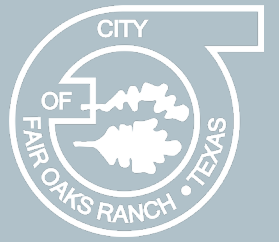




Left-Turn Lane Analysis Fair Oaks Parkway and Front Gate Intersection

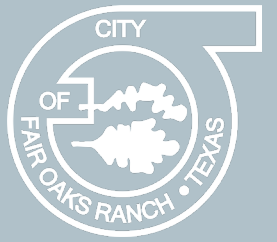


September 4, 2025

Grant Watanabe, P.E., CFM

Oscar Michael Garza, P.E., PTP, PTOE , RSPi

Data Collection - Turning Movement Counts

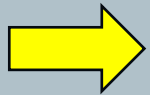
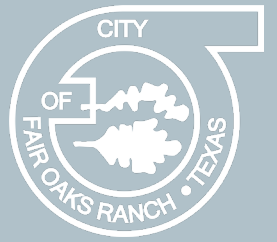


Left-Turn Lane Warrant Criteria

- San Antonio Unified Development Code
 - Left-turn volume >50 vehicles during peak hour
- National Cooperative Highway Research Program (NCHRP) Report 745
 - Left-Turn Accommodations at Unsignalized Intersections

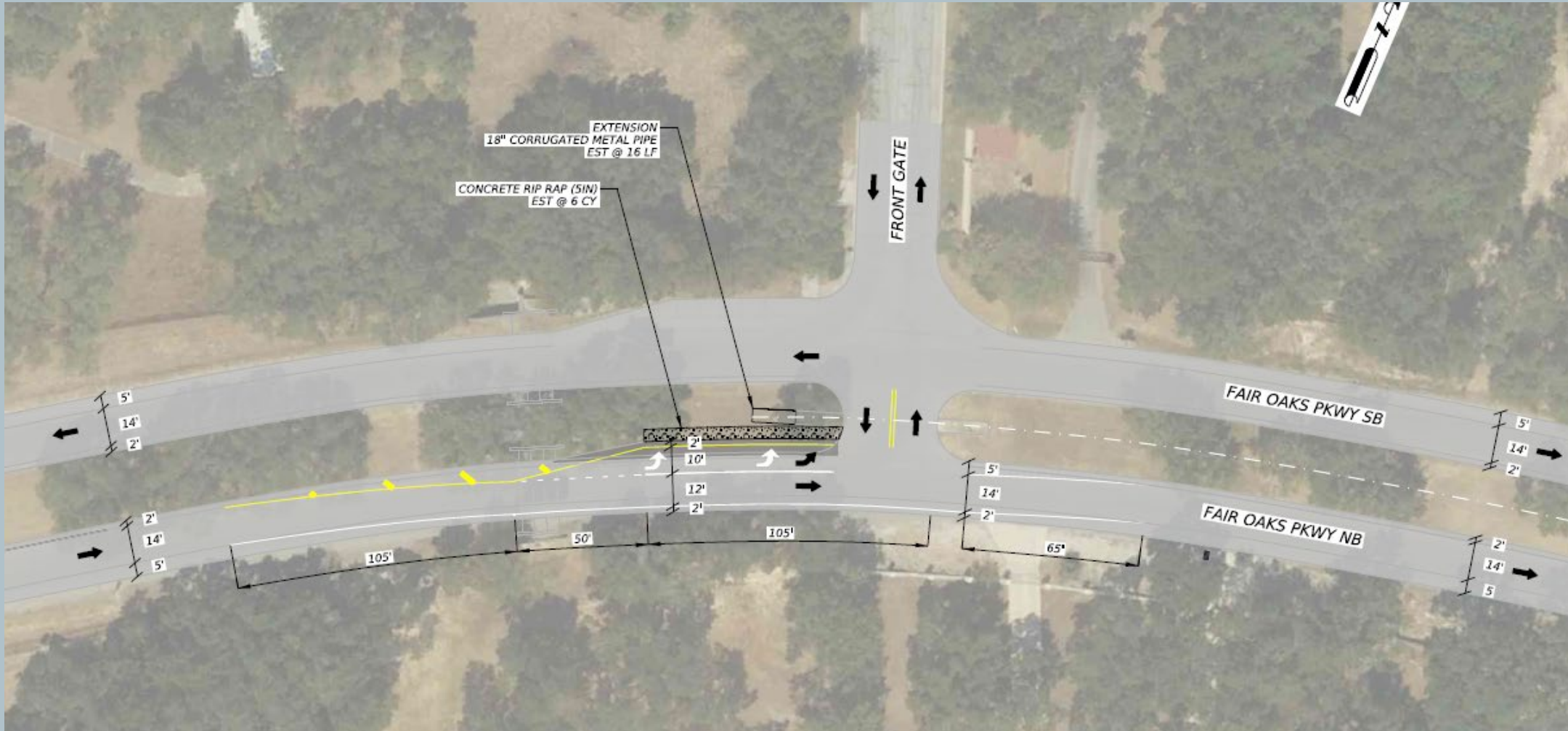
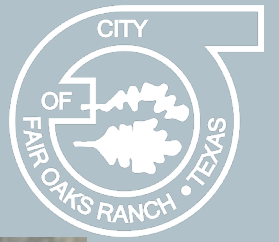
Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Urban and Suburban Arterial Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Urban and Suburban Arterial Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	450	50
10	300	50
15	250	50
20	200	50
25	200	50
30	150	50
35	150	50
40	150	50
45	150	< 50
50 or More	100	< 50

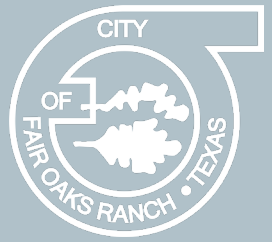
Left-Turn Alternative Comparison



Alternatives	Cost	Safety	Optimal Design Criteria	LOS	Downstream Impacts	Alternative Ranking
All-Way Stop	\$	-	-	-	Yes	4
Restripe	\$	+	-	+	No	3
Hybrid LTL	\$\$	++	✓✓	+++	No	1
Full LTL	\$\$\$	+++	✓✓✓	+++	No	2
Hooded Left In	\$\$\$	--	-	--	Yes	5
Hooded Left Out	\$\$\$	--	-	--	Yes	5
Full Closure	\$	+	✓	+	Yes	4

Hybrid Left-Turn Lane Alternative





Questions?