

US16/Neck Yoke Road Intersection

Traffic Operations, Safety, and Cost Build Option Measures (PRELIMINARY)

		Planning Horizon 2050 Traffic Operations				Crash Prediction Analysis - 2026 Year of Opening to 2050 Planning Horizon		Total Cost
		Main Intersection LOS ¹ Based on intersection delay	Experienced Travel Time (ETT) through Intersection ¹ [sec]	Additional US16 Through Lane Needed to Meet LOS Goals ¹	Does US16 Through Traffic Need to Stop at Bottom of Hill?	Total Crashes ² Change in number of crashes from No-Build condition (-decrease; +increase)	Fatal and Injury Crashes ² Change in number of crashes from No-Build condition (-decrease; +increase)	Construction Cost + Contingency + ROW Acquisition
		AM / PM	AM / PM	Yes / No		# of Access Points 1 (main) / 2 (main + secondary)	# of Access Points 1 (main) / 2 (main + secondary)	\$M
Reduced Conflict Intersection (RCI)								
1.1	RCI at Neck Yoke Road	A / A	4 / 8	No	No	-215 / -153	-107 / -76	4.5
1.2	RCI at Central Driveway	A / A	4 / 8	No	No	-215 / -153	-107 / -76	3.2
1.3	RCI at Central Driveway with US16 Realignment	A / A	4 / 8	No	No	-215 / -153	-107 / -76	5.4
Traffic Signal								
2.1a	Traffic Signal at Neck Yoke Road	B / B	15 / 19	Yes - Eastbound	Yes – traffic signal	-173 / -108	-91 / -59	5.5
2.1b	Traffic Signal at Central Driveway	B / B	15 / 19	Yes - Eastbound	Yes – traffic signal	-173 / -108	-91 / -59	5.7
No Build Condition								
	No Build Condition	C / F	23 / 591	n/a	No	363	163	0
	Relation to study/Build Option	<i>Study LOS Goal: B</i>	<i>Comparative measure of how long it will take the average vehicle to traverse through the intersection.</i>	<i>Truck and lane utilization sub-analysis. Contributes to overall Build Option cost and LOS.</i>	<i>Denotes operational benefits afforded to US16 through traffic that does not need to stop, and then accelerate, at the bottom of the hill.</i>	<i>Comparative measure of safety and operational effects of geometric design.</i>	<i>Comparative measure of safety and operational effects of geometric design.</i>	<i>Comparative measure of total cost to construct.</i>

Key:

- Greatest Improvement/Benefit
- Least Improvement/Benefit

Experienced Travel Time (ETT) = control delay + extra distance travel time

¹ Highway Capacity Software measure

² Vissim microsimulation measure

³ Blend of Highway Capacity Software and Vissim microsimulation measures

⁴ Interactive Highway Safety Design Model (IHSDM) measure

