Version 11.06.15

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

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WATERLINE UTILITY SHEETS

C-101	WATER MAIN ON BRIDGE
C-501	WATERLINE DETAILS

STRUCTURES DETAIL SHEETS

SD-501.000	CONCRETE DETAILS AND NOTES	05-07-2010
SD-502.00	CONCRETE DETAILS AND NOTES	06-04-2010
SD-601.00	STRUCTURAL STEEL DETAILS & NOTES	06-04-2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	05-02-2011

STANDARDS LIST

C-10	CURBING	02-11-2008
E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
E-101	CONSTRUCTION SIGN DETAILS	05-30-2003
E-102	CONSTRUCTION SIGN DETAILS	06-30-2003
E-102A	CONSTRUCTION SIGN DETAILS	05-01-2004
E-106	TRAFFIC CONTROL- MISCELLANEOUS DETAILS	03-01-2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-2003
E-107A	BREAKAWAY BARRICADE DETAILS	06-08-2009
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	06-08-2009
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	01-03-2000
G-17A	MODIFIED ECCENTRIC LOADER TERMINAL (MELT)	09-27-2002
G-17B	MODIFIED ECCENTRIC LOADER TERMINAL (MELT)	09-27-2002
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11-15-2002
S-360a	BRIDGE RAILING, GALVANIZED NETC 2 RAIL	12-14-2009
S-360b	GUARDRAIL APPROACH SECTION, GALVANIZED NETC 2 RAIL	12-14-2009
S-363	GUARDRAIL APPROACH SECTION, GALVANIZED NETC 2 & 4 RAIL	12-14-2009

TRAFFIC DATA

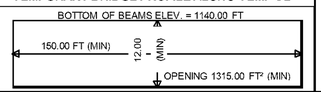
YEAR	ADT	DHV	% D	% T	ADTT
2012	4000	620	56	10.7	500
2032	4300	660	56	13.1	660

20 year ESAL for flexible pavement from 2012 to 2032 : 4789000

40 year ESAL for flexible pavement from 2012 to 2052 : 10386000

Design Speed : 50 mph

TEMPORARY BRIDGE PROFILE ALONG TEMP CL



FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Dec 2011

DRAINAGE AREA : 37.7 SQ MI
CHARACTER OF TERRAIN : HILLY TO MOUNTAINOUS, MOSTLY FORESTED
STREAM CHARACTERISTICS :
NATURE OF STREAMBED : WELL ARMORED - MEDIUM TO LARGE COBBLES & BOULDE

PEAK FLOW DATA

Q 2.33 =	2400 CFS	Q 50 =	6000 CFS
Q 10 =	4000 CFS	Q 100 =	7000 CFS
Q 25 =	5000 CFS	Q 500 =	

DATE OF FLOOD OF RECORD N/A
ESTIMATED DISCHARGE: N/A
WATER SURFACE ELEV.: N/A
NATURAL STREAM VELOCITY : @ Q50 = 12.9 fps
ICE CONDITIONS : LIGHT
DEBRIS: MODERATE
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? YES
IS ORDINARY RISE RAPID? YES
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO
IF YES, DESCRIBE:

WATERSHED STORAGE: <1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: THREE SPAN CONTINOUS PLATE GIRDER BRIDGE
YEAR BUILT: 2005
CLEAR SPAN(NORMAL TO STREAM): 183 FT
VERTICAL CLEARANCE ABOVE STREAMBED: 10 FT
WATERWAY OF FULL OPENING: 2200 SQ FT
DISPOSITION OF STRUCTURE: REPAIR
TYPE OF MATERIAL UNDER SUBSTRUCTURE:

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1132.4 FT	VELOCITY =	10.4 FPS
Q10 =	1133.7 FT	"	10.6 FPS
Q25 =	1134.1 FT	"	11.4 FPS
Q50 =	1134.5 FT	"	12.1 FPS
Q100 =	1134.9 FT	"	12.7 FPS

LONG TERM STREAMBED CHANGES: Channel is highly unstable and subject to lateral shifting

IS THE ROADWAY OVERTOPPED BELOW Q100: NO
FREQUENCY: N/A
RELIEF ELEVATION: N/A
DISCHARGE OVER ROAD @Q100: N/A

UPSTREAM STRUCTURE

TOWN: N/A
HIGHWAY # :
CLEAR SPAN:
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE:
STRUCTURE #:
CLEAR HEIGHT:
FULL WATERWAY:

DOWNSTREAM STRUCTURE

TOWN: Bennington
HIGHWAY # : VT 9
CLEAR SPAN: 209 FT
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE: 1.7 MI
STRUCTURE #: 9
CLEAR HEIGHT: 17'
FULL WATERWAY:

LFD LOAD RATING (TONS)

STRESS LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
INVENTORY	46	52					
POSTING	52	73	85		67	79	
OPERATING		87	101	116			
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: THREE SPAN PLATE GIRDER BRIDGE

CLEAR SPAN(NORMAL TO STREAM): 53' + 77' + 53' = 183 FT TOTAL
VERTICAL CLEARANCE ABOVE STREAMBED: 10 FT
WATERWAY OF FULL OPENING: 2200 SQ FT

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1132.4 FT	VELOCITY=	10.4 FPS
Q10 =	1133.7 FT	"	10.6 FPS
Q25 =	1134.1 FT	"	11.4 FPS
Q50 =	1134.5 FT	"	12.1 FPS
Q100 =	1134.9 FT	"	12.7 FPS

IS THE ROADWAY OVERTOPPED BELOW Q100: NO
FREQUENCY: N/A
RELIEF ELEVATION: N/A
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1139.1 FT
VERTICAL CLEARANCE: @ Q100 = 4.2 FT

SCOUR: 1 FT

REQUIRED CHANNEL PROTECTION: STONE FILL, TYPE IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	80 CFS	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	40 CFS	DEPTH = 0.5 FT
ORDINARY HIGH WATER:	1150 CFS	DEPTH = 3.0 FT

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single span structure
CLEAR SPAN (NORMAL TO STREAM): 131' minimum clear span (normal to channel)
VERTICAL CLEARANCE ABOVE STREAMBED: Minimum low beam elev. 1140'
WATERWAY AREA OF FULL OPENING: 1315 SQ FT

ADDITIONAL INFORMATION

HYDROLOGIC AND HYDRAULIC INFORMATION TAKEN FROM 2005 PLANS.
2011 SURVEY SHOWED SOME CHANGES IN CHANNEL, BUT LITTLE EFFECT ON NET CROSS SECTIONAL AREA.
2011 SURVEY DOES NOT REPRESENT A LONG TERM CONDITION OF THE CHANNEL.

1. MAINTAIN TWO-WAY TRAFFIC ON A TEMPORARY BRIDGE.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY
4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

1. DESIGN LIVE LOAD		HS-25
2. FUTURE PAVEMENT	d_p:	0.0 INCH
3. ABUTMENT BEARING TO BEARING LENGTH (THREE SPANS) (79.00 - 114.00 - 79.00) FT	L:	272.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	---
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	---
20. PILE YIELD STRENGTH ASTM A572	f_y:	---
21. PILE SIZE		---
22. EST. PILE LENGTH	L_p:	
23. PILE RESISTANCE FACTOR	ϕ:	---
24. LATERAL PILE DEFLECTION	Δ:	---
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA: ---	S_s:	---
	S_1:	---

PROJECT NAME: **WOODFORD**
PROJECT NUMBER: **ER BHF 010-1(44)**

FILE NAME: **s11b214pi.dgn**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **M. EVANS-MONGEON**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 3/23/2012
DRAWN BY: **G. ROY**
CHECKED BY: **M. EVANS-MONG**