ischaemum*), Bermudagrass, little bluestem (*Schizachyrium scoparium*), sideoats grama (*Bouteloua curtipendula*), silver bluestem (*Bothriochloa saccharoides*), Texas wintergrass (*Nassella leucotricha*). Scattered trees and shrubs are common within this vegetation community and include Texas live oak, Ashe juniper, honey mesquite, algerita, and cedar elm (TPWD 2023d).

*Edwards Plateau: Shin Oak Shrubland*

Edwards Plateau: Shin Oak Shrubland vegetation community dominate species include honey mesquite, sandpaper oak, bastard oak, algerita, Texas persimmon, Texas live oak, Ashe juniper, cactus apple, Texas wintergrass, sideoats grama, and little bluestem (TPWD 2023d).

### **3.1.9 Wildlife**

The study area occurs within the Balconian Biotic Province (see Figure 3-3) as described by Blair (Blair 1950). The Balconian province's faunal composition is characterized as an intermixed representation of Austroriparian, Tamaulpian, Chihuahuan, and Kansan province species. The following sections list species that may occur in and represent the faunal diversity of the study area today.



Source: Blair, 1950, modified

**Legend**

- Biotic Province Boundary
- County Boundary

**CPS ENERGY SAT15  
138 KV TRANSMISSION LINE  
PROJECT**

**FIGURE 3-3**

LOCATION OF THE STUDY AREA  
IN RELATION TO THE  
BIOTIC PROVINCES  
OF TEXAS



Date: 10/17/2023

**Amphibians**

Amphibian species (frogs, toads, and salamanders) that may occur within the study area are listed in Table 3-2. The likelihood for occurrence of each species within the study areas will depend upon suitable habitat. Frogs and toads may occur in all vegetation types, while salamanders are typically restricted to hydric habitats (Tipton et al. 2012).

**TABLE 3-2 AMPHIBIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME
<b>Frogs/Toads</b>	
American bullfrog	<i>Lithobates catesbeianus</i>
Barking frog	<i>Eleutherodactylus augusti</i>
Blanchard's cricket frog	<i>Acris blanchardi</i>
Cliff chirping frog	<i>Eleutherodactylus marnokii</i>
Cope's gray treefrog	<i>Hyla chrysoscelis</i>
Couch's spadefoot	<i>Scaphiopus couchi</i>
Eastern green toad	<i>Anaxyrus debilis</i>
Gray treefrog	<i>Hyla versicolor</i>
Green treefrog	<i>Hyla cinerea</i>
Gulf Coast toad	<i>Incilius nebulifer</i>
Hurter's spadefoot	<i>Scaphiopus hurterii</i>
Red-spotted toad	<i>Anaxyrus punctatus</i>
Rio Grande chirping frog	<i>Eleutherodactylus cystignathoides</i>
Rio Grande leopard frog	<i>Lithobates berlandieri</i>
Rocky Mountain toad	<i>Anaxyrus woodhousii</i>
Southern leopard frog	<i>Lithobates sphenoccephala</i>
Spotted chorus frog	<i>Pseudacris clarkii</i>
Strecker's chorus frog	<i>Pseudacris streckeri</i>
Texas toad	<i>Anaxyrus speciosus</i>
Western narrow-mouthed toad	<i>Gastrophryne olivacea</i>
<b>Salamanders</b>	
Black-spotted newt	<i>Notophthalmus meridionalis</i>
Comal blind salamander	<i>Eurycea tridentifera</i>
Small-mouthed salamander	<i>Ambystoma texanum</i>
Tiger salamander	<i>Ambystoma tigrinum</i>
Western slimy salamander	<i>Plethodon albagula</i>

Source: Dixon 2013.

**Reptiles**

Reptiles (turtles, lizards and snakes) that may occur in the study area are listed in Table 3-3. The likelihood for occurrence of each species within the study areas will depend upon suitable habitat. These include those species that are more commonly observed near water (e.g., aquatic turtles) and those that are more common in terrestrial habitats (Dixon 2013).

**TABLE 3-3 REPTILIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME
<b>Turtles</b>	
Cagle's map turtle	<i>Graptemys caglei</i>
Eastern box turtle	<i>Terrapene carolina</i>
Eastern mud turtle	<i>Kinosternon subrubrum</i>
Eastern musk turtle	<i>Sternotherus odoratus</i>
Guadalupe spiny softshell	<i>Apalone spinifera guadalupensis</i>
Ornate box turtle	<i>Terrapene ornata ornata</i>
Pond slider	<i>Trachemys scripta</i>
Snapping turtle	<i>Chelydra serpentina</i>
Texas cooter	<i>Pseudemys texana</i>
Texas tortoise	<i>Gopherus berlandieri</i>
Yellow mud turtle	<i>Kinosternon flavescens</i>
<b>Lizards</b>	
Brown anole	<i>Anolis sagrei</i>
Common spotted whiptail	<i>Cnemidophorus gularis</i>
Crevice spiny lizard	<i>Sceloporus poinsettii</i>
Eastern collared lizard	<i>Crotaphytus collaris collaris</i>
Eastern six-lined racerunner	<i>Cnemidophorus sexlineata sexlineata</i>
Great Plains skink	<i>Plestiodon obsoletus</i>
Green anole	<i>Anolis carolinensis</i>
Keeled earless lizard	<i>Holbrookia propinqua</i>
Little brown skink	<i>Scincella lateralis</i>
Mediterranean gecko	<i>Hemidactylus turcicus</i>
Prairie lizard	<i>Sceloporus consobrinus</i>
Prairie skink	<i>Plestiodon septentrionalis</i>
Rose-bellied lizard	<i>Sceloporus variabilis</i>
Short-lined skink	<i>Plestiodon tetragrammus brevilineatus</i>
Slender glass lizard	<i>Ophisaurus attenuatus</i>
Southern spot-tailed earless lizard	<i>Holbrookia lacerata subcaudalis</i>
Texas alligator lizard	<i>Gerrhonotus infernalis</i>
Texas banded gecko	<i>Coleonyx brevis</i>
Texas greater earless lizard	<i>Cophosarus texanus texanus</i>
Texas horned lizard	<i>Phrynosoma cornutum</i>
Texas spiny lizard	<i>Sceloporus olivaceus</i>

**TABLE 3-3 REPTILIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME
Texas tree lizard	<i>Urosaurus ornatus ornatus</i>
<b>Snakes</b>	
Black-tailed rattlesnake	<i>Crotalus molossus</i>
Broad-banded copperhead	<i>Agkistrodon contortrix laticinctus</i>
Bullsnake	<i>Pituophis catenifer sayi</i>
Central American indigo snake	<i>Drymarchon melanurus</i>
Checkered garter snake	<i>Thamnophis marcianus</i>
Chihuahuan night snake	<i>Hypsiglena jani</i>
Cottonmouth	<i>Agkistrodon piscivorus</i>
Desert kingsnake	<i>Lampropeltis getula splendida</i>
Diamond-backed watersnake	<i>Nerodia rhombifer</i>
Eastern black-necked garter snake	<i>Thamnophis cyrtopsis ocellatus</i>
Eastern hog-nosed snake	<i>Heterodon platirhinos</i>
Eastern rat snake	<i>Pantherophis obsoletus</i>
Eastern yellow-bellied racer	<i>Coluber constrictor flaviventris</i>
Flat-headed snake	<i>Tantilla gracilis</i>
Graham's crayfish snake	<i>Regina grahamii</i>
Long-nosed snake	<i>Rhinocheilus lecontei</i>
Mexican milksnake	<i>Lampropeltis triangulum annulate</i>
Plain-bellied watersnake	<i>Nerodia erythrogaster</i>
Plains black-headed snake	<i>Tantilla nigriceps</i>
Plains hog-nosed snake	<i>Heterodon nasicus</i>
Prairie kingsnake	<i>Lampropeltis calligaster</i>
Prairie ring-necked snake	<i>Diadophis punctatus arnyi</i>
Rough earthsnake	<i>Virginia striatula</i>
Rough green snake	<i>Opheodrys aestivus</i>
Schott's whipsnake	<i>Masticophis schotti</i>
Smooth earthsnake	<i>Virginia valeriae</i>
Southwestern rat snake	<i>Pantherophis emoryi meahllorum</i>
Striped whipsnake	<i>Masticophis taeniatus</i>
Texas brown snake	<i>Storeria dekayi texana</i>
Texas coral snake	<i>Micrurus tener</i>
Texas garter snake	<i>Thamnophis sirtalis annectens</i>
Texas glossy snake	<i>Arizona elegans Arenicola</i>
Texas lined snake	<i>Tropidoclonion lineatum texanum</i>
Texas patch-nosed snake	<i>Salvadora grahamiae lineata</i>
Texas thread snake	<i>Rena dulcis</i>
Timber rattlesnake	<i>Crotalus horridus</i>
Western coachwhip	<i>Masticophis flagellum</i>
Western diamond-backed rattlesnake	<i>Crotalus atrox</i>
Western ground snake	<i>Sonora semiannulata</i>
Western ribbon snake	<i>Thamnophis Proximus</i>

Source: Dixon 2013.

## **Birds**

Texas Ornithological Society (Lockwood and Freeman 2014) data and TPWD ecoregion specific avian check lists (Lockwood 2008) were reviewed for species distribution and life history information. Avian species potentially occurring within the study area include year-round residents and summer, and/or winter migrants as shown in Table 3-4. Additional transient bird species may migrate within or through the study area in the spring and fall and/or use the area to nest (spring/summer) or overwinter. The likelihood for the occurrence of each species depends upon availability of suitable habitat and season. Migratory bird species that are native to the United States or its territories are protected under the MBTA.

**TABLE 3-4 AVIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME	RESIDENT	SUMMER	WINTER
<b>Accipitriformes: Accipitridae</b>				
Cooper's hawk	<i>Accipiter cooperii</i>		X	X
Northern harrier	<i>Circus cyaneus</i>			X
Red-shouldered hawk	<i>Buteo lineatus</i>	X		
Red-tailed hawk	<i>Buteo jamaicensis</i>	X		
Sharp-shinned hawk	<i>Accipiter striatus</i>			X
Swainson's hawk	<i>Buteo swainsoni</i>		X	X
Zone-tailed hawk	<i>Buteo albonotatus</i>		X	
<b>Accipitriformes: Cathartidae</b>				
Black vulture	<i>Coragyps atratus</i>	X		
Turkey vulture	<i>Cathartes aura</i>	X		
<b>Apodiformes: Apodidae</b>				
Chimney Swift	<i>Chaetura pelagica</i>		X	
<b>Apodiformes: Trochilidae</b>				
Black-chinned hummingbird	<i>Archilochus alexandri</i>		X	
Buff-bellied hummingbird	<i>Amazilia yucatanensis</i>		X	
Ruby-throated hummingbird	<i>Archilochus colubris</i>		X	
Rufous hummingbird	<i>Selasphorus rufus</i>			X
<b>Caprimulgiformes: Caprimulgidae</b>				
Common nighthawk	<i>Chordeiles minor</i>		X	
Common poorwill	<i>Phalaenoptilus nuttallii</i>		X	
<b>Charadriiformes: Charadriidae</b>				
Killdeer	<i>Charadrius vociferus</i>	X		
<b>Columbiformes: Columbidae</b>				
Eurasian collared-dove	<i>Streptopelia decaocto</i>	X		
Inca dove	<i>Columbina inca</i>	X		
Mourning dove	<i>Zenaida macroura</i>	X		
Rock pigeon	<i>Columba livia</i>	X		
White-winged dove	<i>Zenaida asiatica</i>	X		
<b>Coraciiformes: Alcedinidae</b>				
Belted kingfisher	<i>Megasceryle alcyon</i>			X
Green kingfisher	<i>Chloroceryle americana</i>	X		
<b>Cuculiformes: Cuculidae</b>				
Greater roadrunner	<i>Geococcyx californianus</i>	X		

**TABLE 3-4 AVIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME	RESIDENT	SUMMER	WINTER
Yellow-billed cuckoo	<i>Coccyzus americanus</i>		X	
<b>Falconiformes: Falconidae</b>				
American kestrel	<i>Falco sparverius</i>			X
Crested caracara	<i>Caracara cheriway</i>	X		
<b>Passeriformes: Bombycillidae</b>				
Cedar waxwing	<i>Bombycilla cedrorum</i>			X
<b>Passeriformes: Cardinalidae</b>				
Blue grosbeak	<i>Passerina caerulea</i>		X	
Dickcissel	<i>Spiza americana</i>		X	
Indigo bunting	<i>Passerina cyanea</i>		X	
Northern cardinal	<i>Cardinalis cardinalis</i>	X		
Painted bunting	<i>Passerina ciris</i>		X	
Summer tanager	<i>Piranga rubra</i>		X	
<b>Passeriformes: Corvidae</b>				
American crow	<i>Corvus brachyrhynchos</i>			X
Blue jay	<i>Cyanocitta cristata</i>	X		
Common raven	<i>Corvus corax</i>	X		
<b>Passeriformes: Emberizidae</b>				
Cassin's sparrow	<i>Peucaea cassinii</i>	X		
Chipping sparrow	<i>Spizella passerina</i>	X		
Clay-colored sparrow	<i>Spizella pallida</i>			X
Dark-eyed junco	<i>Junco hyemalis</i>			X
Eastern towhee	<i>Pipilo erythrophthalmus</i>			X
Field sparrow	<i>Spizella pusilla</i>	X		
Grasshopper sparrow	<i>Ammodramus savannarum</i>		X	
Harris's sparrow	<i>Zonotrichia querula</i>			X
Lark bunting	<i>Calamospiza melanocorys</i>			X
Lark sparrow	<i>Chondestes grammacus</i>		X	
Lincoln's sparrow	<i>Melospiza lincolni</i>			X
Savannah sparrow	<i>Passerculus sandwichensis</i>			X
Song sparrow	<i>Melospiza melodia</i>	X		X
Spotted towhee	<i>Pipilo maculatus</i>			X
Vesper sparrow	<i>Pooecetes gramineus</i>			X
White-crowned sparrow	<i>Zonotrichia leucophrys</i>			X
White-throated sparrow	<i>Zonotrichia albicollis</i>			X
<b>Passeriformes: Fringillidae</b>				
American goldfinch	<i>Spinus tristis</i>			X
House finch	<i>Haemorhous mexicanus</i>	X		
Lesser goldfinch	<i>Spinus psaltria</i>		X	
Pine siskin	<i>Spinus pinus</i>			X
<b>Passeriformes: Hirundinidae</b>				
Bank swallow	<i>Riparia riparia</i>			X
Barn swallow	<i>Hirundo rustica</i>		X	
Cave swallow	<i>Petrochelidon fulva</i>		X	
Cliff swallow	<i>Petrochelidon pyrrhonota</i>		X	
Purple martin	<i>Progne subis</i>		X	
Tree swallow	<i>Tachycineta bicolor</i>		X	



**TABLE 3-4 AVIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME	RESIDENT	SUMMER	WINTER
<b>Passeriformes: Icteridae</b>				
Baltimore oriole	<i>Icterus galbula</i>		X	X
Brown-headed cowbird	<i>Molothrus ater</i>	X		
Bullock's oriole	<i>Icterus bullockii</i>		X	
Common grackle	<i>Quiscalus quiscula</i>	X		
Eastern meadowlark	<i>Sturnella magna</i>	X		
Great-tailed grackle	<i>Quiscalus mexicanus</i>	X		
Orchard oriole	<i>Icterus spurius</i>		X	
Red-winged blackbird	<i>Agelaius phoeniceus</i>	X		
<b>Passeriformes: Laniidae</b>				
Loggerhead shrike	<i>Lanius ludovicianus</i>	X		X
<b>Passeriformes: Mimidae</b>				
Gray catbird	<i>Dumetella carolinensis</i>			X
Long-billed thrasher	<i>Toxostoma longirostre</i>	X		
Northern mockingbird	<i>Mimus polyglottos</i>	X		
<b>Passeriformes: Motacillidae</b>				
American pipit	<i>Anthus rubescens</i>			X
<b>Passeriformes: Paridae</b>				
Black-crested titmouse	<i>Baeolophus atricristatus</i>	X		
Carolina chickadee	<i>Poecile carolinensis</i>	X		
<b>Passeriformes: Parulidae</b>				
Black-and-white warbler	<i>Mniotilta varia</i>		X	
Black-throated green warbler	<i>Setophaga virens</i>		X	
Canada warbler	<i>Cardellina canadensis</i>			X
Common yellowthroat	<i>Geothlypis trichas</i>			X
Hooded warbler	<i>Setophaga citrina</i>		X	
Magnolia warbler	<i>Setophaga magnolia</i>			X
Mourning warbler	<i>Geothlypis philadelphia</i>			X
Northern parula	<i>Setophaga americana</i>		X	
Orange-crowned warbler	<i>Oreothlypis celata</i>			X
Pine warbler	<i>Setophaga pinus</i>			X
Tennessee warbler	<i>Oreothlypis peregrina</i>			X
Wilson's warbler	<i>Cardellina pusilla</i>			X
Yellow warbler	<i>Setophaga petechia</i>			X
Yellow-rumped warbler	<i>Setophaga coronata</i>			X
<b>Passeriformes: Passeridae</b>				
House sparrow	<i>Passer domesticus</i>	X		
<b>Passeriformes: Polioptilidae</b>				
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>		X	
<b>Passeriformes: Regulidae</b>				
Golden-crowned kinglet	<i>Regulus satropa</i>			X
Ruby-crowned kinglet	<i>Regulus calendula</i>			X
<b>Passeriformes: Remizidae</b>				
Verdin	<i>Auriparus flaviceps</i>	X		
<b>PASSERIFORMES: Sturnidae</b>				
European starling	<i>Sturnus vulgaris</i>	X		

**TABLE 3-4 AVIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME	RESIDENT	SUMMER	WINTER
<b>Passeriformes: Troglodytidae</b>				
Bewick's wren	<i>Thryomanes bewickii</i>	X		
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	X		
Carolina wren	<i>Thryothorus ludovicianus</i>	X		
House wren	<i>Troglodytes aedon</i>			X
Winter wren	<i>Troglodytes hiemalis</i>			X
<b>Passeriformes: Turdidae</b>				
American robin	<i>Turdus migratorius</i>		X	
Eastern bluebird	<i>Sialia sialis</i>	X		
Swainson's thrush	<i>Catharus ustulatus</i>		X	
<b>Passeriformes: Tyrannidae</b>				
Brown-crested flycatcher	<i>Myiarchus tyrannulus</i>		X	
Eastern phoebe	<i>Sayornis phoebe</i>		X	
Eastern wood-pewee	<i>Contopus virens</i>		X	
Great crested flycatcher	<i>Myiarchus crinitus</i>		X	
Least flycatcher	<i>Empidonax minimus</i>		X	
Say's phoebe	<i>Sayornis saya</i>			X
Scissor-tailed flycatcher	<i>Tyrannus forficatus</i>		X	
Vermilion flycatcher	<i>Pyrocephalus rubinus</i>		X	
Western kingbird	<i>Tyrannus verticalis</i>		X	
<b>Passeriformes: Vireonidae</b>				
Bell's vireo	<i>Vireo bellii</i>		X	
Blue-headed vireo	<i>Vireo solitarius</i>			X
Hutton's vireo	<i>Vireo huttoni</i>		X	X
Warbling vireo	<i>Vireo gilvus</i>		X	
White-eyed vireo	<i>Vireo griseus</i>		X	
Yellow-throated vireo	<i>Vireo flavifrons</i>		X	
<b>Pelecaniformes: Ardeidae</b>				
Great blue heron	<i>Ardea herodias</i>	X		
Great egret	<i>Ardea alba</i>		X	
<b>Piciformes: Picidae</b>				
Downy woodpecker	<i>Picoides pubescens</i>			X
Golden-fronted woodpecker	<i>Melanerpes aurifrons</i>	X		
Ladder-backed woodpecker	<i>Picoides scalaris</i>	X		
Northern flicker	<i>Colaptes auratus</i>			X
Yellow-bellied sapsucker	<i>Sphyrapicus varius</i>			X
<b>Strigiformes: Strigidae</b>				
Barn owl	<i>Tyto alba</i>	X		
Barred owl	<i>Strix varia</i>	X		
Great horned owl	<i>Bubo virginianus</i>	X		

Source: Lockwood 2008; Lockwood and Freeman 2014

**Mammals**

Mammals that may occur in the study area are listed in Table 3-5. The likelihood for occurrence of each species within the study areas will depend upon suitable habitat.

**TABLE 3-5 MAMMALIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME
<b>Mammals</b>	
American badger	<i>Taxidea taxus</i>
American beaver	<i>Castor canadensis</i>
American perimyotis	<i>Perimyotis subflavus</i>
Attwater's pocket gopher	<i>Geomys attwateri</i>
Big brown bat	<i>Eptesicus fuscus</i>
Big free-tailed bat	<i>Nyctinomops macrotis</i>
Black rat	<i>Rattus rattus</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>
Bobcat	<i>Lynx rufus</i>
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>
Cave myotis	<i>Myotis velifer</i>
Collared peccary	<i>Pecari tajacu</i>
Common gray fox	<i>Urocyon cinereoargenteus</i>
Common raccoon	<i>Procyon lotor</i>
Coyote	<i>Canis latrans</i>
Crawford's desert shrew	<i>Notiosorex crawfordi</i>
Eastern cottontail	<i>Sylvilagus floridanus</i>
Eastern fox squirrel	<i>Sciurus niger</i>
Eastern gray squirrel	<i>Sciurus carolinensis</i>
Eastern mole	<i>Scalopus aquaticus</i>
Eastern red bat	<i>Lasiurus borealis</i>
Eastern spotted skunk	<i>Spilogale putorius</i>
Eastern woodrat	<i>Neotoma floridana</i>
Feral pig	<i>Sus scrofa</i>
Fulvous harvest mouse	<i>Reithrodontomys fulvescens</i>
Ghost-faced bat	<i>Mormoops megalophylla</i>
Gulf Coast kangaroo rat	<i>Dipodomys compactus</i>
Hispid cotton rat	<i>Sigmodon hispidus</i>
Hispid pocket mouse	<i>Chaetodipus hispidus</i>
Hoary bat	<i>Aeorestes cinereus</i>
Hog-nosed skunk	<i>Conepatus leuconotus</i>
House mouse	<i>Mus musculus</i>
Lacey's white-ankled deermouse	<i>Peromyscus laceianus</i>
Least shrew	<i>Cryptotis parva</i>
Long-tailed weasel	<i>Mustela frenata</i>
Merriam's pocket mouse	<i>Perognathus merriami</i>
Mountain lion	<i>Puma concolor</i>
Nine-banded armadillo	<i>Dasypus novemcinctus</i>

**TABLE 3-5 MAMMALIAN SPECIES POTENTIALLY OCCURRING WITHIN BEXAR COUNTY**

COMMON NAME	SCIENTIFIC NAME
North American deermouse	<i>Peromyscus maniculatus</i>
Northern pygmy mouse	<i>Baiomys taylori</i>
Northern yellow bat	<i>Dasypterus intermedius</i>
Norway rat	<i>Rattus norvegicus</i>
Nutria	<i>Myocastor coypus</i>
Plains harvest mouse	<i>Reithrodontomys montanus</i>
Red fox	<i>Vulpes vulpes</i>
Red wolf	<i>Canis rufus</i>
Ringtail	<i>Bassariscus astutus</i>
Rio Grande ground squirrel	<i>Ictidomys parvidens</i>
Rock squirrel	<i>Otospermophilus variegatus</i>
Southern plains woodrat	<i>Neotoma micropus</i>
Striped skunk	<i>Mephitis mephitis</i>
Swamp rabbit	<i>Sylvilagus aquaticus</i>
Texas deermouse	<i>Peromyscus attwateri</i>
Virginia opossum	<i>Didelphis virginiana</i>
Western spotted skunk	<i>Spilogale gracilis</i>
White-footed deermouse	<i>Peromyscus leucopus</i>
White-tailed deer	<i>Odocoileus virginianus</i>
White-toothed woodrat	<i>Neotoma leucodon</i>

Source: Schmidly and Bradley 2016.

### 3.1.10 Aquatic Resources

Four intermittent creeks and two ponds occur within the study area.

Intermittent flowing streams support aquatic species primarily adapted to ephemeral pool habitats. Because intermittent streams consist of small headwater drainages, persistent flow is unlikely to be sufficient to support any substantial lotic species assemblage. Species in ephemeral aquatic habitats are typically adapted to rapid dispersal and completion of life cycles. In streams dominated by scoured, sandy-clay bottoms, accumulations of woody debris or leaf pack provide the most important feeding and refuge areas for invertebrates and forage fish. Softer, muddy bottoms generally harbor substantial populations of burrowing invertebrates (e.g., larval diptera and oligochaetes), which can be an important food source to higher trophic levels (Hubbs 1957).

Potential ponds located in the study area will exhibit variability in terms of their age, drainage, use by livestock, past fish stocking, and fertilization history. One pond located on Northwest Vista College campus is a maintained, urban water feature. Typically for pond habitat, fluctuations in water levels are experienced during summer months because of high evaporation rates and repeated heavy rainfall required to fill ponds. Periods of extended drought in the region may reduce these seasonal water level fluctuations or dry ponds completely.

### 3.1.11 Southern Edwards Plateau Habitat Conservation Plan

The study area is located in the Southern Edwards Plateau (SEP) Habitat Conservation Plan (HCP) area. The SEP HCP was established in 2015 in coordination between USFWS, the City of San Antonio, and Bexar County to streamline project compliance for landowners and private developers in accordance with the ESA. It created an incidental take credit bank in the form of a preserve system for nine federally-listed species: golden-cheeked warbler (*Setophaga chrysosparia*), black-capped vireo (*Vireo atricapilla*), Government Canyon Bat Cave spider (*Neoleptoneta microps*), Madla Cave Meshweaver (*Cicurina madla*), Braken Cave Meshweaver (*Cicurina venii*), Government Canyon Bat Cave Meshweaver (*Cicurina vespera*), unnamed beetle (*Rhadine exilis*), unnamed beetle (*Rhadine infernalis*), and Helotes Mold Beetle (*Batrisodes venyivi*). If the study area is expected to impact any of these listed species, coordination with the SEP HCP will be necessary.

Within the SEP HCP is the APS Karst Preserve. The APS Karst Preserve is approximately 57.6 acres of undeveloped land that is a permanently protected and managed karst habitat preserve located within the existing SAWS APS property (SWCA Environmental Consultants 2017).

### 3.1.12 Threatened and Endangered Species

Information on sensitive wildlife and vegetation resources within the study area were obtained from a variety of sources, including correspondence with the USFWS and TPWD. Additional information was obtained from published literature and technical reports. Available biological resource data for the study area were mapped using GIS.

For the purpose of this EA, emphasis was placed on obtaining known occurrences of special status species and unique vegetation communities that have been previously documented within the study area. Special status species include those listed by the USFWS as threatened, endangered, proposed, or candidate; and those listed by TPWD as threatened, endangered, or as a rare species. Spatial data of known occurrences for listed species and/or sensitive vegetation communities was obtained from the TPWD's TXNDD on February 10, 2023 (TPWD 2023g). The TXNDD data provides a data record, known as an element of occurrence record (EOR), of state-listed rare or threatened/endangered species and rare vegetation communities that have been documented within a given area. The TXNDD data does not preclude the potential for a species to exist within the study area. Only a species-specific survey within the study area can determine the presence or absence of a special status species.

A USFWS IPaC Official Species List (USFWS 2023b; Project Code: 2023-0069935) and Resource List was received on April 17, 2023 and updated on June 26, 2023. This USFWS (2023b) report identifies potentially occurring federal-listed threatened, endangered, and candidate species and habitats within the study area. By definition, a threatened species is defined as likely to become endangered within the near foreseeable future

throughout all or a significant portion of its range. An endangered species is in danger of extinction throughout all or a significant portion of its range. Candidate species are those that have sufficient information regarding their biological vulnerability and threat(s) to support listing as threatened or endangered and are likely to be proposed for listing in the near foreseeable future (USFWS 2023b).

The ESA also provides for the conservation of “designated critical habitat,” which is defined as the areas of land, water, and air space that an endangered species needs for survival. These areas include sites with food and water, breeding areas, cover or shelter sites, and sufficient habitat to provide for normal population growth and behavior for the species. No critical habitat was identified occurring within the study area (USFWS 2023c). According to USFWS (2023a) Ecological Services Southwest Region, the study area for the Project intersects portions of Karst Zones 1 and 2. Karst Zones 1 and 2 are defined as areas having a high probability of containing suitable habitat for endangered karst invertebrate species (Veni 2002). Karst Zone 2 occurs throughout the majority of the study area. Karst Zone 1 occurs along the central southern boundary of the study area.

### **Threatened and Endangered Plant Species**

USFWS (2023b) IPaC species list for the study area and TPWD (2023b) county listings were reviewed for special status plant species potentially occurring within the study area. Two federally listed endangered plant species, black lace cactus (*Echinocereus reichenbachii* var. *albertii*) and Texas wild-rice (*Zizania texana*), and one federally listed threatened plant species, bracted twistflower (*Streptanthus bracteatus*), was identified as having the potential to occur within the study area (USFWS 2023b; TPWD 2023b). A brief description of these species’ life history, habitat requirements, and documented occurrences within the study area are summarized.

#### ***Black Lace Cactus***

Black lace cactus is a succulent perennial growing approximately 8 inches tall and produces a bright purple-pink flower with a crimson center (TPWD 2023c). Known from five sites with three possibly extant, the species is known to currently occur within Jim Wells, Kleberg, and Refugio Counties in South Texas. This species inhabits open areas of grasslands, thorn shrublands, and mesquite-acacias woodlands on sandy soils within the transition ecotone where uplands meet lower areas dominated by halophytic forbs and grasses (NatureServe 2023). It is anticipated that the black lace cactus will not occur within the study area as the study area is located outside the known extant range for the species.

#### ***Texas Wild-rice***

Texas wild-rice is endemic to Texas and the only known populations occur in portions of the Upper San Marcos River within Hays County (Poole et al. 2007). This species occurs in the spring-fed San Marcos River within clear, cool, shallow, swift water. Sediments are typically coarse sandy soils and this species flowers year-round

(Poole et al. 2007; TPWD 2023b). This species is not anticipated to occur within the study area due to a lack of potential suitable aquatic habitat.

#### *Bracted Twistflower*

Bracted twistflower is endemic to the Edwards Plateau ecoregion. It is a short annual, growing to about eight inches tall. The entire plant is glabrous with pink to purple flowers. Bracted twistflower occurs on shallow, well-drained gravelly clays and clay loams over limestone in openings of oak-juniper woodlands, as well as in canyon bottoms. It can be found growing amidst dense shrub areas; however, plants are often more robust in sites with plentiful sunlight. Associate plant species include shrubby boneset (*Ageratina havanensis*), algerita Texas hog plum (*Colubrina texensis*), bush croton (*Croton fruticosus*), Mexican buckeye (*Ungnadia speciosa*), featherleaf desertpeony (*Acourtia runcinata*), green milkweed vine (*Matelea reticulata*), blue curls (*Phacelia congesta*), and Buckley's fluffgrass (*Tridens buckleyanus*). Populations of this species may change extensively between years depending on the amount winter rainfall. The primary causes for its decline are residential development and browsing by white-tailed deer (Poole et al. 2007). This species may occur within the study area if suitable habitat is available.

#### **Threatened and Endangered Animal Species**

The USFWS (2023b) IPaC species report for the study area and TPWD (2023b) county listings were reviewed for special status animal species potentially occurring within the study area. Federally- and/or federally proposed, state-listed, and candidate status animal species potentially occurring within the study area are listed in Table 3-6. Federal status species listed in the TPWD Annotated County Lists of Rare Species have been included in Table 3-6 for consistency. Although only federally-listed threatened or endangered species are protected under the ESA, state-listed species may receive protection under other federal and/or state laws, such as the MBTA, BGEPA, Chapters 67, 68, and 88 of the Texas Parks and Wildlife Code, and Section 65.171–65.184 and 69.01–69.14 of Title 31 of the TAC. Brief descriptions of life history, habitat requirements, and documented occurrences within the study area are summarized below for each species.

**TABLE 3-6 LISTED THREATENED AND ENDANGERED ANIMAL SPECIES FOR BEXAR COUNTY**

SPECIES		LEGAL STATUS	
COMMON NAME	SCIENTIFIC NAME	USFWS <sup>1</sup>	TPWD <sup>2</sup>
<b>Amphibians</b>			
Cascade Caverns salamander	<i>Eurycea latitans</i>	-	T
San Marcos salamander	<i>Eurycea nana</i>	T	T
Texas blind salamander	<i>Eurycea rathbuni</i>	E	-
Texas salamander	<i>Eurycea neotenes</i>	-	T
<b>Arachnids</b>			
Bracken Bat Cave meshweaver	<i>Cicurina venii</i>	E	-
Cokendolpher Cave harvestman	<i>Texella cokendolpheri</i>	E	-
Government Canyon Bat Cave meshweaver	<i>Cicurina vespera</i>	E	-
Government Canyon Bat Cave spider	<i>Neoleptoneta microps</i>	E	-
Madla Cave meshweaver	<i>Cicurina madla</i>	E	-
Robber Baron Cave meshweaver	<i>Cicurina baronia</i>	E	-
<b>Birds</b>			
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, DL	-
Golden-cheeked warbler	<i>Dendroica chrysoparia</i>	E	E
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA	-
Piping plover	<i>Charadrius melodus</i>	T	T
Red knot	<i>Calidris canutus rufa</i>	T	-
White-faced ibis	<i>Plegadis chihi</i>	-	T
Whooping crane	<i>Grus americana</i>	E	E
Wood stork	<i>Mycteria americana</i>	-	T
<b>Crustaceans</b>			
Peck's Cave amphipod	<i>Stygobromus pecki</i>	E	-
<b>Fishes</b>			
Fountain darter	<i>Etheostoma fonticola</i>	E	-
Toothless blindcat	<i>Trogloglanis pattersoni</i>	-	T
Widemouth blindcat	<i>Satan eurystomus</i>	-	T
<b>Insects</b>			
Beetle (No designated common name)	<i>Rhadine exilis</i>	E	-
Beetle (No designated common name)	<i>Rhadine infernalis</i>	E	-
Comal Springs dryopid beetle	<i>Stygoparnus comalensis</i>	E	-
Comal Springs riffle beetle	<i>Heterelmis comalensis</i>	E	-
Helotes mold beetle	<i>Batrisodea venyivi</i>	E	-
Monarch butterfly	<i>Danaus plexippus</i>	C	-
<b>Mammals</b>			
American black bear	<i>Ursus americanus</i>	-	T
Tricolored bat	<i>Perimyotis subflavus</i>	PE	-
White-nosed coati	<i>Nasua narica</i>	-	T
<b>Mollusks</b>			
False spike	<i>Fusconaia mitchelli</i>	PE	T



**TABLE 3-6 LISTED THREATENED AND ENDANGERED ANIMAL SPECIES FOR BEXAR COUNTY**

SPECIES		LEGAL STATUS	
<b>Reptiles</b>			
Cagle's map turtle	<i>Graptemys caglei</i>	-	T
Texas horned lizard	<i>Phrynosoma cornutum</i>	-	T
Texas tortoise	<i>Gopherus berlandieri</i>	-	T

<sup>1</sup> USFWS 2023b, <sup>2</sup> TPWD 2023b.  
BGEPA - Bald and Golden Eagle Protection Act  
E – Federal- or State-Listed Endangered  
T – Federal- or State-Listed Threatened  
PE – Federally Proposed Endangered  
C – Federal Candidate for Listing  
DL – Federally Delisted Species

**Federal Listed Threatened and Endangered Species**

**AMPHIBIANS**

*San Marcos Salamander*

The San Marcos salamander requires clear, constant flowing water with aquatic vegetation over sand and gravel substrates. Its reddish-brown color allows it to camouflage well with aquatic vegetation. The San Marcos salamander is restricted to the outflows of Spring Lake and the riffle just below Spring Lake dam near the City of San Marcos (Tipton et al. 2012). This species is not anticipated to occur within the study area due the known range of suitable habitat.

*Texas Blind Salamander*

The Texas blind salamander is a cave-dwelling amphibian that requires constant flow of clear water. This species is only seen above ground when strong water flows carry it to the surface. The Texas blind salamander is only known to occur in the Balcones Escarpment near the City of San Marcos and is found within subterranean streams of Purgatory Creek (Tipton et al. 2012). This species is not anticipated to occur within the study area due the known range of suitable habitat.

**ARACHNIDS**

*Braken Bat Cave Meshweaver*

The Braken Bat Cave meshweaver is a species of eyeless spider known only from a single specimen at the type locality, Braken Bat Cave, Bexar County, Texas This invertebrate species is a troglobite, which is an organism that spends its entire life in subterranean environments (NatureServe 2023). Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution and alterations in water flow (USFWS 2012). According to TPWD correspondence, this species was encountered within the study area during an SH 151 improvement project in 2012. The project had to be redesigned to avoid impacting the spider. TXNDD

also contains occurrence records for this species occurring near the study area. Due to previous observations and proximity of the TXNDD element of occurrence, this species is anticipated to occur within the study area wherever suitable habitat is found. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

#### *Cokendolpher Cave Harvestman*

The Cokendolpher Cave harvestman is a species of eyeless spider also referred to as the Robber Baron Cave harvestman. It is a troglobite (NatureServe 2023) endemic to Bexar County, Texas, where it has only been documented in Robber Baron Cave, a cave which runs underneath a heavily urbanized area in the City of San Antonio. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the known range of suitable habitat.

#### *Government Canyon Bat Cave Meshweaver*

The Government Canyon Bat Cave meshweaver is a spider endemic to Bexar County, Texas. It is a troglobite (NatureServe 2023) that is only known to occur in Bexar County at Government Canyon Bat Cave located within Government Canyon State Natural Area. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the known range of suitable habitat. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

#### *Government Canyon Bat Cave Spider*

The Government Canyon Bat Cave spider is endemic to Bexar County, Texas. It is a troglobite (NatureServe 2023) that has only been documented in Bexar County at Government Canyon Bat Cave and Surprise Sink located within Government Canyon State Natural Area. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the known range of suitable habitat. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

#### *Madla Cave Meshweaver*

The Madla Cave meshweaver is an eyeless spider endemic to Bexar County, Texas. It is a troglobite that has been observed in eight caves including Lost Pothole, Christmas Cave, Helotes Blowhole, Madla's Cave, Madla's Drop Cave, Headquarters Cave, the Hills and Dales Pit, and Robbers Cave within the University of Texas at San

Antonio main campus (NatureServe 2023). Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). Genetic research of this species suggests that additional populations may exist outside the eight documented caves (Paquin and Hedin 2004). This species may occur within the study area if suitable cave/karst habitat is available. This species is not anticipated to occur within the study area due to the known range of suitable habitat. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

#### *Robber Baron Cave Meshweaver*

The Robber Baron Cave meshweaver is an eyeless spider endemic to Bexar County, Texas. It is a troglobite (NatureServe 2023) that is only known from Robber Baron Cave within the Alamo Heights karst region. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the known range of suitable habitat.

## **BIRDS**

#### *Golden-cheeked Warbler*

The golden-cheeked warbler's entire nesting range is confined to habitat in 33 counties located in central Texas. Nesting typically occurs from March to May in mature oak-juniper woodland areas with a moderate to high density of mature Ashe juniper trees mixed with deciduous trees (e.g., oaks) creating dense foliage in the upper canopy (Pulich 1976; Campbell 2003). These oak-juniper woodland vegetation communities are typically located in moist areas along steep-sided slopes, drainages, and bottomlands. However, golden-cheeked warblers will also nest in upland oak-juniper woodlands on flat topography (Pulich 1976). The golden-cheeked warbler migrates southward to southern Mexico and northern Central America to overwinter. Review of TPWD TEAM data identified an undeveloped portion of land as Edwards Plateau – Ashe Juniper Motte and Woodland that could potentially be foraging habitat; however, due to how developed the surrounding area is and the lack of connectivity to other suitable habitat it is expected that this area will not be utilized. Due to the fragmentation and urbanization of the study area the species is not anticipated to occur. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

#### *Piping Plover*

The piping plover is a small migratory shorebird that nests within the Great Lakes, Northern Great Plains or Atlantic Coast (TPWD 2023b). Primary fall migration to Texas is from July to early September, while spring migration occurs from March to early May. Piping plovers are common to locally uncommon winter residents

along the Gulf of Mexico coastline (Lockwood and Freeman 2014). Two ponds occur within the study area that could potentially be utilized for migratory habitat by the piping plover during winter migration. It is anticipated that the piping plover might occur within the study area as a transient migrant wherever suitable habitat is found. Impacts to piping plovers only need to be considered for wind related projects.

#### *Red Knot*

Red knots are migratory and breed in the drier arctic tundra areas while overwintering takes place along shorelines of the Gulf of Mexico and Central and South America (NatureServe 2023). Spring migration occurs in large flocks and takes place from April to June. Preferred habitat includes the shoreline of coasts and bays and sometimes inland mudflats. Their primary prey items are small mussels, clams, snails, and other invertebrates (USFWS 2013). Due to the study area being located outside the migratory corridor and the rare transient nature of the species, it is anticipated that this species will not occur within the study area. Impacts to piping plovers only need to be considered for wind related projects.

#### *Whooping Crane*

The study area is located within the central migratory corridor for the whooping crane (USGS 2023c). The migration path includes a 220-mile wide corridor that begins at their nesting site at Wood Buffalo National Park in Canada and continues south to their wintering grounds at the Aransas National Wildlife Refuge along the Texas coast. The migratory corridor contains 95 percent of all confirmed whooping crane stopover sightings, during migration. Whooping cranes overwinter in the Aransas National Wildlife Refuge from November through March. During migration, they typically fly at altitudes greater than 1,000 feet but will roost and feed in areas away from human disturbance during nightly stopovers. Stopover areas include large rivers, lakes and associated wetlands, playa lakes, pastureland, and cropland (USFWS 2009). One large pond located within the study area might be utilized during migration. It is anticipated that this species may occur within the study area as a rare transient during migration.

## **CRUSTACEANS**

#### *Peck's Cave Amphipod*

Little is known about the life history of the Peck's Cave amphipod, except that it is an eyeless cave obligate. This species has only been observed at spring openings of Comal and Hueco Springs in the Edwards Aquifer area (NatureServe 2023). This species is not anticipated to occur within the study area due to the known range of suitable habitat.

## FISHES

### *Fountain Darter*

The fountain darter is a species of perch that is endemic to the San Marcos and Comal River headwaters in Hays and Comal Counties, Texas (Thomas et al. 2007). It inhabits clear waters with aquatic vegetation and constant water temperatures. Diet consists of small crustaceans and insect larvae. Females lay their eggs year-round and utilize calmer waters of the river. Fountain darters are often associated with algae mats (Thomas et al. 2007). This species is not anticipated to occur within the study area due to the known range of suitable habitat.

## INSECTS

### *Unnamed Beetle (Rhadine exilis)*

This unnamed beetle species is endemic to Bexar County, Texas. It is an eyeless cave obligate that has been documented in about 50 different caves (NatureServe 2023). *Rhadine exilis* is known only from caves in the southern portion of Camp Bullis Military Base (Reddell and Cokendolpher 2004). Threats to this species include habitat loss from quarrying operations, cave filling, and habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species may occur within the study area if suitable cave/karst habitat is present and available. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

### *Unnamed Beetle (Rhadine infernalis)*

This unnamed beetle species is an eyeless cave obligate that has been documented in approximately 39 different caves in Bexar County, Texas (NatureServe 2023). Threats to this species include habitat loss from quarrying operations, cave filling, and habitat degradation via pollution, and alterations in water flow (USFWS 2012). Critical habitat for this species is located 0.25 mile south of the study area (USFWS 2023c). This species may occur within the study area if suitable cave/karst habitat is present and available. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

### *Comal Springs Dryopid Beetle*

The Comal Springs dryopid beetle is translucent, with a rust-colored exoskeleton. It is eyeless and measures approximately three to four millimeters long. The larvae may inhabit the ceilings of spring openings where organic soil and roots are present, whereas the adults are completely aquatic. Diet of the Comal Springs dryopid beetle is unknown; however, it may be like that of other dryopid beetles, which includes detritus and aquatic

plants. It has only been collected from Comal Springs and Fern Bank Springs of the Edwards Aquifer (USFWS 2007). This species is not anticipated to occur within the study area due to the known range of suitable habitat.

#### *Comal Springs Riffle Beetle*

The Comal Springs riffle beetle is approximately two millimeters long, with a reddish-brown exoskeleton. Diet consists of detritus and microorganisms. They are restricted to springs within the Edwards Aquifer and are only known to occur near headwaters of the Comal and San Marcos rivers (USFWS 2007). This species is not anticipated to occur within the study area due to the known range of suitable habitat.

#### *Helotes Mold Beetle*

The Helotes mold beetle is endemic to karst features within Texas. It has been documented in eight caves near Helotes, Texas, northwest of San Antonio. This species is a cave obligate, growing up to 2.4 millimeters long and is believed to be predatory in nature (USFWS 2012). This species may occur within the study area if suitable cave habitat is available. If during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

### **Federal Proposed Endangered Species**

#### **Mammals**

##### *Tricolored Bat*

The tricolored bat has a large extensive range throughout eastern and central North America. Throughout its range, the species has many types of roost sites and locations due to their expansive foraging habitat. Tricolored bats are closely associated with forested landscapes and bottomland riparian forest with most foraging occurring within forested riparian corridors. In spring and summer, non-reproductive individuals roost in trees near perennial streams. Maternal and other summertime roosts are found in dead or live tree foliage, caves, mines, and rock crevices, with maternal colonies also occasionally occurring within man-made structures. Winter hibernation sites typically found within caves, mines, cave like tunnels, or large box culverts adjacent to forest habitat (NatureServe 2023). This species is unlikely to occur within the study area due to lack of suitable habitat.

#### **Mollusks**

##### *False Spike*

The false spike inhabits surface waters in the Rio Grande, Guadalupe, Colorado, and Brazos River systems, in Texas and New Mexico. Little is known about specific habitat requirements for this species, but it likely prefers medium to large rivers with substrates varying from mud through mixtures of sand, gravel and cobble (Howells et al. 1996). It is anticipated that the species will not occur within the study area due to the lack of suitable habitat.

## **Federal Candidate Species**

### **INSECTS**

#### *Monarch Butterfly*

The monarch butterfly ranges from North and South America to the Caribbean, Australia, New Zealand, the Pacific Islands, and Western Europe. The species has been proposed as candidate species for protection under the ESA due to decreasing populations and habitat loss. Eastern and western monarch populations migrate both north and south on an annual basis. Populations usually overwinter in Mexico, Texas, Florida, and California and then spend the spring and summer months migrating back north. The entire migration cycle last for four generations of monarchs and no individual makes the round trip. Monarchs are heavily dependent on milkweed plants (*Asclepias* spp.) as larval hosts and to help produce poison. Preferred overwintering habitat includes appropriate roosting vegetation, dense tree cover, access to streams, and warm enough temperatures to allow for flight (NatureServe 2023). This species may occur as a temporary migrant within the study area.

## **Other Federally Protected Species**

#### *Bald Eagle*

The bald eagle was delisted in 2007 by the USFWS, because the population has recovered beyond the ESA criteria for listing. The status of the bald eagle population is currently monitored by USFWS and the species is still protected under the MBTA and the BGEPA. Bald eagles may nest and/or winter in Texas. Nests are built in treetops or on cliffs near rivers or large lakes. The bald eagle primarily preys on fish but will also eat birds, small mammals, and turtles and will often scavenge or steal carrion (Campbell 2003). This species is not anticipated to occur within the study area due to lack of suitable habitat.

#### *Golden Eagle*

The golden eagle is one of the largest raptors in North America. Breeding range spans from western and northern Alaska, eastward to the Northwest Territories of Canada, south to northern Mexico and Texas, western Oklahoma, and western Kansas. The species' North American winter range extends from south-central Alaska, southern Canada, and casually further southward. As habitat generalist, the species has been found inhabiting open to semi-open country that includes prairies, sage brush, arctic alpine and tundra, savanna, sparse woodlands, and mountainous or hilly barren areas. (NatureServe 2023). In Texas, golden eagles occur more commonly in the western portion of the state where they breed at high elevation (8,600 amsl) in mountains and canyons. This species is not anticipated to occur within the study area due to the absence of suitable habitat.

## **State Listed Species**

### **AMPHIBIANS**

#### *Cascade Caverns Salamander*

The Cascade Caverns salamander is a small amphibian endemic to Texas and restricted to springs and karst aquatic habitats within the Edwards Aquifer (NatureServe2023). The salamander is pale brown to yellowish in color and grows up to four inches in length. Cave-dwelling forms of the Cascade Caverns salamander have greatly reduced nonfunctional eyes and little skin pigmentation. Other populations of this species have more skin pigmentation and functional eyes (Powell et al. 2016). This species is not anticipated to occur within the study area due to absence of suitable habitat.

#### *Texas Salamander*

The Texas salamander is endemic to Bexar and Kendall Counties, Texas. It is adapted to living in subterranean streams and creeks. This subterranean species is capable of traversing upland habitats when conditions are wet but may rarely do so successfully (NatureServe 2023). This species is not anticipated to occur within the study area due to absence of suitable habitat.

### **BIRDS**

#### *White-faced Ibis*

The white-faced ibis prefers freshwater marshes, swamps, ponds, rivers, sloughs, and irrigated rice fields, but will also use brackish and saltwater habitats. This species is a colonial nester and forages on insects, newts, leeches, earthworms, snails, crayfish, frogs, and fish (TPWD 2023b). White-faced ibis commonly breeds and winters along the Texas Gulf Coast (Arvin 2007). This species may occur in the study area as a non-breeding migrant (Lockwood and Freeman 2014) if suitable habitat is available.

#### *Wood Stork*

The wood stork inhabits prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including saltwater areas. This species usually roosts communally in tall snags, sometimes in association with other wading birds and historically nested in Texas (TPWD 2023b). This species may occur in the study area wherever suitable habitat is available.

### **FISHES**

#### *Toothless Blindcat*

The toothless blindcat is a small, eyeless fish restricted to freshwater pools within caves located in the Medina and Upper San Antonio River watersheds. Diet of the toothless blindcat may consist of detritus and fungi



(NatureServe 2023). This species is not anticipated to occur within the study area due to absence of suitable habitat.

#### *Widemouth Blindcat*

The widemouth blindcat is a small, white to pink eyeless fish restricted to freshwater pools within caves located in the Medina and Upper San Antonio River watershed. Diet of the widemouth blindcat consists of shrimp, amphipods, and isopods (NatureServe 2023). This species is not anticipated to occur within the study area due to the absence of suitable habitat.

### **MAMMALS**

#### *Black Bear*

The black bear is listed as threatened due to similarities with the Louisiana black bear (*Ursus americanus luteolus*), which has now been federally delisted. The black bear is a stocky, large, omnivore with black to cinnamon brown fur that consumes insects, roots, and tubers. Preferred habitat in Texas includes bottomland hardwood forest and large tracts of inaccessible forested areas (TPWD 2023b). This species historically inhabited large tracts of forest and woodland throughout Texas and was once thought to be extirpated from the state. This species is not anticipated to occur within the study area due to the absence of suitable habitat.

#### *White-nosed Coati*

The white-nosed coati is a member of the raccoon family (*Procyonidae*) that inhabits cropland/hedgerows, mesquite grasslands, oak scrub, riparian corridors, and canyons of south and west Texas (iNaturalist 2023). Denning occurs in snags or hollow trees. Adult males are solitary while females and young males travel in groups of 12 or more. White-nosed coatis are most active during mornings and evenings at which times they forage canopies and the ground for fruits, insects, birds, and small mammals (Schmidly and Bradley 2016; NatureServe 2023). It is anticipated that the white nosed coati will not occur within the study area due to the study area being outside the species known distribution.

### **REPTILES**

#### *Cagle's Map Turtle*

The Cagle's map turtle habitat range is limited to the Guadalupe and San Antonio River basins, inhabiting the Guadalupe, San Antonio and San Marcos Rivers. This species prefers rivers with slow to moderate flow and silt and gravel substrates. Optimal habitat includes riffles and pools. Like most other turtles, this species basks in the sun on brush piles along river and stream banks (Conant and Collins 1991; Dixon 2013). This species is not anticipated to occur within the study area due to the lack of suitable perennial river habitat.

### *Texas Horned Lizard*

The Texas horned lizard inhabits open, arid to semiarid regions with sparse vegetation including open desert, grasslands, and shrubland containing bunch grasses, cacti and yucca. Preferred soils vary from pure sands and sandy loams to coarse gravels, conglomerates, and desert pavements (Henke and Fair 1998). Texas horned lizards are active between early spring to late summer and thermo-regulate by basking or burrowing into the soil. During winter inactivity periods, this species aestivates beneath the surface six to 12 inches deep under rocks, leaf litter, or abandoned animal burrows. Populations are thought to have decreased because of land use conversions, increased pesticide/herbicide use, collection, and increased fire ant populations. The Texas horned lizard forages primarily on the red harvester ant (*Pogonomyrmex barbatus*), but also consumes grasshoppers, beetles, and grubs (Dixon 2013; Henke and Fair 1998). This species is not anticipated to occur within the study area due to the absence of suitable habitat.

### *Texas Tortoise*

The Texas tortoise is a long-lived species with a shell that has characteristically yellowish-orange, bluntly-horned scutes (shell plates). Habitat preferences include arid brush, scrub woods, and grass-cactus associations with grassy understories (NatureServe 2023). The Texas tortoise is active during March to November and when inactive, it occupies shallow depressions at the base of bushes or cactus, underground burrows, or under other suitable objects such as trash. The tortoise feeds on fruits of prickly pear and other mostly succulent plants (TPWD 2023b). This species may occur within the study area if potential suitable habitat is available.

## **3.2 Human Resources/Community Values**

### **3.2.1 Land Use**

Jurisdiction does not necessarily represent land ownership. Potential conflicts that could arise from crossing jurisdictional boundaries were evaluated in this study. The study area is located within the jurisdictional boundary of Bexar County. A portion of the City of San Antonio is also located within the study area.

The study area covers approximately two square miles in Bexar County. Land uses within the study area were identified and placed into the following categories: urban/developed, planned land use, agriculture, oil and gas facilities, transportation/aviation/utility features, communication towers, and parks and recreation areas. The primary sources of land use information were obtained from interpretation of aerial photographs, USGS topographical maps, and vehicular reconnaissance surveys from accessible public viewpoints. Planned land use features were limited to known features obtained from governmental entities and mobility authorities.

## **Residential Areas**

The urban/developed classification represents concentrations of surface disturbing land uses, which include habitable structures and other developed areas, characterized with low, medium, and high intensities. The various levels of development include a mix of institutional, commercial, and/or industrial land uses. Developed low, medium, and high intensity areas were identified using aerial photograph interpretation and reconnaissance surveys. These classifications are described below:

- **Developed Low Intensity** areas typically include rural settings with single-family housing units.
- **Developed Medium Intensity** areas typically include single-family housing units that are grouped in residential subdivisions and might include peripheral commercial structures.
- **Developed High Intensity** includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses, and commercial/industrial parks. Areas with the highest concentration of development are typically located within or near the towns and communities in the study area.

The study area is located within Bexar County and partially within the City of San Antonio. The study area is suburban with residential and commercial development and some rural areas scattered throughout portions of the study area. The habitable structures in the study area would be considered medium and low intensity development. Habitable structures were identified using aerial photographs (Nearmap 2022), Google Earth, and reconnaissance surveys. The PUC definition of a habitable structure was used for this routing study. The PUC's Substantive Rules (16 TAC § 25.101(a)(3)) define habitable structures 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 multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools."

## **Schools**

The study area is located within the Northside Independent School District. The Northwest Vista College was identified within the central portion of the study area (Texas Education Agency 2023).

## **Planned Land Use**

The planned land use component identifies objectives and/or policies regarding land use goals and plans, including conservation easements, managed lands, and proposed developments. Cities and counties typically prepare comprehensive land use plans to provide strategic direction by goals and objectives for the individual city or county. City and county websites were reviewed, and correspondence was submitted to local and county officials to identify potential planned land use conflicts. The City of San Antonio also has a Master Plan intended to provide guidance in future decisions related to land use, infrastructure improvements, transportation, and more

(City of San Antonio 2023a and 2023b). Additionally, the City of San Antonio has set up zoning districts to provide information on how a property may be developed and a regional subgroup called Highway 151 and Loop 1604. No Neighborhood Conservation Districts were identified within the study area, but there is one platted subdivision within the southeast corner of the study area. Bexar County is implementing a parks master plan, no new parks were planned within the study area. No zoning was identified for Bexar County within the study area (Bexar County 2023).

### **Conservation Easements**

A conservation easement is a restriction property owners voluntarily place on specified uses of their property to protect natural, productive or cultural features. The property owner retains legal title to the property and determines the types of uses to allow or restrict. The property can still be bought, sold, and inherited, but the conservation easement is tied to the land and binds all present and future owners to its terms and restrictions. Conservation easement language will vary as to the individual property owner's allowances for additional developments on the land. The land trusts facilitate the easement and ensure compliance with the specified terms and conditions.

A review of numerous non-governmental groups (e.g., the Nature Conservancy, Texas Land Conservancy [TLC] and the National Conservation Easement Database [NCED]) that are land trusts and databases for conservation easements within Texas indicated no traditional conservation easements are within the study area (Nature Conservancy 2023; TLC 2023; NCED 2023).

A 57.6-acre SAWS APS Karst Preserve (Special Management Area) was identified in the northwestern portion of the study area. This Special Management Area serves as mitigation for the SAWS' Micron and WRIP HCP and associated ITP (TE36242C). The USFWS accepted the Karst Preserve as mitigation because it supports two listed karst invertebrates within two features (S-19 and S-29) and meets the USFWS's 2011 Preserve Design Guidance for a medium quality preserve. Under the recorded permitting documentation, any clearing, excavation, or construction activity on or under the surface of the Karst Preserve is not allowed without express authorization of the USFWS.

### **3.2.2 Agriculture**

Agriculture is a significant segment of the economy throughout Texas, and the study area county has an active agricultural sector. According to the USDA's National Agricultural Statistics Service's 2017 Census of Agriculture, the total market value for agricultural products sold for Bexar County was \$67,877,000, a seven percent decrease from the 2012 market value of \$72,387,000. Livestock sales accounted for 26 percent of agricultural sales in Bexar County, while crop sales accounted for 74 percent of agricultural sales. The number of

farms in Bexar County increased slightly from 2,457 in 2012 to 2,520 in 2017 (an increase of three percent) (USDA 2012 and 2017).

### **3.2.3 Transportation/Aviation**

#### **Transportation**

Federal, state, and local roadways were identified using TxDOT county transportation maps, Texas Natural Resources Information System data, and field reconnaissance surveys. The major roadway transportation system within the study area includes SH 1604 and SH 151. No FM roads were identified within the study area. A few county and local roads were identified in the study area, including Alamo Ranch Parkway, N. Ellison Dr., and Wiseman Boulevard (TxDOT 2023a).

TxDOT’s “Project Tracker,” which contains detailed information by county for every project that is or could be scheduled for construction, was reviewed to identify any state roadway projects planned within the study area. The TxDOT Project Tracker indicated there is one state roadway project planned within the study area (TxDOT 2023b). The proposed roadway project will include adding more lanes to SH 151 (underway or begins soon). A review of the City of San Antonio Transportation and Capital Improvements did not indicate any city roadway projects planned within the study area (City of San Antonio 2023c).

No railroads were identified within the study area (United States Department of Transportation [USDOT] 2023).

#### **Aviation**

POWER reviewed the San Antonio Sectional Aeronautical Chart (FAA 2023a) and the Chart Supplement for the South Central US (formerly the Airport/Facility Directory) (FAA 2023b) to identify FAA registered facilities within the study area subject to notification requirements listed in 14 C.F.R. Part 77.9. Facilities subject to notification requirements listed in 14 C.F.R. Part 77.9 include public-use airports listed in the Airport/Facility Directory (currently the Chart Supplement), public-use or military airports under construction, airports operated by a federal agency or DoD, or an airport or heliport with at least one FAA-approved instrument approach procedure.

The Chart Supplement for the South Central US used in conjunction with the San Antonio Sectional Aeronautical Chart, contains all public-use airports, seaplane bases and public-use heliports, military facilities, and selected private-use facilities specifically requested by the DoD for which a DoD Instrument Approach Procedure has been published in the US Terminal Procedures Publication.

No public-use or military FAA registered airports were identified within the study area or within 20,000 feet of the study area boundary (FAA 2023b).

Although pre-existing landing areas (PELAs) for air ambulance services may exist in the study area, no public-use heliports or heliports with an instrument approach procedure are listed within the study area in the Chart Supplement for the South Central US (FAA 2023b).

In addition, POWER also reviewed the FAA database (FAA 2023c), USGS topographic maps, recent aerial photography, and conducted field reconnaissance from publicly accessible areas to identify private-use airstrips and private-use heliports not subject to notification requirements listed in 14 C.F.R. Part 77.9. There were no private-use airstrips or heliports identified within the study area.

### **3.2.4 Communication Towers**

Review of the Federal Communication Commission (FCC) database indicated that there are no amplitude modulation radio (AM radio) transmitters within the study area. However, there are two frequency modulation radio (FM radio) transmitter/microwave tower/other electronic installations identified within the northwestern portion of the study area. There are no additional FM radio transmitters/microwave towers/other electronic installations within 2,000 feet of the study area boundary (FCC 2023).

### **3.2.5 Utility Features**

Utility features reviewed include existing electrical transmission lines, distribution lines, pipelines, water and gas/oil wells, and water and gas/oil storage tanks. Data sources used to identify existing electrical transmission and distribution lines include utility company and regional system maps, aerial imagery, USGS topographic maps, additional available planning documents, and field reconnaissance surveys. Existing transmission lines identified within the study area include four 138-kV transmission lines and a 345-kV transmission line. Distribution lines are prevalent throughout the developed portions of the study area; however, these features were not mapped or inventoried.

Data was obtained from the RRC (RRC 2023d) which provided a GIS layer for existing oil and gas wells, pipelines, and supporting facilities. The 2023 RRC dataset along with aerial photograph interpretation and field reconnaissance were used to identify and map existing oil and gas related facilities. No pipelines or oil and gas wells were identified within the study area (RRC 2023d).

Water wells are primarily in the northwestern portion throughout the study area. The water wells located within the study area are public supply water wells (TWDB 2023b). A 42 inch water pipeline was also identified on the northeastern portion of the SAWS property.

### 3.2.6 Socioeconomics

This section presents a summary of economic and demographic characteristics for these counties and describes the socioeconomic environment of the study area. Literature sources reviewed include publications of the United States Census Bureau (USCB), and the Texas State Data Center (TXSDC).

#### Population Trends

Bexar County experienced a population increase between 2010 and 2020 of 17 percent. By comparison, population at the state level increased by nearly 16 percent during the 2010s (USCB 2010 and 2023).

According to TXSDC projections, Bexar County is projected to experience population growth of 67 percent during the next 30 years, from 2020 to 2050. By comparison, the population of Texas is expected to experience population increase of 62 percent over the next three decades (TXSDC 2018). Table 3-7 presents the past population trends and projections for the study area county and for the state of Texas.

**TABLE 3-7 POPULATION TRENDS**

STATE/COUNTY	PAST		PROJECTED		
	2010	2020	2030	2040	2050
Texas	25,145,561	29,145,505	34,894,452	40,686,496	47,342,105
Bexar County	1,714,773	2,009,324	2,502,617	2,914,615	3,353,060

Sources: USCB 2010 and 2023; TXSDC 2018.

#### Employment

From 2010 to 2021, the civilian labor force (CLF) in the study area county increased by 25 percent (201,756 people). By comparison, the CLF at the state level grew by 20 percent (2,427,369 people) over the same time period (USCB 2023). Table 3-8 presents the CLF for the study area county and the state of Texas for the years 2010 and 2021.

Between 2010 and 2021, Bexar County experienced a decrease in its unemployment rate from 6.9 percent in 2010, to 5.6 percent in 2021. By comparison, the state of Texas also experienced a decrease in the unemployment rate over the same period. The state’s unemployment rate decreased from 7.0 percent in 2010, to 5.4 percent in 2021 (USCB 2023). Table 3-8 presents the employment and unemployment data for the study area county and the state of Texas for the years 2010 and 2021.

**TABLE 3-8 CIVILIAN LABOR FORCE AND EMPLOYMENT**

STATE/COUNTY	2010	2021
<b>Texas</b>		
Civilian Labor Force	11,962,847	14,390,216
Employment	11,125,616	13,618,630
Unemployment	837,231	771,586
Unemployment Rate	7.0%	5.4%
<b>Bexar County</b>		
Civilian Labor Force	793,358	995,114
Employment	738,564	939,296
Unemployment	54,794	55,818
Unemployment Rate	6.9%	5.6%

Source: USCB 2023.

**Leading Economic Sectors**

The major occupations in Bexar County in 2021 are listed under the category of management, business, science, and arts occupations, followed by sales and office occupations (USCB 2023). Table 3-9 presents the number of persons employed in each occupation category during 2021 in the study area county.

**TABLE 3-9 OCCUPATIONS IN THE COUNTY OF THE STUDY AREA**

OCCUPATION	BEXAR COUNTY
Management, business, science, and arts occupations	351,124
Service occupations	175,031
Sales and office occupations	217,890
Natural resources, construction, and maintenance occupations	90,130
Production, transportation, and material moving occupations	105,121

Source: USCB 2023.

In 2010 and 2021, the industry group employing the most people in Bexar County was educational services, and health care and social assistance (USCB 2023). Table 3-10 presents the number of persons employed in each of the industries in the study area county for the years 2010 and 2021.

**TABLE 3-10 INDUSTRY IN THE COUNTY OF THE STUDY AREA**

INDUSTRY GROUP	BEXAR COUNTY	
	2010	2021
Agriculture, forestry, fishing and hunting, and mining	4,864	10,407
Construction	60,387	76,883
Manufacturing	44,307	51,376
Wholesale trade	21,801	21,390



**TABLE 3-10 INDUSTRY IN THE COUNTY OF THE STUDY AREA**

INDUSTRY GROUP	BEXAR COUNTY	
	2010	2021
Retail trade	87,948	107,221
Transportation and warehousing, and utilities	35,297	47,582
Information	18,424	14,990
Finance and insurance, and real estate and rental and leasing	71,493	85,991
Professional, scientific and management, and administrative and waste management services	79,856	114,274
Educational services, and health care and social assistance	163,102	217,499
Arts, entertainment, and recreation, and accommodation and food services	73,044	102,242
Other services, except public administration	37,264	45,287
Public administration	40,777	44,154

Source: USCB 2023.

### 3.2.7 Community Values

The term “community values” is included as a factor for the consideration of transmission line route approval under PURA 37.056(c)(4)(A-D); however, the term has not been defined by the PUC. The PUC CCN application requires information concerning the following items related to community values:

- Public open-house meeting
- Approval or permits required from other governmental agencies
- Brief description of the area traversed
- Habitable structures within 300 feet of the centerline for transmission lines of 230 kV or less
- AM and FM radio, microwave, and other electronic installations in the area
- FAA-registered public use airstrips, private airstrips, and heliports located in the area
- Irrigated pasture or croplands utilizing center-pivot or other traveling irrigation systems
- Parks and recreation areas
- Historical and archeological sites

In addition, POWER also evaluated the Project for community values and resources that might not be specifically listed by the PUC, but that might be of importance to a particular community as a whole. Although the term “community values” is not formally defined in PUC rules, in several dockets the PUC and Staff have used the following as a working definition: the term “community values” is defined as *a shared appreciation of an area or other natural resource by a national, regional, or local community*. Examples of a community resource would be a park or recreational area, historical or archeological site, or a scenic vista (aesthetics). POWER mailed consultation letters to various local elected and appointed officials and assisted CPS Energy personnel in hosting a

public open house meeting to identify and collect information regarding community values and community resources.

### **3.3 Recreational and Park Areas**

The PUC's CCN application specifically requires reporting of recreational and park areas owned by a governmental body or an organized group, club, or church. Federal and state database searches and county/local maps were reviewed to identify any parks and/or recreational areas within the study area. Reconnaissance surveys were also conducted to identify any additional park or recreational areas.

#### **3.3.1 National/State/County/Local Parks**

No national or state parks were identified within the study area (National Parks Service [NPS] 2023a; TPWD 2023e). No county or local parks were identified within the study area (City of San Antonio 2023d). However, the Northwest Vista College Disc Golf Course was identified within the study area. Additional recreational activities such as hunting and fishing might occur on private properties throughout the study area but are not considered to be open to the general public.

#### **3.3.2 Wildlife Viewing Trails**

Review of the TPWD *Great Texas Wildlife Trails Heart of Texas East* indicates that there are no wildlife viewing loops within the study area. There are also no sites of interest listed by TPWD located within the study area (TPWD 2023f).

### **3.4 Aesthetic Values**

PURA § 37.056(c)(4)(C) incorporates aesthetics as a consideration when evaluating proposed electric transmission facilities. There are currently no formal guidelines provided for managing visual resources on private, state, or county owned lands. For the purposes of this study, the term aesthetics is defined by POWER to accommodate the subjective perception of natural beauty in a landscape and measure an area's scenic qualities. The visual analysis was conducted by describing the regional setting and determining a viewer's sensitivity. Related literature, aerial photograph interpretation, and field reconnaissance surveys were used to describe the regional setting and to determine the landscape character types for the area.

Consideration of the visual environment includes a determination of aesthetic values (where the major potential effect of a project on the resource is considered visual) and recreational values (where the location of a transmission line could potentially affect the scenic enjoyment of the area) that would help define a viewer's sensitivity. POWER considered the following aesthetic criteria that combine to give an area its aesthetic identity:

- Topographical variation (hills, valleys, etc.)
- Prominence of water in the landscape (rivers, lakes, etc.)

- Vegetation variety (woodland, meadows)
- Diversity of scenic elements
- Degree of human development or alteration
- Overall uniqueness of the scenic environment compared with the larger region

The study area consists primarily of residential and commercial land use with some rural areas. The majority of the study area has been impacted by land improvements associated with residential structures, commercial activities, local roadways, and various utility corridors. Overall, the study area viewscape consists of medium intensity development.

The study area is located within the Texas Hill Country, which is known to be a scenic area of Texas. However, no known high-quality aesthetic resources, designated views, or designated scenic roads or highways were identified within the study area.

The study area is located within the 28-county Texas Independence Trail Region. There are no identified sites of interest along the trail within the study area (THC 2023a).

A review of the NPS website did not indicate any Wild and Scenic Rivers, National Monuments, National Memorials, National Historic Sites, National Historic Trails, or National Battlefields within the study area (National Wild and Scenic Rivers System [NWSRS] 2023; NPS 2023b and 2023c).

Based on these criteria, the study area exhibits a moderate degree of aesthetic quality for the region. The majority of the study area maintains the feel of a suburban area. Although some portions of the study area might be visually appealing, the aesthetic quality of the study area overall is not distinguishable from that of other adjacent areas within the region.

### **3.5 Historical (Cultural Resource) Values**

PURA § 37.056(c)(4)(C) incorporates historical (cultural resources) and aesthetic values as a consideration when evaluating proposed electric transmission facilities. The PUC's CCN application requires that known cultural resources sites within 1,000 feet of an alternative route be listed, mapped, and their distance from the centerline of the alternative route documented in the application filed for consideration. Archeological sites within 1,000 feet of a route are required to be listed and their distance from the centerline documented, but they need not be shown on maps for the protection of the site. Sources consulted to identify known sites (national, state, or local commission) must also be listed.

The THC is the state agency responsible for preservation of the state's cultural resources. The THC, working in conjunction with the TARL, maintains records of previously recorded cultural resources as well as records of previous field investigations. Information from the THC's restricted-access Texas Archeological Sites Atlas (TASA) and Texas Historical Sites Atlas (THSA) was acquired in addition to GIS shapefiles acquired from TARL, to identify and map locations of previously recorded cultural (archeological and historical) resources within the study area. TxDOT's historic bridges database was also reviewed for bridges that are listed or determined eligible for listing on the NRHP. At the national level, NPS websites and data centers were reviewed to identify locations and boundaries for nationally designated historic landmarks, trails, and battlefield monuments.

Together, Pre- and Post-Contact sites are often referred to as cultural resources. Under the NPS standardized definitions, cultural resources include districts, sites, buildings, structures, or objects important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. For this study, cultural resources have been divided into three major categories: archeological resources, historical resources, and cemeteries. These three categories correlate to the organization of cultural resource records maintained by the THC and TARL.

**Archeological** resources are sites where human activity has measurably altered the earth and left deposits of physical remains (e.g., burned rock middens, stone tools, petroglyphs, house foundations, trails, trash scatters). Most archeological sites in Texas are Native American (Pre-Contact), Euro/African American, or Hispanic in origin. Much of the study area has not been studied intensively for archeological resources. Therefore, high probability areas (HPAs) for Pre-Contact and Post-Contact archeological resources were determined based on proximity to perennial water sources, certain topographic features, and the presence of structures on historic maps in currently undeveloped areas.

**Historical** resources include standing buildings or structures (e.g., houses, barns and out buildings), and may also include dams, canals, bridges, transportation routes, silos, etc., and districts that are non-archeological in nature and generally more than 50 years of age.

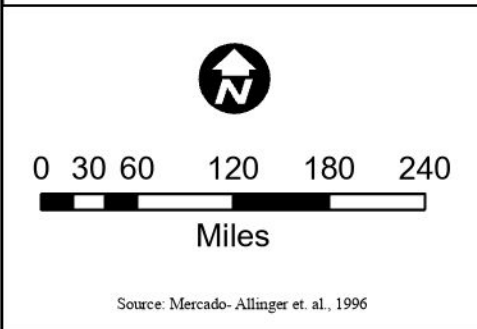
**Cemeteries** are locations of intentional human interment and may include large public burial grounds with multiple individuals, small family plots with only a few burials, or individual grave sites. In some instances, cemeteries may be designated as Historic Texas Cemeteries (HTCs) by the THC or recognized with an Official Texas Historical Marker (OTHM). Cemeteries may also be documented as part of the THC Record-Investigate-Protect Program.

### **3.5.1 Cultural Background**

#### **Pre-Contact**

The study area is located within the Central and Southern Cultural Resource Planning Region as shown on Figure 3-4 (Mercado-Allinger et al. 1996). Bexar County is near the border of the central Texas archaeological region and the South Texas, and Savannah and Prairie archeological regions as mapped by Pertulla (2004). Although the archeological record within and near the study area is likely to reflect influence and shared traits from all three of the archeological regions, the following discussion focuses on the cultural chronology of central Texas, as presented by Michael B. Collins (2004).

The Pre-Contact occupation of central Texas is most often divided into three broad periods spanning at least the last 20,000 years. These periods include the Paleoindian period, beginning around 20,000 years before present (BP) and lasting approximately 11,200 years. Following the Paleoindian period is the long-lasting Archaic period, which subsumes almost two-thirds of the Pre-Contact occupation of central Texas from about 8,800 BP until 1,250 BP. The final period before Euromerican contact is the Late Prehistoric period, which ended with the first Spanish expedition into the region in the late 1600s.



Source: Mercado- Allinger et. al., 1996

**Legend**  
— Cultural Resource Planning Region Boundary  
□ County Boundary

**CPS ENERGY SAT15  
138 KV TRANSMISSION LINE  
PROJECT**

**FIGURE 3-4**  
LOCATION OF THE STUDY AREA  
IN RELATION TO THE  
CULTURAL RESOURCE PLANNING  
REGIONS OF TEXAS



Date: 10/17/2023

### **Paleoindian Period (20,000 to 8,800 BP)**

The Paleoindian period in central Texas is divided into the early and late sub-periods. The early Paleoindian period corresponds with the waning years of the Pleistocene era and is characterized by a comparatively cooler, wetter environment. The earliest known occupation begins in the early Paleoindian period with the Pre-Clovis groups at about 20,000 BP. Evidence from the Gault site has among the earliest dated cultural material in central Texas, including an assemblage of small stemmed and lanceolate projectile points, large bifaces, macro-blades, cores, and other basic flake tools (Williams et al. 2018). Stemmed points recorded within the Gault assemblage are similar in shape to the Early Archaic tools but differ technologically and morphologically from later cultural manifestation (Williams et al. 2018). The lanceolate points resemble Late Paleoindian or those of the Western Stemmed tradition but do not fit any point from the period. The Debra L. Friedkin site, located downstream from the Gault site recorded cultural materials dating between 13,000 to 15,000 BP. Evidence include biface, blades, and flakes tools (Waters et al. 2018). Stone tools recorded at Gault and the Debra L. Friedkin site indicate a hunting and gathering subsistence that used tools for processing meat, hide, and harvesting plants. Other sites such as Wilson-Leonard (Collins, ed 1998) in Williamson County and the Levi Rockshelter site in Travis County have a small lithic assemblage below the Clovis occupation level (Collins 2007).

The Pre-Clovis sequence is followed by the Clovis cultural horizon at 13,500 BP. Clovis as well as other contemporary stone tool cultures subsisted on a well-diversified resource base that included not only the last of the mammoth, but also smaller animals, fish, and a variety of reptiles (Collins 2002). Site types dating to this period are also varied and include kill, quarry/stone-working, cache, camp, ritual, and burial sites. Artifacts associated with early Paleoindian period sites include large, fluted Clovis spear points, bone and ivory points, and stone bolas. Many of the artifacts were made from exotic stone suggesting a wide-ranging hunting and gathering territory. When the Pleistocene era came to an end around 10,900 BP and the mammoth populations had all but disappeared, Pre-Contact populations began to focus their hunting efforts on bison, one of the hallmarks of the transition for the early to the late Paleoindian period (Collins 2004).

The late Paleoindian period in central Texas extended from about 10,900 to 8,800 BP. Although the subsistence base now emphasized large game over the more diversified resource base of the early period, small animals, fish, reptiles, and plants remained important food sources. Small groups continued to hunt, gather plants, and obtain raw material for stone tool manufacture over a broad territory. The hallmark Clovis spear points of the early Paleoindian period gave way to the shorter, fluted Folsom points. There was a greater variety of smaller dart points (Collins 2004) including the St. Mary's Hall point, from the St Mary's Hall site (41BX229) and the Brackenridge Park site (41BX1396) in Bexar County (City of San Antonio Office of Historic Preservation [OHP] 2023a).

### **Archaic Period (8,800 to 1,250 BP)**

The Archaic period is subdivided into Early (ca. 8,800 to 6,000 BP), Middle (ca. 6,000 to 4,000 BP), and Late (4,000 to 1,250 BP) sub-periods. The transition from the late Paleoindian period to the Early Archaic is gradual and is generally characterized as a time when broad territorial hunting and gathering became more localized and artifact assemblages began to show greater diversity than during the late Paleoindian period (Collins 2004). The Brackenridge Park site is considered a transition site having both Paleoindian and Early Archaic tool types. The Higgins site (41BX184) and the Panther Springs site (41BX228), both in Bexar County, also have evidence of early Archaic occupations. Projectile points during this period were much more varied than in the Paleoindian and task-specific tools begin to appear, including Clear Fork tools and Guadalupe bifaces (OHP 2023b). Hallmarks of the Early Archaic include the greater use of groundstone tools and the widespread occurrence of heat-altered rocks, which may have functioned as hearths, ovens, or other features. Although there is a paucity of subsistence data for the Early Archaic in central Texas, there is some evidence that deer, various small animals, fish, and roasted plant bulbs were part of the diet, and bison is absent from the archeological assemblages dating to this sub-period (Collins 2004).

During the early portion of the Middle Archaic, bison hunting is evident in the archeological record. However, by around 5,000 BP, bison are once again absent from the archeological record in central Texas, concomitant with the onset of the driest conditions faced by humans in central Texas (Collins 2004). Near the study area, the Middle Archaic is subdivided further into Clear Fork (early) and Round Rock (late) intervals. In general, projectile points crafted during the Middle Archaic are large and straight-stemmed and sometimes found in large quantities at Middle Archaic sites. This greater density of tools may indicate an increase in population (OHP 2023b). Burned rock middens were prolific in central Texas during this time and in many instances appear to have been used for processing plants adapted to the drier climate such as sotol, a semi-succulent plant used for both food and fiber products (Collins 2004).

The onset of the Late Archaic occurred when central Texas was at its driest, around 4,000 BP. Burned rock middens continued to be a common site type in the earliest years of the sub-period, even increasing in frequency in the eastern region of central Texas. As the desert plants were replaced by plants adapted to a moister climate around 3,500 to 2,500 years ago the number of burned rock middens in east-central Texas decreased but did not entirely disappear. West-central Texas remained dry and burned rock middens continued to be used to process the plant foods at the same intensity as during the Middle Archaic. There is also evidence of increasing population during the Late Archaic (Collins 2004). Cemeteries are commonly found in central Texas during the Late Archaic including several in Bexar County. Burial goods found with the human remains at these cemeteries, such as worked conch shells, indicate regional trade with coastal communities (OHP 2023b).



### **Late Prehistoric Period (1,250 to 300 BP)**

The onset of the Late Prehistoric period has been arbitrarily set by some archaeologists around 1,250 BP but may have started as recently as 800 BP. Little changed in subsistence patterns during the Late Prehistoric; the hunting and gathering strategy continued as did the processing of plants in burned rock middens. The most notable shift from the Late Archaic to the Late Prehistoric was the introduction and subsequent prevalence of arrow points over dart and spear points in the archeological record. There also appears to be an increase in intergroup violence, possibly as a result of increasing population pressure, as evidenced by numerous skeletal remains exhibiting fatal arrow wounds. Pottery and evidence for small-scale agriculture begin to appear in the archeological assemblages dating to the latter part of the Late Prehistoric period (Collins 2004).

Shortly before the arrival of Europeans to central Texas, native groups were living in small band-sized encampments and large, diffuse camps comprised of people with multiple tribal affiliations. Hunting focused on bison, but also included deer and antelope. Group mobility patterns were governed by the seasonal movements of the native animals and availability of resources, and later affected by the newly introduced horse. The presence of Caddoan ceramics at several central Texas sites indicates a long pattern of Hasinai Caddo interaction with groups indigenous to central Texas (Collins 2004).

### **Post-Contact Period (ca. 500 to 50 BP)**

Direct European contact in this region began with exploratory expeditions in the late seventeenth and early eighteenth centuries. The earliest contact came in 1691 when Domingo Terán de los Ríos and Damián Massanet travelled through on an expedition to east Texas (Jasinski 2023). During this expedition, the Spanish explorers encountered an indigenous population that came to be known as Payaya and established the name of San Antonio de Padua for an indigenous village and nearby river. In 1709, another expedition led by Antonio de san Buenaventura y Olivares and Isidro Félix de Espinosa came through the region (Chipman 2023a), after which the area was frequently revisited by exploratory expeditions (Chipman 2023b).

Beginning in 1718 and continuing through the 1720s, Spanish occupation intensified as population increased following the construction of the presidio of San Antonio de Bexar and multiple missions (Handbook of Texas Online 2023). Olivares founded the Mission San Antonio de Valero on May 1 at its original location west of San Pedro Springs. Days later, the presidio of San Antonio de Béxar was founded near the mission by Martín de Alcarón, governor of Coahuila y Texas (Jasinski 2023). Both the presidio and the mission were relocated to their latest locations in 1722 and 1724, respectively, with the presidio on the west bank of the San Antonio River directly across from the mission on the east bank. Additional missions were established as the population of the area steadily rose (Schoelwer 2023).

Development of the area continued to intensify as construction projects grew to support the population and the responsibilities of the newly established government. The San Fernando de Béxar settlement was founded in 1731, the first civil government in Texas. By 1773, San Fernando became the capital of Spanish Texas (de la Teja 2023). San Fernando de Béxar initially consisted of military personnel and civilians including Mexican frontiersman, resident families, and Native Americans living at the missions. Later, it evolved into a *casta*, or an organization of social hierarchy based on racial divisions. This society was typical in North American Spanish colonies and consisted of Europeans and European descendants, Native Americans, African descendants, and mixed-race groups (Jasinski 2023).

During the late eighteenth and early nineteenth centuries San Fernando suffered a hostile period. Surrounding Native American communities such as the Apache and Comanche put pressure on communication networks and the surrounding farmland, and there were military upheavals in the city as well (de la Teja 2023). In 1811, Captain Juan Bautista de las Casas assumed governorship of Texas in what was known as the Casas Revolt. The revolt was short-lived, however, and ended with the incumbent governor, Manuel María de Salcedo re-instated, and the city was recaptured in 1813 (Caldwell 2023). This tumultuous period eventually led to the re-organization of the provinces of Texas and Coahuila into one state governed out of Saltillo (de la Teja 2023). During the initial stages of the Texas Revolution, San Fernando de Béxar was besieged and occupied by rebel forces. By 1837, it had been renamed San Antonio and was county seat of Bexar County (de la Teja 2023).

The impetus for the Texas Revolution began when several Mexican states rebelled against President Antonio Lopez de Santa Anna's reformation that replaced the constitution of 1824 with a new government. Coahuila y Tejas were among the rebelling states, and on February 23, 1836, the Mexican army under Santa Anna retaliated against the Texian rebels by laying siege to San Antonio. The resulting battle known as the Battle of the Alamo. This rebellion ultimately ended on April 21, 1836, with the independence of Texas and the subsequent removal of Mexican forces from San Antonio (Barker and Pohl 2023).

Following the war for independence, San Antonio became the seat of Bexar County within the Republic of Texas, hostilities with Comanches persisted, such as the Council House Fight in 1840 (Dickson Schilz 2023), and San Antonio was seized twice by Mexico in 1842 (Jasinski 2023). Hostilities with Mexico only intensified after Texas was annexed by the US in 1845 and the Mexican-American War began in 1846. The US military established a headquarters in San Antonio in 1848 but was forced to surrender it to militia forces in 1861 when Texas seceded from the Union at the outset of the American Civil War (Jasinski 2023).

North of the city limits, in the Texas Hill Country area, many Western European immigrants, particularly Germans, settled near the study area beginning in the 1840s (Cooper 2008). Nearby Helotes was settled in the

1850s by German and Mexican immigrants (Massey 2023). By the 1890s, one third of San Antonio's population was German (Ezell et al. 2011).

After the Civil War, San Antonio became a prosperous hub supporting multiple industries and growing in population. Cattle trail drives were an integral part of the San Antonio economy, as well as the wool from the nearby hill country. In 1877, the Galveston, Harrisburg and San Antonio Railway reached San Antonio. A second railroad, the International-Great Northern, reached San Antonio in 1881. The railroads fueled local industries, and five additional railroads connected San Antonio to distant markets by 1900 (Jasinski 2023).

### 3.5.2 Literature and Records Review

Historical and archeological data for the study area were reviewed online through the THSA and TARL. GIS shapefiles identifying the locations of previously recorded archeological sites were obtained from TARL on March 23, 2021, and used to map archeological site locations within the study area. The TASA and THSA were reviewed in April 2021, and updated in June 2023, to identify locations of archeological sites, historical sites, State Antiquities Landmarks (SALs), cemeteries, HTC's, and OTHMs within the study area, as well as previously conducted cultural resource investigations. The City of San Antonio Office of Historic Preservation Address Search was reviewed for local significant landmarks designated by the city (OHP 2023c). The TxDOT Historic Resources Aggregator database was also reviewed to identify historic properties within the study area (TxDOT 2023c). NPS databases and websites pertaining to the NRHP, National Historic Trails, and National Historic Landmark properties were also reviewed to locate and define boundaries for historic properties recorded at the national level (NPS 2023d). The results of the review are summarized in Table 3-11.

**TABLE 3-11 RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA**

ARCHEOLOGICAL SITES	NRHP-LISTED RESOURCES	NRHP DETERMINED - ELIGIBLE RESOURCE	STATE ANTIQUITIES LANDMARKS	CEMETERIES	OTHM
1	0	0	0	0	0

Source: THC 2023b.

The review of the TASA (THC 2023b), and TARL data indicates one archeological site has been recorded in the study area. No cemeteries, NRHP-listed or determined-eligible properties, OTHMs, or historic trails have been recorded within the study area.

Archeological site 41BX1958 is a multicomponent site consisting of Pre-Contact lithic scatter and the ruins of a mid-twentieth century ranching complex. Cultural materials recorded at the site include debitage, tested cobbles, modified flakes, and a biface; and historic debris consisting corrugated metal, milled lumber, rusted machinery,

glass shards, and pieces of plastic. A concrete foundation and trough are recorded at the site. Site 41BX1958 has not been formally assessed by the State Historic Preservation Office for listing in the NRHP. According to the 2013 site form, the site has been heavily disturbed by erosion, bulldozing, and the construction of a large stock pond (THC 2023b).

The majority of the Pre-Contact archeological sites that have been recorded near the study area are campsites with burned rock middens, and/or lithic scatters in close proximity to streams and river channels (e.g., unnamed tributaries of Leon Creek), or on uplands adjacent to these channels. Post-Contact sites in and in the vicinity of the study area generally include the remains of ranching activity. Aerial images indicate that Pre- and Post-Contact sites have been impacted by encroaching urbanization.

### 3.5.3 Previous Investigations

There have been at least seven previously conducted cultural resource investigations within the study area (THC 2023b). These investigations were undertaken in advance of roadway (Turner 2005; Thompson et al. 2008; Brandon and Sanchez 2014; and THC 2023b), oil and gas (THC 2023b), and transmission line (Stahman 2009) projects (see Table 3-12).

**TABLE 3-12 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS WITHIN THE STUDY AREA**

INVESTIGATING AGENCY NAME	SURVEY/PROJECT NAME	SITE(S) RECORDED/VISITED
-	Stotzer Freeway TX-151 Survey for TxDOT No additional information	none
-	Unspecified Survey for TxDOT No additional information	none
SWCA Environmental Consultants	Cultural Resources Survey of the Proposed 3-Mile Wisemen Road Extension Project in the Northwestern San Antonio, Bexar County, Texas (Turner 2005)	none
UTSA-CAR	Intensive Pedestrian Archeological Survey of Loop 1604 North Improvements Project, City of San Antonio, Bexar County, Texas (Thompson et al. 2008)	none
PBS&J C	An Intensive Archeological Survey of the Proposed Anderson to Westover Hills 138-kV Transmission Line Project, San Antonio, Bexar County, Texas (Stahman 2009)	none
SWCA Environmental Consultants	Black & Veatch Water Resources Integration Pipeline No additional information	none
Blanton & Associates, Inc.	Intensive Archeological Survey of Selected Parts of Loop 1604 From US 90 to IH 35 in the City of San Antonio, Bexar County, Texas (Brandon and Sanchez 2014)	none

Source: THC 2023b.

### **3.5.4 High Probability Areas**

Review of the previously recorded cultural resource sites data indicates that the study area has not been entirely examined during previous archeological and historical investigations. Consequently, the records review results do not include all possible cultural resources sites within the study area. To further assess and avoid potential impacts to cultural resources, HPAs for Pre-Contact archeological sites were defined during the route analysis process. HPAs were designated based on a review of the site and survey data within the study area, as well as soils and geologic data, and topographic variables. Within the study area, the Pre-Contact HPAs typically occur near and along streams such as unnamed tributaries Leon Creek. Terraces and topographic high points that would provide flats for camping and expansive landscape views as well as access to fresh water sources are also considered to have a high probability for containing Pre-Contact archeological sites.

Post-Contact age resources are likely to be found near water sources. However, they will also be located in proximity to primary and secondary transportation routes (e.g., trails, roads, and railroads) which provided access to the sites. Buildings and cemeteries are also more likely to be located within or near Post-Contact communities.

## **4.0 ENVIRONMENTAL IMPACTS OF THE ALTERNATIVE ROUTES**

Potential impacts of the Project that could occur from, and are unique to, the construction and operation of a transmission line are discussed separately in this section of the EA. Evaluation of the potential impacts of the alternative routes identified in Section 3.0 was conducted by tabulating the data for each of the 46 evaluation criteria in Table 2-2 for each alternative routing segment and each primary alternative route. The data tabulation for land use and environmental criteria for each alternative route are presented in Table 4-1 and for each segment in Table 4-2.

### **4.1 Impacts on Natural Resources/Environmental Integrity**

#### **4.1.1 Impacts on Physiography and Geology**

Construction of the proposed transmission line is expected to have negligible effects on physiographic features, geologic features and/or natural resources of the area. Erection of the pole structures proposed for the Project would require the excavation and/or minor disturbance of small quantities of near-surface materials but should have no measurable impacts on the geologic resources along the alternative routes.

Karst formations have the potential to occur within the study area. As such a site-specific karst survey may be required for the approved route to comply with USFWS survey requirements related to Endangered Karst Invertebrates in Central Texas. Surveys for karst features would follow USFWS guidelines for conducting karst features and would include a review of available existing information on regional caves, soils, historical land use practices, topography, and geology of the Project area and vicinity. Field surveys would include a pedestrian survey to identify karst features, that includes a description and assessment of observed features. The scope of this survey would not include an evaluation of the structural development or subgrade extent of the biological content (i.e., presence/absence of endangered cave invertebrate species) of potential karst features. Surface karst features may indicate the potential presence of suitable habitat for federally listed, endangered cave invertebrates, a USFWS permitted biologist holding a 10(a)(1)(A) permit for karst wildlife would be required to further investigate a feature to determine the presence of suitable habitat for listed species.

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**Table 4-1**  
Land Use and Environmental Data For Route Evaluation  
SAT15

**Evaluation Criteria**

Land Use	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H	Route I	Route J	Route K	Route L	Route M
1 Length of alternative route	1.82	1.83	2.13	2.36	1.20	1.43	1.25	1.24	2.28	2.28	2.08	1.77	1.77
2 Number of habitable structures <sup>1</sup> within 300 feet of ROW centerline	16	22	20	20	13	13	3	3	19	19	18	20	20
3 Length of ROW using existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Length of ROW parallel and adjacent to existing transmission line ROW	0.53	0	0	0	0	0	0	0	0	0	0	0	0
5 Length of ROW parallel and adjacent to other existing ROW (roadways)	0.89	0.86	1.69	1.79	0.60	0.69	0.73	0.71	1.87	1.85	1.79	0.95	0.90
6 Length of ROW parallel and adjacent to apparent property lines <sup>2</sup> (or other natural or cultural features, etc.)	0	0.53	0.04	0.04	0.34	0.34	0	0	0	0	0	0.50	0.50
7 Sum of evaluation criteria 4, 5, and 6	1.42	1.39	1.73	1.83	0.94	1.03	0.73	0.71	1.87	1.85	1.79	1.44	1.40
8 Percent of evaluation criteria 4, 5, and 6	78%	76%	81%	77%	78%	72%	59%	57%	82%	81%	86%	81%	79%
9 Length of ROW across parks/recreational areas <sup>3</sup>	0	0	0.11	0.11	0	0.11	0.11	0	0.11	0	0	0	0
10 Number of additional parks/recreational areas <sup>3</sup> within 1,000 feet of ROW centerline	1	1	1	1	1	1	1	1	1	1	1	1	1
11 Length of ROW across cropland	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Length of ROW across pasture/rangeland	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Length of route across conservation easements and/or mitigation banks (Special Management Area)	0.13	0.13	0.13	0.13	0	0	0	0	0.13	0.13	0.13	0.13	0.13
15 Length of route across gravel pits, mines, or quarries	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Length of ROW parallel and adjacent to pipelines <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Number of pipeline crossings <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Number of transmission line crossings	1	1	1	1	1	1	1	1	1	1	1	1	1
19 Number of US and state highway crossings	1	1	1	1	1	1	1	1	1	1	1	1	1
20 Number of FM or RM road crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Number of FAA registered public/military airports <sup>5</sup> with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
22 Number of FAA registered public/military airports <sup>5</sup> having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23 Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Number of heliports within 5,000 feet of the ROW centerline	1	1	1	1	1	1	1	1	1	1	1	1	1
25 Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
26 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	2	2	2	2	0	0	0	0	2	2	2	2	2
27 Number of identifiable existing water wells within 200 feet of the ROW centerline	3	4	4	4	0	0	0	0	4	4	4	4	3
28 Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Aesthetics</b>													
29 Estimated length of ROW within foreground visual zone <sup>6</sup> of US and state highways	1.82	1.82	2.12	2.36	1.20	1.43	1.25	1.24	2.28	2.27	2.07	1.77	1.77
30 Estimated length of ROW within foreground visual zone <sup>6</sup> of FM roads	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Estimated length of ROW within foreground visual zone <sup>6/7</sup> of parks/recreational areas <sup>3</sup>	0.91	1.22	1.52	1.76	1.06	1.29	1.04	1.04	1.67	1.67	1.47	1.17	1.09
<b>Ecology</b>													
32 Length of ROW across upland woodlands/brushlands	1.50	1.51	1.69	1.75	1.04	1.08	0.79	0.78	1.87	1.87	1.78	1.51	1.48
33 Length of ROW across bottomland/riparian woodlands	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Length of ROW across NWI mapped wetlands	0	0	0	0	0	0	0	0	0	0	0	0	0
35 Length of ROW across critical known habitat of federally-listed threatened or endangered species	0	0	0	0	0	0	0	0	0	0	0	0	0
36 Length of ROW across open water (lakes, ponds)	0	0	0	0	0	0	0	0	0	0	0	0	0
37 Number of stream and river crossings	0	1	1	1	2	2	2	2	1	1	1	1	1
38 Length of ROW parallel (within 100 feet) to streams or rivers	0	0	0	0	0	0	0	0	0	0	0	0	0
39 Length of ROW across Edwards Aquifer Contributing Zone	1.82	1.83	2.13	2.36	1.20	1.43	1.25	1.24	2.28	2.28	2.08	1.77	1.77
40 Length of ROW across 100-year floodplains	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Cultural Resources</b>													
41 Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
42 Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
43 Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	0	0	0	0	1	1	1	1	0	0	0	0	0
44 Number of NRHP listed properties crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
45 Number of additional NRHP listed properties within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
46 Length of ROW across areas of high archeological site potential	0.25	0.30	0.70	0.62	0.89	0.80	0.51	0.47	0.41	0.36	0.52	0.30	0.30

<sup>1</sup>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 within 300 feet of the centerline of a transmission project of 230-kV or less.

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>Only steel pipelines six inches and greater in diameter carrying hydrocarbons were quantified in the pipeline crossing and paralleling calculations.

<sup>5</sup>As listed in the Chart Supplement South Central US (FAA 2023b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.

<sup>6</sup>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.

<sup>7</sup>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.

All length measurements are shown in miles unless noted otherwise.



**Table 4-1**  
Land Use and Environmental Data For Route Evaluation  
SAT15

**Evaluation Criteria**

<b>Land Use</b>		<b>Route N</b>	<b>Route O</b>
1	Length of alternative route	2.07	2.27
2	Number of habitable structures <sup>1</sup> within 300 feet of ROW centerline	18	19
3	Length of ROW using existing transmission line ROW	0	0
4	Length of ROW parallel and adjacent to existing transmission line ROW	0	0
5	Length of ROW parallel and adjacent to other existing ROW (roadways)	1.74	1.81
6	Length of ROW parallel and adjacent to apparent property lines <sup>2</sup> (or other natural or cultural features, etc.)	0	0
7	Sum of evaluation criteria 4, 5, and 6	1.74	1.81
8	Percent of evaluation criteria 4, 5, and 6	84%	79%
9	Length of ROW across parks/recreational areas <sup>3</sup>	0	0
10	Number of additional parks/recreational areas <sup>3</sup> within 1,000 feet of ROW centerline	1	1
11	Length of ROW across cropland	0	0
12	Length of ROW across pasture/rangeland	0	0
13	Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0	0
14	Length of route across conservation easements and/or mitigation banks (Special Management Area)	0.13	0.13
15	Length of route across gravel pits, mines, or quarries	0	0
16	Length of ROW parallel and adjacent to pipelines <sup>4</sup>	0	0
17	Number of pipeline crossings <sup>4</sup>	0	0
18	Number of transmission line crossings	1	1
19	Number of US and state highway crossings	1	1
20	Number of FM or RM road crossings	0	0
21	Number of FAA registered public/military airports <sup>5</sup> with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0
22	Number of FAA registered public/military airports <sup>5</sup> having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0
23	Number of private airstrips within 10,000 feet of the ROW centerline	0	0
24	Number of heliports within 5,000 feet of the ROW centerline	1	1
25	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0
26	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	2	2
27	Number of identifiable existing water wells within 200 feet of the ROW centerline	3	3
28	Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	0	0
<b>Aesthetics</b>			
29	Estimated length of ROW within foreground visual zone <sup>6</sup> of US and state highways	2.07	2.27
30	Estimated length of ROW within foreground visual zone <sup>6</sup> of FM roads	0	0
31	Estimated length of ROW within foreground visual zone <sup>6/7</sup> of parks/recreational areas <sup>3</sup>	1.40	1.59
<b>Ecology</b>			
32	Length of ROW across upland woodlands/brushlands	1.75	1.83
33	Length of ROW across bottomland/riparian woodlands	0	0
34	Length of ROW across NWI mapped wetlands	0	0
35	Length of ROW across critical known habitat of federally-listed threatened or endangered species	0	0
36	Length of ROW across open water (lakes, ponds)	0	0
37	Number of stream and river crossings	1	1
38	Length of ROW parallel (within 100 feet) to streams or rivers	0	0
39	Length of ROW across Edwards Aquifer Contributing Zone	2.07	2.27
40	Length of ROW across 100-year floodplains	0	0
<b>Cultural Resources</b>			
41	Number of cemeteries within 1,000 feet of the ROW centerline	0	0
42	Number of recorded cultural resource sites crossed by ROW	0	0
43	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	0	0
44	Number of NRHP listed properties crossed by ROW	0	0
45	Number of additional NRHP listed properties within 1,000 feet of ROW centerline	0	0
46	Length of ROW across areas of high archeological site potential	0.52	0.36

<sup>1</sup>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 within 300 feet of the centerline of a transmission project of 230-kV or less.

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>Only steel pipelines six inches and greater in diameter carrying hydrocarbons were quantified in the pipeline crossing and paralleling calculations.

<sup>5</sup>As listed in the Chart Supplement South Central US (FAA 2023b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.

<sup>6</sup>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.

<sup>7</sup>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.

All length measurements are shown in miles unless noted otherwise.

**Table 4-2**  
Land Use and Environmental Data For Segment Evaluation  
SAT15

<b>Evaluation Criteria</b>															
<b>Land Use</b>	<b>1</b>	<b>2A</b>	<b>2B</b>	<b>3</b>	<b>5</b>	<b>6A</b>	<b>6B</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12A</b>	<b>12B</b>	
1 Length of alternative route (miles)	0.49	0.13	0.97	0.16	0.28	0.08	0.59	0.23	0.47	0.46	0.46	0.18	0.08	0.36	
2 Number of habitable structures <sup>1</sup> within 300 feet of the route centerline	15	0	1	0	2	1	5	0	1	10	0	0	0	3	
3 Length of ROW using existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4 Length of ROW parallel and adjacent to existing transmission line ROW	0	0	0.53	0	0	0	0	0	0	0	0	0	0	0	
5 Length of ROW parallel to other existing ROW (roadways, railways, etc.)	0.35	0	0.31	0.16	0.13	0	0	0.23	0.47	0	0.22	0.18	0	0.36	
6 Length of ROW parallel and adjacent to apparent property lines <sup>2</sup> (or other natural or cultural features, etc.)	0	0	0	0	0.04	0	0.50	0	0	0.34	0	0	0	0	
7 Sum of evaluation criteria 4, 5, and 6	0.35	0.00	0.84	0.16	0.16	0.00	0.50	0.23	0.47	0.34	0.22	0.18	0.00	0.36	
8 Percent of evaluation criteria 4, 5, and 6	70%	0%	87%	100%	59%	0%	84%	100%	100%	73%	48%	100%	0%	100%	
9 Length of ROW across parks/recreational areas <sup>3</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10 Number of additional parks/recreational areas <sup>3</sup> within 1,000 feet of ROW centerline	0	0	1	0	0	0	1	1	1	1	0	1	1	1	
11 Length of ROW across cropland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12 Length of ROW across pasture/rangeland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13 Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14 Length of route across conservation easements and/or mitigation banks (Special Management Area)	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0	
15 Length of route across gravel pits, mines, or quarries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16 Length of ROW parallel and adjacent to pipelines <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17 Number of pipeline crossings <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18 Number of transmission line crossings	1	0	0	0	0	0	0	0	0	1	1	0	0	0	
19 Number of IH, US and state highway crossings	0	1	0	0	0	1	0	0	0	0	0	0	1	0	
20 Number of FM or RM road crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21 Number of FAA registered airports <sup>5</sup> with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22 Number of FAA registered airports <sup>5</sup> having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23 Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24 Number of heliports within 5,000 feet of the ROW centerline	0	0	1	0	0	0	1	1	0	0	0	0	1	1	
25 Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	2	1	0	1	1	1	1	0	1	0	0	0	0	0	
27 Number of identifiable existing water wells within 200 feet of the ROW centerline	3	1	0	2	1	0	0	0	0	0	0	0	0	0	
28 Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Aesthetics</b>															
29 Estimated length of ROW within foreground visual zone <sup>6</sup> of IH, US and state highways	0.49	0.13	0.97	0.16	0.28	0.08	0.59	0.23	0.47	0.46	0.46	0.18	0.08	0.36	
30 Estimated length of ROW within foreground visual zone <sup>6</sup> of FM/RM roads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31 Estimated length of ROW within foreground visual zone <sup>6 7</sup> of parks/recreational areas <sup>3</sup>	0	0	0.68	0.04	0.28	0.08	0.59	0.23	0.47	0.33	0.25	0.18	0.08	0.36	
<b>Ecology</b>															
32 Length of ROW across upland woodlands/brushlands	0.49	0.03	0.75	0.10	0.18	0.02	0.50	0.23	0.33	0.42	0.26	0.12	0.00	0.36	
33 Length of ROW across bottomland/riparian woodlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
34 Length of ROW across NWI mapped wetlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
35 Length of ROW across critical habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36 Length of ROW across open water (lakes, ponds)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
37 Number of stream and river crossings	0	0	0	0	0	0	1	0	0	1	1	0	0	0	
38 Length of ROW parallel (within 100 feet) to streams or rivers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
39 Length of ROW across Edwards Aquifer Contributing Zone	0.49	0.13	0.97	0.16	0.28	0.08	0.59	0.23	0.47	0.46	0.46	0.18	0.08	0.36	
40 Length of ROW across FEMA mapped 100-year floodplain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cultural Resources</b>															
41 Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
42 Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
43 Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
44 Number of NRHP listed properties crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45 Number of additional NRHP listed properties within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46 Length of ROW across areas of high archeological site potential	0	0	0.20	0	0	0	0.25	0.05	0.17	0.36	0.10	0.04	0.02	0.23	

<sup>1</sup>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 within 300 feet of the centerline of a transmission project of 230-kV or less.

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>Only steel pipelines six inches and greater in diameter carrying hydrocarbons were quantified in the pipeline crossing and paralleling calculations.

<sup>5</sup>As listed in the Chart Supplement South Central US (FAA 2023b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.

<sup>6</sup>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.

<sup>7</sup>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. All length measurements are shown in miles unless noted otherwise.

**Table 4-2**  
Land Use and Environmental Data For Segment Evaluation  
SAT15

<b>Evaluation Criteria</b>													
<b>Land Use</b>	<b>13A</b>	<b>13B</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
1 Length of alternative route (miles)	0.10	0.23	0.17	0.19	0.03	0.16	0.13	0.13	0.09	0.12	0.21	0.47	0.18
2 Number of habitable structures <sup>1</sup> within 300 feet of the route centerline	0	3	0	0	0	0	0	0	0	0	0	0	1
3 Length of ROW using existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Length of ROW parallel and adjacent to existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Length of ROW parallel to other existing ROW (roadways, railways, etc.)	0	0.12	0.15	0.13	0	0.11	0.11	0.13	0	0.12	0.21	0.47	0.18
6 Length of ROW parallel and adjacent to apparent property lines <sup>2</sup> (or other natural or cultural features, etc.)	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Sum of evaluation criteria 4, 5, and 6	0.00	0.12	0.15	0.13	0.00	0.11	0.11	0.13	0.00	0.12	0.21	0.47	0.18
8 Percent of evaluation criteria 4, 5, and 6	0%	55%	88%	66%	0%	68%	84%	100%	0%	100%	100%	100%	100%
9 Length of ROW across parks/recreational areas <sup>3</sup>	0	0	0	0	0	0.11	0	0	0	0	0	0	0
10 Number of additional parks/recreational areas <sup>3</sup> within 1,000 feet of ROW centerline	0	0	1	1	1	1	1	1	0	0	0	1	1
11 Length of ROW across cropland	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Length of ROW across pasture/rangeland	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Length of route across conservation easements and/or mitigation banks (Special Management Area)	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Length of route across gravel pits, mines, or quarries	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Length of ROW parallel and adjacent to pipelines <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Number of pipeline crossings <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Number of IH, US and state highway crossings	1	0	0	0	0	0	0	0	1	0	0	0	0
20 Number of FM or RM road crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Number of FAA registered airports <sup>5</sup> with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
22 Number of FAA registered airports <sup>5</sup> having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23 Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Number of heliports within 5,000 feet of the ROW centerline	1	1	1	1	1	1	1	1	0	0	0	1	1
25 Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
26 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	0	0	0	0	0	0	0	0	1	1	1	1	0
27 Number of identifiable existing water wells within 200 feet of the ROW centerline	0	0	0	0	0	0	0	0	1	0	0	0	0
28 Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Aesthetics</b>													
29 Estimated length of ROW within foreground visual zone <sup>6</sup> of IH, US and state highways	0.10	0.23	0.17	0.19	0.03	0.16	0.13	0.13	0.09	0.12	0.21	0.47	0.18
30 Estimated length of ROW within foreground visual zone <sup>6</sup> of FM/RM roads	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Estimated length of ROW within foreground visual zone <sup>6 7</sup> of parks/recreational areas <sup>3</sup>	0.10	0.23	0.17	0.19	0.03	0.16	0.13	0.13	0.09	0.06	0.21	0.47	0.18
<b>Ecology</b>													
32 Length of ROW across upland woodlands/brushlands	0.00	0.14	0.15	0.14	0.00	0.11	0.12	0.13	0.01	0.04	0.19	0.39	0.18
33 Length of ROW across bottomland/riparian woodlands	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Length of ROW across NWI mapped wetlands	0	0	0	0	0	0	0	0	0	0	0	0	0
35 Length of ROW across critical habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
36 Length of ROW across open water (lakes, ponds)	0	0	0	0	0	0	0	0	0	0	0	0	0
37 Number of stream and river crossings	0	0	0	0	0	1	1	0	0	0	0	0	0
38 Length of ROW parallel (within 100 feet) to streams or rivers	0	0	0	0	0	0	0	0	0	0	0	0	0
39 Length of ROW across Edwards Aquifer Contributing Zone	0.1	0.23	0.17	0.19	0.03	0.16	0.13	0.13	0.09	0.12	0.21	0.47	0.18
40 Length of ROW across FEMA mapped 100-year floodplain	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Cultural Resources</b>													
41 Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
42 Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
43 Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
44 Number of NRHP listed properties crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
45 Number of additional NRHP listed properties within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
46 Length of ROW across areas of high archeological site potential	0	0	0.13	0.10	0.03	0.16	0.13	0.13	0	0	0	0	0

<sup>1</sup>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 within 300 feet of the centerline of a transmission project of 230-kV or less.

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>Only steel pipelines six inches and greater in diameter carrying hydrocarbons were quantified in the pipeline crossing and paralleling calculations.

<sup>5</sup>As listed in the Chart Supplement South Central US (FAA 2023b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.

<sup>6</sup>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.

<sup>7</sup>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.

All length measurements are shown in miles unless noted otherwise.

### **4.1.2 Impacts on Soils**

Potential impacts to soils from the construction, operation, and maintenance of electric transmission lines include erosion and compaction. Such impacts can be avoided by CPS Energy's implementation of appropriate mitigative measures during construction. No conversion of prime farmland soils is anticipated to occur as a result of Project activities.

The highest risk for soil erosion and compaction is associated with the clearing and construction phases of the Project. In accordance with CPS Energy standard construction specifications, woody vegetation would be cleared within the ROW, as necessary to achieve conductor to ground clearance of the transmission line. Areas with vegetation removed would have the highest potential for soil erosion and the movement of heavy equipment through the cleared ROW creates the greatest potential for soil compaction. Prior to construction, CPS Energy would develop a Stormwater Pollution Prevention Plan (SWPPP) to minimize potential impacts associated with soil erosion, compaction, and external ROW sedimentation. Implementation of this plan would incorporate temporary and permanent best management practices to minimize soil erosion on the ROW during rainfall events. The SWPPP would also establish the criteria for mitigating soil compaction and re-vegetation to maintain soil stabilization during the construction and post construction phases. The existing herbaceous layer of vegetation would be maintained, to the extent practical, during construction. Denuded areas would be seeded and/or further stabilized with the implementation of permanent soil berms or interceptor slopes to stabilize disturbed areas and minimize soil erosion potential. The ROW would be inspected during and post construction to identify potential high erosion areas to ensure that best management practices are implemented and maintained.

The potential for erosion and compaction would be minimized by CPS Energy's development and implementation of a SWPPP for the Project. The range of potential soil impacts is considered equivalent for each of the alternative routes.

### **4.1.3 Impacts on Surface Water**

CPS Energy proposes to span surface waters crossed by the alternative routes. Structures would be constructed outside of the ordinary high-water mark for each surface water being spanned. CPS Energy would only remove woody vegetation near surface waters in order to meet conductor to ground clearance requirements. The understory and herbaceous layers of vegetation would remain, where allowable, and best management practices would be implemented in accordance with the SWPPP for the Project to reduce the potential for sedimentation into surface waters. Since CPS Energy intends to span surface waters a SWPPP plan would be implemented during construction, minimal impacts to surface waters are anticipated for the alternative routes. The lengths of each alternative route crossing open waters (lakes, ponds), number of streams and rivers crossed by each of the alternative routes, and lengths paralleling (within 100 feet) streams or rivers are provided in Table 4-1.

The number of linear surface water crossings (stream feature) ranges from 0 (zero) for Alternative Route A, to two for Alternative Routes E, F, G, and H. None of the alternative routes cross an open water feature (lake or pond). None of the alternative routes have length of ROW parallel (within 100 feet) to streams or rivers.

#### **4.1.4 Impacts on Ground Water**

Each alternative route occurs entirely within the Edwards Aquifer Artesian Zone. The length of ROW across the Edwards Aquifer Artesian Zone ranges from approximately 1.20 miles for Alternative Route E, to approximately 2.36 miles for Alternative Route D. The construction, operation, and maintenance of the Project are not anticipated to adversely affect groundwater resources within the study area.

Avoidance and minimization measures of potential contamination of water resources (related to minor fuel and/or chemical spills) would be identified in the SWPPP. CPS Energy would take necessary precautions to avoid the occurrence of these spills. If an unauthorized discharge occurs during construction, CPS Energy would comply with TCEQ and EAA notification requirements.

#### **4.1.5 Impacts on Floodplains**

The construction of the alternative routes is not anticipated to impact the overall function of a floodplain within the study area, or adversely affect adjacent or downstream properties. Engineering design would alleviate the potential of construction activities to adversely impact flood channels while proper structure placement would minimize flow impedance during a major flood event. Typically, the small footprint of a pole structures, as proposed for the Project, would not significantly alter the flow of water within a floodplain.

None of the alternative routes have length of ROW across mapped 100-year floodplains ranges.

#### **4.1.6 Impacts on Wetlands**

None of the alternative routes cross NWI mapped wetlands. No NWI mapped wetlands were identified within the study area; however, unmapped wetlands still have the potential to occur within the study area. Removal of vegetation in wetlands increases the potential for erosion and sedimentation, which can be detrimental to downstream plant communities and aquatic life. Wetland areas also provide habitat to a number of species and are often used as migration corridors for wildlife. Mitigation measures supported by best management practices (BMPs), would be implemented, as appropriate, in areas identified as potential wetlands. BMPs would be utilized during construction activities to further avoid and minimize impacts to those areas. CPS Energy proposes to implement best management practices as a component of their SWPPP to prevent external ROW sedimentation and degradation of potential wetland areas. With the use of these avoidance and minimization measures, the alternative routes are anticipated to have none to minimal impact on potential wetlands.

The temporary and/or permanent placement of fill material within jurisdictional waterways and wetlands may require a permit from the USACE under Section 404 of the CWA. If necessary, CPS Energy would coordinate with the USACE – Fort Worth District prior to clearing and construction to ensure compliance with Section 404 of the CWA.

#### **4.1.7 Impacts on Coastal Natural Resources Areas**

The study area is not located within the CMZ boundary as defined by 31 TAC § 503.1, which excludes the Project from CMP conditions.

#### **4.1.8 Impacts on Vegetation**

Potential impacts to vegetation would result from clearing the ROW of vegetation and/or mowing/clearing of vegetation. These activities would facilitate ROW access for structure construction, line stringing, and future maintenance activities of the proposed transmission line.

Impacts to vegetation would generally be limited to the transmission ROW. Additional clearing may be necessary in temporary easements outside of the ROW to facilitate the construction of the transmission line. These clearing activities would be implemented by minimizing the impacts to existing groundcover vegetation when practical. Future ROW maintenance activities might include periodic mowing and/or herbicide applications to deter and/or maintain an herbaceous vegetation layer within the ROW.

Clearing trees and shrubs from woodland areas typically generates a degree of habitat fragmentation. The magnitude of habitat fragmentation was minimized to the extent possible during the routing process by paralleling existing linear features such as roadways. During the route development process, consideration was given to avoid wooded areas and/or to maximize the length of the routes parallel to existing linear features. Vegetation clearing would occur only where necessary to provide access, workspace, and future maintenance access to the ROW.

The lengths of each alternative route crossing upland woodlands/brushlands and bottomland/riparian woodlands are provided in Table 4-1. None of the alternative routes cross bottomland/riparian woodlands. Each alternative route has length of ROW across upland woodlands/brushlands which ranges from approximately 0.78 mile for Alternative Route H, to approximately 1.87 miles for Alternative Routes I and J.

#### **4.1.9 Impacts on Wildlife**

The primary impacts of construction activities on wildlife species are typically associated with disturbances from construction activities, and the removal of vegetation. Increased noise and equipment movement during construction might temporarily displace mobile wildlife species from the immediate workspace area. These

impacts are considered short-term and normal wildlife movements would be expected to resume after construction is completed. Potential long-term impacts include those resulting from habitat modifications, and/or fragmentation. Each alternative route crosses areas of upland woodlands/brushlands, which can represent the highest degree of habitat fragmentation by converting the area within the ROW to an herbaceous habitat. During the segment and route development process, disturbance to habitat and woodland habitat fragmentation was considered and minimized by paralleling existing linear features and not paralleling streams to the extent feasible.

Construction activities could impact small, immobile, or fossorial (living underground) animal species through incidental impacts or from the alteration of local habitats. Incidental impacts to these species might occur due to equipment or vehicular movement on the ROW by direct impact or due to the compaction of the soil if the species is fossorial. Potential impacts of this type are not typically considered relevant and are not likely to have an adverse effect on species population dynamics.

If ROW clearing occurs during bird nesting seasons, potential impacts to birds could occur that include but are not limited to disturbance to breeding, nesting, and fledging. Increases in noise and equipment activity levels during construction could also potentially disturb breeding or other activities of species nesting in areas immediately adjacent to the ROW. If ROW clearing activities are necessary during the migratory bird nesting season (March 15 to September 15), CPS Energy would comply with state (Texas Parks and Wildlife Code Chapter 64) and federal (MBTA) regulations regarding avian species by having a qualified biologist conduct surveys for active nests prior to ground disturbance and/or vegetation clearing.

Transmission lines can also present additional hazards to birds due to electrocutions and/or collisions. Measures would be implemented to minimize this risk with transmission line through engineering designs. The electrocution risk to birds would not be significant since the engineering design distance between conductors, conductor to structure, or conductor to ground wire for the proposed transmission line is greater than the wingspan of most birds typically expected to occur within the area (i.e., greater than eight feet). The risk for avian collisions with the shield wire can be minimized by installing bird flight diverters or other marking devices on the line within determined high bird use areas.

#### **4.1.10 Impacts on Aquatic Resources**

Potential impacts to aquatic resources would include potential effects of erosion, siltation, and sedimentation. Vegetation clearing of the ROW might result in increased suspended solids entering surface waters near the Project. Increases in suspended solids might adversely affect aquatic organisms that require relatively clear water for foraging and/or reproduction. Physical aquatic habitat loss or alteration could result wherever riparian vegetation is removed and at temporary crossings required for access. Increased levels of siltation or

sedimentation might also potentially impact downstream areas primarily affecting filter feeding benthic and other aquatic invertebrates. Implementation of a SWPPP utilizing best management practices would minimize these potential impacts. No adverse impacts are anticipated to aquatic habitats crossed or located adjacent to the ROW of the alternative routes.

Construction of the Project is not anticipated to have substantial impacts to wildlife and aquatic resources within the study area. Direct impacts would be associated with the loss of woodland/brushland habitat, which is reflected in the vegetation analysis discussed above. Habitat fragmentation was minimized for each of the alternative routes within woodland areas by paralleling existing linear features to the extent feasible. While highly mobile animals might temporarily be displaced from habitats near the ROW during the construction phase, normal movement patterns should return after Project construction is complete. Implementation of a SWPPP utilizing best management practices would minimize potential impacts to aquatic habitats.

#### **4.1.11 Impacts to Threatened and Endangered Species**

In order to assess potential impacts to threatened or endangered species, POWER utilized available information for the species under review. Known occurrence data from TXNDD for the study area and project scoping comments from TPWD were reviewed. A USFWS IPaC consultation, TPWD county listings, and USFWS designated critical habitat locations were included in the review.

The TXNDD data provides a GIS data record of state-listed, rare, and federally threatened and endangered species and special status vegetation communities that have been documented within a given area. The absence of species within the TXNDD database is not a substitute for a species-specific field survey as may be needed to assess potential habitat for state or federal listed special status species. Prior to construction, a field survey would be completed of the PUC and San Antonio approved route to determine if suitable habitat for threatened and endangered species is present. Additional consultation with the USFWS and TPWD may be required if suitable habitat is observed during field surveys.

#### **Threatened and Endangered Plant Species**

Review of the TPWD (2023b) and USFWS (2023) data identified three plant species that are federally- and/or federally proposed listed, state-listed, or have candidate status, for Bexar County (see Table 3-6 in Section 3.1.12).

The black lace cactus is not anticipated to occur within the study area due to the study area being located outside the known extant range of the species. Texas wild-rice is not anticipated to occur within the study area due to lack of potential suitable habitat. The Bracted twistflower is a federally threatened species that may occur within the



study area if suitable habitat is available. Federally listed and candidate plant species are only afforded federal protection from take if they are located on federal lands and/or federal funding or actions are associated with the Project. If necessary, CPS Energy would coordinate with the USFWS regarding the Bracted twistflower. Construction of the proposed transmission line is not anticipated to have adverse effects on federally listed threatened or endangered plant species.

### **Threatened and Endangered Animal Species**

Review of the TPWD (2023b) and USFWS (2023) data identified 35 animal species that are federally- and/or federally proposed listed, state-listed, or have candidate status, for Bexar County (see Table 3-6 in Section 3.1.12).

None of the alternative routes cross critical habitat for the Madla Cave meshweaver. Alternative Routes A, B, L, and M are entirely located within Karst Zone 2. Alternative Routes C, D, E, F, G, H, I, J, K, N, and O are primarily located within Karst Zone 2, and have smaller portions, less than 50 percent of the route, located within Karst Zone 1. Refer to page 3-21 for a description of each karst zone. A field survey for potential suitable habitat for federally protected species would be completed after PUC and San Antonio approval of an alternative route.

### **Federally-Listed and Candidate Species**

As indicated in Table 4-1, none of the alternative route lengths cross critical habitat of federally-listed endangered or threatened species.

The study area is located outside of the recognized/known distributions of San Marcos salamander, Texas blind salamander, Cokendolpher Cave harvestman, Government Canyon Bat Cave meshweaver, Government Canyon Bat Cave spider, Madla Cave meshweaver, Robber Baron Cave meshweaver, Peck's Cave amphipod, fountain darter, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The tri-colored bat, false spike, red knot and golden-cheeked warbler are not anticipated to occur within the study area due to the lack of potential suitable habitat. No impacts to these species are anticipated to occur from the Project.

The Braken Bat Cave meshweaver, the two unnamed beetles (*Rhadine exilis* and *Rhadine infernalis*), and the Helotes mold beetle may occur within the study area if suitable cave/karst habitat is present and available. CPS Energy would conduct a site-specific karst survey pursuant to USFWS protocols prior to construction to avoid potential impacts to cave-obligate species.

The whooping crane and piping plover may pass through and potentially occur temporarily within the study area as a rare transient during migration if suitable foraging habitat is available. The Project is not anticipated to have adverse impacts to whooping crane or piping plover nesting habitat.

A field survey for potential suitable habitat for federally protected species would be completed after PUC and San Antonio approval of an alternative route. CPS Energy would consult with the USFWS regarding avoidance measures and mitigation if suitable habitat for the Braken Bat Cave meshweaver, two unnamed beetles (*Rhadine exilis* and *Rhadine infernalis*), Helotes mold beetle, whooping crane, or piping plover is observed during the survey of the PUC and San Antonio approved route. If suitable habitat for the golden-cheeked warbler is identified during field surveys of the PUC and San Antonio approved route, CPS Energy may contact the City of San Antonio to enroll in the Southern Edwards Plateau Habitat Conservation Plan in order to achieve compliance with the ESA.

### **State-Listed Species**

The Cascade Caverns salamander, Texas salamander, toothless blindcat, widemouth blindcat, black bear, white-nosed coati, Cagle's map turtle, and Texas horned lizard are not anticipated to occur within the study area due to the lack of potential suitable habitat. The Project is not anticipated to have adverse impacts to these species.

The bald eagle may occur within the study area if suitable habitat is available. Bald eagles and their nests are protected under the MBTA and BGEPA. Nests are protected if they have been used within the previous five nesting seasons. If nests are identified or individuals are observed during the field survey of the PUC and San Antonio approved route, CPS Energy would further coordinate with the TPWD and USFWS to determine avoidance or mitigation measures.

The wood stork and white-faced ibis may occur within the study area if suitable habitat is available. CPS Energy proposes to conduct ROW clearing activities in compliance with state (Texas Parks and Wildlife Code Chapter 64) and federal (MBTA) regulations regarding avian species and appoint a qualified biologist to conduct surveys for active nests prior to vegetation clearing.

CPS Energy proposes to conduct a site-specific karst survey prior to construction to avoid potential impacts to cave-obligate species and implement best management practices within their SWPPP to minimize impacts to aquatic species. A field survey for potential suitable habitat for state and federal protected species would be completed after PUC and San Antonio approval of a route for the Project. Additional consultation with TPWD and the USFWS for avoidance and mitigation measures may be required if suitable habitat is observed during the field survey of the PUC and San Antonio approved route.

## **4.2 Impacts on Human Resources/Community Values**

### **4.2.1 Impacts on Land Use**

The magnitude of potential impacts to land use resulting from the construction of a transmission line is determined by the amount of land (land use type) temporarily or permanently displaced by the actual ROW and by the compatibility of the facility with adjacent land uses. During construction, temporary impacts to land uses within the ROW might occur due to the movement of workers, equipment, and materials through the area. Construction noise and dust, as well as temporary disruptions of traffic flow, might also temporarily affect local residents and businesses in the area immediately adjacent the ROW. Coordination between CPS Energy, their respective contractors, and landowners regarding ROW access and construction scheduling should minimize these disruptions.

The evaluation criteria used to compare potential land use impacts include overall alternative route length, route length parallel to existing linear features (including apparent property boundaries), route proximity to habitable structures, route proximity to park and recreational areas, and route length across various land use types. An analysis of the existing land use within and adjacent to the proposed ROW is required to evaluate the potential impacts.

#### **Alternative Route Length**

The length of an alternative route can be an indicator of the relative magnitude of land use impacts. Generally, all other things being equal, the shorter the route, the less land is crossed, which usually results in the least amount of potential impacts. The total lengths of the alternative routes vary from approximately 1.20 miles for Alternative Route E, to approximately 2.36 miles for Alternative Route D. The differences in route lengths reflect the direct or indirect pathway of each alternative route between the Project endpoints. The length of the alternative routes may also reflect the effort to parallel existing transmission lines, other existing linear features and apparent property boundaries, and the geographic diversity of the alternative routes. The approximate lengths for each of the alternative routes are presented in Table 4-1.

#### **Compatible ROW**

PUC Substantive Rule 25.101(b)(3)(B) requires that an applicant for a CCN, and ultimately the PUC, consider whether new transmission line routes are within existing compatible ROWs and/or are parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features. Criteria were used to evaluate the use of existing transmission line ROW, length parallel and adjacent to existing transmission line ROW, length of route parallel to other existing linear ROWs, and length of ROW parallel and adjacent to apparent property lines. It should also be noted that if a segment parallels more than one existing linear corridor it was only tabulated once

(e.g., a segment that parallels both an apparent property line and a roadway, would only be tabulated as paralleling the roadway).

None of the alternative routes utilize existing transmission line ROW. Only one of the alternative routes, Alternative Route A, parallels an existing transmission line ROW for approximately 0.53 mile.

The alternative routes with lengths parallel to other existing ROW (roadways, etc.) range from approximately 0.60 mile for Alternative Route E, to approximately 1.87 miles for Alternative Route I. The lengths of ROW parallel to other existing ROW for each of the alternative routes are presented in Table 4-1.

Five of the alternative routes have lengths of ROW parallel and adjacent to apparent property lines. The length of alternative routes parallel and adjacent to apparent property lines ranges from 0 (zero) miles each for eight of the alternative routes, to approximately 0.53 mile for Alternative Route B. The lengths paralleling apparent property lines for each of the alternative routes are presented in Table 4-1.

Typically, a more representative account for the consideration of whether new transmission line routes are parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features is demonstrated with the percentage of each total route length parallel to any of these existing linear features. These percentages can be calculated for each alternative route by adding up the total length parallel to existing transmission lines, other existing ROW, and apparent property lines and then dividing the result by the total length of the alternative route. All of the alternative routes parallel existing linear features for some portion of their lengths. The percentage of the alternative routes paralleling existing linear features ranges from 57 percent for Alternative Route H, to 86 percent for Alternative Route K.

### **Developed and Residential Areas**

Typically, one of the most important measures of potential land use impacts is the number of habitable structures located in the vicinity of each alternative route. Based on direction provided by the PUC, habitable structure identification is included with the CCN application. POWER determined the number of habitable structures located within 300 feet of the centerline of each alternative route and the distance from the centerline through the use of GIS software, interpretation of aerial photography, and verification during reconnaissance surveys. Due to the nature of the study area, all 15 of the alternative routes have habitable structures located within 300 feet of their centerlines. Alternative Routes G and H have the least number of habitable structures located within 300 feet of their centerline at three each. Alternative Route B has the most habitable structures located within 300 feet of its centerline at 22.

It is worth noting that Habitable Structures 1-9 and 27 are located directly west of an existing 345 kV transmission line that is parallel to CPS Energy's Cagnon to Helotes 138 kV Transmission Line that is being looped for this Project. All routes proposed for this Project are located east of the existing 138 kV transmission line; therefore, the Project is further away from Habitable Structures 1-9 and 27 than the existing 345 kV transmission line as presented on Figure 4-1. Similarly, Habitable Structures 11-14 are located north of an existing 138 kV transmission line. All routes proposed for this Project are located south of the existing 138 kV transmission line and south of a private road. The Project is further away from Habitable Structures 11-14 than the existing 138 kV transmission line as presented on Figure 4-1.

Tables 4-6 through 4-20 present detailed information on habitable structures. The number of habitable structures located within 300 feet of each of the alternative route centerlines are presented in Table 4-1. All known habitable structure locations are shown on Figure 4-1 located in Appendix E (map pocket).

#### **Special Management Area**

As discussed in Section 3.2.1, the SAWS APS Karst Preserve is located within the study area. The alternative routes with lengths across conservation easements and/or mitigation banks (Special Management Area) range from 0 (zero) mile each for Alternative Routes E, F, G, and H, to approximately 0.13 mile each for 11 of the alternative routes. The lengths of ROW across conservation easements and/or mitigation banks (Special Management Area) for each of the alternative routes are presented in Table 4-1.

#### **4.2.2 Impacts on Agriculture**

Impacts to agricultural land uses can generally be ranked by degree of potential impact, with the least potential impact occurring in areas where cultivation is not the primary use (pastureland/rangeland), followed by cultivated croplands, which have a higher degree of potential impact. Most existing agricultural land uses may be resumed within the ROW following construction.

None of the alternative routes cross any length of known cropland or pastureland/rangeland. The Project would have minimal impacts on cropland or pastureland/rangeland.

None of the alternative routes cross lands with known mobile irrigation systems (rolling or pivot type). The lengths of each of the alternative routes crossing cropland, pastureland/rangeland, and land with known mobile irrigation systems are presented in Table 4-1.

### 4.2.3 Impacts on Transportation/Aviation Features

#### Transportation Features

Potential impacts to transportation could include temporary disruption of traffic or conflicts with future proposed roadways and/or utility improvements. Traffic disruptions would include those associated with the movement of equipment and materials to the ROW, and slightly increased traffic flow and/or periodic congestion during the construction phase of the Project. In the less developed portions of the study area, these impacts are typically considered minor, temporary, and short-term. In the more developed portions of the study area, the temporary impacts to traffic flow can be significant during construction but would be temporary and short-term. CPS Energy would coordinate with the agencies in control of the affected roadways to address these traffic flow impacts. As mentioned in Section 3.2.3, there were no state roadway projects within the study area.

All of the alternative routes cross SH 1604. Additionally, there are no identified FM roads in the study area.

#### Aviation Facilities

According to FAA regulations, Title 14 C.F.R. Part 77, the construction of a transmission line requires FAA notification if tower structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100:1 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. The FAA also requires notification if tower structure heights exceed 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, and if tower structure heights exceed a 25:1 slope for a horizontal distance of 5,000 feet for heliports.

There are no public FAA registered airports with at least one runway longer than 3,200 feet located within 20,000 feet of the ROW centerline for any of the alternative routes. There are no FAA registered airports having no runway longer than 3,200 feet located within 10,000 feet of any of the alternative routes. Although there may be PELAs designated within the study area, there is also one heliport, Christus Santa Rosa Westover Hill Heliport, within 5,000 feet of the ROW centerline of all of the alternative routes.

Following PUC and San Antonio approval of a complete route for the Project, CPS Energy would make a final determination of the need for FAA notification, based on specific route location and structure design of the approved route. The result of this notification, and any subsequent coordination with the FAA, could include changes in the line design and/or potential requirements to mark the conductors and/or light the structures.

There are also no known private airstrips located within 10,000 feet of the ROW centerline of any of the alternative routes. None of the alternative routes are anticipated to have a substantial impact on aviation activities within the study area.

The number of airports, airstrips, and heliports for each of the alternative routes are presented in Table 4-1. Tables 4-6 through 4-20 present detailed information on airports, airstrips, and heliports. The distance for each airport/airstrip from the nearest route and segment was measured using GIS software and aerial photography interpretation (see Table 4-3). All known airport/airstrip locations are shown on Figures 2-4 and 4-1 located in Appendix D and E (map pockets).

**TABLE 4-3 AIRPORT FACILITIES AND RUNWAY LOCATIONS**

FIGURE 4-1 MAP ID	AIRPORTS	PRIMARY ALTERNATIVE ROUTES	NEAREST SEGMENT	DISTANCE FROM NEAREST SEGMENTS (FEET)*	ESTIMATED RUNWAY LENGTH (FEET) <sup>1/2</sup>	EXCEEDS THE SLOPE <sup>1,2</sup>
300	Christus Santa Rosa Westover Hills Heliport (Private)	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O	19	2,402	45	Yes

<sup>1</sup>FAA 2023b; <sup>2</sup>POWER aerial photo and USGS interpretation.

<sup>2</sup>POWER used aerial photo and USGS interpretation considering elevation information obtained from USGS topographic maps and a typical maximum transmission structure height of 130 feet.

#### 4.2.4 Impacts on Communication Towers

All known facilities, including fifth generation (5G), licensed with the FCC have been identified. No commercial AM radio transmitters were identified within 10,000 feet of the ROW centerline for any of the alternative routes. However, there are two other electronic communication facilities located within 2,000 feet of each of the ROW centerlines for 11 of the alternative routes. None of the alternative routes are anticipated to have a substantial impact on electronic communication facilities or operations in the study area.

The number of other communication facilities located within 2,000 feet of the alternative routes is presented in Table 4-1. Tables 4-6 and 4-20 present detailed information on the electronic communication facilities. The distance to the electronic communication facilities from the closest segment was measured using GIS software and aerial photograph interpretation (see Table 4-4). All known radio and communication facility locations are shown on Figures 2-4 and 4-1 located in Appendix D and E (map pockets).

**TABLE 4-4 ELECTRONIC COMMUNICATION FACILITIES**

FIGURE 4-1 MAP ID	TOWER TYPE	NEAREST SEGMENT	DISTANCE FROM NEAREST SEGMENTS (FEET)*
200	Other Electronic Installation	5	991
201	Other Electronic Installation	1	494

\*POWER aerial photo and USGS interpretation; FCC 2023.

### 4.2.5 Impacts on Utility Features

Utility features include existing electrical transmission lines, distribution lines, water wells, pipelines, and oil and gas wells. Numerous water wells were identified within the study area and were mapped and avoided to the extent practicable. The number of identifiable existing water wells within 200 feet of the ROW centerline and substation sites range from 0 (zero) for Alternative Routes E, F, G, and H, to four each for seven of the alternative routes. All four of the water wells located within 200 feet of the alternative routes are public supply water wells. If these utility features are crossed by or are in close vicinity to the alternative route centerline approved by the PUC, CPS Energy would coordinate with the appropriate entities to obtain necessary permits or permission as required. The number of known water wells within 200 feet of each of the alternative route is presented in Table 4-1.

Five existing electric transmission lines were identified within the study area, the Anderson to Cagnon 138 kV transmission line, the Cagnon to Helotes 138 kV transmission line, Anderson to Helotes 138 kV transmission line, Anderson to Westover Hills 138 kV transmission line, and Cagnon to Hill Country 345 kV transmission line. All of the alternative routes cross the Anderson to Cagnon 138 kV transmission line.

No oil and gas wells, associated facilities, or pipelines were identified within the study area. Thus, the Project would have no known impacts on oil and gas wells, associated facilities, or pipelines. Further, if any oil and gas wells, associated facilities, or pipelines are discovered during construction, CPS Energy would notify and coordinate with pipeline companies as necessary during transmission line construction and operation.

None of the alternative routes cross or parallel known oil or gas pipelines or are within 200 feet of any known oil and gas wells. Additionally, none of the alternative routes cross gravel pits, mines, or quarries.

### 4.2.6 Impacts on Socioeconomics

Construction and operation of the Project is not anticipated to result in a significant change in the population or employment rate within the study area. For this Project, some short-term employment would be generated. CPS Energy normally uses contract labor supervised by each entity's respective employees during the clearing and construction phases of transmission line projects. Construction workers for the project would likely commute to



the work site on a daily or weekly basis instead of permanently relocating to the area. The temporary workforce increase would likely result in an increase in local retail sales due to purchases of lodging, food, fuel, and other merchandise for the duration of construction activities. No additional CPS Energy staff would be required for line operations and maintenance.

#### **4.2.7 Impacts on Community Values**

Adverse effects upon community values are defined as aspects of the 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 applicable to this specific project's location and characteristics, and do not include objections to electric transmission lines in general.

Potential impacts to community resources can be classified into direct and indirect effects. Direct effects are those that would occur if the location and construction of a transmission line and stations result in the removal or loss of public access to a valued resource. Indirect effects are those that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed transmission line, structures, or ROW.

#### **4.3 Impacts on Parks and Recreation Areas**

Potential impacts to parks or recreation areas include the disruption or preemption of recreation activities. As previously mentioned in Section 3.3.1, a park or recreational area meeting the definition set forth in the PUC application was identified within and in close proximity to the study area.

Five of the alternative routes cross a portion of the Northwest Village College Disc Golf Course for approximately 0.11 mile each. All of the alternative routes are located within 1,000 feet of the Northwest Village College Disc Golf Course.

However, no substantial impacts to the use of the parks and recreation areas located within the study area are anticipated from any of the alternative routes. Also, no adverse impacts are anticipated for any other potential fishing or hunting areas from any of the alternative routes.

The number of park or recreational areas located within 1,000 feet of the alternative routes is presented in Table 4-1. Tables 4-6 and 4-20 present detailed information on the park or recreational areas. The distance to the park or recreational areas from the closest segment was measured using GIS software and aerial photograph interpretation (see Table 4-5). All known park or recreational area locations are shown on Figures 2-4 and 4-1 located in Appendix D and E (map pockets).

**TABLE 4-5 PARK AND RECREATIONAL AREAS**

FIGURE 4-1 MAP ID	PARK OR RECREATIONAL AREA	NEAREST SEGMENT	DISTANCE FROM NEAREST SEGMENTS (FEET)*
400	Northwest Vista College Disc Golf Course	17	0

\*POWER aerial photo and USGS interpretation.

#### 4.4 Impacts on Aesthetic Values

Aesthetic impacts, or impacts to visual resources, exist when the ROW, lines and/or structures of a transmission line system create an intrusion into, or substantially alter the character of the existing view. 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 and/or enjoyment of an area, in the case of valued community resources and recreational areas.

Construction of the Project could have both temporary and permanent aesthetic impacts. Temporary impacts would include views of the actual assembly and erection of the tower structures. If wooded areas are cleared, the brush and wood debris could have an additional negative temporary impact on the local visual environment. Permanent impacts from the Project would involve the views of the cleared ROW, tower structures, and lines from public viewpoints including roadways, recreational areas, and scenic overlooks.

The study area is located within the Texas Hill Country; however, no designated landscapes protected by legislation and most forms of development exist within the study area. Potential visibility impacts were evaluated by estimating the length of each alternative route that would fall within the foreground visual zones (one-half mile with unobstructed views) of major highways, FM roads, and parks or recreational areas. The alternative route lengths within the foreground visual zone of US highways, state highways, FM roads, and parks or recreational areas were tabulated and are discussed below.

All of the alternative routes have a portion of the route located within the foreground visual zone of IHS, US Hwys, and SHs. Lengths range from approximately 1.20 miles for Alternative Route E, to 2.36 miles for Alternative Route D. None of the alternative routes have any portion of the routes located within the foreground visual zone of FM roads because none are located within the study area.

All of the alternative routes have a portion of the route located within the foreground visual zone of parks or recreational areas. Length ranges from approximately 0.91 mile for Alternative Route A, to approximately 1.76 mile for Alternative Route D.

Overall, the character of the study area maintains a suburban feel characteristic of the Texas Hill Country region. The residential and commercial developments within the study area have already impacted the aesthetic quality within the region from public viewpoints. The construction of any of the alternative routes is not anticipated to substantially impact the aesthetic quality of the landscape.

## **4.5 Impacts on Historical (Cultural Resources) Values**

Methods for identifying, evaluating, and mitigating impacts to cultural resources have been established for federal projects or permitting actions, primarily for purposes of compliance with the National Historic Preservation Act (NHPA). Similar methods are often used when considering cultural resources affected by state-regulated undertakings. In either case, this process generally involves identification of significant (i.e., national- or state-designated) cultural resources within a Project area, determining the potential impacts of the Project on those resources, and implementing measures to avoid, minimize, or mitigate those impacts.

Impacts associated with the construction, operation, and maintenance of transmission lines can affect cultural resources either directly or indirectly. Construction activities associated with any proposed project can adversely impact cultural resources if those activities alter the integrity of key characteristics that contribute to a property's significance as defined by the standards of the NRHP or the Antiquities Code of Texas. These characteristics might include location, design, setting, materials, workmanship, feeling, or association for architectural and engineering resources or archeological information potential for archeological resources.

### **4.5.1 Direct Impacts**

Typically, direct impacts could be caused by the actual construction of the line or through increased vehicular and pedestrian traffic and excavation for towers during the construction phase. If construction is required near historic structures, landscapes, or districts, proper mitigation and avoidance measures would avoid adversely impacting such features during construction of a transmission line. Additionally, an increase in vehicular and/or pedestrian traffic might damage surficial or shallowly buried sites. Excavation for transmission structures could impact shallow or deeply buried archeological sites. Direct impacts might also include isolation of cultural resource from or alteration of its surrounding environment.

### **4.5.2 Indirect Impacts**

Indirect impacts include those affects caused by the Project that are farther removed in distance or that occur later in time but are reasonably foreseeable. These indirect impacts might include introduction of visual or audible elements that are out of character with the resource or its setting. Indirect impacts might also occur as a result of alterations in the pattern of land use, changes in population density, accelerated growth rates, or increased

pedestrian or vehicular traffic. Absent best management practices, proper mitigation, and avoidance measures, historic buildings, structures, landscapes, and districts are among the types of resources that could be adversely impacted by the indirect impact of a transmission line.

The preferred form of mitigation for direct and indirect impacts to cultural resources is avoidance through project modifications. Additional mitigation measures for direct impacts might include implementing a program for data recovery excavations if an archeological site cannot be avoided. Indirect impacts on historic properties and landscapes can be lessened through careful design and landscaping considerations, such as using vegetation screens or berms if practicable. Additionally, relocation might be possible for some structures.

### **4.5.3 Summary of Cultural Resource Impacts**

The distance of each recorded site located within 1,000 feet from the nearest routing segment and alternative route was measured using GIS software and aerial photography interpretation. A review of the THSA and TASA (THC 2023b) records and NPS data (NPS 2023d) described in Section 3.5, indicated that one archeological site is recorded within 1,000 feet of the alternative routes. No cultural resources are crossed by the alternative routes. Alternative Routes E and F are 643 feet and G and H are 129 feet from archeological site 41BX1958.

No systematic cultural resource surveys have been conducted along the alternative routes. Thus, the potential for undiscovered cultural resources does exist along all alternative routes. To assess this potential, a review of geological, soils, and topographical maps was undertaken by a professional archeologist to identify areas along the alternative routes where unrecorded Pre-Contact archeological resources have a higher probability to occur. These HPAs for Pre-Contact archeological sites were identified near unnamed streams in the study area and adjacent to closed depressions that may have held fresh water. To facilitate the data evaluation and alternative route comparison, each HPA was mapped using GIS and the length of each alternative route crossing these areas was tabulated. HPA were mapped near previously recorded Post-Contact sites and NRHP properties, and near structures depicted on historic topographic maps.

All of the alternative routes cross HPAs for cultural resources. Alternative Routes A, B, L, and M cross the least amount of HPA, with 0.25, 0.30, 0.30, and 0.30 miles of HPA crossed, respectively. Alternative Routes D, C, F, and E cross the most HPA, with 0.62, 0.70, 0.80, and 0.89 miles of HPA crossed, respectively. Table 4-1 shows the amount of HPA crossed by each route.

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## 5.0 AGENCY CORRESPONDENCE

A list of federal, state, and local regulatory agencies, elected officials, and organizations was developed to receive a consultation letter regarding the Project. The purpose of the letter was to inform the various agencies and officials of the Project and provide them with an opportunity to provide information regarding resources and potential issues within the study area. Various federal, state, and local agencies and officials that may have potential concerns and/or regulatory permitting requirements for the proposed Project were contacted. POWER utilized websites and telephone confirmations to identify local officials. Copies of all correspondence with the various state/federal regulatory agencies and local/county officials and departments are included in Appendix A.

Federal, state and local agencies/officials contacted include:

- Federal Aviation Administration (FAA)
- Federal Emergency Management Agency (FEMA) – Region 6
- National Park Service (NPS)
- Natural Resource Conservation Service (NRCS) – Texas Office
- United States Army Corps of Engineers (USACE) – Fort Worth District
- United States Department of Defense Military Aviation and Installation Assurance Siting Clearinghouse
- United States Environmental Protection Agency (USEPA) – Region 6
- United States Fish and Wildlife Service (USFWS)
- Applicable United States Congressman
- Applicable Texas Senators
- Applicable Texas House Members
- Railroad Commission of Texas (RRC)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Department of Transportation (TxDOT) – Aviation Division, Environmental Affairs Division, Planning & Programming, and San Antonio District Engineer
- Texas General Land Office (GLO)
- Texas Historical Commission (THC)
- Texas Parks and Wildlife Department (TPWD)
- Texas Water Development Board (TWDB)
- Bexar County Judge and Commissioners Court
- Bexar County Economic Development
- Bexar County Flood Control
- Bexar County Historical Commission
- Bexar County Manager

- City of San Antonio Officials
- Alamo Area Council of Governments
- Alamo Soil and Water Conservation District
- Edwards Aquifer Authority Chairman
- San Antonio River Authority
- San Antonio World Heritage Office
- San Antonio Water System
- Northside Independent School District
- City of Helotes Officials
- City of Leon Valley Officials
- The Nature Conservancy – Texas
- Texas Land Trust Council
- Texas Land Conservancy
- Texas Agricultural Land Trust
- Texas Cave Management Association

In addition to letters sent to the agencies listed, POWER also requested and reviewed TXNDD Element Occurrence Records from TPWD (TPWD 2023g). POWER also requested and reviewed previously recorded archeological site information from TARL and reviewed the THC's TASA for additional cultural resource information. As of the date of this document, written responses to letters sent in relation to the study area that were received are listed and summarized below.

The NRCS responded with a letter and an email dated June 8, 2023, providing a Custom Soil Resources Report and encouraged the use of acceptable erosion control method during the construction of the Project.

The USACE Section 408 Coordinator responded with an email dated May 5, 2023, stating that the Project will not require authorization under Section 14 of the River and Harbor Act. They also had assigned Section 408 Request Number 408-SWF-2023-0034 to the Project.

The USACE responded with a letter and an email dated May 18, 2023, stating that they were unable to determine if a USACE permit would be required from the information provided and provided several documents related to permitting. They also assigning Project Number SWF-2023-00233 to the Project.

The USFWS Austin Ecological Services Field Office responded with a letter dated April 17, 2023, and a letter dated June 26, 2023, both providing a list of the federally-listed threatened and endangered species for the study area county. The USFWS also provided the definitions of the affected determinations and referenced the MBTA and BGEPA.

The USFWS Consultations and HCPs responded with an email dated September 29, 2023, as a follow up to the teleconference held on September 14, 2023, stating their concerns regarding crossing the SAWS APS Karst Preserve in close proximity to the caves on the Karst Preserve.

The GLO responded with a letter dated July 20, 2022, stating that it did not appear that the GLO will have any environmental issues or land use constraints at this time.

The THC responded with an email dated May 25, 2023, stating that no documents were attached to the submission for them to review.

The THC responded with a letter dated June 5, 2023, stating that many archeological sites have been recorded in the vicinity of the study area, including one with undetermined eligibility for listing on the NRHP. They also said that the area is considered high probability for precontact and historical sites and that a Texas Antiquities Permit may be required. The THC recommended archeological shovel testing in areas without previous development or disturbance.

The TPWD responded with a letter dated June 26, 2023, providing several recommendations. In summary, TPWD recommended avoiding or minimizing potential impacts to water bodies, nesting migratory birds, listed or rare species, and native vegetation. The TPWD also recommended a karst survey be conducted once a route is selected.



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## 6.0 PUBLIC INVOLVEMENT

CPS Energy hosted a public open house meeting within the study area to solicit comments, concerns and input from residents, landowners, public officials, and other interested parties. The purpose of this meeting was to:

- Promote a better understanding of the Project, including the purpose, need, potential benefits and impacts, and the PUC CCN application approval process.
- Inform the public with regard to the routing procedure, schedule, and decision-making process.
- Ensure that the decision-making process adequately identifies and considers the values and concerns of the public and community leaders.

The public meeting was held on June 7, 2023, from 5:30 p.m. to 7:30 p.m. at Courtyard by Marriot Sea World/San Antonio, 11605 SH 151 in San Antonio, Texas. Invitation letters were sent to landowners who owned property within 300 feet from a preliminary alternative route segment. CPS Energy mailed 128 invitation letters to landowners. Each landowner that received an invitation letter also received a map of the study area depicting the preliminary alternative route segments. An advertisement for the open house was also published in the *San Antonio Express News* on June 4, 2023, and in the *Miércoles* on May 31, 2023.

At the meeting, engineers, GIS analysts, biologists, project managers, and regulatory professionals from CPS Energy and POWER were available to answer questions regarding the Project. Manned information stations were set up that provided typical 138 kV pole types, a list of agencies contacted, land-use and environmental criteria for transmission lines, and an environmental and land use constraints map on aerial base. CPS Energy also provided two GIS interactive stations operated by POWER GIS analysts. These computer stations allowed attendees to view more-detailed digital maps of preliminary alternative route segments and submit comments digitally and spatially. The information station format is advantageous because it facilitates one-on-one discussions and encourages personalized landowner interactions.

Each individual in attendance was offered the opportunity to sign their name on the sign-in sheet and given three handouts. The first handout was an information brochure that provided general information about the Project. The second handout was a questionnaire that solicited comments on the Project and an evaluation of the information presented at the public meeting. Individuals were asked to fill out the questionnaire after visiting the information stations and speaking with POWER and CPS Energy personnel. The third handout was a Frequently Asked Questions document providing an overview of the Project as well as a description of the regulatory process. Copies of the public notice letter with map, brochure, questionnaire, and Frequently Asked Questions are located in Appendix B.

A total of 14 individuals signed in as attendees at the public meeting and 10 submitted questionnaire responses at or after the public meeting. Results from the questionnaires were reviewed and analyzed. Table 6-1 summarizes general response information from the questionnaires.

**TABLE 6-1 GENERAL RESPONSE SUMMARY FROM QUESTIONNAIRES**

GENERAL INFORMATION RESPONSES	PERCENTAGE (%) OF RESPONDENTS
<b>Was the need for the project clearly explained?</b>	
<i>Strongly Agree</i>	10%
<i>Agree</i>	40%
<i>Neutral</i>	40%
<i>Disagree</i>	0%
<i>Strongly Disagree</i>	10%
<b>The project team responded to and answered questions about the Project.</b>	
<i>Strongly Agree</i>	10%
<i>Agree</i>	40%
<i>Neutral</i>	20%
<i>Disagree</i>	10%
<i>Strongly Disagree</i>	10%
<b>The exhibits at the open house were helpful.</b>	
<i>Strongly Agree</i>	20%
<i>Agree</i>	40%
<i>Neutral</i>	20%
<i>Disagree</i>	0%
<i>Strongly Disagree</i>	0%

Respondents were then presented with a list of 13 factors that are taken into consideration for a routing study (see a complete list of the criteria on the questionnaire in Appendix B). They were asked to rank each of these criteria, with **1** being the most important factor and **5** being the least important factor. Of those attendees that ranked the criteria, the three criteria that were ranked by the respondents as being the most important are listed in descending order:

- Impact to business: 4 (40%)
- Impact to residences: 2 (20%)
- Parallel to property lines: 1 (10%)
- Total line cost: 2 (20%)

Respondents were asked if there are other factors that should be considered when identifying and evaluating the preliminary alternative route segments and substation sites. Written responses included:

- Concerns about future development plans
- Concerns about property values

- Concerns about the easements and future investments
- Concerns about trees and greenbelt areas

Respondents were then asked if there are other features that should be added to the Land Use and Environmental Constraints map. Written responses included:

- Concerns about the width of any easement and locations

Respondents were asked to identify the preliminary alternative route segments that they most preferred and least preferred. Segment 1 received the most positive comments (4), followed by Segments 3, 4, and 10 (3 each). Segments 9, and 11 received the most negative comments (4 each), followed by Segment 10 (3). Table 6-2 summarizes the preliminary alternative route segments that received the most responses to this question, both positive and negative.

**TABLE 6-2 SAT15 SEGMENT COMMENTS**

SEGMENT	1	3	4	9	10	11
Positive Comments	4	3	3	1	3	0
Negative Concerns	0	0	0	4	3	4

When asked which of four situations applied to them, written responses were as follows:

- 2 indicated that a proposed segment is near their home/business
- 5 indicated that a proposed segment crosses their property
- 0 answered “Other”

Respondents were also asked if there was any other information, they would like the Project Team to know or take into consideration when evaluating the Project, responses included:

- Stated that they were not affected
- Concerns about crossing property
- Concerns about future development
- Concerns about property values

## 6.1 Post Open House

After the open house meeting, CPS Energy staff communicated with various landowners and landowner groups within the study area. CPS Energy staff additionally held meetings with SAWS and USFWS regarding the 57.6-acre SAWS APS Karst Preserve. The purpose of these meetings was generally to inform the landowners or their representatives about the proposed Project, the transmission line routing process, the PUC process, and to gather information from the landowners or their representatives about potential routing constraints on their property and issues/concerns the landowners had about potential route segment locations.

## 6.2 Modifications to the Preliminary Alternative Route Segments

Information received by CPS Energy and POWER from the public, officials, and agencies resulted in a deletion to the preliminary alternative route segments as well as the identification of new route segments, which are described in detail below. The preliminary alternative segments shown at the SAT15 open house meeting are presented in Figure 2-2. The primary alternative route segments resulting from the segment revisions described below are shown in Figure 2-3.

### 6.2.1 Segment Additions

Segment 20 was added crossing SH 1604 in response to landowner requests for segment options on the east side of SH 1604 (Figure 6-1).

Segment 21 was added along the east side of SH 1604 in response to public comments received. As a result of adding Segment 21, a node was added near the west end of Segment 2 relabeling the western portion of the segment as Segment 2A and the eastern portion of the segment as Segment 2B. Segment 2 was also modified slightly to provide a better roadway crossing (Figure 6-2).

Segment 22 was added along the east side of SH 1604 in response to public comments received. As a result of adding Segment 22, a node was added near the west end of Segment 6 relabeling the western portion of the segment as Segment 6A and the eastern portion of the segment as Segment 6B (Figure 6-3).

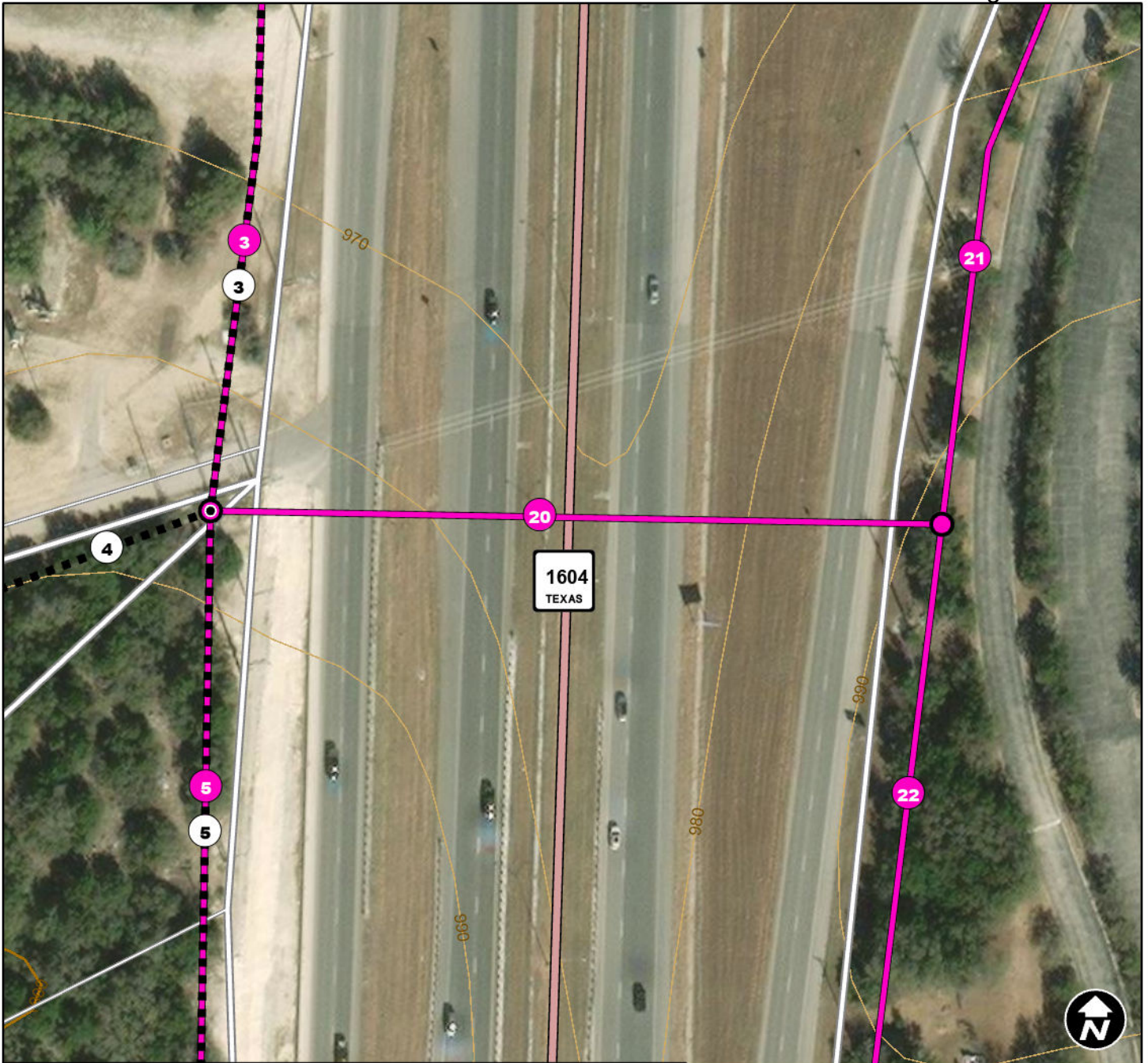
Segment 23 was added along the east side of SH 1604 in response to public comments received. As a result of adding Segment 23, a node was added near the west end of Segment 12 relabeling the western portion of the segment as Segment 12A and the eastern portion of the segment as Segment 12B (Figure 6-4).

Segment 24 was added along the east side of SH 1604 in response to public comments received. As a result of adding Segment 24, a node was added near the west end of Segment 13 relabeling the western portion of the segment as Segment 13A and the eastern portion of the segment as Segment 13B (Figure 6-5).

## **6.2.2 Segment Deletions**

Segment 4 was originally proposed to cross an area that is part of the APS Karst Preserve, which the USFWS holds a legal controlling interest. Based on USFWS authority to prohibit clearing, excavation, or construction activity on or under the surface of the Karst Preserve, and in consideration of written communication from the USFWS following the open house meeting regarding their concerns about Segment 4 being in close proximity to the caves on the APS Karst Preserve (see Appendix A), it was deleted from further consideration (Figure 6-6).

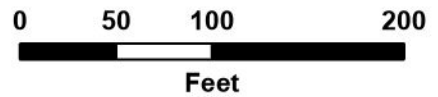
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Legend	
	Revised or New Alternative Route Segment
	Removed Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Revised or New Alternative Route Segment Node
	Preliminary Alternative Route Segment Node Shown at Open House Meeting
	Resulting Alternative Route Segment Label
	Preliminary Alternative Route Segment Label Shown at Open House Meeting
	Parcel Boundary
	Property Boundary
	State Highway
	Existing 138kV Transmission Line
	Existing 345kV Transmission Line
	10 foot Contour

CPS Energy SAT15 138 kV  
Transmission Line Project

**Figure 6-1**  
**Addition of Segment 20 Following**  
**the Open House Meeting**

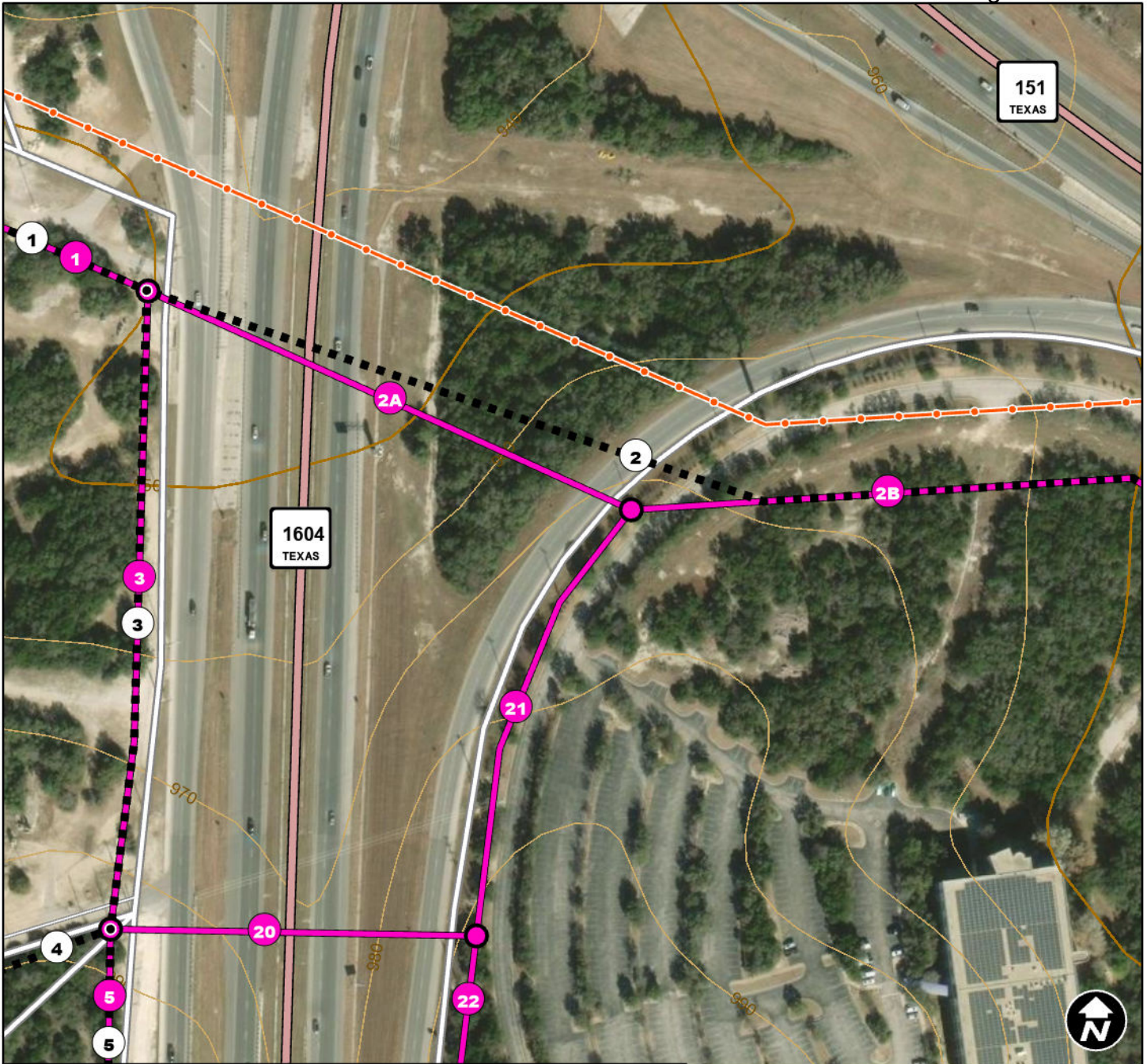


Date: 10/17/2023





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Legend	
	Revised or New Alternative Route Segment
	Unchanged Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Removed Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Revised or New Alternative Route Segment Node
	Unchanged Alternative Route Segment Node Shown at Open House Meeting
	Preliminary Alternative Route Segment Node Shown at Open House Meeting
	Resulting Alternative Route Segment Label
	Preliminary Alternative Route Segment Label Shown at Open House Meeting
	Parcel Boundary
	Property Boundary
	State Highway
	Existing 138kV Transmission Line
	Existing 345kV Transmission Line
	10 foot Contour

CPS Energy SAT15 138 kV  
Transmission Line Project

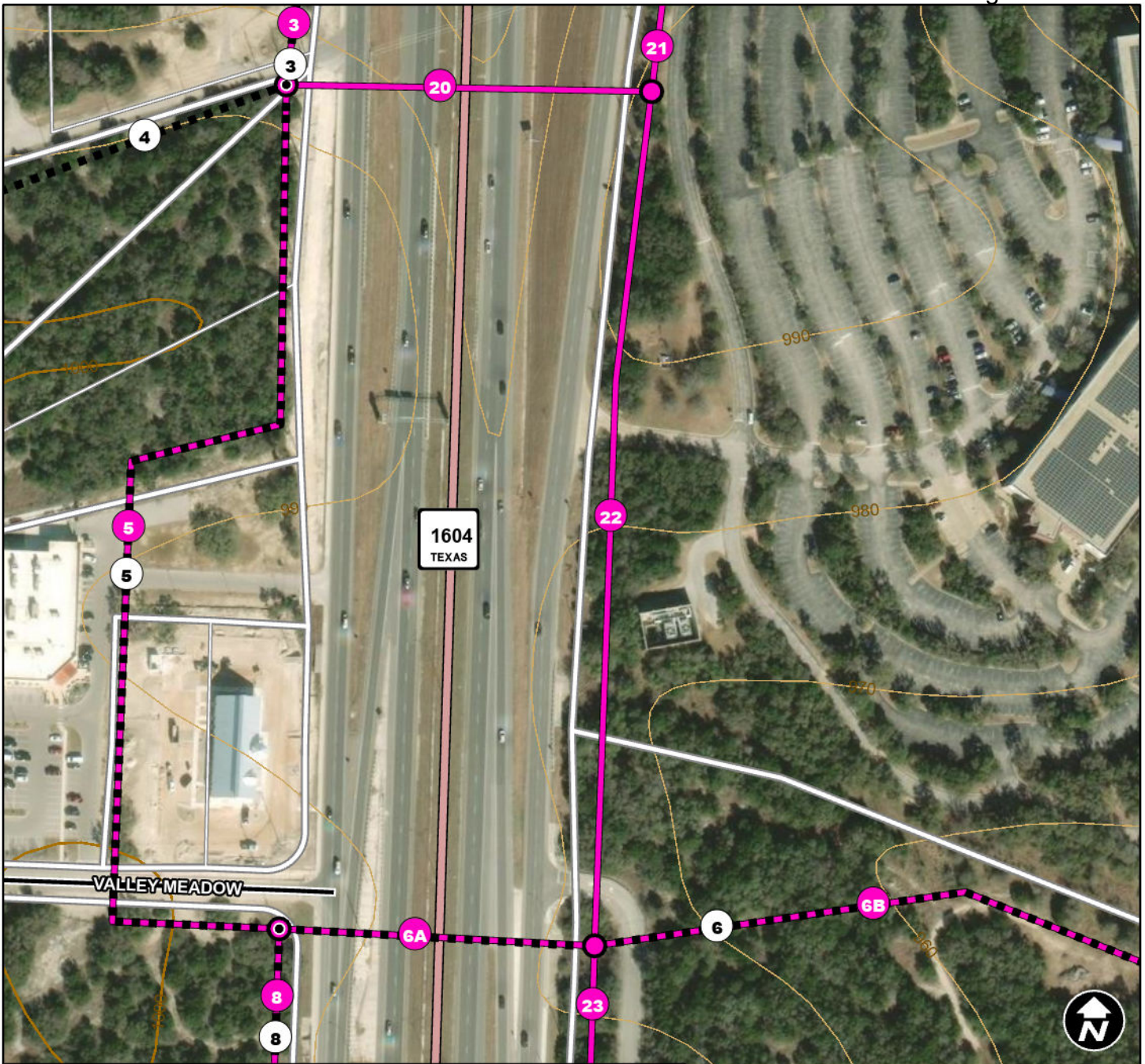
**Figure 6-2**  
**Addition of Segment 21; Relabel of**  
**Western Portion of 2 as 2A; Relabel**  
**of Eastern Portion of 2 as 2B**  
**Following the Open House Meeting**

0    100    200    400  
Feet

Date: 10/17/2023



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Legend	
	Revised or New Alternative Route Segment
	Unchanged Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Removed Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Revised or New Alternative Route Segment Node
	Unchanged Alternative Route Segment Node Shown at Open House Meeting
	Preliminary Alternative Route Segment Node Shown at Open House Meeting
	Resulting Alternative Route Segment Label
	Preliminary Alternative Route Segment Label Shown at Open House Meeting
	Parcel Boundary
	Property Boundary
	State Highway
	County / Local Road
	Existing 138kV Transmission Line
	Existing 345kV Transmission Line
	10 foot Contour

CPS Energy SAT15 138 kV  
Transmission Line Project

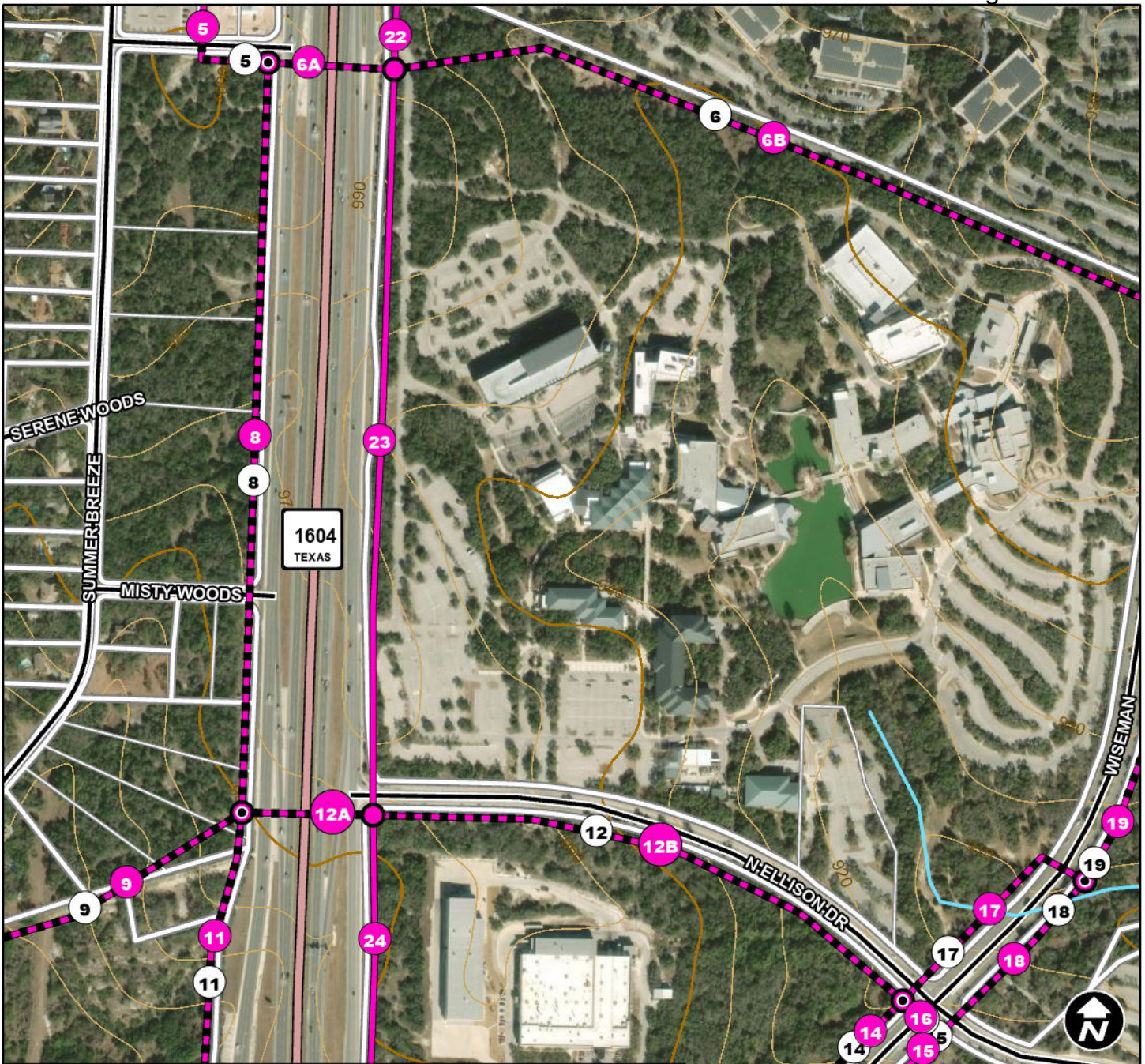
**Figure 6-3**  
**Addition of Segment 22; Relabel of**  
**Western Portion of 6 as 6A; Relabel**  
**of Eastern Portion of 6 as 6B**  
**Following the Open House Meeting**

0    100    200    400  
Feet

Date: 10/17/2023



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Legend	
	Revised or New Alternative Route Segment
	Unchanged Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Removed Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Revised or New Alternative Route Segment Node
	Unchanged Alternative Route Segment Node Shown at Open House Meeting
	Preliminary Alternative Route Segment Node Shown at Open House Meeting
	Resulting Alternative Route Segment Label
	Preliminary Alternative Route Segment Label Shown at Open House Meeting
	Parcel Boundary
	Property Boundary
	State Highway
	County / Local Road
	Hydro_NHD_Flowline
	Existing 138kV Transmission Line
	Existing 345kV Transmission Line
	10 foot Contour

**CPS Energy SAT15 138 kV  
Transmission Line Project**

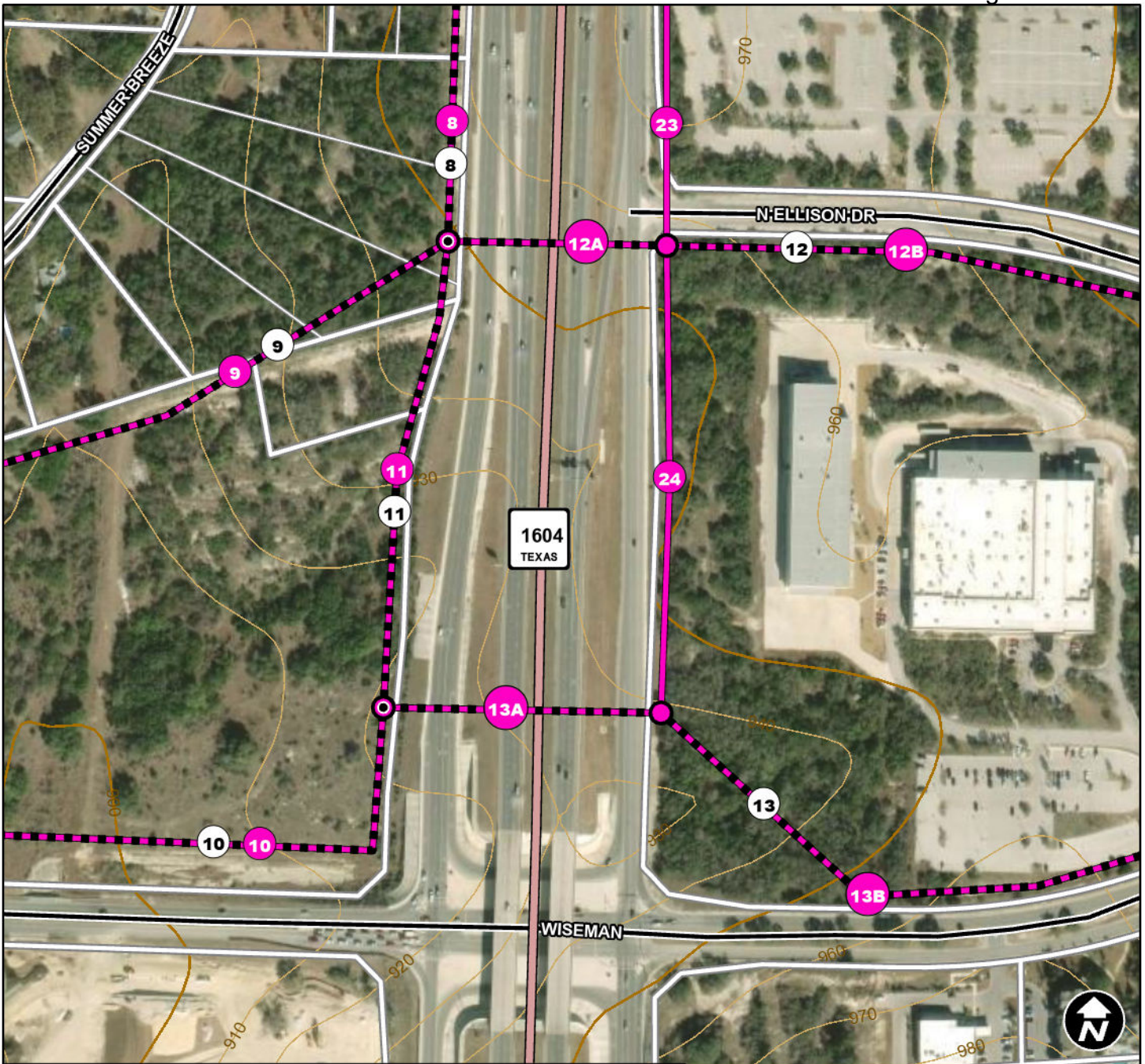
**Figure 6-4  
Addition of Segment 23; Relabel of  
Western Portion of 12 as 12A;  
Relabel of Eastern Portion of 12 as  
12B Following the Open House  
Meeting**

0    250    500    1,000  
Feet

Date: 10/17/2023



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Legend	
	Revised or New Alternative Route Segment
	Unchanged Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Removed Portion of Preliminary Alternative Route Segment Shown at Open House Meeting
	Revised or New Alternative Route Segment Node
	Unchanged Alternative Route Segment Node Shown at Open House Meeting
	Preliminary Alternative Route Segment Node Shown at Open House Meeting
	Resulting Alternative Route Segment Label
	Preliminary Alternative Route Segment Label Shown at Open House Meeting
	Parcel Boundary
	Property Boundary
	State Highway
	County / Local Road
	Existing 138kV Transmission Line
	Existing 345kV Transmission Line
	10 foot Contour

**CPS Energy SAT15 138 kV  
Transmission Line Project**

**Figure 6-5  
Addition of Segment 24; Relabel of  
Western Portion of 13 as 13A;  
Relabel of Eastern Portion of 13 as  
13B Following the Open House  
Meeting**

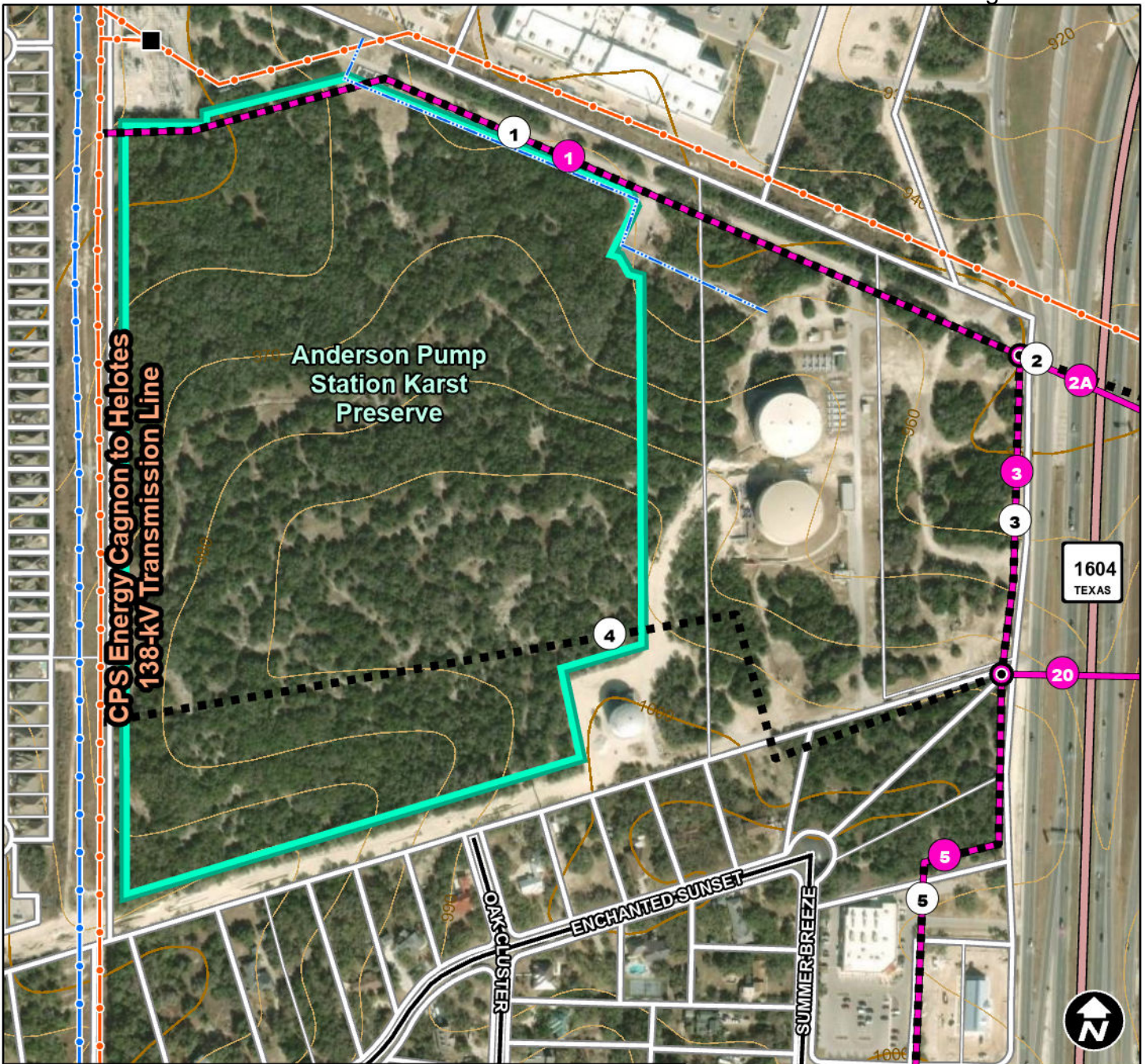
0    150    300    600  
Feet

Date: 10/17/2023





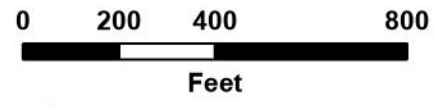
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Revised or New Alternative Route Segment	Parcel Boundary
Unchanged Portion of Preliminary Alternative Route Segment Shown at Open House Meeting	Property Boundary
Removed Portion of Preliminary Alternative Route Segment Shown at Open House Meeting	Preserve
Revised or New Alternative Route Segment Node	State Highway
Unchanged Alternative Route Segment Node Shown at Open House Meeting	County / Local Road
Preliminary Alternative Route Segment Node Shown at Open House Meeting	Existing Substations
Resulting Alternative Route Segment Label	Existing 138kV Transmission Line
Preliminary Alternative Route Segment Label Shown at Open House Meeting	Existing 345kV Transmission Line
	SAWS Water Pipeline
	10 foot Contour

CPS Energy SAT15 138 kV  
Transmission Line Project

**Figure 6-6**  
**Removal of Segment 4 Following**  
**the Open House Meeting**



Date: 10/17/2023



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## 7.0 LIST OF PREPARERS

This EA and Alternative Route Analysis was prepared for CPS Energy by POWER. A list of the POWER employees with primary responsibilities for the preparation of this document is presented below.

RESPONSIBILITY	NAME	TITLE
Project Manager	Lisa Barko Meaux	Sr. Project Manager I
Assistant Project Manager/ Project Coordinator	Denise Williams	Associate Project Manager
Natural Resources	Jonathan Barton Virginia Brown Yancy Bissonnette Mikaela Egbert	Environmental Specialist III Environmental Specialist II Senior Biologist I Environmental Specialist I
Land Use/Aesthetics	Denise Williams Ashley Brewer	Associate Project Manager Environmental Planner I
Cultural Resources	Darren Schubert Emily Duke	Project Manager II Cultural Resource Specialist I
Maps/Figures/Graphics	Gray Rackley Evan Doss	Senior GIS Analyst I GIS Analyst II

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**Appendix A**  
**Agency and Other Correspondence**

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SAT 15 138-kV Transmission and Substation Project  
Federal, State, and Local Agencies/Officials Contact List

**FEDERAL**

Mr. Rob Lowe  
Southwest Regional Administrator  
Federal Aviation Administration  
10101 Hillwood Parkway  
Fort Worth, TX 76177

Mr. Tony Robinson  
Region 6 Regional Administrator  
Federal Emergency Management Agency  
FRC 800 N. Loop 288  
Denton, TX 76209-3698

Ms. Kate Hammond  
Regions 6, 7, and 8 Acting Director  
National Parks Service  
IMRextrev@nps.gov

Ms. Kristy Oates  
State Conservationist  
NRCS Texas State Office  
101 South Main Street  
Temple, TX 76501

Regulatory Division  
U.S. Army Corps of Engineers – Fort Worth  
District  
CESWF-Permits@usace.army.mil

Mr. Jason Story  
Section 408 Coordinator  
U.S. Army Corps of Engineers – Fort Worth  
District  
jason.e.story@usace.army.mil

Mr. Steven Sample  
Executive Director  
Military Aviation and Installation Assurance  
Siting Clearinghouse  
3400 Defense Pentagon, Room 5C646  
Washington, DC 20301-3400

Ms. Earthea Nance  
Region 6 Administrator  
U.S. Environmental Protection Agency  
1201 Elm Street, Suite 500  
Dallas, TX 75270

Mr. Adam Zerrenner  
Field Supervisor  
U.S. Fish Wildlife Service – Austin Ecological  
Services Field Office  
10711 Burnet Rd, Ste. 200  
Austin, TX 78758-4455

**STATE**

The Honorable Philip Cortez  
Texas House District 117  
2600 S.W. Military Dr., Ste. 211  
San Antonio, TX 78224

The Honorable Josey Garcia  
Texas House District 124  
P.O. Box 2910  
Austin, TX 78768

The Honorable Roland Gutierrez  
Texas Senator District 19  
3175 Sidney Brooks  
Building 470  
San Antonio, TX 78235

The Honorable Jose Menendez  
Texas Senator District 26  
4522 Fredericksburg Road, A-22  
San Antonio, TX 78201

The Honorable Joaquin Castro  
U.S. Congressional District 20  
727 E. Cesar E. Chavez Blvd, Ste. B-128  
San Antonio, TX 78206

Ms. Leslie Savage  
Chief Geologist, Oil and Gas Division  
Railroad Commission of Texas  
P.O. Box 12967  
Austin, TX 78711-2967

Mr. George Ortiz  
Region 13 Director  
Texas Commission on Environmental Quality  
14250 Judson Rd.  
San Antonio, TX 78233-4480



SAT 15 138-kV Transmission and Substation Project  
Federal, State, and Local Agencies/Officials Contact List

Mr. Dan Harmon  
Director, Department of Aviation  
Texas Department of Transportation  
6230 E Stassney Lane  
Austin, TX 78744

Mr. Doug Booher, P.E.  
Director, Environmental Affairs Division  
Texas Department of Transportation  
6230 E Stassney Lane  
Austin, TX 78744

Mr. Humberto "Tito" Gonzalez Jr., P.E.  
Director, Planning & Programming  
Texas Department of Transportation  
6230 E Stassney Lane  
Austin, TX 78744

Ms. Gina Gallegos, P.E.  
San Antonio District Engineer  
Texas Department of Transportation  
4615 NW Loop 410  
San Antonio, TX 78229-0928

Dr. Dawn Buckingham, M.D.  
Commissioner  
Texas General Land Office  
1700 N. Congress Ave., Suite 935  
Austin, TX 78711

Mr. Mark Wolfe  
Executive Director  
Texas Historical Commission  
P.O. Box 12276  
Austin, TX 78711

Ms. Laura Zebehazy  
Wildlife Habitat Assessment Program  
Texas Parks and Wildlife Department  
WHAB@tpwd.texas.gov

Mr. Jeff Walker  
Executive Administrator  
Texas Water Development Board  
P.O. Box 13231  
Austin, TX 78711-3231

**LOCAL**

Ms. Brenda Hicks-Sorensen  
Director Economic Development Department  
City of San Antonio  
City Tower  
100 West Houston Street, 18<sup>th</sup> Floor  
San Antonio, TX 78205

Ms. Bridgett White  
Director  
City of San Antonio - Department of Planning  
100 West Houston Street, 18<sup>th</sup> Floor  
San Antonio, TX 78205

Ms. Tomika Monterville  
Director  
City of San Antonio - Transportation  
P.O. Box 839966  
San Antonio, TX 78283

Ms. Shanon Shea Miller, AICP  
Director  
City of San Antonio Office of Historic  
Preservation Development and Business  
Services Center  
P.O. Box 839966  
San Antonio, TX 78283

Mr. Ron Nirenberg  
Mayor  
City of San Antonio  
P.O. Box 839966  
San Antonio, TX 78283

Ms. Melissa Cabello Havdra  
Councilwoman, District 6  
City of San Antonio  
P.O. Box 839666  
San Antonio, TX 78283

Ms. Diane Rath  
Executive Director  
Alamo Area Council of Governments  
2700 NE Loop 410, Suite 101  
San Antonio, TX 78217

SAT 15 138-kV Transmission and Substation Project  
Federal, State, and Local Agencies/Officials Contact List

Mr. Gary Schott  
Chairman  
Alamo Soil and Water Conservation District  
727 E Cesar E Chavez Blvd RM A507  
San Antonio, TX 78206-1216

Mr. Tim Draves  
Chair  
Bexar County Historical Commission  
15303 Pebble Sound  
San Antonio, TX 78232

Mr. Roland Ruiz  
General Manager  
Edwards Aquifer Authority Chairman  
900 E. Quincy  
San Antonio, TX 78215

Mr. David L. Smith  
Bexar County Manager  
101 W. Nueva, 10<sup>th</sup> Floor  
San Antonio, TX 78205

Mr. Derek Boese  
Interim General Manager  
San Antonio River Authority  
100 East Guenther St.  
San Antonio, TX 78204

Dr. Brian T. Woods  
Superintendent  
Northside ISD  
5900 Evers Road  
San Antonio, TX 78238

Ms. Colleen Swain  
Director  
San Antonio World Heritage Office  
P.O. Box 839966  
San Antonio, TX 78283

**SUBURBAN CITIES**

Mr. Rich Whitehead  
Mayor  
City of Helotes  
12951 Bandera Road  
Helotes, TX 78023

Mr. Robert R. Puente, J.D.  
President/CEO  
San Antonio Water System  
P.O. Box 2449  
San Antonio, TX 78298

Ms. Marian Mendoza  
City Administrator  
City of Helotes  
12951 Bandera Road  
Helotes, TX 78023

Mr. Peter Sakai  
Bexar County Judge  
101 West Nueva, 10<sup>th</sup> Floor  
San Antonio, TX 78205-3482

Ms. Chris Riley  
Mayor  
City of Leon Valley  
6400 El Verde Road  
Leon Valley, TX 78238

Ms. Rebeca Clay-Flores  
Bexar County Commissioner, Precinct 1  
101 W. Nueva, Suite 1009, 10<sup>th</sup> Floor  
San Antonio, TX 78205

Dr. Crystal Caldera  
City Manager  
City of Leon Valley  
6400 El Verde Road  
Leon Valley, TX 78238

Mr. David E. Marquez  
Executive Director  
Bexar County Economic Development  
101 West Nueva, Suite 944  
San Antonio, TX 78205

**NON-GOVERNMENTAL  
ORGANIZATION**

Mr. Todd Putnam, PE, CFM  
Bexar County Flood Control  
1948 Probandt Street  
San Antonio, TX 78214

Ms. Suzanne Scott  
Regional State Director, Texas  
The Nature Conservancy  
200 E. Grayson, Suite 202  
San Antonio, TX 78215

SAT 15 138-kV Transmission and Substation Project  
Federal, State, and Local Agencies/Officials Contact List

Ms. Lori Olson  
Texas Land Trust Council  
Executive Director  
P.O. Box 2677  
Wimberley, TX 78676

Mr. Mark Steinbach  
Executive Director  
Texas Land Conservancy  
P. O. Box 162481  
Austin, TX 78716

Mr. Chad Ellis  
Chief Executive Director  
Texas Agricultural Land Trust  
1919 Oakwell Farms Parkway, Suite, 100  
San Antonio, TX 78218

Mr. Greg Mosier  
President  
Texas Cave Management Association  
2186 Jackson Keller Street, #533  
San Antonio, TX 78214



POWER ENGINEERS, INC.  
16825 NORTHCHASE DRIVE  
SUITE 1200  
HOUSTON, TX 77060 USA

PHONE 281-765-5500  
FAX 281-765-5599

May 9, 2023  
(Via eMail)

Regulatory Division Chief  
U.S. Army Corps of Engineers – Fort Worth District  
CESWF-Permits@usace.army.mil

Re: Proposed SAT 15 138-kV Transmission Line and Substation Project  
Bexar County, Texas  
POWER Engineers, Inc. Project No. 169772

Regulatory Division Chief:

CPS Energy is evaluating the construction of a new double-circuit 138-kilovolt (kV) transmission line in Bexar County, Texas. The proposed 138-kV line will extend approximately 1.2 miles from the proposed SAT 15 Substation to be located approximately 0.4 mile west of the intersection of State Highway 151 and Wiseman Boulevard, to the existing CPS Energy Cagnon to Helotes 138-kV transmission line located approximately 0.5 mile west of State Highway 1604. The purpose of this project is to provide service for a new customer, support growth, and enhance reliability. The study area is shown on the enclosed map.

POWER Engineers, Inc. (POWER) is preparing an Environmental Assessment (EA) to support CPS Energy's internal and external regulatory activities associated with the project. POWER is gathering data on the existing environment and identifying environmental, cultural, and land use constraints within the study area. POWER will identify potential alternative route segments between the end points that consider these environmental, cultural and land use constraints and the need to serve electrical load in the area.

We are requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your input will be an important consideration in the evaluation of alternative routes and in the assessment of potential impacts of those routes. In addition, we would appreciate receiving information about any permits, easements, or other approvals by your agency/office that you believe could affect this project, or if you are aware of any major proposed development or construction in the study area. Upon certification of a final route for the proposed project, CPS Energy will identify and obtain necessary permits, if required, from your agency/office.

May 9, 2023

Thank you for your assistance with this proposed electric transmission line project. Please contact me by phone at 281-765-5507, or by e-mail at [lisa.barko@powereng.com](mailto:lisa.barko@powereng.com) if you have any questions or require additional information. We would appreciate receiving your reply by June 9, 2023.

Sincerely,










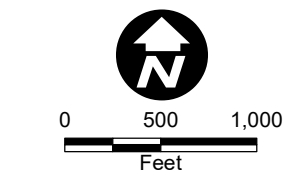
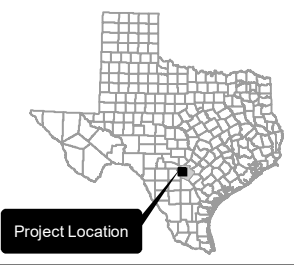
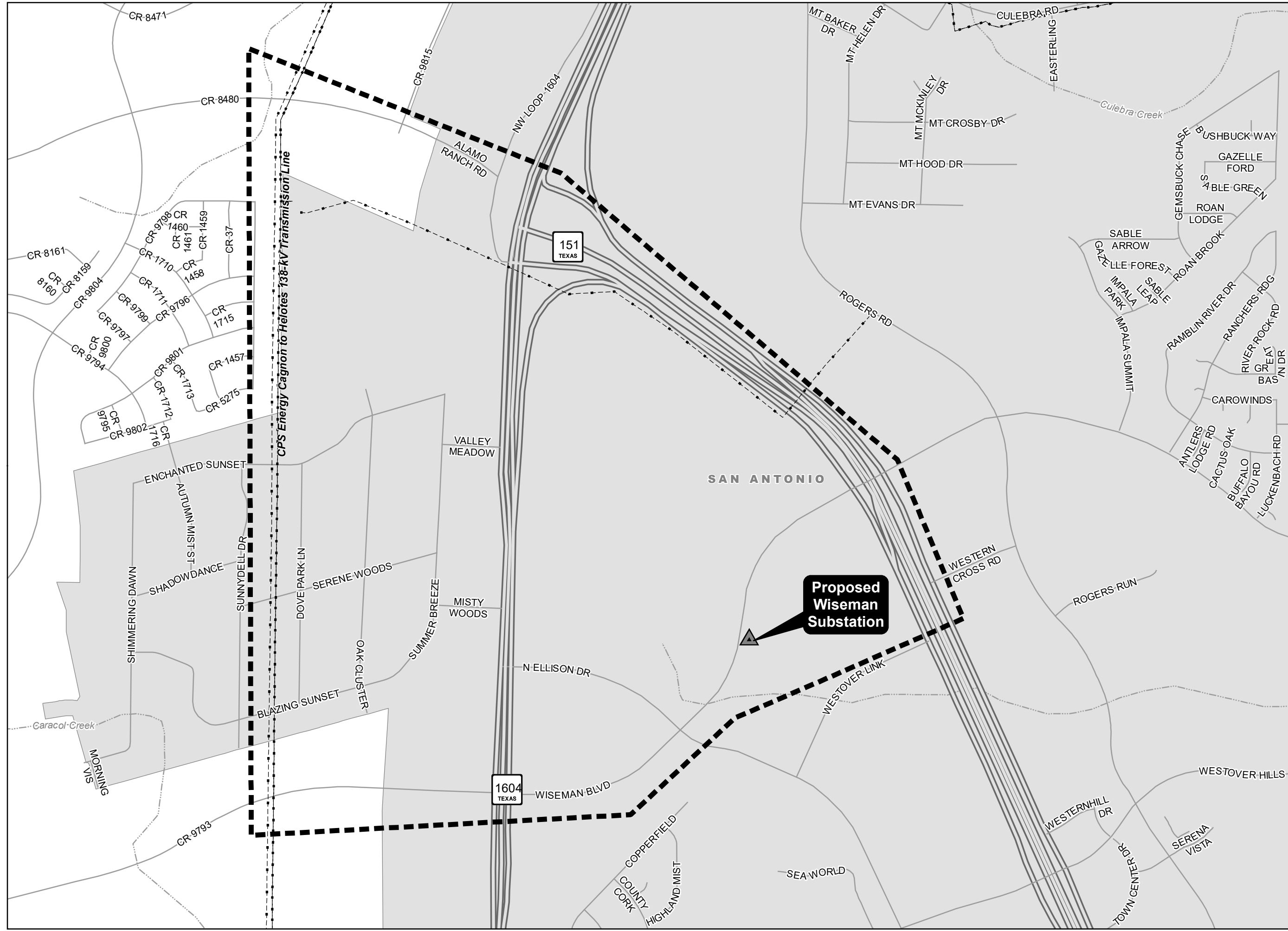
Lisa Barko Meaux  
Senior Project Manager  
Regional Manager

Enclosure(s):  
Study Area Map

Sent Via Mail  
ProjectWise 169772

STUDY AREA

-  Proposed Substation
-  Study Area Boundary
-  Existing Transmission Line
-  River / Stream
-  State Highway
-  Local Road
-  City Limits



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**From:** [Story, Jason E CIV USARMY CESWF \(USA\)](#)  
**To:** [Brewer, Ashley](#)  
**Cc:** [Jetton, Montey E CIV USARMY CESWF \(USA\)](#); [Story, Jason E CIV USARMY CESWF \(USA\)](#); [Williams, Denise](#)  
**Subject:** [EXTERNAL] Proposed SAT 15 138-kV Transmission Line and Substation Project, 408-SWF-2023-0034, no 408 required  
**Date:** Tuesday, May 16, 2023 12:19:04 PM

**CAUTION:** This Email is from an **EXTERNAL** source. **STOP. THINK** before you **CLICK** links or **OPEN** attachments.

Dear Ashley Brewer:

The Fort Worth District of the U.S. Army Corps of Engineers (USACE) has received your inquiry regarding the subject project (proposed SAT 15 138-kV Transmission Line and Substation Project located in Bexar County, Texas). This project has been assigned Section 408 Request Number 408-SWF-2023-0034. Please use this number in all future correspondence regarding this project. Based on your description of the proposed work, and other information available to us, we have determined this project will not involve activities that require authorization under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408). We have placed a copy of the information you submitted in our files. Thanks for coordinating with us on this matter. Please contact me at 817-239-8475, or email [jason.e.story@usace.army.mil](mailto:jason.e.story@usace.army.mil) for any questions.

Authorization may still be required under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899, which are administered by the Regulatory Division. Information about the Regulatory Division can be found at <https://www.swf.usace.army.mil/Missions/Regulatory/> [[swf.usace.army.mil](mailto:swf.usace.army.mil)].

Sincerely,

Jason Story  
Section 408 Coordinator  
Fort Worth District  
Biologist  
RPEC  
U.S. Army Corps of Engineers  
817-239-8475  
[jason.e.story@usace.army.mil](mailto:jason.e.story@usace.army.mil)

For more information on Section 408, visit the Fort Worth District Section 408 webpage at <https://www.swf.usace.army.mil/Missions/Section-408/> [[swf.usace.army.mil](mailto:swf.usace.army.mil)]



**From:** ashley.brewer@powereng.com <ashley.brewer@powereng.com>  
**Sent:** Friday, May 12, 2023 1:57 PM  
**To:** Story, Jason E CIV USARMY CESWF (USA) <Jason.E.Story@usace.army.mil>  
**Cc:** denise.williams@powereng.com  
**Subject:** [URL Verdict: Neutral][Non-DoD Source] Proposed SAT 15 138-kV Transmission Line and Substation Project

To Whom It May Concern,

On behalf of our client, CPS Energy, attached please find a proposed project information letter.

Thank you for your assistance with this proposed electric transmission line project. Please contact the Project Manager, Lisa Barko-Meaux, by phone at 281-765-5507, or by e-mail at [lisa.barko@power.com](mailto:lisa.barko@power.com), if you have any questions or require additional information.

Thanks,


*Ashley (Taylor) Brewer*

**Environmental Specialist**  
Central Env Svc PM Department  
16825 Northchase Drive, Suite 1200  
Houston, TX 77060  
281-765-5512 direct  
832-244-8654 cell

**Please note that my email address has changed to:** [Ashley.brewer@powereng.com](mailto:Ashley.brewer@powereng.com)

**POWER Engineers, Inc.**  
[www.powereng.com](http://www.powereng.com)



 Go Green! Please print this email only when necessary.  
Thank you for helping POWER Engineers be environmentally responsible.

**From:** Sewell, Valerie A CIV USARMY CESWF (USA)  
**To:** Meaux, Lisa  
**Subject:** [EXTERNAL] SWF-2023-00233 Transmission Line and Substation Project AST 15 , Bexar County  
**Date:** Thursday, May 18, 2023 4:39:08 PM  
**Attachments:** NWP57TX Electric Utility Line and Telecommunications Activities.pdf  
USACE Pre-App Meeting Request\_Apr\_2022\_60x3  
Consultants List County - Others may need.xlsx  
USACE NWP 57 Application Form.docx  
20230518\_SWF-2023-00233\_Letter of Need Additional Information.pdf

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CAUTION: This Email is from an EXTERNAL source. STOP. THINK before you CLICK links or OPEN attachments.

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Ms. Barko-Meaux,

Please find the Letter of Need Additional Information and related attachments.

We can not evaluate your project with the information provided. Please review these documents and in particular submit the USACE Pre-App Meeting Request with the supporting documents mentioned in the request form to communicate your project.

We can set up a conference call with you once we receive more information on the project.

Please consider hiring a 404 Consultant (a general list of known biologists is provided in the Consultants List.)

If there are aquatic features being impacted by your project, you will need submit a Wetland/Waters Delineation Report with a map defining all water resources as well as a description of the degree/quantity of impacts to those resources.

If no waters are impacted, your project may not need a permit. However, if it does need a permit, we can consider the applicability of the Nationwide Permit 57 for Electric Utility Line and Telecommunication Activities. I have provided information on that permit and an application form.

We can discuss this in more detail prior to applying for a permit once we receive more detailed information on what/where the work will be performed and the route of the transmission line and any associated construction.

Thank you,

Valerie Sewell  
Project Manager  
US Army Corps of Engineers  
Fort Worth District CESWF-RDE  
819 Taylor Street, Room 3A37  
Fort Worth, Texas 76102-0300  
817.886.1782  
Email: valerie.sewell@usace.army.mil

USACE Fort Worth District Regulatory Division Website  
[https://urldefense.com/v3/!NPIPZ64uwXccAw!q5hIS9R9yVOF4Ji8eKZ3klp8KnpNtuGzbfRsARsU\\_Hksqgc9uKn3TKhToan6bhEOMAVSAxeKpNxBV\\_ctv13yU82wdOzMffEhew\\$](https://urldefense.com/v3/!NPIPZ64uwXccAw!q5hIS9R9yVOF4Ji8eKZ3klp8KnpNtuGzbfRsARsU_Hksqgc9uKn3TKhToan6bhEOMAVSAxeKpNxBV_ctv13yU82wdOzMffEhew$)  
[swf].[usace].[army].[mil]

USACE Fort Worth District Regulatory Division Electronic Submittal Process [https://urldefense.com/v3/!NPIPZ64uwXccAw!q5hIS9R9yVOF4Ji8eKZ3klp8KnpNtuGzbfRsARsU\\_Hksqgc9uKn3TKhToan6bhEOMAVSAxeKpNxBV\\_ctv13yU82wdOxboPHJaw\\$](https://urldefense.com/v3/!NPIPZ64uwXccAw!q5hIS9R9yVOF4Ji8eKZ3klp8KnpNtuGzbfRsARsU_Hksqgc9uKn3TKhToan6bhEOMAVSAxeKpNxBV_ctv13yU82wdOxboPHJaw$) [swf].[usace].[army].[mil]

Please help the Regulatory Program improve its service by completing the survey on the following website: [https://urldefense.com/v3/!NPIPZ64uwXccAw!q5hIS9R9yVOF4Ji8eKZ3klp8KnpNtuGzbfRsARsU\\_Hksqgc9uKn3TKhToan6bhEOMAVSAxeKpNxBV\\_ctv13yU82wdOxLKnvsrw\\$](https://urldefense.com/v3/!NPIPZ64uwXccAw!q5hIS9R9yVOF4Ji8eKZ3klp8KnpNtuGzbfRsARsU_Hksqgc9uKn3TKhToan6bhEOMAVSAxeKpNxBV_ctv13yU82wdOxLKnvsrw$) [regulatory].[ops].[usace].[army].[mil]



**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT  
P. O. BOX 17300  
FORT WORTH, TEXAS 76102-0300

May 18, 2023

Regulatory Division

SUBJECT: Project Number SWF-2023-00233, SAT 15 138-kV Transmission Line and Substation

Ms. Lisa Barko-Meaux  
POWER Engineers, Inc.  
16825 Northchase Drive, Suite 1200  
Houston, Texas 77060  
Lisa.barko@powereng.com

Ms. Barko-Meaux,

This letter is in regard to information received 05/12/2023 concerning a proposal to construct a new double-circuit 138-kilovolt transmission line in Bexar County, Texas. This project has been assigned Project Number SWF-2023-00233. Please include this number in all future correspondence concerning this project.

We have reviewed this project in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Under Section 404, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into waters of the United States, including wetlands. Our responsibility under Section 10 is to regulate any work in, or affecting, navigable waters of the United States. Any such discharge or work requires Department of the Army authorization in the form of a permit.

We are unable to determine from the information provided whether Department of the Army authorization will be required. Please provide a more detailed description of the entire proposed project, a suitable map of the proposed project area showing the location of proposed discharges, the type and amount of material (temporary or permanent), if any, to be discharged, and plan and cross-section views of the proposed project. Please refer to the enclosed guidance for Department of the Army submittals for additional details about what you should submit for this and future projects.

If a Department of the Army permit is required, the project may be authorized by one or more general permits. For work to be authorized by general permit it must comply with the specifications and conditions of the permit. Projects that would not meet the specifications and conditions of a general permit may require authorization by individual permit.

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

-2-

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 letter, 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.

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 <http://media.swf.usace.army.mil/pubdata/enviro/Regulatory/introduction/submittal.pdf>, and mitigation at <http://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 contact Ms. Valerie Sewell at the address above, by telephone (817) 886-1782, or by email [valerie.sewell@usace.army.mil](mailto:valerie.sewell@usace.army.mil), and refer to your assigned project number.

Sincerely,

For: Brandon W. Mobley  
Chief, Regulatory Division

Attachments:

NWP57TX Electric Utility Line and Telecommunications Activities  
USACE\_NWP\_57\_Application\_Form  
USACE\_Pre-App\_Meeting\_Request\_Apre\_2022  
Consultants List County – Others may exist

**NATIONWIDE PERMIT 57**  
**Electric Utility Line and**  
**Telecommunications Activities**

Effective Date: March 15, 2021  
(NWP Final Notice, 86 FR 8)

57. Electric Utility Line and Telecommunications Activities. Activities required for the construction, maintenance, repair, and removal of electric utility lines, telecommunication lines, and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Electric utility lines and telecommunication lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of electric utility lines and telecommunication lines. There must be no change in pre-construction contours of waters of the United States. An "electric utility line and telecommunication line" is defined as any cable, line, fiber optic line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States 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 United States (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 electric utility line or telecommunication line crossing of each waterbody.

Electric utility line and telecommunications substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with an electric utility line or telecommunication line in non-tidal waters of the United States, 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 United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead electric utility line or telecommunication line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead electric utility line or telecommunication line towers, poles, and anchors in all waters of the United States, 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 electric utility lines or telecommunication lines,

including overhead lines and substations, in non-tidal waters of the United States, 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 United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States 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 United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize electric utility lines or telecommunication lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Electric utility lines or telecommunication lines constructed over section 10 waters and electric utility lines or telecommunication 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 electric utility lines or telecommunication 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 electric utility lines or telecommunication lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the electric 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 of dredged or fill material, 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: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the electric utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP

verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the electric utility line to protect navigation.

Note 2: For electric utility line or telecommunications activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Electric utility line and telecommunications activities must comply with 33 CFR 330.6(d).

Note 3: Electric utility lines or telecommunication lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the electric utility line or telecommunication line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: This NWP authorizes electric utility line and telecommunication line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For overhead electric utility lines and telecommunication lines authorized by this NWP, a copy of the PCN and NWP verification will be provided by the Corps to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 7: For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

### **2021 Nationwide Permit General Conditions**

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently

relying on an existing or prior permit authorization under one or more NWP's, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States 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 or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may 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, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP's 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water,



adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for

that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is 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 which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-

construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether “incidental take” permits are necessary and available

under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a

complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they 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. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate

form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWP, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and

should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously



received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

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(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not

begin the activity 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 are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might 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 Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete

crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any

Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

## **2021 District Engineer's Decision**

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district

engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

## **2021 Further Information**

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.

5. NWP's do not authorize interference with any existing or proposed Federal project (see general condition 31).

## **2021 Nationwide Permit Definitions**

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high



tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: 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.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent

that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a

rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

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.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water

marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

### **The following regional conditions apply within the Fort Worth District**

1. Notification to the appropriate District Engineer in accordance with Nationwide Permit General Condition 32 - Pre-Construction Notification (PCN) is required for all activities proposed for authorization by any NWP into the below listed ecologically unique and sensitive areas located within waters of the United States. The Corps will coordinate with the resource agencies as specified in NWP General Condition 32(d)(3).
  - a. Pitcher plant bogs ((*Sarracenia* spp.) and/or sundews (*Drosera* spp.) and/or Bald Cypress/Tupelo swamps ((*Taxodium distichum*) and/or water tupelo (*Nyssa aquatica*)).
  - b. Karst Zones 1 and 2 located in Bexar, Travis and Williamson Counties (see [https://www.fws.gov/southwest/es/AustinTexas/Maps\\_Data.html](https://www.fws.gov/southwest/es/AustinTexas/Maps_Data.html) ).
  - c. Caddo Lake and associated areas that are designated as "Wetland of International Importance" under the Ramsar Convention (see

<http://caddolakedata.us/media/145/1996caddolakeramsar.pdf> or  
<http://caddolakedata.us/media/144/1996caddolakeramsar.jpg> ).

- d. Reaches of rivers (and their adjacent wetlands) that are included in the Nationwide Rivers Inventory (see <https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm> ).

2. For all activities proposed for authorization under any NWP at sites approved as compensatory mitigation sites (either permittee-responsible, mitigation bank and/or in-lieu fee) under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899, the applicant shall notify the appropriate District Engineer in accordance with the Nationwide Permit General Condition 32 - PCN prior to commencing the activity.

#### **ADDITIONAL INFORMATION**

This nationwide permit is effective March 15, 2021, and expires on March 14, 2026.

Information about the U.S. Army Corps of Engineers regulatory program, including nationwide permits, may also be found at <http://www.swf.usace.army.mil/Missions/Regulatory.aspx> and <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx>

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

December 18, 2020

Colonel Timothy R. Vail  
Galveston District  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229

Re: 2020 USACE Nationwide Permits Reissuance

Dear Colonel Vail:

This letter is in response to your October 19, 2020, letter requesting Clean Water Act Section 401 certification of the United States Army Corps of Engineers (Corps) Nationwide Permits (NWP). The Proposal to Reissue and Modify Nationwide Permits was published in the Federal Register (Vol. 85, No. 179, pages 57298-57395) on September 15, 2020. Regional conditions for NWPs in Texas were proposed in public notices on September 30, 2020 (Corps Galveston District) and October 1, 2020 (Corps Fort Worth District).

The Texas Commission on Environmental Quality (TCEQ) has reviewed the Proposal to Reissue and Modify Nationwide Permits and the proposed regional conditions. On behalf of the Executive Director and based on our evaluation of the information contained in these documents, the TCEQ certifies that any discharge associated with the activities authorized by NWPs 1, 2, 4, 5, 8, 9, 10, 11, 20, 23, 24, 28, 34, 35, 48, A, and B will comply with water quality requirements as required by Section 401 of the Federal Clean Water Act and pursuant to Title 30, Texas Administrative Code (TAC), Chapter 279.

The TCEQ conditionally certifies that any discharge associated with the activities authorized by NWPs 3, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, 54, C, D, and E will comply with water quality requirements as required by Section 401 of the Federal Clean Water Act and pursuant to Title 30, Texas Administrative Code, Chapter 279. Conditions for each NWP are defined in Attachment 1 and more detail on specific conditions is given below, including information explaining why the condition is necessary for compliance with water quality requirements as well as the supporting regulatory authorizations.

Colonel Timothy Vail  
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The TCEQ understands that a prohibition against the use of NWP 3 in coastal dune swales, mangrove marshes, and Columbia Bottomlands in the Galveston District is included in the Draft 2020 Nationwide Permit (NWP) Regional Conditions for the State of Texas (Regional Conditions). A prohibition of using NWP 3 in coastal dune swales, mangrove marshes, and Columbia bottomlands in the Galveston District is a condition of this TCEQ 401 certification. This condition is necessary to ensure compliance with water quality requirements because impacts to rare and ecologically significant aquatic resources such as coastal dune swales, mangrove marshes, and Columbia bottomlands would not be considered minimal but significant, and therefore would not meet the purpose of a nationwide permit to authorize activities that will result in no more than minimal adverse environmental effects. Furthermore, activities that would result in impacts to these unique resources are more appropriately authorized under an individual permit to ensure that unavoidable impacts are adequately minimized (30 TAC §279.11(c)(2)) and mitigated (30 TAC §279.11(c)(3) and 30 TAC §307.4(i)).

The TCEQ wants to clarify the application of NWP 16 in Texas. NWP 16 should be limited to the return water from upland contained dredged material disposal areas. It is important to emphasize the intent for dredged material disposal. The TCEQ understands dredged material to be associated with navigational dredging activities, not commercial mining activities. To avoid confusion, the TCEQ requests that a regional condition be added or that the Corps commits to prohibiting the use of NWP 16 for activities that would be regulated under Standard Industrial Classification (SIC) codes 1442 and 1446 (industrial and construction sand and gravel mining).

Consistent with previous NWP certification decisions, the TCEQ is conditionally certifying NWP 16 for the return water from confined upland disposal not to exceed a 300 mg/L total suspended solids (TSS) concentration. This condition is necessary to ensure that return water discharges will comply with water quality requirements in accordance with Texas Water Code §26.003 and antidegradation policy in 30 TAC §307.5, and not result in violations of general water quality criteria in 30 TAC 307.4(b)(2)-(5). The TCEQ encourages the Corps to consider that TSS limits are promulgated as effluent limits under Title 40 of the Code of Federal Regulations, and that the TCEQ effectively imposes TSS effluent limits in thousands of wastewater discharge permits issued in Texas under Section 402 of the federal Clean Water Act.

The TCEQ recognizes the usefulness of having an instantaneous method to determine compliance with the 300 mg/L TSS limit. However, existing literature and analysis of paired samples of turbidity and TSS from the Texas Surface Water Quality Information System indicate this relationship must be a site-specific characterization of the actual sediments to be dredged. To address this approach, we have continued language in the NWP 16 conditional certification that allows flexibility to use an instantaneous method in implementing the TSS limit when a site-specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus TSS has been approved by TCEQ. The TCEQ remains interested in working with the Corps in the development of these curves and in working together to find the best methods to implement this limit.

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Regional Condition 17 applies to NWP authorizations in the Area of Concern (AOC) of the San Jacinto River Waste Pits Superfund Site. The TCEQ conditionally certifies Regional Condition 17 provided that the Permit Evaluation Requirement Process (Process), effective November 1, 2009, is adhered to for all proposed and existing permits within the AOC. The Process requires that all permit applicants and existing permittees within the AOC perform sampling to ensure that any activities conducted, especially activities involving dredging or disposal of dredged materials, do not impact site investigation and remediation and that existing water quality is maintained and protected in accordance with the Texas Water Code §26.003 and TCEQ antidegradation policy in 30 TAC §307.5.

The TCEQ is conditionally certifying NWP General Condition 12 *Soil Erosion and Sediment Controls*, and General Condition 25 *Water Quality*. The conditions address three broad categories of water quality management with specific recommendations for Best Management Practices (BMPs) for each category. These BMP conditions are necessary to enhance the water quality protection of these General Conditions by requiring the use of specific BMPs to control erosion, sedimentation, and/or post-construction TSS in permitted activities and therefore prevent violation of state general water quality criteria (30 TAC §307.4) and antidegradation policy (30 TAC §307.5). Runoff from bridge decks has been exempted from the requirement for post-construction TSS controls under General Condition 25. A list of TCEQ-recommended BMPs is included as Attachment 2. Attachment 3 is provided as a quick reference table identifying the BMP categories that are required for each NWP. A detailed description of the BMPs is provided in Attachment 4.

The Corps is proposing to remove the 300 linear foot (LF) limit for NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52, in part, to simplify the quantification of aquatic resource types (i.e., streams, wetlands, etc.) by using acreage as the preferred unit of measure. Removing the stream bed loss limit would mean that stream losses associated with activities covered by these 10 NWPs would only be limited by the existing ½-acre limit on overall impacts to waters of the U.S. This could significantly affect state stream resources by allowing upwards of several thousand linear feet of stream impacts under these permits, depending on the dimensions of the streams being impacted. The TCEQ has traditionally relied on and used linear feet as the preferred unit of measure of stream impacts and stream mitigation in our Section 401 water quality certification program. Therefore, the TCEQ does not support the proposed removal of the 300 LF stream bed loss limit in these NWPs and conditionally certifies NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 with a limit of 1,500 linear feet of stream bed loss. The condition is based on the amount of stream impacts considered minimal by the TCEQ, where certification is waived for projects impacting 1,500 LF of streams or less in accordance with the Memorandum of Agreement (August 2000) between the Corps and TCEQ. Any proposed impacts greater than 1,500 linear feet of impacts in stream length will need to undergo an individual TCEQ 401 certification review, preferably in the context of a Section 404 individual permit. This condition is necessary to ensure that the discharge associated with projects permitted using these 10 NWPs will comply with water quality requirements for aquatic life uses and habitat (30 TAC 307.4(i)), antidegradation implementation procedures (30 TAC



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307.5(c)(1)(B), and minimization and mitigation requirements in 30 TAC 279.11(c)(2) and (3), as well as be consistent with the NWP goal of authorizing only minimal adverse environmental impacts.

This certification decision is limited to those activities under the jurisdiction of the TCEQ. For activities related to the production and exploration of oil and gas, a Railroad Commission of Texas certification is required as provided in the Texas Water Code §26.131.

The TCEQ has reviewed the Notice of Reissuance of Nationwide Permits for consistency with the Texas Coastal Management Program (CMP) goals and policies in accordance with the CMP regulations {Title 31, Texas Administrative Code (TAC), Chapter (§)505.30} and has determined that the action is consistent with the applicable CMP goals and policies.

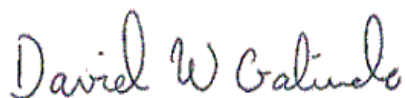
This certification was reviewed for consistency with the CMP's development in critical areas policy {31 TAC §501.23} and dredging and dredged material disposal and placement policy {31 TAC §501.25}. This certification complies with the CMP goals {31 TAC §501.12(1, 2, 3, 5)} applicable to these policies.

The TCEQ reserves the right to modify this certification if additional information identifies specific areas where significant impacts, including cumulative or secondary impacts, are occurring, and the use of these NWPs would be inappropriate.

No review of property rights, location of property lines, nor the distinction between public and private ownership has been made, and this certification may not be used in any way with regard to questions of ownership.

If you require further assistance, please contact Ms. Lili Murphy, Water Quality Assessment Section, Water Quality Division (MC-150), at (512) 239-4595 or by email at [lili.murphy@tceq.texas.gov](mailto:lili.murphy@tceq.texas.gov).

Sincerely,



David W. Galindo, Deputy Director  
Water Quality Division  
Texas Commission on Environmental Quality

DWG/LM/

Attachments

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ccs: Mr. Joseph McMahan, U.S. Army Corps of Engineers Galveston District via e-mail at [joseph.a.mcmahan@usace.army.mil](mailto:joseph.a.mcmahan@usace.army.mil)  
Ms. Kristi McMillan U.S. Army Corps of Engineers Galveston District via e-mail at [Kristi.N.McMillan@usace.army.mil](mailto:Kristi.N.McMillan@usace.army.mil)  
Mr. Stephen Brooks, Branch Chief, U.S. Army Corp of Engineers Fort Worth District via e-mail at [Stephen.Brooks@usace.army.mil](mailto:Stephen.Brooks@usace.army.mil)  
Ms. Allison Buchtien, and Mr. Jesse Solis, Texas General Land Office via e-mail at [Federal.Consistency@glo.texas.gov](mailto:Federal.Consistency@glo.texas.gov)  
Ms. Leslie Savage, Texas Railroad Commission via e-mail at [Leslie.Savage@RRC.texas.gov](mailto:Leslie.Savage@RRC.texas.gov)  
Branch Chief, U.S. Army Corps of Engineers, Albuquerque District, 4101 Jefferson Plaza NE, Room 313, Albuquerque, New Mexico 87109-3435  
Regulatory Branch Chief, U.S. Army Corps of Engineers, Regulatory Branch CESWT-PE-R, 1645 South 101<sup>st</sup> East Avenue, Tulsa, Oklahoma, 74128  
Regulatory Branch Chief, U.S. Army Corps of Engineers, El Paso Regulatory Office, CESP-OD-R-EP, P.O. Box 6096, Fort Bliss, Texas 79906-6096



## **Attachment 1** **Conditions of Section 401 Certification for Nationwide Permits, Regional Conditions, and General Conditions**

### **General Condition 12 (Soil Erosion and Sediment Controls)**

Erosion control and sediment control best management practices (BMPs) are required with the use of this general condition. Attachment 2 describes the BMPs and the Nationwide Permits (NWP) to which they apply. If the applicant does not choose one of the BMPs listed in Attachment 2, an individual 401 certification is required.

### **General Condition 25 (Water Quality)**

Post-construction total suspended solids (TSS) BMPs are required with the use of this general condition. Attachment 2 describes the BMPs and the NWP to which they apply. If the applicant does not choose one of the BMP's listed in Attachment 2, an individual 401 certification is required. Bridge deck runoff is exempt from this requirement.

### **Regional Condition 17 condition**

The Permit Evaluation Requirement Process, effective November 1, 2009, is required for all proposed and existing permits within San Jacinto River Waste Pits Superfund Site Area of Concern.

### **All NWPs except for NWP 3**

These NWPs are not authorized for use in coastal dune swales, mangrove marshes, and Columbia bottomlands in the Galveston District, Texas.

### **NWP 3 (Maintenance)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

### **NWP 6 (Survey Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

### **NWP 7 (Outfall Structures and Associated Intake Structures)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

### **NWP 12 (Oil or Natural Gas Pipeline Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

### **NWP 13 (Bank Stabilization)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

### **NWP 14 (Linear Transportation Projects)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

### **NWP 15 (U.S. Coast Guard Approved Bridges)**

Soil Erosion and Sediment Controls under General Condition 12 are required.



**Attachment 1**  
**Conditions of Section 401 Certification for Nationwide Permits, Regional Conditions, and General Conditions**

**NWP 16 (Return Water From Upland Contained Disposal Areas)**

Activities that would be regulated under Standard Industrial Classification (SIC) codes 1442 and 1446 (industrial and construction sand and gravel mining) are not eligible for this NWP. Effluent from an upland contained disposal area shall not exceed a TSS concentration of 300 mg/L unless a site-specific TSS limit, or a site-specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus TSS has been approved by TCEQ.

**NWP 17 (Hydropower Projects)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP 18 (Minor Discharges)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP 19 (Minor Dredging)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 21 (Surface Coal Mining Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 22 (Removal of Vessels)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 25 (Structural Discharges)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 29 (Residential Developments)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 30 (Moist Soil Management for Wildlife)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 31 (Maintenance of Existing Flood Control Facilities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.



**Attachment 1**  
**Conditions of Section 401 Certification for Nationwide Permits, Regional Conditions, and General Conditions**

**NWP 32 (Completed Enforcement Actions)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 33 (Temporary Construction, Access and Dewatering)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 36 (Boat Ramps)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP 37 (Emergency Watershed Protection and Rehabilitation)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 38 (Cleanup of Hazardous and Toxic Waste)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 39 (Commercial and Institutional Developments)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 40 (Agricultural Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 41 (Reshaping Existing Drainage Ditches and Irrigation Ditches)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP 42 (Recreational Facilities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 43 (Stormwater Management Facilities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 44 (Mining Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.



**Attachment 1**  
**Conditions of Section 401 Certification for Nationwide Permits, Regional Conditions, and General Conditions**

**NWP 45 (Repair of Uplands Damaged by Discrete Events)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP 46 (Discharges in Ditches)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 49 (Coal Remining Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP 50 (Underground Coal Mining Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 51 (Land-Based Renewal Energy Generation Facilities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 52 (Water-Based Renewal Energy Generation Pilot Projects)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required. Stream bed losses are limited to 1,500 linear feet.

**NWP 53 (Removal of Low-Head Dams)**

Soil Erosion and Sediment Controls under General Condition 12 are required.

**NWP 54 (Living Shorelines)**

Sediment Controls under General Condition 12 are required.

**NWP C (Electric Utility Line and Telecommunications Activities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP D (Utility Line Activities for Water and Other Substances)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

**NWP E (Water Reclamation and Reuse Facilities)**

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.



**Attachment 2**  
**401 Water Quality Certification Best Management Practices (BMPs) for**  
**Nationwide Permits**

**I. Erosion Control**

Disturbed areas must be stabilized to prevent the introduction of sediment to adjacent wetlands or water bodies during wet weather conditions (erosion). *At least one* of the following best management practices (BMPs) must be maintained and remain in place until the area has been stabilized for NWP 3, 6, 7, 12, 13, 14, 15, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, C, D, and E. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features.

- |                           |                      |
|---------------------------|----------------------|
| ◇ Temporary Vegetation    | ◇ Blankets/Matting   |
| ◇ Mulch                   | ◇ Sod                |
| ◇ Interceptor Swale       | ◇ Diversion Dike     |
| ◇ Erosion Control Compost | ◇ Mulch Filter Socks |
| ◇ Compost Filter Socks    |                      |

**II. Sedimentation Control**

Prior to project initiation, the project area must be isolated from adjacent wetlands and water bodies by the use of BMPs to confine sediment. Dredged material shall be placed in such a manner that prevents sediment runoff into water in the state, including wetlands. Water bodies can be isolated by the use of one or more of the required BMPs identified for sedimentation control. These BMP's must be maintained and remain in place until the dredged material is stabilized. *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWP 3, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, 54, C, D, and E. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features.

- |                               |                      |
|-------------------------------|----------------------|
| ◇ Sand Bag Berm               | ◇ Rock Berm          |
| ◇ Silt Fence                  | ◇ Hay Bale Dike      |
| ◇ Triangular Filter Dike      | ◇ Brush Berms        |
| ◇ Stone Outlet Sediment Traps | ◇ Sediment Basins    |
| ◇ Erosion Control Compost     | ◇ Mulch Filter Socks |
| ◇ Compost Filter Socks        |                      |



**Attachment 2**  
**401 Water Quality Certification Best Management Practices (BMPs) for**  
**Nationwide Permits**

**III. Post-Construction TSS Control**

After construction has been completed and the site is stabilized, total suspended solids (TSS) loadings shall be controlled by *at least one* of the following BMPs for NWP 12, 14, 17, 18, 21, 29, 31, 36, 39, 40, 41, 42, 44, 45, 49, 50, 51, 52, C, D, and E. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features. Runoff from bridge decks has been exempted from the requirement for post construction TSS controls.

- ◇ Retention/Irrigation Systems
- ◇ Extended Detention Basin
- ◇ Vegetative Filter Strips
- ◇ Grassy Swales
- ◇ Erosion Control Compost
- ◇ Compost Filter Socks
- ◇ Constructed Wetlands
- ◇ Wet Basins
- ◇ Vegetation lined drainage ditches
- ◇ Sand Filter Systems
- ◇ Mulch Filter Socks
- ◇ Sedimentation Chambers\*

\* Only to be used when there is no space available for other approved BMPs.





**Attachment 3**  
**Reference to Nationwide Permits Best Management Practices Requirements**

NWP	Permit Description	Erosion Control	Sediment Control	Post-Construction TSS
1	Aid to Navigation			
2	Structures in Artificial Canals			
3	Maintenance	X	X	
4	Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities			
5	Scientific Measurement Devices			
6	Survey Activities *Trenching	X	X	
7	Outfall Structures and Associated Intake Structures	X	X	
8	Oil and Gas Structures on the Outer Continental Shelf			
9	Structures in Fleeting and Anchorage Areas			
10	Mooring Buoys			
11	Temporary Recreational Structures			
12	Oil or Natural Gas Pipeline Activities	X	X	X
13	Bank Stabilization	X	X	
14	Linear Transportation Projects	X	X	X
15	U.S. Coast Guard Approved Bridges	X	X	
16	Return Water From Upland Contained Disposal Areas			
17	Hydropower Projects	X	X	X
18	Minor Discharges	X	X	X
19	Minor Dredging	X	X	
20	Response Operations for Oil or Hazardous Substances			
21	Surface Coal Mining Activities	X	X	X
22	Removal of Vessels	X	X	



**Attachment 3**  
**Reference to Nationwide Permits Best Management Practices Requirements**

NWP	Permit Description	Erosion Control	Sediment Control	Post-Construction TSS
23	Approved Categorical Exclusions			
24	Indian Tribe or State Administered Section 404 Programs			
25	Structural Discharges	X	X	
26	[Reserved]			
27	Aquatic Habitat Restoration, Establishment, and Enhancement Activities	X	X	
28	Modifications of Existing Marinas			
29	Residential Developments	X	X	X
30	Moist Soil Management for Wildlife	X	X	
31	Maintenance of Existing Flood Control Facilities	X	X	X
32	Completed Enforcement Actions	X	X	
33	Temporary Construction, Access and Dewatering	X	X	
34	Cranberry Production Activities			
35	Maintenance Dredging of Existing Basins			
36	Boat Ramps	X	X	X
37	Emergency Watershed Protection and Rehabilitation	X	X	
38	Cleanup of Hazardous and Toxic Waste	X	X	
39	Commercial and Institutional Developments	X	X	X
40	Agricultural Activities	X	X	X
41	Reshaping Existing Drainage Ditches and Irrigation Ditches	X	X	X
42	Recreational Facilities	X	X	X
43	Stormwater Management Facilities	X	X	



**Attachment 3**  
**Reference to Nationwide Permits Best Management Practices Requirements**

NWP	Permit Description	Erosion Control	Sediment Control	Post-Construction TSS
44	Mining Activities	X	X	X
45	Repair of Uplands Damaged by Discrete Events	X	X	X
46	Discharges in Ditches	X	X	
47	[Reserved]			
48	Existing Commercial Shellfish Aquaculture Activities			
49	Coal Remining Activities	X	X	X
50	Underground Coal Mining Activities	X	X	X
51	Land-Based Renewable Energy Generation Facilities	X	X	X
52	Water-Based Renewable Energy Generation Pilot Projects	X	X	X
53	Removal of Low-Head Dams	X	X	
54	Living Shorelines		X	
C	Electric Utility Line and Telecommunications Activities	X	X	X
D	Utility Line Activities for Water and Other Substances	X	X	X
E	Water Reclamation and Reuse Facilities	X	X	X



**Attachment 4**  
**Description of Best Management Practices (BMPs)**

**EROSION CONTROL BMPs**

**Temporary Vegetation**

**Description:** Vegetation can be used as a temporary or permanent stabilization technique for areas disturbed by construction. Vegetation effectively reduces erosion in swales, stockpiles, berms, mild to medium slopes, and along roadways. Other techniques such as matting, mulches, and grading may be required to assist in the establishment of vegetation.

**Materials:**

- The type of temporary vegetation used on a site is a function of the season and the availability of water for irrigation.
- Temporary vegetation should be selected appropriately for the area.
- County agricultural extension agents are a good source for suggestions for temporary vegetation.
- All seed should be high quality, U.S. Dept. of Agriculture certified seed.

**Installation:**

- Grading must be completed prior to seeding.
- Slopes should be minimized.
- Erosion control structures should be installed.
- Seedbeds should be well pulverized, loose, and uniform.
- Fertilizers should be applied at appropriate rates.
- Seeding rates should be applied as recommended by the county agricultural extension agent.
- The seed should be applied uniformly.
- Steep slopes should be covered with appropriate soil stabilization matting.

**Blankets and Matting**

**Description:** Blankets and matting material can be used as an aid to control erosion



## **Attachment 4** **Description of Best Management Practices (BMPs)**

on critical sites during the establishment period of protective vegetation. The most common uses are in channels, interceptor swales, diversion dikes, short, steep slopes, and on tidal or stream banks.

### **Materials:**

New types of blankets and matting materials are continuously being developed. The Texas Department of Transportation (TxDOT) has defined the critical performance factors for these types of products and has established minimum performance standards which must be met for any product seeking to be approved for use within any of TxDOT's construction or maintenance activities. The products that have been approved by TxDOT are also appropriate for general construction site stabilization. TxDOT maintains a web site at <https://www.txdot.gov/inside-txdot/division/maintenance/erosion-control.html> which is updated as new products are evaluated.

### **Installation:**

- Install in accordance with the manufacturer's recommendations.
- Proper anchoring of the material.
- Prepare a friable seed bed relatively free from clods and rocks and any foreign material.
- Fertilize and seed in accordance with seeding or other type of planting plan.
- Erosion stops should extend beyond the channel liner to full design cross-section of the channel.
- A uniform trench perpendicular to line of flow may be dug with a spade or a mechanical trencher.
- Erosion stops should be deep enough to penetrate solid material or below level of ruling in sandy soils.
- Erosion stop mats should be wide enough to allow turnover at bottom of trench for stapling, while maintaining the top edge flush with channel surface.

### **Mulch**

**Description:** Mulching is the process of applying a material to the exposed soil surface to protect it from erosive forces and to conserve soil moisture until plants can become



## **Attachment 4** **Description of Best Management Practices (BMPs)**

established. When seeding critical sites, sites with adverse soil conditions or seeding on other than optimum seeding dates, mulch material should be applied immediately after seeding. Seeding during optimum seeding dates and with favorable soils and site conditions will not need to be mulched.

### **Materials:**

- Mulch may be small grain straw which should be applied uniformly.
- On slopes 15 percent or greater, a binding chemical must be applied to the surface.
- Wood-fiber or paper-fiber mulch may be applied by hydroseeding.
- Mulch nettings may be used.
- Wood chips may be used where appropriate.

### **Installation:**

Mulch anchoring should be accomplished immediately after mulch placement. This may be done by one of the following methods: peg and twine, mulch netting, mulch anchoring tool, or liquid mulch binders.

### **Sod**

**Description:** Sod is appropriate for disturbed areas which require immediate vegetative covers, or where sodding is preferred to other means of grass establishment. Locations particularly suited to stabilization with sod are waterways carrying intermittent flow, areas around drop inlets or in grassed swales, and residential or commercial lawns where quick use or aesthetics are factors. Sod is composed of living plants and those plants must receive adequate care in order to provide vegetative stabilization on a disturbed area.

### **Materials:**

- Sod should be machine cut at a uniform soil thickness.
- Pieces of sod should be cut to the supplier's standard width and length.
- Torn or uneven pads are not acceptable.
- Sections of sod should be strong enough to support their own weight and retain their size and shape when suspended from a firm grasp.



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**Description of Best Management Practices (BMPs)**

- Sod should be harvested, delivered, and installed within a period of 36 hours.

**Installation:**

- Areas to be sodded should be brought to final grade.
- The surface should be cleared of all trash and debris.
- Fertilize according to soil tests.
- Fertilizer should be worked into the soil.
- Sod should not be cut or laid in excessively wet or dry weather.
- Sod should not be laid on soil surfaces that are frozen.
- During periods of high temperature, the soil should be lightly irrigated.
- The first row of sod should be laid in a straight line with subsequent rows placed parallel to and butting tightly against each other.
- Lateral joints should be staggered to promote more uniform growth and strength.
- Wherever erosion may be a problem, sod should be laid with staggered joints and secured.
- Sod should be installed with the length perpendicular to the slope (on the contour).
- Sod should be rolled or tamped.
- Sod should be irrigated to a sufficient depth.
- Watering should be performed as often as necessary to maintain soil moisture.
- The first mowing should not be attempted until the sod is firmly rooted.
- Not more than one third of the grass leaf should be removed at any one cutting.



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### **Interceptor Swale**

Interceptor swales are used to shorten the length of exposed slope by intercepting runoff, prevent off-site runoff from entering the disturbed area, and prevent sediment-laden runoff from leaving a disturbed site. They may have a v-shape or be trapezoidal with a flat bottom and side slopes of 3:1 or flatter. The outflow from a swale should be directed to a stabilized outlet or sediment trapping device. The swales should remain in place until the disturbed area is permanently stabilized.

#### **Materials:**

- Stabilization should consist of a layer of crushed stone three inches thick, riprap or high velocity erosion control mats.
- Stone stabilization should be used when grades exceed 2% or velocities exceed 6 feet per second.
- Stabilization should extend across the bottom of the swale and up both sides of the channel to a minimum height of three inches above the design water surface elevation based on a 2-year, 24-hour storm.

#### **Installation:**

- An interceptor swale should be installed across exposed slopes during construction and should intercept no more than 5 acres of runoff.
- All earth removed and not needed in construction should be disposed of in an approved spoils site so that it will not interfere with the functioning of the swale or contribute to siltation in other areas of the site.
- All trees, brush, stumps, obstructions and other material should be removed and disposed of so as not to interfere with the proper functioning of the swale.
- Swales should have a maximum depth of 1.5 feet with side slopes of 3:1 or flatter.
- Swales should have positive drainage for the entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. Stabilization should be crushed stone placed in a layer of at least 3 inches thick or may be high velocity erosion control matting. Check dams are also recommended to reduce velocities in the swales possibly reducing the amount of stabilization necessary.





## **Attachment 4** **Description of Best Management Practices (BMPs)**

- Minimum compaction for the swale should be 90% standard proctor density.

### **Diversion Dikes**

A temporary diversion dike is a barrier created by the placement of an earthen embankment to reroute the flow of runoff to an erosion control device or away from an open, easily erodible area. A diversion dike intercepts runoff from small upland areas and diverts it away from exposed slopes to a stabilized outlet, such as a rock berm, sandbag berm, or stone outlet structure. These controls can be used on the perimeter of the site to prevent runoff from entering the construction area. Dikes are generally used for the duration of construction to intercept and reroute runoff from disturbed areas to prevent excessive erosion until permanent drainage features are installed and/or slopes are stabilized.

### **Materials:**

- Stone stabilization (required for velocities in excess of 6 fps) should consist of riprap placed in a layer at least 3 inches thick and should extend a minimum height of 3 inches above the design water surface up the existing slope and the upstream face of the dike.
- Geotextile fabric should be a non-woven polypropylene fabric designed specifically for use as a soil filtration media with an approximate weight of 6 oz./yd<sup>2</sup>, a Mullen burst rating of 140 psi, and having an equivalent opening size (EOS) greater than a #50 sieve.

### **Installation:**

- Diversion dikes should be installed prior to and maintained for the duration of construction and should intercept no more than 10 acres of runoff.
- Dikes should have a minimum top width of 2 feet and a minimum height of compacted fill of 18 inches measured from the top of the existing ground at the upslope toe to top of the dike and have side slopes of 3:1 or flatter.
- The soil for the dike should be placed in lifts of 8 inches or less and be compacted to 95 % standard proctor density.
- The channel, which is formed by the dike, must have positive drainage for its entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. In situations where velocities do not exceed 6 feet per second, vegetation may be used to control erosion.



## **Attachment 4** **Description of Best Management Practices (BMPs)**

### **Erosion Control Compost**

**Description:** Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

#### **Materials:**

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at <https://www.txdot.gov/inside-txdot/division/support/recycling/speclist.html> that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332.

Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols



## **Attachment 4** **Description of Best Management Practices (BMPs)**

or test methods listed in TMECC. TMECC information can be found at <https://www.compostingcouncil.org/page/tmecc>.

The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at <https://www.compostingcouncil.org/page/SealofTestingAssuranceSTA>.

### **Installation:**

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2-inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

### **Mulch and Compost Filter Socks**

**Description:** Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

### **Materials:**

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at <https://www.txdot.gov/inside-txdot/division/support/recycling/speclist.html> that provides information on compost specification data.

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification



## **Attachment 4** **Description of Best Management Practices (BMPs)**

data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <https://www.compostingcouncil.org/page/tmecc>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at <https://www.compostingcouncil.org/page/SealofTestingAssuranceSTA>.

### **Installation:**

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.



**Attachment 4**  
**Description of Best Management Practices (BMPs)**

**SEDIMENT CONTROL BMPS**

**Sandbag Berm**

**Description:** The purpose of a sandbag berm is to detain sediment carried in runoff from disturbed areas. This objective is accomplished by intercepting runoff and causing it to pool behind the sandbag berm. Sediment carried in the runoff is deposited on the upstream side of the sandbag berm due to the reduced flow velocity. Excess runoff volumes are allowed to flow over the top of the sandbag berm. Sandbag berms are used only during construction activities in streambeds when the contributing drainage area is between 5 and 10 acres and the slope is less than 15%, i.e., utility construction in channels, temporary channel crossing for construction equipment, etc. Plastic facing should be installed on the upstream side and the berm should be anchored to the streambed by drilling into the rock and driving in T-posts or rebar (#5 or #6) spaced appropriately.

**Materials:**

- The sandbag material should be polypropylene, polyethylene, polyamide or cotton burlap woven fabric, minimum unit weight 4 oz/yd<sup>2</sup>, mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70 percent.
- The bag length should be 24 to 30 inches, width should be 16 to 18 inches and thickness should be 6 to 8 inches.
- Sandbags should be filled with coarse grade sand and free from deleterious material. All sand should pass through a No. 10 sieve. The filled bag should have an approximate weight of 40 pounds.
- Outlet pipe should be schedule 40 or stronger polyvinyl chloride (PVC) having a nominal internal diameter of 4 inches.

**Installation:**

- The berm should be a minimum height of 18 inches, measured from the top of the existing ground at the upslope toe to the top of the berm.
- The berm should be sized as shown in the plans but should have a minimum width of 48 inches measured at the bottom of the berm and 16 inches measured at the top of the berm.
- Runoff water should flow over the tops of the sandbags or through 4-inch diameter PVC pipes embedded below the top layer of bags.



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- When a sandbag is filled with material, the open end of the sandbag should be stapled or tied with nylon or poly cord.
- Sandbags should be stacked in at least three rows abutting each other, and in staggered arrangement.
- The base of the berm should have at least 3 sandbags. These can be reduced to 2 and 1 bag in the second and third rows respectively.
- For each additional 6 inches of height, an additional sandbag must be added to each row width.
- A bypass pump-around system, or similar alternative, should be used on conjunction with the berm for effective dewatering of the work area.

#### **Silt Fence**

**Description:** A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. When properly used, silt fences can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. If not properly installed, silt fences are not likely to be effective. The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow. Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

#### **Materials:**

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in<sup>2</sup>, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Y-bar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft<sup>2</sup>, and Brindell hardness exceeding 140.



#### **Attachment 4** **Description of Best Management Practices (BMPs)**

- Woven wire backing to support the fabric should be galvanized 2-inch x 4-inch welded wire, 12 gauge minimum.

#### **Installation:**

- Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1 foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.
- Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The fence should be sited so that the maximum drainage area is 3 acre/100 feet of fence.
- The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.

#### **Triangular Filter Dike**

**Description:** The purpose of a triangular sediment filter dike is to intercept and detain water-borne sediment from unprotected areas of limited extent. The triangular sediment filter dike is used where there is no concentration of water in a channel or other drainage way above the barrier and the contributing drainage area is less than one acre. If the uphill slope above the dike exceeds 10%, the length of the slope above the dike should be less than 50 feet. If concentrated flow occurs after installation, corrective action should be taken such as placing rock berm in the areas of concentrated flow. This measure is effective on paved areas where installation of silt fence is not possible or where vehicle access must be maintained. The advantage of these controls is the ease with which they can be moved to allow vehicle traffic and then reinstalled to maintain sediment.



## **Attachment 4** **Description of Best Management Practices (BMPs)**

### **Materials:**

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in<sup>2</sup>, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- The dike structure should be 6 gauge 6-in x 6-inch wire mesh folded into triangular form being eighteen (18) inches on each side.

### **Installation:**

- The frame of the triangular sediment filter dike should be constructed of 6-inch x 6-inch, 6-gauge welded wire mesh, 18 inches per side, and wrapped with geotextile fabric the same composition as that used for silt fences.
- Filter material should lap over ends six (6) inches to cover dike to dike junction; each junction should be secured by shoat rings.
- Position dike parallel to the contours, with the end of each section closely abutting the adjacent sections.
- There are several options for fastening the filter dike to the ground. The fabric skirt may be toed-in with 6 inches of compacted material, or 12 inches of the fabric skirt should extend uphill and be secured with a minimum of 3 inches of open graded rock, or with staples or nails. If these two options are not feasible the dike structure may be trenched in 4 inches.
- Triangular sediment filter dikes should be installed across exposed slopes during construction with ends of the dike tied into existing grades to prevent failure and should intercept no more than one acre of runoff.
- When moved to allow vehicular access, the dikes should be reinstalled as soon as possible, but always at the end of the workday.

### **Rock Berm**

**Description:** The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a





## **Attachment 4** **Description of Best Management Practices (BMPs)**

silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

### **Materials:**

- The berm structure should be secured with a woven wire sheathing having opening of one inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.
- Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

### **Installation:**

- Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20-gauge woven wire mesh with 1 inch openings.
- Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
- Place the rock along the sheathing to a height not less than 18 inches.
- Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, and the berm retains its shape when walked upon.
- Berm should be built along the contour at zero percent grade or as near as possible.
- The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

### **Hay Bale Dike**

**Description:** The purpose of a hay or straw bale dike is to intercept and detain small amounts of sediment-laden runoff from relatively small unprotected areas. Straw bales are to be used when it is not feasible to install other, more effective measures or when the construction phase is expected to last less than 3 months. Straw bales should not be used on areas where rock or other hard surfaces prevent the full and uniform anchoring of the barrier.



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### **Materials:**

**Straw:** The best quality straw mulch comes from wheat, oats or barley and should be free of weed and grass seed which may not be desired vegetation for the area to be protected. Straw mulch is light and therefore must be properly anchored to the ground.

**Hay:** This is very similar to straw with the exception that it is made of grasses and weeds and not grain stems. This form of mulch is very inexpensive and is widely available but does introduce weed and grass seed to the area. Like straw, hay is light and must be anchored.

- Straw bales should weigh a minimum of 50 pounds and should be at least 30 inches long.
- Bales should be composed entirely of vegetable matter and be free of seeds.
- Binding should be either wire or nylon string, jute or cotton binding is unacceptable. Bales should be used for not more than two months before being replaced.

### **Installation:**

- Bales should be embedded a minimum of 4 inches and securely anchored using 2-inch x 2-inch wood stakes or 3/8-inch diameter rebar driven through the bales into the ground a minimum of 6 inches.
- Bales are to be placed directly adjacent to one another leaving no gap between them.
- All bales should be placed on the contour.
- The first stake in each bale should be angled toward the previously laid bale to force the bales together.

### **Brush Berms**

Organic litter and spoil material from site clearing operations is usually burned or hauled away to be dumped elsewhere. Much of this material can be used effectively on the construction site itself. The key to constructing an efficient brush berm is in the method used to obtain and place the brush. It will not be acceptable to simply take a bulldozer and push whole trees into a pile. This method does not assure continuous ground contact with the berm and will allow uncontrolled flows under the berm.



## **Attachment 4** **Description of Best Management Practices (BMPs)**

Brush berms may be used where there is little or no concentration of water in a channel or other drainage way above the berm. The size of the drainage area should be no greater than one-fourth of an acre per 100 feet of barrier length; the maximum slope length behind the barrier should not exceed 100 feet; and the maximum slope gradient behind the barrier should be less than 50 percent (2:1).

### **Materials:**

- The brush should consist of woody brush and branches, preferably less than 2 inches in diameter.
- The filter fabric should conform to the specifications for filter fence fabric.
- The rope should be 1/4-inch polypropylene or nylon rope.
- The anchors should be 3/8-inch diameter rebar stakes that are 18-inches long.

### **Installation:**

- Lay out the brush berm following the contour as closely as possible.
- The juniper limbs should be cut and hand placed with the vegetated part of the limb in close contact with the ground. Each subsequent branch should overlap the previous branch providing a shingle effect.
- The brush berm should be constructed in lifts with each layer extending the entire length of the berm before the next layer is started.
- A trench should be excavated 6-inches wide and 4-inches deep along the length of the barrier and immediately uphill from the barrier.
- The filter fabric should be cut into lengths sufficient to lay across the barrier from its up-slope base to just beyond its peak. The lengths of filter fabric should be draped across the width of the barrier with the uphill edge placed in the trench and the edges of adjacent pieces overlapping each other. Where joints are necessary, the fabric should be spliced together with a minimum 6-inch overlap and securely sealed.
- The trench should be backfilled, and the soil compacted over the filter fabric.
- Set stakes into the ground along the downhill edge of the brush barrier and anchor the fabric by tying rope from the fabric to the stakes. Drive the rope anchors into the ground at approximately a 45-degree angle to the ground on 6-



## **Attachment 4** **Description of Best Management Practices (BMPs)**

foot centers.

- Fasten the rope to the anchors and tighten berm securely to the ground with a minimum tension of 50 pounds.
- The height of the brush berm should be a minimum of 24 inches after the securing ropes have been tightened.

### **Stone Outlet Sediment Traps**

A stone outlet sediment trap is an impoundment created by the placement of an earthen and stone embankment to prevent soil and sediment loss from a site. The purpose of a sediment trap is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment trap from sedimentation. A sediment trap is usually installed at points of discharge from disturbed areas. The drainage area for a sediment trap is recommended to be less than 5 acres.

Larger areas should be treated using a sediment basin. A sediment trap differs from a sediment basin mainly in the type of discharge structure. The trap should be located to obtain the maximum storage benefit from the terrain, for ease of clean out and disposal of the trapped sediment and to minimize interference with construction activities. The volume of the trap should be at least 3600 cubic feet per acre of drainage area.

### **Materials:**

- All aggregate should be at least 3 inches in diameter and should not exceed a volume of 0.5 cubic foot.
- The geotextile fabric specification should be woven polypropylene, polyethylene or polyamide geotextile, minimum unit weight of 4.5 oz/yd<sup>2</sup>, mullen burst strength at least 250 lb/in<sup>2</sup>, ultraviolet stability exceeding 70%, and equivalent opening size exceeding 40.

### **Installation:**

- **Earth Embankment:** Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95 percent standard proctor density. Do not place material on surfaces that are muddy or frozen. Side slopes for the embankment are to be 3:1. The minimum width of the embankment should be 3 feet.



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- A gap is to be left in the embankment in the location where the natural confluence of runoff crosses the embankment line. The gap is to have a width in feet equal to 6 times the drainage area in acres.
- Geotextile Covered Rock Core: A core of filter stone having a minimum height of 1.5 feet and a minimum width at the base of 3 feet should be placed across the opening of the earth embankment and should be covered by geotextile fabric which should extend a minimum distance of 2 feet in either direction from the base of the filter stone core.
- Filter Stone Embankment: Filter stone should be placed over the geotextile and is to have a side slope which matches that of the earth embankment of 3:1 and should cover the geotextile/rock core a minimum of 6 inches when installation is complete. The crest of the outlet should be at least 1 foot below the top of the embankment.

#### **Sediment Basins**

The purpose of a sediment basin is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment basin from sedimentation. A sediment basin is usually installed at points of discharge from disturbed areas. The drainage area for a sediment basin is recommended to be less than 100 acres.

Sediment basins are effective for capturing and slowly releasing the runoff from larger disturbed areas thereby allowing sedimentation to take place. A sediment basin can be created where a permanent pond BMP is being constructed. Guidelines for construction of the permanent BMP should be followed, but revegetation, placement of underdrain piping, and installation of sand or other filter media should not be carried out until the site construction phase is complete.

#### **Materials:**

- Riser should be corrugated metal or reinforced concrete pipe or box and should have watertight fittings or end to end connections of sections.
- An outlet pipe of corrugated metal or reinforced concrete should be attached to the riser and should have positive flow to a stabilized outlet on the downstream side of the embankment.
- An anti-vortex device and rubbish screen should be attached to the top of the riser and should be made of polyvinyl chloride or corrugated metal.



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### **Basin Design and Construction:**

- For common drainage locations that serve an area with ten or more acres disturbed at one time, a sediment basin should provide storage for a volume of runoff from a two-year, 24-hour storm from each disturbed acre drained.
- The basin length to width ratio should be at least 2:1 to improve trapping efficiency. The shape may be attained by excavation or the use of baffles. The lengths should be measured at the elevation of the riser de-watering hole.
- Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95 percent standard proctor density. Do not place material on surfaces that are muddy or frozen. Side slopes for the embankment should be 3:1 (H:V).
- An emergency spillway should be installed adjacent to the embankment on undisturbed soil and should be sized to carry the full amount of flow generated by a 10-year, 3-hour storm with 1 foot of freeboard less the amount which can be carried by the principal outlet control device.
- The emergency spillway should be lined with riprap as should the swale leading from the spillway to the normal watercourse at the base of the embankment.
- The principal outlet control device should consist of a rigid vertically oriented pipe or box of corrugated metal or reinforced concrete. Attached to this structure should be a horizontal pipe, which should extend through the embankment to the toe of fill to provide a de-watering outlet for the basin.
- An anti-vortex device should be attached to the inlet portion of the principal outlet control device to serve as a rubbish screen.
- A concrete base should be used to anchor the principal outlet control device and should be sized to provide a safety factor of 1.5 (downward forces = 1.5 buoyant forces).
- The basin should include a permanent stake to indicate the sediment level in the pool and marked to indicate when the sediment occupies 50% of the basin volume (not the top of the stake).
- The top of the riser pipe should remain open and be guarded with a trash rack and anti-vortex device. The top of the riser should be 12 inches below the elevation of the emergency spillway. The riser should be sized to convey the runoff from the 2-year, 3-hour storm when the water surface is at the



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emergency spillway elevation. For basins with no spillway the riser must be sized to convey the runoff from the 10-yr, 3-hour storm.

- Anti-seep collars should be included when soil conditions or length of service make piping through the backfill a possibility.
- The 48-hour drawdown time will be achieved by using a riser pipe perforated at the point measured from the bottom of the riser pipe equal to 1/2 the volume of the basin. This is the maximum sediment storage elevation. The size of the perforation may be calculated as follows:

$$A_o = \frac{A_s \times \sqrt{2h}}{C_d \times 980,000}$$

Where:

$A_o$  = Area of the de-watering hole, ft<sup>2</sup>

$A_s$  = Surface area of the basin, ft<sup>2</sup>

$C_d$  = Coefficient of contraction, approximately 0.6

$h$  = head of water above the hole, ft

Perforating the riser with multiple holes with a combined surface area equal to  $A_o$  is acceptable.

### **Erosion Control Compost**

**Description:** Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

#### **Materials:**

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at <https://www.txdot.gov/inside-txdot/division/support/recycling/speclist.html> that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection



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Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <https://www.compostingcouncil.org/page/tmecc>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at <https://www.compostingcouncil.org/page/SealofTestingAssuranceSTA>.

### **Installation:**

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2-inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

### **Mulch and Compost Filter Socks**

**Description:** Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the





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perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

#### **Materials:**

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at <https://www.txdot.gov/inside-txdot/division/support/recycling/speclist.html> that provides information on compost specification data.

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC.



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### **Installation:**

Install in accordance with TxDOT Special Specification 5049.

- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.).
- Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.



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### **POST-CONSTRUCTION TSS CONTROLS**

#### **Retention/Irrigation Systems**

**Description:** Retention/irrigation systems refer to the capture of runoff in a holding pond, then use of the captured water for irrigation of appropriate landscape areas. Retention/irrigation systems are characterized by the capture and disposal of runoff without direct release of captured flow to receiving streams. Retention systems exhibit excellent pollutant removal but can require regular, proper maintenance. Collection of roof runoff for subsequent use (rainwater harvesting) also qualifies as a retention/irrigation practice but should be operated and sized to provide adequate volume. This technology, which emphasizes beneficial use of stormwater runoff, is particularly appropriate for arid regions because of increasing demands on water supplies for agricultural irrigation and urban water supply.

**Design Considerations:** Retention/irrigation practices achieve 100% removal efficiency of total suspended solids contained within the volume of water captured. Design elements of retention/irrigation systems include runoff storage facility configuration and sizing, pump and wet well system components, basin lining, basin detention time, and physical and operational components of the irrigation system. Retention/irrigation systems are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

**Maintenance Requirements:** Maintenance requirements for retention/irrigation systems include routine inspections, sediment removal, mowing, debris and litter removal, erosion control, and nuisance control.

#### **Extended Detention Basin**

**Description:** Extended detention facilities are basins that temporarily store a portion of stormwater runoff following a storm event. Extended detention basins are normally used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. The water quality benefits are the removal of sediment and buoyant materials. Furthermore, nutrients, heavy metals, toxic materials, and oxygen-demanding materials associated with the particles also are removed. The control of the maximum runoff rates serves to protect drainage channels below the device from erosion and to reduce downstream flooding. Although detention facilities designed for flood control have different design requirements than those used for water quality enhancement, it is possible to achieve these two objectives in a single facility.

**Design Considerations:** Extended detention basins can remove approximately 75% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of extended detention basins include basin sizing, basin



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configuration, basin side slopes, basin lining, inlet/outlet structures, and erosion controls. Extended detention basins are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

**Maintenance Requirements:** Maintenance requirements for extended detention basins include routine inspections, mowing, debris and litter removal, erosion control, structural repairs, nuisance control, and sediment removal.

### **Vegetative Filter Strips**

**Description:** Filter strips, also known as vegetated buffer strips, are vegetated sections of land similar to grassy swales except they are essentially flat with low slopes and are designed only to accept runoff as overland sheet flow. They may appear in any vegetated form from grassland to forest, and are designed to intercept upstream flow, lower flow velocity, and spread water out as sheet flow. The dense vegetative cover facilitates conventional pollutant removal through detention, filtration by vegetation, and infiltration.

Filter strips cannot treat high velocity flows, and do not provide enough storage or infiltration to effectively reduce peak discharges to predevelopment levels for design storms. This lack of quantity control favors use in rural or low-density development; however, they can provide water quality benefits even where the impervious cover is as high as 50%. The primary highway application for vegetative filter strips is along rural roadways where runoff that would otherwise discharge directly to a receiving water passes through the filter strip before entering a conveyance system. Properly designed roadway medians and shoulders make effective buffer strips. These devices also can be used on other types of development where land is available and hydraulic conditions are appropriate.

Flat slopes and low to fair permeability of natural subsoil are required for effective performance of filter strips. Although an inexpensive control measure, they are most useful in contributing watershed areas where peak runoff velocities are low as they are unable to treat the high flow velocities typically associated with high impervious cover.

Successful performance of filter strips relies heavily on maintaining shallow unconcentrated flow. To avoid flow channelization and maintain performance, a filter strip should:

- Be equipped with a level spreading device for even distribution of runoff
- Contain dense vegetation with a mix of erosion resistant, soil binding species
- Be graded to a uniform, even and relatively low slope



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- Laterally traverse the contributing runoff area

Filter strips can be used upgradient from watercourses, wetlands, or other water bodies along toes and tops of slopes and at outlets of other stormwater management structures. They should be incorporated into street drainage and master drainage planning. The most important criteria for selection and use of this BMP are soils, space, and slope.

**Design Considerations:** Vegetative filter strips can remove approximately 85% of the total suspended solids contained within the volume of runoff captured. Design elements of vegetative filter strips include uniform, shallow overland flow across the entire filter strip area, hydraulic loading rate, inlet structures, slope, and vegetative cover. The area should be free of gullies or rills which can concentrate flow. Vegetative filter strips are appropriate for small drainage areas with moderate slopes. Other design elements include the following:

- Soils and moisture are adequate to grow relatively dense vegetative stands
- Sufficient space is available
- Slope is less than 12%
- Comparable performance to more expensive structural controls

**Maintenance Requirements:** Maintenance requirements for vegetative filter strips include pest management, seasonal mowing and lawn care, routine inspections, debris and litter removal, sediment removal, and grass reseeding and mulching.

### **Constructed Wetlands**

**Description:** Constructed wetlands provide physical, chemical, and biological water quality treatment of stormwater runoff. Physical treatment occurs as a result of decreasing flow velocities in the wetland, and is present in the form of evaporation, sedimentation, adsorption, and/or filtration. Chemical processes include chelation, precipitation, and chemical adsorption. Biological processes include decomposition, plant uptake and removal of nutrients, plus biological transformation and degradation. Hydrology is one of the most influential factors in pollutant removal due to its effects on sedimentation, aeration, biological transformation, and adsorption onto bottom sediments.

The wetland should be designed such that a minimum amount of maintenance is required. The natural surroundings, including such things as the potential energy of a stream or flooding river, should be utilized as much as possible. The wetland should approximate a natural situation and unnatural attributes, such as rectangular shape or



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rigid channel, should be avoided.

Site considerations should include the water table depth, soil/substrate, and space requirements. Because the wetland must have a source of flow, it is desirable that the water table is at or near the surface. If runoff is the only source of inflow for the wetland, the water level often fluctuates, and establishment of vegetation may be difficult. The soil or substrate of an artificial wetland should be loose loam to clay. A perennial baseflow must be present to sustain the artificial wetland. The presence of organic material is often helpful in increasing pollutant removal and retention. A greater amount of space is required for a wetland system than is required for a detention facility treating the same amount of area.

**Design Considerations:** Constructed wetlands can remove over 90% of the total suspended solids contained within the volume of runoff captured in the wetland. Design elements of constructed wetlands include wetland sizing, wetland configuration, sediment forebay, vegetation, outflow structure, depth of inundation during storm events, depth of micro pools, and aeration. Constructed wetlands are appropriate for large drainage areas with low to moderate slopes.

**Maintenance Requirements:** Maintenance requirements for constructed wetlands include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, harvesting, and maintenance of water levels.

### **Wet Basins**

**Description:** Wet basins are runoff control facilities that maintain a permanent wet pool and a standing crop of emergent littoral vegetation. These facilities may vary in appearance from natural ponds to enlarged, bermed (manmade) sections of drainage systems and may function as online or offline facilities, although offline configuration is preferable. Offline designs can prevent scour and other damage to the wet pond and minimize costly outflow structure elements needed to accommodate extreme runoff events.

During storm events, runoff inflows displace part or all of the existing basin volume and are retained and treated in the facility until the next storm event. The pollutant removal mechanisms are settling of solids, wetland plant uptake, and microbial degradation. When the wet basin is adequately sized, pollutant removal performance can be excellent, especially for the dissolved fraction. Wet basins also help provide erosion protection for the receiving channel by limiting peak flows during larger storm events. Wet basins are often perceived as a positive aesthetic element in a community and offer significant opportunity for creative pond configuration and landscape design. Participation of an experienced wetland designer is suggested. A significant potential drawback for wet ponds in arid climates is that the contributing watershed for these facilities is often incapable of providing an adequate water supply to



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maintain the permanent pool, especially during the summer months. Makeup water (i.e., well water or municipal drinking water) is sometimes used to supplement the rainfall/runoff process, especially for wet basin facilities treating watersheds that generate insufficient runoff.

**Design Considerations:** Wet basins can remove over 90% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of wet basins include basin sizing, basin configuration, basin side slopes, sediment forebay, inflow and outflow structures, vegetation, depth of permanent pool, aeration, and erosion control. Wet basins are appropriate for large drainage areas with low to moderate slopes.

**Maintenance Requirements:** Maintenance requirements for wet basins include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, and harvesting.

### **Grassy Swales**

**Descriptor:** Grassy swales are vegetated channels that convey stormwater and remove pollutants by filtration through grass and infiltration through soil. They require shallow slopes and soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the swale and improve pollutant removal rates.

Grassy swales are primarily stormwater conveyance systems. They can provide sufficient control under light to moderate runoff conditions, but their ability to control large storms is limited. Therefore, they are most applicable in low to moderate sloped areas or along highway medians as an alternative to ditches and curb and gutter drainage. Their performance diminishes sharply in highly urbanized settings, and they are generally not effective enough to receive construction stage runoff where high sediment loads can overwhelm the system. Grassy swales can be used as a pretreatment measure for other downstream BMPs, such as extended detention basins. Enhanced grassy swales utilize check dams and wide depressions to increase runoff storage and promote greater settling of pollutants.

Grassy swales can be more aesthetically pleasing than concrete or rock-lined drainage systems and are generally less expensive to construct and maintain. Swales can slightly reduce impervious area and reduce the pollutant accumulation and delivery associated with curbs and gutters. The disadvantages of this technique include the possibility of erosion and channelization over time, and the need for more right-of-way as compared to a storm drain system. When properly constructed, inspected, and maintained, the life expectancy of a swale is estimated to be 20 years.



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### **Design Considerations:**

- Comparable performance to wet basins
- Limited to treating a few acres
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

The suitability of a swale at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the swale system. In general, swales can be used to serve areas of less than 10 acres, with slopes no greater than 5 %. The seasonal high water table should be at least 4 feet below the surface. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use.

### **Maintenance Requirements:**

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods but may be necessary only to prevent the vegetation from dying.

### **Vegetation Lined Drainage Ditches**

**Description:** Vegetation lined drainage ditches are similar to grassy swales. These drainage ditches are vegetated channels that convey storm water and remove pollutants by filtration through grass and infiltration through soil. They require soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the ditch and improve pollutant removal rates. Vegetation lined drainage ditches are primarily storm water conveyance systems. They have vegetation lined in the low flow channel and may include vegetated shelves.

Vegetation in drainage ditches reduces erosion and removes pollutants by lowering water velocity over the soil surface, binding soil particles with roots, and by filtration through grass and infiltration through soil. Vegetation lined drainage ditches can be used where:

- A vegetative lining can provide sufficient stability for the channel grade by increasing maximum permissible velocity
- Slopes are generally less than 5%, with protection from sheer stress as needed through the use of BMPs, such as erosion control blankets





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- Site conditions required to establish vegetation, i.e. climate, soils, topography, are present

**Design Criteria:** The suitability of a vegetation lined drainage ditch at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the ditch system. The hydraulic capacity of the drainage ditch and other elements such as erosion, siltation, and pollutant removal capability, must be taken into consideration. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use. Other items to consider include the following:

- Capacity, cross-section shape, side slopes, and grade
- Select appropriate native vegetation
- Construct in stable, low areas to conform with the natural drainage system. To reduce erosion potential, design the channel to avoid sharp bends and steep grades.
- Design and build drainage ditches with appropriate scour and erosion protection. Surface water should be able to enter over the vegetated banks without erosion occurring.
- BMPs, such as erosion control blankets, may need to be installed at the time of seeding to provide stability until the vegetation is fully established. It may also be necessary to divert water from the channel until vegetation is established or to line the channel with sod.
- Vegetated ditches must not be subject to sedimentation from disturbed areas.
- Sediment traps may be needed at channel inlets to prevent entry of muddy runoff and channel sedimentation.
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

#### **Maintenance:**

During establishment, vegetation lined drainage ditches should be inspected, repaired, and vegetation reestablished if necessary. After the vegetation has become established, the ditch should be checked periodically to determine if the channel is



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withstanding flow velocities without damage. Check the ditch for debris, scour, or erosion and immediately make repairs if needed. Check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes and make repairs immediately. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the vegetation in a healthy condition at all times, since it is the primary erosion protection for the channel. Vegetation lined drainage ditches should be seasonally maintained by mowing or irrigating, depending on the vegetation selected. The long-term management of ditches as stable, vegetated, “natural” drainage systems with native vegetation buffers is highly recommended due to the inherent stability offered by grasses, shrubs, trees, and other vegetation.

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods but may be necessary only to prevent the vegetation from dying.

### **Sand Filter Systems**

**Description:** The objective of sand filters is to remove sediment and the pollutants from the first flush of pavement and impervious area runoff. The filtration of nutrients, organics, and coliform bacteria is enhanced by a mat of bacterial slime that develops during normal operations. One of the main advantages of sand filters is their adaptability; they can be used on areas with thin soils, high evaporation rates, low-soil infiltration rates, in limited-space areas, and where groundwater is to be protected.

Since their original inception in Austin, Texas, hundreds of intermittent sand filters have been implemented to treat stormwater runoff. There have been numerous alterations or variations in the original design as engineers in other jurisdictions have improved and adapted the technology to meet their specific requirements. Major types include the Austin Sand Filter, the District of Columbia Underground Sand Filter, the Alexandria Dry Vault Sand Filter, the Delaware Sand Filter, and peat-sand filters which are adapted to provide a sorption layer and vegetative cover to various sand filter designs.

### **Design Considerations:**

- Appropriate for space-limited areas
- Applicable in arid climates where wet basins and constructed wetlands are not appropriate
- High TSS removal efficiency



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### **Cost Considerations:**

Filtration Systems may require less land than some other BMPs, reducing the land acquisition cost; however the structure itself is one of the more expensive BMPs. In addition, maintenance cost can be substantial.

### **Erosion Control Compost**

**Description:** Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

### **Materials:**

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at <https://www.txdot.gov/inside-txdot/division/support/recycling/speclist.html> that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections '332.71 Sampling and Analysis Requirements for Final Products and '332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and



## **Attachment 4** **Description of Best Management Practices (BMPs)**

to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <https://www.compostingcouncil.org/page/tmecc>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at <https://www.compostingcouncil.org/page/SealofTestingAssuranceSTA>.

### **Installation:**

Install in accordance with current TxDOT specification.

- Use on slopes 3:1 or flatter.
- Apply a 2-inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

### **Mulch and Compost Filter Socks**

**Description:** Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

### **Materials:**

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at



#### **Attachment 4** **Description of Best Management Practices (BMPs)**

<https://www.txdot.gov/inside-txdot/division/support/recycling/speclist.html> that provides information on compost specification data.

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections '332.71 Sampling and Analysis Requirements for Final Products and '332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product=s specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <https://www.compostingcouncil.org/page/tmecc>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at <https://www.compostingcouncil.org/page/SealofTestingAssuranceSTA>.

#### **Installation:**

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.



#### **Attachment 4** **Description of Best Management Practices (BMPs)**

- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

#### **Sedimentation Chambers (only to be used when there is no space available for other approved BMP's)**

**Description:** Sedimentation chambers are stormwater treatment structures that can be used when space is limited such as urban settings. These structures are often tied into stormwater drainage systems for treatment of stormwater prior to entering state waters. The water quality benefits are the removal of sediment and buoyant materials. These structures are not designed as a catch basin or detention basin and not typically used for floodwater attenuation.

**Design Considerations:** Average rainfall and surface area should be considered when following manufacturer's recommendations for chamber sizing and/or number of units needed to achieve effective TSS removal. If properly sized, 50-80% removal of TSS can be expected.

**Maintenance Requirements:** Maintenance requirements include routine inspections, sediment, debris and litter removal, erosion control and nuisance control.



# RAILROAD COMMISSION OF TEXAS

## OIL AND GAS DIVISION

December 18, 2020

Colonel Timothy R. Vail  
Galveston District  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, Texas 77553-1229

Re: 2020 USACE Nationwide Permits Reissuance  
NPWs 2, 3, 6, 7, 8, 12, 14, 16, 18, 19, 20, 25, 38, 43, 46, D and E

Dear Colonel Vail:

This letter is in response to your letter dated October 19, 2020, requesting Clean Water Act Section 401 certification of the United States Army Corps of Engineers (USACE) Nationwide Permits (NWP), notification of which was published in the September 15, 2020, issue of the Federal Register (85 FR 57298). Regional conditions for NWPs in Texas were proposed in public notices on September 30, 2020 and October 1, 2020.

Texas Natural Resources Code, §91.101, and Texas Water Code, §26.131, grant the RRC jurisdiction for water quality certifications for federal permits covering activities associated with the exploration, development, and production, including pipeline transportation, of oil, gas or geothermal resources that may result in discharges to waters of the United States. No person may conduct any activity subject to RRC jurisdiction pursuant to a USACE permit if that activity may result in a discharge into to waters of the United States within the boundaries of the State of Texas, unless the RRC has first issued a certification or waiver of certification under 16 Texas Administrative Code §3.93 (Rule 93). Although the RRC is responsible for water quality certification of activities under the jurisdiction of the RRC, the Texas Commission on Environmental Quality (TCEQ) establishes the Texas Water Quality Standards. This certification is limited to those activities under the jurisdiction of the RRC. For all other activities, the TCEQ will issue the certification as provided in Texas Water Code §26.131.

This office has reviewed the following proposed NWPs: 2 (Structures in Artificial Canals), 3 (Maintenance), 6 (Survey Activities), 7 (Outfall Structures and Associated Intake Structures), 8 (Oil and Gas Structures on the Outer Continental Shelf), 12 (Utility Line Activities), 14 (Linear Transportation Projects), 16 (Return Water From Upland Contained Disposal Areas), 18 (Minor Discharges), 19 (Minor Dredging), 20 (Oil Spill Cleanup), 25 (Structural Discharges), 38 (Cleanup of Hazardous and Toxic Waste), 43 (Stormwater Management Facilities), 46

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(Discharges in Ditches), D (Utility Line Activities for Water and Other Substances), and E (Water Reclamation and Reuse Facilities).

Based on our evaluation of the information contained in these documents, the RRC certifies that the activities authorized by NWPs 2, 8, 20, and E should not result in a violation of Texas Surface Water Quality Standards as required by Section 401 of the Federal Clean Water Act and pursuant to 16 Texas Administrative Code (TAC) §3.93.

The RRC conditionally certifies that the activities authorized by NWPs 3, 6, 7, 12, 14, 16, 18, 19, 25, 38, 43, 46, and D should not result in a violation of Texas Surface Water Quality Standards as required by Section 401 of the Federal Clean Water Act and pursuant to 16 TAC §3.93. Conditions for each NWP are defined in Attachment 1, in accordance with Texas Water Code, §26.003 and 30 TAC §307.5(a), which establish the antidegradation policy. The antidegradation policy and implementation procedures apply to actions regulated under state and federal authority that would increase pollution of the water in the state, including federal permits relating to the discharge of fill or dredged material under Federal Clean Water Act, §404.

Conditions for NWPs 6, 7, 12, 14, 16, 18, 19, 25, 38, 43, 46, and D: Certification of these NWPs is conditioned on inclusion of a prohibition on the use of these NWPs in coastal dune swales, mangrove marshes, and Columbia bottomlands in the Galveston District. Impacts to rare and ecologically significant coastal dune swales, mangrove marshes, and Columbia bottomlands, would not be considered minimal. Wetland water quality functions as defined in the Texas Surface Water Quality Standards (30 TAC §307) are attributes of wetlands that protect and maintain the quality of water in the state, which include stormwater storage and retention and the moderation of extreme water level fluctuations; shoreline protection against erosion through the dissipation of wave energy and water velocity, and anchoring of sediments; habitat for aquatic life; and removal, transformation, and retention of nutrients and toxic substances. No discharge can be certified if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other more significant adverse environmental consequences.

Condition for NWP 12 and NWP D: Certification on NWP 12 and NWP D is conditioned on a prohibition on mechanized land clearing in forested wetlands. Wetland water quality functions as defined in the Texas Surface Water Quality Standards (30 TAC §307) are attributes of wetlands that protect and maintain the quality of water in the state, which include stormwater storage and retention and the moderation of extreme water level fluctuations; shoreline protection against erosion through the dissipation of wave energy and water velocity, and anchoring of sediments; habitat for aquatic life; and removal, transformation, and retention of nutrients and toxic substances. No discharge can be certified if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other more significant adverse environmental consequences.

Condition for NWP 16: Certification of NWP 16 is conditioned on inclusion of a limit of 300 mg/L total suspended solids (TSS) concentration on the return water from upland contained dredged material disposal areas. This limit is promulgated as an effluent limit under Title 40 of



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the Code of Federal Regulations. The requirement has also been included in individual 404 permits.

The RRC is conditionally certifying NWP General Condition #12 *Soil Erosion and Sediment Controls*, and General Condition #25 *Water Quality*. The conditions address three categories of water quality management with specific recommendations for Best Management Practices (BMPs) for each category intended to enhance the water quality protection. A list of recommended BMPs is included as Attachment 2. The BMPs identified in Attachment 2 are in accordance with the Texas Water Code, §26.003 and the antidegradation policy and implementation procedures in 30 TAC §307.5(a), which apply to actions regulated under state and federal authority that would increase pollution of the water in the state, including federal permits relating to the discharge of fill or dredged material under Federal Clean Water Act, §404.

Attachment 3 is provided as a reference for all NWPs. A detailed description of the BMPs is provided in Attachment 4. These BMPs should be included for the protection of waters in the state specific to each NWP as part of the regional conditions for Texas. The conditions identified in Attachment 3 and 4 are in accordance with the Texas Water Code, §26.003 and the antidegradation policy and implementation procedures in 30 TAC §307.5(a), which apply to actions regulated under state and federal authority that would increase pollution of the water in the state, including federal permits relating to the discharge of fill or dredged material under Federal Clean Water Act, §404.

USACE is proposing to remove the 300 linear foot limit for NWP 43 and quantify impacts to streams using a 1/2-acre limit. Removal of the 300 linear foot limit would also remove the waiver requirement for proposed impacts to streams greater than 300 linear feet. The RRC is concerned about the potential adverse impact to state aquatic resources of the proposed removal of the 300 linear foot limit on stream bed losses. Removing the stream loss limit would mean that stream losses associated with activities covered by this NWP would only be limited by the existing 1/2 - acre limit on overall impacts to waters of the U.S., which could significantly affect state stream resources by allowing upwards of several thousand linear feet of stream impacts under these permits, depending on the dimensions of the streams being impacted. The RRC conditionally certifies this NWP with a cap of 1,500 linear feet on the stream length impacted based on the amount of stream impacts considered minimal by the state. The greater than minimal loss of stream length would result in significant loss of aquatic habitat and degradation of water quality per the state's Antidegradation Policy (30 TAC §307.4(i)) for aquatic life uses and habitat, where vegetative and physical components of the aquatic environment must be maintained or mitigated to protect aquatic life uses.

Certification of General Condition 23 *Mitigation* is conditioned to require USACE to copy RRC on any written notification of a mitigation waiver so that RRC may fulfill its responsibility to ensure water of the state is appropriately protected by understanding the impact of waivers being granted in Texas.

By letter dated November 14, 2020, the Texas Parks and Wildlife Department (TPWC) provided substantive recommendations. TPWD commented that the proposal to replace the 300 linear

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foot limit with a half-acre limit would greatly increase the amount of stream subject to impact without PCN and the length of stream allowed to be impacted under a NWP. TPWD recommended that Regional Condition 10 be revised to include resource agency coordination for any proposed discharges into mangrove forests or coastal dune swales.

TPWD recommended new Regional Conditions for NWP 3, 6, and 12 include PCN for activities that include general conditions for aquatic life movement, shellfish beds, adverse effects from impoundments, endangered species, designated critical resource waters and notice of fish, shellfish, and other aquatic resource mortality events as it related to the general conditions. The General Conditions cover many of these concerns.

In addition, a new regional condition should prohibit use of NWP 12 for discharges into Critical Resource Water (CRW) (GEMS, State Coastal Preserves, Sanctuaries, state Scientific areas, and Ecologically Significant Stream Segments, and Texas protected Mussel Sanctuaries; as well as state designated areas for known mussel habitat and known occurrences of state-and/or federally-listed freshwater mussels species) and their adjacent wetlands. 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, Designated Critical Resource Waters, including wetlands adjacent to such waters (General Condition 22). PCN is required for NWPs 3 for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal (General Condition 22). N addition, USACE advised by letter dated December 11, 2020, that USACE may designate, after notice and opportunity for public comment, additional waters having particular environmental or ecological significance. Although the process for designating the requested areas as CRWs was initiated, it has not been completed.

The RRC reserves the right to modify this certification should it be determined that significant cumulative or secondary impacts are occurring as a result of the activities authorized by the USACE under these NPWs.

The RRC has reviewed this proposed action for consistency with the Texas Coastal Management Plan (TCMP) goals and policies, in accordance with the regulations of the TCMP, and has found that the proposed action will have direct and significant adverse effect on any coastal natural resource area identified in the applicable policies, but has determined that the proposed action is consistent with the applicable goals and policies of the TCMP. This consistency determination is conditioned on inclusion in the NWPs of the conditions discussed above, as well as the following conditions:

Under General Condition 18 (Endangered Species), no activity is authorized under any NWP which is 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 which will directly or indirectly destroy or adversely modify the critical habitat of such species. However, the General Condition does not include such a prohibition on activity that could jeopardize the continued existence of a threatened or

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endangered species or a species proposed for such designation, as identified by the State of Texas. USACE should coordinated with Texas Parks and Wildlife for all discharges, work, dredging activities, or dewatering activities proposed in non-tidal waters in which state and/or federal listed freshwater mussel species are known to occur and/or are within one of the 18 listed Texas protected mussel sanctuaries.

If you require further assistance, please contact me at 512-463-7308 or by email at [Leslie.savage@rrc.texas.gov](mailto:Leslie.savage@rrc.texas.gov).

Regards,

*Leslie Savage*

Leslie Savage, Chief Geologist  
Oil and Gas Division  
Railroad Commission of Texas

Ccs: (Via Electronic mail)  
Mr. Stephen Brooks, Branch Chief, U.S. Army Corp of Engineers, Regulatory Branch,  
Fort Worth  
Branch Chief, U.S. Army Corps of Engineers, Albuquerque District  
Regulatory Branch Chief, U.S. Army Corps of Engineers, Regulatory Branch, Tulsa  
Regulatory Branch Chief, U.S. Army Corps of Engineers, El Paso Regulatory Office  
Ms. Leslie Koza, Texas Parks and Wildlife  
Ms. Allison Buchtien, Texas General Land Office via e-mail

**Attachment 1**  
**Conditions of Section 401 Certification for Nationwide Permits and General Conditions**

General Condition 12 (Soil Erosion and Sediment Controls)

Erosion control and sediment control BMPs described in Attachment 2 are required with the use of this general condition. If the applicant does not choose one of the BMPs listed in Attachment 2, an individual 401 certification is required.

General Condition 25 (Water Quality)

Post-construction total suspended solids (TSS) BMPs described in Attachment 2 are required with the use of this general condition. If the applicant does not choose one of the BMP's listed in Attachment 2, an individual 401 certification is required.

General Condition 23 (Mitigation)

The USACE will copy the RRC on all mitigation waivers sent to applicants.

NWP 43

The USACE will copy the RRC on all written approvals of waivers for impacts to ephemeral, intermittent or perennial streams.

NWPs 2, 3, 6, 7, 8, 12, 14, 16, 18, 19, 20, 25, 38, 43, and 46

These NWPs are not authorized for use in coastal dune swales, mangrove marshes, and Columbia bottomlands in the Galveston District, Texas.

NWP 3 (Maintenance)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 6 (Survey Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 7 (Outfall Structures and Associated Intake Structures)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 12 (Utility Line Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Postconstruction TSS controls under General Condition 25 are required.

NWP 14 (Linear Transportation Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Postconstruction TSS controls under General Condition 25 are required.

NWP 16 (Return Water From Upland Contained Disposal Areas)

Effluent from an upland contained disposal area shall not exceed a TSS concentration of 300 mg/L unless a site-specific TSS limit, or a site specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus TSS has been approved by TCEQ.

NWP 18 (Minor Discharges)

Soil Erosion and Sediment Controls under General Condition 12 are required. Postconstruction TSS controls under General Condition 2 5 are required.

NWP 19 (Minor Dredging)

Soil Erosion: and Sediment Controls under General Condition 12 are required.

NWP 25 (Structural Discharges)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 38 (Cleanup of Hazardous and Toxic Waste)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 43 (Stormwater Management Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 46 (Discharges in Ditches)

Soil Erosion and Sediment Controls under General Condition 12 are required.

**Attachment 2**  
**401 Water Quality Certification Best Management Practices (BMPs) for Nationwide Permits**

**I. Erosion Control**

Disturbed areas must be stabilized to prevent the introduction of sediment to adjacent wetlands or water bodies during wet weather conditions (erosion). *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWP's 3, 6, 7, 12, 14, 18, 19, 25, 38, 43, and 46. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required.

- o Temporary Vegetation
- o Mulch
- o Interceptor Swale
- o Erosion Control Compost
- o Compost Filter Socks

**II. Sedimentation Control**

- o Blankets/Matting
- o Sod
- o Diversion Dike
- o Mulch Filter Socks

Prior to project initiation, the project area must be isolated from adjacent wetlands and water bodies by the use of BMPs to confine sediment. Dredged material shall be placed in such a manner that prevents sediment runoff into water in the state, including wetlands. Water bodies can be isolated by the use of one or more of the required BMPs identified for sedimentation control. These BMP's must be maintained and remain in place until the dredged material is stabilized. *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWP's 3, 6, 7, 12, 14, 18, 19, 25, 38, 43, and 46. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required.

- o Sand Bag Berm
- o Rock Berm
- o Silt Fence
- o Triangular Filter Dike
- o Stone Outlet Sediment Traps
- o Erosion Control Compost
- o Compost Filter Socks

**III. Post-Construction TSS Control**

- o Hay Bale Dike
- o Brush Berms
- o Sediment Basins
- o Mulch Filter Socks

After construction has been completed and the site is stabilized, total suspended solids (TSS) loadings shall be controlled by *at least one* of the following BMPs for NWPs 12, 14, and 18. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required.

- o Retention/Irrigation Systems
- o Constructed Wetlands
- o Extended Detention Basin
- o Wet Basins
- o Vegetative Filter Strips
- o Vegetation lined drainage ditches
- o Grassy Swales
- o Sand Filter Systems
- o Erosion Control Compost
- o Mulch Filter Socks
- o Compost Filter Socks
- o Sedimentation Chambers\*

\* Only to be used when there is no space available for other approved BMPs.

#### **IV. NWP 16: Return Water from Upland Contained Disposal Areas**

Effluent from an upland contained disposal area shall not exceed a TSS concentration of 300 mg/L unless a site-specific TSS limit, or a site specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus TSS has been approved by TCEQ.

#### **V. All NWPs except NWP 3**

These NWPs are not authorized for use in coastal dune swales, mangrove marshes, and Columbia bottomlands in the Galveston District, Texas.

**Attachment 3  
Reference to Nationwide Permits Best Management Practices Requirements**

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
2	Structures in Artificial Canals			
3	Maintenance	X	X	
6	Survey Activities Trenching	X	X	
7	Outfall Structures and Associated Intake Structures	X	X	
8	Oil and Gas Structures on the Outer Continental Shelf	X	X	
12	Utility Line Activities	X	X	X
14	Liner Transportation Projects	X	X	X
16	Return Water From Upland Contained Disposal Areas			
18	Minor Discharges	X	X	X
19	Minor Dredging	X	X	
20	Response Operations for Oil and Hazardous Substances			
25	Structural Discharges	X	X	
38	Cleanup o Hazardous and Toxic Waste	X	X	
43	Stormwater Management Facilities	X	X	
46	Discharges in Ditches	X	X	



## Attachment 4 EROSION CONTROL BMPs

### **Temporary Vegetation**

**Description:** Vegetation can be used as a temporary or permanent stabilization technique for areas disturbed by construction. Vegetation effectively reduces erosion in swales, stockpiles, berms, mild to medium slopes, and along roadways. Other techniques such as matting, mulches, and grading may be required to assist in the establishment of vegetation.

### **Materials:**

- The type of temporary vegetation used on a site is a function of the season and the availability of water for irrigation.
- Temporary vegetation should be selected appropriately for the area.
- County agricultural extension agents are a good source for suggestions for temporary vegetation.
- All seed should be high quality, U.S. Dept. of Agriculture certified seed.

### **Installation:**

- Grading must be completed prior to seeding.
- Slopes should be minimized.
- Erosion control structures should be installed.
- Seedbeds should be well pulverized, loose, and uniform.
- Fertilizers should be applied at appropriate rates.
- Seeding rates should be applied as recommended by the county agricultural extension agent.
- The seed should be applied uniformly.
- Steep slopes should be covered with appropriate soil stabilization matting.

### **Blankets and Matting**

**Description:** Blankets and matting material can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are in channels, interceptor swales, diversion dikes, short, steep slopes, and on tidal or stream banks.

### **Materials:**

The Texas Department of Transportation (TxDOT) has defined the critical performance factors for these types of products and has established minimum performance standards which must be met for any product seeking to be approved for use within any of TxDOT's construction or maintenance activities. The products that have been approved by TxDOT are also appropriate for general construction site stabilization. TxDOT maintains a web site at [http://www.txdot.gov/business/doing\\_business/product\\_evaluation/erosion\\_control.htm](http://www.txdot.gov/business/doing_business/product_evaluation/erosion_control.htm), which is updated as new products are evaluated.

### **Installation:**

- Install in accordance with the manufacturer's recommendations.
- Proper anchoring of the material.
- Prepare a friable seed bed relatively free from clods, rocks and any foreign material.
- Fertilize and seed in accordance with seeding or other type of planting plan.

- Erosion stops should extend beyond the channel liner to full design cross-section of the channel.
- A uniform trench perpendicular to line of flow may be dug with a spade or a mechanical trencher.
- Erosion stops should be deep enough to penetrate solid material or below level of ruling in sandy soils.
- Erosion stop mats should be wide enough to allow turnover at bottom of trench for stapling, while maintaining the top edge flush with channel surface.

### **Mulch**

**Description:** Mulching is the process of applying a material to the exposed soil surface to protect it from erosive forces and to conserve soil moisture until plants can become established. When seeding critical sites, sites with adverse soil conditions or seeding on other than optimum seeding dates, mulch material should be applied immediately after seeding. Seeding during optimum seeding dates and with favorable soils and site conditions will not need to be mulched.

### **Materials:**

- Mulch may be small grain straw which should be applied uniformly.
- On slopes 15 percent or greater, a binding chemical must be applied to the surface.
- Wood-fiber or paper-fiber mulch may be applied by hydroseeding.
- Mulch nettings may be used.
- Wood chips may be used where appropriate.

### **Installation:**

Mulch anchoring should be accomplished immediately after mulch placement. This may be done by one of the following methods: peg and twine, mulch netting, mulch anchoring tool, or liquid mulch binders.

**Description:** Sod is appropriate for disturbed areas which require immediate vegetative covers, or where sodding is preferred to other means of grass establishment. Locations particularly suited to stabilization with sod are waterways carrying intermittent flow, areas around drop inlets or in grassed swales, and residential or commercial lawns where quick use or aesthetics are factors. Sod is composed of living plants and those plants must receive adequate care to provide vegetative stabilization on a disturbed area.

### **Materials:**

- Sod should be machine cut at a uniform soil thickness.
- Pieces of sod should be cut to the supplier's standard width and length.
- Torn or uneven pads are not acceptable.
- Sections of sod should be strong enough to support their own weight and retain their size and shape when suspended from a firm grasp.
- Sod should be harvested, delivered, and installed within a period of 36 hours.

### **Installation:**

- Areas to be sodded should be brought to final grade.
- The surface should be cleared of all trash and debris.

- Fertilize according to soil tests.
- Fertilizer should be worked into the soil.
- Sod should not be cut or laid in excessively wet or dry weather.
- Sod should not be laid on soil surfaces that are frozen.
- During periods of high temperature, the soil should be lightly irrigated.
- The first row of sod should be laid in a straight line with subsequent rows placed parallel to and butting tightly against each other.
- Lateral joints should be staggered to promote more uniform growth and strength.
- Wherever erosion may be a problem, sod should be laid with staggered joints and secured.
- Sod should be installed with the length perpendicular to the slope (on the contour).
- Sod should be rolled or tamped.
- Sod should be irrigated to a sufficient depth.
- Watering should be performed as often as necessary to maintain soil moisture.
- The first mowing should not be attempted until the sod is firmly rooted.
- Not more than one third of the grass leaf should be removed at any one cutting.

### **Interceptor Swale**

Interceptor swales are used to shorten the length of exposed slope by intercepting runoff, prevent off-site runoff from entering the disturbed area, and prevent sediment-laden runoff from leaving a disturbed site. They may have a v-shape or be trapezoidal with a flat bottom and side slopes of 3:1 or flatter. The outflow from a swale should be directed to a stabilized outlet or sediment trapping device. The swales should remain in place until the disturbed area is permanently stabilized.

### **Materials:**

- Stabilization should consist of a layer of crushed stone three inches thick, riprap or high velocity erosion control mats.
- Stone stabilization should be used when grades exceed 2% or velocities exceed 6 feet per second.
- Stabilization should extend across the bottom of the swale and up both sides of the channel to a minimum height of three inches above the design water surface elevation based on a 2-year, 24-hour storm.

### **Installation:**

- An interceptor swale should be installed across exposed slopes during construction and should intercept no more than 5 acres of runoff.
- All earth removed and not needed in construction should be disposed of in an approved spoils site so that it will not interfere with the functioning of the swale or contribute to siltation in other areas of the site.
- All trees, brush, stumps, obstructions and other material should be removed and disposed of so as not to interfere with the proper functioning of the swale.
- Swales should have a maximum depth of 1.5 feet with side slopes of 3:1 or flatter. Swales should have positive drainage for the entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. Stabilization should be crushed stone placed in a layer of at least 3 inches thick or may be high velocity erosion control matting. Check dams are also

recommended to reduce velocities in the swales possibly reducing the amount of stabilization necessary.

- Minimum compaction for the swale should be 90% standard proctor density.

### **Diversion Dikes**

A temporary diversion dike is a barrier created by the placement of an earthen embankment to reroute the flow of runoff to an erosion control device or away from an open, easily erodible area. A diversion dike intercepts runoff from small upland areas and diverts it away from exposed slopes to a stabilized outlet, such as a rock berm, sandbag berm, or stone outlet structure. These controls can be used on the perimeter of the site to prevent runoff from entering the construction area. Dikes are generally used for the duration of construction to intercept and reroute runoff from disturbed areas to prevent excessive erosion until permanent drainage features are installed and/or slopes are stabilized.

### **Materials:**

- Stone stabilization (required for velocities in excess of 6 fps) should consist of riprap placed in a layer at least 3 inches thick and should extend a minimum height of 3 inches above the design water surface up the existing slope and the upstream face of the dike.
- Geotextile fabric should be a non-woven polypropylene fabric designed specifically for use as a soil filtration media with an approximate weight of 6 oz./yd<sup>2</sup>, a Mullen burst rating of 140 psi, and having an equivalent opening size (EOS) greater than a #50 sieve.

### **Installation:**

- Diversion dikes should be installed prior to, and maintained for the duration of, construction and should intercept no more than 10 acres of runoff.
- Dikes should have a minimum top width of 2 feet and a minimum height of compacted fill of 18 inches measured from the top of the existing ground at the upslope toe to top of the dike and have side slopes of 3:1 or flatter.
- The soil for the dike should be placed in lifts of 8 inches or less and be compacted to 95 % standard proctor density .
- The channel, which is formed by the dike, must have positive drainage for its entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. In situations where velocities do not exceed 6 feet per second, vegetation may be used to control erosion.

### **Erosion Control Compost**

**Description:** Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

### **Materials:**

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal

Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and TCEQ Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. TCEQ testing requirements are defined in TAC Chapter 332, including Sections §332.71 (Sampling and Analysis Requirements for Final Products) and §332.72 (Final Product Grades). Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at [http://tmecc.org/sta/STA\\_program\\_description.html](http://tmecc.org/sta/STA_program_description.html).

**Installation:**

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2-inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

**Mulch and Compost Filter Socks**

**Description:** Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

**Materials:**

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and TCEQ Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. TCEQ testing requirements are defined in TAC Chapter

332, including Sections §332.71 (Sampling and Analysis Requirements for Final Products) and §332.72 (Final Product Grades). Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

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**Installation:**

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

**SEDIMENT CONTROL BMPS**

**Sand Bag Berm**

**Description:** The purpose of a sandbag berm is to detain sediment carried in runoff from disturbed areas by intercepting runoff and causing it to pool behind the sand bag berm. Sediment carried in the runoff is deposited on the upstream side of the sand bag berm due to the reduced flow velocity. Excess runoff volumes are allowed to flow over the top of the sand bag berm. Sand bag berms are used only during construction activities in streambeds when the contributing drainage area is between 5 and 10 acres and the slope is less than 15%, i.e., pipeline construction in channels, temporary channel crossing for construction equipment, etc. Plastic facing should be installed on the upstream side and the berm should be anchored to the streambed by drilling into the rock and driving in T-posts or rebar (#5 or #6) spaced appropriately.

**Materials:**

- The sand bag material should be polypropylene, polyethylene, polyamide or cotton burlap woven fabric, minimum unit weight 4 oz/yd<sup>2</sup>, mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70%.
- The bag length should be 24 to 30 inches, width should be 16 to 18 inches and thickness should be 6 to 8 inches.

- Sandbags should be filled with coarse grade sand and free from deleterious material. All sand should pass through a No. 10 sieve. The filled bag should have an approximate weight of 40 pounds.
- Outlet pipe should be schedule 40 or stronger polyvinyl chloride (PVC) having a nominal internal diameter of 4 inches.

**Installation:**

- The berm should be a minimum height of 18 inches, measured from the top of the existing ground at the upslope toe to the top of the berm.
- The berm should be sized as shown in the plans but should have a minimum width of 48 inches measured at the bottom of the berm and 16 inches measured at the top of the berm.
- Runoff water should flow over the tops of the sandbags or through 4-inch diameter PVC pipes embedded below the top layer of bags.
- When a sandbag is filled with material, the open end of the sandbag should be stapled or tied with nylon or poly cord.
- Sandbags should be stacked in at least three rows abutting each other, and in staggered arrangement.
- The base of the berm should have at least 3 sandbags. These can be reduced to 2 and 1 bag in the second and third\_ rows respectively.
- For each additional 6 inches of height, an additional sandbag must be added to each row width.
- A bypass pump-around system, or similar alternative, should be used on conjunction with the berm for effective dewatering of the work area.

**Silt Fence**

**Description:** A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. Silt fences can be highly effective at controlling sediment from disturbed areas by causing runoff to pond, allowing heavier solids to settle. The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow. Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

**Materials:**

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in<sup>2</sup>, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Y-bar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft<sup>2</sup>, and Brindell hardness exceeding 140.

- Woven wire backing to support the fabric should be galvanized 2-inch x 4-inch welded wire, 12 gauge minimum.

#### **Installation:**

- Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1 foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.
- Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The fence should be sited so that the maximum drainage area is \* acre/100 feet of fence.
- The toe of the silt fence should be trenched in with a spade or mechanical trencher so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in, weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- Silt fence should be securely fastened to each steel support post or to woven wire attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.

#### **Triangular Sediment Filter Dike**

**Description:** The purpose of a triangular sediment filter dike is to intercept and detain water-borne sediment from unprotected areas of limited extent. The triangular sediment filter dike is used where there is no concentration of water in a channel or other drainage way above the barrier and the contributing drainage area is less than one acre. If the uphill slope above the dike exceeds 10%, the length of the slope above the dike should be less than 50 feet. If concentrated flow occurs after installation, corrective action should be taken such as placing rock berm in the areas of concentrated flow. This measure is effective on paved areas where installation of silt fence is not possible or where vehicle access must be maintained. The advantage of these controls is the ease with which they can be moved to allow vehicle traffic and then reinstalled to maintain sediment.

#### **Materials:**

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in<sup>2</sup>, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- The dike structure should be 6 gauge 6-inch x 6-inch wire mesh folded into triangular form being eighteen (18) inches on each side.

#### **Installation:**

- The frame of the triangular sediment filter dike should be constructed of 6-inch x 6-inch, 6 gauge welded wire mesh, 18 inches per side, and wrapped with geotextile fabric the same composition as that used for silt fences.
- Filter material should lap over ends 6 inches to cover dike to dike junction; each junction should be secured by shoat rings.



- Position dike parallel to the contours, with the end of each section closely abutting the adjacent sections.
- There are several options for fastening the filter dike to the ground. The fabric skirt may be toed-in with 6 inches of compacted material, or 12 inches of the fabric skirt should extend uphill and be secured with a minimum of 3 inches of open graded rock, or with staples or nails. If these two options are not feasible the dike structure may be trenched in 4 inches.
- Triangular sediment filter dikes should be installed across exposed slopes during construction with ends of the dike tied into existing grades to prevent failure and should intercept no more than one acre of runoff.
- When moved to allow vehicular access, the dikes should be reinstalled as soon as possible, but always at the end of the workday.

### **Rock Berm**

**Description:** The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but can withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows. Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

### **Materials:**

- The berm structure should be secured with a woven wire sheathing having maximum opening of one inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.
- Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

### **Installation:**

- Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
- Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
- Place the rock along the sheathing to a height not less than 18 inches.
- Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, and the berm retains its shape when walked upon.
- Berm should be built along the contour at zero percent grade or as near as possible.
- The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

### **Hay Bale Dike**

**Description:** The purpose of a hay or straw bale dike is to intercept and detain small amounts of sediment-laden runoff from relatively small unprotected areas. Straw bales are to be used when it is not feasible to install other, more effective measures or when the construction phase is expected to last less than 3 months. Straw bales should not be used on areas where rock or other hard surfaces prevent the full and uniform anchoring of the barrier.

**Materials:**

**Straw:** The best quality straw mulch comes from wheat, oats or barley and should be free of weed and grass seed which may not be desired vegetation for the area to be protected. Straw mulch is light and therefore must be properly anchored to the ground.

**Hay:** This is very similar to straw with the exception that it is made of grasses and weeds and not grain stems. This form of mulch is very inexpensive and is widely available but does introduce weed and grass seed to the area. Like straw, hay is light and must be anchored.

- Straw bales should weigh a minimum of 50 pounds and should be at least 30 inches long.
  - Bales should be composed entirely of vegetable matter and be free of seeds.
  - Binding should be either wire or nylon string, jute or cotton binding is unacceptable.
- Bales should be used for not more than two months before being replaced.

**Installation:**

- Bales should be embedded a minimum of 4 inches and securely anchored using 2-inch x 2-inch wood stakes or 3/8-inch diameter rebar driven through the bales into the ground a minimum of 6 inches.
- Bales are to be placed directly adjacent to one another leaving no gap between them.
- All bales should be placed on the contour.
- The first stake in each bale should be angled toward the previously laid bale to force the bales together.

**Brush Berms**

Organic litter and spoil material from site clearing operations is usually burned or hauled away to be dumped elsewhere. Much of this material can be used effectively on the construction site. The key to constructing an efficient brush berm is in the method used to obtain and place the brush. It will not be acceptable to simply take a bulldozer and push whole trees into a pile as this does not assure continuous ground contact with the berm and will allow uncontrolled flows under the berm. Brush berms may be used where there is little or no concentration of water in a channel or other drainage way above the berm. The size of the drainage area should be no greater than one-fourth of an acre per 100 feet of barrier length; the maximum slope length behind the barrier should not exceed 100 feet; and the maximum slope gradient behind the barrier should be less than 50% (2:1).

**Materials:**

- The brush should consist of woody brush and branches, preferably less than 2 inches in diameter.
- The filter fabric should conform to the specifications for filter fence fabric.
- The rope should be 1/4 - inch polypropylene or nylon rope.
- The anchors should be 3/8-inch diameter rebar stakes that are 18-inches long.

**Installation:**

- Lay out the brush berm following the contour as closely as possible.

- The juniper limbs should be cut and hand placed with the vegetated part of the limb in close contact with the ground. Each subsequent branch should overlap the previous branch providing a shingle effect.
- The brush berm should be constructed in lifts with each layer extending the entire length of the berm before the next layer is started.
- A trench should be excavated 6-inches wide and 4-inches deep along the length of the barrier and immediately uphill from the barrier.
- The filter fabric should be cut into lengths sufficient to lay across the barrier from its up-slope base to just beyond its peak. The lengths of filter fabric should be draped across the width of the barrier with the uphill edge placed in the trench and the edges of adjacent pieces overlapping each other. Where joints are necessary, the fabric should be spliced together with a minimum 6-inch overlap and securely sealed.
- The trench should be backfilled and the soil compacted over the filter fabric.
- Set stakes into the ground along the downhill edge of the brush barrier, and anchor the fabric by tying rope from the fabric to the stakes. Drive the rope anchors into the ground at approximately a 45-degree angle to the ground on 6-foot centers.
- Fasten the rope to the anchors and tighten berm securely to the ground with a minimum tension of 50 pounds.
- The height of the brush berm should be a minimum of 24 inches after the securing ropes have been tightened.

### **Stone Outlet Sediment Traps**

A stone outlet sediment trap is an impoundment created by the placement of an earthen and stone embankment to prevent soil and sediment loss from a site. The purpose of a sediment trap is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment trap from sedimentation. A sediment trap is usually installed at points of discharge from disturbed areas. The drainage area for a sediment trap is recommended to be less than 5 acres.

Larger areas should be treated using a sediment basin. A sediment trap differs from a sediment basin mainly in the type of discharge structure. The trap should be located to obtain the maximum storage benefit from the terrain, for ease of clean out and disposal of the trapped sediment and to minimize interference with construction activities. The volume of the trap should be at least 3600 cubic feet per acre of drainage area.

### **Materials:**

- All aggregate should be at least 3 inches in diameter and should not exceed a volume of 0.5 cubic foot.
- The geotextile fabric specification should be woven polypropylene, polyethylene or polyamide geotextile, minimum unit weight of 4.5 oz/yd<sup>2</sup>, mullen burst strength at least 250 lb/in<sup>2</sup>, ultraviolet stability exceeding 70%, and equivalent opening size exceeding 40.

### **Installation:**

- Earth Embankment: Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95% standard proctor density. Do not place material on

surfaces that are muddy or frozen. Side slopes for the embankment are to be 3: 1. The minimum width of the embankment should be 3 feet.

- A gap is to be left in the embankment in the location where the natural confluence of runoff crosses the embankment line. The gap is to have a width in feet equal to 6 times the drainage area in acres.
- Geotextile Covered Rock Core: A core of filter stone having a minimum height of 1.5 feet and a minimum width at the base of 3 feet should be placed across the opening of the earth embankment and should be covered by geotextile fabric which should extend a minimum distance of 2 feet in either direction from the base of the filter stone core.
- Filter Stone Embankment: Filter stone should be placed over the geotextile and is to have a side slope which matches that of the earth embankment of 3:1 and should cover the geotextile/rock core a minimum of 6 inches when installation is complete. The crest of the outlet should be at least 1 foot below the top of the embankment.

### **Sediment Basins:**

The purpose of a sediment basin is to intercept sediment-laden runoff and trap the sediment to protect drainage ways, properties and rights of way below the sediment basin from sedimentation. A sediment basin is usually installed at points of discharge from disturbed areas. The drainage area for a sediment basin is recommended to be less than 100 acres.

Sediment basins are effective for capturing and slowly releasing the runoff from larger disturbed areas thereby allowing sedimentation to take place. A sediment basin can be created where a permanent pond BMP is being constructed. Guidelines for construction of the permanent BMP should be followed, but revegetation, placement of underdrain piping, and installation of sand or other filter media should not be carried out until the site construction phase is complete.

### **Materials:**

- Riser should be corrugated metal or reinforced concrete pipe or box and should have watertight fittings or end to end connections of sections.
- An outlet pipe of corrugated metal or reinforced concrete should be attached to the riser and should have positive flow to a stabilized outlet on the downstream side of the embankment.
- An anti-vortex device and rubbish screen should be attached to the top of the riser and should be made of polyvinyl chloride or corrugated metal.

### **Basin Design and Construction:**

- For common drainage locations that serve an area with ten or more acres disturbed at one time, a sediment basin should provide storage for a volume of runoff from a two-year, 24-hour storm from each disturbed acre drained.
- The basin length to width ratio should be at least 2:1 to improve trapping efficiency. The shape may be attained by excavation or the use of baffles. The lengths should be measured at the elevation of the riser de-watering hole.
- Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95% standard proctor density. Do not place material on surfaces that are muddy or frozen. Side slopes for the embankment should be 3:1 (H:V).

- An emergency spillway should be installed adjacent to the embankment on undisturbed soil and should be sized to carry the full amount of flow generated by a 10-year, 3-hour storm with 1 foot of freeboard less the amount which can be carried by the principal outlet control device.
- The emergency spillway should be lined with riprap as should the swale leading from the spillway to the normal watercourse at the base of the embankment.
- The principal outlet control device should consist of a rigid vertically oriented pipe or box of corrugated metal or reinforced concrete. Attached to this structure should be a horizontal pipe, which should extend through the embankment to the toe of fill to provide a de-watering outlet for the basin.
- An anti-vortex device should be attached to the inlet portion of the principal outlet control device to serve as a rubbish screen.
- A concrete base should be used to anchor the principal outlet control device and should be sized to provide a safety factor of 1.5 (downward forces= 1.5 buoyant forces).
- The basin should include a permanent stake to indicate the sediment level in the pool and marked to indicate when the sediment occupies 50% of the basin volume (not the top of the stake).
- The top of the riser pipe should remain open and be guarded with a trash rack and anti-vortex device. The top of the riser should be 12 inches below the elevation of the emergency spillway. The riser should be sized to convey the runoff from the 2-year, 3-hour storm when the water surface is at the emergency spillway elevation. For basins with no spillway the riser must be sized to convey the runoff from the 10-yr, 3-hour storm.
- Anti-seep collars should be included when soil conditions or length of service make piping through the backfill a possibility.
- The 48-hour drawdown time will be achieved by using a riser pipe perforated at the point measured from the bottom of the riser pipe equal to 1/2 the volume of the basin. This is the maximum sediment storage elevation. The size of the perforation may be calculated as follows:

$$A_o = \frac{A_s \times \sqrt{2h}}{C_d \times 980,000}$$

Where:

$A_s$  = Area of the de-watering hole, ft<sup>2</sup>

$A_o$  = Surface area of the basin, ft<sup>2</sup>

$C_d$  = Coefficient of contraction, approximately 0.6

$h$  = head of water above the hole, ft

Perforating the riser with multiple holes in a combined surface area equal to  $A_o$  is acceptable.

### **Erosion Control Compost**

**Description:** Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

#### **Materials:**

ECC used for projects not related to TxDOT should be of quality materials by meeting performance standards and compost specification data. Products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and TCEQ Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. TCEQ testing requirements are defined in TAC Chapter 332, including Sections §332.71 (Sampling and Analysis Requirements for Final Products) and §332.72 (Final Product Grades). Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

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#### **Installation:**

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2-inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

### **Mulch and Compost Filter Socks**

**Description:** Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

**Materials:**

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and TCEQ Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. TCEQ testing requirements are defined in TAC Chapter 332, including Sections §332.71 (Sampling and Analysis Requirements for Final Products) and §332.72 (Final Product Grades). Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (ST A) program contains information regarding compost STA certification. STA program information can be found at [http://tmecc.org/sta/STA\\_program\\_description.html](http://tmecc.org/sta/STA_program_description.html).

**Installation:**

- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

**POST-CONSTRUCTION TSS CONTROLS**

**Retention/Irrigation Systems**

**Description:** Retention/irrigation systems refer to the capture of runoff in a holding pond, then use of the captured water for irrigation of appropriate landscape areas. Retention/irrigation systems are characterized by the capture and disposal of runoff without direct release of captured flow to receiving streams. Retention systems exhibit excellent pollutant removal but require regular, proper maintenance.

**Design Considerations:** Retention/irrigation practices achieve 100% removal efficiency of total suspended solids contained within the volume of water captured. Design elements of

retention/irrigation systems include runoff storage facility configuration and sizing, pump and wet well system components, basin lining, basin detention time, and physical and operational components of the irrigation system. Retention/irrigation systems are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

**Maintenance Requirements:** Maintenance requirements for retention/irrigation systems include routine inspections, sediment removal, mowing, debris and litter removal, erosion control, and nuisance control.

### **Extended Detention Basin**

**Description:** Extended detention facilities are basins that temporarily store a portion of stormwater runoff following a storm event. Extended detention basins are normally used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. The water quality benefits are the removal of sediment and buoyant materials. Furthermore, nutrients, heavy metals, toxic materials, and oxygen-demanding materials associated with the particles also are removed. The control of the maximum runoff rates serves to protect drainage channels below the device from erosion and to reduce downstream flooding.

**Design Considerations:** Extended detention basins can remove approximately 75% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of extended detention basins include basin sizing, basin configuration, basin side slopes, basin lining, inlet/outlet structures, and erosion controls. Extended detention basins are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

**Maintenance Requirements:** Maintenance requirements for extended detention basins include routine inspections, mowing, debris and litter removal, erosion control, structural repairs, nuisance control, and sediment removal.

### **Vegetative Filter Strips**

**Description:** Filter strips, also known as vegetated buffer strips, are vegetated sections of land similar to grassy swales except they are essentially flat with low slopes, and are designed only to accept runoff as overland sheet flow. They may appear in any vegetated form from grassland to forest, and are designed to intercept upstream flow, lower flow velocity, and spread water out as sheet flow. The dense vegetative cover facilitates conventional pollutant removal through detention, filtration by vegetation, and infiltration. Filter strips cannot treat high velocity flows, and do not provide enough storage or infiltration to effectively reduce peak discharges to predevelopment levels for design storms. This lack of quantity control favors use in rural or low-density development; however, they can provide water quality benefits even where the impervious cover is as high as 50%.

Flat slopes and low to fair permeability of natural subsoil are required for effective performance of filter strips. Although an inexpensive control measure, they are most useful in contributing watershed areas where peak runoff velocities are low as they are unable to treat the high flow



velocities typically associated with high impervious cover. Successful performance of filter strips relies heavily on maintaining shallow unconcentrated flow. To avoid flow channelization and maintain performance, a filter strip should:

- Be equipped with a level spreading device for even distribution of runoff
- Contain dense vegetation with a mix of erosion resistant, soil binding species
- Be graded to a uniform, even and relatively low slope
- Laterally traverse the contributing runoff area

Filter strips can be used upgradient from watercourses, wetlands, or other water bodies along toes and tops of slopes and at outlets of other stormwater management structures. They should be incorporated into street drainage and master drainage planning. The most important criteria for selection and use of this BMP are soils, space, and slope.

**Design Considerations:** Vegetative filter strips can remove approximately 85% of the total suspended solids contained within the volume of runoff captured. Design elements of vegetative filter strips include uniform, shallow overland flow across the entire filter strip area, hydraulic loading rate, inlet structures, slope, and vegetative cover. The area should be free of gullies or rills which can concentrate flow. Vegetative filter strips are appropriate for small drainage areas with moderate slopes. Other design elements include the following:

- Soils and moisture are adequate to grow relatively dense vegetative stands
- Sufficient space is available
- Slope is less than 12%
- Comparable performance to more expensive structural controls

**Maintenance Requirements:** Maintenance requirements for vegetative filter strips include pest management, seasonal mowing and lawn care, routine inspections, debris and litter removal, sediment removal, and grass reseeding and mulching.

### **Constructed Wetlands**

**Description:** Constructed wetlands provide physical, chemical, and biological water quality treatment of stormwater runoff. Physical treatment occurs as a result of decreasing flow velocities in the wetland, and is present in the form of evaporation, sedimentation, adsorption, and/or filtration. Chemical processes include chelation, precipitation, and chemical adsorption. Biological processes include decomposition, plant uptake and removal of nutrients, plus biological transformation and degradation. Hydrology is one of the most influential factors in pollutant removal due to its effects on sedimentation, aeration, biological transformation, and adsorption onto bottom sediments. The wetland should be designed such that a minimum amount of maintenance is required. The natural surroundings, including such things as the potential energy of a stream or flooding river, should be utilized as much as possible. The wetland should approximate a natural situation and unnatural attributes, such as rectangular shape or rigid channel, should be avoided.

Site considerations should include the water table depth, soil/substrate, and space requirements. Because the wetland must have a source of flow, it is desirable that the water table is at or near the surface. If runoff is the only source of inflow for the wetland, the water level often fluctuates and establishment of vegetation may be difficult. The soil or substrate of an artificial wetland

should be loose loam to clay. A perennial baseflow must be present to sustain the artificial wetland. The presence of organic material is often helpful in increasing pollutant removal and retention. A greater amount of space is required for a wetland system than is required for a detention facility treating the same amount of area.

**Design Considerations:** Constructed wetlands can remove over 90% of the total suspended solids contained within the volume of runoff captured in the wetland. Design elements of constructed wetlands include wetland sizing, wetland configuration, sediment forebay, vegetation, outflow structure, depth of inundation during storm events, depth of micropools, and aeration. Constructed wetlands are appropriate for large drainage areas with low to moderate slopes.

**Maintenance Requirements:** Maintenance requirements for constructed wetlands include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, harvesting, and maintenance of water levels.

### **Wet Basins**

**Description:** Wet basins are runoff control facilities that maintain a permanent wet pool and a standing crop of emergent littoral vegetation. These facilities may vary in appearance from natural ponds to enlarged, bermed (manmade) sections of drainage systems and may function as online or offline facilities, although offline configuration is preferable. Offline designs can prevent scour and other damage to the wet pond and minimize costly outflow structure elements needed to accommodate extreme runoff events. During storm events, runoff inflows displace part or all of the existing basin volume and are retained and treated in the facility until the next storm event. The pollutant removal mechanisms are settling of solids, wetland plant uptake, and microbial degradation. When the wet basin is adequately sized, pollutant removal performance can be excellent, especially for the dissolved fraction. Wet basins also help provide erosion protection for the receiving channel by limiting peak flows during larger storm events. Wet basins are often perceived as a positive aesthetic element in a community and offer significant opportunity for creative pond configuration and landscape design. Participation of an experienced wetland designer is suggested. A significant potential drawback for wet ponds in arid climates is that the contributing watershed for these facilities is often incapable of providing an adequate water supply to maintain the permanent pool, especially during the summer months. Makeup water (i.e., well water or municipal drinking water) is sometimes used to supplement the rainfall/runoff process, especially for wet basin facilities treating watersheds that generate insufficient runoff.

**Design Considerations:** Wet basins can remove over 90% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of wet basins include basin sizing, basin configuration, basin side slopes, sediment forebay, inflow and outflow structures, vegetation, depth of permanent pool, aeration, and erosion control. Wet basins are appropriate for large drainage areas with low to moderate slopes.

**Maintenance Requirements:** Maintenance requirements for wet basins include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, and harvesting.

### **Grassy Swales**

Grassy swales are vegetated channels that convey stormwater and remove pollutants by filtration through grass and infiltration through soil. They require shallow slopes and soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the swale and improve pollutant removal rates. Grassy swales are primarily stormwater conveyance systems. They can provide sufficient control under light to moderate runoff conditions, but their ability to control large storms is limited. Therefore, they are most applicable in low to moderate sloped areas or along highway medians as an alternative to ditches and curb and gutter drainage. Their performance diminishes sharply in highly urbanized settings, and they are generally not effective enough to receive construction stage runoff where high sediment loads can overwhelm the system. Grassy swales can be used as a pretreatment measure for other downstream BMPs, such as extended detention basins. Enhanced grassy swales use check dams and wide depressions to increase runoff storage and promote greater settling of pollutants. Grassy swales can be more aesthetically pleasing than concrete or rock-lined drainage systems and are generally less expensive to construct and maintain. Swales can slightly reduce impervious area and reduce the pollutant accumulation and delivery associated with curbs and gutters. The disadvantages of this technique include the possibility of erosion and channelization over time, and the need for more right-of-way as compared to a storm drain system. When properly constructed, inspected, and maintained, the life expectancy of a swale is estimated to be 20 years.

#### **Design Considerations:**

- Comparable performance to wet basins
- Limited to treating a few acres
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

The suitability of a swale at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the swale system. In general, swales can be used to serve areas of less than 10 acres, with slopes no greater than 5 %. The seasonal high water table should be at least 4 feet below the surface. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use.

#### **Maintenance Requirements:**

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods, but may be necessary only to prevent the vegetation from dying.

### **Vegetation Lined Drainage Ditches**

Vegetation lined drainage ditches are similar to grassy swales. These drainage ditches are vegetated channels that convey storm water and remove pollutants by filtration through grass and infiltration through soil. They require soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the ditch and improve pollutant

removal rates. Vegetation lined drainage ditches are primarily storm water conveyance systems. They have vegetation lined in the low flow channel and may include vegetated shelves. Vegetation in drainage ditches reduces erosion and removes pollutants by lowering water velocity over the soil surface, binding soil particles with roots, and by filtration through grass and infiltration through soil. Vegetation lined drainage ditches can be used where:

- A vegetative lining can provide sufficient stability for the channel grade by increasing maximum permissible velocity
- Slopes are generally less than 5%, with protection from sheer stress as needed through the use of BMPs, such as erosion control blankets
- Site conditions required to establish vegetation, i.e. climate, soils, topography, are present

**Design Criteria:** The suitability of a vegetation lined drainage ditch at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the ditch system. The hydraulic capacity of the drainage ditch and other elements such as erosion, siltation, and pollutant removal capability, must be taken into consideration. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use. Other items to consider include the following:

- Capacity, cross-section shape, side slopes, and grade
- Select appropriate native vegetation
- Construct in stable, low areas to conform with the natural drainage system. To reduce erosion potential, design the channel to avoid sharp bends and steep grades.
- Design and build drainage ditches with appropriate scour and erosion protection. Surface water should be able to enter over the vegetated banks without erosion occurring.
- BMPs, such as erosion control blankets, may need to be installed at the time of seeding to provide stability until the vegetation is fully established. It may also be necessary to divert water from the channel until vegetation is established or to line the channel with sod.
- Vegetated ditches must not be subject to sedimentation from disturbed areas.
- Sediment traps may be needed at channel inlets to prevent entry of muddy runoff and channel sedimentation.
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

**Maintenance:**

During establishment, vegetation lined drainage ditches should be inspected, repaired, and vegetation reestablished if necessary. After the vegetation has become established, the ditch should be checked periodically to determine if the channel is withstanding flow velocities without damage. Check the ditch for debris, scour, or erosion and immediately make repairs if needed. Check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes and make repairs immediately. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the vegetation in a healthy condition at all times, since it is the primary erosion protection for the channel. Vegetation lined drainage ditches should be seasonally maintained by mowing or irrigating, depending on the vegetation selected. The long-term management of ditches as stable, vegetated, "natural" drainage systems with native vegetation buffers is highly recommended due to the inherent stability offered by grasses, shrubs, trees, and other vegetation.

### **Sand Filter Systems**

The objective of sand filters is to remove sediment and the pollutants from the first flush of pavement and impervious area runoff. The filtration of nutrients, organics, and coliform bacteria is enhanced by a mat of bacterial slime that develops during normal operations. One of the main advantages of sand filters is their adaptability; they can be used on areas with thin soils, high evaporation rates, low-soil infiltration rates, in limited-space areas, and where groundwater is to be protected. There have been numerous alterations or variations in the original design as engineers in other jurisdictions have improved and adapted the technology to meet their specific requirements. Major types include the Austin Sand Filter, the District of Columbia Underground Sand Filter, the Alexandria Dry Vault Sand Filter, the Delaware Sand Filter, and peat-sand filters which are adapted to provide a sorption layer and vegetative cover to various sand filter designs.

#### **Design Considerations:**

- Appropriate for space-limited areas
- Applicable in arid climates where wet basins and constructed wetlands are not appropriate
- High TSS removal efficiency

#### **Cost Considerations:**

Filtration Systems may require less land than some other BMPs, reducing the land acquisition cost; however the structure itself is one of the more expensive BMPs. In addition, maintenance cost can be substantial.

### **Erosion Control Compost**

**Description:** Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

#### **Materials:**

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and TCEQ Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. TCEQ testing requirements are defined in TAC Chapter 332, including Sections §332.71 (Sampling and Analysis Requirements for Final Products) and §332.72 (Final Product Grades). Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health,

safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost ST A certification. STA program information can be found at [http://tmecc.org/sta/STA\\_program\\_description.html](http://tmecc.org/sta/STA_program_description.html).

**Installation:**

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2-inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

**Mulch and Compost Filter Socks**

**Description:** Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

**Materials:**

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and TCEQ Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. TCEQ testing requirements are defined in TAC Chapter 332, including §332.71 (Sampling and Analysis Requirements for Final Products) and §332.72 (Final Product Grades). Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program

contains information regarding compost STA certification. STA program information can be found at [http://tmecc.org/sta/STA\\_program\\_description.html](http://tmecc.org/sta/STA_program_description.html).

**Installation:**

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

**Sedimentation Chambers (only to be used when there is no space available for other approved BMP's)**

**Description:** Sedimentation chambers are stormwater treatment structures that can be used when space is limited such as urban settings. These structures are often tied into stormwater drainage systems for treatment of stormwater prior to entering state waters. The water quality benefits are the removal of sediment and buoyant materials. These structures are not designed as a catch basin or detention basin and not typically used for floodwater attenuation.

**Design Considerations:** Average rainfall and surface area should be considered when following manufacturer's recommendations for chamber sizing and/or number of units needed to achieve effective TSS removal. If properly sized, 50-80% removal of TSS can be expected.

**Maintenance Requirements:** Maintenance requirements include routine inspections, sediment, debris and litter removal, erosion control and nuisance control.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 6  
1201 ELM STREET, SUITE 500  
DALLAS, TEXAS 75270

December 14, 2020

Joe McMahan  
Chief, Regulatory Division  
Galveston District, U.S. Army Corps of Engineers  
2000 Fort Point Road  
Galveston, TX 77550

RE: Clean Water Act Section 401 Water Quality Certification for the 2020 U.S. Army Corps of Engineers  
Section 404 Nationwide Permits Reissuance, on behalf of Indian tribes that have not received  
Treatment in a Similar Manner as a State for Section 401 in EPA Region 6.

Dear Mr. McMahan:

This water quality certification (WQC) applies to any potential point source discharges from potential projects authorized under the proposed reissuance of the following U.S. Corps of Engineers (Corps) Nationwide Permits (NWP) into waters of the United States that occur within tribal boundaries within the State of Texas: NWP 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, 51, 52, 53, 54, C, D and E. The Corps is not requesting certification for 11 NWPs: 1, 2, 8, 9, 10, 11, 24, 28, 35, A, and B.

Section 401(a)(1) of the Clean Water Act (CWA) requires applicants for Federal permits and licenses that may result in discharges into waters of the United States to obtain certification that potential discharges will comply with applicable provisions of the CWA, including Sections 301, 302, 303, 306 and 307. Where no state agency or tribe has authority to give such certification, the U.S.

Environmental Protection Agency (EPA) is the certifying authority. In this case, Ysleta del Sur Pueblo, Alabama-Coushatta Tribe of Texas, and Kickapoo Traditional Tribe of Texas do not have the authority to provide CWA Section 401 certification for discharges occurring within the boundaries of the aforementioned tribal lands, therefore, EPA Region 6 is making the certification decisions for discharges that may result from the potential projects authorized under the proposed Corps CWA 404 NWPs. This letter is being directed to Galveston District, which is the lead regulatory program for NWP reissuance in Texas; the Albuquerque, Fort Worth, Galveston, and Tulsa Districts are also represented. Consistent with the *EPA Policy on Consultation and Coordination with Indian Tribes*, EPA Region 6 circulated a letter dated September 18, 2020 offering to consult with tribes on the certification process and invite their participation.

**Reissuance of NWPs Description**

The Corps is proposing to re-issue its existing NWPs and associated general conditions and definitions, with some modifications. The Corps states that it is “proposing these modifications to simplify and clarify the NWPs, reduce burdens on the regulated public, and continue to comply with the statutory requirement that these NWPs authorize only activities with no more than minimal individual and cumulative adverse environmental effects.” 85 FR 57298. For more details:

<https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Nationwide-Permits/>.



### **General Information**

The general information provided in this section does not constitute a certification condition(s).

Project proponents for potential projects authorized under the NWP's are responsible for obtaining all other permits, licenses, and certifications that may be required by federal, state, or tribal authorities.

Project proponents for potential projects authorized under the NWP's should conduct all work in such a manner as to comply with all Corps Section 404 permit conditions.

Copies of the Corps permit including this certification should be kept on the job site and readily available to the public for reference.

Project proponents for potential projects authorized under the NWP's should retain this certification in their files with the applicable NWP's as documentation of EPA's certification decisions for the above-referenced proposed NWP's. This certification is specifically associated with the proposed NWP's described above and expires when those NWP's expire, five years from Corps issuance date.

During project planning, EPA highly recommends the project proponent notify the appropriate tribal environmental office of the project details and location.

### **Certification Determination**

#### **Grant (121.7(c)):**

On behalf of Ysleta del Sur Pueblo, Alabama-Coushatta Tribe of Texas, and Kickapoo Traditional Tribe of Texas, CWA Section 401 certification, for the following proposed NWP's, is granted with no conditions. EPA Region 6 has determined that any discharge that could be authorized under the following proposed NWP's will comply with water quality requirements, as defined at 40 CFR 121.1(n).

**NWP 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, 51, 52, 53, 54, C, D, and E**

Thank you for your ongoing partnership in implementing the regulatory programs of the CWA. Should your office have any questions, please feel free to contact our staff: 1) Paul Kaspar at 214-665-7459, [Kaspar.Paul@epa.gov](mailto:Kaspar.Paul@epa.gov); 2) Daniel Landeros at 214-665-8077, [Landeros.Daniel@epa.gov](mailto:Landeros.Daniel@epa.gov).

Sincerely,

*Charles Maguire*

Charles W. Maguire  
Director  
Water Division



## U.S. Army Corps of Engineers (USACE), Fort Worth District Pre-Application Coordination/Meeting Request

<b>Box 1 Basic Project Information</b>		Date:
Project Name:		
City	County	State
Total Size of Property in Acres	Latitude (NAD 83, DD.ddddd)	Longitude (NAD 83, -DD.ddddd)
<b>Box 2 Property Owner Name</b>		Email
Mailing Address		Phone
<b>Box 3 Applicant Name</b>		Email
Mailing Address		Phone
<b>Box 4 Agent Name</b>		Email
Mailing Address		Phone
<b>Box 5 Information Required to Accompany Request - check as much information as is available:</b>		
Project Description: Provide a brief summary of the proposed project including development plans, size in acres, potential impacts to Waters of the U.S., existing land use/cover, etc.: <input type="checkbox"/>		
Project Purpose: <input type="checkbox"/>		
<input type="checkbox"/> Accurate Location Maps (from County map, USGS Quad Sheet, Aerial Photos, etc.) <input type="checkbox"/> Map of the Project including entire boundary of Single and Complete Project/Preliminary Site Development Plan <input type="checkbox"/> Conceptual Site Plans for the Overall Development <input type="checkbox"/> Approximate impacts - wetland impact:                      acres and linear feet of stream impact:                      linear feet <input type="checkbox"/> Impact Type: (e.g., Forested Wetland, Emergent Wetland, Intermittent Stream, etc.) <input type="checkbox"/> Federal Project (project within/affecting USACE Civil Works Project, i.e. USACE Lakes, Levees, Restoration Work) <input type="checkbox"/> For Projects Spanning Multiple USACE Districts, map depicting project locations in each District <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Pre-Application Meeting Agenda		
<b>Box 6 Optional Additional Information:</b> Any information you can provide about the proposal, project site, and/or surrounding area will facilitate a more effective pre-application meeting. Additional information may include, but is not limited to:		
<input type="checkbox"/> Delineation of the Waters of the U.S. Type of JD – Preliminary JD                      Approved JD                      No JD <input type="checkbox"/> Threatened or Endangered Species Information, and/or Any Coordination With USFWS <input type="checkbox"/> Historic Properties Cultural Resources Information, and/or Any Coordination With the SHPO <input type="checkbox"/> Conceptual Mitigation Information <input type="checkbox"/> Floodplain Information <input type="checkbox"/> Color Photographs <input type="checkbox"/> Other Authorizations Obtained or Required, Lead Federal Agency <input type="checkbox"/> Other:		

**The applicant will be responsible for taking meeting notes and submitting them to the USACE for review.**

Copies of this request may be obtained at: <http://www.swf.usace.army.mil/Missions/Regulatory.aspx>

Electronic Submittal Instructions: <https://www.swf.usace.army.mil/Missions/Regulatory/Electronic-Submittal-Instructions/>

Please **email** this form and additional information to: [CESWF-Permits@usace.army.mil](mailto:CESWF-Permits@usace.army.mil)

<b>Company Name</b>	<b>Street Address</b>	<b>City</b>
CNG Environmental	P.O. Box 1616	Lytle
Adams Environmental, Inc.	13483 Wetmore Road	San Antonio
AECOM	6800 Park Ten Blvd., Suite 180S	San Antonio
Alan Plummer Associates, Inc.	10060 N. Dowling Road	College Station
CSC Engineering & Environmental Consultants, Inc.	3407 Tabor Road	Bryan
Marshall, Miller & Associates, Inc.	910 Pierremont Road, Suite 117	Shreveport
Williamson & Associates LLC	P.O. Box 8565	Shreveport
Envir-Rowe Services, LLC	P.O. Box 791	Pittsburg
Rowden Consulting, LLC	P.O. Box 978 23221 Oak Grove Road	Bullard
HNTB Corporation	5910 W. Plano Parkway, Suite 200	Plano
Integrated Environmental Solutions, LLC.	610 Elm Street, Suite 300	McKinney
Kimley-Horn & Associates, Inc.	106 West Louisiana Street	McKinney
D & M Construction	P.O. Box 311353	New Braunfels
M&S Engineering, Ltd.	P.O. Box 970	Spring Branch
Arredondo, Zepeda & Brunz, Inc.	11355 McCree Road	Dallas
Benchmark Environmental Consultants	6116 N. Central Expressway, Suite 808	Dallas
Ecology & Environment, Inc.	1200 Main Street, Suite 500	Dallas
EnSafe, Inc.	545 Fuller Drive, Suite 230	Irving
GES, Inc. Texas - North	101 E. Southwest Parkway, Suite 114	Lewisville
Halff Associates, Inc.	8616 Northwest Plaza Drive	Dallas
Kimley-Horn & Associates, Inc.	13455 Noel Rd. 2 Galleria Office Tower, Suite 700	Dallas
Kimley-Horn & Associates, Inc.	2201 West Royal Lane, Suite 275	Irving
LopezGarcia Group	1825 Market Center Boulevard, Suite 150	Dallas
MACTEC Engineering and Consulting, Inc.	16650 Westgrove Drive, Suite 600	Addison
O'Brien Engineering, Inc.	14900 Landmark Boulevard, Suite 530	Dallas
Reed Engineering Group, Ltd.	2424 Stutz Drive, Suite 200	Dallas
Symonds Ecology	1506 Audrey Drive	Garland
Terra-Solve, Inc.	3216 Commander Drive, Suite 103	Carrollton
Tetra Tech EM, Inc.	350 N. St. Paul Street, Suite 2600	Dallas
URS Corporation	3010 LBJ Freeway, Suite 1300	Dallas
Allison Engineering Group, Inc.	401 South Locust, Suite 105-B	Denton

Kimley-Horn & Associates, Inc.	5750 Genesis Court, Suite 200	Frisco
Conestoga-Rovers & Associates	4915 South Sherwood Forest Boulevard	Baton Rouge
Jones & Ridenour, Inc.	P.O. Box 494	Denison
Sphere 3 Environmental	1501 Bill Owens Parkway	Longview
Titanium Environmental Services, LLC	311 E. Cotton Street P.O. Box 4029	Longview
Berg Oliver	14701 St. Mary's Lane, Suite 400	Houston
Burns & McDonnell	1776 Yorktown, Suite 840	Houston
CK Associates	616 FM 1960, Suite 575	Houston
Damico Environmental Services, Inc.	P.O. Box 691465	Houston
Othon, Inc., Engineering Consultants	11111 Wilcrest Green Drive, Suite 128	Houston
Resource Environmental Solutions, LLC	5020 Montrose Blvd., Suite 650	Houston
S&B Infrastructure	3535 Sage Road	Houston
Universal ENSCO, Inc.	20 Greenway Plaza, Suite 475	Houston
H & T Environmental, Inc.	5150 Old Town Road P.O. Box 239	Elysian Fields
Whitenton Group, Inc.	3413 Hunter Road	San Marcos
S&B Infrastructure	5408 N 10th Street	McAllen
HSW Engineering, Inc.	3820 Northdale Boulevard, Suite 210B P.O. Box 452	Tampa
Hoffman Environmental, Inc.	213 Jefferson St.	Sulphur Springs
Adaptive Ecosystems, Inc.	801 Main Street, Suite 103	Grandview
HBC/Terracon	16000 College Boulevard P.O. Box 2205	Lenexa
Westward Environmental, Inc.	4 Shooting Club Rd.	Boerne
US Environmental Services	9237 Via de Ventura, Suite 205	Scottsdale
Kleinfelder	2000 South 15th Street	Waco
DESCO Environmental Consultants, LP	P.O. Box 1490	Magnolia
Castilaw Environmental Services, LLC	510 E. Pilar Street	Nacogdoches
Hydrex Environmental Inc.	1120 Northwest Stallings Drive	Nacogdoches
Edward F. Janak, Jr., CPSS	200 North 13th Street, Suite 113	Corsicana
Advanced Ecology, Inc.	2557 State Highway 7 East	Center
Adams Consulting Engineers, Inc.	6320 Copeland Road	Tyler
Adam Engineering, Inc.	1506 Pioneer Parkway, Suite 102	Arlington

Alan Plummer Associates, Inc.	1320 South University Drive, Suite 300	Fort Worth
Atkins	101 Summit Avenue, Suite 1014	Fort Worth
Berg Oliver	1907 Ascension Blvd., Suite 440	Arlington
Caffey Engineering, Inc.	P.O. Box 13786	Arlington
CDM	777 Taylor Street, Suite 1050	Fort Worth
Deotte, Inc.	2553 East Loop 820 North	Fort Worth
Halff Associates, Inc.	4000 Fossil Creek Boulevard	Fort Worth
Jacobs Engineering, Inc. (formerly Carter & Burgess, Inc.)	777 Main Street	Fort Worth
JEA/HydroTech	6825 Manhattan Blvd., Suite 100	Fort Worth
Jones & Ridenour, Inc.	2000 E. Lamar Boulevard, Suite 600	Arlington
Kimley-Horn & Associates, Inc.	801 Cherry Street, Suite 1300, Unit 11	Fort Worth
Modern GeoSciences	5100 Thompson Terrace	Colleyville
Pape-Dawson Engineers	500 West Seventh Street, Suite 827	Fort Worth
Turner Collie & Braden Inc.	1200 Summit Avenue, Suite 600	Fort Worth
Turner Biological Consulting	618 West St.	Buffalo Gap
ACI Consulting	1001 Mopac Circle, Suite 100	Austin
ANCHOR QEA, LLC	901 S. Mopac Expressway Barton Oaks Plaza IV, Suite 280	Austin
Apex Companies, LLC	13640 Briarwick Dr., Suite 110	Austin
Baer Engineering and Environmental Consulting, Inc.	7756 Northcross Drive, Suite 211	Austin
Blanton & Associates, Inc.	5 Lakeway Centre Court, Suite 200	Austin
Chiang, Patel, & Yerby, Inc.	The Avallon, Building I 10415 Morado Circle, Suite 200	Austin
Eclipse Environmental & Engineering, Inc.	8705 Shoal Creek Boulevard, Suite 200	Austin
Ecological Communications Corporation	3355 Bee Caves Road, Suite 700	Austin
Goshawk Environmental Consulting	P.O. Box 151525	Austin
Hicks & Company	1504 West 5th Street	Austin
Horizon Environmental Services, Inc.	P.O. Box 162017	Austin
Loomis Austin, Inc.	3103 Bee Cave Road, Suite 225	Austin
Paul Price Associates, Inc.	3006 Bee Cave Road, Suite D-230	Austin
SWCA Environmental Consultants	4407 Monterey Oaks Boulevard, Building 1, Suite 110	Austin
TRC Environmental Corporation	505 East Huntland Drive, Suite 250	Austin
Zephyr Environmental Corp.	1515 Capital of Texas Highway, Suite 300	Austin
Wildlife Technical Services, Inc.	P.O. Box 820188	Vicksburg

Kelley Environmental Consulting Services	817 Wagon Wheel Trail	Georgetown
<b>Updated 9/9/2022</b>		
<p>The following is an alphabetical list of consultants who have indicated that they conduct work associated with the Fort Worth District, U.S. Army Corps of Engineers Regulatory Program and have requested to be included on this list. The Fort Worth District, U.S. Army Corps of Engineers, does not certify, recommend, or endorse any consultants whether on this list or not. No recommendation or guarantee of competence or experience is expressed or implied by this listing. There are other consultants who are not included on this list. You may also wish to consult other sources of information such as telephone/business listings, internet search engines, etc. We suggest that prospective clients obtain cost information and qualifications before contracting for professional services.</p>		

<b>State</b>	<b>Zip Code</b>	<b>County</b>	<b>Phone Number</b>
Texas	78052	Atascosa	(830) 772-5868
Texas	78247	Bexar	(210) 858-6873
Texas	78213	Bexar	(210) 296-2100
Texas	77845	Brazos	(979) 694-7619
Texas	77808	Brazos	(979) 778-2810
Louisiana	71106	Caddo Parish	(318) 868-4848
Louisiana	71148-8565	Caddo Parish	(318) 465-8831
Texas	75686	Camp	(903) 855-1004
Texas	75757	Cherokee	(903) 894-6410
Texas	75093	Collin	(972) 628-3167
Texas	75069	Collin	(972) 562-7672
Texas	75069	Collin	(469) 301-2580
Texas	78131-1353	Comal	(830) 625-7205
Texas	78070	Comal	(830) 228-5446
Texas	75219	Dallas	(214) 341-9900
Texas	75206	Dallas	(214) 363-5996
Texas	75202	Dallas	(214) 245-1010
Texas	75038	Dallas	(972) 791-3222
Texas	75067	Dallas	800-871-6417
Texas	75225	Dallas	(214) 346-6252
Texas	75240	Dallas	(972) 770-1300
Texas	75063	Dallas	(214) 420-5600
Texas	75207	Dallas	(214) 741-7777
Texas	75001	Dallas	(469) 828-4136
Texas	75254	Dallas	(972) 233-2288
Texas	75235	Dallas	(214) 350-5600
Texas	75040	Dallas	(214) 926-0429
Texas	75006	Dallas	(972) 267-1900
Texas	75201	Dallas	(214) 740-2041
Texas	75234	Dallas	(972) 406-6950
Texas	76201	Denton	(940) 380-9453

Texas	75034	Denton	(972) 335-3580
Louisiana	70816	East Baton Rouge Parish	(225) 292-9007
Texas	75021	Grayson	(903) 464-9055
Texas	75604	Gregg	(903) 297-4673
Texas	75606-4026	Gregg	(903) 234-8443
Texas	77079	Harris	(281) 589-0898
Texas	77056	Harris	(713) 622-0227
Texas	77090	Harris	(281) 397-9016
Texas	77269-1465	Harris	(281) 895-6101
Texas	77042-4739	Harris	(713) 975-8555
Texas	77006	Harris	(346) 310-6218
Texas	77056	Harris	(713) 845-5401
Texas	77046	Harris	(713) 977-7770
Texas	75642	Harrison	(903) 633-8224
Texas	78666	Hays	(512) 353-3344
Texas	78504	Hidalgo	(956) 926-5000
Florida	33624	Hillsborough	(813) 968-7722
Texas	75482	Hopkins	(903) 885-0304
Missouri	64030	Jackson	(816) 966-8199
Kansas	66219	Johnson	(913) 599-6886
Texas	78006	Kendall	(830) 249-8284
Arizona	85258	Maricopa	(480) 800-3293 ext. 2007
Texas	76706	McLennan	(254) 754-0369
Texas	77353	Montgomery	(281) 252-9799
Texas	75961	Nacogdoches	(936) 559-9991
Texas	75964	Nacogdoches	(936) 568-9451
Texas	75110	Navarro	(903) 874-0223
Texas	75935	Shelby	(800) 780-9105
Texas	75713	Smith	(903) 324-8400
Texas	76103	Tarrant	(817) 269-2872



Texas	76107	Tarrant	(817) 806-1700
Texas	76102	Tarrant	(817) 810-0149 x225
Texas	76006	Tarrant	(817) 548-9998
Texas	76094-0786	Tarrant	(817) 274-7467
Texas	76102	Tarrant	(817) 332-8721
Texas	76118	Tarrant	(817) 589-0000
Texas	76137	Tarrant	(817) 847-1422
Texas	76102	Tarrant	(817) 735-7031
Texas	76120	Tarrant	
Texas	76006	Tarrant	(817) 303-2112
Texas	76102	Tarrant	(817) 335-6511
Texas	76034	Tarrant	(682) 223-1322
Texas	76102	Tarrant	
Texas	76102-4409	Tarrant	(817) 698-6700
Texas	79508	Taylor	(325) 572-5131
Texas	78746	Travis	(512) 347-9000
Texas	78746	Travis	(512) 306-9221
Texas	78729	Travis	(512)250-2600
Texas	78757	Travis	1 (800) 926-9242
Texas	78734	Travis	(512) 264-1095
Texas	78759	Travis	(512) 349-0700
Texas	78757	Travis	(512) 323-6350
Texas	78746	Travis	(512) 329-0031
Texas	78715	Travis	(512) 203-0484
Texas	78703	Travis	(512) 478-0858
Texas	78716	Travis	(512) 328-2430
Texas	78746	Travis	(512) 327-1180
Texas	78746	Travis	(512) 329-0155
Texas	78749	Travis	(512) 476-0891
Texas	78752	Travis	(512) 329-6080
Texas	78746	Travis	(512) 879-6629
Mississippi	39182	Warren	(601) 634-0097





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

## Nationwide Permit (NWP) Pre-Construction Notification (PCN) Template

This application template 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 template.

### Contents

- **Description of NWP 57**
- **Part I:** NWP Conditions and Requirements Checklist
  - General Conditions Checklist
  - NWP 57-Specific Requirements Checklist
  - Regional Conditions Checklist
- **Part II:** Project Information
- **Part III:** Project Impacts and Mitigation
- **Part IV:** Attachments
- **Instructions**

### **DESCRIPTION OF NWP 57 – ELECTRIC UTILITY LINE AND TELECOMMUNICATIONS ACTIVITIES**

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

**Electric utility lines and telecommunication lines:** This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of electric utility lines and telecommunication lines. There must be no change in pre-construction contours of waters of the United States. An "electric utility line and telecommunication line" is defined as any cable, line, fiber optic line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States 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 United States (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 electric utility line or telecommunication line crossing of each waterbody.

**Electric utility line and telecommunications substations:** This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with an electric utility line or telecommunication line in non-tidal waters of the United States, 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 United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

**Foundations for overhead electric utility line or telecommunication line towers, poles, and anchors:** This NWP authorizes the construction or maintenance of foundations for overhead electric utility line or telecommunication line towers, poles, and anchors in all waters of the United States, 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 electric utility lines or telecommunication lines, including overhead lines and substations, in non-tidal waters of the United States, 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 United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States 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 United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize electric utility lines or telecommunication lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Electric utility lines or telecommunication lines constructed over section 10 waters and electric utility lines or telecommunication 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 electric utility lines or telecommunication 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 electric utility lines or telecommunication lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the electric 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 of dredged or fill material, 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: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

**Note 1:** Where the electric utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the electric utility line to protect navigation.

**Note 2:** For electric utility line or telecommunications activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Electric utility line and telecommunications activities must comply with 33 CFR 330.6(d).

**Note 3:** Electric utility lines or telecommunication lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

**Note 4:** Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the electric utility line or telecommunication line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

**Note 5:** This NWP authorizes electric utility line and telecommunication line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

**Note 6:** For overhead electric utility lines and telecommunication lines authorized by this NWP, a copy of the PCN and NWP verification will be provided by the Corps to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

**Note 7:** For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, **including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32).** The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

## 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, 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 or Section 10(a) ESA 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 57 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 57?  Yes  No  N/A

**b.** If in Louisiana, does the project comply with the conditions of the LDEQ water quality certification for NWP 57?  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:
- Require a Section 10 permit.
  - The loss of waters of the U.S. exceeds 1/10-acre of wetlands and/or 3/100-acre of stream bed.
  - Potential endangered species.
  - Potential historic properties.
  - Required by Texas or Louisiana Regional Conditions.
  - Other:

**To ensure compliance with the NWP 57-specific requirements please answer the first question regarding all electric utility line and telecommunications activities and then answer the other questions as they apply to your project.**

**All electric utility line and telecommunications 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 57 and would require an individual permit application.

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

If you answered yes to question 2. above, be aware that the project would not be authorized by a NWP 57 and may require an individual permit application.

- 3.** Is each activity/crossing considered a single and complete project and have independent utility?  
 Yes    No    N/A

If you answered no to question 3. above, be aware that the project may require an individual permit application.

- 4. 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 57 and would require an individual permit application.

- 5. 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 57 and may require an individual permit application.

- 6.** 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 6. 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 57 and may require an individual permit application:

- 7.** 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 7. above, be aware that the project is not considered a "utility line" and would not be authorized by a NWP 57 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 57 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 57 and may require an individual permit application.

**Foundations for overhead electric utility line or telecommunication line towers, poles, and anchors:**

- 10.** 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 10. above, be aware that the project would not be authorized by a NWP 57 and may require an individual permit application.

**Access Road(s):**

- 11.** 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 11. above, be aware that the project would not be authorized by a NWP 57 and may require an individual permit application.

- 12. 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 57 and may require an individual permit application.

- 13. 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 57 and may require an individual permit application.

- 14.** 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 14. above, be aware that the project may not be authorized by a NWP 57 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 any of the following habitat types?:

- Pitcher plant bogs ((*Sarracenia* spp.) and/or sundews (*Drosera* spp.) and/or Bald Cypress/Tupelo swamps ((*Taxodium distichum*) and/or water tupelo (*Nyssa aquatica*))?  
 Karst Zones 1 and 2 located in Bexar, Travis and Williamson Counties (see [https://www.fws.gov/southwest/es/AustinTexas/Maps\\_Data.html](https://www.fws.gov/southwest/es/AustinTexas/Maps_Data.html)).  
 Caddo Lake and associated areas that are designated as "Wetland of International Importance" under the Ramsar Convention (see <http://caddolakedata.us/media/145/1996caddolakeramsar.pdf> or <http://caddolakedata.us/media/144/1996caddolakeramsar.jpg>).  
 Reaches of rivers (and their adjacent wetlands) that are included in the Nationwide Rivers Inventory (see <https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm/>)

If you answered yes to any of the above choices, 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. Is the activity located at a site approved as a compensatory mitigation site (either permittee-responsible, mitigation bank and/or in lieu fee) under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899?  
 Yes     No

If you answered yes to question 2. above, notification of the District Engineer is required in accordance with NWP GC 32.

**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 57 and would require an individual permit application.

2. Does the activity cause the permanent loss of greater than 1/2 acre of pine savanna 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 57 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 57 and would require an individual permit application.

4. 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 4. above, be aware that the project would not be authorized by a NWP 57 and would require an individual permit application.

5. *Regional Condition 5 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.*

6. Does the activity 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 6. above, notification of the District Engineer is required in accordance with NWP GC 32.

7. For activities involving the installation of a culvert, will the culvert be sufficiently sized to maintain expected high water flows, and installed at a sufficient depth to maintain low flows to sustain the movement of aquatic species?  Yes     No

If you answered no to question 7. above, be aware that the project would not be authorized by a NWP 57 and would require an individual permit application.

**Additional Discussion:**

**Part II: Project Information ( *Project No. SWF-* )**

<b>Box 1. Project Name:</b>		<b>Applicant Name/Person of Contact</b>	
<b>Applicant Title</b>		<b>Applicant Company, Agency, etc.</b>	
Mailing Address		Applicant's internal tracking number (if any)	
Work Phone with area code	Cell Phone with area code	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.			
<b>Signature of applicant</b>		Date (mm/dd/yyyy)	

<b>Box 2. Authorized Agent/Operator Name and Signature:</b> (If an agent is acting for the applicant during the permit process)	
<b>Agent/Operator Title</b>	<b>Agent/Operator Company, Agency, etc.</b>
Mailing Address	Agent's internal tracking number (if any)
E-mail Address	
Work Phone(s) with area code	Cell Phone with area code
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.	
<b>Signature of applicant</b>	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.	
<b>Signature of authorized agent</b>	Date (mm/dd/yyyy)

<b>Box 3. Name of property owner, if other than applicant:</b>	
<input type="checkbox"/> Multiple Current Owners (If multiple current property owners, check here and include a list as an attachment)	
<b>Owner Title</b>	<b>Owner Company, Agency, etc.</b>
Mailing Address	
Work Phone with area code	Home Phone with area code

<b>Box 4. Project location, including street address, city, county, state, and zip code where proposed activity will occur:</b>
<b>Nature of Activity</b> (Description of project; include all features; see instructions):
<b>Project Purpose</b> (Description of the reason or purpose of the project; see instructions):
Are there any other Federal Permits or Federal Agencies associated with this project? <input type="checkbox"/> Yes If yes, list the agency(ies) <input type="checkbox"/> No
Has a lead Federal Agency been identified? <input type="checkbox"/> Yes If yes, provide the agency name, agency POC, address, phone number, and email address. <input type="checkbox"/> No
Has a delineation of waters of the U.S., including wetlands, been completed? (see instructions) <input type="checkbox"/> Yes, Attached <input type="checkbox"/> No If a delineation has been completed, has it been verified in writing by the USACE? <input type="checkbox"/> Yes, Date of approved or preliminary jurisdictional determination (mm/dd/yyyy): USACE project: <input type="checkbox"/> No
Are color photographs of the existing conditions available? <input type="checkbox"/> Yes, Attached <input type="checkbox"/> No Are aerial photographs available? <input type="checkbox"/> Yes, Attached <input type="checkbox"/> No
<input type="checkbox"/> <b>Multiple Single and Complete Crossings</b> (If multiple single and complete crossings, check here and complete the table in Attachment D)
<b>Waterbody(ies)</b> (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

<b>Box 5. Reason(s) for Discharge into waters of the U.S.:</b>
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 all aquatic resources) 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 in length	Linear feet in width	Acres	Linear feet in length	Linear feet in width
Emergent wetlands						
Scrub/Shrub wetlands						
Forested wetlands						
Perennial streams						
Intermittent streams						
Impoundments						
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? (see Fort Worth District Navigable Waters list)  Yes  No

Is Section 404 of the Clean Water Act applicable?  Yes  No

**Box 7. Larger Plan of Development:**

This information is not applicable for Nationwide Permit 57.

**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 all aquatic resources) 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 (emergent wetland, scrub/shrub wetland, forested wetland, perennial stream, intermittent stream, impoundment, other) or non-jurisdictional (uplands<sup>1</sup>).

Mitigation Site Type and Number	Waterbody Type	Created	Restored	Enhanced	Preserved
<i>e.g., On-site 1</i>	<i>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:				

<sup>1</sup> 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 57?  Yes     No

Does the project include soil erosion control and sediment control Best Management Practices (BMPs)?

Yes     No

List the BMPs for soil erosion control and sediment control to be used, or explain why they aren't necessary for the project:

Does the project include controls for post-construction total suspended solids control?

Yes     No

List the controls for post-construction total suspended solids control, or explain why it isn't necessary for the project:

For Louisiana:

Does the project meet the conditions of the Louisiana Department of Environmental Quality (LDEQ) Clean Water Act Section 401 certification for NWP 57?  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:**

<b>Agency</b>	<b>Approval Type<sup>2</sup></b>	<b>Identification No.</b>	<b>Date Applied</b>	<b>Date Approved</b>	<b>Date Denied</b>

<sup>2</sup> 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 Template**

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**Instructions: [please do not include these pages when submitting template]**

1) **The Fort Worth District accepts paperless/electronic submittals as the primary means of accepting applications. All initial application materials should be sent to [CESWF-Permits@usace.army.mil](mailto:CESWF-Permits@usace.army.mil).**

2) **Complete Part I of the template first to determine if the project meets the conditions and requirements of NWP 57, 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>

3) **Boxes 1 to 3:** Provide contact information for the Applicant, Agent, Owner, etc.

4) **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:

[https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/juris\\_info/](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/juris_info/)

- 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.

**5) 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.

- 6) Box 6:** A list of navigable waters in the Fort Worth District can be found at the following website:

<https://swf-apps.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>

- 7) 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.

<https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=TX&stateName=Texas&statusCategory=Listed>

<https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=LA&stateName=Louisiana&statusCategory=Listed>

<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](http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/index.phtml)

- 8) 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>

- 9) 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 57. The TCEQ conditions of Section 401 certification for NWP 57 as well as a description of Best Management Practices can be found at the following website:

[https://www.swf.usace.army.mil/Portals/47/docs/regulatory/Permitting/General%20Permitting/TX\\_401\\_cert.pdf?ver=rIe8wttu6MRCA2s6Q4QQMg%3d%3d](https://www.swf.usace.army.mil/Portals/47/docs/regulatory/Permitting/General%20Permitting/TX_401_cert.pdf?ver=rIe8wttu6MRCA2s6Q4QQMg%3d%3d)

Projects in Louisiana require water quality certification from the Louisiana Department of Environmental Quality (LDEQ). Information about water quality certification from LDEQ can be found at the following website:

[https://www.swf.usace.army.mil/Portals/47/docs/regulatory/Permitting/General%20Permitting/LA\\_401\\_Cert.pdf?ver=ngbtr2e\\_QEGvADQ9cCTLNg%3d%3d](https://www.swf.usace.army.mil/Portals/47/docs/regulatory/Permitting/General%20Permitting/LA_401_Cert.pdf?ver=ngbtr2e_QEGvADQ9cCTLNg%3d%3d)

- 10) 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 template. If Attachment D is not needed, discard this page, but if more room is necessary, include an additional table.

**From:** [Meaux, Lisa](#)  
**To:** [Williams, Denise](#); [Brewer, Ashley](#); [Brown, Virginia](#)  
**Subject:** Fwd: Requested Environmental Assessment, Project No.169772  
**Date:** Thursday, June 08, 2023 8:40:22 AM  
**Attachments:** [BrazosCoProjNo169772 ProjectLetter.pdf](#)  
[ProjectNo169772 Soil Report.pdf](#)

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**From:** Anderson, Ashley - FPAC-NRCS, TX <ashley.anderson@usda.gov>  
**Sent:** Wednesday, June 7, 2023 4:10:08 PM  
**To:** Meaux, Lisa <lisa.barko@powereng.com>  
**Cc:** Stahnke, Alan - FPAC-NRCS, TX <alan.stahnke@usda.gov>  
**Subject:** [EXTERNAL] Requested Environmental Assessment, Project No.169772

<b>CAUTION:</b> This Email is from an <b>EXTERNAL</b> source. <b>STOP. THINK</b> before you <b>CLICK</b> links or <b>OPEN</b> attachments.
--

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Good afternoon Ms. Barko Meaux,

Attached you will find the requested environmental assessment for the transmission line and substation project located in Bexar County, Texas. If you have any questions or need any additional information, let me know.

Thank you,

**Ashley Anderson**  
Soil Scientist  
Temple, Texas  
USDA-NRCS  
254-742-9836

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Natural Resources  
Conservation Service

June 7, 2023

State Office

Power Engineers, Inc.  
16825 Northchase Drive  
Suite 1200  
Houston, TX 77060

101 S. Main Street  
Temple, TX 76501  
Voice 254.742.9800  
Fax 254.742.9819

Attention: Ms. Lisa Barko Meaux

Subject: Proposed SAT 15 138-kV Transmission Line and Substation Project,  
Bexar County, TX; Project No. 169772

Thank you for the opportunity to provide input on the potential environmental effects of the proposed SAT 15 138-kV Transmission Line and Substation Project located in Bexar County, Texas. The proposed site has been evaluated and does not involve any USDA-NRCS easements.

The soils in the proposed project area have been reviewed. There are a few soil limitations in the project area that should be taken into consideration while planning for the project. As with any project, soil erosion is a main concern and erosion prevention practices are recommended. There is some degree of potential soil erosion in the project area, especially with slopes ranging up to 15 percent. The majority of the soils in the project area have an indurated bedrock layer within 20 inches of the soil surface. This should be considered during planning. There is a high potential for steel corrosion for most of the area. There are no areas with hydric soils, which can be indicators of wetlands. There are no areas of flooding or ponding.

Enclosed is a Web Soil Survey map and reports illustrating the location of the soils as well as the ratings for related interpretations. We encourage you to consider this information during the construction of the proposed transmission line rebuild and take measures to protect the soils and water quality.

If you have any questions, please contact me at by email at [ashley.anderson@usda.gov](mailto:ashley.anderson@usda.gov)

Sincerely,

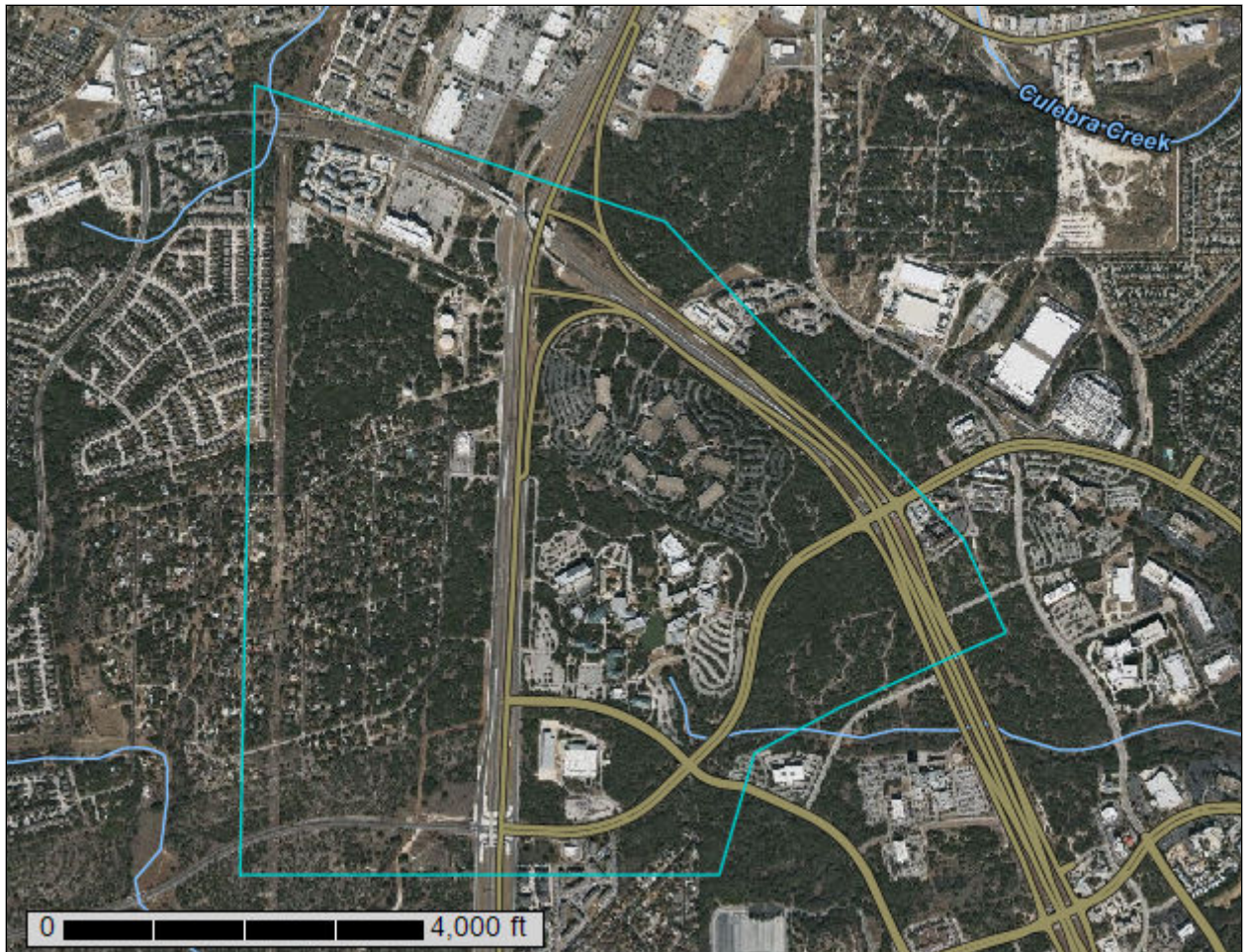
Ashley Anderson  
Soil Scientist



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

Power Engineers Project No. 169772



# Preface

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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](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

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## Soil Map

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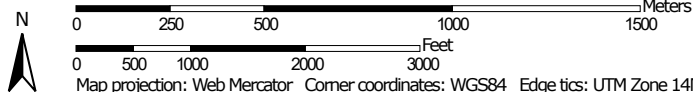
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Custom Soil Resource Report  
Soil Map



Map Scale: 1:20,100 if printed on A portrait (8.5" x 11") sheet.




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

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**MAP LEGEND**


**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

**MAP INFORMATION**

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

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

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

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

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

Soil Survey Area: Bexar County, Texas  
Survey Area Data: Version 26, Aug 24, 2022

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

Date(s) aerial images were photographed: Dec 8, 2020—Dec 14, 2020

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.

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## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LvB	Lewisville silty clay, 1 to 3 percent slopes	1.9	0.2%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	861.4	73.9%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	302.6	26.0%
<b>Totals for Area of Interest</b>		<b>1,165.8</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

## Custom Soil Resource Report

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

## Bexar County, Texas

### LvB—Lewisville silty clay, 1 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2vtgn  
*Elevation:* 240 to 1,470 feet  
*Mean annual precipitation:* 32 to 44 inches  
*Mean annual air temperature:* 63 to 68 degrees F  
*Frost-free period:* 240 to 270 days  
*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Lewisville and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Lewisville

##### Setting

*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Calcareous clayey alluvium derived from mudstone

##### Typical profile

*Ap - 0 to 15 inches:* silty clay  
*Bk1 - 15 to 38 inches:* silty clay  
*Bk2 - 38 to 69 inches:* silty clay

##### Properties and qualities

*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*Maximum salinity:* Nonsaline (0.7 to 1.1 mmhos/cm)  
*Available water supply, 0 to 60 inches:* High (about 9.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* R086AY007TX - Southern Clay Loam  
*Hydric soil rating:* No

#### Minor Components

##### Altoga

*Percent of map unit:* 10 percent

Custom Soil Resource Report

*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* R086AY007TX - Southern Clay Loam  
*Hydric soil rating:* No

**Branyon**

*Percent of map unit:* 5 percent  
*Landform:* Stream terraces, stream terraces  
*Landform position (three-dimensional):* Tread  
*Microfeatures of landform position:* Circular gilgai, circular gilgai  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* R086AY011TX - Southern Blackland  
*Hydric soil rating:* No

**TaB—Eckrant cobbly clay, 1 to 8 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2t0sg  
*Elevation:* 650 to 1,900 feet  
*Mean annual precipitation:* 30 to 35 inches  
*Mean annual air temperature:* 65 to 69 degrees F  
*Frost-free period:* 210 to 250 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Eckrant and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Eckrant**

**Setting**

*Landform:* Ridges  
*Landform position (two-dimensional):* Summit, shoulder, backslope  
*Landform position (three-dimensional):* Interfluve, side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from limestone

**Typical profile**

*A1 - 0 to 4 inches:* cobbly clay  
*A2 - 4 to 11 inches:* very cobbly clay  
*R - 11 to 80 inches:* bedrock

**Properties and qualities**

*Slope:* 1 to 8 percent  
*Surface area covered with cobbles, stones or boulders:* 2.3 percent  
*Depth to restrictive feature:* 4 to 20 inches to lithic bedrock

Custom Soil Resource Report

*Drainage class:* Well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.57 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 10 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Very low (about 1.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* D  
*Ecological site:* R081CY360TX - Low Stony Hill 29-35 PZ  
*Hydric soil rating:* No

**Minor Components**

**Brackett**

*Percent of map unit:* 7 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Ecological site:* R081CY355TX - Adobe 29-35 PZ  
*Hydric soil rating:* No

**Bexar**

*Percent of map unit:* 5 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R081CY361TX - Redland 29-35 PZ  
*Hydric soil rating:* No

**Krum**

*Percent of map unit:* 3 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R081CY357TX - Clay Loam 29-35 PZ  
*Hydric soil rating:* No

Custom Soil Resource Report

**TaC—Eckrant very cobbly clay, 5 to 15 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2yltv  
*Elevation:* 1,000 to 2,400 feet  
*Mean annual precipitation:* 30 to 35 inches  
*Mean annual air temperature:* 65 to 69 degrees F  
*Frost-free period:* 220 to 270 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Eckrant and similar soils:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Eckrant**

**Setting**

*Landform:* Ridges  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from limestone

**Typical profile**

*A1 - 0 to 4 inches:* very cobbly clay  
*A2 - 4 to 12 inches:* very cobbly clay  
*R - 12 to 30 inches:* bedrock

**Properties and qualities**

*Slope:* 5 to 15 percent  
*Surface area covered with cobbles, stones or boulders:* 0.0 percent  
*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock  
*Drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.57 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 10 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Very low (about 0.8 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D



Custom Soil Resource Report

*Ecological site:* R081CY360TX - Low Stony Hill 29-35 PZ  
*Hydric soil rating:* No

**Minor Components**

**Krum**

*Percent of map unit:* 4 percent  
*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* R081CY357TX - Clay Loam 29-35 PZ  
*Hydric soil rating:* No

**Crawford**

*Percent of map unit:* 3 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R081CY358TX - Deep Redland 29-35 PZ  
*Hydric soil rating:* No

**Bexar**

*Percent of map unit:* 3 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R081CY361TX - Redland 29-35 PZ  
*Hydric soil rating:* No

# **Soil Information for All Uses**

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## **Suitabilities and Limitations for Use**

The Suitabilities and Limitations for Use section includes various soil interpretations 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 interpretation.

## **Land Classifications**

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

## **Hydric Rating by Map Unit (Project No. 169772)**

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

## Custom Soil Resource Report

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

### References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report  
Map—Hydric Rating by Map Unit (Project No. 169772)



Map Scale: 1:20,100 if printed on A portrait (8.5" x 11") sheet.

0 250 500 1000 1500 Meters

0 500 1000 2000 3000 Feet


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



Custom Soil Resource Report







**MAP LEGEND**

**Area of Interest (AOI)**







 Area of Interest (AOI)

**Soils**







**Soil Rating Polygons**

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


**Soil Rating Lines**

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






**Soil Rating Points**

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

**MAP INFORMATION**

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

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

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

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

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

Soil Survey Area: Bexar County, Texas  
Survey Area Data: Version 26, Aug 24, 2022

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

Date(s) aerial images were photographed: Dec 8, 2020—Dec 14, 2020

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—Hydric Rating by Map Unit (Project No. 169772)**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LvB	Lewisville silty clay, 1 to 3 percent slopes	0	1.9	0.2%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	0	861.4	73.9%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	0	302.6	26.0%
<b>Totals for Area of Interest</b>			<b>1,165.8</b>	<b>100.0%</b>

**Rating Options—Hydric Rating by Map Unit (Project No. 169772)**

*Aggregation Method: Percent Present*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Lower*

**Land Management**

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

**Water Erosion Potential (TX) (Project No. 169772)**

"Water Erosion Potential (TX)" is a qualitative interpretation that evaluates a soil's potential to erode through the action of water. The potential assumes that the area being affected is bare, smooth, and exposed to the water erosion processes. The interpretation provides the user with a qualitative rating of the vulnerability of the soil to the action of water; it is not a measure of actual soil loss from erosion.

The water erosion potential of the soil is based on those soil properties or a combination of soil properties and landscape characteristics that contribute to runoff and have low resistance to water erosion processes. Soil features that contribute to water erosivity are surface-layer particle size, saturated hydraulic conductivity, and high runoff landscapes. Conversely, soil features that resist the erosive effect of water are high organic matter content in the surface layer and low runoff landscapes. The water erosion potential is a function of the interaction between

## Custom Soil Resource Report

those soil features that make the soil susceptible to water erosion and those that resist the water erosion process.

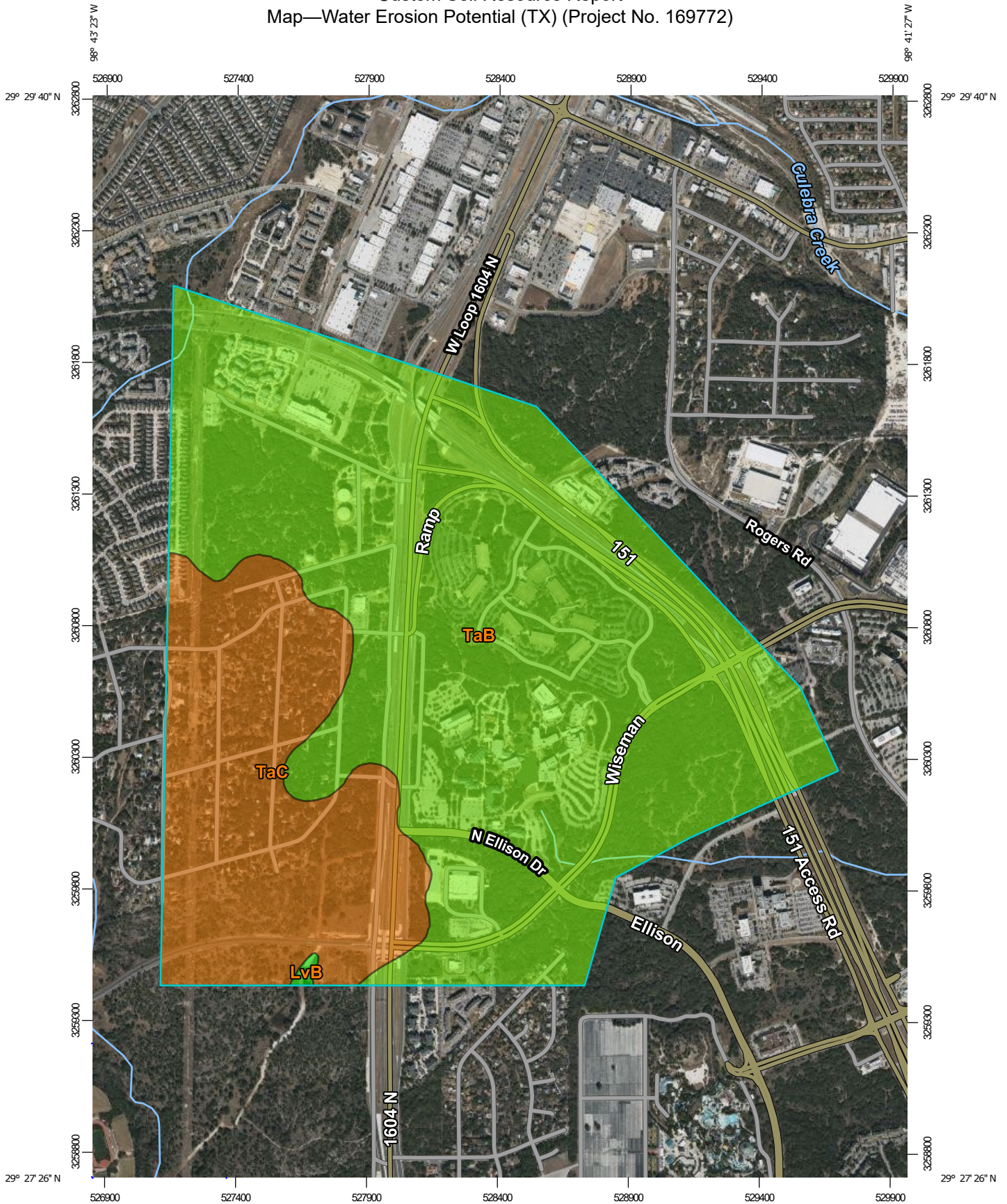
The ratings are both verbal and numerical. Numerical ratings indicate the soil's relative water erosion potential. They are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil has the greatest water erosion potential (1.00) and the point at which a soil has very low water erosion potential (0.00).

Verbal soil rating classes are based on the highest numerical rating for the most limiting soil feature(s) considered in the rating process. "Very high" (numerical values less than or equal to 1.0 to greater than 0.9) indicates that the soil has the greatest relative water erosion vulnerability. "High" (numerical value less than or equal to 0.9 to greater than 0.65) indicates that the soil has large relative water erosion vulnerability. "Moderate" (numerical value less than or equal to 0.65 to greater than 0.35) indicates that the soil has medium relative water erosion vulnerability. "Low" (numerical value less than or equal to 0.35 to greater than 0.1) indicates that the soil has small relative water erosion vulnerability. "Very low" (numerical value less than or equal to 0.10) indicates that the soil has little or no relative water erosion vulnerability.

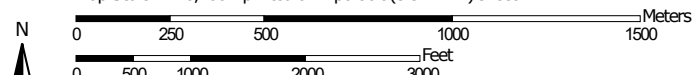
The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report  
Map—Water Erosion Potential (TX) (Project No. 169772)



Map Scale: 1:20,100 if printed on A portrait (8.5" x 11") sheet.




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



Custom Soil Resource Report







**MAP LEGEND**

**Area of Interest (AOI)**







 Area of Interest (AOI)

**Soils**







**Soil Rating Polygons**

-  Very high water erosion potential
-  High water erosion potential
-  Moderate water erosion potential
-  Low water erosion potential
-  Very low water erosion potential
-  Not rated or not available


**Soil Rating Lines**

-  Very high water erosion potential
-  High water erosion potential
-  Moderate water erosion potential
-  Low water erosion potential
-  Very low water erosion potential
-  Not rated or not available






**Soil Rating Points**

-  Very high water erosion potential
-  High water erosion potential
-  Moderate water erosion potential
-  Low water erosion potential
-  Very low water erosion potential
-  Not rated or not available


**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

**MAP INFORMATION**

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

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

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

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

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

Soil Survey Area: Bexar County, Texas  
Survey Area Data: Version 26, Aug 24, 2022

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

Date(s) aerial images were photographed: Dec 8, 2020—Dec 14, 2020

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.

Custom Soil Resource Report

**Tables—Water Erosion Potential (TX) (Project No. 169772)**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
LvB	Lewisville silty clay, 1 to 3 percent slopes	Very low water erosion potential	Lewisville (85%)	Percs slowly (1.00)	1.9	0.2%
				Organic matter (0.97)		
				Silt content (0.77)		
				LS factor (0.10)		
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	Low water erosion potential	Eckrant (85%)	Organic matter (1.00)	861.4	73.9%
				Percs slowly (0.99)		
				Silt content (0.59)		
				LS factor (0.35)		
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	High water erosion potential	Eckrant (90%)	LS factor (1.00)	302.6	26.0%
				Organic matter (1.00)		
				Percs slowly (0.99)		
				Silt content (0.58)		
<b>Totals for Area of Interest</b>					<b>1,165.8</b>	<b>100.0%</b>

Rating	Acres in AOI	Percent of AOI
Low water erosion potential	861.4	73.9%
High water erosion potential	302.6	26.0%
Very low water erosion potential	1.9	0.2%
<b>Totals for Area of Interest</b>	<b>1,165.8</b>	<b>100.0%</b>

**Rating Options—Water Erosion Potential (TX) (Project No. 169772)**

*Aggregation Method:* Dominant Condition  
*Component Percent Cutoff:* None Specified  
*Tie-break Rule:* Higher

**Wind Erosion Potential (TX) (Project No. 169772)**

The higher the numerical rating the greater the vulnerability rating class. The "very high" potential class (numerical values less than or equal to 1.0 to greater than 0.9) indicates that the soil has the greatest relative wind erosion vulnerability. The "high"

## Custom Soil Resource Report

class (numerical value less than or equal to 0.9 to greater than 0.65) indicates that the soil has large relative wind erosion vulnerability. The "moderate" class (numerical value less than or equal to 0.65 to greater than 0.4) indicates that the soil has medium relative wind erosion vulnerability. The "low" class (numerical value less than or equal to 0.4 to greater than 0.2) indicates that the soil has small relative wind erosion vulnerability. The "very low" class (numerical value less than or equal to 0.20) indicates that the soil has little or no relative wind erosion vulnerability.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site. The Wind Erosion Potential (TX) is a qualitative interpretation which evaluates a soil's potential to erode through the action of wind. The potential assumes that the area being affected is bare, smooth, and has a long distance exposed to the wind. The soil wind erosion potential provides the user with a qualitative rating of the vulnerability of the soil to the action of the wind and is not a measure of actual soil loss from erosion.

The wind erosion potential of the soil is based on those surface soil properties that by themselves or in combination with others contribute to the soil's potential wind erosivity. Those surface soil features that contribute to wind erosivity are particle size and carbonate content. Conversely, surface features that resist the erosive effect of wind are organic matter content and coarse fragments. The soil wind erosion potential is a function of the interaction between surface soil features that make the soil susceptible to wind erosion and those that resist the wind erosion process.

Numerical ratings or values indicate the soil's relative wind erosion potential. Ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil has the greatest wind erosion potential (1.00), and the point at which a soil has very low wind erosion potential (0.00).

The ratings are both verbal and numerical. The potential degree to which a soil is susceptible to wind erosion will range from "very high" to "very low" (from 1.0 to 0.0). Soils that have favorable surface particle size, high organic matter content, or protective coarse fragments will have "very low" wind erosion potential. Soils that have "very high" wind erosion potential are those with a surface layer that has a sandy particle size, high carbonate content, low organic matter content, or no coarse fragment protection.

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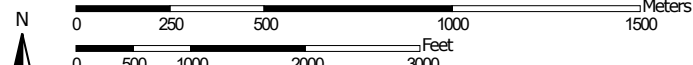
The higher the numerical rating the greater the vulnerability rating class. The "very high" potential class (numerical values less than or equal to 1.0 to greater than 0.9) indicates that the soil has the greatest relative wind erosion vulnerability. The "high" class (numerical value less than or equal to 0.9 to greater than 0.65) indicates that the soil has large relative wind erosion vulnerability. The "moderate" class (numerical value less than or equal to 0.65 to greater than 0.4) indicates that the soil has medium relative wind erosion vulnerability. The "low" class (numerical value less than or equal to 0.4 to greater than 0.2) indicates that the soil has small relative wind erosion vulnerability. The "very low" class (numerical value less than or equal to 0.20) indicates that the soil has little or no relative wind erosion vulnerability.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation

Custom Soil Resource Report  
Map—Wind Erosion Potential (TX) (Project No. 169772)



Map Scale: 1:20,100 if printed on A portrait (8.5" x 11") sheet.




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

Custom Soil Resource Report







**MAP LEGEND**

**Area of Interest (AOI)**






 Area of Interest (AOI)

**Soils**







**Soil Rating Polygons**

-  Very high
-  High
-  Moderate
-  Low
-  Very low
-  Not rated or not available


**Soil Rating Lines**

-  Very high
-  High
-  Moderate
-  Low
-  Very low
-  Not rated or not available






**Soil Rating Points**

-  Very high
-  High
-  Moderate
-  Low
-  Very low
-  Not rated or not available

**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

**MAP INFORMATION**

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

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

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

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

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Soil Survey Area: Bexar County, Texas  
Survey Area Data: Version 26, Aug 24, 2022

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

Date(s) aerial images were photographed: Dec 8, 2020—Dec 14, 2020

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.

Custom Soil Resource Report

**Tables—Wind Erosion Potential (TX) (Project No. 169772)**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
LvB	Lewisville silty clay, 1 to 3 percent slopes	High wind erosion potential	Lewisville (85%)	Carbonate content of surface (0.86)	1.9	0.2%
				Clay content of surface (0.85)		
				Silt content of surface (0.19)		
				Rock fragment content of surface (0.01)		
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	Very low wind erosion potential	Eckrant (85%)	Clay content of surface (0.85)	861.4	73.9%
				Rock fragment content of surface (0.49)		
				Organic matter content of surface (0.40)		
				Silt content of surface (0.11)		
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	Very low wind erosion potential	Eckrant (90%)	Clay content of surface (0.85)	302.6	26.0%
				Rock fragment content of surface (0.60)		
				Organic matter content of surface (0.40)		
				Silt content of surface (0.10)		
<b>Totals for Area of Interest</b>					<b>1,165.8</b>	<b>100.0%</b>

Rating	Acres in AOI	Percent of AOI
Very low wind erosion potential	1,164.0	99.8%
High wind erosion potential	1.9	0.2%
<b>Totals for Area of Interest</b>	<b>1,165.8</b>	<b>100.0%</b>

**Rating Options—Wind Erosion Potential (TX) (Project No. 169772)**

*Aggregation Method: Dominant Condition*

*Component Percent Cutoff: None Specified*

Custom Soil Resource Report

*Tie-break Rule:* Higher



## Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

## Soil Qualities and Features

This folder contains tabular reports that present various soil qualities and features. The reports (tables) include all selected map units and components for each map unit. 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.

### Soil Features (Project No. 169772)

This table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

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. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

*Subsidence* is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage, or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

*Potential for frost action* is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (Ksat), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly,

Custom Soil Resource Report

or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

*Risk of corrosion* pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Custom Soil Resource Report

Soil Features—Bexar County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		<i>Low-RV-High</i>	<i>Range</i>		<i>Low-High</i>	<i>Low-High</i>			
		<i>In</i>	<i>In</i>		<i>In</i>	<i>In</i>			
LvB—Lewisville silty clay, 1 to 3 percent slopes									
Lewisville		—	—		0	0	None	High	Low
TaB—Eckrant cobbly clay, 1 to 8 percent slopes									
Eckrant	Lithic bedrock	4- 11-20	—	Indurated	0	0	None	High	Low
TaC—Eckrant very cobbly clay, 5 to 15 percent slopes									
Eckrant	Lithic bedrock	10- 12-20	—	Indurated	0	0	None	High	Low

## Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

### Water Features (Project No. 169772)

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

*Hydrologic soil groups* are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

*Surface runoff* refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

*Water table* refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top ( *upper limit* ) and base ( *lower limit* ) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on

## Custom Soil Resource Report

observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. The kind of water table, apparent or perched, is given if a seasonal high water table exists in the soil. A water table is perched if free water is restricted from moving downward in the soil by a restrictive feature, in most cases a hardpan; there is a dry layer of soil underneath a wet layer. A water table is apparent if free water is present in all horizons from its upper boundary to below 2 meters or to the depth of observation. The water table kind listed is for the first major component in the map unit.

*Ponding* is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

*Flooding* is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

*Duration* and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

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Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>		<i>Ft</i>				
LvB—Lewisville silty clay, 1 to 3 percent slopes											
Lewisville	B	High	Jan-Dec	—	—	—	—	—	None	—	None
TaB—Eckrant cobbly clay, 1 to 8 percent slopes											
Eckrant	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None
TaC—Eckrant very cobbly clay, 5 to 15 percent slopes											
Eckrant	D	High	Jan-Dec	—	—	—	—	—	None	—	None

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

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## 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

In Reply Refer To:  
Project Code: 2023-0069935  
Project Name: Bexar County

April 17, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location 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 boundary 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.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please 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. Please 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 threatened and endangered species and to determine whether projects may affect threatened and endangered 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

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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.

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 the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. 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:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.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 Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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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

04/17/2023

## PROJECT SUMMARY

Project Code: 2023-0069935  
Project Name: Bexar County  
Project Type: Transmission Line - New Constr - Above Ground  
Project Description: Transmission Substation  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@29.436982299999997,-98.47263307816695,14z>



Counties: Bexar County, Texas

## ENDANGERED SPECIES ACT SPECIES

There is a total of 22 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 2 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 Fisheries<sup>1</sup>, 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.

## MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

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**BIRDS**

NAME	STATUS
Golden-cheeked Warbler <i>Setophaga chrysoparia</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/33">https://ecos.fws.gov/ecp/species/33</a>	Endangered
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"><li>▪ Wind Energy Projects</li></ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
Red Knot <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"><li>▪ Wind Energy Projects</li></ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a>	Endangered

**AMPHIBIANS**

NAME	STATUS
San Marcos Salamander <i>Eurycea nana</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6374">https://ecos.fws.gov/ecp/species/6374</a>	Threatened

**FISHES**

NAME	STATUS
Fountain Darter <i>Etheostoma fonticola</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5858">https://ecos.fws.gov/ecp/species/5858</a>	Endangered

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**INSECTS**

NAME	STATUS
[no Common Name] Beetle <i>Rhadine exilis</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6942">https://ecos.fws.gov/ecp/species/6942</a>	Endangered
[no Common Name] Beetle <i>Rhadine infernalis</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3804">https://ecos.fws.gov/ecp/species/3804</a>	Endangered
Comal Springs Dryopid Beetle <i>Stygoparnus comalensis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7175">https://ecos.fws.gov/ecp/species/7175</a>	Endangered
Comal Springs Riffle Beetle <i>Heterelmis comalensis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3403">https://ecos.fws.gov/ecp/species/3403</a>	Endangered
Helotes Mold Beetle <i>Batrisodes venyivi</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1149">https://ecos.fws.gov/ecp/species/1149</a>	Endangered
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

**ARACHNIDS**

NAME	STATUS
Cokendolpher Cave Harvestman <i>Texella cokendolpheri</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/676">https://ecos.fws.gov/ecp/species/676</a>	Endangered
Government Canyon Bat Cave Meshweaver <i>Cicurina vespera</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7037">https://ecos.fws.gov/ecp/species/7037</a>	Endangered
Government Canyon Bat Cave Spider <i>Tayshaneta microps</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/553">https://ecos.fws.gov/ecp/species/553</a>	Endangered
Madla Cave Meshweaver <i>Cicurina madla</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2467">https://ecos.fws.gov/ecp/species/2467</a>	Endangered
Robber Baron Cave Meshweaver <i>Cicurina baronia</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2361">https://ecos.fws.gov/ecp/species/2361</a>	Endangered



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**CRUSTACEANS**

NAME	STATUS
Peck's Cave Amphipod <i>Stygobromus</i> (= <i>Stygonectes</i> ) <i>pecki</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8575">https://ecos.fws.gov/ecp/species/8575</a>	Endangered

**FLOWERING PLANTS**

NAME	STATUS
Black Lace Cactus <i>Echinocereus reichenbachii</i> var. <i>albertii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5560">https://ecos.fws.gov/ecp/species/5560</a>	Endangered
Bracted Twistflower <i>Streptanthus bracteatus</i> There is <b>final</b> critical habitat for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2856">https://ecos.fws.gov/ecp/species/2856</a>	Threatened
Texas Wild-rice <i>Zizania texana</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/805">https://ecos.fws.gov/ecp/species/805</a>	Endangered

**CRITICAL HABITATS**

There are 8 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
[no Common Name] Beetle <i>Rhadine exilis</i> <a href="https://ecos.fws.gov/ecp/species/6942#crithab">https://ecos.fws.gov/ecp/species/6942#crithab</a>	Final
[no Common Name] Beetle <i>Rhadine infernalis</i> <a href="https://ecos.fws.gov/ecp/species/3804#crithab">https://ecos.fws.gov/ecp/species/3804#crithab</a>	Final
Cokendolpher Cave Harvestman <i>Texella cokendolpheri</i> <a href="https://ecos.fws.gov/ecp/species/676#crithab">https://ecos.fws.gov/ecp/species/676#crithab</a>	Final
Government Canyon Bat Cave Meshweaver <i>Cicurina vespera</i> <a href="https://ecos.fws.gov/ecp/species/7037#crithab">https://ecos.fws.gov/ecp/species/7037#crithab</a>	Final
Government Canyon Bat Cave Spider <i>Tayshaneta microps</i> <a href="https://ecos.fws.gov/ecp/species/553#crithab">https://ecos.fws.gov/ecp/species/553#crithab</a>	Final
Helotes Mold Beetle <i>Batrisodes venyivi</i> <a href="https://ecos.fws.gov/ecp/species/1149#crithab">https://ecos.fws.gov/ecp/species/1149#crithab</a>	Final
Madla Cave Meshweaver <i>Cicurina madla</i> <a href="https://ecos.fws.gov/ecp/species/2467#crithab">https://ecos.fws.gov/ecp/species/2467#crithab</a>	Final
Robber Baron Cave Meshweaver <i>Cicurina baronia</i> <a href="https://ecos.fws.gov/ecp/species/2361#crithab">https://ecos.fws.gov/ecp/species/2361#crithab</a>	Final

## **IPAC USER CONTACT INFORMATION**

Agency: Power Engineer  
Name: Virginia Brown  
Address: 2600 Via Fortuna  
Address Line 2: Ste 450  
City: Austin  
State: TX  
Zip: 78746  
Email: virginia.brown@powereng.com  
Phone: 5129683968



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Austin Ecological Services Field Office

1505 Ferguson Lane

Austin, TX 78754-4501

Phone: (512) 937-7371



In Reply Refer To:  
Project Code: 2023-0069935  
Project Name: Bexar County

June 26, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location 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 boundary 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.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please 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. Please 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 threatened and endangered species and to determine whether projects may affect threatened and endangered 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

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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.

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 the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. 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:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.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 Code 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

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## 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**

1505 Ferguson Lane  
Austin, TX 78754-4501  
(512) 937-7371

06/26/2023

## PROJECT SUMMARY

Project Code: 2023-0069935  
Project Name: Bexar County  
Project Type: Transmission Line - New Constr - Above Ground  
Project Description: Transmission Substation  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@29.43763195,-98.4723712695902,14z>



Counties: Bexar County, Texas

## ENDANGERED SPECIES ACT SPECIES

There is a total of 23 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 Fisheries<sup>1</sup>, 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.

## MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered



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**BIRDS**

NAME	STATUS
Golden-cheeked Warbler <i>Setophaga chrysoparia</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/33">https://ecos.fws.gov/ecp/species/33</a>	Endangered
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>▪ Wind Energy Projects</li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
Red Knot <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>▪ Wind Energy Projects</li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a>	Endangered

**AMPHIBIANS**

NAME	STATUS
San Marcos Salamander <i>Eurycea nana</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6374">https://ecos.fws.gov/ecp/species/6374</a>	Threatened
Texas Blind Salamander <i>Eurycea rathbuni</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>▪ Effects to water quality and quantity in the Edwards Aquifer and to surface waters in the recharge and contributing zones of the Edwards Aquifer must be considered if they adversely affect water quality and quantity in Texas blind salamander habitat</li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/5130">https://ecos.fws.gov/ecp/species/5130</a>	Endangered

**FISHES**

NAME	STATUS
Fountain Darter <i>Etheostoma fonticola</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5858">https://ecos.fws.gov/ecp/species/5858</a>	Endangered

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**INSECTS**

NAME	STATUS
[no Common Name] Beetle <i>Rhadine exilis</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6942">https://ecos.fws.gov/ecp/species/6942</a>	Endangered
[no Common Name] Beetle <i>Rhadine infernalis</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3804">https://ecos.fws.gov/ecp/species/3804</a>	Endangered
Comal Springs Dryopid Beetle <i>Stygoparnus comalensis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7175">https://ecos.fws.gov/ecp/species/7175</a>	Endangered
Comal Springs Riffle Beetle <i>Heterelmis comalensis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3403">https://ecos.fws.gov/ecp/species/3403</a>	Endangered
Helotes Mold Beetle <i>Batrisodes venyivi</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1149">https://ecos.fws.gov/ecp/species/1149</a>	Endangered
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

**ARACHNIDS**

NAME	STATUS
Cokendolpher Cave Harvestman <i>Texella cokendolpheri</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/676">https://ecos.fws.gov/ecp/species/676</a>	Endangered
Government Canyon Bat Cave Meshweaver <i>Cicurina vespera</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7037">https://ecos.fws.gov/ecp/species/7037</a>	Endangered
Government Canyon Bat Cave Spider <i>Tayshaneta microps</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/553">https://ecos.fws.gov/ecp/species/553</a>	Endangered
Madla Cave Meshweaver <i>Cicurina madla</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2467">https://ecos.fws.gov/ecp/species/2467</a>	Endangered
Robber Baron Cave Meshweaver <i>Cicurina baronia</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2361">https://ecos.fws.gov/ecp/species/2361</a>	Endangered

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**CRUSTACEANS**

NAME	STATUS
Peck's Cave Amphipod <i>Stygobromus (=Stygonectes) pecki</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8575">https://ecos.fws.gov/ecp/species/8575</a>	Endangered

**FLOWERING PLANTS**

NAME	STATUS
Black Lace Cactus <i>Echinocereus reichenbachii var. albertii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5560">https://ecos.fws.gov/ecp/species/5560</a>	Endangered
Bracted Twistflower <i>Streptanthus bracteatus</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2856">https://ecos.fws.gov/ecp/species/2856</a>	Threatened
Texas Wild-rice <i>Zizania texana</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/805">https://ecos.fws.gov/ecp/species/805</a>	Endangered

**CRITICAL HABITATS**

There are 9 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
[no Common Name] Beetle <i>Rhadine exilis</i> <a href="https://ecos.fws.gov/ecp/species/6942#crithab">https://ecos.fws.gov/ecp/species/6942#crithab</a>	Final
[no Common Name] Beetle <i>Rhadine infernalis</i> <a href="https://ecos.fws.gov/ecp/species/3804#crithab">https://ecos.fws.gov/ecp/species/3804#crithab</a>	Final
Bracted Twistflower <i>Streptanthus bracteatus</i> <a href="https://ecos.fws.gov/ecp/species/2856#crithab">https://ecos.fws.gov/ecp/species/2856#crithab</a>	Final
Cokendolpher Cave Harvestman <i>Texella cokendolpheri</i> <a href="https://ecos.fws.gov/ecp/species/676#crithab">https://ecos.fws.gov/ecp/species/676#crithab</a>	Final
Government Canyon Bat Cave Meshweaver <i>Cicurina vespera</i> <a href="https://ecos.fws.gov/ecp/species/7037#crithab">https://ecos.fws.gov/ecp/species/7037#crithab</a>	Final
Government Canyon Bat Cave Spider <i>Tayshaneta microps</i> <a href="https://ecos.fws.gov/ecp/species/553#crithab">https://ecos.fws.gov/ecp/species/553#crithab</a>	Final
Helotes Mold Beetle <i>Batrisodes venyivi</i> <a href="https://ecos.fws.gov/ecp/species/1149#crithab">https://ecos.fws.gov/ecp/species/1149#crithab</a>	Final
Madla Cave Meshweaver <i>Cicurina madla</i> <a href="https://ecos.fws.gov/ecp/species/2467#crithab">https://ecos.fws.gov/ecp/species/2467#crithab</a>	Final
Robber Baron Cave Meshweaver <i>Cicurina baronia</i>	Final

06/26/2023

NAME

STATUS

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<https://ecos.fws.gov/ecp/species/2361#crithab>

## **IPAC USER CONTACT INFORMATION**

Agency: Power Engineer  
Name: Virginia Brown  
Address: 2600 Via Fortuna  
Address Line 2: Ste 450  
City: Austin  
State: TX  
Zip: 78746  
Email: virginia.brown@powereng.com  
Phone: 5129683968

**From:** [Giles, Kipling D.](#)  
**To:** [Williams, Denise](#)  
**Cc:** [Rasmussen, Kirk](#)  
**Subject:** [EXTERNAL] Fwd: [InternetMail] CPS Energy Proposed Line 4  
**Date:** Thursday, October 05, 2023 10:43:16 AM

**CAUTION:** This Email is from an **EXTERNAL** source. **STOP. THINK** before you **CLICK** links or **OPEN** attachments.

FYI. Dan said you were needing this.

KG

Begin forwarded message:

**From:** "Williams, Christina" <christina\_williams@fws.gov>  
**Date:** September 29, 2023 at 6:45:29 PM CDT  
**To:** "Giles, Kipling D." <KDGiles@cpsenergy.com>, "Barho, Rebecca Hays" <rbarho@nossaman.com>  
**Subject:** [InternetMail] CPS Energy Proposed Line 4

You don't often get email from christina\_williams@fws.gov. [Learn why this is important \[aka.ms\]](#)

**EXTERNAL EMAIL:** Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Kip and Rebecca,

This is a follow-up to our September 14<sup>th</sup> meeting regarding a potential new CPS line for participation in the CPS Habitat Conservation Plan (HCP) and associated section 10(a)(1)(B) incidental take permit (ESPER0012435; ITP) issued by the U.S. Fish and Wildlife Service (Service). We understand there are various placement options CPS is considering that are proposed in proximity to the 57.6-acre SAWS Anderson Pump Station Preserve (Preserve). This Preserve serves as mitigation for the SAWS' Micron and WRIP HCP and associated ITP (TE36242C). The Service accepted the Preserve as mitigation because it supports two listed karst invertebrates within two features (S-19 and S-29) and meets the Service's 2011 Preserve Design Guidance for a medium quality preserve. The primary needs for a recovery quality preserve are:

1. The cave entrance, or footprint if known, is more than 345 feet from the edge of the preserve;
2. The entire surface and subsurface drainage basins remain undisturbed;
3. The preserve is a minimum of 40 acres; and
4. The preserve is monitored and managed in perpetuity.

We understand CPS is considering various lines within and adjacent to this Preserve. In particular you asked us to look at Line 4, which goes through the southern portion of the Preserve. We have looked at the proximity of this line in relation to the caves on the Preserve and have determined that Line 4 would run approximately 240 feet to the south of S-19 and approximately 170 feet to the south of S-29. Having impacts within the 345-foot area around an occupied feature would potentially render this feature no longer a recovery quality preserve.

While HCPs do not have to meet recovery, the Service cannot issue ITPs that would preclude recovery. Because of the known distribution of both of the species within this Preserve, recovery would likely be precluded for both listed species with construction of Line 4, which could be considered a violation of CPS's ITP.

We recommend that CPS Energy look for other options for construction of the needed infrastructure that does not dissect the SAWS Preserve. Also, please note that species lists and generic letters generated from our Information for Planning and Consultation (IPaC) system are merely indications of species that could be within a particular projects area (typically a county based assessment only) and are not species specific assessments of individual projects, even if the project footprint is uploaded into IPaC. I'm happy to explain this in more detail, if needed.

Thank you,

Christina

Christina Williams  
Division Supervisor  
Consultations and HCPs  
U.S. Fish and Wildlife Service  
1505 Ferguson Lane  
Austin, Texas 78754  
Cell 512-850-0980

*Our mission is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.*

**From:** [Meaux, Lisa](#)  
**To:** [Brewer, Ashley](#); [Williams, Denise](#)  
**Subject:** Fwd: CPS Energy 138kV transmission line and SAT 15 Substation (eTRAC 202308210)  
**Date:** Thursday, May 25, 2023 9:14:08 AM  
**Attachments:** [thc\\_email\\_logo\\_65px\\_e6b590e5-b608-48df-a46f-bbaf70308c09.png](#)  
[thc\\_email\\_signature\\_url\\_2\\_9467b7d4-3cf0-4ad6-a56a-a173b9a5102c.png](#)  
[thc\\_email\\_signature\\_fb\\_18px\\_f52434f2-a1bc-4678-9a22-33dd4606f18b.png](#)  
[thc\\_email\\_signature\\_twitter\\_18px\\_a0320705-84ac-453d-b948-ce7b9ec24d9b.png](#)  
[thc\\_email\\_signature\\_ig\\_18px\\_b246144c-2e4c-4e72-a377-d3dbb77f8934.png](#)  
[thc\\_email\\_signature\\_vt\\_18px\\_87f9dc8d-8149-47b9-988d-88c487090614.png](#)  
[thc\\_email\\_signature\\_li\\_18px\\_5bdd2c5b-c609-480e-a872-4fe1572cd908.png](#)  
[thc\\_email\\_signature\\_email\\_18px\\_61592cdc-f8f6-43c2-83c5-648830375491.png](#)

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Please address as appropriate.

Thanks

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---

**From:** Emily Dylla, PhD <Emily.Dylla@thc.texas.gov>  
**Sent:** Thursday, May 25, 2023 7:50:25 AM  
**To:** Meaux, Lisa <lisa.barko@powereng.com>  
**Subject:** [EXTERNAL] CPS Energy 138kV transmission line and SAT 15 Substation (eTRAC 202308210)

**CAUTION:** This Email is from an **EXTERNAL** source. **STOP. THINK** before you **CLICK** links or **OPEN** attachments.

Hi Lisa,

We have received the referenced request for consultation, Unfortunately, there are no documents attached to the submission for us to review. Can you please try again to upload them? If you're having trouble with it (sometimes eTRAC can be a pain), please also feel free to send me the doc(s) via email, and I will get them uploaded for you.

Thanks,  
Emily



**Emily Dylla, PhD**

Regional Archeologist  
Archeology Division  
P.O. Box 12276, Austin, Texas 78711-2276  
Phone: +1 512 463 5915

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[\[linkedin.com\]](#) [\[public.govdelivery.com\]](#)





P.O. Box 12276  
Austin, Texas 78711-2276  
512-463-6100  
thc.texas.gov

June 5, 2023

Lisa Barko  
Power Engineers, Inc.  
16825 Northchase Dr.  
Suite 1200  
Houston, TX 77060

Re: Project Review under the Antiquities Code of Texas, *Proposed SAT 15 138-k Transmission Line and Substation Project* (THC Tracking No. 202308210)

Dear Ms. Barko,

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under the Antiquities Code of Texas.

The review staff, led by Emily Dylla and Caitlin Brashear, has completed its review. Many archeological sites have been recorded in the vicinity of the Study Area, including one with undetermined eligibility for listing on the National Register of Historic Places (NRHP) that is situated within the Study Area. This area is considered high probability for precontact and historical sites, although given the mapped geology and soils they are likely to be deposited in a shallow context. Parts of the Study Area have been previously developed, lowering the likelihood of intact archeological deposits in those specific areas. We recommend archeological shovel testing in areas without previous development or disturbances such as existing roadways. Because this project will involve CPS Energy owned or controlled properties, a Texas Antiquities Permit will be required before conducting survey across these lands. Once the route has been finalized and all regulatory jurisdictions have been established, please submit a scope of work meeting all applicable state and federal requirements for our review. We welcome submissions through our online eTRAC system. Links to the eTRAC portal and a user guide can be found on our website at <https://www.thc.texas.gov/etrac-system>.

Additionally, should the project ultimately include Federal involvement, any above-ground resources that are 45 years or older within the Area of Potential Effect (APE) will need to be identified and evaluated for listing in the NRHP. Further, any resources identified as eligible will need to be assessed for effects by the proposed project.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [emily.dylla@thc.texas.gov](mailto:emily.dylla@thc.texas.gov), [caitlin.brashear@thc.texas.gov](mailto:caitlin.brashear@thc.texas.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "M Wolfe", is written over a light blue circular stamp.

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



TEXAS GENERAL LAND OFFICE  
COMMISSIONER DAWN BUCKINGHAM, M.D.

July 20, 2022

Lisa Barko Meaux  
Power Engineers, Inc.  
16825 Northchase Drive, Ste 1200  
Houston, TX 77060-6012

Re: Proposed SAT 15 138 kV Transmission Line and Substation Project  
Bexar County, Texas  
POWER Engineers, Inc. Project No. 169772

Dear Ms. Meaux:

On behalf of Commissioner Buckingham, 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 on this project, I can be reached by email at [jeff.burroughs@glo.texas.gov](mailto:jeff.burroughs@glo.texas.gov) or by phone at (512) 463-7845.

Again, thank you for your inquiry.

Sincerely,

Jeff Burroughs  
Manager, Right-of-Way Department  
Leasing Operations



Life's better outside.®

June 26, 2023

Lisa Barko Meaux  
POWER Engineers, Incorporated  
16825 Northchase Drive, Suite 1200  
Houston, TX 77060

RE: Proposed SAT 15 138-kV transmission line and substation project, Bexar County, Texas  
POWER Engineers Project Number 169772

Dear Ms. Barko Meaux:

Texas Parks and Wildlife Department (TPWD) received the preliminary information request regarding the project referenced above. On behalf of CPS Energy, POWER Engineers, Incorporated (POWER) is preparing an Environmental Assessment (EA) to support CPS Energy's internal and external regulatory activities associated with the project.

**Project Description**

CPS Energy is proposing to construct a new double-circuit 138-kilovolt (kV) transmission line in Bexar County, Texas. The proposed line would begin at the proposed SAT 15 Substation to be located approximately 0.4 miles west of the intersection of State Highway (SH) 151 and Wiseman Boulevard, to the existing CPS Energy Cagnon to Helotes 138-kv transmission line located approximately 0.5 miles west of SH 1604.

POWER is gathering 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 routing new transmission lines along existing road, pipeline, transmission line or other utility right-of-ways (ROW) or easements to reduce habitat fragmentation. By utilizing previously disturbed areas, existing utility corridors, county roads, private 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, is available online at TPWD's Ecological and Environmental Review Program website ([https://tpwd.texas.gov/huntwild/wild/wildlife\\_diversity/habitat\\_assessment/](https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/habitat_assessment/)).

Commissioners

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David Yoskowitz, Ph.D.  
Executive Director

## **Federal Regulations**

### *Endangered Species Act*

Federally listed animal species and their habitat are protected from “take” on any property by the Endangered Species Act (ESA). Take of a federally listed species can be allowed if it is “incidental” to an otherwise lawful activity and must be permitted in accordance with Section 7 or 10 of the ESA. Federally listed plants are not protected from take except on lands under federal jurisdiction or for which a federal nexus (i.e., permits or funding) exists. Take of a federally listed species or its habitat without allowance from the U.S. fish and Wildlife Service (USFWS) is a violation of the ESA.

### Karst invertebrates

The proposed project study area is located in Karst Zones 1 and 2. Karst Zone 1 is defined as, “areas known to contain endangered karst invertebrate species” and Karst Zone 2 is defined as, “areas having a high probability of containing suitable habitat for endangered karst invertebrate species.” Karst invertebrates are troglobites, spending their entire lives underground, inhabiting caves and mesocavernous voids in karst limestone. Surface activities that may fill voids, cap or seal cave entrances, alter surface vegetation or alter drainage patterns can affect karst invertebrates. Excavations or other surface activities could inadvertently alter subsurface cave habitat.

The Texas Natural Diversity Database (TXNDD) contains occurrence records for the Braken Bat Cave meshweaver (*Cicurina venii*), a federally listed endangered eyeless spider occurring in karst features, near the project area. This species was also encountered within the proposed project area by the Texas Department of Transportation (TxDOT) during an SH 151 improvement project in 2012. That TxDOT project was redesigned to avoid impacting the spider.

**Recommendation:** The USFWS has developed a five-step approach for determining if karst invertebrates may be present in a project area. More information and the karst survey protocol are available online at the USFWS Southwest Region Ecological Services website. TPWD recommends contacting the USFWS-Ecological Services Office in Austin regarding appropriate measures to take to ensure potential impacts to karst invertebrates are avoided and/or minimized.

At a minimum, a survey of the eventual selected route should be conducted by a qualified geologist or karst biologist with demonstrated experience identifying karst features. Due to the potential for karst features or caves without surface expression to be encountered during excavation, TPWD recommends that if a cave or karst feature is encountered during construction, work immediately cease in the vicinity of the feature, the feature should be covered, and a Section 10(a)(1)(A) permitted scientist should inspect the site as soon as possible to evaluate potential for protected species habitat. All other applicable void discovery protocols, as outlined in the April 27, 2022 (or most recent) USFWS Section 10(a)(1)(A) Karst

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Invertebrate Survey Requirements document, should be followed. Additionally, if caves or karst features are encountered in the project area during construction, TPWD recommends that no work take place within 50 meters (164 feet) of a known cave.

Maintaining native vegetation in areas containing karst features is important. Surface vegetation provides nutrients to the cave ecosystem directly through plant material being washed into the karst feature with water and indirectly by providing habitat and food for the animal communities that contribute nutrients to the karst ecosystem (such as cave crickets, small mammals, and other vertebrates). A healthy vegetative community protects the karst environment from contaminants and may also help control the spread of exotic species such as red imported fire ants (*Solenopsis invicta*) and tawny crazy ants (*Nylanderia fulva*). Loss of the vegetation community could lead to nutrient depletion. Maintaining native surface vegetation in the vicinity of karst features can also help minimize temperature fluctuations, maintain moisture regimes, reduce potential for contamination, and reduce sedimentation from soil erosion.

#### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) prohibits taking, attempting to take, capturing, killing, selling, purchasing, possessing, transporting, and importing of migratory birds, their eggs, parts, or nests, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The USFWS Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

Review of aerial photography and the Ecological Mapping Systems of Texas (EMST), indicate that the study area consists primarily of live oak mottes and woodlands, oak-hardwood motte and woodland, Ashe juniper-live oak shrubland, and urban development (low and high intensity).

Data from the eBird online application have documented more than 130 bird species, including species of greatest conservation need (SGCN), at the Northwest Vista College eBird hotspot located within the project study area.

**Recommendation:** TPWD recommends identifying and routing new transmission lines along existing utility corridors or other previously disturbed areas. 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 100-foot radius

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buffer of vegetation remain around nests until eggs have hatched and the young have fledged; however, the size of the buffer zone is dependent on various factors and can be coordinated with the local or regional USFWS office.

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. Birds most susceptible of colliding with electrical transmission lines (e.g. egrets, waterfowl, doves, and shorebirds) occur on the Northwest Vista Collage eBird hotspot species list within the project's study area.

**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 preferred alternative.

TPWD recommends the transmission line design should utilize avian safety features described in the publication:

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. 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, Chapter 64-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 Code (PWC); specifically, section 64.002 provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. PWC 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. PWC chapter 64 does not allow for incidental take.

Although not documented in the TXNDD, many bird species which are not listed as threatened or endangered are protected by chapter 64 of the PWC and are known to be year-round or seasonal residents or seasonal migrants through the proposed project area.

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**Recommendation:** Please review the *Federal Regulations: Migratory Bird Treaty Act* section above for recommendations as they are applicable for chapter 64 of the PWC compliance.

*Parks and Wildlife Code, Section 68.015*

PWC 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 the USFWS or TPWD. A copy of *TPWD Guidelines for Protection of State-Listed Species*, which includes a list of penalties for take of species, can be found on the TPWD Wildlife Habitat Assessment Program website. State-listed species may only be handled by persons with appropriate authorization from the TPWD Wildlife Permits Office. For more information regarding Wildlife Permits, please contact the Wildlife 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.

**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. 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 proposed transmission line route. Specific evaluations should be designed to predict project impacts upon these natural resources including potential impacts to state-listed species.

**Beneficial Management Practices**

TPWD recommends implementing the following beneficial management practices (BMP) to avoid or minimize impacts to wildlife and SGCN, including state listed SGCN, potentially occurring at the construction site for this project:

1. In general, TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from discrete 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

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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.

2. 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 and hydromulch containing microplastics should be avoided.
3. TPWD recommends designing the project to minimize removal of vegetation and retain native habitats. TPWD recommends that precautions be taken to avoid impact to SGCN flora and fauna, natural plant communities, and priority habitat types of the ecoregion while working in Bexar County, or if encountered during project construction, operation, and maintenance activities. Areas exhibiting a native grass and forbs component should be protected from disturbance and from introduction of non-native vegetation. TPWD encourages clearly marking areas found to contain rare plants as work zone avoidance areas prior to construction, maintenance, and operation activities.
4. TPWD recommends informing employees and contractors of the potential for state listed species and other SGCN to occur in the project area and to avoid impacts to all wildlife that are encountered. Wildlife observed during construction should be allowed to safely leave the site or be translocated to a nearby area with similar habitat that would not be disturbed during construction. TPWD recommends that any translocations of reptiles be the minimum distance possible, no greater than one mile, and preferably with 100-200 yards from the initial encounter location. For purposes of relocation, surveys, monitoring, and research, state listed species may only be handled by persons with the appropriate authorization obtained through the TPWD Wildlife Permits Program. For more information on this authorization, please contact the Wildlife Permits Office at (512) 389-4647.
5. Waterways, floodplains, riparian corridors, lakes, and wetlands provide valuable wildlife habitat, and TPWD recommends protecting them to the maximum extent possible. TPWD recommends establishing disturbance-free buffers contiguous to wetlands or aquatic systems to preserve wildlife cover, food sources, and travel corridors and constructing the transmission line to span all creeks. During construction, trucks and equipment should use existing bridges to cross creeks. Erosion control measures should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site-specific native vegetation.



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6. Where trenching or other excavation is involved in construction, TPWD recommends contractors keep trenching, excavation, and backfilling crews close together to minimize the number of trenches or excavation areas left open at any given time during construction. Any holes left open for more than two daylight hours should be inspected for the presence of trapped wildlife prior to backfilling. TPWD recommends any open trenches or excavation areas be covered overnight and inspected every morning to ensure no wildlife species have been trapped. If trenches and excavation areas cannot be backfilled the day of initial excavation or covered overnight, then escape ramps should be installed, if feasible, at least every 300 feet. Escape ramps consist of short lateral trenches or wooden planks sloping to the surface at an angle less than 45 degrees (1:1).
  
7. Significant declines in the population of migrating monarch butterflies (*Danaus plexippus*), a federal candidate species, have led to widespread concern about this species and other native insect pollinator species due to reduction in native floral resources. To support pollinators and migrating monarchs, TPWD encourages the establishment of native wildflower habitats on private and public lands. Infrastructure ROW can provide habit for a diverse community of pollinators, providing food, breeding, or nesting opportunities. Infrastructure ROW extend across a variety of landscapes and can aid dispersal of pollinators by linking fragmented habitats. By acting as refugia for pollinators in otherwise inhospitable landscapes, this habitat can contribute to the maintenance of healthy ecosystems and provide ecological services such as crop pollination. The publication, Monarch Habitat Development on Utility Rights of Way, can be found at the TPWD Wildlife Habitat Assessment Program webpage. TPWD encourages the project proponent to restore or revegetate impacted areas with vegetation that provides habitat for monarch butterflies and other pollinator species. Species appropriate for establishment within the project area can be found by accessing the Lady Bird Johnson Wildflower Center, working with TPWD biologist to develop an appropriate list of species, or utilizing resources found at the Monarch Watch website or the Xerces Society's Guidelines webpage. For areas of the site that already exhibit floral resources and for areas that are planted with floral resources, TPWD recommends incorporating pollinator conservation into maintenance plans for the site to promote and sustain the availability of flowering species throughout the growing season. TPWD recommends scheduling vegetation maintenance to occur after seeds from pollinator plants have been released and avoiding herbicide that affect floral resources.
  
8. To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of SGCN to the TXNDD following the data submittal instructions found at the *TPWD Texas Natural Diversity Database: Submit Data* webpage. An additional method for reporting observations of species is through the iNaturalist community app where plant and animal observations are uploaded from a smartphone. The observer then selects to add the observation to specific TPWD Texas Nature Tracker Projects appropriate for the taxa observed, including Herps of Texas, Birds of Texas, Texas Eagle Nests, Texas Whooper

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Watch, Mammals of Texas, Rare Plants of Texas, Bees & Wasps of Texas, Terrestrial Mollusks of Texas, Texas Freshwater Mussels, Fishes of Texas, and All Texas Nature.

TPWD advises review and implementation of these recommendations in the preparation of the environmental document for the project. Please contact me at (361) 431-6003 or [russell.hooten@tpwd.texas.gov](mailto:russell.hooten@tpwd.texas.gov) if you have any questions or we may be of further assistance.

Sincerely,

*Russell Hooten*

Russell Hooten  
Wildlife Habitat Assessment Program  
Wildlife Division

/rh 50736

**From:** [Otto, Daniel T.](#)  
**To:** [AFGSC.A3OA.TERPS@us.af.mil](mailto:AFGSC.A3OA.TERPS@us.af.mil); [christopher.lippolis@us.af.mil](mailto:christopher.lippolis@us.af.mil)  
**Cc:** [krasmussen@iw.com](mailto:krasmussen@iw.com)  
**Subject:** DOD Notification  
**Date:** Monday, September 11, 2023 9:32:00 AM  
**Attachments:** [SAT15 Preliminary Segment Map.pdf](#)  
[DOD Notice of Intent to File CCN Application -SAT15.pdf](#)  
[DoD May 9 Correspondence.pdf](#)

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Good morning,

CPS Energy intends to file an application to amend its certificate of convenience and necessity with the Public Utility Commission of Texas to construct a new double circuit 138 kV transmission line extending approximately 1.2 – 2.5 miles from the CPS Energy's existing Helotes to Cagnon 138 kV transmission line to a new substation located on Wiseman Blvd to the northeast of N. Ellison Drive. We held a public meeting for the project on June 7, 2023. Regrettably, the notice of that event was not sent to your department.

The attached documents have been sent to the Military Aviation and Installation Assurance Siting Clearinghouse via mail, and describe the project and its preliminary route segments. Would you please review the proposed project and let us know if you have any concerns? If you have any questions, please do not hesitate to reach out to me.

Your feedback would be greatly appreciated.

Daniel T. Otto, PE, PMP, MBA

Manager | S&T Regulatory Support

CPS Energy | 500 McCullough, San Antonio, Texas 78215 | MD: RT0801

Office: 210.353.4852 | Mobile: 210.289.9685

[cpsenergy.com](http://cpsenergy.com)



Mr. Steven Sample  
Executive Director  
Military Aviation and Installation Assurance Siting Clearinghouse  
3400 Defense Pentagon, Room 5C646  
Washington, DC 20301-3400

Re: Proposed Transmission Line Project – SAT15 Project, Bexar County, Texas

Dear Mr. Sample:

On May 9, 2023, POWER Engineers, Inc. (POWER) sent you the attached letter notifying you of transmission line project that is being proposed by the City of San Antonio, acting by and through the City Public Service Board (CPS Energy) within Bexar County, Texas. As stated in the initial consultation letter, CPS Energy intends to file an application to amend its certificate of convenience and necessity (CCN) to construct a new double circuit 138 kV transmission line extending approximately 1.2 – 2.5 miles from the CPS Energy's existing Helotes to Cagnon 138 kV transmission line to a new substation located on Wiseman Blvd to the northeast of N. Ellison Drive. Subsequent to the initial consultation letter, preliminary proposed alternative routing segments have been developed for the proposed project as shown on the attached figure.

POWER is nearing the conclusion of preparing an Environmental Assessment (EA) to support CPS Energy's internal and external regulatory activities associated with the proposed project. The EA will identify environmental, cultural, and land use constraints within the study area, and POWER will also evaluate the routes between the end points, taking into consideration the identified constraints and the need to serve increasing electrical load in the area. As you can see from the attached preliminary routing figure, the preliminary proposed alternative route segments are in an area connecting to, paralleling, or near existing 345 kV and 138 kV transmission lines and, thus, are not anticipated to present any new or unusual concerns.

We are notifying you, pursuant to 16 Tex. Admin. Code § 22.52(a)(4), of CPS Energy's intent to file the CCN amendment application with the Public Utility Commission of Texas (PUC). A public meeting was held for this project on June 7, 2023. We regret that this notice to you was inadvertently not sent at that time. We are providing notice now in hope that you will be able to review the proposed project and let us know if you have any concerns. Pursuant to the PUC rules, once the routing study is completed and the application is filed, we will provide you notice of that as well.

Please know that CPS Energy welcomes any input or information your office would like to provide regarding this project. Please do not hesitate to reach out to me if you have any questions regarding this matter.

Sincerely,

A handwritten signature in blue ink that reads "Daniel T. Otto". The signature is stylized and includes a horizontal line through the middle of the name.

Daniel T. Otto

**From:** [Otto, Daniel T.](#)  
**To:** [aetc.terps1@us.af.mil](mailto:aetc.terps1@us.af.mil)  
**Cc:** [krasmussen@jw.com](mailto:krasmussen@jw.com)  
**Subject:** FW: DOD Notification  
**Date:** Monday, September 18, 2023 3:00:00 PM  
**Attachments:** [SAT15 Preliminary Segment Map.pdf](#)  
[DOD Notice of Intent to File CCN Application -SAT15.pdf](#)  
[DoD May 9 Correspondence.pdf](#)

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Good afternoon,

We sent the attached information and correspondence to the Military Aviation and Installation Assurance Siting Clearinghouse as well as the AFGSC TERPS. In following up with AFGSC I was notified that this review falls under the AETC, so I am reaching out to see if there is any additional information that you need.

Your feedback is greatly appreciated.

Daniel T. Otto, PE, PMP, MBA

Manager | S&T Regulatory Support

CPS Energy | 500 McCullough, San Antonio, Texas 78215 | MD: RT0801

Office: 210.353.4852 | Mobile: 210.289.9685

[cpsenergy.com](http://cpsenergy.com)

---

**From:** Otto, Daniel T.

**Sent:** Monday, September 11, 2023 9:32 AM

**To:** AFGSC.A3OA.TERPS@us.af.mil; christopher.lippolis@us.af.mil

**Cc:** [krasmussen@jw.com](mailto:krasmussen@jw.com)

**Subject:** DOD Notification

Good morning,

CPS Energy intends to file an application to amend its certificate of convenience and necessity with the Public Utility Commission of Texas to construct a new double circuit 138 kV transmission line extending approximately 1.2 – 2.5 miles from the CPS Energy's existing Helotes to Cagnon 138 kV transmission line to a new substation located on Wiseman Blvd to the northeast of N. Ellison Drive. We held a public meeting for the project on June 7, 2023. Regrettably, the notice of that event was not sent to your department.

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Your feedback would be greatly appreciated.

Daniel T. Otto, PE, PMP, MBA

Manager | S&T Regulatory Support

CPS Energy | 500 McCullough, San Antonio, Texas 78215 | MD: RT0801

Office: 210.353.4852 | Mobile: 210.289.9685

[cpsenergy.com](http://cpsenergy.com)

**From:** [LIPPOLIS, CHRISTOPHER P MSgt USAF AFGSC AFGSC/A3OA](#)  
**To:** [Otto, Daniel T.; AFGSC A3OA TERPS Workflow](#)  
**Cc:** [Rasmussen, Kirk](#)  
**Subject:** [InternetMail] RE: DOD Notification  
**Date:** Monday, September 18, 2023 1:34:26 PM

**EXTERNAL EMAIL: Do not click any links or open any attachments unless you trust the sender and know the content is safe.**

Mr Otto,

Per our phone conversation that AOR should be AETC below is their Org Box:

[aetc.terps1@us.af.mil](mailto:aetc.terps1@us.af.mil)

V/R

CHRISTOPHER P. LIPPOLIS, MSgt, USAF

Manager, AFGSC TERPS

AFGSC/A360A Airfield Operations Branch Barksdale AFB, LA

DSN: (312) 781-2962

Comm: (318) 456-2962

Org Box: [AFGSC.A3OA.TERPS@us.af.mil](mailto:AFGSC.A3OA.TERPS@us.af.mil)

---

**From:** Otto, Daniel T. <DTOtto@cpsenergy.com>

**Sent:** Monday, September 11, 2023 9:32 AM

**To:** AFGSC A3OA TERPS Workflow <AFGSC.A3OA.TERPS@us.af.mil>; LIPPOLIS, CHRISTOPHER P MSgt USAF AFGSC AFGSC/A3OA <christopher.lippolis@us.af.mil>

**Cc:** Rasmussen, Kirk <krasmussen@jw.com>

**Subject:** [Non-DoD Source] DOD Notification

Good morning,

CPS Energy intends to file an application to amend its certificate of convenience and necessity with the Public Utility Commission of Texas to construct a new double circuit 138 kV transmission line extending approximately 1.2 – 2.5 miles from the CPS Energy's existing Helotes to Cagnon 138 kV transmission line to a new substation located on Wiseman Blvd to the northeast of N. Ellison Drive. We held a public meeting for the project on June 7, 2023. Regrettably, the notice of that event was not sent to your department.

The attached documents have been sent to the Military Aviation and Installation Assurance Siting Clearinghouse via mail, and describe the project and its preliminary route segments. Would you please review the proposed project and let us know if you have any concerns? If you have any questions, please do not hesitate to reach out to me.

Your feedback would be greatly appreciated.

Daniel T. Otto, PE, PMP, MBA

Manager | S&T Regulatory Support

CPS Energy | 500 McCullough, San Antonio, Texas 78215 | MD: RT0801

Office: 210.353.4852 | Mobile: 210.289.9685

[cpsenergy.com](http://cpsenergy.com)

**Appendix B**  
**Public Involvement**

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# S.A. has rich history of repurposing quarries

According to my mother, my great-grandfather, Refugio Lopez, worked at removing stone from the Brackenridge Park quarry, and worked in building the San Antonio Zoo animal pits, as well as Alamo Stadium. Could you provide more history/information about this?



**Paula Allen**  
GUEST COLUMNIST

Also, I grew up off North St. Mary's Street and remember that the area by Brackenridge Park was called the Rock Quarry, or La Piedreda, as it was known to the Mexican Americans living in the neighborhood. When Alamo Stadium received a face-lift a few years ago, I was taken aback when Express-News articles referred to it as the "Rock Pile." Where did that name come from?

— Richard Cortez Arredondo



Courtesy Richard Cortez Arredondo

**A reader's great-grandfather, Refugio Lopez, who worked in the Brackenridge Park quarry, is shown fourth from right, in front of the two men standing at the door of the "automatic shovel."**

Your grandfather, who lived from 1867 to 1941, might have worked in that quarry at several stages of his life, as the area progressed through different stages of its own. From 1880 to 1908, it was leased by the Alamo Cement Co., the first manufacturer of Portland cement west of the Mississippi River. (Portland cement uses a mixture of ground limestone and other materials fired in a kiln and ground again to make an exceptionally strong type of cement for concrete, known as "artificial stone.")

Once this original quarry was played out, with high-quality stone harder to excavate, the company, renamed the San Antonio Portland Cement Co., moved to its new quarters known as Cementville on what is now the site of the Alamo Quarry Market.

After that, the city-owned tract became a city quarry that supplied crushed rock for street building, a trash dump and a materials yard (storage space for construction materials).

Refugio Lopez probably didn't stay with the cement company. Most documents list his occupation as "carpenter," including the 1910, 1920 and

1930 U.S. census and city directories between 1908 and 1929. Earlier than that, the directories list him as a gardener or laborer.

He may have come back later to the old quarry to work on one of the many civic-minded projects that made use of its strengths — natural beauty and essentially free rock. As the cement company said in a 50th anniversary advertisement in the San Antonio Express, Jan. 29, 1930, "in all the world, there is not another abandoned manufacturing site of comparable interest and charm," citing "Brackenridge Park, with its unique Sunken Garden and Japanese Lily Ponds (now the Japanese Tea Garden)" and the "section of the old quarry which the city of San Antonio now uses to house the cages of its zoological exhibit."

The idea to make San Antonio "the South's first cageless zoo" came from a group of residents who formed the Zoological Society of San Antonio, a support group whose members would "contribute toward the purchase of new species," said the Express,

Dec. 30, 1928, and would continue to "take an active interest in (the zoo's) growth."

The St. Louis Zoo provided an example — "barless" enclosures whose construction "in natural depressions" allowed animals to move around freely in more natural-seeming surroundings while separated from human onlookers by smooth walls, moats and elevated walkways for viewing.

Besides being more enjoyable for visitors, this form of display was cost-effective.

Under better conditions, fewer animals would die and need to be replaced, and "surplus animals" could be sold for "a source of considerable revenue."

A bear pit, in three sections for different species, was built in a section of the old rock quarry adjoining the zoo. Nearby was Monkey Island, "where hundreds of monkeys of all varieties cavort unhampered by cages," said the San Antonio Light, Nov. 3, 1929.

Judging from the model of the Thew Automatic Shovel (steam shovel) and the background, the photograph you shared of your grandfather at

work in front of a rocky construction site was taken during the 1920s, maybe at the Monkey Island construction site.

"The limestone cliffs in the background of the bear pits were a lot higher than the ones shown in this photo," said Lewis Fisher, author of "Brackenridge: San Antonio's Acclaimed Urban Park." By the time this photo was taken, he suggested, "the crew could have moved on to Monkey Island, with its lower rock outcroppings."

The "barless" exhibits were so successful that the city announced plans to "replace cages holding the smaller animals with pits similar to the bear pits" and for "a pit for the elephant in an old rock quarry behind Monkey Island," says the Light, Aug. 23, 1933.

"Some of these habitats are still in use and currently in the process of being reimagined," zoo spokesman Cyle Perez said.

By the time Alamo Stadium was constructed for the San Antonio Independent School District in 1939 to 1940, Lopez

would have been in his early 70s. In the 1940 census, his occupation is left blank, and on his 1941 death certificate, he's said to be retired.

Alamo Stadium (mentioned here Feb. 14, 2015) was built with federal funds from the Works Progress Administration, which typically employed people who had been out of work and were found to be in need by a local relief organization.

After years of discussion, including proposals for other locations and protests by neighboring homeowners, the city conveyed 30 acres of quarry land to SAISD for \$10 as stipulated by an ordinance passed May 31, 1939, with the WPA's use-it-or-lose-it deadline looming.

Architects Phelps & DeWees & Simmons designed the district's first stadium using the natural bowl of the old quarry. "The stadium will be built against the cliff wall on the west with the natural limestone forming a portion of the rim," said the Light, Aug. 2, 1939, the date of the groundbreaking.

Limestone quarried on-site was used to complete the outer wall that enclosed the stadium. Additional parking was built in another part of the old quarry, and streets were extended to allow access.

The new facility was named "Alamo Stadium" by the SAISD school board, which had appointed a committee to sift through public submissions that included Bluebonnet, Bexar, Cactus, Laurel and San Antonio Stadium. The stadium opened Sept. 20, 1940.

The first printed reference to the nickname I could find was in a sports column in the Light, Sept. 23, 1940, by Harold Scherwitz that compliments city schools athletic director Claude Kellam on "your big rockpile."

From then on, most newspaper stories used some variation of this name, usually "the Big Rock Pile."

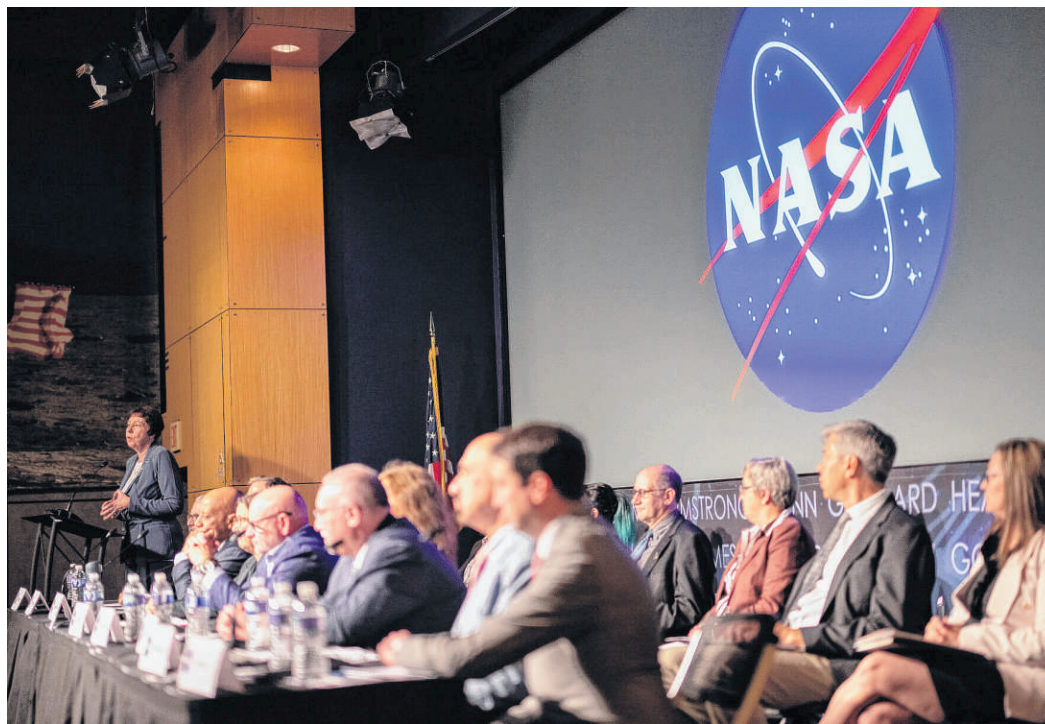
historycolumn@yahoo.com |  
Twitter: @sabhistorycolumn |  
Facebook:  
SanAntoniohistorycolumn

## UFOS

From page A3

appear to be moving quickly through the air; in one an object appears to rotate and in another an aviator is heard remarking that the object he spots is racing against the wind. NASA's independent study team, which only uses declassified data, said there is no evidence connecting UAPs with extraterrestrial life. Still, they acknowledged the heightened public interest.

More than 800 UAP sightings have been collected in the past 27 years. Of those, maybe 2 to 5 percent are truly anomalous, said Sean Kirkpatrick, director of the All-domain Anomaly Resolution Office, which was started



**Nicola Fox, associate administrator for NASA's Science Mission Directorate, speaks during a meeting of NASA's unidentified anomalous phenomena (UAP) independent study team, Wednesday at the Mary W. Jackson NASA Headquarters in Washington.**

NASA/Joel Kowsky

last year within the Department of Defense.

Most UAPs have explainable sources, such

as commercial aircraft, military equipment, drones, weather balloons, SpaceX Starlink satellites or ionospheric phenomena including auroras.

For instance, Kirkpatrick showed a nighttime video with three dots that moved left then right, left then right, over and over. Those dots were planes lined up to land at a major airport. The planes were all flying to the left, and the back-and-forth motion was caused by a "jitter" in the sensor.

Optical illusions are common when flying a plane or spacecraft, confirmed former NASA astronaut and fighter pilot Scott Kelly. He described flying near Virginia Beach when his companion thought he saw a UAP. They turned around, and it was a Bart Simpson balloon.

That's why better data collection will be a crucial part of the recommendations for studying UAPs. Kirkpatrick said the

new DOD office is analyzing which current sensors, such as those on satellites or used by the Federal Aviation Administration to monitor air traffic, could help observe UAPs. His organization is also deploying surveillance systems built to specifically look for and track these phenomena. These systems would operate over long periods of time to help researchers understand what's normal and what's not.

"This will take time," he said. "It's working through the data and the signatures that we have. It'll be a little bit of searching some old data. It'll be looking at dedicated sensors in the future."

Federica Bianco, an astrophysicist and data scientist with the University of Delaware, added that UAP data should include surrounding factors like the time and location a phenomena was spotted, the type of sensors used, the noises heard and the

temperature outside.

Crowdsourcing could help. And if multiple people capture the same thing on their smartphones from different angles, then researchers could infer the location and velocity to determine if the object was a plane or balloon or something else.

"Some of them will almost certainly be novel physical phenomena," said David Spergel, chair of the NASA independent study team and president of the Simons Foundation that issues grants and conducts math and science research. "We have learned a lot about our planet and how the universe works. There's a lot we don't know."

He said NASA could work with an outside company to develop an app to collect this crowdsourced information. There could also be a website where this data would be uploaded.

Ultimately, the team hopes that NASA's global recognition, standards for high-quality data and use of public-private partnerships can help guide this new approach to researching UAPs.

But it has a lot of work to do first, said Mike Gold, a former NASA employee who is now chief growth officer at space infrastructure company Redwire Corp. Gold would like to see a permanent UAP office at NASA, something the agency has not yet agreed to.

"I think we have an inflection point opportunity," he said. "If you don't institutionalize something at NASA, the fear is it can go away far too quickly."

andrea.leinfelder@houstonchronicle.com

000417



### Proposed Construction of an Electric Substation and Transmission Line

CPS Energy will host a public open house informational meeting regarding the construction of a new electric substation and transmission line near the intersection of State Hwy. 151 and Wiseman Blvd.

**Wednesday, June 7, 2023  
5:30 P.M.**

**11605 State Hwy 151  
San Antonio, TX 78251**

CPS Energy representatives will be available to receive comments and answer questions from area residents. This event will have an informal "come and go" type format consisting of information stations addressing specific areas of the project. Attendees are encouraged to review each station and ask questions.

This open house is free and open to the public.

For more information, please contact **Daniel Otto, S&T Regulatory Support Manager, CPS Energy at 210-353-2515.**

# Entretenimiento

## CALENDARIO

**Teatro para niños**  
**CUÁNDO:** hasta el domingo 4 de junio (horarios varían).  
**DÓNDE:** Magik Theatre, 420 South Alamo, San Antonio.  
**INFO:** el teatro infantil presenta *School House Rock Live*, el musical que cuenta la historia de Tom, un maestro de escuela que está ansioso por su primer día de clase. Intenta relajarse viendo la TV y descubre que su programa favorito, de pronto, cobra vida. Junto con la banda de School House Rock, Tom se da cuenta de lo divertido que puede ser aprender. Más información en [magiktheatre.org](http://magiktheatre.org).

**Exposición de arte**  
**CUÁNDO:** hasta el domingo 4 de junio (horarios varían).  
**DÓNDE:** Contemporary at Blue Star, 116 Blue Star, San Antonio.  
**INFO:** *In Passing: Fronterño Epics Across Time, Juan de Dios Mora and Zeke Peña* es una exposición de dos artistas que exploran temas de pertenencia y comunidad a través de imágenes vívidas y fantásticas. Zeke Peña y Juan de Dios Mora han cultivado estilos gráficos distintos para construir mundos que expanden el tiempo y el espacio para abordar la inmigración y los derechos humanos, influenciados por la ciencia ficción y las tradiciones satíricas y caricaturescas. Más en [sa.org.](http://contemporary-</a></p>
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**En el Zoológico**  
**CUÁNDO:** hasta el lunes 4 de septiembre (horarios varían).  
**DÓNDE:** San Antonio Zoo, 3903 N. St Mary's St., San Antonio.  
**INFO:** es hora de batir récords mundiales con el nuevo evento de verano del zoo de San Antonio: ¡Récords del Mundo Salvaje! con Guinness World Records. Conoce los rasgos de los animales que han batido récords, las iniciativas de conservación y muchos otros datos insuperables mientras exploras y compites por cada récord mundial salvaje por todo el zoo. Este evento cuenta con la colaboración de Guinness World Records. Más en [sazoo.org](http://sazoo.org).

**Conciertos en Paper Tiger**  
**CUÁNDO:** miércoles 31 de mayo y viernes 2 de junio (horarios varían).  
**DÓNDE:** Paper Tiger, 2410 N. Saint Marys St., San Antonio.  
**INFO:** el miércoles se presentan Clan of Xymox, Curse Mackey, A Cloud of Ravens y DJ Kill. Los conciertos posteriores incluyen a Fugitive, Tribal Gaze, Afflictive Nature, Future S, Onism E, Semihelix y High Heavens (viernes). Más en [papertigersatx.com](http://papertigersatx.com).

**Comedia en el teatro**  
**CUÁNDO:** miércoles 31 de mayo, viernes 2 y sábado 3 de junio (horarios varían).  
**DÓNDE:** Majestic & Empire Theatres, 224 E. Houston St., San Antonio.



Annie Mulligan / Archivo

### El Jardín Botánico de San Antonio ofrece un taller para aprender a hacer bonsais y una exposición.

**INFO:** el miércoles llegan Iván Fematt 'La Mole' y Adrián Marcelo con *Hermanos de leche*, su primera gira internacional basada en comedia oscura y chistes prohibidos. El viernes se presenta el comediante Joe Gatto, conocido por sus programas televisivos *Impractical Jokers* y *The Misery Index*. El sábado ocupa el escenario Prima-donna, la banda tributo a la cantante estadounidense Madonna. Más en [majesticempire.com](http://majesticempire.com).

**Conciertos en Gruene**  
**CUÁNDO:** miércoles 31 de mayo al martes 6 de junio (horarios varían).  
**DÓNDE:** Gruene Hall, 1281 Gruene Road, New Braun-

fels.  
**INFO:** este miércoles se presenta The Georges. Los conciertos posteriores incluyen a Lance Lipinsky & The Lovers (jueves), Max Stalling (viernes), Pat Byrne Band y Red Shahan (sábado), Henri Herbert Band y Guy Forsyth Band (domingo), Bret Graham Band (lunes), Two Tons of Steel (martes). Más en [gruenehall.com](http://gruenehall.com).

**Concierto de Jay Wheeler**  
**CUÁNDO:** jueves 1 de junio, 8 p.m.  
**DÓNDE:** Freeman Coliseum, 3201 E. Houston St., San Antonio.  
**INFO:** el cantante puertorriqueño Jay Wheeler presenta *Emociones World*

*Tour*. Más en [freemancoliseum.com](http://freemancoliseum.com).

**Charla en el Tobin Center**  
**CUÁNDO:** viernes 2 de junio, 8 p.m. (horarios varían).  
**DÓNDE:** The Tobin Center, 100 Auditorium Circle, San Antonio.  
**INFO:** se presenta en vivo Josh Gate, el explorador, escritor y anfitrión de las series *Expedition Unknown* y *Josh Gates Tonight*. Durante la charla compartirá historias de sus expediciones y algunos de los misterios más grandes del mundo. Más en [tobincen-ter.org](http://tobincen-ter.org).

**En el Jardín Botánico**  
**CUÁNDO:** sábado 3 de junio (horarios varían).  
**DÓNDE:** San Antonio Botanical Garden, 555 Funston Place, San Antonio.  
**INFO:** las actividades planeadas para este día incluyen clases para aprender a elaborar extracto de vainilla y lavanda (10 a.m. a 11 a.m.), exposiciones de bonsáis (10 a.m. a 7 p.m.), talleres para aprender a hacer bonsáis (10 a.m. a 12:30 p.m. y 2 p.m. a 4:30 p.m.) y clases familiares de cocina (12:30 p.m. a 2 p.m.). Más en [sabot.org](http://sabot.org).

**Cine al aire libre, en Mission Marquee Plaza**  
**CUÁNDO:** sábado 3 de junio, 7 p.m.  
**DÓNDE:** Mission Marquee Plaza, 3100 Roosevelt Ave, San Antonio.  
**INFO:** se proyectará en la pantalla al aire libre la película animada *Beauty*

*and the Beast*. Puedes llevar tu manta o silla de playa y tu picnic. Entrada gratuita. Más en [mission-marquee.com](http://mission-marquee.com).

**Fútbol de la USL**  
**CUÁNDO:** sábado 3 de junio, 8 p.m.  
**DÓNDE:** Toyota Field, 5106, David Edwards Drive, San Antonio. También por radio y TV.  
**INFO:** el San Antonio FC recibe al San Diego Loyal SC en la temporada regular del fútbol de la United Soccer League (USL). Más en [sanantoniofc.com](http://sanantoniofc.com).

**En Market Square**  
**CUÁNDO:** sábado 3 y domingo 4 de junio, 10 a.m. a 6 p.m.  
**DÓNDE:** Historic Market Square, 514 W. Commerce, San Antonio.  
**INFO:** la programación del fin de semana incluye música en vivo, artistas trabajando en el lugar, puestos de comidas y otras actividades. Más en [marketsquaresa.com](http://marketsquaresa.com).

**Cine al aire libre, en Travis Park**  
**CUÁNDO:** martes 6 de junio, 8:30 p.m.  
**DÓNDE:** Travis Park, 301 E. Travis St, San Antonio.  
**INFO:** puedes disfrutar de la película *The Sandlot*, que se proyectará en pantalla grande y al aire libre. Puedes llevar tu silla, manta y picnic. Más en [slabcinema.com](http://slabcinema.com).

*Editado por Germán Fernández-Moores. Para más puedes visitar en la web [mysanantonio.com](http://mysanantonio.com).*

## TEATRO

# El arte y peligro de los toros

'Torera' revela lado femenino

Chris Vognar  
HOUSTON CHRONICLE

Si tu conocimiento de las corridas de toros se limita al escritor Ernest Hemingway, o a la película *Ferdinand*, Alley Theatre te ofrece una producción ideal. Y la dramaturga Monet Hurst-Mendoza quiere que sepas que se trata de mucho más que un animal atacando una capa roja. "Es una danza metafórica con la muerte", dice Hurst-Mendoza, cuya más reciente obra, 'Torera', fue estrenada el miércoles 17 de mayo en Houston y estará en cartelera hasta el 4 de junio. "Todos sabemos que somos falibles, que eventualmente vamos a morir,

pero durante 20 minutos estamos viendo a alguien manipular la muerte, desafiarla, enfrentarla y luego, con suerte, superarla. Y hay algo de liberación en eso". "Torera", que Hurst-Mendoza desarrolló a través del *Alley All New Festival 2022* (un escararate anual de nuevas obras de teatro), cuenta la historia de Elena Ramírez (interpretada por Jacqueline Guillén), una torera ficticia que intenta llegar a la cima de un campo dominado por los hombres y el machismo. Ambientada en Yucatán, México, la obra sigue a Elena mientras ella trata de hacer equilibrio entre sus propias ambiciones con las expectativas de su

familia por una vocación más convencionalmente femenina. Mientras entrena en secreto con un matador masculino, también pone a prueba sus propios límites entre la tradición y la individualidad. Hurst-Mendoza, oriunda de Los Ángeles, se inspiró en la historia de Lupita López, oriunda de Yucatán y una de las pocas matadoras del mundo, o toreras profesionales. Una historia de la cadena pública de radio NPR de 2011 la describió así: "una cascada de cabello oscuro; los brazos de un luchador; el cuerpo de un bailarín; y ojos francos y encantadores". A Hurst-Mendoza también le llamó la atención la apariencia de López cuando vio fotos. "Se veía tan hermosa,



Cortesía de Lynn Lane

Jacqueline Guillén (izq.), como Elena María Ramírez, José Arrieta Cuesta, como Ensemble, y Jesse Castellanos, como Tanok Cárdenas, en la obra 'Torera'.

tan fuerte y también muy femenina al mismo tiempo", dice Hurst-Mendoza. "Las toreras realmente encarnan esta dualidad de masculinidad y feminidad: la forma como se paran, su actitud en el ruedo, la forma como enfrentan al toro, su valentía y también su postura. Y luego los trajes de matador, el traje de luces, son muy ajustados, así que también puedes ver realmente la figura femenina". Liz Frankel, directora de New Works en el Alley Theatre, conoció a 'Torera' por primera vez

a través de una lectura del Grupo de Escritores Emergentes en el Teatro Público de Nueva York, un programa de becas para artistas de teatro que están en el comienzo de sus carreras. "Simplemente me enamoré", dice Frankel. "Cuenta una historia que nunca antes había escuchado. No es que haya muchas obras taurinas". También pensó que encajaría bien en Houston, una ciudad con una gran comunidad mexicana-estadounidense. Y recomendó a 'Torera' para el *All New Festival* (la edición de 2023 se lleva a cabo del 16 al 25 de junio), y cuando llegó el momento de programar la temporada regular del Alley, pareció encajar de manera natural.

Una de las tareas más importantes que enfrentaron 'Torera' y la directora/coreógrafa Tatiana Pandiani fue cómo representar las corridas de toros en el escenario. En una película puedes usar toros reales. En el teatro, no tanto. Se les ocurrió la idea de usar bailarines, sosteniendo un par de cuernos, para jugar con los animales.

"Uno de los temas que surgieron en la obra es cómo comparo las corridas de toros con el baile, debido al movimiento", explica Hurst-Mendoza. "Y eso funcionó bien". Muchos ven las corridas de toros como algo cruel, incluso bárbaro. Pero Hurst-Mendoza señala que los aficionados consideran que dañar innecesariamente al toro es un pecado imperdonable. Si el matador no hace una matanza limpia y causa un sufrimiento excesivo, los fanáticos abuchean en respuesta y, a veces, incluso hasta llegan a golpear al matador en la calle. Una vez muerto el toro, se convierte en comida para la gente del pueblo. En cuanto a las acusaciones de maltrato animal, sugiere que consideremos lo que comemos cuando tenemos prisa. "Los toros son tratados mucho mejor que la ganadería masiva que hacemos en Estados Unidos sólo para nuestro consumo, donde ni siquiera nos comemos todo el animal", dice Hurst-Mendoza. "Los llenamos de hormonas y luego los matamos para hacer un 'Big Mac'".

000418



### Construcción Propuesta de una Subestación Eléctrica y Línea de Transmisión

CPS Energy organizará una jornada de puertas abiertas informativa pública sobre la construcción de una nueva subestación eléctrica y línea de transmisión cerca de la intersección de State Hwy. 151 y Wiseman Blvd.

**Miércoles, 7 de junio de 2023**  
**5:30 P.M.**

**11605 State Hwy 151**  
**San Antonio, TX 78251**

Los representantes de CPS Energy estarán disponibles para recibir comentarios y responder preguntas de los residentes del área. Este evento tendrá un formato informal tipo "ir y venir" y consistirá en estaciones de información que abordarán áreas específicas del proyecto. Se les anima a los asistentes a revisar cada estación y hacer preguntas.

Esta jornada de puertas abiertas informativa es gratuita y está abierta al público.

Para obtener más información, por favor, comuníquese con **Daniel Otto**, S&T Regulatory Support Manager, CPS Energy al **210-353-2515**.

**conexión**

Producido por  
**La Voz**  
DE HOUSTON

Germán Fernández-Moores  
Editor  
(713) 362-7934  
gf.moore@chron.com

Ventas:  
Rosalinda Sword  
210-250-2435



May 24, 2023

Dear CPS Energy Customer:

Thank you for being our customer. We invite you to attend an open house to learn about a proposed project in your area. The SAT15 Substation & Transmission Line Project involves the proposed construction of a new substation and transmission line in the northwest area of Bexar County.

The proposed substation will require approximately five acres of property and a transmission line connection to the existing Cagnon to Helotes transmission line.

At the Open House, you may learn more about the project need, the substation site and transmission line routing options that we are currently evaluating. We welcome your questions, comments, and input regarding this project. CPS Energy team members directly involved with the project will be present to answer your questions and receive feedback you provide. The Open House will have an informal "come and go" format with information stations addressing specific areas of the proposed project.

**CPS Energy Open House**  
**SAT15 Substation & Transmission Line Project**  
June 7, 2023  
5:30 P.M. - 7:30 P.M.

11605 State Highway 151, San Antonio, TX 78251

A brochure describing the proposed project and a map of the study area is included in this packet. Additional information will also be available at [cpsenergy.com/infrastructure](http://cpsenergy.com/infrastructure).

We look forward to meeting you, receiving feedback you provide, and answering your questions. Thank you in advance for taking the time to join us.

Sincerely,

**Daniel Otto**  
S&T Regulatory Support Manager



24 de mayo del 2023

Estimado Cliente de CPS Energy:

Gracias por ser nuestro cliente. Lo invitamos a asistir a una jornada pública para informarse sobre un proyecto propuesto en su área. El Proyecto de Línea de Transmisión y Subestación SAT15 consiste en la construcción propuesta de una nueva subestación y línea de transmisión en el área noroeste del Condado de Bexar.

La subestación propuesta requerirá aproximadamente cinco acres de propiedad y una conexión de línea de transmisión a la línea de transmisión actual desde Cagnon hasta Helotes.

En la Jornada Pública, podrá obtener más información sobre las necesidades del proyecto, el sitio de la subestación y las opciones de rutas de la línea de transmisión que estamos evaluando actualmente. Agradecemos sus preguntas, comentarios y aportes con respecto a este proyecto. Los miembros del equipo de CPS Energy directamente involucrados en el proyecto estarán presentes para responder sus preguntas y recibir sus comentarios. La Jornada Pública tendrá un formato informal de "ir y venir" con puestos informativos que abordarán áreas específicas del proyecto propuesto.

**Jornada Pública de CPS Energy**  
**Proyecto de Línea de Transmisión y Subestación SAT15**  
7 de junio del 2023  
5:30 P.M. - 7:30 P.M.

11605 State Highway 151, San Antonio, TX 78251

En este paquete se incluye un folleto que describe el proyecto propuesto y un mapa del área de estudio. También habrá información adicional disponible en [cpsenergy.com/infrastructure](http://cpsenergy.com/infrastructure).

Esperamos que nos acompañe, recibir sus comentarios y responder sus preguntas. Gracias de antemano por tomarse el tiempo para acompañarnos.

Atentamente,

**Daniel Otto**  
Administrador de Soporte Regulatorio de S&T



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## Your feedback is important to us.

Please take a moment to respond to the following questions so we may evaluate public comments.

1. Did you attend the SAT15 Substation and Transmission Line Project Open House on Wednesday, June 7, 2023?  
Yes      No
  
2. Do you understand the need for the new SAT15 Substation and Transmission Line Project?  
Strongly Agree      Agree      Neutral      Disagree      Strongly Disagree
  
3. If you attended the Open House or have reviewed the project information from the website, have your questions about the SAT15 Substation and Transmission Line Project been answered?  
Strongly Agree      Agree      Neutral      Disagree      Strongly Disagree
  
4. If you answered "Disagree" or "Strongly Disagree" to Question 3, and you still have questions about the project that have not been answered to your satisfaction, would you like for someone from the project team to contact you to discuss the project with you further?  
Yes      No
  
5. Were the exhibits at the Open House helpful to you? If not, do you have suggestions for improvements?  
Strongly Agree      Agree      Neutral      Disagree      Strongly Disagree

Suggestions for improvements:

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6. Below is a list of factors that CPS Energy and its consultants consider when identifying and evaluating alternative transmission line route segments. Please rank your top five factors below from most important (1) to least important (5).

- |   |   |
|---|---|
| _____ Impact to residences  | _____ Total project cost                          |
| _____ Impact to woodland, grasslands/wetlands                         | _____ Impact to trees and other vegetation        |
| _____ Impact to businesses  | _____ Parallel existing roadways/highways         |
| _____ Parallel property lines   | _____ Proximity to archaeological/historical site |
| _____ Proximity to schools, churches, cemeteries and day care centers | _____ Parallel existing transmission lines        |
| _____ Impact to streams/floodplains                                   | _____ Visibility of structures                    |
| _____ Proximity to parks/recreational areas                           |   |

7. Are there any other factors that you feel should be considered when identifying and evaluating alternative transmission line segments? \_\_\_\_\_  
\_\_\_\_\_

8. Following your review of the Land Use and Environmental Constraints map at the Open House or from the project website, please indicate any features that should be added which were not identified in the appropriate location or that were not included on the map. \_\_\_\_\_  
\_\_\_\_\_

9. Please identify any alternative transmission line segments that are the most preferable to you.  
Please describe why. \_\_\_\_\_  
\_\_\_\_\_

10. Please identify any alternative transmission line segments that are the least preferable to you.  
Please describe why. \_\_\_\_\_  
\_\_\_\_\_

11. Please indicate all that apply:

A potential transmission segment or segments are near my home/business.

List segment(s): \_\_\_\_\_

A potential transmission segment or segments cross my property.

List segment(s): \_\_\_\_\_

Other. Please specify \_\_\_\_\_

12. 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 to the welcome table at the Open House, via mail or email to the following:***

**CPS Energy**  
**Daniel Otto**  
Mail Drop RT0801  
500 McCullough  
San Antonio, TX 78215

**Email:**  
SAT15Project@cpsenergy.com

Please provide your name and contact information below.  
(Optional)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_



### Su aporte es importante para nosotros.

Por favor, tómese un momento para responder a las siguientes preguntas para que podamos evaluar los comentarios públicos.

1. ¿Asistió a la Jornada Pública del Proyecto de Línea de Transmisión y Subestación SAT15 el miércoles 7 de junio de 2023?  
Sí      No
  
2. ¿Comprende la necesidad del nuevo Proyecto de Línea de Transmisión y Subestación SAT15?  
Totalmente de Acuerdo    De Acuerdo    Neutral    En Desacuerdo    Totalmente en Desacuerdo
  
3. Si asistió a la Jornada Pública o revisó la información del proyecto en el sitio web, ¿tuvo respuestas a sus preguntas sobre el Proyecto de Línea de Transmisión y Subestación SAT15?  
Totalmente de Acuerdo    De Acuerdo    Neutral    En Desacuerdo    Totalmente en Desacuerdo
  
4. Si su respuesta fue "En Desacuerdo" o "Totalmente en Desacuerdo" en la Pregunta 3, y aún tiene preguntas sobre el proyecto que no han sido aclaradas satisfactoriamente para usted, ¿le gustaría que alguien del equipo del proyecto se comuniquen con usted para discutir el proyecto con usted más a fondo?  
Sí      No
  
5. ¿Le resultaron útiles las exposiciones de la Jornada Pública? Si no fue así, ¿tiene sugerencias de mejora?  
Totalmente de Acuerdo    De Acuerdo    Neutral    En Desacuerdo    Totalmente en Desacuerdo

Sugerencias de mejora:

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6. A continuación, se muestra una lista de factores que CPS Energy y sus consultores consideran al identificar y evaluar segmentos de rutas de líneas de transmisión alternativos. Por favor, clasifique sus cinco factores principales a continuación, del más importante (1) al menos importante (5).

- |   |   |
|---|---|
| _____ Impacto en viviendas  | _____ Costo total del proyecto                  |
| _____ Impacto en bosques, pastizales/humedales                      | _____ Impacto en árboles y otra vegetación      |
| _____ Impacto en empresas   | _____ Carreteras/autopistas paralelas actuales  |
| _____ Líneas de propiedad paralelas                                 | _____ Proximidad a sitio arqueológico/histórico |
| _____ Proximidad a escuelas, iglesias, cementerios y centros de día | _____ Líneas de transmisión paralelas actuales  |
| _____ Impacto en arroyos/llanuras aluviales                         | _____ Visibilidad de estructuras                |
| _____ Proximidad a parques/áreas de recreación                      |   |

7. ¿Existen otros factores que considere que deberían tenerse en cuenta al identificar y evaluar segmentos de líneas de transmisión alternativos? \_\_\_\_\_  
\_\_\_\_\_

8. Luego de su revisión del mapa de Uso del Terreno y de las Restricciones Ambientales en la Jornada Pública o en el sitio web del proyecto, por favor, indique las características que deben añadirse que no se identificaron en la ubicación adecuada o no se incluyeron en el mapa. \_\_\_\_\_  
\_\_\_\_\_

9. Por favor, identifique cualquier segmento de línea de transmisión alternativo que sea más preferible para usted.

Por favor, describa por qué. \_\_\_\_\_  
\_\_\_\_\_

10. Por favor, identifique cualquier segmento de línea de transmisión alternativo que sea menos preferible para usted.

Por favor, describa por qué. \_\_\_\_\_  
\_\_\_\_\_

11. Por favor, indique todo lo que corresponda:

Un posible segmento o segmentos de transmisión están cerca de mi hogar/empresa.

Mencione el(los) segmento(s): \_\_\_\_\_

Un posible segmento o segmentos de transmisión cruzan mi propiedad.

Mencione el(los) segmento(s): \_\_\_\_\_

Otro. Por favor, especifique \_\_\_\_\_

12. ¿Existe alguna otra información que le gustaría que el equipo del proyecto supiese o tuviese en cuenta al evaluar el proyecto? \_\_\_\_\_  
\_\_\_\_\_

***Puede enviar este formulario a la mesa de bienvenida en la Jornada Pública, por correo o correo electrónico a:***

**CPS Energy**  
**Daniel Otto**  
Buzón de Correo RT0801  
500 McCullough  
San Antonio, TX 78215

**Correo Electrónico:**  
SAT15Project@cpsenergy.com

Por favor, proporcione su nombre e información de contacto a continuación. (Opcional)

Nombre: \_\_\_\_\_

Dirección: \_\_\_\_\_

Ciudad \_\_\_\_\_ Estado \_\_\_\_\_ Código Postal \_\_\_\_\_

Teléfono: \_\_\_\_\_

Correo Electrónico: \_\_\_\_\_



## **Project Overview**

**What is the SAT15 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 area. A substation is necessary to reduce the high voltage electricity coming in from a transmission line to a lower voltage that can be distributed to, and utilized by, end-users. 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 a large customer load that cannot be supported by existing distribution infrastructure.

**How much land is needed for this new substation?** The new substation will utilize approximately five acres. The substation property will be provided by the large customer.

**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 SAT15 Substation and Transmission Line Project is anticipated to begin November 2024.

**When will crews be working on this project?** Under normal circumstances, work will be performed Monday through Friday, in alignment with City of San Antonio Code Sec. 21-52. - Noise nuisance enumeration. Weekend work will be performed as needed.

## **Transmission Line Routes and Substation Sites**

**Where will the new substation be located?** The substation site will be located off of Wiseman Blvd. Multiple transmission line routes have been identified, offering different options for bringing electricity to the substation. The substation property is being provided by the large customer. 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 the information that has been gathered and compiled regarding the transmission line route options and presents that data to the Public Utility Commission of Texas (PUC), which ultimately approves the need for the transmission line and the route outside of the City of San Antonio. In CPS Energy's presentation of the route data to the PUC, it will identify the transmission line route that it believes best addresses the PUC's routing requirements. After completion of the PUC process, the CPS Board of Trustees will review and approve the portion of the route inside the city of San Antonio.

**Will landowners receive notice of the PUC proceeding?** Yes. All landowners who are crossed by a potential transmission line route, or who own a habitable structure within at least 300 feet of the centerline of a potential transmission line route, will be mailed a notice from CPS Energy that an application has been filed at the PUC requesting approval to construct and operate the project. CPS Energy will also publish notice of the application filing in the newspaper and update the project website (see the end of this FAQ sheet for the website address for this project) announcing the filing of the application. The notice will include forms for interested persons to provide public comment on the project or to participate in the PUC proceeding.

**Can landowners or other interested persons participate in the PUC proceeding?** Yes. Landowners or other persons impacted by a potential transmission line route may file a public comment regarding the project or request to participate in the PUC proceeding. A person participating in the PUC proceeding is generally referred to as an "intervenor" during the proceeding.

**Will the PUC simply approve the route that CPS Energy identifies as best addressing the PUC's routing requirements?** The PUC will independently evaluate CPS Energy's application and consider input from landowners and other interested parties, including the recommendation of the PUC's own staff of experts, and independently determine if the project is needed and, if so, which transmission line route and associated substation site best addresses its routing requirements.

## **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 making 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 does a substation look like?** Although substations vary in their appearance, a typical substation may consist of a paved site with electrical equipment mounted on concrete foundations. Most substation sites are open, in that the equipment is not enclosed in a building, but rather is simply mounted on concrete foundations. The substation will be encircled by a fence and other appropriate security measures designed to maintain safe separation between the equipment and the public.

**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, working, and recreating 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 project affect my property value?** Appraisal studies tend to show that the presence of transmission lines or 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 may 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 landowner fair market value for property rights to be acquired.

## **Next Steps**

**What happens after the Open House?** CPS Energy's project team will evaluate all project information, including public input received. The project team will then meet to identify an adequate number of alternative transmission routes and substation sites, including identification of which route and substation site best meet all applicable regulatory criteria. 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.

**When will CPS Energy file the CCN Application?** The anticipated date to file the CCN application is August 2023. Updates will be posted on the project webpage. Affected landowners will be notified when the application is filed.

### **Información General del Proyecto**

**¿Qué es el Proyecto de Línea de Transmisión y Subestación SAT15?** CPS Energy tiene previsto construir y operar una subestación eléctrica y conectarla a una línea de transmisión de alto voltaje actual en el área. Una subestación es necesaria para reducir la electricidad de alto voltaje procedente de una línea de transmisión a un voltaje inferior que pueda ser distribuida y utilizada por los usuarios finales. Se construirán estructuras de transmisión para conectar la subestación a una línea de transmisión actual.

**¿Por qué se necesita la subestación en esta área?** La nueva subestación es necesaria para soportar una gran carga de clientes que no puede ser soportada por la infraestructura existente.

**¿Cuánto terreno se necesita para esta subestación?** La subestación utilizará aproximadamente cinco acres. La propiedad de la subestación será proporcionada por un gran cliente.

**¿Qué es una línea de transmisión?** Una línea de transmisión está formada por estructuras de acero y cables especialmente diseñados para transportar electricidad a largas distancias y a altos voltajes.

**¿Cómo llega la electricidad a los hogares y empresas?** Por lo general, la electricidad se genera a partir de centrales de energía eléctrica ubicadas en sitios remotos (incluyendo los parques eólicos y solares) y luego viaja desde esas fuentes de generación remotas a las 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 adecuado para la 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 empresas.

**¿Cuándo comienza la construcción?** Se prevé que la construcción del Proyecto de Línea de Transmisión y Subestación SAT15 comience en noviembre de 2024.

**¿Cuándo estarán los empleados trabajando en este proyecto?** En circunstancias normales, el trabajo se realizará de lunes a viernes, en consonancia con la Sec. 21-52 del Código de la Ciudad de San Antonio. - Lista de ruidos molestos. El trabajo los fines de semana se realizará según sea necesario.

### **Rutas de Líneas de Transmisión y Sitios de Subestaciones**

**¿Dónde se ubicará la subestación?** El sitio de la subestación estará ubicado fuera de Wiseman Blvd. Se han identificado múltiples rutas de líneas de transmisión, que ofrecen diferentes opciones para llevar electricidad a la subestación. La propiedad de la subestación esta siendo proporcionada por un gran cliente. Para determinar las diversas opciones de ruta de la línea de transmisión, CPS Energy y sus consultores recopilan información de la comunidad y de los oficiales y agencias federales, estatales y locales. Este aporte se recolectan en un Informe de Evaluación Ambiental, que se utiliza para comparar y evaluar las opciones de ruta de transmisión y sitio de la 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 recopilado y compilado con respecto a las opciones de ruta de la línea de transmisión y presenta esos datos a la Comisión de Servicios Públicos de Texas (PUC), que finalmente aprueba la necesidad de la línea de transmisión y la ruta fuera de la ciudad de San Antonio. En la presentación de CPS Energy de los datos de la ruta a la PUC, identificará la ruta de la línea de transmisión que considera que se adapta mejor a los requisitos de rutas de la PUC. Luego de completar el proceso de la PUC, la Junta Directiva de CPS revisará y aprobará la parte de la ruta dentro de la Ciudad de San Antonio.

**¿Los propietarios recibirán notificación del proceso de la PUC?** Sí. CPS Energy enviará por correo una notificación a todos los propietarios atravesados por la ruta de una posible línea de transmisión, o que posean una estructura habitable a una distancia mínima de 300 pies de la línea central de la ruta de una posible línea de transmisión, informándoles de que se ha presentado una solicitud ante la PUC pidiendo la aprobación para construir y operar el proyecto. CPS Energy también publicará un aviso de la presentación de la solicitud en el periódico y actualizará el sitio web del proyecto (consultar el final de esta hoja de Preguntas Frecuentes para conocer la dirección del sitio web de este proyecto) anunciando la presentación de la solicitud. La notificación incluirá formularios para que las personas interesadas proporcionen comentarios públicos sobre el proyecto o participen en el proceso de la PUC.

**¿Pueden los propietarios u otras personas interesadas participar en el proceso de la PUC?** Sí. Los propietarios u otras personas afectadas por la ruta de una posible línea de transmisión pueden presentar un comentario público sobre el proyecto o una solicitud para participar en el proceso de la PUC. Una persona que participa en el proceso de la PUC generalmente se denomina "interventor" durante el proceso.

**¿La PUC simplemente aprobará la ruta que CPS Energy identifique como la que mejor cumple con los requisitos de rutas de la PUC?** La PUC evaluará de forma independiente la solicitud de CPS Energy y considerará los aportes de los propietarios y otros interesados, incluyendo la recomendación del propio personal de expertos de la PUC, y determinará de forma independiente si el proyecto es necesario y, de ser así, qué ruta de la línea de transmisión y el sitio de la subestación asociada, satisfacen mejor sus requisitos de ruta.

## **Ambiental**

**¿Será necesario remover árboles y otra vegetación para construir el proyecto?** Sí, a menudo es necesario remover algunos árboles y otra vegetación para construir y operar de forma segura y fiable las líneas de transmisión y los sitios de las subestaciones.

CPS Energy trabaja con propietarios y comunidades para cumplir de manera responsable con los requisitos de conservación de árboles y minimizar el impacto en los árboles y otra vegetación, talando árboles y otra vegetación solo cuando sea necesario para operar de manera segura y fiable las instalaciones de la línea de transmisión y la subestación.

**¿El proyecto afectará a las especies en peligro de extinción en el área?** CPS Energy realizará estudios para identificar especies silvestres y plantas en peligro de extinción en las proximidades del proyecto y se compromete a realizar los esfuerzos necesarios para garantizar que las especies silvestres y plantas en peligro de extinción no se vean afectadas negativamente como resultado de la construcción y operación de las instalaciones del proyecto.

## **Infraestructura**

**¿Qué aspecto tendrá el poste de la línea de transmisión?** CPS Energy generalmente utiliza estructuras tubulares de acero galvanizado, como monopolos, aunque se pueden utilizar otros tipos de estructuras cuando las circunstancias lo ameriten.

**¿Como es la subestación?** Aunque las subestaciones varían en apariencia, una subestación típica puede consistir en un sitio pavimentado con equipos eléctricos montados sobre cimientos de concreto. La mayoría de los sitios de subestaciones son a cielo abierto, es decir, los equipos no están bajo techo en un edificio, sino que simplemente está montado sobre cimientos de concreto. La subestación estará rodeada por una valla y otras medidas de seguridad apropiadas diseñadas para mantener una distancia segura entre los equipos y el público.

**¿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, trabajan y se entretienen en las proximidades y no se prevé que produzcan efectos EMF adversos para las personas que se encuentren cerca. Para obtener más información sobre EMF, por favor, visite <https://www.niehs.nih.gov/health/topics/agents/emf/index.cfm>

## **Inmuebles**

**¿Este proyecto afectará el valor de mi propiedad?** Los estudios de tasación tienden a mostrar que la presencia de líneas de transmisión o subestaciones no afecta sustancialmente el valor 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 necesario de la línea de transmisión?** Los propietarios cuya propiedad será atravesada por la ruta de la línea de transmisión aprobada, o de quienes se adquirirá el terreno para el sitio de la subestación, tienen derechos muy específicos que generalmente se establecen en la Carta de Derechos de Propietarios de Texas, publicada por el Abogado General de Texas. Puede encontrar una copia en <https://www.texasattorneygeneral.gov/sites/default/files/files/divisions/general-oag/LandownersBillOfRights.pdf>. Se anima a los propietarios interesados a revisar ese documento para familiarizarse más con sus derechos según la ley. Los propietarios afectados recibirán una copia de la Carta de Derechos de Propietarios de Texas de CPS Energy por Correo Estadounidense antes de que se negocie un derecho de acceso a la propiedad.

**¿Qué es el “dominio eminente?”** Es el derecho de un gobierno, o de su representante, de adquirir propiedad privada para uso público, con pago de 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 actuales. De acuerdo con los términos del derecho de acceso a la propiedad, la vegetación que crece debajo de la línea de transmisión se podará y, en algunos casos, se quitará para permitir la construcción de la línea. El documento de derecho de acceso a la propiedad también abordará cuestiones tales como carreteras, vallas, derechos de acceso y notificación, y otros asuntos relacionados con la construcción, operación y mantenimiento de las instalaciones de la línea de transmisión por parte de CPS Energy.

**¿Cuánto paga CPS Energy por adquirir 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.

## **Próximas Etapas**

**¿Qué sucede luego de la Jornada Pública?** El equipo del proyecto de CPS Energy evaluará toda la información del proyecto, incluyendo los aportes públicos recibidos. Luego, el equipo del proyecto se reunirá para identificar una cantidad adecuada de rutas de transmisión alternativas y sitios de subestaciones, incluyendo la identificación de qué ruta y sitio de subestación cumplen mejor con todos los criterios reglamentarios aplicables. El equipo del proyecto identificará posibles rutas de líneas de transmisión y sitios de subestaciones en función de la consideración de los valores de la comunidad, las áreas recreativas y de parques, los valores históricos y estéticos y la integridad ambiental.

**¿Cuándo presentará CPS Energy la Solicitud de CCN?** La fecha prevista para presentar la solicitud de CCN es agosto del 2023. Las actualizaciones se publicarán en la página web del proyecto. Los propietarios afectados serán notificados cuando se present la solicitud.



# SAT15

## SUBSTATION AND TRANSMISSION LINE PROJECT

### Who is CPS Energy?

Established in 1860, CPS Energy is the nation's largest community-owned provider of electric and natural gas services. We provide safe, reliable, and competitively priced services to **907,526** electric and **373,998** natural gas customers in San Antonio and portions of seven adjoining counties. Our customers' combined energy bills rank among the lowest of the nation's 20 largest cities while generating \$9 billion in revenue for the City of San Antonio over the last 80 years.

Our Vision 2027 strategic plan is designed to guide CPS Energy through rapid transformational change in our city. As a trusted and reliable community partner, we continuously focus on job creation, economic development, and educational investment.

We are powered by our skilled workforce, whose commitment to the community is demonstrated through our employees' volunteerism, our community engagement efforts and programs aimed at bringing value and assistance to our customers.



### How can you follow the progress of this project?

The CPS Energy project team will post project information on the CPS Energy website at [cpsenergy.com/infrastructure](http://cpsenergy.com/infrastructure).

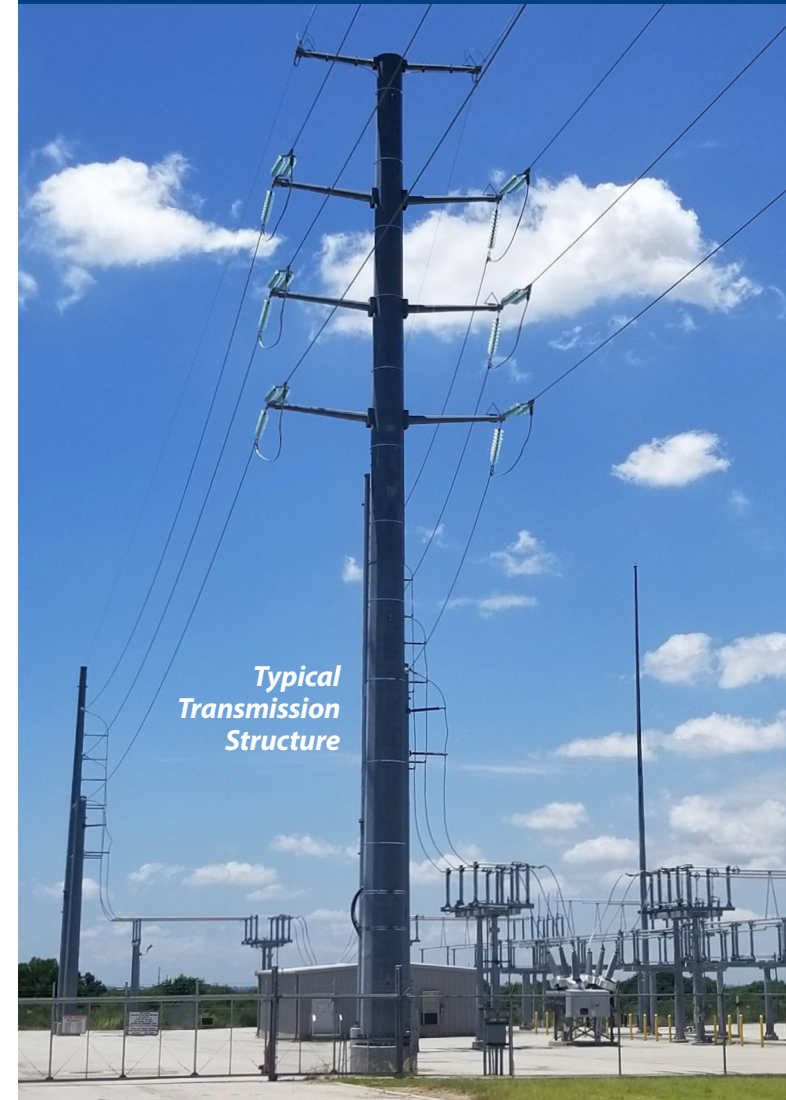
### Who can answer your questions?

The website will include regular updates on the project as steps are completed.

Also, you may write, call or email to:

#### CPS Energy

Daniel Otto, S&T Regulatory Support Manager  
SAT15 Substation and Transmission Line Project  
Mail Code RT0801  
500 McCullough Ave.  
San Antonio, Texas 78215  
(210) 353-2515  
[SAT15Project@cpsenergy.com](mailto:SAT15Project@cpsenergy.com)



*Typical Transmission Structure*







# Proyecto de Línea de Transmisión y Subestación **SAT15**

## ¿Quién es CPS Energy?

Fundada en 1860, CPS Energy es el proveedor comunitario de servicios de electricidad y gas natural más grande del país. Brindamos servicios seguros, fiables y a precios competitivos a **907,526** clientes de electricidad y **373,998** de gas natural en San Antonio y partes de siete condados adyacentes. Las facturas de energía combinadas de nuestros clientes se encuentran entre las más bajas de las 20 ciudades más grandes del país y generaron \$9 mil millones en ingresos para la Ciudad de San Antonio durante los últimos 80 años.

Nuestro plan estratégico Vision 2027 está diseñado para guiar a CPS Energy a través de un rápido cambio transformador en nuestra ciudad. Como socio comunitario de confianza y fiable, nos centramos



continuamente en la creación de empleo, el desarrollo económico y la inversión en educación. Somos impulsados por nuestra fuerza laboral calificada, cuyo compromiso con la comunidad se demuestra a través del voluntariado de nuestros empleados, nuestros esfuerzos y programas de participación comunitaria destinados a aportar valor y asistencia a nuestros clientes.

## ¿Cómo se puede seguir el progreso de este proyecto?

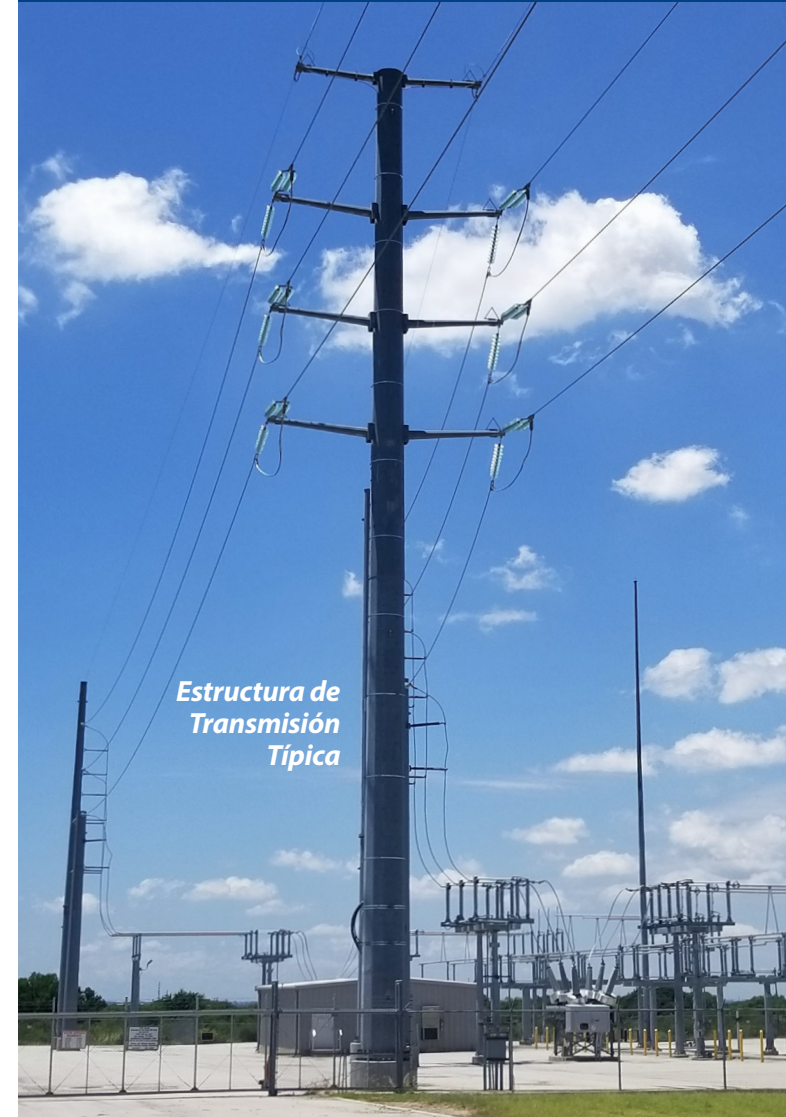
El equipo del proyecto de CPS Energy publicará la información del proyecto en el sitio web de CPS Energy [cpsenergy.com/infrastructure](http://cpsenergy.com/infrastructure).

## ¿Quién puede responder sus preguntas?

El sitio web incluirá actualizaciones periódicas sobre el proyecto a medida que se completen las etapas. Además, puede escribir, llamar o enviar un correo electrónico a:

### CPS Energy

Daniel Otto, Administrador de Soporte Regulatorio de S&T Proyecto de Línea de Transmisión y Subestación SAT15  
Código Postal RT0801  
500 McCullough Ave.  
San Antonio, Texas 78215  
(210) 353-2515  
[SAT15Project@cpsenergy.com](mailto:SAT15Project@cpsenergy.com)



Estructura de Transmisión Típica

# INFORMACIÓN SOBRE EL PROYECTO DE LÍNEA DE TRANSMISIÓN Y SUBESTACIÓN SAT15

## ¿Qué es el Proyecto de Línea de Transmisión y Subestación SAT15?

CPS Energy propone construir una subestación eléctrica y una línea de transmisión de alto voltaje en la parte noroeste del Condado de Bexar, cerca de la intersección de State Hwy 151 y Wiseman Blvd. Una subestación es un centro de energía local o un punto de distribución de electricidad. La subestación se abastecerá de una extensión de una línea de transmisión de alto voltaje actual dentro del mapa del Área de Estudio que se muestra aquí. La subestación requiere aproximadamente 5 acres; el derecho de paso de la línea de transmisión será de aproximadamente 100 pies de ancho.

## ¿Cómo podría afectarlo este proyecto?

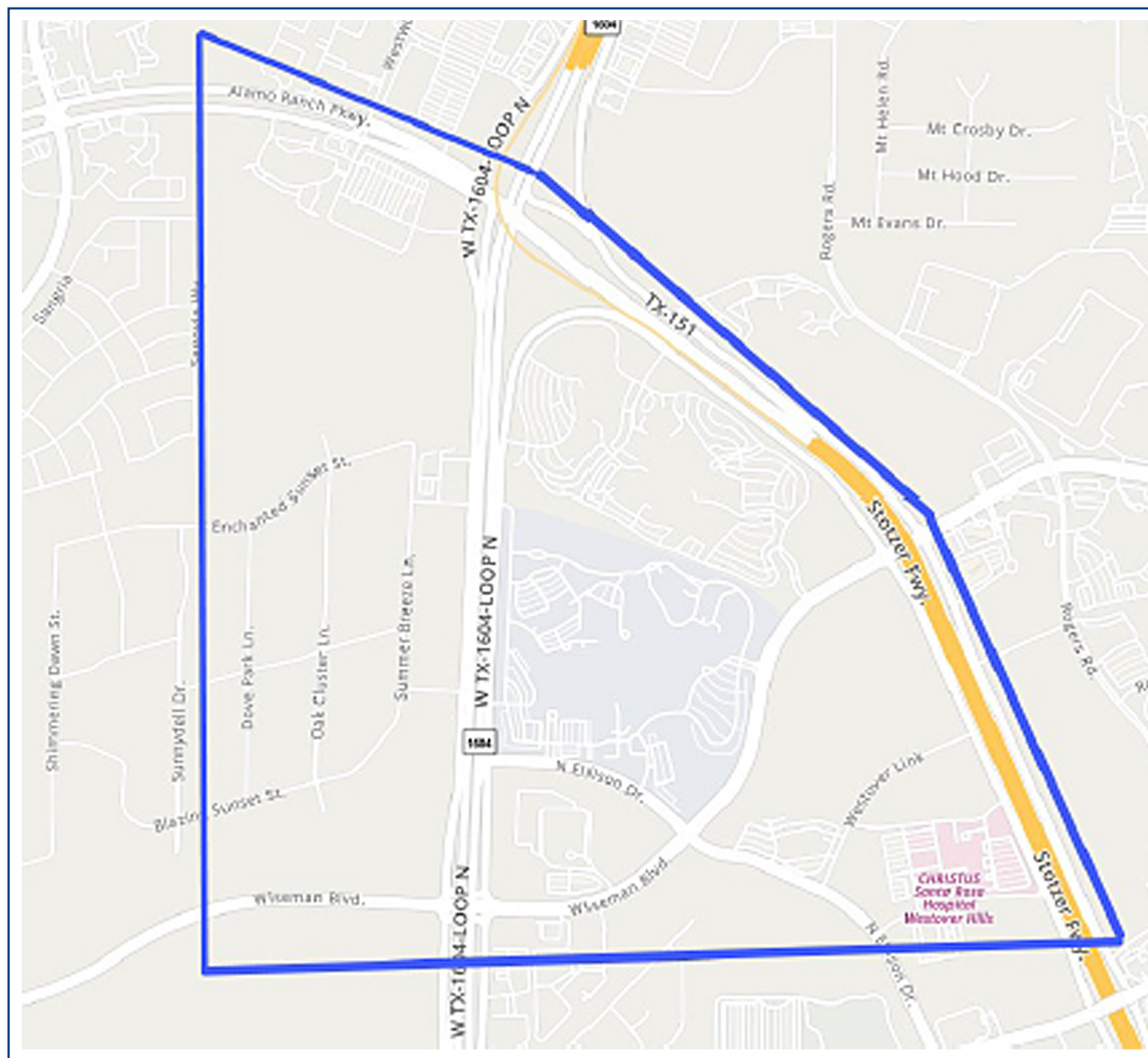
CPS Energy está evaluando múltiples opciones de líneas de transmisión geográficamente diversas para el proyecto. Su aporte y comentarios son importantes para nuestra evaluación de las alternativas.

## ¿Por qué es necesario este proyecto?

Esta subestación es necesaria para dar servicio eléctrico a un gran comercio del área. La capacidad eléctrica requerida es mayor que la que puede soportar la infraestructura eléctrica actual.



**Subestación Típica**



**Mapa del Área de Estudio**

# SCOPE, PURPOSE & NEED



## **SCOPE:**

CPS Energy proposes to construct a new substation in the northwest part of Bexar County in the area of Loop 1604 and State Hwy 151, near the intersection of Wiseman and State Hwy 151 to serve customer load at that location. CPS Energy plans to install a new 138kV transmission line that will be connected to the existing Cagnon to Helotes transmission line in order to serve the new substation.

## **PURPOSE & NEED:**

The new substation is necessary to provide reliable electric service to the project area as a result of a new large customer load that cannot be supported by the existing substation or overhead distribution lines in the area. The new substation is proposed to be connected to the existing 138kV Cagnon to Helotes transmission line.

# Planning Criteria



- 13.2kV Substation transformer = 40 MW
  - 34.5kV Substation transformer = 80 MW
  - 13.2kV circuit capacity = 10 MW main line
  - 34.5kV circuit capacity = 25 MW main line
- **Distribution Level Service:**
    - Less than 40 MW
  - **Transmission Level Service:**
    - More than 40 MW

# ROUTING AND SITING PROCESS HIGHLIGHTS



## **DETERMINE A NEED FOR THE PROJECT**

- By utility planners and engineers.

## **DEFINE THE STUDY AREA**

## **GATHER DATA, IDENTIFY CONSTRAINTS, 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 transmission structure types suitable for project need.

## **INVITE PUBLIC INVOLVEMENT**

- Notify landowners in proximity to alternative route segments to open house.
- Advertise open house in newspaper (digital and hard copy) of general circulation in the project area.
- Hold open house to explain the project and solicit input on preliminary alternative route segments.
- Evaluate public and agency input.
- Adjust preliminary alternative route segments, if appropriate, based upon public input received.

## **PREPARE ENVIRONMENTAL ASSESSMENT REPORT INCLUDING EVALUATION OF PUBLIC AND AGENCY INPUT**

## **BEGIN CCN PROCESS**

# CCN Process Highlights



## APPLICATION & NOTIFICATION

- CPS Energy submits Application to the Public Utility Commission of Texas (PUC) to Amend CPS Energy's Certificate of Convenience and Necessity (CCN).
- CPS Energy mails or delivers notice to:
  - Landowners (as listed on the county tax rolls) whose property is crossed by an alternative route segment
  - Landowners who own habitable structures within 300 feet of an alternative route segment (as listed on the county tax rolls)
  - Texas Parks & Wildlife
  - Department of Defense
  - Municipalities within five miles
  - Other Electric Utilities within five miles
  - Bexar County
  - Office of Public Utility Counsel
- CPS Energy publishes notice of the filed application in a newspaper of general circulation in Bexar County (the San Antonio Express News) within a week of filing the application.

## PUC PUBLIC PARTICIPATION

- Landowners and other potentially impacted persons have 45 days to file a request to participate (intervene) in the PUC proceeding.
- If no parties intervene, the PUC staff conduct a review and issue a recommendation.
- If parties intervene, testimony may be filed, and an administrative hearing is held. After the hearing process, an Administrative Law Judge (ALJ) will prepare a recommendation to the PUC (a Proposal for Decision). The ALJ will consider the following when making a ruling:
  - Community values, recreational and park areas, historical and aesthetic values, environmental integrity, and other factors associated with the need for the project
  - Engineering constraints, costs, and moderation of impact on affected community and landowners

## PUC DECISION

- Within approximately 12 months of the application filing (if contested) the five governor appointed PUC Commissioners will approve the application, deny the application, or approve the application with modifications. The PUC's approval will extend to the overall project need and the routing of the project outside of the San Antonio municipal boundaries.
- CPS Energy is approved to construct, own, and operate the approved transmission line outside of the San Antonio municipal boundaries using the routing approved by the PUC.

## CPS ENERGY BOARD OF TRUSTEES DECISION

- The project team will provide the information utilized in the PUC process to the CPS Energy Board of Trustees along with the decisions and recommendations given by the PUC regarding the project need and routing.
- The CPS Energy Board of Trustees will hear public input and identify the transmission route to be constructed within the San Antonio municipal boundaries.

# Anticipated Timeline



**Gather information and land use data**  
**In progress**

**Send letters to landowners**  
**May 24, 2023**

**Hold Open House**  
**June 7, 2023**

**Complete Environmental Analysis and Routing  
Assessment**  
**July 2023**

**Submit CCN application to  
The Public Utility Commission of Texas (PUC)  
Notify directly affected landowners and other  
required entities**  
**August 2023**

**Receive Ruling from the PUC regarding need for the  
project and selected route outside of the  
San Antonio boundaries**  
**August 2024**

**Receive approval to proceed and selected route inside  
of the San Antonio boundaries by CPS Energy  
Board of Trustees**  
**November 2024**

**Start construction**  
**November 2024**

**Complete construction**  
**February 2027**

# Substation Facts



## EXISTING SUBSTATIONS

- As of 2023, there are approximately 113 existing substations in the CPS Energy service area.
- Substations operate on either 345kV or 138kV transmission voltages and either 34.5kV or 13.2kV distribution voltages.

## NEW SUBSTATIONS

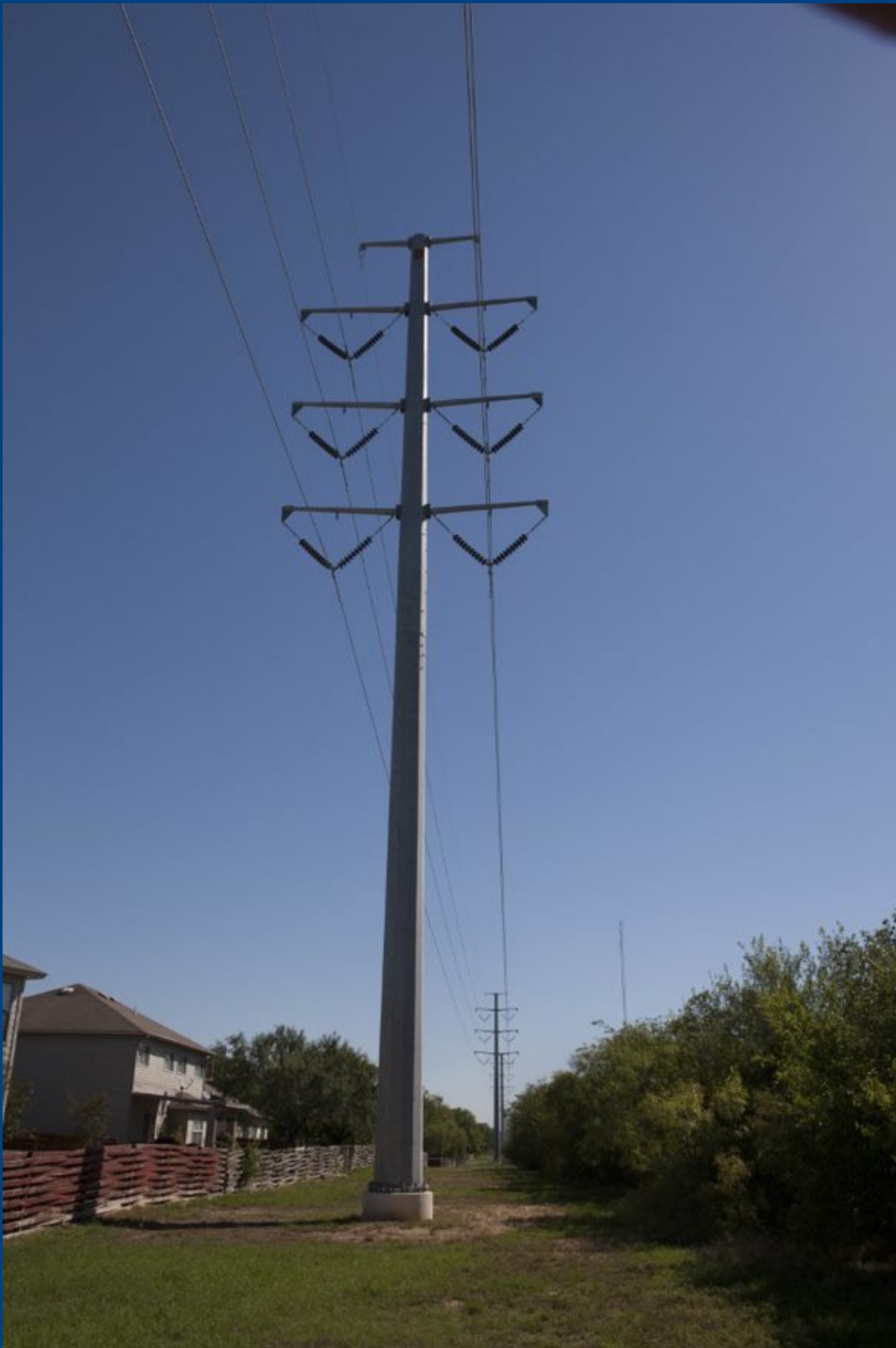
- The general location for a substation is determined by the demand for electricity in that area.
- A substation site must have access to public roadway.
- A substation site must have suitable potential access for interconnecting the existing transmission system network and serving load needs with new or existing distribution lines.
- Typical suitable site conditions for a new substation include:
  - Location – not in an area subject to regular flooding
  - Size – approximately five acres
  - Terrain – relatively flat
  - Soil – primarily natural soil (minimal to no fill or waste)



# Typical Substations



# Typical 138kV Transmission Poles



# Land Use & Environmental Evaluation Criteria



TABLE 2-2 LAND USE AND ENVIRONMENTAL EVALUATION CRITERIA

## EVALUATION CRITERIA

### Land Use

- 1 Length of alternative route (miles)
- 2 Number of habitable structures<sup>1</sup> within 300 feet of the route centerline
- 3 Length of ROW using existing transmission line ROW
- 4 Length of ROW parallel and adjacent to existing transmission line ROW
- 5 Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)
- 6 Length of ROW parallel and adjacent to apparent property lines<sup>2</sup> (or other natural or cultural features, etc.)
- 7 Sum of evaluation criteria 4, 5, and 6
- 8 Percent of evaluation criteria 4, 5, and 6
- 9 Length of ROW across parks/recreational areas<sup>3</sup>
- 10 Number of additional parks/recreational areas<sup>3</sup> within 1,000 feet of ROW centerline
- 11 Length of ROW across cropland
- 12 Length of ROW across pasture/rangeland
- 13 Length of ROW across land irrigated by traveling systems (rolling or pivot type)
- 14 Length of route across conservation easements and/or mitigation banks (Special Management Area)
- 15 Length of route across gravel pits, mines, or quarries
- 16 Length of ROW parallel and adjacent to pipelines<sup>4</sup>
- 17 Number of pipeline crossings<sup>4</sup>
- 18 Number of transmission line crossings
- 19 Number of IH, US and state highway crossings
- 20 Number of FM or RM road crossings
- 21 Number of FAA registered public/military airports<sup>5</sup> with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline
- 22 Number of FAA registered public/military airports<sup>5</sup> having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline
- 23 Number of private airstrips within 10,000 feet of the ROW centerline
- 24 Number of heliports within 5,000 feet of the ROW centerline
- 25 Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline
- 26 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
- 27 Number of identifiable existing water wells within 200 feet of the ROW centerline
- 28 Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)

### Aesthetics

- 29 Estimated length of ROW within foreground visual zone<sup>6</sup> of IH, US and state highways
- 30 Estimated length of ROW within foreground visual zone<sup>6</sup> of FM/RM roads
- 31 Estimated length of ROW within foreground visual zone<sup>6</sup>[<sup>7</sup>] of parks/recreational areas<sup>3</sup>

### Ecology

- 32 Length of ROW through upland woodlands/brushlands
- 33 Length of ROW through bottomland/riparian woodlands
- 34 Length of ROW across NWI mapped wetlands
- 35 Length of ROW across critical habitat of federally listed endangered or threatened species
- 36 Length of ROW across open water (lakes, ponds)
- 37 Number of stream and river crossings
- 38 Length of ROW parallel (within 100 feet) to streams or rivers
- 39 Length of ROW across Edwards Aquifer Contributing Zone
- 40 Length of ROW across FEMA mapped 100-year floodplain

### Cultural Resources

- 41 Number of cemeteries within 1,000 feet of the ROW centerline
- 42 Number of recorded cultural resource sites crossed by ROW
- 43 Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline
- 44 Number of NRHP listed properties crossed by ROW
- 45 Number of additional NRHP listed properties within 1,000 feet of ROW centerline
- 46 Length of ROW across areas of high archeological site potential

**Notes:** All length measurements are shown in miles unless noted otherwise.

<sup>1</sup> 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 within 300 feet of the centerline of a transmission project of 230 kV or less.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> Only steel pipelines six inches and greater in diameter carrying petrochemicals were quantified in the pipeline crossing and paralleling calculations.

<sup>5</sup> As listed in the Chart Supplement South Central US (FAA 2019b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.

<sup>6</sup> 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.

<sup>7</sup> 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  
Military Aviation and Installation Assurance Siting Clearinghouse  
U.S. Environmental Protection Agency  
U.S. Fish Wildlife Service  
U.S. National Parks Service

## STATE

Railroad Commission of Texas  
Texas Commission on Environmental Quality  
Texas Department of Transportation  
    Department of Aviation  
    Environmental Affairs Division  
    Planning and Programming  
    San Antonio District Engineer  
Texas General Land Office  
Texas Historical Commission  
Texas Parks and Wildlife Department  
Texas House of Representatives  
Texas State Senate  
Texas Water Development Board

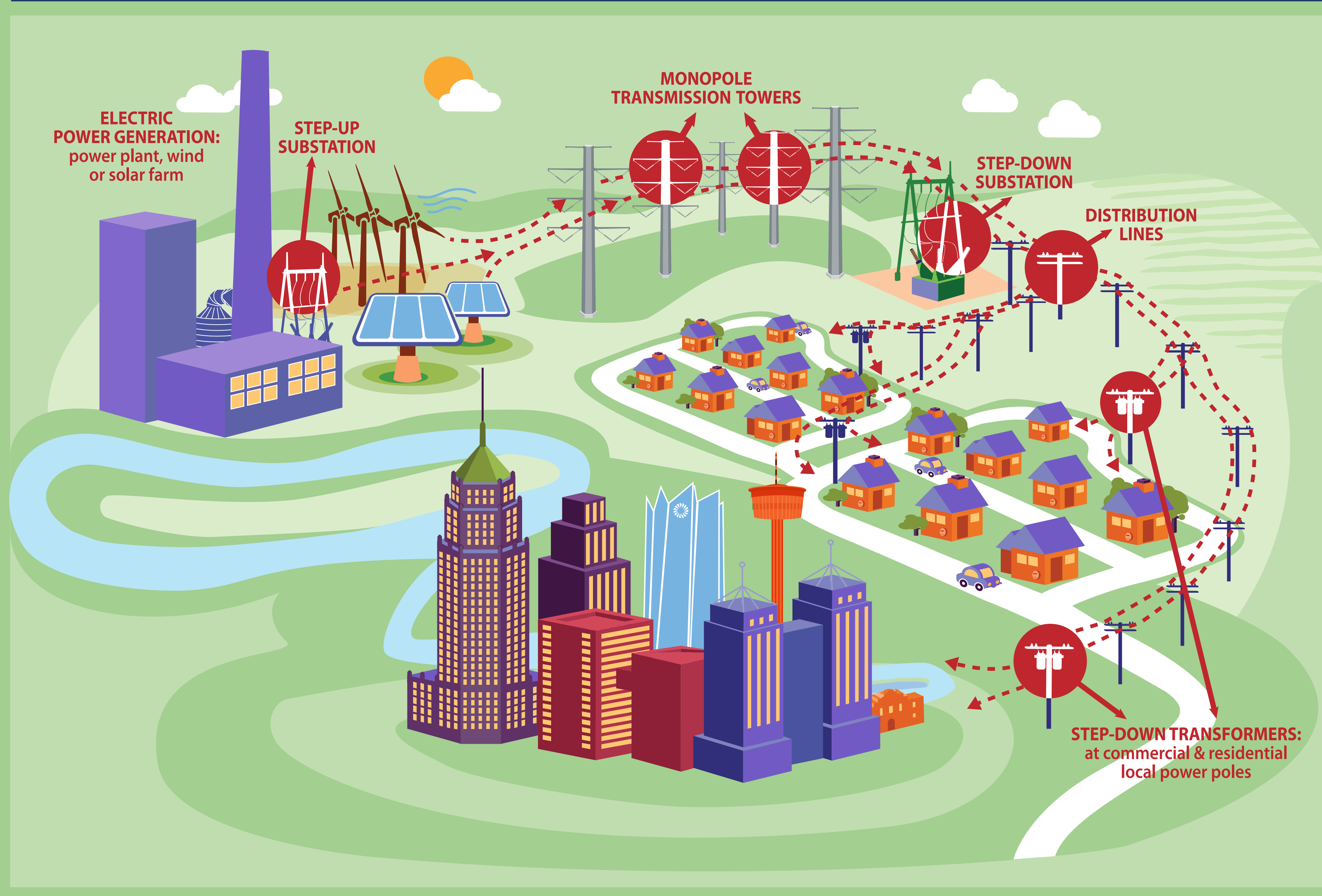
## LOCAL

Alamo Area Council of Governments  
Alamo Soil and Water Conservation District  
Bexar County Economic Development  
Bexar County Flood Control  
Bexar County Historical Commission  
Bexar County Judge, Commissioner, and Manager  
City of Helotes  
City of Leon Valley  
City of San Antonio Officials  
Edwards Aquifer Authority  
Northside ISD  
San Antonio Office of Historic Preservation  
San Antonio River Authority  
San Antonio World Heritage Office  
San Antonio Water System  
Texas Agricultural Land Trust  
Texas Cave Management Association  
Texas Land Conservancy

# Generation to Customer Diagram



## ELECTRIC GENERATION AND DISTRIBUTION



# Typical Transmission Easements



100 feet clearing around transmission structure



16-30 feet clearing along route

# Acquisition Process



- 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:**

The right to cross, or otherwise use, someone else's land for a specified purpose.

## **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:**

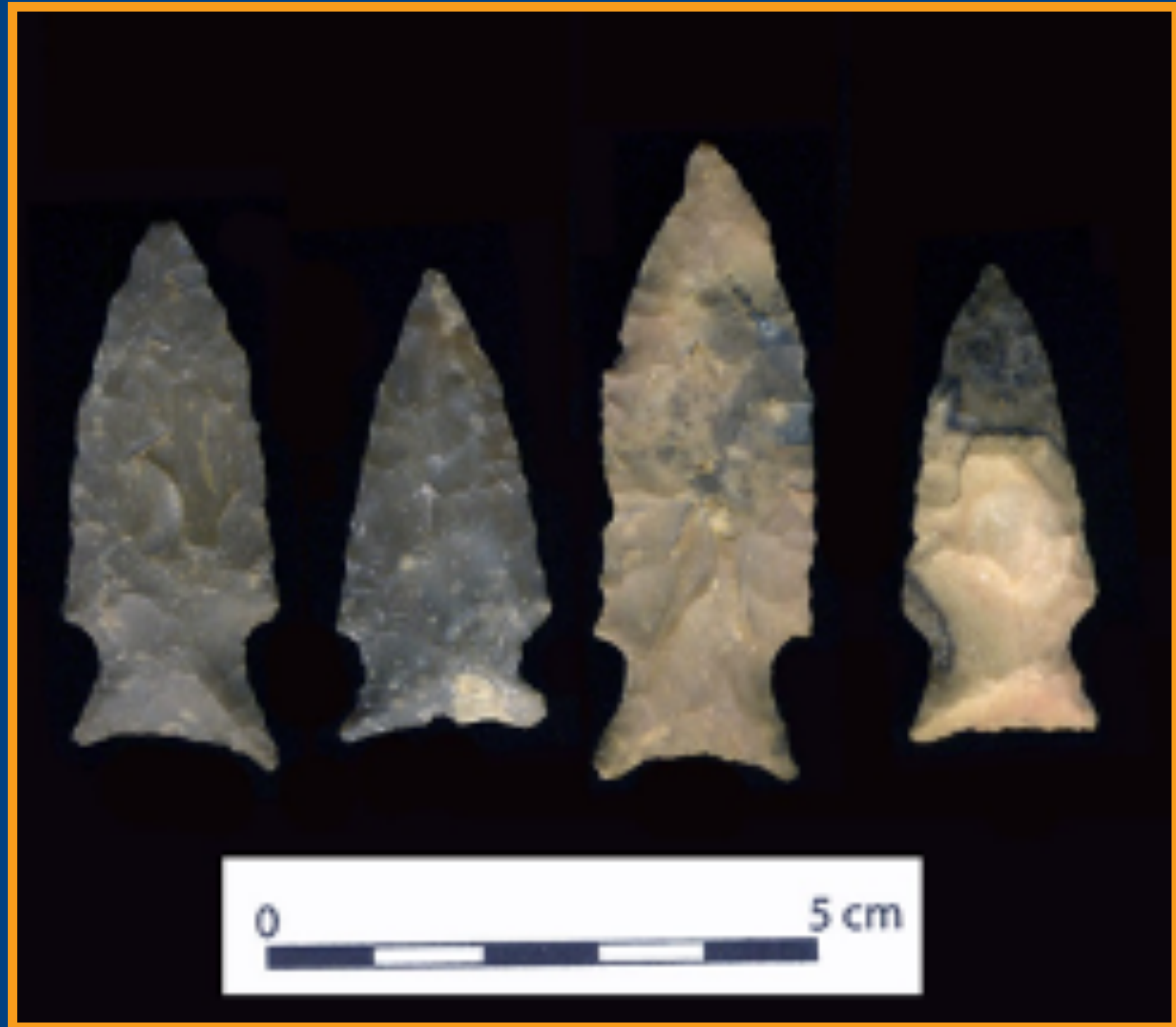
The price that would be negotiated between a willing seller and a willing buyer in a reasonable time, usually arrived at by comparable sales in the same area.

## **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.



# Endangered Species and Historic Features



Native American dart points of  
Central Texas



Karst invertebrates



## **Appendix C**

### **Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Routes**

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**Table 4-6 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route A**

Segment Combinations: 1-2A-2B-7			
Map Number	Structure or Feature	Approximate Distance from Route Centerline <sup>1</sup> (feet)	Nearest Alternative Route Segment <sup>2</sup>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
19	Commercial	248	2B
200	Other Electronic Installation	1,630	1
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,429	7
400	Northwest Vista College Disc Golf Course	137	7

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-7 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route B**

Segment Combinations: 1-3-5-6A-6B-7			
Map Number	Structure or Feature	Approximate Distance from Route Centerline <sup>1</sup> (feet)	Nearest Alternative Route Segment <sup>2</sup>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
17	Commercial	60	5
18	Commercial	123	5
20	Commercial	252	6B
21	Commercial	245	6B
22	Commercial	256	6B
23	Northwest Vista College	138	6B
24	Northwest Vista College	194	6B
200	Other Electronic Installation	991	5
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,429	7
400	Northwest Vista College Disc Golf Course	137	7

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-8 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route C**

<b>Segment Combinations: 1-3-5-8-12A-12B-17-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
17	Commercial	60	5
18	Commercial	123	5
25	Commercial	207	12B
26	Northwest Vista College Dormatory	234	12B
38	Commercial	260	12B
200	Other Electronic Installation	991	5
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	0	17

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-9 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route D**

<b>Segment Combinations: 1-3-5-8-11-13A-13B-14-17-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
17	Commercial	60	5
18	Commercial	123	5
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
200	Other Electronic Installation	991	5
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	0	17

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.



**Table 4-10 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route E**

<b>Segment Combinations: 9-12A-12B-16-18-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
25	Commercial	207	12B
26	Northwest Vista College Dormatory	234	12B
27	Single Family Residence	193	9
28	Single Family Residence	249	9
29	Single Family Residence	170	9
30	Single Family Residence	161	9
31	Single Family Residence	184	9
32	Single Family Residence	164	9
33	Single Family Residence	138	9
34	Single Family Residence	208	9
35	Single Family Residence	209	9
36	Single Family Residence	300	9
38	Commercial	260	12B
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	108	12B
--	41BX1958	643	--

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-11 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route F**

<b>Segment Combinations: 9-11-13A-13B-14-17-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
27	Single Family Residence	193	9
28	Single Family Residence	249	9
29	Single Family Residence	170	9
30	Single Family Residence	161	9
31	Single Family Residence	184	9
32	Single Family Residence	164	9
33	Single Family Residence	138	9
34	Single Family Residence	208	9
35	Single Family Residence	209	9
36	Single Family Residence	300	9
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	0	17
--	41BX1958	643	--

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-12 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route G**

<b>Segment Combinations: 10-13A-13B-14-17-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	0	17
--	41BX1958	129	--

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-13 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route H**

<b>Segment Combinations: 10-13A-13B-15-18-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	134	18
--	41BX1958	129	--

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-14 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route I**

<b>Segment Combinations: 1-3-20-22-23-24-13B-14-17-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
38	Commercial	231	24
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
200	Other Electronic Installation	1,255	3
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	0	17

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-15 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route J**

<b>Segment Combinations: 1-3-20-22-23-24-13B-15-18-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
38	Commercial	231	24
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
200	Other Electronic Installation	1,255	3
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	134	18

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-16 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route K**

<b>Segment Combinations: 1-3-20-22-23-12B-16-18-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
25	Commercial	207	12B
26	Northwest Vista College Dormatory	234	12B
38	Commercial	260	12B
200	Other Electronic Installation	1,255	3
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	108	12B

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-17 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route L**

<b>Segment Combinations: 1-3-20-22-6B-7</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
20	Commercial	252	6B
21	Commercial	245	6B
22	Commercial	256	6B
23	Northwest Vista College	138	6B
24	Northwest Vista College	194	6B
200	Other Electronic Installation	1,255	3
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,429	19
400	Northwest Vista College Disc Golf Course	137	7

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.



**Table 4-18 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route M**

Segment Combinations: 1-2A-21-22-6B-7			
Map Number	Structure or Feature	Approximate Distance from Route Centerline <sup>1</sup> (feet)	Nearest Alternative Route Segment <sup>2</sup>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
20	Commercial	252	6B
21	Commercial	245	6B
22	Commercial	256	6B
23	Northwest Vista College	138	6B
24	Northwest Vista College	194	6B
200	Other Electronic Installation	1,624	22
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,429	19
400	Northwest Vista College Disc Golf Course	137	7

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-19 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route N**

<b>Segment Combinations: 1-2A-21-22-23-12B-16-18-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
25	Commercial	207	12B
26	Northwest Vista College Dormatory	234	12B
38	Commercial	260	12B
200	Other Electronic Installation	1,624	22
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	108	12B

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

**Table 4-20 Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Route O**

<b>Segment Combinations: 1-2A-21-22-23-24-13B-15-18-19</b>			
<b>Map Number</b>	<b>Structure or Feature</b>	<b>Approximate Distance from Route Centerline<sup>1</sup> (feet)</b>	<b>Nearest Alternative Route Segment<sup>2</sup></b>
1	Single Family Residence	277	1
2	Single Family Residence	234	1
3	Single Family Residence	193	1
4	Single Family Residence	158	1
5	Single Family Residence	154	1
6	Single Family Residence	151	1
7	Single Family Residence	164	1
8	Single Family Residence	199	1
9	Single Family Residence	231	1
11	Multi Family Residence	242	1
12	Multi Family Residence	231	1
13	Multi Family Residence	225	1
14	Commercial	212	1
15	Commercial	111	1
16	Commercial	183	1
38	Commercial	231	24
39	Commercial	246	13B
40	Multi Family Residence	205	13B
41	Multi Family Residence	273	13B
200	Other Electronic Installation	1,624	22
201	Other Electronic Installation	494	1
300	Christus Santa Rosa Westover Hills Heliport	2,402	19
400	Northwest Vista College Disc Golf Course	134	18

<sup>1</sup> Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

<sup>2</sup> Nearest Alternate Route Segment to sensitive cultural resource sites are not provided for protection of the sites.

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## **Appendix D**

### **Figure 2-4 Primary Alternative Segments with Environmental and Land Use Constraints (Topographic Base Map)**

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## **Appendix E**

### **Figure 4-1 Habitable Structures and Other Land Use Features In the Vicinity of the Primary Alternative Routes (Aerial Base Map)**

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# **Attachment 2**

CPS Energy CCN Application

Estimated Costs for Transmission Line and Substation Facilities

Table 1: Transmission and Substation Facilities Total Estimated Costs

Route	Total Length (miles)	Sub Site	**Estimated Total Cost	ROW & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
A	1.82	1	\$39,446,000	\$4,310,000	\$1,005,000	\$710,000	\$14,527,000	\$3,272,000	\$8,501,000	\$3,535,000
B	1.83	1	\$42,918,000	\$7,854,000	\$1,006,000	\$712,000	\$14,404,000	\$3,273,000	\$8,309,000	\$3,458,000
C	2.13	1	\$48,040,000	\$10,793,000	\$1,018,000	\$763,000	\$15,059,000	\$3,303,000	\$9,052,000	\$3,684,000
D	2.36	1	\$50,124,000	\$11,699,000	\$1,027,000	\$802,000	\$15,479,000	\$3,326,000	\$9,579,000	\$3,655,000
E	1.2	1	\$34,455,000	\$3,553,000	\$980,000	\$604,000	\$13,156,000	\$3,210,000	\$7,279,000	\$2,540,000
F	1.43	1	\$38,042,000	\$4,722,000	\$990,000	\$644,000	\$13,934,000	\$3,233,000	\$8,008,000	\$3,052,000
G	1.25	1	\$35,639,000	\$3,412,000	\$982,000	\$613,000	\$13,664,000	\$3,215,000	\$7,674,000	\$2,839,000
H	1.24	1	\$35,693,000	\$3,523,000	\$982,000	\$611,000	\$13,672,000	\$3,214,000	\$7,617,000	\$2,829,000
I	2.28	1	\$44,934,000	\$7,655,000	\$1,024,000	\$788,000	\$14,766,000	\$3,318,000	\$8,937,000	\$4,361,000
J	2.28	1	\$45,005,000	\$7,767,000	\$1,024,000	\$788,000	\$14,779,000	\$3,318,000	\$8,886,000	\$4,351,000
K	2.08	1	\$42,222,000	\$6,560,000	\$1,016,000	\$754,000	\$14,269,000	\$3,298,000	\$8,502,000	\$3,984,000
L	1.77	1	\$40,556,000	\$5,932,000	\$1,003,000	\$701,000	\$14,237,000	\$3,267,000	\$8,196,000	\$3,533,000
M	1.77	1	\$39,996,000	\$5,091,000	\$1,003,000	\$701,000	\$14,160,000	\$3,267,000	\$8,184,000	\$3,954,000
N	2.07	1	\$41,315,000	\$5,719,000	\$1,015,000	\$752,000	\$14,187,000	\$3,297,000	\$8,484,000	\$4,105,000
O	2.27	1	\$44,261,000	\$6,925,000	\$1,023,000	\$786,000	\$14,697,000	\$3,317,000	\$8,867,000	\$4,622,000

\*\*Estimated Costs include a 10% Contingency for unknown project costs not evident at the time these estimates were created.

Table 2: Transmission and Substation Facilities Total Estimated Costs (Sorted Least to Most Expensive)

Route	Total Length (miles)	Sub Site	**Estimated Total Cost	ROW & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
E	1.2	1	\$34,455,000	\$3,553,000	\$980,000	\$604,000	\$13,156,000	\$3,210,000	\$7,279,000	\$2,540,000
G	1.25	1	\$35,639,000	\$3,412,000	\$982,000	\$613,000	\$13,664,000	\$3,215,000	\$7,674,000	\$2,839,000
H	1.24	1	\$35,693,000	\$3,523,000	\$982,000	\$611,000	\$13,672,000	\$3,214,000	\$7,617,000	\$2,829,000
F	1.43	1	\$38,042,000	\$4,722,000	\$990,000	\$644,000	\$13,934,000	\$3,233,000	\$8,008,000	\$3,052,000
A	1.82	1	\$39,446,000	\$4,310,000	\$1,005,000	\$710,000	\$14,527,000	\$3,272,000	\$8,501,000	\$3,535,000
M	1.77	1	\$39,996,000	\$5,091,000	\$1,003,000	\$701,000	\$14,160,000	\$3,267,000	\$8,184,000	\$3,954,000
L	1.77	1	\$40,556,000	\$5,932,000	\$1,003,000	\$701,000	\$14,237,000	\$3,267,000	\$8,196,000	\$3,533,000
N	2.07	1	\$41,315,000	\$5,719,000	\$1,015,000	\$752,000	\$14,187,000	\$3,297,000	\$8,484,000	\$4,105,000
K	2.08	1	\$42,222,000	\$6,560,000	\$1,016,000	\$754,000	\$14,269,000	\$3,298,000	\$8,502,000	\$3,984,000
B	1.83	1	\$42,918,000	\$7,854,000	\$1,006,000	\$712,000	\$14,404,000	\$3,273,000	\$8,309,000	\$3,458,000
O	2.27	1	\$44,261,000	\$6,925,000	\$1,023,000	\$786,000	\$14,697,000	\$3,317,000	\$8,867,000	\$4,622,000
I	2.28	1	\$44,934,000	\$7,655,000	\$1,024,000	\$788,000	\$14,766,000	\$3,318,000	\$8,937,000	\$4,361,000
J	2.28	1	\$45,005,000	\$7,767,000	\$1,024,000	\$788,000	\$14,779,000	\$3,318,000	\$8,886,000	\$4,351,000
C	2.13	1	\$48,040,000	\$10,793,000	\$1,018,000	\$763,000	\$15,059,000	\$3,303,000	\$9,052,000	\$3,684,000
D	2.36	1	\$50,124,000	\$11,699,000	\$1,027,000	\$802,000	\$15,479,000	\$3,326,000	\$9,579,000	\$3,655,000

Table 3: Transmission Facilities Total Estimated Costs

Route	Total Length (miles)	Sub Site	Estimated Total Cost	ROW & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
A	1.82	1	\$16,481,000	\$4,310,000	\$73,000	\$310,000	\$4,030,000	\$182,000	\$4,041,000	\$3,535,000
B	1.83	1	\$19,637,000	\$7,854,000	\$74,000	\$312,000	\$3,907,000	\$183,000	\$3,849,000	\$3,458,000
C	2.13	1	\$24,293,000	\$10,793,000	\$86,000	\$363,000	\$4,562,000	\$213,000	\$4,592,000	\$3,684,000
D	2.36	1	\$26,188,000	\$11,699,000	\$95,000	\$402,000	\$4,982,000	\$236,000	\$5,119,000	\$3,655,000
E	1.2	1	\$11,943,000	\$3,553,000	\$48,000	\$204,000	\$2,659,000	\$120,000	\$2,819,000	\$2,540,000
F	1.43	1	\$15,204,000	\$4,722,000	\$58,000	\$244,000	\$3,437,000	\$143,000	\$3,548,000	\$3,052,000
G	1.25	1	\$13,020,000	\$3,412,000	\$50,000	\$213,000	\$3,167,000	\$125,000	\$3,214,000	\$2,839,000
H	1.24	1	\$13,069,000	\$3,523,000	\$50,000	\$211,000	\$3,175,000	\$124,000	\$3,157,000	\$2,829,000
I	2.28	1	\$21,470,000	\$7,655,000	\$92,000	\$388,000	\$4,269,000	\$228,000	\$4,477,000	\$4,361,000
J	2.28	1	\$21,534,000	\$7,767,000	\$92,000	\$388,000	\$4,282,000	\$228,000	\$4,426,000	\$4,351,000
K	2.08	1	\$19,004,000	\$6,560,000	\$84,000	\$354,000	\$3,772,000	\$208,000	\$4,042,000	\$3,984,000
L	1.77	1	\$17,490,000	\$5,932,000	\$71,000	\$301,000	\$3,740,000	\$177,000	\$3,736,000	\$3,533,000
M	1.77	1	\$16,981,000	\$5,091,000	\$71,000	\$301,000	\$3,663,000	\$177,000	\$3,724,000	\$3,954,000
N	2.07	1	\$18,180,000	\$5,719,000	\$83,000	\$352,000	\$3,690,000	\$207,000	\$4,024,000	\$4,105,000
O	2.27	1	\$20,858,000	\$6,925,000	\$91,000	\$386,000	\$4,200,000	\$227,000	\$4,407,000	\$4,622,000

Table 4: Substation Facilities Total Estimated Costs

Sub Site	Estimated Total Cost	ROW & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)
1	\$19,379,000.00	\$ -	\$932,000.00	\$400,000.00	\$10,497,000.00	\$3,090,000.00	\$4,460,000.00

# **Attachment 3**

January 12, 2023

Microsoft Corporation  
One Microsoft Way  
Redmond, Washington 98052  
Attention: General Manager, CO+I Energy

Re: Surety Guaranty Agreement Authorizing Commencement of a Routing and Siting Process and Preparation of Engineering Design Documents for the Facility Located at 4102 Wiseman Blvd, San Antonio, Texas (the "Surety Guaranty Agreement")

Dear Mr. Janous,

The City of San Antonio, acting by and through the City Public Service Board of San Antonio d/b/a CPS Energy, and Microsoft Corporation (the "Customer") (collectively the "Parties") have been engaged in discussions regarding Customer's request for temporary electric service and the eventual installation of a dedicated onsite substation at its proposed data center located at 4102 Wiseman Blvd, San Antonio, Texas (the "Project Site").<sup>1</sup> The Parties have reached agreement on terms, reflected in a letter agreement dated January 12, 2023 (the "Preliminary Agreement"), addressing certain distribution and transmission system upgrades and installation of facilities necessary to provide standard and redundant services to the Project Site. The Preliminary Agreement covers the upfront contribution-in-aid-of-construction ("CIAC") and monthly recurring charges ("MRC") associated with installation of circuit facilities and initiation of service (the "Initial Configuration"), as well as consensus to enter into a definitive agreement for standard and redundant service, including construction of a dedicated onsite substation at the Property Site (the "Final Agreement"). Collectively, the Preliminary Agreement and this Surety Guaranty Agreement constitute the Customer's Application and Agreement for Electric Service (the "AAES"). The parties agree that the Final Agreement, when executed, will become a part of the AAES.

Pursuant to this Surety Guaranty Agreement, the Parties agree to: (1) the general parameters of the Project; (2) Customer execution of a surety bond instrument (the "Surety Bond") for the benefit of CPS Energy to ensure reimbursement of certain costs should a "Trigger Event" occur as this term is defined herein; (3) the form of the Surety Bond; (4) required criteria for the acceptable surety; and (5) the conditions that will trigger payment under the Surety Bond.

Incorporated as Exhibit A is a conceptual drawing of the Project Site. Subject to engineering design drawings to be approved in the Final Agreement, CPS Energy will design a substation on Customer's property to be assigned to CPS Energy. Such engineering design drawings will detail the distribution and transmission system infrastructure and facility upgrades necessary to provide permanent electrical service for the Project that will include primary circuits with a total capacity of 168.3 MW to support standard service and a redundant circuit of 56.1 MW to ensure redundant service. The proposed standard and redundant circuit capacity is consistent with the Project's load ramp schedule incorporated as Exhibit B. These facilities will comprise the final design of the

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<sup>1</sup> The work associated with this request for service is sometimes referred to by the parties as the "Project."

Project (the “Final Configuration”). Customer construction charges will be determined once the design is complete and will be paid by Customer before construction begins. These details will be addressed in the Final Agreement.

In order to extend a transmission line to the proposed substation site, CPS Energy must conduct a routing and siting process (the “R&S Process”) that involves an environmental assessment, public input, and ultimate route approval by the CPS Energy Board of Trustees/San Antonio City Council and/or the Public Utility Commission of Texas (“PUC”).<sup>2</sup> The R&S Process may take up to two (2) years and must be completed before the transmission line engineering design work can begin. CPS Energy does not recommend beginning substation construction nor the procurement of materials until after the R&S Process is complete. Details related to this issue will also be addressed in the Final Agreement.

The R&S Process must respect the rights of property owners and other affected stakeholders that may be impacted by construction of transmission lines, whether subject to Board/City Council or PUCT approval. Seeking and receiving public input is a critical component of the R&S Process, which may cause delay in CPS Energy’s construction timeline for delivery of the on-site substation. Customer accepts the business risk associated with project delays caused by the R&S Process.

Through the execution of this Surety Guaranty Agreement, Customer:

- (i) authorizes CPS Energy to perform engineering design of the onsite substation to be installed at the Project Site at an estimated cost of [REDACTED] which includes transmission, substation, civil, and site engineering components;
- (ii) authorizes CPS Energy to conduct the R&S Process to obtain routing approval for the transmission line at an estimated cost of [REDACTED] which includes environmental assessment, public involvement, and transmission line routing approval from the appropriate regulatory authorities.

Provided, however, that in the event that Customer (1) cancels the Project before the completion of the R&S Process; (2) cancels the Project after the completion of the R&S Process; or (3) changes the substation loading requirements or design rendering the R&S Process or substation design obsolete or otherwise unnecessary (hereinafter, any of the three events is individually referred to as a “Trigger Event”); Customer agrees to reimburse CPS Energy for the cost actually incurred by CPS Energy for the research, planning, engineering work, public notifications, public meetings, regulatory proceedings, and legal fees associated with the R&S Process; as well as substation engineering design in accordance with Table 1 below:

---

<sup>2</sup> The R&S Process for a transmission line within the jurisdictional boundaries of the City of San Antonio is subject to review and ultimate approval of the route by the CPS Energy Board of Trustees and San Antonio City Council. For a transmission line that extends outside the San Antonio city limits, the route is subject to approval by the PUCT.

**Table 1. Reimbursement Schedule for Trigger Events<sup>3</sup>**

Reimbursement Amount for R&S Process	Reimbursement Amount for Engineering Design
Not to exceed [REDACTED]	Not to exceed [REDACTED]

Customer understands and agrees that CPS Energy will not begin construction at the Project Site or order materials and equipment for the Project until and unless Customer executes the Final Agreement and pays any upfront charges associated with the requested electric service, in addition to satisfying all charges associated with this Surety Guaranty Agreement and the Preliminary Agreement. Customer further agrees to continue contract negotiations with CPS Energy in good faith toward the prompt execution of the Final Agreement.

Customer is required to make payment to CPS Energy within 30 days (the “Grace Period”) of receiving a detailed invoice regarding the occurrence of a Trigger Event in the amount identified on Table 1. Under no circumstance will Customer be responsible for payment exceeding the amount set out in Table 1 with respect to Trigger Events. Any failure of financial performance on the part of Customer for the payment and reimbursement requirements of this Surety Guaranty Agreement shall be considered a contractual default. Should Customer fail to timely cure the default within 15 days of the end of the Grace Period, CPS Energy shall have the right to receive full reimbursement from Customer through the Surety Bond, a template of which is attached as Exhibit C, which shall be executed contemporaneously with this Surety Guaranty Agreement and incorporated as Exhibit D. The Surety Bond shall: (1) be executed with a proper surety through a company licensed and qualified to operate in the State of Texas and listed with the U.S. Department of the Treasury Listing of Certified Companies; (2) not be for an amount greater than the surety's approved limit as referenced in the U.S. Department of the Treasury Listing of Certified Companies; and (3) be signed by an agent resident in the State of Texas and accompanied by a certified power-of-attorney document.

The Surety Bond will be released upon the occurrence of one of the following conditions:

1. Should a Trigger Event not occur, the Surety Bond will be released following execution of all the agreements that constitute the AAES, provided Customer has complied with all its financial obligations under this Surety Guaranty Agreement and made all upfront payments under other AAES agreements necessary to energize service.

<sup>3</sup> CPS Energy will provide a detailed invoice outlining the categories of actual costs incurred through the date CPS Energy received notice from Customer of the occurrence of a Trigger Event and Customer shall be responsible for payment of such actual costs within 30 days. For labor costs, such as for design work, such costs shall be based on CPS Energy’s internal labor cost structures and/or CPS Energy’s actual subcontractor costs.

2. Should a Trigger Event occur, the Surety Bond will be released upon Customer complying with all its financial obligations under this Surety Guaranty Agreement or CPS Energy receiving full reimbursement of its actual costs.

[THE SIGNATURE PAGE FOLLOWS]

By the signatures below of duly authorized officers for both parties, CPS Energy and Customer, agree to the terms of this Surety Guaranty Agreement.

**The City of San Antonio, acting by and through City Public Service Board of San Antonio (CPS Energy)**

**[Customer]**

  
Shawn Cobb (Feb 10, 2023 13:21 CST)

  
Brian Janous (Feb 2, 2023 15:35 PST)

Signature

Signature

Shawn Cobb

Brian Janous

Printed Name

Printed Name

Director, Managed Accounts

GM

Title

Title

Feb 10, 2023

Feb 2, 2023

Date

Date



**EXHIBIT A**

**Conceptual Drawing of Project Site**

**EXHIBIT B**

**Customer Load Ramp Schedule**

This exhibit should include:

Data Center Load Type

Yearly Load Projections Associated with New Load (MW, MVAR)

**EXHIBIT C**

**Template of Surety Bond**

**Surety Bond**

Bond No. \_\_\_\_\_

WHEREAS, the City of San Antonio, acting by and through City Public Service Board (CPS Energy) (“Obligee”) and \_\_\_\_\_ (“Principal”), have entered into a Surety Guaranty Agreement, duly executed and delivered as of XXX \_\_, 2022 (the “Agreement”), on the terms and conditions set forth therein. The Agreement is incorporated by reference herein. Capitalized terms not separately defined herein have the meanings assigned such terms in the Agreement; and

WHEREAS, the Agreement requires the Principal to furnish adequate security for the obligations owed by the Principal to Obligee under the Agreement. Obligee agrees that furnishing a bond (this “Bond”) guaranteeing the faithful performance of its obligations under the Agreement will satisfy this security requirement under the Agreement.

NOW, THEREFORE, Principal and [Enter Name of Surety Company] (“Surety”), an admitted surety insurer in the State of Texas, are held and firmly bound unto Obligee in the amount of \$\_\_\_\_\_ (the “Bonded Sum”), for payment of which sum Principal and Surety, jointly and severally, firmly bind themselves and their successors and assigns.

THE CONDITION OF THIS BOND IS SUCH THAT, if Principal shall promptly and faithfully perform all its obligations under the Agreement, including any amendments or supplements thereto, then the obligations under this Bond shall be null and void; otherwise this Bond shall remain in full force and effect. Obligee shall release this Bond upon the occurrence of all the conditions to release set forth in the Agreement.

The maximum liability of the surety shall not exceed the Bonded Sum set forth above.

1. Correspondence or claims relating to this Bond should be sent to Surety at the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. No right of action shall accrue on this Bond to or for the use of any entity other than Obligee or its successors and assigns.

[Signature Page Follows]



IN WITNESS WHEREOF, Principal and Surety have caused this Bond to be executed and delivered as of \_\_\_\_\_, 20\_\_.

Principal: \_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
(Seal)

Surety: \_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
(Seal)

**[ADD APPROPRIATE SURETY SURETY  
ACKNOWLEDGMENTS]**

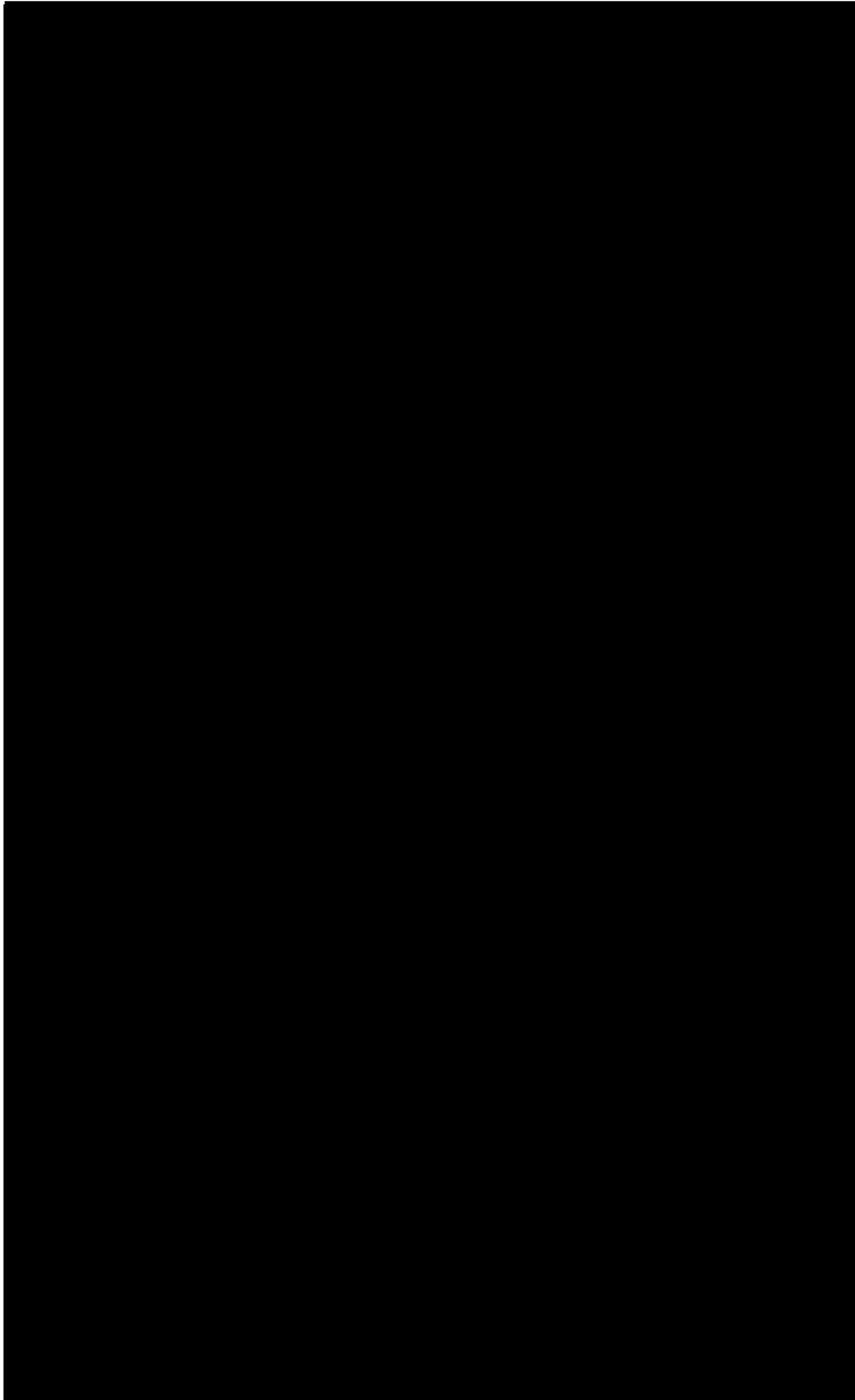
\_\_\_\_\_  
or secretary attest

By: \_\_\_\_\_  
Name  
Title:  
Address:



**EXHIBIT D**

**Executed Surety Bond**



Power Need by date

	SAT 15	SAT 16	SAT 17	Total
Max Design IT MW	48.0	48.0	48.0	144.0
Utilization	70%	70%	70%	
PUE Factor	1.67	1.67	1.67	
Ramp (MW/month)	1.00	1.00	1.00	
Expected Utility MW	56.1	56.1	56.1	168.3
Commissioning MW / Design Utility MW	80.2	80.2	80.2	160.3

Month	Date	SAT 15	SAT 16	SAT 17	Total Utility MW
1	12/1/2023	16.0			16.0
2	1/1/2024	16.0			16.0
3	2/1/2024	16.0			16.0
4	3/1/2024	16.0			16.0
5	4/1/2024	1.0			1.0
6	5/1/2024	1.0			1.0
7	6/1/2024	1.0			1.0
8	7/1/2024	1.0			1.0
9	8/1/2024	1.0			1.0
10	9/1/2024	2.5			2.5
11	10/1/2024	4.0			4.0
12	11/1/2024	5.5			5.5
13	12/1/2024	7.0			7.0
14	1/1/2025	8.5			8.5
15	2/1/2025	10.0			10.0
16	3/1/2025	11.5			11.5
17	4/1/2025	13.0			13.0
18	5/1/2025	14.5	16.0		30.5
19	6/1/2025	16.0	16.0		32.0
20	7/1/2025	17.5	16.0		33.5
21	8/1/2025	19.0	16.0		35.0
22	9/1/2025	20.5	1.0		21.5
23	10/1/2025	22.0	1.0		23.0
24	11/1/2025	23.5	1.0		24.5
25	12/1/2025	25.0	1.0		26.0
26	1/1/2026	26.5	1.0		27.5
27	2/1/2026	28.0	2.5		30.5
28	3/1/2026	29.5	4.0		33.5
29	4/1/2026	31.0	5.5		36.5
30	5/1/2026	32.5	7.0	16.0	55.5
31	6/1/2026	34.0	8.5	16.0	58.5
32	7/1/2026	35.5	10.0	16.0	61.5
33	8/1/2026	37.0	11.5	16.0	64.5
34	9/1/2026	38.5	13.0	1.0	52.5
35	10/1/2026	40.0	14.5	1.0	55.5
36	11/1/2026	41.5	16.0	1.0	58.5
37	12/1/2026	43.0	17.5	1.0	61.5
38	1/1/2027	44.5	19.0	1.0	64.5
39	2/1/2027	46.0	20.5	2.5	69.0
40	3/1/2027	47.5	22.0	4.0	73.5
41	4/1/2027	49.0	23.5	5.5	78.0
42	5/1/2027	50.5	25.0	7.0	82.5
43	6/1/2027	52.0	26.5	8.5	87.0
44	7/1/2027	53.5	28.0	10.0	91.5
45	8/1/2027	55.0	29.5	11.5	96.0

46	9/1/2027	56.1	31.0	13.0	100.1
47	10/1/2027	56.1	32.5	14.5	103.1
48	11/1/2027	56.1	34.0	16.0	106.1
49	12/1/2027	56.1	35.5	17.5	109.1
50	1/1/2028	56.1	37.0	19.0	112.1
51	2/1/2028	56.1	38.5	20.5	115.1
52	3/1/2028	56.1	40.0	22.0	118.1
53	4/1/2028	56.1	41.5	23.5	121.1
54	5/1/2028	56.1	43.0	25.0	124.1
55	6/1/2028	56.1	44.5	26.5	127.1
56	7/1/2028	56.1	46.0	28.0	130.1
57	8/1/2028	56.1	47.5	29.5	133.1
58	9/1/2028	56.1	49.0	31.0	136.1
59	10/1/2028	56.1	50.5	32.5	139.1
60	11/1/2028	56.1	52.0	34.0	142.1
61	12/1/2028	56.1	53.5	35.5	145.1
62	1/1/2029	56.1	55.0	37.0	148.1
63	2/1/2029	56.1	56.1	38.5	150.7
64	3/1/2029	56.1	56.1	40.0	152.2
65	4/1/2029	56.1	56.1	41.5	153.7
66	5/1/2029	56.1	56.1	43.0	155.2
67	6/1/2029	56.1	56.1	44.5	156.7
68	7/1/2029	56.1	56.1	46.0	158.2
69	8/1/2029	56.1	56.1	47.5	159.7
70	9/1/2029	56.1	56.1	49.0	161.2
71	10/1/2029	56.1	56.1	50.5	162.7
72	11/1/2029	56.1	56.1	52.0	164.2
73	12/1/2029	56.1	56.1	53.5	165.7
74	1/1/2030	56.1	56.1	55.0	167.2
75	2/1/2030	56.1	56.1	56.1	168.3
76	3/1/2030	56.1	56.1	56.1	168.3
77	4/1/2030	56.1	56.1	56.1	168.3
78	5/1/2030	56.1	56.1	56.1	168.3
79	6/1/2030	56.1	56.1	56.1	168.3
80	7/1/2030	56.1	56.1	56.1	168.3
81	8/1/2030	56.1	56.1	56.1	168.3
82	9/1/2030	56.1	56.1	56.1	168.3
83	10/1/2030	56.1	56.1	56.1	168.3
84	11/1/2030	56.1	56.1	56.1	168.3
85	12/1/2030	56.1	56.1	56.1	168.3
86	1/1/2031	56.1	56.1	56.1	168.3
87	2/1/2031	56.1	56.1	56.1	168.3
88	3/1/2031	56.1	56.1	56.1	168.3
89	4/1/2031	56.1	56.1	56.1	168.3
90	5/1/2031	56.1	56.1	56.1	168.3
91	6/1/2031	56.1	56.1	56.1	168.3
92	7/1/2031	56.1	56.1	56.1	168.3
93	8/1/2031	56.1	56.1	56.1	168.3
94	9/1/2031	56.1	56.1	56.1	168.3
95	10/1/2031	56.1	56.1	56.1	168.3
96	11/1/2031	56.1	56.1	56.1	168.3
97	12/1/2031	56.1	56.1	56.1	168.3
98	1/1/2032	56.1	56.1	56.1	168.3
99	2/1/2032	56.1	56.1	56.1	168.3
100	3/1/2032	56.1	56.1	56.1	168.3
101	4/1/2032	56.1	56.1	56.1	168.3
102	5/1/2032	56.1	56.1	56.1	168.3
103	6/1/2032	56.1	56.1	56.1	168.3
104	7/1/2032	56.1	56.1	56.1	168.3
105	8/1/2032	56.1	56.1	56.1	168.3
106	9/1/2032	56.1	56.1	56.1	168.3

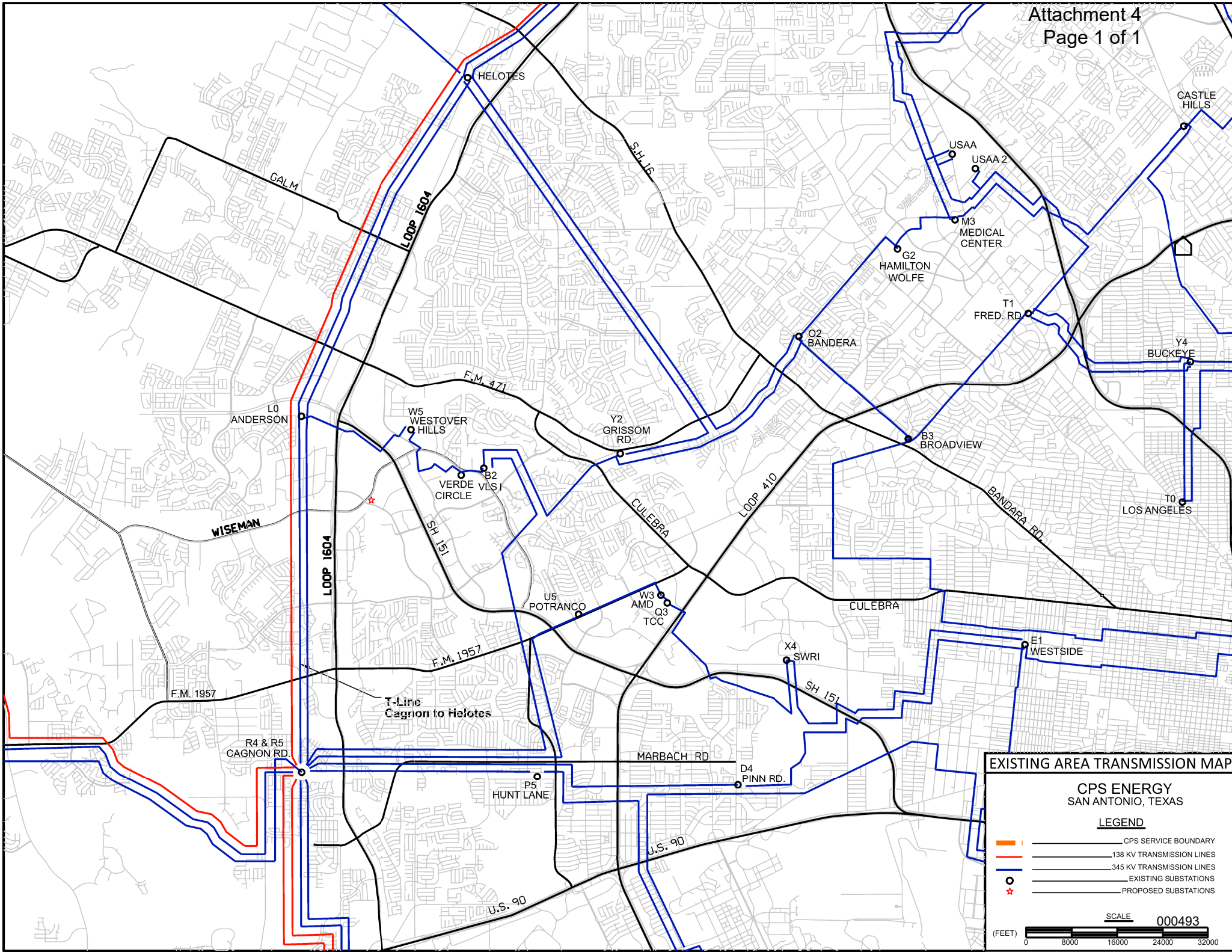


107	10/1/2032	56.1	56.1	56.1	168.3
108	11/1/2032	56.1	56.1	56.1	168.3
109	12/1/2032	56.1	56.1	56.1	168.3
110	1/1/2033	56.1	56.1	56.1	168.3
111	2/1/2033	56.1	56.1	56.1	168.3
112	3/1/2033	56.1	56.1	56.1	168.3
113	4/1/2033	56.1	56.1	56.1	168.3
114	5/1/2033	56.1	56.1	56.1	168.3
115	6/1/2033	56.1	56.1	56.1	168.3
116	7/1/2033	56.1	56.1	56.1	168.3
117	8/1/2033	56.1	56.1	56.1	168.3
118	9/1/2033	56.1	56.1	56.1	168.3
119	10/1/2033	56.1	56.1	56.1	168.3
120	11/1/2033	56.1	56.1	56.1	168.3
121	12/1/2033	56.1	56.1	56.1	168.3
122	1/1/2034	56.1	56.1	56.1	168.3
123	2/1/2034	56.1	56.1	56.1	168.3
124	3/1/2034	56.1	56.1	56.1	168.3
125	4/1/2034	56.1	56.1	56.1	168.3
126	5/1/2034	56.1	56.1	56.1	168.3
127	6/1/2034	56.1	56.1	56.1	168.3
128	7/1/2034	56.1	56.1	56.1	168.3
129	8/1/2034	56.1	56.1	56.1	168.3
130	9/1/2034	56.1	56.1	56.1	168.3
131	10/1/2034	56.1	56.1	56.1	168.3
132	11/1/2034	56.1	56.1	56.1	168.3
133	12/1/2034	56.1	56.1	56.1	168.3
134	1/1/2035	56.1	56.1	56.1	168.3
135	2/1/2035	56.1	56.1	56.1	168.3
136	3/1/2035	56.1	56.1	56.1	168.3
137	4/1/2035	56.1	56.1	56.1	168.3
138	5/1/2035	56.1	56.1	56.1	168.3
139	6/1/2035	56.1	56.1	56.1	168.3
140	7/1/2035	56.1	56.1	56.1	168.3
141	8/1/2035	56.1	56.1	56.1	168.3
142	9/1/2035	56.1	56.1	56.1	168.3
143	10/1/2035	56.1	56.1	56.1	168.3
144	11/1/2035	56.1	56.1	56.1	168.3
145	12/1/2035	56.1	56.1	56.1	168.3
146	1/1/2036	56.1	56.1	56.1	168.3
147	2/1/2036	56.1	56.1	56.1	168.3
148	3/1/2036	56.1	56.1	56.1	168.3
149	4/1/2036	56.1	56.1	56.1	168.3
150	5/1/2036	56.1	56.1	56.1	168.3
151	6/1/2036	56.1	56.1	56.1	168.3
152	7/1/2036	56.1	56.1	56.1	168.3
153	8/1/2036	56.1	56.1	56.1	168.3
154	9/1/2036	56.1	56.1	56.1	168.3
155	10/1/2036	56.1	56.1	56.1	168.3
156	11/1/2036	56.1	56.1	56.1	168.3
157	12/1/2036	56.1	56.1	56.1	168.3
158	1/1/2037	56.1	56.1	56.1	168.3
159	2/1/2037	56.1	56.1	56.1	168.3
160	3/1/2037	56.1	56.1	56.1	168.3
161	4/1/2037	56.1	56.1	56.1	168.3
162	5/1/2037	56.1	56.1	56.1	168.3
163	6/1/2037	56.1	56.1	56.1	168.3
164	7/1/2037	56.1	56.1	56.1	168.3
165	8/1/2037	56.1	56.1	56.1	168.3
166	9/1/2037	56.1	56.1	56.1	168.3
167	10/1/2037	56.1	56.1	56.1	168.3

168	11/1/2037	56.1	56.1	56.1	168.3
169	12/1/2037	56.1	56.1	56.1	168.3
170	1/1/2038	56.1	56.1	56.1	168.3
171	2/1/2038	56.1	56.1	56.1	168.3
172	3/1/2038	56.1	56.1	56.1	168.3
173	4/1/2038	56.1	56.1	56.1	168.3
174	5/1/2038	56.1	56.1	56.1	168.3
175	6/1/2038	56.1	56.1	56.1	168.3
176	7/1/2038	56.1	56.1	56.1	168.3
177	8/1/2038	56.1	56.1	56.1	168.3
178	9/1/2038	56.1	56.1	56.1	168.3
179	10/1/2038	56.1	56.1	56.1	168.3
180	11/1/2038	56.1	56.1	56.1	168.3
181	12/1/2038	56.1	56.1	56.1	168.3
182	1/1/2039	56.1	56.1	56.1	168.3
183	2/1/2039	56.1	56.1	56.1	168.3
184	3/1/2039	56.1	56.1	56.1	168.3
185	4/1/2039	56.1	56.1	56.1	168.3
186	5/1/2039	56.1	56.1	56.1	168.3
187	6/1/2039	56.1	56.1	56.1	168.3
188	7/1/2039	56.1	56.1	56.1	168.3
189	8/1/2039	56.1	56.1	56.1	168.3
190	9/1/2039	56.1	56.1	56.1	168.3
191	10/1/2039	56.1	56.1	56.1	168.3
192	11/1/2039	56.1	56.1	56.1	168.3
193	12/1/2039	56.1	56.1	56.1	168.3
194	1/1/2040	56.1	56.1	56.1	168.3
195	2/1/2040	56.1	56.1	56.1	168.3
196	3/1/2040	56.1	56.1	56.1	168.3
197	4/1/2040	56.1	56.1	56.1	168.3
198	5/1/2040	56.1	56.1	56.1	168.3
199	6/1/2040	56.1	56.1	56.1	168.3
200	7/1/2040	56.1	56.1	56.1	168.3
201	8/1/2040	56.1	56.1	56.1	168.3
202	9/1/2040	56.1	56.1	56.1	168.3
203	10/1/2040	56.1	56.1	56.1	168.3
204	11/1/2040	56.1	56.1	56.1	168.3
205	12/1/2040	56.1	56.1	56.1	168.3
206	1/1/2041	56.1	56.1	56.1	168.3
207	2/1/2041	56.1	56.1	56.1	168.3
208	3/1/2041	56.1	56.1	56.1	168.3
209	4/1/2041	56.1	56.1	56.1	168.3
210	5/1/2041	56.1	56.1	56.1	168.3
211	6/1/2041	56.1	56.1	56.1	168.3
212	7/1/2041	56.1	56.1	56.1	168.3
213	8/1/2041	56.1	56.1	56.1	168.3
214	9/1/2041	56.1	56.1	56.1	168.3
215	10/1/2041	56.1	56.1	56.1	168.3
216	11/1/2041	56.1	56.1	56.1	168.3
217	12/1/2041	56.1	56.1	56.1	168.3
218	1/1/2042	56.1	56.1	56.1	168.3
219	2/1/2042	56.1	56.1	56.1	168.3
220	3/1/2042	56.1	56.1	56.1	168.3
221	4/1/2042	56.1	56.1	56.1	168.3
222	5/1/2042	56.1	56.1	56.1	168.3
223	6/1/2042	56.1	56.1	56.1	168.3
224	7/1/2042	56.1	56.1	56.1	168.3
225	8/1/2042	56.1	56.1	56.1	168.3
226	9/1/2042	56.1	56.1	56.1	168.3
227	10/1/2042	56.1	56.1	56.1	168.3
228	11/1/2042	56.1	56.1	56.1	168.3

229	12/1/2042	56.1	56.1	56.1	168.3
230	1/1/2043	56.1	56.1	56.1	168.3
231	2/1/2043	56.1	56.1	56.1	168.3
232	3/1/2043	56.1	56.1	56.1	168.3
233	4/1/2043	56.1	56.1	56.1	168.3
234	5/1/2043	56.1	56.1	56.1	168.3
235	6/1/2043	56.1	56.1	56.1	168.3
236	7/1/2043	56.1	56.1	56.1	168.3
237	8/1/2043	56.1	56.1	56.1	168.3
238	9/1/2043	56.1	56.1	56.1	168.3
239	10/1/2043	56.1	56.1	56.1	168.3
240	11/1/2043	56.1	56.1	56.1	168.3

# **Attachment 4**



**EXISTING AREA TRANSMISSION MAP**

**CPS ENERGY  
SAN ANTONIO, TEXAS**

**LEGEND**

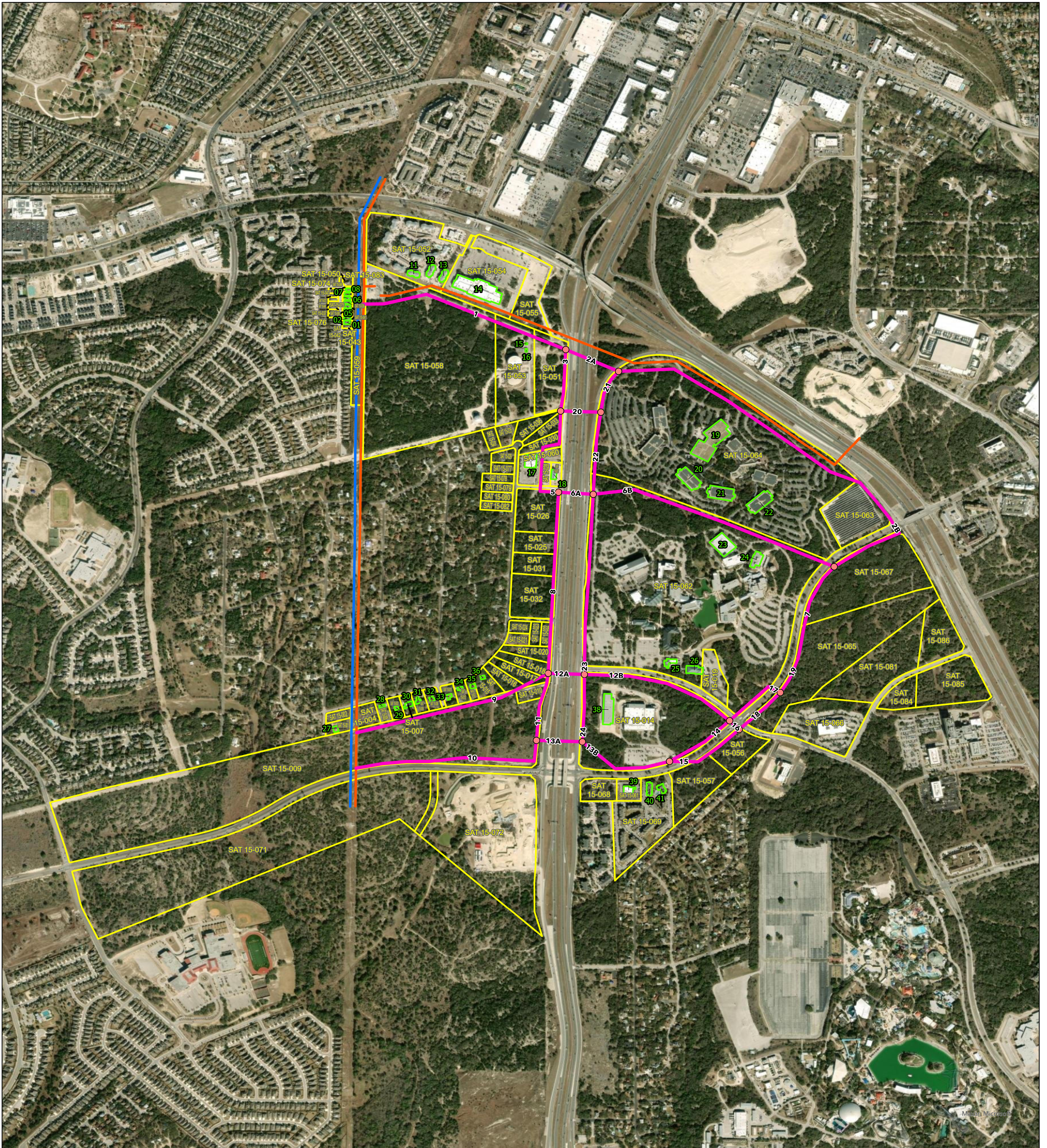
- CPS SERVICE BOUNDARY
- 138 KV TRANSMISSION LINES
- 345 KV TRANSMISSION LINES
- EXISTING SUBSTATIONS
- ★ PROPOSED SUBSTATIONS

**SCALE 000493**

(FEET)

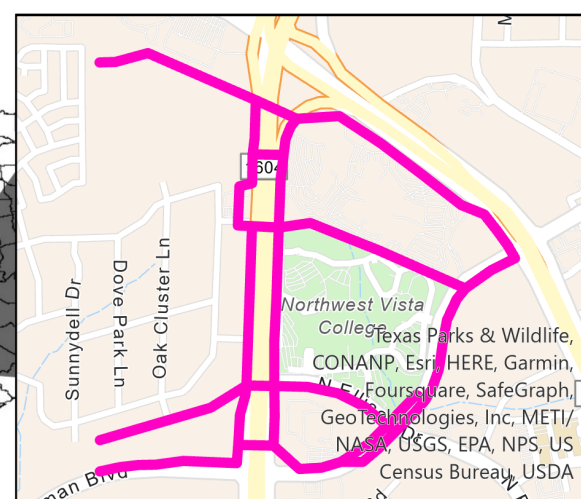
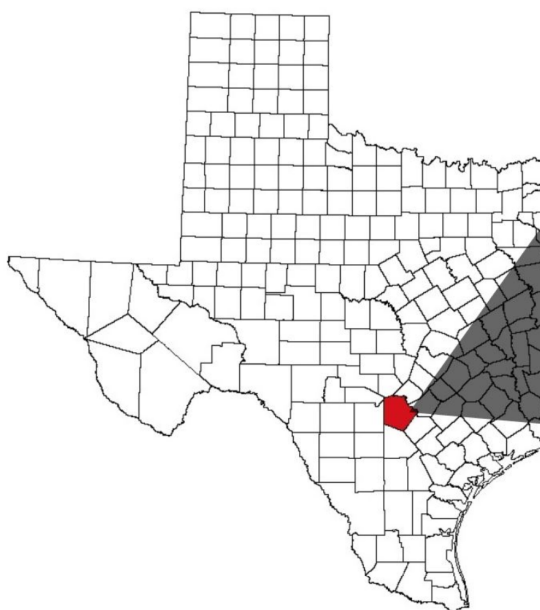
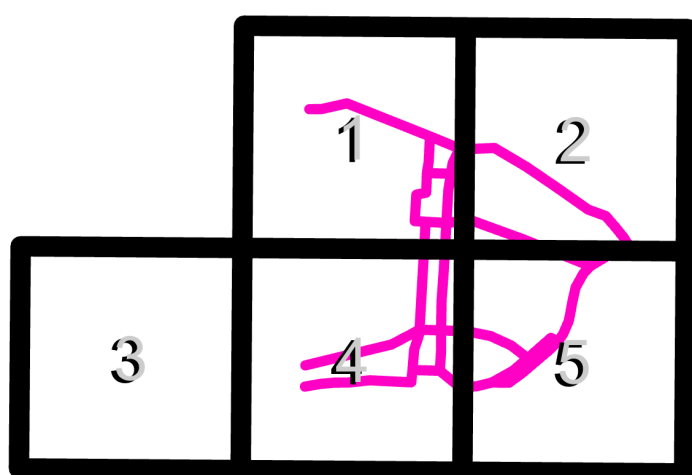
0 8000 16000 24000 32000

# **Attachment 5**



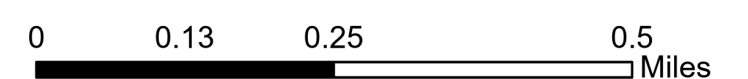
CPS Energy is the nation's largest municipally owned energy utility providing both natural gas and electric service. We serve more than 840,750 gas customers in and around San Antonio, the nation's seventh largest city. This map has been produced by CPS Energy for its own use. Accordingly, certain information, features or details may have been emphasized over others or may have been left out. CPS Energy does not warrant the accuracy of this map, either as to scale, accuracy or completeness.

Prepared by Refined Land Services: 11/1/2023



### CPS SAT 15

LEGEND	
	NODES
	SEGMENTS
	138-kV
	345-kV
	PARCEL BOUNDARY
	HABITABLE STRUCTURES

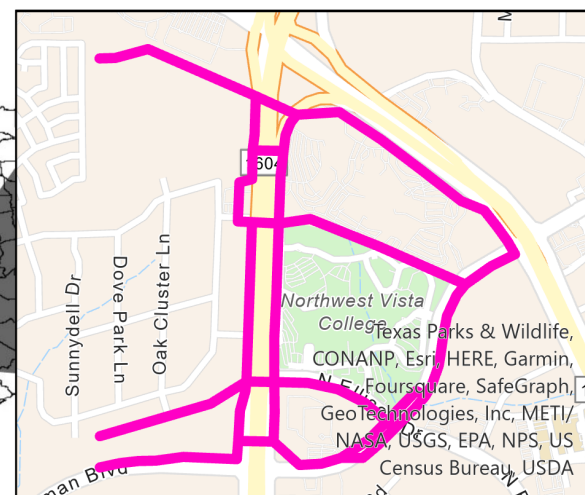
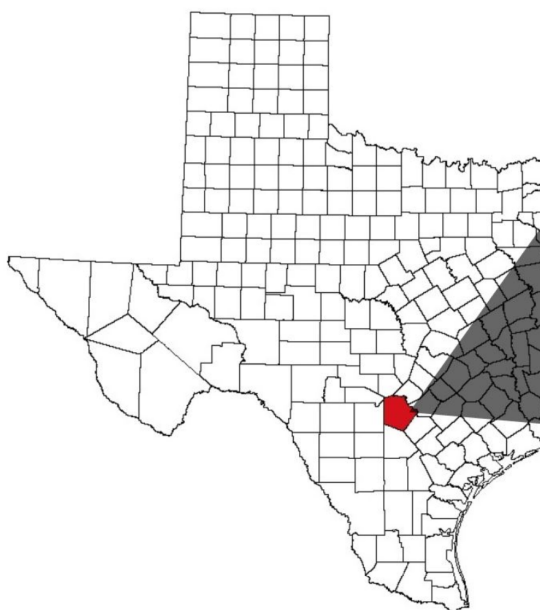
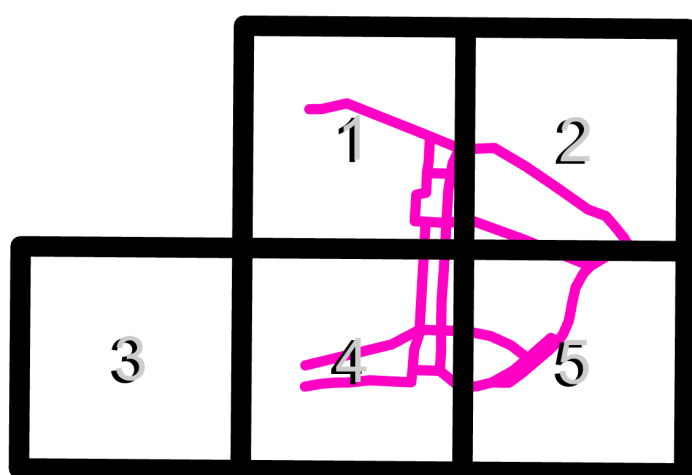


# **Attachment 6**



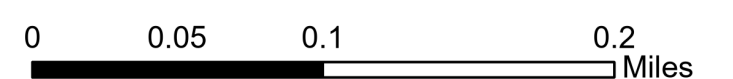


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### CPS SAT 15

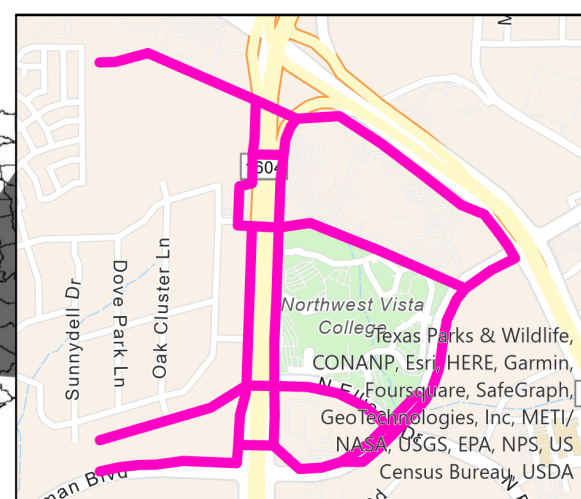
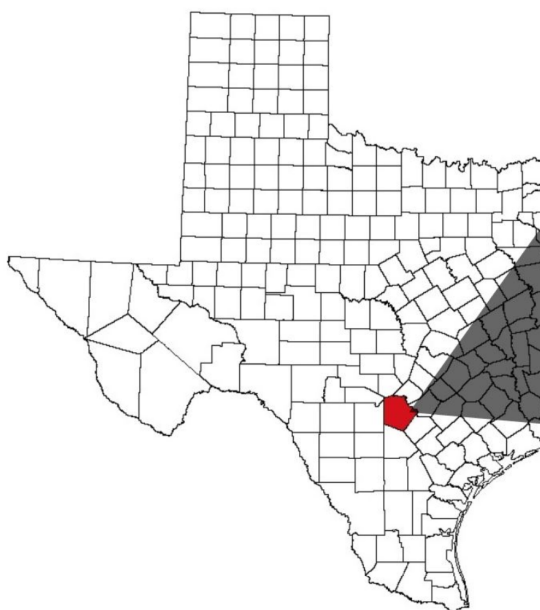
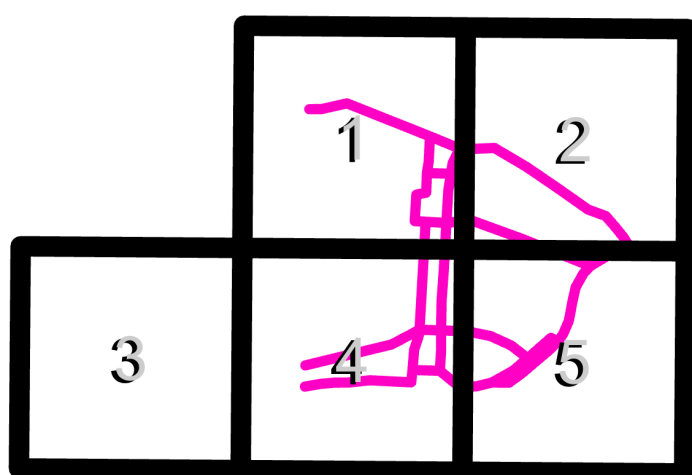
LEGEND	
	NODES
	SEGMENTS
	138-KV
	345-KV
	PARCEL BOUNDARY
	HABITABLE STRUCTURES





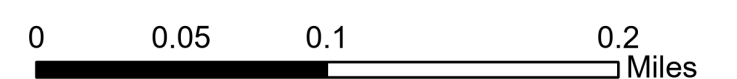
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Prepared by Refined Land Services: 11/1/2023



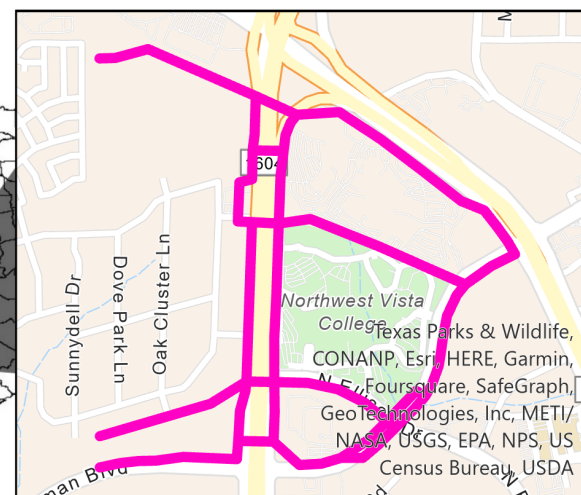
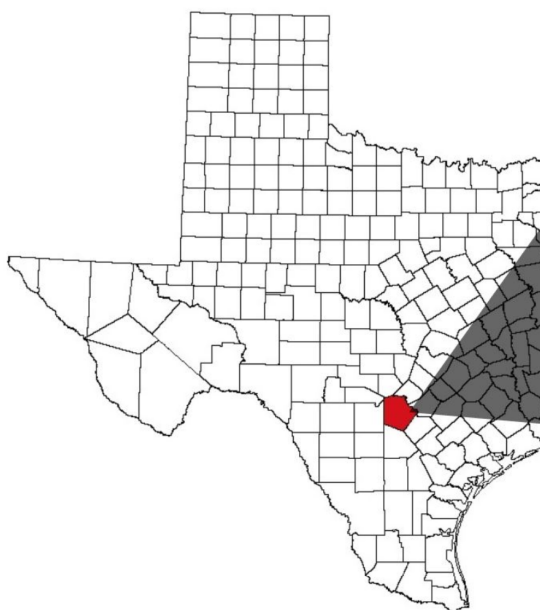
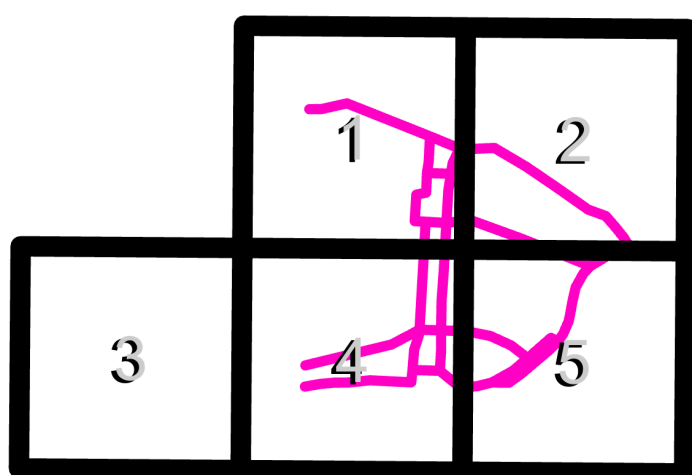
### CPS SAT 15

LEGEND	
	NODES
	SEGMENTS
	138-KV
	345-KV
	PARCEL BOUNDARY
	HABITABLE STRUCTURES



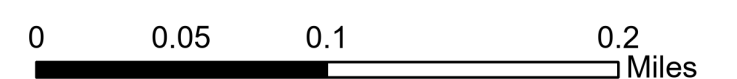


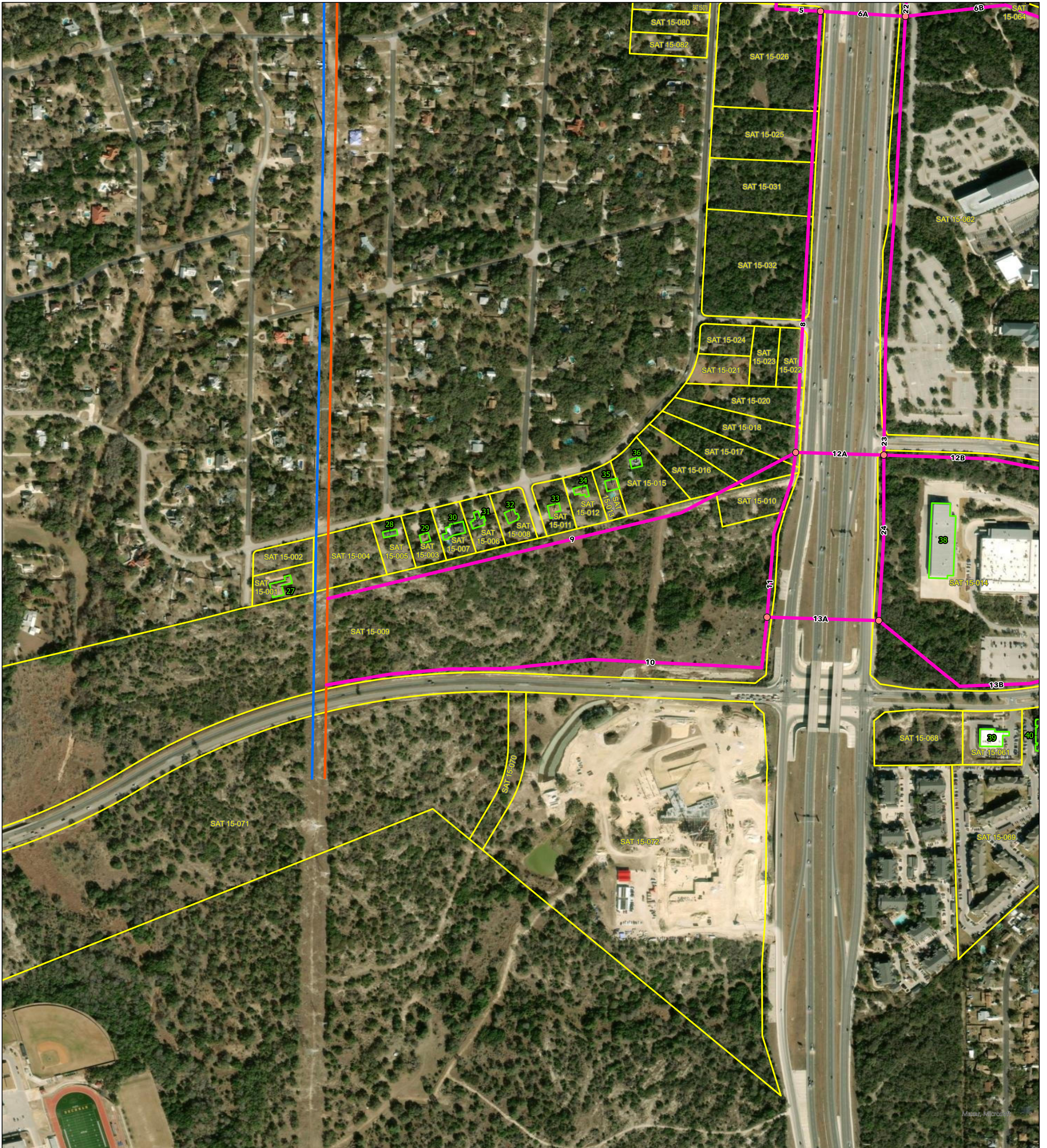
CPS Energy is the nation's largest municipally owned energy utility providing both natural gas and electric service. We serve more than 840,750 gas customers in and around San Antonio, the nation's seventh largest city. This map has been produced by CPS Energy for its own use. Accordingly, certain information, features or details may have been emphasized over others or may have been left out. CPS Energy does not warrant the accuracy of this map, either as to scale, accuracy or completeness.



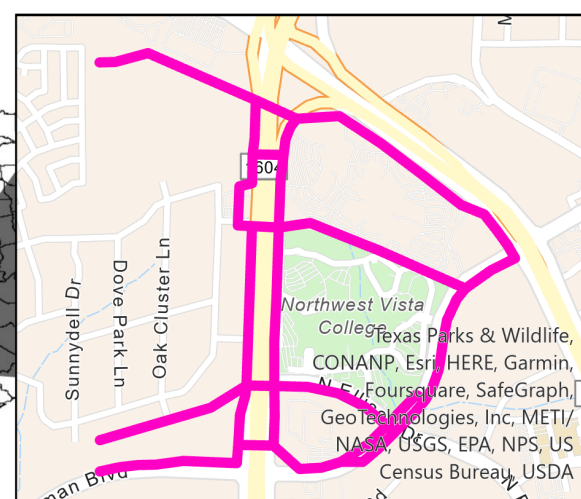
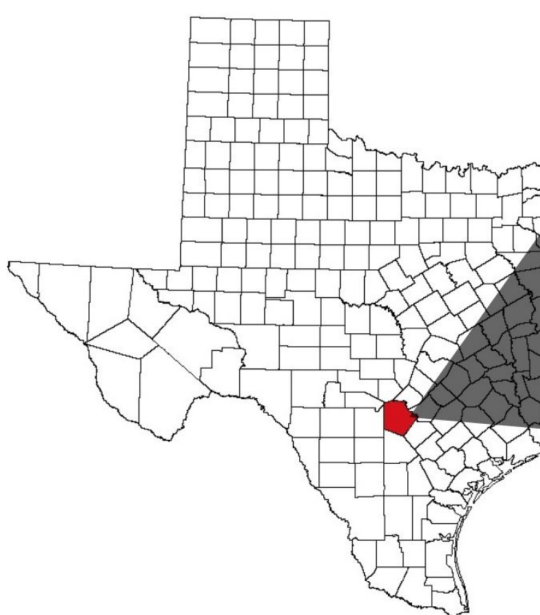
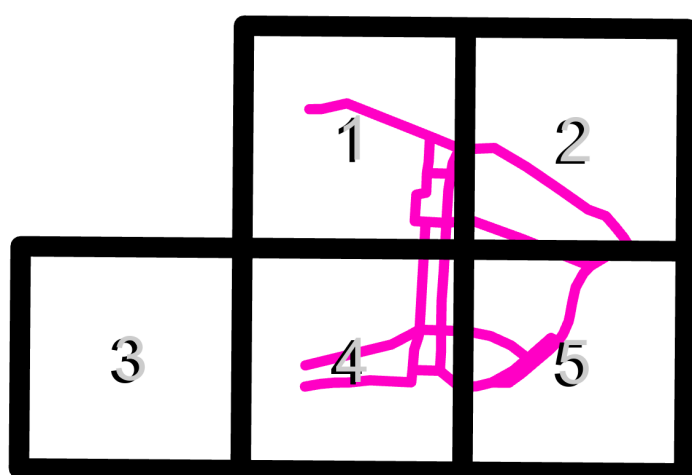
### CPS SAT 15

LEGEND	
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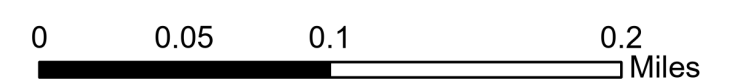


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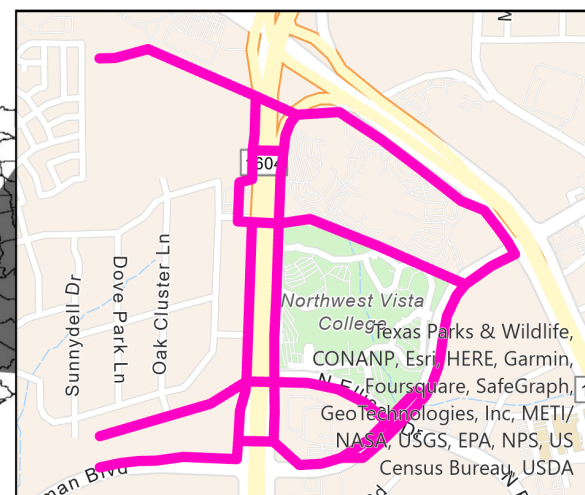
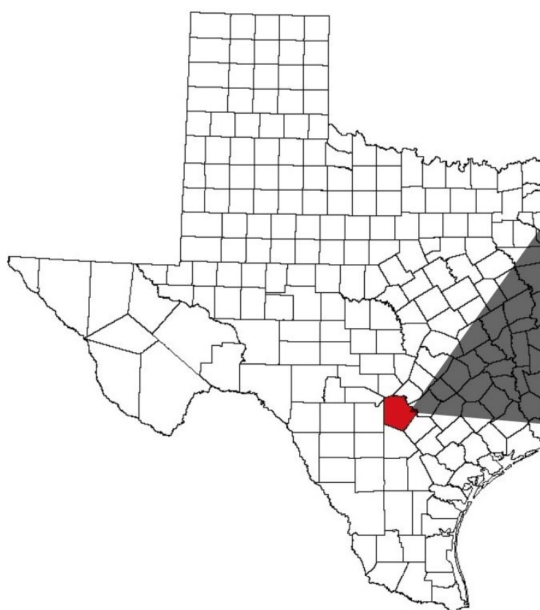
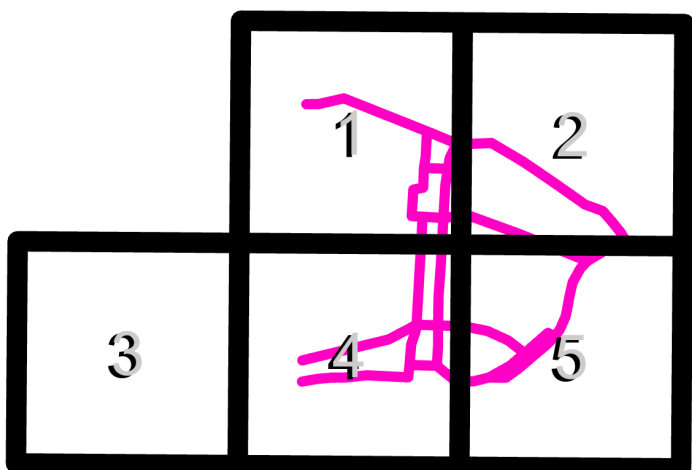
### CPS SAT 15

LEGEND	
	NODES
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	138-KV
	345-KV
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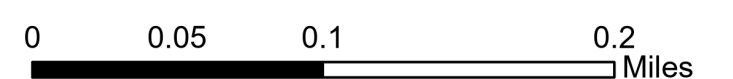


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### CPS SAT 15

LEGEND	
	NODES
	SEGMENTS
	138-KV
	345-KV
	PARCEL BOUNDARY
	HABITABLE STRUCTURES



# **Attachment 7**



November 3, 2023

«FirstName» «LastName» «Suffix»  
«SecondName»  
«Address1» «Address2»  
«City», «STATE» «ZIP»

***RE: Application of the City of San Antonio, Acting By and Through City Public Service Board (CPS Energy) to Amend a Certificate of Convenience and Necessity for the Proposed SAT15 138-kV Transmission Line Project in Bexar County, Texas***

**PUBLIC UTILITY COMMISSION OF TEXAS (PUC) DOCKET NO. 55728**

Tract ID: «Tract\_IDs»

Dear Landowner:

This letter is to inform you that the City of San Antonio, acting by and through City Public Service Board (CPS Energy) is requesting approval from the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct the proposed SAT15 138-kV Transmission Line Project in Bexar County. The proposed transmission line will connect the existing Cagnon to Helotes 138 kV transmission line in northwest Bexar County to a proposed new Wiseman Substation located near the intersection of State Highway (SH) 151 and Wiseman Boulevard. The entire project will be about 1.2 to 2.4 miles in length and is estimated to cost approximately \$34 million to \$50 million (including substation costs), depending upon the final route chosen by the PUC.

Your land may be directly affected in this docket. If one of CPS Energy's routes is approved by the PUC, CPS Energy will have the right to build the facilities, which may directly affect your land. This docket will not determine the value of your land or the value of an easement if one is needed by CPS Energy to build the facilities.

If you have questions about the transmission line or substation sites, please call 210-353-2515. The descriptions of the proposed routing alternatives, proposed substations sites, and a map showing the proposed alternative routes are enclosed for your convenience.

The CCN application, including detailed routing maps illustrating the proposed transmission line project, substations, and project area, may be reviewed on the project website at <https://www.cpsenergy.com/en/about-us/new-infrastructure/sat15-substation-transmission-line.html> and at:

- CPS Energy, 500 McCullough, San Antonio, Texas 78215
- Great Northwest Library, 9050 Wellwood St., San Antonio, TX 78250

**All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas.**

The enclosed brochure entitled “Landowners and Transmission Line Cases at the PUC” provides basic information about how you may participate in this docket, and how you may contact the PUC. Please read this brochure carefully. The brochure includes sample forms for making comments and for making a request to intervene as a party in this docket. The only way to fully participate in the PUC’s decision on where to locate the transmission line is to intervene in the docket. It is important for an affected person to intervene because the utility is not obligated to keep affected persons informed of the PUC’s proceedings and cannot predict which route may or may not be approved by the PUC. CPS Energy will place updates on the project site listed above however all affected persons are encouraged to participate in the process.

Your request for intervention should be filed electronically and you will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the “PUC Filer” on the Commission’s website can be found here: <https://interchange.puc.texas.gov/filer> Instructions for using the PUC Filer are available at [http://www.puc.texas.gov/industry/filings/New\\_PUC\\_Web\\_Filer\\_Presentation.pdf](http://www.puc.texas.gov/industry/filings/New_PUC_Web_Filer_Presentation.pdf). Once you obtain a tracking sheet associated with your filing from the PUC Filer, you may email the tracking sheet and the document you wish to file to: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). For assistance with your electronic filing, please contact the Commission’s Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

In addition to the contacts listed in the brochure, you may call the PUC’s Customer Assistance Hotline at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC’s Customer Assistance Hotline at (512) 936-7136 or toll free at (800) 735-2989. If you wish to participate in this proceeding by becoming an intervenor, the deadline for intervention in the proceeding is December 4, 2023, and the PUC should receive a letter from you requesting intervention by that date.

While the preferred method is for you to submit your request for intervention electronically, if you are unable to do so you may mail 10 copies of the request to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, Texas 78711-3326



Persons who wish to intervene in the docket must also mail or email a copy of their request for intervention to all parties in the docket and all persons that have pending motions to intervene, at or before the time the request for intervention is mailed to the PUC. In addition to the intervention deadline, other important deadlines may already exist that affect your participation in this docket. You should review the orders and other filings already made in the docket. The enclosed brochure explains how you can access these filings.

Sincerely,

Daniel Otto, PE, PMP, MBA  
Manager of Regulatory Support  
CPS Energy  
500 McCullough San Antonio, Texas 78215  
210.353.2515  
SAT15Project@CPSEnergy.com  
Enclosures



3 de noviembre del 2023

«FirstName» «LastName» «Suffix»  
«SecondName»  
«Address1» «Address2»  
«City», «STATE» «ZIP»

***RE: Solicitud de la Ciudad de San Antonio, Actuando Por y A Través de la Junta de Servicios Públicos de la Ciudad (CPS Energy) para Enmendar un Certificado de Conveniencia y Necesidad para el Proyecto de Línea de Transmisión SAT15 de 138 kV propuesto en el Condado de Bexar, Texas***

**COMISIÓN DE SERVICIOS PÚBLICOS DE TEXAS (PUC) EXPEDIENTE No. 55728**

Tract ID: «Tract\_IDs»

Estimado Propietario:

Esta carta es para informarle que la Ciudad de San Antonio, actuando por y a través de la Junta de Servicios Públicos de la Ciudad (CPS Energy), solicita la aprobación de la Comisión de Servicios Públicos de Texas (PUC) para enmendar su Certificado de Conveniencia y Necesidad (CCN) para construir el Proyecto de Línea de Transmisión SAT15 de 138 kV propuesto en el Condado de Bexar. La línea de transmisión propuesta conectará la línea de transmisión actual de 138 kV de Cagnon a Helotes en el noroeste del Condado de Bexar con una nueva Subestación Wiseman propuesta ubicada cerca de la intersección de la Autopista Estatal (SH) 151 y Wiseman Boulevard. Todo el proyecto tendrá una longitud de entre 1.2 y 2.4 millas y se prevé que costará aproximadamente entre \$34 y 50 millones (incluyendo los costos de la subestación), dependiendo de la ruta final elegida por la PUC.

Su terreno puede verse directamente afectado en este expediente. Si una de las rutas de CPS Energy es aprobada por la PUC, CPS Energy tendrá derecho a construir las instalaciones, lo que puede afectar directamente a sus terrenos. Este expediente no determinará el valor de su terreno ni el valor de derecho de acceso a la propiedad si CPS Energy lo necesita para construir las instalaciones.

En caso de alguna pregunta sobre la línea de transmisión o los sitios de las subestaciones, comuníquese al 210-353-2515. Para su comodidad se adjuntan las descripciones de las rutas alternativas propuestas, los sitios de las subestaciones propuestas y un mapa que muestra las rutas alternativas propuestas.

La solicitud de CCN, incluyendo los mapas de rutas detallados que ilustran el proyecto de línea de transmisión propuesto, las subestaciones y la zona del proyecto, pueden consultarse en la página web del proyecto en <https://www.cpsenergy.com/en/about-us/new-infrastructure/sat15-substation-transmission-line.html> y en:

- CPS Energy, 500 McCullough, San Antonio, Texas 78215
- Great Northwest Library, 9050 Wellwood St., San Antonio, TX 78250

**Todas las rutas y segmentos de ruta incluidos en esta notificación están disponibles para su selección y aprobación por parte de la Comisión de Servicios Públicos de Texas.**

El folleto adjunto titulado “Casos de Propietarios de Terrenos y Líneas de Transmisión en la PUC” proporciona información básica sobre cómo puede participar en este expediente y cómo puede comunicarse con la PUC. Por favor, lea este folleto atentamente. El folleto incluye ejemplos de formularios para realizar comentarios y solicitar intervenir como parte en este expediente. La única manera de participar plenamente en la decisión de la PUC sobre la ubicación de la línea de transmisión es intervenir en el expediente. Es importante que una persona afectada intervenga porque la empresa de servicios públicos no está obligada a mantener a las personas afectadas informadas de los procedimientos de la PUC y no puede predecir qué ruta puede o no ser aprobada por la PUC. CPS Energy publicará actualizaciones en el sitio del proyecto mencionado previamente, pero se alienta a todas las personas afectadas a participar en el proceso.

Su petición de intervención debe presentarse electrónicamente y se le pedirá que notifique la petición a las demás partes por correo electrónico. Por lo tanto, incluya su propia dirección de correo electrónico en el formulario de intervención. Las indicaciones para la presentación electrónica a través del "PUC Filer" en el sitio web de la Comisión se encuentran aquí: <https://interchange.puc.texas.gov/filer> Las indicaciones para utilizar el PUC Filer están disponibles en [http://www.puc.texas.gov/industry/filings/New\\_PUC\\_Web\\_Filer\\_Presentation.pdf](http://www.puc.texas.gov/industry/filings/New_PUC_Web_Filer_Presentation.pdf). Una vez que obtenga una hoja de seguimiento asociada a su presentación de la PUC Filer, puede enviar por correo electrónico la hoja de seguimiento y el documento que desea presentar a: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). Para obtener ayuda con su presentación electrónica, póngase en contacto con el Servicio de Asistencia de la Comisión en el (512) 936-7100 o en el [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). Puede consultar el material presentado en este expediente en el PUC Interchange en: <http://interchange.puc.texas.gov/>.

Además de los contactos mencionados en el folleto, puede llamar a la Línea Directa de Asistencia al Cliente de la PUC al (888) 782-8477. Las personas con problemas de audición y del habla que tengan teléfonos de texto (TTY) pueden comunicarse con la Línea Directa de Asistencia al Cliente de la PUC al (512) 936-7136 o al número gratuito (800) 735-2989. Si desea participar en este procedimiento convirtiéndose en interventor, la fecha límite para la intervención en el procedimiento es el 4 de diciembre del 2023, y la PUC debe recibir una carta suya solicitando intervención antes de esa fecha.

Aunque el método preferido es que presente su solicitud de intervención por vía electrónica, si no puede hacerlo puede enviar por correo 10 copias de la solicitud a:

Comisión de Servicios Públicos de Texas  
Registros Centrales  
A la atención de: Secretario de Archivos  
1701 N. Congress Ave.  
Apartado Postal 13326  
Austin, Texas 78711-3326

Las personas que deseen intervenir en el expediente también deben enviar por correo postal o electrónico una copia de su solicitud de intervención a todas las partes en el expediente y a todas las personas que tengan mociones pendientes para intervenir, en el momento en que la solicitud de intervención se envíe por correo postal a la PUC o antes. Además del plazo de intervención, es posible que ya existan otros plazos importantes que afecten a su participación en este expediente. Debería consultar las órdenes y otros documentos ya presentados en el expediente. En el folleto adjunto se explica cómo acceder a estos documentos.

Atentamente,

Daniel Otto, PE, PMP, MBA  
Responsable de Apoyo Normativo  
CPS Energy  
500 McCullough San Antonio, Texas 78215  
210.353.2515  
SAT15Project@CPSEnergy.com  
Anexos

**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

CPS Energy has filed an application with the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct the SAT15 138-kilovolt (kV) Transmission Line Project in Bexar County, Texas. In its CCN application for this project, CPS Energy has presented 15 alternative routes comprised of 27 segments for consideration by the PUC. The following table lists the segment combinations that make up CPS Energy’s 15 alternative routes and the length of each alternative route in miles. All routes and segments are available for selection and approval by the PUC. Only one multi-segment transmission line route will ultimately be constructed.

Alternative routes are not listed in any order of preference or priority.

PRIMARY ALTERNATIVE ROUTES	SEGMENT COMPOSITION	TOTAL LENGTH IN MILES
A	1-2A-2B-7	1.82
B	1-3-5-6A-6B-7	1.83
C	1-3-5-8-12A-12B-17-19	2.13
D	1-3-5-8-11-13A-13B-14-17-19	2.36
E	9-12A-12B-16-18-19	1.20
F	9-11-13A-13B-14-17-19	1.43
G	10-13A-13B-14-17-19	1.25
H	10-13A-13B-15-18-19	1.24
I	1-3-20-22-23-24-13B-14-17-19	2.28
J	1-3-20-22-23-24-13B-15-18-19	2.28
K	1-3-20-22-23-12B-16-18-19	2.08
L	1-3-20-22-6B-7	1.77
M	1-2A-21-22-6B-7	1.77
N	1-2A-21-22-23-12B-16-18-19	2.07
O	1-2A-21-22-23-24-13B-15-18-19	2.27

*Note: All distances listed below are approximate and rounded to the nearest hundredths of a mile. The distances of individual segments below may not sum to the total length of route presented above due to rounding.*

**Segment 1**

Segment 1 begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.52 mile southwest of the intersection of State Highway (SH) 151 and SH Loop 1604. The segment proceeds east for approximately 0.05 mile, then angles northeast for approximately 0.10 mile, paralleling the southeast side of an existing 138-kV transmission line. The segment proceeds southeast for approximately 0.34 mile. The segment terminates at its intersection with Segments 2A and 3, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604.

**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

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**Segment 2A**

Segment 2A begins at its intersection with Segments 1 and 3, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604. The segment proceeds southeast for approximately 0.13 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 2B and 21, located on the southeast side of the intersection of SH 151 and SH Loop 1604.

**Segment 2B**

Segment 2B begins at intersection with Segments 2A and 21, located on the southeast side of the intersection of SH 151 and SH Loop 1604. The segment proceeds east for approximately 0.13 mile, paralleling the south side of an existing 138-kV transmission line for majority of the length. The segment then angles southeast for approximately 0.44 mile, paralleling the southwest side of an existing 138-kV transmission line. The segment then angles east-southeast for approximately 0.07 mile. The segment then angles southeast for approximately 0.16 mile, crossing Wiseman Boulevard (Blvd). The segment then angles southwest for approximately 0.17 mile, paralleling the southeast side of Wiseman Blvd. The segment terminates at its intersection with Segments 6B and 7, located on the southwest side of the intersection of SH 151 and Wiseman Blvd.

**Segment 3**

Segment 3 begins at its intersection with Segments 1 and 2A, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604. The segment proceeds south-southwest for approximately 0.16 mile. The segment terminates at its intersection with Segments 5 and 20, located on the west side of SH Loop 1604.

*There is no segment labeled Segment 4 in this project.*

**Segment 5**

Segment 5 begins at its intersection with Segments 3 and 20, located on the west side of SH Loop 1604. The segment proceeds south for approximately 0.08 mile, then angles southwest for approximately 0.04 mile. The segment then angles south for approximately 0.11 mile, crossing Valley Meadow Road, then angles east for approximately 0.04 mile paralleling the south side of Valley Meadow Road. The segment terminates at its intersection with Segments 6A and 8, located on the west side of SH Loop 1604.

**Segment 6A**

Segment 6A begins at its intersection with Segments 5 and 8, located on the west side of SH Loop 1604. The segment proceeds east-southeast for approximately 0.08 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 6B, 22, and 23, located east of SH Loop 1604.

**Segment 6B**

Segment 6B begins at its intersection with Segments 6A, 22, and 23, located east of SH Loop 1604. The segment proceeds northeast for approximately 0.09 mile. The segment then angles southeast for approximately 0.49 mile, crossing Slick Ranch Creek and Wiseman Blvd. The segment terminates at its intersection with Segments 2B and 7, located on the east side of Wiseman Blvd.

**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

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**Segment 7**

Segment 7 begins at its intersection with Segments 6B and 7, located on the east side of Wiseman Blvd. The segment proceeds southwest for approximately 0.11 mile paralleling the east side of Wiseman Blvd. The segment then angles west-southwest for approximately 0.12 mile, paralleling the east side of Wiseman Blvd. The segment terminates at the Wiseman Substation, located approximately 0.42 mile southwest of the intersection of SH 151 and Wiseman Blvd.

**Segment 8**

Segment 8 begins at its intersection with Segments 5 and 6A, located on the west side of SH Loop 1604. The segment proceeds south for approximately 0.47 mile, crossing Misty Woods Road. The segment terminates at its intersection with Segments 9, 11, and 12A, located on the west side of SH Loop 1604.

**Segment 9**

Segment 9 begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.46 mile northwest of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds northeast for approximately 0.34 mile, crossing an unnamed stream. The segment then angles north-northeast for approximately 0.12 mile. The segment terminates at its intersection with Segments 8, 11, and 12A, located on the west side of SH Loop 1604.

**Segment 10**

Segment 10 begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.46 mile west of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds east-northeast for approximately 0.17 mile, paralleling the north side of Wiseman Blvd. The segment then angles northeast for approximately 0.08 mile. The segment then angles east-southeast for approximately 0.16 mile, crossing an unnamed stream. The segment then angles north for approximately 0.05 mile. The segment terminates at its intersection with Segments 11 and 13A, located northwest of the intersection of SH Loop 1604 and Wiseman Blvd.

**Segment 11**

Segment 11 begins at its intersection with Segments 10 and 13A, located northwest of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds north-northeast for approximately 0.09 mile, then angles northeast for approximately 0.06 mile. The segment then angles north-northeast for approximately 0.03 mile. The segment terminates at its intersection with Segments 8, 9, and 12A, located on the west side of SH Loop 1604.

**Segment 12A**

Segment 12A begins at its intersection with Segments 8, 9, and 11, located on the west side of SH Loop 1604. The segment proceeds east for approximately 0.08 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 12B, 23, and 24, located on the east side of SH Loop 1604.

**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

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**Segment 12B**

Segment 12B begins at its intersection with Segments 12A, 23, and 24, located on the east side of SH Loop 1604. The segment proceeds east-southeast for approximately 0.10 mile, paralleling the south side of North Ellison Drive. The segment then angles southeast for approximately 0.09, paralleling the southwest side of North Ellison Drive. The segment then angles south-southeast for approximately 0.09 mile, paralleling the southwest side of North Ellison Drive. The segment then angles southeast for approximately 0.08 mile. The segment terminates at its intersection with Segments 14, 16, and 17, located on the northwest side of the intersection of North Ellison Drive and Wiseman Blvd.

**Segment 13A**

Segment 13A begins at its intersection with Segments 10 and 11, located northwest of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds east for approximately 0.10 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 13B and 24, located on the east side of SH Loop 1604.

**Segment 13B**

Segment 13B begins at its intersection with Segments 13A and 24, located on the east side of SH Loop 1604. The segment proceeds southeast for approximately 0.10 mile, then angles east-northeast for approximately 0.07 mile, paralleling the north side of Wiseman Blvd. The segment then angles northeast for approximately 0.06 mile, paralleling the north side of Wiseman Blvd. The segment terminates at its intersection with Segments 14 and 15, located on the northwest side of Wiseman Blvd.

**Segment 14**

Segment 14 begins at its intersection with Segments 13B and 15, located on the northwest side of Wiseman Blvd. The segment proceeds northeast for approximately 0.09 mile, paralleling the northwest side of Wiseman Blvd. The segment then angles north-northeast for approximately 0.08 mile, paralleling the northwest side of Wiseman Blvd. The segment terminates at its intersection with Segments 12B, 16, and 17, located northwest of the intersection of North Ellison Drive and Wiseman Blvd.

**Segment 15**

Segment 15 begins at its intersection with Segments 13B and 14, located on the northwest side of Wiseman Blvd. The segment proceeds east for approximately 0.06 mile, crossing Wiseman Blvd. The segment then angles northeast for approximately 0.12 mile, paralleling the southeast side of Wiseman Blvd. The segment terminates at its intersection with Segments 16 and 18, located southwest of the intersection of North Ellison Drive and Wiseman Blvd.

**Segment 16**

Segment 16 begins at its intersection with Segments 12B, 14, and 17, located northwest of the intersection of North Ellison Drive and Wiseman Blvd. The segment proceeds southeast for approximately 0.03 mile, crossing Wiseman Blvd and paralleling the southwest side of North Ellison Drive. The segment terminates at its intersection with Segments 15 and 18, located southwest of the intersection of North Ellison Drive and Wiseman Blvd.



**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

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**Segment 17**

Segment 17 begins at its intersection with Segments 12B, 14, and 16, located northwest of the intersection of North Ellison Drive and Wiseman Blvd. The segment proceeds northeast for approximately 0.13 mile, crossing N Ellison Drive and Slick Ranch Creek and paralleling the northwest side of Wiseman Blvd. The segment then angles southeast for approximately 0.03 mile, crossing Wiseman Blvd. The segment terminates at its intersection with Segments 18 and 19, located on the southeast side of Wiseman Blvd.

**Segment 18**

Segment 18 begins at its intersection with Segments 15 and 16, located southwest of the intersection of North Ellison Drive and Wiseman Blvd. The segment proceeds northeast for approximately 0.13 mile, crossing North Ellison Drive, Slick Ranch Creek and paralleling the southeast side of Wiseman Blvd. The segment terminates at its intersection with Segments 17 and 19, located on the southeast side of Wiseman Blvd.

**Segment 19**

Segment 19 begins at its intersection with Segments 17 and 18, located on the southeast side of Wiseman Blvd. The segment proceeds northeast for approximately 0.13 mile. The segment terminates at the Wiseman Substation, located approximately 0.42 mile southwest of the intersection of SH 151 and Wiseman Blvd.

**Segment 20**

Segment 20 begins at its intersection with Segments 3 and 5, located on the west side of SH Loop 1604. The segment proceeds east for approximately 0.09 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 21 and 22, located east of SH Loop 1604.

**Segment 21**

Segment 21 begins at its intersection with Segments 2A and 2B, located on the southeast side of the intersection of SH 151 and SH Loop 1604. The segment proceeds southwest for approximately 0.07 mile. The segment then angles south-southwest for approximately 0.05 mile. The segment terminates at its intersection with Segments 20 and 22, located east of SH Loop 1604.

**Segment 22**

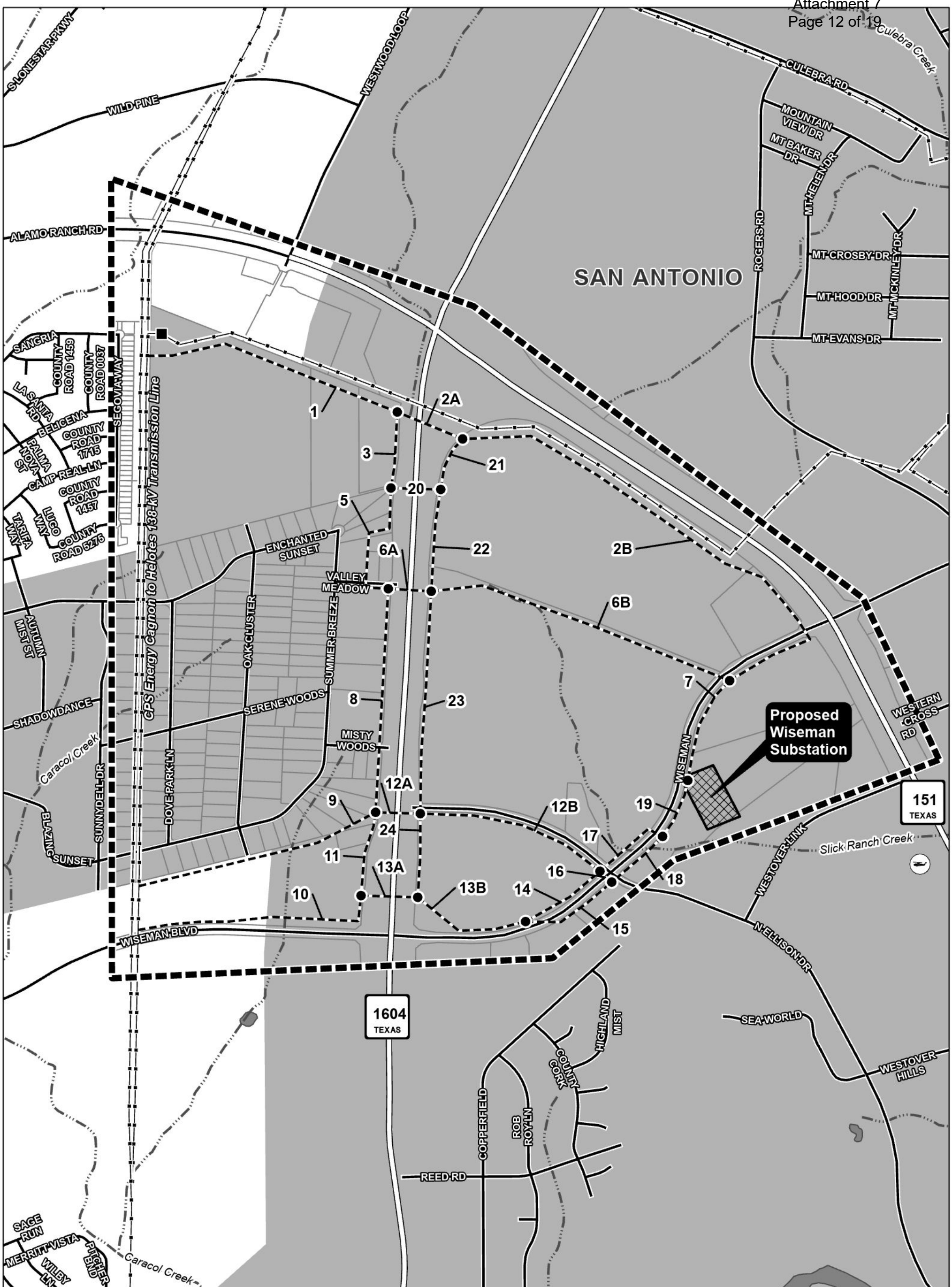
Segment 22 begins at its intersection with Segments 20 and 21, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.21 mile. The segment terminates at its intersection with Segments 6A, 6B, and 23, located east of SH Loop 1604.

**Segment 23**

Segment 23 begins at its intersection with Segments 6A, 6B, and 22, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.47 mile, crossing North Ellison Drive. The segment terminates at its intersection with Segments 12A, 12B, and 24, located east of SH Loop 1604.

**Segment 24**

Segment 24 begins at its intersection with Segments 12A, 12B, and 23, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.18 mile. The segment terminates at its intersection with Segments 13A and 13B, located east of SH Loop 1604.



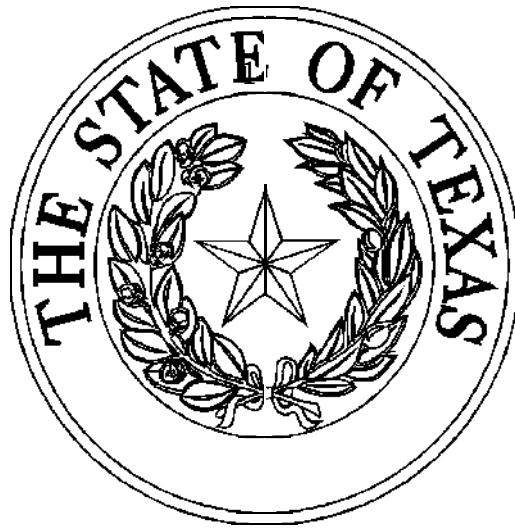
<p><b>Project Features</b></p> <ul style="list-style-type: none"> <li>Primary Alternative Segment, Node, and Label</li> <li>Study Area</li> <li>Project Substation</li> <li>Existing Substations</li> <li>Existing Electrical Transmission Line</li> </ul>	<p><b>Transportation Features</b></p> <ul style="list-style-type: none"> <li>State Highway</li> <li>County / Local Road</li> <li>Heliport</li> </ul>	<p><b>Surface Waters</b></p> <ul style="list-style-type: none"> <li>NHD River / Stream</li> <li>NHD Waterbody</li> </ul> <p><b>Administrative Features</b></p> <ul style="list-style-type: none"> <li>City Limit</li> <li>Parcel Boundary</li> </ul>		<p>CPS ENERGY SAT15 138 KV TRANSMISSION LINE PROJECT</p> <p><b>PRIMARY ALTERNATIVE SEGMENTS</b></p> <p>0 1,000 2,000 Feet</p> <p><b>POWER</b> 000514 EERS</p> <p>Date: 10/20/2023</p>
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# Landowners and Transmission Line Cases at the PUC

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*Public Utility Commission of Texas*



1701 N. Congress Avenue  
P.O. Box 13326  
Austin, Texas 78711-3326  
(512) 936-7260  
[www.puc.state.tx.us](http://www.puc.state.tx.us)

Effective: June 1, 2011

### ***Purpose of This Brochure***

This brochure is intended to provide landowners with information about proposed new transmission lines and the Public Utility Commission's ("PUC" or "Commission") process for evaluating these proposals. At the end of the brochure is a list of sources for additional information.

The following topics are covered in this brochure:

- How the PUC evaluates whether a new transmission line should be built,
- How you can participate in the PUC's evaluation of a line, and
- How utilities acquire the right to build a transmission line on private property.

You are receiving the enclosed formal notice because one or more of the routes for a proposed transmission line may require an easement or other property interest across your property, or the centerline of the proposed project may come within 300 feet of a house or other habitable structure on your property. This distance is expanded to 500 feet if the proposed line is greater than 230 kilovolts (kV). For this reason, your property is considered **directly affected land**. This brochure is being included as part of the formal notice process.

If you have questions about the proposed routes for a transmission line, you may contact the applicant. The applicant also has a more detailed map of the proposed routes for the transmission line and nearby habitable structures. The applicant may help you understand the routing of the project and the application approval process in a transmission line case but cannot provide legal advice or represent you. ***The applicant cannot predict which route may or may not be approved by the PUC. The PUC decides which route to use for the transmission line, and the applicant is not obligated to keep you informed of the PUC's proceedings. The only way to fully participate in the PUC's decision on where to locate the transmission line is to intervene, which is discussed below.***

The PUC is sensitive to the impact that transmission lines have on private property. At the same time, transmission lines deliver electricity to millions of homes and businesses in Texas, and new lines are sometimes needed so that customers can obtain reliable, economical power.

The PUC's job is to decide whether a transmission line application should be approved and on which route the line should be constructed. The PUC values input from landowners and encourages you to participate in this process by intervening in the docket.

### ***PUC Transmission Line Case***

Texas law provides that most utilities must file an application with the PUC to obtain or amend a Certificate of Convenience and Necessity (CCN) in order to build a new transmission line in Texas. The law requires the PUC to consider a number of factors in deciding whether to approve a proposed new transmission line.

The PUC may approve an application to obtain or amend a CCN for a transmission line after considering the following factors:

- Adequacy of existing service;
- Need for additional service;
- The effect of approving the application on the applicant and any utility serving the proximate area;
- Whether the route utilizes existing compatible rights-of-way, including the use of vacant positions on existing multiple-circuit transmission lines;
  - Whether the route parallels existing compatible rights-of-way;
  - Whether the route parallels property lines or other natural or cultural features;
  - Whether the route conforms with the policy of prudent avoidance (which is defined as the limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort); and
  - Other factors such as community values, recreational and park areas, historical and aesthetic values, environmental integrity, and the probable improvement of service or lowering of cost to consumers in the area.

If the PUC decides an application should be approved, it will grant to the applicant a CCN or CCN amendment to allow for the construction and operation of the new transmission line.

***Application to Obtain or Amend a CCN:***

An application to obtain or amend a CCN describes the proposed line and includes a statement from the applicant describing the need for the line and the impact of building it. In addition to the routes proposed by the applicant in its application, the possibility exists that additional routes may be developed, during the course of a CCN case, that could affect property in a different manner than the original routes proposed by the applicant.

The PUC conducts a case to evaluate the impact of the proposed line and to decide which route should be approved. Landowners who would be affected by a new line can:

- informally file a protest, or
- formally participate in the case as an intervenor.

***Filing a Protest (informal comments):***

If you do not wish to intervene and participate in a hearing in a CCN case, you may file **comments**. An individual or business or a group who files only comments for or against any aspect of the transmission line application is considered a “protestor.”

Protestors make a written or verbal statement in support of or in opposition to the utility’s application and give information to the PUC staff that they believe supports their position.

Protestors are **not** parties to the case, however, and do not have the right to:

- Obtain facts about the case from other parties;
- Receive notice of a hearing, or copies of testimony and other documents that are filed in the case;
- Receive notice of the time and place for negotiations;
- File testimony and/or cross-examine witnesses;
- Submit evidence at the hearing; or
- Appeal P.U.C. decisions to the courts.

If you want to make comments, you may either send written comments stating your position, or you may make a statement on the first day of the hearing. If you have not intervened, however, you will not be able to participate as a party in the hearing. Only parties may submit evidence and ***the PUC must base its decision on the evidence.***

***Intervening in a Case:***

To become an intervenor, you must file a statement with the PUC, no later than the date specified in the notice letter sent to you with this brochure, requesting intervenor status (also referred to as a party). This statement should describe how the proposed transmission line would affect your property. Typically, intervention is granted only to directly affected landowners. However, any landowner may request to intervene and obtain a ruling on his or her specific fact situation and concerns. A sample form for intervention and the filing address are attached to this brochure, and may be used to make your filing. A letter requesting intervention may also be used in lieu of the sample form for intervention.

If you decide to intervene and become a party in a case, you will be required to follow certain procedural rules:

- You are required to timely respond to requests for information from other parties who seek information.
- If you file testimony, you must appear at a hearing to be cross-examined.
- If you file testimony or any letters or other documents in the case, you must send copies of the documents to every party in the case and you must file multiple copies with the PUC.

If you intend to participate at the hearing and you do not file testimony, you must at least file a statement of position, which is a document that describes your position in the case.

Failure to comply with these procedural rules may serve as grounds for you to be dismissed as an intervenor in the case.

If you wish to participate in the proceedings it is very important to attend any prehearing conferences.

Intervenors may represent themselves or have an attorney to represent them in a CCN case. If you intervene in a case, you may want an attorney to help you understand the PUC’s procedures and the laws and rules that the PUC applies in deciding whether to approve a transmission line. The PUC encourages landowners to intervene and become parties.

*Stages of a CCN Case:*

If there are persons who intervene in the case and oppose the approval of the line, the PUC may refer the case to an administrative law judge (ALJ) at the State Office of Administrative Hearings (SOAH) to conduct a hearing, or the Commission may elect to conduct a hearing itself. The hearing is a formal proceeding, much like a trial, in which testimony is presented. In the event the case is referred to SOAH, the ALJ makes a recommendation to the PUC on whether the application should be approved and where and how the line should be routed.

There are several stages of a CCN case:

- The ALJ holds a prehearing conference (usually in Austin) to set a schedule for the case.
- Parties to the case have the opportunity to conduct discovery; that is, obtain facts about the case from other parties.
- A hearing is held (usually in Austin), and parties have an opportunity to cross-examine the witnesses.
- Parties file written testimony before the date of the hearing. Parties that do not file written testimony or statements of position by the deadline established by the ALJ may not be allowed to participate in the hearing on the merits. Parties may file written briefs concerning the evidence presented at the hearing, but are not required to do so.

In deciding where to locate the transmission line and other issues presented by the application, the ALJ and Commission rely on factual information submitted as evidence at the hearing by the parties in the case. In order to submit factual information as evidence (other than through cross-examination of other parties' witnesses), a party must have intervened in the docket and filed written testimony on or before the deadline set by the ALJ.

The ALJ makes a recommendation, called a **proposal for decision**, to the Commission regarding the case. Parties who disagree with the ALJ's recommendation may file exceptions.

The Commissioners discuss the case and decide whether to approve the application. The Commission may approve the ALJ's recommendation, approve it with specified changes, send the case back to the ALJ for further consideration, or deny the application. The written decision rendered by the Commission is called a **final order**. Parties who believe that the Commission's decision is in error may file motions for rehearing, asking the Commission to reconsider the decision.

After the Commission rule on the motion for rehearing, parties have the right to appeal the decision to district court in Travis County.

*Right to Use Private Property*

The Commission is responsible for deciding whether to approve a CCN application for a proposed transmission line. If a transmission line route is approved that impacts your property, the electric utility must obtain the right from you to enter your property and to build, operate, and maintain the transmission line. This right is typically called an easement.

Utilities may buy easements through a negotiated agreement, but they also have the power of eminent domain (condemnation) under Texas law. Local courts, not the PUC, decide issues concerning easements for rights-of-way. The PUC does not determine the value of property.

The PUC final order in a transmission case normally requires a utility to take certain steps to minimize the impact of the new transmission line on landowners' property and on the environment. For example, the order normally requires steps to minimize the possibility of erosion during construction and maintenance activities.

## HOW TO OBTAIN MORE INFORMATION

The PUC's online filings interchange on the PUC website provides free access to documents that are filed with the Commission in Central Records. The docket number, also called a control number on the PUC website, of a case is a key piece of information used in locating documents in the case. You may access the Interchange by visiting the PUC's website home page at [www.puc.state.tx.us](http://www.puc.state.tx.us) and navigate the website as follows:

- Select "Filings."  
Select "Filings Search."  
Select "Filings Search."  
Enter 5-digit Control (Docket) Number. *No other information is necessary.*  
Select "Search." *All of the filings in the docket will appear in order of date filed.*  
Scroll down to select desired filing.  
Click on a blue "Item" number at left.  
Click on a "Download" icon at left.

Documents may also be purchased from and filed in Central Records. For more information on how to purchase or file documents, call Central Records at the PUC at 512-936-7180.

PUC Substantive Rule 25.101, Certification Criteria, addresses transmission line CCNs and is available on the PUC's website, or you may obtain copies of PUC rules from Central Records.

***Always include the docket number on all filings with the PUC. You can find the docket number on the enclosed formal notice.*** Send documents to the PUC at the following address.

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Avenue  
P.O. Box 13326  
Austin, TX 78711-3326

The information contained within this brochure is not intended to provide a comprehensive guide to landowner rights and responsibilities in transmission line cases at the PUC. This brochure should neither be regarded as legal advice nor should it be a substitute for the PUC's rules. However, if you have questions about the process in transmission line cases, you may call the PUC's Legal Division at 512-936-7260. The PUC's Legal Division may help you understand the process in a transmission line case but cannot provide legal advice or represent you in a case. You may choose to hire an attorney to decide whether to intervene in a transmission line case, and an attorney may represent you if you choose to intervene.

### ***Communicating with Decision-Makers***

***Do not contact the ALJ or the Commissioners by telephone or email. They are not allowed to discuss pending cases with you. They may make their recommendations and decisions only by relying on the evidence, written pleadings, and arguments that are presented in the case.***

## Request to Intervene in PUC Docket No.

The following information must be submitted by the person requesting to intervene in this proceeding. This completed form will be provided to all parties in this docket. **If you DO NOT want to be an intervenor, but still want to file comments, please complete the "Comments" page.**

Mail this completed form and 10 copies to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, TX 78711-3326

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

Email Address: \_\_\_\_\_

**I am requesting to intervene in this proceeding. As an INTERVENOR, I understand the following:**

- I am a party to the case;
- I am required to respond to all discovery requests from other parties in the case;
- If I file testimony, I may be cross-examined in the hearing;
- If I file any documents in the case, I will have to provide a copy of that document to every other party in the case; and
- I acknowledge that I am bound by the Procedural Rules of the Public Utility Commission of Texas (PUC) and the State Office of Administrative Hearings (SOAH).

**Please check one of the following:**

- I own property with a habitable structure located near one or more of the utility's proposed routes for a transmission line.
- One or more of the utility's proposed routes would cross my property.
- Other. Please describe and provide comments. You may attach a separate page, if necessary.

**Signature of person requesting intervention:**

\_\_\_\_\_ Date: \_\_\_\_\_



## Comments in Docket No. \_\_\_\_\_

**If you want to be a PROTESTOR only, please complete this form.** Although public comments are not treated as evidence, they help inform the PUC and its staff of the public concerns and identify issues to be explored. The PUC welcomes such participation in its proceedings.

Mail this completed form and 10 copies to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, TX 78711-3326

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

**I am NOT requesting to intervene in this proceeding. As a PROTESTOR, I understand the following:**

- I am NOT a party to this case;
- My comments are not considered evidence in this case; and
- I have no further obligation to participate in the proceeding.

**Please check one of the following:**

- I own property with a habitable structure located near one or more of the utility's proposed routes for a transmission line.
- One or more of the utility's proposed routes would cross my property.
- Other. Please describe and provide comments. You may attach a separate page, if necessary. \_\_\_\_\_

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**Signature of person submitting comments:**

\_\_\_\_\_ Date: \_\_\_\_\_

# **Attachment 8**

Tract No.	Parcel ID	Segments	Route	Structure	First Name	Last Name	Suffix	Second Name	Mailing Address Line 1	Mailing Address Line 2	Mailing City	Mailing State	Mailing Zip	Acres	Legal Description	Geo ID
SAT 15-001	747622	9	E, F	27	Charles B & Bonnie Bishop	Knape			3226 Sunnydell Dr		San Antonio	Texas	78253-5021	1.147980141	NCB 34400A BLK 8 LOT 8 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0080
SAT 15-002	747621	9	E, F		Gilberto & Lourdes	Escamilla			3438 Sunnydell Dr		San Antonio	Texas	78253	0.92723624	NCB 34400A BLK 8 LOT 7 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0070
SAT 15-003	747618	9	E, F	29	Sergio A & Jozabeth Silva	Gonzales			11438 Blazing Sunset St		San Antonio	Texas	78253-5000	1.055706259	NCB 34400A BLK 8 LOT 4 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0040
SAT 15-004	747620	9	E, F		Rita	Ontiveros			11703 La Granja		San Antonio	Texas	78253	2.282682004	NCB 34400A BLK 8 LOT 6 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0060
SAT 15-005	747619	9	E, F	28	Mark Sr. & Maricruz	Anfield			11450 Blazing Sunset St		San Antonio	Texas	78253	1.022590438	NCB 34400A BLK 8 LOT 5 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0050
SAT 15-006	747616	9	E, F	31	Stephanie & Matthew	Buckholdt			11414 Blazing Sunset St		San Antonio	Texas	78253-5000	1.039450322	NCB 34400A BLK 8 LOT 2 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0020
SAT 15-007	747617	9	E, F	30	Branden Ray	Lopez		Rochelle M Acevedo	11426 Blazing Sunset St		San Antonio	Texas	78253-5000	1.01383636	NCB 34400A BLK 8 LOT 3 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0030
SAT 15-008	747615	9	E, F	32	Alvaro C & Victoria	Compean			3345 Oak Cluster St		San Antonio	Texas	78253-5027	1.110657686	NCB 34400A BLK 8 LOT 1 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-108-0010
SAT 15-009	1058972	9, 10, 11, 13A	D, E, F, G, H		WISE OAKS I LTD				19230 Stone Oak Pkwy	Ste 301	San Antonio	Texas	78258-3285	105.16	NCB 17634 BLK LOT P-5 (19.552) AC & CB 4400 P-40 (85.61) ABS 825 SEPI PER DEED 13651/0386	17634-000-0057
SAT 15-010	664177	9, 11	D, E, F		DHS PARTNERS LLS				808 E Court		Seguin	Texas	78155	1.88	NCB 17634 BLK LOT P-5B (WESTSIDE FREEWAY ANNEXATION)	17634-000-0053
SAT 15-011	747527	9	E, F	33	Larry M & Virginia Davila	Gutierrez			11390 Blazing Sunset St		San Antonio	Texas	78253-5022	1.053958853	NCB 34400A BLK 3 LOT 12 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-103-0120
SAT 15-012	747528	9	E, F	34	Yoshiaki & Mikiko	Takeuchi			11378 Blazing Sunset St		San Antonio	Texas	78253-5022	1.030048548	NCB 34400A BLK 3 LOT 13 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-103-0130
SAT 15-013	747529	9	E, F	35	Itzel	Gonzalez			11150 Farm to Market Road 7026		Forney	Texas	75126	0.719291026	NCB 34400A BLK 3 LOT 14 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-103-0140
SAT 15-014	667487	12A, 12B, 13A, 13B, 14, 15, 16, 17, 23, 24	C, D, E, F, G, H, I, J, K, N, O	38	TK-Taito LLC				4611 Wiseman BLVD		San Antonio	Texas	78251-4202	41.65	NCB 17648 BLK 1 LOT 1 TAKATA SUBDIVISION	17648-001-0010
SAT 15-015	747530	9	E, F	36	Roger M & Maria De Jesus	Perez			11358 Blazing Sunset St		San Antonio	Texas	78253-5022	2.080904176	NCB 34400A BLK 3 LOT 15 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-103-0150
SAT 15-016	747526	9	E, F		TRIDENT JOINT VENTURE				PO Box 17258		San Antonio	Texas	78217-0258	1.923780775	NCB 34400A BLK 3 LOT 8 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-103-0080
SAT 15-017	664186	9, 11	D, E, F		TRIDENT JOINT VENTURE				PO Box 17258		San Antonio	Texas	78217-0258	2.497963374	NCB 17634 BLK 3 LOT 7 (WESTSIDE FREEWAY ANNEXATION)	17634-003-0070
SAT 15-018	664185	8, 9, 11, 12A	C, D, E, F		TRIDENT JOINT VENTURE				PO Box 17258		San Antonio	Texas	78217-0258	2.422753628	NCB 17634 BLK 3 LOT 6 (WESTSIDE FREEWAY ANNEXATION)	17634-003-0060
SAT 15-019	666004	12B, 17	C, D, E, F, G, I, K, N		ALAMO COMMUNITY COLLEGE DISTRICT				2222 N Alamo St		San Antonio	Texas	78215	3.475	NCB 17640 BLK 1 LOT 4 NORTHWEST VISTA COLLEGE SUBD	17640-001-0040
SAT 15-020	664184	8	C, D		TRIDENT JOINT VENTURE				PO Box 17258		San Antonio	Texas	78217-0258	2.18362904	NCB 17634 BLK 3 LOT 5 (WESTSIDE FREEWAY ANNEXATION)	17634-003-0050
SAT 15-021	664183	8	C, D		Jose Antonio	Rivera Jr.			3726 Summer Breeze Ln		San Antonio	Texas	78253	1.065343759	NCB 17634 BLK 3 LOT 4 (WESTSIDE FREEWAY ANNEXATION)	17634-003-0040
SAT 15-022	664181	8	C, D		Sarnoon Ventures LLC				8755 Interstate 10 E		Converse	Texas	78109-5125	1.043450579	NCB 17634 BLK 3 LOT 1 (WESTSIDE FREEWAY ANNEXATION)	17634-003-0010
SAT 15-023	664182	8	C, D		Sarnoon Ventures LLC				8755 Interstate 10 E		Converse	Texas	78109-5125	1.008195643	NCB 17634 BLK 3 LOT 2 (WESTSIDE FREEWAY ANNEXATION)	17634-003-0020
SAT 15-024	747525	8	C, D		Dijon A	Turner			3732 Summer Breeze Ln		San Antonio	Texas	78253-5045	1.008289788	NCB 34400A BLK 3 LOT 3 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-103-0030
SAT 15-025	664172	8	C, D		JETEXAS at Westover Hills a Texas limited liability company				17806 IH-10 West	Suite 450	San Antonio	Texas	78257	3.440223122	NCB 17633 BLK 2 LOT N 292.5' OF 18 (WESTSIDE FREEWAY ANNEXATION)	17633-002-0181
SAT 15-026	664170	5, 6A, 8	B, C, D		JETEXAS at Westover Hills a Texas limited liability company				17806 IH-10 West	Suite 450	San Antonio	Texas	78257	7.014041365	NCB 17633 BLK 2 LOT 17 (WESTSIDE FREEWAY ANNEXATION)	17633-002-0170
SAT 15-027	664162	5, 6A, 8	B, C, D	18	1604 PI LLC				12016 Eucalyptus St		San Antonio	Texas	78245-3307	0.945556354	NCB 17632 BLK 1 LOT 1 (WESTSIDE FREEWAY ANNEXATION)	17632-001-0100
SAT 15-028	664163	5	B, C, D		1604 PI LLC				12016 Eucalyptus St		San Antonio	Texas	78245-3307	0.96986608	NCB 17632 BLK 1 LOT 2 (WESTSIDE FREEWAY ANNEXATION)	17632-001-0020
SAT 15-029	747549	5	B, C, D		Ernest and Carrie L Arredondo Revocable Trust		Trustees		4227 Summer Breeze Ln		San Antonio	Texas	78253-5051	1.1837	NCB 4400A BLK 5 LOT 3 & N 1.8 FT OF 4 "POTRANCO/FM1604" ANNEXATION	34400-103-0030
SAT 15-030	664166	5	B, C, D		Kenneth Lau & Constance L Andrews Living Trust		Golden Wok		8822 Wurzbach Rd		San Antonio	Texas	78240-1033	1.905976343	NCB 17632 BLK 1 LOT 6 (WESTSIDE FREEWAY ANNEXATION)	17632-001-0060
SAT 15-031	664173	8	C, D		JETEXAS at Westover Hills a Texas limited liability company				17806 IH-10 West	Suite 450	San Antonio	Texas	78257	3.534041547	NCB 17633 BLK 2 LOT 5 292.5' OF 18 (WESTSIDE FREEWAY ANNEXATION)	17633-002-0182
SAT 15-032	664174	8	C, D		JETEXAS at Westover Hills a Texas limited liability company				17806 IH-10 West	Suite 450	San Antonio	Texas	78257	7.084077514	NCB 17633 BLK 2 LOT 19 (WESTSIDE FREEWAY ANNEXATION)	17633-002-0190
SAT 15-033	664167	5, 20	B, C, D, I, J, K, L		Kenneth Lau & Constance L Andrews Living Trust		Golden Wok		8822 Wurzbach Rd		San Antonio	Texas	78240-1033	1.815310994	NCB 17632 BLK 1 LOT 7 (WESTSIDE FREEWAY ANNEXATION)	17632-001-0070
SAT 15-034	747521	5	B, C, D		Dean & Sonia	Stone			11327 Enchanted Sunset St		San Antonio	Texas	78253-5007	1.057676712	NCB 34400A BLK 1 LOT 10 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-101-0100
SAT 15-035	747520	5	B, C, D		Danny A & Maria	Dobbs			11319 Enchanted Sunset St		San Antonio	Texas	78253-5007	1.436501857	NCB 34400A BLK 1 LOT 9 NORTH SAN ANTONIO HILLS UT-1 "POTRANCO/FM1604" ANNEXATION	34400-101-0090
SAT 15-036	664168	3, 5, 20	B, C, D, I, J, K, L		Stephanie Jones, Trustees		Wai Hung Lau		8822 Wurzbach Rd		San Antonio	Texas	78240-1033	2.200864086	NCB 17632 BLK 1 LOT 8 (WESTSIDE FREEWAY ANNEXATION)	17632-001-0080
SAT 15-037	1155341	1	A, B, C, D, I, J, K, L, M, N, O		Karina L	Rubio			5039 Segovia Way		San Antonio	Texas	78253	0.151557222	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 104 LOT 19 2011 NEW ACCT PER PLAT 9619/117-123	04400-104-0191
SAT 15-038	1155269	1	A, B, C, D, I, J, K, L, M, N, O	5	Alfredo & Maria Theresa	Garcia			11243 Thorn Apple		San Antonio	Texas	78253-6257	0.151557303	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 100 LOT 25 2011 NEW ACCT PER PLAT 9619/117-123	04400-100-0250
SAT 15-039	1155270	1	A, B, C, D, I, J, K, L, M, N, O	4	The Basset-Hernandez Living Trust Dated August 31, 2022		Hernandez-Rodriguez, Trustees		5038 Segovia Way		San Antonio	Texas	78253	0.151555387	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 100 LOT 26 2011 NEW ACCT PER PLAT 9619/117-123	04400-100-0260
SAT 15-040	1155271	1	A, B, C, D, I, J, K, L, M, N, O	3	Daniel S & Cynthia L	Zulli			5034 Segovia Way		San Antonio	Texas	78253-6322	0.151556118	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 100 LOT 27 2011 NEW ACCT PER PLAT 9619/117-123	04400-100-0270
SAT 15-041	1155272	1	A, B, C, D, I, J, K, L, M, N, O	2	Jason J & Chisa Nicole	Boseigneur			5030 Segovia Way		San Antonio	Texas	78253-6322	0.151557042	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 100 LOT 28 2011 NEW ACCT PER PLAT 9619/117-123	04400-100-0280
SAT 15-042	1155273	1	A, B, C, D, I, J, K, L, M, N, O	1	Richard & Virjinia	Cortez			5026 Segovia Way		San Antonio	Texas	78253-6322	0.151555237	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 100 LOT 29 2011 NEW ACCT PER PLAT 9619/117-123	04400-100-0290
SAT 15-043	1155274	1	A, B, C, D, I, J, K, L, M, N, O		Avel D	Rodriguez	Diana Olguin		5022 Segovia Way		San Antonio	Texas	78253-6322	0.151556186	CB 4400L (ALAMO RANCH UT-20 & 21 PH-2), BLOCK 100 LOT 30 2011 NEW ACCT PER PLAT 9619/117-123	04400-100-0300
SAT 15-044	1210593	1	A, B, C, D, I, J, K, L, M, N, O	8	Margarita C & Romel E	Pilapil			5054 Segovia Way		San Antonio	Texas	78253	0.151557224	FILED 02/26/2014.	04400-100-0220
SAT 15-045	1210594	1	A, B, C, D, I, J, K, L, M, N, O	7	Ashley	Skidmore			5050 Segovia Way		San Antonio	Texas	78253	0.151556035	FILED 02/26/2014.	04400-100-0230
SAT 15-046	1210595	1	A, B, C, D, I, J, K, L, M, N, O	6	Mohammed H	Baker			5046 Segovia Way		San Antonio	Texas	78253	0.151556441	FILED 02/26/2014.	04400-100-0240
SAT 15-047	1210668	1	A, B, C, D, I, J, K, L, M, N, O		Imelda	Rios			P.O. Box 1311		Helotes	Texas	78023-1311	0.151557888	FILED 02/26/2014.	04400-104-0170
SAT 15-048	1210669	1	A, B, C, D, I, J, K, L, M, N, O		Hamilton Ayala	Lugo	Mary Castillo		5043 Segovia Way		San Antonio	Texas	78253-6322	0.151557229	FILED 02/26/2014.	04400-104-0180
SAT 15-049	1210592	1	A, B, C, D, I, J, K, L, M, N, O	9	Donald Shane & Adelaida	Magill			5058 Segovia Way		San Antonio	Texas	78253-6322	0.160390006	FILED 02/26/2014.	04400-100-0210
SAT 15-050	1210591	1	A, B, C, D, I, J, K, L, M, N, O		Elizabeth A	Carbajal	Benedict Espinosa		5062 Segovia Way		San Antonio	Texas	78253-6322	0.368485514	FILED 02/26/2014.	04400-100-0200
SAT 15-051	1167737	1, 2A, 3	A, B, C, D, I, J, K, L, M, N, O		CITY PUBLIC SERVICE BOARD				P.O. Box 1771		San Antonio	Texas	78296-1771	9.1733	NCB 17641 BLK LOT P-4 NON-ADJACENT REMAINS PER PLAT 9635/115-117	17641-000-0040
SAT 15-052	1209882	1	A, B, C, D, I, J, K, L, M, N, O	11, 12, 13	AVOCET 336 LLC				3500 Lenox Rd NE	STE 1650	Atlanta	Georgia	30326-4280	19.583	12/18/2015. 2015 NEW ACCT PER PLAT 9669/167-6 FILED 06/06/2014.	04400-118-0020
SAT 15-053	1167738	1, 3	A, B, C, D, I, J, K, L, M, N, O	15, 16	CITY PUBLIC SERVICE BOARD				P.O. Box 1771		San Antonio	Texas	78296-1771	14.76	NCB 17641 BLK 2 LOT 1 (SAWS-ANDERSON PUMP) DUPLICATE TO PLAT 9531/44 PER PLAT 9635/115-117	17641-000-0011
SAT 15-054	1244144	1	A, B, C, D, I, J, K, L, M, N, O	14	SANTIKOS CASA BLANCA SA THEATER REALTY LLC				4630 N Loop 1604 W	STE 501	San Antonio	Texas	78249-1374	14.2027	2016 NEW ACCT PER DEED 17351/2165 EXEC 07/16/2015.	17632-118-0031
SAT 15-055	1244131	1, 2A, 3	A, B, C, D, I, J, K, L, M, N, O		MILITARY CROSSING SHOPPING CENTER LTD & SANTIKOS				4630 N Loop 1604 W	STE 501	San Antonio	Texas	78249-1374	9.8873	2016 NEW ACCT.	

# **Attachment 9**



November 3, 2023

«Prefix» «Contact»  
«FormalTitle»  
«Organization»  
«Address1»  
«City», «State» «Zip»

***RE: Application of the City of San Antonio, Acting By and Through City Public Service Board (CPS Energy) to Amend a Certificate of Convenience and Necessity for the Proposed SAT15 138-kV Transmission Line Project in Bexar County, Texas***

**PUBLIC UTILITY COMMISSION OF TEXAS (PUC) DOCKET NO. 55728**

Dear «Formal»:

As part of our efforts to keep you and the public informed about electric transmission projects, we want you to know the City of San Antonio, acting by and through City Public Service Board (CPS Energy) is requesting approval from the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct the SAT15 138-kV Transmission Line Project in Bexar County.

The proposed transmission line will connect the existing Cagnon to Helotes 138 kV transmission line in northwest Bexar County to a proposed new Wiseman Substation located near the intersection of State Highway (SH) 151 and Wiseman Boulevard. The entire project will be about 1.2 to 2.4 miles in length and is estimated to cost approximately \$34 million to \$50 million (including substation costs), depending upon the final route chosen by the PUC.

If you have questions about the transmission line, you can call Daniel Otto at 210-353-4852. The descriptions of the proposed routing alternatives and a map showing the proposed alternative routes are enclosed for your convenience.

The CCN application, including detailed routing maps illustrating the proposed transmission line project, substations, and project area, may be reviewed on the project website at <https://www.cpsenergy.com/en/about-us/new-infrastructure/sat15-substation-transmission-line.html> and at:

- CPS Energy, 500 McCullough, San Antonio, Texas 78215
- Great Northwest Library, 9050 Wellwood St., San Antonio, TX 78250

***All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas.***

For your information, the enclosed brochure entitled “Landowners and Transmission Line Cases at the PUC” provides basic information about how landowners may participate in this docket, and how they may contact the PUC. The brochure includes sample forms for making comments and for making a request to intervene as a party in this docket. The only way to fully participate in the PUC’s decision on where to locate the transmission line is to intervene in the docket. It is important for an affected person to intervene because the utility is not obligated to keep affected persons informed of the PUC’s proceedings and cannot predict which route may or may not be approved by the PUC.

Requests for intervention should be filed electronically and requestors will be required to serve the request on other parties by email. Therefore, those wishing to intervene should include an email address on the intervention form. Instructions for electronic filing via the “PUC Filer” on the Commission’s website can be found here: <https://interchange.puc.texas.gov/filer>. Instructions for using the PUC Filer are available at [http://www.puc.texas.gov/industry/filings/New\\_PUC\\_Web\\_Filer\\_Presentation.pdf](http://www.puc.texas.gov/industry/filings/New_PUC_Web_Filer_Presentation.pdf). Once a filer obtains a tracking sheet associated with the filing from the PUC Filer, they may email the tracking sheet and the document they wish to file to: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). For assistance with electronic filings, please contact the Commission’s Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

In addition to the contacts listed in the brochure, interested persons may call the PUC’s Customer Assistance Hotline at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC’s Customer Assistance Hotline at (512) 936-7136 or toll free at (800) 735-2989. If a person wishes to participate in this proceeding by becoming an intervenor, the deadline for intervention in the proceeding is December 4, 2023, and the PUC should receive an electronic filing or letter requesting intervention by that date.

While the preferred method for requesting intervention is to submit a request electronically, if a person is unable submit an electronic request, they can still request intervention by mailing 10 copies of the request to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, Texas 78711-3326

Persons who wish to intervene in the docket must also mail or email a copy of their request for intervention to all parties in the docket and all persons that have pending motions to intervene, at or before the time the request for intervention is mailed to the PUC. In addition to the intervention deadline, other important deadlines may already exist that affect participation in this docket. The enclosed brochure explains how an interested person can access these filings.

Sincerely,

Daniel Otto, PE, PMP, MBA  
Manager of Regulatory Support  
CPS Energy  
500 McCullough San Antonio, Texas 78215  
210.353.2515  
SAT15Project@CPSEnergy.com

Enclosures



November 3, 2023

«FirstName» «LastName» «Suffix»  
«SecondName»  
«Address1» «Address2»  
«City», «STATE» «ZIP»

***RE: Application of the City of San Antonio, Acting By and Through City Public Service Board (CPS Energy) to Amend a Certificate of Convenience and Necessity for the Proposed SAT15 138-kV Transmission Line Project in Bexar County, Texas***

**PUBLIC UTILITY COMMISSION OF TEXAS (PUC) DOCKET NO. 55728**

Tract ID: «Tract\_IDs»

Dear Landowner:

This letter is to inform you that the City of San Antonio, acting by and through City Public Service Board (CPS Energy) is requesting approval from the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct the proposed SAT15 138-kV Transmission Line Project in Bexar County. The proposed transmission line will connect the existing Cagnon to Helotes 138 kV transmission line in northwest Bexar County to a proposed new Wiseman Substation located near the intersection of State Highway (SH) 151 and Wiseman Boulevard. The entire project will be about 1.2 to 2.4 miles in length and is estimated to cost approximately \$34 million to \$50 million (including substation costs), depending upon the final route chosen by the PUC.

Your land may be directly affected in this docket. If one of CPS Energy's routes is approved by the PUC, CPS Energy will have the right to build the facilities, which may directly affect your land. This docket will not determine the value of your land or the value of an easement if one is needed by CPS Energy to build the facilities.

If you have questions about the transmission line or substation sites, please call 210-353-2515. The descriptions of the proposed routing alternatives, proposed substations sites, and a map showing the proposed alternative routes are enclosed for your convenience.

The CCN application, including detailed routing maps illustrating the proposed transmission line project, substations, and project area, may be reviewed on the project website at <https://www.cpsenergy.com/en/about-us/new-infrastructure/sat15-substation-transmission-line.html> and at:

- CPS Energy, 500 McCullough, San Antonio, Texas 78215
- Great Northwest Library, 9050 Wellwood St., San Antonio, TX 78250



**All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas.**

The enclosed brochure entitled “Landowners and Transmission Line Cases at the PUC” provides basic information about how you may participate in this docket, and how you may contact the PUC. Please read this brochure carefully. The brochure includes sample forms for making comments and for making a request to intervene as a party in this docket. The only way to fully participate in the PUC’s decision on where to locate the transmission line is to intervene in the docket. It is important for an affected person to intervene because the utility is not obligated to keep affected persons informed of the PUC’s proceedings and cannot predict which route may or may not be approved by the PUC. CPS Energy will place updates on the project site listed above however all affected persons are encouraged to participate in the process.

Your request for intervention should be filed electronically and you will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the “PUC Filer” on the Commission’s website can be found here: <https://interchange.puc.texas.gov/filer> Instructions for using the PUC Filer are available at [http://www.puc.texas.gov/industry/filings/New\\_PUC\\_Web\\_Filer\\_Presentation.pdf](http://www.puc.texas.gov/industry/filings/New_PUC_Web_Filer_Presentation.pdf). Once you obtain a tracking sheet associated with your filing from the PUC Filer, you may email the tracking sheet and the document you wish to file to: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). For assistance with your electronic filing, please contact the Commission’s Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

In addition to the contacts listed in the brochure, you may call the PUC’s Customer Assistance Hotline at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC’s Customer Assistance Hotline at (512) 936-7136 or toll free at (800) 735-2989. If you wish to participate in this proceeding by becoming an intervenor, the deadline for intervention in the proceeding is December 4, 2023, and the PUC should receive a letter from you requesting intervention by that date.

While the preferred method is for you to submit your request for intervention electronically, if you are unable to do so you may mail 10 copies of the request to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, Texas 78711-3326

Persons who wish to intervene in the docket must also mail or email a copy of their request for intervention to all parties in the docket and all persons that have pending motions to intervene, at or before the time the request for intervention is mailed to the PUC. In addition to the intervention deadline, other important deadlines may already exist that affect your participation in this docket. You should review the orders and other filings already made in the docket. The enclosed brochure explains how you can access these filings.

Sincerely,

Daniel Otto, PE, PMP, MBA  
Manager of Regulatory Support  
CPS Energy  
500 McCullough San Antonio, Texas 78215  
210.353.2515  
SAT15Project@CPSEnergy.com  
Enclosures



3 de noviembre del 2023

«FirstName» «LastName» «Suffix»  
«SecondName»  
«Address1» «Address2»  
«City», «STATE» «ZIP»

***RE: Solicitud de la Ciudad de San Antonio, Actuando Por y A Través de la Junta de Servicios Públicos de la Ciudad (CPS Energy) para Enmendar un Certificado de Conveniencia y Necesidad para el Proyecto de Línea de Transmisión SAT15 de 138 kV propuesto en el Condado de Bexar, Texas***

**COMISIÓN DE SERVICIOS PÚBLICOS DE TEXAS (PUC) EXPEDIENTE No. 55728**

Tract ID: «Tract\_IDs»

Estimado Propietario:

Esta carta es para informarle que la Ciudad de San Antonio, actuando por y a través de la Junta de Servicios Públicos de la Ciudad (CPS Energy), solicita la aprobación de la Comisión de Servicios Públicos de Texas (PUC) para enmendar su Certificado de Conveniencia y Necesidad (CCN) para construir el Proyecto de Línea de Transmisión SAT15 de 138 kV propuesto en el Condado de Bexar. La línea de transmisión propuesta conectará la línea de transmisión actual de 138 kV de Cagnon a Helotes en el noroeste del Condado de Bexar con una nueva Subestación Wiseman propuesta ubicada cerca de la intersección de la Autopista Estatal (SH) 151 y Wiseman Boulevard. Todo el proyecto tendrá una longitud de entre 1.2 y 2.4 millas y se prevé que costará aproximadamente entre \$34 y 50 millones (incluyendo los costos de la subestación), dependiendo de la ruta final elegida por la PUC.

Su terreno puede verse directamente afectado en este expediente. Si una de las rutas de CPS Energy es aprobada por la PUC, CPS Energy tendrá derecho a construir las instalaciones, lo que puede afectar directamente a sus terrenos. Este expediente no determinará el valor de su terreno ni el valor de derecho de acceso a la propiedad si CPS Energy lo necesita para construir las instalaciones.

En caso de alguna pregunta sobre la línea de transmisión o los sitios de las subestaciones, comuníquese al 210-353-2515. Para su comodidad se adjuntan las descripciones de las rutas alternativas propuestas, los sitios de las subestaciones propuestas y un mapa que muestra las rutas alternativas propuestas.

La solicitud de CCN, incluyendo los mapas de rutas detallados que ilustran el proyecto de línea de transmisión propuesto, las subestaciones y la zona del proyecto, pueden consultarse en la página web del proyecto en <https://www.cpsenergy.com/en/about-us/new-infrastructure/sat15-substation-transmission-line.html> y en:

- CPS Energy, 500 McCullough, San Antonio, Texas 78215
- Great Northwest Library, 9050 Wellwood St., San Antonio, TX 78250

**Todas las rutas y segmentos de ruta incluidos en esta notificación están disponibles para su selección y aprobación por parte de la Comisión de Servicios Públicos de Texas.**

El folleto adjunto titulado “Casos de Propietarios de Terrenos y Líneas de Transmisión en la PUC” proporciona información básica sobre cómo puede participar en este expediente y cómo puede comunicarse con la PUC. Por favor, lea este folleto atentamente. El folleto incluye ejemplos de formularios para realizar comentarios y solicitar intervenir como parte en este expediente. La única manera de participar plenamente en la decisión de la PUC sobre la ubicación de la línea de transmisión es intervenir en el expediente. Es importante que una persona afectada intervenga porque la empresa de servicios públicos no está obligada a mantener a las personas afectadas informadas de los procedimientos de la PUC y no puede predecir qué ruta puede o no ser aprobada por la PUC. CPS Energy publicará actualizaciones en el sitio del proyecto mencionado previamente, pero se alienta a todas las personas afectadas a participar en el proceso.

Su petición de intervención debe presentarse electrónicamente y se le pedirá que notifique la petición a las demás partes por correo electrónico. Por lo tanto, incluya su propia dirección de correo electrónico en el formulario de intervención. Las indicaciones para la presentación electrónica a través del "PUC Filer" en el sitio web de la Comisión se encuentran aquí: <https://interchange.puc.texas.gov/filer> Las indicaciones para utilizar el PUC Filer están disponibles en [http://www.puc.texas.gov/industry/filings/New\\_PUC\\_Web\\_Filer\\_Presentation.pdf](http://www.puc.texas.gov/industry/filings/New_PUC_Web_Filer_Presentation.pdf). Una vez que obtenga una hoja de seguimiento asociada a su presentación de la PUC Filer, puede enviar por correo electrónico la hoja de seguimiento y el documento que desea presentar a: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). Para obtener ayuda con su presentación electrónica, póngase en contacto con el Servicio de Asistencia de la Comisión en el (512) 936-7100 o en el [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). Puede consultar el material presentado en este expediente en el PUC Interchange en: <http://interchange.puc.texas.gov/>.

Además de los contactos mencionados en el folleto, puede llamar a la Línea Directa de Asistencia al Cliente de la PUC al (888) 782-8477. Las personas con problemas de audición y del habla que tengan teléfonos de texto (TTY) pueden comunicarse con la Línea Directa de Asistencia al Cliente de la PUC al (512) 936-7136 o al número gratuito (800) 735-2989. Si desea participar en este procedimiento convirtiéndose en interventor, la fecha límite para la intervención en el procedimiento es el 4 de diciembre del 2023, y la PUC debe recibir una carta suya solicitando intervención antes de esa fecha.

Aunque el método preferido es que presente su solicitud de intervención por vía electrónica, si no puede hacerlo puede enviar por correo 10 copias de la solicitud a:

Comisión de Servicios Públicos de Texas  
Registros Centrales  
A la atención de: Secretario de Archivos  
1701 N. Congress Ave.  
Apartado Postal 13326  
Austin, Texas 78711-3326

Las personas que deseen intervenir en el expediente también deben enviar por correo postal o electrónico una copia de su solicitud de intervención a todas las partes en el expediente y a todas las personas que tengan mociones pendientes para intervenir, en el momento en que la solicitud de intervención se envíe por correo postal a la PUC o antes. Además del plazo de intervención, es posible que ya existan otros plazos importantes que afecten a su participación en este expediente. Debería consultar las órdenes y otros documentos ya presentados en el expediente. En el folleto adjunto se explica cómo acceder a estos documentos.

Atentamente,

Daniel Otto, PE, PMP, MBA  
Responsable de Apoyo Normativo  
CPS Energy  
500 McCullough San Antonio, Texas 78215  
210.353.2515  
SAT15Project@CPSEnergy.com  
Anexos

**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

CPS Energy has filed an application with the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct the SAT15 138-kilovolt (kV) Transmission Line Project in Bexar County, Texas. In its CCN application for this project, CPS Energy has presented 15 alternative routes comprised of 27 segments for consideration by the PUC. The following table lists the segment combinations that make up CPS Energy’s 15 alternative routes and the length of each alternative route in miles. All routes and segments are available for selection and approval by the PUC. Only one multi-segment transmission line route will ultimately be constructed.

Alternative routes are not listed in any order of preference or priority.

PRIMARY ALTERNATIVE ROUTES	SEGMENT COMPOSITION	TOTAL LENGTH IN MILES
A	1-2A-2B-7	1.82
B	1-3-5-6A-6B-7	1.83
C	1-3-5-8-12A-12B-17-19	2.13
D	1-3-5-8-11-13A-13B-14-17-19	2.36
E	9-12A-12B-16-18-19	1.20
F	9-11-13A-13B-14-17-19	1.43
G	10-13A-13B-14-17-19	1.25
H	10-13A-13B-15-18-19	1.24
I	1-3-20-22-23-24-13B-14-17-19	2.28
J	1-3-20-22-23-24-13B-15-18-19	2.28
K	1-3-20-22-23-12B-16-18-19	2.08
L	1-3-20-22-6B-7	1.77
M	1-2A-21-22-6B-7	1.77
N	1-2A-21-22-23-12B-16-18-19	2.07
O	1-2A-21-22-23-24-13B-15-18-19	2.27

*Note: All distances listed below are approximate and rounded to the nearest hundredths of a mile. The distances of individual segments below may not sum to the total length of route presented above due to rounding.*

**Segment 1**

Segment 1 begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.52 mile southwest of the intersection of State Highway (SH) 151 and SH Loop 1604. The segment proceeds east for approximately 0.05 mile, then angles northeast for approximately 0.10 mile, paralleling the southeast side of an existing 138-kV transmission line. The segment proceeds southeast for approximately 0.34 mile. The segment terminates at its intersection with Segments 2A and 3, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604.

**CPS Energy**  
**SAT15 138 kV Transmission Line Project**  
**PUC Docket No. 55728**  
**Description of the Primary Alternative Routes**

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**Segment 2A**

Segment 2A begins at its intersection with Segments 1 and 3, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604. The segment proceeds southeast for approximately 0.13 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 2B and 21, located on the southeast side of the intersection of SH 151 and SH Loop 1604.

**Segment 2B**

Segment 2B begins at intersection with Segments 2A and 21, located on the southeast side of the intersection of SH 151 and SH Loop 1604. The segment proceeds east for approximately 0.13 mile, paralleling the south side of an existing 138-kV transmission line for majority of the length. The segment then angles southeast for approximately 0.44 mile, paralleling the southwest side of an existing 138-kV transmission line. The segment then angles east-southeast for approximately 0.07 mile. The segment then angles southeast for approximately 0.16 mile, crossing Wiseman Boulevard (Blvd). The segment then angles southwest for approximately 0.17 mile, paralleling the southeast side of Wiseman Blvd. The segment terminates at its intersection with Segments 6B and 7, located on the southwest side of the intersection of SH 151 and Wiseman Blvd.

**Segment 3**

Segment 3 begins at its intersection with Segments 1 and 2A, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604. The segment proceeds south-southwest for approximately 0.16 mile. The segment terminates at its intersection with Segments 5 and 20, located on the west side of SH Loop 1604.

*There is no segment labeled Segment 4 in this project.*

**Segment 5**

Segment 5 begins at its intersection with Segments 3 and 20, located on the west side of SH Loop 1604. The segment proceeds south for approximately 0.08 mile, then angles southwest for approximately 0.04 mile. The segment then angles south for approximately 0.11 mile, crossing Valley Meadow Road, then angles east for approximately 0.04 mile paralleling the south side of Valley Meadow Road. The segment terminates at its intersection with Segments 6A and 8, located on the west side of SH Loop 1604.

**Segment 6A**

Segment 6A begins at its intersection with Segments 5 and 8, located on the west side of SH Loop 1604. The segment proceeds east-southeast for approximately 0.08 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 6B, 22, and 23, located east of SH Loop 1604.

**Segment 6B**

Segment 6B begins at its intersection with Segments 6A, 22, and 23, located east of SH Loop 1604. The segment proceeds northeast for approximately 0.09 mile. The segment then angles southeast for approximately 0.49 mile, crossing Slick Ranch Creek and Wiseman Blvd. The segment terminates at its intersection with Segments 2B and 7, located on the east side of Wiseman Blvd.

**CPS Energy**  
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**Description of the Primary Alternative Routes**

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**Segment 7**

Segment 7 begins at its intersection with Segments 6B and 7, located on the east side of Wiseman Blvd. The segment proceeds southwest for approximately 0.11 mile paralleling the east side of Wiseman Blvd. The segment then angles west-southwest for approximately 0.12 mile, paralleling the east side of Wiseman Blvd. The segment terminates at the Wiseman Substation, located approximately 0.42 mile southwest of the intersection of SH 151 and Wiseman Blvd.

**Segment 8**

Segment 8 begins at its intersection with Segments 5 and 6A, located on the west side of SH Loop 1604. The segment proceeds south for approximately 0.47 mile, crossing Misty Woods Road. The segment terminates at its intersection with Segments 9, 11, and 12A, located on the west side of SH Loop 1604.

**Segment 9**

Segment 9 begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.46 mile northwest of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds northeast for approximately 0.34 mile, crossing an unnamed stream. The segment then angles north-northeast for approximately 0.12 mile. The segment terminates at its intersection with Segments 8, 11, and 12A, located on the west side of SH Loop 1604.

**Segment 10**

Segment 10 begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.46 mile west of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds east-northeast for approximately 0.17 mile, paralleling the north side of Wiseman Blvd. The segment then angles northeast for approximately 0.08 mile. The segment then angles east-southeast for approximately 0.16 mile, crossing an unnamed stream. The segment then angles north for approximately 0.05 mile. The segment terminates at its intersection with Segments 11 and 13A, located northwest of the intersection of SH Loop 1604 and Wiseman Blvd.

**Segment 11**

Segment 11 begins at its intersection with Segments 10 and 13A, located northwest of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds north-northeast for approximately 0.09 mile, then angles northeast for approximately 0.06 mile. The segment then angles north-northeast for approximately 0.03 mile. The segment terminates at its intersection with Segments 8, 9, and 12A, located on the west side of SH Loop 1604.

**Segment 12A**

Segment 12A begins at its intersection with Segments 8, 9, and 11, located on the west side of SH Loop 1604. The segment proceeds east for approximately 0.08 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 12B, 23, and 24, located on the east side of SH Loop 1604.



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**Segment 12B**

Segment 12B begins at its intersection with Segments 12A, 23, and 24, located on the east side of SH Loop 1604. The segment proceeds east-southeast for approximately 0.10 mile, paralleling the south side of North Ellison Drive. The segment then angles southeast for approximately 0.09, paralleling the southwest side of North Ellison Drive. The segment then angles south-southeast for approximately 0.09 mile, paralleling the southwest side of North Ellison Drive. The segment then angles southeast for approximately 0.08 mile. The segment terminates at its intersection with Segments 14, 16, and 17, located on the northwest side of the intersection of North Ellison Drive and Wiseman Blvd.

**Segment 13A**

Segment 13A begins at its intersection with Segments 10 and 11, located northwest of the intersection of SH Loop 1604 and Wiseman Blvd. The segment proceeds east for approximately 0.10 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 13B and 24, located on the east side of SH Loop 1604.

**Segment 13B**

Segment 13B begins at its intersection with Segments 13A and 24, located on the east side of SH Loop 1604. The segment proceeds southeast for approximately 0.10 mile, then angles east-northeast for approximately 0.07 mile, paralleling the north side of Wiseman Blvd. The segment then angles northeast for approximately 0.06 mile, paralleling the north side of Wiseman Blvd. The segment terminates at its intersection with Segments 14 and 15, located on the northwest side of Wiseman Blvd.

**Segment 14**

Segment 14 begins at its intersection with Segments 13B and 15, located on the northwest side of Wiseman Blvd. The segment proceeds northeast for approximately 0.09 mile, paralleling the northwest side of Wiseman Blvd. The segment then angles north-northeast for approximately 0.08 mile, paralleling the northwest side of Wiseman Blvd. The segment terminates at its intersection with Segments 12B, 16, and 17, located northwest of the intersection of North Ellison Drive and Wiseman Blvd.

**Segment 15**

Segment 15 begins at its intersection with Segments 13B and 14, located on the northwest side of Wiseman Blvd. The segment proceeds east for approximately 0.06 mile, crossing Wiseman Blvd. The segment then angles northeast for approximately 0.12 mile, paralleling the southeast side of Wiseman Blvd. The segment terminates at its intersection with Segments 16 and 18, located southwest of the intersection of North Ellison Drive and Wiseman Blvd.

**Segment 16**

Segment 16 begins at its intersection with Segments 12B, 14, and 17, located northwest of the intersection of North Ellison Drive and Wiseman Blvd. The segment proceeds southeast for approximately 0.03 mile, crossing Wiseman Blvd and paralleling the southwest side of North Ellison Drive. The segment terminates at its intersection with Segments 15 and 18, located southwest of the intersection of North Ellison Drive and Wiseman Blvd.

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**Segment 17**

Segment 17 begins at its intersection with Segments 12B, 14, and 16, located northwest of the intersection of North Ellison Drive and Wiseman Blvd. The segment proceeds northeast for approximately 0.13 mile, crossing N Ellison Drive and Slick Ranch Creek and paralleling the northwest side of Wiseman Blvd. The segment then angles southeast for approximately 0.03 mile, crossing Wiseman Blvd. The segment terminates at its intersection with Segments 18 and 19, located on the southeast side of Wiseman Blvd.

**Segment 18**

Segment 18 begins at its intersection with Segments 15 and 16, located southwest of the intersection of North Ellison Drive and Wiseman Blvd. The segment proceeds northeast for approximately 0.13 mile, crossing North Ellison Drive, Slick Ranch Creek and paralleling the southeast side of Wiseman Blvd. The segment terminates at its intersection with Segments 17 and 19, located on the southeast side of Wiseman Blvd.

**Segment 19**

Segment 19 begins at its intersection with Segments 17 and 18, located on the southeast side of Wiseman Blvd. The segment proceeds northeast for approximately 0.13 mile. The segment terminates at the Wiseman Substation, located approximately 0.42 mile southwest of the intersection of SH 151 and Wiseman Blvd.

**Segment 20**

Segment 20 begins at its intersection with Segments 3 and 5, located on the west side of SH Loop 1604. The segment proceeds east for approximately 0.09 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 21 and 22, located east of SH Loop 1604.

**Segment 21**

Segment 21 begins at its intersection with Segments 2A and 2B, located on the southeast side of the intersection of SH 151 and SH Loop 1604. The segment proceeds southwest for approximately 0.07 mile. The segment then angles south-southwest for approximately 0.05 mile. The segment terminates at its intersection with Segments 20 and 22, located east of SH Loop 1604.

**Segment 22**

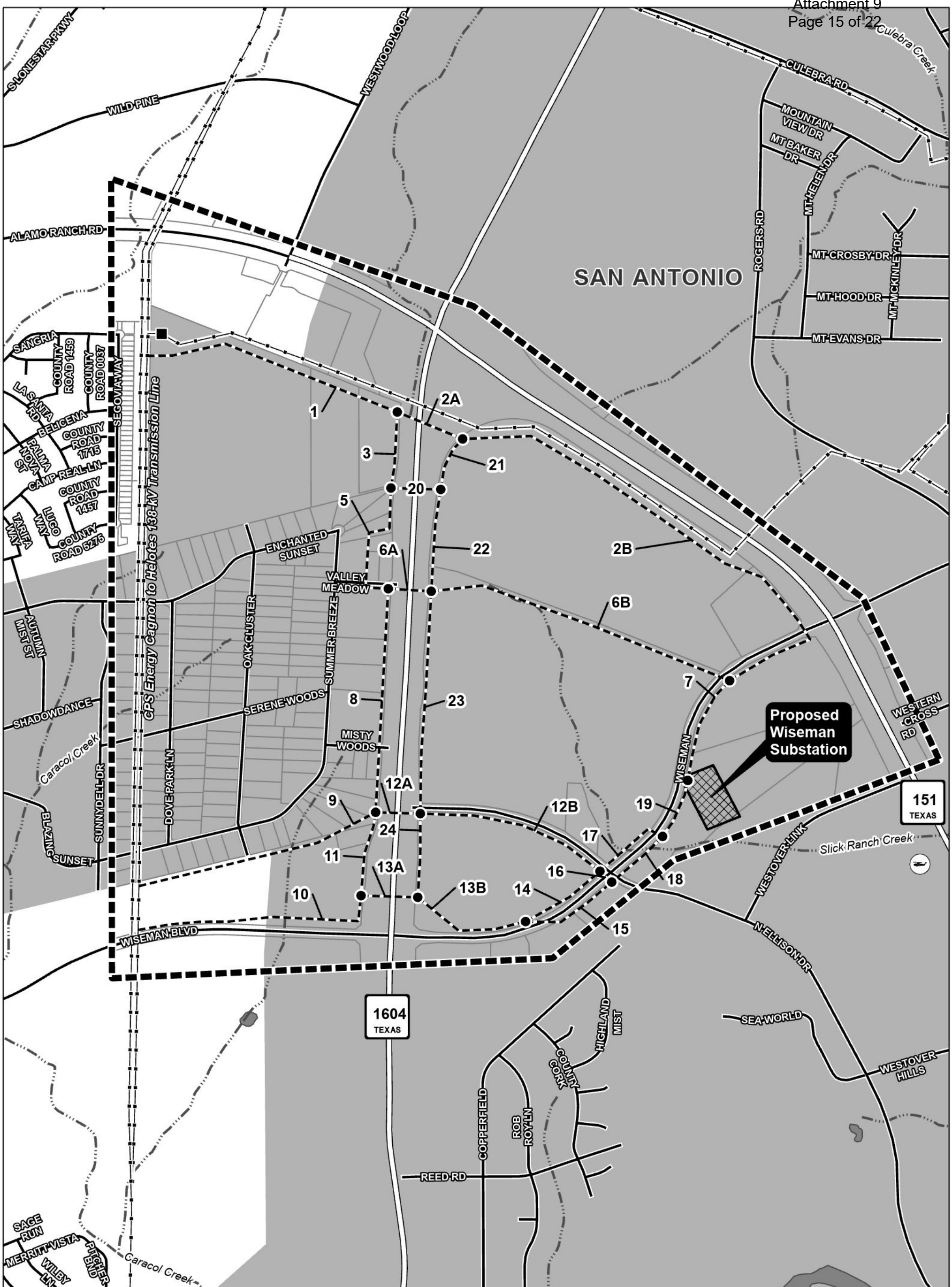
Segment 22 begins at its intersection with Segments 20 and 21, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.21 mile. The segment terminates at its intersection with Segments 6A, 6B, and 23, located east of SH Loop 1604.

**Segment 23**

Segment 23 begins at its intersection with Segments 6A, 6B, and 22, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.47 mile, crossing North Ellison Drive. The segment terminates at its intersection with Segments 12A, 12B, and 24, located east of SH Loop 1604.

**Segment 24**

Segment 24 begins at its intersection with Segments 12A, 12B, and 23, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.18 mile. The segment terminates at its intersection with Segments 13A and 13B, located east of SH Loop 1604.



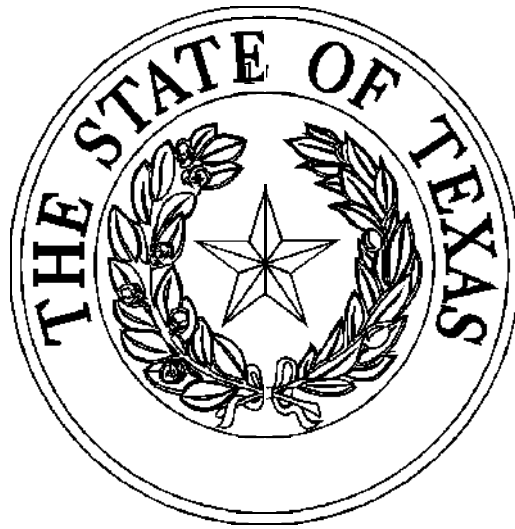
<p><b>Project Features</b></p> <ul style="list-style-type: none"> <li>Primary Alternative Segment, Node, and Label</li> <li>Study Area</li> <li>Project Substation</li> <li>Existing Substations</li> <li>Existing Electrical Transmission Line</li> </ul>	<p><b>Transportation Features</b></p> <ul style="list-style-type: none"> <li>State Highway</li> <li>County / Local Road</li> <li>Heliport</li> </ul>	<p><b>Surface Waters</b></p> <ul style="list-style-type: none"> <li>NHD River / Stream</li> <li>NHD Waterbody</li> </ul> <p><b>Administrative Features</b></p> <ul style="list-style-type: none"> <li>City Limit</li> <li>Parcel Boundary</li> </ul>		<p>CPS ENERGY SAT15 138 KV TRANSMISSION LINE PROJECT</p> <p><b>PRIMARY ALTERNATIVE SEGMENTS</b></p> <p>0 1,000 2,000 Feet</p> <p><b>POWER</b> 000539 EERS</p> <p>Date: 10/20/2023</p>
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# Landowners and Transmission Line Cases at the PUC

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*Public Utility Commission of Texas*



1701 N. Congress Avenue  
P.O. Box 13326  
Austin, Texas 78711-3326  
(512) 936-7260  
[www.puc.state.tx.us](http://www.puc.state.tx.us)

Effective: June 1, 2011

### ***Purpose of This Brochure***

This brochure is intended to provide landowners with information about proposed new transmission lines and the Public Utility Commission's ("PUC" or "Commission") process for evaluating these proposals. At the end of the brochure is a list of sources for additional information.

The following topics are covered in this brochure:

- How the PUC evaluates whether a new transmission line should be built,
- How you can participate in the PUC's evaluation of a line, and
- How utilities acquire the right to build a transmission line on private property.

You are receiving the enclosed formal notice because one or more of the routes for a proposed transmission line may require an easement or other property interest across your property, or the centerline of the proposed project may come within 300 feet of a house or other habitable structure on your property. This distance is expanded to 500 feet if the proposed line is greater than 230 kilovolts (kV). For this reason, your property is considered **directly affected land**. This brochure is being included as part of the formal notice process.

If you have questions about the proposed routes for a transmission line, you may contact the applicant. The applicant also has a more detailed map of the proposed routes for the transmission line and nearby habitable structures. The applicant may help you understand the routing of the project and the application approval process in a transmission line case but cannot provide legal advice or represent you. ***The applicant cannot predict which route may or may not be approved by the PUC. The PUC decides which route to use for the transmission line, and the applicant is not obligated to keep you informed of the PUC's proceedings. The only way to fully participate in the PUC's decision on where to locate the transmission line is to intervene, which is discussed below.***

The PUC is sensitive to the impact that transmission lines have on private property. At the same time, transmission lines deliver electricity to millions of homes and businesses in Texas, and new lines are sometimes needed so that customers can obtain reliable, economical power.

The PUC's job is to decide whether a transmission line application should be approved and on which route the line should be constructed. The PUC values input from landowners and encourages you to participate in this process by intervening in the docket.

### ***PUC Transmission Line Case***

Texas law provides that most utilities must file an application with the PUC to obtain or amend a Certificate of Convenience and Necessity (CCN) in order to build a new transmission line in Texas. The law requires the PUC to consider a number of factors in deciding whether to approve a proposed new transmission line.

The PUC may approve an application to obtain or amend a CCN for a transmission line after considering the following factors:

- Adequacy of existing service;
- Need for additional service;
- The effect of approving the application on the applicant and any utility serving the proximate area;
- Whether the route utilizes existing compatible rights-of-way, including the use of vacant positions on existing multiple-circuit transmission lines;
  - Whether the route parallels existing compatible rights-of-way;
  - Whether the route parallels property lines or other natural or cultural features;
  - Whether the route conforms with the policy of prudent avoidance (which is defined as the limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort); and
  - Other factors such as community values, recreational and park areas, historical and aesthetic values, environmental integrity, and the probable improvement of service or lowering of cost to consumers in the area.

If the PUC decides an application should be approved, it will grant to the applicant a CCN or CCN amendment to allow for the construction and operation of the new transmission line.

***Application to Obtain or Amend a CCN:***

An application to obtain or amend a CCN describes the proposed line and includes a statement from the applicant describing the need for the line and the impact of building it. In addition to the routes proposed by the applicant in its application, the possibility exists that additional routes may be developed, during the course of a CCN case, that could affect property in a different manner than the original routes proposed by the applicant.

The PUC conducts a case to evaluate the impact of the proposed line and to decide which route should be approved. Landowners who would be affected by a new line can:

- informally file a protest, or
- formally participate in the case as an intervenor.

***Filing a Protest (informal comments):***

If you do not wish to intervene and participate in a hearing in a CCN case, you may file **comments**. An individual or business or a group who files only comments for or against any aspect of the transmission line application is considered a “protestor.”

Protestors make a written or verbal statement in support of or in opposition to the utility’s application and give information to the PUC staff that they believe supports their position.

Protestors are **not** parties to the case, however, and do not have the right to:

- Obtain facts about the case from other parties;
- Receive notice of a hearing, or copies of testimony and other documents that are filed in the case;
- Receive notice of the time and place for negotiations;
- File testimony and/or cross-examine witnesses;
- Submit evidence at the hearing; or
- Appeal P.U.C. decisions to the courts.

If you want to make comments, you may either send written comments stating your position, or you may make a statement on the first day of the hearing. If you have not intervened, however, you will not be able to participate as a party in the hearing. Only parties may submit evidence and ***the PUC must base its decision on the evidence.***

***Intervening in a Case:***

To become an intervenor, you must file a statement with the PUC, no later than the date specified in the notice letter sent to you with this brochure, requesting intervenor status (also referred to as a party). This statement should describe how the proposed transmission line would affect your property. Typically, intervention is granted only to directly affected landowners. However, any landowner may request to intervene and obtain a ruling on his or her specific fact situation and concerns. A sample form for intervention and the filing address are attached to this brochure, and may be used to make your filing. A letter requesting intervention may also be used in lieu of the sample form for intervention.

If you decide to intervene and become a party in a case, you will be required to follow certain procedural rules:

- You are required to timely respond to requests for information from other parties who seek information.
- If you file testimony, you must appear at a hearing to be cross-examined.
- If you file testimony or any letters or other documents in the case, you must send copies of the documents to every party in the case and you must file multiple copies with the PUC.

If you intend to participate at the hearing and you do not file testimony, you must at least file a statement of position, which is a document that describes your position in the case.

Failure to comply with these procedural rules may serve as grounds for you to be dismissed as an intervenor in the case.

If you wish to participate in the proceedings it is very important to attend any prehearing conferences.

Intervenors may represent themselves or have an attorney to represent them in a CCN case. If you intervene in a case, you may want an attorney to help you understand the PUC’s procedures and the laws and rules that the PUC applies in deciding whether to approve a transmission line. The PUC encourages landowners to intervene and become parties.

*Stages of a CCN Case:*

If there are persons who intervene in the case and oppose the approval of the line, the PUC may refer the case to an administrative law judge (ALJ) at the State Office of Administrative Hearings (SOAH) to conduct a hearing, or the Commission may elect to conduct a hearing itself. The hearing is a formal proceeding, much like a trial, in which testimony is presented. In the event the case is referred to SOAH, the ALJ makes a recommendation to the PUC on whether the application should be approved and where and how the line should be routed.

There are several stages of a CCN case:

- The ALJ holds a prehearing conference (usually in Austin) to set a schedule for the case.
- Parties to the case have the opportunity to conduct discovery; that is, obtain facts about the case from other parties.
- A hearing is held (usually in Austin), and parties have an opportunity to cross-examine the witnesses.
- Parties file written testimony before the date of the hearing. Parties that do not file written testimony or statements of position by the deadline established by the ALJ may not be allowed to participate in the hearing on the merits. Parties may file written briefs concerning the evidence presented at the hearing, but are not required to do so.

In deciding where to locate the transmission line and other issues presented by the application, the ALJ and Commission rely on factual information submitted as evidence at the hearing by the parties in the case. In order to submit factual information as evidence (other than through cross-examination of other parties' witnesses), a party must have intervened in the docket and filed written testimony on or before the deadline set by the ALJ.

The ALJ makes a recommendation, called a **proposal for decision**, to the Commission regarding the case. Parties who disagree with the ALJ's recommendation may file exceptions.

The Commissioners discuss the case and decide whether to approve the application. The Commission may approve the ALJ's recommendation, approve it with specified changes, send the case back to the ALJ for further consideration, or deny the application. The written decision rendered by the Commission is called a **final order**. Parties who believe that the Commission's decision is in error may file motions for rehearing, asking the Commission to reconsider the decision.

After the Commission rule on the motion for rehearing, parties have the right to appeal the decision to district court in Travis County.

*Right to Use Private Property*

The Commission is responsible for deciding whether to approve a CCN application for a proposed transmission line. If a transmission line route is approved that impacts your property, the electric utility must obtain the right from you to enter your property and to build, operate, and maintain the transmission line. This right is typically called an easement.

Utilities may buy easements through a negotiated agreement, but they also have the power of eminent domain (condemnation) under Texas law. Local courts, not the PUC, decide issues concerning easements for rights-of-way. The PUC does not determine the value of property.

The PUC final order in a transmission case normally requires a utility to take certain steps to minimize the impact of the new transmission line on landowners' property and on the environment. For example, the order normally requires steps to minimize the possibility of erosion during construction and maintenance activities.

## HOW TO OBTAIN MORE INFORMATION

The PUC's online filings interchange on the PUC website provides free access to documents that are filed with the Commission in Central Records. The docket number, also called a control number on the PUC website, of a case is a key piece of information used in locating documents in the case. You may access the Interchange by visiting the PUC's website home page at [www.puc.state.tx.us](http://www.puc.state.tx.us) and navigate the website as follows:

- Select "Filings."  
Select "Filings Search."  
Select "Filings Search."  
Enter 5-digit Control (Docket) Number. *No other information is necessary.*  
Select "Search." *All of the filings in the docket will appear in order of date filed.*  
Scroll down to select desired filing.  
Click on a blue "Item" number at left.  
Click on a "Download" icon at left.

Documents may also be purchased from and filed in Central Records. For more information on how to purchase or file documents, call Central Records at the PUC at 512-936-7180.

PUC Substantive Rule 25.101, Certification Criteria, addresses transmission line CCNs and is available on the PUC's website, or you may obtain copies of PUC rules from Central Records.

***Always include the docket number on all filings with the PUC. You can find the docket number on the enclosed formal notice.*** Send documents to the PUC at the following address.

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Avenue  
P.O. Box 13326  
Austin, TX 78711-3326

The information contained within this brochure is not intended to provide a comprehensive guide to landowner rights and responsibilities in transmission line cases at the PUC. This brochure should neither be regarded as legal advice nor should it be a substitute for the PUC's rules. However, if you have questions about the process in transmission line cases, you may call the PUC's Legal Division at 512-936-7260. The PUC's Legal Division may help you understand the process in a transmission line case but cannot provide legal advice or represent you in a case. You may choose to hire an attorney to decide whether to intervene in a transmission line case, and an attorney may represent you if you choose to intervene.

### ***Communicating with Decision-Makers***

***Do not contact the ALJ or the Commissioners by telephone or email. They are not allowed to discuss pending cases with you. They may make their recommendations and decisions only by relying on the evidence, written pleadings, and arguments that are presented in the case.***



## Request to Intervene in PUC Docket No.

The following information must be submitted by the person requesting to intervene in this proceeding. This completed form will be provided to all parties in this docket. **If you DO NOT want to be an intervenor, but still want to file comments, please complete the "Comments" page.**

Mail this completed form and 10 copies to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, TX 78711-3326

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

Email Address: \_\_\_\_\_

**I am requesting to intervene in this proceeding. As an INTERVENOR, I understand the following:**

- I am a party to the case;
- I am required to respond to all discovery requests from other parties in the case;
- If I file testimony, I may be cross-examined in the hearing;
- If I file any documents in the case, I will have to provide a copy of that document to every other party in the case; and
- I acknowledge that I am bound by the Procedural Rules of the Public Utility Commission of Texas (PUC) and the State Office of Administrative Hearings (SOAH).

**Please check one of the following:**

- I own property with a habitable structure located near one or more of the utility's proposed routes for a transmission line.
- One or more of the utility's proposed routes would cross my property.
- Other. Please describe and provide comments. You may attach a separate page, if necessary.

**Signature of person requesting intervention:**

\_\_\_\_\_ Date: \_\_\_\_\_

## Comments in Docket No. \_\_\_\_\_

**If you want to be a PROTESTOR only, please complete this form.** Although public comments are not treated as evidence, they help inform the PUC and its staff of the public concerns and identify issues to be explored. The PUC welcomes such participation in its proceedings.

Mail this completed form and 10 copies to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, TX 78711-3326

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

**I am NOT requesting to intervene in this proceeding. As a PROTESTOR, I understand the following:**

- I am NOT a party to this case;
- My comments are not considered evidence in this case; and
- I have no further obligation to participate in the proceeding.

**Please check one of the following:**

- I own property with a habitable structure located near one or more of the utility's proposed routes for a transmission line.
- One or more of the utility's proposed routes would cross my property.
- Other. Please describe and provide comments. You may attach a separate page, if necessary. \_\_\_\_\_

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**Signature of person submitting comments:**

\_\_\_\_\_ Date: \_\_\_\_\_

# **Attachment 10**

SAT15 138-kV Transmission Line Project  
Agencies/Officials Contact List

**DEPARTMENT OF DEFENSE**

Mr. Steven Sample  
Executive Director  
Military Aviation and Installation Assurance  
Siting Clearinghouse  
3400 Defense Pentagon, Room 5C646  
Washington, DC 20301-3400

**OPUC**

Courtney Haltjman  
Chief Executive and Public Counsel  
Texas Office of Public Utility Counsel  
William B. Travis State Office Building  
1701 North Congress Avenue  
(Suite 9-180)  
Austin, Texas 78701  
(*via Hand Delivery*)

**TPWD**

Ms. Laura Zebehazy  
Wildlife Habitat Assessment Program  
Wildlife Division  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744-3291  
(*Complete Application via Hand Delivery*)

**TXDOT**

Mr. Humberto Gonzalez Jr., P.E.  
Director, Transportation Planning &  
Programming  
Texas Department of Transportation  
6230 E Stassney Lane  
Austin, TX 78744

Ms. Gina E. Gallegos, P.E.  
San Antonio District Engineer  
Texas Department of Transportation  
4615 NW Loop 410  
San Antonio, TX 78229-0928

**NISD**

Dr. John M. Craft  
Superintendent  
Northside ISD  
5900 Evers Road  
San Antonio, TX 78238

**BEXAR COUNTY**

The Honorable Peter Saki  
Bexar County Judge  
101 West Nueva, 10<sup>th</sup> Floor  
San Antonio, Texas 78205-3482

Ms. Rebeca Clay-Flores  
Bexar County Commissioner, Precinct 1  
101 W. Nueva, Suite 1009, 10<sup>th</sup> Floor  
San Antonio, TX 78205

**MUNICIPALITIES**

The Honorable Ron Nirenberg  
Mayor – City of San Antonio  
P.O. Box 839966  
San Antonio, Texas 78283

Ms. Melissa Cabello Havdra  
Councilwoman, District 6  
City of San Antonio  
P.O. Box 839666  
San Antonio, TX 78283

Mr. Rich Whitehead  
Mayor  
City of Helotes  
12951 Bandera Road  
Helotes, TX 78023

Ms. Marian Mendoza  
City Administrator  
City of Helotes  
12951 Bandera Road  
Helotes, TX 78023

Scenic Loop 138-kV Transmission and Substation Project  
Federal, State, and Local Agencies/Officials Contact List

Ms. Chris Riley  
Mayor  
City of Leon Valley  
6400 El Verde Road  
Leon Valley, TX 78238

Dr. Crystal Caldera  
City Manager  
City of Leon Valley  
6400 El Verde Road  
Leon Valley, TX 78238

**HOA**

Mr. Richard Ramos  
North SA Hills HOA President  
4128 Autumn Mist  
San Antonio, Texas 78253

# **Attachment 11**

**Application of the City of San Antonio, Acting By and Through the City Public Service Board (CPS Energy) to Amend a Certificate of Convenience and Necessity for the Proposed SAT15 138-kV Transmission Line Project in Bexar County, Texas**  
Public Utility Commission of Texas (PUC) Docket No. 55728

The City of San Antonio, acting by and through City Public Service Board (CPS Energy) provides this notice of intent to amend its Certificate of Convenience and Necessity (CCN) to construct the proposed SAT15 138-kV Transmission Line Project in Bexar County.

The proposed transmission line will connect the existing Cagnon to Helotes 138-kV transmission line in northwest Bexar County to a proposed new Wiseman Substation located near the intersection of State Highway (SH) 151 and Wiseman Boulevard. The entire project will be about 1.2 to 2.4 miles in length and is estimated to cost approximately \$34 million to \$50 million (including substation costs), depending upon the final route chosen by the PUC.

Persons with questions about the transmission line may contact Daniel Otto at 210-353-2515. The CCN application, including detailed routing maps illustrating the proposed transmission line project, substations, and project area, may be reviewed on the project website at <https://www.puc.state.tx.us/interchange/about-us/new-infrastructure/sat15-substation-transmission-line.html> and at:

- CPS Energy, 500 McCullough, San Antonio, Texas 78215
- Great Northwest Library, 4050 Wellwood St., San Antonio, TX 78250

**All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas.**

Persons who are affected by the proposed transmission line and wish to intervene in the docket or comment on the applicant's application should file electronically and will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the "PUC Filer" on the Commission's website can be found here: <https://interchange.puc.texas.gov/filer>. Instructions for using the PUC Filer are available at <https://www.puc.state.tx.us/interchange/about-us/new-infrastructure/sat15-substation-transmission-line.html>. Once you obtain a tracking sheet associated with your filing from the PUC Filer, you may email the tracking sheet and the document you wish to file to: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). For assistance with your electronic filing, please contact the Commission's Help Desk at (512) 536-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

While the preferred method is for you to submit your request for intervention electronically, if you are unable to do so, you may mail 10 copies of the request to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Avenue  
P.O. Box 15226  
Austin, Texas 78711-3326

Persons who wish to intervene in the docket must also mail or email a copy of their request for intervention to all parties in the docket and all persons that have pending motions to intervene, at or before the time the request for intervention is mailed to the PUC.

**The only way to fully participate in the PUC's decision on where to locate the transmission line is to intervene in the docket. It is important for an affected person to intervene because the utility is not obligated to keep affected persons informed of the PUC's proceedings and cannot predict which route may or may not be approved by the PUC.**

The deadline for intervention in the docket is December 4, 2023, and the PUC should receive a letter from anyone requesting intervention by that date.

The PUC has a brochure titled "Landowners and Transmission Line Cases at the PUC." Copies of the brochure are available from Daniel Otto at 210-353-2515 or may be downloaded from the PUC's website at <https://www.puc.state.tx.us/interchange/about-us/new-infrastructure/sat15-substation-transmission-line.html>. You may also contact the PUC's Customer Assistance Hotline at (512) 936-7120 or (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC's Customer Assistance Hotline at (512) 936-7135 or toll free at (800) 735-2989.

In addition to the intervention deadline, other important deadlines may already exist that affect your participation in this docket. You should review the orders and other filings already made in the docket.

**Project Segment Descriptions**

In its CCN application for this project, CPS Energy has presented 15 alternative routes comprised of 27 segments for consideration by the PUC. The following table lists the segment combinations that make up CPS Energy's 15 alternative routes and the length of each alternative route in miles. All routes and segments are available for selection and approval by the PUC. Only one multi-segment transmission line route will ultimately be constructed.

**Alternative routes are not listed in any order of preference or priority.**

PRIMARY ALTERNATIVE ROUTES	SEGMENT COMPOSITION	TOTAL LENGTH IN MILES
A	1-2A-2B-7	1.82
B	1-3-5-6A-6B-7	1.83
C	1-3-5-8-12A-12B-17-19	2.13
D	1-3-5-8-11-13A-13B-14-17-19	2.36
E	9-12A-12B-16-18-19	1.20
F	9-11-13A-13B-14-17-19	1.43
G	10-13A-13B-14-17-19	1.25
H	10-13A-13B-15-18-19	1.24
I	1-3-20-22-23-24-13B-14-17-19	2.28
J	1-3-20-22-23-24-13B-15-18-19	2.28
K	1-3-20-22-23-12B-16-18-19	2.08
L	1-3-20-22-6B-7	1.77
M	1-2A-21-22-6B-7	1.77
N	1-2A-21-22-23-12B-16-18-19	2.07
O	1-2A-21-22-23-24-13B-15-18-19	2.27

Note: All distances listed below are approximate and rounded to the nearest hundredths of a mile. The distances of individual segments below may not sum to the total length of route presented above due to rounding.

**Segment 1** begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.52 mile southwest of the intersection of State Highway (SH) 151 and SH Loop 1604. The segment proceeds east for approximately 0.08 mile, then angles northeast for approximately 0.10 mile, paralleling the southeast side of an existing 138-kV transmission line. The segment proceeds southeast for approximately 0.34 mile. The segment terminates at its intersection with Segments 2A and 3, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604.

**Segment 2A** begins at its intersection with Segments 1 and 3, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604. The segment proceeds southeast for approximately 0.13 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 2B and 21, located on the southeast side of the intersection of SH 151 and SH Loop 1604.

**Segment 2B** begins at its intersection with Segments 2A and 21, located on the southeast side of the intersection of SH 151 and SH Loop 1604. The segment proceeds east for approximately 0.13 mile, paralleling the south side of an existing 138-kV transmission line for majority of the length. The segment then angles southeast for approximately 0.44 mile, paralleling the southwest side of an existing 138-kV transmission line. The segment then angles east-southeast for approximately 0.07 mile. The segment then angles southeast for approximately 0.16 mile, crossing Wiseman Boulevard (Bvld). The segment then angles southwest for approximately 0.17 mile, paralleling the southeast side of Wiseman Bvld. The segment terminates at its intersection with Segments 6B and 7, located on the southwest side of the intersection of SH 151 and Wiseman Bvld.

**Segment 3** begins at its intersection with Segments 1 and 2A, located on the south-southwest side of the intersection of SH 151 and SH Loop 1604. The segment proceeds south-southwest for approximately 0.16 mile. The segment terminates at its intersection with Segments 5 and 20, located on the west side of SH Loop 1604.

There is no segment labeled Segment 4 in this project.

**Segment 5** begins at its intersection with Segments 3 and 20, located on the west side of SH Loop 1604. The segment proceeds south for approximately 0.08 mile, then angles southwest for approximately 0.04 mile. The segment then angles south for approximately 0.11 mile, crossing Valley Meadow Road, then angles east for approximately 0.04 mile paralleling the south side of Valley Meadow Road. The segment terminates at its intersection with Segments 6A and 8, located on the west side of SH Loop 1604.

**Segment 6A** begins at its intersection with Segments 5 and 8, located on the west side of SH Loop 1604. The segment proceeds east-southeast for approximately 0.08 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 6B, 22, and 23, located east of SH Loop 1604.

**Segment 6B** begins at its intersection with Segments 6A, 22, and 23, located east of SH Loop 1604. The segment proceeds northeast for approximately 0.09 mile. The segment then angles southeast for approximately 0.49 mile, crossing Slick Ranch Creek and Wiseman Bvld. The segment terminates at its intersection with Segments 2B and 7, located on the east side of Wiseman Bvld.

**Segment 7** begins at its intersection with Segments 6B and 7, located on the east side of Wiseman Bvld. The segment proceeds southwest for approximately 0.11 mile paralleling the east side of Wiseman Bvld. The segment then angles west-southwest for approximately 0.12 mile, paralleling the east side of Wiseman Bvld. The segment terminates at the Wiseman Substation, located approximately 0.42 mile southwest of the intersection of SH 151 and Wiseman Bvld.

**Segment 8** begins at its intersection with Segments 5 and 6A, located on the west side of SH Loop 1604. The segment proceeds south for approximately 0.47 mile, crossing Misty Woods Road. The segment terminates at its intersection with Segments 9, 11, and 12A, located on the west side of SH Loop 1604.

**Segment 9** begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.46 mile northwest of the intersection of SH Loop 1604 and Wiseman Bvld. The segment proceeds northeast for approximately 0.34 mile, crossing an unnamed stream. The segment then angles north-northeast for approximately 0.12 mile. The segment terminates at its intersection with Segments 8, 11, and 12A, located on the west side of SH Loop 1604.

**Segment 10** begins at its intersection with the existing Cagnon to Helotes 138-kV Transmission Line, located approximately 0.46 mile west of the intersection of SH Loop 1604 and Wiseman Bvld. The segment proceeds east-northeast for approximately 0.17 mile, paralleling the north side of

Wiseman Bvld. The segment then angles northeast for approximately 0.08 mile. The segment then angles east-southeast for approximately 0.16 mile, crossing an unnamed stream. The segment then angles north for approximately 0.05 mile. The segment terminates at its intersection with Segments 11 and 13A, located northwest of the intersection of SH Loop 1604 and Wiseman Bvld.

**Segment 11** begins at its intersection with Segments 10 and 13A, located northwest of the intersection of SH Loop 1604 and Wiseman Bvld. The segment proceeds north-northeast for approximately 0.09 mile, then angles northeast for approximately 0.05 mile. The segment then angles north-northeast for approximately 0.03 mile. The segment terminates at its intersection with Segments 8, 9, and 12A, located on the west side of SH Loop 1604.

**Segment 12A** begins at its intersection with Segments 8, 9, and 11, located on the west side of SH Loop 1604. The segment proceeds east for approximately 0.08 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 12B, 23, and 24, located on the east side of SH Loop 1604.

**Segment 12B** begins at its intersection with Segments 12A, 23, and 24, located on the east side of SH Loop 1604. The segment proceeds east-southeast for approximately 0.10 mile, paralleling the south side of North Ellison Drive. The segment then angles southeast for approximately 0.09 mile, paralleling the southwest side of North Ellison Drive. The segment then angles south-southeast for approximately 0.09 mile, paralleling the southwest side of North Ellison Drive. The segment then angles southeast for approximately 0.08 mile. The segment terminates at its intersection with Segments 14, 16, and 17, located on the northwest side of the intersection of North Ellison Drive and Wiseman Bvld.

**Segment 13A** begins at its intersection with Segments 10 and 11, located northwest of the intersection of SH Loop 1604 and Wiseman Bvld. The segment proceeds east for approximately 0.10 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 13B and 24, located on the east side of SH Loop 1604.

**Segment 13B** begins at its intersection with Segments 13A and 24, located on the east side of SH Loop 1604. The segment proceeds southeast for approximately 0.10 mile, then angles east-northeast for approximately 0.07 mile, paralleling the north side of Wiseman Bvld. The segment then angles northeast for approximately 0.06 mile, paralleling the north side of Wiseman Bvld. The segment terminates at its intersection with Segments 14 and 15, located on the northwest side of Wiseman Bvld.

**Segment 14** begins at its intersection with Segments 13B and 15, located on the northwest side of Wiseman Bvld. The segment proceeds northeast for approximately 0.09 mile, paralleling the northwest side of Wiseman Bvld. The segment then angles north-northeast for approximately 0.08 mile, paralleling the northwest side of Wiseman Bvld. The segment terminates at its intersection with Segments 12B, 16, and 17, located northwest of the intersection of North Ellison Drive and Wiseman Bvld.

**Segment 15** begins at its intersection with Segments 13B and 14, located on the northwest side of Wiseman Bvld. The segment proceeds east for approximately 0.06 mile, crossing Wiseman Bvld. The segment then angles northeast for approximately 0.12 mile, paralleling the southeast side of Wiseman Bvld. The segment terminates at its intersection with Segments 16 and 18, located southwest of the intersection of North Ellison Drive and Wiseman Bvld.

**Segment 16** begins at its intersection with Segments 12B, 14, and 17, located northwest of the intersection of North Ellison Drive and Wiseman Bvld. The segment proceeds southeast for approximately 0.03 mile, crossing Wiseman Bvld and paralleling the southwest side of North Ellison Drive. The segment terminates at its intersection with Segments 15 and 18, located southwest of the intersection of North Ellison Drive and Wiseman Bvld.

**Segment 17** begins at its intersection with Segments 12B, 14, and 16, located northwest of the intersection of North Ellison Drive and Wiseman Bvld. The segment proceeds northeast for approximately 0.13 mile, crossing North Ellison Drive and Slick Ranch Creek and paralleling the northwest side of Wiseman Bvld. The segment then angles southeast for approximately 0.03 mile, crossing Wiseman Bvld. The segment terminates at its intersection with Segments 18 and 19, located on the southeast side of Wiseman Bvld.

**Segment 18** begins at its intersection with Segments 15 and 16, located southwest of the intersection of North Ellison Drive and Wiseman Bvld. The segment proceeds northeast for approximately 0.13 mile, crossing North Ellison Drive, Slick Ranch Creek and paralleling the southeast side of Wiseman Bvld. The segment terminates at its intersection with Segments 17 and 19, located on the southeast side of Wiseman Bvld.

**Segment 19** begins at its intersection with Segments 17 and 18, located on the southeast side of Wiseman Bvld. The segment proceeds northeast for approximately 0.13 mile. The segment terminates at the Wiseman Substation, located approximately 0.42 mile southwest of the intersection of SH 151 and Wiseman Bvld.

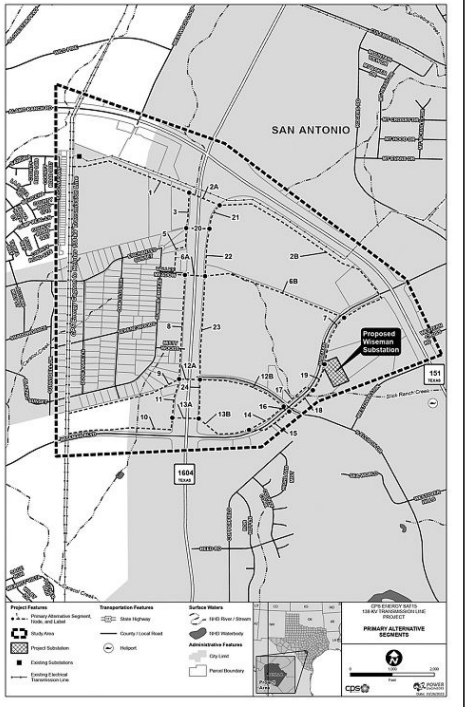
**Segment 20** begins at its intersection with Segments 3 and 5, located on the west side of SH Loop 1604. The segment proceeds east for approximately 0.09 mile, crossing SH Loop 1604. The segment terminates at its intersection with Segments 21 and 22, located east of SH Loop 1604.

**Segment 21** begins at its intersection with Segments 2A and 2B, located on the southeast side of the intersection of SH 151 and SH Loop 1604. The segment proceeds southwest for approximately 0.07 mile. The segment then angles south-southwest for approximately 0.05 mile. The segment terminates at its intersection with Segments 20 and 22, located east of SH Loop 1604.

**Segment 22** begins at its intersection with Segments 20 and 21, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.21 mile. The segment terminates at its intersection with Segments 6A, 6B, and 23, located east of SH Loop 1604.

**Segment 23** begins at its intersection with Segments 6A, 6B, and 22, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.47 mile, crossing North Ellison Drive. The segment terminates at its intersection with Segments 12A, 12B, and 24, located east of SH Loop 1604.

**Segment 24** begins at its intersection with Segments 12A, 12B, and 23, located on the east side of SH Loop 1604. The segment proceeds south for approximately 0.18 mile. The segment terminates at its intersection with Segments 13A and 13B, located east of SH Loop 1604.



# **Attachment 12**





Kirk D. Rasmussen  
(512) 236-2310 (Direct Dial)  
(512) 391-2120 (Direct Fax)  
krasmussen@jw.com

November 3, 2023

Mr. James Murphy  
General Counsel  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744

via hand delivery

Re: *Application of the City of San Antonio, Acting By and Through the City Public Service Board (CPS Energy), to Amend Its Certificate of Convenience and Necessity for the Proposed SAT15 138-kV Transmission Line Project in Bexar County.*

Public Utility Commission of Texas Docket No. 55728

Dear Mr. Murphy:

On Friday, November 3, 2023, the City of San Antonio, acting by and through the City Public Service Board (CPS Energy) filed with the Public Utility Commission of Texas (Commission) the above-referenced application to amend its Certificate of Convenience and Necessity (CCN) to construct the SAT15 138-kV Transmission Line Project in Bexar County.

As you are aware, the Commission's CCN application requires that CPS Energy provide for review and comment a copy of the project environmental assessment (EA) to Texas Parks and Wildlife Department (TPWD) within seven days of the application's filing. Accordingly, enclosed with this letter is a copy of the EA prepared for the referenced project as well as a complete copy of CPS Energy's CCN application filed at the Commission. The CCN application also requires that a copy of this transmittal letter be included with the project application. You will find a copy of this letter included as Attachment 12 to the filed Application.

Under the traditional CCN process, TPWD typically provides the Commission Staff with comments about the application. CPS Energy would also appreciate receiving a copy of any comments TPWD may choose to provide to Commission Staff. You may send those comments to Daniel Otto, PE, who is the Regulatory Case Manager for the project at 500 McCullough Avenue, San Antonio, Texas 78215. Of course, CPS Energy reserves the right to inquire into the basis of any comments or recommendations TPWD may choose to submit in this case, but I am certain the appropriate arrangements can be made for that inquiry if the necessity arises.

Mr. Murphy  
November 3, 2023  
Page 2

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Finally, CPS Energy is pleased to offer TPWD staff a briefing of the CCN application and the accompanying EA. To that end, I would be happy to arrange a visit between CPS Energy and you and your staff at your earliest convenience. If you have any questions about the EA, please feel free to contact Daniel T. Otto at (210) 353-2515 or me at (512) 236-2310.

Sincerely,



Kirk D. Rasmussen

CC: Daniel T. Otto, CPS Energy

# **Attachment 13**



# **Power Flow Analysis Report for SAT15**

## **Need Study Report**

**Prepared By: CPS Energy Transmission Planning**

**August 1, 2023**



**SAT 15 Steady-State Analysis – Need Study Report**

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**SAT 15 Steady-State Analysis – Need Study Report**

**I. Executive Summary**

CPS Energy is experiencing significant load growth especially in the northwest region of Bexar County, with some areas averaging as high as 5 percent growth annually. Existing 138 kV electrical substations in the area do not have sufficient growth capacity to interconnect the new, very large customer load (the SAT 15 customer facility), which has requested capacity to serve a 168.3 MW demand by 2028. Pursuant to CPS Energy’s Distribution Planning Criteria, if a requested customer load exceeds 40 MW (requiring more than two 35 kV circuits), then a new substation needs to be constructed to serve the requested customer large load. In this instance, the requested customer load exceeds by four times the 40 MW criteria. As a result, CPS Energy is evaluating the construction and interconnection of a new substation to the CPS Energy system (the Proposed Project). CPS Energy Transmission Planning performed a steady-state analysis for addition of the new requested load. This Report consists of a steady-state study required for determining the reliability impact of this load addition in accordance with all North American Electric Reliability Corporation (NERC) Reliability Standards and the Electric Reliability Council of Texas (ERCOT) Planning Guide.

The impact of the SAT 15 customer load was analyzed using modeling and simulation software. The SAT 15 customer load was modeled connecting to the existing 138 kV transmission lines in the study area in different configurations to determine the most feasible, reliable and cost-effective connection.

The Proposed Project consists of electric service to:

- The SAT 15 customer load -- resulting in a 168.3 MW load increase to the real power demand on the CPS Energy system. The Customer has provided a load ramp indicating the site will reach its maximum demand of 168.3 MW by Summer Peak of 2028.

The study analyzed 2028 summer peak conditions with the Proposed Project in-service.

Four reasonable alternative solutions are explored in this study report. CPS Energy has determined the project set associated with Alternative 3 best accomplishes the necessary interconnection in the most cost-efficient manner. The total estimated cost for the Alternative 3 is \$31,140,000, which consists of the projects listed in Table 1. A Certificate of Convenience and Necessity (CCN) will be needed for CPS Energy to construct, own, and operate a portion of the facilities associated with Alternative 3.

Project	Cost (\$)
Loop in SAT15 Substation into Cagnon to Helotes 138 kV transmission line	\$ 6,840,000
Rebuild Cagnon to VLSI 138 kV Line (~5.4 miles)	\$24,300,000
<b>Total</b>	<b>\$31,140,000</b>

**Table 1: Project Set of Alternative 3**

SAT 15 Steady-State Analysis – Need Study Report

II. Introduction and Background

CPS Energy is experiencing significant load growth especially in the northwest region of Bexar County, with some areas averaging as high as 5 percent growth annually. Existing 138 kV electrical substations in the area do not have sufficient growth capacity to interconnect the new, very large customer load (the SAT 15 customer facility), which has requested capacity to serve a 168.3 MW demand by 2028. Pursuant to CPS Energy’s Distribution Planning Criteria, if a requested customer load exceeds 40 MW (requiring more than two 35 kV circuits), then a new substation needs to be constructed to serve the requested customer large load. In this instance, the requested customer load exceeds by four times the 40 MW criteria. As a result, CPS Energy is evaluating the construction and interconnection of a new substation to the CPS Energy system. This Report evaluates the reasonable viable alternatives available to CPS Energy to provide electric service to the new customer facility (the Proposed Project).

As a highly growing region, the northwest quadrant of Bexar County serviced by the CPS Energy transmission system is currently experiencing significant load growth and is forecasted to experience significant load growth in the future. Specifically, the load is forecasted to increase on average by 8 percent annually as shown in Figure 1.1 (the values shown for years 2018 through 2022 are historic peak demand and the values for years 2023 through 2029 are forecasted peak demand based on existing plus committed new customer loads). CPS Energy’s analysis of the large requested load for the SAT 15 customer facility was based on the committed load ramp provided by the customer with a peak demand of 168.3 MW by 2028.

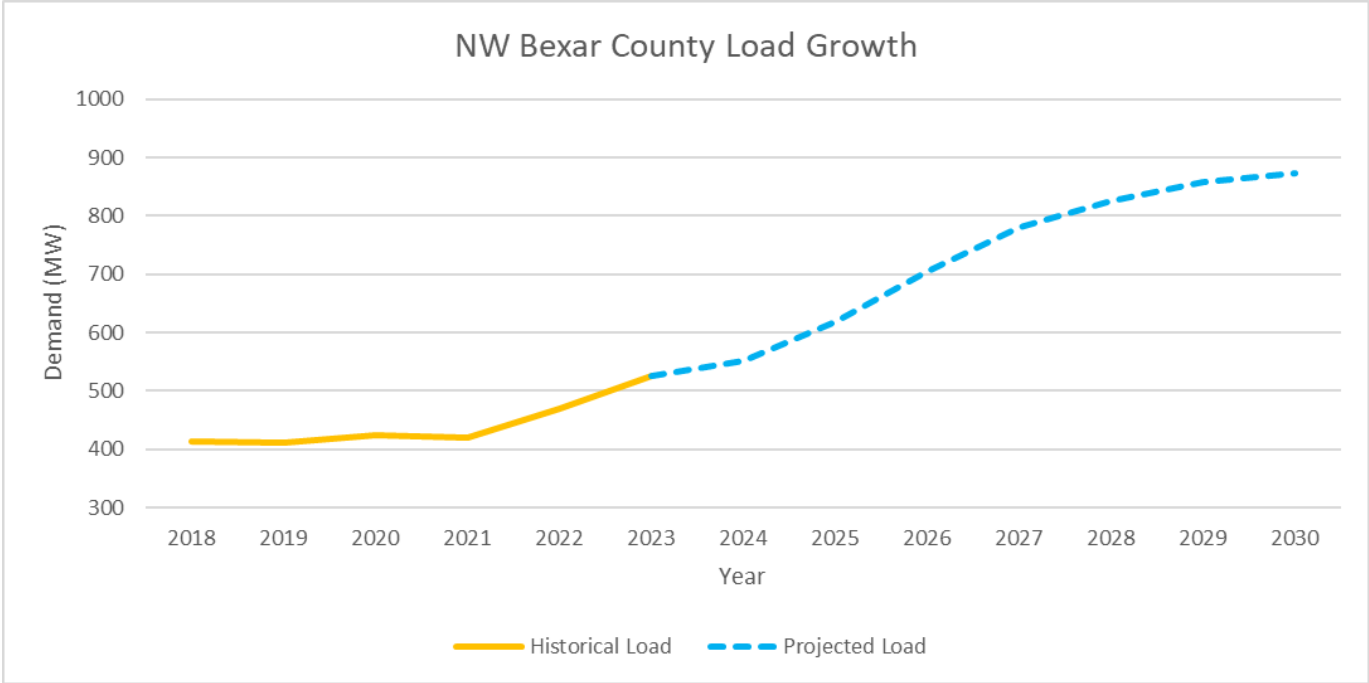


Figure 1.1: Recent and forecasted demand in the area of the new SAT 15 customer facility



**SAT 15 Steady-State Analysis – Need Study Report**

**III. Study Area**

Figure 1.2 shows the CPS Energy transmission system in the area where the SAT 15 customer facility is being constructed. The customer will provide CPS Energy property for a new load-serving substation on the customer’s site.



**Figure 1.2: New load-serving station locations for SAT 15 and nearby 138 kV Transmission Lines and Substations**

**IV. Objectives**

The purpose of the steady-state study is to assess the impacts of addition of the large SAT 15 customer load on the transmission system. Using the study cases, CPS Energy Transmission Planning performed power flow analyses testing NERC Category P0 through P7 Planning Events, as defined in the NERC TPL-001-4 Reliability Standard and ERCOT1 through ERCOT3 planning events as defined in ERCOT Planning Guide Section 4. The study will determine if the Proposed Project causes any transmission line overloads or voltage violations in the area of the requested customer interconnection. This Report summarizes the study results.

**SAT 15 Steady-State Analysis – Need Study Report**

**V. Study Assumptions**

**A. Model Assumptions**

The following 2025 and 2028 Summer Peak ERCOT Steady State Working Group (SSWG) steady-state cases posted to the ERCOT Market Information System (MIS) website on October 10, 2022 were used as a starting point in creation of the study case.

- 22SSWG\_2025\_SUM1\_U1\_Final\_10102022.sav
- 22SSWG\_2028\_SUM1\_U1\_Final\_10102022.sav

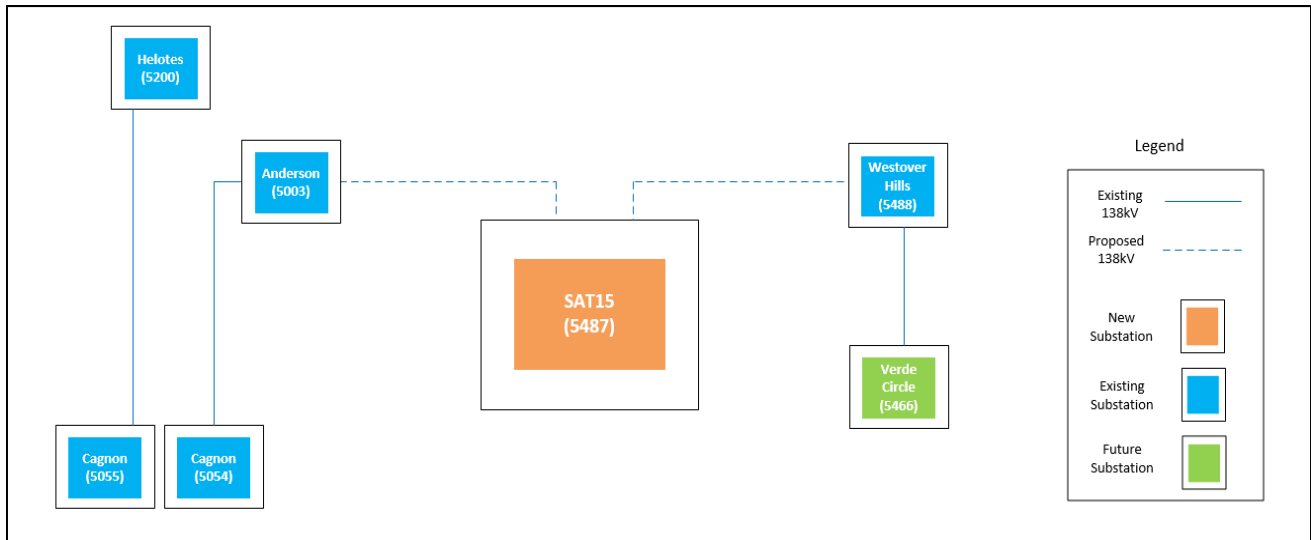
Siemens PTI PSS®E Rev 35.3.3 software was used to perform the study.

The base case used for the study was built from the SSWG base case listed above and was modified according to the changes listed in Appendix B, Modifications to ERCOT SSWG Base Cases.

**B. Alternatives**

Study cases were created from the base case by modeling the Proposed Project. The new facility load was evaluated as follows:

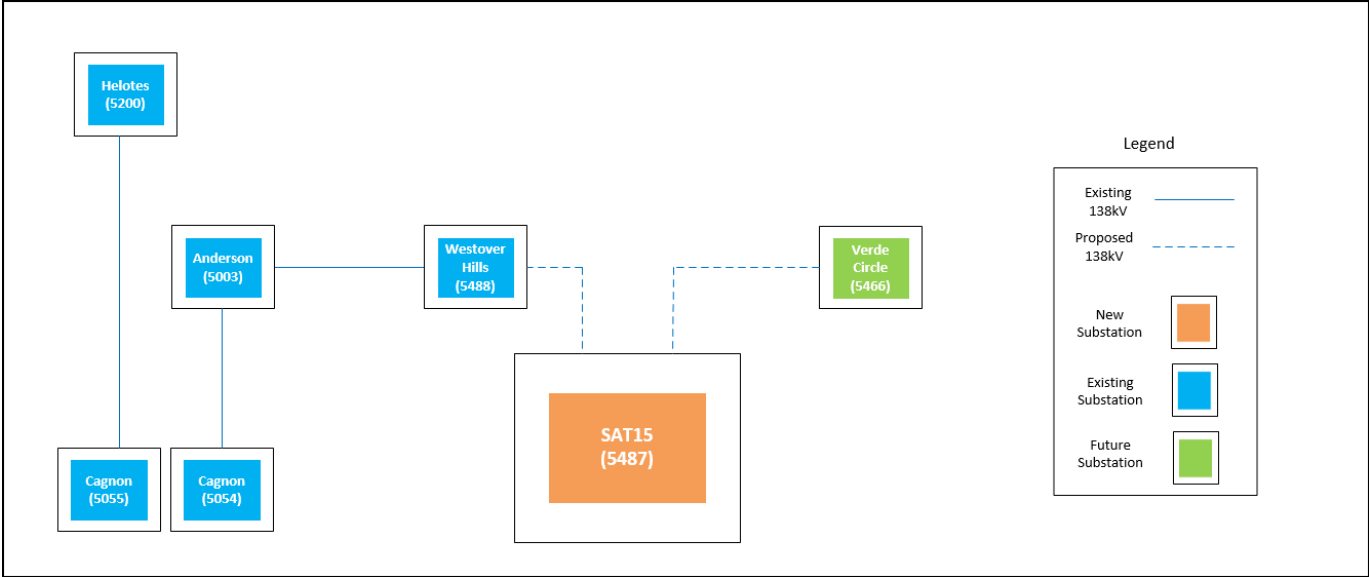
- **Alternative 1:** Looping the Westover Hills to Anderson 138 kV transmission line into a new SAT 15 substation. This alternative is shown below in Figure 1a.



**Figure 1a:** Transmission system configuration for the Alternative 1 study case

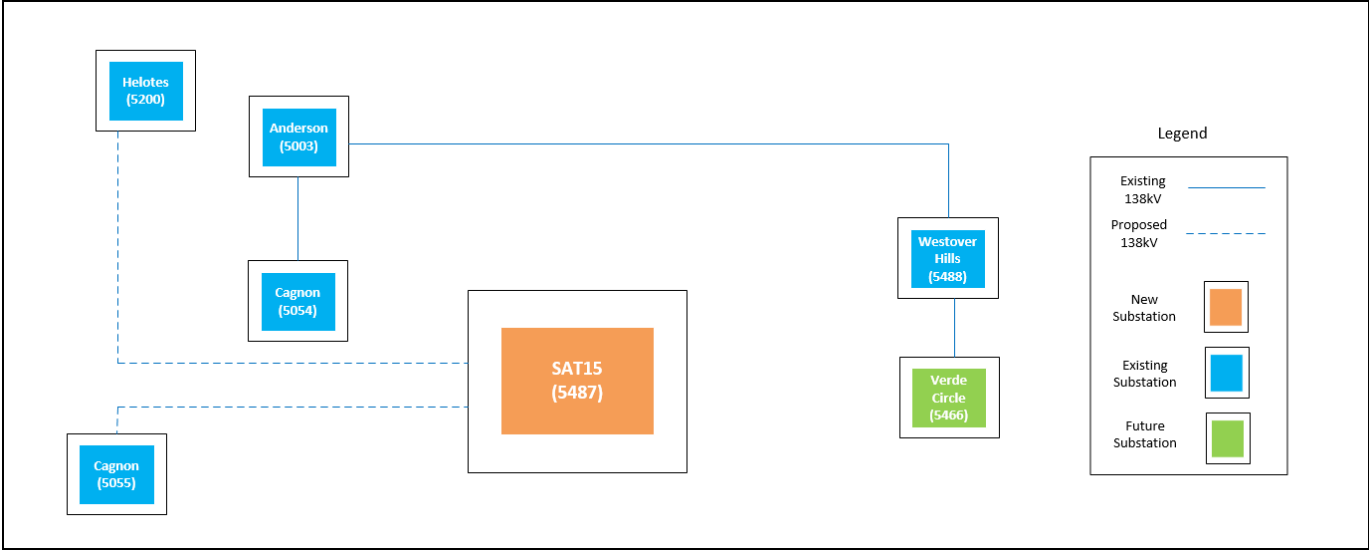
**SAT 15 Steady-State Analysis – Need Study Report**

- **Alternative 2:** Looping the Westover Hills to Verde Circle (Future Substation) 138 kV transmission line into a new SAT 15 substation. This alternative is shown below in Figure 1b.



**Figure 1b:** Transmission system configuration for the Alternative 2 study case

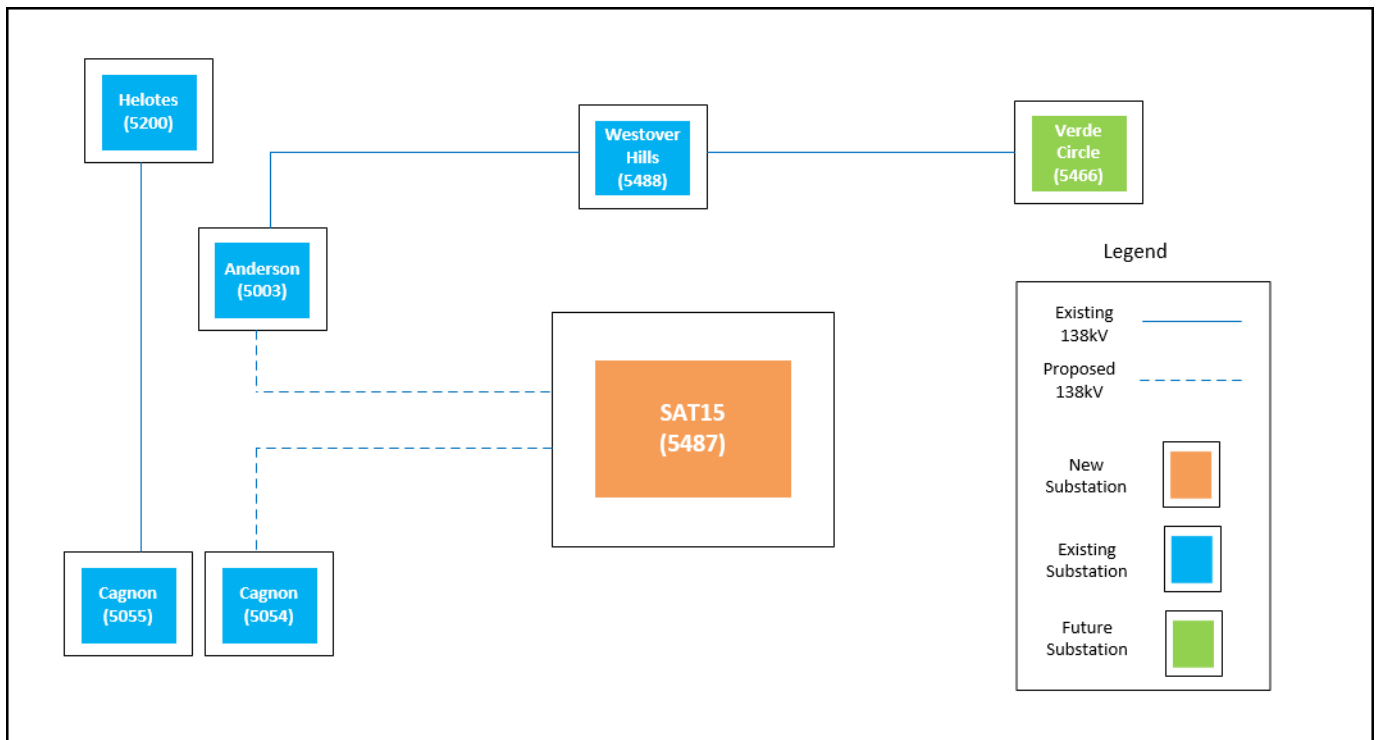
- **Alternative 3:** Looping the Cagnon to Helotes 138 kV transmission line into a new SAT 15 substation. This alternative is shown below in Figure 1c.



**Figure 1c:** Transmission system configuration for the Alternative 3 study case

**SAT 15 Steady-State Analysis – Need Study Report**

- **Alternative 4:** Looping the Cagnon to Anderson 138 kV transmission line into a new SAT 15 substation. This alternative is shown below in Figure 1d.



**Figure 1d:** Transmission system configuration for the Alternative 4 study case

**C. System Monitoring and Performance Requirements**

The Study Area for the analysis included buses in Areas 5 as well as Areas 905, which includes transmission and generation facilities within CPS Energy. The Study Area was used for contingency development and for monitoring contingency results. Branch loading and bus voltages were monitored in the Study Area to assess the impact of the new load on system reliability.

**i. Thermal Loading**

- NERC Category P1 events with thermal loading for branches in the study area greater than 100% of their Rate A (Normal Rating) were flagged for further analysis.
- NERC Category P2-P7 events and ERCOT Category 1, 2, and 3 events with thermal loading for branches in the study area greater than 100% of their Rate B (Emergency Rating) were flagged for further analysis.

**ii. Voltage Violations**

- All bus voltages in the study area were monitored and post-contingency voltages less than 0.95 p.u. for P1 events; 0.92 p.u. for P2, P3, P7 and ERCOT 1 events; 0.90 for P4, P5, P6, ERCOT 2, and ERCOT 3 events. Any post-contingency voltages greater than 1.05 p.u. were flagged for further analysis.

**SAT 15 Steady-State Analysis – Need Study Report**

**VI. Steady-State Analysis**

The steady state results shown below are based on the new SAT 15 customer load interconnecting to the existing transmission system. This initial set of overloads was used in development of the full project set needed for each alternative. The full set of thermal overloading results for the steady-state analysis can be found in Appendix B. 2028 Summer Peak Results are as follows:

**A. Thermal Loading Results**

Con Type	Monitored Branch	Rating	Base Case (%)	Alt 1 (%)	Alt 2 (%)	Alt 3 (%)	Alt 4 (%)
P7	5055 CAGNON1_8 - 5467 VLSI	326	86.1	100.9	101.4		
	5003 ANDERSON - 5488 WOH	441	64.2		103.7	64.4	64.8
P6	5185 GRISSOM - 5467 VLSI	306		154.3			51.8
	5055 CAGNON1_8 - 5467 VLSI -	326		145.0			72.3
	5466 VERDE CIRCL - 5467 VLSI	441	82.8	124.2	124.0	83.1	
	5466 VERDE CIRCL - 5488 WOH	441	76.4	117.2		76.6	
	5003 ANDERSON - 5200 HELOTES	478	76.1	114.3	114.3	76.4	
	5185 GRISSOM - 5467 VLSI	306	94.4		154.2	94.7	94.7
	5055 CAGNON1_8 - 5467 VLSI	326	88.2		144.9	88.5	88.4
	5003 ANDERSON - 5488 WOH	441	64.2		103.7	64.4	64.8
	5466 VERDE CIRCL - 5467 VLSI	441					124.4
	5466 VERDE CIRCL - 5488 WOH	441					117.5
	5003 ANDERSON - 5200 HELOTES	478					113.9
	5055 CAGNON1_8 - 5467 VLSI	326					112.0
	5466 VERDE CIRCL - 5487 SAT15	441				117.0	
	5003 ANDERSON - 5487 SAT15	441			103.7		
ERCOT2	5055 CAGNON1_8 - 5467 VLSI	326	89.7	105.3	105.8		
	5055 CAGNON1_8 - 5467 VLSI	326	89.5	105.1	105.6		
	5003 ANDERSON - 5488 WOH	441	65.2		105.8	65.6	66.0
ERCOT3	5055 CAGNON1_8 - 5467 VLSI	326	88.6	103.4	103.9		
	5055 CAGNON1_8 - 5467 VLSI	326	88.6	103.4	103.9		
	5056 CAGNON_5 - 3WNDTR AUTO4 - 4	600	95.9	100.1	100.0	97.6	98.9
	5055 CAGNON1_8 - 5467 VLSI	326				102.5	
	5055 CAGNON1_8 - 5467 VLSI	326				102.4	
	5003 ANDERSON - 5488 WOH	441	64.5		104.2	64.7	65.0

**Table VI-A-1: Thermal Loading Results for all 4 Alternatives**

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**B. Voltage Criteria Violations**

For the base and study cases, no new voltage violation concerns were identified for NERC P0 through P7 and ERCOT Category 1, 2 and 3 events.

**C. PV Analysis**

PV analysis was performed for all NERC P1 and P7/ERCOT 1 contingencies in the study area. As shown in the table below, transfer capability for Alternative 1 and Alternative 2 are similar, but Alternative 3 and Alternative 4 provide an increased transfer capability in comparison.

Contingency Type	Transfer Capability			
	Alt 1 (MW)	Alt 2 (MW)	Alt 3 (MW)	Alt 4 (MW)
NERC P1	225	228	440	418
NERC P7/ERCOT 1	150	150	278	260

**Table VI-C-1: Transfer Capabilities for all 4 Alternatives Case**

**D. Steady-State Power Flow Conclusion**

Alternatives 1 and 2 achieve similar performance, with both alternatives requiring numerous upgrades on multiple existing CPS Energy substations and transmission lines. These alternatives provide a low level of transfer capability. Alternative 3 significantly increases the transfer capability and requires upgrade of one 138 kV transmission line to serve the new requested load. Alternative 4 shows an increase in transfer capability, however it requires numerous upgrades on multiple existing CPS Energy substations and transmission lines. According to these steady-state results, Alternative 3 performed better than the other alternatives, and requires the least amount of transmission line and substation upgrades, therefore, this alternative is recommended as the most cost-effective solution.

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**VII. Cost Estimation for Alternatives Studied**

Project	Cost (\$)
Loop in SAT 15 Station into Westover Hills to Anderson 138 kV transmission line	\$4,560,000
Rebuild Grissom to VLSI 138 kV Line (~3 miles)	\$13,500,000
Rebuild Cagnon to VLSI 138 kV Line (~5.4 miles)	\$24,300,000
Build New Verde Circle to VLSI 138 kV Line (~0.26 miles)	\$1,424,800
Upgrade a Breaker and Switches at VLSI Substation	\$410,000
Upgrade CTs at VLSI Substation	\$85,000
Build New Westover Hills to Verde Circle 138 kV Line (~1.49 miles)	\$8,001,300
Upgrade a Switch at Westover Hills Substation	\$90,000
Upgrade Switches at Anderson Substation	\$155,000
Upgrade a Breaker and Switches at Helotes Substation	\$410,000
Upgrade CTs at Helotes Substation	\$85,000
<b>Total</b>	<b>\$53,021,100</b>

**Table VII-A-1: Project Set for Alternative 1**

Project	Cost (\$)
Loop in SAT 15 Station into Westover Hills to Verde Circle 138 kV transmission line	\$4,560,000
Rebuild Grissom to VLSI 138 kV Line (~3 miles)	\$13,500,000
Rebuild Cagnon to VLSI 138 kV Line (~5.4 miles)	\$24,300,000
Build New Verde Circle to VLSI 138 kV Line (~0.26 miles)	\$1,424,800
Upgrade a Breaker and Switches at VLSI Substation	\$410,000
Upgrade CTs at VLSI Substation	\$85,000
Build New Westover Hills to Verde Circle 138 kV Line (~1.49 miles)	\$8,001,300
Upgrade a Switch at Westover Hills Substation	\$90,000
Upgrade Switches at Anderson Substation	\$155,000
Upgrade a Breaker and Switches at Helotes Substation	\$410,000
Upgrade CTs at Helotes Substation	\$85,000
Rebuild Anderson to WOH 138 kV Line (~1.75 miles)	\$7,875,000
<b>Total</b>	<b>\$60,896,100</b>

**Table VII-A-2: Project Set for Alternative 2**

Project	Cost (\$)
Loop in SAT 15 Station into Cagnon to Helotes 138 kV transmission line	\$6,840,000
Rebuild Cagnon to VLSI 138 kV Line (~5.4 miles)	\$24,300,000
<b>Total</b>	<b>\$31,140,000</b>

**Table VII-A-3: Project Set for Alternative 3**

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<b>Project</b>	<b>Cost (\$)</b>
Loop in SAT 15 Station into Cagnon to Anderson 138 kV transmission line	\$6,840,000
Rebuild Cagnon to VLSI 138 kV Line (~5.4 miles)	\$24,300,000
Build New Verde Circle to VLSI 138 kV Line (~0.26 miles)	\$1,424,800
Upgrade a Breaker and Switches at VLSI Substation	\$410,000
Upgrade CTs at VLSI Substation	\$85,000
Build New Westover Hills to Verde Circle 138 kV Line (~1.49 miles)	\$8,001,300
Upgrade a Switch at Westover Hills Substation	\$90,000
Upgrade Switches at Anderson Substation	\$155,000
Upgrade a Breaker and Switches at Helotes Substation	\$410,000
Upgrade CTs at Helotes Substation	\$85,000
<b>Total</b>	<b>\$41,801,100</b>

**Table VII-A-4: Project Set for Alternative 4**



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### VIII. Recommendation

As residential, commercial, and industrial development and associated electric demand increases in the northwest region of Bexar County, CPS Energy has identified reliability violations in the area of the proposed SAT 15 facility.

The reliability concerns, driven by continued load growth in the area, demonstrate the need for a new substation to be constructed to serve the very large customer load. CPS Energy's analysis shows that a new SAT 15 Substation, connected to the existing 138 kV Cagnon to Helotes Transmission Line is the preferred solution along with a 50 MVAR Cap Bank to avoid any voltage violations in the future and to address the short-term and long-term system needs of the northwestern Bexar County region.

The following project sets, and associated estimated costs, resolve criteria violations observed in the steady-state study. Based on system performance and cost, CPS Energy Transmission Planning recommends Alternative 3 as the preferred solution to mitigate the observed criteria violations at the lowest estimated cost.

In addition to accommodating forecasted load growth, the new SAT 15 Substation interconnected to the Cagnon to Helotes 138 kV Transmission Line will improve reliability in the northwestern region of Bexar County. Adding the proposed substation will reduce the total number of customer interruptions and duration of those interruptions at the lowest estimated cost.