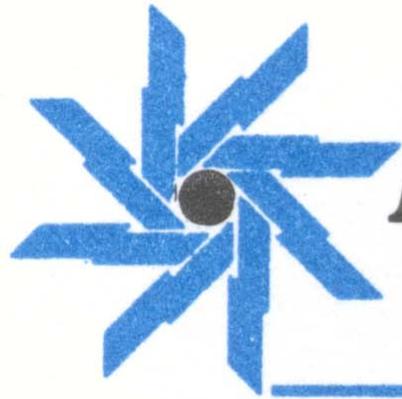




CITY OF PLANO COUNCIL AGENDA ITEM

CITY SECRETARY'S USE ONLY				
<input type="checkbox"/> Consent <input type="checkbox"/> Regular <input type="checkbox"/> Statutory				
Council Meeting Date:		6/13/2016		
Department:		Policy and Government Relations		
Department Head		Brandi Youngkin		
Agenda Coordinator (include phone #): Andrea Park x5113				
CAPTION				
A Resolution of the City of Plano, Texas, regarding the proposed Kittyhawk Transmission Line and Substation Project; supporting the shortest and most cost effective route segment to an existing connection point located outside of the City of Plano; and providing an effective date.				
FINANCIAL SUMMARY				
<input checked="" type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> OPERATING EXPENSE <input type="checkbox"/> REVENUE <input type="checkbox"/> CIP				
FISCAL YEAR:	2015-16	Prior Year (CIP Only)	Current Year	Future Years
		TOTALS		
Budget		0	0	0
Encumbered/Expended Amount		0	0	0
This Item		0	0	0
BALANCE		0	0	0
FUND(S): N/A				
COMMENTS: This item has no fiscal impact.				
STRATEGIC PLAN GOAL: A Resolution regarding the proposed Kittyhawk Transmission Line and Substation Project relates to the City's goals of Financially Strong City with Service Excellence and Partnering for Community Benefit.				
SUMMARY OF ITEM				
A Resolution supporting the shortest and most cost effective route segment connecting the Kittyhawk Transmission Line and Substation Project to an existing connection point located outside of the City of Plano.				
List of Supporting Documents:			Other Departments, Boards, Commissions or Agencies	
Resolution, Exhibit A, Supporting Materials				



**BRAZOS
ELECTRIC
COOPERATIVE**





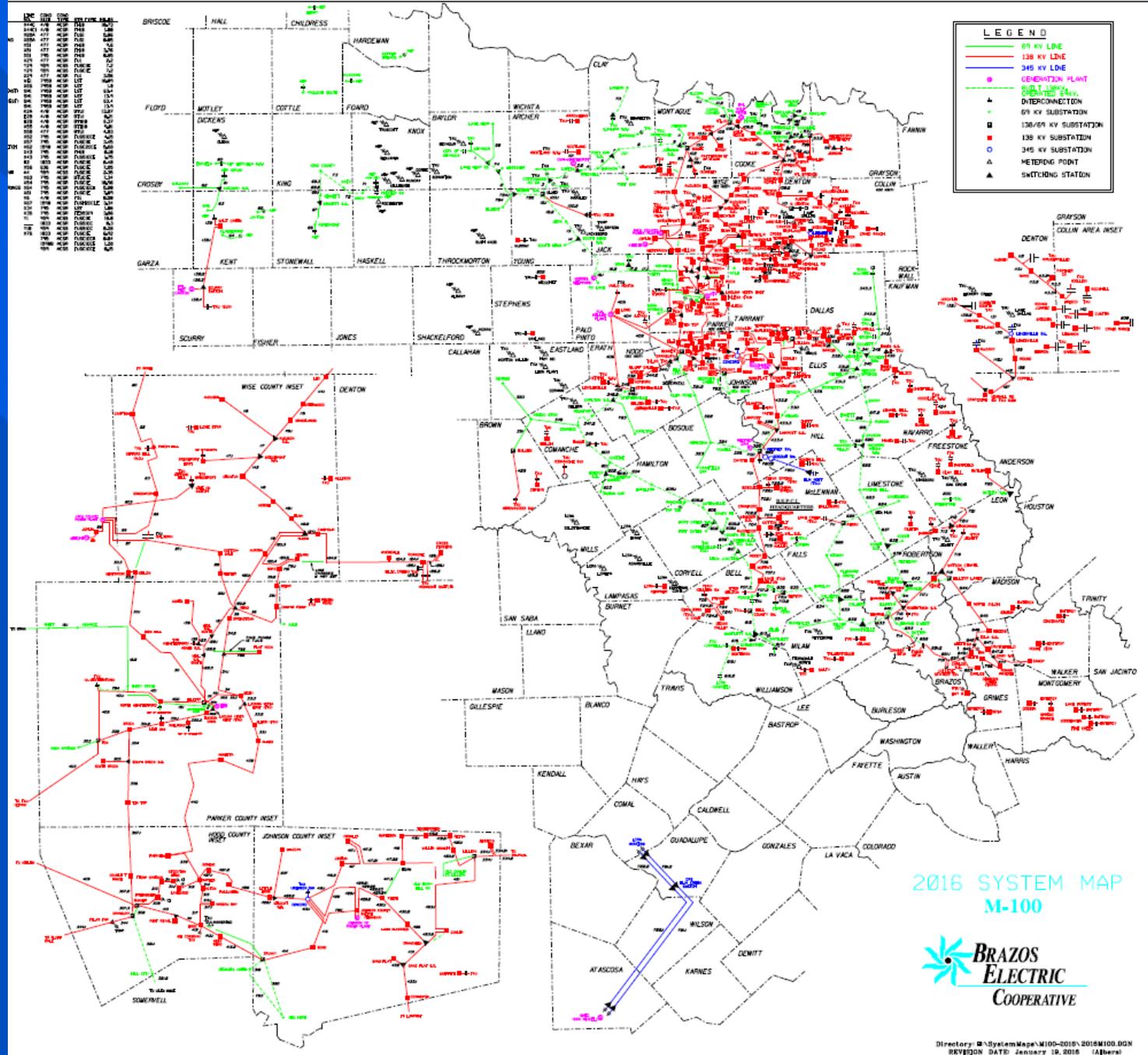
***KITTYHAWK
TRANSMISSION &
SUBSTATION PROJECT***

Collin County, Texas

**Brazos Electric Power Cooperative
Inc. & CoServ Electric Sponsored
Project**

Brazos Electric's Existing Transmission System

- 96 circuit miles of 345kv
- 1414 circuit miles of 138kv
- 1139 circuit miles of 69kv
- System covers approximately 56,777 square miles in 68 counties with a 3,841 peak load
- Extensive overlap with other system's, approximately 175 points of interconnection
- Member Cooperatives serve more than 593,000 meters



Member Cooperatives

- Bartlett Electric – Bartlett, TX.
- Comanche Electric – Comanche, TX.
- Cooke County Electric – Muenster, TX.
- **CoServ Electric – Corinth, TX.**
- Fort Belknap Electric – Olney, TX.
- Hamilton County Electric – Hamilton, TX.
- Heart of Texas Electric – McGregor, TX.
- HILCO Electric – Itasca, TX.
- J-A-C Electric – Bluegrove, TX.
- Mid-South Synergy – Navasota, TX.

Member Cooperatives – Continued.

- Navarro County Electric – Corsicana, TX.
- Navasota Valley Electric – Franklin, TX.
- South Plains Electric – Lubbock, TX.
- Tri-County Electric – Azle, TX.
- United Cooperative Services – Cleburne, TX.
- Wise Electric – Decatur, TX.



Brazos Electric Power Cooperative, Inc. Our Mission Statement

At Brazos Electric Cooperative, our mission is to provide valued service to our members and customers by generating, procuring, and transmitting reliable power at the lowest cost. We will provide excellent customer service while practicing the highest degree of integrity. The members, customers, and employees are Brazos Electric Cooperative's most valued assets.

PRINCIPLES

Customer satisfaction: Brazos Electric Cooperative will satisfy our members and customers by supplying and delivering cost-effective, reliable products.

Safety and environmental responsibility: Brazos Electric Cooperative is committed to performing all activities in a safe and environmentally sound manner.

Commitment to excellence: Brazos Electric Cooperative is committed to building relationships based on mutual respect and understanding. We will improve continually in all phases of our business operations.

How dependable electricity reaches you

Most of us take reliable electric power for granted. But do you know what's really involved in getting that power to you?

Power Plant

At a generating plant, water is heated to steam using fuels such as natural gas, coal and oil; the steam turns turbines that turn generators to produce electric energy. In some areas, nuclear power or water flowing through hydroelectric dams powers the turbines.

Step-Up Substation

Transformers at the generating plant increase the voltage up to 345,000 volts, so it can travel long distances over high-voltage transmission lines.

High-Voltage Transmission Lines

These lines carry the electric energy over long distances. Insulators on the towers prevent the power from flowing to the towers or the ground.

Transmission Substation

Transformers reduce the electric energy up to 69,000 volts, making it suitable for high-volume delivery over short distances.

Large Industrial User

Most industries need 2,400 to 4,160 volts to run heavy machinery. They usually have their own substation at the facility.

Consumer-Owned Renewable Generation

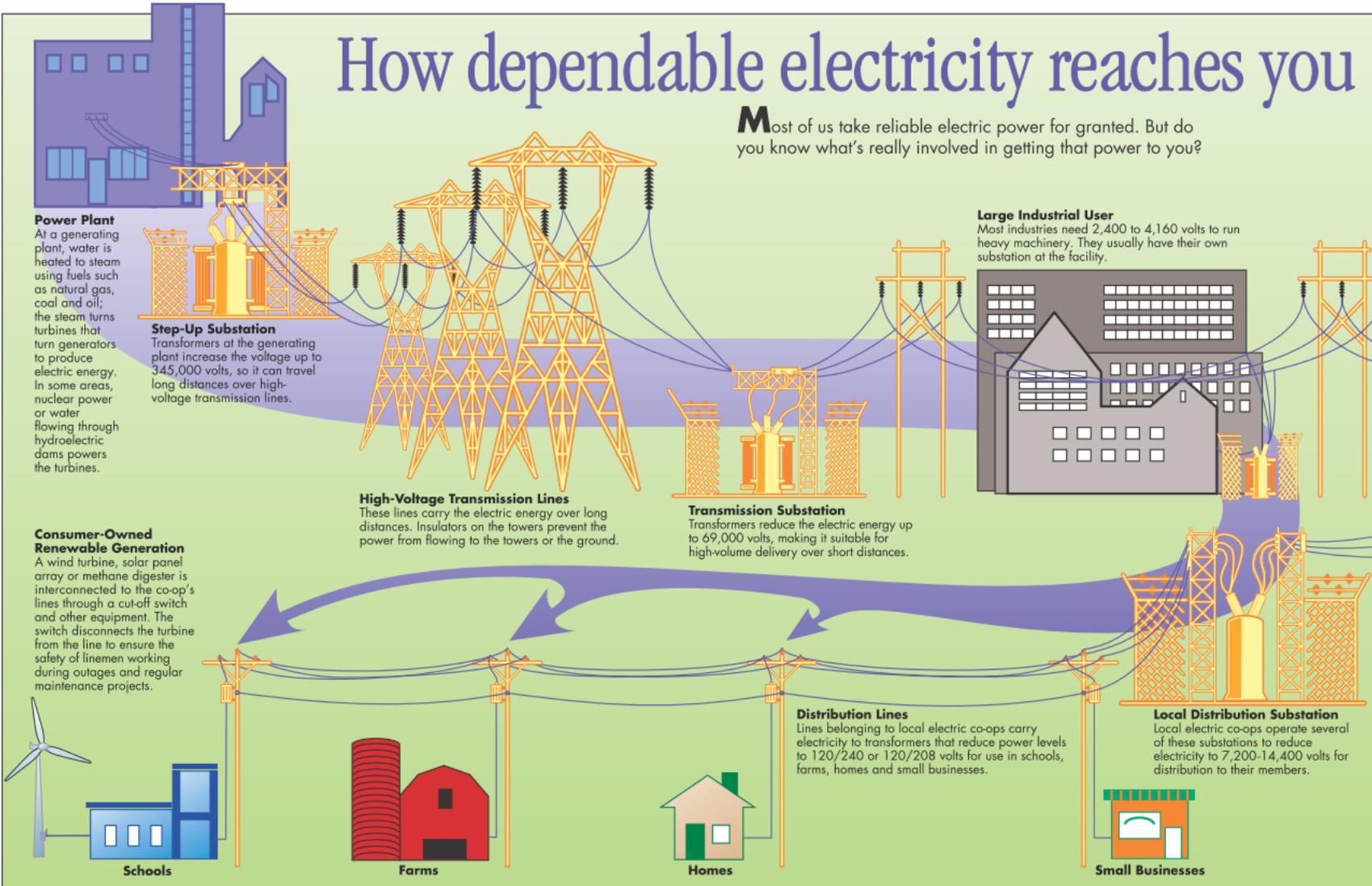
A wind turbine, solar panel array or methane digester is interconnected to the co-op's lines through a cut-off switch and other equipment. The switch disconnects the turbine from the line to ensure the safety of linemen working during outages and regular maintenance projects.

Local Distribution Substation

Local electric co-ops operate several of these substations to reduce electricity to 7,200-14,400 volts for distribution to their members.

Distribution Lines

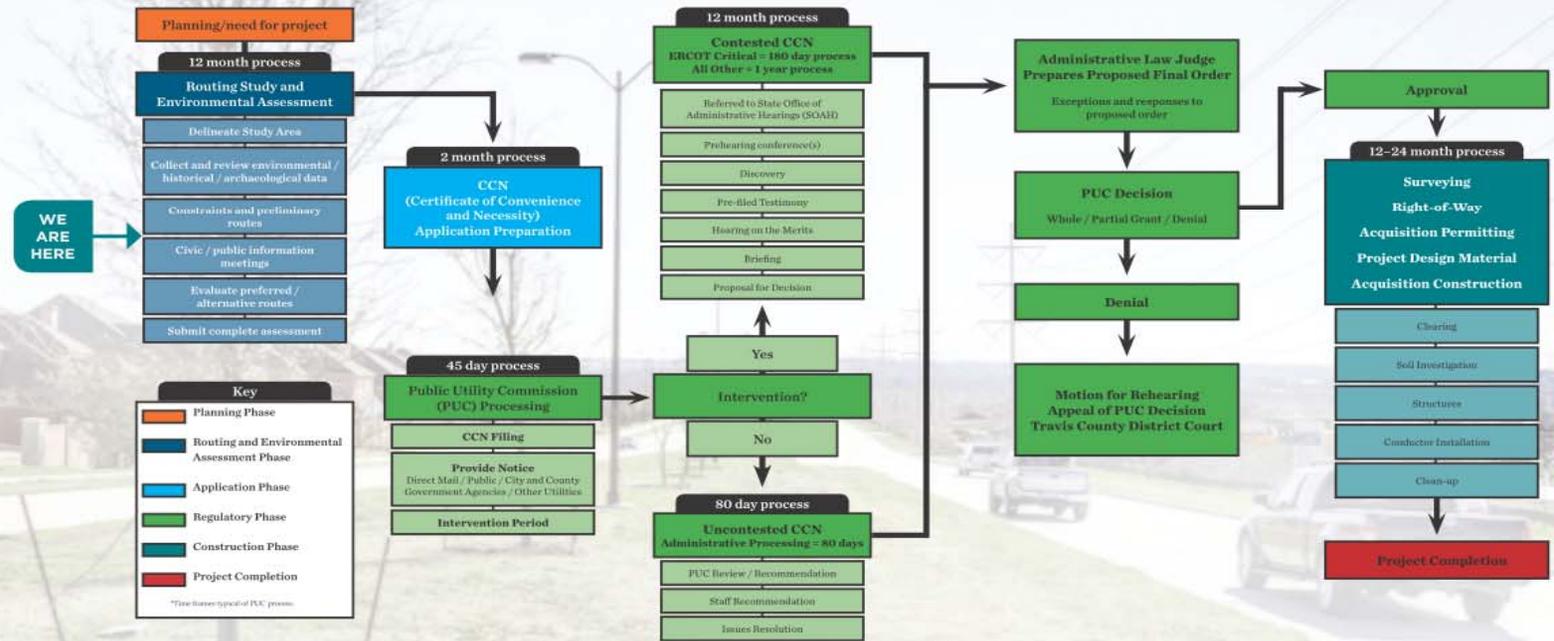
Lines belonging to local electric co-ops carry electricity to transformers that reduce power levels to 120/240 or 120/208 volts for use in schools, farms, homes and small businesses.



Public Utility Commission of Texas – CCN Process Flow Chart



PUC Process for New Transmission Facilities



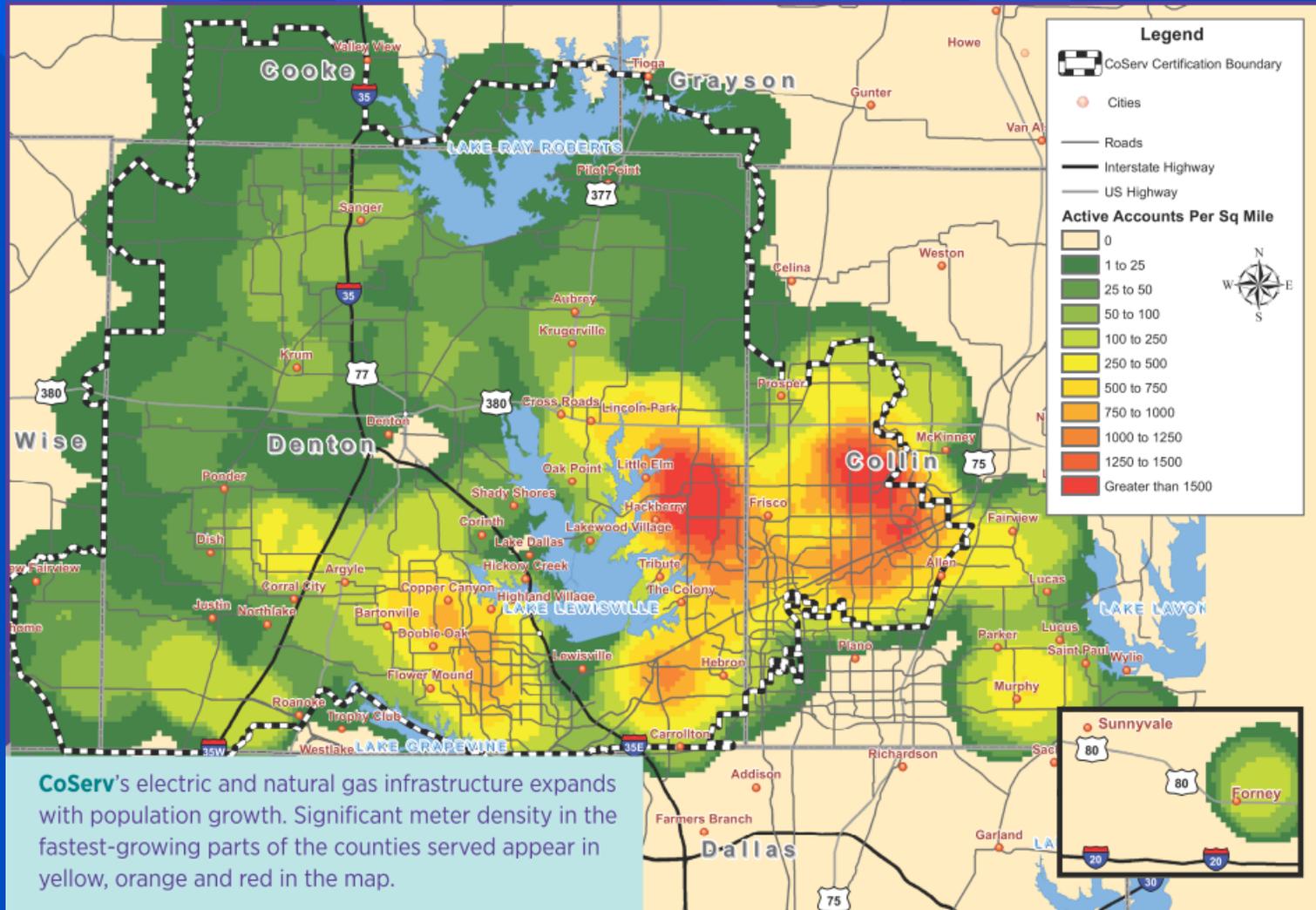
Kittyhawk Purpose and Need

- The study area is bounded by Eldorado Parkway on the north, State Highway 75 on the east, Independence Parkway vicinity on the west, and the Hedcoxe Road/West Bethany Drive boundary on the south.
- Peak demands are expected to grow annually between 4.4% and 15.3%. The historic growth rate was 7% from 2008 to 2015. The surrounding area has grown at a rate of 5% over the same period.
- The study area's growth shows continued expansion of residential developments, office building complexes, and retail/commercial complexes. Much of this property is already platted, with many developments seeing substantial growth. Construction continues in the study area, and is expected to continue for the foreseeable future.

Kittyhawk Purpose and Need – Continued.

- Fifty-five (55) residential subdivisions are planned for the study area, representing an additional 10,460 residential lots, with an estimated 5,951 lots to be constructed by 2016, or approximately 1,983 lots per year.
- The summer peak load for these lots is projected to be 68.1 MW, with 39.6 MW being connected by 2016. ERCOT states that 1 MW serves approximately 200 homes. An additional 9.7 MW of commercial or mixed use load is expected by 2016.
- This area is currently served by Brazos Electric's Craig Ranch, Custer, and Lebanon Substations. Because of rapid growth, these substations will soon reach their capacity, and the study area will lack the capacity to meet the projected load.

CoServ Meter Density



Public Utilities Commission Of Texas - Routing Constraints

- **Rule §25.101(b)(3)(i)-(iv) Factors:**

Routes utilizing existing, compatible rights-of-way, including the use of vacant positions on existing multiple-circuit transmission lines;

Routes parallel to existing compatible rights-of-way;

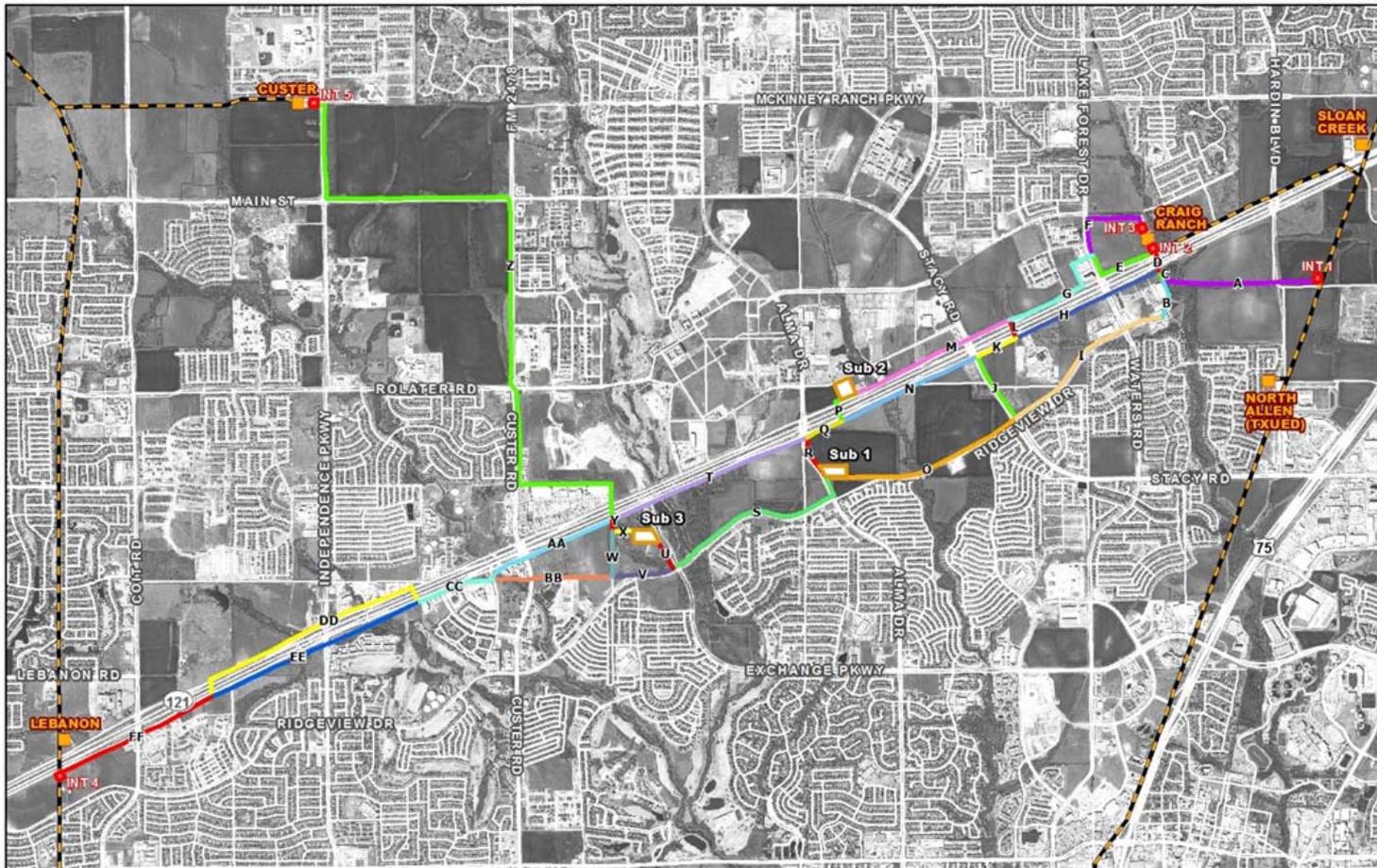
Routes parallel to property lines or other natural or cultural features; and

Routes conforming to the policy of prudent avoidance.

Brazos Electrics - Routing Constraints

- Minimum adverse environmental impacts;
- Minimum adverse impact on potential growth areas;
- Maximum utilization of property lines, roadways, and fence lines;
- Maximum utilization of existing rights-of-way;
- Minimum adverse impacts to rangeland and farmland;
- Minimum adverse impacts to existing residences;
- Acceptance of routing by federal and state agencies; and
- Public meeting and landowner input.

Kittyhawk Notification Exhibit



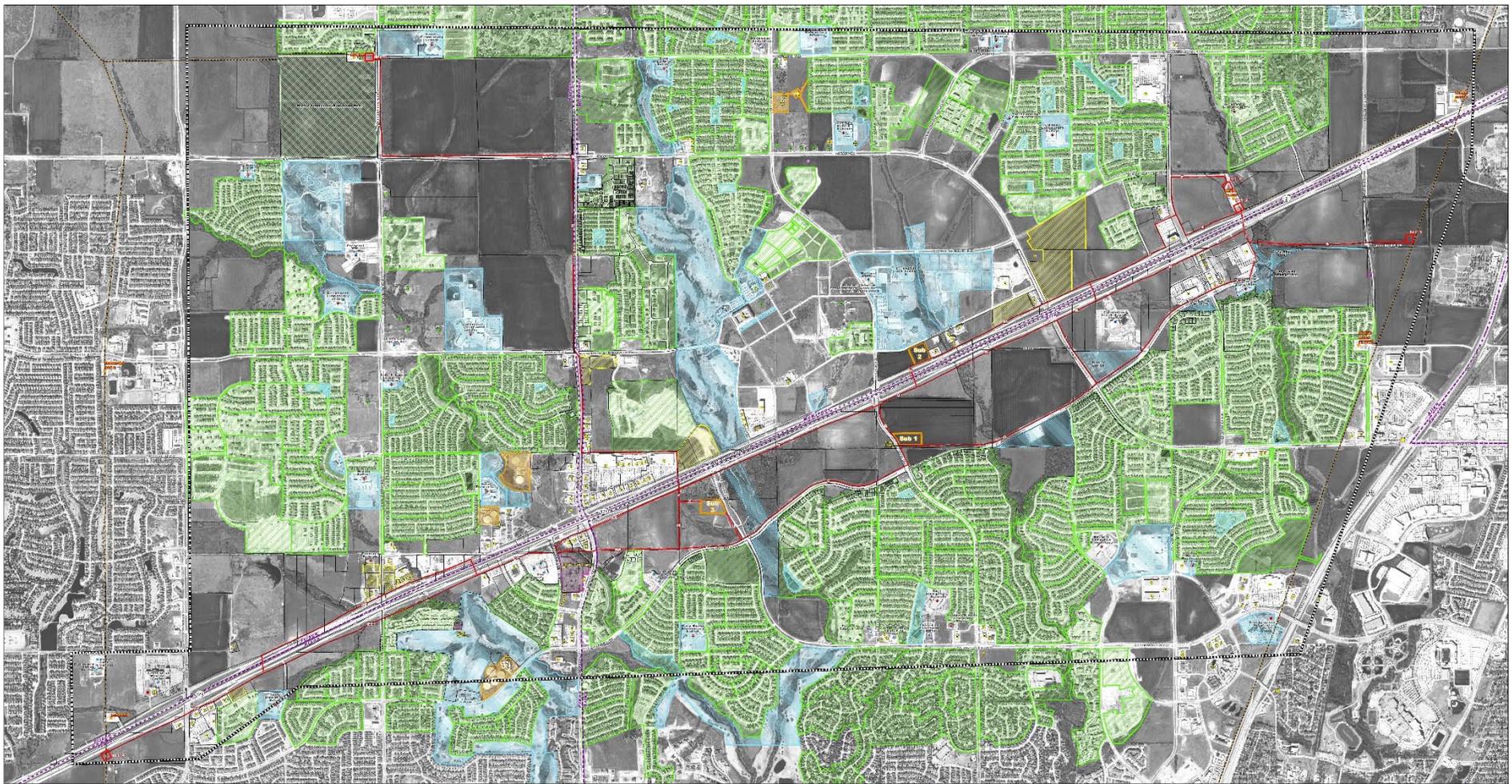
- Proposed Line Segments
- Existing Transmission Lines
- Existing Substations
- Proposed Interconnect Sites
- Proposed Substations



BRAZOS ELECTRIC POWER COOPERATIVE
KITTYHAWK TRANSMISSION LINE AND SUBSTATION PROJECT
TRANSMISSION LINE ALTERNATIVE SEGMENTS

THE SUBSTATIONS, TAPS, AND ROUTE SEGMENTS SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE

Kittyhawk Proposed Route Constraint Exhibit as Displayed



Kittyhawk Typical Structure



Distribution Structures



Single Phase Distribution



Three Phase Distribution 19

Typical Urban Substation



Summary

Transmission line is going to be designed and constructed as a 138 Kv. Single Pole, Double Circuit Bundled line.

Transmission line will require approximately 70'-0" (35'-0" each side of centerline) easement.

The transmission line easements will be purchased from the owner of record.

Summary Cont.

There will only be one transmission line and one substation constructed.

The proposed substation will require approximately 5 acres.

If a switch station is needed at the interconnect locations it will require approximately 3 acres.

Typical transmission line structure height will be 120' above ground. The typical transmission line pole spacing will be 550'.

Tentative Kittyhawk CCN File Date

**Tentative CCN File Date for
Kittyhawk = September 2, 2016**

If your property is affected by one of the proposed filed routes and or you have a habitable structure within 300' of a filed route you will be notified via USPS of the CCN filing. The notification will inform you of your options at the PUCT.

To Stay Informed Kittyhawk Transmission and Substation Project

Please visit the Brazos Electric Power Cooperative, Inc. Internet Home Page and choose “PUC Projects” then navigate to the Kittyhawk Project.

www.brazoselectric.com

A Resolution of the City of Plano, Texas, regarding the proposed Kittyhawk Transmission Line and Substation Project; supporting the shortest and most cost effective route segment to an existing connection point located outside of the City of Plano; and providing an effective date.

WHEREAS, Brazos Electric Power Cooperative (“Brazos Electric”) intends to construct a 138kV double circuit transmission line with single-pole structures (the “Kittyhawk Transmission Line”) as well as a five-acre substation site (the “Kittyhawk Substation Site”) (collectively the “Kittyhawk Transmission Line and Substation Project”) along or near SH121 (Sam Rayburn Tollway); and

WHEREAS, the new Kittyhawk Transmission Line would connect the new Kittyhawk Substation Site to an existing transmission line as shown on the routing map attached as Exhibit A; and

WHEREAS, the shortest and most cost effective route segment to an existing connection point outside the City of Plano does not include proposed line segments “AA”, “BB”, “CC”, “DD”, “EE”, or “FF” as shown on the routing map attached as Exhibit A; and

WHEREAS, the proposed project should provide for increased capacity and continuity of service for CoServ Electric, Brazos Electric’s member cooperative, and its member customers; and

WHEREAS, the City of Plano recognizes the need for the Kittyhawk Transmission Line and Substation Project to meet the needs created by future growth in the region; and

WHEREAS, the City Council of the City of Plano desires to adopt a Resolution supporting the shortest and most cost effective route segment from the Kittyhawk Substation Site to an existing transmission line located outside of the City of Plano.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PLANO, TEXAS, THAT:

Section I. The City supports the shortest and most cost effective route segment located outside of the City of Plano connecting the new Kittyhawk Substation Site to an existing transmission line, which route does not include proposed line segments “AA”, “BB”, “CC”, “DD”, “EE”, or “FF” as shown on the routing map attached as Exhibit A.

DULY PASSED AND APPROVED this the 13th day of June, 2016.

Harry LaRosiliere, MAYOR

ATTEST:

Lisa C. Henderson, CITY SECRETARY

APPROVED AS TO FORM:

Paige Mims, CITY ATTORNEY

