



## **Oncor Southern DFW Load Interconnection and General Grid Strengthening Project – ERCOT Independent Review Status Update**

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RPG Meeting  
August 26, 2025

# Introduction

- Oncor submitted the Southern Dallas Fort Worth (DFW) Load Interconnection and General Grid Strengthening Project for Regional Planning Group (RPG) review in February 2025
  - This Tier 1 project is estimated to cost \$1.219 billion and will require a Certificate of Convenience and Necessity (CCN) filing
  - Expected in-service date (ISD) is December 2028
  - Addresses the thermal overloads and voltage violations due to proposed load additions in the Southern DFW in the North Central and East Weather Zones
- Oncor presented project overview and ERCOT presented EIR Scope at the April RPG meeting
  - <https://www.ercot.com/calendar/04292025-RPG-Meeting>
- ERCOT presented EIR status update at the July RPG meeting
  - <https://www.ercot.com/calendar/07292025-RPG-Meeting>
- This project is currently under ERCOT Independent Review (EIR)

# Recap – Study Assumptions

- Final 2024 Regional Transmission Planning (RTP) 2029 summer peak load case was used as the start case
- Transmission updates
  - New transmission projects, listed in the [Appendix A1](#), based on the February 2025 Transmission Project and Information Tracking (TPIT) report along with recently approved RPG projects were added to the study base case
  - Transmission projects, listed in the [Appendix A2](#), identified as placeholder projects in the 2024 RTP in the study area that have not been approved by RPG were removed from the study base case
  - Base case updates based on feedback from Oncor were also applied to the study base case

# Recap – Study Assumptions (cont.)

- Generation updates
  - New 6.9(1) generation, listed in [Appendix B](#), were added to the study base case based on the March 2025 Generator Interconnection Status (GIS) report
  - All new generation were dispatched consistent with the 2024 RTP methodology
  - GenHubs in North and North Central (NNC) Weather Zones were opened (turned off) to balance power
- Load updates
  - All 2024 RTP Officer Letter Loads (OLLs) in the study area were removed from the study base case
  - Large Loads including OLLs (approximately 4,046 MW) relevant to the project, provided by Oncor, in the study area were added to the study base case
- Reserve
  - Reserve was maintained consistent with the 2024 RTP

# Status Update

- Reliability Need Analysis
  - N-1
  - G-1+N-1
    - G-1: Comanche Peak, Forney CCT, Martain Lake, Mt. Creek SES, and Midlothian generations
  - X-1+N-1
    - X-1: Desoto Switch (SW), Monticello SES, Sargent Road, Seagoville, Trinidad SES, Venus Kemp Ranch, Watermill, West Levee SW, and Wilmer 345/138-kV transformers
- Options development and evaluation

# Preliminary Results of Reliability Assessment – Need Analysis

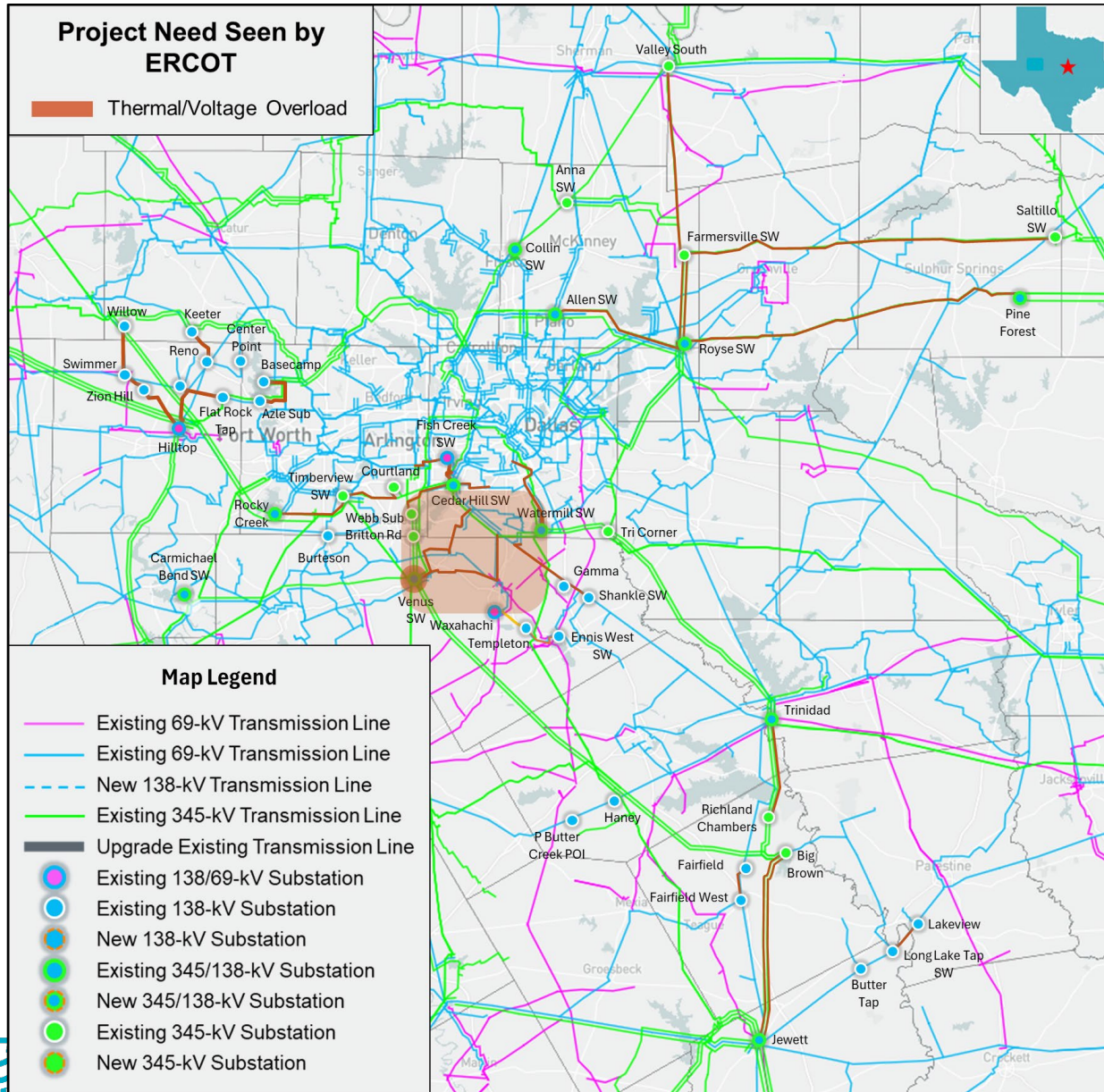
- ERCOT conducted steady-state load flow analysis for the study base case according to the NERC TPL-001-5.1 and ERCOT Planning Criteria to identify the project need

Contingency Category	Voltage Violations	Thermal Overloads	Unsolved Power Flow
N-0 (P0)	None	None	None
N-1 (P1, P2-1, P7)	8	44	None
G-1+N-1 (P3)*	None	None	None
X-1+N-1 (P6-2)**	31	18	3
<b>Total</b>	<b>39</b>	<b>62</b>	<b>3</b>

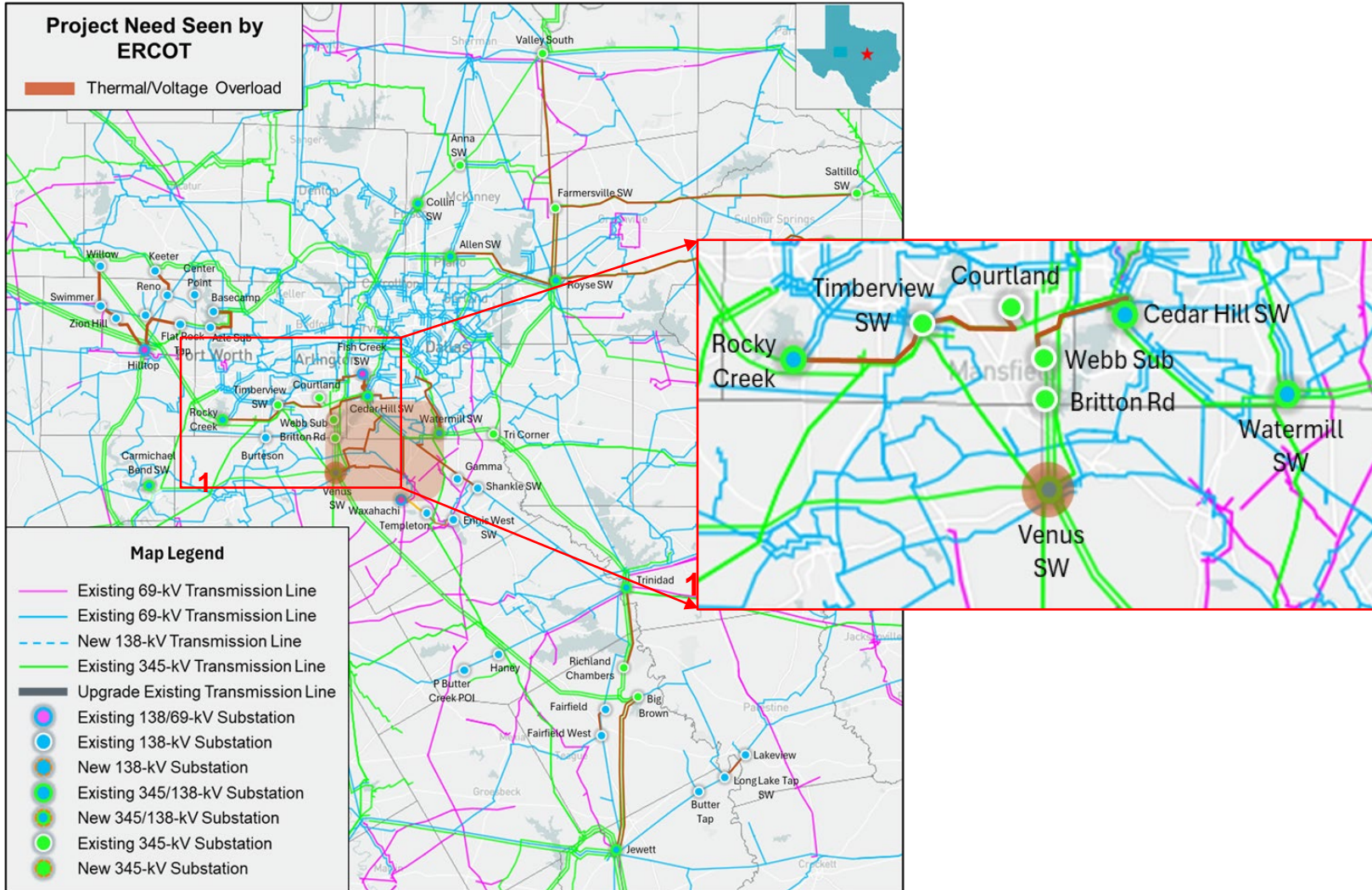
\* G-1: Comanche Peak, Forney CCT, Martain Lake, Mt. Creek SES, and Midlothian generations

\*\* X-1: Desoto Switch (SW), Monticello SES, Sargent Road, Seagoville, Trinidad SES, Venus Kemp Ranch, Watermill, West Levee SW, and Wilmer 345/138-kV transformers

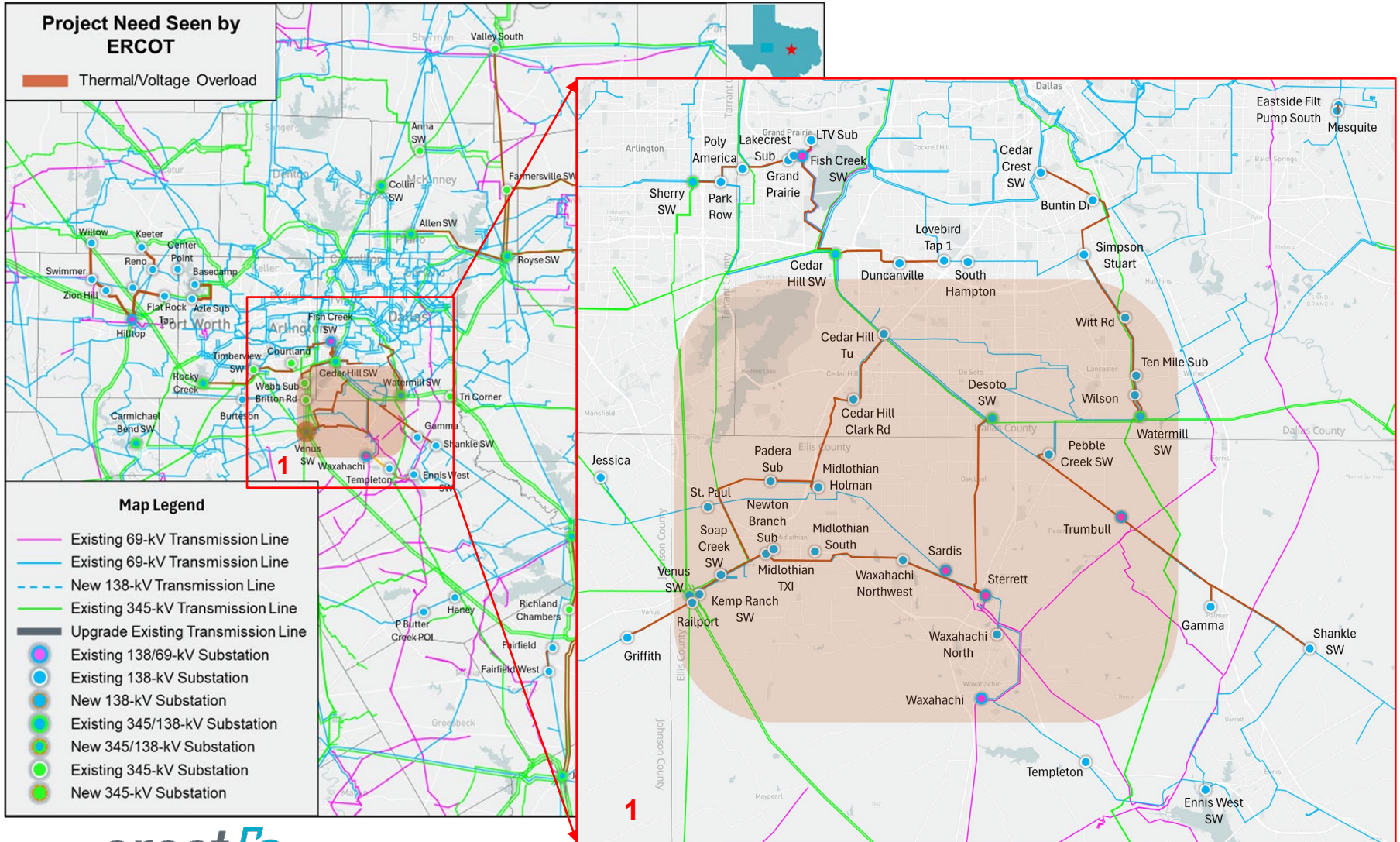
# Map with All Violations Seen by ERCOT



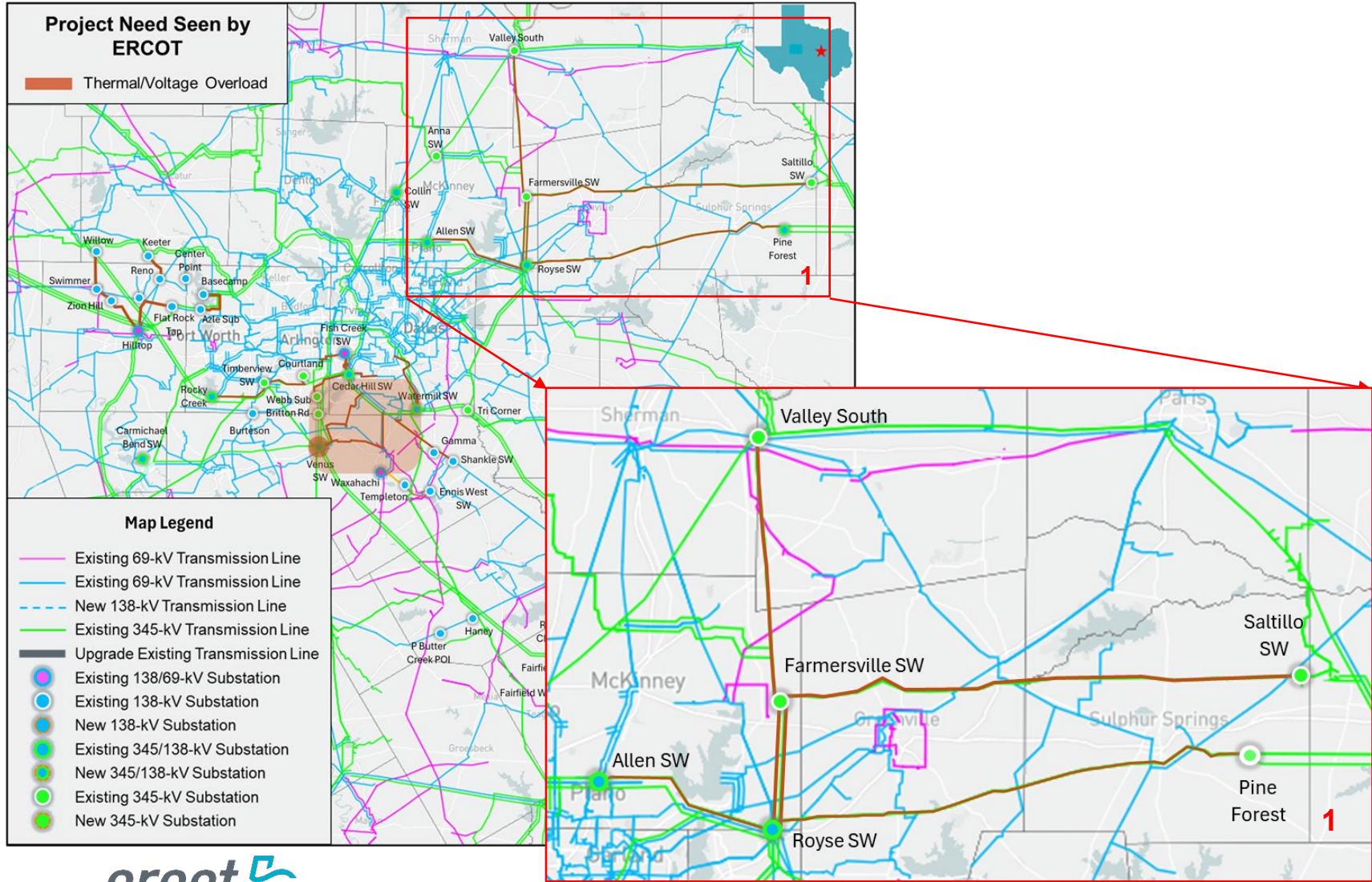
# Map of Central Study Area with Violations Seen on 345-kV System



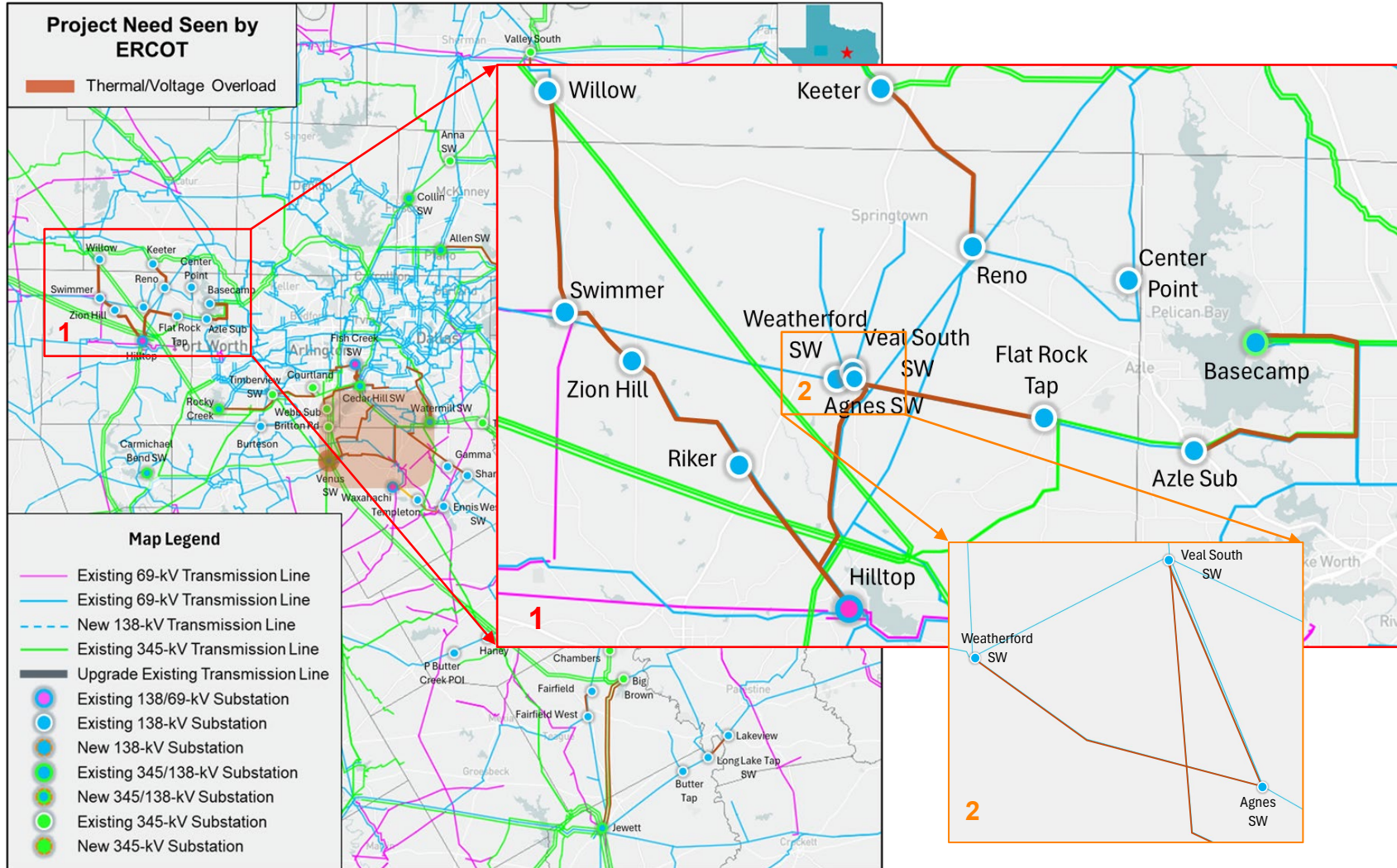
# Map of Central Study Area with Violations Seen on 138-kV System



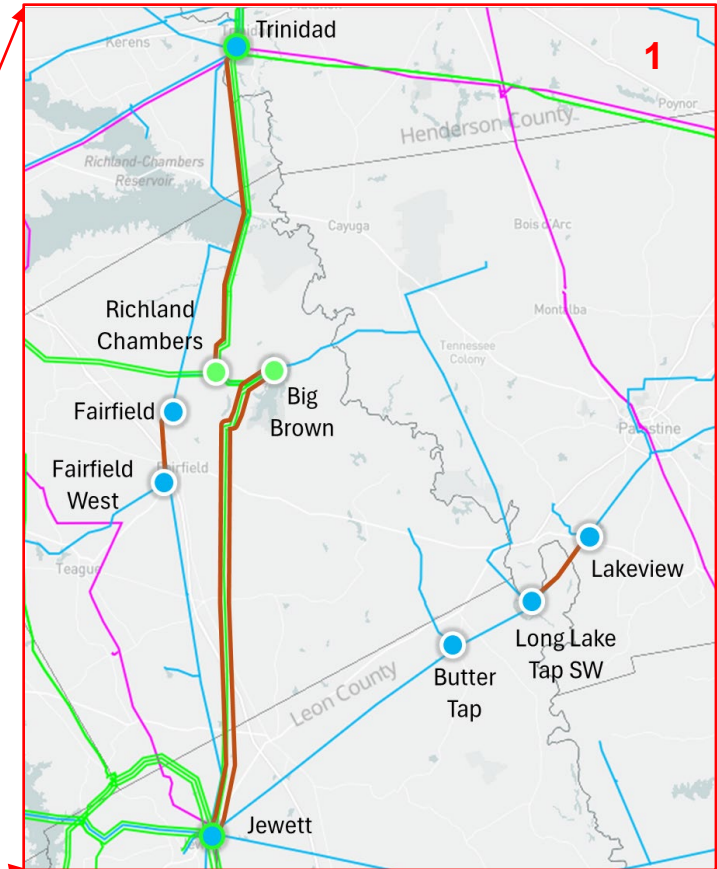
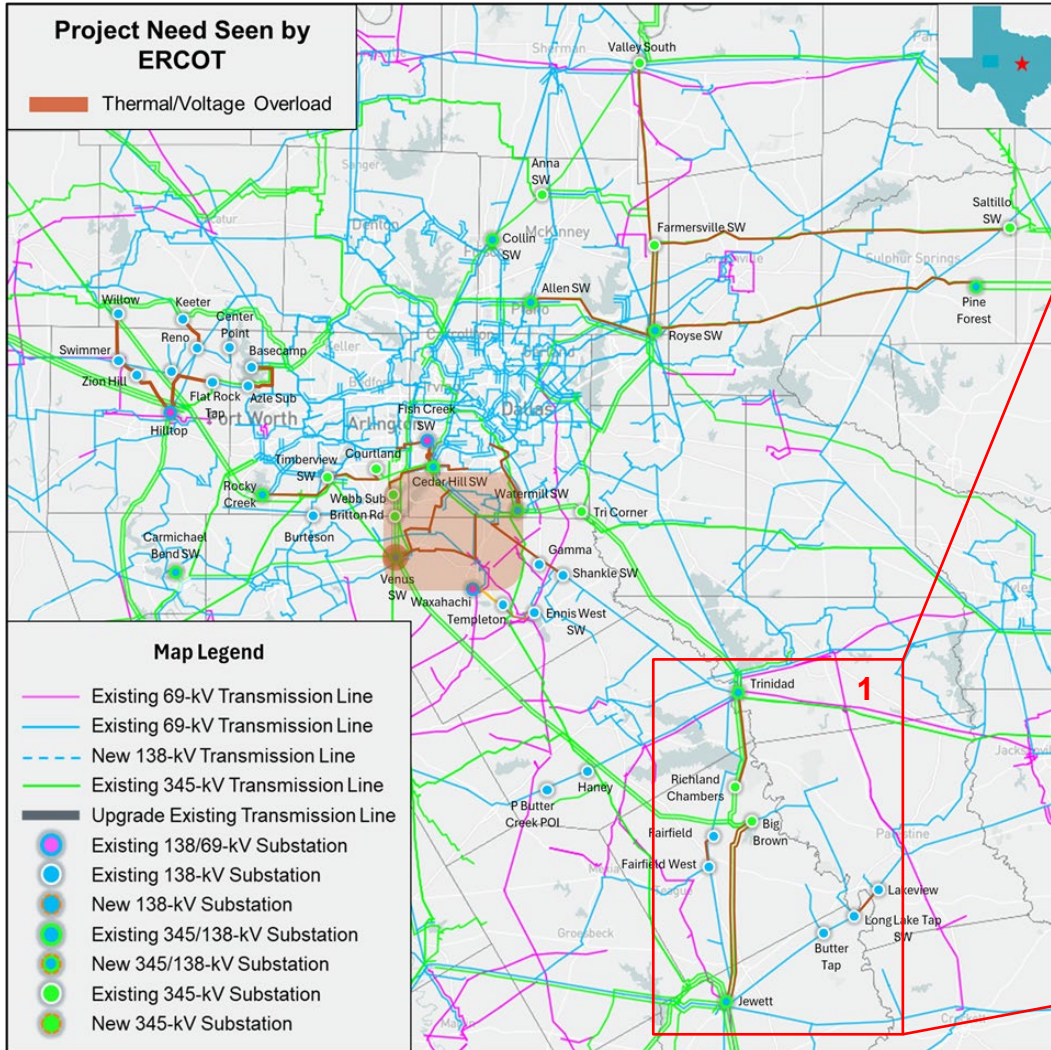
# Map of North-Eastern Study Area with Violations Seen on 345-kV System



# Map of North-Western Study Area with Violations Seen on 138-kV System



# Map of South-Eastern Study Area with Violations on 345-kV & 138-kV Systems



# Option 1 – Oncor Proposed Project

- Construct a new Greene Road 345/138-kV Switch (SW) by installing fourteen 345-kV, 5,000 A and ten 138-kV, 3,200 A breakers in a breaker-and-a-half bus arrangement:
  - Install two new 345/138-kV autotransformers with a normal rating of 700 MVA and an emergency rating of 750 MVA;
  - Re-terminate the existing Watermill SW to Sargent Road SW/West Levee SW 345-kV double-circuit transmission line into the new Greene Road 345-kV SW, which creates the new Watermill SW to Greene Road SW and the new Greene Road SW to Sargent Road SW/West Levee SW 345-kV double-circuit transmission lines;
  - Re-terminate the existing Wilson SW to Cedar Hill SW/Cedar Crest SW 138-kV double-circuit transmission line into the new Greene Road 138-kV SW, which creates the new Wilson SW to Greene Road SW and the new Greene Road SW to Cedar Hill SW/Cedar Crest SW 138-kV double-circuit transmission line;
- Rebuild the new Greene Road SW to Watermill SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 2,987 MVA, approximately 3.6-mile;
- Rebuild the new Wilson SW to Greene Road SW 138-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 764 MVA, approximately 2.0-mile;
- Rebuild the new Greene Road SW to Cedar Crest 138-kV single-circuit transmission line on double-circuit structures with one circuit in place, with normal and emergency ratings of at least 764 MVA, approximately 10.9-mile;

# Option 1 (cont.)

- Construct a new Alba Road 345-kV SW by installing eleven 345-kV, 5,000 breakers in a breaker-and-a-half bus arrangement:
  - Re-terminate the new Watermill SW to Greene Road SW 345-kV double-circuit transmission line into the new Alba Road 345-kV SW, which creates the new Watermill SW to Alba Road SW and the new Alba Road SW to Greene Road SW 345-kV double-circuit transmission lines;
- Construct a new Stainback 345-kV SW by installing fourteen 345-kV, 5,000 breakers in a breaker-and-a-half bus arrangement:
  - Re-terminate the existing Watermill SW to Elrod SW/Big Onion SW 345-kV double-circuit transmission line into the new Stainback 345-kV SW, which creates the new Watermill SW to Stainback SW and the new Stainback SW to Elrod SW/Big Onion SW 345-kV double-circuit transmission lines;
- Rebuild the new Watermill SW to Stainback SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 2,987 MVA, approximately 3.0-mile;
- Rebuild the existing Watermill SW to Wilson SW 138-kV double-circuit transmission line on double-circuit structures with both circuit in place, with normal and emergency ratings of at least 764 MVA, approximately 0.8-mile;

# Option 1 (cont.)

- Construct a new Ironwood 345/138-kV SW by installing seventeen 345-kV, 5,000 A and ten 138-kV, 3,200 A breakers in a breaker-and-a-half bus arrangement:
  - Install two 345/138-kV autotransformers with normal and emergency ratings of 700 MVA and 750 MVA, respectively;
  - Re-terminate the existing Liggett SW to Endeavor SW 345-kV Line at the new Ironwood 345-kV SW, which creates the new Liggett SW to Venus SW (north bus)/Ironwood SW 345-kV double-circuit transmission line;
  - Disconnect the existing Endeavor SW to Venus SW (south bus) and Midlothian ANP #2 to Venus SW (south bus) 345-kV Lines from Venus SW (south bus) and connect the Midlothian ANP to Endeavor 345-kV SW. This will create Midlothian ANP #1 to Venus SW (north bus) and Midlothian ANP #2 to Endeavor SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Timberview SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Everman SW to Venus SW (north bus) and the new Timberview SW to Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Cedar Hill SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Sherry SW to Venus SW (north bus) and the new Cedar Hill SW to Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Sam SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Fort Smith SW to Venus SW (north bus) and the new Sam SW to Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Navarro SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Navarro SW to Venus SW (north bus)/Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Cottonwood Creek 345/138-kV Autotransformer #2 at the north bus of Venus 345-kV SW by installing one 345-kV, 5,000 A breaker;

## Option 1 (cont.)

- Loop the existing Kemp Ranch SW to Sardis SW/Soap Creek 138-kV double-circuit transmission line into the new Ironwood 138-kV SW by disconnecting the double-circuit line at structure #1/2 (Midlothian Tap) and constructing four circuits from Midlothian Tap to the new Ironwood 138-kV SW on separate structures, with normal and emergency ratings of at least 764 MVA, approximately 2.0-mile each circuit;
- Rebuild the two Kemp Ranch SW to Midlothian Tap 138-kV single-circuit transmission line sections using two separate structures, with normal and emergency ratings of at least 764 MVA, approximately 0.5-mile each circuit;
- Rebuild the existing Sterrett SW to Midlothian TXI 138-kV single-circuit transmission line sections, with normal and emergency ratings of at least 764 MVA, approximately 11.8-mile;
- Rebuild the existing Ennis West SW to Sterrett SW 138-kV single-circuit transmission line, with normal and emergency ratings of at least 614 MVA, approximately 21.0-mile;

# Option 1 (cont.)

- Rebuild the existing Big Brown 345-kV SW by installing twelve 345-kV, 5,000 A breakers in a breaker-and-a-half bus arrangement. Upon completion, Big Brown SW will be renamed as Pin Oak SW:
  - Re-terminate the existing Big Brown SW to Jewett SW 345-kV double-circuit transmission line at the new Pin Oak 345-kV SW, which creates the new Pin Oak SW to Jewett SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Big Brown SW to Navarro SW 345-kV double-circuit transmission line at the new Pin Oak 345-kV SW, which creates the new Pin Oak SW – Navarro SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Big Brown SW to Richland Chamber SW 345-kV double-circuit transmission line at the new Pin Oak 345-kV SW, which creates the new Pin Oak SW to Richland Chambers SW 345-kV double-circuit transmission line;
- Rebuild the new Jewett SW to Pin Oak SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 1,792 MVA and with a conductor rating of at least 2,987 MVA, approximately 32.8-mile;
- Rebuild the existing Richland Chambers SW to Trinidad SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place with normal and emergency ratings of at least 1,792 MVA and a with conductor rating of at least 2,987 MVA, approximately 18.7-mile;

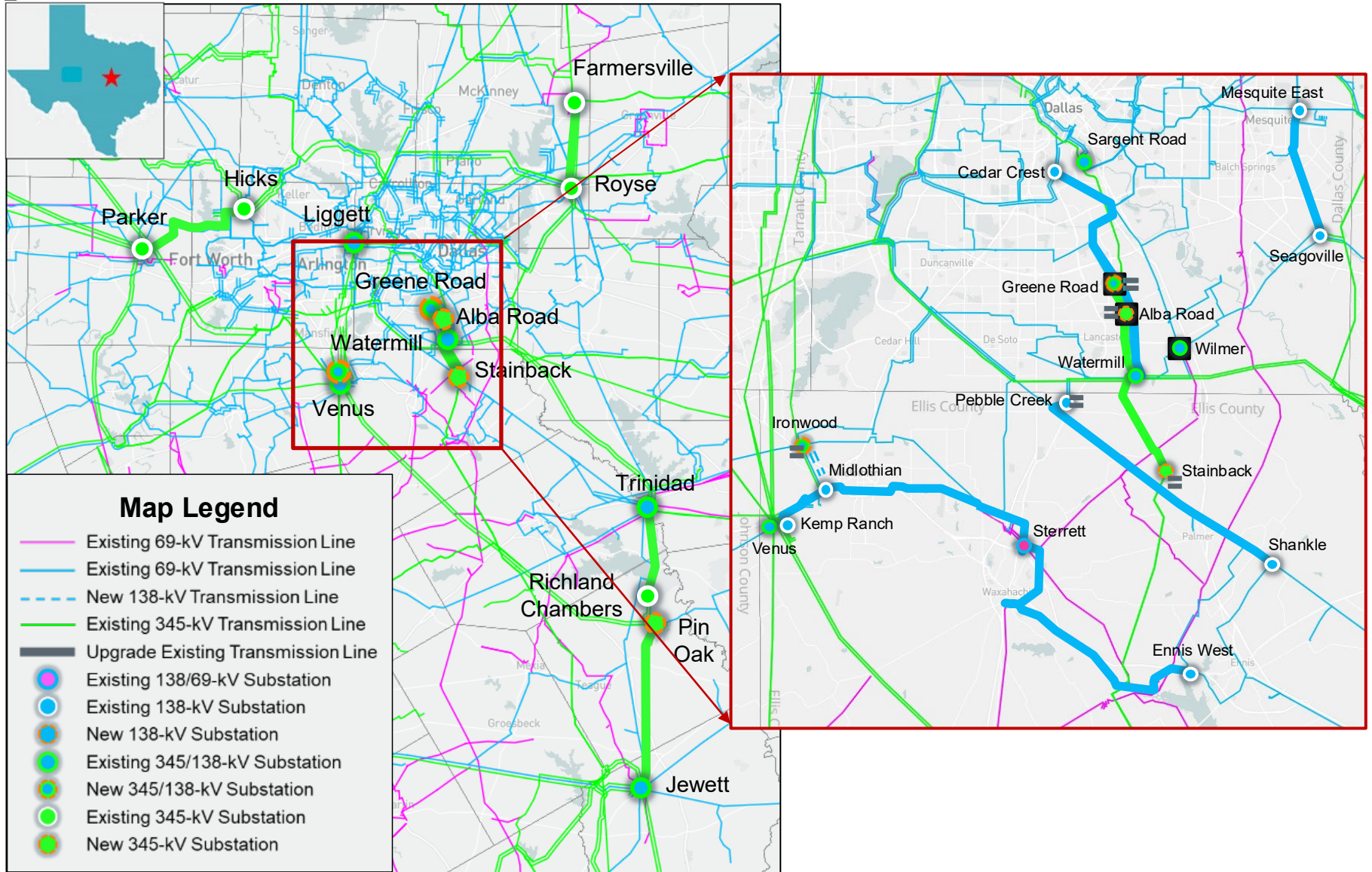
## Option 1 (cont.)

- Rebuild the existing Parker SW to Hicks SW 345-kV transmission line, with normal and emergency ratings of at least 1,912 MVA and with a conductor rating of at least 2,987 MVA, approximately 23.0-mile;
- Rebuild the existing Pebble Creek SW to Shankle SW 138-kV transmission line, with normal and emergency ratings of at least 764 MVA, approximately 15.5-mile;
- Rebuild the existing Mesquite East SW to Seagoville SW 138-kV transmission line, with normal and emergency ratings of at least 764 MVA, approximately 7.4-mile;
- Rebuild the existing Farmersville SW to Royse SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 1,792 MVA and with a conductor rating of at least 2,987 MVA, approximately 15.25-mile;
- Install one +250/-250 MVar Grid-forming STATCOM at each of the following:
  - Alba Road 345-kVSW;
  - Greene Road 345-kVSW;
  - Wilmer 345kV SW;

# Option 1 (cont.)

- Install 240 MVAR 345-kV capacitor banks (3-80 MVAR each):
  - One at Greene Road 345-kV SW;
  - Two at Alba Road 345-kV SW;
  - Two at Stainback 345-kV SW;
- Install 110.4 MVAR 138-kV capacitor banks (3-36.8 MVAR each) at:
  - One at Greene Road 138-kVSW;
  - Two at Ironwood 138-kVSW;
  - Two at Pebble Creek 138-kVSW;
- For terminal equipment:
  - The existing 345 kV terminal equipment, ensure they meet or exceed a rating of 3000 A (1792 MVA);
  - The new 345-kV terminal equipment, ensure they meet or exceed a rating of 5,000 A if the station is 5,000 A capable. Otherwise ensure the new 345-kV terminal equipment meets or exceeds a rating of 3,200 A; and
  - The 138-kV terminal equipment, ensure they meet or exceed a rating of 3,000 A.

# Map of Option 1



## Option 2

- Construct a new Greene Road 345/138-kV SW by installing fourteen 345-kV, 5,000 A and ten 138-kV, 3,200 A breakers in a breaker-and-a-half bus arrangement:
  - Install two new 345/138-kV autotransformers with a normal rating of 700 MVA and an emergency rating of 750 MVA;
  - Re-terminate the existing Watermill SW to Sargent Road SW/West Levee SW 345-kV double-circuit transmission line into the new Greene Road 345-kV SW, which creates the new Watermill SW to Greene Road SW and the new Greene Road SW to Sargent Road SW/West Levee SW 345-kV double-circuit transmission lines;
  - Re-terminate the existing Wilson SW to Cedar Hill SW/Cedar Crest SW 138-kV double-circuit transmission line into the new Greene Road 138-kV SW, which creates the new Wilson SW to Greene Road SW and the new Greene Road SW to Cedar Hill SW/Cedar Crest SW 138-kV double-circuit transmission line;
- Rebuild the new Greene Road SW to Watermill SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 2,987 MVA, approximately 3.6-mile;
- Rebuild the new Wilson SW to Greene Road SW 138-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 764 MVA, approximately 2.0-mile;
- Rebuild the new Greene Road SW to Cedar Crest 138-kV single-circuit transmission line on double-circuit structures with one circuit in place, with normal and emergency ratings of at least 764 MVA, approximately 10.9-mile;

## Option 2 (cont.)

- Construct a new Alba Road 345-kV SW by installing eleven 345-kV, 5,000 breakers in a breaker-and-a-half bus arrangement:
  - Re-terminate the existing Watermill SW to Greene Road SW 345-kV double-circuit transmission line into the new Alba Road 345-kV SW, which creates the new Watermill SW to Alba Road SW and the new Alba Road SW to Greene Road SW 345-kV double-circuit transmission lines;
- Rebuild the existing Watermill SW to Wilson SW 138-kV double-circuit transmission line on double-circuit structures with both circuit in place, with normal and emergency ratings of at least 764 MVA, approximately 0.8-mile;
- Rebuild the existing Pebble Creek SW to Shankle SW 138-kV transmission line, with normal and emergency ratings of at least 764 MVA, approximately 15.5-mile;
- Loop the existing Kemp Ranch SW to Sardis SW/Soap Creek 138-kV double-circuit transmission line into the new Ironwood 138-kV SW by disconnecting the double-circuit line at structure #1/2 (Midlothian Tap) and constructing four circuits from Midlothian Tap to the new Ironwood 138-kV SW on separate structures, with normal and emergency ratings of at least 764 MVA, approximately 2.0-mile each circuit;

## Option 2 (cont.)

- Construct a new Ironwood 345/138-kV SW by installing seventeen 345-kV, 5,000 A and ten 138-kV, 3,200 A breakers in a breaker-and-a-half bus arrangement:
  - Install two 345/138-kV autotransformers with normal and emergency ratings of 700 MVA and 750 MVA, respectively;
  - Re-terminate the existing Liggett SW to Endeavor SW 345-kV Line at the new Ironwood 345-kV SW, which creates the new Liggett SW to Venus SW (north bus)/Ironwood SW 345-kV double-circuit transmission line;
  - Disconnect the existing Endeavor SW to Venus SW (south bus) and Midlothian ANP #2 to Venus SW (south bus) 345-kV Lines from Venus SW (south bus) and connect the Midlothian ANP to Endeavor 345-kV SW. This will create Midlothian ANP #1 to Venus SW (north bus) and Midlothian ANP #2 to Endeavor SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Timberview SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Everman SW to Venus SW (north bus) and the new Timberview SW to Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Cedar Hill SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Sherry SW to Venus SW (north bus) and the new Cedar Hill SW to Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Sam SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Fort Smith SW to Venus SW (north bus) and the new Sam SW to Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Navarro SW to Venus SW (south bus) at the new Ironwood 345-kV SW, which creates the new Navarro SW to Venus SW (north bus)/Ironwood SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Cottonwood Creek 345/138-kV Autotransformer #2 at the north bus of Venus 345-kV SW by installing one 345-kV, 5,000 A breaker;

## Option 2 (cont.)

- Rebuild the two Kemp Ranch SW to Midlothian Tap 138-kV single-circuit transmission line sections using two separate structures, with normal and emergency ratings of at least 764 MVA, approximately 0.5-mile each circuit;
- Rebuild the existing Sterrett SW to Midlothian TXI 138-kV single-circuit transmission line sections, with normal and emergency ratings of at least 764 MVA, approximately 11.8-mile;
- Rebuild the existing Rock Creek to Timberview to Courtland 345-kV single-circuit transmission lines on single-circuit structures with normal and emergency ratings of at least 1,792 MVA approximately 23.0-mile;
- Rebuild the existing Cedar Hill SW to Webb to Britton Rd 345-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 1,792 MVA, approximately 14.0-mile;
- Rebuild the existing Cleburne SW to Keene to Alvarado to Griffitt to Railport to Venus 138-kV single-circuit transmission line sections on single-circuit structures, with normal and emergency ratings of at least 764 MVA, approximately 24.6-mile;

## Option 2 (cont.)

- Rebuild the existing Cedar Hill SW to Fish Creek to Lake Crest to Poly America to Park Row to Sherry SW and Cedar Hill SW to Fish Creek to Grand Prairie to LTV to Park Row to Sherry SW 138-kV double-circuit transmission line sections on double-circuit structures with both circuit in place, with normal and emergency ratings of at least 764 MVA, approximately 12.0-mile each circuit;
- Install one +250/-250 MVar Grid-forming STATCOM at each of the following at:
  - Alba Road 345-kVSW;
  - Greene Road 345-kVSW;
  - Wilmer 345kV SW;
- Install 240 MVar 345-kV capacitor banks (3-80 MVar each) at:
  - One at Greene Road 345-kV SW;
  - Two at Alba Road 345-kV SW;
  - Two at Stainback 345-kV SW;
- Install 110.4 MVar 138-kV capacitor banks (3-36.8 MVar each) at:
  - One at Greene Road 138-kVSW;
  - Two at Ironwood 138-kVSW;
  - Two at Pebble Creek 138-kVSW;

## Option 2 (cont.)

- Rebuild the existing Farmersville SW to Royse SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 1,792 MVA and with a conductor rating of at least 2,987 MVA, approximately 15.25-mile;
- Rebuild the existing Farmersville SW to Valley South 345-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 1,792 MVA, approximately 30.0-mile;
- Rebuild the existing Farmersville SW to Saltillo SW 345-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 1,912 MVA, approximately 59.9-mile;
- Rebuild the existing Allen SW to Stouts Creek SW 345-kV single-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 1,912 MVA, approximately 51.2-mile;

## Option 2 (cont.)

- Rebuild the existing Keeter to Reno 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 6.6-mile;
- Rebuild the existing Veal South to Reno 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 6.6-mile;
- Rebuild the existing Willow to Swimmer to Zion Hill to Riker to Hilltop 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614, approximately 21.4-mile;
- Rebuild the existing Hilltop to Veal South SW to Agnes SW to Weatherford 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 7.6-mile;
- Rebuild the existing Weatherford SW to Flat Rock to Azle Sub to Basecamp 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 18.7-mile;
- Rebuild the existing Basecamp to Penden Rd to Rhome 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 10.9-mile;

## Option 2 (cont.)

- Rebuild the existing Big Brown 345-kV SW by installing twelve 345-kV, 5,000 A breakers in a breaker-and-a-half bus arrangement. Upon completion, Big Brown SW will be renamed as Pin Oak SW:
  - Re-terminate the existing Big Brown SW to Jewett SW 345-kV double-circuit transmission line at the new Pin Oak 345-kV SW, which creates the new Pin Oak SW to Jewett SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Big Brown SW to Navarro SW 345-kV double-circuit transmission line at the new Pin Oak 345-kV SW, which creates the new Pin Oak SW – Navarro SW 345-kV double-circuit transmission line;
  - Re-terminate the existing Big Brown SW to Richland Chamber SW 345-kV double-circuit transmission line at the new Pin Oak 345-kV SW, which creates the new Pin Oak SW to Richland Chambers SW 345-kV double-circuit transmission line;
- Rebuild the new Jewett SW to Pin Oak SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 1,792 MVA and with a conductor rating of at least 2,987 MVA, approximately 32.8-mile;
- Rebuild the existing Richland Chambers SW to Trinidad SW 345-kV double-circuit transmission line on double-circuit structures with both circuits in place with normal and emergency ratings of at least 1,792 MVA and a with conductor rating of at least 2,987 MVA, approximately 18.7-mile;

## Option 2 (cont.)

- Rebuild the existing Fairfield to Fairfield West 138-kV single-circuit transmission line on single-circuit structures, with a normal and emergency ratings of 614 MVA, approximately 4.8-mile;
- Rebuild the existing Jewett to Butler Mt to Long Lake Tap to Lakeview Palestine 138-kV single-circuit transmission line on single-circuit structures, with a normal and emergency ratings of 614 MVA, approximately 40.8-mile;

# Option 3 – Additional Upgrades Added to Option 1

- Rebuild the existing Ironwood SW to Endeavor SW 345-kV single-circuit transmission lines on single-circuit structures with normal and emergency ratings of at least 1,912 MVA, approximately 1.5-mile;
- Rebuild the existing Rock Creek to Timberview to Courtland 345-kV single-circuit transmission lines on single-circuit structures with normal and emergency ratings of at least 1,792 MVA approximately 23.0-mile;
- Rebuild the existing Cedar Hill SW to Webb to Britton Road 345-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 1,792 MVA, approximately 14.0-mile;
- Rebuild the existing Fairfield to Fairfield West 138-kV single-circuit transmission line on single-circuit structures, with a normal and emergency ratings of 614 MVA, approximately 4.8-mile;

# Option 3 – Additional Upgrades Added to Option 1 (cont.)

- Rebuild the existing Keeter to Reno 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 6.6-mile
- Rebuild the existing Willow to Swimmer to Zion Hill to Riker to Hilltop 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614, approximately 21.4-mile;
- Rebuild the existing Hilltop to Veal South SW to Agnes SW to Weatherford 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 7.6-mile;
- Rebuild the existing Weatherford SW to Flat Rock to Azle Sub to Basecamp 138-kV single-circuit transmission line on single-circuit structures, with normal and emergency ratings of at least 614 MVA, approximately 18.7-mile;

# Next Steps and Tentative Timeline

- ERCOT will continue with project evaluation and perform the following
  - Develop and test alternatives
  - Conduct Planned Maintenance Outage Evaluation
  - Conduct Long-Term Load-Serving Capability Assessment
  - Request TSPs to conduct Cost Estimate and Feasibility Assessment
- Additional analyses to be performed on the preferred option
  - Dynamic Analysis may be conducted
  - Congestion Analysis to ensure that the identified transmission upgrades do not result in new congestion within the study area
  - Generation Addition and Load Scaling Sensitivity Analyses
    - Planning Guide Section 3.1.3(4)
  - Subsynchronous Resonance (SSR) Assessment
    - Nodal Protocol Section 3.22.1.3(2)
- Tentative Timelines
  - Status updates at the future RPG meetings
  - Final recommendation – Q4 2025

*Thank you!*

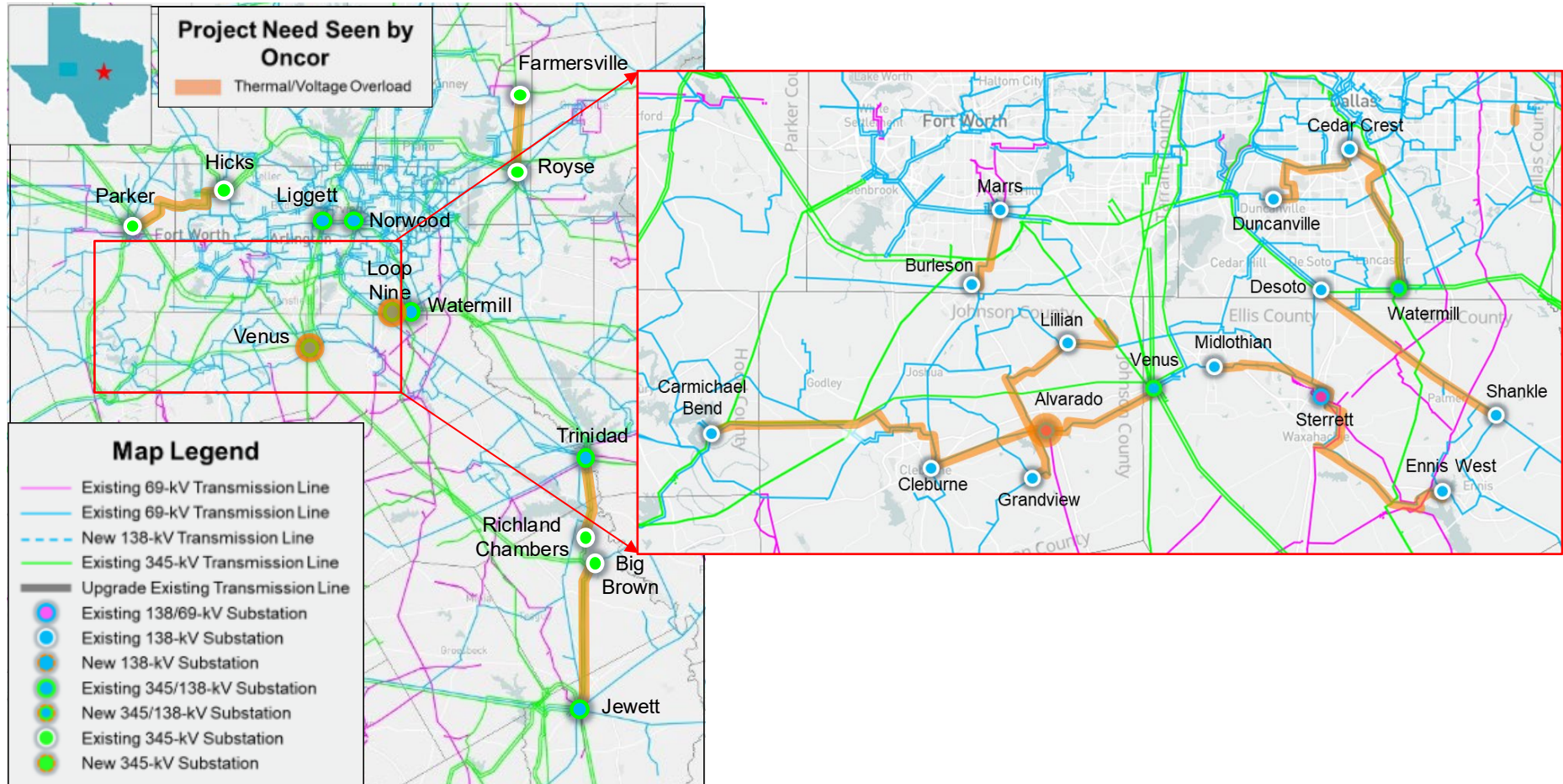


Stakeholder comments also welcomed through:

[Tanzila.Ahmed@ercot.com](mailto:Tanzila.Ahmed@ercot.com)

[Robert.Golen@ercot.com](mailto:Robert.Golen@ercot.com)

# Recap – Study Area Map with Violations Seen by Oncor



# Appendix A1 – Transmission Projects Added

- List of recently approved RPG transmission projects added to study base case

RPG/TPIT No	Project Name	Tier	Project ISD	From County
24RPG016	Rand Area Loop Project	Tier 2	4/1/2027	Kaufman
24RPG017	Venus SW to Sam Switch 345-kV Line Project	Tier 1	5/1/2026	Ellis, Hill
24RPG022	Wilmer 345/138-kV Switch Project	Tier 1	5/1/2026	Dallas
24RPG025	Gunter 345/138-kV Switch Project	Tier 3	12/1/2025	Ellis, Hill

# Appendix A2 – Transmission Projects Removed

- List of placeholder transmission projects that are directly related to proposed project were removed from the study base case

Project ID	Project Name	County(s)
2024-E3	Big Brown SES West (3381) to Jewett (3391) 345-kV Line Upgrade and Substation Rebuilds	Henderson, Freestone
2024-E12	Trinidad SES (3124) to Richland Chambers (3134) 345-kV Line Upgrade	Freestone, Leon
2024-E18	Big Brown SES West (3381) to Jewett (3391) 345-kV Line Upgrade	Freestone, Leon
2024-NC13	Pebble Creek (2229) to Trumbull (221) to Gamma (12344) to Shankle Switch (12329) 138-kV Line Upgrades	Ellis
2024-NC14	Green Road (3069) to Ten Mile (2126) to Watermill (2429) to Reindeer (3065) 138-kV Line Upgrades	Dallas
2024-NC18	Ennis West Switch (2241) to Templeton (12320) to Waxahachie (2321) 138-kV Line Upgrades	Ellis, Waxahachie
2024-NC31	Royse Area 345-kV Line Upgrades and Substation Rebuilds	Collin, Hopkins, Rockwall, Fannin, Lamar
2024-NC63	Watermill Area 345-kV Line Additions and Reactive Support	Dallas, Navarro, Hill, Leon
2024-NC68	Batchler Road (2217) to Watermill (2427) 345-kV Line Upgrades	Dallas
2024-NC70	Miller Road (2632) 345/138-kV Substation Addition and 345-kV Lines Re-Termination	Dallas, Ellis
2024-NC85	Miller Road (2635) to Kemp Ranch Switch (2303) 138-kV double-circuit transmission line Upgrade	Ellis
2024-NC86	Greene Road (3063/3069) New 138-kV and 345-kV Line Additions and Substation Rebuilds	Dallas

# Appendix A2 – Transmission Projects Removed (cont.)

- List of additional placeholder transmission projects in the study area that have not been approved by RPG were removed

Project ID	Project Name	County(s)
2024-E2	Shamburger (3103) to Elkton (3105) 345-kV Double Circuit Line Addition	Smith
2024-N11	Alla Hubbard (1757) to Epco POI (12468) 138-kV Line Upgrade	Collin, Grayson
2024-NC01	Glen Heights (217) to Sterett Road (2237) 138-kV Line Upgrade	Ellis
2024-NC04	Railport (442) Area 138-kV Rebuild	Ellis, Johnson
2024-NC06	Miller (824) to Newman (849) 138-kV Line Upgrade	Dallas
2024-NC07	Walnut (823) to Naaman (825) 138-kV Line Upgrade	Dallas
2024-NC08	Centerville (810) to Miller (824) 138-kV Line Upgrade	Dallas
2024-NC09	Walnut (823) to Newman (849) 138-kV Line Upgrade	Dallas
2024-NC10	Glen Heights (217) to Desoto Switch 8 (2424) 138-kV Line Upgrade	Ellis, Dallas
2024-NC11	Watermill (2427) to Tricorner (2432) to Trinidad (3123/3124) 345-kV Line Upgrades	Dallas, Henderson
2024-NC15	Waxahachie (2321) to Waxahachie North (2320) 138-kV Line Upgrade and Waxahachie (2335) to Waxahachie OCF (2343) 69-kV Line Upgrades	Ellis
2024-NC19	Climax TNP (37280) to Bridge Point RC (37245) 69-kV Line Upgrade	Collin
2024-NC21	Carrollton Northwest (2363) to South TNP (37100) to TI TNP (37080) 138-kV Line Upgrades	Dallas, Denton
2024-NC22	Waxahachie Pump 2 (2315) to Waxahachie North (2320) 138-kV Line Upgrade	Ellis

# Appendix A2 – Transmission Projects Removed (cont.)

- List of additional placeholder transmission projects in the study area that have not been approved by RPG were removed

Project ID	Project Name	County(s)
2024-NC25	LTV Sub (2259) to Grand Prairie (2262) 138-kV Line Upgrade	Dallas
2024-NC27	Navarro (3478) to Haney (213) to Payne Battle Creek POI (888876) to Hubbard (3515) 138-kV Line Upgrades	Navarro, Hill
2024-NC28	Olympus Switch (3723) to Montfort Switch (3454) to Chatfield (200) 138-kV Line Upgrade	Henderson, Navarro
2024-NC29	Allen Switch (2514) to Pine Forest POI (888854) 345-kV Line Upgrade	Collin, Hopkins
2024-NC34	Trinidad SES (3127) to Nipak Tap (3260) to Mankin Switch (3265) 138-kV Line Upgrade	Henderson, Navarro
2024-NC35	Firewheel (821) to Wylie Switch (833) 138-kV Line Upgrade	Dallas, Collin
2024-NC38	Seagoville Area Upgrades	Dallas
2024-NC41	Ben Davis (968) to GOBLN_8 (2497) 138-kV Line Upgrade	Dallas
2024-NC44	Cedar Creek 138-kV Area Line Upgrades	Henderson
2024-NC51	Waxahachie-Sterrett Area Upgrades	Ellis
2024-NC59	Lavon Switch 345/138-kV Switch Substation Expansion and Lavon Switch (2475) to Allen Switch (2511) 138-kV Line Addition	Collin, Rockwall
2024-NC64	Calmont Switch (1955) to Benbrook Switch (1874) 138-kV Line Upgrade	Tarrant
2024-NC66	Tri Corner (2432) to Forney Switch (2437) 345-kV Line Upgrade	Dallas, Kaufman

# Appendix A2 – Transmission Projects Removed (cont.)

- List of additional placeholder transmission projects in the study area that have not been approved by RPG were removed

Project ID	Project Name	County(s)
2024-NC67	Elkton (3105) to Tri Corner (2432) 345-kV Line Additions and Upgrades	Dallas, Kaufman, Smith, Van Zandt
2024-NC71	Mitchell Bend Switch (1895) to Carmichael Bend Switch (2285) to Benbrook Switch (1873) 345-kV Line Upgrades	Tarrant, Hood, Grayson
2024-NC74	Midlothian TXI (2307) to Waxahachie Northwest (2309) 138-kV Line Upgrades	Ellis
2024-NC75	Primrose Fort Worth (2196) to Rocky Creek (1881) to Primrose Fort Worth (2197) 138-kV Line Upgrades	Tarrant
2024-NC76	Gunter 345/138-kV Switch Addition and Gunter (2236) to Collin (2370) 138-kV Line Addition	Cooke, Denton, Collin, Grayson
2024-NC77	Skyview 345/138-kV Switch Addition and Area Upgrade	Dallas, Tarrant
2024-NC79	Upgrade Benbrook Switch 345/138-kV (1869/18741) and (1870/18751) Transformers	Tarrant
2024-NC80	Desoto Switch 345/138-kV Transformer Addition (2431/2424) and Desoto Switch (2424) to Loop9 (2848) 138-kV Line Addition	Dallas
2024-NC82	Rocky Creek 345/138-kV Transformer Addition (1880/1881)	Tarrant
2024-NC83	Hempill (2164) to Mistletoe Heights (2173) 138-kV Line Upgrade	Tarrant
2024-NC84	Wedgewood Switch (2184) to Bryant Irvin (2182) 138-kV Line Upgrade	Tarrant

# Appendix B – New Generation Projects Added

- List of new generation, that met the Planning Guide 6.9(1) condition, added to the study base case

GINR	Project Name	Fuel	Projected COD	Capacity (~MW)	County
21INR0359	Hickerson Solar	SOL	3/1/2026	316.3	Bosque
22INR0437	TORMES SOLAR	SOL	3/31/2027	382.1	Navarro
24INR0126	High Noon Storage	OTH	12/1/2027	94.0	Hill
24INR0188	Tehuacana Creek Solar SLF	SOL	3/10/2027	505.5	Navarro
24INR0189	Tehuacana Creek BESS SLF	OTH	3/10/2027	419.0	Navarro
24INR0355	Anatole Renewable Energy Storage	OTH	1/11/2026	207.8	Henderson
24INR0364	Pitts Dudik II	SOL	1/29/2026	30.2	Hill
24INR0498	Fort Watt Storage	OTH	4/20/2027	205.4	Tarrant
24INR0631	Radian Storage SLF	OTH	4/22/2025	160.3	Brown
25INR0018	Yellow Cat Wind	WIN	9/30/2026	301.2	Navarro
25INR0046	Blue Skies BESS	OTH	12/31/2027	306.3	Hill
25INR0231	Apache Hill BESS	OTH	11/15/2026	200.9	Hood
25INR0391	Purple Sage BESS 1	OTH	5/30/2027	156.0	Collin
25INR0392	Purple Sage BESS 2	OTH	5/30/2027	156.0	Collin
26INR0543	Three Canes Solar SLF	SOL	12/31/2026	333.0	Navarro

# Taken out of option 1 for option 2

- Construct a new Stainback 345-kV Switch by installing fourteen 345-kV, 5,000 breakers in a breaker-and-a-half bus arrangement:
  - Re-terminate the existing Watermill Switch to Elrod Switch/Big Onion Switch 345-kV double-circuit transmission line into the new Stainback 345-kV Switch, which creates the new Watermill Switch to Stainback Switch and Stainback Switch to Elrod Switch/Big Onion Switch 345-kV double-circuit transmission lines;
- Rebuild the new Watermill Switch to Stainback Switch 345-kV double-circuit transmission line on double-circuit structures with both circuits in place, with normal and emergency ratings of at least 2,987 MVA, approximately 3.0-mile;
- Rebuild the existing Ennis West Switch to Sterrett Switch 138-kV single-circuit transmission line, with normal and emergency ratings of at least 614 MVA, approximately 21.0-mile;
- Rebuild the existing Parker Switch to Hicks Switch 345-kV transmission line, with normal and emergency ratings of at least 1,912 MVA and with a conductor rating of at least 2,987 MVA, approximately 23.0-mile;
- Rebuild the existing Mesquite East Switch to Seagoville Switch 138-kV transmission line, with normal and emergency ratings of at least 764 MVA, approximately 7.4-mile;