



**DEPARTMENT OF TRANSPORTATION**  
Structure Maintenance & Investigations

Bridge Number : 55C0177  
Facility Carried: SILVERADO CANYN RD  
Location : 4.4 MI. E/O SANTIAGO ROA  
City :  
Inspection Date : 07/12/2011  
Inspection Type

**Bridge Inspection Report**

Routine	FC	Underwater	Special	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**STRUCTURE NAME:** SILVERADO CANYON CREEK

**CONSTRUCTION INFORMATION**

Year Built : 1947	Skew (degrees): 45
Year Widened: N/A	No. of Joints : 0
Length (m) : 12.8	No. of Hinges : 0

Structure Description: Simply supported single span steel stringers (4 each) with RC open end seat abutments, all supported upon spread footings.

Span Configuration : (W) 1 @ 12.5 m (E) c/c

**LOAD CAPACITY AND RATINGS**

Design Live Load: M-13.5 OR H-15	
Inventory Rating: 25.4 metric tonnes	Calculation Method: NO RATING ANALYSIS
Operating Rating: 40.8 metric tonnes	Calculation Method: NO RATING ANALYSIS
Permit Rating : PGGGG	
Posting Load : Type 3: <u>Legal</u>	Type 3S2: <u>Legal</u> Type 3-3: <u>Legal</u>

**DESCRIPTION ON STRUCTURE**

Deck X-Section: (S) 0.5 m br, 7.2 m, 0.5 m br (N)	
Total Width: 8.2 m	Net Width: 7.2 m      No. of Lanes: 2
Rail Description: (S) MBGR; (N) Timber	Rail Code : 0000
Min. Vertical Clearance: Unimpaired	

**DESCRIPTION UNDER STRUCTURE**

Channel Description: Natural earth trapezoidal with a cobbled bottom.

**CONDITION TEXT**

**CONDITION OF STRUCTURE**

There was 200mm of water running; all elements were visually inspected.

There are debris and tree trunk on the girders.

The concrete deck exhibits light scaling about 70% of the deck area.

There are unsealed transverse cracks in the concrete deck, 1 mm wide and 300 mm spacing. Also there are 2 spalls (300 mm x 200 mm x 50 mm) in the eastbound direction.

The steel girders exhibit surface rust.

There are two wooden posts missing in the southerly bridge railing.

There is one wooden post broken at the west side of the northerly bridge rail.

**MISCELLANEOUS**

As a consequence of these revisions, the calculated Sufficiency Rating is 47.0 Also the bridge is "Functionally Obsolete".

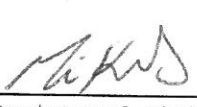
ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total		Qty in each Condition State				
			Qty	Units	St. 1	St. 2	St. 3	St. 4	St. 5
12	Concrete Deck - Bare	2	90	sq.m.	0	90	0	0	0
107	Painted Steel Open Girder/Beam	2	52	m.	0	0	39	13	0
215	Reinforced Conc Abutment	2	24	m.	24	0	0	0	0
332	Timber Bridge Railing	2	13	m.	13	0	0	0	0
333	Other Bridge Railing	2	13	m.	7	6	0		
358	Deck Cracking	2	1	ea.	0	1	0	0	0

WORK RECOMMENDATIONS

RecDate: 07/12/2011	EstCost:	
Action : Deck-Methacrylate	StrTarget: 2 YEARS	Repair the deck spall and seal the cracks with methacrylate.
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
RecDate: 07/12/2011	EstCost:	
Action : Remove Vegetation	StrTarget: 1 YEAR	Remove the debris and free trunk from the girders
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
RecDate: 07/12/2011	EstCost:	
Action : Paint-Full prep/Pain	StrTarget: 4 YEARS	Clean and paint the steel girders
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
RecDate: 02/09/2005	EstCost:	
Action : Railing-Repair	StrTarget: 2 YEARS	Replace the two wooden posts missing in the southerly bridge railing.
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	

Inspected By : MT.Zaarour/A.Shenouda


  
Mikhael T. Zaarour (Registered Civil Engineer)


# STRUCTURE INVENTORY AND APPRAISAL REPORT

## \*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 55C0177  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 140000000  
 (2) HIGHWAY AGENCY DISTRICT 12  
 (3) COUNTY CODE 059 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- SILVERADO CANYON CREEK  
 (7) FACILITY CARRIED- SILVERADO CANYN RD  
 (9) LOCATION- 4.4 MI. E/O SANTIAGO ROAD  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0  
 (13) LRS INVENTORY ROUTE & SUBROUTE  
 (16) LATITUDE 33 DEG 44 MIN 48.9 SEC  
 (17) LONGITUDE 117 DEG 36 MIN 43.3 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

## \*\*\*\*\* STRUCTURE TYPE AND MATERIAL \*\*\*\*\*

(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL  
 TYPE- STRINGER/MULTI-BEAM OR GDR CODE 302  
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA  
 TYPE- OTHER/NA CODE 000  
 (45) NUMBER OF SPANS IN MAIN UNIT 1  
 (46) NUMBER OF APPROACH SPANS 0  
 (107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1  
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  
 A) TYPE OF WEARING SURFACE- NONE CODE 0  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

## \*\*\*\*\* AGE AND SERVICE \*\*\*\*\*

(27) YEAR BUILT 1947  
 (106) YEAR RECONSTRUCTED 0000  
 (42) TYPE OF SERVICE: ON- HIGHWAY 1  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 2000  
 (30) YEAR OF ADT 2009 (109) TRUCK ADT 1 %  
 (19) BYPASS, DETOUR LENGTH 199 KM

## \*\*\*\*\* GEOMETRIC DATA \*\*\*\*\*

(48) LENGTH OF MAXIMUM SPAN 12.5 M  
 (49) STRUCTURE LENGTH 12.8 M  
 (50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 7.2 M  
 (52) DECK WIDTH OUT TO OUT 8.2 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 6.4 M  
 (33) BRIDGE MEDIAN- CLOSED (NO BARRIER) 2  
 (34) SKEW 45 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 7.2 M  
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M  
 (54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.00 M  
 (55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M  
 (56) MIN LAT UNDERCLEAR LT 0.0 M

## \*\*\*\*\* NAVIGATION DATA \*\*\*\*\*

(38) NAVIGATION CONTROL- NOT APPLICABLE CODE N  
 (111) PIER PROTECTION- CODE  
 (39) NAVIGATION VERTICAL CLEARANCE 0.0 M  
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M  
 (40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

## \*\*\*\*\*

SUFFICIENCY RATING = 47.0  
 STATUS FUNCTIONALLY OBSOLETE  
 HEALTH INDEX 76.7  
 PAINT CONDITION INDEX = 43.8

## \*\*\*\*\* CLASSIFICATION \*\*\*\*\* CODE

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- NOT ON NHS 0  
 (26) FUNCTIONAL CLASS- COLLECTOR URBAN 17  
 (100) DEFENSE HIGHWAY- NOT STRAHNET 0  
 (101) PARALLEL STRUCTURE- NONE EXISTS N  
 (102) DIRECTION OF TRAFFIC- 2 WAY 2  
 (103) TEMPORARY STRUCTURE-  
 (105) FED.LANDS HWY- NOT APPLICABLE 0  
 (110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0  
 (20) TOLL- ON FREE ROAD 3  
 (21) MAINTAIN- COUNTY HIGHWAY AGENCY 02  
 (22) OWNER- COUNTY HIGHWAY AGENCY 02  
 (37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

## \*\*\*\*\* CONDITION \*\*\*\*\* CODE

(58) DECK 5  
 (59) SUPERSTRUCTURE 5  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 8  
 (62) CULVERTS N

## \*\*\*\*\* LOAD RATING AND POSTING \*\*\*\*\* CODE

(31) DESIGN LOAD- M-13.5 OR H-15 2  
 (63) OPERATING RATING METHOD- NO RATING ANALYSIS 5  
 (64) OPERATING RATING- 40.8  
 (65) INVENTORY RATING METHOD- NO RATING ANALYSIS 5  
 (66) INVENTORY RATING- 25.4  
 (70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5  
 (41) STRUCTURE OPEN, POSTED OR CLOSED- A  
 DESCRIPTION- OPEN, NO RESTRICTION

## \*\*\*\*\* APPRAISAL \*\*\*\*\* CODE

(67) STRUCTURAL EVALUATION 5  
 (68) DECK GEOMETRY 3  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 5  
 (72) APPROACH ROADWAY ALIGNMENT 8  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113) SCOUR CRITICAL BRIDGES 8

## \*\*\*\*\* PROPOSED IMPROVEMENTS \*\*\*\*\*

(75) TYPE OF WORK- REPLACE FOR DEFICIENC CODE 31  
 (76) LENGTH OF STRUCTURE IMPROVEMENT 12.8 M  
 (94) BRIDGE IMPROVEMENT COST \$241,500  
 (95) ROADWAY IMPROVEMENT COST \$48,300  
 (96) TOTAL PROJECT COST \$405,720  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 2010  
 (114) FUTURE ADT 4121  
 (115) YEAR OF FUTURE ADT 2029

## \*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 07/11 (91) FREQUENCY 24 MO  
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE  
 A) FRACTURE CRIT DETAIL- NO MO A)  
 B) UNDERWATER INSP- NO MO B)  
 C) OTHER SPECIAL INSP- NO MO C)