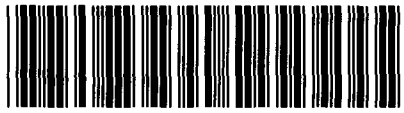

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Addendum StartPage: 0

PUBLIC UTILITY COMMISSION OF TEXAS
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DOCKET NO. 50812

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-KV TRANSMISSION LINE IN COLLIN COUNTY	§ § § § § § §	**PUBLIC UTILITY COMMISSION OF TEXAS**

RAYBURN'S
FIRST AMENDMENT TO CCN APPLICATION

On May 22, 2020, Rayburn Country Electric Cooperative, Inc. d/b/a Rayburn Electric Cooperative ("Rayburn") filed its application to amend its certificate of convenience and necessity (CCN) for the New Hope 138-kV Transmission Line Project in Collin County, Texas ("Application"). Since that time, Rayburn has learned of a routing constraint affecting two segments and determined a need to modify these segments. Accordingly, Rayburn files this first amendment to the Application.

I. Summary of Amendment

On or about June 4, 2020, Rayburn learned that North Texas Municipal Water District ("NTMWD") recently acquired an easement and began construction on a water pipeline in a location where Rayburn proposes alternative route segments for the New Hope 138-kV transmission line, specifically Segments W3 and W6. To address this new information, Rayburn has redesigned Segments W3 and W6 to be located an average of approximately 150 feet farther south than originally proposed. As modified, Rayburn's proposed right-of-way would be located adjacent to and south of NTMWD's right-of-way along these segments for most of their distance.

The modification of Segments W3 and W6 also causes slight changes to other segments to which they connect, including Segment W5 (becoming shorter), Segment 10 (becoming shorter), and Segment W14 (connecting with Segment W6 at a location farther south than originally proposed). These segments are parts of proposed alternative routes West A, B, C, D, and H.

As a result of this modification, Rayburn has revised the Application form and Attachment 1 to the Application (the Environmental Assessment and Alternative Route Analysis) to reflect changes in text, tables, and map figures. The modification requires a few additional angle

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structures and results in some slightly shorter routes, thus Rayburn has also revised its estimated route costs at Attachment 3. In addition, during this cost update, Rayburn identified a formula error that excluded a certain pole structure type from the total cost estimates for routes. Rayburn has corrected this error, which slightly increased the cost for routes that include this type pole structure.

II. Notice

No new landowners who have not already been notified are directly affected by this amendment, although one additional parcel owned by a previously notified landowner is now crossed by Segment W6. Segment W6 also now comes within 300 feet of an additional habitable structure on this parcel, but Segment W6 also has been moved farther than 300 feet away from three other habitable structures (structures 3, 4, and 5) that were initially considered directly affected. Nonetheless, contemporaneously with the filing of this amendment, Rayburn will provide direct mail notice of the amendment to those landowners directly affected by Segments W3, W6, W5, W10, and W14, both as originally filed and as modified. A copy of this additional notice letter and a list of those to whom it was sent are included in new Attachment 18 to the amended Application, attached hereto.

Rayburn will also provide notice of the amendment by the same letter to the following entities, all of which previously received notice of the Application: municipalities within five miles of the requested facility; neighboring utilities providing the same utility service within five miles of the facility; Collin County, the only county government in which the proposed facilities will be located; the Department of Defense Siting Clearinghouse; and the Office of Public Utility Counsel.

Finally, Rayburn will provide a copy of this amendment pleading to the Texas Parks and Wildlife Department.

Rayburn will file proof of additional notice as described above after it is completed.

III. Amended Materials

Attached to this pleading are the following amended materials that are intended to replace materials within the Application or to be added to the Application. Revisions are identified with an "R" (for tables), shown in redline (for changes to text), or by a new issue date (for map figures).

- Amended CCN Application Form, pages 1, 22, 29, 34-36 (clean and redlined versions)

- Application, Attachment 1(R), Environmental Assessment
    - Pages: two cover pages, 2-11 (Figure 2-4, v. 6-26-20), 2-13 (Table 2-1(R)), 2-14 (Table 2-2(R)), 4-3, 4-10, 4-12; 4-13; 4-14; 4-19; 4-22, 4-23 to 4-24 (Table 4-1(R)), 4-25 to 4-30 (Table 4-2(R)), 6-2 to 6-8 (Tables 6-1(R) to 6-4(R)) (clean and redlined/highlighted versions provided for tables and text);
    - Figure 2-2 (oversized map, v. 6-30-20)
    - Figure 6-1a (oversized map, v. 6-26-20)
    - Figure 6-1b (oversized map, v. 6-26-20)
- Application, Attachment 3(R) (Estimated Costs)
- Application, Attachment 10a(R) (Directly Affected Property Map - West, v. 6-29-20)
- Application, Attachment 10b(R) (Directly Affected Property Map - East, v. 6-29-20)
- Application, Attachment 11(R) (Affected Landowner List – adding one parcel (241a) and habitable structure (6a))
- Application, Attachment 18 (Additional Notice Letter for Modified Segments)
- Application, Attachment 19 (Affidavit for Amended Application)

IV. Procedural Schedule

Because this amendment only directly affects landowners who have already received notice of the Application, and because certain intervenors have already requested a hearing on the Application, Rayburn believes there is no need for a change in the current procedural schedule. However, Rayburn proposes and does not object to granting 20 additional days to file a motion to intervene to those landowners who are directly affected by modified Segments W3, W6, W5, W10, and W14. These landowners are shown on the first page of Attachment 18.

V. Conclusion

WHEREFORE, Rayburn respectfully requests that the presiding officer accept this amendment to the Application, and that all parties to this docket take notice of the same.

Respectfully submitted,

Carl R. Galant
State Bar No. 24050633
Travis Vickery
State Bar No. 00794790
McGINNIS LOCHRIDGE, LLP
600 Congress Ave., Ste. 2100
Austin, Texas 78701
Phone: (512) 495-6083
Fax: (512) 505-6383
cgalant@mcginnislaw.com
tvickery@mcginnislaw.com

ATTORNEYS FOR RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC.

CERTIFICATE OF SERVICE

I hereby certify that a true and complete copy of the above and foregoing document was served on all parties of record in this proceeding as required by order or in accordance with P.U.C. PROC. R. § 22.74 on July 6, 2020.

Carl R. Galant

AMENDED APPLICATION OF

RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC.

TO AMEND ITS

CERTIFICATE OF CONVENIENCE AND NECESSITY

FOR THE

NEW HOPE 138-kV TRANSMISSION LINE PROJECT

IN COLLIN COUNTY, TEXAS

(Revised July 6, 2020)

DOCKET NO. 50812

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

constraints, the selection of potential preliminary alternative route segments, and the alternative route analysis is available in the EA.

Selection of the Alternative Route the Applicant Believes Best Addresses the Requirements of PURA and the PUC Substantive Rules

REC believes all alternative routes comply with PURA and the PUC's Substantive Rules and are viable and constructible. However, as it is required to do by law, REC evaluated the 24 alternative routes included in the application and selected Route West C as the route that best complies with PURA and the PUC's Substantive Rules. In performing its evaluation, REC considered the EA, the analysis performed by Burns & McDonnell, and all of the factors and criteria listed in PURA § 37.056(c)(4)(A)(D), PUC Substantive Rule 25.101, and the PUC CCN Application Form, including the Commission's policy on prudent avoidance; potential environmental, cultural, and land use impacts; engineering constraints; public input and community values; estimated costs; system planning; and landowner, agency, and utility concerns and preferences.

REC's identification of Route West C as the route that best addresses the requirements of PURA and the PUC Substantive Rules is based on the following advantages:

- Second ~~C~~cheapest route (estimated cost $5,374,938~~5,124,577~~)
- Tenth~~Ninth~~ shortest route (4.20~~1~~ miles);
- Second fewest habitable structures within 300 feet of ROW centerline (24);
- Greatest length of ROW parallel to existing water ~~NTMWD~~ pipelines ROW (1.77~~87~~ miles);
- Almost half its length (~~49.4~~46.7% or ~~2.08~~1.96 miles) parallels existing compatible ROW, ~~NTMWD~~water pipelines ROW, or property lines;
- Fourth greatest distance across 100-year floodplain, which floodplain areas are otherwise difficult to develop for commercial or residential purposes;
- No transmission line crossings;
- Only one U.S. and state highway crossing; and
- No FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft. of ROW centerline.

Additionally, like all the other routes evaluated, Route West C also has the following

Table 4-1 of the EA presents the number of habitable structures located within 300 feet of the centerline of each alternative route, and Table 4-2 of the EA presents the number of habitable structures located within 300 feet of each alternative segment. Tables 6-1 through 6-24 of the EA provide a general description of the habitable structures located within 300 feet and their distance and direction from the centerline of each alternative route. The locations of habitable structures or groups of structures listed in Tables 6-1 through 6-24 are shown on Figures 6-1a and 6-1b of the EA. The total numbers of habitable structures for the 24 primary alternative routes are provided in the table below.

Primary Alternative Route	Total Number of Habitable Structures within 300 feet of ROW Centerline
East A	11
East B	12
East C	13
East D	16
East E	15
East F	16
East G	13
East H	13
East I	20
East J	20
East K	21
East L	35
West A	~~48~~46
West B	~~43~~41
West C	42
West D	~~50~~48
West E	46
West F	18
West G	32
West H	1
West I	16
West J	9

and recreational areas, including ownership, is provided in Sections 3.11.2 of the EA.

None of the alternative routes cross parks or recreational areas. However, 13 of the 24 alternative routes are located within 1,000 feet of a park or recreation area. In particular, 10 of the 12 western alternative routes (all except Routes West G and West L) are located within 1,000 feet of the Oak Hollow Golf Course, and 3 of the 12 eastern alternative routes (Routes East J, East K, and East L) are located within 1,000 feet of Pat Fowler Park in New Hope. The parks or recreational areas are listed and described with the approximate distance from the centerline of each alternative route in Tables 6-1 through 6-24 of the EA, and also depicted on Figures 2-2, 6-1a, and 6-1b of the EA.

For more information on parks and recreation areas, see Sections 3.11.2 and 4.3.2 of the EA. No significant impacts to the use of parks and recreation areas located within the study area are anticipated from construction of the Project.

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.

To identify historical and archeological sites in the study area, Burns & McDonnell researched the available records and literature at the Texas Archeological Research Laboratory, J.J. Pickle Research Campus, at the University of Texas at Austin. In addition, the Texas Historical Commission's Archeological Sites Atlas files were used to identify listed and eligible National Register of Historical Places (NRHP) properties and sites, NRHP districts, cemeteries, Official Texas Historical Markers, State Archeological Landmarks, and any other potential cultural resources such as National Historic Landmarks, National Monuments, National Memorials, National Historic Sites, and National Historical Parks to ensure the completeness of the study. To identify areas with a high probability for the occurrence of cultural resources, Burns & McDonnell used 7.5-minute topographic maps and aerial photography.

Table 4-1 of the EA indicates that thirteen (13) of the alternative routes do not cross previously recorded cultural resource sites; ~~six~~ten (~~6~~10) of the alternative routes cross one previously recorded cultural resource site; and ~~five~~one (~~1~~5) of the alternative routes cross

two previously recorded cultural resource sites. The number of additional recorded cultural resource sites located within 1,000 feet of each alternative route ranges from zero (0) sites to five~~four~~ (5~~4~~) sites. The sites are listed by each of the primary alternative routes in Tables 6-1 through 6-24 of the EA. For protection of the sites, archeological sites are not shown on the maps.

No NRHP-listed or determined-eligible site is crossed by, or located within 1,000 feet of any of the 24 alternative routes.

For more information regarding site descriptions and evaluation of historical and archaeological sites located within the study area, see Sections 3.12.1 – 3.12.3, 4.41 – 4.4.4; Tables 3-11, 3-12, and 6-1 through 6-24; and Figures 2-2, 6-1a, and 6-1b of the EA.

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 T.A.C. §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 T.A.C. §19.2(a)(21). Using the designations in 31 T.A.C. §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 alternative route is located within the Coastal Management Program boundary, as defined in 31 T.A.C. § 503.1.

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 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.

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REC will provide a copy of the EA to TPWD within seven days after the application is filed. A copy of the letter of transmittal of the EA to TPWD is provided as Attachment 16. An affidavit confirming that the letter of transmission and a copy of the EA were sent to TPWD will be filed with the Commission.

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 s~~Sworn affidavit~~s~~ ~~is~~are included as Attachment 17 and Attachment 19.

AMENDED APPLICATION OF

RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC.

TO AMEND ITS

CERTIFICATE OF CONVENIENCE AND NECESSITY

FOR THE

NEW HOPE 138-kV TRANSMISSION LINE PROJECT

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Sworn affidavits are included as Attachment 17 and Attachment 19.

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-kV TRANSMISSION LINE PROJECT IN COLLIN COUNTY, TEXAS

DOCKET NO. 50812

Attachment 1(R)—Environmental Assessment and Alternative Route Analysis (Revised Pages, Tables, and Figures)

Environmental Assessment and Alternative Route Analysis

Rayburn Electric Cooperative, Inc.

Proposed New Hope
138-kV Transmission Line Project
Docket No. 50812

~~May 2020~~ (Revised July 2020)

Environmental Assessment and Alternative Route Analysis

prepared for

Rayburn Electric Cooperative, Inc.
Proposed New Hope
138-kV Transmission Line Project
Collin County, Texas

Docket No. 50812

~~May 2020~~ (Revised July 2020)

prepared by

Burns & McDonnell Engineering Company, Inc.
Austin, Texas

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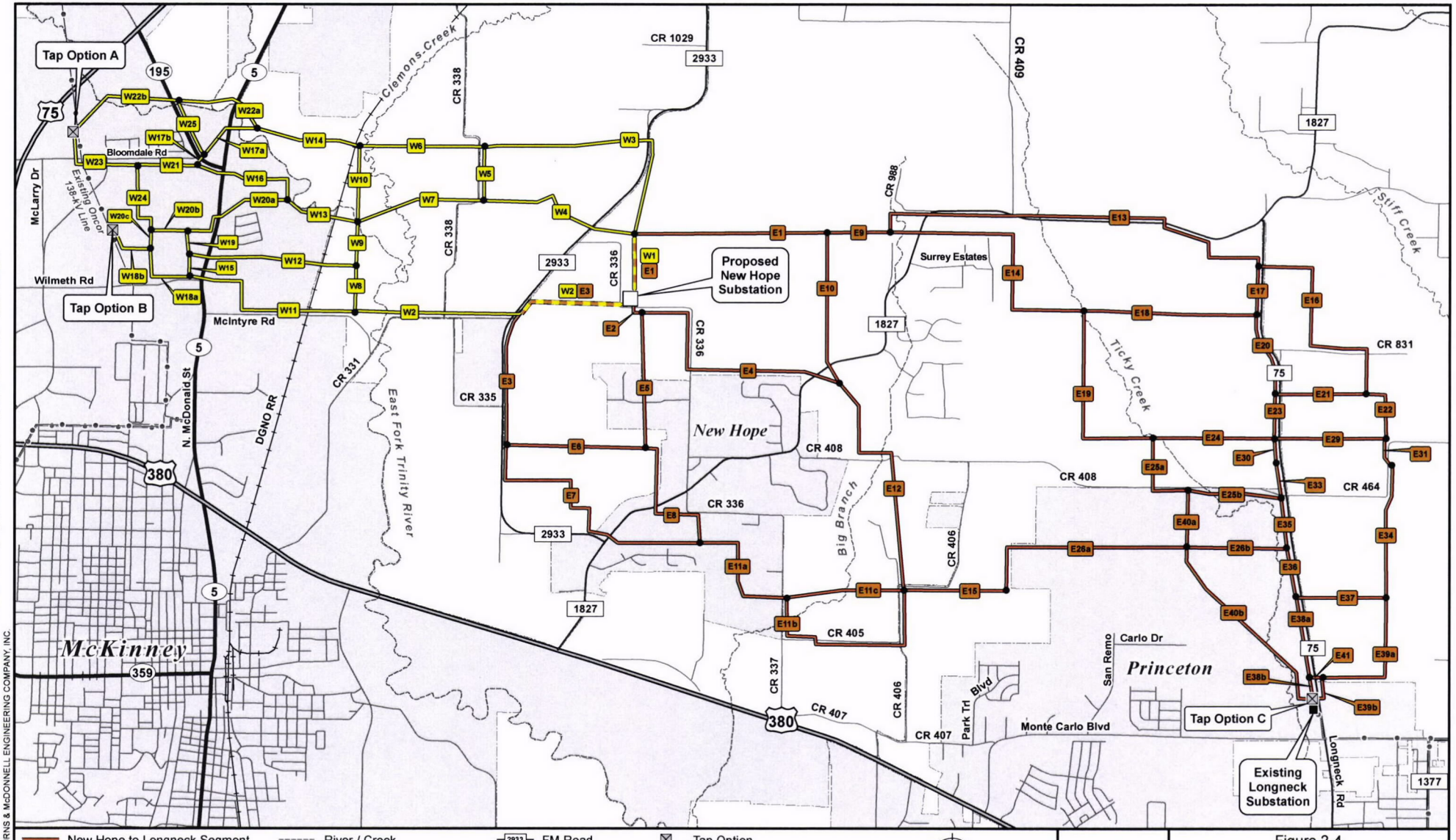

New Hope to Longneck Segment
New Hope to Oncor Tap Segment
W1 Segment Label
Segment Endpoint
River / Creek
Existing Transmission Line
Roadway
2933 FM Road
5 State Highway
75 US Highway
Tap Option
Proposed Substation
Existing Facility
City Limit
NORTH
0 0.25 0.5 1
Miles

BURNS McDONNELL

Figure 2-4
Primary Alternative Route Segments
New Hope 138-kV
Transmission Line Project
Rayburn Electric Cooperative
Collin County, Texas

Source: ESRI, TxDOT, USGS NHD, Burns & McDonnell Engineering Company, Inc

Issued: 6/26/2020

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COPYRIGHT © 2020 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Table 2-1(R): Primary Alternative Route Composition and Length

Route[a]	Component Segments	Tap Option	Length	
			Feet	Miles
West A	W1-W3-W6-W14-W17a-W17b-W21-W23	A	23,030005	4.36
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b	B	24,04367	4.556
West C	W1-W3-W6-W14-W22a-W22b	A	22,221196	4.201
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A	21,957834	4.146
West E	W1-W4-W7-W13-W16-W21-W23	A	20,619	3.91
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A	21,402	4.05
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B	18,728	3.55
West H	W2-W8-W9-W10-W14-W22a-W22b	A	22,305166	4.202
West I	W2-W8-W9-W13-W16-W17b-W25-22b	A	21,722	4.11
West J	W2-W11-W15-W19- W20b-W20c-W18b	B	17,831	3.38
West K	W2-W11-W18a-W18b	B	16,842	3.19
West L	W2-W8-W12-W19-W20b-W20c-W18b	B	17,690	3.35
East A	E1-E9-E13-E16-E22-E31-E34-E39a-E39b	C	40,729	7.71
East B	E1-E9-E13-E16-E22-E31-E34-E37-E38a-E38b	C	41,249	7.81
East C	E1-E9-E13-E17-E20-E23-E30-E33-E35-E36-E38a-E38b	C	34,993	6.63
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-E39a-E41-E38b	C	39,553	7.49
East E	E1-E9-E14-E19-E24-E29-E31-E34-E39a-E41-E38b	C	40,027	7.58
East F	E1-E9-E14-E19-E25a-E25b-E35-E36-E38a-E38b	C	34,593	6.55
East G	E1-E9-E14-E19-E25a-E40a-E40b	C	33,479	6.34
East H	E1-E10-E12-E15-E26a-E26b-E36-E38a-E38b	C	36,667	6.94
East I	E2-E4-E12-E15-E26a-E40b	C	31,461	5.96
East J	E2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C	33,878	6.42
East K	E3-E6-E8-E11a-E11b-E15-E26a-E40b	C	42,267	8.01
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-E38b	C	43,574	8.25

(a) For primary route locations, see Figure 2–2 (map pocket)

2.4 Evaluation of Primary Alternative Routes

The evaluation of the primary alternative routes for the Project involved studying a variety of environmental factors. Each of the alternative routes, where access allowed, was examined in the field on various occasions during 2019. The field investigations were conducted from publicly accessible areas. In evaluating the alternative routes, 40 environmental criteria were considered. These criteria are presented in Table 2-2. The goal of this evaluation was to provide comparative environmental data for the 24

primary transmission line routes between the proposed New Hope Substation and either the existing Oncor Anna to McKinney 138-kV transmission line or the existing TNMP Longneck Substation. The analysis of each route involved the inventory and tabulation of the number or quantity of each environmental criterion located along each route (e.g., number of habitable structures within 300 feet of the centerline, the length paralleling existing compatible ROW, etc.). The number or amount of each criterion was determined by reviewing various maps and recent color aerial imagery (2018, 2019 ESRI; 2018 NAIP; 2015 TOP, and Google Earth) and by field verification, where possible. The environmental criteria of each alternative route were then evaluated. Potential environmental impacts of the primary alternative routes are addressed in Section 4.0 of this document. Comparative environmental data for the primary routes and individual segments are provided in Table 4-1 and Table 4-2, respectively, in Section 4.0.

Table 2-2(R): Environmental Criteria for Alternative Route Evaluation for the New Hope 138-kV Transmission Line Project

No.	Environmental Criterion
Land Use	
1	Length of alternative route
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline
3	Length utilizing existing transmission line ROW
4	Length of ROW parallel to existing transmission line ROW
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc.)
6	Length of ROW parallel to existing ~~NTMWD~~ water pipeline ROWs
7	Length of ROW parallel to property lines (not following existing ROW)[c]
8	Combined total length of ROW utilizing/parallel to existing transmission line ROW, other compatible ROW, ~~NTMWD~~ existing water pipeline ROWs, and property lines
9	Percent of combined total length utilizing/parallel to existing transmission line ROW, other compatible ROW, existing water~~NTMWD~~ pipeline ROWs, and property lines
10	Length of ROW across parks/recreational areas[d]
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline
12	Length of ROW across cropland
13	Length of ROW across pastureland/rangeland
14	Length of ROW across cropland or pastureland with mobile irrigation systems
15	Number of oil and gas pipeline crossings
16	Number of transmission line crossings
17	Number of U.S. and State highway crossings
18	Number of Farm-to-Market (FM)/Ranch-to-Market (RM) road crossings
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)

short duration of the construction activities, the preservation of vegetation adjacent to surface water features, and the implementation by REC of BMPs designated in the SWPPP.

Measurement of the various criteria used in the environmental analysis of the primary alternative routes for this Project is tabulated in Tables 4-1 and 4-2 at the end of this section. No named rivers are crossed by any alternative route; however, named creeks are crossed by all the alternative routes. The number of stream crossings ranges from 2 crossings (Route East C) to 13 crossings (Route East I). ~~Thirteen~~ Fourteen of the alternative routes parallel streams within 100 feet, ranging from approximately 0.03 mile (160 feet) for Routes East E and East F to approximately 0.31 mile (1,640 feet) for Routes West J and West K. Sixteen of the alternative routes cross open water, ranging from approximately 0.01 mile (46 feet for Routes West H, West I, West J, West K, and West L and 77 feet for Routes West D, West E, West F, and West G) to approximately 0.04 mile (189 feet for Route East F and 197 feet for Route East L).

4.1.3.2 Floodplains

FEMA has conducted detailed floodplain analyses for Collin County. Proposed construction could result in locating some transmission line structures within floodplains, particularly in the vicinity of named streams. These structures would be designed and constructed so as not to impede the flow of any waterway or create any hazard during flooding. Construction activities within floodplains would be limited to the Project ROW, and significant efforts should be made to keep structures from being in obvious flood channels. Some scour could occur around structures if flood-flow depths and velocities become great enough. Careful siting of structures should eliminate the possibility of significant scour. The Project should have no significant impact on the function of the floodplain, nor adversely affect adjacent property or downstream property.

All the alternative routes except three (Routes East A, East B, and East C), cross mapped 100-year floodplains. These crossings range from approximately 0.06 mile (338 feet) for Route East D to approximately 3.01 ~~4~~ miles (~~16,057~~ 15,918 feet) for Route West H.

4.1.3.3 Groundwater

No adverse impacts to groundwater are expected to occur from the construction and operation of the proposed transmission line. The amount of recharge area that would be disturbed by construction is minimal when compared with the total amount of recharge area available for the aquifer systems in the region. Additionally, if accidental spillage of fuel, lubricants, or other petroleum products from normal operation of heavy equipment occurred during construction activities, it would be unlikely to result in any groundwater contamination. Any accidental spills would be promptly handled in accordance with State

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

4.1.4.6 Critical Habitat

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

4.1.4.7 Summary of Impact on Natural Resources

- Route West L would require the least amount of combined upland/bottomland/riparian woodland/brushland needing to be cleared with 0.31 mile (1,632 feet)
- Route East C crosses the fewest streams (2) and the shortest distance across mapped wetlands with 0.01 mile (41 feet)
- Eleven routes (West D, West E, West F, West H, West I, West L, East A, East B, East C, East D, and East H) do not parallel any streams within 100 feet
- Eight routes (West A, West B, West C, East A, East D, East E, East G, and East I) do not cross any open water
- Routes East A, East B, and East C do not cross any mapped 100-year floodplains

4.2 Socioeconomic Impact

4.2.1 Impact on Social and Economic Factors

REC will use its own employees or contractors for the clearing and construction of the transmission line, but some short-term local employment would be generated. A portion of the project wages would find their way into the local economy through purchases such as fuel, food, lodging, and possibly construction materials. ROW payments for the acquisition of private easements may be made to individuals whose lands are crossed by the transmission line, based on the land value. REC will also pay state and local taxes on purchases, as well as property tax on both acquired land and improvements made in the

including proximity to habitable structures, length of the alternative route paralleling existing ROW or property lines, and overall length.

4.3.1.1 Habitable Structures

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

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

Burns & McDonnell staff determined the number and distance of habitable structures located within 300 feet of the centerline of each primary alternative route segment through the interpretation of aerial imagery and field reconnaissance where possible. To account for the margin of error in horizontal accuracy of aerial imagery, Burns & McDonnell identified habitable structures located within 310 feet of the centerline of each primary alternative route segment. Of the 24 primary alternative routes being evaluated, all have habitable structures located within 300 feet of their centerlines. Route West H has the least number of habitable structures located within 300 feet of its centerline (1), followed by Route West C (42). By comparison, Route West D has the greatest number of habitable structures located within 300 feet of its centerline (5448), followed by Routes West A and West L (468). Table 4-1 presents the number of habitable structures located within 300 feet of each alternative route, and Table 4-2 provides the number of habitable structures located within 300 feet of each individual segment. Table 6-1 through Table 6-24 in Section 6.0 provide the distance and direction of each habitable structure identified within 300 feet of the primary alternative routes. The locations of habitable structures listed in Tables 6-1 through 6-24 are shown on Figures 6–1a and 6-1b, located in map pockets at the end of this document.

4.3.1.2 Utilizing/Paralleling Existing Transmission Line ROW

The least impact to land use generally results from building within existing transmission line ROW, followed by building parallel to existing transmission line ROW. Utilizing existing transmission line ROW of sufficient width usually eliminates the need for additional clearing. Additionally, building parallel to existing transmission line ROW, when compared to establishing a new ROW corridor, can also minimize the amount of ROW to be cleared, which generally results in the least amount of impact to

landowners, the environment, and the overall aesthetic quality of that particular area. The factors listed by 16 TAC § 25.101(b)(3)(B) to be considered in routing transmission lines include:

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

Options to utilize or parallel existing transmission line ROW within the Study Area were limited. None of the primary alternative routes utilizes existing transmission line ROW for this Project; however, 3 of the 24 alternative routes parallel some existing transmission line ROW. Routes West A, West D, and West E parallel approximately 0.18 mile (925 feet) of Oncor's Anna to McKinney 138-kV transmission line, while the remaining 21 routes do not parallel existing transmission line ROW.

4.3.1.3 Paralleling Other Existing Compatible ROW

Paralleling other existing compatible ROW (roads, highways, etc.) is also considered to be a positive routing criterion, one that usually results in fewer impacts than establishing a new ROW corridor within an area and is included in the PUC's transmission line certification criteria. In accordance with PUC Substantive Rule § 25.101(b)(3)(B), Burns & McDonnell identified existing compatible ROW for potential paralleling opportunities. In this respect, Route East C parallels the greatest amount of other existing compatible ROW with approximately 4.14 miles (21,846 feet) of its total length, followed by Route East L with approximately 3.40 miles (17,926 feet). By comparison, Route East G parallels the least amount of other existing compatible ROW with approximately 0.20 mile (1,041 feet), followed by Route West G, with 0.20 mile (1,046 feet) and an additional 0.09 mile (487 feet) parallel to a NTMWD water pipeline ROW. The lengths of primary alternative routes and individual segments that parallel other existing compatible ROW and the NTMWD water pipeline ROW s are presented in Table 4-1 and Table 4-2, respectively.

4.3.1.4 Paralleling Property Lines

Another important land use and favorable routing criterion under PUC Substantive Rule § 25.101(b)(3)(B) is the length of property lines paralleled. In the absence of existing ROW to follow, paralleling property or fence lines minimizes disruption to agricultural activities and creates less of a constraint to the future development of a tract of land. Updated parcel data was obtained from the Collin County Appraisal District for this routing purpose. Where contiguous tracts were under apparent common

ownership, these parcels were aggregated and only those outside boundaries that were paralleled were counted for this category; interior parcel lines did not qualify in the count. Each alternative route was developed to parallel property lines where feasible, while avoiding other known constraints. All but two routes parallel property boundaries where other existing linear categories to parallel were not available. For this Project, Route East E parallels the greatest amount of property lines with approximately 4.82 miles (25,461 feet), followed by Route East K with approximately 4.31 miles (22,731 feet). Routes West A and West C do not parallel any property lines, followed by 0.32 mile (1,678 feet) for Route East C. The length of primary alternative routes and individual segments that parallel property lines are presented in Table 4-1 and Table 4-2, respectively.

4.3.1.5 Combined Total Length Paralleling ROW and Property Lines

The combined total length that each primary alternative route parallels existing transmission lines, other compatible ROW, ~~the NTMWD~~ water pipeline ROW, and property lines was calculated for comparison. The sum of each criterion was then considered in relation to the total length of the alternative route. All the alternative routes parallel existing linear features for some portion of their length. Route East K, with 6.75 miles (35,645 feet), or 84.3 percent of overall length, Route East L with 6.73 miles (35,516 feet), or 81.6 percent, and Route East J with 5.16 miles (27,249 feet), or 80.4 percent, parallel the greatest amount of linear feature. By comparison, Route West H parallels the least amount of linear features with ~~2.00~~1.86 miles (~~10.561~~9,846 feet), or ~~47.4~~44.3 percent of its overall length.

4.3.1.6 Overall Length of Routes

Finally, the overall length of an alternative route can be an indicator of the relative level of land use impacts. Generally, all other things being approximately equal, the shorter the route, the less land required for ROW is crossed, which would usually result in fewer potential impacts. In this regard, Routes West K and West L are the shortest alternatives (approximately 3.19 miles [16,842 feet] and 3.35 miles [17,690 feet], respectively). By comparison, Routes East L and East K are the longest routes (approximately 8.25 miles [43,574 feet] and 8.01 miles [42,267 feet], respectively). Table 4-1 and Table 4-2, located at the end of this section, present the overall length of each alternative route and individual segment, respectively.

4.3.2 Impact on Recreation

Potential impacts to recreational land would include the disruption or preemption of recreational activities. As previously mentioned, numerous recreational facilities were identified within the Study Area. Recreational lands were avoided when developing the primary alternative routes, thereby minimizing the amount of such land crossed. None of the alternative routes cross parks or recreational land. However, 13 of the 24 primary alternative routes are located within 1,000 feet of a park or

(4,650 feet). By comparison, Route East K would have the greatest length of ROW located within the FVZ of parks or recreational areas, with an estimated 1.53 miles (8,087 feet), followed by Route East J with 1.52 miles (8,016 feet).

4.3.7 Summary of Impact on Human Resources

As discussed in more detail in Section 5.2, respondents to the Project questionnaires identified maximizing distances from residences as their primary routing concern. Land Use criteria primarily considered for this Project included the number of habitable structures located within 300 feet of each primary alternative route, length parallel to linear features (exiting transmission line ROW, other existing compatible ROW, ~~NTMWD~~ water pipeline ROWs, and property lines), and the overall length of each primary alternative route.

- Routes West H (one habitable structure), West C (~~four~~ two habitable structures), and West J (nine habitable structures) have the fewest habitable structures located within 300 feet of their centerlines. By comparison, Route West D has the most habitable structures within 300 feet of its centerline, with 48~~50~~ habitable structures.

- Route East K has the highest percentage of its overall length parallel to linear features (existing transmission line ROW, other existing compatible ROW, ~~NTMWD~~ water pipeline ROWs, and property lines), with approximately 84.3 percent of its overall length, followed by Route East L (81.6 percent) and Route East J (80.4 percent). By comparison, Route West H parallels linear features for approximately 4~~7~~.3 percent of its overall length.

The shortest overall route is Route West K, at approximately 3.19 miles (16,842 feet), followed by Route West L, at 3.35 miles (17,690 feet), and Route West J at 3.38 miles (17,831 feet). By comparison, Route East L is the longest overall route at approximately 8.25 miles (43,574 feet).

4.4 Impact on Cultural Resources

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

All 24 primary alternative routes were individually examined for the number and type of previously recorded cultural resources that are either crossed by the proposed ROW or located within 1,000 feet of each alternative route's centerline and the approximate amount of HPA delineated along each of the routes (Table 4-1). This same information for each segment is shown in Table 4-2. None of the sites crossed by any route's proposed ROW or located within 1,000 feet of any alternative route's centerline have been determined eligible for or listed on the NRHP.

- The number of recorded cultural resource sites crossed by the primary alternative routes ranges from zero to two
- Thirteen routes (West E, West F, West G, West I, West J, West K, West L, East A, East B, East D, East E, East H, and East J) cross no recorded cultural resource sites
- The number of additional recorded cultural resources sites within 1,000 feet of the ROW centerline ranges from zero to ~~four~~five
- Nine routes (West G, West L, East A, East B, East C, East D, East E, East F, and East G) have no additional recorded cultural resources sites within 1,000 feet of the ROW centerline
- Route West A crosses ~~two~~ one sites (~~41COL307~~ 41COL315 ~~and 41COL308~~) and is within 1,000 feet of ~~four~~ five sites (41COL298, 41 COL307, 41 COL308, 41COL309, ~~41COL315,~~ and McLarry Cemetery)
- Route East K crosses two sites (41COL283 and a tract that contains the Johnson Cemetery) and is within 1,000 feet of one site (41COL281)
- No routes cross any NRHP-listed or determined-eligible sites or are within 1,000 feet of such sites
- The length of HPA crossed ranges from 2.27 miles (11,976 feet) for Route West E to 5.83 miles (30,780 feet) for Route East K

Table 4-1(R): Environmental Data for Alternative Route Evaluation (by Route) New Hope 138-kV Transmission Line Project

		Route West A	Route West B	Route West C	Route West D	Route West E	Route West F	Route West G	Route West H	Route West I	Route West J	Route West K	Route West L
Land Use													
1	Length of Alternative Route	4.36	4.55	4.20	4.14	3.91	4.05	3.55	4.20	4.11	3.38	3.19	3.35
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	46	41	2	48	46	18	32	1	16	9	10	33
3	Length utilizing existing transmission line ROW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Length of ROW parallel to existing transmission line ROW	0.18	0.00	0.00	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc. - excluding oil and gas pipelines)	0.86	0.53	0.19	0.97	0.93	0.61	0.20	0.77	1.27	1.41	1.49	0.77
6	Length of ROW parallel to existing water pipeline ROW	1.77	1.77	1.77	0.81	0.23	0.23	0.09	0.13	0.23	0.00	0.00	0.00
7	Length of ROW parallel to property lines (not following existing ROW[c]	0.00	0.61	0.00	0.51	1.33	1.33	1.89	0.96	0.97	1.27	0.92	1.66
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	2.81	2.91	1.96	2.47	2.67	2.18	2.19	1.86	2.47	2.68	2.41	2.43
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	64.4	64.0	46.7	59.7	68.3	53.8	61.7	44.3	60.1	79.3	75.5	72.5
10	Length of ROW across parks/recreational areas[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	1	1	1	1	1	1	0	1	1	1	1	0
12	Length of ROW across cropland	2.32	2.43	2.42	1.84	1.25	1.04	1.08	2.08	1.46	1.71	1.63	1.92
13	Length of ROW across pastureland/rangeland	0.44	0.44	0.35	0.64	0.63	0.63	0.42	0.60	0.86	0.60	0.60	0.60
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	1	0	0	1	1	0	0	0	0	0	0	0
17	Number of U.S. and State highway crossings	1	1	1	1	1	1	1	1	1	1	1	1
18	Number of FM/RM road crossings	2	2	2	2	1	3	1	2	3	1	1	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	1	1	1	1	1	1	1	1	1	1
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	5	5	5	5	5	5	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	1	0	0	0	0	1	0	0	1	1	1
Aesthetics													
25	Estimated length of ROW within foreground visual zone[f] of U.S. and State highways	1.57	1.83	1.48	1.57	1.57	1.78	1.27	1.48	1.78	1.49	1.30	1.22
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	2.68	2.94	2.84	2.46	2.48	2.94	2.19	2.61	2.92	1.53	1.19	1.53
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	1.15	1.34	0.88	1.15	1.00	1.15	0.86	0.88	1.15	1.47	1.29	1.14
Ecology													
28	Length of ROW through upland woodland/brushland	0.95	0.85	1.06	1.08	1.28	1.80	1.43	1.13	1.14	0.34	0.34	0.25
29	Length of ROW through bottomland/riparian woodland/brushland	0.15	0.15	0.19	0.11	0.12	0.18	0.11	0.16	0.17	0.06	0.06	0.06
30	Length of ROW across potential wetlands[g]	0.09	0.09	0.12	0.10	0.17	0.18	0.20	0.28	0.14	0.04	0.04	0.03
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	Number of stream crossings	9	8	10	8	7	9	7	8	9	4	4	4
33	Length of ROW paralleling (within 100 ft) streams	0.07	0.07	0.07	0.04	0.00	0.00	0.04	0.00	0.00	0.31	0.31	0.00
34	Length of ROW across open water (ponds, lakes, etc.)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
35	Length of ROW across 100-year floodplains	1.18	1.18	2.01	1.31	1.34	2.05	1.18	3.01	2.42	0.63	0.63	1.05
Cultural Resources													
36	Number of recorded cultural resource sites crossed by ROW	1	1	1	1	0	0	0	1	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	5	4	4	3	2	1	0	1	1	1	1	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	2.88	2.85	3.28	2.49	2.27	2.71	2.41	3.67	3.20	2.65	2.46	2.63

(a) Single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis.
(b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 310 ft have been identified.
(c) Property lines created by existing road, highway, or railroad ROW are not double-counted in the "Length of ROW parallel to property lines" criterion.
(d) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church.
(e) As listed in the Chart Supplement South Central U.S. (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U.S.) and FAA (2019b).
(f) One-half mile, unobstructed.
(g) As mapped by the USFWS NWI.

Note: all length measurements in miles except for Criterion #9, which is expressed as a percentage.

Route	Segments	Tap Option
West A	W1-W3-W6-W14-W17a-W17b-W21-W23	A
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b	B
West C	W1-W3-W6-W14-W22a-W22b	A
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A
West E	W1-W4-W7-W13-W16-W21-W23	A
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B
West H	W2-W8-W9-W10-W14-W22a-W22b	A
West I	W2-W8-W9-W13-W16-W17b-W25-W22b	A
West J	W2-W11-W15-W19- W20b-W20c-W18b	B
West K	W2-W11-W18a-W18b	B
West L	W2-W8-W12-W19-W20b-W20c-W18b	B

Table 4-1(R)· Environmental Data for Alternative Route Evaluation (by Route) New Hope 138-kV Transmission Line Project

		Route East A	Route East B	Route East C	Route East D	Route East E	Route East F	Route East G	Route East H	Route East I	Route East J	Route East K	Route East L
Land Use													
1	Length of Alternative Route	7 71	7 81	6 63	7 49	7 58	6 55	6 34	6 94	5 96	6 42	8 01	8 25
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	11	12	13	16	15	16	13	13	20	20	21	35
3	Length utilizing existing transmission line ROW	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4	Length of ROW parallel to existing transmission line ROW	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	2 40	2 87	4 14	0 89	0 42	1 88	0 20	1 40	1 26	1 27	2 45	3 40
6	**Length of ROW parallel to existing water pipeline ROW**	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
7	Length of ROW parallel to property lines (not following existing ROW[c]	2 73	2 60	0 32	4 15	4 82	2 64	2 95	2 48	3 09	3 89	4 31	3 33
8	**Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	5 12	5 47	4 46	5 04	5 24	4 51	3 15	3 88	4 35	5 16	6 75	6 73
9	**Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	66 4	70 0	67 3	67 3	69 1	68 9	49 7	55 9	73 0	80 4	84 3	81 6
10	Length of ROW across parks/recreational areas[d]	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
11	Number of additional parks/recreational areas[e] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	1	1	1
12	Length of ROW across cropland	4 41	4 28	4 59	4 48	4 93	3 86	4 03	4 19	2 29	3 16	3 94	4 28
13	Length of ROW across pastureland/rangeland	1 23	1 69	1 08	1 13	0 42	1 02	0 18	0 96	0 43	1 41	1 42	2 21
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	5	5	3	3	3	1	1	1	1	1	1	1
19	Number of FAA-registered public/military airfields[f] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[f] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	1	1	1	1	1	1	1	1	1	1
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	5	5	5	5	5	5	5	5	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
Aesthetics													
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 24	0 24
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	5 90	6 00	5 89	4 95	4 39	3 86	3 07	3 15	1 83	2 29	3 70	3 86
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	1 52	1 53	1 07
Ecology													
28	Length of ROW through upland woodland/brushland	1 67	1 77	0 60	1 50	1 87	1 30	1 72	1 39	2 64	1 19	1 85	1 31
29	Length of ROW through bottomland/riparian woodland/brushland	0 16	0 17	0 08	0 14	0 23	0 17	0 27	0 18	0 38	0 32	0 36	0 18
30	Length of ROW across potential wetlands[g]	0 03	0 03	0 01	0 03	0 04	0 05	0 03	0 03	0 07	0 06	0 07	0 04
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
32	Number of stream crossings	7	6	2	6	8	5	6	6	13	9	10	7
33	Length of ROW paralleling (within 100 ft) streams	0 00	0 00	0 00	0 00	0 03	0 03	0 17	0 00	0 19	0 24	0 30	0 04
34	Length of ROW across open water (ponds, lakes, etc)	0 00	0 02	0 02	0 00	0 00	0 04	0 00	0 02	0 00	0 02	0 02	0 04
35	Length of ROW across 100-year floodplains	0 00	0 00	0 00	0 06	0 17	0 55	0 92	0 15	0 87	0 53	1 06	0 35
Cultural Resources													
36	Number of recorded cultural resource sites crossed by ROW	0	0	1	0	0	1	1	0	1	0	2	1
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	1	1	1	1	1
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	5 13	5 25	3 72	3 82	4 88	4 24	4 07	4 21	4 34	5 18	5 83	5 55

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in miles except for Criterion #9, which is expressed as a percentage

Route	Segments	Tap Option
East A	E1-F9-E13-E16-F22-F31-E34-E39a-E39b	C
East B	F1-F9-F13-E16-F22-F31-E34-E37-E38a-E38b	C
East C	E1-E9-F13-F17-E20-E23-E30-E33-E35-F36-E38a-E38b	C
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-F39a-E41-E38b	C
East E	E1-E9-E14-E19-E24-F29-E31-F34-F39a-F41-E38b	C
East F	E1-E9-E14-E19-E25a-E25b-E35-E36-E38a-E38b	C
East G	E1-E9-E14-E19-E25a-E40a-F40b	C
East H	E1-E10-F12-E15-E26a-E26b-F36-F38a-E38b	C
East I	E2-F4-F12-E15-E26a-F40b	C
East J	F2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C
East K	E3-E6-E8-E11a-E11b-E15-E26a-F40b	C
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-F38b	C

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment W1	Segment W2	Segment W3	Segment W4	Segment W5	Segment W6	Segment W7	Segment W8	Segment W9	Segment W10	Segment W11	Segment W12
Land Use													
1	Length of Alternative Route	1,673	8,135	7,850	5,078	1,601	3,602	3,767	1,404	1,299	2,258	5,784	4,945
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	1	0	2	0	2	1	0	0	0	4	28
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel to existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc. - excluding oil and gas pipelines)	0	4,074	1,015	0	1,601	0	623	0	0	0	3,375	0
6	Length of ROW parallel to existing water pipeline ROW	0	0	5,046	0	0	3,602	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	2,449	0	2,710	0	0	2,983	1,352	0	1,267	634	2,020
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0	6,523	6,061	2,710	1,601	3,602	3,606	1,352	0	1,267	4,009	2,020
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0.0	80.2	77.2	53.4	100.0	100.0	95.7	96.3	0.0	56.1	69.3	40.8
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	1	1
12	Length of ROW across cropland	1,546	3,421	5,923	1,800	1,601	0	75	1,194	1,012	0	3,160	3,794
13	Length of ROW across pastureland/rangeland	0	3,189	265	1,306	0	1,570	658	0	0	0	0	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U.S. and State highway crossings	0	0	0	0	0	0	0	0	0	0	1	1
18	Number of FM/RM road crossings	0	1	1	1	0	0	0	0	0	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	1	1	1	1	1	0	0	1	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	0	5	5	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	1	1
Aesthetics													
25	Estimated length of ROW within foreground visual zone[f] of U.S. and State highways	0	0	0	0	0	0	0	0	0	0	3,949	3,241
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	1,673	6,269	5,827	4,701	0	0	0	0	0	0	0	0
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	3,876	2,835
Ecology													
28	Length of ROW through upland woodland/brushland	50	763	985	1,658	0	1,642	2,748	0	197	2,098	1,027	549
29	Length of ROW through bottomland/riparian woodland/brushland	0	209	337	103	0	271	235	0	66	156	103	111
30	Length of ROW across potential wetlands[g]	0	124	86	141	0	279	205	0	18	1,064	75	45
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	0	2	2	1	0	4	2	0	1	1	2	2
33	Length of ROW paralleling (within 100 ft) streams	0	0	185	0	0	207	0	0	0	0	1,640	0
34	Length of ROW across open water (ponds, lakes, etc.)	0	46	0	77	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	2,100	295	998	0	1,484	1,849	1,404	1,299	2,258	1,200	2,037
Cultural Resources													
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	2	0	0	1	0	0	0	0	1	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	0	5,343	4,992	2,925	0	3,265	2,520	1,404	1,299	2,258	5,747	4,945

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

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

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

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

(e) As listed in the Chart Supplement South Central U.S. (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U.S.) and FAA (2019b).

(f) One-half mile, unobstructed.

(g) As mapped by the USFWS NWI.

Note: all length measurements in feet except for Criterion #9, which is expressed as a percentage.

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment W13	Segment W14	Segment W15	Segment W16	Segment W17a	Segment W17b	Segment W18a	Segment W18b	Segment W19	Segment W20a	Segment W20b	Segment W20c	Segment W21
Land Use														
1	Length of Alternative Route	2,236	3,116	706	3,414	2,011	302	2,070	853	726	3,493	1,099	528	1,766
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	0	0	1	2	0	3	3	1	26	1	1	30
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel 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 compatible ROW (roads, highways, railways, etc. - excluding oil and gas pipelines)	0	0	0	749	0	0	417	0	0	423	0	0	1,766
6	Length of ROW parallel to existing water pipeline ROW	487	704	0	749	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	0	706	1,326	0	0	900	853	524	1,901	1,030	528	0
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	487	704	706	2,824	0	0	1,317	853	524	2,324	1,030	528	1,766
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	21.8	22.6	100.0	82.7	0.0	0.0	63.6	100.0	72.2	66.5	93.7	100.0	100.0
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	1	0	0	0	1	0	1	0	0	0	1
12	Length of ROW across cropland	461	1,873	706	289	332	153	2,016	0	726	788	1,027	0	1,766
13	Length of ROW across pastureland/rangeland	0	0	0	1,347	497	0	0	0	0	249	0	0	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U.S. and State highway crossings	0	0	0	1	1	0	0	0	0	1	0	0	0
18	Number of FM/RM road crossings	0	0	0	0	0	1	0	0	0	0	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	0	0	1	1	1	1	1	1	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	1	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	1	0	0	0	1	1	1	1	1	1	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U.S. and State highways	741	1,838	706	3,414	2,011	302	2,070	853	726	3,493	1,099	528	1,766
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	533	1,560	0	3,414	2,011	302	0	0	634	3,493	1,099	59	1,766
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	706	839	1,310	302	2,070	853	726	2,076	1,099	528	1,766
Ecology														
28	Length of ROW through upland woodland/brushland	1,127	993	0	624	781	56	0	0	0	1,978	0	0	0
29	Length of ROW through bottomland/riparian woodland/brushland	160	106	0	150	84	0	0	0	0	96	0	0	0
30	Length of ROW across potential wetlands[g]	344	49	0	205	46	0	0	0	0	375	0	0	0
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	2	1	0	1	1	0	0	0	0	2	0	0	0
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	193	0	0	0
34	Length of ROW across open water (ponds, lakes, etc.)	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	2,236	3,116	0	1,979	1,318	0	0	0	0	1,149	0	0	0
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	1	0	0	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	1	1	1	0	0	1	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	2,236	3,116	706	2,237	1,760	0	1,914	0	636	3,493	1,099	435	0

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

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

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

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

(e) As listed in the Chart Supplement South Central U.S. (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U.S.) and FAA (2019b).

(f) One-half mile, unobstructed.

(g) As mapped by the USFWS NWI.

Note: all length measurements in feet except for Criterion #9, which is expressed as a percentage.

Table 4-2(R). Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment W22a	Segment W22b	Segment W23	Segment W24	Segment W25	Segment E1	Segment E2	Segment E3	Segment E4	Segment E5	Segment E6	Segment E7	Segment E8
Land Use														
1	Length of Alternative Route	2,885	3,069	2,685	2,342	1,862	7,390	351	7,173	7,906	4,120	4,153	8,558	4,589
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	0	18	10	14	0	0	0	10	4	0	18	7
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel to existing transmission line ROW	0	0	925	0	0	0	0	0	0	0	0	0	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0	0	1,760	0	1,862	0	246	4,437	3,512	0	0	1,048	550
6	**Length of ROW parallel to existing water pipeline ROW**	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	0	0	1,821	0	0	0	2,397	3,240	3,029	4,153	2,979	3,967
8	**Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	0	0	2,685	1,821	1,862	0	246	6,834	6,752	3,029	4,153	4,027	4,517
9	**Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	0 0	0 0	100 0	77 8	100 0	0 0	70 1	95 3	85 4	73 5	100 0	47 1	98 4
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	1	1	1	0	0	0	0	0	0	0	1	1
12	Length of ROW across cropland	2,287	1,173	652	1,243	0	6,781	0	3,038	2,760	0	1,856	2,642	1,336
13	Length of ROW across pastureland/rangeland	0	0	0	0	0	0	0	3,148	706	1,575	2 047	2,948	258
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	1	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	1	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	1	0	0	0	0	0	0	1	0	0	1	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	0	0	1	0	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	0	0	0	0	1	1	1	1	1	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	5	0	0	5	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	1	0	0	0	0	0	0	0	0	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	2,885	3,069	2,381	2,342	1,862	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	2,885	3,051	998	2,342	1,862	4,052	102	7,173	4,190	1,134	4,153	6,121	3,767
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	1,581	3,069	2,685	2,342	1,862	0	0	0	0	849	920	3,096	4,589
Ecology														
28	Length of ROW through upland woodland/brushland	290	1,649	534	0	1,586	506	317	660	3 826	1,929	182	2,501	1,574
29	Length of ROW through bottomland/riparian woodland/brushland	82	213	0	0	73	0	0	86	442	387	0	127	469
30	Length of ROW across potential wetlands[g]	178	44	20	0	21	0	0	21	109	55	0	21	88
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	1	2	1	0	1	0	0	1	5	2	0	1	2
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	225	238	655	0	0	593
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	2,885	2,856	0	0	896	0	0	99	0	590	0	0	0
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	1	0	0	0	0	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	2,885	3,069	2,058	1,502	1,300	2,221	351	4,581	6,323	2,994	2,113	3,969	4,589

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment E9	Segment E10	Segment E11a	Segment E11b	Segment E11c	Segment E12	Segment E13	Segment E14	Segment E15	Segment E16	Segment E17	Segment E18	Segment E19
Land Use														
1	Length of Alternative Route	1,875	4,582	3,961	6,524	3,498	7,336	12,676	8,048	3,175	6,920	1,458	5 176	5,856
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	0	2	11	3	8	4	13	1	5	1	0	0
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel 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 compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0	0	0	6,524	0	1,487	8,794	0	1,403	1,654	1,458	0	0
6	**Length of ROW parallel to existing water pipeline ROW**	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	0	3,833	0	1,326	4,699	1,678	7,863	1,772	4,691	0	3,510	4,670
8	**Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	0	0	3,833	6,524	1,326	6,186	10,472	7,863	3,175	6,345	1,458	3,510	4,670
9	**Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	0 0	0 0	96 8	100 0	37 9	84 3	82 6	97 7	100 0	91 7	100 0	67 8	79 7
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	1	0	0	0	0	0	0	0	0	0	0
12	Length of ROW across cropland	1,302	3,635	2,594	3,762	2,148	1,110	9,746	6,598	2,871	1,316	1,458	2,050	3 147
13	Length of ROW across pastureland/rangeland	171	0	437	757	845	742	287	0	0	3,495	0	1,457	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	1	0	0	0	0	3	1	0	1	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	1	1	1	1	1	0	0	1	0	0	0	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	0	0	0	1	1	1	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	5	0	0	0	5	5	5	0	0	0	5	5
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	1,243	0	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	1,875	4,582	0	0	0	884	12,123	5,804	0	6,920	1,458	3,027	0
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	2,578	0	0	0	0	0	0	0	0	0	0
Ecology														
28	Length of ROW through upland woodland/brushland	402	613	658	1,489	195	4,605	1,814	1,029	174	1,456	0	1,606	2,329
29	Length of ROW through bottomland/riparian woodland/brushland	0	0	114	114	216	461	272	260	0	299	0	0	297
30	Length of ROW across potential wetlands[g]	0	0	33	20	21	68	41	40	50	47	0	0	30
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	0	0	1	1	1	3	2	2	0	2	0	0	1
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	0	0	0	160
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	113	0	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	0	97	1,128	1,597	292	0	333	0	0	0	5	350
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	1	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	746	2,521	3,961	4,271	2,910	4,962	8,605	3,367	434	5,663	333	1,313	4,849

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment E20	Segment E21	Segment E22	Segment E23	Segment E24	Segment E25a	Segment E25b	Segment E26a	Segment E26b	Segment E29	Segment E30	Segment E31	Segment E33
Land Use														
1	Length of Alternative Route	2,495	2,646	1,990	1,301	3,668	2,556	2,868	6,609	3,061	3,258	753	817	1,043
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	1	0	0	1	0	0	0	1	0	0	0	1	3
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel 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 compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	2,495	0	0	1,301	0	1,041	2,868	0	0	0	753	722	1,043
6	**Length of ROW parallel to existing water pipeline ROW**	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	2,530	1,879	0	3,668	1,394	0	6,609	0	3,114	0	0	0
8	**Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	2,495	2,530	1,879	1,301	3,668	2,435	2,868	6,609	0	3,114	753	722	1,043
9	**Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	100 0	95 6	94 4	100 0	100 0	95 3	100 0	100 0	0 0	95 6	100 0	88 4	100 0
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Length of ROW across cropland	2,422	376	0	1,228	2,545	1,756	788	5,348	2,378	1,542	753	79	527
13	Length of ROW across pastureland/rangeland	0	1,316	1,606	0	0	0	0	0	225	598	0	649	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	1	0	0	0	0	0	0	0	1	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	0	0	0	0	0	0	1	0	0	0	0	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	2,495	2,646	79	1,301	2,551	0	2,644	0	2,587	2,729	753	0	1,043
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
Ecology														
28	Length of ROW through upland woodland/brushland	0	117	384	0	720	730	1,518	926	365	1,031	0	0	76
29	Length of ROW through bottomland/riparian woodland/brushland	0	231	0	0	396	0	154	245	87	0	0	0	0
30	Length of ROW across potential wetlands[g]	0	28	31	0	50	0	174	42	20	42	0	0	0
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	0	1	1	0	2	0	2	2	1	1	0	0	0
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	0	0	0	105	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	0	0	0	224	0	2,204	138	366	0	0	0	0
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	1	0	0	0	0	0	1
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	1	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	447	2,145	1,990	0	3,577	2,549	2,868	4,748	3,061	3,086	494	817	1,043

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment E34	Segment E35	Segment E36	Segment E37	Segment E38a	Segment E38b	Segment E39a	Segment E39b	Segment E40a	Segment E40b	Segment E41
Land Use												
1	Length of Alternative Route	3,946	1,487	1,472	2,593	2,491	551	4,429	687	1,671	6,084	192
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	1	0	1	0	2	0	1	0	0	0	0
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel to existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	928	1,487	1,472	0	2,491	551	0	549	0	0	0
6	**Length of ROW parallel to existing water pipeline ROW**	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	3,018	0	0	2,459	0	0	3,128	0	1,671	0	0
8	**Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	3,946	1,487	1,472	2,459	2,491	551	3,128	549	1,671	0	0
9	**Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines**	100 0	100 0	100 0	94 8	100 0	100 0	70 6	79 9	100 0	0 0	0
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
12	Length of ROW across cropland	1,455	0	0	1,895	0	0	2,589	0	1,667	25	0
13	Length of ROW across pastureland/rangeland	0	1,117	1,398	0	2,165	551	103	178	0	805	124
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	0	0	0	0	0	0	1	0	0	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	0	0	0	0	0	0	0	0	0	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
Aesthetics												
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	1,009	1,487	1,472	2,593	2,491	551	4,429	687	0	4,460	192
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0
Ecology												
28	Length of ROW through upland woodland/brushland	2,270	214	69	2,474	60	0	1,580	427	0	4,110	0
29	Length of ROW through bottomland/riparian woodland/brushland	162	0	0	0	166	0	101	0	0	866	0
30	Length of ROW across potential wetlands[g]	36	0	0	0	0	0	20	0	0	94	0
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	1	0	0	0	0	0	1	0	0	3	0
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	757	0
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	0	84	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	0	0	0	0	0	0	0	0	4,158	0
Cultural Resources												
36	Number of recorded cultural resource sites crossed by ROW	0	1	0	0	0	0	0	0	0	1	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	3,946	1,487	1,472	898	2,265	551	2,410	687	1,671	6,084	192

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 6-1(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West A

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
~~3~~	~~Single-family residence~~	~~223~~	~~North~~	~~W6~~
4	~~Single-family residence~~	~~261~~	~~North~~	~~W6~~
~~5~~	~~Mobile home~~	~~191~~	~~North~~	~~W6~~
6	Guest house	~~190~~83	South	W6
6a	Single-family residence	209	South	W6
63	Single-family residence	210	East	W17a
64	Garage apartment	144	East	W17a
79	Single-family residence	263	North	W21
80	Single-family residence	240	North	W21
81	Single-family residence	241	North	W21
82	Single-family residence	239	North	W21
83	Single-family residence	241	North	W21
84	Single-family residence	244	North	W21
85	Single-family residence	250	North	W21
86	Single-family residence	250	North	W21
87	Single-family residence	239	North	W21
88	Single-family residence	237	North	W21
89	Single-family residence	240	North	W21
90	Single-family residence	245	North	W21
91	Single-family residence	254	North	W21
92	Single-family residence	250	North	W21
93	Single-family residence	251	North	W21
94	Single-family residence	247	North	W21
95	Single-family residence	242	North	W21
96	Single-family residence	248	North	W21
97	Single-family residence	255	North	W21
98	Single-family residence	248	North	W21
99	Single-family residence	250	North	W21
100	Single-family residence	247	North	W21
101	Single-family residence	251	North	W21
102	Single-family residence	249	North	W21
103	Single-family residence	248	North	W21
104	Single-family residence	244	North	W21
105	Single-family residence	234	North	W21
106	Single-family residence	277	North	W23

Table 6-1(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West A (Continued)

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
107	Single-family residence	265	North	W23
108	Single-family residence	236	North	W23
109	Single-family residence	253	North	W23
110	Single-family residence	249	North	W23
111	Single-family residence	251	North	W23
112	Single-family residence	254	North	W23
113	Single-family residence	252	North	W23
114	Single-family residence	259	North	W23
115	Single-family residence	254	North	W23
116	Single-family residence	250	North	W23
117	Single-family residence	258	North	W23
118	Single-family residence	262	North	W23
119	Single-family residence	261	North	W23
120	Single-family residence	265	North	W23
300	Square Air Airport (TS63)	~~1,255~~1,301	Northeast	W3
301	McKinney National Airport (KTKI)	16,036	South	W1
302	Inspiration Park	852	North	W23
306	AM Tower #1 (KTNO)	8,435~~08~~	East	W3
307	AM Tower #2 (KTNO)	7,994~~69~~	East	W3
308	AM Tower #3 (KTNO)	8,373~~51~~	East	W3
309	AM Tower #4 (KTNO)	8,445~~27~~	East	W3
310	AM Tower #5 (KTNO)	8,918~~01~~	East	W3
311	McLarry Cemetery	746	West	W23
-	41COL309	166	-	-
-	41COL307	~~1~~9126	-	-
-	41COL298	848~~2~~	-	-
-	41COL308	~~0~~94	-	-
-	41COL315	0	-	-

(a) All habitable structures and other land use features are located on Figures 6-1a and 6-1b (map pockets). To protect their integrity, archeological sites are not shown on these figures.
(b) Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310 feet have been identified.

Table 6-2(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West B

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
~~3~~	~~Single-family residence~~	~~223~~	~~North~~	~~W6~~
~~4~~	~~Single-family residence~~	~~261~~	~~North~~	~~W6~~
~~5~~	~~Mobile home~~	~~191~~	~~North~~	~~W6~~
6	Guest house	~~190~~83	South	W6
6a	Single-family residence	209	South	W6
63	Single-family residence	210	East	W17a
64	Garage apartment	144	East	W17a
79	Single-family residence	263	North	W21
80	Single-family residence	240	North	W21
81	Single-family residence	241	North	W21
82	Single-family residence	239	North	W21
83	Single-family residence	241	North	W21
84	Single-family residence	244	North	W21
85	Single-family residence	250	North	W21
86	Single-family residence	250	North	W21
87	Single-family residence	239	North	W21
88	Single-family residence	237	North	W21
89	Single-family residence	240	North	W21
90	Single-family residence	245	North	W21
91	Single-family residence	254	North	W21
92	Single-family residence	250	North	W21
93	Single-family residence	251	North	W21
94	Single-family residence	247	North	W21
95	Single-family residence	242	North	W21
96	Single-family residence	248	North	W21
97	Single-family residence	255	North	W21
98	Single-family residence	248	North	W21
99	Single-family residence	250	North	W21
100	Single-family residence	247	North	W21
101	Single-family residence	251	North	W21
102	Single-family residence	249	North	W21
103	Single-family residence	248	North	W21
104	Single-family residence	244	North	W21
105	Single-family residence	234	North	W21
106	Single-family residence	278	North	W21

Table 6-2(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West B (Continued)

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
107	Single-family residence	289	North	W21
108	Single-family residence	306	North	W21
121	Collin County Public Safety Training Center (#1)	282	West	W24
122	Collin County Public Safety Training Center (#4)	122	West	W24
123	Collin County Public Safety Training Center (#3)	200	West	W24
124	Collin County Public Safety Training Center (#2)	298	West	W24
125	Collin County Public Works (Shop #1)	207	South	W18b
128	Collin County Medical Examiner	156	South	W18b
129	Commercial (Unknown Warehouse)	216	South	W18b
300	Square Air Airport (TS63)	1,255307	Northeast	W3
301	McKinney National Airport (KTKI)	16,036	South	W1
302	Inspiration Park	911	North	W21
305	Communication Tower (Collin County Sheriff's Office)	426	South	W18b
306	AM Tower #1 (KTNO)	8,43508	East	W3
307	AM Tower #2 (KTNO)	7,99469	East	W3
308	AM Tower #3 (KTNO)	8,37354	East	W3
309	AM Tower #4 (KTNO)	8,44527	East	W3
310	AM Tower #5 (KTNO)	8,91804	East	W3
-	41COL309	166	-	-
-	41COL307	19126	-	-
-	41COL298	8482	-	-
-	41COL308	094	-	-
-	41COL315	0	-	-

(a) All habitable structures and other land use features are located on Figures 6-1a and 6-1b (map pockets). To protect their integrity, archeological sites are not shown on these figures.
(b) Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310 feet have been identified.

Table 6-3(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West C

Route Combination: W1-W3-W6-W14-W22a-W22b				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
~~3~~	~~Single-family residence~~	~~223~~	~~North~~	~~W6~~
~~4~~	~~Single-family residence~~	~~261~~	~~North~~	~~W6~~
~~5~~	~~Mobile home~~	~~191~~	~~North~~	~~W6~~
6	Guest house	~~190~~83	South	W6
6a	Single-family residence	209	South	W6
300	Square Air Airport (TS63)	~~1,255~~1,301	Northeast	W3
301	McKinney National Airport (KTKI)	16,036	South	W1
302	Inspiration Park	466	South	W22b
306	AM Tower #1 (KTNO)	8,435~~08~~	East	W3
307	AM Tower #2 (KTNO)	7,994~~69~~	East	W3
308	AM Tower #3 (KTNO)	8,373~~51~~	East	W3
309	AM Tower #4 (KTNO)	8,445~~27~~	East	W3
310	AM Tower #5 (KTNO)	8,918~~01~~	East	W3
-	41COL309	166	-	-
-	41COL307	~~19~~126	-	-
-	41COL298	848~~2~~	-	-
-	41COL308	~~0~~94	-	-
-	41COL315	0	-	-

(a) All habitable structures and other land use features are located on Figures 6-1a and 6-1b (map pockets). To protect their integrity, archeological sites are not shown on these figures.
(b) Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310 feet have been identified.

Table 6-4(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West D

Route Combination: W1-W4-W5-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
1	Single-family residence	152	South	W4
2	Single-family residence	118	South	W4
~~3~~	~~Single-family residence~~	~~223~~	~~North~~	~~W6~~
4	~~Single-family residence~~	~~261~~	~~North~~	~~W6~~
~~5~~	~~Mobile home~~	~~191~~	~~North~~	~~W6~~
6	Guest house	~~190~~83	South	W6
6a	Single-family residence	209	South	W6
63	Single-family residence	210	East	W17a
64	Garage apartment	144	East	W17a
79	Single-family residence	263	North	W21
80	Single-family residence	240	North	W21
81	Single-family residence	241	North	W21
82	Single-family residence	239	North	W21
83	Single-family residence	241	North	W21
84	Single-family residence	244	North	W21
85	Single-family residence	250	North	W21
86	Single-family residence	250	North	W21
87	Single-family residence	239	North	W21
88	Single-family residence	237	North	W21
89	Single-family residence	240	North	W21
90	Single-family residence	245	North	W21
91	Single-family residence	254	North	W21
92	Single-family residence	250	North	W21
93	Single-family residence	251	North	W21
94	Single-family residence	247	North	W21
95	Single-family residence	242	North	W21
96	Single-family residence	248	North	W21
97	Single-family residence	255	North	W21
98	Single-family residence	248	North	W21
99	Single-family residence	250	North	W21
100	Single-family residence	247	North	W21
101	Single-family residence	251	North	W21
102	Single-family residence	249	North	W21
103	Single-family residence	248	North	W21
104	Single-family residence	244	North	W21

Table 6-4(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West D (Continued)

Route Combination: W1-W4-W5-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
105	Single-family residence	234	North	W21
106	Single-family residence	277	North	W23
107	Single-family residence	265	North	W23
108	Single-family residence	236	North	W23
109	Single-family residence	253	North	W23
110	Single-family residence	249	North	W23
111	Single-family residence	251	North	W23
112	Single-family residence	254	North	W23
113	Single-family residence	252	North	W23
114	Single-family residence	259	North	W23
115	Single-family residence	254	North	W23
116	Single-family residence	250	North	W23
117	Single-family residence	258	North	W23
118	Single-family residence	262	North	W23
119	Single-family residence	261	North	W23
120	Single-family residence	265	North	W23
300	Square Air Airport (TS63)	3,961	Northeast	W1
301	McKinney National Airport (KTKI)	16,036	South	W1
302	Inspiration Park	852	North	W23
306	AM Tower #1 (KTNO)	9,766	East	W1
307	AM Tower #2 (KTNO)	9,296	East	W1
308	AM Tower #3 (KTNO)	9,529	East	W1
309	AM Tower #4 (KTNO)	9,419	East	W1
310	AM Tower #5 (KTNO)	9,888	East	W1
311	McLarry Cemetery	746	West	W23
-	41COL309	166	-	-
-	41COL308	094	-	-
-	41COL315	0	-	-

(a) All habitable structures and other land use features are located on Figures 6-1a and 6-1b (map pockets). To protect their integrity, archeological sites are not shown on these figures.
(b) Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310 feet have been identified.

Environmental Assessment and Alternative Route Analysis

Rayburn Electric Cooperative, Inc.

Proposed New Hope
138-kV Transmission Line Project
Docket No. 50812

(Revised July 2020)

Environmental Assessment and Alternative Route Analysis

prepared for

Rayburn Electric Cooperative, Inc.
Proposed New Hope
138-kV Transmission Line Project
Collin County, Texas

Docket No. 50812

(Revised July 2020)

prepared by

Burns & McDonnell Engineering Company, Inc.
Austin, Texas

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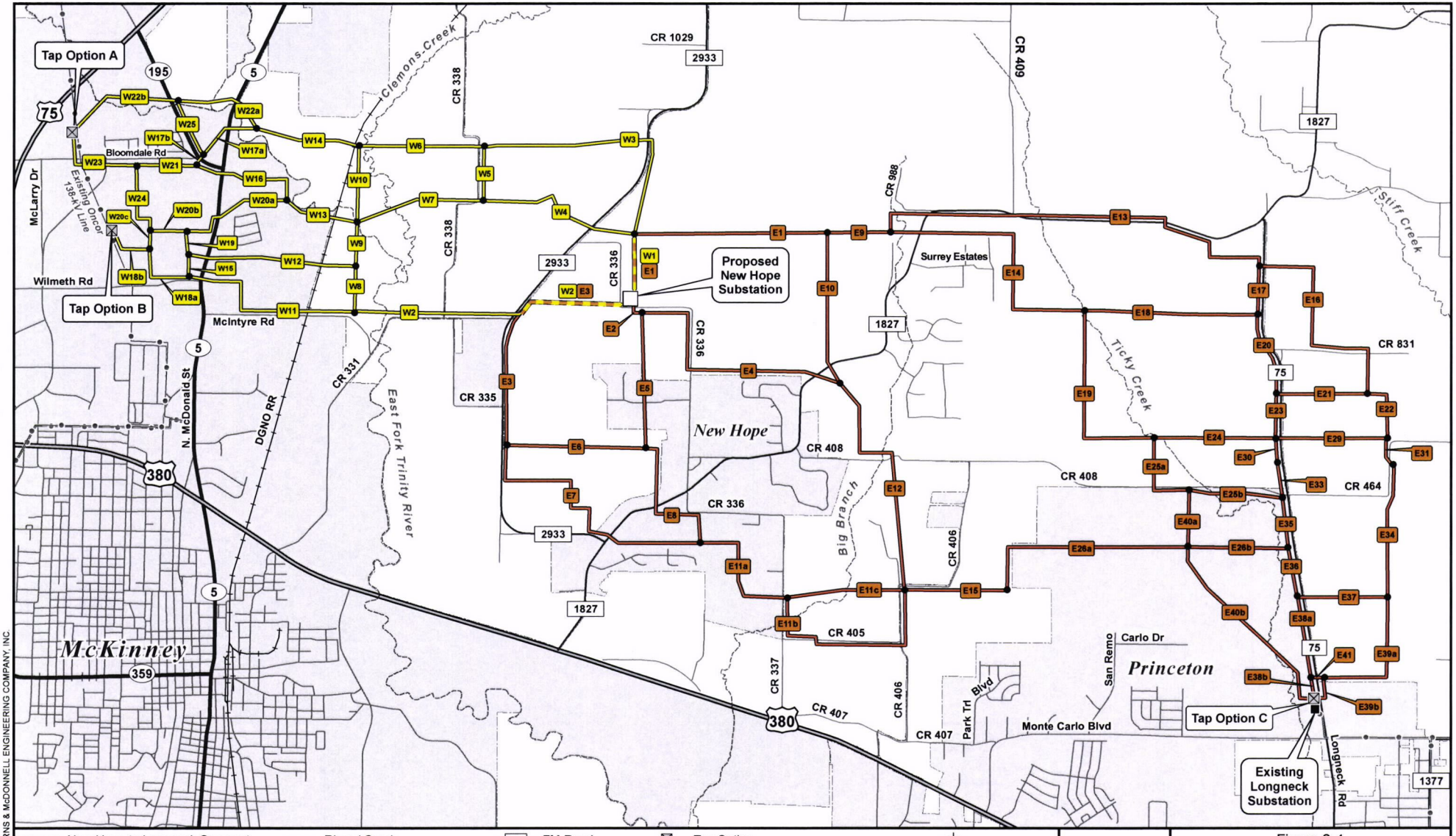

Figure 2-4
Primary Alternative Route Segments
New Hope 138-kV
Transmission Line Project
Rayburn Electric Cooperative
Collin County, Texas

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Source: ESRI; TxDOT; USGS NHD; Burns & McDonnell Engineering Company, Inc

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Table 2-1(R): Primary Alternative Route Composition and Length

Route[a]	Component Segments	Tap Option	Length	
			Feet	Miles
West A	W1-W3-W6-W14-W17a-W17b-W21-W23	A	23,005	4.36
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b	B	24,043	4.55
West C	W1-W3-W6-W14-W22a-W22b	A	22,196	4.20
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A	21,834	4.14
West E	W1-W4-W7-W13-W16-W21-W23	A	20,619	3.91
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A	21,402	4.05
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B	18,728	3.55
West H	W2-W8-W9-W10-W14-W22a-W22b	A	22,166	4.20
West I	W2-W8-W9-W13-W16-W17b-W25-22b	A	21,722	4.11
West J	W2-W11-W15-W19- W20b-W20c-W18b	B	17,831	3.38
West K	W2-W11-W18a-W18b	B	16,842	3.19
West L	W2-W8-W12-W19-W20b-W20c-W18b	B	17,690	3.35
East A	E1-E9-E13-E16-E22-E31-E34-E39a-E39b	C	40,729	7.71
East B	E1-E9-E13-E16-E22-E31-E34-E37-E38a-E38b	C	41,249	7.81
East C	E1-E9-E13-E17-E20-E23-E30-E33-E35-E36-E38a-E38b	C	34,993	6.63
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-E39a-E41-E38b	C	39,553	7.49
East E	E1-E9-E14-E19-E24-E29-E31-E34-E39a-E41-E38b	C	40,027	7.58
East F	E1-E9-E14-E19-E25a-E25b-E35-E36-E38a-E38b	C	34,593	6.55
East G	E1-E9-E14-E19-E25a-E40a-E40b	C	33,479	6.34
East H	E1-E10-E12-E15-E26a-E26b-E36-E38a-E38b	C	36,667	6.94
East I	E2-E4-E12-E15-E26a-E40b	C	31,461	5.96
East J	E2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C	33,878	6.42
East K	E3-E6-E8-E11a-E11b-E15-E26a-E40b	C	42,267	8.01
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-E38b	C	43,574	8.25

(a) For primary route locations, see Figure 2–2 (map pocket)

2.4 Evaluation of Primary Alternative Routes

The evaluation of the primary alternative routes for the Project involved studying a variety of environmental factors. Each of the alternative routes, where access allowed, was examined in the field on various occasions during 2019. The field investigations were conducted from publicly accessible areas. In evaluating the alternative routes, 40 environmental criteria were considered. These criteria are presented in Table 2-2. The goal of this evaluation was to provide comparative environmental data for the 24 primary transmission line routes between the proposed New Hope Substation and either the existing

Oncor Anna to McKinney 138-kV transmission line or the existing TNMP Longneck Substation. The analysis of each route involved the inventory and tabulation of the number or quantity of each environmental criterion located along each route (e.g., number of habitable structures within 300 feet of the centerline, the length paralleling existing compatible ROW, etc.). The number or amount of each criterion was determined by reviewing various maps and recent color aerial imagery (2018, 2019 ESRI; 2018 NAIP; 2015 TOP, and Google Earth) and by field verification, where possible. The environmental criteria of each alternative route were then evaluated. Potential environmental impacts of the primary alternative routes are addressed in Section 4.0 of this document. Comparative environmental data for the primary routes and individual segments are provided in Table 4-1 and Table 4-2, respectively, in Section 4.0.

Table 2-2(R): Environmental Criteria for Alternative Route Evaluation for the New Hope 138-kV Transmission Line Project

No.	Environmental Criterion
Land Use	
1	Length of alternative route
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline
3	Length utilizing existing transmission line ROW
4	Length of ROW parallel to existing transmission line ROW
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc.)
6	Length of ROW parallel to existing water pipeline ROW
7	Length of ROW parallel to property lines (not following existing ROW)[c]
8	Combined total length of ROW utilizing/parallel to existing transmission line ROW, other compatible ROW, existing water pipeline ROW, and property lines
9	Percent of combined total length utilizing/parallel to existing transmission line ROW, other compatible ROW, existing water pipeline ROW, and property lines
10	Length of ROW across parks/recreational areas[d]
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline
12	Length of ROW across cropland
13	Length of ROW across pastureland/rangeland
14	Length of ROW across cropland or pastureland with mobile irrigation systems
15	Number of oil and gas pipeline crossings
16	Number of transmission line crossings
17	Number of U.S. and State highway crossings
18	Number of Farm-to-Market (FM)/Ranch-to-Market (RM) road crossings
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)

short duration of the construction activities, the preservation of vegetation adjacent to surface water features, and the implementation by REC of BMPs designated in the SWPPP.

Measurement of the various criteria used in the environmental analysis of the primary alternative routes for this Project is tabulated in Tables 4-1 and 4-2 at the end of this section. No named rivers are crossed by any alternative route; however, named creeks are crossed by all the alternative routes. The number of stream crossings ranges from 2 crossings (Route East C) to 13 crossings (Route East I). Fourteen of the alternative routes parallel streams within 100 feet, ranging from approximately 0.03 mile (160 feet) for Routes East E and East F to approximately 0.31 mile (1,640 feet) for Routes West J and West K. Sixteen of the alternative routes cross open water, ranging from approximately 0.01 mile (46 feet for Routes West H, West I, West J, West K, and West L and 77 feet for Routes West D, West E, West F, and West G) to approximately 0.04 mile (189 feet for Route East F and 197 feet for Route East L).

4.1.3.2 Floodplains

FEMA has conducted detailed floodplain analyses for Collin County. Proposed construction could result in locating some transmission line structures within floodplains, particularly in the vicinity of named streams. These structures would be designed and constructed so as not to impede the flow of any waterway or create any hazard during flooding. Construction activities within floodplains would be limited to the Project ROW, and significant efforts should be made to keep structures from being in obvious flood channels. Some scour could occur around structures if flood-flow depths and velocities become great enough. Careful siting of structures should eliminate the possibility of significant scour. The Project should have no significant impact on the function of the floodplain, nor adversely affect adjacent property or downstream property.

All the alternative routes except three (Routes East A, East B, and East C), cross mapped 100-year floodplains. These crossings range from approximately 0.06 mile (338 feet) for Route East D to approximately 3.01 miles (15,918 feet) for Route West H.

4.1.3.3 Groundwater

No adverse impacts to groundwater are expected to occur from the construction and operation of the proposed transmission line. The amount of recharge area that would be disturbed by construction is minimal when compared with the total amount of recharge area available for the aquifer systems in the region. Additionally, if accidental spillage of fuel, lubricants, or other petroleum products from normal operation of heavy equipment occurred during construction activities, it would be unlikely to result in any groundwater contamination. Any accidental spills would be promptly handled in accordance with State

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

4.1.4.6 Critical Habitat

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

4.1.4.7 Summary of Impact on Natural Resources

- Route West L would require the least amount of combined upland/bottomland/riparian woodland/brushland needing to be cleared with 0.31 mile (1,632 feet)
- Route East C crosses the fewest streams (2) and the shortest distance across mapped wetlands with 0.01 mile (41 feet)
- Ten routes (West E, West F, West H, West I, West L, East A, East B, East C, East D, and East H) do not parallel any streams within 100 feet
- Eight routes (West A, West B, West C, East A, East D, East E, East G, and East I) do not cross any open water
- Routes East A, East B, and East C do not cross any mapped 100-year floodplains

4.2 Socioeconomic Impact

4.2.1 Impact on Social and Economic Factors

REC will use its own employees or contractors for the clearing and construction of the transmission line, but some short-term local employment would be generated. A portion of the project wages would find their way into the local economy through purchases such as fuel, food, lodging, and possibly construction materials. ROW payments for the acquisition of private easements may be made to individuals whose lands are crossed by the transmission line, based on the land value. REC will also pay state and local taxes on purchases, as well as property tax on both acquired land and improvements made in the

including proximity to habitable structures, length of the alternative route paralleling existing ROW or property lines, and overall length.

4.3.1.1 Habitable Structures

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

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

Burns & McDonnell staff determined the number and distance of habitable structures located within 300 feet of the centerline of each primary alternative route segment through the interpretation of aerial imagery and field reconnaissance where possible. To account for the margin of error in horizontal accuracy of aerial imagery, Burns & McDonnell identified habitable structures located within 310 feet of the centerline of each primary alternative route segment. Of the 24 primary alternative routes being evaluated, all have habitable structures located within 300 feet of their centerlines. Route West H has the least number of habitable structures located within 300 feet of its centerline (1), followed by Route West C (2). By comparison, Route West D has the greatest number of habitable structures located within 300 feet of its centerline (48), followed by Routes West A and West E (46). Table 4-1 presents the number of habitable structures located within 300 feet of each alternative route, and Table 4-2 provides the number of habitable structures located within 300 feet of each individual segment. Table 6-1 through Table 6-24 in Section 6.0 provide the distance and direction of each habitable structure identified within 300 feet of the primary alternative routes. The locations of habitable structures listed in Tables 6-1 through 6-24 are shown on Figures 6–1a and 6-1b, located in map pockets at the end of this document.

4.3.1.2 Utilizing/Paralleling Existing Transmission Line ROW

The least impact to land use generally results from building within existing transmission line ROW, followed by building parallel to existing transmission line ROW. Utilizing existing transmission line ROW of sufficient width usually eliminates the need for additional clearing. Additionally, building parallel to existing transmission line ROW, when compared to establishing a new ROW corridor, can also minimize the amount of ROW to be cleared, which generally results in the least amount of impact to

landowners, the environment, and the overall aesthetic quality of that particular area. The factors listed by 16 TAC § 25.101(b)(3)(B) to be considered in routing transmission lines include:

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

Options to utilize or parallel existing transmission line ROW within the Study Area were limited. None of the primary alternative routes utilizes existing transmission line ROW for this Project; however, 3 of the 24 alternative routes parallel some existing transmission line ROW. Routes West A, West D, and West E parallel approximately 0.18 mile (925 feet) of Oncor's Anna to McKinney 138-kV transmission line, while the remaining 21 routes do not parallel existing transmission line ROW.

4.3.1.3 Paralleling Other Existing Compatible ROW

Paralleling other existing compatible ROW (roads, highways, etc.) is also considered to be a positive routing criterion, one that usually results in fewer impacts than establishing a new ROW corridor within an area and is included in the PUC's transmission line certification criteria. In accordance with PUC Substantive Rule § 25.101(b)(3)(B), Burns & McDonnell identified existing compatible ROW for potential paralleling opportunities. In this respect, Route East C parallels the greatest amount of other existing compatible ROW with approximately 4.14 miles (21,846 feet) of its total length, followed by Route East L with approximately 3.40 miles (17,926 feet). By comparison, Route East G parallels the least amount of other existing compatible ROW with approximately 0.20 mile (1,041 feet), followed by Route West G, with 0.20 mile (1,046 feet) and an additional 0.09 mile (487 feet) parallel to water pipeline ROW. The lengths of primary alternative routes and individual segments that parallel other existing compatible ROW and water pipeline ROW are presented in Table 4-1 and Table 4-2, respectively.

4.3.1.4 Paralleling Property Lines

Another important land use and favorable routing criterion under PUC Substantive Rule § 25.101(b)(3)(B) is the length of property lines paralleled. In the absence of existing ROW to follow, paralleling property or fence lines minimizes disruption to agricultural activities and creates less of a constraint to the future development of a tract of land. Updated parcel data was obtained from the Collin County Appraisal District for this routing purpose. Where contiguous tracts were under apparent common ownership, these parcels were aggregated and only those outside boundaries that were paralleled were

counted for this category; interior parcel lines did not qualify in the count. Each alternative route was developed to parallel property lines where feasible, while avoiding other known constraints. All but two routes parallel property boundaries where other existing linear categories to parallel were not available. For this Project, Route East E parallels the greatest amount of property lines with approximately 4.82 miles (25,461 feet), followed by Route East K with approximately 4.31 miles (22,731 feet). Routes West A and West C do not parallel any property lines, followed by 0.32 mile (1,678 feet) for Route East C. The length of primary alternative routes and individual segments that parallel property lines are presented in Table 4-1 and Table 4-2, respectively.

4.3.1.5 Combined Total Length Paralleling ROW and Property Lines

The combined total length that each primary alternative route parallels existing transmission lines, other compatible ROW, water pipeline ROW, and property lines was calculated for comparison. The sum of each criterion was then considered in relation to the total length of the alternative route. All the alternative routes parallel existing linear features for some portion of their length. Route East K, with 6.75 miles (35,645 feet), or 84.3 percent of overall length, Route East L with 6.73 miles (35,516 feet), or 81.6 percent, and Route East J with 5.16 miles (27,249 feet), or 80.4 percent, parallel the greatest amount of linear feature. By comparison, Route West H parallels the least amount of linear features with 1.86 miles (9,846 feet), or 44.3 percent of its overall length.

4.3.1.6 Overall Length of Routes

Finally, the overall length of an alternative route can be an indicator of the relative level of land use impacts. Generally, all other things being approximately equal, the shorter the route, the less land required for ROW is crossed, which would usually result in fewer potential impacts. In this regard, Routes West K and West L are the shortest alternatives (approximately 3.19 miles [16,842 feet] and 3.35 miles [17,690 feet], respectively). By comparison, Routes East L and East K are the longest routes (approximately 8.25 miles [43,574 feet] and 8.01 miles [42,267 feet], respectively). Table 4-1 and Table 4-2, located at the end of this section, present the overall length of each alternative route and individual segment, respectively.

4.3.2 Impact on Recreation

Potential impacts to recreational land would include the disruption or preemption of recreational activities. As previously mentioned, numerous recreational facilities were identified within the Study Area. Recreational lands were avoided when developing the primary alternative routes, thereby minimizing the amount of such land crossed. None of the alternative routes cross parks or recreational land. However, 13 of the 24 primary alternative routes are located within 1,000 feet of a park or recreation area; 10 of the 12 western primary alternative routes (with the exception of Routes West G and

(4,650 feet). By comparison, Route East K would have the greatest length of ROW located within the FVZ of parks or recreational areas, with an estimated 1.53 miles (8,087 feet), followed by Route East J with 1.52 miles (8,016 feet).

4.3.7 Summary of Impact on Human Resources

As discussed in more detail in Section 5.2, respondents to the Project questionnaires identified maximizing distances from residences as their primary routing concern. Land Use criteria primarily considered for this Project included the number of habitable structures located within 300 feet of each primary alternative route, length parallel to linear features (exiting transmission line ROW, other existing compatible ROW, water pipeline ROW, and property lines), and the overall length of each primary alternative route.

- Routes West H (one habitable structure), West C (two habitable structures), and West J (nine habitable structures) have the fewest habitable structures located within 300 feet of their centerlines. By comparison, Route West D has the most habitable structures within 300 feet of its centerline, with 48 habitable structures.

- Route East K has the highest percentage of its overall length parallel to linear features (existing transmission line ROW, other existing compatible ROW, water pipeline ROW, and property lines), with approximately 84.3 percent of its overall length, followed by Route East L (81.6 percent) and Route East J (80.4 percent). By comparison, Route West H parallels linear features for approximately 44.3 percent of its overall length.

The shortest overall route is Route West K, at approximately 3.19 miles (16,842 feet), followed by Route West L, at 3.35 miles (17,690 feet), and Route West J at 3.38 miles (17,831 feet). By comparison, Route East L is the longest overall route at approximately 8.25 miles (43,574 feet).

4.4 Impact on Cultural Resources

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

All 24 primary alternative routes were individually examined for the number and type of previously recorded cultural resources that are either crossed by the proposed ROW or located within 1,000 feet of each alternative route's centerline and the approximate amount of HPA delineated along each of the routes (Table 4-1). This same information for each segment is shown in Table 4-2. None of the sites crossed by any route's proposed ROW or located within 1,000 feet of any alternative route's centerline have been determined eligible for or listed on the NRHP.

- The number of recorded cultural resource sites crossed by the primary alternative routes ranges from zero to two
- Thirteen routes (West E, West F, West G, West I, West J, West K, West L, East A, East B, East D, East E, East H, and East J) cross no recorded cultural resource sites
- The number of additional recorded cultural resources sites within 1,000 feet of the ROW centerline ranges from zero to five
- Nine routes (West G, West L, East A, East B, East C, East D, East E, East F, and East G) have no additional recorded cultural resources sites within 1,000 feet of the ROW centerline
- Route West A crosses one site (41COL315) and is within 1,000 feet of five sites (41COL298, 41 COL307, 41 COL308, 41COL309, and McLarry Cemetery)
- Route East K crosses two sites (41COL283 and a tract that contains the Johnson Cemetery) and is within 1,000 feet of one site (41COL281)
- No routes cross any NRHP-listed or determined-eligible sites or are within 1,000 feet of such sites
- The length of HPA crossed ranges from 2.27 miles (11,976 feet) for Route West E to 5.83 miles (30,780 feet) for Route East K

Table 4-1(R) Environmental Data for Alternative Route Evaluation (by Route) New Hope 138-kV Transmission Line Project

		Route West A	Route West B	Route West C	Route West D	Route West E	Route West F	Route West G	Route West H	Route West I	Route West J	Route West K	Route West L
Land Use													
1	Length of Alternative Route	4 36	4 55	4 20	4 14	3 91	4 05	3 55	4 20	4 11	3 38	3 19	3 35
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	46	41	2	48	46	18	32	1	16	9	10	33
3	Length utilizing existing transmission line ROW	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4	Length of ROW parallel to existing transmission line ROW	0 18	0 00	0 00	0 18	0 18	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0 86	0 53	0 19	0 97	0 93	0 61	0 20	0 77	1 27	1 41	1 49	0 77
6	Length of ROW parallel to existing water pipeline ROW	1 77	1 77	1 77	0 81	0 23	0 23	0 09	0 13	0 23	0 00	0 00	0 00
7	Length of ROW parallel to property lines (not following existing ROW[c]	0 00	0 61	0 00	0 51	1 33	1 33	1 89	0 96	0 97	1 27	0 92	1 66
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	2 81	2 91	1 96	2 47	2 67	2 18	2 19	1 86	2 47	2 68	2 41	2 43
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	64 4	64 0	46 7	59 7	68 3	53 8	61 7	44 3	60 1	79 3	75 5	72 5
10	Length of ROW across parks/recreational areas[d]	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	1	1	1	1	1	1	0	1	1	1	1	0
12	Length of ROW across cropland	2 32	2 43	2 42	1 84	1 25	1 04	1 08	2 08	1 46	1 71	1 63	1 92
13	Length of ROW across pastureland/rangeland	0 44	0 44	0 35	0 64	0 63	0 63	0 42	0 60	0 86	0 60	0 60	0 60
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	1	0	0	1	1	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	1	1	1	1	1	1	1	1	1	1	1	1
18	Number of FM/RM road crossings	2	2	2	2	1	3	1	2	3	1	1	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	1	1	1	1	1	1	1	1	1	1
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	5	5	5	5	5	5	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	1	0	0	0	0	1	0	0	1	1	1
Aesthetics													
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	1 57	1 83	1 48	1 57	1 57	1 78	1 27	1 48	1 78	1 49	1 30	1 22
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	2 68	2 94	2 84	2 46	2 48	2 94	2 19	2 61	2 92	1 53	1 19	1 53
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	1 15	1 34	0 88	1 15	1 00	1 15	0 86	0 88	1 15	1 47	1 29	1 14
Ecology													
28	Length of ROW through upland woodland/brushland	0 95	0 85	1 06	1 08	1 28	1 80	1 43	1 13	1 14	0 34	0 34	0 25
29	Length of ROW through bottomland/riparian woodland/brushland	0 15	0 15	0 19	0 11	0 12	0 18	0 11	0 16	0 17	0 06	0 06	0 06
30	Length of ROW across potential wetlands[g]	0 09	0 09	0 12	0 10	0 17	0 18	0 20	0 28	0 14	0 04	0 04	0 03
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
32	Number of stream crossings	9	8	10	8	7	9	7	8	9	4	4	4
33	Length of ROW paralleling (within 100 ft) streams	0 07	0 07	0 07	0 04	0 00	0 00	0 04	0 00	0 00	0 31	0 31	0 00
34	Length of ROW across open water (ponds, lakes, etc)	0 00	0 00	0 00	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01
35	Length of ROW across 100-year floodplains	1 18	1 18	2 01	1 31	1 34	2 05	1 18	3 01	2 42	0 63	0 63	1 05
Cultural Resources													
36	Number of recorded cultural resource sites crossed by ROW	1	1	1	1	0	0	0	1	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	5	4	4	3	2	1	0	1	1	1	1	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	2 88	2 85	3 28	2 49	2 27	2 71	2 41	3 67	3 20	2 65	2 46	2 63

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in miles except for Criterion #9, which is expressed as a percentage

Route	Segments	Tap Option
West A	W1-W3-W6-W14-W17a-W17b-W21-W23	A
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b	B
West C	W1-W3-W6-W14-W22a-W22b	A
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A
West E	W1-W4-W7-W13-W16-W21-W23	A
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B
West H	W2-W8-W9-W10-W14-W22a-W22b	A
West I	W2-W8-W9-W13-W16-W17b-W25-W22b	A
West J	W2-W11-W15-W19- W20b-W20c-W18b	B
West K	W2-W11-W18a-W18b	B
West L	W2-W8-W12-W19-W20b-W20c-W18b	B

Table 4-1(R) Environmental Data for Alternative Route Evaluation (by Route) New Hope 138-kV Transmission Line Project

		Route East A	Route East B	Route East C	Route East D	Route East E	Route East F	Route East G	Route East H	Route East I	Route East J	Route East K	Route East L
Land Use													
1	Length of Alternative Route	7 71	7 81	6 63	7 49	7 58	6 55	6 34	6 94	5 96	6 42	8 01	8 25
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	11	12	13	16	15	16	13	13	20	20	21	35
3	Length utilizing existing transmission line ROW	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4	Length of ROW parallel to existing transmission line ROW	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	2 40	2 87	4 14	0 89	0 42	1 88	0 20	1 40	1 26	1 27	2 45	3 40
6	Length of ROW parallel to existing water pipeline ROW	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
7	Length of ROW parallel to property lines (not following existing ROW[c]	2 73	2 60	0 32	4 15	4 82	2 64	2 95	2 48	3 09	3 89	4 31	3 33
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	5 12	5 47	4 46	5 04	5 24	4 51	3 15	3 88	4 35	5 16	6 75	6 73
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	66 4	70 0	67 3	67 3	69 1	68 9	49 7	55 9	73 0	80 4	84 3	81 6
10	Length of ROW across parks/recreational areas[d]	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	1	1	1
12	Length of ROW across cropland	4 41	4 28	4 59	4 48	4 93	3 86	4 03	4 19	2 29	3 16	3 94	4 28
13	Length of ROW across pastureland/rangeland	1 23	1 69	1 08	1 13	0 42	1 02	0 18	0 96	0 43	1 41	1 42	2 21
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	5	5	3	3	3	1	1	1	1	1	1	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	1	1	1	1	1	1	1	1	1	1
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	5	5	5	5	5	5	5	5	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
Aesthetics													
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 24	0 24
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	5 90	6 00	5 89	4 95	4 39	3 86	3 07	3 15	1 83	2 29	3 70	3 86
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	1 52	1 53	1 07
Ecology													
28	Length of ROW through upland woodland/brushland	1 67	1 77	0 60	1 50	1 87	1 30	1 72	1 39	2 64	1 19	1 85	1 31
29	Length of ROW through bottomland/riparian woodland/brushland	0 16	0 17	0 08	0 14	0 23	0 17	0 27	0 18	0 38	0 32	0 36	0 18
30	Length of ROW across potential wetlands[g]	0 03	0 03	0 01	0 03	0 04	0 05	0 03	0 03	0 07	0 06	0 07	0 04
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
32	Number of stream crossings	7	6	2	6	8	5	6	6	13	9	10	7
33	Length of ROW paralleling (within 100 ft) streams	0 00	0 00	0 00	0 00	0 03	0 03	0 17	0 00	0 19	0 24	0 30	0 04
34	Length of ROW across open water (ponds, lakes, etc)	0 00	0 02	0 02	0 00	0 00	0 04	0 00	0 02	0 00	0 02	0 02	0 04
35	Length of ROW across 100-year floodplains	0 00	0 00	0 00	0 06	0 17	0 55	0 92	0 15	0 87	0 53	1 06	0 35
Cultural Resources													
36	Number of recorded cultural resource sites crossed by ROW	0	0	1	0	0	1	1	0	1	0	2	1
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	1	1	1	1	1
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	5 13	5 25	3 72	3 82	4 88	4 24	4 07	4 21	4 34	5 18	5 83	5 55

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in miles except for Criterion #9, which is expressed as a percentage

Route	Segments	Tap Option
East A	E1-E9-E13-E16-E22-E31-E34-E39a-E39b	C
East B	E1-E9-E13-E16-F22-E31-E34-E37-E38a-F38b	C
East C	E1-E9-E13-E17-F20-E23-F30-E33-E35-L36-E38a-E38b	C
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-E39a-E41-E38b	C
East E	E1-E9-E14-E19-F24-F29-L31-E34-E39a-F41-E38b	C
East F	E1-E9-E14-E19-E25a-E25b-F35-F36-E38a-E38b	C
East G	E1-E9-E14-F19-E25a-E40a-E40b	C
East H	E1-E10-E12-E15-F26a-E26b-E36-E38a-E38b	C
East I	E2-E4-E12-E15-E26a-E40b	C
East J	E2-E5-E8-E11a-F11c-E15-E26a-E26b-E36-E38a-E38b	C
East K	E3-E6-E8-E11a-F11b-E15-F26a-E40b	C
East L	E3-E7-F11a-F11b-E15-E26a-F26b-F36-E38a-E38b	C

Table 4-2(R). Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment W1	Segment W2	Segment W3	Segment W4	Segment W5	Segment W6	Segment W7	Segment W8	Segment W9	Segment W10	Segment W11	Segment W12
Land Use													
1	Length of Alternative Route	1,673	8,135	7,850	5,078	1,601	3,602	3,767	1,404	1,299	2,258	5,784	4,945
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	1	0	2	0	2	1	0	0	0	4	28
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel to existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0	4,074	1,015	0	1,601	0	623	0	0	0	3,375	0
6	Length of ROW parallel to existing water pipeline ROW	0	0	5,046	0	0	3,602	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	2,449	0	2,710	0	0	2,983	1,352	0	1,267	634	2,020
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0	6,523	6,061	2,710	1,601	3,602	3,606	1,352	0	1,267	4,009	2,020
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0 0	80 2	77 2	53 4	100 0	100 0	95 7	96 3	0 0	56 1	69 3	40 8
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	1	1
12	Length of ROW across cropland	1,546	3 421	5,923	1,800	1,601	0	75	1,194	1,012	0	3,160	3,794
13	Length of ROW across pastureland/rangeland	0	3,189	265	1,306	0	1,570	658	0	0	0	0	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	1	1
18	Number of FM/RM road crossings	0	1	1	1	0	0	0	0	0	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	1	1	1	1	1	0	0	1	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	0	5	5	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	1	1
Aesthetics													
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	0	0	0	0	0	0	0	3,949	3,241
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	1,673	6,269	5,827	4,701	0	0	0	0	0	0	0	0
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	3,876	2,835
Ecology													
28	Length of ROW through upland woodland/brushland	50	763	985	1,658	0	1,642	2,748	0	197	2,098	1,027	549
29	Length of ROW through bottomland/riparian woodland/brushland	0	209	337	103	0	271	235	0	66	156	103	111
30	Length of ROW across potential wetlands[g]	0	124	86	141	0	279	205	0	18	1,064	75	45
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	0	2	2	1	0	4	2	0	1	1	2	2
33	Length of ROW paralleling (within 100 ft) streams	0	0	185	0	0	207	0	0	0	0	1,640	0
34	Length of ROW across open water (ponds, lakes, etc)	0	46	0	77	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	2,100	295	998	0	1,484	1,849	1,404	1,299	2,258	1,200	2,037
Cultural Resources													
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	2	0	0	1	0	0	0	0	1	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	0	5,343	4,992	2,925	0	3,265	2,520	1,404	1,299	2,258	5,747	4,945

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R)[a] Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment W13	Segment W14	Segment W15	Segment W16	Segment W17a	Segment W17b	Segment W18a	Segment W18b	Segment W19	Segment W20a	Segment W20b	Segment W20c	Segment W21
Land Use														
1	Length of Alternative Route	2,236	3,116	706	3,414	2,011	302	2,070	853	726	3,493	1,099	528	1,766
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	0	0	1	2	0	3	3	1	26	1	1	30
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel 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 compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0	0	0	749	0	0	417	0	0	423	0	0	1,766
6	Length of ROW parallel to existing water pipeline ROW	487	704	0	749	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	0	706	1,326	0	0	900	853	524	1,901	1,030	528	0
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	487	704	706	2,824	0	0	1,317	853	524	2,324	1,030	528	1,766
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	21 8	22 6	100 0	82 7	0 0	0 0	63 6	100 0	72 2	66 5	93 7	100 0	100 0
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	1	0	0	0	1	0	1	0	0	0	1
12	Length of ROW across cropland	461	1,873	706	289	332	153	2,016	0	726	788	1,027	0	1,766
13	Length of ROW across pastureland/rangeland	0	0	0	1,347	497	0	0	0	0	249	0	0	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	1	1	0	0	0	0	1	0	0	0
18	Number of FM/RM road crossings	0	0	0	0	0	1	0	0	0	0	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	1	1	1	1	0	0	1	1	1	1	1	1	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	1	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	1	0	0	0	1	1	1	1	1	1	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	741	1,838	706	3,414	2,011	302	2,070	853	726	3,493	1 099	528	1,766
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	533	1,560	0	3,414	2,011	302	0	0	634	3,493	1,099	59	1,766
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	706	839	1,310	302	2,070	853	726	2,076	1,099	528	1,766
Ecology														
28	Length of ROW through upland woodland/brushland	1,127	993	0	624	781	56	0	0	0	1,978	0	0	0
29	Length of ROW through bottomland/riparian woodland/brushland	160	106	0	150	84	0	0	0	0	96	0	0	0
30	Length of ROW across potential wetlands[g]	344	49	0	205	46	0	0	0	0	375	0	0	0
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	2	1	0	1	1	0	0	0	0	2	0	0	0
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	193	0	0	0
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	2,236	3,116	0	1,979	1,318	0	0	0	0	1,149	0	0	0
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	1	0	0	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	1	1	1	0	0	1	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	2,236	3,116	706	2,237	1,760	0	1,914	0	636	3,493	1,099	435	0

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment W22a	Segment W22b	Segment W23	Segment W24	Segment W25	Segment E1	Segment E2	Segment E3	Segment E4	Segment E5	Segment E6	Segment E7	Segment E8
Land Use														
1	Length of Alternative Route	2,885	3,069	2,685	2,342	1,862	7,390	351	7,173	7,906	4,120	4,153	8,558	4,589
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	0	18	10	14	0	0	0	10	4	0	18	7
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel to existing transmission line ROW	0	0	925	0	0	0	0	0	0	0	0	0	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0	0	1,760	0	1,862	0	246	4,437	3,512	0	0	1,048	550
6	Length of ROW parallel to existing water pipeline ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	0	0	1,821	0	0	0	2,397	3,240	3,029	4,153	2,979	3,967
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0	0	2,685	1,821	1,862	0	246	6,834	6,752	3,029	4,153	4,027	4,517
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0 0	0 0	100 0	77 8	100 0	0 0	70 1	95 3	85 4	73 5	100 0	47 1	98 4
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	1	1	1	0	0	0	0	0	0	0	1	1
12	Length of ROW across cropland	2,287	1,173	652	1,243	0	6,781	0	3,038	2,760	0	1,856	2,642	1,336
13	Length of ROW across pastureland/rangeland	0	0	0	0	0	0	0	3,148	706	1,575	2 047	2,948	258
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	1	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	1	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	1	0	0	0	0	0	0	1	0	0	1	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	0	0	1	0	1	1	1	1	1	1	1	1
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	0	0	0	0	1	1	1	1	1	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	5	0	0	5	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	1	0	0	0	0	0	0	0	0	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	2,885	3,069	2,381	2,342	1,862	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	2,885	3,051	998	2,342	1,862	4,052	102	7,173	4,190	1,134	4,153	6,121	3,767
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	1,581	3,069	2,685	2,342	1,862	0	0	0	0	849	920	3,096	4,589
Ecology														
28	Length of ROW through upland woodland/brushland	290	1,649	534	0	1,586	506	317	660	3,826	1,929	182	2,501	1,574
29	Length of ROW through bottomland/riparian woodland/brushland	82	213	0	0	73	0	0	86	442	387	0	127	469
30	Length of ROW across potential wetlands[g]	178	44	20	0	21	0	0	21	109	55	0	21	88
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	1	2	1	0	1	0	0	1	5	2	0	1	2
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	225	238	655	0	0	593
34	Length of ROW across open water (ponds, lakes etc)	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	2,885	2,856	0	0	896	0	0	99	0	590	0	0	0
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	1	0	0	0	0	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	2,885	3,069	2,058	1,502	1,300	2,221	351	4,581	6,323	2,994	2,113	3,969	4,589

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R). Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment E9	Segment E10	Segment E11a	Segment E11b	Segment E11c	Segment E12	Segment E13	Segment E14	Segment E15	Segment E16	Segment E17	Segment E18	Segment E19
Land Use														
1	Length of Alternative Route	1,875	4,582	3,961	6,524	3,498	7,336	12,676	8,048	3,175	6,920	1,458	5,176	5,856
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	0	0	2	11	3	8	4	13	1	5	1	0	0
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel 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 compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	0	0	0	6,524	0	1,487	8,794	0	1,403	1,654	1,458	0	0
6	Length of ROW parallel to existing water pipeline ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	0	3,833	0	1,326	4,699	1,678	7,863	1,772	4,691	0	3,510	4,670
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0	0	3,833	6,524	1,326	6,186	10,472	7,863	3,175	6,345	1,458	3,510	4,670
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	0 0	0 0	96 8	100 0	37 9	84 3	82 6	97 7	100 0	91 7	100 0	67 8	79 7
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	1	0	0	0	0	0	0	0	0	0	0
12	Length of ROW across cropland	1,302	3,635	2,594	3,762	2,148	1,110	9,746	6,598	2,871	1,316	1,458	2,050	3,147
13	Length of ROW across pastureland/rangeland	171	0	437	757	845	742	287	0	0	3,495	0	1,457	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	1	0	0	0	0	3	1	0	1	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	1	1	1	1	1	0	0	1	0	0	0	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	1	1	0	0	0	1	1	1	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	5	5	0	0	0	5	5	5	0	0	0	5	5
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	1,243	0	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	1,875	4,582	0	0	0	884	12,123	5,804	0	6,920	1,458	3,027	0
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	2,578	0	0	0	0	0	0	0	0	0	0
Ecology														
28	Length of ROW through upland woodland/brushland	402	613	658	1,489	195	4,605	1,814	1,029	174	1,456	0	1,606	2,329
29	Length of ROW through bottomland/riparian woodland/brushland	0	0	114	114	216	461	272	260	0	299	0	0	297
30	Length of ROW across potential wetlands[g]	0	0	33	20	21	68	41	40	50	47	0	0	30
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	0	0	1	1	1	3	2	2	0	2	0	0	1
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	0	0	0	160
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	113	0	0	0	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	0	97	1,128	1,597	292	0	333	0	0	0	5	350
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	1	0	0	0	0	0	0	0	0	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	746	2,521	3,961	4,271	2,910	4,962	8,605	3,367	434	5,663	333	1,313	4,849

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment E20	Segment E21	Segment E22	Segment E23	Segment E24	Segment E25a	Segment E25b	Segment E26a	Segment E26b	Segment E29	Segment E30	Segment E31	Segment E33
Land Use														
1	Length of Alternative Route	2,495	2,646	1,990	1,301	3,668	2,556	2,868	6,609	3,061	3,258	753	817	1,043
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	1	0	0	1	0	0	0	1	0	0	0	1	3
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel 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 compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	2,495	0	0	1,301	0	1,041	2,868	0	0	0	753	722	1,043
6	Length of ROW parallel to existing water pipeline ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	0	2,530	1,879	0	3,668	1,394	0	6,609	0	3,114	0	0	0
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	2,495	2,530	1,879	1,301	3,668	2,435	2,868	6,609	0	3,114	753	722	1,043
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	100 0	95 6	94 4	100 0	100 0	95 3	100 0	100 0	0 0	95 6	100 0	88 4	100 0
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Length of ROW across cropland	2,422	376	0	1,228	2,545	1,756	788	5,348	2,378	1,542	753	79	527
13	Length of ROW across pastureland/rangeland	0	1,316	1,606	0	0	0	0	0	225	598	0	649	0
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	1	0	0	0	0	0	0	0	1	0	0	0
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	0	0	0	0	0	0	1	0	0	0	0	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
Aesthetics														
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	2,495	2,646	79	1,301	2,551	0	2,644	0	2,587	2,729	753	0	1,043
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0	0	0
Ecology														
28	Length of ROW through upland woodland/brushland	0	117	384	0	720	730	1,518	926	365	1,031	0	0	76
29	Length of ROW through bottomland/riparian woodland/brushland	0	231	0	0	396	0	154	245	87	0	0	0	0
30	Length of ROW across potential wetlands[g]	0	28	31	0	50	0	174	42	20	42	0	0	0
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	0	1	1	0	2	0	2	2	1	1	0	0	0
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	0	0	0	105	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	0	0	0	224	0	2,204	138	366	0	0	0	0
Cultural Resources														
36	Number of recorded cultural resource sites crossed by ROW	0	0	0	0	0	0	1	0	0	0	0	0	1
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	1	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	447	2,145	1,990	0	3,577	2,549	2,868	4,748	3,061	3,086	494	817	1,043

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 4-2(R): Environmental Data for Alternative Route (by Segment) Evaluation New Hope 138-kV Transmission Line Project

		Segment E34	Segment E35	Segment E36	Segment E37	Segment E38a	Segment E38b	Segment E39a	Segment E39b	Segment E40a	Segment E40b	Segment E41
Land Use												
1	Length of Alternative Route	3,946	1,487	1,472	2,593	2,491	551	4,429	687	1,671	6,084	192
2	Number of habitable structures[a] within 300 ft[b] of ROW centerline	1	0	1	0	2	0	1	0	0	0	0
3	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0
4	Length of ROW parallel to existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc - excluding oil and gas pipelines)	928	1,487	1,472	0	2,491	551	0	549	0	0	0
6	Length of ROW parallel to existing water pipeline ROW	0	0	0	0	0	0	0	0	0	0	0
7	Length of ROW parallel to property lines (not following existing ROW[c]	3,018	0	0	2,459	0	0	3,128	0	1,671	0	0
8	Combined total length of ROW utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	3,946	1,487	1,472	2,459	2,491	551	3,128	549	1,671	0	0
9	Percent of combined total length utilizing/parallel to existing t-line ROW, other compatible ROW, water pipeline ROW, and property lines	100 0	100 0	100 0	94 8	100 0	100 0	70 6	79 9	100 0	0 0	0
10	Length of ROW across parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0
11	Number of additional parks/recreational areas[d] within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
12	Length of ROW across cropland	1,455	0	0	1,895	0	0	2,589	0	1,667	25	0
13	Length of ROW across pastureland/rangeland	0	1,117	1,398	0	2,165	551	103	178	0	805	124
14	Length of ROW across cropland or pastureland with mobile irrigation systems	0	0	0	0	0	0	0	0	0	0	0
15	Number of oil and gas pipeline crossings	0	0	0	0	0	0	0	0	0	0	0
16	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0
17	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0
18	Number of FM/RM road crossings	0	0	0	0	0	0	0	1	0	0	1
19	Number of FAA-registered public/military airfields[e] within 20,000 ft of ROW centerline (with runway >3,200 ft)	0	0	0	0	0	0	0	0	0	0	0
20	Number of FAA-registered public/military airfields[e] within 10,000 ft of ROW centerline (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
Aesthetics												
25	Estimated length of ROW within foreground visual zone[f] of U S and State highways	0	0	0	0	0	0	0	0	0	0	0
26	Estimated length of ROW within foreground visual zone[f] of FM/RM roads	1,009	1,487	1,472	2,593	2,491	551	4,429	687	0	4,460	192
27	Estimated length of ROW within foreground visual zone[f] of parks/recreational areas[d]	0	0	0	0	0	0	0	0	0	0	0
Ecology												
28	Length of ROW through upland woodland/brushland	2,270	214	69	2,474	60	0	1,580	427	0	4,110	0
29	Length of ROW through bottomland/riparian woodland/brushland	162	0	0	0	166	0	101	0	0	866	0
30	Length of ROW across potential wetlands[g]	36	0	0	0	0	0	20	0	0	94	0
31	Length of ROW across known occupied habitat of federally listed endangered or threatened species	0	0	0	0	0	0	0	0	0	0	0
32	Number of stream crossings	1	0	0	0	0	0	1	0	0	3	0
33	Length of ROW paralleling (within 100 ft) streams	0	0	0	0	0	0	0	0	0	757	0
34	Length of ROW across open water (ponds, lakes, etc)	0	0	0	0	84	0	0	0	0	0	0
35	Length of ROW across 100-year floodplains	0	0	0	0	0	0	0	0	0	4,158	0
Cultural Resources												
36	Number of recorded cultural resource sites crossed by ROW	0	1	0	0	0	0	0	0	0	1	0
37	Number of additional recorded cultural resource sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
38	Number of NRHP-listed or determined-eligible sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0
39	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of ROW centerline	0	0	0	0	0	0	0	0	0	0	0
40	Length of ROW crossing areas of high archeological/historical site potential	3,946	1,487	1,472	898	2,265	551	2,410	687	1,671	6,084	192

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

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

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

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

(e) As listed in the Chart Supplement South Central U S (FAA, 2019a, formerly known as the Airport/Facility Directory South Central U S) and FAA (2019b)

(f) One-half mile, unobstructed

(g) As mapped by the USFWS NWI

Note all length measurements in feet except for Criterion #9, which is expressed as a percentage

Table 6-1(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West A

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
6	Guest house	83	South	W6
6a	Single-family residence	209	South	W6
63	Single-family residence	210	East	W17a
64	Garage apartment	144	East	W17a
79	Single-family residence	263	North	W21
80	Single-family residence	240	North	W21
81	Single-family residence	241	North	W21
82	Single-family residence	239	North	W21
83	Single-family residence	241	North	W21
84	Single-family residence	244	North	W21
85	Single-family residence	250	North	W21
86	Single-family residence	250	North	W21
87	Single-family residence	239	North	W21
88	Single-family residence	237	North	W21
89	Single-family residence	240	North	W21
90	Single-family residence	245	North	W21
91	Single-family residence	254	North	W21
92	Single-family residence	250	North	W21
93	Single-family residence	251	North	W21
94	Single-family residence	247	North	W21
95	Single-family residence	242	North	W21
96	Single-family residence	248	North	W21
97	Single-family residence	255	North	W21
98	Single-family residence	248	North	W21
99	Single-family residence	250	North	W21
100	Single-family residence	247	North	W21
101	Single-family residence	251	North	W21
102	Single-family residence	249	North	W21
103	Single-family residence	248	North	W21
104	Single-family residence	244	North	W21
105	Single-family residence	234	North	W21
106	Single-family residence	277	North	W23

Table 6-1(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West A (Continued)

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
107	Single-family residence	265	North	W23
108	Single-family residence	236	North	W23
109	Single-family residence	253	North	W23
110	Single-family residence	249	North	W23
111	Single-family residence	251	North	W23
112	Single-family residence	254	North	W23
113	Single-family residence	252	North	W23
114	Single-family residence	259	North	W23
115	Single-family residence	254	North	W23
116	Single-family residence	250	North	W23
117	Single-family residence	258	North	W23
118	Single-family residence	262	North	W23
119	Single-family residence	261	North	W23
120	Single-family residence	265	North	W23
300	Square Air Airport (TS63)	1,301	Northeast	W3
301	McKinney National Airport (KTKI)	16,036	South	W1
302	Inspiration Park	852	North	W23
306	AM Tower #1 (KTNO)	8,435	East	W3
307	AM Tower #2 (KTNO)	7,994	East	W3
308	AM Tower #3 (KTNO)	8,373	East	W3
309	AM Tower #4 (KTNO)	8,445	East	W3
310	AM Tower #5 (KTNO)	8,918	East	W3
311	McLarry Cemetery	746	West	W23
-	41COL309	166	-	-
-	41COL307	126	-	-
-	41COL298	848	-	-
-	41COL308	94	-	-
-	41COL315	0	-	-

(a) All habitable structures and other land use features are located on Figures 6-1a and 6-1b (map pockets). To protect their integrity, archeological sites are not shown on these figures.
(b) Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310 feet have been identified.

Table 6-2(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West B

Route Combination: W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
6	Guest house	83	South	W6
6a	Single-family residence	209	South	W6
63	Single-family residence	210	East	W17a
64	Garage apartment	144	East	W17a
79	Single-family residence	263	North	W21
80	Single-family residence	240	North	W21
81	Single-family residence	241	North	W21
82	Single-family residence	239	North	W21
83	Single-family residence	241	North	W21
84	Single-family residence	244	North	W21
85	Single-family residence	250	North	W21
86	Single-family residence	250	North	W21
87	Single-family residence	239	North	W21
88	Single-family residence	237	North	W21
89	Single-family residence	240	North	W21
90	Single-family residence	245	North	W21
91	Single-family residence	254	North	W21
92	Single-family residence	250	North	W21
93	Single-family residence	251	North	W21
94	Single-family residence	247	North	W21
95	Single-family residence	242	North	W21
96	Single-family residence	248	North	W21
97	Single-family residence	255	North	W21
98	Single-family residence	248	North	W21
99	Single-family residence	250	North	W21
100	Single-family residence	247	North	W21
101	Single-family residence	251	North	W21
102	Single-family residence	249	North	W21
103	Single-family residence	248	North	W21
104	Single-family residence	244	North	W21
105	Single-family residence	234	North	W21
106	Single-family residence	278	North	W21

Table 6-4(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West D

Route Combination: W1-W4-W5-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
1	Single-family residence	152	South	W4
2	Single-family residence	118	South	W4
6	Guest house	83	South	W6
6a	Single-family residence	209	South	W6
63	Single-family residence	210	East	W17a
64	Garage apartment	144	East	W17a
79	Single-family residence	263	North	W21
80	Single-family residence	240	North	W21
81	Single-family residence	241	North	W21
82	Single-family residence	239	North	W21
83	Single-family residence	241	North	W21
84	Single-family residence	244	North	W21
85	Single-family residence	250	North	W21
86	Single-family residence	250	North	W21
87	Single-family residence	239	North	W21
88	Single-family residence	237	North	W21
89	Single-family residence	240	North	W21
90	Single-family residence	245	North	W21
91	Single-family residence	254	North	W21
92	Single-family residence	250	North	W21
93	Single-family residence	251	North	W21
94	Single-family residence	247	North	W21
95	Single-family residence	242	North	W21
96	Single-family residence	248	North	W21
97	Single-family residence	255	North	W21
98	Single-family residence	248	North	W21
99	Single-family residence	250	North	W21
100	Single-family residence	247	North	W21
101	Single-family residence	251	North	W21
102	Single-family residence	249	North	W21
103	Single-family residence	248	North	W21
104	Single-family residence	244	North	W21

Table 6-4(R): Habitable Structures and Other Land Use Features in the Vicinity of Alternative Route West D (Continued)

Route Combination: W1-W4-W5-W6-W14-W17a-W17b-W21-W23				
Feature ID Number[a]	**Structure/Feature**	**Distance from Centerline[b] (feet)**	**Direction**	**Nearest Alternative Route Segment**
105	Single-family residence	234	North	W21
106	Single-family residence	277	North	W23
107	Single-family residence	265	North	W23
108	Single-family residence	236	North	W23
109	Single-family residence	253	North	W23
110	Single-family residence	249	North	W23
111	Single-family residence	251	North	W23
112	Single-family residence	254	North	W23
113	Single-family residence	252	North	W23
114	Single-family residence	259	North	W23
115	Single-family residence	254	North	W23
116	Single-family residence	250	North	W23
117	Single-family residence	258	North	W23
118	Single-family residence	262	North	W23
119	Single-family residence	261	North	W23
120	Single-family residence	265	North	W23
300	Square Air Airport (TS63)	3,961	Northeast	W1
301	McKinney National Airport (KTKI)	16,036	South	W1
302	Inspiration Park	852	North	W23
306	AM Tower #1 (KTNO)	9,766	East	W1
307	AM Tower #2 (KTNO)	9,296	East	W1
308	AM Tower #3 (KTNO)	9,529	East	W1
309	AM Tower #4 (KTNO)	9,419	East	W1
310	AM Tower #5 (KTNO)	9,888	East	W1
311	McLarry Cemetery	746	West	W23
-	41COL309	166	-	-
-	41COL308	94	-	-
-	41COL315	0	-	-

(a) All habitable structures and other land use features are located on Figures 6-1a and 6-1b (map pockets). To protect their integrity, archeological sites are not shown on these figures.
(b) Due to the potential horizontal inaccuracies of the aerial photography and data utilized, all habitable structures within 310 feet have been identified.

New Hope 138-kV Transmission Line Project
PUC Docket No. 50812
Figure 2-2 (v. 6-30-20)

THE FOLLOWING PAGE IS IN AN OVERSIZED MAP AND CAN BE VIEWED ON THE PUC INTERCHANGE BY DOWNLOADING THE NATIVE FILE (ZIP) FOR THIS APPLICATION IN DOCKET NO. 50812

Route	Component Segments	Tap Option
West A	W1-W3-W6-W14-W17a-W17b-W21-W23	A
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W26c-W18b	B
West C	W1-W3-W6-W14-W22a-W22b	A
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A
West E	W1-W4-W7-W13-W16-W21-W23	A
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B
West H	W2-W8-W9-W10-W14-W22a-W22b	A
West I	W2-W8-W9-W13-W16-W17b-W25-22b	A
West J	W2-W11-W15-W19-W20b-W20c-W18b	B
West K	W2-W11-W18a-W18b	B
West L	W2-W8-W12-W19-W20b-W20c-W18b	B

Route	Component Segments	Tap Option
East A	E1-E9-E13-E16-E22-E31-E34-E36a-E36b	C
East B	E1-E9-E13-E16-E22-E31-E34-E37-E38a-E38b	C
East C	E1-E9-E13-E17-E20-E23-E26-E33-E35-E36-E38a-E38b	C
East D	E1-E9-E14-E18-E20-E21-E23-E31-E34-E36a-E41-E38b	C
East E	E1-E9-E14-E19-E24-E29-E31-E34-E36a-E41-E38b	C
East F	E1-E9-E14-E19-E26a-E26b-E35-E36-E38a-E38b	C
East G	E1-E9-E14-E19-E26a-E40a-E40b	C
East H	E1-E10-E12-E15-E26a-E26b-E36-E38a-E38b	C
East I	E2-E4-E12-E15-E26a-E40b	C
East J	E2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C
East K	E3-E6-E8-E11a-E11b-E15-E26a-E40b	C
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-E38b	C

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Figure 2-2
Primary Alternative Routes in Relation to Environmental and Land Use Constraints
New Hope 138-kV
Transmission Line Project
Rayburn Electric Cooperative
Collin County, Texas

Source: THC; USGS NHD; BNIS; TWDB; FAA; Collin County; USFWS NWI; FEMA; RRC; Burns & McDonnell Engineering Company, Inc

Issued: 6/30/2020

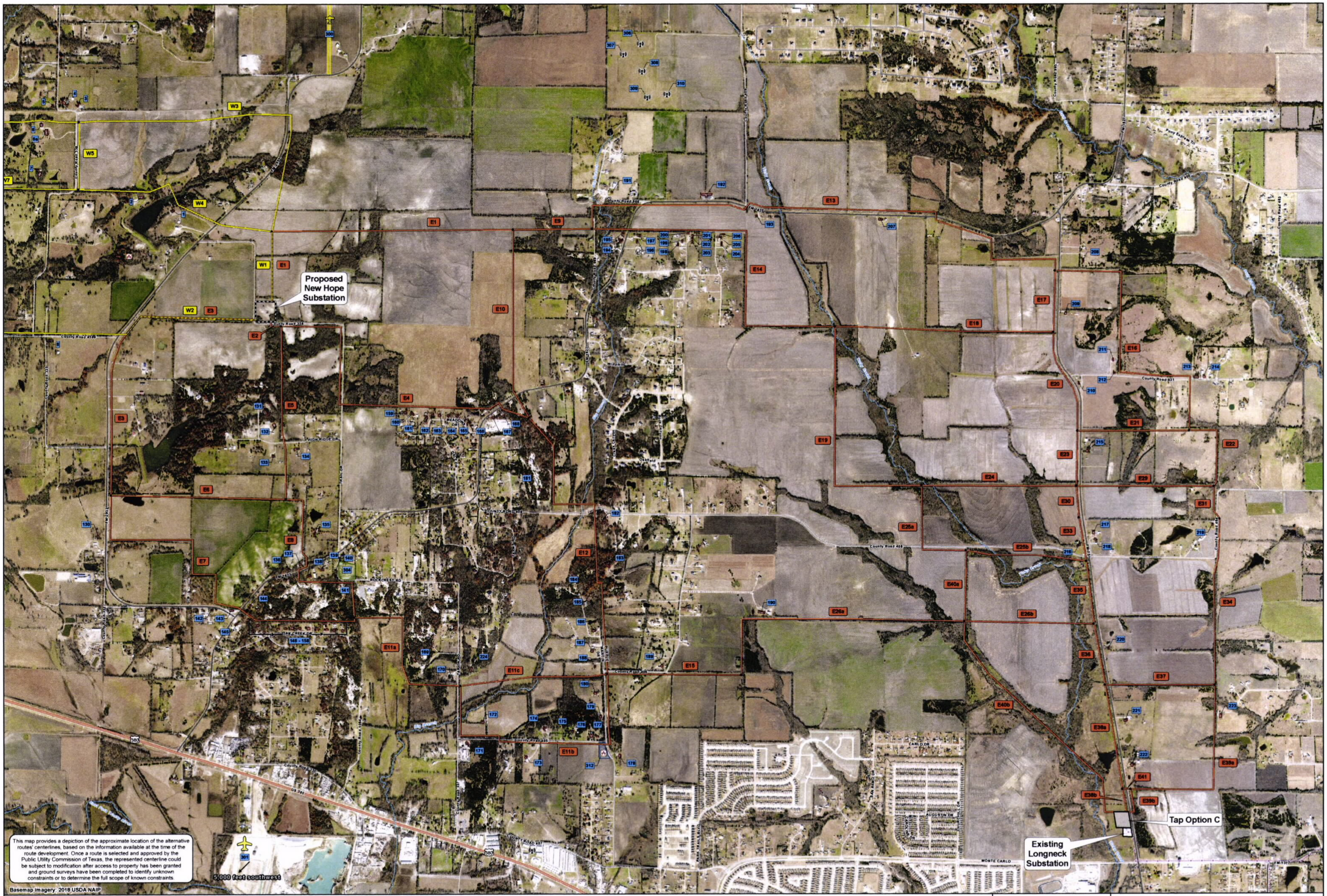
New Hope 138-kV Transmission Line Project
PUC Docket No. 50812
Figure 6-1a (v. 6-26-20)

THE FOLLOWING PAGE IS IN AN OVERSIZED MAP AND CAN BE VIEWED ON THE PUC INTERCHANGE BY DOWNLOADING THE NATIVE FILE (ZIP) FOR THIS APPLICATION IN DOCKET NO. 50812


Tap Option A
Tap Option B
Proposed New Hope Substation
6,000 feet east
10,000 feet south
W1
W2
W3
W4
W5
W6
W7
W9
W10
W11
W12
W13
W14
W15
W16
W17a
W17b
W18b
W19
W20a
W20b
W20c
W21
W22a
W22b
W23
W24
W25
E1
E2
E3
E5
E6
This map provides a depiction of the approximate location of the alternative routes' centerlines, based on the information available at the time of the route development. Once a route is selected and approved by the Public Utility Commission of Texas, the represented centerline could be subject to modification after access to property has been granted and ground surveys have been completed to identify unknown constraints or to determine the full scope of known constraints.
Basemap Imagery: 2018 USDA NAIP
New Hope to Longneck Tap Segment
New Hope to Oncor Tap Segment
Segment Endpoint
Segment ID Label
Habitable Structure / Land Use Feature ID
Existing Substation
Proposed Tap Option
Proposed New Hope Substation
Existing Transmission Line
NHD Named Stream
Airport
Cemetery
Electronic Communication Tower
Cemetery Boundary
Airstrip
Habitable Structure
Park/Recreation Area
Railroad
US Highway
State Highway
Farm-to-Market Road
Route
Component Segments
Tap Option
West A W1-W3-W6-W14-W17a-W17b-W21-W23 A
West B W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b B
West C W1-W3-W6-W14-W22a-W22b A
West D W1-W4-W5-W6-W14-W17a-W17b-W21-W23 A
West E W1-W4-W7-W13-W16-W21-W23 A
West F W1-W4-W7-W13-W16-W17b-W25-W22b A
West G W1-W4-W7-W13-W20a-W20b-W20c-W18b B
West H W2-W8-W9-W10-W14-W22a-W22b A
West I W2-W8-W9-W13-W16-W17b-W25-22b A
West J W2-W11-W15-W19-W20b-W20c-W18b B
West K W2-W11-W18a-W18b B
West L W2-W8-W12-W19-W20b-W20c-W18b B
NORTH
0 500 1,000 2,000
Feet
BURNS McDONNELL
Figure 6-1a
Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Routes
New Hope 138-kV
Transmission Line Project
Rayburn Electric Cooperative
Collin County, Texas
Source: ESRI, USGS NHD, ONIS, FAA, Collin County, Burns & McDonnell Engineering Company, Inc.
Issued: 8/26/2020

New Hope 138-kV Transmission Line Project
PUC Docket No. 50812
Figure 6-1b (v. 6-26-20)

THE FOLLOWING PAGE IS IN AN OVERSIZED MAP AND CAN BE VIEWED ON THE PUC INTERCHANGE BY DOWNLOADING THE NATIVE FILE (ZIP) FOR THIS APPLICATION IN DOCKET NO. 50812



- New Hope to Longneck Tap Segment
- New Hope to Oncor Tap Segment
- Segment Endpoint
- Segment ID Label
- Habitable Structure / Land Use Feature ID
- Existing Substation
- Proposed Tap Option
- Proposed New Hope Substation
- Existing Transmission Line
- NHD Named Stream
- Airport
- Cemetery
- Electronic Communication Tower
- Cemetery Boundary
- Airstrip
- Habitable Structure
- Park/Recreation Area
- Railroad
- US Highway
- State Highway
- Farm-to-Market Road

Route	Component Segments	Tap Option
East A	E1-E9-E13-E16-E22-E31-E34-E39a-E39b	C
East B	E1-E9-E13-E16-E22-E31-E34-E37-E38a-E38b	C
East C	E1-E9-E13-E17-E20-E23-E30-E33-E35-E36-E38a-E38b	C
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-E39a-E41-E38b	C
East E	E1-E9-E14-E19-E24-E29-E31-E34-E39a-E41-E38b	C
East F	E1-E9-E14-E19-E25a-E25b-E35-E36-E38a-E38b	C
East G	E1-E9-E14-E19-E25a-E40a-E40b	C
East H	E1-E10-E12-E15-E26a-E26b-E36-E38a-E38b	C
East I	E2-E4-E12-E15-E26a-E40b	C
East J	E2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C
East K	E3-E6-E8-E11a-E11b-E15-E26a-E40b	C
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-E38b	C

NORTH

0 700 1,400 2,800
Feet

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Figure 6-1b
Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternative Routes
New Hope 138-kV
Transmission Line Project
Rayburn Electric Cooperative
Collin County, Texas

Issued: 8/26/2020

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Source: ESRI; USGS NHD, GNIS; FAA; Collin County; Burns & McDonnell Engineering Company, Inc.

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-kV TRANSMISSION LINE PROJECT IN COLLIN COUNTY, TEXAS

DOCKET NO. 50812

Attachment 3(R)—Estimated Costs

New Hope 138-kV Transmission Line Project
PUC Docket No. 50812
Estimated Costs (Revised)

ROUTE LETTER	TRANSMISSION LINE LENGTH (MILES)	RIGHT-OF-WAY AND LAND ACQUISITION	ENGINEERING AND DESIGN (UTILITY)	ENGINEERING AND DESIGN (CONTRACT)	PROCUREMENT OF MATERIALS & EQUIPMENT	CONSTRUCTION OF FACILITIES (UTILITY)	CONSTRUCTION OF FACILITIES (CONTRACT)	OTHER (ALL COSTS NOT INCLUDED IN OTHER CATEGORIES)*	TOTAL ESTIMATED COSTS
WA	4.36	$1,857,282.00	$98,511.98	$394,047.92	$1,754,126.85	$98,511.98	$1,529,605.83	$771,152.20	**$6,503,238.76**
WB	4.55	$2,130,135.00	$108,177.74	$432,710.98	$1,917,620.90	$108,177.74	$1,688,303.92	$860,408.97	**$7,245,535.25**
WC	4.20	$949,837.00	$96,600.58	$386,402.30	$1,729,309.90	$96,600.58	$1,490,709.27	$625,478.43	**$5,374,938.05**
WD	4.14	$1,823,627.00	$102,570.28	$410,281.12	$1,790,293.55	$102,570.28	$1,628,715.78	$786,395.45	**$6,644,453.47**
WE	3.91	$1,934,617.00	$94,868.40	$379,473.61	$1,641,972.70	$94,868.40	$1,520,307.35	$764,534.56	**$6,430,642.02**
WF	4.05	$1,306,977.00	$103,929.40	$415,717.59	$1,805,927.75	$103,929.40	$1,658,385.52	$715,693.54	**$6,110,560.19**
WG	3.55	$2,495,126.00	$97,261.69	$389,046.77	$1,651,507.70	$97,261.69	$1,590,548.72	$860,577.36	**$7,181,329.94**
WH	4.20	$967,209.00	$95,972.66	$383,890.65	$1,688,097.90	$95,972.66	$1,510,990.88	$624,944.67	**$5,367,078.43**
WI	4.11	$1,273,886.00	$104,046.09	$416,184.37	$1,818,388.05	$104,046.09	$1,649,815.02	$711,313.36	**$6,077,678.98**
WJ	3.38	$3,083,435.00	$90,980.62	$363,922.49	$1,564,990.40	$90,980.62	$1,467,697.00	$917,418.36	**$7,579,424.49**
WK	3.19	$2,379,756.00	$83,400.60	$333,602.40	$1,428,229.90	$83,400.60	$1,351,790.10	$773,966.40	**$6,434,146.00**
WL	3.35	$2,351,794.00	$80,934.58	$323,738.34	$1,431,141.65	$80,934.58	$1,266,677.84	$757,442.02	**$6,292,663.02**
EA	7.71	$1,706,165.00	$189,123.10	$756,492.40	$3,259,001.30	$189,123.10	$3,045,102.06	$1,201,540.25	**$10,346,547.22**
EB	7.81	$1,619,976.00	$183,424.57	$733,698.28	$3,178,364.85	$183,424.57	$2,935,787.50	$1,160,119.25	**$9,994,795.03**
EC	6.63	$1,384,793.00	$149,264.40	$597,057.60	$2,603,663.40	$149,264.40	$2,371,816.60	$954,040.95	**$8,209,900.35**
ED	7.49	$1,578,274.00	$162,849.78	$651,399.12	$2,834,414.00	$162,849.78	$2,593,912.02	$1,050,990.00	**$9,034,688.70**
EE	7.58	$1,668,973.00	$155,852.16	$623,408.65	$2,698,865.85	$155,852.16	$2,496,206.27	$1,029,606.77	**$8,828,764.87**
EF	6.55	$1,347,454.00	$141,028.87	$564,115.50	$2,457,357.75	$141,028.87	$2,243,604.72	$907,262.47	**$7,801,852.18**
EG	6.34	$1,391,845.00	$138,386.86	$553,547.43	$2,406,971.00	$138,386.86	$2,205,924.25	$900,711.04	**$7,735,772.44**
EH	6.94	$1,958,968.00	$143,709.42	$574,837.70	$2,490,267.65	$143,709.42	$2,300,046.49	$1,012,392.32	**$8,623,931.00**
EI	5.96	$1,951,372.00	$140,926.82	$563,707.27	$2,436,941.30	$140,926.82	$2,260,619.27	$997,339.89	**$8,491,833.35**
EJ	6.42	$1,764,963.00	$156,608.34	$626,433.38	$2,687,042.00	$156,608.34	$2,533,236.13	$1,047,786.17	**$8,972,677.37**
EK	8.01	$2,551,999.00	$197,479.90	$789,919.59	$3,415,850.45	$197,479.90	$3,166,812.79	$1,370,199.34	**$11,689,740.96**
EL	8.25	$2,397,946.00	$194,133.90	$776,535.60	$3,374,653.60	$194,133.90	$3,096,476.40	$1,330,361.40	**$11,364,240.80**
Switchyards at Tap Points									
Tap Option A									**$4,259,720.75**
Tap Option B									**$4,374,094.00**
Tap Option C									**$3,869,368.20**
New Hope Substation									**$7,896,918.95**

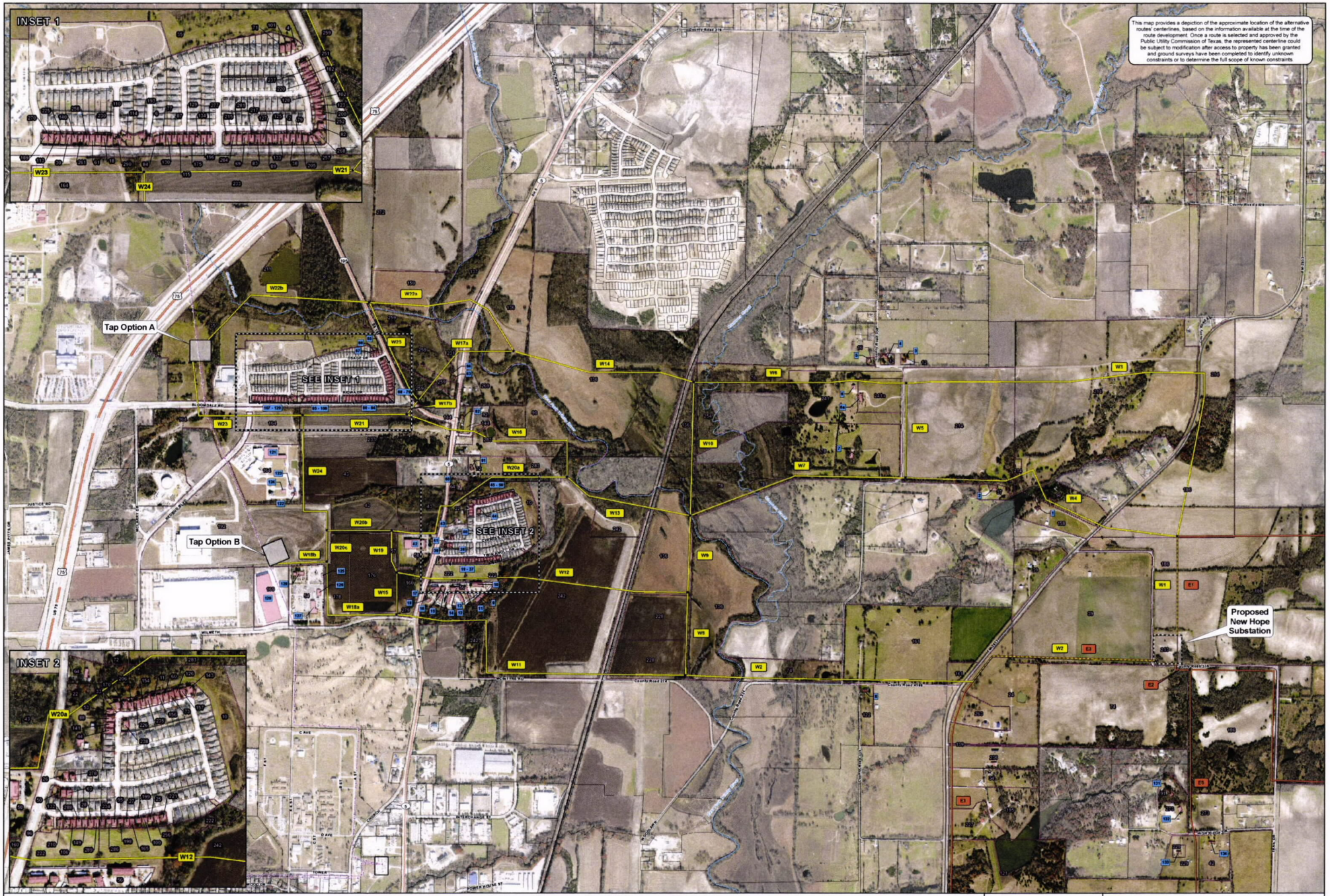
* Contingencies (Assume 15%)

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-kV TRANSMISSION LINE PROJECT IN COLLIN COUNTY, TEXAS

DOCKET NO. 50812

Attachment 10a(R)—Directly Affected Property Map (Western Routes)

THE FOLLOWING PAGE IS IN AN OVERSIZED MAP AND CAN BE VIEWED IN CENTRAL RECORDS OR THE PUC INTERCHANGE BY DOWNLOADING THE NATIVE FILE (ZIP) FOR THIS APPLICATION IN DOCKET NO. 50812



Route	Component Segments	Tap Option
West A	W1-W3-W6-W14-W17a-W17b-W21-W25	A
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b	B
West C	W1-W3-W6-W14-W22a-W22b	A
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A
West E	W1-W4-W7-W13-W16-W21-W23	A
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B
West H	W2-W8-W9-W10-W14-W22a-W22b	A
West I	W2-W8-W9-W13-W16-W17b-W25-22b	A
West J	W2-W11-W15-W19-W20b-W20c-W18b	B
West K	W2-W11-W18a-W18b	B
West L	W2-W8-W12-W19-W20b-W20c-W18b	B

Source: ESRI, USGS NHD, GNIS, FAA, Collin County, Burns & McDonnell Engineering Company, Inc.

Issued: 8/26/2020

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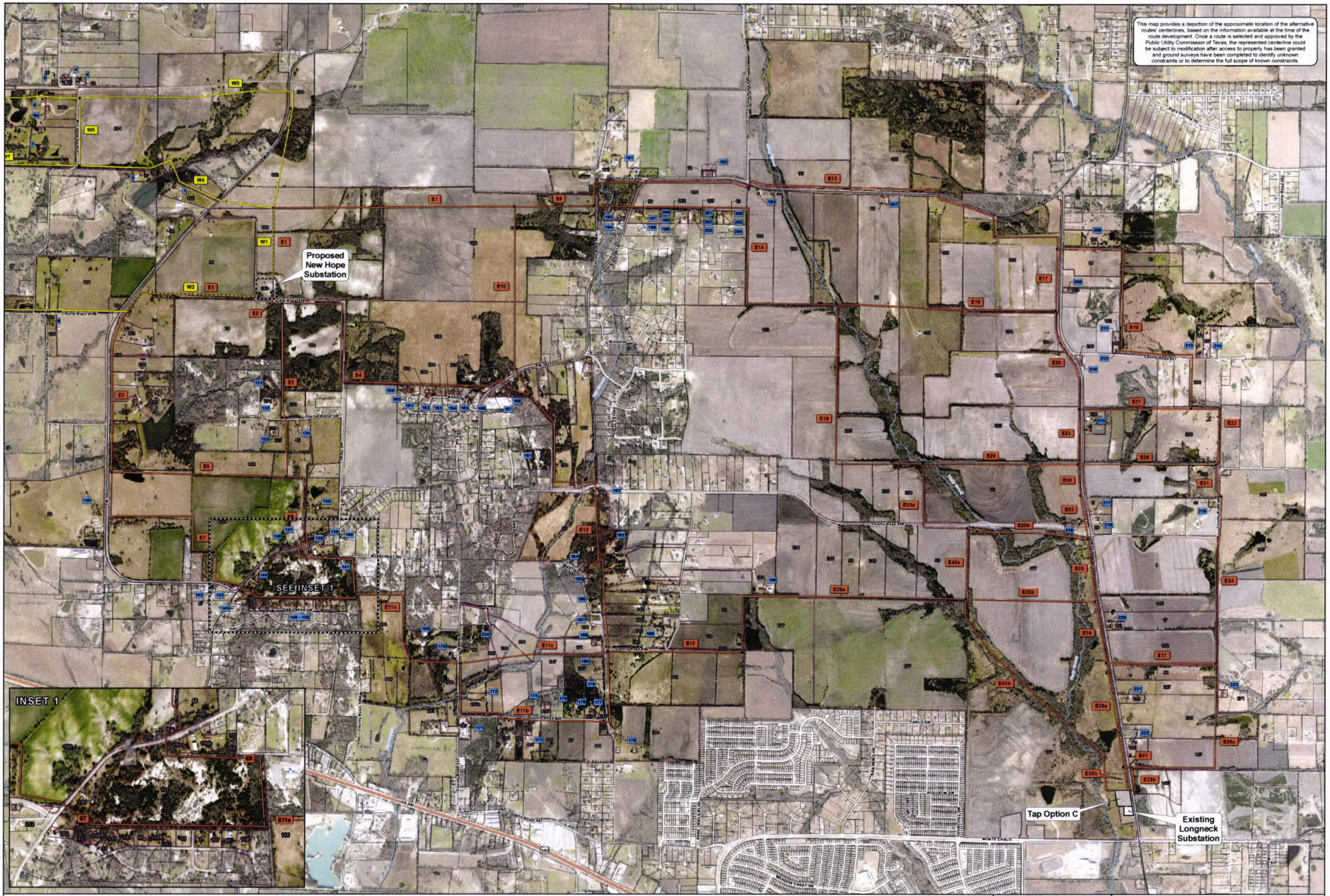
Attachment 10b(R)—Directly Affected Property Map (Eastern Routes)

THE FOLLOWING PAGE IS IN AN OVERSIZED MAP AND CAN BE VIEWED IN CENTRAL RECORDS OR THE PUC INTERCHANGE BY DOWNLOADING THE NATIVE FILE (ZIP) FOR THIS APPLICATION IN DOCKET NO. 50812



New Hope to Longneck Tap Segment
New Hope to Oncor Tap Segment
Segment Endpoint
Segment ID
Habitable Structure ID
Directly Affected Property and ID#
Existing Transmission Line
NHD Named Stream
Parcel Boundary
Habitable Structure
Existing Substation
Proposed Tap Option
Proposed New Hope Substation
Railroad
US Highway
State Highway
Farm-to-Market Road

Basemap imagery: 2018 USDA NAIP

Route	Component Segments	Tap Option
East A	E1-E9-E13-E16-E22-E31-E34-E39a-E39b	C
East B	E1-E9-E13-E16-E22-E31-E34-E37-E38a-E38b	C
East C	E1-E9-E13-E17-E20-E23-E30-E33-E35-E36-E38a-E38b	C
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-E39a-E41-E38b	C
East E	E1-E9-E14-E19-E24-E29-E31-E34-E39a-E41-E38b	C
East F	E1-E9-E14-E19-E25a-E25b-E35-E36-E38a-E38b	C
East G	E1-E9-E14-E19-E25a-E40a-E40b	C
East H	E1-E10-E12-E15-E26a-E26b-E36-E38a-E38b	C
East I	E2-E4-E12-E15-E26a-E40b	C
East J	E2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C
East K	E3-E6-E8-E11a-E11b-E15-E26a-E40b	C
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-E38b	C

NORTH

0 700 1,400 2,800
Feet

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Directly Affected Property Map (Eastern Routes)
New Hope 138-kV Transmission Line Project
Rayburn Electric Cooperative
Collin County, Texas

Source: ESRI, USGS NHD, GNIS, FAA, Collin County, Burns & McDonnell Engineering Company, Inc.

Issued: 8/28/2020

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-kV TRANSMISSION LINE PROJECT IN COLLIN COUNTY, TEXAS

DOCKET NO. 50812

Attachment 11(R)—Affected Landowner List

Map_ID	Tract_ID	HS[1]_ID#	Routes	Segments	Name (Last-First)	dba_name	Address_line 1	Address_line 2	City	State	Zip
1	1102443		EA,EB,ED,EE WA,WB,WD,W	E34	AGRICATTLE LLC			3405 TWIN LAKES WAY	PLANO	TX	75093-7572
2	2590721	84	E	W21	AHMED WASEEM			517 KIOWA DR	MCKINNEY	TX	75071-0493
3	1499550	155	EL	E7	ALLEN GEORGE W JR & MARGARET S			301 OAK CREEK DR	MCKINNEY	TX	75071-4322
4	2590622	65	WF,WI	W25	ALVARADO NATHANAEL			400 OSAGE DR	MCKINNEY	TX	75071-0469
5	2590733	72	WF,WI WA,WB,WD,W	W25	AMERICAN HOMES 4 RENT PROPERTIES EIGHT LLC			30601 AGOURA RD STE 200	AGOURA HILLS	CA	91301-2148
6	2590827 1168667; 1522481; 2059062;	105	E	W21,W23,W24	ANANDRAJ DAVID & KALPANA R			921 KIOWA DR	MCKINNEY	TX	75071-0497
7	2561394		EH, EI	E4, E10, E12	ANDERSON EDWIN R & ERNESTINE L			2454 FM 1827	MCKINNEY	TX	75071-0663
8	2720700	217	EC	E33	ARMSTRONG DAVID W & ANDREA F			3060 FM 75	PRINCETON	TX	75407-2412
9	1061969		WC,WF,WH,WI	W22b	ASSOCIATED TEXAS DEV 543 JV		C/O HOWARD D HAMILTON	802 E 15TH ST	PLANO	TX	75074-5806
10	2539774		WG	W20a	ASSOCIATION OF TRINITY HEIGHTS HOMEOWNERS INC		C/O VERACITY INC	5204 VILLAGE CREEK DR, STE 202	PLANO	TX	75093-4435
11	2539571 1059491;	55a	WG WA,WB,WC,W	W20a W6; W3, W5,	AVERHART ELNORA			601 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3716
12	1974159 1033321;	3; 4	D	W6	AYCOCK R E JR AZIZ FAMILY TRUST & SHALA AZIZ & OWAIS AZIZ &			2752 COUNTY ROAD 338	MCKINNEY	TX	75071-0314
13	1034133 1034142,		EA,EB	E16	ZIYAD AZIZ TRUSTEES &		DONYA AZIZ	112 PETER COUTTS CIR	STANFORD	CA	94305-2517
14	1077382		EA,EB	E16	AZRE LLC		C/O REUVEN ZFAT	1750 NW 124TH WAY	CORAL SPRINGS	FL	33071-7888
15	1102522	216	EC WA,WB,WC,W	E33	BACHRAN TERRY M & CAROLYN			PO BOX 6	PRINCETON	TX	75407-0006
16	2655882	5	D	W6	BAGGARLY JONATHAN D			1610 ALLISON RD	MCKINNEY	TX	75071-0362
17	2517470		EA,EB,ED,EE	E34	BALU MAHI INVESTMENTS LLC			1705 COTTONWOOD VALLEY CIR S	IRVING	TX	75038-6212
18	2590809	110	WA,WD,WE	W23	BARRERA YILENA & OSWALDO FERNANDEZ			1113 NOCONA DR	MCKINNEY	TX	75071-0491
19	1598998	204-206	ED,EE,EF,EG	E14	BATRES CESAR O &		HORACIO CANO-HERNANDEZ	5668 SADDLE RD	MCKINNEY	TX	75071-0764
20	1593047	160	EI	E4	BAUM DENNIS J & SHARON			480 DALE DR	MCKINNEY	TX	75071-3980
21	2803206		EE,EF,EG	E19	BAVIREDDY RAMESH &		DEEPIKA REDDY BAVIREDDY	1146 BACKBAY DR	IRVING	TX	75063-5413
22	2041414	43	WG	W20a	BEATTY MICKEY & JOHN M LOUCEL & KENNETH E LUSK			3917 JEWEL ST	SACHSE	TX	75048-3815
23	2803208		EH,EI,EJ,EK,EL WH,WI,WJ,WK,	E26a	BELAKERE RAMEGOWDA &		JAYANTHI B RAMU	13 LAKE MIST DR	SUGAR LAND	TX	77479-5861
24	2664088		WL,EK,EL	E3,W2	BELLEMEADE FARM LP			1974 BELLEMEADE LN	MCKINNEY	TX	75071-0905
25	2539771	21	WL	W12	BENAVIDEZ NICK &		SAMANTHA BENAVIDEZ	520 TWIN KNOLL DR	MCKINNEY	TX	75071-3709
26	2539535	41	WG	W20a	BENTLE FRANK S & LORRAINE J			401 CYPRESS HILL DR	MCKINNEY	TX	75071-3704
27	2539767	25	WL	W12	BERGONIO JOFRE & MA LILIBETH			504 TWIN KNOLL DR	MCKINNEY	TX	75071-3709
28	2539760	31	WL	W12	BESS ALLEN DWAYNE			424 TWIN KNOLL DR	MCKINNEY	TX	75071-3711
29	2711789	218	EC	E33	BEWLEY DUSTIN J & LESLIE N			3040 FM 75	PRINCETON	TX	75407-2412
30	2590803	116	WA,WD,WE	W23	BHAKTA VIMAL &		PURVI BHAKTA	1205 NOCONA DR	MCKINNEY	TX	75071-0490
31	1499480	148	EL	E7	BHARGAVA MARINA			12100 LAVINIA LN	AUSTIN	TX	78753-6940
32	2123492		EH,EI,EJ,EK,EL	E26a	BIXLER HAROLD BROWN &		BIXLER FAMILY TRUST	6521 BLUE VALLEY LN	DALLAS	TX	75214-2712
33	2539565	49	WG	W20a	BLACKLEDGE ROBERT C & LAURA N			501 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3718
34	2671398		EK,EL	E3	BLOCK DANIEL W & AMBER			2548 FM 2933	MCKINNEY	TX	75071-0341

Map_ID	Tract_ID	HS[1]_ID#	Routes	Segments	Name (Last-First)	dba_name	Address_line 1	Address_line 2	City	State	Zip
35	2681763		WA,WC,WD,WE,WF,WH,WI	W22b,W23	BLOOMDALE LLC			300 CRESCENT CT STE 700	DALLAS	TX	75201-7849
36	1073625		EA,EB,EC	E13	BOOHER CHARLES F JR ETAL			8923 CARVEL LN	HOUSTON	TX	77036-6123
37	2120763	2	WD,WE,WF,WG	W4	BORCHARD JOE & MARY			PO BOX 354	MCKINNEY	TX	75070-8136
38	2590722	83	WA,WB,WD,WE	W21	BOWEN KINDRA			513 KIOWA DR	MCKINNEY	TX	75071-0493
39	1076418		WH,WI,WJ,WK,WL,EK,EL	E3,W2	BROWDER KENNETH WAYNE			PO BOX 888	MCKINNEY	TX	75070-8145
40	1499578	157	EL	E7	BROWN MELISSA			321 OAK CREEK DR	MCKINNEY	TX	75071-4322
41	1696944	219	EA,EB,ED,EE	E31,E34	BULT JAN L &		DIANE M BULT	8249 COUNTY ROAD 464	PRINCETON	TX	75407-2237
42	1591245	134	EJ	E5	BURKS LARRY D & LINDA			241 HIGHRIDGE DR	MCKINNEY	TX	75071-3915
43	2804176; 2804177; 2804178		WG; WB, WG, WJ, WL; WB	W21; W19, W20a. W20b, W24; W24	C5 LOGISTICS CENTER AT MCKINNEY LLC			1230 PEACHTREE ST NE, STE 3560	ATLANTA	GA	30309-3551
44	2539561	45	WG	W20a	CARRASQUILLO-CRUZ JOSE J			3609 ROLLING HILLS DR	MCKINNEY	TX	75071-3723
45	1592930	166	EI	E4	CARTER MICHAEL H & VIKKI L			140 MEADOWS DR	MCKINNEY	TX	75071-3968
46	1168845	137	EJ,EK	E8	CASTILLO MODESTO &		VICTOR GARCIA	200 NEW HOPE RD W	MCKINNEY	TX	75071-8711
47	1966108	142	EL	E7	CASTLE JOYCE			521 FM 2933	MCKINNEY	TX	75071-8726
48	2790867		EJ,EK	E8	CHAPMAN FAMILY TRUST &		JERRY W CHAPMAN	9109 BARBARA DR	FORT WORTH	TX	76108-7059
49	1525335	212	EA,EB	E16	CHAPMAN JACQUELINE			PO BOX 124	PRINCETON	TX	75407-0124
50	2539539	39	WG	W20a	CHAVEZ EDUARDO & ELSIE			400 CYPRESS HILL DR	MCKINNEY	TX	75071-3705
51	1499541	154	EL	E7	CHRON RICHARD L & DENINE L			261 OAK CREEK DR	MCKINNEY	TX	75071-4320
52	2509141	184; 185	EH,EI	E12	CLARK ROBERT S & MARTHA ANN			1254 PURPLE MARTIN DR	MCKINNEY	TX	75071-0757
53	2539564	48	WG	W20a	COLE JOSEPH			3601 ROLLING HILLS DR	MCKINNEY	TX	75071-3723
54	1061166	125-128	WB,WG,WJ,WK,WL	W18a,W18b,W20c	COLLIN COUNTY	COLLIN COUNTY EQUIPMENT SERVICES	COLLIN COUNTY CRTHOUSE		MCKINNEY	TX	75069
55	2802404		EF,EG,EH,EI,EJ,EK,EL	E25a,E25b,E26a,E26b,E40a,E40b	CR 408 PRINCETON MEADOWS LLC			1400 CORPORATE DR, STE 111	IRVING	TX	75038-2944
56	2130116	9-18	WJ,WK,WL	W11,W12	MCKINNEY LEASED HOUSING ASSOCIATES I LP	CREEK POINT APARTMENTS TC		2905 NORTHWEST BLVD	PLYMOUTH	MN	55441-2644
57	2632458		WJ,WL	W19	CROOKED CREEK INC		C/O CRADER DISTRIBUTING CO	808 HIGHWAY 34 W	MARBLE HILL	MO	63764-4302
58	2097481	42	WG,WJ,WL	W19,W20a,W20b	CROOKED CREEK INC	MCD INNOVATIONS		808 HIGHWAY 34 W	MARBLE HILL	MO	63764
59	1598925	196; 197	ED,EE,EF,EG	E14	DARLAND DEBBIE			3342 FM 1827	MCKINNEY	TX	75071-0518
60	2539573	55c	WG	W20a	DAVID MOSHE BEN &		LILIANE BEN DAVID	4432 WHITE ROCK LN	PLANO	TX	75024-7297
61	2590807	112	WA,WD,WE	W23	DE NAVARRO LUISA MARIA SALIDO			1121 NOCONA DR	MCKINNEY	TX	75071-0491
62	2724530		EH,EI	E12	DEVSOL HOLDINGS II LLC			1801 W LOUISIANA ST STE 200	MCKINNEY	TX	75069-8084
63	2539615	38	WG	W20a	DIALLO AISSATOU &		MAMADOU C DIALLO	404 CYPRESS HILL DR	MCKINNEY	TX	75071-3705
64	2059066	60	WG	W20a	DIAZ ALEJANDRO & ALICIA			3700 N MCDONALD ST	MCKINNEY	TX	75071-0371
65	2687912	179	EK,EL	E11b	DIBENEDETTO SCOTT & STEPHANIE			2831 COUNTY ROAD 406	MCKINNEY	TX	75071-0724
66	2691450		EA,ED,EE	E39a	DICKSON JOHNNY			192 INDUSTRIAL BLVD STE 111	MCKINNEY	TX	75069-7238
67	2019667		EK,EL	E11b	DOUGLAS CHARLES B & KIMBERLY			227 E LOUISIANA ST	MCKINNEY	TX	75069-4311
68	1168621	167	EI	E4	DUNGAN JEAN ANN - LE		WILLIAM DUNGAN	PO BOX 763	MCKINNEY	TX	75070-8143
69	2590714	91	WA,WB,WD,WE	W21	DUNHAM CHAPMAN EUGENE & DOROTHY T 1997 REVOCABLE MANAGEMENT TRUST &		DORTHY T DUNHAM	701 KIOWA DR	MCKINNEY	TX	75071-0495
70	1073402; 1073411, 1995992	192	EA,EB,EC	E13	DUNN MEMORIAL BAPTIST CHURCH	DUNN MEMORIAL BAPTIST CHURCH		3849 FM 1827	MCKINNEY	TX	75071-0521

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71	2590637	67	WF,WI	W25	DUTZE KATHERINE & ERIC			500 OSAGE DR	MCKINNEY	TX	75071-0470
72	2528737	61	WG	W20a	EASTHAM PAUL RAY & LINDA IRENE			3860 N MCDONALD ST	MCKINNEY	TX	75071-0375
73	2539574	56	WG	W20a	EDWARDS JEFFREY S & RACHEL LAYNE			613 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3716
	1168408;		EI,EJ, WH, WI,					1006 S WELLINGTON POINT			
74	2124125		WJ, WK, WL	E2; W2	EDWARDS STACY L & LINDA JAMES			RD	MCKINNEY	TX	75072-5751
75	2664073	140	EJ,EK	E8	EMEYABBI VIRGINIA			120 ROCKCREST RD	MCKINNEY	TX	75071-4152
							CUSTODIAN FBO				
			WA,WB,WC,W				STEVEN MARK				
76	1052292		D	W6	EQUITY TRUST COMPANY		WILLIAMS IRA	2665 COUNTY ROAD 338	MCKINNEY	TX	75071-0431
			WA,WB,WD,W								
77	2590829	103	E	W21,W23,W24	ESPINOZA ALFREDO RAMON JR			913 KIOWA DR	MCKINNEY	TX	75071-0497
	520500,										
	1052327;										
	1905004,		WE,WF,WG,W	W7,W9,W10,W							
78	1905013	7	H,WI	13	EUBANK RICHARD H & SHERRI L			2371 COUNTY ROAD 338	MCKINNEY	TX	75071-0433
			WA,WB,WD,W								
79	2590723	82	E	W21	EVEN DAVID L & MARY ELIZABETH			509 KIOWA DR	MCKINNEY	TX	75071-0493
80	2120790	130	EL	E7	FEAGINS EDWIN			611 MILLICAN DR	LEWISVILLE	TX	75057-3024
	1073849;										
81	2144606	207	EA,EB,EC; ED	E13; E18	FH FARM VENTURE LLC			1650 W VIRGINIA ST STE 102	MCKINNEY	TX	75069-7702
82	2590727	78	WF,WI	W25	FOGLIA DENNIS & DOROTHY C			4004 TEJAS CT	MCKINNEY	TX	75071-8300
			WA,WB,WD,W								
83	2590716	89	E	W21	FOMUSO EMILIA LUSIA			609 KIOWA DR	MCKINNEY	TX	75071-0494
			WA,WB,WD,W								
84	2590828	104	E	W21,W23,W24	FOSS JEFFREY R & MELONEE D			9698 COYOTE CALL RD	CELINA	TX	75009-2953
85	1033367	214	EA,EB	E16	FREEMAN DANNY & RITA			7881 COUNTY ROAD 831	PRINCETON	TX	75407-2440
86	1592958	165	EI	E4	FULLER MICHAEL A & STACEY L			180 MEADOWS	NEW HOPE	TX	75071
			WA,WB,WD,W								
87	2590754	101	E	W21	GAO WEI			5999 CUSTER RD STE 110	FRISCO	TX	75035-9304
88	2539563	47	WG	W20a	GARCIA VINCENT P & AUTUMN M			3617 ROLLING HILLS DR	MCKINNEY	TX	75071-3723
			WA,WB,WD,W								
89	2590718	87	E	W21	GLASS GILBERT & JADRIEN JAQUETTA			601 KIOWA DR	MCKINNEY	TX	75071-0494
90	2671475		WE,WF,WI	W16	GLENN STEFEN DARBY &		BAILEE NICOLE GLENN	PO BOX 104	WESTON	TX	75097-0104
91	2671964	131	EJ	E5	GRAVEL DONNA MARIE &		JON ALLEN HENDREN	450 WOOD RIDGE DR	MCKINNEY	TX	75071-0691
92	2620815		WE,WF,WI	W16	GREATER TEXOMA UTILITY AUTHORITY			5100 AIRPORT DR	DENISON	TX	75020-8448
				E23,E24,E29,E3							
93	1102513		EC,EE	0,E33	GRIFFIN LEGACY LP		C/O TORI MANNES	4016 MCFARLIN BLVD	DALLAS	TX	75205-1724
			WD,WE,WF,W								
94	2073087		G	W4	GRIMES SAMMY LEE & LEANNE S			1708 LUAU CT	TOOL	TX	75143-1334
95	2539765	27	WL	W12	GUEVARA JAIME &		ERIK GUEVARA	8614 LAUREL CANYON RD	IRVING	TX	75063-3921
96	2539544	37	WL	W12	GULESERIAN JEFFERY T & DANA L			400 TWIN KNOLL DR	MCKINNEY	TX	75071-3711
97	1512090	182	EH,EI	E12	GURNEY DELOSS B JR ETUX			4316 COUNTY ROAD 408	MCKINNEY	TX	75071-0738
98	2120554	224	EJ,EK,EL	E11a,E11b,E11c	HALL LEZLIE			281 TARVIN RD	MCKINNEY	TX	75071-4140
99	1499514	151	EL	E7	HAMM ANGEL			231 OAK CREEK DR	MCKINNEY	TX	75071-4320
100	2539770	22	WL	W12	HAO PINGHAI			1809 FARINGDON DR	PLANO	TX	75075-2709
								18930 SHERMAN WAY APT			
101	2590636	66	WF,WI	W25	HARBER ERIKA N			15	RESEDA	CA	91335-7739
102	2590731	74	WF,WI	W25	HARRIS MARK A &		SUZANNE ORURUKE	4020 TEJAS CT	MCKINNEY	TX	75071-8300
103	2517472	220	EC,EF,EH,EJ,EL	E36	HARWELL RITA &		HARWELL FISHER	2564 FM 75	PRINCETON	TX	75407-2456
104	1499587	158	EL	E7	HEFNER WICK WINSTON			2 SKYVIEW DR	ALLEN	TX	75002-8403
105	2120528	135	EJ,EK	E8	HERBST DEBORAH ANN GRAY			475 TRAIL DR	MCKINNEY	TX	75071-3900
106	2539757	34	WL	W12	HERNANDEZ JOSE ANTONIO &		KARLA HERNANDEZ	412 TWIN KNOLL DR	MCKINNEY	TX	75071-3711

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107	1499569	156	EL	E7	HODSON LESTER L & ET UX			311 OAK CREEK DR	MCKINNEY	TX	75071-4322
108	1499471	147	EL	E7	HOFFMANN CONNIE			110 OAK CREEK CT	MCKINNEY	TX	75071-4323
109	2124197	170	EJ,EK,EL	E11a,E11b,E11c	HOLUM MICHAEL	THE OTHER SIDE LANDSCAPING & LAWN MAINTENANCE	BOX 431	4100 ELDORADO PKWY STE 100	MCKINNEY	TX	75070-4530
110	2590810	109	WA,WD,WE	W23	HON KAM CHEUNG R & YUET WAH EIRA HON CHAN			1109 NOCONA DR	MCKINNEY	TX	75071-0491
111	1171412; 1171332		EK,EL	E11b	HORNE ANITA LOUISE			2439 HEATHER HILL LN	PLANO	TX	75075-2946
112	2620038; 2653135, 2653154	173	EK,EL	E11b	HORNE GREGORY ALAN			3980 COUNTY ROAD 405	MCKINNEY	TX	75071-1495
113	2590801	118	WA,WD,WE	W23	SALKEY LLC			4332 SWITCHGRASS ST	CELINA	TX	75009-0770
114	2590812	107	WA,WB,WD,WE	W21,W23,W24	HPA TEXAS SUB 2017-1 LLC			120 S RIVERSIDE PLZ	CHICAGO	IL	60606-3908
115	2590755	100	WA,WB,WD,WE	W21	HSU HSIU FENG			48 SWEET FLDS	BUENA PARK	CA	90620-4172
116	1170360; 2807385		EJ,EK,EL	E11a	HUGH TAYLER & NIKKI IWEN LONG FAMILY REVOCABLE TRUST THE			5460 STONE CANYON DR	FRISCO	TX	75034-2219
117	1499499	149	EL	E7	HUGHES KELLY L & JILL			211 OAK CREEK DR	MCKINNEY	TX	75071-4320
118	1171350		EK,EL	E11b	JACKSON FAMILY LIVING TRUST			305 SANDY OAKS DR	BOERNE	TX	78015-8350
119	1499523	152	EL	E7	JACOBS JAQUITA G			241 OAK CREEK DR	MCKINNEY	TX	75071-4320
120	2624929	215	EC,ED	E21,E23	JAMES LIVING TRUST		JAMES DONALD A & BETTY A-TRUSTEES	3350 FM 75	PRINCETON	TX	75407-2462
121	1169194		EK,EL	E3	JBG LITTLE FARM LLC		C/O JUDY GLAZER	7230 MASON DELLS DR	DALLAS	TX	75230-3155
122	1060595	8	WH,WI,WJ,WK, WL	W2	JBG RENT HOUSES LLC		C/O JUDY GLAZER	7230 MASON DELLS DR	DALLAS	TX	75230-3155
123	2590730	75	WF,WI	W25	JOHNS JERAMY J &		LAURA K JOHNS	4016 TEJAS CT	MCKINNEY	TX	75071-8300
124	1171323		EK,EL	E11b	JOHNSON CEMETERY	JOHNSON CEMETERY	JD LOWRY[2]				
125	2590719	86	WA,WB,WD,WE	W21	JOHNSON NANCY			525 KIOWA DR	MCKINNEY	TX	75071-0493
126	2539575	57	WG	W20a	JONES NATHAN EDWARD &		HEATHER CROFT JONES	617 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3716
127	2590717	88	WA,WB,WD,WE	W21	JORDAN CHARLES M & DOROTHY R			605 KIOWA DR	MCKINNEY	TX	75071-0494
128	2590732	73	WF,WI	W25	JUDD BRIGHAM & CATHI			4024 TEJAS CT	MCKINNEY	TX	75071-8300
129	2590756	99	WA,WB,WD,WE	W21	JUDKINS MARVIN JR &		KIMBERLY JUDKINS	817 KIOWA DR	MCKINNEY	TX	75071-0496
130	2590627	102	WA,WB,WD,WE	W21	KHURANA ATUL & MONIKA			11050 PATTISON DR	FRISCO	TX	75035-1135
131	2803207		EH,EI,EJ,EK,EL	E26a	KILARU ANIL & ETAL		C/O NAGA VENKATA SAMURDRALA	9313 VISTA CIR	IRVING	TX	75063-5063
132	2539756	35	WL	W12	KILGORE DAISY			408 TWIN KNOLL DR	MCKINNEY	TX	75071-3711
133	2590720	85	WA,WB,WD,WE	W21	KILPATRICK STEPHEN			521 KIOWA DR	MCKINNEY	TX	75071-0493
134	2590758	97	WA,WB,WD,WE	W21	KOMIC ERMIN & MIRNESA S &		NEJIRA SMOUT	809 KIOWA DR	MCKINNEY	TX	75071-0496
135	2680191	183	EH,EI	E12	KUEHN SCOTT JACKSON &		JULIE LYNN KUEHN	3839 COUNTY ROAD 406	MCKINNEY	TX	75071-4335
136	13246, 520877; 1052407; 1053077, 461547		WA,WB,WC,WD,WH, WI,WJ, WK, WL; WE, WF, WG	W6,W10,W14; W14, W17a, W22a; W2; W8, W9, W12, W13;	LACORE AGRICULTURE LLC			901 SAM RAYBURN HWY	MELISSA	TX	75454-2218
137	1720187		WC,WH	W22a	LACORE TERRY			522 LACORE LN	MELISSA	TX	75454-2659
138	2144607		ED	E18	LACY JAMES ALBERT			PO BOX 657	MCKINNEY	TX	75070-8141

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139	2664089		EK,EL	E3	LADD DEBRA			2022 WAYSIDE TRL	MCKINNEY	TX	75071-8750
140	2590804	115	WA,WD,WE	W23	LANE THOM LTD			1201 NOCONA DR	MCKINNEY	TX	75071-0490
							LEINWEBER CHERI				
141	2539562	46	WG	W20a	LEINWEBER NICHOLAS VON &		RENNE	3613 ROLLING HILLS DR	MCKINNEY	TX	75071-3723
142	2055584		EH,EI	E12	LINDSEY MICHAEL & SHELLEY			3535 COUNTY ROAD 406	MCKINNEY	TX	75071-4329
143	2539577	59	WG	W20a	LION FAMILY TRUST 2017			PO BOX 251354	PLANO	TX	75025-1354
	1062833;					LONE TREE RESOURCES &					
144	1225196	62	WE,WF,WI	W16	LONE TREE RESOURCES & CONSULTING INC	CONSULTING		4000 N MCDONALD ST	MCKINNEY	TX	75071-8768
	1102434;										
145	1180974		EA,EB,ED,EE	E34	M23 FAMILY LIMITED PARTNERSHIP			PO BOX 2767	MCKINNEY	TX	75070-8176
146	2651515		EA,EB,ED,EE	E31,E34	M26 FARM LLC			3405 TWIN LAKES WAY	PLANO	TX	75093-7572
147	1168337	171	EK,EL	E11b	MA ALICE	ARTURO'S AUTO REPAIR		4232 CREEKSTONE DR	PLANO	TX	75093-6948
				E11b,E11c,E12,							
148	1103004		EH,EI,EJ,EK,EL	E15,E26a	MAGNUM ESTATES LLC			708 HORIZON ST	FLOWER MOUND	TX	75028-1462
149	2539759	32	WL	W12	MAH JEFFERY			3816 HASKELL CT	DALLAS	TX	75204-1511
150	2013626	187	EH,EI	E12	MAINS HOYT W & ALISON P			1059 PURPLE MARTIN DR	MCKINNEY	TX	75071-0756
	2803326;										
151	2120043	188	EH,EI,EJ	E12,E11c	MAINS VIOLETA & LANE			1025 PURPLE MARTIN DR	MCKINNEY	TX	75071-0756
152	1102407		EA,EB,ED,EE	E34,E37,E39a	MAJ DG NNN LLC			5629 DOMER DR	FRISCO	TX	75035-0771
153	2120547	169	EJ,EK,EL	E11a	MALONE PATRICK L			PO BOX 753	PRINCETON	TX	75407-0753
154	2539569	53	WG	W20a	MAMULADZE MINDIA & IRINA G			517 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3718
155	1596570	200-203	ED,EE,EF,EG	E14	MARTINEZ-OLGUIN NORA E			5576 SPUR LN	MCKINNEY	TX	75071-0766
156	2539572	55b	WG	W20a	MATTHEWS SHANEE			605 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3716
157	2539576	58	WG	W20a	MAYA SIVAN &		ERAN MAYA	621 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3716
			WD,WE,WF,W								
158	2073089	1	G	W4	MAYER HELMUTH JR &		NICOLE MAYER	3361 FM 2933	MCKINNEY	TX	75071-0344
159	1061898		WC,WF,WH,WI	W22a,W25	MCCALLUM WILLIAM J			8600 GREENTREE CT	FORT WORTH	TX	76179-3019
							C/O JAMES				
160	2582491		WL	W12	MCDONALD BUSINESS PARK LLC		BULLINGTON	6612 ADOBE CIR	THE COLONY	TX	75056-3740
	1168346;		WH,WI,WJ,WK,								
161	2120759		WL	W2	MCDOWELL E A FAMILY LIMITED PARTNERSHIP &		SUSAN L MILES	7425 OAK RIDGE DR	PLANO	TX	75025-3203
162	2699972	211	EA,EB	E16	MCGUFFIN HAROLD & RHONDA			7463 COUNTY ROAD 831	PRINCETON	TX	75407-2436
163	1514588	176	EK,EL	E11b	MCINTOSH TODD			1013 HEMLOCK CT	COPPELL	TX	75019-5534
	2780734;		WB; WA, WD,			COLLIN COUNTY PUB SAF					
164	1063887	121-124	WE	W24; W23	MCKINNEY CITY OF	TRAINING BLDG		PO BOX 517	MCKINNEY	TX	75070-8013
165	2539768	24	WL	W12	MCKINNEY GARRETT L & JAMIE			508 TWIN KNOLL DR	MCKINNEY	TX	75071-3709
	2120530;										
166	2730791		EJ,EK, EL	E3, E5,E6,E7, E8	MCKINNEY HILL PARK LLC			924 S BELT LINE RD	COPPELL	TX	75019-4531
167	2756638		EA,ED,EE	E39a,E39b,E41	MCMAHAN-GANTT FARM LLC			10455 COUNTY ROAD 497	PRINCETON	TX	75407-2363
			EB,EC,EF,EH,EJ,								
168	2120650	222	EL	E38a	MCMAHAN ALICE A			2012 FM 75	PRINCETON	TX	75407-2449
			WB,WG,WJ,WK		MDC-MARINE PARK LLC & LACORE RENTAL		900 LLC & MDC-OSO				
169	2797405	129	,WL	W18b	WILMETH		BAY LLC	12400 COIT RD, STE 1000	DALLAS	TX	75251-2005
170	2539566	50	WG	W20a	MERRITT STACY SYLESTER LEE			123 S BROAD ST STE 2250	PHILADELPHIA	PA	19109-1020
171	1033358	213	EA,EB	E16	MILLAWAY JEFFREY H			7865 COUNTY ROAD 831	PRINCETON	TX	75407-2440
172	2687110	191	EA,EB,EC	E13	MILLER JACKIE DON			6168 COUNTY ROAD 988	MCKINNEY	TX	75071-0623
173	2680108		EH,EI	E12	MINNIS JOHN A ETAL			3563 COUNTY ROAD 406	MCKINNEY	TX	75071-4329
174	2110891	209	EC	E17	MITCHELL MARGARET C			3952 FM HWY 75	PRINCETON	TX	75407
			WA,WB,WD,W								
175	2590757	98	E	W21	MITCHELL OWEN ROBERT &		GLORIA MITCHELL	503 HEARD ST	MCKINNEY	TX	75069-2748
				W12,W15,W18			C/O ML REALTY				
176	2794846		WJ,WK,WL	a,W19	MLRP WILMETH LLC		PARTNERS LLC	1 PIERCE PL STE 450W	ITASCA	IL	60143-2611

Map_ID	Tract_ID	HS[1]_ID#	Routes	Segments	Name (Last-First)	dba_name	Address_line 1	Address_line 2	City	State	Zip
			EA,EB,EC,ED,EE,	E26a, E25b,E26b,E33, E35,E36,E37,E3							
	2658188;		EF,EG,EH,EI,EJ,E	8a,E38b,E39b,E				1800 VALLEY VIEW LN, STE			
177	2658194		K,EL	40b,E41	MM PRINCETON 854 LLC			300	DALLAS	TX	75234-8945
178	1061148		WK	W18a	MOTSENBOCKER DONALD M			PO BOX 8008	MCKINNEY	TX	75070-8008
179	2714248		EH,EI,EJ,EK,EL	E26a	MYNENI HARI PRASAD			1670 TARTAN LN	COLLIERVILLE	TN	38017-3969
180	1521026		EH,EI	E12	NASCIMENTO NUNO R &		CREUZA LIMA NASCIMENTO	860 GRAND ST	BRIDGEPORT	CT	06604-2617
181	2122132	208	EA,EB	E16	NAYEEM FAWAZ MOHAMMED &		ZAINAB FAWAZ	4638 BIRUNI ST	IRVING	TX	75062-2611
182	2590735	70	WF,WI	W25	NELSON DAVID			4104 TEJAS CT	MCKINNEY	TX	75071-8312
183	2647336		EE,EF,EG	E19	NEWIND LLC			3609 MATAGORDA SPRINGS DR	PLANO	TX	75025-6811
184	1592994	161	EI	E4	NOROWSKI STEPHEN J			300 MEADOWS DR	MCKINNEY	TX	75071-3972
	1102504; 2124174; 2801972;			E13,E16,E17,E1							
185	2801973;		EA,EB,EC,ED, EE	8,E20, E29	NORTH COLLIN 550 LAND LLC			3625 N HALL ST, STE 720	DALLAS	TX	75219-5110
	1168444; 2777391; 2777392, 2777394; 2777396;		EA,EB,EC,ED,EE, EF,EG,EH, EI, EJ; WA,WB,WC,W	E1, E2,E4,E5, E9, E10, E13, E14, W1, W3,							
186	2777395		D,WE,WF,WG,	W4	NORTH TEXAS MUNICIPAL WATER DISTRICT			PO BOX 2408	WYLIE	TX	75098-2408
187	2805386		EA	E39b	NORTHGATE APARTMENTS AT MONTICELLO LLC			900 W BETHANY DR	ALLEN	TX	75013-3806
188	2571869		EH,EI	E12	ODLE J O & JULIETTE			2662 FM 1827	MCKINNEY	TX	75071-0511
189	2590764	120	WA,WD,WE	W23	OSBORN LEONARD JAMES JR &		JASSON OSBORN	1221 NOCONA DR	MCKINNEY	TX	75071-0490
190a	1168809	138	EJ,EK	E8	OWEN NEVA - LE		BILLY OWEN ETAL	161 NEW HOPE RD W	MCKINNEY	TX	75071-8708
190b	1841038	139	EJ,EK	E8	OWEN BILLY & NEVA			161 NEW HOPE RD W	MCKINNEY	TX	75071-8708
	1168836; 1168854;										
191	1499505	144, 150	EJ,EK,EL	E7,E8,E11a	OXFORD BARBARA J			PO BOX 215	MCKINNEY	TX	75070-8134
192	2796988		WB,WG,WJ,WK ,WL	W18a,W18b,W 20b,W20c,W24	PACCAR INC		ATTN: SUZANNE GOODING	650 MILWAUKEE AVE N	ALGONA	WA	98001-7409
193	2590826	106	WA,WB,WD,W E	W21,W23,W24	PARMER CASEY L & RANDIA L			4001 SIOUX DR	MCKINNEY	TX	75071-0492
	1073858; 1077408; 1073867; 1073876; 1073420;										
	1073956;		EA, EB, EC, ED,	E13, E14, E18,			DUGGI LLC & KUTHURU				
194	1077417	193	EE, EF, EG	E19, E20	PATEL & PATEL LLC & POONURU LLC & BADE LLC &		LLC & GOURI DUGGI	2904 SHADY CREEK DR	FLOWER MOUND	TX	75022-5359
195	2663886		EK,EL	E3	PATEL BHARGAV & RACHANA			2516 FM 2933	MCKINNEY	TX	75071-0341
196	2590759	96	WA,WB,WD,W E	W21	PATTERSON THOMAS			805 KIOWA DR	MCKINNEY	TX	75071-0496
197a	2522375	172	EK,EL	E11b	PATTON JOSEPH M & EVITA R			3737 COUNTY ROAD 405	MCKINNEY	TX	75071-4346
197b	2765985		EJ,EK,EL	E11a,E11b	PATTON EVITA RUTH			3737 COUNTY ROAD 405	MCKINNEY	TX	75071-4346
198	2539766	26	WL	W12	PAUL BRIDGETTE L			500 TWIN KNOLL DR	MCKINNEY	TX	75071-3709
199	2539769	23	WL	W12	PENG YUN-CHI &		HSIHUI PENG	15052 TURNBRIDGE DR	FRISCO	TX	75035-4834
200	2590729	76	WF,WI	W25	PETERS KORI H & JIMMY DEAN			306 HILL RD	ROSENBERG	TX	77471-2844
201	2123610	181	EH,EI	E12	PETERSON STAN & TERESA			4021 COUNTY ROAD 408	MCKINNEY	TX	75071-0735

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Map_ID	Tract_ID	HS[1]_ID#	Routes	Segments	Name (Last-First)	dba_name	Address_line 1	Address_line 2	City	State	Zip
202	1921843	145	EL	E7	PETWAY JOHN & DEBBIE			501 NEW HOPE RD W	MCKINNEY	TX	75071-8716
203	2765986		EJ,EK,EL	E11a	PHILLIPS TINA JEAN			2649 OUTLOOK RIDGE LOOP	LEANDER	TX	78641-4949
204	2800850	178	EK,EL	E11b	POTTER THOMAS WESLEY &		RONALD LEE POTTER	PO BOX 250574	PLANO	TX	75025-0574
205	2590724	81	WA,WB,WD,W E	W21	POWELL RICHARD & ANNE			505 KIOWA DR	MCKINNEY	TX	75071-0493
206	2539567	51	WG	W20a	PRICE RICHARD A			3009 BROOKSHIRE DR	PLANO	TX	75075-7645
207	2802481		EE,EF,EG	E19	PRINMEAD VESTORS LLC			4612 HERSHEY LN	PLANO	TX	75024-6871
208	2118056	189	EH,EI,EJ,EK,EL	E12,E15	PRYOR KEITH			PO BOX 250231	PLANO	TX	75025-0231
209	1073965	210	EC,ED	E20	PURSER WILLIAM RANSOM			PO BOX 1033	PRINCETON	TX	75407-1033
210	2539755	36	WL	W12	QIAN JINRONG			1800 FARINGDON DR	PLANO	TX	75075-2708
211	1061996		WC,WF,WH,WI	W22b	QUINT ROBERT STEVEN APPOINTEE TRUST		ROBERT STEVEN QUINT TRUSTEE & SUSAN SEKEL BELIAK	5810 FLINTSHIRE LN	DALLAS	TX	75252-5131
212	1822825	143	EL	E7	RAJWANI KASSAMALI K ETAL	THE CORNER STORE		400 FM 2933	MCKINNEY	TX	75071-8723
213	2784033		ALL	E1, E2, E3, W1, W2	RAYBURN COUNTY ELECTRIC COOPERATIVE INC			PO BOX 37	ROCKWALL	TX	75087-0037
214	1052498; 1052470, 1052489; 1052336		WA,WB,WC, WD, WE, WF, WG, WA,WB,WD,W	W3, W4, W5, W6, W7	REA CAPITAL LP		C/O R E AYCOCK JR PRES OF WINDOM FARMS MGMT LLC GE	2752 COUNTY ROAD 338	MCKINNEY	TX	75071-0314
215	2590625	94	E	W21	REYNOLDS CANDACE			713 KIOWA DR	MCKINNEY	TX	75071-0495
216	1073439	194, 195	ED,EE,EF,EG	E14	RICHARDSON R D			3343 FM 1827	MCKINNEY	TX	75071-0519
217	2590715	90	WA,WB,WD,W E	W21	ROBERTS JUSTIN R & SUSAN R			613 KIOWA DR	MCKINNEY	TX	75071-0494
218	2073067		EH,EI	E12	ROBERTS MARK S			3415 COUNTY ROAD 406	MCKINNEY	TX	75071-4193
219	2120651; 2120653	221	EA, EB, EC, ED, EE, EF,EH,EJ,EL	E38a; E39a	ROBINSON RAYMOND J & MARY E REVOCABLE LIVING TRUST THE			PO BOX 8	PRINCETON	TX	75407-0008
220	2590734	71	WF,WI	W25	ROBLES DAVID & FRANCES SELIO-			4100 TEJAS CT	MCKINNEY	TX	75071-8312
221	2563586	19	WL	W12	ROGERS JAMES M & KRISTA N			528 TWIN KNOLL DR	MCKINNEY	TX	75071-3709
222	2109778; 2517581		WL	W12	RSJS WAREHOUSE LTD			7161 VALLEY VIEW RD	FERNDALE	WA	98248-8744
223	1499462	146	EL	E7	RUTLEDGE MICHAEL LEON & VICKI			111 OAK CT	MCKINNEY	TX	75071-4307
224	1592967	164	EI	E4	RYLL SHIRLEY KAY			200 MEADOWS DR	MCKINNEY	TX	75071-3970
225	2590802	117	WA,WD,WE	W23	SALCEDO JORGE L &		TERESA GARCIA-CORDOVA	413 MAGGIE TRL	ALLEN	TX	75002-1405
226	2539568	52	WG	W20a	SALLENBACH JASON			513 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3718
227	2635652		EK,EL	E3	SANDERS GARY W &		REBECCA L EASTERWOOD	2500 FM 2933	MCKINNEY	TX	75071-0341
228	1053086, 1053095		WH,WI,WJ,WK, WL	W2,W8,W11	SCHAEFFER GEORGE M REVOCABLE TRUST			641 HUMBOLDT ST	RENO	NV	89509-1607
229	1591209; 2089368	133	EJ	E5	SCHAUER EDWARD E & JUDY R			301 HIGHRIDGE DR	MCKINNEY	TX	75071-3916
230	2590808	111	WA,WD,WE	W23	SCHUSSLER DEBORAH KAY			1117 NOCONA DR	MCKINNEY	TX	75071-0491
231	2665195	63; 64	WA,WB,WD	W17a	SCOTTI MIKE A			4177 N MCDONALD ST	MCKINNEY	TX	75071-8770
232	1102498		EA,EB,ED,EE	E22,E29,E31	SECONDINE REVOCABLE TRUST		GLEN ALVIN & JOYCE LUCILLE SECONDINE CO-TRUSTEES	1310 N GRAVES ST	MCKINNEY	TX	75069-3118
233	2637241		WA,WB,WD,W E,WF,WI	W21,W17b,W2 1,W23,W24	SEMINOLE BLOOMINFIVE LP			500 COIT RD APT 304	PLANO	TX	75075-5852
234	2539763	29	WL	W12	SERRANO MARISOL			5731 PITTMAN ST	SIMI VALLEY	CA	93063-3526

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235	2539570	54	WG	W20a	SESSUMS JUDY L			521 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3718
236	2598512		EK,EL	E3	SHAABANI JEFFREY			12647 COLBORNE DR	FRISCO	TX	75033-0400
237	2590736	69	WF,WI	W25	SHAYO GRACE WANJIRU &		ADRINE NJERI	4108 TEJAS CT	MCKINNEY	TX	75071-8312
238	2539540	44	WG	W20a	SHERMAN BRYAN & CHRISTINA G SHERMAN			500 CRYSTAL FALLS DR	MCKINNEY	TX	75071-3719
239	2684065		EH,EI	E12	SHORETHOSE LEONARD W & RAEDENE M			3611 COUNTY ROAD 406	MCKINNEY	TX	75071-4331
240	2691484		EK,EL	E11b	SISSON ANDREW LAWRENCE & ERIN LOUISE			3866 COUNTY ROAD 405	MCKINNEY	TX	75071-4131
241	2776536	6	WA,WB,WC,W D	W6	SKW9 LLC			2665 COUNTY ROAD 338	MCKINNEY	TX	75071-0431
241a	1890234	6a	WA, WB, WC, WD	W6	WILLIAMS STEVEN M KAREN K			2665 COUNTY ROAD 338	MCKINNEY	TX	75071-0431
242	1053031; 1053059; 1053068		WE,WF,WG,WI, WJ,WK,WL	W11,W12,W13, W16,W20a	SLOAN CREEK LTD & PLF LTD			1226 CHEROKEE DR	RICHARDSON	TX	75080-3906
243	2509142	186	EH,EI	E12	SMITH ANDALYN GAYLE			1112 PURPLE MARTIN DR	MCKINNEY	TX	75071-4345
244	1592985	162	EI	E4	SMITH PAULA JANE			240 MEADOWS DR	MCKINNEY	TX	75071-3970
245	1514597	177	EK,EL	E11b	SMITH STEVEN C &		LYNDAL C SMITH	4267 COUNTY ROAD 405	MCKINNEY	TX	75071-0831
246	1593056	159	EI	E4	SOMMERS WILLIAM R ETUX			481 DALE DR	MCKINNEY	TX	75071-3981
247	2744524, 2767066	174	EK,EL, EJ	E11b; E11c	SPURGIN KIMA			4025 COUNTY ROAD 405	MCKINNEY	TX	75701-0100
248	2803209		EH,EI,EJ,EK,EL	E26a	SRK GROUP LLC			1400 CORPORATE DR, STE 111	IRVING	TX	75038-2944
249	2803157		EH,EI,EJ,EK,EL	E26a	SS DEE & SRA LLC			232 ROLLING FORK BND	IRVING	TX	75039-3808
250	2803198		EE,EF,EG	E19,E24,E25a	SS S&D PROPERTIES LLC			232 ROLLING FORK BND	IRVING	TX	75039-3808
251	2590737	68	WF,WI	W25	STARK THOMAS CLINTON & BRIANNE			4112 TEJAS CT	MCKINNEY	TX	75071-8312
252	2590728	77	WF,WI	W25	STEFANI FRED R & JANINE M			4008 TEJAS CT	MCKINNEY	TX	75071-8300
253	1499532	153	EL	E7	STEPHENS PATRICIA			251 OAK CREEK DR	MCKINNEY	TX	75071-4320
254	1890225		WA,WB,WC,W D	W6	STERLING TRUST COMPANY CUSTODIAN FBO		C/O STEVEN WILLIAMS	2665 CR 338	MCKINNEY	TX	75071-0431
255	2664074	141	EJ,EK	E8	SULLIVAN RICKY L			130 ROCKCREST RD	MCKINNEY	TX	75071-4152
256	2539772	20	WL	W12	SUN QINGHUA & HAIDONG LI			1058 HOPEWELL DR	ALLEN	TX	75013-5606
257	2590725	80	WA, WB, WD, WE	W21	SWILLING ROBERT MATTHEW & JENNIFER			501 KIOWA DR	MCKINNEY	TX	75071-0493
258	2590806	113	WA,WD,WE	W23	SYED FAROOQ			1125 NOCONA DR	MCKINNEY	TX	75071-0491
259	1062352; 1522365; 2031251; 2121047		WA,WB,WD,W F,WI	W17a,W17b,W 25	TALUKDER JAMAL & NAZNEEN			600 W MCDERMOTT DR STE B	ALLEN	TX	75013-2700
260	1620909; 2624930; 2779277		EA,EB, ED	E16, E21, E22	TASACOM INVESTMENTS LLC			13151 EMILY RD, STE 200	DALLAS	TX	75240
261	2590805	114	WA,WD,WE	W23	TAYLOR JEFFREY L			1129 NOCONA DR	MCKINNEY	TX	75071-0491
262	1598934	198; 199	ED,EE,EF,EG	E14	THOMAS DELTON KEITH			5577 SPUR LN	MCKINNEY	TX	75071-0765
263	2655659		EK,EL	E3	THOMPSON J DAVID & KAREN K		C/O BELLEMEADE FARMS LP	1974 BELLEMEADE LN	MCKINNEY	TX	75071-0905
264	1592976	163	EI	E4	THOMPSON RICHARD G ETUX			220 MEADOWS DR	MCKINNEY	TX	75071-3970
265	1073974; 2666185		EC,ED, EE, EF, EG	E19, E20,E21,E23	TILLERY WILLIAM VIRGIL III LIVING TRUST &		JULIA ANN TILLERY LIVING TRUST	3 ROCKBROOK RD	AUGUSTA	GA	30909-3760
266	2656556		EH,EI	E12	TRAVIS FARON ETAL			3489 COUNTY ROAD 406	MCKINNEY	TX	75071-4193
267	1102363		EA,ED,EE	E39a	VANAM SRIRAM RAO &		SREEPAD KANCHANAVALLY	656 TERRACE ST	COPPELL	TX	75019-2021
268	2590726	79	WA,WB,WD,W E	W21	VOIRIN ROBERT SHANE & STACI E			4000 TEJAS CT	MCKINNEY	TX	75071-8300
269	2121046		WA,WB,WD	W17a	W J FAMILY LP			PO BOX 250128	PLANO	TX	75025-0128

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270	2590800	119	WA,WD,WE	W23	WANG LU			1208 HOYT DR	MCKINNEY	TX	75071-0016
271	1614578	223	EA,ED,EE	E39a	WATERS JAMES & SUSAN			8203 MCKISSICK MEADOWS RD	PRINCETON	TX	75407-2506
272	1061941		WC,WF,WH,WI	W22a,W22b,W25	WESTGOLD REALTORS INC			79687 COUNTRY CLUB DR STE 201	BERMUDA DUNES	CA	92203-1251
273	2017560; 2671963	132	EJ	E5	WHEELER PATRICE			425 WOOD RIDGE DR	MCKINNEY	TX	75071-0692
274	2664142	190	EH,EI,EJ,EK,EL	E26a	WILKINSON RANDALL W & HILDE A			3624 COUNTY ROAD 406	MCKINNEY	TX	75071-4330
275	2120555	175	EK,EL	E11b	WILLIAMS JOHN M			4155 COUNTY ROAD 405	MCKINNEY	TX	75071-0829
276	1614382	136	EJ,EK	E8	WILLIAMS PAUL O & BILLIE RUTH			PO BOX 654	MCKINNEY	TX	75070-8141
277	2590760	95	WA,WB,WD,WE	W21	WILLIAMS WARREN P & GRACE H			801 KIOWA DR	MCKINNEY	TX	75071-0496
278	2539546	40	WG	W20a	WILLIS FRANK A &		CANDACE V WILLIS	405 CYPRESS HILL DR	MCKINNEY	TX	75071-3704
279	2582492		WJ,WK	W11	WILMETH AND FIVE CORNER LLC			14902 PRESTON RD STE 902	DALLAS	TX	75254-9136
280	2137068	168	EI	E4	WINFORD DEBORAH			2222 FM RD 1827	MCKINNEY	TX	75071
281	2590713	92	WA,WB,WD,WE	W21	WOODS CHRISTOPHER			705 KIOWA DR	MCKINNEY	TX	75071-0495
282	2714247		EH,EI,EJ,EK,EL	E26a	YELURI SRILAKSHMI &		RADHIKA VELIVELLI	16763 FALKIRK TRL	LAKEVILLE	MN	55044-6149
283	2671480, 2671481		WE,WF, WG, WI	W16, W20a	YOUNGBLOOD GRANTSIE ANN			3874 N MCDONALD ST	MCKINNEY	TX	75071-0375
284	2590712	93	WA,WB,WD,WE	W21	YU HUANG REVOCABLE TRUST		FENGJIE HUANG & HUA YU CO-TR	13188 JULIET WAY	FRISCO	TX	75035-3185
285	2803211		EE,EF,EG	E19	ZENVOY LLC			8701 NAOMI ST	PLANO	TX	75024-7812
286	2539764	28	WL	W12	ZHANG XIAOPING &		XINFEN CHEN	3525 AQUA SPRINGS DR	PLANO	TX	75025-6912
287	2111511	180	EK,EL	E11b	OWNER OF RECORD[3]			2935 COUNTY ROAD 406	McKinney	TX	75071
288	2539758	33	WL	W12	OWNER OF RECORD[3]			416 TWIN KNOLL DR	McKinney	TX	75071
289	2539762	30	WL	W12	OWNER OF RECORD[3]			428 TWIN KNOLL DR	McKinney	TX	75071
290	2590811	108	WA,WB,WD,WE	W21,W23,W24	OWNER OF RECORD[3]			1105 NOCONA DR	McKinney	TX	75071
291	2013617; 2144228		EJ	E11c	CLAYTON CHRIS B & ANNE F			3843 KATIE CIR	MCKINNEY	TX	75071-0838
292	2013616		EJ	E11c	NORTON KEVIN & HOLLY			3680 BILLY LN	MCKINNEY	TX	75071-4306
	W11, W12, W13, W14		WA, WB, WC, WD, WE,WF, WG, WH, WI, WJ, WK, WL		Dallas Area Rapid Transit		Attn: Bonnie Murphy	PO BOX 660613	Dallas	TX	75266-0163

Notes:

[1]HS = Habitable Structure

[2]Owner information not available at Collin Central Appraisal District. Notice sent to individual presumed to be associated with cemetery by email.

[3]Name and contact information not available at Collin Central Appraisal District; mailing address obtained by other means.

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-kV TRANSMISSION LINE PROJECT IN COLLIN COUNTY, TEXAS

DOCKET NO. 50812

Attachment 18—Additional Notice Letter for Modified Segments

New Hope 138-kV Transmission Line Project
PUC Docket No. 50812
Affected Landowners List (Modified Segments W3-W5-W6-W10-W14)

Map_ID	Tract_ID	HS[1]_ID#	Routes	Segments	Name (Last-First)	dba_name	Address_line 1	Address_line 2	City	State	Zip
12	1059491, 1974159	3; 4	WA,WB,WC,WD	W6, W3, W5, W6	AYCOCK R E JR			2752 COUNTY ROAD 338	MCKINNEY	TX	75071-0314
16	2655882	5	WA,WB,WC,WD	W6	BAGGARLY JONATHAN D			1610 ALLISON RD	MCKINNEY	TX	75071-0362
76	1052292		WA,WB,WC,WD	W6	EQUITY TRUST COMPANY		CUSTODIAN FBO STEVEN MARK WILLIAMS IRA	2665 COUNTY ROAD 338	MCKINNEY	TX	75071-0431
78	520500; 1052327; 1905004; 1905013	7	WE,WF,WG,WH,WI	W7,W9,W10,W13	EUBANK RICHARD H & SHERRI L			2371 COUNTY ROAD 338	MCKINNEY	TX	75071-0433
136	13246; 520877; 1052407, 1053077, 461547		WA,WB,WC,WD,WH; WI,WJ, WK, WL; WE, WF, WG	W6,W10,W14, W14, W17a, W22a; W2; W8, W9, W12, W13;	LACORE AGRICULTURE LLC			901 SAM RAYBURN HWY	MELISSA	TX	75454-2218
186	1168444, 2777391; 2777392; 2777394; 2777396; 2777395		EA,EB,EC,ED,EE, EF,EG,EH, EI, EJ; WA,WB,WC,WD,WE,WF,WG,	E1, E2,E4,E5, E9, E10, E13, E14, W1, W3, W4	NORTH TEXAS MUNICIPAL WATER DISTRICT			PO BOX 2408	WYLIE	TX	75098-2408
214	1052498, 1052470, 1052489; 1052336		WA,WB,WC, WD, WE, WF, WG, WA,WB,WC,WD	W3, W4, W5, W6, W7	REA CAPITAL LP		C/O R E AYCOCK JR PRES OF WINDOM FARMS MGMT LLC GE	2752 COUNTY ROAD 338	MCKINNEY	TX	75071-0314
241	2776536	6	WA, WB, WC, WD	W6	SKW9 LLC			2665 COUNTY ROAD 338	MCKINNEY	TX	75071-0431
241a	1890234	6a	WA,WB,WC,WD	W6	WILLIAMS STEVEN M KAREN K			2665 COUNTY ROAD 338	MCKINNEY	TX	75071-0431
254	1890225		WA,WB,WC,WD	W6	STERLING TRUST COMPANY CUSTODIAN FBO		C/O STEVEN WILLIAMS	2665 CR 338	MCKINNEY	TX	75071-0431

Notes:

[1]HS = Habitable Structure

New Hope 138-kV Transmission Line Project
PUC Docket No. 50812
Utility-City-County-OPUC-DoD Notice List

Name	Attention	Address	City	State	Zip
City of Anna	Mayor Nate Pike	111 N. Powell Pkwy, P.O. Box 776	Anna	TX	75409
City of Blue Ridge	Mayor Rhonda Williams	200 S. Main Street	Blue Ridge	TX	75424
Town of Fairview	Mayor Henry Lessner	372 Town Place	Fairview	TX	75069
City of Farmersville	Mayor Randy Rice	205 S. Main Street	Farmersville	TX	75442
City of Lowry Crossing	Mayor Derek Stephens	1405 S. Bridgefarmer Road	Lowry Crossing	TX	75069
City of Lucas	Mayor Jim Olk	665 Country Club Road	Lucas	TX	75002
City of McKinney	Mayor George Fuller	222 N. Tennessee Street	McKinney	TX	75069
City of Melissa	Mayor Reed Greer	3411 Barker Avenue	Melissa	TX	75454
Town of New Hope	Mayor Angel Hamm	P.O. Box 562	McKinney	TX	75070
City of Princeton	Mayor John-Mark Caldell	123 Princeton Drive	Princeton	TX	75407
City of Weston	Mayor Jim Marischen	301 Main Street	Weston	TX	75009
Collin County	Judge Chris Hill	2300 Bloomdale Rd., Suite 4192	McKinney	TX	75071
Collin County	Commissioner Darrell Hale	2300 Bloomdale Rd., Suite 4192	McKinney	TX	75071
Office of Public Utility Counsel	Ms. Lori Cobos	P.O. Box 12397	Austin	TX	78711-2397
Department of Defense Siting Clearinghouse		3400 Defense Pentagon, Room 5C646 Email: osd.dod-siting-clearinghouse@mail.mil	Washington	DC	20301-3400
Oncor Electric Delivery Company	Attn: Michael Sherburne	1616 Woodall Rodgers Fwy	Dallas	TX	75202-1234
Texas-New Mexico Power Company	Attn: Stacy Whitehurst	577 North Garden Ridge Blvd.	Lewisville	TX	75067
Grayson-Collin Electric Cooperative, Inc	Attn: David McGinnis	P.O. Box 548	Van Alstyne	TX	75495-0548

Rayburn Electric Cooperative
P.O. Box 37
Rockwall, TX 75087
(469) 402-2100

July 6, 2020

<Landowner Name/Utility/City/Etc.>
<Address>
<City, State, Zip>

Tract ID: <Tract ID>

RE: PUC Docket No. 50812; AMENDED Application of Rayburn Country Electric Cooperative, Inc. to Amend a Certificate of Convenience and Necessity for the New Hope 138-kV Transmission Line Project in Collin County, Texas

Dear <Landowner/Gov't Entity>:

This letter is to notify you of an amendment to the application of Rayburn Country Electric Cooperative, Inc. d/b/a Rayburn Electric Cooperative (REC) to amend its Certificate of Convenience and Necessity (CCN) to construct the proposed New Hope 138-kV Transmission Line Project in Collin County, Texas. The application is pending in Docket No. 50812 before the Public Utility Commission of Texas (PUC).

You previously received notice of this application by letter dated May 22, 2020, because your land located in Collin County might be directly affected in this docket. You are receiving this additional notice because Rayburn has filed an amendment to its application to modify the location of two segments and these modifications could also directly affect your land.

Since filing its application, REC learned that North Texas Municipal Water District (NTMWD) recently acquired an easement and began construction on a water pipeline in a location where REC proposes alternative routing segments for the New Hope 138-kV transmission line, specifically Segments W3 and W6. To address this new information, Rayburn has redesigned Segments W3 and W6 to be located an average of approximately 150 feet farther south than originally proposed. As modified, Rayburn's proposed right-of-way would be located south of NTMWD's right-of-way along these segments for most of their distance.

The modification of Segments W3 and W6 also causes slight changes to other segments to which they connect, including Segment W5 (becoming shorter), Segment 10 (becoming shorter), and Segment W14 (connecting with Segment W6 at a location farther south than originally proposed). These segments are parts of proposed alternative routes West A, West B, West C, West D, and West H.

We enclose with this letter a more detailed description of the modified segments, along with a map depicting the modified segments relative to their original alignment. REC has also revised relevant application materials on file in Docket No. 50812 consistent with the segment modifications.

If one of REC's alternative routes is approved by the PUC, REC will have the right to build a facility that might directly affect your land. The PUC docket will not determine the value of your land or of the easement if one is needed by REC to build the facility.

All routes and route segments included with REC's application are available for selection and approval by the Public Utility Commission of Texas.

If you have questions about the transmission line, you may contact Stephen Geiger with REC by phone at (469) 402-2100. The CCN application and detailed routing maps may be reviewed during normal business hours at REC's headquarters at 950 Sids Road, Rockwall, Texas 75087, or the project website: http://www.rayburnelectric.com/projects/NewHope.

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.

Due to the COVID-19 pandemic, 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. 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. For assistance with your electronic filing, please contact the Commission's Help Desk at (512) 936-7100 or 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 toll free 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 docket by becoming an intervenor, the deadline for intervention in the proceeding is July 6, 2020, unless that deadline is extended by the PUC. The PUC may extend the deadline for those landowners directly affected by the modified segments identified in this letter. The PUC should receive a letter from you requesting intervention by the deadline. Mail the request for intervention and 10 copies of the request to the following address:

Public Utility Commission of Texas
Central Records, Attn: Filing Clerk
1701 N. Congress Avenue
P.O. Box 13326
Austin, Texas 78711-3326

Persons who wish to intervene in the docket must also mail 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.

The PUC will make the final determination of which route will be approved for this transmission line project. Any one of the proposed alternative routes or any other combination of the route segments could be approved by the PUC.

Sincerely,

Stephen Geiger
Chief Operating Officer
Rayburn Electric Cooperative

Enclosures

- Modified Route Segment Descriptions
- Map of Modified Segments
- Brochure: Landowners and Transmission Line Cases at the PUC
- Comment Form
- Intervention Form

On May 22, 2020, Rayburn Country Electric Cooperative, Inc. a/k/a Rayburn Electric Cooperative (REC) filed an application with the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct the New Hope 138-kV Transmission Line Project in Collin County, Texas. The new line will connect the proposed New Hope Substation to just one of three termination point options being considered:

- Tap Option A, located 0.45 mile north and east of the intersection of US-75 and Bloomdale Road, at the existing Oncor Electric Delivery Company, LLC (Oncor) Anna to McKinney 138-kV transmission line, which is approximately 2.75 miles west of the New Hope Substation;

- Tap Option B, located 0.5 mile south-southeast of the intersection of Bloomdale Road and Shawnee Drive, at the existing Oncor Anna to McKinney 138-kV transmission line, which is approximately 2.75 miles west of the New Hope Substation; or

- Tap Option C, located adjacent to the existing Texas-New Mexico Power Co. (TNMP) Longneck Substation along FM 75 (Longneck Road), approximately 600 feet north of Monte Carlo Boulevard, which is approximately 4.5 miles southeast of the New Hope Substation.

In its CCN application for this project, REC has presented 24 alternative routes comprised of 75 segments for consideration by the PUC. The following table lists the segment combinations that make up the 24 alternative routes and the length of each alternative route in feet and in miles. On July 6, 2020, REC filed an amendment to its CCN application to modify the location of a few routing segments. This slightly affected the length of alternative routes West A, West B, West C, West D, and West H. The *revised distances are reflected below. 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 listed alphabetically and not in any order of preference or priority.

Route	Component Segments	Tap Option	Length	
			Feet	Miles
West A	W1-W3-W6-W14-W17a-W17b-W21-W23	A	23,005	4.36
West B	W1-W3-W6-W14-W17a-W17b-W21-W24-W20c-W18b	B	24,043	4.55
West C	W1-W3-W6-W14-W22a-W22b	A	22,196	4.20
West D	W1-W4-W5-W6-W14-W17a-W17b-W21-W23	A	21,834	4.14
West E	W1-W4-W7-W13-W16-W21-W23	A	20,619	3.91
West F	W1-W4-W7-W13-W16-W17b-W25-W22b	A	21,402	4.05
West G	W1-W4-W7-W13-W20a-W20b-W20c-W18b	B	18,728	3.55
West H	W2-W8-W9-W10-W14-W22a-W22b	A	22,166	4.20
West I	W2-W8-W9-W13-W16-W17b-W25-22b	A	21,722	4.11
West J	W2-W11-W15-W19- W20b-W20c-W18b	B	17,831	3.38
West K	W2-W11-W18a-W18b	B	16,842	3.19

Route	Component Segments	Tap Option	Length	
			Feet	Miles
West L	W2-W8-W12-W19-W20b-W20c-W18b	B	17,690	3.35
East A	E1-E9-E13-E16-E22-E31-E34-E39a-E39b	C	40,729	7.71
East B	E1-E9-E13-E16-E22-E31-E34-E37-E38a-E38b	C	41,249	7.81
East C	E1-E9-E13-E17-E20-E23-E30-E33-E35-E36-E38a-E38b	C	34,993	6.63
East D	E1-E9-E14-E18-E20-E21-E22-E31-E34-E39a-E41-E38b	C	39,553	7.49
East E	E1-E9-E14-E19-E24-E29-E31-E34-E39a-E41-E38b	C	40,027	7.58
East F	E1-E9-E14-E19-E25a-E25b-E35-E36-E38a-E38b	C	34,593	6.55
East G	E1-E9-E14-E19-E25a-E40a-E40b	C	33,479	6.34
East H	E1-E10-E12-E15-E26a-E26b-E36-E38a-E38b	C	36,667	6.94
East I	E2-E4-E12-E15-E26a-E40b	C	31,461	5.96
East J	E2-E5-E8-E11a-E11c-E15-E26a-E26b-E36-E38a-E38b	C	33,878	6.42
East K	E3-E6-E8-E11a-E11b-E15-E26a-E40b	C	42,267	8.01
East L	E3-E7-E11a-E11b-E15-E26a-E26b-E36-E38a-E38b	C	43,574	8.25

Following is a revised narrative describing the routing segments that were modified as a result of REC's amended CCN application, specifically Segments W3, W5, W6, W10, and W14. Also enclosed is a map that shows these modified routing segments relative to their original alignment. Except for these modifications, there were no other changes to the 24 alternative routes originally filed by REC.

Segment W3 (7,850 feet)

Segment W3 begins at its junction with Segments E1, W1, and W4, at a point approximately 1,720 east-northeast of the FM 2933 and CR 336 intersection. It extends north-northeast for approximately 2,800 feet to the east side of FM 2933 at a point approximately 900 feet south of the CR 997 and FM 2933 intersection. From there it angles west, immediately crosses FM 2933, and continues west for approximately 5,050 feet to the east side of CR 338. There the Segment terminates at its junction with Segments W5 and W6, on the east side of CR 338 approximately 3,950 feet south-southeast of the CR 338 and the Dallas, Garland, and Northeastern (DGNO) Railroad intersection.

Segment W5 (1,601 feet)

Segment W5 begins at its junction with Segments W4 and W7, on the east side of CR 338 approximately 3,650 feet north-northeast of the intersection of CR 331 and CR 338. It extends north, parallel to the east side of CR 338, for 1,601 feet where it terminates at its junction with Segments W3 and W6, on the east side of CR 338 approximately 3,950 feet south-southeast of the CR 338 and the DGNO Railroad intersection.

Segment W6 (3,602 feet)

Segment W6 begins at its junction with Segments W3 and W5, on the east side of CR 338 approximately 3,950 feet south-southeast of the CR 338 and the DGNO Railroad intersection. It extends west for a total

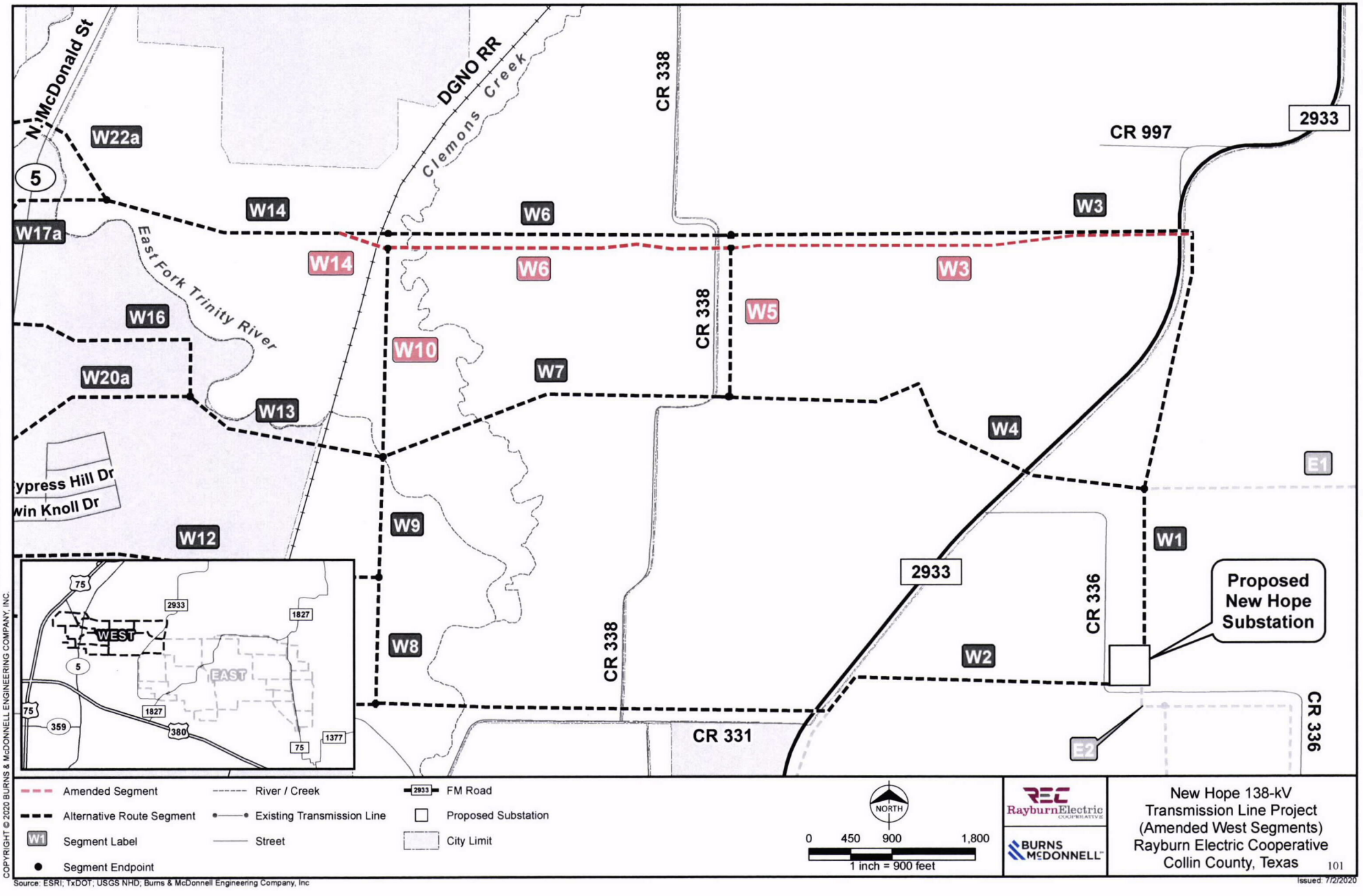
of 3,602 feet, as it crosses CR 338 and then Clemons Creek before terminating at its junction with Segments W10 and W14, on the east side of the DGNO Railroad at a point approximately 4,070 feet northeast of the State Highway (SH) 5 (North McDonald Street) and State Spur 195 [formerly designated as FM 543 (Weston Road)] intersection.

Segment W10 (2,258 feet)

Segment W10 begins at its junction with Segments W7, W9, and W13, at a point just south of the East Fork of the Trinity River approximately 3,970 feet north of the CR 331 and CR 274 (McIntyre Road) intersection. It extends north, immediately crossing the East Fork of the Trinity River, for 2,258 feet where it terminates at its junction with Segments W6 and W14 on the east side of the DGNO Railroad at a point approximately 4,070 feet northeast of the State Highway (SH) 5 (North McDonald Street) and State Spur 195 [formerly designated as FM 543 (Weston Road)] intersection.

Segment W14 (3,116 feet)

Segment W14 begins at its junction with Segments W6 and W10, on the east side of the DGNO Railroad at a point approximately 4,070 feet northeast of the intersection of SH 5 (North McDonald Street) and State Spur 195 [formerly designated as FM 543 (Weston Road)]. It extends northwest, immediately crossing the DGNO Railroad, for 575 feet, then angles west for 1,226 feet. wherefrom there, it angles northwest and proceeds another 1,315 feet and terminates at its junction with Segments W17a and W22a, at a point approximately 950 feet southeast of where SH 5 (North McDonald Street) crosses the East Fork of the Trinity River.



Path: Z:\Clients\ENS\RayburnEC\111517_McKinney-138kV\Studies\Geospatial\DataFiles\ArcDocs\NoticeMap_RouteDescriptions_WestAmended_11x17.mxd gacox 7/2/2020

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Source: ESRI; TxDOT; USGS NHD; Burns & McDonnell Engineering Company, Inc

Landowners and Transmission Line Cases at the PUC

Public Utility Commission of Texas

1701 N. Congress Avenue
P.O. Box 13326
Austin, Texas 78711-3326
(512) 936-7261
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 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 512-936-7261. 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.

Comments in Docket No. 50812

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.

_____

_____

_____

_____

Signature of person submitting comments:

_____ Date: _____

Effective: January 1, 2003

Request to Intervene in PUC Docket No. 50812

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: _____

Effective: April 8, 2020

APPLICATION OF RAYBURN COUNTRY ELECTRIC COOPERATIVE, INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE NEW HOPE 138-kV TRANSMISSION LINE PROJECT IN COLLIN COUNTY, TEXAS

DOCKET NO. 50812

Attachment 19—Affidavit for Amendment

AFFIDAVIT FOR AMENDED APPLICATION
PUC Docket No. 50812

STATE OF TEXAS §
§
COUNTY OF ROCKWALL §

Before me, the undersigned authority, Stephen Geiger, being first duly sworn, deposes and states:

"My name is Stephen Geiger. I am over the age of twenty-one and competent to make this affidavit. I am the Chief Operating Officer with Rayburn Country Electric Cooperative, Inc. d/b/a Rayburn Electric Cooperative (REC), and in such capacity I am responsible for the New Hope 138-kV Transmission Line Project and am qualified to make this affidavit. I am authorized by REC to verify and affirm that, to the best of my knowledge, all information provided, statements made, and matters set forth in this CCN application and attachments, including as it has been amended by the First Amendment to the CCN Application, are true and correct.

I have personal knowledge of the information contained in the CCN application, as amended, including the maps and attachments filed with the CCN application and the First Amendment thereto, and that, to the best of my knowledge, REC has complied with all the requirements contained in the CCN application form.

I am the custodian of REC's records for this CCN application, including the records included in or attached to the CCN application, as amended (the Records), and I have care, custody, and control of such Records. These Records were kept by REC in the regular course of business, and it was the regular course of REC's business for its employee or representative with personal knowledge of the events recorded in the Records and CCN application, as amended, to make the Records or transmit information thereof to be included in such Records. The Records were made at or near the time or reasonably soon thereafter the events they record, and the Records are the original or exact duplicates of the originals.

The CCN application, as amended, is made in good faith and does not duplicate any filing presently before the Public Utility Commission of Texas.

Formal and informal contact between REC and some of the affected landowners has occurred as part of the public involvement process."

Stephen Geiger
Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public in and for the State of Texas, this 1st day of July, 2020.

Notary Public

DAWN DAIS WAGNER
Notary Public, State of Texas
Comm. Expires 12-02-2023
Notary ID 130455791