

**New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX CRITERIA**

Criteria by Goal	Measure	Rank	Notes
Safety Goal			
Provides a Crossing at Guadalupe River	Assessment	no, yes	"Yes" if route will provide a crossing at the Guadalupe River.
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	"Yes" if route will reduce public safety delays to response time.
Accommodates Bicycles and Pedestrians	Assessment	no, yes	"Yes" if route will provide accommodations for bicycles and pedestrians.
Mobility Goal			
Provides Relief Route for Congested Areas	Assessment	no, yes	"Yes" if route will provide a relief route for congested areas.
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	"Yes" if route will offer long-term expansion potential for future needs.
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	"Yes" if route will minimize impacts to the operations, circulations, and access to existing land at existing interchanges along IH 35.
Economic Development Goal			
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	"Yes" if route will avoid impacts to future airport expansion.
Community and Environmental Goal			
Minimize Residential Displacements	Each	#	Residents were identified via aerial images, sight-identification, and stakeholders. Each resident was counted as "impacted" if the corridor impacted a residential structure, East of IH 35. "Light Green(+)"s 5, 6 s<"Green(0)"s 10, "Dark Green(-)"s 11
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	Impacts to undeveloped habitat. Undeveloped habitat does not include residential nor commercial properties. Vegetation/Wildlife Habitat will be further evaluated during the Environmental Document Phase. "Light Green(+)"s400, 401s"Green(0)"s600, "Dark Green(-)"s601
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	Using existing databases, sites were identified as potential and known hazardous material sites. A rank of "Yes" indicates that no impact was identified for the proposed corridors. A rank of "No" indicates that one or more impacts was identified for the proposed corridors.
Minimize Impacts to Wetlands	Acres	#	Using existing databases, sites were identified as areas of potential wetland. Wetland mitigation would be based upon detailed analysis as part of future studies. "Light Green(+)"s5, 6s"Green(0)"s10, "Dark Green(-)"s11
Minimize Impacts to 100-yr Floodplains	Acres	#	FEMA floodplain data was used to determine the acreage count, based upon the proposed corridor width. "Light Green(+)"s60, 61s"Green(0)"s75, "Dark Green(-)"s76
Minimize Impacts to Sensitive Archeological Areas	Acres	#	This criterion is based on characteristics of the natural, topographic and geologic settings within the study area that have historically demonstrated the potential to contain archeological sites. The archeological sites have not been digitized to protect the location and security of the sites. "Light Green(+)"s200, 201s"Green(0)"s400, "Dark Green(-)"s401
Minimize Noise Impacts to Sensitive Receivers	Each	#	Potential sensitive receivers included the study's 800 ft corridor and 300 ft outside the corridor. Noise mitigation would be based upon detailed analysis as part of future studies. "Light Green(+)"s30, 31s"Green(0)"s50, "Dark Green(-)"s51
Minimize Impacts to Schools	Potential Impacts	no, yes	Schools were identified using existing databases. A rank of "Yes" indicates that no impact was identified for the proposed corridors. A rank of "No" indicates that one or more impacts was identified for the proposed corridors.
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Using existing databases and sight-identified cemeteries. A rank of "Yes" indicates that no impact was identified for the proposed corridors. A rank of "No" indicates that one or more impacts was identified for the proposed corridors.
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Parks and recreational facilities were identified using existing databases. No routes appear to directly impact parks and recreational facilities within the study area. A rank of "Yes" indicates that no impact was identified for the proposed corridors. A rank of "No" indicates that one impact was identified for the proposed corridors.
Avoid Impacts to Historic Resources	Displacements	no, yes	Registered historical sites as well as potentially eligible historical sites were identified within the study area using existing databases and sight-identified potential historical sites. A rank of "Yes" indicates that no impact was identified for the proposed corridors. A rank of "No" indicates that one or more impacts was identified for the proposed corridors.
Avoid Impacts to Landfill	Impacts	no, yes	Landfills were identified using existing databases. A rank of "Yes" indicates that no impact was identified for the proposed corridors. A rank of "No" indicates that one or more impacts was identified for the proposed corridors.
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	Corridors were examined for intent to avoid bisecting 50 acre or larger parcels of farmland/ranchland. "Light Green(+)"s10, 11s"Green(0)"s15, "Dark Green(-)"s16
Minimize Impacts to Commercial Properties	# Properties	#	Commercial properties were sight-identified by the study team. Each commercial property was counted as "impacted" if the corridor impacted a property. "Light Green(+)"=0, 1s"Green(0)"s2, "Dark Green(-)"s3
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	Using existing databases, sites were identified as planned capital improvement projects. Upon discussions with county and city engineers and planners, no routes appear to directly impact planned capital improvement projects.
Minimize Impacts to Major Utility Features	Assessment	-, +	Major utility features were defined as water towers, communication towers, transmission lines, substations, power plants, and water/sewer facilities. A major utility feature was considered impacted if daily operations or future expansions were affected or relocation cost were prohibitive.
Minimize Impacts to Civic Organizations	Each	-, +	The civic organizations used for this count were sight-identified by the study team. A rank of "+" indicates that no impact was identified for the proposed corridors.
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	Environmental justice concerns include disproportionate impacts to low-income and minority residents. Potential environmental justice areas identified will be further evaluated during the Environmental Document Phase. A rank of "+" indicates that no impact was identified for the proposed corridors. A rank of "-" indicates that an impact was identified for the proposed corridors.
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	The faith-based organizations used for this count were sight-identified by the study team. A rank of "+" indicates that no impact was identified for the proposed corridors.
Minimize Impacts to Prime or Unique Farmlands	Acres	#	Corridors were examined to minimize impacts to soil types typically associated with prime or unique farmlands. Unique Farmlands will be determined during the Environmental Document Phase. East of IH 35 "Light Green(+)"s200, 201s"Green(0)"s300, "Dark Green(-)"s301
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	Potential Golden-cheeked warbler habitat areas were identified within the study area. Mitigation would be based upon detailed analysis as part of future studies. "Light Green(+)"s200, 201s"Green(0)"s300, "Dark Green(-)"s301
Minimize Impacts to Sensitive Geologic Areas	Acres	#	Areas mapped as cave-bearing formations on a geologic map (Collins 2000) were identified within the study area. Mitigation would be based upon detailed analysis as part of future studies. "Light Green(+)"s500, 501s"Green(0)"s700, "Dark Green(-)"s701
Engineering Goal			
Affords Potential River Crossings	Design parameter	no, yes	"Yes" if route can afford a potential river crossing.
Conforms to AASHTO Design Criteria	Design parameter	no, yes	"Yes" if route conforms to terrain and is viable.
Cost Effectiveness Goal			
Costs will be determined during future planning and environmental studies.			

New Braunfels Outer Loop Study PRELIMINARY
 REFINED SHORT LIST OF OPTIONS
 SCREENING MATRIX

Criteria by Goal	Options:		No Build*	Section D Refined Short List of Options						
	Measure	Rank		ROUTE 1 (D2, D5, D6, D13)	ROUTE 2 (D2, D5, D6, D9, D10, D12)	ROUTE 3 (D2, D5, D6, D16, D8, D15)	ROUTE 4 (D2, D4, D7, D9, D10, D13)	ROUTE 5 (D2, D4, D7, D9, D10, D12)	ROUTE 6 (D2, D4, D8, D15)	** ROUTE 7 (D3, D6, D16, D8, D15)
Safety Goal										
Provides a Crossing at Guadalupe River	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Accommodates Bicycles and Pedestrians	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mobility Goal										
Provides Relief Route for Congested Areas	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic Development Goal										
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Community and Environmental Goal										
Minimize Residential Displacements	Each	#	0	8	8	8	13	13	12	1
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	0	895	918	953	847	870	887	937
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	+	+	+	+	+	+	+
Minimize Impacts to Wetlands	Acres	#	0	4	2	3	4	2	3	8
Minimize Impacts to 100-yr Floodplains	Acres	#	0	63	61	57	28	26	22	57
Minimize Impacts to Sensitive Archeological Areas	Acres	#	0	563	576	599	469	482	490	618
Minimize Noise Impacts to Sensitive Receivers	Each	#	0	39	37	37	40	38	44	17
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	No	No	No	Yes	Yes	Yes	No
Avoid Impacts to Landfill	Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	0	18	18	17	14	14	16	14
Minimize Impacts to Commercial Properties	# Properties	#	0	1	0	0	1	0	0	0
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	+	+	+	+	+	+	+	+
Minimize Impacts to Major Utility Features	Assessment	-, +	+	+	+	+	+	+	+	+
Minimize Impacts to Civic Organizations	Each	-, +	+	+	+	+	+	+	+	+
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	+	-	-	-	-	-	-	-
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	+	+	+	+	+	+	+	+
Minimize Impacts to Prime or Unique Farmlands	Acres	#	0	665	666	683	614	615	633	695
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	0	0	0	0	0	0	0
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	0	0	0	0	0	0	0
Engineering Goal										
Affords Potential River Crossings	Design parameter	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conforms to AASHTO Design Criteria	Design parameter	no, yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cost Effectiveness Goal***										

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
 REFINED SHORT LIST OF OPTIONS
 SCREENING MATRIX

Criteria by Goal	Options:		No Build*	Section E Refined Short List of Options						
	Measure	Rank		ROUTE 1	ROUTE 2	ROUTE 3	ROUTE 4	ROUTE 5	ROUTE 6	**Route 7
				(E5, E14, E7, E12)	(E4, E7, E12)	(E3, E6, E11, E12)	(E3, E6, E15)	(E2, E6, E11, E12)	(E2, E6, E15)	(E3, E6, E15)
Safety Goal										
Provides a Crossing at Guadalupe River	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Accommodates Bicycles and Pedestrians	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mobility Goal										
Provides Relief Route for Congested Areas	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic Development Goal										
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Community and Environmental Goal										
Minimize Residential Displacements	Each	#	0	6	3	5	3	5	3	3
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	0	606	689	690	606	660	576	576
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	+	+	+	+	+	+	+
Minimize Impacts to Wetlands	Acres	#	0	6	6	6	5	7	6	6
Minimize Impacts to 100-yr Floodplains	Acres	#	0	75	143	115	77	152	114	114
Minimize Impacts to Sensitive Archeological Areas	Acres	#	0	291	423	434	401	525	492	492
Minimize Noise Impacts to Sensitive Receivers	Each	#	0	48	46	49	33	49	33	33
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	No	No	No	Yes	No	Yes	Yes
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Impacts to Landfill	Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	0	11	12	12	12	14	13	13
Minimize Impacts to Commercial Properties	# Properties	#	0	0	0	0	1	0	1	1
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	0	+	+	+	+	+	+	+
Minimize Impacts to Major Utility Features	Assessment	-, +	0	+	+	+	+	+	+	+
Minimize Impacts to Civic Organizations	Each	-, +	0	+	+	+	+	+	+	+
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	+	-	-	-	-	-	-	-
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	0	+	+	+	+	+	+	+
Minimize Impacts to Prime or Unique Farmlands	Acres	#	0	368	295	241	260	248	267	267
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	0	0	0	0	0	0	0
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	0	0	0	0	0	0	0
Engineering Goal										
Affords Potential River Crossings	Design parameter	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conforms to AASHTO Design Criteria	Design parameter	no, yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cost Effectiveness Goal***										

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** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
 REFINED SHORT LIST OF OPTIONS
 SCREENING MATRIX

Criteria by Goal	Measure	Rank	Options: No Build*	Section F Refined Short List of Options		
				ROUTE 1 (F3-F13)	** ROUTE 2 (F3, F10)	ROUTE 3 (F3, F12, F9)
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes	No	Yes	Yes	Yes
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	No	Yes	Yes	Yes
Accommodates Bicycles and Pedestrians	Assessment	no, yes	No	Yes	Yes	Yes
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes	No	Yes	Yes	Yes
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	No	Yes	Yes	Yes
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Yes	Yes	Yes
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Yes	Yes	Yes
Community and Environmental Goal						
Minimize Residential Displacements	Each	#	0	7	4	3
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	0	822	707	701
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	+	+	+
Minimize Impacts to Wetlands	Acres	#	0	1	1	0
Minimize Impacts to 100-yr Floodplains	Acres	#	0	66	65	69
Minimize Impacts to Sensitive Archeological Areas	Acres	#	0	444	433	440
Minimize Noise Impacts to Sensitive Receivers	Each	#	0	24	20	14
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	Yes	Yes	Yes
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	Yes	Yes	Yes
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	Yes	Yes	Yes
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	Yes	Yes	Yes
Avoid Impacts to Landfill	Impacts	no, yes	Yes	Yes	Yes	Yes
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	0	18	13	15
Minimize Impacts to Commercial Properties	# Properties	#	0	0	0	0
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	0	+	+	+
Minimize Impacts to Major Utility Features	Assessment	-, +	0	+	+	+
Minimize Impacts to Civic Organizations	Each	-, +	0	+	+	+
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	+	+	+	+
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	0	+	+	+
Minimize Impacts to Prime or Unique Farmlands	Acres	#	0	394	324	281
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	0	0	0
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	0	0	0
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	No	Yes	Yes	Yes
Conforms to AASHTO Design Criteria	Design parameter	no, yes	N/A	Yes	Yes	Yes
Cost Effectiveness Goal***						

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

**New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX**

Criteria by Goal		Measure	R a n k	Option: No Build*
Safety Goal				
Provides a Crossing at Guadalupe River	Assessment	no, yes		No
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes		No
Accommodates Bicycles and Pedestrians	Assessment	no, yes		No
Mobility Goal				
Provides Relief Route for Congested Areas	Assessment	no, yes		No
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes		No
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes		Yes
Economic Development Goal				
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes		Yes
Community and Environmental Goal				
Minimize Residential Displacements	Each	#		0
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#		0
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+		+
Minimize Impacts to Wetlands	Acres	#		0
Minimize Impacts to 100-yr Floodplains	Acres	#		0
Minimize Impacts to Sensitive Archeological Areas	Acres	#		0
Minimize Noise Impacts to Sensitive Receivers	Each	#		0
Minimize Impacts to Schools	Potential Impacts	no, yes		Yes
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes		Yes
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes		Yes
Avoid Impacts to Historic Resources	Displacements	no, yes		Yes
Avoid Impacts to Landfill	Impacts	no, yes		Yes
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#		0
Minimize Impacts to Commercial Properties	# Properties	#		0
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+		+
Minimize Impacts to Major Utility Features	Assessment	-,+		+
Minimize Impacts to Civic Organizations	Each	-,+		+
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+		+
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+		+
Minimize Impacts to Prime or Unique Farmlands	Acres	#		0
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#		0
Minimize Impacts to Sensitive Geologic Areas	Acres	#		0
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes		No
Conforms to AASHTO Design Criteria	Design parameter	no, yes		N/A
Cost Effectiveness Goal***				

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** Study Recommendation Route

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New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

Criteria by Goal	Measure	Rank	Options:	Comments
			D ROUTE 1	
Safety Goal				
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Accommodates Bicycles and Pedestrians
Mobility Goal				
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	#REF!	Yes	Minimizes impacts to existing interchanges along IH 35
Economic Development Goal				
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Avoids impacts to future Airport expansion
Community and Environmental Goal				
Minimize Residential Displacements	Each	#	8	8 Residents within D1 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	895	895 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	4	4 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	63	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	563	563 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	39	39 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	No	Beechie Property (See June 26, 2008 MAPO Report)
Avoid Impacts to Landfill	Impacts	no, yes	Yes	No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	18	18 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	1	1 impact to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	+	No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-, +	+	No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-, +	+	No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	-	Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	+	No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	665	665 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	No impact to Sensitive Geologic Areas
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: D2, D5, D6, D13				

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** Study Recommendation Route

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New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

Criteria by Goal		Options:		D	Comments
		Measure	R a n k	ROUTE 2	
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Accommodates Bicycles and Pedestrians	
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Avoids impacts to future Airport expansion	
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	8	8 Residents within D2 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	918	918 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	2	2 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	61	Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	576	576 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	37	37 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	No	Beechie Property (See June 26, 2008 MAPO Report)	
Avoid Impacts to Landfill	Impacts	no, yes	Yes	No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	18	18 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0	No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+	No impacts to planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-,+	+	No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-,+	+	No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-	Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+	No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	666	666 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	No impact to Sensitive Geologic Areas	
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: D2, D5, D6, D9, D10, D12					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

Criteria by Goal		Options:		D	Comments
		Measure	R a n k	ROUTE 3	
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Accommodates Bicycles and Pedestrians	
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Avoids impacts to future Airport expansion	
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	8	8 Residents within D3 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	953	953 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	3	3 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	57	Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	599	599 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	37	37 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	No	Beechie Property (See June 26, 2008 MAPO Report)	
Avoid Impacts to Landfill	Impacts	no, yes	Yes	No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	17	17 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0	No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	+	Avoids planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-, +	+	No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-, +	+	No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	-	Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	+	No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	683	683 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	No impact to Sensitive Geologic Areas	
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: D2, D5, D6, D16, D8, D15					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

Criteria by Goal		Options:		D	Comments
		Measure	R a n k	ROUTE 4	
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Accommodates Bicycles and Pedestrians	
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Avoids impacts to future Airport expansion	
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	13	13 Residents within D4 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	847	847 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	4	4 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	28	Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	469	469 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	40	40 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	No impact to Historic Resources	
Avoid Impacts to Landfill	Impacts	no, yes	Yes	No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	14	14 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	1	1 impact to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	+	Avoids planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-, +	+	No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-, +	+	No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	-	Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	+	No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	614	614 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	No impact to Sensitive Geologic Areas	
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: D2, D4, D7, D9, D10, D13					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

Criteria by Goal		Options:		D	Comments
		Measure	R a n k	ROUTE 5	
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Accommodates Bicycles and Pedestrians	
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Avoids impacts to future Airport expansion	
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	13	13 Residents within D5 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	870	870 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	2	2 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	26	Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	482	482 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	38	38 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	No impact to Historic Resources	
Avoid Impacts to Landfill	Impacts	no, yes	Yes	No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	14	14 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0	No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	+	Avoids planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-, +	+	No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-, +	+	No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	-	Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-, +	+	No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	615	615 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	No impact to Sensitive Geologic Areas	
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: D2, D4, D7, D9, D10, D13					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

Criteria by Goal			Options:		D	Comments
			Measure	R a n k	ROUTE 6	
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Yes	Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Yes	Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Yes	Accommodates Bicycles and Pedestrians	
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Yes	Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Yes	Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Yes	Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Yes	Avoids impacts to future Airport expansion	
Community and Environmental Goal						
Minimize Residential Displacements	Each	#	12	12	12 Residents within D6 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	887	887	887 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,*	+	+	No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	3	3	3 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	22	22	Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	490	490	490 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	44	44	44 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	Yes	No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	Yes	No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	Yes	No impact to Historic Resources	
Avoid Impacts to Landfill	Impacts	no, yes	Yes	Yes	No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	16	16	16 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0	0	No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,*	+	+	Avoids planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-,*	+	+	No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-,*	+	+	No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,*	-	-	Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,*	+	+	No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	633	633	633 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	0	No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	0	No impact to Sensitive Geologic Areas	
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	Yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Yes		
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: D2, D4, D8, D15						

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** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		D	Comments
Criteria by Goal	Measure	R a n k			** ROUTE 7	
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes			Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes			Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes			Accommodates Bicycles and Pedestrians
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes			Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes			Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes			Minimizes impacts to existing interchanges along IH 35
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes			Avoids impacts to future Airport expansion
Community and Environmental Goal						
Minimize Residential Displacements	Each	#	1			1 Residents within D7 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	937			937 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+			No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	8			8 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	57			Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	618			618 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	17			44 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes			No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes			Link Property (See June 26, 2008 MAPO Report)
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes			No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	No			Beechie Property (See June 26, 2008 MAPO Report)
Avoid Impacts to Landfill	Impacts	no, yes	Yes			No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	14			16 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0			No impacts to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+			Avoids planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+			No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+			No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-			Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+			No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	695			633 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0			No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0			No impact to Sensitive Geologic Areas
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	Yes			
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes			
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: D2, D4, D8, D15						

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** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		
Criteria by Goal	Measure	R a n k	E		Comments
			ROUTE 1		
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	6		6 Residents within E1 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	606		606 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	6		6 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	75		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	291		291 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	48		50 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	No		1 IMPACT to Cemetery
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	11		11 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0		No impacts to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-		Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	368		368 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: E5, E14, E7, E12					

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** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		E	Comments
Criteria by Goal	Measure	R a n k	ROUTE 2			
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians	
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion	
Community and Environmental Goal						
Minimize Residential Displacements	Each	#	3		3 Residents within E2 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	689		689 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	6		6 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	143		Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	423		423 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	46		46 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	No		1 IMPACT to Cemetery	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources	
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	12		12 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0		No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-		Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	295		295 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas	
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	Yes			
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes			
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: E4, E7, E12						

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		E	Comments
Criteria by Goal	Measure	R a n k	ROUTE 3			
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians	
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion	
Community and Environmental Goal						
Minimize Residential Displacements	Each	#	5		5 Residents within E3 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	690		690 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	6		6 ACRES Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	115		Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	434		434 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	49		49 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	No		1 IMPACT to Cemetery	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources	
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	12		12 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0		No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-		Impacts Environmental Justice Areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	241		241 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas	
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	Yes			
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes			
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: E3, E6, E11, E12						

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		
Criteria by Goal	Measure	R a n k	E		Comments
			ROUTE 4		
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	3		3 Residents within E4 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	606		606 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	5		3 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	77		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	401		401 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	33		33 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes		No impact to Cemeteries and Prehistoric Burial Sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	12		12 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	1		1 impact to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-		Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	260		260 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: E3, E6, E15					

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** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		
Criteria by Goal	Measure	R a n k	E		Comments
			ROUTE 5		
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	5		5 Residents within E5 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	660		660 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	7		7 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	152		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	525		525 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	49		49 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	No		1 IMPACT to Cemetery
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	14		14 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0		No impacts to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-		Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	248		248 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: E2, E6, E11, E12					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		
Criteria by Goal	Measure	R a n k	E		Comments
			ROUTE 6		
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	3		3 Residents within E6 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	576		576 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	6		6 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	114		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	492		492 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	33		33 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes		No impact to Cemeteries and Prehistoric Burial Sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	13		13 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	1		1 impact to commercial property
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-		Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	267		267 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: E2, E6, E15					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Options:		E	
Criteria by Goal	Measure	R a n k			**Route 7	Comments
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes		Yes		Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes		Yes		Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes		Yes		Accommodates Bicycles and Pedestrians
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes		Yes		Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes		Yes		Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes		Yes		Minimizes impacts to existing interchanges along IH 35
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes		Yes		Avoids impacts to future Airport expansion
Community and Environmental Goal						
Minimize Residential Displacements	Each	#		3		3 Residents within E6 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#		624		624 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+		+		No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#		6		6 ACRES Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#		73		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#		421		421 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#		35		33 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes		Yes		No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes		Yes		No impact to Cemeteries and Prehistoric Burial Sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes		Yes		No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes		Yes		No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes		Yes		No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#		14		13 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#		1		1 impact to commercial property
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+		+		No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+		+		No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+		+		No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+		-		Impacts Environmental Justice Areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+		+		No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#		266		266 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#		0		No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#		0		No impact to Sensitive Geologic Areas
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes		Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes		Yes		
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: E2, E6, E15						

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY REFINED SHORT LIST OF OPTIONS SCREENING MATRIX

Criteria by Goal			Option:		F	Comments
			Measure	R a n k	ROUTE 1	
Safety Goal						
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River	
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)	
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians	
Mobility Goal						
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas	
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs	
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35	
Economic Development Goal						
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion	
Community and Environmental Goal						
Minimize Residential Displacements	Each	#	7		7 Residents within F1 corridor	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	822		822 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites	
Minimize Impacts to Wetlands	Acres	#	1		1 ACRE Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	66		Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	444		444 ACRES Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	24		24 IMPACTS Quantities calculated from GIS export.	
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools	
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes		No impact to Cemeteries and Prehistoric Burial Sites	
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities	
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources	
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills	
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	18		18 SPLITS Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	0		No impacts to commercial properties	
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects	
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features	
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations	
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	+		No impact to environmental justice areas	
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations	
Minimize Impacts to Prime or Unique Farmlands	Acres	#	394		394 ACRES Quantities calculated from GIS export.	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat	
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas	
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	Yes			
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes			
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: F3, F13						

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Option:	F	
Criteria by Goal	Measure	R a n k		** ROUTE 2	Comments
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes	Yes	Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes	Yes	Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes	Yes	Accommodates Bicycles and Pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes	Yes	Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes	Yes	Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes	Yes	Minimizes impacts to existing interchanges along IH 35
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Yes	Avoids impacts to future Airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	4	4	4 Residents within F2 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	707	707	707 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	+	No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	1	1	1 ACRE Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	65	65	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	433	433	433 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	20	20	20 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	Yes	No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes	Yes	No impact to Cemeteries and Prehistoric Burial Sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	Yes	No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes	Yes	No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes	Yes	Yes	No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	13	13	13 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0	0	No impacts to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+	+	No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+	+	No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+	+	No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	+	+	No impact to environmental justice areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+	+	No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	324	324	324 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	0	No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0	0	No impact to Sensitive Geologic Areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes	Yes	
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Yes	
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: F3, F10					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.

New Braunfels Outer Loop Study PRELIMINARY
REFINED SHORT LIST OF OPTIONS
SCREENING MATRIX

			Option:	F	
Criteria by Goal	Measure	R a n k	ROUTE 3		Comments
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no, yes	Yes		Provides a crossing at Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no, yes	Yes		Reduces Public Safety Delays (police, fire, EMS)
Accommodates Bicycles and Pedestrians	Assessment	no, yes	Yes		Accommodates Bicycles and Pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no, yes	Yes		Provides relief route for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	Yes		Offers long-term expansion potential for future needs
Minimizes Impacts to Existing Interchanges Along IH 35	Assessment	no, yes	Yes		Minimizes impacts to existing interchanges along IH 35
Economic Development Goal					
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes		Avoids impacts to future Airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#	3		3 Residents within F3 corridor
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	701		701 ACRES Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No Hazardous Material Sites
Minimize Impacts to Wetlands	Acres	#	0		0 ACRE Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	69		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	440		440 ACRES Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	14		14 IMPACTS Quantities calculated from GIS export.
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes		No impact to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no, yes	Yes		No impact to Cemeteries and Prehistoric Burial Sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes		No impact to Parks/Recreational Facilities
Avoid Impacts to Historic Resources	Displacements	no, yes	Yes		No impact to Historic Resources
Avoid Impacts to Landfill	Impacts	no, yes	Yes		No impact to Landfills
Minimize Impacts to Farmlands/Ranchlands	Bisects Large Parcels	#	15		15 SPLITS Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0		No impacts to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-,+	+		No impacts to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-,+	+		No impacts to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+		No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	+		No impact to environmental justice areas
Minimize Impacts to Faith-Based Organizations	Potential Impact	-,+	+		No impacts to faith-based organizations
Minimize Impacts to Prime or Unique Farmlands	Acres	#	281		281 ACRES Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0		No impacts to Potential Golden-cheeked Warbler Habitat
Minimize Impacts to Sensitive Geologic Areas	Acres	#	0		No impact to Sensitive Geologic Areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: F3, F12, F9					

* The "No Build" option is not eliminated and is to remain an option throughout this study and any subsequent screening and environmental studies.

** Study Recommendation Route

*** Costs will be determined during future planning and environmental studies.