

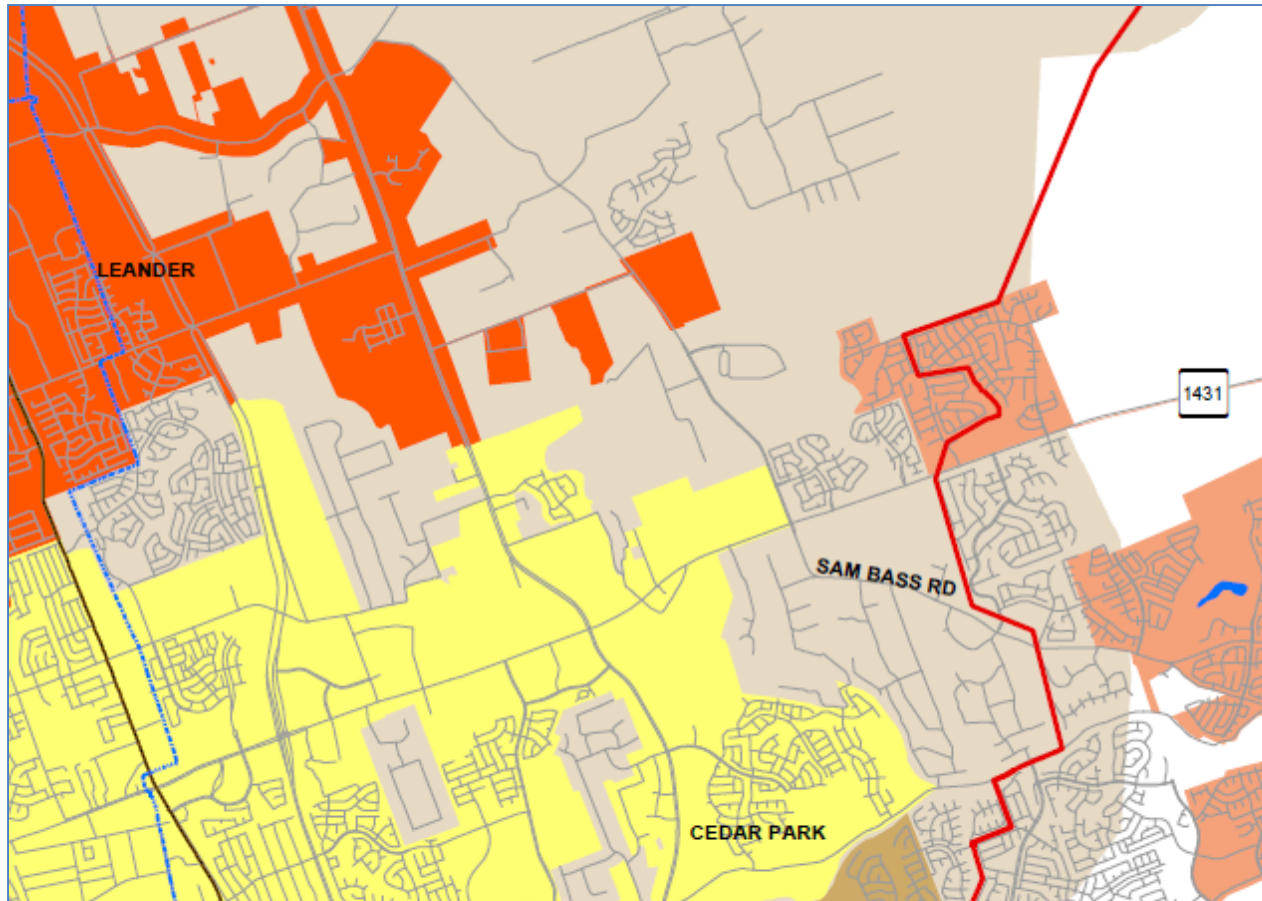
Leander to Round Rock Transmission Line Addition

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Presentation Objectives

- **Background**
- **Purpose and need for the Leander-Parmer-Round Rock transmission line and substation addition project**
- **Summary of Alternatives Considered**

Communities in Western Williamson County



Demand in Western Williamson County

Western Williamson County

Connected Meters by Year

Year	Total Number of Meters	Meters Added	% Increase
2000	33,751		
2001	37,103	3,352	9.93%
2002	40,377	3,274	8.82%
2003	43,862	3,485	8.63%
2004	46,823	2,961	6.75%
2005	49,499	2,676	5.72%
2006	52,868	3,369	6.81%
2007	56,645	3,777	7.14%
2008	59,314	2,669	4.71%
2009	60,944	1,630	2.75%
2010	62,268	1,324	2.17%
2011	63,864	1,596	2.56%
2012	65,859	1,995	3.12%
Average Growth Over Last 12 Years			7.93%
System Average Over Last 12 Years			5.33%

- 32,108 meters added over a 10-year period.
- Area's average meter growth of 7.93% over a 12-year period.
- Area meter growth rate is 1.5 times the overall PEC system meter growth rate.
- Primarily Residential, Small Commercial, and Large Commercial

Source: PEC

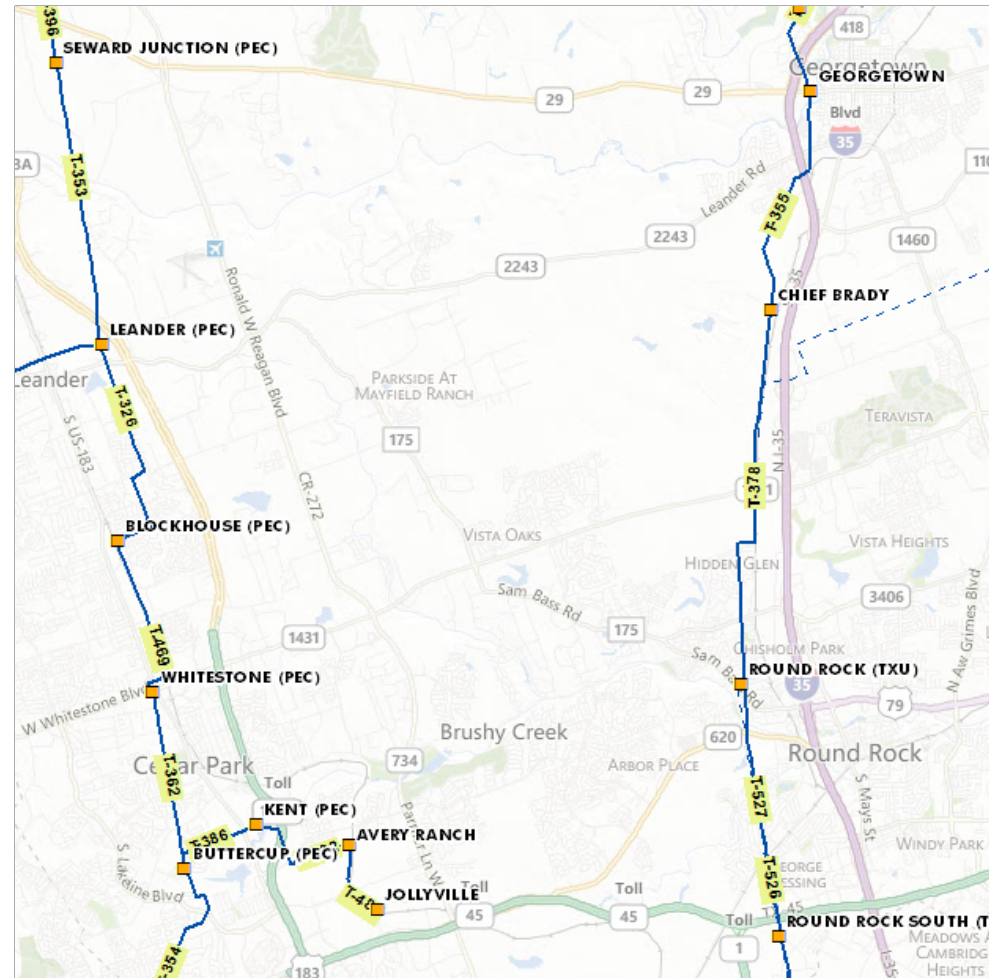
Demand in Project Area

Substation	2002 Load (MW)	2012 Load (MW)	2019 Load (MW)	2022 Load (MW)
Avery Ranch	0	70	85	98
Balcones	49	68	91	104
Blockhouse	0	38	55	63
Buttercup	45	48	66	76
Kent Street	0	16	36	41
Leander	34	53	73	84
Seward Junction	0	20	29	33
Whitestone	55	48	67	76
Parmer	0	0	0	0
TOTAL LOAD	183	361	502	575

Source: PEC

Area Transmission System

- Transmission support to the area at:
 - Leander
 - Buttercup
 - Jollyville
 - Round Rock
 - Round Rock South
 - Georgetown
- No transmission through the growth area



Note: Facilities shown limited to LCRA TSC and PEC-owned / operated equipment.

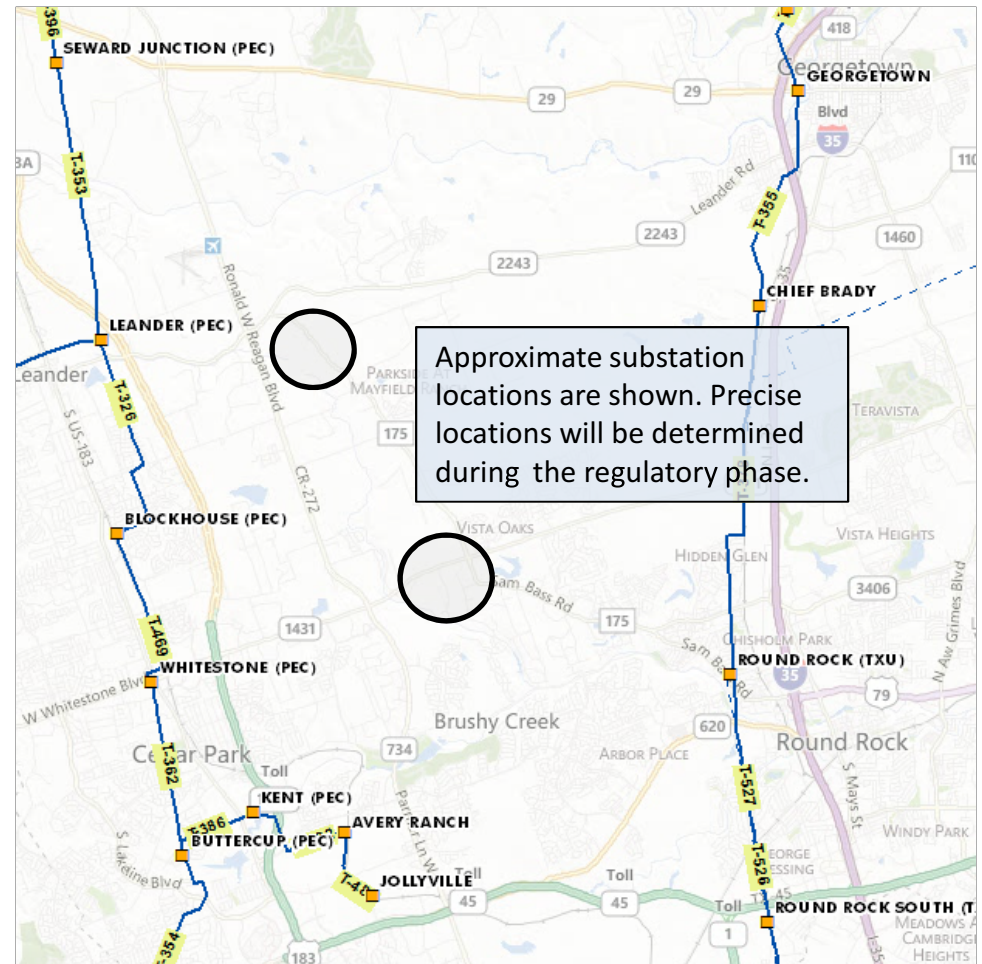
Area Load Forecast for Analysis

Bus Number	Substation	2019 Load (MW)	2022 Load (MW)
7534	Avery Ranch	69	80
7533	Balcones	91	103
7527	Blockhouse	55	62
7531	Buttercup	66	75
7530	Kent Street	35	41
7525	Leander	62	58
7524	Seward Junction	29	33
7529	Whitestone	67	77
7367	Parmer	28	33
7368	Future Station	0	13
	TOTAL LOAD	502	575

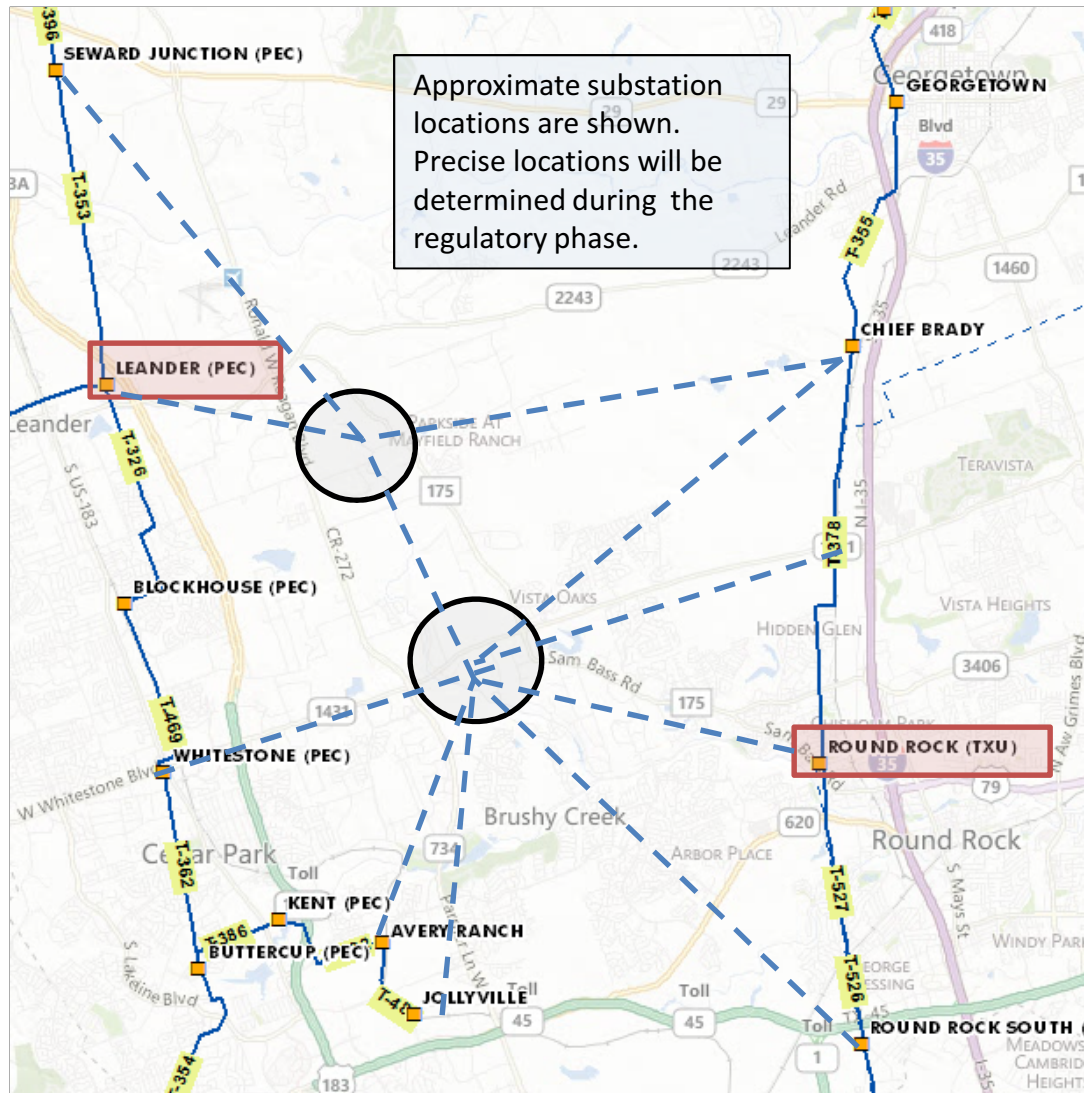
Source: PEC

PEC Long-Term Study Findings

- High load growth area between U.S. Highway 183 and Interstate Highway 35 north of RM 620 projected to continue experiencing significant load growth.
- The existing substations are far away from this growing area.
- The existing delivery system cannot serve the forecasted load growth in western Williamson County.



Transmission Alternatives



12 different potential alternatives were evaluated.

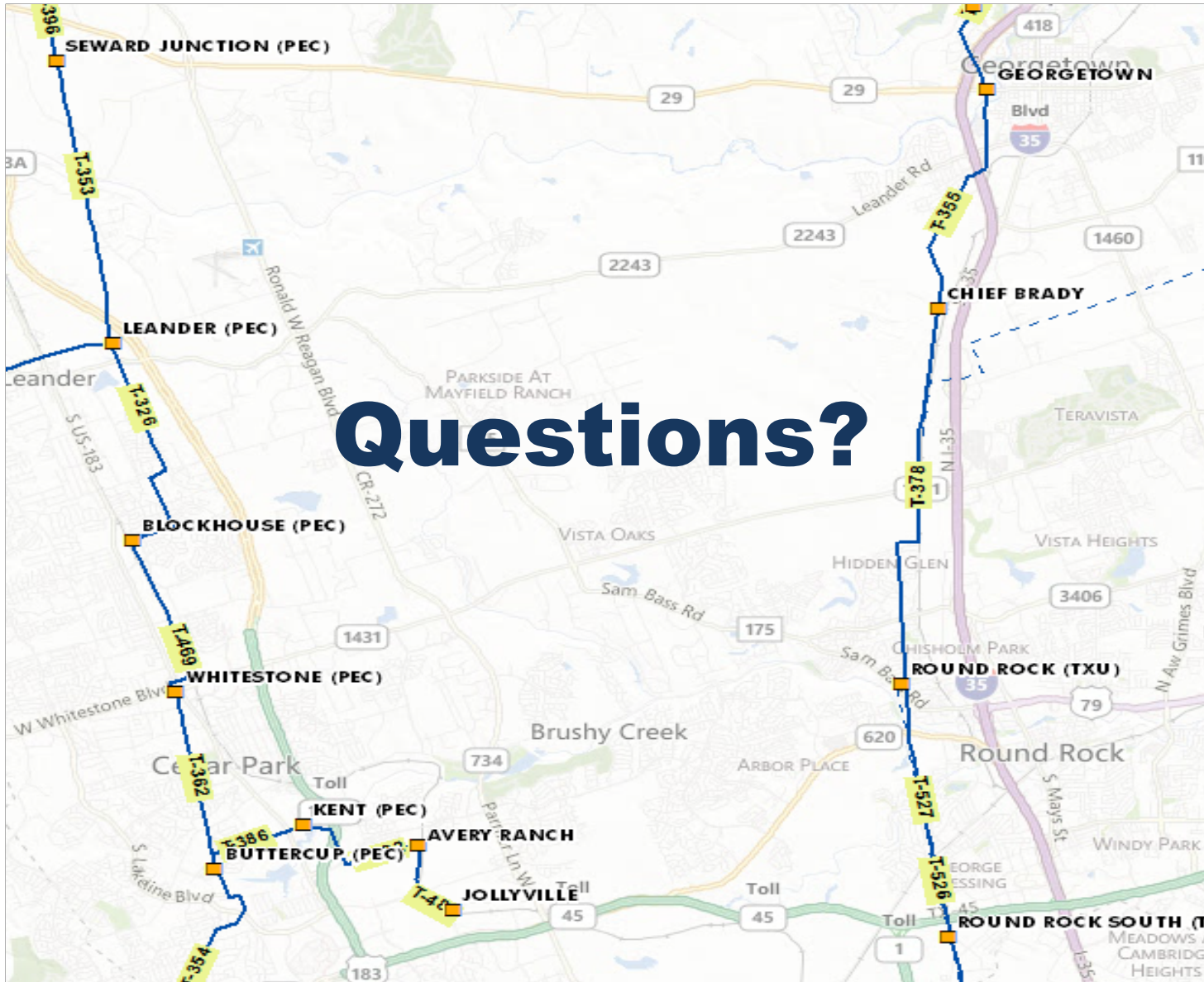
End points at Leander and Round Rock substations provides the most effective solution.

Transmission Alternatives

Alternative	From Bus of New Line	To Bus of New Line	2019	2022	Cost* (\$000,000)
Base	Base Case		2	10	0
1	Chief Brady	Whitestone	1	1	\$62.3
2	Chief Brady	Avery Ranch	1	6	\$60.9
3	Chief Brady	Jollyville	0	9	\$63.6
4	Avery Ranch	Seward Junction	0	10	\$54.0
5	Jollyville	Seward Junction	0	2	\$56.8
6	Round Rock	Seward Junction	0	0	\$61.9
7	Avery Ranch	Leander	0	11	\$43.1
8	Jollyville	Leander	0	1	\$46.2
9	Chandler	Leander	1	1	\$54.4
10	Round Rock S.	Leander	0	0	\$77.5
11	Round Rock	Leander	0	0	\$51.0
12	Chief Brady	Leander	1	4	\$63.7

Proposed Plan

- **Build a new 138-kV, 440 MVA transmission line between the Round Rock and Leander substations by Dec 2018.**
 - **This line will provide the 138-kV source required for the new substations.**
 - **This line will increase the reliability of the 138-kV system within the broader area.**
 - **This line between Round Rock and Leander will address multiple area needs.**



Questions?