

STRUCTURES INSPECTION FIELD REPORT

SPECIAL MEMBER INSPECTION

2-DIST
01

B.I.N.
0FM

BR. DEPT. NO.
A-13-020

CITY/TOWN ASHFIELD	8.-STRUCTURE NO. A13020-0FM-MUN-NBI	11-Kilo. POINT 000.000	90-ROUTINE INSP. DATE Jul 18, 2023	93*-SPEC. MEMB. INSP. DATE Jul 23, 2024
07-FACILITY CARRIED HWY APPLE VALLEY	MEMORIAL NAME/LOCAL NAME SCHOOLHOUSE NO. 13	27-YR BUILT 1939	106-YR REBUILT 0000	*YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER U BR CLESSON BK	26-FUNCTIONAL CLASS Rural Local	DIST. BRIDGE INSPECTION ENGINEER <i>M. P.E. McCabe</i>		
43-STRUCTURE TYPE 302 : Steel Stringer/Girder	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER R. Mancari <i>Reed Mancari</i>	
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Sunny	TEMP. (air) 21°C	TEAM MEMBERS M. RANZONI <i>Matthew Ranzoni</i>	

WEIGHT POSTING	<i>Not Applicable</i>				Signs In Place (Y=Yes,N=No, NR=Not Required) Legibility/ Visibility	At bridge		Advance		PLANS (Y/N): <input type="checkbox"/> Y
	H	3	3S2	Single		N	S	N	S	
Actual Posting	19	22	36	N	8	8	8	8	TAPES#:	
Recommended Posting	19	22	36	N						
Waived Date:	00/00/0000		EJDMT Date:	00/00/0000						

RATING

Rating Report (Y/N): Y Date: **04/01/2020** Recommend for Rating or Rerating (Y/N): N

If YES please give priority:
HIGH () MEDIUM () LOW ()

Inspection data at time of existing rating
I 58: 7 I 59: 6 I 60: 7 I 62: - Date :09/26/2019

REASON:

SPECIAL MEMBER(S):

	MEMBER	CRACK (Y/N):	WELD'S CONDITION (0-9)	LOCATION OF CORROSION, SECTION LOSS (%), CRACKS, COLLISION DAMAGE, STRESS CONCENTRATION, ETC.	CONDITION		INV. RATING OF MEMBER FROM RATING ANALYSIS			Deficiencies
					PREVIOUS (0-9)	PRESENT (0-9)	H-20	3	3S2	
A	Item 60.1 - Abutments	N	N	See remarks in comments section.	4	4	Not Rated			S-A
B	Item 60.1.j - Scour	N	N	See remarks in comments section.	4	4	Not Rated			S-A
C										
D										
E										

List of field tests performed:

	I-58	I-59	I-60	I-62
(Overall Previous Condition)	7	6	4	-
(Overall Current Condition)	7	6	4	-

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

M= Minor Deficiency - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

S= Severe/Major Deficiency - Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

C-H= Critical Hazard Deficiency - A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].

P = Prioritize- [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

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REMARKS

BRIDGE ORIENTATION

Apple Valley Road travels north and south. Upper Branch of the Clesson Brook flows from west to east. This single span structure consists of five steel beams, supporting a reinforced concrete deck, with an asphalt wearing surface. The beams and bays are numbered from west to east, upstream to downstream, in accordance with the 2018 Repair Plans and the 2020 Rating Report. See sketch 1 and photos 1 & 2.

GENERAL REMARKS

This inspection was performed at the request of the District Bridge Engineer, Mark DeVylder, to monitor the scour along the abutments.

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments

The abutment condition is controlled by the severe scour.

Item 60.1.j - Scour

The south footing is exposed, full length with isolated areas of undermining. Most of the previously noted undermining has been filled in since the previous Routine Inspection Report, dated 7/18/2023. Refer to charts 1 - 3 and photos 2 & 3.

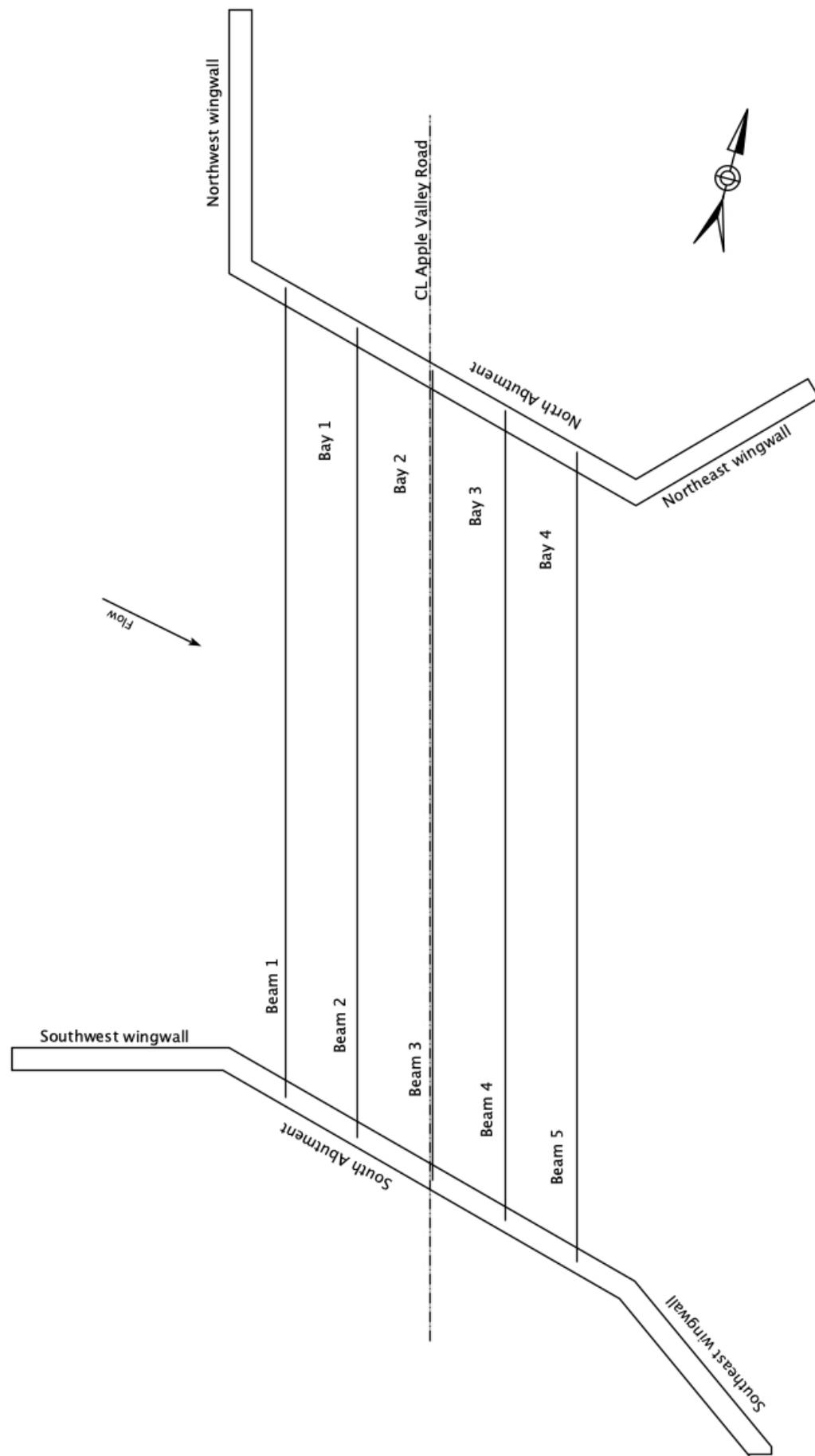
The southeast wingwall footing is exposed, full length. The previously noted undermining has been filled in since the previous Routine Inspection Report, dated 7/18/2023. See photo 3.

Sketch / Chart / Photo Log

Sketch 1 : Framing plan.
 Chart 1 : Channel profile readings.
 Chart 2 : South footing exposure.
 Chart 3 : South footing undermining.
 Photo 1 : General topside, looking north.
 Photo 2 : Typical underside, looking north.
 Photo 3 : Exposed south footing.

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SKETCHES



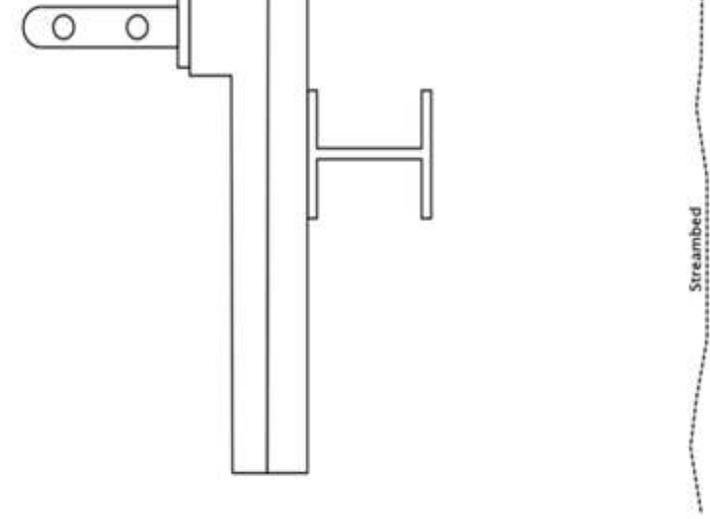
Sketch 1: Framing plan.

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CHARTS

A13020 Channel Profile Readings

DATE	West Fascia					East Fascia								
	North Abutment	Post 1	Post 2	Post 3	Post 4	South Abutment	North Abutment	Post 1	Post 2	Post 3	Post 4	South Abutment		
7/28/2017	8.4	9.1	9.5	9.8	11.1	11.5	10.8	9.4	8.9	8.8	9.8	12.4	13.0	10.7
7/10/2019	8.1	8.4	7.8	8.1	9.5	10.8	10.5	8.7	8.4	9.0	9.0	11.3	12.6	11.0
7/20/2021	8.1	8.4	7.8	8.1	10.0	11.0	10.8	8.7	8.4	9.0	9.0	11.0	12.8	10.7
7/18/2023	8.3	8.7	7.6	9.6	10.8	10.5	10.8	9.0	8.6	9.4	10.1	13.4	14.0	10.7
1/12/2024	8.6	8.5	7.0	9.7	11.2	11.2	10.8	9.0	9.0	9.2	10.2	11.8	12.2	10.7
7/12/2024	8.5	8.5	7.6	10.0	11.0	11.0	11.1	8.8	8.4	9.0	11.0	11.3	12.0	11.8



NOTES:
 *All readings in decimal feet to top of rail base.
 ** All railing posts numbered from north to south.

Chart 1: Channel profile readings.

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CHARTS

South Abutment Footing Exposure Measurements (ft)									
DATE	Boulders	Deck Edge	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Deck Edge	SE wing
7/28/2017	NE	0.2	0.2	0.2	2.5	3.1	2.8	2.0	2.0
7/10/2019	NE	0.3	0.4	0.8	2.6	2.5	2.3	2.2	1.7
7/20/2021	NE	0.0	0.4	0.8	2.0	2.2	2.0	2.2	2.0
7/18/2023	NE	0.2	0.4	1.5	3.6	3.6	3.3	3.0	2.7
1/12/2024	NE	0.3	0.8	1.3	1.6	1.7	1.5	1.3	1.4
7/23/2024	Flush	0.2	0.7	1.8	1.6	1.6	1.4	1.5	0.8

*NE = No Exposure X = distance from stream bed to top of footing
 H = distance from lower chord to top of footing
 W = distance from water surface to bottom of lower chord

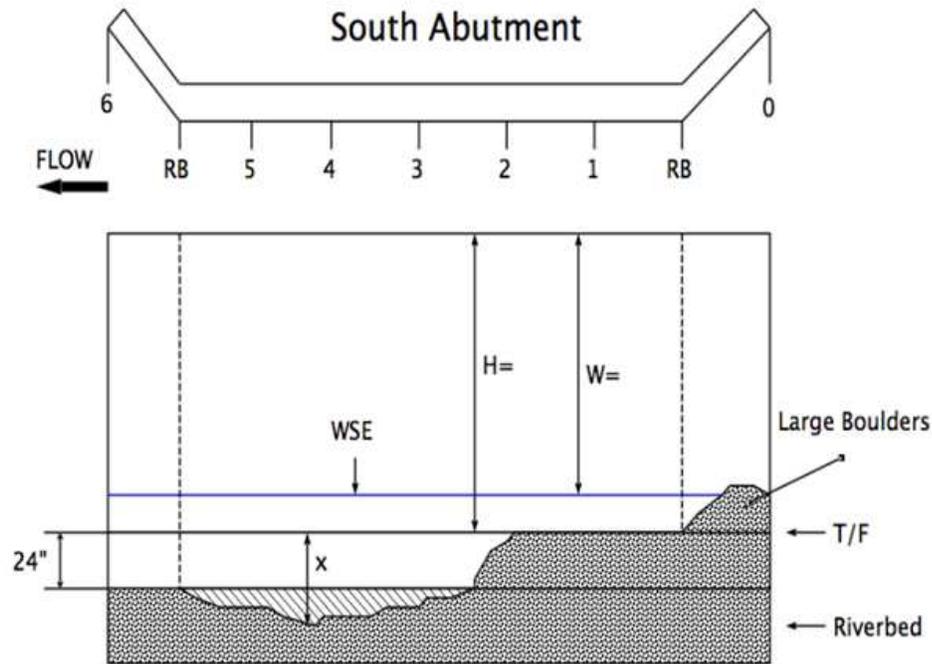


Chart 2: South footing exposure.

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CHARTS

South Abutment Footing Exposure Measurements (ft)								
DATE	Deck Edge	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Deck Edge	SE wing
7/28/2017	0.0;0.0	0.0;0.0	0.0;0.0	1.0;0.5	1.7;1.1	2.1;0.8	0.5;0.2	0.0;0.0
7/10/2019	0.0;0.0	0.0;0.0	0.0;0.0	3.6;0.7	2.4;0.05	2.3;0.3	0.3;0.3	0.0;0.0
7/20/2021	0.0;0.0	0.0;0.0	0.0;0.0	0.7;0.7	0.8;0.7	0.5;0.4	0.3;0.3	0.0;0.0
7/18/2023	0.0;0.0	0.0;0.0	0.0;0.0	2.3;1.6	3.4;1.6	3.0;1.3	1.8;1.0	1.0;0.7
1/12/2024	0.0;0.0	0.0;0.0	0.0;0.0	NU	NU	NU	NU	NU
7/23/2024	NU	NU	NU	NU	NU	NU	NU	NU

*NU = No Undermining

**Measurement convention = H;V with H=horizontal and V=vertical

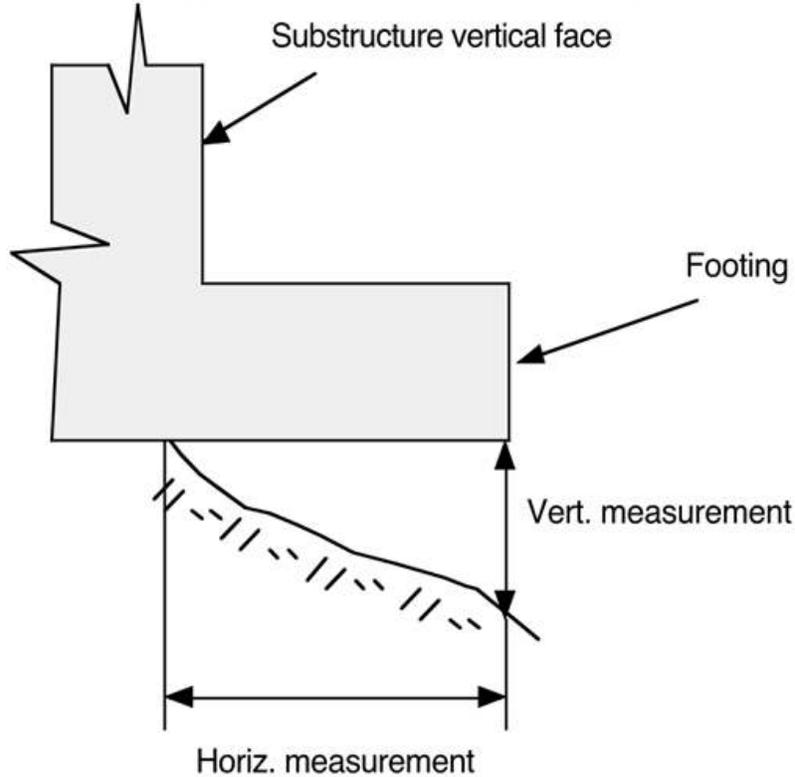


Chart 3: South footing undermining.

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PHOTOS



Photo 1: General topside, looking north.



Photo 2: Typical underside, looking north.

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PHOTOS



Photo 3: Exposed south footing.