

# PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

INDEX OF SHEETS						FINAL HYDRAULIC REPORT																																																																																																																									
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INDEX OF SHEETS						STANDARDS LIST						<p>Date: Jan. 8, 2009</p> <p>DRAINAGE AREA: 11.0 sq. mi.</p> <p>CHARACTER OF TERRAIN: Hilly to mountainous, mostly forested.</p> <p>STREAM CHARACTERISTICS: Sinuous, slightly incised with a wide floodplain.</p> <p>NATURE OF STREAMBED: Mostly cobbles with some gravel.</p> <p>PEAK FLOW DATA</p> <table style="width:100%;"> <tr> <td>Q 2.33 = 700 cfs</td> <td>Q 50 = 2570 cfs</td> </tr> <tr> <td>Q 10 = 1600 cfs</td> <td>Q 100 = 3080 cfs</td> </tr> <tr> <td>Q 25 = 2100 cfs</td> <td>Q 500 = 4510 cfs</td> </tr> </table> <p>DATE OF FLOOD OF RECORD: September 1938</p> <p>ESTIMATED DISCHARGE: Unknown</p> <p>WATER SURFACE ELEV.: Unknown</p> <p>NATURAL STREAM VELOCITY: @ Q50 = 8.9 fps</p> <p>ICE CONDITIONS: Moderate</p> <p>DEBRIS: Moderate</p> <p>DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes</p> <p>IS ORDINARY RISE RAPID? Yes</p> <p>IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No</p> <p>IF YES, DESCRIBE:</p> <p>WATERSHED STORAGE: 1% HEADWATERS: UNIFORM: X IMMEDIATELY ABOVE SITE:</p>						Q 2.33 = 700 cfs	Q 50 = 2570 cfs	Q 10 = 1600 cfs	Q 100 = 3080 cfs	Q 25 = 2100 cfs	Q 500 = 4510 cfs	<p>STRUCTURE TYPE: Single span pre-cast concrete beam bridge</p> <p>CLEAR SPAN(NORMAL TO STREAM): 53'</p> <p>VERTICAL CLEARANCE ABOVE STREAMBED: 7'</p> <p>WATERWAY OF FULL OPENING: 290 sq. ft.</p> <p>WATER SURFACE ELEVATIONS AT:</p> <table style="width:100%;"> <tr> <td>Q2.33 = 573.9'</td> <td>VELOCITY= 7.3 fps</td> </tr> <tr> <td>Q10 = 575.5'</td> <td>" 10.4 fps</td> </tr> <tr> <td>Q25 = 576.3'</td> <td>" 8.4 fps</td> </tr> <tr> <td>Q50 = 576.8'</td> <td>" 6.8 fps</td> </tr> <tr> <td>Q100 = 577.2'</td> <td>" 5.8 fps</td> </tr> </table> <p>IS THE ROADWAY OVERTOPPED BELOW Q100: Yes</p> <p>FREQUENCY: Between Q10 and Q25</p> <p>RELIEF ELEVATION: 576.1'</p> <p>DISCHARGE OVER ROAD @Q100: 1700 cfs</p> <p>AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 577.1'</p> <p>VERTICAL CLEARANCE: @ Q50 = 0.3'</p> <p>SCOUR: Less than 1' of contraction scour up to Q500.</p> <p>REQUIRED CHANNEL PROTECTION: Stone Fill, Type III</p>						Q2.33 = 573.9'	VELOCITY= 7.3 fps	Q10 = 575.5'	" 10.4 fps	Q25 = 576.3'	" 8.4 fps	Q50 = 576.8'	" 6.8 fps	Q100 = 577.2'	" 5.8 fps	<p>EXISTING STRUCTURE INFORMATION</p> <p>STRUCTURE TYPE: Single span steel beam bridge with concrete deck</p> <p>YEAR BUILT: 1924</p> <p>CLEAR SPAN(NORMAL TO STREAM): 39'</p> <p>VERTICAL CLEARANCE ABOVE STREAMBED: 7'</p> <p>WATERWAY OF FULL OPENING: 240 sq. ft.</p> <p>DISPOSITION OF STRUCTURE: Remove and replace</p> <p>TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings.</p> <p>WATER SURFACE ELEVATIONS AT:</p> <table style="width:100%;"> <tr> <td>Q2.33 = 573.9'</td> <td>VELOCITY = 7.1 fps</td> </tr> <tr> <td>Q10 = 575.6'</td> <td>" 10.8 fps</td> </tr> <tr> <td>Q25 = 576.3'</td> <td>" 9.4 fps</td> </tr> <tr> <td>Q50 = 577.4'</td> <td>" 6.6 fps</td> </tr> <tr> <td>Q100 = 577.5'</td> <td>" 7.7 fps</td> </tr> </table> <p>LONG TERM STREAMBED CHANGES: None noted.</p> <p>IS THE ROADWAY OVERTOPPED BELOW Q100: Yes</p> <p>FREQUENCY: Between Q10 and Q25</p> <p>RELIEF ELEVATION: 576.1'</p> <p>DISCHARGE OVER ROAD @Q100: 1840 cfs</p>						Q2.33 = 573.9'	VELOCITY = 7.1 fps	Q10 = 575.6'	" 10.8 fps	Q25 = 576.3'	" 9.4 fps	Q50 = 577.4'	" 6.6 fps	Q100 = 577.5'	" 7.7 fps	<p>PERMIT INFORMATION</p> <p>AVERAGE DAILY FLOW: 20 cfs DEPTH OR ELEVATION:</p> <p>ORDINARY LOW WATER: 10 cfs 0.5'</p> <p>ORDINARY HIGH WATER: 300 cfs 2.0'</p> <p>TEMPORARY BRIDGE REQUIREMENTS</p> <p>STRUCTURE TYPE: No temporary bridge required. Traffic will use an offsite detour.</p> <p>CLEAR SPAN (NORMAL TO STREAM):</p> <p>VERTICAL CLEARANCE ABOVE STREAMBED:</p> <p>WATERWAY AREA OF FULL OPENING:</p> <p>ADDITIONAL INFORMATION</p>						<p>TRAFFIC MAINTENANCE NOTES</p> <ol style="list-style-type: none"> <li>1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.</li> <li>2. TRAFFIC SIGNALS ARE NOT NECESSARY.</li> <li>3. SIDEWALKS ARE NOT NECESSARY</li> </ol>						<p>DESIGN VALUES</p> <table style="width:100%;"> <tr> <td>1. DESIGN LIVE LOAD</td> <td>HL-93</td> </tr> <tr> <td>2. FUTURE PAVEMENT</td> <td>d<sub>p</sub>: 0.0 INCH</td> </tr> <tr> <td>3. DESIGN SPAN</td> <td>L: 56.00 FT</td> </tr> <tr> <td>4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)</td> <td>Δ: ---</td> </tr> <tr> <td>5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)</td> <td>f<sub>y</sub>: 270 KSI</td> </tr> <tr> <td>6. PRESTRESSED CONCRETE STRENGTH</td> <td>f'<sub>c</sub>: 8.0 KSI</td> </tr> <tr> <td>7. 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<p>TOWN: Chester DISTANCE: 5,500'</p> <p>HIGHWAY #: T.H. 3, VT Route 35 &amp; FAS 0125 STRUCTURE #: 7</p> <p>CLEAR SPAN: 72' CLEAR HEIGHT: 7.5'</p> <p>YEAR BUILT: 1949 FULL WATERWAY:</p> <p>STRUCTURE TYPE: Single span steel beam bridge</p>						<p>TOWN: Confluence with Middle Branch Williams River DISTANCE: 600'</p> <p>HIGHWAY #: STRUCTURE #: </p> <p>CLEAR SPAN: CLEAR HEIGHT: </p> <p>YEAR BUILT: FULL WATERWAY: </p> <p>STRUCTURE TYPE: </p>						<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">LOADING LEVELS</th> <th colspan="7">TRUCK</th> </tr> <tr> <th>H-20</th> <th>HL-93</th> <th>3S2</th> <th>6 AXLE</th> <th>3A STR</th> <th>4A STR</th> <th>5A SEMI</th> </tr> </thead> <tbody> <tr> <td>TONNAGE</td> <td>20</td> <td>36</td> <td>36</td> <td>66</td> <td>30</td> <td>34.5</td> <td>38</td> </tr> <tr> <td>INVENTORY</td> <td>1.44</td> <td>1.08</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>POSTING</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>OPERATING</td> <td>1.87</td> <td>1.39</td> <td>1.74</td> <td>1.04</td> <td>1.35</td> <td>1.22</td> <td>1.42</td> </tr> <tr> <td>COMMENTS:</td> <td colspan="7"></td> </tr> </tbody> </table>						LOADING LEVELS	TRUCK							H-20	HL-93	3S2	6 AXLE	3A STR	4A STR	5A SEMI	TONNAGE	20	36	36	66	30	34.5	38	INVENTORY	1.44	1.08						POSTING								OPERATING	1.87	1.39	1.74	1.04	1.35	1.22	1.42	COMMENTS:																																																														
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