DESIGN STANDARDS

Mission Canyon Bridge Studies

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PROJECT INFORMATION

Project Name	Mission Canyon Bridge Studies
Project Location	Santa Barbara, Santa Barbara County, Caltrans District 5
Project Description	Study of Mission Canyon Bridge and associated roadway alignment along Mission Canyon Road

Project Number	0824-0012		
Functional Classification	Minor Arterial	Speed Limit	Posted 35 MPH, Consider 25 MPH
Design Year	2055	Route No.	N/A
Post Miles	N/A	Project Length	0.2 Miles

REFERENCES/HIERARCHY

Abbreviation	Reference	Hierarchy
SBSD	City of Santa Barbara Construction Standard Details	Primary
SBCOEDS	Santa Barbara County Engineering Design Standards	Primary
SBPDG	Santa Barbara Pedestrian Design Guide, 2006 (Chapter 8, Pedestrian Master Plan)	Primary
GB	AASHTO Geometric Design of Highways and Streets, 2018 (7th Ed.)	Primary
CTSP	Caltrans Standard Plans, 2018	Secondary
PROWAG	Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, 2011	Secondary
RDG	AASHTO Roadside Design Guide, 2011 (4th Edition)	Secondary
HDM	Caltrans Highway Design Manual (6th Edition)	Tertiary
ADAAG	2010 ADA Standards for Accessible Design	Tertiary
CAMUTCD	California Manual on Uniform Traffic Control Devices, 2014 (Rev 4)	Tertiary

GEOMETRY

Design Element	Value	Standard (Reference Used)	Comments
HORIZONTAL			
Minimum Radii (ft.)	454 (35 mph/no superelevation) 181 (25 mph/no superelevation)	GB, Pg. 3-55, Table 3-13b	Low Speed Urban Table
Maximum Superelevation (%)	Method 2, LSU	GB, Pg. 3-55, Table 3-13b	Low Speed Urban Table
VERTICAL			
Maximum Grade (%)	7	GB, Pg. 3-130, Section 3.4.2.2.1	
Minimum Grade(%)	0.3	GB, Pg. 3-130, Section 3.4.2.2.2	
Sag Curve (Min. K Value)	49 (35 mph) 26 (25 mph)	GB, Pg. 3-176, Table 3-37	
Crest Curve (Min. K Value)	29 (35 mph) 12 (25 mph)	GB, Pg. 3-170, Table 3-35	
Minimum Vertical Clearance			

CROSS-SECTION

Design Element	Value	Standard (Reference Used)	Comments
No. of Travel Lanes	2		
Lane Width (ft.)	11		
Bike Lane Width (ft.)	5		
Pedestrian Zone (ft.)	6' (on both sides of roadway) 10' (for separate bridge structure on one side)	SBPDG for Pedestrian Zone	SBPDG will allow 6' wide walkway and requires improvements on both side of the roadway. Separate Structure on one side use HDM Chapter 1000 for 10' width on bridge
CLEAR ZONE			
Minimum Clear Zone Distance (ft.) #:# Foreslope/#:# Backslope	CURB: 3 NO CURB: 16 4:1/4:1	RDG	Based on ADT>6000 per 2018 Los Olivos Traffic Study, actual ADT of project location may differ

Accessibility

Design Element	Value	Standard (Reference Used)	Comments
Maximum Ramp Grade (%)	8.33	SBPDG, Pg. 228, Table VIII-4	
Maximum Walkway Grade (%)	5	PROWAG (R302.5)	
Maximum Landing Grade (%)	2	SBPDG, Pg. 228, Table VIII-4	

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Minimum Ramp Width (ft.)	4	SBPDG, Pg. 228, Table VIII-4	
Minimum Landing Dimensions (ft.)	4 x 4	SBPDG, Pg. 228, Table VIII-4	
Maximum Cross Slope (%)	2	SBPDG, Pg. 228, Table VIII-4	
Maximum Ramp Length (ft.)	15	PROWAG (R304.2.2)	
Minimum Width (ft.)	6	SBPDG Pedestrian Zone	
Maximum Gutter Slope (%)	5	SBPDG, Pg. 228, Table VIII-4	
Acceptable Materials	Concrete (Sidewalks) Asphalt (Widened Shoulder Pathways)	SBPDG, Pg. 210, Table VIII-1	SBPDG recommends concrete

INTERSECTIONS

Design Element	Value	Standard (Reference Used)	Comments
Signalization			
Design Vehicle	CA Legal - 65	HDM (Figure 404.5C)	
Stopping Sight Distance (ft.)	250 (35 mph) 155 (25 mph)	GB, Pg. 3-4, Table 3-1	
Acceleration/Deceleration Lane Length (ft.)			
Acceleration/Deceleration Taper Length (ft.)			
Turn Bay Length (ft.)			
Shifting Taper Rate (ft./ft.)	21 (35 mph) 11 (25 mph)	CAMUTCD (Section 3B.10 (03))	$L=WS^2/60$ for V<45 mph
Pedestrian Access			

TRAFFIC

Design Element	Value	Standard (Reference Used)	Comments
Average Daily Traffic	6600	2018 Traffic Study	Project ADT may differ, this is from a segment of Los Olivos 0.5 miles south of
Current LOS			
Proposed LOS			
ACCIDENT DATA			
Spot Location			
Accident Rate			