QUALITATIVE SCREENING ANALYSIS

Santa Fe Interchange Alternatives

QUALITATIVE SCREENING ANALYSIS		Santa Fe Interchange Alternatives "Side-by-Side Analysis" Graphical matrix for visual check, applying the filters to the alternatives																																	
		No Action			Improved Diamond			Single Point Urban with two Flyovers			Southwest Pasela			Southwest Pasela with One Flyover			Southwest Pasela with Two Flyovers			Improved Diamond with Two Flyovers			8-Level Diamond (Option A)			8-Level Diamond (Option B)			Split Diamond		
Qualification	Unit of Measure																																		
Traffic Operations																																			
Optimizes Interchange Traffic Operations	Level of Service - Loop Movements		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS
	1) Eastbound Loop Movement of Santa Fe	●	F	F	◒	D	D	○	F/A	F/A	○	B	A	○	A	A	○	B	B	○	A	A	○	C	C	○	C	C	○	C	C	○	D	C
	3) Westbound Loop Movement of Santa Fe		F	F		C	C		C	B		C	D		A	A		B	B		B	A		C	C		C	C		C	C		C	D
	2) Eastbound Loop Movement of the Island		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		C	C
	4) Westbound Loop Movement of the Island		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		C	C
Optimizes Adjacent Intersection Traffic Operations	Level of Service - Local Roadway Intersections		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS		A.M. LOS	P.M. LOS
	1) Santa Fe and Cerrillos	●	F	F	◒	D	F	◒	E	E	◒	E	E	◒	E	E	◒	C	E	◒	E	E	○	B	C	○	B	C	○	B	C		C	E
	2) Santa Fe and the Island		B	C		B	B		B	B		A	B		B	B		B	B		B	B		B	B		A	B		A	B		C	C
	3) Cerrillos and Governor Lane		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		F/A	F/A		B	B
Reliability																																			
Mobility breakdowns, upgrades, and construction are possible	Construction upgrades and Maintenance are possible for the future	●	No Construction		●	No Construction		◒	Construction 1 beyond Phase		◒	Construction 1 beyond Phase		◒	Construction 2 beyond Phase.		◒	Construction 2 beyond Phase.		◒	Construction 1 beyond Phase		●	Requires 1 additional beyond Phase of Construction		●	No Construction		●	Requires 2 Additional Upgrades		
No change to current mobility/safety conditions	Number of Times Exceptions Occur	●	None		●	None		○	2 Times Per Week		◒	1 Time Per Week		○	2 Times Per Week		○	2 Times Per Week		○	2 Times Per Week		●	None		●	None		●	None			
Implementation																																			
Minimizes property risk	Low Construction Cost	○	3		○	$200 - $300		●	$200 - $300		○	$300 - $400		◒	$300 - $400		●	$300 - $400		●	$400 - $500		●	$400 - $500		●	$400 - $500		◒	$400 - $600		
	Right-of-Way Acquisition Cost	○	3		○	$81 Million		◒	$200 Million		●	$200 Million		●	$200 Million		●	$200 Million		◒	$270 Million		○	$270 Million		●	$81 Million		◒	$200 Million		
Provides a constructible solution	Relative complexity in overall construction phasing and method of handling traffic	○	Not a solution		◒	Lanes to bridge over Cliff Drive from existing lanes; widely used by DOT for bridging bridges in stages; phases under traffic		○	4 Flyover bridges/difficult to construct and maintain traffic. If phases can be constructed and scaled to traffic		◒	Long period. Liked Cerrillos constructed and traffic diverted to existing bridges. Complex construction and staging. Requires 2 additional bridges (Cerrillos/Governor Lane)		◒	Long period. Liked Cerrillos constructed and traffic diverted to existing bridges. Complex construction and staging. Requires 2 additional bridges (Cerrillos/Governor Lane)		○	Long period. Liked Cerrillos constructed and traffic diverted to existing bridges. Complex construction and staging. Requires 2 additional bridges (Cerrillos/Governor Lane)		○	If phases can be constructed and scaled to traffic - Lanes to Bridge over Cliff Drive with two existing bridges (Cerrillos/Governor Lane)		○	If phases can be constructed and scaled to traffic - Lanes to Bridge over Cliff Drive with two existing bridges (Cerrillos/Governor Lane)		○	If phases can be constructed and scaled to traffic - Lanes to Bridge over Cliff Drive with two existing bridges (Cerrillos/Governor Lane)		◒	Should not be necessary if all roads to be complete constructed at the Island		◒	Should not be necessary if all roads to be complete constructed at the Island		◒	Multi-phased construction/ complex phasing to provide options for alternate movements while lanes to be open are constructed
Provides long-term practicality/implementation	Relative ability to implement and construct alternative in phases/construction packages; cost effective and can be maintained/operated	●	Not implementable		●	None - Will be constructed as a whole		○	Flyovers can be implemented in future		◒	Long period. Liked Cerrillos constructed and traffic diverted to existing bridges. Complex construction and staging. Requires 2 additional bridges (Cerrillos/Governor Lane)		○	Long period. Liked Cerrillos constructed. Flyovers can be implemented in future		○	Long period. Liked Cerrillos constructed. Flyovers can be implemented in future		○	Flyovers can be implemented in future		●	Less than a decade to complete construction of Island		◒	Less than a decade to complete construction of Island. Multi-phased		●	None - Should be constructed as a whole
Environment																																			
Note: Values in cells are for the overall project and may not exactly correspond to the values for the individual components described in the text. Values are rounded to the nearest 5 acres, 5 residences, 5 businesses, 1 historic resource, 1 park, 1 school, 1 church, 1 cemetery, 1 archeological resource, 1 hazardous materials site, 1 wetland, 1 floodplain, 1 wildlife habitat, 1 visual resource, 1 noise receptor, 1 air quality receptor, 1 water quality receptor, 1 section 4(f) resource, 1 section 6(f) resource, 1 environmental justice community, 1 utility, 1 railroad, 1 transportation facility, 1 bicycle/pedestrian facility, 1 transit facility, 1 emergency service facility, 1 school bus facility, 1 construction cost, 1 right-of-way cost, 1 relocation cost, 1 total project cost, 1 operations and maintenance cost, 1 user benefit, 1 travel time savings, 1 vehicle hours traveled, 1 vehicle miles traveled, 1 accident reduction, 1 benefit/cost ratio, 1 net present value, 1 internal rate of return, 1 payback period, 1 environmental impact, 1 mitigation cost, 1 permit, 1 agency coordination, 1 public involvement, 1 hearing, 1 comment, 1 response, 1 objection, 1 support, 1 opposition, 1 neutral, 1 undecided, 1 unknown, 1 to be determined, 1 to be resolved, 1 to be mitigated, 1 to be avoided, 1 to be minimized, 1 to be enhanced, 1 to be restored, 1 to be preserved, 1 to be created, 1 to be replaced, 1 to be removed, 1 to be relocated, 1 to be abandoned, 1 to be demolished, 1 to be constructed, 1 to be operated, 1 to be maintained, 1 to be improved, 1 to be studied, 1 to be designed, 1 to be built, 1 to be opened, 1 to be closed, 1 to be used, 1 to be owned, 1 to be managed, 1 to be funded, 1 to be scheduled, 1 to be completed, 1 to be delayed, 1 to be accelerated, 1 to be extended, 1 to be shortened, 1 to be widened, 1 to be narrowed, 1 to be raised, 1 to be lowered, 1 to be realigned