



**Bridge Inspection Report**

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

**STRUCTURE NAME:** SNODGRASS SLOUGH

**CONSTRUCTION INFORMATION**

Year Built : 1931	Skew (degrees): 0
Year Widened: 1965	No. of Joints : 3
Length (m) : 316.4	No. of Hinges : 1

Structure Description: Main Span: Corrugated metal deck on steel swing truss with RC pivot piers, and RC seat abutments (hand operated). Rest and pivot Piers founded on 3'-6" diameter steel shells on timber piles.

Approach Spans: RC slab continuous on RC (3) pile bents with diaphragm abutments.

Span Configuration : 9 @ 9.1 m, 24.4 m, 7.2 m, 24.4 m, 19 @ 9.1 m

**LOAD CAPACITY AND RATINGS**

Design Live Load: OTHER OR UNKNOWN		
Inventory Rating: 7 metric tons	Calculation Method: LOAD FACTOR	
Operating Rating: 12 metric tons	Calculation Method: LOAD FACTOR	
Permit Rating : XXXXX		
Posting Load : Type 3 10 English tons	Type 3S2 10 English tons	Type 3-3 10 English tons

**DESCRIPTION ON STRUCTURE**

Deck X-Section: Approach: 0.1 m r, 8.5 m, 0.1 m r  
Truss: 0.2 m cu, 6.4 m, 0.2 m cu  
Total Width: 6.8 m Net Width: 6.4 m No. of Lanes: 2  
Rail Description: Appr: metal beam on steel posts Truss: steel Rail Code : 0000  
lattice  
Min. Vertical Clearance: 4.110

**DESCRIPTION UNDER STRUCTURE**

Channel Description: Earth and tule lined

**CONDITION TEXT**

**HISTORY**

The 11/4/1965 bridge report stated that the approach spans and deck of this bridge rebuilt in 1965 by the County, which none of the original as built plans were in the bridge files. The 9/3/81 bridge report indicated at the NE corner, on the abutment slope, there is a deeply eroded ditch following under the edge of the deck. The report recommended repairing. No other hydraulic problems pertaining to scour were noted in the previous bridge reports.

**REVISION**

No revisions are made to the NBI Item 113 code at this time.

**SCOUR**

This report addresses hydraulic issues only. The structure's scour potential has been assessed in accordance with the FHWA Technical Advisory T5140.23, "Evaluating Scour at Bridges". The NBI Item 113 Code, "Vulnerability to Scour", remains a U: "Bridge with

**CONDITION TEXT**

unknown foundation that has not been evaluated for scour". Until risk can be determined, a plan of action should be developed and implemented to reduce the risk to users from a bridge failure during and immediately after a flood event (see HEC 23).

Structure Hydraulics conducted a field investigation on 10-10-2007 made an upstream channel cross-section measurement at the bridge and the following observations during this field investigation.

The channel bed materials appeared composed of earth, silt and tule lined. The channel banks were covered with a heavy growth of vegetation, shrubs and trees along both embankments. The maximum water depth on the day of the investigation measured approximately 4.5 meters and the thalweg was noted to be located in Span 11 close to Pier 12. The channel was well aligned to the bridge opening. Levees are noted along each embankment.

Comparisons of the latest channel cross-section taken in 10/10/07 with two available previous cross-sections taken by the ABME teams in 1972 and 1993 show that the channel bottom has not significantly changed since 1972 and the channel has remained stable from span 1 through span 31 (see attached cross-sections plot). There is a deep drop in the upstream channel bottom elevation in front of Bent 32 column. It appears the channel has migrated east towards Bent 32. The piles at this bent and Bent 31 have a relatively short pile length. The loss of the channel grade could compromise the piles bearing capacity. However, we do not have a copy of the Log of Test Borings and therefore, cannot determine the remaining capacity at this time. This situation should be investigated by the local agency.

This review is based on information from maintenance reports, our field investigation results and available bridge as-built plans. No complete bridge as-built plans could be located showing foundation details for Pier 11 through Pier 13. Missing information included dimensions of the foundations, pile type and the pile tip elevations and the Log of Test Boring. Furthermore, due to inadequacy of information, a complete scour evaluation could not be achieved at this time. Therefore, the scour rating should remain as unknown foundations until more detailed information is available.

**RECOMMENDATION**

A Federal Highway Administration Memorandum dated April 27, 2001 has redefined the National Bridge Inventory Item 113 code description for U. This definition recommends that a plan of action should be developed and implemented to reduce the risk to users from a bridge failure during and immediately after a flood event. We recommend that the local agency develop and implement a Plan of Action for the subject bridge. We also recommend that the local agency investigate and address the loss of channel embankment adjacent at Bents 31 and 32.

**CHANNEL X-SECTION**

Side : Upstream

X-Section Date: 10/10/2007

Measured From : top of bridge deck

Location	Horiz (m)	Vert (m)	Comments
Abutment 1	0.00	0.93	Face of A1
2	0.00	4.00	C/L Pier 2
3	0.00	6.14	C/L Pier 3
4	0.00	6.42	C/L Pier 4
5	0.00	6.51	C/L Pier 5
6	0.00	7.12	C/L Pier 6



**CHANNEL X-SECTION**

Side : Upstream

X-Section Date: 10/10/2007

Measured From : top of bridge deck

Location	Horiz (m)	Vert (m)	Comments
7	0.00	8.06	C/L Pier 7
8	0.00	9.59	C/L Pier 8
9	0.00	10.38	C/L Pier 9
9	4.57	10.65	mid-span & ws = 7.16 m
10	0.00	11.26	C/L Pier 10
11	0.00	11.26	C/L Pier 11
11	12.19	10.93	mid-span
12	0.00	11.58	C/L Pier 12
12	16.76	10.10	mid-span
13	0.00	10.26	C/L Pier 13
14	0.00	10.07	C/L Pier 14
14	4.57	9.74	mid-span
15	0.00	9.71	C/L Pier 15
15	4.57	9.62	mid-span
16	0.00	9.62	C/L Pier 16
17	0.00	9.62	C/L Pier 17
18	0.00	9.62	C/L Pier 18
19	0.00	9.52	C/L Pier 19
20	0.00	8.64	C/L Pier 20
21	0.00	7.03	C/L Pier 21
22	0.00	6.42	C/L Pier 22
23	0.00	6.39	C/L Pier 23
24	0.00	6.14	C/L Pier 24
25	0.00	6.08	C/L Pier 25
26	0.00	5.93	C/L Pier 26
27	0.00	6.93	C/L Pier 27
28	0.00	7.39	C/L Pier 28
29	0.00	7.48	C/L Pier 29
30	0.00	8.24	C/L Pier 30
31	0.00	8.52	C/L Pier 31
32	0.00	7.91	C/L Pier 32
32	3.05	5.62	mid-span
Abutment 33	0.00	0.66	Face of A33

Inspected By : H. Azizi



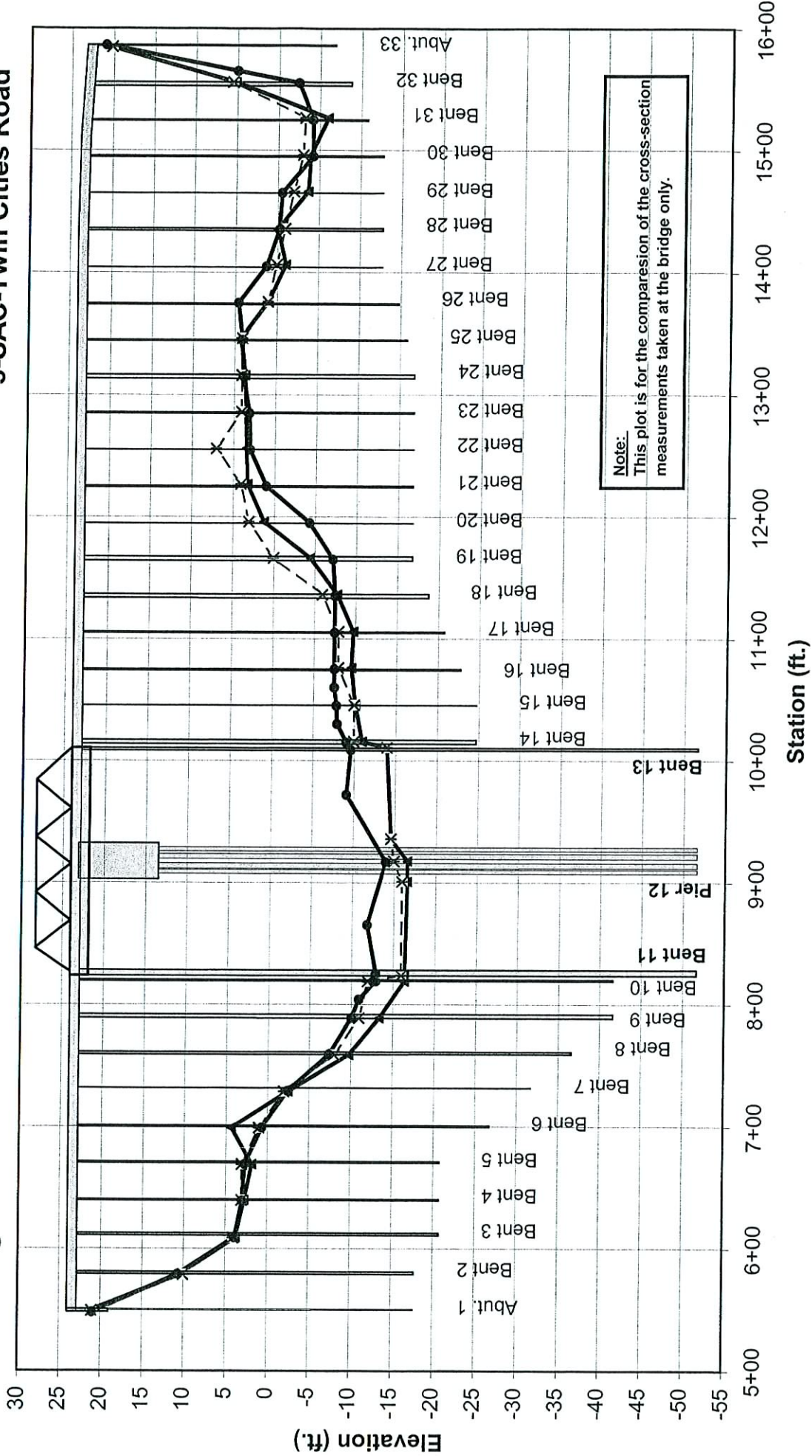
Registered Civil Engineer



# Snodgrass - Upstream

3-SAC-Twin Cities Road

Bridge ID: 24C0053



Legend:  
 - \* - "1/10/72"  
 - o - "10/10/2007"





DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 24C0053  
Facility Carried: TWIN CITIES ROAD  
Location : 2.0 MI EAST OF RIVER RD  
City :  
Inspection Date : 06/25/2007

## Bridge Inspection Report

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

**STRUCTURE NAME:** SNODGRASS SLOUGH

### CONSTRUCTION INFORMATION

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Year Widened: 1965	No. of Joints : 3
Length (m) : 316.4	No. of Hinges : 1

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Approach Spans: RC slab continuous on RC (3) pile bents with diaphragm abutments.

Span Configuration : 9 @ 9.1 m, 24.4 m, 7.2 m, 24.4 m, 19 @ 9.1 m

### LOAD CAPACITY AND RATINGS

Design Live Load: OTHER OR UNKNOWN			
Inventory Rating: 7 metric tons	Calculation Method: LOAD FACTOR		
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Deck X-Section: Approach: 0.1 m r, 8.5 m, 0.1 m r

Truss: 0.2 m cu, 6.4 m, 0.2 m cu

Total Width: 6.8 m	Net Width: 6.4 m	No. of Lanes: 2
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Rail Description: Appr: metal beam on steel posts lattice	Truss: steel	Rail Code : 0000
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Min. Vertical Clearance: 4.110

### DESCRIPTION UNDER STRUCTURE

Channel Description: Earth and tule lined

### CONDITION TEXT

#### REVISIONS

NBI Item #41, Structure Open, has been revised from Open - No Restrictions to Posting Recommended.

NBI Item #70, Bridge Posting, has been revised from Above Legal Loads to below 39.9% of Legal Loads.

NBI Item #64, Operating Rating, has been revised from 24.9 metric tonnes to 12 metric tonnes.

NBI Item #66, Inventory Rating, has been revised from 15.6 metric tonnes to 7 metric tonnes

The AC thickness has been corrected from 1 inch to 3.5 inches to reflect existing field conditions.

CONDITION TEXT

ELI Element #30, Corrugated Steel Deck, a quantity of 380 sq. m. has been downgraded from condition state 2 to condition state 5.

ELI Element #39, Concrete Slab Unprotected w/AC Overlay, has been increased in quantity from 1770 sq. m. to 2165 sq. m. and has been upgraded from condition state 2 to condition state 1.

ELI Element #121, Painted Steel Bottom Chord, a quantity of 56 m has been downgraded from condition state 1 to condition state 2.

ELI Element #126, Painted Steel Through Truss, a quantity of 115 m has been downgraded from condition state 1 to condition state 2.

ELI Element #152, Painted Steel Floor Beam, a quantity of 73 m has been downgraded from condition state 1 to condition state 2.

ELI Element #205, Reinforced Concrete Column, a quantity of 78 each has been upgraded from condition state 2 to condition state 1.

ELI Element #210, Reinforced Concrete Pier Wall, a quantity of 27 m has been upgraded from condition state 2 to condition state 1.

ELI Element #215, Reinforced Concrete Abutment, a quantity of 13 m has been upgraded from condition state 2 to condition state 1.

ELI Element #228, Submerged Timber Piles, a quantity of 1 each has been added in condition state 1 to accurately inventory all structural elements present.

## CONDITION OF STRUCTURE

There several large patches approximately 4' x 8' and numerous small patches and potholes approximately 2' x 2' throughout the AC deck surface on the swing span. The AC overlay has severe size and severe density pattern cracks throughout the swing span. The area of distress is estimated at 75% of the swing span deck surface.

There is a 2" bump in the AC approach at Abutment 37.

The corrugated steel deck has deteriorated from corrosion in three localized areas. The areas are approximately 12" x 12". There are two other areas of distressed steel decking approximately 2' x 4' showing signs of active corrosion. There are also three areas where cracks in the steel deck are visible. The cracks are approximately 1' to 2' long.

The following conditions have been previously reported and have not changed significantly:

The 1st vertical from the west (L1-U1) in Span 11, south side, has been damaged by vehicular impact and approximately 3" area of the flange has curled from impact. A similar condition exists at L0-U1.

The northeast king post at Pier 13 has been damaged by vehicular impact on the inside face 3' above the deck. Three vertical post (L1-U1, L2-U2, L3-U3) on the north side also have minor damage resulting from vehicular impact. Damage to the east portal has been repaired with new steel channel sections.

## PAINT CONDITION

**CONDITION TEXT**

The painted surfaces of all of the steel members is dirty. Light freckled rust is forming on the webs, flanges, edges of the steel members and bridge railing.

**FRACTURE CRITICAL INVESTIGATION**

A hands on visual inspection was performed on all fracture critical and special feature members of this structure on 02/11/04 and no cracks were found.

**SIGNS**

There are "NARROW BRIDGE" postings at each approach to the structure.

The minimum vertical clearance is posted at both truss portals at 13' 5".

**SAFE LOAD CAPACITY**

Due to the deterioration of the corrugated steel deck in the swing span, this structure has been assigned a load rating of 10 TONS.

If the deterioration of the steel deck in the swing span is repaired, this structure is capable of carrying the loads indicated in the load calculations dated February 1982. These calculations show that this structure is capable of carrying legal loads only. The controlling members for this bridge are the steel floor beam in the movable span. No permits loads are permissible. The capacity was determined with 3.5 inches of AC. on the bridge deck.

**RECOMMENDED POSTING**

The recommended posting for this structure is 10 TONS.

**MISCELLANEOUS**

Inventory and Operating Load Ratings have been revised due to localized deck failures. Load Ratings were calculated on September 7, 2007 based on a gross vehicle weight limit of 10 Tons, HS20 design vehicle, and assumed wheel load distribution.

<b><u>ELEMENT INSPECTION RATINGS</u></b>									
F#Elem	Element Description	Env	Total	Units	Qty in each Condition State				
					Qty	St. 1	St. 2	St. 3	St. 4
101 30	Steel Deck - Corrugated/Orthotropic/Etc.	2	380	sq.m.	0	0	0	0	380
101 39	Concrete Slab - Unprotected w/ AC Overlay	2	2165	sq.m.	2165	0	0	0	0
101 121	Painted Steel Bottom Chord Thru Truss	2	56	m.	0	56	0	0	0
101 126	Painted Steel Thru Truss (excl. bottom chord)	2	115	m.	0	115	0	0	0
101 152	Painted Steel Floor Beam	2	73	m.	0	73	0	0	0
101 205	Reinforced Conc Column or Pile Extension	2	78	ea.	78	0	0	0	0
101 210	Reinforced Conc Pier Wall	2	27	m.	27	0	0	0	0
101 215	Reinforced Conc Abutment	2	13	m.	13	0	0	0	0



F#Elem	Element Description	Env	Total	Units	Qty in each Condition State				
					Qty	St. 1	St. 2	St. 3	St. 4
101 228	Timber Submerged Pile	2	1	ea.	1	0	0	0	0
101 251	Steel Shell Foundation Pile Filled w/conc	3	10	ea.	0	10	0	0	0
101 304	Open Expansion Joint	2	16	m.	16	0	0	0	0
101 312	Enclosed/Concealed Bearing	2	1	ea.	0	1	0	0	0
101 330	Metal Bridge Railing - coated or uncoated	2	634	m.	0	632	1	1	0

**WORK RECOMMENDATIONS**

RecDate: 06/25/2007      EstCost:      Replace corrugated steel deck and AC  
 Action : Deck-Replace      StrTarget: 1 YEAR      overlay in kind or with other suitable  
 Work By: LOCAL AGENCY      DistTarget:      deck system.  
 Status : PROPOSED      EA:

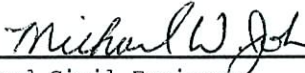
Note: This work recommendation modifies and increases the scope of work recommended on 2/11/2004 to resurface the AC overlay on the corrugated steel deck.

RecDate: 02/11/2004      EstCost:      Resurface or repair the AC overlay atop  
 Action : Deck-Resurface      StrTarget: 2 YEARS      the corrugated steel deck of the truss.  
 Work By: LOCAL AGENCY      DistTarget:  
 Status : PROPOSED      EA:

RecDate: 10/11/2001      EstCost:      Level the 2" bumps at the paving notches  
 Action : Undefined Work      StrTarget: 2 YEARS      on the east and west approaches to  
 Work By: LOCAL AGENCY      DistTarget:      provide a smooth transition to the bridge  
 Status : PROPOSED      EA:      deck.

RecDate: 10/11/2001      EstCost:      Clean dirt and debris from the hinge at  
 Action : Undefined Work      StrTarget: 2 YEARS      Span 22.  
 Work By: LOCAL AGENCY      DistTarget:  
 Status : PROPOSED      EA:

Inspected By : Rohit Nand


  
 Registered Civil Engineer




**STRUCTURE INVENTORY AND APPRAISAL REPORT**

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

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 24C0053  
 (5) INVENTORY ROUTE (ON/UNDER)- ON 1400V5620  
 (2) HIGHWAY AGENCY DISTRICT 03  
 (3) COUNTY CODE 067 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- SNODGRASS SLOUGH  
 (7) FACILITY CARRIED- TWIN CITIES ROAD  
 (9) LOCATION- 2.0 MI EAST OF RIVER RD  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0  
 (13) LRS INVENTORY ROUTE & SUBROUTE  
 (16) LATITUDE 38 DEG 16 MIN 37 SEC  
 (17) LONGITUDE 121 DEG 29 MIN 52 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL  
 TYPE- MOVABLE - SWING CODE 317  
 (44) STRUCTURE TYPE APPR:MATERIAL- CONCRETE CONT  
 TYPE- SLAB CODE 201  
 (45) NUMBER OF SPANS IN MAIN UNIT 1  
 (46) NUMBER OF APPROACH SPANS 30  
 (107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1  
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  
 A) TYPE OF WEARING SURFACE- BITUMINOUS CODE 6  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

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

(27) YEAR BUILT 1931  
 (26) YEAR RECONSTRUCTED 1965  
 (42) TYPE OF SERVICE: ON- HIGHWAY 1  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 4890  
 (30) YEAR OF ADT 1991 (109) TRUCK ADT 10 %  
 (19) BYPASS, DETOUR LENGTH 27 KM

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

(48) LENGTH OF MAXIMUM SPAN 56.1 M  
 (49) STRUCTURE LENGTH 316.4 M  
 (50) CURB OR SIDEWALK: LEFT 0.2 M RIGHT 0.2 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 6.4 M  
 (52) DECK WIDTH OUT TO OUT 6.8 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 7.0 M  
 (33) BRIDGE MEDIAN- NO MEDIAN 0  
 (34) SKEW 0 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 4.11 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 6.4 M  
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 4.11 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- BR PERMIT REQ CODE 1  
 (111) PIER PROTECTION- FUNCTIONING CODE 2  
 (39) NAVIGATION VERTICAL CLEARANCE 1.0 M  
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M  
 (40) NAVIGATION HORIZONTAL CLEARANCE 24.4 M

## \*\*\*\*\* SUFFICIENCY RATING \*\*\*\*\*

SUFFICIENCY RATING = 18.3  
 STATUS STRUCTURALLY DEFICIENT  
 HEALTH INDEX 62.9  
 PAINT CONDITION INDEX = 75.0

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

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- NOT ON NHS 0  
 (26) FUNCTIONAL CLASS- MINOR ARTERIAL RURAL 06  
 (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 6  
 (59) SUPERSTRUCTURE 7  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 7  
 (62) CULVERTS N

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

(31) DESIGN LOAD- OTHER OR UNKNOWN 0  
 (63) OPERATING RATING METHOD- LOAD FACTOR 1  
 (64) OPERATING RATING- 12.0  
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1  
 (66) INVENTORY RATING- 7.0  
 (70) BRIDGE POSTING- > 39.9% BELOW 0  
 (41) STRUCTURE OPEN, POSTED OR CLOSED- B  
 DESCRIPTION- POSTING RECOMMENDED

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

(67) STRUCTURAL EVALUATION 2  
 (68) DECK GEOMETRY 2  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 8  
 (72) APPROACH ROADWAY ALIGNMENT 8  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113) SCOUR CRITICAL BRIDGES U

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

(75) TYPE OF WORK- REPLACE FOR DEFICIENC CODE 31  
 (76) LENGTH OF STRUCTURE IMPROVEMENT 316.4 M  
 (94) BRIDGE IMPROVEMENT COST \$2,582,000  
 (95) ROADWAY IMPROVEMENT COST \$258,000  
 (96) TOTAL PROJECT COST \$3,873,000  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 1999  
 (114) FUTURE ADT 8600  
 (115) YEAR OF FUTURE ADT 2011

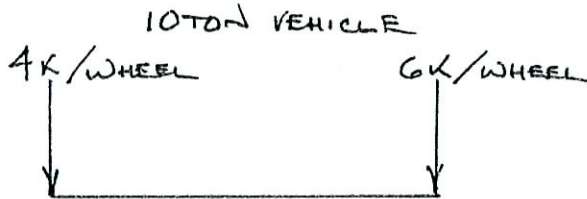
## \*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 06/07 (91) FREQUENCY 24 MO  
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE  
 A) FRACTURE CRIT DETAIL- YES 24 MO A) 02/04  
 B) UNDERWATER INSP- YES 60 MO B) 10/05  
 C) OTHER SPECIAL INSP- NO MO C)

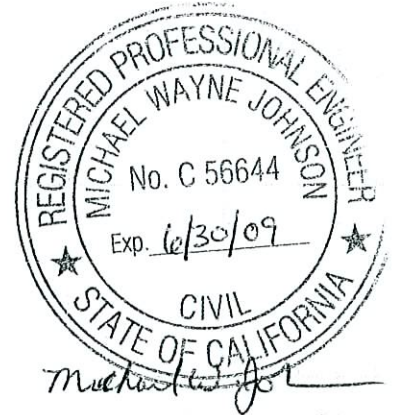
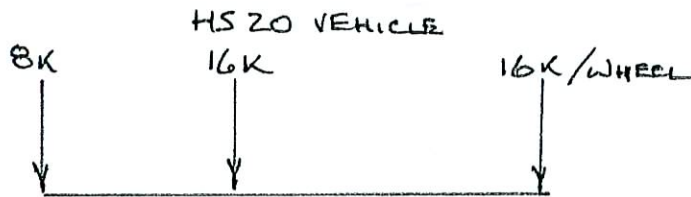
ROHIT NAND  
MWJ

07 SEP 2007

GROSS VEHICLE WEIGHT LIMITED TO 10 TONS



ASSUMED LOAD DISTRIBUTION



OPERATING RATING FACTOR =  $\frac{\text{WHEEL LOAD DISTRIBUTION, 10 TON VEHICLE}}{\text{WHEEL LOAD DISTRIBUTION, HS 20 DESIGN VEHICLE}}$

$$\text{OPERATING RATING FACTOR} = \frac{6K}{16K} = 0.375$$

$$\begin{aligned} \text{OPERATING RATING} &= (\text{OPERATING R.F.})(\text{G.V.W. HS 20}) \\ &= (0.375)(32.4 \text{ METRIC TONNES}) = 12 \text{ TONNES} \end{aligned}$$

$$\begin{aligned} \text{INVENTORY RATING} &= \text{OPERATING RATING} / 1.67 \\ &= (12 \text{ TONNES}) / (1.67) = 7 \text{ TONNES} \end{aligned}$$

NOTE: LOCALIZED DECK FAILURES INDICATE THE CORRUGATED DECK IS CONTROLLING THE LOAD CAPACITY OF THIS STRUCTURE. IT IS ASSUMED THE CORRUGATED DECK WAS DESIGNED USING A HS 20 DESIGN VEHICLE.





DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 24C0053  
 Facility Carried: TWIN CITIES ROAD  
 Location : 2.0 MI EAST OF RIVER RD  
 City :  
 Inspection Date : 02/11/2004  
 Inspection Type  
 Routine Group A Underwater Special Other

**Bridge Inspection Report**

STRUCTURE NAME: SNODGRASS SLOUGH

CONSTRUCTION INFORMATION

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 lattice  
 Min. Vertical Clearance: 4.110

DESCRIPTION UNDER STRUCTURE

Channel Description: Earth and tule lined

GROUP 'A' FEATURES

This structure qualifies for an in-depth Group 'A' investigation because it possesses the following fracture critical or fatigue prone details :

Member / Detail

Floor Beams/F.C.

Floor Beams/Low Redundancy

Truss/F.C.

Truss/Low Redundancy

Fracture Critical: Yes

Inspection Freq.: 60

Next Inspection: 02/11/2009

CONDITION TEXT

REVISIONS

The total quantity of all steel elements (Elements 121, 126, and 152) have been upgraded from Condition State 3 to State 1, as the paint, and the steel members as well, are in good condition.

CONDITION OF STRUCTURE

The AC overlay atop the corrugated metal deck (swing portion only) is undulated, potholed, and

**CONDITION TEXT**

cracked intermittently throughout. The chip seal atop the deck of all approach spans to the truss is in good condition.

There is a 50mm (2") hump in the AC approach at Abutment 37 that should be leveled.

The 1st vertical from the west (L1-U1) in Span 11, south side, has been hit by vehicular traffic and is bent approximately 75mm (3"), including the attached rail. A similar condition exists at L0-U1. There is no problem at this time.

The northeast king post at Pier 13 has been hit by vehicular traffic on the inside face, 1m (3.3') up from the deck. The damage is minor but should be noted for the next inspection. Additionally, the next 3 vertical truss members (L1-U1, L2-U2, L3-U3) on the north side also have minor vehicular damage. Old damage was visible at the east portal with new channel sections placed using the old gusset plate connections.

**PAINT CONDITION**

The paint is in good condition and functioning.

**GROUP "A" INVESTIGATION**

A close-up visual inspection was performed on all Group "A" details of this structure on 02/11/04, and no defects were found.

**SIGNS**

There are signs at both approaches to the structure that read:

NARROW BRIDGE

and signs attached to both truss portals that read:

VERTICAL CLEARANCE 13' 5"

**LOAD CAPACITY**

A 1982 rating conducted by Caltrans OSMI Ratings Section determined that the controlling factor on this bridge was the steel floor beams of the movable span. If the top flange of the floor beams are fully supported, the bridge is just able to carry full legal loads and no permits. In order to retain this posting, "NO ADDITIONAL AC" can be added. Additionally, the deck profile should remain smooth to reduce the effects of impact loading.

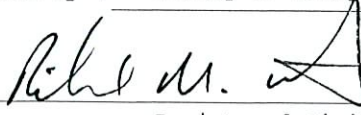
<b><u>ELEMENT INSPECTION RATINGS</u></b>									
F #	Elem No.	Element Description	Env	Total Units Qty	Qty in each Condition State				
					St. 1	St. 2	St. 3	St. 4	St. 5
01	30	Steel Deck - Corrugated/Orthotropic/Etc.	2	380 sq.m.	0	380	0	0	0
01	39	Concrete Slab - Unprotected w/ AC Overlay	2	1770 sq.m.	0	1770	0	0	0
01	121	Painted Steel Bottom Chord Thru Truss	2	56 m.	56	0	0	0	0
01	126	Painted Steel Thru Truss (excl. bottom chord)	2	115 m.	115	0	0	0	0
01	152	Painted Steel Floor Beam	2	73 m.	73	0	0	0	0
01	205	Reinforced Conc Column or Pile Extension	2	78 ea.	0	78	0	0	0
01	210	Reinforced Conc Pier Wall	2	27 m.	0	27	0	0	0
01	215	Reinforced Conc Abutment	2	13 m.	0	13	0	0	0
01	312	Enclosed/Concealed Bearing	2	1 ea.	0	1	0	0	0
01	330	Metal Bridge Railing - coated or uncoated	2	634 m.	0	632	1	1	0



WORK RECOMMENDATIONS

RecDate: 02/11/2004	EstCost:	Resurface or repair the AC overlay atop the
Action : Deck-Resurface	StrTarget: 2 YEARS	corrugated steel deck of the truss.
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
RecDate: 10/11/2001	EstCost:	Level the 2" bumps at the paving notches on
Action :	StrTarget: 2 YEARS	the east and west approaches to provide a
Work By: MAINT. CONTRACT	DistTarget:	smooth transition to the bridge deck.
Status : PROPOSED	EA:	
RecDate: 10/11/2001	EstCost:	Clean dirt and debris from the hinge at Span
Action :	StrTarget: 2 YEARS	22.
Work By: MAINT. CONTRACT	DistTarget:	
Status : PROPOSED	EA:	

Inspected By : Jeremy W. Colby



Registered Civil Engineer



**STRUCTURE INVENTORY AND APPRAISAL REPORT**

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***** IDENTIFICATION *****
'1) STATE NAME- CALIFORNIA                                069
(8) STRUCTURE NUMBER                                     24C0053
(5) INVENTORY ROUTE(ON/UNDER)- ON                       1400V5620
(2) HIGHWAY AGENCY DISTRICT                             03
(3) COUNTY CODE 067 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED- SNODGRASS SLOUGH
(7) FACILITY CARRIED- TWIN CITIES ROAD
(9) LOCATION- 2.0 MI EAST OF RIVER RD
(11) MILEPOINT/KILOMETERPOINT                           0
(12) BASE HIGHWAY NETWORK- NOT ON NET                   0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 38 DEG 16 MIN 37 SEC
(17) LONGITUDE 121 DEG 29 MIN 52 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER
***** STRUCTURE TYPE AND MATERIAL *****
(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL
      TYPE- MOVABLE - SWING CODE 317
(44) STRUCTURE TYPE APPR:MATERIAL- CONCRETE CONT
      TYPE- SLAB CODE 201
(45) NUMBER OF SPANS IN MAIN UNIT 1
(46) NUMBER OF APPROACH SPANS 30
(107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
  A) TYPE OF WEARING SURFACE- BITUMINOUS CODE 6
  B) TYPE OF MEMBRANE- NONE CODE 0
  C) TYPE OF DECK PROTECTION- NONE CODE 0
***** AGE AND SERVICE *****
'27) YEAR BUILT 1931
'26) YEAR RECONSTRUCTED 1965
(42) TYPE OF SERVICE: ON- HIGHWAY 1
      UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 4890
(30) YEAR OF ADT 1991 (109) TRUCK ADT 10 %
(19) BYPASS, DETOUR LENGTH 27 KM
***** GEOMETRIC DATA *****
(48) LENGTH OF MAXIMUM SPAN 56.1 M
(49) STRUCTURE LENGTH 316.4 M
(50) CURB OR SIDEWALK: LEFT 0.2 M RIGHT 0.2 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 6.4 M
(52) DECK WIDTH OUT TO OUT 6.8 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 7.0 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 0 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 4.11 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 6.4 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 4.11 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- BR PERMIT REQ CODE 1
(111) PIER PROTECTION- FUNCTIONING CODE 2
(39) NAVIGATION VERTICAL CLEARANCE 1.0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
(40) NAVIGATION HORIZONTAL CLEARANCE 24.4 M

***** SUFFICIENCY RATING *****
SUFFICIENCY RATING = 41.3
STATUS FUNCTIONALLY OBSOLETE
HEALTH INDEX = 77.5
PAINT CONDITION INDEX = 100.0

***** CLASSIFICATION ***** CODE
(112) NBIS BRIDGE LENGTH- YES Y
(104) HIGHWAY SYSTEM- NOT ON NHS 0
(26) FUNCTIONAL CLASS- MINOR ARTERIAL RURAL 06
(100) DEFENSE HIGHWAY- NOT STRAHNET
(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 6
(59) SUPERSTRUCTURE 7
(60) SUBSTRUCTURE 6
(61) CHANNEL & CHANNEL PROTECTION 7
(62) CULVERTS N

***** LOAD RATING AND POSTING ***** CODE
(31) DESIGN LOAD- OTHER OR UNKNOWN 0
(63) OPERATING RATING METHOD- LOAD FACTOR 1
(64) OPERATING RATING- 24.9
(65) INVENTORY RATING METHOD- LOAD FACTOR 1
(66) INVENTORY RATING- 15.6
(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 4
(68) DECK GEOMETRY 2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 8
(36) TRAFFIC SAFETY FEATURES 0000
(113) SCOUR CRITICAL BRIDGES U

***** PROPOSED IMPROVEMENTS *****
(75) TYPE OF WORK- REPLACE FOR DEFICIENCY CODE 31
(76) LENGTH OF STRUCTURE IMPROVEMENT 316.4 M
(94) BRIDGE IMPROVEMENT COST $2,582,000
(95) ROADWAY IMPROVEMENT COST $258,000
(96) TOTAL PROJECT COST $3,873,000
(97) YEAR OF IMPROVEMENT COST ESTIMATE 1999
(114) FUTURE ADT 8600
(115) YEAR OF FUTURE ADT 2011

***** INSPECTIONS *****
(90) INSPECTION DATE 02/04(91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
  A) FRACTURE CRIT DETAIL- YES 60 MO A) 02/04
  B) UNDERWATER INSP- YES 60 MO B) 10/01
  C) OTHER SPECIAL INSP- YES MO C)

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**DEPARTMENT OF TRANSPORTATION**  
Structure Maintenance & Investigations

Bridge Number : 24C0053  
Facility Carried: TWIN CITIES ROAD  
Location : 2.0 MI EAST OF RIVER RD  
City :  
Inspection Date : 11-OCT-01

**Bridge Inspection Report**

**Inspection Type**  
Routine  Group A  Underwater  Special  Other

**Name : SNODGRASS SLOUGH**

**CONSTRUCTION INFORMATION**

Year Built : 1931  
Year Widened : 1965  
Length (m) : 316.4  
Skew (degrees): 0  
No. of Joints : 0  
No. of Hinges : 1

Description of Structure : Main Span: Corrugated metal deck on steel swing truss with RC pivot piers, and RC seat abutments (hand operated).

Approach Spans: RC slab continuous on RC (3) pile bents with diaphragm abutments.

Span Configuration : 9 @ 9.1 m, 24.4 m, 7.2 m, 24.4 m, 19 @ 9.1 m

**LOAD CAPACITY AND RATINGS**

Design Live Load : OTHER OR UNKNOWN  
Inventory Rating : 15.6 metric tons  
Operating Rating : 24.9 metric tons  
Permit Rating : XXXXX  
Posting Load : Type 3 N/A english tons Type 3S2 N/A english tons Type 3-3 N/A english tons  
Calculation Method : LOAD FACTOR  
Calculation Method : LOAD FACTOR

**DESCRIPTION ON STRUCTURE**

Bridge width : Approach: 0.1 m r, 8.5 m, 0.1 m r  
Truss: 0.2 m cu, 6.4 m, 0.2 m cu

Total Width : 6.8 m  
Rail Description : Appr: metal beam on steel posts  
Min. Vertical Clearance : 4.110 m  
Net Width : 6.40 m  
Truss: steel lattice  
No. of Lanes : 2  
Rail Code : 0000

**DESCRIPTION UNDER STRUCTURE**

Channel Description : Earth and tule lined

**CONDITION OF STRUCTURE**

West Approach (Abutment 1 - Pier 10):

The columns (3 per bent) are in good condition with no signs of scour or abrasion.

The soffit is in good condition with no cracks or efflorescence detected.

The 1/2" chip seal on the deck is in good condition. The AC approach has a 2" bump and should be leveled.

There is no span 10.

Main Span (Pier 11, Pier 12 (swing), and Pier 13):

Pier 11: The double RC filled 4' diameter steel cans look to be in good condition. The cross bracing is functional. The end locks are tight and functional. The armored joints at the ends of the swing span are intact and sound

Span 11: The stringers are in good condition with rust and staining of the paint. The soffit shows no signs of problems. The corrugated metal deck with AC overlay is rough along the outside wheel lines in both directions. The pins and eye bars look okay with no rust stains. The 1st vertical from the west (L1-U1) in Span 11, south side, has been hit by vehicular traffic and is bent approximately 3", including the attached rail. There is no problem at this time.

Pier 12(swing): The cross bracing and columns are in good condition. The ring gear and bearing wheels appear to be in good condition and able to function.

Span 12 Truss: The northeast king post at Pier 13 has been hit by vehicular traffic on the inside face, 1m up from the deck. The damage is minor but should be noted for the next inspection. Additionally, the



Bridge No.: 24C0053      Location: 2.0 MI EAST OF RIVER RD      Inspection Date: 11-OCT-01

next 3 vertical truss members (L1-U1, L2-U2, L3-U3) on the north side also have minor vehicular damage. Old damage was visible at the east portal with new channel sections placed using the old gusset plate connections, all remained in good condition.

Pier 13: The double RC filled 4' diameter steel cans look to be in good condition. The cross bracing is functional. The end locks are tight and functional. The armored joints at the ends of the swing span are intact and sound

There is no span 13.

East Approach (Pier 14 to Abutment 32):

The 1/2" chip seal and PCC deck is in good condition.

The hinge in Span 22 is in good condition but the expansion joint is impacted with gravel and needs to be cleaned out.

The concrete soffit appears to be in good condition. The columns (3 per bent) are also in good condition with no signs of scour or damage.

The east approach roadway is in good condition. There is however a 2" bump at the paving notch and should be leveled.

#### SIGNS

There are signs at both approaches that read "NARROW BRIDGE" and signs at both truss portals that read "VERTICAL CLEARANCE 13'-5" ".

#### LOAD CAPACITY

A 1982 rating conducted by Caltrans OSMI Ratings Section determined that the controlling factor on this bridge was the steel floor beams of the movable span. If the top flange of the floor beams are fully supported, the bridge is just able to carry full legal loads and no permits. In order to retain this posting, "NO ADDITIONAL AC" can be added. Additionally, the deck profile should remain smooth to reduce the effects of impact loading.

ELEMENT LEVEL INSPECTION RATINGS									
F#	Element No.	Element Description	Env	Total Units Quantity	Qty in each Condition State				
					St. 1	St. 2	St. 3	St. 4	St. 5
01	30	Steel Deck - Corrugated/Orthotropic/Etc.	2	380 sq.m.	0	380	0	0	0
01	39	Concrete Slab - Unprotected w/ AC Overlay	2	1770 sq.m.	0	1770	0	0	0
01	121	Painted Steel Bottom Chord Thru Truss	2	56 m.	0	0	56	0	0
01	126	Painted Steel Thru Truss (excl. bottom chord)	2	115 m.	0	0	115	0	0
01	152	Painted Steel Floor Beam	2	73 m.	0	0	73	0	0
01	205	Reinforced Conc Column or Pile Extension	2	78 ea.	0	78	0	0	0
01	210	Reinforced Conc Pier Wall	2	27 m.	0	27	0	0	0
01	215	Reinforced Conc Abutment	2	13 m.	0	13	0	0	0
01	312	Enclosed/Concealed Bearing	2	1 ea.	0	1	0	0	0
01	330	Metal Bridge Railing - Uncoated	2	634 m.	0	632	1	1	0

#### WORK RECOMMENDATIONS

Clean dirt and debris from the hinge at Span 22.

Item#	Rec. Date	Work By	Work Id.	Prog. Method	Cost
1	11-OCT-2001	Contract	40053X01284X		

Level the 2" bumps at the paving notches on the east and west approaches to provide a smooth transition to the bridge deck.

Item#	Rec. Date	Work By	Work Id.	Prog. Method	Cost
2	11-OCT-2001	Contract	40053X01284X		





Bridge No.: 24C0053

Location: 2.0 MI EAST OF RIVER RD

Inspection Date: 11-OCT-01

Inspected By : Richard Hunt



Registered Civil Engineer

cc : Sacramento County



Bridge No.: 24C0053

Location: 2.0 MI EAST OF RIVER RD

Inspection Date: 11-OCT-01

STRUCTURE INVENTORY AND APPRAISAL REPORT

IDENTIFICATION

(1) STATE NAME - CALIFORNIA 069
STRUCTURE NUMBER 24C0053
(2) INVENTORY ROUTE (ON/UNDER) - ON 1 40 OV5620
(2) HIGHWAY AGENCY DISTRICT 03
(3) COUNTY CODE 067 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED - SNODGRASS SLOUGH
(7) FACILITY CARRIED - TWIN CITIES ROAD
(9) LOCATION - 2.0 MI EAST OF RIVER RD
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK - NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 38 DEG 16 MIN 37 SEC
(17) LONGITUDE 121 DEG 29 MIN 52 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER
(43) STRUCTURE TYPE MAIN: MATERIAL - STEEL
TYPE - MOVABLE - SWING CODE 3 17
(44) STRUCTURE TYPE APPR: MATERIAL - CONCRETE CONT
TYPE - SLAB CODE 201
(45) NUMBER OF SPANS IN MAIN UNIT 1
(46) NUMBER OF APPROACH SPANS 30
(107) DECK STRUCTURE TYPE CIP CONCRETE CODE 1
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
A) TYPE OF WEARING SURFACE - BITUMINOUS CODE 6
B) TYPE OF MEMBRANE - NONE CODE 0
C) TYPE OF DECK PROTECTION - NONE CODE 0
(42) TYPE OF SERVICE: ON - HIGHWAY 1
UNDER - WATERWAY 5
(28) LANES: ON STRUCTURE 02 UNDER STRUCTURE
(29) AVERAGE DAILY TRAFFIC 4890
(30) YEAR OF ADT 1998 (109) TRUCK ADT 10%
(19) BYPASS, DETOUR LENGTH 27 KM
(48) LENGTH OF MAXIMUM SPAN 56.1 M
(49) STRUCTURE LENGTH 316.4 M
(50) CURB OR SIDEWALK: LEFT .2 M RIGHT .2 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 6.4 M
(52) DECK WIDTH OUT TO OUT 6.8 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 7 M
(33) BRIDGE MEDIAN - NO MEDIAN 0
(34) SKEW 0 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 4.11 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 6.4 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 4.11 M
(54) MIN VERT UNDERCLEAR REF - NOT H/RR 0 M
(55) MIN LAT UNDERCLEAR RT REF - NOT H/RR 99.9 M
(56) MIN LAT UNDERCLEAR LT 0 M
(38) NAVIGATION CONTROL - BR PERMIT REQ CODE 1
(111) PIER PROTECTION - FUNCTIONING CODE 2
(39) NAVIGATION VERTICAL CLEARANCE 1 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
NAVIGATION HORIZONTAL CLEARANCE 24.4

SUFFICIENCY RATING = 41.3
STATUS = FUNCTIONALLY OBSOLETE
HEALTH INDEX = 65.38
CLASSIFICATION

(112) NBIS BRIDGE LENGTH - YES Y
(104) HIGHWAY SYSTEM - NOT ON NHS 0
(26) FUNCTIONAL CLASS - MINOR ARTERIAL RURAL 06
(100) DEFENSE HIGHWAY - NOT STRAHNET 0
(101) PARALLEL STRUCTURE - NONE EXISTS N
(102) DIRECTION OF TRAFFIC - 2 WAY 2
(103) TEMPORARY STRUCTURE -
(105) FEDERAL LANDS HIGHWAY - NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL - ON FREE ROAD 3
(21) MAINTAIN - COUNTY HIGHWAY AGENCY 2
(22) OWNER - COUNTY HIGHWAY AGENCY 2
(37) HISTORICAL SIGNIFICANCE - NOT ELIGIBLE 5
(58) DECK 6
(59) SUPERSTRUCTURE 6
(60) SUBSTRUCTURE 6
(61) CHANNEL & CHANNEL PROTECTION 7
(62) CULVERTS N
(31) DESIGN LOAD - OTHER OR UNKNOWN 0
(63) OPERATING RATING METHOD - LOAD FACTOR 1
(64) OPERATING RATING - 24.9
(65) INVENTORY RATING METHOD - LOAD FACTOR 1
(66) INVENTORY RATING - 15.6
(70) BRIDGE POSTING - Equal to or above legal loads 5
(41) STRUCTURE OPEN, POSTED OR CLOSED - A
DESCRIPTION - OPEN, NO RESTRICTION
(67) STRUCTURAL EVALUATION 4
(68) DECK GEOMETRY 2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 8
(36) TRAFFIC SAFETY FEATURES 0 0 0
(113) SCOUR CRITICAL BRIDGES U
(75) TYPE OF WORK - REPLACE FOR DEFICIENCY CODE 31
(76) LENGTH OF STRUCTURE IMPROVEMENT 316.4 M
(94) BRIDGE IMPROVEMENT COST \$2,582,000
(95) ROADWAY IMPROVEMENT COST \$258,000
(96) TOTAL PROJECT COST \$3,873,000
(97) YEAR OF IMPROVEMENT COST ESTIMATE 1999
(114) FUTURE ADT 8600
(115) YEAR OF FUTURE ADT 2011
(90) INSPECTION DATE 10/01 (91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
A) FRACTURE CRIT DETAIL - YES 48 MO A) 04/89
B) UNDERWATER INSP - YES 60 MO B) 10/01
C) OTHER SPECIAL INSP - YES 24 MO C)

