

EAGLE TO LOCUST TM LINE

City Council
Public Hearing

5/23/2017

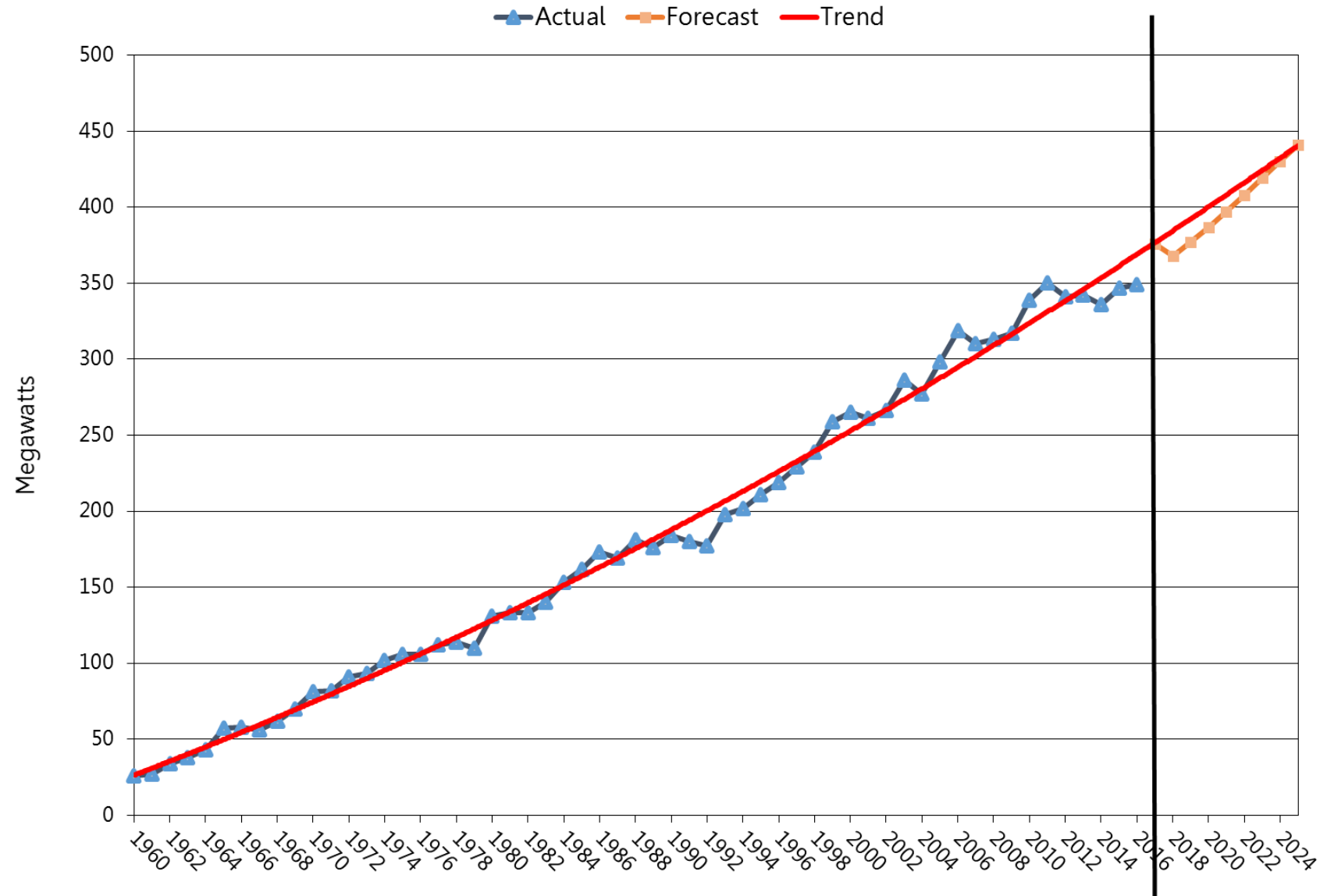
DENTON MUNICIPAL ELECTRIC

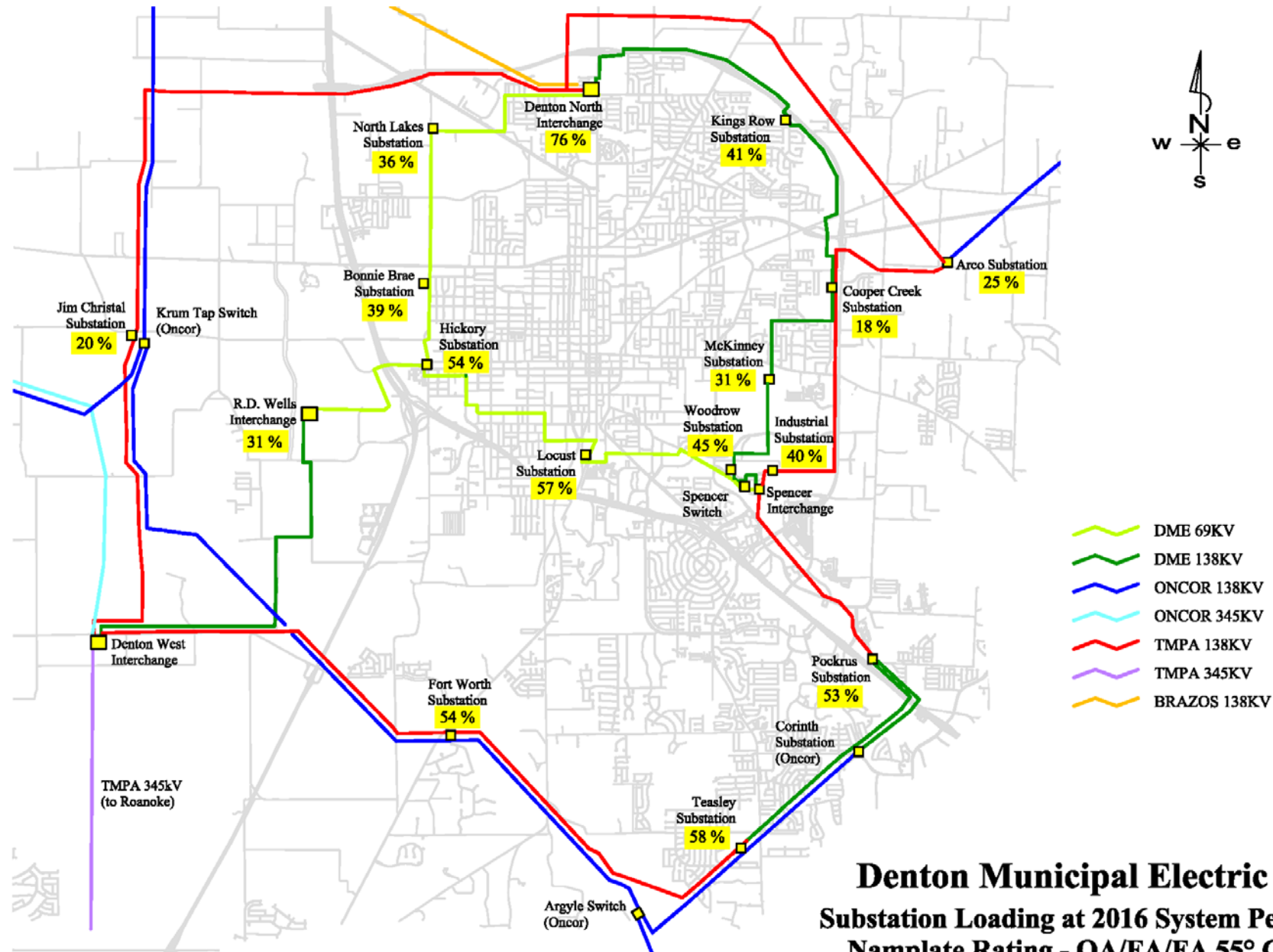


Executive Summary

- Problem:
 - Growth and Aging Infrastructure
- DME has a responsibility to respond
- Open House on 3/23/2017
- Public Hearing with PUB on 4/24/2017
- DME Recommends the existing alignment
 - There *is* a viable alternative

DME Peak Loads and Trend





Denton Municipal Electric
Substation Loading at 2016 System Peak
Namplate Rating - OA/FA/FA 55° C

CIP & Regulation

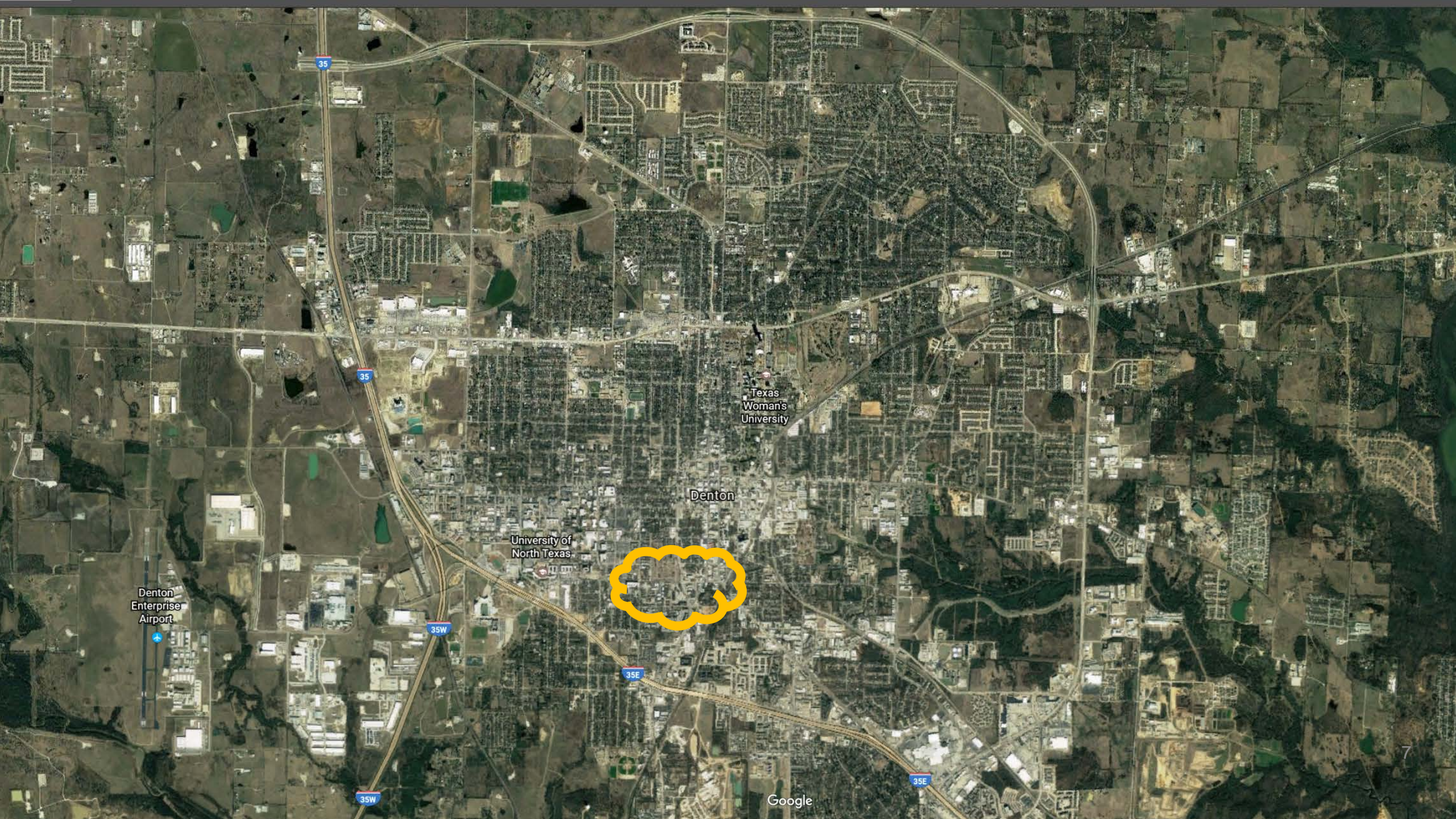
In addition to DME's governance structure, the utility is regulated by these state and federal agencies. FERC, NERC, and TRE ensure compliance of utilities (such as DME) that own and operate transmission systems. ERCOT and the PUCT are responsible for the integrity of the state-wide power grid.

- FERC – Federal Energy Regulatory Commission
 - Requires DME to conduct the 715 study, which helps direct DME's efforts related to the reliability of its transmission system.
- NERC – North American Electric Reliability Corporation
 - Responsible for the enforcement of reliability standards set by FERC.
- TRE – Texas Reliability Entity
 - Has delegated authority from NERC to monitor compliance with reliability standards.
- PUCT – Public Utility Commission of Texas
 - Has the authority to review and approve rate of return for transmission projects.
- ERCOT – Electric Reliability Council of Texas
 - Manages the flow of electric power to 24 million Texas customers representing approximately 90% of the state's electric load and about 75% of the Texas land area

Substation Spacing

The FERC 715 study is a valuable tool for understanding Denton's needs related to transmission reliability. It helps determine the distance between substations along with other factors, including:

- Density of electric load within a service territory.
- Location of existing transmission lines.
- Areas where load growth is anticipated.
- Availability and cost of real estate.
- The preference of nearby residents.
- The preference of land owners.



Texas
Woman's
University

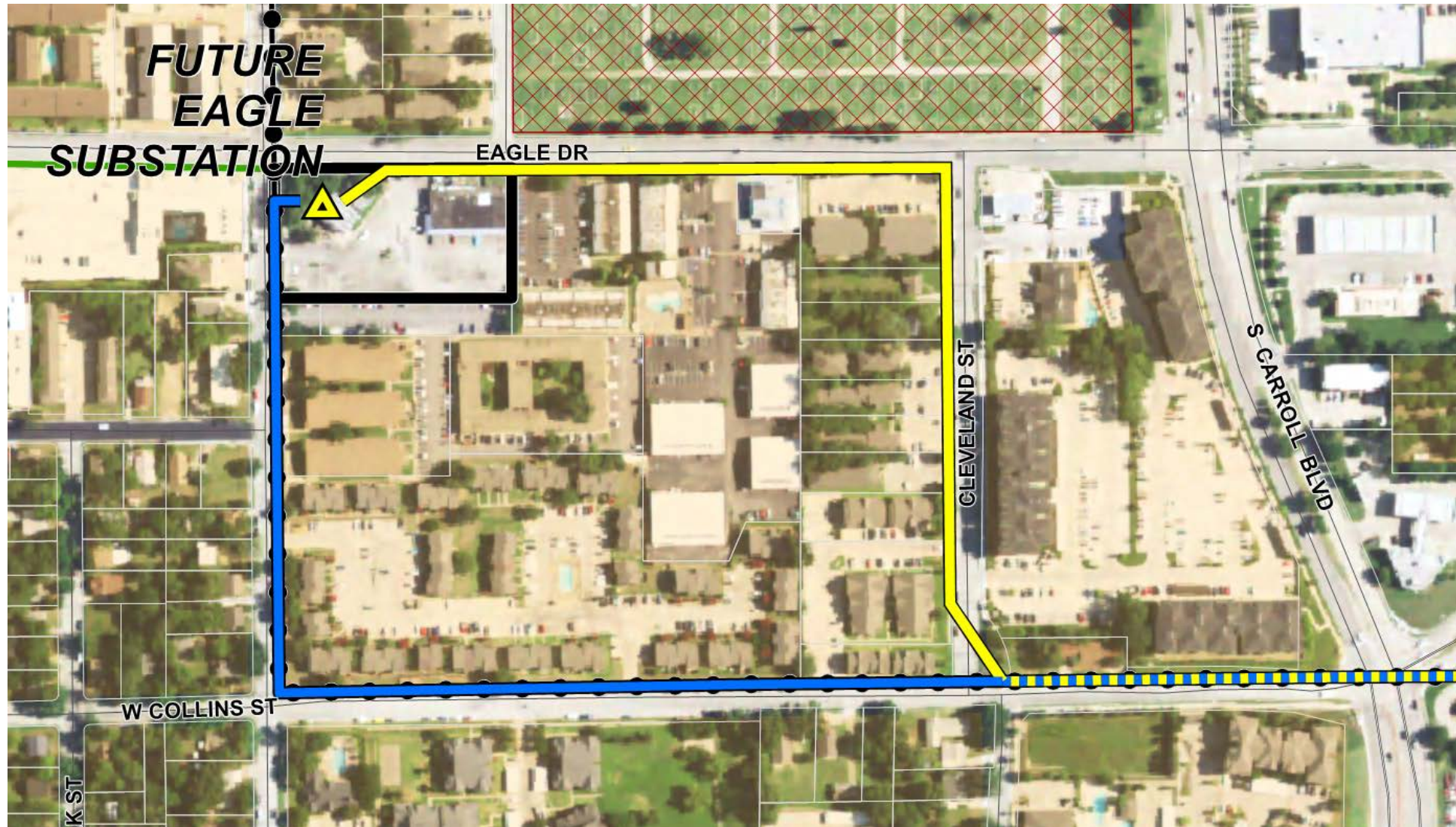
Denton

University of
North Texas

Denton
Enterprise
Airport

Google

Route Selection Alternatives



Summarized Matrix Items

	Alternatives	
	Existing Route 1 (Blue)	Route 2 (Yellow)
New Properties Directly Affected	0	11
Trees to be Removed	7	25
Length of TM Line Route	3,064 feet	2,906 feet
Length of ROW using New Transmission line ROW	0 feet	1,817 feet
Distance to closest Habitable Structure	15 feet	19 feet
Large 90 degree Structures Required	2	4
Habitable Structures within 100 feet of ROW centerline	42	27
Total Estimated Cost	\$3,045,000	\$3,490,000

Blue Route Advantages

- Does not affect new residents and landowners
- Fewer landowners from which to acquire easements
- Fewer trees to be removed
- Lower equipment cost (~\$200,000)

