

**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 use of 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. West of IH 35: "Light Green(+)"#10, 11;"Green(0)"#14, "Dark Green(+)"#15. East of IH 35: "Light Green(+)"#5, 6;"Green(0)"#10, "Dark Green(+)"#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(+)"#400, 401;"Green(0)"#600, "Dark Green(-)"#601
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	Using existing databases, sites were identified as potential and known hazardous material sites. A rank of "+" indicates that no impact was identified for the proposed corridors. A rank of "-" indicates that one or more impacts was identified for the proposed corridors.
Minimize Impacts to Potential 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(+)"#5, 6;"Green(0)"#10, "Dark Green(-)"#11
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(+)"#10, 11;"Green(0)"#30, "Dark Green(-)"#31
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(+)"#200, 201;"Green(0)"#400, "Dark Green(-)"#401
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(+)"#20, 21;"Green(0)"#30, "Dark Green(-)"#31
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 to Large Parcels	#	Corridors were examined for intent to avoid bisecting 50 acre or larger parcels of farmland/ranchland. "Light Green(+)"#5, 6;"Green(0)"#9, "Dark Green(-)"#10
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, 1;"Green(0)"#2, "Dark Green(-)"#3
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. A rank of "+" indicates that no impact was identified for the proposed corridors. A rank of "-" indicates that one or more impacts was identified for the proposed corridors.
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. A rank of "+" indicates that no impact was identified for the proposed corridors. A rank of "-" indicates that one or more impacts was identified for the proposed corridors.
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. A rank of "-" indicates that one or more impacts 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. A rank of "-" indicates that one or more impacts 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. "Light Green(+)"#0, 1;"Green(0)"#75, "Dark Green(-)"#76
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(+)"#200, 201;"Green(0)"#300, "Dark Green(-)"#301
Minimize Impacts to Potential 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(+)"#500, 501;"Green(0)"#700, "Dark Green(-)"#701
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	Measure	Rank	Options:			
			No Build*	Section A Refined Short List of Options		
				Route 1** (A13, A14, A10)	Route 2 (A13, A6, A8)	Route 3 (A13, A14, A16, A8)
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	3	2	2
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	0	714	686	673
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	+	+	+
Minimize Impacts to Potential Wetlands	Acres	#	0	0.5	1	1
Minimize Impacts to 100-yr Floodplains	Acres	#	0	120	122	132
Minimize Impacts to Sensitive Archeological Areas	Acres	#	0	564	503	575
Minimize Noise Impacts to Sensitive Receivers	Each	#	0	4	3	3
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 to Large Parcels	#	0	4	6	5
Minimize Impacts to Commercial Properties	# Properties	#	0	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	120	121	111
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	270	222	223
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	0	553	568	562
Engineering Goal						
Affords Potential River Crossings	Design parameter	no. yes	No	Yes	Yes	Yes
Conforms to AASHTO Design Criteria	Design parameter	no. yes	No	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

Options:			Section B Refined Short List of Options																								
Criteria by Goal	Measure	R a n k	No Build*	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7	Route 8	Route 9	Route 10	Route 11	Route 12	Route 13	Route 14	Route 15	Route 16	Route 17	Route 18	Route 19	Route 20	Route 21**	Route 22	Route 23	Route 24
				(B1, B6, B34, B8, B15, B31, B22)	(B1, B6, B34, B8, B15, B33, B20, B32, B22)	(B1, B6, B34, B8, B15, B33, B20, B21)	(B1, B6, B9, B12, B17, B19, B20, B32, B22)	(B1, B6, B9, B12, B17, B19, B20, B21)	(B1, B6, B9, B27, B14, B19, B20, B32, B22)	(B1, B7, B28, B11, B15, B31, B22)	(B1, B7, B28, B11, B15, B33, B20, B32, B22)	(B1, B7, B28, B11, B15, B33, B20, B21)	(B1, B7, B10, B26, B17, B19, B20, B32, B22)	(B1, B7, B10, B26, B17, B19, B20, B32, B22)	(B1, B7, B10, B26, B14, B19, B20, B32, B22)	(B23, B29, B8, B15, B31, B22)	(B23, B29, B8, B15, B33, B20, B32, B22)	(B23, B29, B8, B15, B33, B20, B21)	(B23, B30, B11, B15, B31, B22)	(B23, B30, B11, B15, B33, B20, B32, B22)	(B23, B29, B8, B15, B33, B20, B21)	(B23, B30, B11, B15, B31, B22)	(B23, B30, B11, B15, B33, B20, B32, B22)	(B23, B29, B8, B15, B33, B20, B21)	(B23, B30, B11, B15, B35)	(B23, B30, B11, B15, B35)	(B1, B7, B28, B11, B15, B35)
Safety Goal																											
Provides a Crossing at Guadalupe River	Assessment	no. yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Accommodates Bicycles and Pedestrians	Assessment	no. yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Community and Environmental Goal																											
Minimize Residential Displacements	Each	#	0	9	10	11	11	12	12	13	10	11	12	13	14	14	15	9	10	11	10	11	12	9	10	10	9
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	0	699	695	687	609	601	586	579	706	701	694	614	607	591	584	696	692	685	668	663	656	698	666	704	697
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-/+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Minimize Impacts to Potential Wetlands	Acres	#	0	4	4	4	4	4	3	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	4	4
Minimize Impacts to 100-yr Floodplains	Acres	#	0	57	57	57	58	58	56	56	34	34	34	26	26	24	24	32	32	32	25	25	25	32	25	34	57
Minimize Impacts to Sensitive Archeological Areas	Acres	#	0	332	311	311	405	405	391	391	270	248	248	322	322	309	309	302	281	281	263	242	242	304	262	269	332
Minimize Noise Impacts to Sensitive Receivers	Each	#	0	33	35	37	32	34	34	36	28	30	32	33	35	35	37	23	25	27	26	28	30	25	28	30	35
Minimize Impacts to Schools	Potential Impacts	no. yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avoid Impacts to Landfill	Impacts	no. yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimize Impacts to Farmlands/Ranchlands	Bisects to Large Parcels	#	0	11	10	10	7	7	7	7	11	11	11	8	8	8	8	11	11	11	10	10	10	11	10	10	10
Minimize Impacts to Commercial Properties	# Properties	#	0	3	3	3	2	2	0	0	3	3	3	2	2	0	0	3	3	3	3	3	3	3	3	3	3
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	343	344	376	270	302	260	293	294	295	327	272	304	262	294	327	327	360	278	278	311	355	304	321	370
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	0	803	810	796	790	776	787	773	803	809	796	784	770	781	767	758	765	751	747	753	739	754	739	796	796
Engineering Goal																											
Affords Potential River Crossings	Design parameter	no. yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conforms to AASHTO Design Criteria	Design parameter	no. yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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

Options:			Section C Refined Short List of Options									
Criteria by Goal	Measure	Rank	No Build*	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7	Route 8	Route 9**
				(C1, C5, C16)	(C1, C5, C18)	(C2, C5, C16)	(C2, C5, C16)	(C20, C5, C16)	(C20, C5, C18)	(C1, C5, C21)	(C2, C5, C21)	(C20, C5, C21)
Safety Goal												
Provides a Crossing at Guadalupe River	Assessment	no, yes	No	Yes	Yes	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	Yes	Yes
Accommodates Bicycles and Pedestrians	Assessment	no, yes	No	Yes	Yes	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	Yes	Yes
Offers Long-Term Expansion Potential for Future Needs	Assessment	no, yes	No	Yes	Yes	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	Yes	Yes
Economic Development Goal												
Avoid Impacts to Future Airport Expansion	Avoids Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Community and Environmental Goal												
Minimize Residential Displacements	Each	#	0	3	4	2	3	2	3	3	2	2
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	0	318	317	366	365	367	365	315	363	363
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	+	+	+	+	+	+	+	+	+
Minimize Impacts to Potential Wetlands	Acres	#	0	1	0	1	0	2	0.5	1	1	1
Minimize Impacts to 100-yr Floodplains	Acres	#	0	33	26	33	26	33	26	24	24	24
Minimize Impacts to Sensitive Archeological Areas	Acres	#	0	46	46	46	46	46	46	46	46	46
Minimize Noise Impacts to Sensitive Receivers	Each	#	0	21	21	18	18	18	18	21	18	18
Minimize Impacts to Schools	Potential Impacts	no, yes	Yes	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	Yes	Yes
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no, yes	Yes	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	Yes	Yes
Avoid Impacts to Landfill	Impacts	no, yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimize Impacts to Farmlands/Ranchlands	Bisects to Large Parcels	#	0	2	2	2	2	2	2	2	2	2
Minimize Impacts to Commercial Properties	# Properties	#	0	0	0	0	0	0	0	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	73	73	68	68	63	63	73	68	63
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	0	47	47	47	47	47	47	47	47	47
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	0	60	60	6	6	9	9	60	6	9
Engineering Goal												
Affords Potential River Crossings	Design parameter	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conforms to AASHTO Design Criteria	Design parameter	no, yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cost Effectiveness Goal***												

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** Study Recommendation Route

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SCREENING MATRIX**

Criteria by Goal	Measure	Option:		No Build*	Comments
		R	a		
		n	n		
		k			
Safety Goal					
Provides a Crossing at Guadalupe River	Assessment	no. yes		No	Does not provide a crossing at the Guadalupe River
Reduces Public Safety Delays (police, fire, EMS)	Assessment	no. yes		No	Does not reduce public safety delays
Accommodates Bicycles and Pedestrians	Assessment	no. yes		No	Does not accommodate bicycles and pedestrians
Mobility Goal					
Provides Relief Route for Congested Areas	Assessment	no. yes		No	Does not provide relief routes for congested areas
Offers Long-Term Expansion Potential for Future Needs	Assessment	no. yes		No	Does not offer 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 futures airport expansion
Community and Environmental Goal					
Minimize Residential Displacements	Each	#		0	No residential displacements
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#		0	No impacts to vegetation/wildlife habitat
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+		+	No impacts to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#		0	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#		0	No impacts to 100-yr floodplains
Minimize Impacts to Sensitive Archeological Areas	Acres	#		0	No impacts to sensitive archeological areas
Minimize Noise Impacts to Sensitive Receivers	Each	#		0	No noise impacts to sensitive receivers
Minimize Impacts to Schools	Potential Impacts	no. yes		Yes	No impacts to schools
Avoid Cemeteries and Prehistoric Burial Sites	Impacts	no. yes		Yes	Avoids cemeteries and prehistoric burial sites
Avoid Impacts to Public Parks/Recreational Facilities	Impacts	no. yes		Yes	Avoids impacts to parks/recreational facilities
Avoid Impacts to Historic Resources	Displacements	no. yes		Yes	Avoids impacts to historic resources
Avoid Impacts to Landfill	Impacts	no. yes		Yes	Avoids impacts to landfill
Minimize Impacts to Farmlands/Ranchlands	Bisects to Large Parcels	#		0	No impacts to farmlands/ranchlands
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 impacts to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+		+	No impacts to potential 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	#		0	No impacts to prime or unique farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#		0	No impacts to potential Golden-cheeked Warbler habitat
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#		0	No impacts to potential sensitive geologic areas
Engineering Goal					
Affords Potential River Crossings	Design parameter	no. yes		No	Does not afford potential river crossings
Conforms to AASHTO Design Criteria	Design parameter	no. yes		No	Does not conform to AASHTO design criteria
Cost Effectiveness Goal***					
Notes					
The No Build option does not meet the purpose and need of the New Bruanfels Outer Loop Study.					

* 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	Rank	Options:	Comments
			A 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	# of Residents	#	3	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	714	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impacts to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	0.5	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	120	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	564	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	4	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 to Large Parcels	#	4	Quantities calculated from GIS export. ROUTE A1 HAS THE LEAST IMPACTS TO FARMLANDS/RANCHLANDS.
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 impact to major utility features
Minimize Impacts to Civic Organizations	Each	-, +	+	No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	-	Impacts potential 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	#	120	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	270	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	553	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: A13, A14, A10 ROUTE A1 IS THE STUDY RECOMMENDATION BECAUSE IT HAS THE LEAST IMPACTS TO COMMUNITY CONSTRAINTS.				
* 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:		A	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	# of Residents	#	2	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	686	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	122	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	503	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	3	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 to Large Parcels	#	6	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0	No impact to commercial properties
Avoids Impacts to Major Capital Improvement Projects	Avoids Impacts	-, +	+	No impact to planned capital improvement projects
Minimize Impacts to Major Utility Features	Assessment	-, +	+	No impact to major utility features
Minimize Impacts to Civic Organizations	Each	-, +	+	No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-, +	-	Impacts potential 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	#	121	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	222	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	568	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: A13, A6, A8				

* 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:		A	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	# of Residents	#	2	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	673	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	132	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	575	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	3	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 to Large Parcels	#	5	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 impact to major utility features
Minimize Impacts to Civic Organizations	Each	-,+	+	No impact to civic organizations
Minimize Impacts Potential Environmental Justice Areas	Potential Impact	-,+	-	Impacts potential 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	#	111	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	223	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	562	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: A13, A14, A15, A8				

* 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:		B	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	# of Residents	#	9	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	699	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	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	#	332	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	33	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 to Large Parcels	#	11	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	343	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	803	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B6, B34, B8, B15, B31, B22				

* 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:		B	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	# of Residents	#	10	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	695	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	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	#	311	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	35	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	344	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	810	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B6, B34, B8, B15, B33, B20, B32, B22				

* 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:		B	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	# of Residents	#	11	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	687	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	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	#	311	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	37	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	376	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	796	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B6, B34, B8, B15, B33, B20, B21				

* 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	Options:		Route 4	Comments
		R	a		
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	# of Residents	#		11	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#		609	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+		+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#		4	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#		58	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#		405	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#		32	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 to Large Parcels	#		7	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#		2	Impacts Angler's Inn and River Road Camp
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 potential 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	#		0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#		270	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#		790	Quantities calculated from GIS export.
Engineering Goal					
Affords Potential River Crossings	Design parameter	no.	yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no.	yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: B1, B6, B9, B12, B17, B19, B20, B32, B22					

* 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	B			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	# of Residents	#	12			Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	601			Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+			No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4			Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	58			Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	405			Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	34			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 to Large Parcels	#	7			Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	2			Impacts Angler's Inn and River Road Camp
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 potential 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	#	0			No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	302			Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	776			Quantities calculated from GIS export.
Engineering Goal						
Affords Potential River Crossings	Design parameter	no. yes	Yes			Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes			Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: B1, B6, B9, B12, B17, B19, B20, B21						

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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	Options:		B	Comments
	Measure	R a n k	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	# of Residents	#	12	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	586	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	56	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	391	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	34	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 to Large Parcels	#	7	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0	No impacts 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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	260	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	787	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B6, B9, B27, B14, B19, B20, B32, B22				

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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	Options:		B	Comments
	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	# of Residents	#	13	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	579	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	56	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	391	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	36	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 to Large Parcels	#	7	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	0	No impacts 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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	293	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	773	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B6, B9, B27, B14, B19, B20, B21				

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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:		B	Comments
	Measure	R a n k	Route 8	
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	# of Residents	#	10	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	706	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	34	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	270	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	28	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 to Large Parcels	#	11	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	294	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	803	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B11, B15, B31, B22				

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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:		B	Comments
	Measure	R a n k	Route 9	
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	# of Residents	#	11	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	701	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	34	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	248	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	30	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 to Large Parcels	#	11	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	295	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	809	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B11, B15, B33, B20, B32, B22				

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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:		B	Comments
	Measure	R a n k	Route 10	
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	# of Residents	#	12	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	694	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	34	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	248	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	32	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 to Large Parcels	#	11	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	327	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	796	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B11, B15, B33, B20, B21				

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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	Options:		B	Comments
	Measure	R a n k	Route 11	
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	# of Residents	#	13	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	614	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	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	#	322	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	33	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 to Large Parcels	#	8	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	2	Impacts River Road Camp and Angler's Inn
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	272	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	784	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B10, B26, B17, B19, B20, B32, B22				

* 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:		B	Comments
	Measure	R a n k	Route 12	
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	# of Residents	#	14	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	607	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	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	#	322	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	35	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 to Large Parcels	#	8	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	2	Impacts River Road Camp and Angler's Inn
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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	304	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	770	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B10, B26, B17, B19, B20, B21				

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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	Options:		B	Comments
	Measure	R a n k	Route 13	
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	# of Residents	#	14	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	591	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	24	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	309	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	35	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 to Large Parcels	#	8	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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	262	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	781	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B10, B25, B14, B19, B20, B32, B22				

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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:		B	Comments
	Measure	R a n k	Route 14	
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	# of Residents	#	15	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	584	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	24	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	309	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	37	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 to Large Parcels	#	8	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 potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	294	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	767	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B1, B7, B28, B10, B25, B14, B19, B20, B21				
* 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	B		Comments
			Route 15		
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	# of Residents	#	9		Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	696		Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+		No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3		Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	32		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	302		Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	23		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 to Large Parcels	#	11		Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3		Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0		No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	327		Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	758		Quantities calculated from GIS export.
Engineering Goal					
Affords Potential River Crossings	Design parameter	no. yes	Yes		Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes		Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: B23, B29, B8, B15, B31, B22					

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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			Options:		Route 16	Comments
			Measure	R a n k		
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	# of Residents	#	10		Quantities calculated from GIS export.	
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	692		Quantities calculated from GIS export.	
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+		No impact to hazardous material sites	
Minimize Impacts to Potential Wetlands	Acres	#	3		Quantities calculated from GIS export.	
Minimize Impacts to 100-yr Floodplains	Acres	#	32		Quantities calculated from GIS export.	
Minimize Impacts to Sensitive Archeological Areas	Acres	#	281		Quantities calculated from GIS export.	
Minimize Noise Impacts to Sensitive Receivers	Each	#	25		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 to Large Parcels	#	11		Quantities calculated from GIS export.	
Minimize Impacts to Commercial Properties	# Properties	#	3		Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store	
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 impacts to potential 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	#	0		No impacts to Prime or Unique Farmlands	
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	327		Quantities calculated from GIS export.	
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	765		Quantities calculated from GIS export.	
Engineering Goal						
Affords Potential River Crossings	Design parameter	no, yes	Yes		Affords potential river crossing	
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		Conforms to AASHTO Design Criteria	
Cost Effectiveness Goal***						
Notes						
This alternative is a combination of: B23, B29, B8, B15, B33, B20, B32, B22						

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** Study Recommendation Route

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

			Options:		
Criteria by Goal	Measure	R a n k	B		Comments
			Route 17		
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	# of Residents	#	11		Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	685		Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+		No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3		Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	32		Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	281		Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	27		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 to Large Parcels	#	11		Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3		Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0		No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	360		Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	751		Quantities calculated from GIS export.
Engineering Goal					
Affords Potential River Crossings	Design parameter	no, yes	Yes		Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes		Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***					
Notes					
This alternative is a combination of: B23, B29, B8, B15, B33, B20, B21					

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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:		B	Comments
	Measure	R a n k	Route 18	
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	# of Residents	#	10	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	668	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	263	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	26	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	278	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	747	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B31, B22				

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** Study Recommendation Route

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

Options:			B	Comments
Criteria by Goal	Measure	R a n k	Route 19	
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	# of Residents	#	11	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	663	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	242	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	28	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	278	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	753	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B33, B20, B32, B22				

* 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:		B	Comments
	Measure	R a n k	Route 20	
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	# of Residents	#	12	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	656	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	242	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	30	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	311	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	739	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B33, B20, B21				

* 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:		B	Comments
	Measure	R a n k	Route 21**	
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	# of Residents	#	9	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	698	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	32	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	304	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	25	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 to Large Parcels	#	11	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	355	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	754	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B33, B20, B21 ROUTE B21 IS THE STUDY RECOMMENDATION BECAUSE IT HAS THE LEAST RESIDENTIAL DISPLACEMENTS				
* 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:		B	Comments
	Measure	R a n k	Route 22	
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	# of Residents	#	10	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	666	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	3	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	262	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	28	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	304	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	739	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B33, B20, B21				

* 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:		B	Comments
	Measure	R a n k	Route 23	
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	# of Residents	#	10	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	704	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	34	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	269	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	30	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	321	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	796	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B33, B20, B21				

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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	Options:		B	Comments
	Measure	R a n k	Route 24	
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	# of Residents	#	9	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	697	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	4	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	#	332	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	35	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 to Large Parcels	#	10	Quantities calculated from GIS export.
Minimize Impacts to Commercial Properties	# Properties	#	3	Impacts Roy's, 2nd Crossing Camp, and Guadalupe General Store
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 impacts to potential 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	#	0	No impacts to Prime or Unique Farmlands
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	370	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	796	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: B23, B30, B28, B11, B15, B33, B20, B21				

* 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:		C	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	# of Residents	#	3	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	318	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-,+	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	33	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	21	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 to Large Parcels	#	2	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 potential 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	#	73	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	60	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no, yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no, yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C1, C5, C16				

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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	Option:		C	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	# of Residents	#	4	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	317	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	0	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	21	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 to Large Parcels	#	2	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 to potential 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	#	73	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	60	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C1, C5, C15 ROUTE C2 IS THE STUDY RECOMMENDATION BECAUSE IT HAS THE LEAST RESIDENTIAL DISPLACEMENTS.				

* 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:		C	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	# of Residents	#	2	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	366	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	Quantities calculated from GIS export.
Minimize Impacts to 100-yr Floodplains	Acres	#	33	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	18	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 to Large Parcels	#	2	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 to potential 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	#	68	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	6	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C16				

* 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:		C	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	# of Residents	#	3	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	365	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	0	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	18	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 to Large Parcels	#	2	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 to potential 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	#	68	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	6	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C15				

* 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:		C	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	# of Residents	#	2	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	367	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1.5	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	33	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	18	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 to Large Parcels	#	2	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 to potential 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	#	63	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	9	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C15				

* 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:		C	Comments
	Measure	R a n k	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	# of Residents	#	3	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	365	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	0.5	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	25	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	18	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 to Large Parcels	#	2	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 to potential 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	#	63	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	9	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C15				

* 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:		C	Comments
	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	# of Residents	#	3	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	315	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	24	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	21	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 to Large Parcels	#	2	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 to potential 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	#	73	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	60	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C15				

* 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:		C	Comments
	Measure	R a n k	Route 8	
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	# of Residents	#	2	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	363	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	24	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	18	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 to Large Parcels	#	2	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 to potential 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	#	68	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	6	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C15				

* 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:		C	Comments
	Measure	R a n k	Route 9**	
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	# of Residents	#	2	Quantities calculated from GIS export.
Minimize Impacts to Vegetation/Wildlife Habitat	Acres	#	363	Quantities calculated from GIS export.
Minimize Impacts to Hazardous Material Sites	# HazMat Sites	-, +	+	No impact to hazardous material sites
Minimize Impacts to Potential Wetlands	Acres	#	1	No impacts to wetlands
Minimize Impacts to 100-yr Floodplains	Acres	#	24	Quantities calculated from GIS export.
Minimize Impacts to Sensitive Archeological Areas	Acres	#	46	Quantities calculated from GIS export.
Minimize Noise Impacts to Sensitive Receivers	Each	#	18	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 to Large Parcels	#	2	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 to potential 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	#	63	Quantities calculated from GIS export.
Minimize Impacts to Potential Golden-cheeked Warbler Habitat	Acres	#	47	Quantities calculated from GIS export.
Minimize Impacts to Potential Sensitive Geologic Areas	Acres	#	9	Quantities calculated from GIS export.
Engineering Goal				
Affords Potential River Crossings	Design parameter	no. yes	Yes	Affords potential river crossing
Conforms to AASHTO Design Criteria	Design parameter	no. yes	Yes	Conforms to AASHTO Design Criteria
Cost Effectiveness Goal***				
Notes				
This alternative is a combination of: C2, C5, C15 ROUTE C9 IS THE STUDY RECOMMENDATION BECAUSE IT HAS THE LEAST IMPACTS TO COMMUNITY CONSTRAINTS.				

* 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.