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State Office of Administrative Hearings

Kristofer S. Monson
Chief Administrative Law Judge

November 10, 2023

Shelah Cisneros, Commission Counsel
Commission Advising and Docket Management
William B. Travis State Office Building
1701 N. Congress, 7th Floor
Austin, Texas 78701

VIA EFILE TEXAS

**RE: SOAH Docket No. 473-23-21216; PUC Docket No. 55067;
*Application of Oncor Electric Delivery Company LLC to Amend Its
Certificate of Convenience and Necessity for the Ramhorn Hill to
Dunham 345 kV Transmission Line in Denton and Wise Counties***

Dear Ms. Cisneros:

Enclosed is the Proposal for Decision (PFD) in the above-referenced case. By copy of this letter, the parties to this proceeding are being served with the PFD.

Please place this case on an open meeting agenda for the Commissioners' consideration. The deadline for the Commission's decision in this case is December 5, 2023. Please notify us and the parties of the open meeting date, as well as the deadlines for filing exceptions to the PFD, replies to the exceptions, and requests for oral argument.

Enclosure

CC: Service List

BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE RAMHORN HILL TO DUNHAM 345 KV TRANSMISSION LINE IN DENTON AND WISE COUNTIES

TABLE OF CONTENTS

Table of Abbreviations.....	iv
Table of Parties.....	vi
I. Introduction.....	1
II. Jurisdiction and Procedural History	3
III. Applicable Law	4
IV. Preliminary Order Issues.....	7
A. Adequacy.....	7
B. Notice.....	8

C.	Public Input	10
D.	Need	12
E.	Routing	13
1.	Introduction.....	13
2.	The Discussed Routes and Modifications	15
a)	Route 179: Oncor’s Preferred Route	15
b)	Route 179-C: Staff’s “Best Meets” Route (West Region)	18
c)	DCLC’s Modifications to Links M1 and M5 (West Region)	20
d)	DCLC’s Modifications to Link M3 (West Region)	22
e)	La Estancia Alternative 1 (East Region)	23
f)	La Estancia Alternatives 2 and 2A (East Region)	25
g)	The Justin Modification (Central Region).....	27
3.	Analysis and Considerations Applicable to All Routes and Modifications	30
a)	Community Values	30
b)	Recreational Park Areas	34
c)	Cultural, Aesthetic, and Historical Values	35
d)	Environmental Integrity	38
e)	Costs.....	41
f)	Use of Existing Corridors.....	42
g)	Prudent Avoidance	44
h)	Engineering Constraints.....	46

i)	Effect on Any Electric Utility Serving the Area.....	47
4.	Alternative Routes: Less Negative Effect, Incremental Cost, Offset, and Reduced Efficiency.....	48
5.	Summary of Routing Recommendation.....	49
F.	Texas Parks and Wildlife Department.....	51
G.	Other Preliminary Issues.....	54
1.	Cost of the Project to Consumers and Congestion Cost Savings.....	54
2.	Best Management Practices	54
3.	Permitting, Licenses, Plans, and Permissions.....	54
4.	Coastal Management Program	56
5.	Limitation of Authority	56
6.	Effect of Construction on Power Generation, Delivery or Reliability.....	56
7.	Agreement between Parties.....	57
V.	Findings of Fact	57
VI.	Conclusions of Law.....	81
VII.	Proposed Ordering Paragraphs.....	83
	Comparison Chart Between Discussed Routes	Appendix A

TABLE OF ABBREVIATIONS

Abbreviation	Term
ALJs	Administrative Law Judges
CCN	Certificate of Convenience and Necessity
Commission or PUC	Public Utility Commission of Texas
DCLC Modified M1	A modified Link M1 link in Route 179-C proposed by Intervenor Denton Land and Cattle, LP and Denton Land and Cattle 2
DCLC Modified M5	A modified M5 link in Route 179-C proposed by Intervenor Denton Land and Cattle, LP and Denton Land and Cattle 2
DOD	Department of Defense Siting Clearinghouse
EA	Environmental Assessment and Alternative Routing Analysis
EMF	Electro-magnetic fields
ERCOT	Electric Reliability Council of Texas
FAA	Federal Aviation Administration
FM	Farm-to-Market Road
Halff	Halff Associates, Inc.
Justin Modification	A modification to Routes 179 or 179-C that would replace Links I8-J3-K1-L5-L4-L3 with Links I6-J1-J21-J22-L1.
La Estancia Alt. 1	A modification of Route 179 or 179-C that would create a modified link between C21 and C3 and then replace Links C23-C7-E2 with Links C3-C6.
La Estancia Alt. 2	A modification of Route 179 or 179-C that would modify Links E6 and G1 to track the existing roadway, FM 1171.
kV	Kilovolt
PFD	Proposal for Decision

Abbreviation	Term
Project	A proposed 345-kilovolt (kV) transmission line and associated facilities in Denton and Wise counties
PURA	Public Utility Regulatory Act, Texas Utility Code §§ 11.001-66.016
Recommended Route	Route 179-C as modified by La Estancia Alts. 1 and 2 and DCLC Modified M1 and M5: A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 Link-C3-C6-E1-Mod. E6-Mod. G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-Mod. M1-Mod. M5-R2-R5-U3-V3-V4-Z
Route 179	Route comprising of links: A0-A4-B1-B61-B62-C1-C21-C23-C7-E2-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M2-M3-R4-V2-Z
Route 179-C	Route comprising of links: A0-A4-B1-B61-B62-C1-C21-C23-C7-E2-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M5-R2-R5-U3-V3-V4-Z
ROW	Right-of-way
Secondary Route	Route 179-C as modified by La Estancia Alt. 1 and DCLC Modified M1 and M5: A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 Link-C3-C6-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-Mod. M1-Mod. M5-R2-R5-U3-V3-V4-Z
SOAH	State Office of Administrative Hearings
SWPPP	Storm Water Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

TABLE OF PARTIES

For ease of reference, the parties that appeared at the hearing are listed below¹ with how they will be referred in the PFD, along with their respective supported routes:

Party Name	Supported Route²
Oncor Electric Delivery Company (Applicant or Oncor)	Route 179
Staff of the Public Utility Commission (Staff)	Route 179-C
Alliance West, LP (Alliance West)	Route 179-C modified by DCLC Modified M1 and M5
Charles Dee and Gretchen Brown	Any discussed route ³
Deborah N. Dallas	Route 179-C with La Estancia Alts. 1 & 2 ⁴
Seth Deleon	Route 179-C with La Estancia Alts. 1 & 2
Denton County Land & Cattle 1, LP and Denton County Land & County 2, LP (DCLC)	Route 179-C modified by DCLC Modified M1 and M5
DHL Supply Chain (DHL)	Route 179-C with La Estancia Alts. 1 & 2
Dudley Realty, LLC (Dudley Realty)	Route 179 or 179-C with the Justin Modification

¹ Certain parties did not appear at the hearing but filed post hearing briefing; Janet and Mike Bresler; Kimn and Terri Nierman; and Meredith and Jason Guess. These intervenors support the Justin Residents' position.

² For simplicity, this column only identifies the primary position of the party. Certain parties took alternative positions, which were considered and, if necessary, discussed further below.

³ The Browns did not file a closing or reply brief, but their direct testimony indicates that they oppose the use of Link U2, which is not included in any of discussed or identified routes.

⁴ While Ms. Dallas did not file closing briefs or direct testimony in this action, she indicated her support to these alternatives in an email to counsel for La Estancia. La Estancia Ex. 4 at *3.

Party Name	Supported Route²
Old WR Ranch I, LP; SWC 1171-377 Ltd.; and 64.3 SE 1171/377 LLC (collectively, Furst Ranch)	Route 179-C with La Estancia Alts. 1 & 2
GRBK Edgewood, LLC (GRBK) and GBTM Sendera, LLC (GBTM)	Route 179-C
H3M Property Holdings, LP and Ross Brewer (together, H3M Property)	Route 179 or 179-C
Eagle Income Properties, LP; AIL Investment LP; Petrus Investment, LP; HW Indian Spring, LP; HWC Justin 407, LLC; HP Gibbs, LP; Pecan Square 1, LLC; Pecan Square 2A, LLC; Pecan Square 2B, LLC; Pecan Square 3A, LLC; and Pecan Square 3B, LLC (collectively, Hillwood Parties)	Route 179-C with La Estancia Alts. 1 & 2
City of Justin (Justin)	Route 179 or 179-C with the Justin Modification
Anzhela and Viktor Chopovenko; Daniel and Melissa Dennis; James and Holly Lewis; and Robert L. and Martha J. Vinyard (collectively, the Justin Residents)	Route 179 or 179-C with the Justin Modification ⁵
La Estancia Investments, LP (La Estancia)	Route 179 with La Estancia Alts. 1 & 2/2A
New Dimension Investment II, LLC (New Dimension)	Route 179 or 179-C
Town of Northlake (Northlake)	Route 179-C with La Estancia Alts. 1 & 2

⁵ While some of the residents propose a series of links that are listed differently than the Justin Modification, their request is to avoid Link J3 and instead use Link J22 and other links to connect Route 179 through J22. The Chopovenkos and Dennises specifically indicate some opposition to Link J22, seeking use of Link I12; however, ultimately it appears that their focus is opposing the use of Links J3 and J4 so they are included in this grouping as well.

Party Name	Supported Route²
PMB Rolling V Land, LP (PMB)	Route 179 ⁶
Bill Beverly Jr.; Bobby Keith Norris; David Bratton; Jerry Bratton; GFAT, LLC; Janet Beverly; Margaret and Antonio Chavez; Martin Rojas; Matthew A. Spaethe; Michael and Marnie Hamilton; Floyd T. McCurdy Testamentary Trust; Peggy McCurdy; and Rama Prasad Chalasani (collectively, the Spaethe Intervenors)	Route 179-C
TCCI Range – Mead 2021, LLC (TCCI Range)	Route 179 or 179-C with the Justin Modification
Texas Municipal Power Agency (TMPA)	No route position taken ⁷
Todd Family Holdings, L.P. (Todd Family)	Route 179
Jeff True	Route 179-C with La Estancia Alts. 1 & 2 ⁸
Edgar Brent Watkins and Mary Ann Livengood, Co-Trustees of the Watkins Family Trust (Watkins Family Trust)	Route 179-C
Wayne and Norma Wilkerson	Route 179-C
Jeremy and Katie Young	Route 179-C with La Estancia Alts. 1 & 2 ⁹

⁶ If the Commission’s order permits Oncor to make minor modifications to limit disruption, PMB does not oppose Route 179-C.

⁷ In its evidence and closing, TMPA focused on the effect of the proposed transmission line on its existing transmission infrastructure.

⁸ While Mr. True did not file a closing or reply brief, he indicated his support to the La Estancia Alts. in an email to counsel for La Estancia. La Estancia Ex. 4 at *6.

⁹ While the Youngs did not file a closing or reply brief, they indicated their support to the La Estancia Alts. in an email to counsel for La Estancia. La Estancia Ex. 4 at *8.

BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE RAMHORN HILL TO DUNHAM 345 KV TRANSMISSION LINE IN DENTON AND WISE COUNTIES

PROPOSAL FOR DECISION

I. INTRODUCTION

On June 8, 2023, Oncor Electric Delivery Company, LLC (Oncor) filed an application (Application) with the Public Utility Commission of Texas (Commission or PUC) to amend its Certificate of Convenience and Necessity (CCN) to construct and operate a 345-kilovolt (kV) transmission line and associated facilities in Denton and Wise counties (Project).¹⁰

¹⁰ On August 28, 2023, Oncor filed errata to their application, identifying and correcting errors in attachments 1 and 3 of the Application. *See* Oncor Ex. 24 (Notice of Errata) at 1-2.

The proposed transmission line is designated as the Ramhorn Hill-Dunham 345-kV transmission line. Oncor proposes to construct, own, and operate a new double-circuit 345-kV transmission line on triple-circuit-capable structures between the proposed Ramhorn Hill Switch and the proposed Dunham Switch.¹¹ The structures will have two 345-kV circuits initially installed with a vacant third circuit position capable of accommodating a future 138-kV circuit. The proposed transmission line and associated facilities are the second in a series of projects, collectively named the Roanoke Area Upgrades Project, that will address the identified reliability issues and provide additional operational flexibility on the transmission system in the Roanoke area.¹² The project has been endorsed by the Electric Reliability Council of Texas, Inc. (ERCOT) board of directors to address reliability challenges and serve existing and projected electricity demand growth in the Dallas and Fort Worth Metroplex.¹³ Oncor proposed 74 alternative routes for the proposed transmission line. The total estimated cost for the routes, not including associated substation costs (which are the same for all proposed routes),¹⁴ ranges from approximately \$168,332,000 to \$238,602,000, and the routes' estimated length ranges from approximately 20 miles to 23 miles.¹⁵

The State Office of Administrative Hearings (SOAH) Administrative Law Judges (ALJs) conditionally recommend granting the certificate and approval of

¹¹ Oncor Ex. 1 (Application) at 4.

¹² Oncor Ex. 1 (Application) at 10-11.

¹³ Oncor Ex. 1 (Application) at 10-15; *see also* Oncor Ex. 21 (Actions to Aid the Commission) at 3.

¹⁴ Estimated substation costs at \$74,858,000 are the same for all routes. Oncor Ex. 1 (Application), attach. 3, at 657.

¹⁵ Oncor Ex. 24 (Notice of Errata), attach. 2, at 12-18.

Route 179-C as modified by La Estancia Alternatives 1 and 2 and DCLC's Modified M1 and M5 comprising of links: A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 Created Link-C3-C6-E1-Modified E6-Modified G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-Modified M1-Modified M5-R2-R5-U3-V3-V4-Z (Recommended Route), as the route that best meets the applicable routing criteria. This route is conditioned on Intervenor La Estancia Investments, LP (La Estancia) demonstrating written consent to La Estancia Alternative 2 by the directly affected landowner of Tract 801.¹⁶ If written consent by the directly affected landowner is not provided, the ALJs recommend granting the certificate and approval of Route 179-C, as modified by La Estancia Alternative 1 and DCLC Modified M1 and M5 comprising of: A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 Created Link-C3-C6-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-Modified M1-Modified M5-R2-R5-U3-V3-V4-Z (Secondary Route).¹⁷

II. JURISDICTION AND PROCEDURAL HISTORY

The Commission has jurisdiction over Oncor's Application under Public Utility Regulatory Act (PURA)¹⁸ sections 14.001, 32.001, 37.051, 37.053, and 37.056. SOAH has jurisdiction to conduct a hearing and render a proposal for decision (PFD)

¹⁶ In addition, the ALJs understand from Denton County Land & Cattle 1, LP and Denton County Land & County 2, LP's (DCLC) representations that BNSF Railway Company, a directly affected landowner of the modifications sought to Link M1, has consented to the modification. However, the affidavit provided fails to demonstrate such consent or authority to provide such consent. Therefore, this recommended route is likewise conditioned on DCLC providing written consent from BNSF Railway Company.

¹⁷ In general, the PFD may summarize or not discuss uncontested issues, which are incorporated in detail in the PFD's findings of fact (FOFs), conclusions of law (COLs), and ordering paragraphs (OPs).

¹⁸ Tex. Util. Code §§ 11.001-66.016 (PURA).

on the Application under PURA section 14.053 and Texas Government Code section 2003.049.

On June 9, 2023, the Commission issued an Order of Referral and Preliminary Order referring the matter to SOAH, establishing a decision deadline of December 5, 2023, including a list of issues to be addressed in this proceeding.¹⁹

On August 28, 2023, SOAH ALJs Rachelle Nicolette Robles, Brent McCabe, and Amy Davis convened a hearing on the merits via the Zoom videoconferencing platform. The parties listed in the Table of Parties above appeared at the hearing.

Initial briefs were filed on September 7, 2023, and reply briefs were filed on September 14, 2023, at which time the record closed.

III. APPLICABLE LAW

The Commission may take one of three actions after considering a CCN application for new transmission facilities: grant the certificate as requested, grant the certificate for a portion of the facilities, or refuse to grant the certificate.²⁰ The transmission facilities must be necessary for the service, accommodation,

¹⁹ Order of Referral and Prelim. Order, Filing No. 11 (Jun. 9, 2023).

²⁰ PURA § 37.056(b).

convenience, or safety of the public.²¹ Additionally, the Commission must consider numerous statutory and regulatory factors that include:²²

- (1) the adequacy of existing service;
- (2) the need for additional service;
- (3) the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area; and
- (4) other factors, such as:
 - (A) community values;
 - (B) recreational and park areas;
 - (C) historical and aesthetic values;
 - (D) environmental integrity;
 - (E) the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted;
 - (F) engineering constraints;
 - (G) costs;
 - (H) to the extent reasonable, whether the impact of the line on affected community and landowners can be moderated;
 - (I) whether the routes parallel or utilize existing compatible rights-of-way (ROW) for electric facilities;

²¹ PURA § 37.056(a); *see also* 16 Tex. Admin. Code § 25.101(b).

²² The various factors are listed in PURA § 37.056(c) and 16 Tex. Admin. Code § 25.101(b)(3)(B).

- (J) whether the routes parallel or utilize other existing compatible ROW, including roads, highways, railroads, or telephone utility ROW;
- (K) whether the routes parallel property lines or other natural or cultural features; and
- (L) whether the routes conform with the policy of prudent avoidance.²³

Some of the factors are inherently in conflict, and neither PURA nor Commission rules specify the relative weight to be given to each factor. For example, the factors favor the paralleling of roads and maintaining environmental integrity, which could lead to the conclusion that transmission lines should be placed along roadways and avoid bisecting undeveloped land. However, the factors also favor moderating the impact to the community and consideration of community values (which often includes maximizing the distance from the line to residences). Consideration of these factors could lead to the conclusion that the line should be placed as far from homes as possible. The Commission and the ALJs have the difficult task of considering the totality of all factors, even if individual factors—considered in isolation—could lead to opposite outcomes. The Third Court of Appeals recognized this challenge when it held: “None of the statutory factors is intended to be absolute in the sense that any one shall prevail in all possible

²³ Prudent avoidance means “[t]he limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort. 16 Tex. Admin. Code § 25.101(a)(6)

circumstances. In making these sometimes-delicate accommodations, the agency is required to exercise its ‘expertise’ to further the overall public interest.”²⁴

IV. PRELIMINARY ORDER ISSUES

A. ADEQUACY²⁵

Staff recommended that Oncor’s Application be found sufficient and materially complete.²⁶ No party challenged the sufficiency of the Application. The record evidence establishes that Oncor’s Application is sufficient.

Oncor witness Brenda Perkins provided testimony in support of the adequacy of Oncor’s proposed routes.²⁷ In particular, as described in Ms. Perkins’s direct testimony, 74 reasonably differentiated and geographically diverse alternative routes were selected for evaluation.²⁸ Given the physical constraints of the study area, Ms. Perkins explained that it is “unlikely that routes of lower cost or more consistent rule compatibility could be identified” outside the 74 routes selected.²⁹

²⁴ *Pub. Util. Comm’n of Tex. v. Texland Elec. Co.*, 701 S.W.2d 261, 267 (Tex. App.—Austin 1985, writ ref’d n.r.e.).

²⁵ This section addresses Preliminary Issue No. 1.

²⁶ Commission Staff’s Recommendation on Sufficiency of the App. and Proposed Notice (Recommendation), Filing No. 22 (June 20, 2023).

²⁷ Oncor Ex. 4 (Perkins Dir.) at 12.

²⁸ Oncor Ex. 4 (Perkins Dir.) at 12.

²⁹ Oncor Ex. 4 (Perkins Dir.) at 12.

Commission Staff witness John Poole confirmed that Staff believes the alternative routes presented are sufficient to conduct a proper evaluation.³⁰

No party raised a route adequacy challenge.³¹ Accordingly, the record evidence supports a finding that the Application contains an adequate number of reasonably differentiated alternative routes for the Commission to conduct a proper evaluation.

B. NOTICE³²

Pursuant to 16 Texas Administrative Code section 22.52, Oncor is required to provide and publish notice of its application and of the public meetings held. Staff recommended that Oncor's proposed notice be found sufficient.³³ SOAH Order No. 2 found the proposed notice sufficient.³⁴ Oncor complied with the notice requirements of 16 Texas Administrative Code section 22.52(a)(1)-(3), as demonstrated by the following:

Notice of Application. On June 28, 2023, Oncor filed the affidavit of Chris Riley, a regulatory manager for Oncor, attesting to the service of notice on

³⁰ Staff Ex. 2 (Poole Dir. Errata) at 21.

³¹ Intervenor Deborah N. Dallas filed a pleading styled as a "Challenge of Route Adequacy," but it included her statement of position concerning certain alternative routes and rather than a valid challenge to route adequacy. *See* Intervening Statement and Evidence, Challenge of Route Adequacy and Hearing Request, Filing No. 1487 (Jul. 31, 2023); SOAH Order No. 7, Filing No. 1584 (August 8, 2023).

³² This section addresses Preliminary Issue Nos. 2-3.

³³ Recommendation, Filing No. 22.

³⁴ SOAH Order No. 2, Filing No. 60 (June 28, 2023).

June 8, 2023, to the neighboring utilities providing the same utility service within five miles of the requested territory or facility, municipalities within five miles of the requested territory or facility, county governments in which any portion of the proposed facility or requested territory is located, the Department of Defense Siting Clearinghouse (DOD), directly affected landowners, the Office of Public Utility Counsel (OPUC); and Texas Parks and Wildlife Department (TPWD).³⁵ Mr. Reilly's affidavit also attested to the publication of notice in *The Denton Record Chronicle* on June 10, 2023, and in *The Wise County Messenger* on June 15, 2023, which are newspapers having general circulation in Denton County and Wise County, respectively.³⁶ Copies of the publishers affirming the publication of notice were provided as attachments to Mr. Reilly's affidavit.³⁷

Notice of Public Meeting. Oncor hosted two public meetings on December 7 and 8, 2022, in Fort Worth, Texas.³⁸ Oncor provided sufficient notice of its public meetings. Oncor mailed 2,068 individual written notices of the public meetings to all owners of property within 520 feet of the centerline of any preliminary alternative route link for the Project.³⁹ Oncor also provided notice of the public meeting to the DOD.⁴⁰

³⁵ Oncor Exs. 6-8 (Aff. of Notice, Supp. Aff., 2nd Supp. Aff.).

³⁶ Oncor Ex. 9 (Aff. of Publication).

³⁷ Oncor Ex. 9 (Aff. of Publication), attachs. 1(a), (b).

³⁸ Oncor Ex. 4 (Perkins Dir.) at 4; *see also* Oncor Exs. 6-8 (Aff. of Notice, Supp. Aff., 2nd Supp. Aff.).

³⁹ Oncor Ex. 4 (Perkins Dir.) at 4; *see also* Oncor Exs. 6-8 (Aff. of Notice, Supp. Aff., 2nd Supp. Aff.). A notice of the public meetings was also published in the *Denton Record Chronicle* on November 26 and 27, 2022, and in the *Wise County Messenger* on November 23, 2022. Oncor Ex. 4 (Perkins Dir.) at 5.

⁴⁰ Oncor Ex. 4 (Perkins Dir.) at 5:8-9; *see also* Oncor Ex. 6 (Aff. of Notice).

In their closing briefs, Intervenors Anzhela and Viktor Chopovenko and Daniel and Melissa Dennis questioned the sufficiency of Oncor's notice of the public meetings, arguing that they were unaware of this action until they received a mailing in June 2023.⁴¹ However, this issue was first raised in the post-hearing briefings and the evidence in the records fails to rebut Oncor's evidence establishing that notice of public meetings was properly mailed out to directly affected homeowners.⁴²

Outside of these briefs, notice was uncontested. Thus, the ALJs find that Oncor complied with the notice requirements of 16 Texas Administrative Code section 22.52.

C. PUBLIC INPUT⁴³

At the public meetings, Oncor provided a questionnaire to attendees.⁴⁴ Oncor received 71 completed questionnaires between the two meetings.⁴⁵ Due to the

⁴¹ Initial Post-Hr'g Br. of Pro Se Intervenors Viktor and Anzhela Chopovenko, Filing No. 1779 (Sept. 7, 2023); Initial Post-Hr'g Br. of Pro Se Intervenors Daniel Matthews Dennis and Melissa Mae Dennis, Filing No. 1790 (Sept. 7, 2023). In their briefs, the Chopovenkos and Dennises also raised issues with Oncor's notice of the settlement conference held prior to the hearing on the merits and Oncor's lack of guidance on how to fully participate in the proceeding through direct testimony and statement of positions. These briefs do not identify relief requested for these issues. Ultimately, even if these issues were taken as true, they are untimely as the time to raise such issues would have been prior to the hearing on the merits or deadlines for the complained-of action. The ALJs recognize the difficulties of parties, especially self-represented litigants, in participating in a legal action such as this one. However, all parties—whether self-represented or by an attorney—are expected to know and comply with the applicable law and rules.

⁴² Even accepting that the Chopovenkos and the Dennises were subjectively unaware of the public meetings, it does not follow—without more—that Oncor failed to properly notice the appropriate landowners.

⁴³ This section addresses Preliminary Issue No. 4.

⁴⁴ Oncor Ex. 1 (Application) at 25.

⁴⁵ Oncor Ex. 1 (Application) at 25.

questionnaire and other comments received, Oncor identified that the public indicated an overwhelming preference for maximizing the Project's distance from residences, schools, churches, and recreational areas.⁴⁶ Another common theme was the impact on the residential aesthetic.⁴⁷ Oncor grouped general comments together into the following categories:

- Opposition to Particular Routes or Locations
 - Liberty Christian School (Route D1-D4) (approximately 1000 comments)
 - Cross Timbers Church (Route D) (approximately 450 comments)
 - Town of Argyle (Route D) (approximately 550 comments)
 - Town of Northlake (Route running along 407 and Stone Ridge Drive) (approximately 300 comments)
 - Canyon Falls, master planned community (Link E5) (approximately 60 comments)
 - Trailwood Subdivision (approximately 10 comments)
 - Legacy Ranch (Link J3) (approximately 10 comments)
 - Avery Ranch (near Propwash Airport) (approximately 20 comments)
 - Northwest Regional Airport (approximately 60 comments)
 - Other landowners expressing concern for the use of their land
- Health/Safety (approximately 650 comments) – concern over health effects of high-power lines and presence of strangers on their property
- Projected Length/Efficiency (approximately 220 comments) – requesting that Oncor use direct and short routes to connect the proposed substations.
- Property Value (approximately 170 comments) – concern over the amount of compensation or decline in property values.

⁴⁶ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 166.

⁴⁷ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 166.

- Wildlife/Habitat/Natural Resources (approximately 70 comments) – concerns over the removal of trees, and harm to birds and other species
- Aesthetics/Quality of Life (approximately 50 comments) – transmission line through neighborhood would ruin the beauty or aesthetics of the neighborhood.
- Use of United States Army Corps of Engineers (USACE) Land (approximately 40 comments) – comments requesting that Oncor route through unused land owned by USACE.
- Farming/Ranch (approximately 10 comments) – concern of disrupting livestock areas⁴⁸

D. NEED⁴⁹

In its Application, Oncor contended that the project is needed for the service, accommodation, convenience, and safety of the public.⁵⁰ ERCOT—an independent organization—identified reliability issues and deemed the Project critical to the reliability of the ERCOT transmission system.⁵¹

The Project seeks to address reliability issues in the Roanoke area—one of the highest growth areas in the Dallas-Fort Worth Metroplex.⁵² The Roanoke area transmission system is approaching operating limits as to power transfer and load-serving capabilities.⁵³ In ERCOT’s Independent Review of Oncor Roanoke

⁴⁸ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 167-76.

⁴⁹ This section addresses Preliminary Issues Nos. 5-7, 11.

⁵⁰ Oncor Ex. 1 (Application) at 10.

⁵¹ Oncor Ex. 1 (Application) at 10.

⁵² Oncor Ex. 1 (Application) at 10-11.

⁵³ Oncor Ex. 1 (Application) at 10.

Area Upgrades Project, ERCOT determined the presence of thermal overloads and low voltage issues.⁵⁴ Using the NERC Reliability Standard TPL-001-4 and ERCOT Nodal Protocols and Planning Criteria, ERCOT evaluated four options to address these reliability issues and determined that the second option, which includes the Project, was the best option.⁵⁵ Staff agreed with this determination.⁵⁶

No party contested Oncor's or Staff's position on this issue. The ALJs find that the evidence establishes the need for the Project.

E. ROUTING⁵⁷

1. Introduction

In this case, the hearing on the merits and subsequent briefing primarily focused on the routing of the Project's transmission line to connect the two proposed substations. In its application, Oncor proposes to construct a new double-circuit 345-kV transmission line on triple-circuit-capable structures between the proposed Ramhorn Hill Switch and the proposed Dunham Switch⁵⁸:

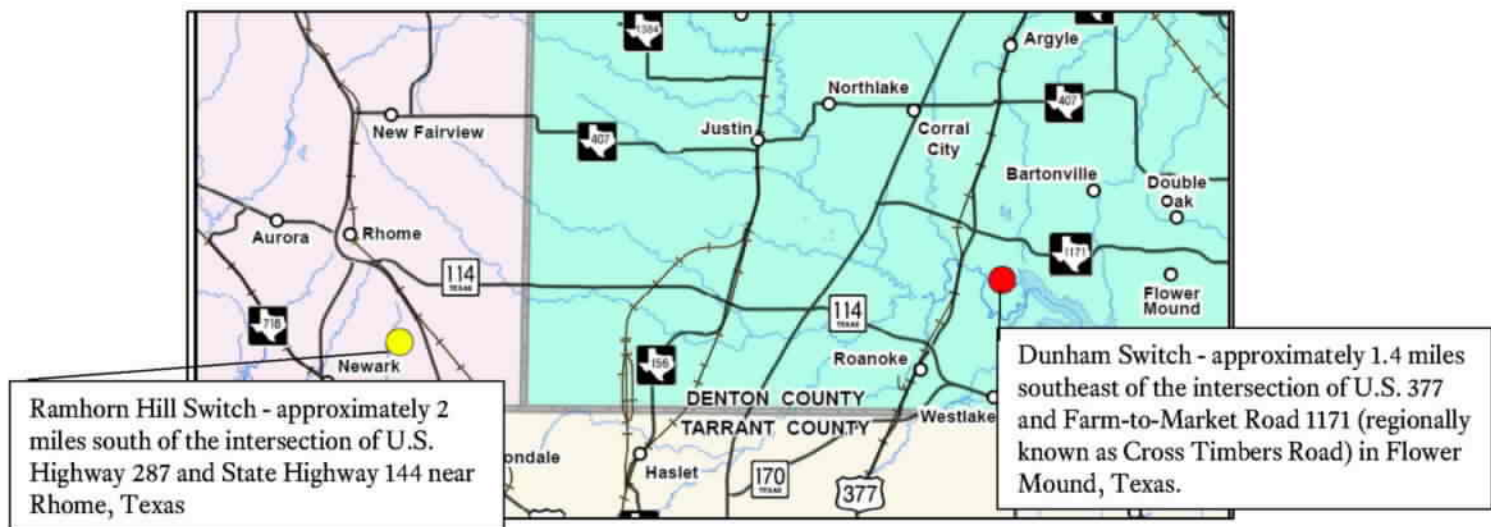
⁵⁴ Oncor Ex. 1 (Application), attach. 4 (ERCOT Independent Review) at 672, 679-80.

⁵⁵ Oncor Ex. 1 (Application), attach. 4 (ERCOT Independent Review) at 678, 81-83, 88.

⁵⁶ Staff Ex. 2 (Poole Dir. Errata) at 24:11-14.

⁵⁷ This section addresses Preliminary Issue Nos. 8-10.

⁵⁸ Oncor Ex. 1 (Application) at 4, 50.



Oncor retained Halff Associates, Inc. (Halff) to prepare the Environmental Assessment and Alternative Routing Analysis (EA).⁵⁹ To identify and evaluate several alternative transmission line routes, Halff conducted reconnaissance surveys; delineated a study area; gathered data; performed constraint mapping; identified alternative links; reviewed and adjusted preliminary alternative links; considered public input; and identified alternative and primary routes.⁶⁰ As a result, Oncor and Halff identified 74 primary alternative routes.⁶¹

At the hearing and in closing briefs, the parties' positions largely crystallized around Route 179—Oncor's preferred route—and individual modifications to

⁵⁹ See generally Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 36-654.

⁶⁰ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 54

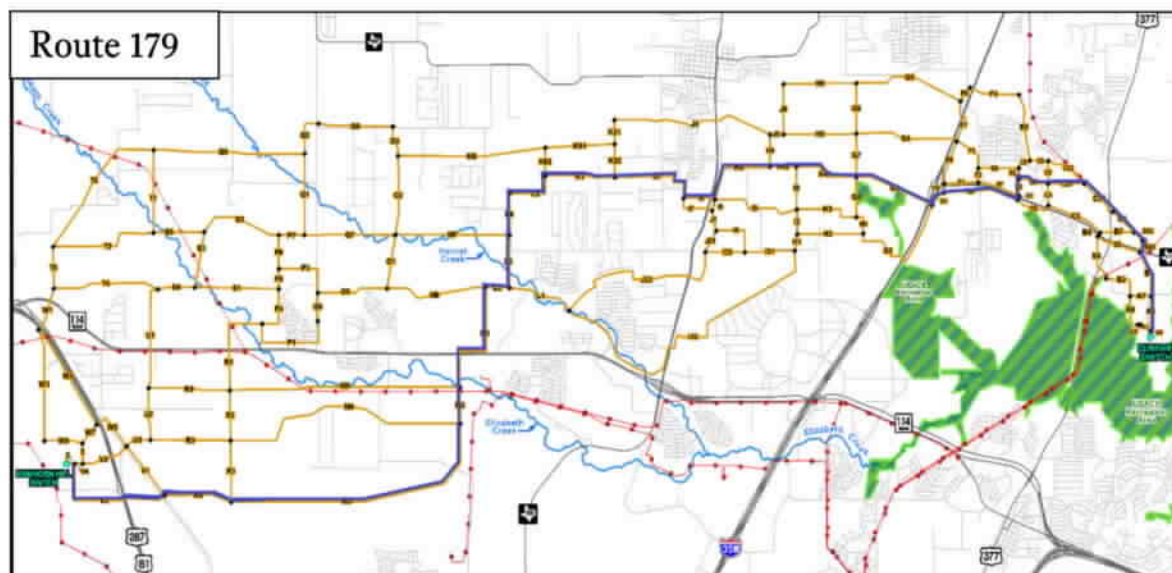
⁶¹ Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 702. The identified routes are nonsequential and comprise of routes 1, 3, 5, 10, 11, 13, 14, 15, 16, 18, 19, 22, 23, 24, 25, 26, 28, 29, 33, 36, 41, 42, 43, 44, 54, 58, 61, 63, 65, 67, 68, 69, 70, 71, 72, 78, 86, 87, 92, 94, 96, 103, 108, 116, 117, 119, 130, 132, 137, 138, 142, 143, 146, 154, 164, 170, 175, 176, 178, 179, 184, 185, 186, 187, 191, 192, 199, 200, 207, 216, 217, 218, 219, and 221.

portions of that route.⁶² Given the length of proposed transmission line and the number of intervenors, the proposed routes and modifications were categorized based on their relative regional position: East, Central, or West. Therefore, this PFD will first discuss Route 179, then introduce the proposed alternatives or modifications to Route 179, and finally apply the PURA factors and other considerations to these identified routes. For each regional modification, the modification does not affect routing in other regions.

2. The Discussed Routes and Modifications

a) Route 179: Oncor's Preferred Route

Oncor's Preferred route—Route 179—consists of links: A0-A4-B1-B61-B62-C1-C21-C23-C7-E2-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M2-M3-R4-V2-Z⁶³:



⁶² Parties also maintained arguments, in the alternative, that if their proposed modification was not recommended, the ALJs should select a different route to avoid a link that was problematic from their perspective.

⁶³ Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 701, 702. *See also* Oncor Ex. 20 (Intervenor Map).

Oncor asserts that Route 179 emerges as the route that best meets the considerations required by PURA and the Commission rules.⁶⁴ The route would span approximately 21.8 miles, is approximately two miles longer than the shortest route, and one mile shorter than the longest route. Route 179 has an estimated cost of \$178,749,000.⁶⁵

Generally speaking, Route 179 compares favorably with respect to the number of habitable structures within 500 feet of the centerline, coming in second out of the 74 alternative routes, but in the bottom half of the routes in terms of length⁶⁶:

	Route 179 Rank⁶⁷	Route 179	Range
Length of route ⁶⁸	49th	114,898	105,124 -120,969 ⁶⁹
Length of route (miles)	49th	21.8	19.9 - 22.9 ⁷⁰
Estimated Cost	22nd	\$178,749,000	\$168,800,000 - \$238,602,000 ⁷¹
Length across compatible ROWs	27th	26,061	47,414 - 19,253 ⁷²

⁶⁴ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 561; attach. 7 (Routing Memo.) at 699, 710.

⁶⁵ Oncor Ex. 24 (Notice of Errata), attach. 2 at 17. The cost estimate excludes the estimated substation costs.

⁶⁶ Oncor Ex. 1, attach. 1 at 553-63, attach. 7 at 703-11.

⁶⁷ Route 179's rank among the 74 originally proposed routes in the application and does not include the modifications discussed below.

⁶⁸ All lengths are provided in feet unless otherwise noted.

⁶⁹ Route 16 is the shortest and Route 216 is the longest.

⁷⁰ Route 16 is the shortest and Route 216 is the longest.

⁷¹ Route 29 is the cheapest and Route 117 is the most expensive.

⁷² Route 117 has the shortest length along compatible ROWs and Route 221 is the longest.

	Route 179 Rank⁶⁷	Route 179	Range
Length across compatible ROWs as a percentage of total length	25th	22.68%	39.65% - 17.25% ⁷³
Habitable Structures within 500 ft. of the centerline	2nd	97	93 - 400 ⁷⁴
Park and recreational areas within 1000 ft of the centerline	T2nd	4	3 - 11 ⁷⁵
Length of route across park/recreational areas (feet)	T1st	0	0 - 3,844 ⁷⁶
Length across high archaeological/historical site potential (feet)	27th	37,905	28,161 - 64,206 ⁷⁷

While Route 179 does not excel in all relevant factors among the original 74 alternative routes, it offers a route that balances the factors reasonably well with a lean toward mitigating impacts on landowners and land use—for example, the second fewest habitable structures within 500 feet and not crossing park or

⁷³ Route 117 has the lowest percentage of length along compatible ROWs and Route 221 has the highest.

⁷⁴ Route 164 has the fewest habitable structures and Route 192 has the most.

⁷⁵ Multiple routes have the fewest and Routes 117 and 119 have the most.

⁷⁶ Multiple routes have no portion within 1,000 feet of a park or recreational area and multiple routes have the most length.

⁷⁷ Route 186 has the shortest length across potential archeological/historical site potential and Route 28 has the longest.

recreational areas.⁷⁸ Outside of objections to particular links and proposing modifications to Route 179, no party proposes or champions another route identified in the application. Overall, among the original identified routes, Route 179 offers a good balance between the factors that the Commission must consider pursuant to PURA and Commission rules as further discussed below.

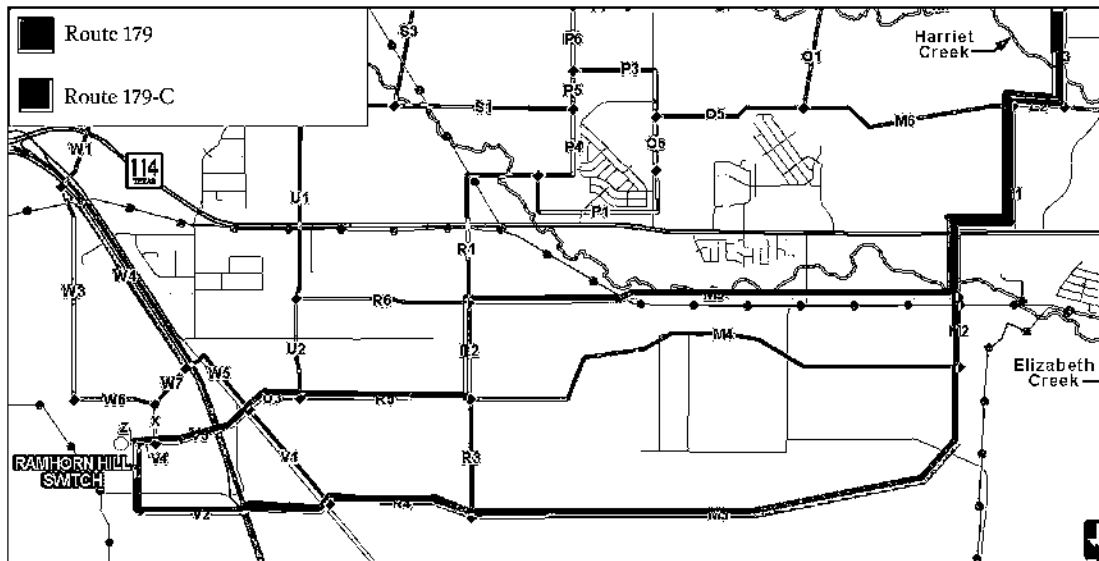
b) Route 179-C: Staff’s “Best Meets” Route (West Region)

During this proceeding, Intervenor Edgar Brent Watkins and Mary Ann Livengood, Co-Trustees of the Watkins Family Trust (Watkins Family Trust) proposed a modified version of Route 179, which was designated as Route 179-C.⁷⁹ This route is the same as Route 179 except it substitutes Links M5-R2-R5-U3-V3-V4 in place of Links M2-M3-R4-V2⁸⁰:

⁷⁸ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 553-63. To compare, Route 164 with the fewest habitable structures is more expensive, crosses parks and recreational area for over 2,000 feet and is within 1,000 ft of nine parks or recreational areas. The cheapest route—Route 29—affects 131 habitable structures compared to Route 179’s 97. Route 221 follows the most compatible ROWs but is the more expensive and affects 220 habitable structures.

⁷⁹ See Staff Ex. 1 (Poole Dir.), attach. JP-4 (Oncor Resp. to Watkins’ RFI), pt. 1, at 19.

⁸⁰ See Staff Ex. 1 (Poole Dir.), attach. JP-4 (Oncor Resp. to Watkins’ RFI), pt. 1, at 19; *see also* Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 701.



Staff recommended that this modified Route 179-C best met the required considerations under PURA and Commission Rules.⁸¹ Oncor does not oppose this route.⁸² One intervenor affected by the routing in the west region has indicated opposition to Route 179-C, citing to the impact on its property.⁸³

⁸¹ Staff Ex. 2 (Poole Dir. Errata) at 53.

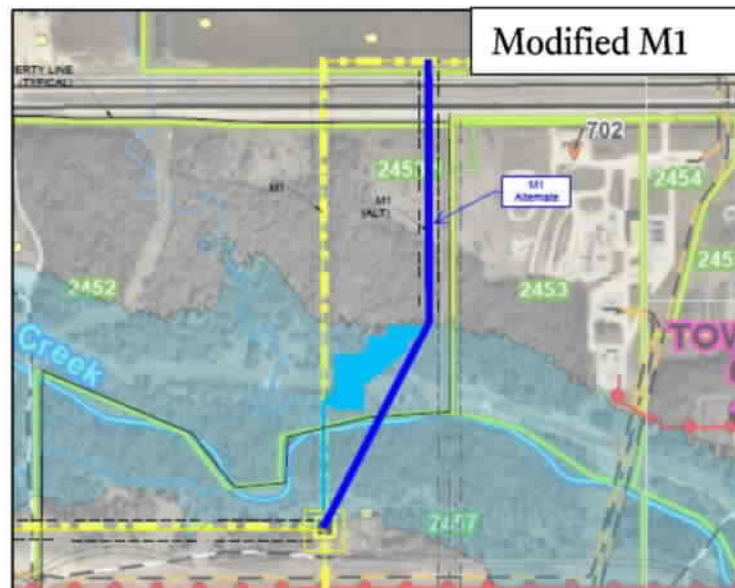
⁸² Hearing Transcript (Tr.), vol. 1 at 214:1-15.

⁸³ Todd Family Holdings L.P.'s Initial Post-Hr'g Br. at 4, Filing No. 1765 (Sept. 7, 2023) (supports Route 179 and opposes routes that include Link V3, which Route 179-C includes). *But see* Intervenor Matthew Spaethe, Margaret and Antonio Chavez, GFAT, LLC, David Bratton, Jerry Bratton, Bill Beverly, Janet Beverly, Rama Prasad Chalasani, Michael Hamilton, Keith (Bobby) Norris, Martin Rojas, Peggy Logan McCurdy, and the Floyd T. McCurdy Testamentary Trust's Initial Post Hr'g Br. at 4, Filing No. 1793 (Sept. 7, 2023) (supporting Route 179-C); PMB Rolling V Land, LP's Initial Br. on the Merits at 5-6, Filing No. 1773 (Sept. 7, 2023) (supports Route 179 but does not object Route 179-C if the Commission allows Oncor to make minor deviations on their property); New Dimension Investments II, LLC's Initial Post-Hr'g Br. at 15, Filing No. 1785 (Sept. 7, 2023) (does not oppose Route 179 or 179-C); Initial Post-Hr'g Br. of Harvey M. Mueller on behalf of H3m Property Holdings, LP and Ross Arthur Brewer at 3, Filing No. 1791 (Sept. 7, 2023) (supports either Route 179 or 179-C); GRBK Edgewood LLC and GBTM Sendera LLC's Initial Post-Hr'g Br. at 3, Filing No. 1791 (Sept. 7, 2023) (supports Route 179-C); Alliance West, LP's Initial Post-Hr'g Br. at *12, Filing Item No. 1786 (Sept. 7, 2023) (supports Route 179-C); Denton County Land & Cattle LP and Denton County Land & Cattle 2's Initial Post-Hr'g Br. at 13, Filing No. 1787 at 13 (Sept. 7, 2023) (supports Route 179-C with its proposed modifications).

Compared to Route 179, Route 179-C is less costly, follows compatible ROWs for a greater percentage of its total length, affects one more habitable structure within 500 feet of the centerline, and does not cross any parks or recreational areas or potential wetlands.⁸⁴

c) DCLC's Modifications to Links M1 and M5 (West Region)

At the hearing, Intervenors Denton County Land & Cattle LP and Denton County Land & Cattle 2 (DCLC) proposed two modifications to the routing within Links M1 and M5 on Route 179-C (DCLC Modified M1 and M5)⁸⁵:



⁸⁴ Oncor Ex. 25.

⁸⁵ DCLC Ex. 1 (Alternative Segment Map).



Generally, these modifications are relatively minor within a single link. It involves land owned, according to Oncor's application, by intervenor Alliance West, LP (Alliance West) and BNSF Railway Company, who was noticed as a directly affected landowner of this proceeding but did not intervene.⁸⁶ Alliance West supports the adoption of the DCLC Modified M1 and M5, and DCLC confirms that BNSF consents to the modification as well.⁸⁷ Oncor does not oppose the modifications and acknowledges that the modifications are viable and constructible.⁸⁸ No party states an opposition to these modifications.

As a brief overview, DCLC Modified M1 and M5, taken together, are slightly shorter than Route 179-C (by 324 feet), run slightly less parallel to existing compatible ROWs (by 529 feet), have no effect on the number of nearby habitable structures, pose a slight increase in estimated cost (approximately \$730,000), and

⁸⁶ Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 851, 853; see DCLC Ex. 1 (Alternative Segment Map).

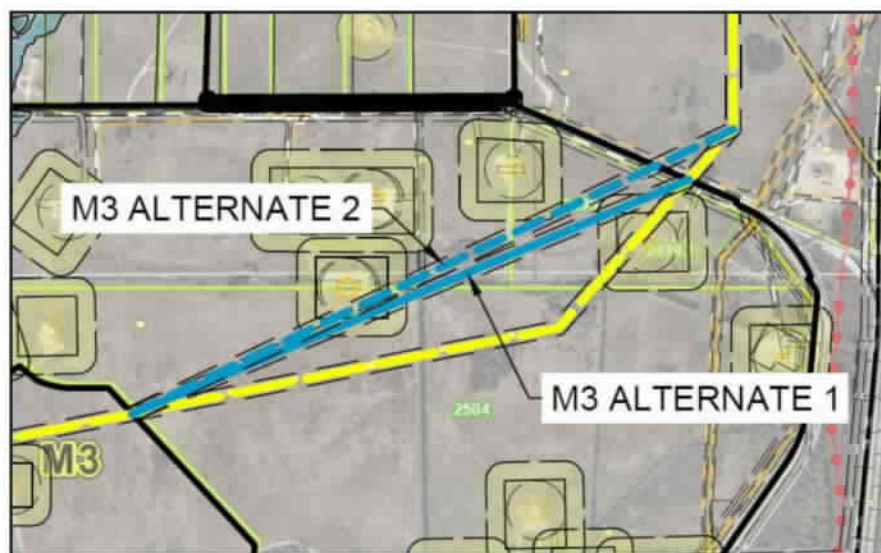
⁸⁷ Alliance West Br. at *12; DCLC Mot. to Admit Evid. at 1, Filing No. 1810 (Sept. 14, 2023).

⁸⁸ Oncor's Reply Br. at 3, Filing No. 1802 (Sept. 14, 2023); DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *6.

make other slight changes to the character of the land crossed (less length across upland woodlands and more across rangeland pasture).⁸⁹

d) DCLC's Modifications to Link M3 (West Region)

Alternatively, DCLC requests that if Route 179 is recommended and approved, a modified Link M3 be recommended⁹⁰:



According to Oncor's tract information, the proposed modification occurs entirely on DCLC's land.⁹¹ No party opposes the modification, though some parties oppose the use of Link M3 and oppose modification of Link M3 where it crosses their land.⁹²

⁸⁹ DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *3, 12-13.

⁹⁰ DCLC Ex. 2 (Alternative Segment M3 Map) at 1.

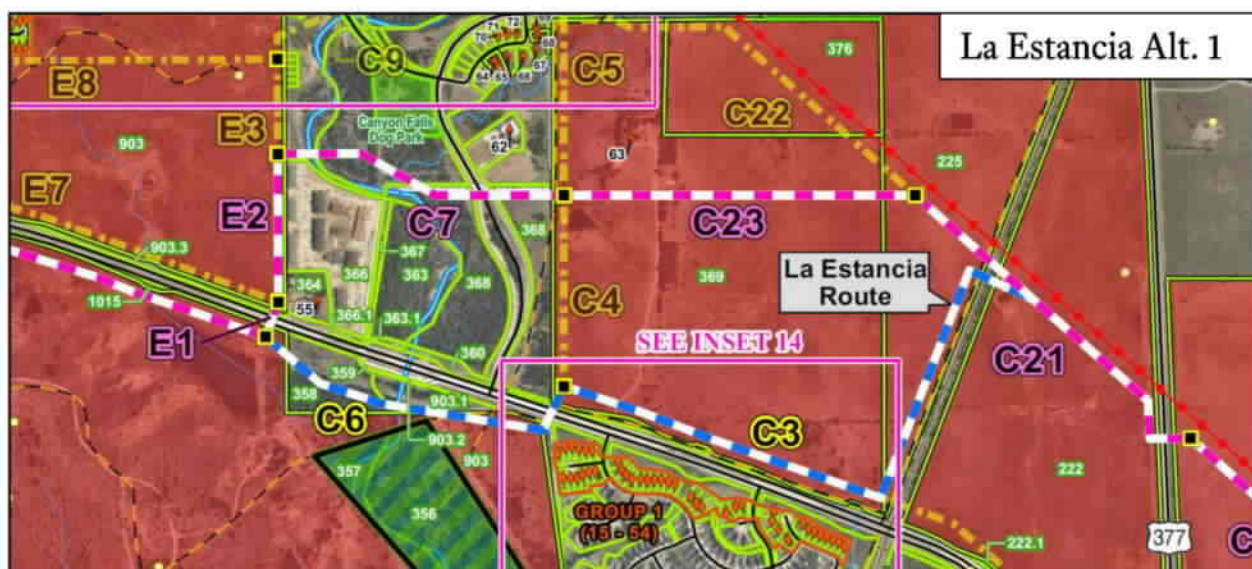
⁹¹ Oncor Ex. 1 (Application), attach. 7 (Routing Memo.), at 851; *see* DCLC Ex. 2 (Alternative Segment M3 Map).

⁹² Alliance West Br. at *12; GRBK and GBTM Br. at 4.

Like the modifications to Links M1 and M5, the effect on the overall route is minor. Modified M3 Alternate 1 would be slightly shorter (by 170 feet), slightly more expensive (by \$543,000), have slightly different land character (more rangeland pasture and less upland woodlands), and does not involve any changes to other factors like habitable structures.⁹³

e) La Estancia Alternative 1 (East Region)

For its first alternative, La Estancia proposes severing from Link C21 and instead connecting to Links C3 and C6, bypassing Links C23-C7-E2 (La Estancia Alt. 1)⁹⁴:



⁹³ DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *7, 12-13.

⁹⁴ La Estancia Ex. 5 (La Estancia Alternatives Map).

La Estancia Alt. 1 uses a combination of a created link between C21 and C3 and then use of alternative links that were identified in Oncor's application. For the newly created link, Oncor identifies the affected land as owned by Intervenor La Estancia and Old WR Ranch 1 LP, both of which agree to or support this new link.⁹⁵ Other intervenors in the East Region also support or agree to the modification.⁹⁶ Neither Oncor nor any other party stated opposition to La Estancia Alt. 1.⁹⁷

Compared to Route 179-C, La Estancia Alt. 1 is slightly longer (by 63 feet); follows compatible ROWs for less length (by 2,301 feet); has fewer parks or recreational areas within 1,000 feet of centerline; reduces the number of stream crossings; and is slightly more expensive (by \$250,000).⁹⁸ La Estancia Alt. 1 sizeably increases the number of habitable structures from 98 to 136; however, the evidence shows that the added structures are mostly located across a six-lane divided highway.⁹⁹

⁹⁵ Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 833, 850; La Estancia Ex. 5 (La Estancia Alternatives Map); La Estancia Investments, L.P.'s Initial Br. on the Merits at 1-2, Filing No.1772 (Sept. 7, 2023); Furst Ranch Intervenor Initial Br. on the Merits at 3, Filing No. 1770 (Sept. 7, 2023).

⁹⁶ See La Estancia Ex. 4 (emails from intervenors indicating support for La Estancia Alts. 1 and 2).

⁹⁷ Tr., vol. 1 at 124:25-125:12. See Oncor Reply at 3.

⁹⁸ Oncor Ex. 25.

⁹⁹ Oncor Ex. 25; Tr., vol. 2 at 44:2-46:3; Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 575. The habitable structures are in proximity to Link C3 and C6, which were noticed of the application by Oncor. See La Estancia Ex. 5 (La Estancia Alternatives Map); Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 575.

f) La Estancia Alternatives 2 and 2A (East Region)

West of La Estancia Alt. 1, La Estancia proposes to further modify Route 179 or Route 179-C by modifying Links E6 and G1 to follow Farm-to-Market Road (FM) 1171 (La Estancia Alt. 2)¹⁰⁰:



For this modified link, the land affected is owned by La Estancia and the owner of Tract 801, who is identified by Oncor as non-party Ronnie Leo Frick, who received notice of the action, but no evidence of his consent is provided.¹⁰¹ In its closing brief, La Estancia recognizes that La Estancia Alt. 2 requires the consent of the owner of Tract 801.¹⁰² Oncor asserts that either one or both of the habitable structures located on Tract 801 would need to be removed to construct the transmission line.¹⁰³ La Estancia states that it is currently attempting to purchase the

¹⁰⁰ La Estancia Ex. 5 (La Estancia Alternatives Map).

¹⁰¹ Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 724; La Estancia Ex. 5 (La Estancia Alternatives Map).

¹⁰² La Estancia Br. at 5-6.

¹⁰³ La Estancia Ex. 3E (Oncor Resp. to La Estancia RFI) at 1.

subject property.¹⁰⁴ However, if it is unable to secure the property, La Estancia proposes another alternative, which would follow the La Estancia Alt. 2 until it reaches the northeast corner of Tract 801 where it would track the eastern, southern, and western boundaries of the tract, before resuming on La Estancia Alt. 2 (La Estancia Alt. 2A).¹⁰⁵

As compared to La Estancia Alt. 1, La Estancia Alt. 2 adds slightly more length, more length parallel to compatible ROWs (but still slightly less than Route 179-C), and is less expensive (by \$468,000 compared to Route 179-C and \$718,000 compared to just La Estancia Alt. 1).¹⁰⁶ The habitable structures and stream crossings and many other data points remain the same compared to just La Estancia Alt. 1.¹⁰⁷

Because La Estancia Alt. 2A was first raised in the closing arguments, there is no direct environmental data on the effects of this routing around Tract 801. Based on review of the data and maps, it can be inferred that La Estancia Alt. 2A—compared to La Estancia Alt. 2—would be slightly longer and more expensive.¹⁰⁸ It does not appear that La Estancia Alt. 2A would have any effect on the number of habitable structures, stream crossings, or other data points.¹⁰⁹

¹⁰⁴ La Estancia Br. at 5-6.

¹⁰⁵ La Estancia Br. at 6.

¹⁰⁶ Oncor Ex. 25.

¹⁰⁷ Oncor Ex. 25.

¹⁰⁸ Oncor Ex. 25; La Estancia Ex. 5 (La Estancia Alternatives Map).

¹⁰⁹ Oncor Ex. 25 at 1; La Estancia Ex. 5 (La Estancia Alternatives Map).

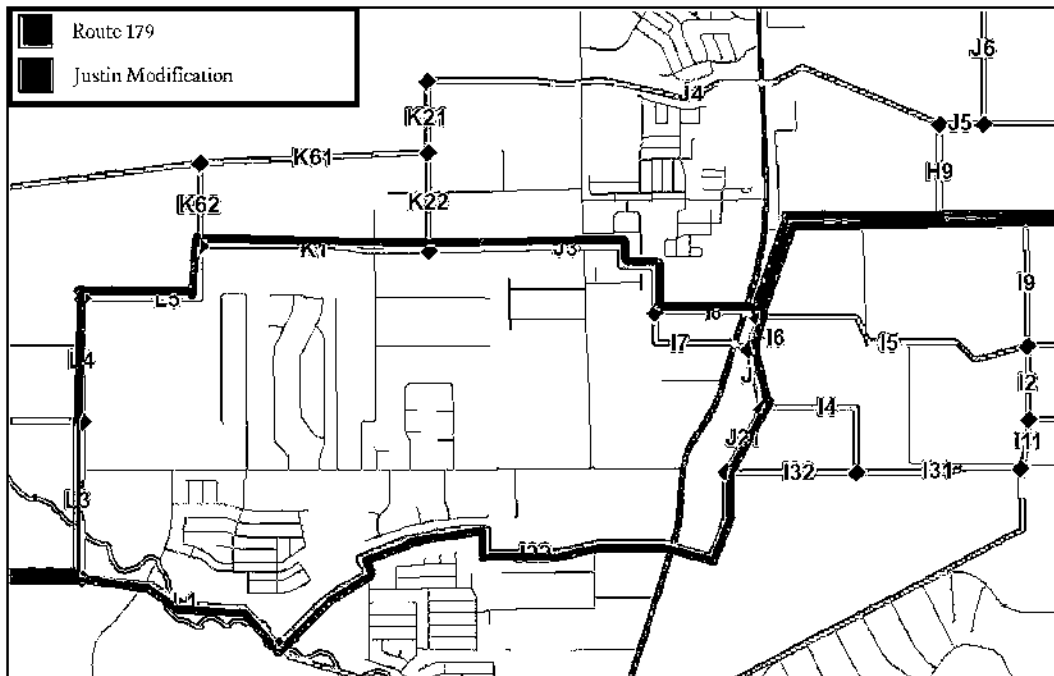
g) The Justin Modification (Central Region)

The intervenors in the Central Region differ with respect to the appropriate links to use. Intervenors City of Justin (Justin), TCCI Range – Mead 2021, LLC (TCCI Range), Dudley Realty, LLC (Dudley Realty); and Anzhela and Viktor Chopovenko; Daniel and Melissa Dennis; James and Holly Lewis; and Robert L. and Martha J. Vinyard (collectively, the Justin Residents) request a modified Route 179 that avoids the use of Link J3 and instead seek to use Link J22.¹¹⁰ However, the Hillwood Parties and the Town of Northlake oppose this modification.¹¹¹ The proposed modification by Justin seeks to substitute Links I6-J1-J21-J22-L1 in place of Links I8-J3-K1-L5-L4-L3 (the Justin Modification)¹¹²:

¹¹⁰ The City of Justin Initial Br. at 9, Filing No. 1784 (Sept. 7, 2023); TCCI Range – Mean LLC’s Initial Br. at 2, Filing No. 1774 (Sept. 7, 2023); Dudley Realty, LLC’s Initial Br. at 3-4, Filing No. 1794 (Sept. 7, 2023); Intervenors Holly and James Lewis’s Post-Hr’g Br. at 3, Filing No. 1777 (Sept. 7, 2023); Intervenors Kimn and Terri Nierman’s Initial Post-Hr’g Br. at 2-3, Filing No. 1782 (Sept. 7, 2023); Intervenors Meredith and James Guess Initial Post-Hr’g Br. at 3, Filing No. 1768 (Sept. 7, 2023); Intervenors Robert L. and Marth J Vinyard’s Post-Hr’g Br. at 3, Filing No. 1780 (Sept. 7, 2023); Intervenor Janet and Mike Bresler Post-Hr’g Br. at 1-2, 1783 (Sept. 7, 2023); Chopvenko Br. at 2-3; Dennis Br. at 2-3.

¹¹¹ Hillwood Parties’ Post-Hr’g Reply Br. at 3, Filing No. 1806 (Sept. 14, 2023); Town of Northlake’s Reply Br. at 1, Filing No. 1796 (Sept. 14, 2023). DHL Supply Chain was also a party affected in the central region. In its opening brief, it indicated that it supported Routes 179-C with the La Estancia alternatives and opposed use of Link I5. Post-Hr’g Br. of DHL Supply Chain at 1-3, Filing No. 1776 (Sept. 7, 2023). Neither Route 179 or the proposed modification use Link I5, and DHL did not file a reply brief addressing the proposed modification.

¹¹² Dudley Realty Ex. 2 (Dudley Realty Alternatives Map); *see also* Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 701.



The central region is described as a region of rapid growth and features the majority of habitable structures on Route 179-C, including zigzagging through the Legacy Ranch neighborhood on Link J3.¹¹³ Ultimately, the transmission line would need to be routed through one of the corridors that includes Links J3, J4, or J22.¹¹⁴ No party recommends a route through J4, which is also opposed by Justin. While Oncor acknowledges that there is some evidence in the record with which to analyze the Justin Modification and routing through Link J22, it asserts that no holistic

¹¹³ Oncor Ex. 24 (Notice of Errata), attach. 1, at 7 (identifying 62 habitable structures out of Route 179-C's total of 98); see Justin Ex. 1 (Clark Dir.) at 5 (describing the City of Justin as a forefront of growth in the area); Oncor Ex. 2 (Marusak Dir.) at 7 (describing the study area as an area rapidly developing into new commercial, industrial, and residential uses).

¹¹⁴ See Oncor Ex. 20 (Intervenor Map). While Link I12 provides a link through the central region, there is little discussion on an appropriate route through that link and data supporting it.

analysis of the route was performed and concludes that use of original links, including J3, is the superior route.¹¹⁵

When compared to Route 179-C, the Justin Modification is slightly shorter, follows compatible ROWs for a shorter length (and shorter percentage of overall length), has a shorter length across lakes and ponds and fewer stream crossings, and more parks or recreational areas within 1,000 feet of the route centerline.¹¹⁶ The largest discrepancy, however, is the number of habitable structures: the Justin Modification features 59 more habitable structures than the links it seeks to replace.¹¹⁷ Justin argues that the habitable structures within the J3 Link are sometimes as close as 65 feet away and will also affect future development of habitable structures.¹¹⁸ Finally, an estimated cost for this modification is not available in the record, and there is no link-specific cost data available to calculate the estimated cost.¹¹⁹ However, there are five identified alternative routes that use the link sequence proposed by the Justin Modification.¹²⁰ The average cost of these lines

¹¹⁵ Oncor Reply at 7, 9 (contending that link data in the environmental assessment cannot simply be aggregated as it results in an overcounting of certain variables). *See* Oncor Ex. 24 (Notice of Errata), attach.1 at 7 (“Caution should be exercised when combining link-based values to form cumulative path values. Distance-based features (e.g., within 1,000 feet) may be over-represented for routes that contain multiple links in proximity to the same feature. Simple addition of link values may result in certain variables being counted multiple times.”). While the ALJs understand the concern over the potential double counting within distance variables, without further information in the record, the ALJs can only rely on the link-specific data to analyze the proposed Justin Modification.

¹¹⁶ Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9.

¹¹⁷ Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9.

¹¹⁸ Justin Br. at 7.

¹¹⁹ *See* Oncor Ex. 24 (Notice of Errata), attach. 2 (containing only route level cost estimates).

¹²⁰ *See* Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 702 (identifying Routes 43, 44, 58, 70, and 87 as containing Links I6-J1-J21-J22-L1).

is \$186,318,800, suggesting that use of these links is likely to be more expensive than Route 179 or 179-C.¹²¹

3. Analysis and Considerations Applicable to All Routes and Modifications

a) Community Values

PURA section 37.056(c)(4)(A) requires consideration of impacts of proposed transmission facilities on community values. While “community values” is not defined in statute or rule, the Commission has previously defined community values as “a shared appreciation of an area or other mutual resource by a national, regional, or local community.”¹²² Community values are generally associated with recreational areas or resources and the aesthetic environment of an area.¹²³ These topics and other issues considered “community values” are evaluated separately in this PFD according to the statute and Commission rules.

As explained in the EA, the Commission CCN application requires information concerning the following items related to community values: habitable structure locations; AM, FM, microwave, and other electronic installations in the study area; Federal Aviation Administration (FAA)-registered airstrips, private

¹²¹ See Oncor Ex. 24 (Notice of Errata), attach. 2, at 14-15. In its rebuttal, Oncor estimates the cost would increase by six million to ten million dollars to use the Justin Modification but acknowledges that no cost data for the Justin Modification or its modified route is available in the record. Oncor Reply at 7-8.

¹²² *Joint Application of Electric Transmission Texas, LLC and Sharyland Utilities to Amend Their Certificates of Convenience and Necessity for the North Edinburg to Loma Alta Double-Circuit 345-kV Transmission Line in Hidalgo and Cameron Counties, Texas*, Docket No. 41606, Order at 8-9, FOF No. 51 (Apr. 11, 2014).

¹²³ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 131.

airstrips, and heliports located in the study area; irrigated pasture or croplands utilizing center-pivot or other traveling irrigation systems; input from the public participation meetings; approvals or permits required from other governmental agencies; and comments received from community leaders and members of the public.¹²⁴

Adverse effects upon community values include aspects of the Project that would significantly and negatively alter the use, enjoyment, or intrinsic value attached to an import area or resource by a community.¹²⁵ Potential impacts to community resources can be classified into direct and indirect effects.¹²⁶ Direct effects are those that would occur if the location and construction of a transmission line and substation result in the removal or loss of public access to a valued resource.¹²⁷ Indirect effects are those that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed transmission line, structures, or ROW.¹²⁸

To identify community values in the Project area, Halff mailed consultation letters to various local elected and appointed officials and assisted Oncor in hosting two public meetings to identify and collect information regarding community values

¹²⁴ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 131.

¹²⁵ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 210.

¹²⁶ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 210.

¹²⁷ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 210.

¹²⁸ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 210.

and community resources.¹²⁹ At the two public meeting, a total of 172 individuals attended and 71 questionnaire responses were received.¹³⁰ Oncor therefore provided means by which members of the community could express concerns in compliance with Commission rules. As stated above, the community values expressed in the responses to the questionnaire included a strong preference for maximizing the distances of the Project from habitable structures, and, to a lesser degree, utilizing existing compatible corridors.¹³¹ Subsequent correspondence indicated an overwhelming preference for maximizing the Project's distance from residences, schools, churches, and recreational areas.¹³²

Not surprisingly, landowners do not want a transmission line near or on their property. Landowners are concerned about their health and safety, reduced property values, views of unsightly towers, loss of trees, interference with the current and future use of their property, lines cutting across their property, and the effect on future development.¹³³ The ALJs do not individually discuss every fact and concern of every landowner witness or party. Rather, the ALJs have highlighted important issues and representative concerns.

¹²⁹ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 131.

¹³⁰ Oncor Ex. 1 (Application) at 25.

¹³¹ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 166.

¹³² Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 166.

¹³³ The ALJs also address health concerns below in the section titled Prudent Avoidance.

During the hearing, Oncor witness Russell Marusak testified regarding the challenges associated with routing the transmission line through the central portion of the study area.¹³⁴

Multiple intervenors from the central region expressed concerns that Route 179 and Route 179-C would negatively impact their community values. A group of residents of the Legacy Ranch neighborhood in Justin oppose a route that utilizes Link J3 because that link would consume most of their neighborhood's central green space.¹³⁵

TCCI Range opposes any route that includes Links J3 and K1 and instead advocates for a route that includes Links J22 and L1.¹³⁶ TCCI Range argues that Links J3 and J4 will impact more habitable structures than is reflected in Oncor's application because of the ongoing and planned development in the area.¹³⁷ TCCI Range contends that a route selecting J22 best moderates the impact of the Project on the community and landowners because it parallels or otherwise utilizes rail ROW and/or natural features (creek bed/floodplain).¹³⁸

¹³⁴ Tr., vol. 2 at 94 (“And whereas we have currently a lot of open land, you know, which we thought we could work with, but the transition, once we cross FM 156, if we start at the top of this map and we work ourselves down, you know, we’ve got the town square, we’ve got development along 156...[b]ut then on the other side of that, we got habitable structures that are—leave us no room.”).

¹³⁵ Lewis Br. at 3; Nierman Br. at 2-3; Guess Br. at 3; Vinyard Br. at 3; Chopvenko Br. at 2-3; Dennis Br. at 2-3; Bresler Br. at 1-2.

¹³⁶ TCCI Range Br. at 2.

¹³⁷ TCCI Ex. 1 (Cansler Dir) at 8.

¹³⁸ TCCI Range Br. at 3 (citing Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 651; attach. 13 (Notice to DOD, OPUC and Municipalities) at 948).

As demonstrated by the intervenors in this case, the avoidance of interference with existing and future development is a widely held community value in this area. However, because this value was expressed by almost all intervenors, it makes the use of this value in determining the route of limited significance.

b) Recreational Park Areas

Halff reviewed federal and state databases, in addition to county and local maps, to identify parks and recreational areas within the study area.¹³⁹ They also conducted field reconnaissance surveys to identify any additional parks or recreational areas within the study area.¹⁴⁰ Twenty parks and recreational areas are either crossed or within 1,000 feet of the centerline of the proposed alternative routes.¹⁴¹ The number of parks or recreational areas either crossed or within 1,000 feet of the centerline of the proposed alternative routes ranges from 3 (Routes 29, 33, 36, 41, 42, 86, 207, 217, 218, and 29R) to 11 (Routes 117 and 119).¹⁴² Routes range from crossing no parks or recreational areas (Routes 29, 33, 36, 41, 42, 43, 44, 54, 58, 71, 86, 87, 154, 175, 176, 178, 179, 184, 11 185, 207, 216, 221, 179-A, 179-B, 179-C, and

¹³⁹ Oncor Ex. 1 (Application) at 32-33.

¹⁴⁰ Oncor Ex. 1 (Application) at 33.

¹⁴¹ Oncor Ex. 1 (Application) at 16.

¹⁴² Staff Ex. 2 (Poole Dir. Errata) at 31; Oncor Ex. 1 (Application), attach. 16 (Table of Parks and Recreational Areas within 1,000 feet).

29R) to crossing 3,844 feet of parks and recreational areas (Routes 92, 94, 96, 103, 108, 143, and 146).¹⁴³

Route 179 and Route 179-C do not cross any parks or recreational areas and have four parks and recreational areas within 1,000 feet of their centerline.¹⁴⁴ The Recommended Route and Secondary Route would reduce this to three parks or recreational areas located within 1,000 feet of the centerline of the route.¹⁴⁵ The Justin Modification increases the number of parks or recreational areas would be located within 1,000 feet of the centerline of the route to five and still does not cross any parks or recreational areas.¹⁴⁶

c) Cultural, Aesthetic, and Historical Values

PURA section 37.056(c)(4)(C) requires consideration of impacts of proposed transmission facilities on historical and aesthetic values. Aesthetic values would be negatively impacted by any of the proposed routes.¹⁴⁷

All proposed alternative routes are located within 1,000 feet from Dunham Cemetery—the cemetery is approximately 610 feet from Link A0.¹⁴⁸ An additional

¹⁴³ Staff Ex. 2 (Poole Dir. Errata) at 31; Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at Ex. E (Table 7-2); Staff Ex. 1 (Poole Dir.), attach. JP-4 (Oncor Resp. to Watkins' RFI), pt. 1.

¹⁴⁴ Staff Ex. 2 (Poole Dir. Errata) at 31; Oncor Ex. 25.

¹⁴⁵ See *infra* Appendix A; Oncor Ex. 25.

¹⁴⁶ Oncor Ex. 24 (Notice of Errata), attach. 1, at 7-8; see also Oncor Ex. 20 (Intervenor Map).

¹⁴⁷ Staff Ex. 2 (Poole Dir. Errata) at 33-34.

¹⁴⁸ Staff Ex. 2 (Poole Dir. Errata) at 32; Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 221.

cemetery, the City of Justin Cemetery, is approximately 100 feet from Link J4.¹⁴⁹ Bishop Park, a historically significant area, is crossed by Link J4.¹⁵⁰

There are two recorded archeological sites that are within 1,000 feet of the centerline of the proposed alternative routes. Link M1 crosses a former schoolhouse.¹⁵¹ A historic house is within 90 feet of the centerline of Link L2.¹⁵²

Route 179 and Route 179-C both cross only one recorded cultural resource site, with or without adoption of any of the proposed modifications.¹⁵³ There are three recorded cultural resource sites located within 1,000 feet of the centerlines of Route 179 and Route 179-C, with or without adoption of any of the proposed modifications.¹⁵⁴

Half's study area is primarily rural and agricultural, intermixed with modern commercial and residential land use.¹⁵⁵ Production of forage for livestock is the most

¹⁴⁹ Staff Ex. 2 (Poole Dir. Errata) at 32; Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment), at 221. Link J4 is used in Routes 1, 19, 65, 67, 68, 69, 72, 92, 94, 96, 103, 6 108, 142, 143, 146, 170, 191, 192, and 219.

¹⁵⁰ Staff Ex. 2 (Poole Dir. Errata) at 32; Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 221. Link J4 is used in Routes 1, 19, 65, 67, 68, 69, 72, 92, 94, 96, 103, 108, 142, 143, 146, 170, 191, 192, and 219.

¹⁵¹ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 222. Link M1 is used in Routes 3, 5, 13, 14, 15, 16, 18, 22, 23, 24, 25, 26, 28, 29, 36, 43, 44, 58, 61, 63, 70, 78, 87, 108, 116, 119, 130, 132, 137, 146, 164, 179, 199, 200, 179-A, 179-B, 179-C (including the Justing Modification), 22R, 29R, 116R, 130R, 132R, and 164.

¹⁵² Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 222. , Link L2 is used in Routes 3, 5, 10, 11, 13, 14, 15, 16, 18, 19, 22, 23, 24, 25, 26, 28, 29, 33, 36, 43, 44, 58, 61, 63, 70, 78, 87, 92, 108, 116, 117, 119, 130, 132, 137, 146, 154, 164, 170, 178, 179, 186, 187, 199, 200, 216, 179-A, 179-B, 179-C (including the Justing Modification), 22R, 29R, 116R, 130R, 132R, 164R.

¹⁵³ Oncor Ex. 25; *see infra* Appendix A.

¹⁵⁴ Oncor Ex. 25; *see infra* Appendix A.

¹⁵⁵ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 222.

widespread use of agricultural land throughout the study area.¹⁵⁶ Additionally, areas of grassland or agriculture are being converted as master planned residential communities.¹⁵⁷

Construction of the proposed transmission line could have both temporary and permanent aesthetic effects.¹⁵⁸ Temporary effects would include views of the actual transmission line construction and of any clearing of right-of-way. Permanent effects would involve the visibility of structures and the lines.¹⁵⁹

Of the 140 alternative links, parts of 78 links are within the one-half mile foreground visual zone of parks and recreation areas.¹⁶⁰ The estimated length of the ROW within foreground visual zone of parks and recreation areas is 41,488 feet with the Recommended Route; 45,269 feet for the Route 179; 41,157 feet for Route 179-C; 41,219 feet for the Secondary Route; and 47,429 feet for the Recommended Route with the Justin Modification.¹⁶¹

¹⁵⁶ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 94.

¹⁵⁷ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 132.

¹⁵⁸ Staff Ex. 2 (Poole Dir. Errata) at 34.

¹⁵⁹ Staff Ex. 2 (Poole Dir. Errata) at 34.

¹⁶⁰ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 215.

¹⁶¹ See *infra* Appendix A; see Oncor Ex. 25; Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9; DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *13.

d) Environmental Integrity

PURA section 37.056(c)(4)(D) requires the consideration of impacts of proposed transmission facilities on environmental integrity. Halff performed an evaluation of the Project's potential impacts on the environmental effects, including effects on endangered and threatened species.¹⁶² Halff reviewed federal- and state-listed endangered or threatened species in Denton and Wise counties.¹⁶³ It determined that there were no endangered or threatened plant species under federal listing within the United States Fish and Wildlife Service or state listing with TPWD for either Denton or Wise counties.¹⁶⁴ None of the identified routes or modifications will cross any known critical habitat of federally listed endangered or threatened species.¹⁶⁵

The Project is not anticipated to have any significant adverse effects on the physiographic or geologic features and resources of the area.¹⁶⁶ No geological hazards are anticipated to be created by the Project.¹⁶⁷ The construction, operation, and maintenance of the Project are also not anticipated to adversely affect groundwater resources within the study area.¹⁶⁸ No construction activities are anticipated that

¹⁶² Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 202-03, 207-09.

¹⁶³ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 95.

¹⁶⁴ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 95-96.

¹⁶⁵ See *infra* Appendix A; Oncor Ex. 25; Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9; DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *13.

¹⁶⁶ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 196.

¹⁶⁷ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 196.

¹⁶⁸ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 200.

would impede the flow of water within watersheds or floodplains. No future surface water projects were identified as occurring within the study area and no impacts are anticipated. No construction activities are anticipated that would significantly impede the flow of receding flood waters within special hazard areas. Furthermore, other than potential construction-related erosion, impacts to prime farmland soils are anticipated to be insignificant and limited to the physical occupation of small areas at the base of support structures.¹⁶⁹ The Project is anticipated to have short-term minimal impacts to soil, water, and ecological resources.¹⁷⁰

Staff does not believe the Project will present a significant impact to environmental integrity, because transmission lines do not often create many long-term impacts on soils.¹⁷¹ Rather, Staff explained that most of the impacts, erosion, and soil compaction, will be present during initial construction.¹⁷² Oncor will employ erosion control during initial construction including development of a Storm Water Pollution Prevention Plan (SWPPP) to minimize any impacts.¹⁷³

DHL witness Mr. Buntz testified that Route 179 “presents a shorter, straighter route through potential Whooping Crane stopover habitat, thereby

¹⁶⁹ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 197.

¹⁷⁰ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 198.

¹⁷¹ Staff Ex. 2 (Poole Dir. Errata) at 35.

¹⁷² Staff Ex. 2 (Poole Dir. Errata) at 35.

¹⁷³ Staff Ex. 2 (Poole Dir. Errata) at 35.

minimizing impacts to this federally endangered species, as well as other migratory birds using the Decker Creek corridor.”¹⁷⁴

Justin argues that Route 179 is not the best choice from an environmental integrity perspective. Specifically, Justin argued that because Route 179 crosses 20,248 feet of cropland/hay meadow; 71,051 feet of rangeland pasture; 10,126 feet of upland woodlands; and 27 streams, it should not be considered the preferred route.¹⁷⁵ Justin advocates that the Justin Modification would have fewer detrimental impacts on the natural environment.¹⁷⁶ The Justin Modification would reduce stream crossings by four; travel over less cropland/hay meadow (by 4,658 feet) and less rangeland pasture (by 2,264 feet); and reduce the length across upland woodlands by 108 feet.¹⁷⁷ However, it would increase the length of route across riparian areas by 2,326 feet.¹⁷⁸

Testifying for Staff, Mr. Poole indicated that impacts on vegetation would be the result of clearing and maintaining the ROW. Mr. Poole testified that the length of upland woodland or brushland along the ROW of Route 179-C is 11,311 feet and

¹⁷⁴ DHL Ex. 1 (Buntz Dir.) at 9.

¹⁷⁵ Justin Br. at 5; *see also* Oncor Ex. 4 (Perkins Dir.) at 10.

¹⁷⁶ Justin Br. at 5. Other parties join in Justin’s advocacy for the Justin Modification. Dudley Realty Br. at 3-4; TCCI Range Br. at 2; Lewis Br. at 3; Niernan Br. at 2-3; Guess Br. at 3; Vinyard Closing Br. at 3; Chopvenko Br. at 2-3; Dennis Br. at 2-3; Bresler Br. at 1-2.

¹⁷⁷ *See infra* Appendix A; Oncor Ex. 25; Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9; DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *13.

¹⁷⁸ *See infra* Appendix A; Oncor Ex. 25; Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9; DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *13.

the length of riparian areas along the ROW of Route 179-C is 11,536 feet.¹⁷⁹ Route 179-C does not cross any wetlands.¹⁸⁰ Mr. Poole opined that none of the routes are unacceptable from an environmental and land use perspective.¹⁸¹

e) Costs

The Commission is required to consider cost as a factor in evaluating proposed alternative routes.¹⁸² Oncor prepared cost estimates for all alternative routes included in the Application and that are under consideration in this proceeding.¹⁸³ The estimated costs include the costs of engineering, acquiring ROW, procurement of materials and supplies, construction labor and transportation, and administration.¹⁸⁴

For all alternative routes included in the Application, the estimated costs range from \$168,332,000 to \$238,602,000, not including the substation costs (which are the same for all routes).¹⁸⁵ The following table provides the estimated costs for Routes 179, 179-C, and 179-C with the La Estancia Modifications¹⁸⁶:

¹⁷⁹ Staff Ex. 2 (Poole Dir. Errata) at 36.

¹⁸⁰ Staff Ex. 2 (Poole Dir. Errata) at 37.

¹⁸¹ Staff Ex. 2 (Poole Dir. Errata) at 38.

¹⁸² 16 Tex. Admin. Code § 25.101(b)(3)(B).

¹⁸³ Oncor Ex. 5 (Zapletal Dir.) at 9.

¹⁸⁴ Oncor Ex. 5 (Zapletal Dir.) at 10.

¹⁸⁵ Staff Ex. 2 (Poole Dir. Errata) at 39-41.

¹⁸⁶ See *infra* Appendix A. Oncor Ex. 25; DCLC Ex. 5 (Oncor Resp. to DCLC RFI) at *3; Staff Ex. 2 (Poole Dir. Errata) at 40.

Route	Estimated Cost
179	\$178,749,000
179-C	\$176,285,000
179-C with La Estancia Modification 1	\$176,535,000
179-C with La Estancia Modifications 1 & 2	\$175,817,000
Recommended Route	\$176,548,432
Secondary Route	\$177,266,432

There is a total cost difference of less than 1 percent across all alternatives. There is no direct evidence for the cost of one of these routes if it included the Justin Modification. However, the average cost for alternative routes that included the same links proposed by Justin was \$186,318,800, or an approximate 5% increase over these other routes.

f) Use of Existing Corridors

Title 16 Texas Administrative Code section 25.101(b)(3)(B)(i)-(iii) requires consideration of the extent to which a new transmission line parallels existing, compatible ROW, which includes existing transmission, road, highway, railroad, and telephone utility ROW as well as property lines or other natural or cultural features. Routing along existing, compatible ROW for the proposed alternative routes ranges from approximately 17.25 percent for Route 221 to 39.65 percent along Route 117.¹⁸⁷ The percentages of paralleling for Routes 179, 179-C, and 179-C with the La Estancia modifications are represented below¹⁸⁸:

¹⁸⁷ Staff Ex. 2 (Poole Dir. Errata) at 44-45.

¹⁸⁸ Oncor Ex. 25.

Route	Length (feet)	Length Parallel to ROW	Percentage
179-C	110,373	25,665	23.25%
179	114,898	26,061	22.68%
179-C with La Estancia Modification 1	110,436	23,364	21.15%
179-C with La Estancia Modification 1 and 2	110,692	25,416	22.96%
Recommended Route	110,367	24,887	22.55%
Secondary Route	110,111	22,835	20.74%
Recommended Route with Justin Modification	108,402	20,456	18.87%

Not including the La Estancia Modifications, Route 179-C is the 29th shortest route and has the 53rd highest percentage of compatible ROW; Route 179 is the 54th shortest route and has the 58th highest percentage of compatible ROW.¹⁸⁹

Intervenors TCCI and Dudley Realty object to the selection of Route 179 and 179-C and instead argue for the selection of a route that uses Link J22. They argue that a route using Link J22 will parallel or otherwise utilize the most compatible ROW, property lines, and natural features as opposed to Route 179-C.¹⁹⁰ However, the evidence provided in the EA suggests that, while overall shorter, the Justin Modification would reduce length paralleling existing compatible ROW by over 4,400 feet and reduce the percentage of compatible ROW by 3.68 percent.¹⁹¹

¹⁸⁹ Staff Ex. 2 (Poole Dir. Errata) at 44-47.

¹⁹⁰ See TCCI Range Br. at 3 (citing Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 651; attach. 13 (Notice to DOD, OPUC and Municipalities) at 948).

¹⁹¹ See *infra* Appendix A; Oncor Ex. 25; Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-9.

g) Prudent Avoidance

Commission rules define prudent avoidance as “[t]he limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort.”¹⁹² Limiting exposure to electric and magnetic fields can be accomplished by choosing a route that avoids population centers or other locations where people gather and has fewer habitable structures in close proximity to the route.¹⁹³ Prudent avoidance does not mean that a proposed transmission line must avoid habitable structures at all costs, but that reasonable alternatives must be considered.¹⁹⁴

Staff supports 179-C as a route that conforms with the concept of prudent avoidance and acknowledges that Route 179 has one less habitable structure within 500 feet of its centerline.¹⁹⁵ Staff witness Poole testified that Route 179-C “makes better use of compatible right-of-way as a percentage of its total length than Routes 179 and 179-B” and does not cross any park and recreational areas.¹⁹⁶

Several intervenors expressed concerns with the proximity of the lines to their homes or businesses and that electro-magnetic fields (EMF) exposures from the proposed transmission line would result in adverse human health effects.

¹⁹² 16 Tex. Admin. Code § 25.101(a)(6).

¹⁹³ Staff Ex. 2 (Poole Dir. Errata) at 48.

¹⁹⁴ Oncor Ex. 4 (Perkins Dir.) at 12.

¹⁹⁵ Staff Ex. 2 (Poole Dir. Errata) at 48-49.

¹⁹⁶ Staff Ex. 2 (Poole Dir. Errata) at 51.

Intervenors Anzhela and Viktor Chopovenko and Daniel and Melissa Dennis reside in Justin, Texas.¹⁹⁷ The Chopovenkos and Dennises believe transmission lines are dangerous and are concerned about the long-term effects of EMF and oppose a route that utilizes Links J4, J3, and J22.¹⁹⁸ If Route 179-C is selected, the Chopovenkos and Dennises ask that the southernmost routes be used to minimize the routes' proximity to their development.¹⁹⁹

In response, Oncor provided credible evidence regarding numerous studies on EMF exposure conducted over the past 35 years.²⁰⁰ Oncor witness Dr. Gelmann discussed 34 studies that examined EMF and its effects on human and animal DNA and living cells.²⁰¹ Dr. Gelmann explained that several studies have found no damage to DNA as a result of EMF exposure.²⁰² He also referenced studies that showed no increase in the incidence of cancer in animals exposed to power frequency EMF.²⁰³ Other studies found no significant differences in mortality patterns or cancer incidences in animals exposed to power frequency for most of their lives.²⁰⁴ Dr. Gelmann concluded that these studies do not show a "scientific basis to

¹⁹⁷ Chopovenko Ex. 1 (Chopovenko Ltr.); Dennis Br. at 7.

¹⁹⁸ Chopovenko Br. at 7; Dennis Br. at 3.

¹⁹⁹ Chopovenko Br. at 7; Dennis Br. at 6-7.

²⁰⁰ Oncor Ex. 10 (Gelmann Reb.) at 5.

²⁰¹ Oncor Ex. 10 (Gelmann Reb.), attach. EPG-R-2.

²⁰² Oncor Ex. 10 (Gelmann Reb.) at 7-8.

²⁰³ Oncor Ex. 10 (Gelmann Reb.) at 6.

²⁰⁴ Oncor Ex. 10 (Gelmann Reb.) at 7-8.

conclude that EMF cause[s] or contribute[s] to cancer or other adverse health effects.”²⁰⁵

All the routes under consideration conform to the Commission’s policy of prudent avoidance in that they reflect reasonable investments of money and effort to limit exposures to electric and magnetic fields.²⁰⁶

h) Engineering Constraints

There are no significant engineering constraints along any of the alternative routes. As explained in the EA, Halff’s preliminary alternative links were reviewed by Oncor for engineering and constructability.²⁰⁷ Modifications to the proposed preliminary alternative links were completed after input was considered from stakeholders and in consideration of identified potential engineering constraints.²⁰⁸

Oncor witness Amy Zapletal testified that the Project will be designed and constructed to meet or exceed the specifications and/or criteria set forth in the latest edition of the National Electrical Safety Code, Texas statutes, Commission rules, and Oncor’s standard design practices.²⁰⁹

²⁰⁵ Oncor Ex. 10 (Germann Reb.) at 10, 12.

²⁰⁶ Oncor Ex. 4 (Perkins Dir.) at 11-12.

²⁰⁷ Oncor Ex. 2 (Marusak Dir.) at 7-8.

²⁰⁸ Oncor Ex. 2 (Marusak Dir.) at 8-9.

²⁰⁹ Oncor Ex. 5 (Zapletal Dir.) at 3.

Staff witness Poole testified that there are no specific engineering constraints associated with the Project that are not present in a usual transmission line proposal and that, in his opinion, all the possible constraints can be adequately addressed by using design and construction practices and techniques that are usual and customary in the electric utility industry.²¹⁰

i) Effect on Any Electric Utility Serving the Area

The transmission line that is subject of Oncor's Application will not be directly connected to any other electric utility and no other electric utility is involved in the construction of the Project.²¹¹ Additionally, the Project does not utilize existing facilities owned by any other electric utility.²¹²

Intervenor Texas Municipal Power Agency (TMPA) identified that Links B1 and B4 would impact TMPA's existing 345kV transmission lines, which may require modification if the Project is constructed.²¹³ TMPA testified that it was concerned that Oncor would proceed with the Project without consulting TMPA.²¹⁴ In its closing, Oncor stated that it will coordinate with TMPA to address the Project's

²¹⁰ Staff Ex. 2 (Poole Dir. Errata) at 38-39.

²¹¹ Oncor Ex. 1 (Application) at 8.

²¹² Oncor Ex. 1 (Application) at 8.

²¹³ TMPA Ex. 1 (Martin Dir.) at 5-7.

²¹⁴ TMPA Ex. 1 (Martin Dir.) at 7.

impacts or modifications.²¹⁵ TMPA, in its reply brief, recognizes Oncor's statement and expects to coordinate with Oncor.²¹⁶

4. Alternative Routes: Less Negative Effect, Incremental Cost, Offset, and Reduced Efficiency

Almost all parties who submitted evidence at the hearing support, or do not oppose, the Commission's selection of either Route 179 or Route 179-C.²¹⁷ The La Estancia Alt. 1 would result in fewer landowners in the Canyon Falls neighborhood being directly affected by the Project, but would also directly affect 38 habitable structures in the Trailwood Subdivision south of FM 1171.²¹⁸ The La Estancia Alt. 1 would occur entirely on property owned by La Estancia and one of the Furst Ranch intervenors.²¹⁹ The La Estancia Alt. 2 would occur entirely on property owned by La Estancia, except for Tract 801, from whom owner consent is still required. The La Estancia Alt. 1 will add approximately \$250,000 to the total transmission line costs for Route 179 or Route 179-C, and the La Estancia Alt. 2 would reduce transmission line costs by approximately \$450,000 on either route.²²⁰ Both alternatives together would reduce estimated costs by approximately \$200,000.²²¹ No evidence was

²¹⁵ Oncor Electric Delivery Co., LLC's Initial Post-Hr'g Br. at 24, Filing No. 1771 (Sept. 7, 2023).

²¹⁶ Ltr. from R. Arnett to ALJs Robles and McCabe (TMPA's Reply Br.) at 1, Filing No. 1801 (Sept. 14, 2023).

²¹⁷ Dudley Realty, the City of Justin, TCCI Range, and the Justin Residents oppose both Route 179 and Route 179-C.

²¹⁸ La Estancia Ex. 3A-3C.

²¹⁹ See La Estancia Ex. 3A-3C.

²²⁰ Oncor Ex. 25.

²²¹ Oncor Ex. 25.

presented that these modifications would diminish the reliability of electric efficiency of the line.

The DCLC Modified M1 and M5 links have minor effects on the route as a whole—adding no additional habitable structures. The DCLC Modified M1 and M5 would occur entirely on land owned by intervenor Alliance West, LP (Alliance West) and nonparty BNSF Railway Company, both of whom likely consent to the modification.²²² Both modified links together would increase estimated costs by approximately \$730,000.²²³ No evidence was presented that these modifications would diminish the reliability of electric efficiency of the line.

5. Summary of Routing Recommendation

The ALJs recommend that the Commission approve the Recommended Route or, if consent to La Estancia Alt. 2 cannot be established, the ALJs recommend the Secondary Route.²²⁴ For convenience, the environmental and cost data for each of the discussed routes is provided in chart attached as Appendix A to this PFD, which is incorporated herein.

Ultimately, all the routes discussed are feasible and constructible. Under the appropriate factors, the differences between Route 179, 179-C, and routes with the

²²² Oncor Ex. 1 (Application), attach. 7 (Routing Memo.) at 851, 853; *see* DCLC Ex. 1 (Alternative Segment Map). Alliance West Br. at *12; DCLC Mot. to Admit Evid. at 1.

²²³ Oncor Ex. 25.

²²⁴ Because of the lack of data demonstrating the feasibility and cost for La Estancia Alternative 2A, the ALJs do not recommend approval of Alternative 2A if consent for Alternative 2 cannot be established.

La Estancia Alts. 1 and 2 and DCLC Modified M1 and M5 are relatively minor. While La Estancia Alt. 1 offers an increase in certain areas like habitable structures, the evidence establishes that those minor increases do not offset the benefit of mitigating the effect on the affected landowners (especially if it can be coupled with La Estancia Alt. 2) and is not opposed by the parties in this case. Similarly, the DCLC Modified M1 and M5 have minor effects on the overall characteristics of the transmission lines so the mitigation of effect on the affected landowners weighs toward approving the modification to the route. While the adoption of each modification may increase the overall cost, the estimated increases are relatively minor and still less than the cost of Oncor's preferred route.

Meanwhile, the evidence does not establish the Justin Modification as a modification that best meets the factors in this instance, and, when compared to the other routes, the negatives of the proposed modification outweigh the positives of a shorter length and mitigation of effect on certain intervenors. The Justin Modification increases the number of habitable structures by 59 and shortens the length paralleling a compatible ROW by over 4,400 feet. While the Justin Modification travels over less rangeland pasture, cropland/hay meadow, and upland woodlands, the expected impact on vegetation and other natural elements is expected to be minimal given the nature of the land use for transmission lines and the mitigation efforts by Oncor during construction. Also, the estimated cost for the Justin Modification cannot be accurately determined but the evidence in the record suggests that it would be more expensive than any of the other discussed routes including Route 179. It has not been shown that the factors weigh in favor of the

Justin Modification compared to the Recommended Route or any of the other discussed routes.

F. TEXAS PARKS AND WILDLIFE DEPARTMENT²²⁵

TPWD provided Halff with recommendations for the Project while Halff prepared the EA²²⁶ and provided comments and recommendations regarding the Project directly to Staff in this docket.²²⁷ In its comments and recommendations, TPWD generally commented that it preferred Route 137 over Route 179 and recommended that the Commission: (1) adhere to Texas Parks and Wildlife Code chapter 26 if the approved route crosses a public park or recreational area, and (2) implement certain beneficial management practices to further mitigate the impacts on fish and wildlife.²²⁸

Route 137. In its review of the 74 alternative routes presented by Oncor's Application, TPWD supported Route 137.²²⁹ While it recognized that Route 137 and 179 ranked very similarly and consisted of generally shorter lengths across natural resource criteria compared to other routes using similar links, Route 137 crossed the least amount of upland woodlands, riparian areas, potential wetlands, and lakes/ponds—approximately 200 feet less than Route 179.²³⁰ Also, TPWD

²²⁵ This section addresses Preliminary Issue No. 16.

²²⁶ Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 429.

²²⁷ Ltr. to M. Wagley from J. Silovsky (TPWD Letter), Filing Item No. 457 (July 20, 2023).

²²⁸ TPWD Letter at 5-8.

²²⁹ TPWD Letter at 5.

²³⁰ TPWD Letter at 6.

emphasized that Route 137 did not cross a native Mollisol Blackland Prairie (found in Links E6 and C6) while Route 179 did.²³¹ Oncor notes that TPWD evaluates the routes solely on natural resource impacts where the ALJs and the Commission must consider all the PURA and Commission rule factors.²³² Also, one witness testified that TPWD was incorrect to value Links E6 and C6 (links that contain the Mollisol Blackland Prairie area) over other links used by Route 137 (links that would cross over the Canyon Falls Greenbelt).²³³

Texas Parks and Wildlife Code Chapter 26. TPWD recommends that the PUC adhere to chapter 26 of the Texas Parks and Wildlife Code if the approved route would cross a public park or recreational area.²³⁴ Generally, chapter 26 provides a process for a state agency to provide notice, conduct a hearing, and render certain findings before it approves a project that would result in the use or taking of public land designated and used as a park or public recreation area.²³⁵ Oncor responds that, pursuant to prior Commission orders, chapter 26 does not apply to this proceeding because chapter 26 applies only when the land would no longer be used as a park after the proposed project. The transmission line crossing a park in this case would not change the character of the land to something other than a park so chapter

²³¹ TPWD Letter at 6.

²³² For example, Route 137 has 228 habitable structures within 500 feet of the route centerline compared to the Recommended Route's 136.

²³³ Northlake Ex. 4 (Rettig Dir.) at 10. Dr. Rettig concludes that area crossed by Route 179 is valuable commercial frontage subject to commercial or industrial development where the Canyon Falls greenbelt is designed for long term natural preservation where the community had invested funds to keep it in its natural state. Northlake Ex. 4 (Rettig Dir.) at 10.

²³⁴ TPWD Letter at 7.

²³⁵ See Texas Parks & Wild. Code § 26.001.

26 is inapplicable in this case. No party argued that chapter 26 applied, and there is no evidence in this record that the character of public land would be changed from park to nonpark after the Project.²³⁶

Beneficial Management Practices. TPWD also identified 15 beneficial management practices that it recommended to protect fish and wildlife resources during clearing, construction, and maintenance.²³⁷

Staff witness Mr. Poole recommended several mitigation measures that he concluded would be sufficient address TPWD's mitigation recommendations.²³⁸ Oncor does not object to Mr. Poole's recommended mitigation measures—stating that Halff already attempted to utilize many of the TPWD's recommendations as part of the EA.²³⁹ No party opposed the mitigation measures listed by Mr. Poole, nor has any party contended that additional measures are needed to protect wildlife or plant species in response to TPWD's concerns.

Therefore, the ALJs recommend that the mitigation measures identified by Mr. Poole be adopted, and they are included in the Ordering Paragraphs with this PFD. Otherwise, the ALJs find that the evidence does not show any other

²³⁶ *Determinations Under Chapter 26 of the Texas Parks and Wildlife Code Relating to Docket No. 53053 (Application of Oncor Electric Delivery Company, LLC to Amend Its Certificate of Convenience and Necessity for the Ivy League 138-kV Line in Collin County)*, Docket No. 54392, Order at 1, 4-6 (Dec. 15, 2022) ("It is common knowledge that parks coexist with transmission lines and under transmission lines throughout the State of Texas.").

²³⁷ TPWD Letter at 8.

²³⁸ Staff Ex. 2 (Poole Dir. Errata) at 17.

²³⁹ Oncor Ex. 11 (Marusak Reb.) at 3.

modifications, conditions, or limitations need be imposed to address TPWD's comments, recommendations, or concerns.

G. OTHER PRELIMINARY ISSUES²⁴⁰

1. Cost of the Project to Consumers and Congestion Cost Savings

Oncor argues that this issue is inapplicable in this case because the Project is needed to address reliability issues identified under a state or federal reliability standard (NERC Reliability Standard TPL-001-4 and the ERCOT Planning Guide).²⁴¹ No party contests Oncor's position on this issue and no evidence was presented on this issue.

2. Best Management Practices

The best management practices for construction and operating transmission facilities that are standard in the Commission's electric CCN orders are adequate. No party has identified that the standard best management practices are inadequate.

3. Permitting, Licenses, Plans, and Permissions

Oncor expects to seek the following, if necessary:

- A permit with the Texas Department of Transportation if the Project crosses state-owned or -maintained properties, roads, or highways;

²⁴⁰ This section addresses Preliminary Issue Nos. 12-15, 17-21.

²⁴¹ Oncor Br. at 17.

- A SWPPP and a Notice of Intent under the Texas Pollutant Discharge Elimination System program with the Texas Commission on Environmental Quality;
- A cultural resources survey plan with the Texas Historical Commission;
- Consultation with the USACE to determine appropriate requirements under Section 404/Section 10 permit criteria;
- Consultation with the United States Fish and Wildlife Service to determine appropriate requirements under the Endangered Species Act; and
- Consultation with the FAA to determine appropriate requirements and notification under Federal Aviation Regulations (14 Code of Federal Regulations part 77).²⁴²

Alternative routes that use link G2 would require federal approval, as the land is owned and managed by USACE.²⁴³ Oncor and USACE have discussed, and USACE has indicated they could support an approved crossing along this link.²⁴⁴ Oncor states that if this link is selected, it will coordinate with USACE to obtain any necessary federal approval to cross the USACE land.²⁴⁵

Oncor asserts that the permits, plans, and consultations identified above—except for the approval to cross USACE land—are routinely done and obtained in the ordinary course of transmission line projects.²⁴⁶ There is no evidence of prior

²⁴² Oncor Ex. 1 (Application) at 27.

²⁴³ Oncor Ex. 2 (Marusak Dir.) at 17; Oncor Ex. 5 (Zapletal Dir.) at 12.

²⁴⁴ Oncor Ex. 5 (Zapletal Dir.) at 12.

²⁴⁵ Oncor Br. at 39.

²⁴⁶ Oncor Br. at 40.

agency permissions; granted permits; or contingency plans. No party has identified any other necessary permits, licenses, plans, or permissions required by the Project. According to Oncor, it will obtain any necessary permits or approvals from federal, state, or local authorities, prior to beginning construction on the Project.²⁴⁷

4. Coastal Management Program

No part of the proposed transmission facilities is located within the coastal management program boundary as defined in 31 Texas Administrative Code section 503.1(b).

5. Limitation of Authority

No party has asserted that circumstances in this case warrant changing the seven-year period limiting authority. Seven years is a reasonable and appropriate limit to place on the authority granted in this Order to construct the Project.

6. Effect of Construction on Power Generation, Delivery or Reliability

Oncor does not expect that construction of the Project will preclude or limit a generator from generating or delivering power, or adversely affect the reliability of the ERCOT system.²⁴⁸ No party has contested Oncor's position on this issue.

²⁴⁷ Oncor Ex. 1 (Application) at 27; *see also* Oncor Br. at 40.

²⁴⁸ Oncor Ex. 5 (Zapletal Dir.) at 21. The Project will be constructed on new right-of-way and will cross at least two existing transmission lines as it traverses the study area. *See* Oncor Ex. 20 (Intervenor Map). While a clearance on the existing transmission facilities may be required to build the Project, Oncor does not anticipate any material generator impact resulting from this clearance. *See* Oncor Ex. 5 (Zapletal Dir.) at 21.

7. Agreement between Parties

No agreements were announced between the parties in this case. Any modifications to a route proposed by a party are discussed in the Routing section above.

V. FINDINGS OF FACT

Applicant and Application

1. Oncor Electric Delivery Company, LLC (Oncor) is a Delaware limited liability company registered with the Texas secretary of state under filing number 800880712.
2. Oncor is an investor-owned electric utility that owns and operates for compensation in Texas facilities and equipment to transmit and distribute electricity in the Electric Reliability Council of Texas, Inc. (ERCOT) region.
3. Oncor is authorized to provide service to the public under Certificate of Convenience and Necessity (CCN) number 30043.
4. On June 8, 2023, Oncor filed an application, with an errata filed on August 28, 2023, to amend its CCN for a new double-circuit 345 kV transmission line to be built on triple-circuit-capable structures, between the proposed Ramhorn Hill Switch, located in Wise County, and the proposed Dunham Switch, located in Denton County.
5. Oncor hired Halff Associates, Inc. (Halff) to prepare an Environmental Assessment and Alternative Route Analysis (EA) for the proposed transmission line, which was included as part of the application.
6. On June 20, 2023, Staff for the Public Utility Commission (Commission or PUC) recommended that the Application be found sufficient.

7. In State Office of Administrative Hearings (SOAH) Order No. 2, issued June 28, 2023, the administrative law judge (ALJ) found the Application administratively complete.

Project Description

8. Oncor proposes to construct a new double-circuit 345-Kilovolt (kV) transmission line to be built on triple-circuit-capable structures in Denton and Wise Counties, Texas (Project).
9. The triple-circuit-capable structures will include a vacant third circuit position to allow for the future addition of an underbuilt 138-kV circuit.
10. The transmission line will be located between the proposed Ramhom Hill Switch—which is approximately two miles south of the intersection of United States Highway 287 and State Highway 114 near Rhome, Wise County—and the proposed Dunham Switch—which is located approximately 1.4 miles southeast of the intersection of United States Highway 377 and Farm-to-Market Road (FM) 1181, in Flower Mound, Denton County.
11. The Project includes the transmission line and Oncor’s construction of the proposed Ramhorn Hill and Dunham switching stations.
12. Oncor will own, operate, and maintain the proposed transmission line and the proposed transmission facilities.
13. Both switching stations will be built in a 12-breaker, breaker-and-a-half arrangement and will tap into the existing 345-kV transmission system in the northwestern DFW Metroplex.
14. The Project will primarily be constructed on steel monopole structures, generally within a 100-foot-wide right-of-way (ROW), except where alternate structures and/or additional ROW width are required to address engineering constraints.
15. The typical structure for the transmission line will be approximately 120 to 175 feet in height.

16. Oncor estimated that it would finalize engineering and design by October 2024, procure materials and equipment by October 2024, complete construction of facilities by December 2025, and energize the facilities by December 2025.

Public Notice and Input

17. Prior to filing the Application, Oncor held two public participation meetings in Fort Worth, Texas on December 7 and 8, 2022.
18. Oncor published notice of the public participation meetings in the *Denton Record Chronicle* on November 26 and 27, 2022, and in the *Wise County Messenger* on November 23, 2022, which are the newspapers of general circulation in Denton and Wise Counties, respectively.
19. Prior to the public participation meetings, Oncor mailed 2,068 individual written notices of the public participation meetings to all owners of property within 500 feet of the proposed route centerlines for the preliminary links in the Project.
20. Oncor sent written notice of the public participation meetings to the Department of Defense Siting Clearinghouse (DOD).
21. At the public participation meetings, Oncor provided a questionnaire, which provided a space for participants to include any general comments, remarks, or concerns.
22. Seventy-seven individuals signed in as attendees at the public meeting held on December 7, 2022, and Oncor received 27 questionnaires at that public meeting. Ninety-five individuals signed in as attendees at the public meeting held on December 8, 2022, and Oncor received 44 questionnaires at that public meeting. Oncor also received questionnaires and other correspondence following the public meeting.
23. The questionnaires and comments indicated an overwhelming preference for maximizing the Project's distance from residences, schools, churches, and recreational areas.

24. Other areas of concern were the impact on the residential aesthetics; opposition to particular routes or locations; concerns of health effects of high-power lines; the efficiency and length of the project; impact on wildlife and natural resources; and impacts on farming or ranching.

Notice of the Application

25. On June 8, 2023, Oncor sent written notice of the application by first class mail to directly affected landowners of record; municipalities and municipal officials of the towns of Argyle, Bartonville, Corral City, DISH, Double Oak, Flower Mound, Northlake, Trophy Club, and Westlake, as well as the cities of Aurora, Denton, Fort Worth, Haslet, Justin, Keller, New Fairview, Newark, Rhome, Southlake, and Roanoke; counties and county officials of Denton County and Wise County; the Office of Public Utility Counsel; the DOD; Brazos Electric Power Cooperative; Denton Municipal Electric d/b/a CoServ Electric; Texas Municipal Power Agency (TMPA); Tri-County Electric Cooperative; Wise County Electric Cooperative; and certain pipeline owners and operators.
26. On June 8, 2023, Oncor mailed a copy of the EA to the Texas Parks and Wildlife Department (TPWD).
27. Oncor published notice of the application in the *Denton Record Chronicle*, a newspaper having general circulation in Denton County, Texas, and in the *Wise County Messenger*, a newspaper having general circulation in Wise County, Texas, on June 10 and 15, 2023, respectively.
28. On June 28, 2023, Oncor filed the affidavit of Chris Reily, Regulatory Manager II at Oncor, attesting that notice was provided as described in Finding of Fact No. 25.
29. On June 28, 2023, Oncor filed another affidavit of Mr. Reily, including the publisher's affidavits of Alice McConnaughey, attesting to the publications of notice described in Finding of Fact No. 27.
30. On July 13, 2023, Oncor filed the supplemental affidavit of Mr. Reily, attesting to notices that were returned as "Return to Sender/Unable to Forward" as well as re-sent notices.

31. On August 8, 2023, Oncor filed the second supplemental affidavit of Mr. Reily, attesting to notices that were returned as “Return to Sender/Unable to Forward” as well as re-sent notices.
32. In SOAH Order No. 2, filed June 28, 2023, the ALJ found Oncor’s proposed notice sufficient.

Referral to SOAH for Hearing

33. On June 9, 2023, the Commission referred this docket to SOAH and issued a preliminary order, establishing a decision deadline and specifying issues to be addressed in this proceeding.
34. SOAH ALJ Christiaan Siano convened a prehearing conference on June 26, 2023, via Zoom videoconference, to address a procedural schedule and other prehearing matters.
35. In SOAH Order No. 2, filed on June 28, 2023, the ALJ adopted a procedural schedule and set the hearing on the merits.

Intervenors

36. In SOAH Order No. 2, filed on June 28, 2023, the ALJ granted intervention to City of Argyle (modified to include the City of Justin in SOAH Order No. 4); Edgar Brent Watkins and Mary Ann Livengood, Co-Trustees of Watkins Family Trust; Matthew A Spaethe; DHL Supply Chain; Wayne and Norma Wilkerson; Town of Northlake; Eric and Diane Howe; GRBK Edgewood LLC; GBTM Sendera LLC; April Burrill; Alliance West, LP; Margaret & Antonio Chavez; Rodney Stokes; and Zachariah Linton.
37. In SOAH Order No. 4, filed on July 24, 2023, the ALJ granted intervention to PMB Rolling V Land LP; Jason Bailey; Jeremy Young; Seth DeLeon; Joanna Girard; Deborah N. Dasllas; Sally Allen; Joseph Gerson; Tyrell Looney; Haihong Xu; Bettye Wiley Neely, Aubrey Eugene Wiley, David Randolph Wiley, Donald Bryan Neely, Dana Lauraine Tur, Howard Ray Schwope, and Janice Vardakis; Stephanie Cox; Brian Eddy; Dennis Tolleson; Stephanie Geddes; Kristopher Munn; Steve and Rhonda Boisvert; City of Argyle; Benito Gonzalez; Justin Butler; Ross Brewer; H3M Property Holdings LP; Janet Bresler; Stephen Jenkins (corrected to Stephan in SOAH Order No. 6);

Curt Whitworth; Charles Dee and Gretchen Brown; Kimberley Ventrca (reverted to protestor status in SOAH Order No. 6); John Roddam; Yvette and Nick Deligny; La Estancia Investments, LP; Chandra Vipparla; Emily Rutherford; Greg Maberry; GFAT, LLC; Mallory Maberry; Joshua Chute; Haley Lane; David Bratton; Jerry Bratton; Jennifer Eller; Cory Lane; Michael Holyfield (corrected to Michael & Deborah Holyfield in SOAH Order No. 6); Anthony Lassetter; Carla Crockett; James Ehlinger; Jeffrey and Holly Cannedy; Russell Sherwood; Stevanna Matthews-Tyler; Joshua Marshall; Tracy Mills; Harold Woolsey; Jean Young; Martha and Robert Vinyard; J. Young Land and Cattle Co. Ltd.; Cora James; Keely James; Adler James; Bryant James; Dylan James; Min Sun; Fran Flores; Old WR Ranch I LP; SWC 1171-377 Ltd.; 64.3 SE 1171/377 LLC; Texas Municipal Power Agency; TCCI Range - Mead 2021 LLC; Deanna Turner; Shale Creek HOA; Garry DeLong (reverted to protestor status in SOAH Order No. 5); Danny and Gayle Hill; Dennis Mortimer; Veronica Shielder; Janet Beverly; Jose Aguilar; Michael and Marnie Hamilton; Scott and Trinda Mulkey; Dennis Mortimer; Daniel Jenkins; Lacey McVea; Seth McVea; Brandon Bennett; Vanessa Bennett; Brian Crawley; Terri Koehler; Melissa Humphrey; Richard Humphrey; David Bradley Cook; Sandee Cook; Stephanie Smith; Jawahav Chilmeser; Greg Scott; Andrew Wey; Janice Wey; Carla Gastineau; Randy Mirror; Gordon Sutherland; Jonathan Castro; Daniel Dennis; Melissa Dennis; Rachel Santini; Nicolo Santini; Robert D. Chambers; David Buchanan; Leah Buchanan; Curtis Tally; Henry Northlake Development LLC; Dawn Ehlinger; Amanda Crandall; Donald Dalrymple; Ronald Dalrymple; Crystal Boyd; Ryan and Linda Shawaluk; Ken Burrill; Randy Kaster; Ana Simmons; Timothy Simmons; Jeffrey Scott Brooks; Justin Butler; Gage Harris; and Shelly Butler.

38. In SOAH Order No. 5, filed on July 26, 2023, the ALJs granted intervention to Robert Chambers; Ashley Acker; James Allen Powers; Christen Powers; Rama Prasad Chalasani; Todd Family Holdings LP; James Kimmorie; Charles Gardtti; Jazmarae Moran; Brandon Wobb; Jason Trisko; Kelly Trisko; Heidi Sherman; Eric Jackson; Brian Voight; Carrie Kimmbrilo; Emigdio Torros; Jeffrey Shorman; Latrice Sharpe; Jasmine Mondmer; Rebekah Gaiotti; Becky Reed; Janette Purg; Charlene Jackson; Sandra Mills; David Rogers; Ruben Robles; Marjorie A. Pate; Michael Czap; Maureen Czap; Janet Michlitsch; Fanchon Casazza; Lorena Garcia; Alison Brooks; Milagros Vargas; Eagle Income Properties, LP, AIL Investment, LP, Petrus Investment, LP, HW

Indian Springs, LP, HWC Justin 407, LLC HP Gibbs, LP, Pecan square Phase I, LLC, Pecan Square Phase 2A, LLC, Pecan Square Phase 2B, LLC Pecan Square Phase 3A, LLC, and Pecan Square Phase 3B, LLC; Cristina Chavez; Brenda A. Cline; Julio Chavez; Manuel Luciano; Marlene Becotte; Shalene Bowlby; Michael Bowlby; Frankie Mercado; Deion Stamper; Eric Jackson; Sarah Ogletree; Latoya Odems; Bruce Odems; Sandra Nunez; Kelly Leach; Fred Stamper; Austin Weedor; Everett Stamper; Evette Stamper; Dianna Weedor; Dave Carter; Brayton Ogletree; Everett Gillum; Lisa Wilke; Kelli Schellenberg; Mary Ashmore; Veronica Shields; Aristeo Flores; Teny Parrott; Florence Randall; Martin Ruiz; David Stall; Connie Stall; Stella Villegas; Erin Waymire; Kathy Waymire; Wes Waymire; Deborah Atchley; Kasey Leary; Zachary Leary; Garrett Davis; Judith and Jorge Arzuaga; Misty Hayner; Bruce Nemeth; David Johnsen; James and Holly Lewis; Leslie Miller; Lisa Lonchar; Eric Howe; Raymond Loustaunau; Carrie Polka; Tobias Polka; Katie Morehead; Ronald Morehead; Floyd I. McCurdy Testamentary Trust; Peggy McCurdy; Edward Volponi; Patty Newcomb; Andrew Lyon; Shawn Wells; Fred Mapel; Rebecca Schrimsher; Joseph Schrimsher; Phillip Cruson; Amy Roddam; Gordon Marks; Zac Harbert; Kim Harbert; Jeff and Mary Davis; Kari Cottrell de Mendoza; Rod Stokes; Cynthia and Harvey Reeves; Bo Whitley; Debra Joiner; Todd Templeton; Karen Templeton; Alan Yarbrough; Sarah Yarbrough (corrected to Sara in SOAH Order No. 6); Jeff Balduini; Sarah Wood; Ronald Wood; Eric and Sarah Johnson; Janet Zelnik; Cara McCaskill (reverted to protestor status in SOAH Order No. 6); Joseph McCaskill (reverted to protestor status in SOAH Order No. 6); Charles and Ellena Manton; James and Pamela Matthews; Brenna Matthews; Wyatt Matthews; Kurt Carter; Luke Oliver; Colin Mayne; Tamara Hines; Chad Crowther; Rodney Hines; Dirk Bohse; Cindy Valdez; Matias Villarreal; Michelle Davis (reverted to protestor status in SOAH Order No. 6); Bonnie James; Travis James; Legacy Cattle and Land LLC; Continental U.S. Management LLC; Steve Elis; Michelle Hamilton (corrected to Michael in SOAH Order No. 6); Bill Beverly; Keith (Bobby) Norris; Jawahar Chiluveru; Robert B. Logan; Mya Grant; Jessica Butler (reverted to protestor status in SOAH Order No. 6); Abbie Rodriguez; Paramjit Sahota; Christina Rioux; Curtis Attaway; Manraj Kaur; Lisa and Jay Hemby; Adam Shaddy; Bhaskara Gorantla; Lisa Junkins; Ned Lana; Mario Bartolini; Pat Stevens (reverted to protestor status in SOAH Order No. 6); L. Marvin Guier (reverted to protestor status in SOAH Order No. 6); Kathy Guier; Bryan Crosby; Aston Long; Steve and Kathy Waldfrum; Susan Thomas; James Thomas; Carla

Hardeman, Rena Hardeman, and Heidi Hardeman; Jay Warner; Don and Michelle Cooper; Crystal Clarke (reverted to protestor status in SOAH Order No. 6); City of Rhome; Robert H Heygster; CADG Avalon at Argyle, LLC; Avalon 162, LLC; Avalon 71, LLC; Craig LaPlant; Hardeman Estates HOA, Inc; CTMGT AR II, LLC; CTMGT Alpha Ranch III, LLC; JTS 3.8, LLC; Justin Town Center, Ltd; Shale 114, LP; City of New Fairview; Rebecca Ann Smith; Jody Ray (reverted to protestor status in SOAH Order No. 6); Margarita Graham; Jason Graham; Tomas Mendoza; Jennifer Andress; Mackey Andress; Becky Bettis; Milagros Rivera Torres; Jeff Taylor; Dawn Clyburn; Scott Clyburn; Amy Legorreta; Matthew Rice; Maci Kauffman; Michael and Julie Prickett; Brandon Kauffman; Meredith and Jason Guess; and Luke Oliver.

39. In SOAH Order No. 6, filed on July 28, 2023, the ALJs granted intervention to Denton County Land & Cattle LP; Denton County Land & Cattle 2, LP; Jeffrey True; Lance Roberts; Michael Allen; John Becotte; Kevin Oliver; Viktor Chopovenko; Anzhela Chopovenko; Martin Rojas; Connie Svoboda; Shelley Warner; Margaret L. Heygster; Craig & Alice D.K. Jones; Nicholas Lembotesis; Dudley Realty, LLC; Ben Weaverling; Edna Weaverling; Dennis Mirabel; Kari Mirabel; Sheron White; Archie L. White; Donella Wheeler; Pam Smith; Trevor Keele; Kimn and Terri Niermann; Ariel Keele; Martina Mitchell; Brian Mitchell; Robin Amerine; Nancy Acevedo; Zachary Osborne; Viktoria Nizhnik; Iakov Nizhuik; Fred Mapel; and Barry & Stephanie Smith.
40. In SOAH Order No. 8, filed August 9, 2023, the ALJs granted late intervention to Julie Mooney and Patrick Mooney. SOAH Order No. 8 also directed Oncor to file a written list of intervenors who did not file direct testimony or a statement of position by August 11, 2023, pursuant to SOAH Order No. 1.
41. On August 11, 2023, Oncor filed a list of intervenors who either did not file direct testimony or a statement of position.
42. In SOAH Order No. 9, filed August 16, 2023, the ALJs dismissed a number of intervenors who were determined not to have filed direct testimony or a statement of position.

Testimony and Statements of Position

43. On June 8, 2023, Oncor filed the direct testimony of its witnesses, Harsh Naik, Russell J. Marusak, Brenda J. Perkins, and Amy L. Zapletal.
44. The following intervenors filed testimony or a statement of position on or before August 1, 2023: the Furst Ranch Intervenors; Henry Northlake Development LLC; the Hillwood Parties; La Estancia Investments, LP; Texas Municipal Power Agency; the Town of Northlake; Deborah N Dallas; Jeffrey True; Jeremy and Katie Young; Seth DeLeon; City of Justin; DHL Supply Chain; Dudley Realty, LLC; TCCI Range-Mead 2021 LLC; Alan and Sara Yarbrough; Amy and Justin Roddam; Ana and Timothy Simmons; Anzhela and Victor Chopovenko; Bryan Crosby; Craig LaPlant; Daniel and Melissa Dennis; Daniel Jenkins; Eric and Diane Howe; HA Smith Properties LP; Hardeman Estates HOA, Inc; James and Holly Lewis; James, Pamela, Brenna, and Wyatt Matthews; Janet Bresler; Jennifer Address; Joanna Girard; JTS 3.8, LLC/Justin Town Center, Ltd.; Justin and Shelly Butler; Kimn & Terri Nierman; Meredith and Jason Guess; Robert B. Logan; Robert L. and Martha J. Vinyard; Rodney & Dian Stokes; Todd and Karen Templeton; Tracy Millis; Zac and Kim Harbert; Bill Beverly Jr.; Bobby Norris; David Bratton; Jerry Bratton; Denton County Land & Cattle; Edgar Brent Watkins and Mary Ann Livengood, Co-Trustees of Watkins Family Trust; the Floyd T. McCurdy Testamentary Trust; GBTM Sendera, LLC and GRBK Edgewood LLC; GFAT, LLC; H3M Property Holdings LP; Janet Beverly; Margaret and Antonio Chavez; Martin Rojas; Matthew A Spaethe; Michael and Marnie Hamilton; New Dimension Investment II, LLC; PMB Rolling V Land LP; Rama Prasad Chalasani; Todd Family Holdings L.P.; Wayne and Norma Wilkerson; Alliance West, LP; Charles Dee and Gretchen Brown; Craig and Alice D.K. Jones; Crystal Boyd; Cynthia and Harvey Reeves; Deborah Atchley; Dennis Tolleson; Donald Dalrymple; Gage Harris; Harold Woolsey; Janet Zelnik; Jeffrey Scott Brooks; Joshua Chute; Katie and Ronald Morehead; the estate of Marjorie A Pate; Raymond Loustau; Rebecca and Joseph Schrimsher; Ross Brewer; Russell Sherwood; Shale Creek HOA; and Shawn Wells.
45. On August 14, 2023, Commission Staff filed the direct testimony of its witness, John Poole.

46. On August 14-17, 2023, the following parties filed cross-rebuttal testimony: New Dimension Investments II, LLC; La Estancia Investments, LP; Edgar Brent Watkins and Mary Ann Livengood, co-trustees of the Watkins Family Trust; the Hillwood Parties; Jeremy and Katie Young; and Seth DeLeon.
47. On August 21, 2023, Oncor filed the rebuttal testimonies of its witnesses: Dr. Edward P. Gelmann, Mr. Naik, Mr. Marusak, Ms. Perkins, and Ms. Zapletal.

Route Adequacy

48. Oncor's application presented 74 alternative routes for the Commission's consideration.
49. No party filed testimony or a position statement challenging whether the application provided an adequate number of reasonably differentiated routes to conduct a proper evaluation. No party raised a route adequacy challenge that resulted in a route adequacy hearing.
50. Intervenor Deborah N. Dallas filed a pleading styled as a "Challenge of Route Adequacy," but in substance it was a statement of position and did not challenge the adequacy of the alternative routes, as found in SOAH Order No. 7, issued August 8, 2023.
51. The application provided an adequate and sufficiently delineated number of geographically diverse routes to conduct a proper evaluation.

Hearing on the Merits

52. The hearing on the merits convened on August 28, 2023, and concluded on August 30, 2023, via Zoom videoconference. Oncor secured a meeting space in Austin for all parties who wished to attend the hearing on the merits in person.
53. The following parties made appearances and participated in the hearing on the merits: Oncor; Commission Staff; Old WR Ranch I, LP., 64.3 SE 1171/377, LLC, and SWC 1171-377, Ltd. (Furst Ranch); La Estancia Investments, LP (La Estancia); PMB Rolling V Land, LP; Eagle Income Properties, LP, AIL Investment, L.P., Petrus Investment, L.P., HW Indian Springs, L.P., HWC

Justin 407, LLC, HP Gibbs, LP, Pecan Square Phase I, LLC, Pecan Square Phase 2A, LLC, Pecan Square Phase 2B, LLC, Pecan Square Phase 3A, LLC, and Pecan Square Phase 3B, LLC (collectively, the Hillwood Parties); TMPA; the Town of Northlake; Deborah N. Dallas; Seth DeLeon; the City of Justin; Dudley Realty, LLC; TCCI Range-Mead 2021, LLC; Jeremy and Katie Young; Edgar Brent Watkins and Mary Ann Livengood, Co-Trustees of the Watkins Family Trust; Bill Beverly, Jr., Matthew Spaethe; Margaret and Antonio Chavez; GFAT, LLC; David Bratton; Jerry Bratton; Janet Beverly, Rama Prasad Chalasani; Michael and Marnie Hamilton; Keith (Bobby) Norris; Martin Rojas; Peggy Logan McCurdy; the Floyd T. McCurdy Testamentary Trust; Wayne and Norma Wilkerson; Denton County Land & Cattle, LP; Denton County Land & Cattle 2, LP; GRBK Edgewood, LLC; GBTM Sendera, LLC; Alliance West, LP; DHL Supply Chain; New Dimension II, LLC; H3M Property Holdings, LP and Ross Brewer; Todd Family Holdings, LP; Charles Dee and Gretchen Brown; Robert and Martha Vinyard; Viktor and Anzhela Chopovenko; and Jeff True.

Need for the Proposed Transmission Line and Adequacy of Existing Service

54. The 345-kV transmission system in the north Fort Worth/Roanoke area is approaching its designed operating limits at current demand levels.
55. Oncor performed power flow studies and contingency analysis under NERC Reliability Standard TPL-001-4 and the ERCOT Planning Guide, which identified post-contingency system performance issues beginning in the summer of 2023, including thermal overloads, loading limitations, and voltage criteria exceedances on area transmission lines and autotransformers.
56. To address these issues, Oncor recommended the Roanoke Area Upgrades Project to ERCOT for review.
57. ERCOT's independent review observed thermal overloads on ten transmission elements and voltage criteria exceedances on five transmission elements.
58. On August 16, 2022, ERCOT's Board of Directors approved the Roanoke Area Upgrades Project as a Tier 1 Transmission Project.

59. This Project consists of several transmission improvements that are components of the Roanoke Area Upgrades Project, and the Project approved in this order constitutes one of those components.
60. The Project is needed to provide additional transmission capacity that will resolve thermal overloads and voltage criteria exceedances in post-contingency conditions, enhance operational flexibility, and address loading limitations that are restricting Oncor's ability to interconnect new transmission service customers.
61. ERCOT's Board designated the Project critical to the reliability of the ERCOT transmission system, and ERCOT recommended the Project as necessary to alleviate existing and potential transmission and distribution constraints and system needs within ERCOT in the annual report filed under Texas Utilities Code (PURA) section 39.155(b).
62. Commission Staff witness Mr. Poole concluded that, under the factors set out in PURA section 37.056(c), the Project is necessary and the best option to meet the need when compared to other alternatives.
63. Oncor demonstrated a need for the Project.
64. No party submitted evidence contesting the need for the Project.

Effect of Granting the Application on Oncor and Other Utilities and Probable Improvement of Service or Lowering of Cost

65. Oncor is the only electric utility involved in the construction of the transmission facilities.
66. Oncor will own the proposed transmission line and both of the Project endpoints, and the Project will not serve, connect to, or utilize the facilities of any other electric utility.
67. Certain links will cross transmission facilities jointly owned by TMPA, and Oncor will coordinate with TMPA to address any potential impacts or modifications to the existing facilities.

68. The construction of the transmission line along any proposed alternative route will likely not adversely affect service by other utilities in the area.
69. It is likely that the construction of the transmission facilities will enhance the reliability of the transmission system and facilitate robust wholesale competition.

Routing of the Transmission Facilities

70. To identify preliminary alternative route links for the transmission facilities, Halff delineated a study area, sought public official and agency input, gathered data regarding the study area, and performed constraints mapping.
71. Of the 74 routes filed with Oncor's application, Oncor identified Route 179 as the route that best addresses PURA and the Commission's substantive rules. Route 179 is comprised of Links A0-A4-B1-B61-B62-C1-C21-C23-C7-E2-E1-E6-G1-G3- H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M2-M3-R4-V2-Z.
72. Commission Staff recommended Route 179-C, a modification of Route 179, as the route that best addresses PURA and the Commission's substantive rules. Route 179-C is comprised of Links A0-A4-B1-B61-B62-C1-C21-C23-C7-E2-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M5-R2-R5-U3-V3-V4-Z.
73. Intervenor La Estancia Investments, LP (La Estancia) proposed further modifications of Routes 179 or 179-C, designated La Estancia Alts. 1 and 2.
74. La Estancia Alt. 1 comprises of the same links as either Route 179 or 179-C except it would Link C21 and C3 and then replace C23-C7-E2 with C3-C6. The full route with Route 179-C would be: A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 link-C3-C6-E1-E6-G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M5-R2-R5-U3-V3-V4-Z.
75. La Estancia Alt. 2 comprises of the same links as either Route 179 or 179-C except it would modify Links E6 and G1 to track FM 1171. La Estancia Alt. 2 requires the selected route to include La Estancia Alt. 1. La Estancia Alt. 2 also requires the consent of the owner of Tract 801 as designated in the EA. The full route with Route 179-C would be: A0-A4-B1-B61-B62-C1-C21-

La Estancia Alt. 1 link-C3-C6-E1-Modified E6-Modified G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-M1-M5-R2-R5-U3-V3-V4-Z.

76. Intervenor Denton Land and Cattle, LP and Denton Land and Cattle 2 (together, DCLC) proposed further modifications to Route 179-C, designated as DCLC Modified M1 and Modified M5. Each modification seeks to modify a particular link of Route 179-C. The full route with Route 179-C and the La Estancia Alt. 1 and 2 would be: A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 link-C3-C6-E1-Modified E6-Modified G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-Modified M1-Modified M5-R2-R5-U3-V3-V4-Z.
77. If written consent of the directly affected landowners can be obtained, Route 179-C with La Estancia Alts. 1 and 2 and DCLC Modified M1 and M5 (the Recommended Route) presents an appropriate balance of routing factors, and negative attributes can be addressed with mitigation and the application of best-practice engineering design and construction methods.
78. If written consent of the directly affected landowners cannot be obtained, Route 179-C with La Estancia Alt. 1 and DCLC Modified M1 and M5 (the Secondary Route) presents an appropriate balance of routing factors, and negative attributes can be addressed with mitigation and the application of best-practice engineering design and construction methods.
79. The Recommended Route is approximately 20.9 miles in length.
80. The Secondary Route is approximately 20.9 miles in length.
81. Findings related to the data surrounding the Recommended and Secondary Routes can be found in Appendix A to this PFD, which is fully incorporated into these Findings of Fact.

Estimated Costs

82. The estimated cost of the proposed transmission line facilities on the Recommended Route is \$176,548,432.
83. The estimated cost of the proposed transmission line facilities on the Secondary Route is \$177,266,432.

- 84. The estimated cost of the proposed Ramhorn Hill Switching Station is \$33,510,000 and the estimated cost of the proposed Dunham Switching Station is \$41,348,000.
- 85. The total estimated cost for the project is reasonable.
- 86. The project will be financed through a combination of debt and equity.

Proposed Alternative Routes or Facilities Configurations

- 87. No party suggested alternative facility configurations.
- 88. Parties suggested alternative routing as referenced above.
- 89. No intervenor offered to make any contributions to offset any additional costs associated with any routing accommodations. The modifications discussed herein are less costly than Oncor's preferred route.
- 90. No party contended that any requested modifications would diminish the electric efficiency or reliability of the transmission line.
- 91. The Recommended Route or the Secondary Route, if landowner consent was not obtained, would minimize adverse impacts on directly affected landowners and no additional alternative route configurations for the transmission line would have less overall landowner impact.

Prudent Avoidance

- 92. Commission rules define prudent avoidance under 16 Texas Administrative Code section 25.101(a)(6) as the "limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort."
- 93. There are 136 habitable structures located within 500 feet of the Recommended Route.
- 94. There are 136 habitable structures located within 500 feet of the Secondary Route.

95. The proposed routes comply with the Commission's policy of prudent avoidance.

Community Values

96. Information regarding community values was received from local, state, and federal agencies and incorporated into the EA and the transmission line's route selection.
97. Oncor held public participation meetings which resulted in the submittal of completed questionnaires or other correspondence indicating primary concerns relating to community values.
98. Following the public participation meetings, Halff made preliminary route link modifications in consideration of community feedback, where feasible.
99. Oncor implemented preliminary route link modifications after considering recommendations from certain development representatives in the study area.
100. The proposed transmission line adequately addresses the expressed community values.

Using or Paralleling Compatible Rights-of-Way and Paralleling of Property Boundaries

101. Oncor evaluated the use and paralleling of existing compatible rights-of-way (ROW) and apparent property boundaries when developing Route 179.
102. The Recommended Route parallels existing compatible corridors for approximately 24,887 feet or 22.55 percent of its length.
103. The Secondary Route parallels existing compatible corridors for approximately 22,835 feet or 20.74 percent of its length.
104. The Recommended Route uses or parallels existing compatible rights of way to a reasonable extent.
105. If the Recommended Route's condition is not met, the Recommended Route uses or parallels existing compatible rights of way to a reasonable extent.

Engineering Constraints

- 106. Oncor evaluated engineering and construction constraints when developing Route 179-C or any of the recommended modifications to Route 179-C.
- 107. Oncor did not identify any engineering constraints that would prevent the construction of transmission facilities along Route 179-C or any of the recommended modifications to Route 179-C.
- 108. Given the ongoing nature of rapid development in the study area, it is possible that new obstacles may arise before Oncor acquires ROW for the proposed transmission facilities.

Other Comparisons of Land Uses and Land Types

Radio Towers and Other Electronic installations

- 109. No commercial AM radio transmitters were identified within 10,000 feet of centerline of the Recommended Route or the Secondary Route.
- 110. Two FM radio towers, microwave towers, or other electronic installations were identified within 2,000 feet of the centerline of the Recommended Route or the Secondary Route.
- 111. It is unlikely that the presence of transmission facilities along the Recommended Route or the Secondary Route will adversely affect any communication operations in the proximity of the route.

Airstrips and Airports

- 112. There are four airports registered with the Federal Aviation Administration (FAA) not equipped with at least one runway greater than 3,200 feet in length and within 10,000 feet of the centerline of the Recommended Route and the Secondary Route.
- 113. There are three airports registered with the FAA equipped with at least one runway greater than 3,200 feet in length and within 20,000 feet of the centerline of the Recommended Route and the Secondary Route.

- 114. There are no private airstrips within 10,000 feet of the centerline of the Recommended Route and the Secondary Route.
- 115. There are two heliports within 5,000 feet of the centerline of the Recommended Route and the Secondary Route.
- 116. It is unlikely that the presence of transmission facilities along the Recommended Route and the Secondary Route will adversely affect any airports, airstrips, or heliports.

Irrigation Systems

- 117. The Recommended Route and the Secondary Route do not cross agricultural lands with known mobile irrigation systems.
- 118. It is unlikely that the presence of transmission facilities along the Recommended Route or the Secondary Route will adversely affect any agricultural lands with known mobile irrigation systems.

Recreational and Park Areas

- 119. The Recommended Route and the Secondary Route do not cross any parks or recreational areas.
- 120. Three parks or recreational areas are located within 1,000 feet of the centerline of the Recommended Route and the Secondary Route. Four parks or recreational areas are located within 1,000 feet of Route 179-C's centerline.
- 121. It is unlikely that the presence of transmission facilities along the Recommended Route and the Secondary Route will adversely affect the use of recreational and park areas.

Historical and Archaeological Values

- 122. The Recommended Route and the Secondary Route cross one recorded cultural resource site.
- 123. There are three recorded cultural resource sites located within 1,000 feet of the centerline of the Recommended Route and the Secondary Route.

124. The Recommended Route crosses areas with a high potential for historical or archeological sites for 57,467 feet. The Secondary Route crosses areas with a high potential for historical or archeological sites for 57,223 feet.
125. It is unlikely that the presence of transmission facilities along the Recommended Route and the Secondary Route will adversely affect historical or archaeological resources.

Aesthetic Values

126. An estimated 63,388 feet of the Recommended Route's ROW is within the foreground visual zone of United States or state highways. An estimated 63,132 feet of the Secondary Route's ROW is within the foreground visual zone of United States or state highways.
127. An estimated 41,488 feet of Route 179-C's ROW is within the foreground visual zone of park or recreational areas. An estimated 41,219 feet of Route 179-C's ROW is within the foreground visual zone of park or recreational areas.
128. It is unlikely that the presence of transmission facilities along the Recommended Route and the Secondary Route will have a significant adverse effect on the aesthetic quality of the surrounding landscape.

Environmental Integrity

129. The EA analyzed the possible impacts of the transmission line on numerous environmental factors.
130. Oncor and Halff evaluated the effects of the transmission facilities on the environment, including potential consequences for soil and water resources, the ecosystem (including endangered and threatened vegetation and fish and wildlife), and land use within the study area.
131. Current county listings for federally and state-listed threatened and endangered species were obtained from the United States Fish and Wildlife Service (USFWS) and TPWD. USFWS-designated critical habitat locations were included in the review.

132. Construction and operation of the proposed transmission facilities is unlikely to have significant effect on the physiographic or geologic features and resources in the area.
133. Construction and operation of the proposed transmission facilities is unlikely to have substantial impacts to surface water resources in the area.
134. Construction and operation of the proposed transmission facilities is not expected to adversely impact on the groundwater resources in the area.
135. In light of avoidance measures to be used, construction and operation of the proposed transmission facilities is not anticipated to have significant direct impacts to the area's aquatic resources.
136. There are 11 threatened or endangered plant species with potential to occur within the study area.
137. There are 42 federally- or state-listed endangered, threatened, proposed endangered, proposed threatened, or candidate species with potential to occur in the study area.
138. After Commission approval of a route, field surveys may be performed, if necessary, to identify potential suitable habitat for federally- and state-listed animal species and determine the need for any additional species-specific surveys. If potential suitable habitat is identified or federally- or state-listed animal species are observed during a field survey of the Commission-approved route, Oncor may further coordinate with the TPWD and USFWS to determine avoidance and/or mitigation strategies.
139. Oncor can construct the transmission facilities in an ecologically sensitive manner on the proposed route.
140. Oncor will mitigate any effect on federally listed plant or animal species according to standard practices and measures taken in accordance with the Endangered Species Act.
141. It is appropriate for Oncor to follow the procedures to protect raptors and migratory birds as outlined in the following publications: *Reducing Avian Collisions with Power Lines: State of the Art in 2012*, Edison Electric Institute

and Avian Power Line Interaction Committee, Washington, D.C. (2012); *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*, Edison Electric Institute, Avian Power Line Interaction Committee, and the California Energy Commission, Washington, D.C. and Sacramento, CA (2006); and the *Avian Protection Plan Guidelines*, Avian Power Line Interaction Committee and the USFWS (April 2005). It is appropriate for Oncor to take precautions to avoid disturbing occupied nests and take steps to minimize the burden of construction on migratory birds during the nesting season of the migratory bird species identified in the area of construction.

142. It is appropriate for Oncor to minimize the amount of flora and fauna disturbed during construction of the transmission line, except to the extent necessary to establish appropriate ROW clearance for the proposed transmission line.
143. It is appropriate for Oncor to re-vegetate cleared and disturbed areas using native species and consider landowner preferences and wildlife needs in doing so.
144. It is appropriate for Oncor to avoid, to the maximum extent practical, causing adverse environmental impacts to sensitive plant and animal species and their habitats as identified by the TPWD and the USFWS.
145. It is appropriate for Oncor to implement erosion-control measures and return each affected landowner's property to its original contours and grades unless the landowner agrees otherwise. However, it is not appropriate for Oncor to restore original contours and grades where different contours or grades are necessary to ensure the safety or stability of any transmission line.
146. It is appropriate for Oncor to exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the ROW. The use of chemical herbicides to control vegetation within the ROW is required to comply with the rules and guidelines established in the Federal Insecticide, Fungicide, and Rodenticide Act and with Texas Department of Agriculture regulations.
147. It is appropriate for Oncor to use best management practices to minimize the potential burden on migratory birds and threatened or endangered species.

148. It is unlikely that the presence of transmission facilities along the proposed route will adversely affect the environmental integrity of the surrounding landscape.

TPWD's Written Comments and Recommendation

149. The TPWD provided information and recommendations regarding the preliminary study area for the proposed transmission facilities to Halff on October 7, 2022.
150. The TPWD was provided a copy of the EA for the proposed transmission facilities.
151. On July 20, 2023, the TPWD filed its comments and recommendations on the proposed transmission facilities.
152. Before beginning construction, it is appropriate for Oncor to undertake appropriate measures to identify whether a habitat for potential endangered or threatened species exists and to respond appropriately.
153. Oncor will use avoidance or mitigation procedures, as appropriate, to comply with laws protecting federally listed species.
154. Oncor will re-vegetate the ROW as necessary and according to Oncor's vegetation management practices, the stormwater pollution prevention plan developed for construction of the proposed transmission line, if any, and in many instances, landowner preferences or requests.
155. Oncor's standard vegetation removal, construction, and maintenance practices adequately address concerns expressed by the TPWD.
156. Oncor will use appropriate avian protection procedures.
157. Oncor will comply with all environmental laws and regulations, including those governing threatened and endangered species.
158. Oncor will comply with all applicable regulatory requirements in constructing the transmission facilities, including any applicable requirements under section 404 of the Clean Water Act (33 U.S.C. § 1251, *et seq.*).

159. Oncor will cooperate with the USFWS and the TPWD if threatened or endangered species' habitats are identified during field surveys.
160. If construction impacts federally listed species or their habitat, or impacts water under the jurisdiction of the United States Army Corps of Engineers (USACE) or the Texas Commission on Environmental Quality (TCEQ), Oncor will cooperate with the USFWS, USACE, and TCEQ, as appropriate, to obtain permitting and perform any required mitigation.
161. The standard mitigation requirements included in the ordering paragraphs in this order, coupled with Oncor's standard practices, are reasonable measures for a transmission service provider to undertake when constructing a transmission line and are sufficient to address the TPWD's comments and recommendations.

Permits

162. Before beginning construction of the proposed transmission facilities, Oncor will obtain any necessary permits from the Texas Department of Transportation or any other applicable state agency if the facilities cross state-owned or -maintained properties, roads, or highways.
163. Before beginning construction of the proposed transmission facilities, Oncor will obtain a miscellaneous easement from the Texas General Land Office if the transmission line crosses any state-owned riverbed, navigable stream or other property interest.
164. Before beginning construction of the proposed transmission facilities, Oncor will obtain any necessary permits or clearances from federal, state, or local authorities.
165. It is appropriate for Oncor, before commencing construction, to obtain a general permit to discharge under the Texas pollutant discharge elimination system for stormwater discharges associated with construction activities as required by the TCEQ. In addition, before commencing construction, it is appropriate for Oncor to prepare a stormwater-pollution-prevention plan if required, to submit a notice of intent to the TCEQ if required, and to comply with all other applicable requirements of the general permit.

166. It is appropriate for Oncor to conduct a field assessment of Route 179-C before beginning construction of the transmission facilities approved by the Commission's order to identify water resources, cultural resources, potential migratory bird issues, and threatened and endangered species' habitats disrupted by the transmission line. As a result of these assessments, Oncor will identify all necessary permits from Denton and Wise Counties and federal and state agencies. Oncor will comply with the relevant permit conditions during construction and operation of the transmission facilities along the Recommended Route and the Secondary Route.
167. After designing and engineering the alignments, structure locations, and structure heights, Oncor will determine the need to notify the FAA based on the final structure locations and designs. If necessary, Oncor will use lower-than-typical structure heights, line marking, or line lighting on certain structures to avoid or accommodate requirements of the FAA.

Coastal Management Program

168. No part of the proposed transmission facilities is located within the coastal management program boundary as defined in 31 Texas Administrative Code section 503.1(b).

Agreements of Parties on Routing

169. The parties reached no agreement as to routing.

Modification of Applicant's Proposed Route

170. All municipalities, utilities, counties, and directly affected landowners to the modifications identified in the Recommended and Secondary Routes were previously noticed.
171. All landowners directly affected by the La Estancia Alt. 1 modification have consented to the modification.
172. Except for the owner of Tract 801, all landowners directly affected by the La Estancia Alt. 2 modification have consented to the modification.

173. Except for BNSF Railway Company, all landowners directly affected by the DCLC Modified M1 have consented to the modification.
174. All landowners directly affected by the DCLC Modified M5 have consented to the modification.

Limitation of Authority

175. It is reasonable and appropriate for a CCN order not to be valid indefinitely because it is issued based on the facts known at the time of issuance.
176. Seven years is a reasonable and appropriate limit to place on the authority granted in this Order to construct the Project.

VI. CONCLUSIONS OF LAW

1. Oncor is a public utility as defined in PURA section 11.004 and an electric utility as defined in PURA section 31.002(6).
2. The Commission has jurisdiction over this matter under PURA sections 14.001, 32.001, 37.051, .053, .054, and .056.
3. Oncor must obtain the Commission's approval to construct the Project and to provide service to the public using the facilities.
4. SOAH exercised jurisdiction over this proceeding in accordance with PURA section 14.053 and Texas Government Code sections 2003.021 and .049.
5. The Application is sufficient under 16 Texas Administrative Code section 22.75(d).
6. The Commission processed this docket in accordance with the requirements of PURA; the Administrative Procedure Act, Texas Government Code sections 2001.001-.093; and the Commission's rules.
7. Oncor provided notice of the Application in compliance with PURA section 37.054 and 16 Texas Administrative Code section 22.52(a).

8. Additional notice of the approved route is not required under 16 Texas Administrative Code section 22.52(a)(2) because it consists of properly noticed links contained in the Application and, for the modifications identified, all affected municipalities, utilities or counties landowners previously received notice.
9. Additional notice of the approved route is not required under 16 Texas Administrative Code section 22.52(a)(3)(C) because it consists of properly noticed links contained in the Application and, for the modifications identified, all directly affected landowners previously received notice.
10. Oncor held public meetings and provided proper notice of those public meetings in compliance with 16 Texas Administrative Code section 22.52(a)(4).
11. The hearing on the merits was set, and notice of the hearing was provided, in compliance with PURA section 37.054 and Texas Government Code sections 2001.051 and .052.
12. The Texas Coastal Management Program does not apply to the transmission facilities, and the requirements of 16 Texas Administrative Code section 25.102 do not apply to the Application.
13. The Recommended Route and, alternatively, the Secondary Route best meet the routing criteria set forth in PURA § 37.056 and 16 Texas Administrative Code section 25.101, including the Commission's policy of prudent avoidance, to the extent reasonable to moderate the impact on the affected community and landowners.
14. The transmission facilities using the Recommended Route or, alternatively, the Secondary Route are necessary for the service, accommodation, convenience, or safety of the public within the meaning of PURA § 37.056 and 16 Texas Administrative Code section 25.201.
15. ERCOT is an independent organization as defined by PURA § 39.151.

VII. PROPOSED ORDERING PARAGRAPHS

1. The Commission adopts the proposal for decision, including findings of fact and conclusions of law, and approves the application.
2. The Commission amends Oncor's CCN No. 30043 to include the construction and operation of the Project, including a new double-circuit 345 kV transmission line to be built on triple-circuit-capable structures along Route 179-C with modifications as described as the La Estancia Alt. 1 and 2 and the Denton County Land and Cattle modifications to Links M1 and M5 (comprising routing Links A0-A4-B1-B61-B62-C1-C21-La Estancia Alt. 1 link-C3-C6-E1-Modified E6-Modified G1-G3-H41-H42-H8-I8-J3-K1-L5-L4-L3-L2-Modified M1-Modified M5-R2-R5-U3-V3-V4-Z) and construction of the proposed Ramhorn Hill and Dunham switching stations. The Commission is not certifying a third circuit through this Order.
3. Oncor must consult with pipeline owners or operators in the vicinity of the approved route regarding the pipeline owners' or operators' assessment of the need to install measures to mitigate the effects of alternating-current interference on existing metallic pipelines that are paralleled by the proposed electric transmission facilities.
4. Oncor must conduct surveys, if not already completed, to identify metallic pipelines that could be affected by the proposed transmission line approved by this Order and cooperate with pipeline owners in modeling and analyzing potential hazards because of alternating-current interference affecting metallic pipelines being paralleled.
5. Oncor must obtain all permits, licenses, plans, and permission required by state and federal law that are necessary to construct the transmission facilities approved by this Order, and if Oncor fails to obtain any such permit, license, plan, or permission, it must notify the Commission immediately.
6. Oncor must identify any additional permits that are necessary, consult any required agencies (such as the USACE and USFWS), obtain all necessary environmental permits, and comply with the relevant conditions during construction and operation of the transmission facilities approved by this Order.

7. If Oncor encounters any archaeological artifacts or other cultural resources during construction, work must cease immediately in the vicinity of the artifact or resource, and Oncor must report the discovery to, and act as directed by, the Texas Historical Commission.
8. Before beginning construction, Oncor must undertake appropriate measures to identify whether a potential habitat for endangered or threatened species exists and must respond as required.
9. Oncor must use best management practices to minimize the potential harm to migratory birds and threatened or endangered species that is presented by the approved route.
10. Oncor must follow the procedures to protect raptors and migratory birds as outlined in the following publications: *Reducing Avian Collisions with Power Lines: State of the Art in 2012*, Edison Electric Institute and Avian Power Line Interaction Committee, Washington, D.C. (2012); *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*, Edison Electric Institute, Avian Power Line Interaction Committee, and the California Energy Commission, Washington, D.C. and Sacramento, CA (2006); and the *Avian Protection Plan Guidelines*, Avian Power Line Interaction Committee and the USFWS (April 2005). Oncor must take precautions to avoid disturbing occupied nests and take steps to minimize the burden of the construction of the transmission facilities on migratory birds during the nesting season of the migratory bird species identified in the area of construction.
11. Oncor must exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the ROW. Herbicide use must comply with rules and guidelines established in the Federal Insecticide, Fungicide, and Rodenticide Act and with Texas Department of Agriculture regulations.
12. Oncor must minimize the amount of flora and fauna disturbed during construction of the transmission facilities, except to the extent necessary to establish appropriate ROW clearance for the transmission line. In addition, Oncor must re-vegetate using native species and must consider landowner preferences and wildlife needs in doing so. Furthermore, to the maximum extent practicable, Oncor must avoid adverse environmental effects on

sensitive plant and animal species and their habitats, as identified by the TPWD and the USFWS.

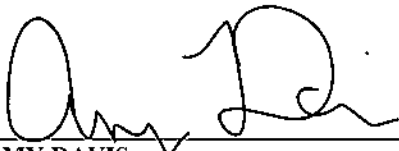
13. Oncor must implement erosion-control measures as appropriate. Erosion control measures may include inspection of the ROW before and during construction to identify erosion areas and implement special precautions as determined reasonable to minimize the effect of vehicular traffic over the areas. Also, Oncor must return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowner or the landowner's representative. However, the Commission does not require Oncor to restore original contours and grades where a different contour or grade is necessary to ensure the safety or stability of the structures or the safe operation and maintenance of the line.
14. Oncor must cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the disruptive effect of the proposed transmission line approved by this Order. Any minor deviations from the approved route must only directly affect landowners who were sent notice of the transmission line in accordance with 16 Texas Administrative Code section 22.52(a)(3) and have agreed to the minor deviation, excluding public rights of way.
15. The Commission does not permit Oncor to deviate from the approved route in any instance in which the deviation would be more than a minor deviation without first further amending the relevant CCN.
16. If possible, and subject to the other provisions of this Order, Oncor must prudently implement appropriate final design for the transmission line to avoid being subject to the FAA's notification requirements. If required by federal law, Oncor must notify and work with the FAA to ensure compliance with applicable federal laws and regulations. The Commission does not authorize Oncor to deviate materially from this Order to meet the FAA's recommendations or requirements. If a material change would be necessary to meet the FAA's recommendations or requirements, then Oncor must file an application to amend its CCN as necessary.
17. Oncor must include the transmission facilities approved by this Order on its monthly construction progress reports before the start of construction to

reflect the final estimated cost and schedule in accordance with 16 Texas Administrative Code section 25.83(b). In addition, Oncor must provide final construction costs, with any necessary explanation for cost variance, after completion of construction when Oncor identifies all charges.

18. The Commission limits the authority granted by the Order to a period of seven years from the date the Order is signed unless, before that time, the transmission line is commercially energized before that time.
19. The Commission denies all other motions and any other requests for general or specific relief that the Commission has not expressly granted.

SIGNED NOVEMBER 10, 2023.

ALJ Signatures:



AMY DAVIS
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS



BRENT MCCABE,
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPENDIX A
COMPARISON CHART BETWEEN DISCUSSED ROUTES

Comparison Chart Between Discussed Routes

	Route 179 ¹	Route 179-C ²	Recommended Route (Difference from Route 179-C) ³	Secondary Route ⁴	Recommended Route w/ Justin Modification (Difference from Rec. Route) ⁵
Length of alternative route (feet) ⁶	114,898	110,373	110,367 (-6)	110,111	108,402 (-1,965)
Length of alternative route (miles)	21.76	20.90	20.90 (--)	20.85	20.53 (-0.37)
Length of route parallel to existing electric transmission lines	5,227	5,227	4,041 (-1,186)	4,041	4,041 (--)
Length of route parallel to railroads	0	0	0 (--)	0	5,514 (5,514)
Length of route parallel to existing public roads/highways	6,591	6,591	8,708 (2,117)	6,062	6,270 (-2,438)
Length of route parallel to pipelines	7,636	9,440	15,438 (5,998)	15,438	16,599 (1,161)

¹ Data retrieved from Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 561; Oncor Ex. 24 (Notice of Errata), attach. 2 at 17; Oncor Ex. 25.

² Data retrieved from Staff Ex. 1 (Poole Dir.), attach. JP-4, pt. 1, at 19-20; Staff Ex. 2 (Poole Dir. Errata) at 40; Oncor Ex. 25.

³ Recommended Route is Route 179-C with La Estancia Alts. 1 & 2 and the DCLC Modified Links M1 and M5. Data retrieved from La Estancia Ex. 3a; Oncor Ex. 25; DCLC Ex. 5 (Oncor Resp. to DCLC RFI).

⁴ Secondary Route is Route 179-C with La Estancia Alternative 1 and the DCLC Modified Links M1 and M5. Data retrieved from La Estancia Ex. 3a; Oncor Ex. 25; DCLC Ex. 5 (Oncor Resp. to DCLC RFI).

⁵ This route is the Recommended Route with Links I8-J3-K1-L5-L4-L3 replaced with Links I6-J1-J21-J22-L1. Data retrieved from Oncor Ex. 1 (Application), attach. 1 (Environmental Assessment) at 561, 568-69; Oncor Ex. 24 (Notice of Errata), attach. 1 at 7-8; Oncor Ex. 25 at 1. Certain distance-based data may be inaccurate as this data was derived from link-specific data, which may contain some overlap.

⁶ All lengths are in feet unless otherwise noted.

	Route 179¹	Route 179-C²	Recommended Route (Difference from Route 179-C)³	Secondary Route⁴	Recommended Route w/ Justin Modification (Difference from Rec. Route)⁵
Length of route parallel to apparent property boundaries	20,834	20,438	20,846 (408)	18,793	16,415 (-4,431)
Total length of route parallel to existing compatible rights-of-way	26,061	25,665	24,887 (-778)	22,835	20,456 (-4,431)
Percentage of total route length parallel to existing compatible rights-of-way	22.68%	23.25%	22.55% (-0.70%)	20.74%	18.87% (-3.68%)
Number of habitable structures within 500 feet of the route centerline	97	98	136 (38)	136	195 (59)
Number of parks or recreational areas within 1,000 feet of the route centerline	4	4	3 (-1)	3	5 (2)
Length of the route across parks/recreational areas	0	0	0 (--)	0	0 (--)
Length of route through commercial/industrial areas	4,607	4,551	4,626 (75)	4,227	7,938 (3,312)
Length of the route across cropland/hay meadow	20,248	22,691	22,162 (-529)	22,162	17,504 (4,658)
Length across rangeland pasture	71,051	58,417	59,729 (1,312)	59,894	57,465 (2,264)
Length of route across agricultural cropland with mobile irrigation systems	0	0	0 (--)	0	0 (--)
Length of route across upland woodlands	10,126	11,311	10,492 (-819)	10,441	10,384 (-108)
Length of route across riparian areas	7,162	11,536	11,419 (-117)	11,456	13,745 (2,326)
Length of route across potential wetlands	0	0	0 (--)	0	0 (--)
Number of stream crossings by the route	27	28	27 (-1)	27	23 (-4)

	Route 179¹	Route 179-C²	Recommended Route (Difference from Route 179-C)³	Secondary Route⁴	Recommended Route w/ Justin Modification (Difference from Rec. Route)⁵
Length of route parallel to streams (within 100 feet)	1,351	695	695 (--)	695	0 (-695)
Length across lakes or ponds (open waters)	1,704	1,867	1,940 (73)	1,930	1,370 (-570)
Number of known rare/unique plant locations within the right-of-way	1	1	1 (--)	1	1 (-)
Length of route through known habitat of endangered or threatened species	0	0	0 (--)	0	0 (--)
Number of recorded cultural resource sites crossed by the route	1	1	1 (--)	1	1 (-)
Number of recorded cultural resources within 1,000 feet of the route centerline	3	3	3 (--)	3	3 (--)
Length of route across areas of high archaeological/historical site potential	37,905	56,733	57,467 (734)	57,223	58,278 (811)
Number of private airstrips within 10,000 feet of the route centerline	0	0	0 (--)	0	0 (--)
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	3	3	3 (--)	3	6 (3)
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	4	4	4 (--)	4	4 (--)
Number of heliports located within 5,000 feet of the route centerline	2	2	2 (--)	2	4 (2)
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	0	0	0 (--)	0	0 (--)