

HAYWOOD COUNTY

38-SR001-0289

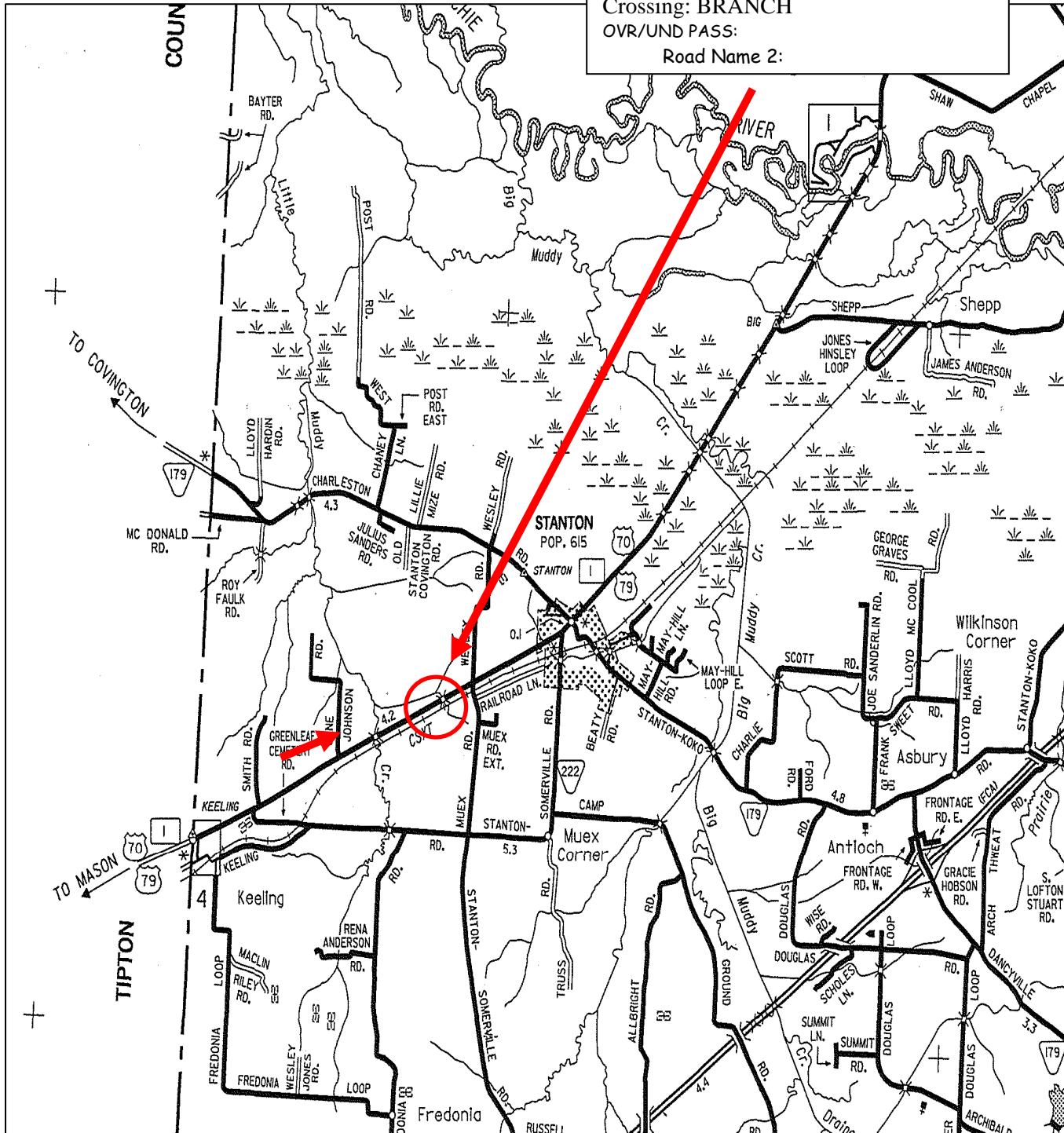
Federal ID: 38SR0010003

Road Name: HWY 79

Crossing: BRANCH

OVR/UND PASS:

Road Name 2:



BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: HAYWOOD

LOCATION: 38-SR001-02.89-

CO. SEQ.: 1 SPEC. CASE: 0

Tennessee Department
of Transportation

CROSSING: BRANCH

FED. BRIDGE NO.: 38SR0010003

MAINT. DIST.: 38

REPAIR LIST NO.: 2

DATE ADDED: 02/04/1999

REVISED: 11/01/2017

FACILITY CARRIED:	FAP 1	NUMBER OF MAIN SPANS:	1
HIGHWAY SYSTEM:	05-STP RURAL, STATE	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	28 FT 2 IN	BRIDGE LENGTH (FT):	46
BRIDGE WIDTH (OUT TO OUT):	34 FT 5 IN	MAXIMUM SPAN LENGTH (FT):	41
APPROACH ROADWAY (W/SHOULDERS):	29 FT 10 IN	SKEW ANGLE (DEGREES):	45
MAINTAINED BY: STATE HIGHWAY AGENCY			
MAIN SPAN MATERIAL: CONCRETE			
MAIN SPAN DESIGN TYPE: TEE BEAM			
APPROACH SPAN MATERIAL: OTHER OR NOT APPLICABLE			
APPROACH SPAN DESIGN TYPE: OTHER OR NOT APPLICABLE			
INSPECTION DATE:	11/01/2017	GENERAL CONDITION:	POOR
EVALUATION DATE:	12/28/2015	STRUCTURALLY DEFICIENT:	YES
PPRM PIN NUMBER:			
H TRUCK RATING @ INV.:	16 TONS	SUFFICIENCY RATING:	37.1

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS

REPAIR STEEL BEAM "B & H" IN SPAN NO.1

REPAIR BREASTWALL AT ABUTMENT NO.1

CLEAR DRAINS

LEVEL THE WEARING SURFACE

CUT AND REMOVE VEGETATION FROM CHANNEL

LEVEL THE WEARING SURFACE AT BOTH APPROACHES.

APPROACH GUARDRAILS ARE NON-EXISTENT

BRIDGERAILS ARE SUBSTANDARD

GENERAL COMMENTS:



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 11/02/2017

Bridge Number: 38SR00100031
(Includes Item 5A)

Feature Intersected: BRANCH

Evaluation Status: CONDITION ITEM CHANGE

County: 38

Route: SR001

Special Case: 0

County Sequence: 1

Log Mile: 2.89

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES
90	LAST INSPECTION DATE	<u>11/01/2017</u>	(Values for Coding Items 58, 59, 60 and 62)
	EARLIEST DATE OF NEXT REGULAR INSPECTION	<u>09/02/2019</u>	
		<u>/ /</u>	N NOT APPLICABLE
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.	9 EXCELLENT CONDITION
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
36	TRAFFIC SAFETY FEATURES		7 GOOD CONDITION - SOME MINOR PROBLEMS.
	Br. Rail Trans. Appr. Rail Terminal SPEED LIMIT	0 1 0 1 55	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
41	STRC OPEN/CLOSED/POSTED	A	5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
	A K P		4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
58	DECK	5	3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOUSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
59	SUPERSTRUCTURE	4	2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
60	SUBSTRUCTURE	5	1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT IT BACK IN LIGHT SERVICE.
61	CHANL/CHANL PROTECTION	6	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.
62	CULVERT AND RETAIN WALL	N	
71	WATERWAY ADEQUACY	8	
72	APPROACH RDWY ALIGNMENT	8	
521	OVERALL CONDITION	<u>POOR</u>	
16	LATITUDE	17 LONGITUDE	
	N 35° 27.3083'	W 89° 25.6033'	
TEAM LEADER SIGNATURE		REVIEW DATE	

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



BRIDGE NUMBER



APPROACH 1

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



APPROACH 2 LOOKING BACK



LOOKING AHEAD ON ROUTE

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



LOOKING BACK ON ROUTE



APPROACH 2

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



LOOKING RIGHT



LOOKING LEFT

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



VIEW ACROSS TOP OF DECK



ABUTMENT 2 LEFT WING WALL (WASHING BEHIND)

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



ABUTMENT 2



STEEL I BEAM "B"

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



STEEL I BEAM "B"



STEEL I BEAM "H"

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



BETWEEN G & H BOTTOM DECK



STEEL I BEAM "H"

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



ABUTMENT 1



BOTTOM DECK

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



RIGHT SIDE ELEVATION



BREAST WALL- IMPENDING SPALL UNDER BEAM "H"

Bridge Loc. No: 38-SR001-02.89 Date: 11-01-17



LEFT SIDE ELEVATION



ABUTMENT 1 RIGHT WING WALL (WASHING BEHIND)

BRIDGE INSPECTION REPORT

NOV 01 2017

Form BIR 3.0
(Rev. 9-22-98)
DT-0069

Field Report No.: 24 Date: 11/1/17
Previous Report No.: 23 Date: 12/17/15
Co. Seq 01 Plans: YES () NO ()

Bridge No. 38SR0010003 Bridge Location No. 38 - SR001 - 0289
Eleven Digit No. Co. Route Log Mile OVER/UNDER PASS

HWY 79 BRANCH
Road Name Feature Intersected CITY
Year Constructed 1926 County Haywood Maint. Dist: 48 Maint. Resp: 02
Year Widened Year Rehabilitated

Structure Name (If Named)

FEATURES

Wearing Surface Concrete () Timber () Asphalt (X) Depth 3" (in.)
Flared Width Yes () No (X) Median Width Open () None (X) Closed ()
Navigational Control Yes () No (X) Bridge Skew 45R ° LT () RT ()
Structure Type (Main Span) C. D. G. & STEEL I. BEAM
Structure Type (Appr. Spans)
No. Main Spans 1 No. Approach Spans
Maximum Span Length 41.0 (**. ft.)
Total Length 41.0 (**. ft.)

INSPECTORS

1. MOORE (TC)
2. ARRINGTON
3. CONWAY
4. B. JONES
5. KEE
6.
7.
8.

WIDTHS (ft.)

Deck Out-to-Out 34.0
Roadway Curb/Curb 28.0
Roadway Rail/Rail 28.0
Sidewalk Rt. Lt.
*Approach Roadway 24.0
*(Does Not Include Shoulders)
Approach Shoulder Rt. 4.0
Lt. 4.0

CLEARANCES

Min. Vertical Clearance over Deck (ft.-in.)
Min. Vertical Under Clearance (ft.-in.)
Min. Lateral Under Clearance Rt. (**. ft.)
Min. Lateral Under Clearance Lt. (**. ft.)

FRACTURE CRITICAL:
(If Yes, Include BIR 3.9)

NBIS Bridge Length (<25 ft.) (ft.-in.)

UNDERWATER INSPECTION

To Be Performed By: Date
DOT FIELD TEAM () CONTRACT DIVERS () NONE REQUIRED (X)
Change in Structural Condition: Yes () No (X) Major Repairs Made: Yes () No (X)

COMMENTS:

LATITUDE: N35 ° 27.3083LONGITUDE: W89 ° 25.6033

G.P.S. Location

BRIDGE RATING: () () (X) ()

GOOD FAIR POOR CRITICAL

Supervising Bridge Inspector: Ronnie W. Moore II

PERFORMANCE EVALUATION

Time of Day Inspected 3:20 PM Weather Conditions CLOUDY, 65°±

Vehicles Observed ALL TYPES

LIVE LOAD BEHAVIOR

Substructure	YES	NO	Comments
Horiz./ Vert. Defl.	()	(X)	
Vibration	()	(X)	
Superstructure			
Horiz./ Vert. Defl.	()	(X)	
Vibration	()	(X)	

APPROACH

	Rating	Comments
Alignment	(G) F P C	
Slab	G F P C	
Joints	G F P C	
Pavement	G F (P) C	<u>APP#1 + #2 (003)</u>
Embankment	G (F) P C	
Drains	G F P C	

TRAFFIC SAFETY FEATURES

	Rating	STANDARD/ SUB-STANDARD	Comments
Bridgerailing	(G) F P C	() (X)	
Transitions	(G) F P C	(X) ()	
Guardrail	G F P C	() ()	
Guardrail Terminal	(G) F P C	(X) ()	

SIGNING

	YES	NO	NEEDED	Weight Limit Posted
Paddleboards	(X)	()	()	YES () NO (X)
Vertical Clearance (<14'-6")	()	(X)	()	Gross..... Tons
NARROW ()	()	(X)	()	2 Axle..... Tons
ONE LANE BRIDGE ()	()	(X)	()	3 or more Axles.. Tons

Other Signs or Plaques: NONE

Comments Regarding any Problems with Signing: NONE

DECK

Wearing Surface

Rating
G F (P) C

Comments

SPAN #1 (048)

Deck - Structural
Condition

G (F) P C

Curbs

G (F) P C

Median

G F P C

Sidewalks

G F P C

Parapet

G F P C

Railing

(G) F P C

Paint

G F P C

Drains

G F (P) C

SPAN #1 (041)

Lighting Standards

G F P C

Utilities

G F P C

Joint Leakage

G F P C

Expansion Joints

G F P C

SUPERSTRUCTURE

Bearing Devices

G F P C

Beams SIB

G F (P) C

SPAN #1 "B" + "H" (244)

Girders

G (F) P C

P C C S

G F P C

BOLTS (PCCS)

G F P C

Floor Beams

G F P C

Stringers

G F P C

Diaphragms

G F P C

Bracing

G F P C

Trusses - General

G F P C

Portals

G F P C

Bracing

G F P C

Paint

G (F) P C

Alignment of Members

(G) F P C

TEXTURE COAT

Condition Rating

G F P C

Fading

G F P C

Overall Appearance

G F P C

Needs Spot Painting

YES () NO ()

Staining Rating

G F P C

Needs Repainting

YES () NO ()

Comments

Scaling Rating G F P C

RECOMMENDATIONS:

CLEAN SEAL JOINTS ()

CLEAN DRAINS (X)

SUBSTRUCTURE

PILES TO BE
REPLACED

ABUTMENTS

	Rating	Comments	PILE(S)	ABUTMENT
Caps	G F P C			
Breastwall	G F <u>P</u> C	ABUT #1 (167)		
Wings	G <u>F</u> P C			
Backwall	G <u>F</u> P C			
Plumb	<u>G</u> F P C			
Footing	G F P C	N/V		
Piles	G F P C			
Embankment	G <u>F</u> P C			
Bearing	G F P C			
Slope Paving	G F P C			
Rip Rap	G F P C			
Earthquake Devices	G F P C			

PIERS

			PILE(S)	PIER
Caps	G F P C			
Columns	G F P C			
Plumb	G F P C			
Footings	G F P C			
Piles	G F P C			
Bearing	G F P C			
Web	G F P C			
Earthquake Devices	G F P C			

BENTS

			PILE(S)	BENT
Caps	G F P C			
Columns	G F P C			
Plumb	G F P C			
Footings	G F P C			
Piles	G F P C			
Bearing	G F P C			
Bracing	G F P C			
Earthquake Devices	G F P C			

Piles Need Replacement: NO (X) YES ()

CUT VEGETATION NO () YES (X) (204)

CLEAR DRIFT NO (X) YES ()

RECOMMENDATIONS:

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing: BRANCH

- I. 1. Type of bed material? SILT & CLAY
2. Has channel shifted? YES () NO (☒) NOT APPARENT ()
3. Condition of rip-rap? G F P C Est. % failed _____ % N/A (☒)
4. Overall condition of channel? G (☒) P C
5. Item 61 - Code values 0 thru 9 according to the recording
and coding guide currently in effect: 6
6. Underwater diver inspection recommended? YES () NO (☒)
If yes, why? _____
- II. Channel and bank stability conditions: (check if applicable)
1. Steep bank conditions: - Failures upstream () Failures downstream ()
2. Moderate bank erosion (☒)
3. Bank vegetation: a. low growth (☒) b. large timber (☒) c. clear banks ()
d. dead trees upstream () e. dead trees downstream ()
4. Sediment or gravel accumulation: YES () NO (☒) UNKNOWN ()
5. Channel altered or straightened: YES () NO (☒) UNKNOWN ()
6. Stable conditions: a. live growth (☒) b. bedrock ()
c. boulders (☒) d. flat slopes ($\leq 2:1$) ()
- III. Waterway adequacy and debris characteristics: (check if applicable)
1. Bridge deck elevations:
a. level with approach roadway. ()
b. higher than approach roadway. (☒)
c. roadway approach \geq 2 ft. above natural ground line. (☒)
2. Abutment encroaches into channel. ()
3. Large scour (blowhole) under bridge. ()
4. Indications that flood waters overtop bridge:
NO (☒) YES () OCASSIONALLY () FREQUENTLY () UNKNOWN ()
5. Debris characteristics:
a. debris/drift present YES () NO (☒)
b. debris/drift likely to accumulate YES (☒) NO ()
c. dead trees upstream () dead trees downstream ()
- IV. Comments: _____

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

- I. Does this bridge need a special inspection? YES () NO (☒)
II. Reason for special inspection: _____

Inspection Team's Summary
Bridge Location No. 38 - SR001 - 02.89
Inspection Date 11 - 01 - 17
Bridge Rating POOR

THIS IS A 1 SPAN CONCRETE DECK GIRDER & STEEL I BEAM BRIDGE
SUBSTRUCTURE IS CONCRETE
SAFETY FEATURES ARE CONCRETE BRIDGE RAILS & METAL GUARD
RAILS
APPROACHS # 1 & 2 HAVE HEAVY CRACKING, SETTLING & SPALLING
TOP DECK HAS HEAVY CRACKING, SETTLING IN PATCHED AREAS
BOTTOM DECK HAS HAIRLINE CRACKS WITH EFFLORESCENCE
STAINS, SPALLING & SPALL TO STEEL
CONCRETE DECK GIRDERS HAVE HAIRLINE CRACKS WITH
EFFLORESCENCE STAINS, SPALLING & SPALL TO STEEL
STEEL I BEAMS HAVE HEAVY CORROSION & HOLES IN WEB,
ESPECIALLY STEEL I BEAMS "B & H"
SUBSTRUCTURE HAS 1/16" CRACKING & SPALLING
ABUTMENT # 1 HAS IMPENDING SPALL BELOW BEAM "H"

VEGETATION IS HEAVY IN GENERAL

THERE IS NO ISSUE WITH SCOUR

JASON ARRINGTON

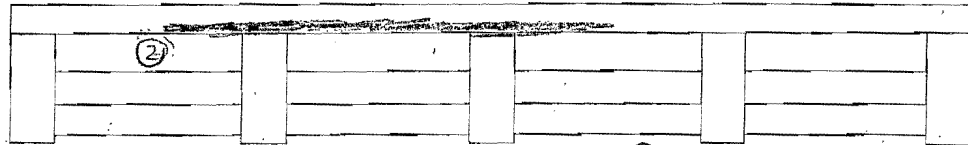
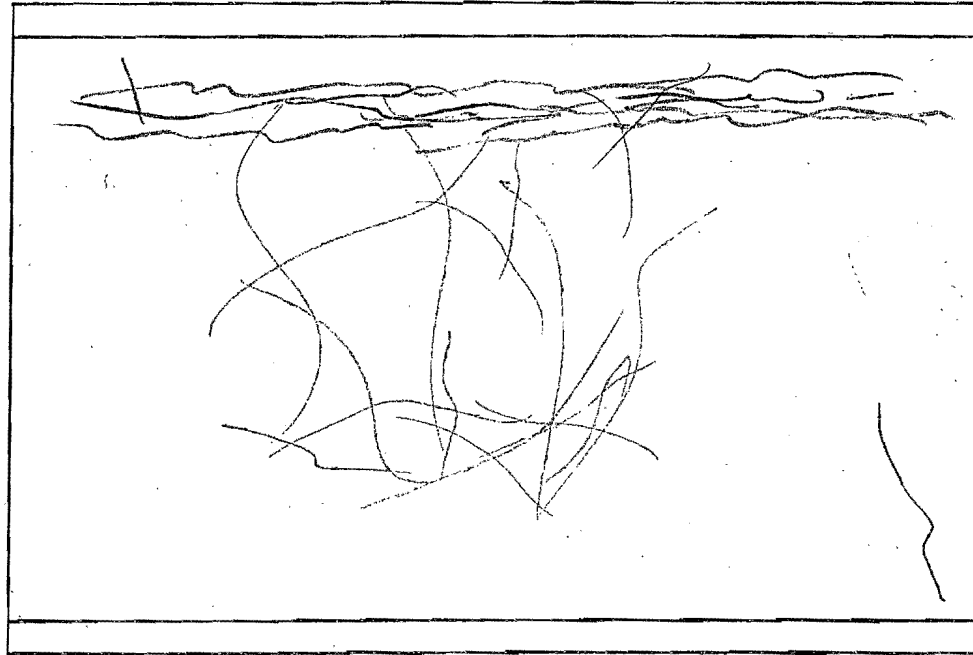
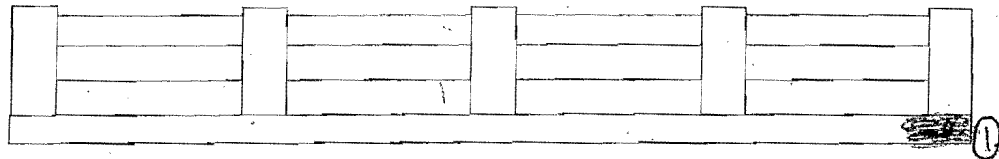
INSPECTOR

CROSS SECTION: YES ☐ NO ☒ BRM: YES ☒ NO ☐

Bridge No. 9

Skew 90 RT.

SPAN. NO. NOV 01 2017

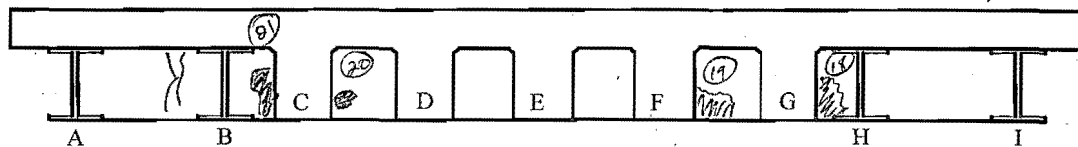
JACOB
KEE

DOR

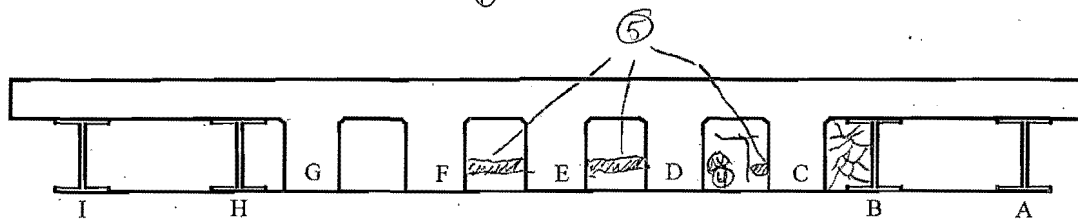
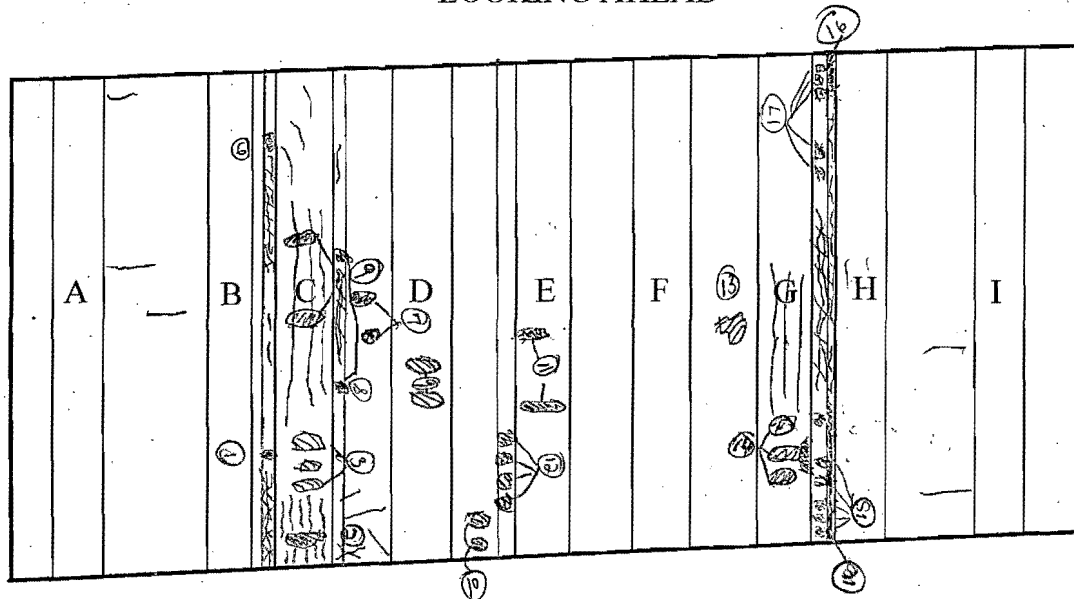
① Spalling 30" L x 6" H x 12" W x 1.5" D

② Spalling 23' L x 10" W x 1" D

ELEMENT	RATING	COMMENT
TOP DECK	G F <u>P</u> C	Heavy Cracking, Rough Patch
CURBS	G <u>F</u> P C	See 1
RAIL & POST	<u>G</u> F P C	
DRAINS	G F <u>P</u> C	6 Drains Blocked
JOINT	G F P C	NA
	G F P C	



LOOKING AHEAD



LOOKING BACK

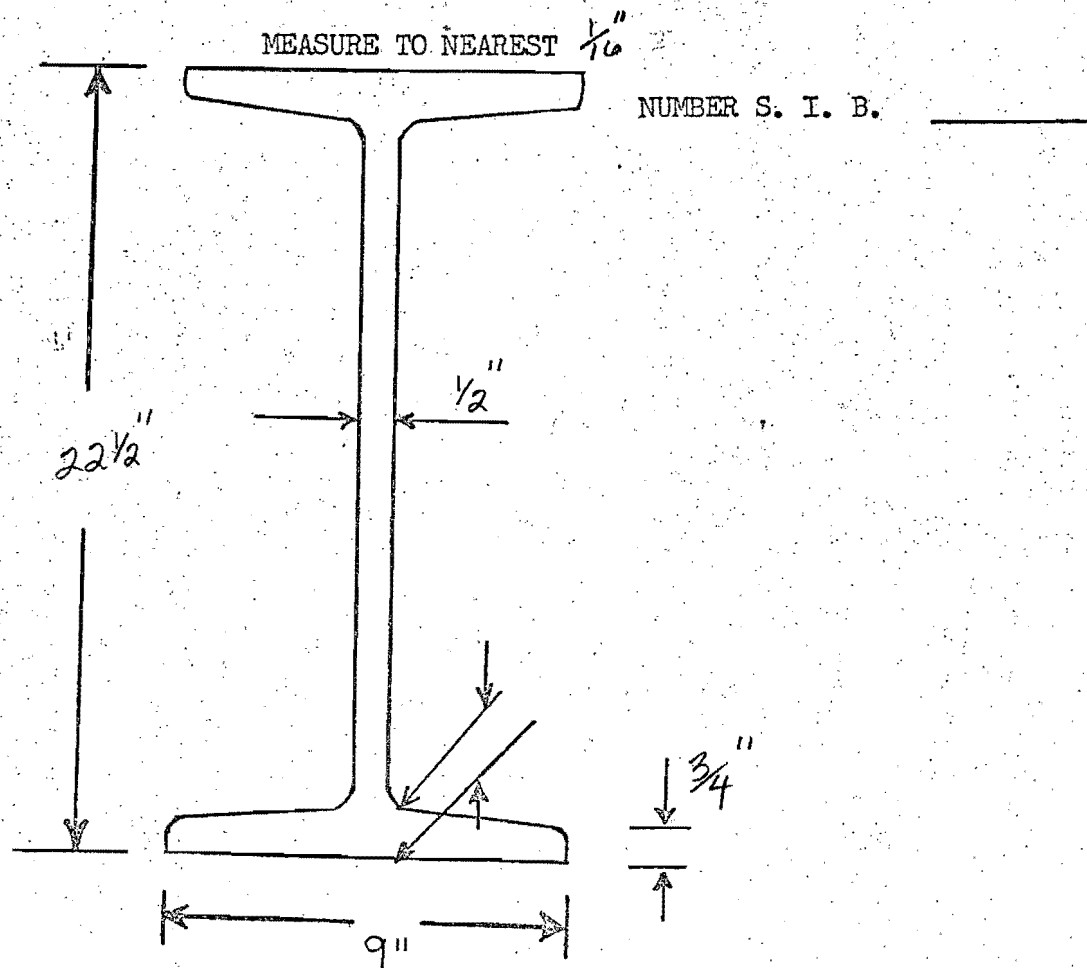
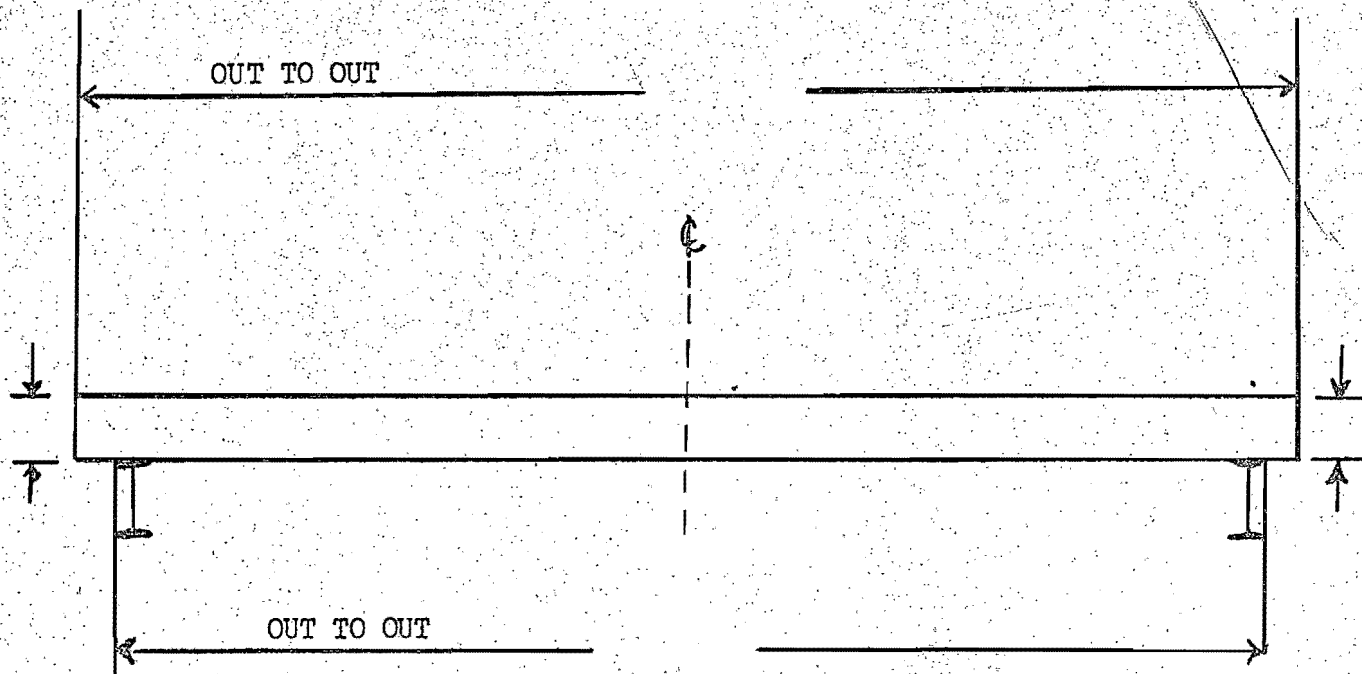
ELEMENT		RATING	COMMENT
BOTTOM DECK		G (F) P C	hairline cracks w/EFF (7) Spall to Steel 1'WX 8" LX 1/2"D
S.I.B.	A	G (F) P C	medium corrosion (19) impending spall 2'WX 10" L
	B	G F (P) C	heavy corrosion (13) " 8" dia (14) scaling 8"WX 8" H length of span
GIRDER	C	G (F) P C	See detail sheet (1) spall to steel 1'HX 6" LX 1/2"D (6) Spalling 2' LX 6" W
	D	G (F) P C	(2) " " 1'WX 3" LX 1/2"D (8) Spall to Steel
	E	G (F) P C	(4) spall to steel 1'WX 3" LX 1/2"D (2'HX 4" LX 1"D
	F	G (F) P C	(10) 10'WX 4" LX 1/2"D hairline cracks w/EFF
	G	(G) F P C	(11) spall to steel 1'WX 2" WX 1/4"D
	H	G F (P) C	(12) 1'HX 2" LX 1/4"D
	I	G (F) P C	(14) Spall to Steel 1'WX 2" LX 1/2"D + hairline cracks w/EFF
S.I.B.	H	G F (P) C	(15) Spall to steel 3'HX 5" LX 1"D (17) Chipped to steel
	I	G (F) P C	see detail sheet heavy corrosion 9" to 36" H up to 7" X 1/2" to 1" D
PAINT		G (F) P C	heavy surface rust (20) Chipped to Steel
BACKWALLS		G (F) P C	light scaling on 'A+I' (21) Impending Spall
		G F P C	hairline cracks w/EFF (19) Spalled spot
		G F P C	(18) Spalled Area 15" HX 1' WX 2"D

NOV 01 2017

BRIDGE NO. 38 1 2.89

SPAN NO. 1

SKEW 45°

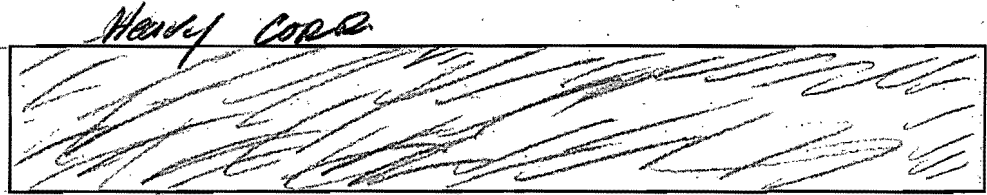


BR. NO. 38-521-2.89

DATE 2/14/12

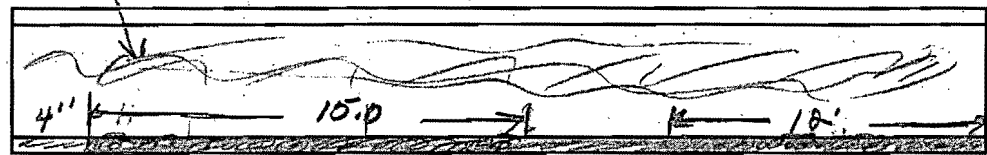
SPAN NO. 1

S.I.B. (B)



BOTTOM OF BEAM

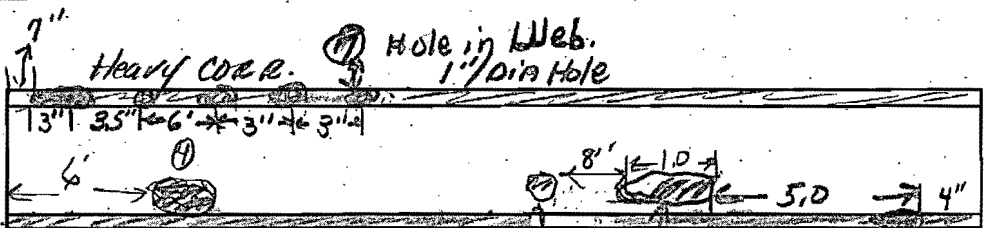
Note: Heavy scalling and section loss on RT. inside web.



RIGHT SIDE OF BEAM

⑤ section of Fly missing
15.0/L x up to 4"W

⑥ section of Fly missing
18"L x up to 4"W



LEFT SIDE OF BEAM

① section of Fly missing
4"/L x 1"W

② Hole 1.0/L x 6"/H

④ Hole in web
4"/dia

N/C 11/1/17

NOV 01 2017

BR. NO. 38-SR 1-289

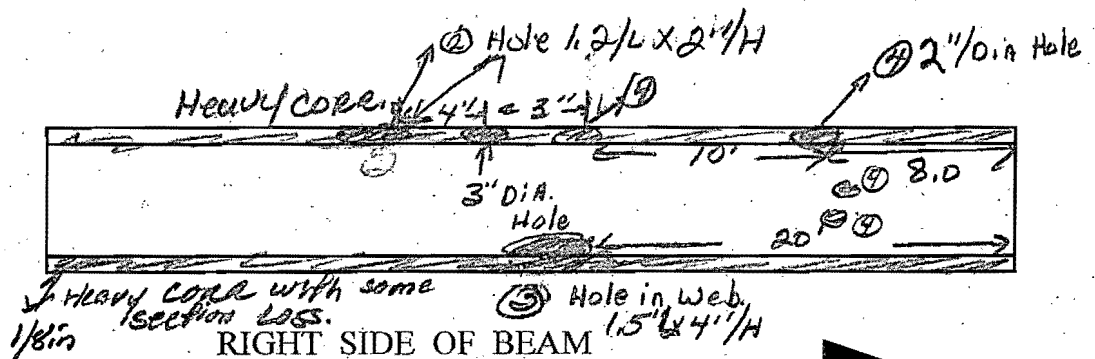
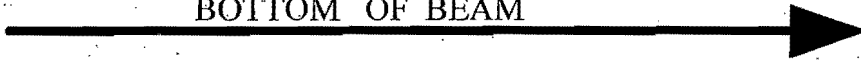
DATE 2/14/12

SPAN NO. 1

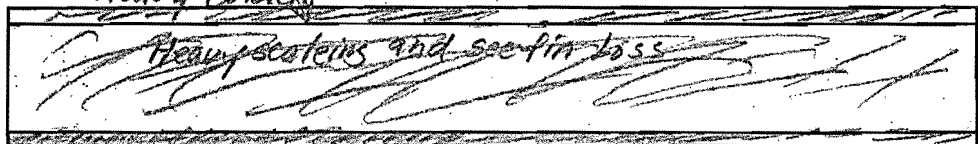
S.I.B. (H)



BOTTOM OF BEAM



Heavy CORR.



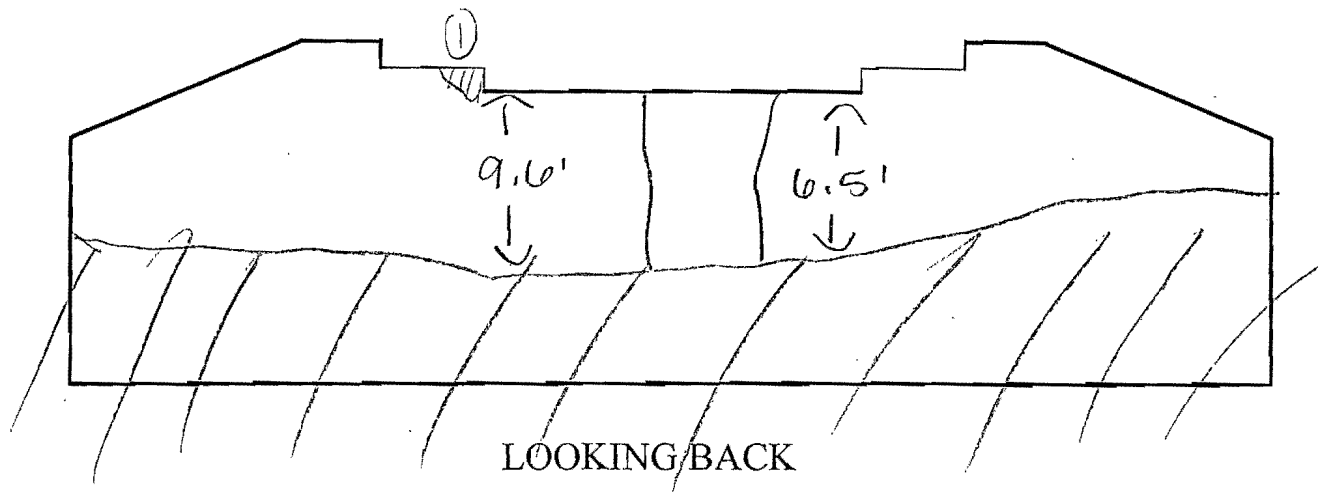
① Flg. Missing up to 4' W x

LEFT SIDE OF BEAM



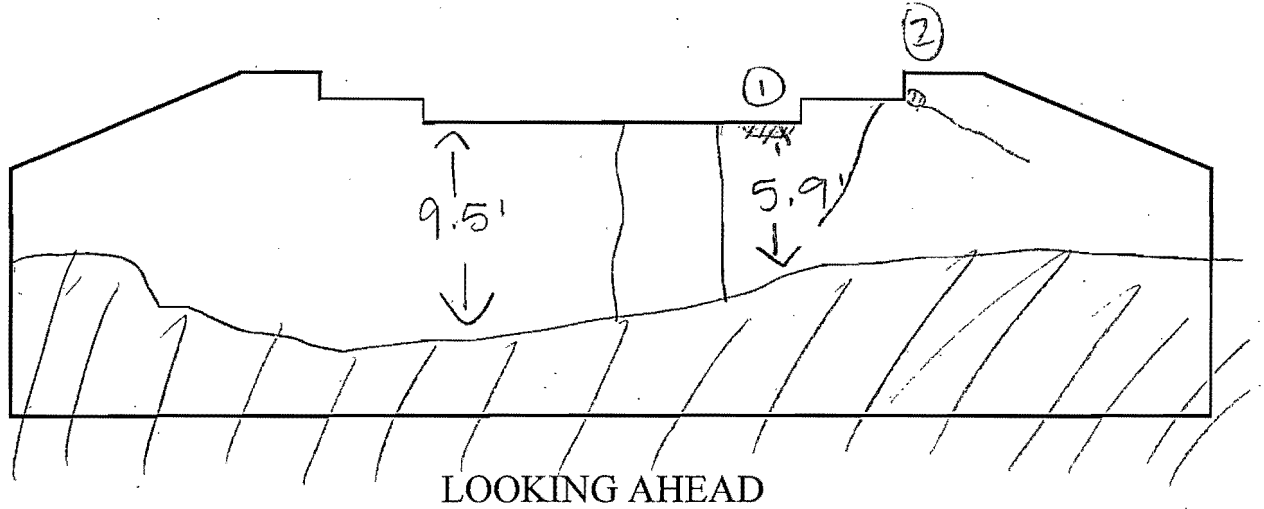
N/C
11/1/17

COMMENTS: _____



① Impending spall
 18" W x 2' H x ?" D
 Under Beam 'H'

ELEMENT	RATING	COMMENT
BEARING	G F P C	
PAINT	G F P C	
BREASTWALL	G F <u>P</u> C	① 1/16" cracks
WINGS	<u>G</u> F P C	
EMBANKMENT	G <u>F</u> P C	Washing behind Right wing wall
RIP RAP	G F P C	
VEGETATION	G <u>F</u> P C	medium growth



① Spalling
 18" W X 8" H X 1" D

② Spalling 10" W X 8" H X 1" D

ELEMENT	RATING	COMMENT
BEARING	G F P C	
PAINT	G F P C	
BREASTWALL	G (F) P C	1/16" CRACKS ①
WINGS	G (F) P C	1/16" CRACKS ②
EMBANKMENT	G (F) P C	Washing behind left wing wall
RIP-RAP	G F P C	
VEGETATION	G F (P) C	Tree growth

NOV 01 2017

38SR0010003 38 SR001 0289 _____

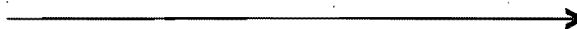
BRIDGE NO.: CO. ROUTE L.M. L/R

SKEW: 45R

No. of Spans: 1

No. of Approach Spans:

Direction of Route



A1

A2

F = FIXED

E = EXPANSION

S = SIMPLE

C = CONTINUOUS

