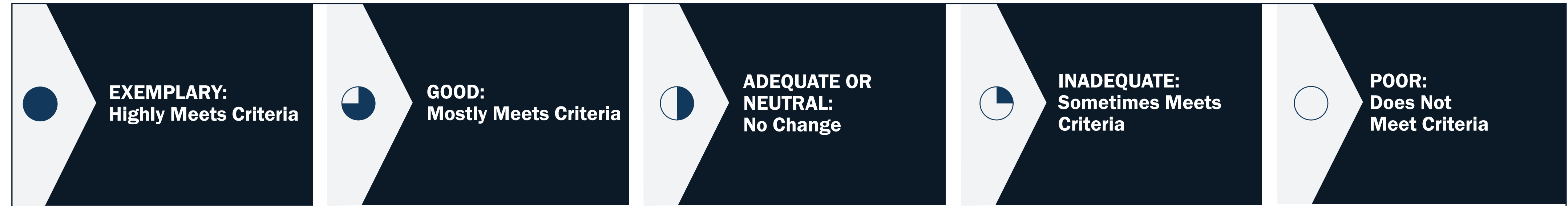




# TEXAS DEPARTMENT OF TRANSPORTATION

## ALTERNATIVES ANALYSIS MATRIX



### SPUR 399 EXTENSION - US 75 TO US 380

### CSJs 0364-04-051, 0047-05-058, 0047-10-002

SCREENING/EVALUATION CATEGORY	METRIC	PURPLE ALTERNATIVE West of the airport	ORANGE ALTERNATIVE East of the airport	NO-BUILD ALTERNATIVE	KEY TAKEAWAYS
<b>Purpose &amp; Need</b> Improve Mobility and Connectivity, Provide Capacity to Support Regional Growth	<b>Improve Level of Service (LOS)</b> 2050 (TxDOT design year) LOS using a scale of A to F. Derived from Highway Capacity Software using TxDOT approved projections based on the NCTCOG Travel Demand Model, historical roadway volumes, future growth projections, and census data.	Primarily LOS A & B, with a minimum LOS of C	Primarily LOS A & B, with a minimum LOS of C	Existing US 380, US 75, and SH 5 would operate at LOS D/E/F at various locations along each roadway	Both alternatives provide additional capacity to allow traffic to move through the study area at near free-flow conditions (LOS A & B), and connect areas of high forecasted growth with the existing regional arterial network, supporting mobility and connectivity to and from employment, education, healthcare, commerce, and activity centers in the Dallas Metroplex.
	<b>Improve Regional Mobility</b> Measured by total hours of congestion relief per day experienced by drivers in Collin County in 2045 (NCTCOG planning year). Derived from the NCTCOG Travel Demand Model.	Reduces total delay (caused by congestion) experienced by drivers in Collin County by 13,532 hours per day	Reduces total delay (caused by congestion) experienced by drivers in Collin County by 13,532 hours per day	No reduction	
	<b>Enhance connectivity between northern and eastern Collin County and the core of the Dallas Metroplex</b> Proximity of the proposed Spur 399 Extension (Ext.) to areas of high-growth and where the existing arterial roadway network is not sufficient to support current and future travel demand; connects "arterial needs areas" identified as "low, medium, or high" in Mobility 2045 Update.	Provides an arterial connection between areas of high-growth and "low and medium" arterial needs with the Dallas Metroplex.	Provides an arterial connection between areas of high-growth and "low, medium, and high" arterial needs with the Dallas Metroplex.	Would not provide an arterial connection between Collin County areas of high-growth and arterial needs and the Dallas Metroplex.	While the Purple Alternative has a slightly higher throughput of vehicles/day than the Orange Alternative (Spur 399 volumes only), it replaces Airport Drive. Since Airport Drive would remain with the Orange Alternative, it offers more total north-south throughput to the local transportation system with the additional capacity from Airport Drive. (Spur 399 Ext., SH 5, and Airport Drive).
	<b>Support system redundancy and expand transportation network options to enhance vehicle volume throughput by 2050</b> Measured in projected vehicles per day that could be carried along the proposed Spur 399 Ext. in 2050. Derived from TxDOT approved projections.	76,900 vehicles/day (along Spur 399 Ext. only)	72,900 vehicles/day (along Spur 399 Ext. only)	No additional vehicles/day because Spur 399 Ext. would not exist	
	<b>Provide Additional North-South Roadway Capacity Beyond 2050</b> Measured in projected vehicles per day that could be carried along the proposed Spur 399 Ext. and other major north-south roadways in close proximity in 2050. Derived from TxDOT approved projections.	133,300 vehicles/day (along Spur 399 Ext. and SH 5)	137,600 vehicles/day (along Spur 399 Ext., SH 5, and Airport Drive)	81,806 vehicles per day (along SH 5 and Airport Drive)	
	<b>Meet Purpose &amp; Need</b> Maximum roadway capacity (vehicles/day) along major north-south roadways in close proximity to the study area (SH 5, Airport Drive, proposed Spur 399 Ext.). Derived from FHWA's Simplified Highway Capacity Calculation Method for the Highway Performance Monitoring System.	Maximum of 206,100 vehicles/day (along Spur 399 Ext. and SH 5)	Maximum of 243,200 vehicles/day (along Spur 399 Ext., SH 5, and Airport Drive)	Maximum of 93,100 vehicles/day (along SH 5 and Airport Drive)	Historically, the DFW region has experienced faster population and traffic growth than projected. The north-south local transportation system offered by the Orange Alternative has more "ultimate" throughput of vehicles/day than the Purple Alternative if regional travel demand grows beyond TxDOT approved projections and all available roadway capacity is utilized.
<b>Meet Purpose &amp; Need</b>	Yes	Yes	No	The No-Build Alternative does not meet Purpose and Need and therefore is not considered a Reasonable Alternative.	