

Complete Streets Analysis: California Ave - Hook Alternative

Complete Streets Analysis for design alternative.

No.	Complete Streets Element Description	Included in Project? (Y/N) or Not Feasible (NF)	Additional Cost	Schedule Delay (Months)	Comments/Justification
1	Pave Shoulders (201.010, .015)	Yes	\$101.04/cy	-	-
2	Pedestrian Crossings (201.010, .015)	Yes	\$2000/intersection	-	-
3	Roundabouts (201.010, .015)	No	-	-	Not Part of this Alternative Design. Roundabouts lower LOS
4	Widen Shoulders (201.010, .015)	NF	-	-	Due to use of ROW constraints, widening of shoulders is not feasible
5	New Pedestrian Refuge Islands (201.310, .010, .015)	Yes	\$3100/island	-	-
6	Restripe Bikeways (201.310)	No	-	-	Bikeways are being included as part of the project
7	New/Modified Crosswalks (201.010, .015)	Yes	\$2000/intersection	-	-
8	Shoulders - New & Widening (201.310, .010, .015)	Yes	\$101.04/cy + additional cut/fill	-	-
9	Non-motorized overcrossing/undercrossing for accessibility (201.310)	NF	-	-	Ped & Bike Access is already being given
10	Bike Box (201.999) - CSC	No	-	-	Class II Bike Lanes are being installed w/project
11	Bike Parking (201.999) - CSC	No	-	-	No current bike parking facility on existing conditions
12	Bridge Access - bike, Ped, ADA (201.999) - CSC	Yes	\$5000/ADA Ramp	-	California Ave Bridge includes Sidewalk & Class II Bike Lanes
13	Bus Bay / turnout / Pull out (201.999) - CSC	NF	-	-	Not enough street width. No known transit stops in this area
14	Class I Bike Paths (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
15	Class II Bike Lane (201.999) - CSC	Yes	\$84,480/mi	-	Included w/project
16	Class III Bike Routes (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
17	Class IV Separated Bikeway (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
18	Bike Lane Gap Closure (201.999) - CSC	NF	-	-	No existing GAP closure is identified
19	Conflict zone green paint (201.999) - CSC	Yes	\$15/sf	-	-
20	Crossing Islands (201.999) - CSC	Yes	\$3100/island	-	Pedestrians will not cross more than 4 lanes
21	Enhanced Crosswalk Visibility (201.999) - CSC	Yes	\$7000/intersection	-	Additional Modification in Striping
22	Crosswalks (201.999) - CSC	Yes	\$2000/intersection	-	Included w/ project
23	Curb Extensions/bulb-out (201.999) - CSC	NF	-	-	Would reduce street width
24	Lane Narrowing (201.999) - CSC	NF	-	-	Would reduce street width
25	Lane Reduction (Road Diet) (201.999) - CSC	NF	-	-	Would lower LOS
26	LED Lighting (201.999) - CSC	No	-	-	-
27	Overpass/Underpass - Pedestrian & Bike (201.999) - CSC	NF	-	-	Ped & Bike Access is already being given
28	Park and Ride Lot (201.999) - CSC	No	-	-	Not included in alternative
29	Install Shade for Pedestrian access (201.999) - CSC	No	-	-	-
30	Pedestrian access / sidewalks (201.999) - CSC	Yes	N/A	-	-
31	Vegetative Street Swale (201.999) - CSC	No	-	-	Part of aesthetics
32	Vegetative Buffer Between Cars/ Bikes/Peds (201.999) - CSC	No	-	-	Not included in this Alternative
33	Transit Stop Improvements (201.999) - CSC	NF	-	-	No known transit stops in this area
34	New Transit Stops (201.999) - CSC	NF	-	-	NF b/c this is an interchange; therefore, not a point of interest for transit stops
35	Class II Buffered Bike Lanes (201.999)	Yes	N/A	-	-
36	Shared-Lane Markings (201.999)	NF	-	-	Class II Bike Lanes are being installed w/project
37	Bicycle Detection Loops (201.999)	No	-	-	Cost depends on what type of structure is being installed
38	Bicycle-tolerable rumble strips (201.999)	No	-	-	Pavement Treatment done varies in cost
39	Bicycle-tolerable drainage grates (201.999)	Yes	\$1500 EA	-	Gates would just be installed during construction
40	Bicycle Signals (201.999)	NF	-	-	New Vehicle heads, wiring, additional poles, and signal timing would need to be installed to accommodate, only feasible if large amounts of Auto/Bicycle ROW conflicts exist.
41	Two-Stage Turn Queue Boxes (201.999)	NF	-	-	Need is unknown for this specific improvement. Collision Analysis including AUTO/BIKE would need to justify two stage turning boxes.
42	Leading Pedestrian Interval (201.999)	Yes	-	-	-
43	Yield Lines (201.999)	NF	-	-	Alternative does not include midblock Crossings or uncontrolled intersections
44	Bicycle and Pedestrian Signage (201.999)	Yes	\$500/S&P for any additional sign	-	-
45	Rectangular Rapid Flashing Beacon (201.999)	NF	-	-	Intersection will use signal control
46	Curb radius reduction (eliminate free right turn) (201.999)	NF	-	-	Would lower LOS
47	Parking Reduction (201.999)	NF	-	-	No current parking facility on existing conditions
48	Boarding Island (201.999)	NF	-	-	NF b/c this is an interchange; therefore, not a point of interest for transit stops; No known transit stops in this area
49	Transit Traveler Information (201.999)	No	-	-	No known transit stops in this area
50	Transit Signal Priority (201.999)	No	-	-	No known transit stops in this area
51	Transit-Only Lanes (201.999)	NF	-	-	Would lower LOS
52	Bicycle signal priority (201.999)	No	-	-	There is only one intersection in the project limit which bike movement will cross
53	Landscaped Areas	No	-	-	On Sidewalks, Tree Well Installation, and planter costs varies, depending on size, and what is being installed.
54	Bike/Pedestrian Path Gap Closure (201.999)	Yes	\$54/sf + additional cut/fill cost	-	-

Complete Streets Analysis: California Ave - Diamond Alternative

Complete Streets Analysis for design alternative.

No.	Complete Streets Element Description	Included in Project? (Y/N) or Not Feasible (NF)	Additional Cost	Schedule Delay (Months)	Comments/Justification
1	Pave Shoulders (201.010, .015)	Yes	\$101.04/cy	-	-
2	Pedestrian Crossings (201.010, .015)	Yes	\$2000/intersection	-	-
3	Roundabouts (201.010, .015)	No	-	-	Included in other alternative design.
4	Widen Shoulders (201.010, .015)	NF	-	-	Due to use of Retaining Wall, Right hand shoulder is constrained (as-is). Expansion to the left may be feasible however
5	New Pedestrian Refuge Islands (201.310, .010, .015)	Yes	\$3100/island	-	-
6	Restripe Bikeways (201.310)	No	-	-	Bikeways are being installed as part of project
7	New/Modified Crosswalks (201.010, .015)	Yes	\$2000/intersection	-	-
8	Shoulders - New & Widening (201.310, .010, .015)	Yes	\$101.04/cy + additional cut/fill	-	-
9	Non-motorized overcrossing/undercrossing for accessibility (201.310)	NF	-	-	Ped & Bike Access is already being given
10	Bike Box (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$2000 per intersection, with no significant delay
11	Bike Parking (201.999) - CSC	No	-	-	NF for bicyclists to want to park on street, but bike racks can be installed within public ROW, at \$800/rack (5spaces)
12	Bridge Access - bike, Ped, ADA (201.999) - CSC	Yes	\$5000/ADA Ramp	-	-
13	Bus Bay / turnout / Pull out (201.999) - CSC	NF	-	-	Would limit travel way, not enough street width, no known transit stops in area.
14	Class II Bike Paths (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
15	Class II Bike Lane (201.999) - CSC	Yes	\$84,480/mi	-	-
16	Class III Bike Routes (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
17	Class IV Separated Bikeway (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
18	Bike Lane Gap Closure (201.999) - CSC	NF	-	-	No existing GAP closure is identified
19	Conflict zone green paint (201.999) - CSC	Yes	\$15/sf	-	-
20	Crossing Islands (201.999) - CSC	Yes	\$3100/island	-	-
21	Enhanced Crosswalk Visibility (201.999) - CSC	Yes	\$7000/intersection	-	-
22	Crosswalks (201.999) - CSC	Yes	\$2000/intersection	-	-
23	Curb Extensions/bulb-out (201.999) - CSC	NF	-	-	NF would reduce street width
24	Lane Narrowing (201.999) - CSC	NF	-	-	NF would reduce street width
25	Lane Reduction (Road Diet) (201.999) - CSC	NF	-	-	Would lower LOS
26	LED Lighting (201.999) - CSC	No	-	-	Cost depends on how many luminaires, existing -eq, how many circuits, conduit, wiring, service pedestal, (modification of existing eq or new equipment in general)
27	Overpass/Underpass - Pedestrian & Bike (201.999) - CSC	NF	-	-	Ped & Bike access already included in design
28	Park and Ride Lot (201.999) - CSC	Yes	Included in Supplemental Work Cost	-	-
29	Install Shade for Pedestrian access (201.999) - CSC	No	-	-	Cost depends on what type of structure is being installed
30	Pedestrian access / sidewalks (201.999) - CSC	Yes	\$54/sf	-	-
31	Vegetative Street Swale (201.999) - CSC	No	-	-	Aesthetic improvements
32	Vegetative Buffer Between Cars/ Bikes/Peds (201.999) - CSC	No	-	-	Would eliminate unwarranted left turn movements, improvement need would have to be analyzed
33	Transit Stop Improvements (201.999) - CSC	NF	-	-	No known transit stops in area.
34	New Transit Stops (201.999) - CSC	NF	-	-	Since this is an interchange, not necessarily a point of interest, the need for new transit stops is NF
35	Class II Buffered Bike Lanes (201.999)	Yes	\$15.75/lf	-	-
36	Shared-Lane Markings (201.999)	NF	-	-	Class II Bike Lanes are being installed w/project
37	Bicycle Detection Loops (201.999)	Yes	\$600 EA	-	Cost depends on what type of detection the intersection uses
38	Bicycle-tolerable rumble strips (201.999)	No	-	-	Pavement Treatment done varies in cost
39	Bicycle-tolerable drainage grates (201.999)	Yes	\$1500 EA	-	-
40	Bicycle Signals (201.999)	NF	-	-	New Vehicle heads, wiring, additional poles, and signal timing would need to be installed to accommodate, only feasible if large amounts of Auto/Bicycle ROW conflicts exist.
41	Two-Stage Turn Queue Boxes (201.999)	NF	-	-	Need is unknown for this specific improvement. Collision Analysis including AUTO/BIKE would need to justify two stage turning boxes.
42	Leading Pedestrian Interval (201.999)	Yes	\$20000/intersection	-	-
43	Yield Lines (201.999)	NF	-	-	No Midblock Crossings or uncontrolled intersections
44	Bicycle and Pedestrian Signage (201.999)	Yes	\$500/S&P for any additional sign	-	-
45	Rectangular Rapid Flashing Beacon (201.999)	NF	-	-	Intersections to be signal controlled, no need for flashing beacons
46	Curb radius reduction (eliminate free right turn) (201.999)	NF	-	-	Would Hurt LOS, since the project is new, a study after the project can be done in order for future modifications if needed.
47	Parking Reduction (201.999)	No	-	-	No existing on street parking within project limits.
48	Boarding Island (201.999)	NF	-	-	Not enough SW to accommodate
49	Transit Traveler Information (201.999)	No	-	-	Information Boards/ Signs at the Park N Ride Lot
50	Transit Signal Priority (201.999)	No	-	-	Reprogramming Signal Controller about \$10,000 with a delay of 1 week
51	Transit-Only Lanes (201.999)	NF	-	-	Would Decrease LOS for all other travelers
52	Bicycle signal priority (201.999)	No	-	-	Bike users would only cross two intersections, so bike movement restriction is minimal.
53	Landscaped Areas	No	-	-	On Sidewalks, Tree Well Installation, and planter costs varies, depending on size, and what is being installed.
54	Bike/Pedestrian Path Gap Closure (201.999)	Yes	\$54/sf + additional cut/fill cost	-	-

Complete Streets Analysis: California Ave - Hybrid Alternative

Complete Streets Analysis for design alternative.

No.	Complete Streets Element Description	Included in Project? (Y/N) or Not Feasible (NF)	Additional Cost	Schedule Delay (Months)	Comments/Justification
1	Pave Shoulders (201.010, .015)	Yes	\$101.04/cy	N/A	-
2	Pedestrian Crossings (201.010, .015)	Yes	\$2000/intersection	-	-
3	Roundabouts (201.010, .015)	No	-	-	Included in other alternative design.
4	Widen Shoulders (201.010, .015)	NF	-	-	Due to use of Retaining Wall, Right hand shoulder is constrained (as-is). Expansion to the left may be feasible however
5	New Pedestrian Refuge Islands (201.310, .010, .015)	Yes	\$3100/island	-	-
6	Restripe Bikeways (201.310)	No	-	-	Bikeways are being installed as part of project
7	New/Modified Crosswalks (201.010, .015)	Yes	\$2000/intersection	N/A	-
8	Shoulders - New & Widening (201.310, .010, .015)	Yes	\$101.04/cy + additional cut/fill	-	-
9	Non-motorized overcrossing/undercrossing for accessibility (201.310)	NF	-	-	Ped & Bike Access is already being given
10	Bike Box (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$2000 per intersection, with no significant delay
11	Bike Parking (201.999) - CSC	No	-	-	NF for bicyclists to want to park on street, but bike racks can be installed within public ROW, at \$800/rack (5spaces)
12	Bridge Access - bike, Ped, ADA (201.999) - CSC	Yes	\$5000/ADA Ramp	-	-
13	Bus Bay / turnout / Pull out (201.999) - CSC	NF	-	-	Would limit travel way, not enough street width, no known transit stops in area.
14	Class I Bike Paths (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
15	Class II Bike Lane (201.999) - CSC	Yes	\$84,480/mi	-	-
16	Class III Bike Routes (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
17	Class IV Separated Bikeway (201.999) - CSC	NF	-	-	Class II Bike Lanes are being installed w/project
18	Bike Lane Gap Closure (201.999) - CSC	NF	-	-	No existing GAP closure is identified
19	Conflict zone green paint (201.999) - CSC	Yes	\$15/sf	-	-
20	Crossing Islands (201.999) - CSC	Yes	\$3100/island	-	-
21	Enhanced Crosswalk Visibility (201.999) - CSC	Yes	\$7000/intersection	-	-
22	Crosswalks (201.999) - CSC	Yes	\$2000/intersection	-	-
23	Curb Extensions/bulb-out (201.999) - CSC	NF	-	-	NF would reduce street width
24	Lane Narrowing (201.999) - CSC	NF	-	-	NF would reduce street width
25	Lane Reduction (Road Diet) (201.999) - CSC	NF	-	-	Would lower LOS
26	LED Lighting (201.999) - CSC	No	-	-	Cost depends on how many luminaires, existing -eq, how many circuits, conduit, wiring, service pedestal, (modification of existing eq or new equipment in general)
27	Overpass/Underpass - Pedestrian & Bike (201.999) - CSC	NF	-	-	Ped & Bike access already included in design
28	Park and Ride Lot (201.999) - CSC	Yes	Included in Supplemental Work Cost	-	-
29	Install Shade for Pedestrian access (201.999) - CSC	No	-	-	Cost depends on what type of structure is being installed
30	Pedestrian access / sidewalks (201.999) - CSC	Yes	\$54/sf	-	-
31	Vegetative Street Swale (201.999) - CSC	No	-	-	Aesthetic improvements
32	Vegetative Buffer Between Cars/ Bikes/Peds (201.999) - CSC	No	-	-	Would eliminate unwarranted left turn movements, improvement need would have to be analyzed
33	Transit Stop Improvements (201.999) - CSC	NF	-	-	No known transit stops in area.
34	New Transit Stops (201.999) - CSC	NF	-	-	Since this is an interchange, not necessarily a point of interest, the need for new transit stops is NF
35	Class II Buffered Bike Lanes (201.999)	Yes	\$15.75/lf	-	-
36	Shared-Lane Markings (201.999)	NF	-	-	Class II Bike Lanes are being installed w/project
37	Bicycle Detection Loops (201.999)	Yes	\$600 EA	-	Cost depends on what type of detection the intersection uses
38	Bicycle-tolerable rumble strips (201.999)	No	-	-	Pavement Treatment done varies in cost
39	Bicycle-tolerable drainage grates (201.999)	Yes	\$1500 EA	-	-
40	Bicycle Signals (201.999)	NF	-	-	New Vehicle heads, wiring, additional poles, and signal timing would need to be installed to accommodate, only feasible if large amounts of Auto/Bicycle ROW conflicts exist.
41	Two-Stage Turn Queue Boxes (201.999)	NF	-	-	Need is unknown for this specific improvement. Collision Analysis including AUTO/BIKE would need to justify two stage turning boxes.
42	Leading Pedestrian Interval (201.999)	Yes	\$20000/intersection	-	-
43	Yield Lines (201.999)	NF	-	-	No Midblock Crossings or uncontrolled intersections
44	Bicycle and Pedestrian Signage (201.999)	Yes	\$500/S&P for any additional sign	-	-
45	Rectangular Rapid Flashing Beacon (201.999)	NF	-	-	Intersections to be signal controlled, no need for flashing beacons
46	Curb radius reduction (eliminate free right turn) (201.999)	NF	-	-	Would Hurt LOS, since the project is new, a study after the project can be done in order for future modifications if needed.
47	Parking Reduction (201.999)	No	-	-	No existing on street parking within project limits.
48	Boarding Island (201.999)	NF	-	-	Not enough SW to accommodate
49	Transit Traveler Information (201.999)	No	-	-	Information Boards/ Signs at the Park N Ride Lot
50	Transit Signal Priority (201.999)	No	-	-	Reprogramming Signal Controller about \$10,000 with a delay of 1 week
51	Transit-Only Lanes (201.999)	NF	-	-	Would Decrease LOS for all other travelers
52	Bicycle signal priority (201.999)	No	-	-	Bike users would only cross two intersections , so bike movement restriction is minimal.
53	Landscaped Areas	No	-	-	On Sidewalks, Tree Well Installation, and planter costs varies, depending on size, and what is being installed.
54	Bike/Pedestrian Path Gap Closure (201.999)	Yes	\$54/sf + additional cut/fill cost	-	-

Complete Streets Analysis: Lamb Canyon Rd - Tight Diamond

Complete Streets Analysis for design alternative.

No.	Complete Streets Element Description	Included in Project? (Y/N) or Not Feasible (NF)	Additional Cost (\$1000)	Schedule Delay (Months)	Comments/Justification
1	Pave Shoulders (201.010, .015)	Yes	\$101.04/cy	-	-
2	Pedestrian Crossings (201.010, .015)	Yes	\$2000/intersection	-	NF to have pedestrian crossings on ramps, but may be needed at intersections with Lamb Canyon Rd
3	Roundabouts (201.010, .015)	No	-	-	Included in other alternative design.
4	Widen Shoulders (201.010, .015)	NF	-	-	Due to use of ROW constraints, widening of shoulders is not feasible
5	New Pedestrian Refuge Islands (201.310, .010, .015)	NF	-	-	Area is not expected to get large amounts of foot traffic, so NF
6	Restripe Bikeways (201.310)	NF	-	-	Bikeways are being installed as part of project
7	New/Modified Crosswalks (201.010, .015)	Yes	\$2000/intersection	-	-
8	Shoulders - New & Widening (201.310, .010, .015)	Yes	\$101.04/cy + additional cut/fill	-	-
9	Non-motorized overcrossing/undercrossing for accessibility (201.310)	NF	-	-	Ped & Bike Access is already being given w/construction
10	Bike Box (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$2000 per intersection, with no significant delay
11	Bike Parking (201.999) - CSC	No	-	-	NF for bicyclists to want to park on street, but bike racks can be installed within public ROW, at \$800/rack (5spaces)
12	Bridge Access - bike, Ped, ADA (201.999) - CSC	Yes	\$5000/ADA Ramp	-	-
13	Bus Bay / turnout / Pull out (201.999) - CSC	NF	-	-	Would limit travel way, not enough street width
14	Class I Bike Paths (201.999) - CSC	Yes	\$518,743	-	Sidewalk & Class I Bike Lane is being designed as part of project.
15	Class II Bike Lane (201.999) - CSC	NF	-	-	Class I Bike Path is being installed as part of project
16	Class III Bike Routes (201.999) - CSC	NF	-	-	Class I Bike Path is being installed as part of project
17	Class IV Separated Bikeway (201.999) - CSC	NF	-	-	Class I Bike Path is being installed as part of project
18	Bike Lane Gap Closure (201.999) - CSC	No	-	-	No existing GAP closure is identified
19	Conflict zone green paint (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$3000 per intersection with no significant delay
20	Crossing Islands (201.999) - CSC	NF	-	-	Street width is not large, signal timing should give crosswalk users ample time to cross, large amounts of foot traffic not expected for area.
21	Enhanced Crosswalk Visibility (201.999) - CSC	Yes	\$7000/intersection	-	-
22	Crosswalks (201.999) - CSC	Yes	\$2000/intersection	-	-
23	Curb Extensions/bulb-out (201.999) - CSC	NF	-	-	NF would reduce street width
24	Lane Narrowing (201.999) - CSC	NF	-	-	NF would reduce street width
25	Lane Reduction (Road Diet) (201.999) - CSC	NF	-	-	Would lower LOS
26	LED Lighting (201.999) - CSC	No	-	-	Cost depends on how many luminaires, existing eq, how many circuits, conduit, wiring, service pedestal (modification of existing eq or new equipment in general)
27	Overpass/Underpass - Pedestrian & Bike (201.999) - CSC	NF	-	-	Ped & Bike access already included in design
28	Park and Ride Lot (201.999) - CSC	No	-	-	On Location and Infrastructure needed to include
29	Install Shade for Pedestrian access (201.999) - CSC	No	-	-	No large pedestrian traffic is expected in area.
30	Pedestrian access / sidewalks (201.999) - CSC	Yes	\$54/sf	-	-
31	Vegetative Street Swale (201.999) - CSC	NF	-	-	Aesthetic improvements
32	Vegetative Buffer Between Cars/ Bikes/Peds (201.999) - CSC	NF	-	-	Would eliminate unwarranted left turn movements, improvement need would have to be analyzed
33	Transit Stop Improvements (201.999) - CSC	NF	-	-	No known transit stops in area
34	New Transit Stops (201.999) - CSC	NF	-	-	Since this is an interchange, not necessarily a point of interest, the need for new transit stops is NF
35	Class II Buffered Bike Lanes (201.999)	NF	-	-	Separate Class I Bike path is being installed
36	Shared-Lane Markings (201.999)	NF	-	-	Separate Class I Bike path is being installed
37	Bicycle Detection Loops (201.999)	No	-	-	Separate Class I Bike path is being installed
38	Bicycle-tolerable rumble strips (201.999)	NF	-	-	Separate Class I Bike path is being installed
39	Bicycle-tolerable drainage grates (201.999)	NF	-	-	Separate Class I Bike path is being installed
40	Bicycle Signals (201.999)	NF	-	-	Separate Class I Bike path is being installed
41	Two-Stage Turn Queue Boxes (201.999)	NF	-	-	Need is unknown for this specific improvement. Collision Analysis including AUTO/BIKE would need to justify two stage turning boxes.
42	Leading Pedestrian Interval (201.999)	Yes	\$20000/intersection	-	-
43	Yield Lines (201.999)	NF	-	-	No Midblock Crossings or uncontrolled intersections
44	Bicycle and Pedestrian Signage (201.999)	Yes	\$500/S&P for any additional sign	-	-
45	Rectangular Rapid Flashing Beacon (201.999)	NF	-	-	Intersections to be signal controlled, no need for flashing beacons
46	Curb radius reduction (eliminate free right turn) (201.999)	NF	-	-	Would Hurt LOS, since the project is new, a study after the project can be done in order for future modifications if needed.
47	Parking Reduction (201.999)	NF	-	-	On street parking analysis was not within scope of the project
48	Boarding Island (201.999)	NF	-	-	Not enough SW to accommodate
49	Transit Traveler Information (201.999)	No	-	-	Information Boards/ Signs at the Park N Ride Lot
50	Transit Signal Priority (201.999)	No	-	-	Reprogramming Signal Controller about \$10,000 with a delay of 1 week
51	Transit-Only Lanes (201.999)	NF	-	-	Would Decrease LOS for all other travelers
52	Bicycle signal priority (201.999)	NF	-	-	Bike users would only cross two intersections, so bike movement restriction is minimal.
53	Landscaped Areas	No	-	-	On Sidewalks, Tree Well Installation, and planter costs varies, depending on size, and what is being installed.
54	Bike/Pedestrian Path Gap Closure (201.999)	Yes	\$54/sf + additional cut/fill cost	-	-

Complete Streets Analysis: Lamb Canyon Rd - Spread Diamond

Complete Streets Analysis for design alternative.

No.	Complete Streets Element Description	Included in Project? (Y/N) or Not Feasible (NF)	Additional Cost	Schedule Delay (Months)	Comments/Justifications
1	Pave Shoulders (201.010,.015)	Yes	\$101.04/cy	-	-
2	Pedestrian Crossings (201.010,.015)	Yes	\$2000/intersection	-	NF to have pedestrian crossings on ramps, but may be needed at intersections with Lamb Canyon Rd
3	Roundabouts (201.010,.015)	No	-	-	Included in other alternative design.
4	Widen Shoulders (201.010,.015)	NF	-	-	Due to use of ROW constraints, widening of shoulders is not feasible
5	New Pedestrian Refuge Islands (201.310,.010,.015)	NF	-	-	Area is not expected to get large amounts of foot traffic, so NF
6	Restripe Bikeways (201.310)	NF	-	-	Bikeways are being installed as part of project
7	New/Modified Crosswalks (201.010,.015)	Yes	\$2000/intersection	-	-
8	Shoulders - New & Widening (201.310,.010,.015)	Yes	\$101.04/cy + additional cut/fill	-	-
9	Non-motorized overcrossing/undercrossing for accessibility (201.310)	NF	-	-	Ped & Bike Access is already being given w/construction
10	Bike Box (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$2000 per intersection, with no significant delay
11	Bike Parking (201.999) - CSC	No	-	-	NF for bicyclists to want to park on street, but bike racks can be installed within public ROW, at \$800/rack (5spaces)
12	Bridge Access - bike, Ped, ADA (201.999) - CSC	Yes	\$5000/ADA Ramp	-	-
13	Bus Bay / turnout / Pull out (201.999) - CSC	NF	-	-	Would limit travel way, not enough street width
14	Class I Bike Paths (201.999) - CSC	Yes	\$518,743	-	Sidewalk & Class I Bike Lane is being designed as part of project.
15	Class II Bike Lane (201.999) - CSC	NF	-	-	Class II Bike Path is being installed as part of project
16	Class III Bike Routes (201.999) - CSC	NF	-	-	Class III Bike Path is being installed as part of project
17	Class IV Separated Bikeway (201.999) - CSC	NF	-	-	Class IV Bike Path is being installed as part of project
18	Bike Lane Gap Closure (201.999) - CSC	No	-	-	No existing GAP closure is identified
19	Conflict zone green paint (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$3000 per intersection with no significant delay
20	Crossing Islands (201.999) - CSC	NF	-	-	Street width is not large, signal timing should give crosswalk users ample time to cross, large amounts of foot traffic not expected for area.
21	Enhanced Crosswalk Visibility (201.999) - CSC	Yes	\$7000/intersection	-	-
22	Crosswalks (201.999) - CSC	Yes	\$2000/intersection	-	-
23	Curb Extensions/bulb-out (201.999) - CSC	NF	-	-	NF would reduce street width
24	Lane Narrowing (201.999) - CSC	NF	-	-	NF would reduce street width
25	Lane Reduction (Road Diet) (201.999) - CSC	NF	-	-	Would lower LOS
26	LED Lighting (201.999) - CSC	No	-	-	Cost depends on how many luminaires, existing eq, how many circuits, conduit, wiring, service pedestal, (modification of existing eq or new equipment in general)
27	Overpass/Underpass - Pedestrian & Bike (201.999) - CSC	NF	-	-	Ped & Bike access already included in design
28	Park and Ride Lot (201.999) - CSC	No	-	-	On Location and Infrastructure needed to include
29	Install Shade for Pedestrian access (201.999) - CSC	No	-	-	No large pedestrian traffic is expected in area.
30	Pedestrian access / sidewalks (201.999) - CSC	Yes	\$54/sf	-	-
31	Vegetative Street Swale (201.999) - CSC	NF	-	-	Aesthetic improvements
32	Vegetative Buffer Between Cars/ Bikes/Peds (201.999) - CSC	NF	-	-	Would eliminate unwarranted left turn movements, improvement need would have to be analyzed
33	Transit Stop Improvements (201.999) - CSC	NF	-	-	No known transit stops in area
34	New Transit Stops (201.999) - CSC	NF	-	-	Since this is an interchange, not necessarily a point of interest, the need for new transit stops is NF
35	Class II Buffered Bike Lanes (201.999)	NF	-	-	Separate Class II Bike path is being installed
36	Shared-Lane Markings (201.999)	NF	-	-	Separate Class I Bike path is being installed
37	Bicycle Detection Loops (201.999)	No	-	-	Separate Class I Bike path is being installed
38	Bicycle-tolerable rumble strips (201.999)	NF	-	-	Separate Class I Bike path is being installed
39	Bicycle-tolerable drainage grates (201.999)	NF	-	-	Separate Class I Bike path is being installed
40	Bicycle Signals (201.999)	NF	-	-	Separate Class I Bike path is being installed
41	Two-Stage Turn Queue Boxes (201.999)	NF	-	-	Need is unknown for this specific improvement. Collision Analysis including AUTO/BIKE would need to justify two stage turning boxes.
42	Leading Pedestrian Interval (201.999)	Yes	\$20000/intersection	-	-
43	Yield Lines (201.999)	NF	-	-	No Midblock Crossings or uncontrolled intersections
44	Bicycle and Pedestrian Signage (201.999)	Yes	\$500/\$6P for any additional sign	-	-
45	Rectangular Rapid Flashing Beacon (201.999)	NF	-	-	Intersections to be signal controlled, no need for flashing beacons
46	Curb radius reduction (eliminate free right turn) (201.999)	NF	-	-	Would Hurt LOS, since the project is new, a study after the project can be done in order for future modifications if needed.
47	Parking Reduction (201.999)	NF	-	-	On street parking analysis was not within scope of the project
48	Boarding Island (201.999)	NF	-	-	Not enough SW to accommodate
49	Transit Traveler Information (201.999)	No	-	-	Information Boards/ Signs at the Park N Ride Lot
50	Transit Signal Priority (201.999)	No	-	-	Reprogramming Signal Controller about \$10,000 with a delay of 1 week
51	Transit-Only Lanes (201.999)	NF	-	-	Would Decrease LOS for all other travelers
52	Bicycle signal priority (201.999)	NF	-	-	Bike users would only cross two intersections, so bike movement restriction is minimal.
53	Landscaped Areas	No	-	-	On Sidewalks, Tree Well Installation, and planter costs varies, depending on size, and what is being installed.
54	Bike/Pedestrian Path Gap Closure (201.999)	Yes	\$54/sf + additional cut/fill cost	-	-

Complete Streets Analysis: Lamb Canyon Rd - Trumpet

Complete Streets Analysis for design alternative.

No.	Complete Streets Element Description	Included in Project? (Y/N) or Not Feasible (NF)	Additional Cost	Schedule Delay (Months)	Comments/Justification
1	Pave Shoulders (201.010, .015)	Yes	\$101.04/cy	-	-
2	Pedestrian Crossings (201.010, .015)	Yes	-	-	-
3	Roundabouts (201.010, .015)	No	-	-	Would lower LOS
4	Widen Shoulders (201.010, .015)	NF	-	-	Due to use of ROW constraints, widening of shoulders is not feasible
5	New Pedestrian Refuge Islands (201.310, .010, .015)	NF	-	-	Ped & Bike Access is already being given through bike path
6	Restripe Bikeways (201.310)	No	-	-	Bikeways are being included as part of the project
7	New/Modified Crosswalks (201.010, .015)	NF	-	-	Ped & Bike Access is already being given through bike path
8	Shoulders - New & Widening (201.310, .010, .015)	Yes	\$101.04/cy + additional cut/fill	-	-
9	Non-motorized overcrossing/undercrossing for accessibility (201.310)	NF	-	-	Ped & Bike Access is already being given through bike path
10	Bike Box (201.999) - CSC	No	-	-	No signalized intersections for bicyclists
11	Bike Parking (201.999) - CSC	No	-	-	No current bike parking facility on existing conditions
12	Bridge Access - bike, Ped, ADA (201.999) - CSC	No	-	-	Pedestrians will be provided access to a Class I Bike Path
13	Bus Bay / turnout / Pull out (201.999) - CSC	NF	-	-	Not enough street width; No known transit stops in this area
14	Class I Bike Paths (201.999) - CSC	Yes	\$991,971	-	-
15	Class II Bike Lane (201.999) - CSC	NF	-	-	Class I Bike Lanes are being installed w/project
16	Class III Bike Routes (201.999) - CSC	NF	-	-	Class I Bike Lanes are being installed w/project
17	Class IV Separated Bikeway (201.999) - CSC	NF	-	-	Class I Bike Lanes are being installed w/project
18	Bike Lane Gap Closure (201.999) - CSC	No	-	-	No existing GAP closure is identified
19	Conflict zone green paint (201.999) - CSC	No	-	-	Additional Modification in Striping, about \$3000 per intersection with no significant delay
20	Crossing Islands (201.999) - CSC	NF	-	-	Pedestrians will be provided access to a Class I Bike Paths; Crosswalks not included in this design
21	Enhanced Crosswalk Visibility (201.999) - CSC	No	-	-	Pedestrians will be provided access to a Class I Bike Paths; Crosswalks not included in this design
22	Crosswalks (201.999) - CSC	NF	-	-	Pedestrians will be provided access to a Class I Bike Paths
23	Curb Extensions/bulb-out (201.999) - CSC	NF	-	-	Pedestrians will be provided access to a Class I Bike Paths; Sidewalks not included in this design
24	Lane Narrowing (201.999) - CSC	NF	-	-	Would reduce street width
25	Lane Reduction (Road Diet) (201.999) - CSC	NF	-	-	Would lower LOS
26	LED Lighting (201.999) - CSC	No	-	-	No pedestrian or bicycle on ramps
27	Overpass/Underpass - Pedestrian & Bike (201.999) - CSC	NF	-	-	Class I Separate Bike Path provided
28	Park and Ride Lot (201.999) - CSC	No	-	-	Not included in this alternative
29	Install Shade for Pedestrian access (201.999) - CSC	No	-	-	Cost depends on what type of structure is being installed
30	Pedestrian access / sidewalks (201.999) - CSC	Yes	\$54/sf	-	-
31	Vegetative Street Swale (201.999) - CSC	NF	-	-	Aesthetics of project
32	Vegetative Buffer Between Cars/ Bikes/Peds (201.999) - CSC	NF	-	-	Peds & Bikes will be provided access to a Class I Bike Paths; Crosswalks not included in this design
33	Transit Stop Improvements (201.999) - CSC	NF	-	-	No known transit stops in this area
34	New Transit Stops (201.999) - CSC	NF	-	-	No known transit stops in this area
35	Class II Buffered Bike Lanes (201.999)	NF	-	-	Separate Class I bike path is being designed
36	Shared-Lane Markings (201.999)	NF	-	-	Separate Class I bike path is being designed
37	Bicycle Detection Loops (201.999)	No	-	-	Separate Class I Bike path is being installed
38	Bicycle-tolerable rumble strips (201.999)	NF	-	-	Separate bike path is being designed
39	Bicycle-tolerable drainage grates (201.999)	NF	-	-	Separate bike path is being designed
40	Bicycle Signals (201.999)	NF	-	-	Separate Class I Bike path is being installed
41	Two-Stage Turn Queue Boxes (201.999)	NF	-	-	Need is unknown for this specific improvement. Collision Analysis including AUTO/BIKE would need to justify two stage turning boxes.
42	Leading Pedestrian Interval (201.999)	NF	\$50,000/intersection	-	Pedestrians will be provided access to a Class I Bike Paths
43	Yield Lines (201.999)	NF	-	-	Pedestrians will be provided access to a Class I Bike Paths
44	Bicycle and Pedestrian Signage (201.999)	Yes	\$500/S&P for any additional sign	-	-
45	Rectangular Rapid Flashing Beacon (201.999)	NF	-	-	Peds & Bikes will be provided access to a Class I Bike Paths
46	Curb radius reduction (eliminate free right turn) (201.999)	NF	-	-	Would lower LOS
47	Parking Reduction (201.999)	NF	-	-	No current parking facility on existing conditions
48	Boarding Island (201.999)	NF	-	-	NF b/c this is an interchange; therefore, not a point of interest for transit stops
49	Transit Traveler Information (201.999)	No	-	-	No known transit stops in this area
50	Transit Signal Priority (201.999)	No	-	-	No known transit stops in this area
51	Transit-Only Lanes (201.999)	NF	-	-	Would lower LOS
52	Bicycle signal priority (201.999)	No	-	-	Separate bike path is being designed
53	Landscaped Areas	No	-	-	On Sidewalks, Tree Well Installation, and planter costs varies, depending on size, and what is being installed.
54	Bike/Pedestrian Path Gap Closure (201.999)	Yes	Included in bike path cost	-	-