Concept Evaluation Matrix

US 59 Feasibility Study
Concept Evaluation Matrix
For Proposed Concepts for Future Evaluation

LEAST IMPACTFUL
NEUTRAL
MOST IMPACTFUL

SCREENING/EVALUATION CATEGORY	NO BUILD CONCEPT	PINK CONCEPT	ORANGE CONCEPT	GREEN CONCEPT	PURPLE CONCEPT	KEY TAKEAWAYS
Residential Displacements	No Displacements	2 Potential Displacements	2 Potential Displacements	2 Potential Displacements	31 Potential Displacements	The Purple Concept potentially displaces 31 residences. All potential displaced residences for each of the proposed concepts can be viewed on the public meeting roll plots.
Business Displacements	No Displacements	1 Potential Displacement	1 Potential Displacement	1 Potential Displacement	19 Potential Displacements	The Purple Concept potentially displaces 19 businesses while the Pink, Orange and Green Concepts all potentially displace one business. These potentially displaced businesses can be viewed on the roll plots.
Impacts to Future Developments	0 Acres	0 Acres	0 Acres	0 Acres	2 Acres	More acreage for future developments would be potentially displaced by the Purple Concept (2) than the other proposed concepts (none).
Level of Service (LOS) by 2045*	LOS E	LOS A	LOS A	LOS A	LOS C	There is not a substantial difference in LOS between the Pink, Orange and Green Concept. The Purple Concept serves more local traffic than the other concepts and would have a lower LOS.
Length of New Facility (New Concept)	0 Miles	22.1 Miles	21.9 Miles	21.5 Miles	22.7 Miles	The Green Concept is the shortest of all the proposed concepts.
Length of Facility (Existing Outer Loop Overlap) *Distance from I-35 to proposed improvements*	0 Miles	4 Miles	4 Miles	6 Miles	8 Miles	Generally, the shorter the concept is from I-35 to the Outer Loop the better that concept is for freight movement.
Reduced crash rate and conflict points	No	Yes	Yes	Yes	Yes	The results of the traffic and safety analyses demonstrate that all the proposed concepts reduce crash rates and conflict points. The ability to reduce crash rates and conflict points along existing US 59 is constrained by existing and proposed development.
Number of Curves/Direction Changes	10 Curves (estimated)	13 Curves	12 Curves	12 Curves	18 Curves	Generally, the more curves there are in a roadway the less safe a roadway is for drivers, specifically trucks (freight).
Water Features** and Floodplains (100yr) within Proposed ROW	0 Acres	118 Acres	101 Acres	122 Acres	126 Acres	Impacts to existing lakes and floodplains are much more substantial for the Green Concept than the other proposed concepts.
U.S. Fish and Wildlife Service's National Wetlands Inventory, and Potential Wetlands within ROW	0 Acres	3 Acres	1 Acre	28 Acres	3 Acres	The Orange Concept is the least impactful to existing and potential wetlands within the study area right-of-way.
Community resources or aquatic sites impacted	0 Sites	5 Sites	4 Sites	7 Sites	10 Sites	All proposed concepts potentially impact aquatic sites. There are no impacts anticipated to Historic Properties, Parks, Cemeteries or Community Facilities (Churches, Schools, Libraries).
Overall Cost Estimate	$0	$413M	$381M	$422M	$376M	Costs are generally higher on concepts where TxDOT would have to acquire more right-of-way as well as concepts that include construction of structures or bridges.

**Level of Service measures the quality of vehicle traffic service based on performance measures like vehicle speed, density, and congestion using a scale of A to F. For example, a LOS "F" is a rating assigned to roadways with breakdown flow which means that there are high traffic volumes and limited capacity on the roadway. A LOS "A" is a rating that means free flow conditions with low traffic volumes and greater roadway capacity available.*

*** Water features include lakes, ponds and stream crossings, and aquatic sites.*