

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA **

DRAINAGE AREA= _____
 CHARACTER OF TERRAIN: _____
 CHARACTER & TYPE OF STREAM: _____
 NATURE OF STREAMBED: _____
 02.33= _____ 050= _____
 010= _____ 0100= _____
 025= _____ 0500= _____
 DATE OF FLOOD OF RECORD: _____
 WATER SURFACE ELEV. ESTIMATED DISCHARGE: _____
 NATURAL STREAM VELOCITY @ 0 _____
 ICE CONDITIONS: _____ DEBRIS: _____
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? _____
 IS ORDINARY RISE RAPID? _____
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? _____
 IF YES, DESCRIBE: _____
 WATERSHED STORAGE _____ HEADWATERS _____ UNIFORM THROUGHOUT WATERSHED _____
 IMMEDIATELY ABOVE SITE _____

PROPOSED STRUCTURE

STRUCTURE TYPE: FIVE SPAN SIMPLY SUPPORTED BEAM W/ CONC. DECK
 (COMPOSITE)
 CLEAR SPAN (NORMAL TO STREAM): SPAN 1 = 51', SPANS 2, 3, 4&5 = 81'
 VERTICAL CLEARANCE ABOVE STREAMBED: _____
 WATERWAY OF FULL OPENING: _____
 WATER SURFACE ELEV. @ 02.33= _____ VELOCITY= _____
 010= _____ " = _____
 025= _____ " = _____
 050= _____ " = _____
 0100= _____ " = _____
 IS THE ROADWAY OVERTOPPED BELOW THE 0100? _____ FREQUENCY: _____
 RELIEF ELEVATION: _____ DISCHARGE OVER ROAD @ 0100: _____
 AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: _____
 VERTICAL CLEARANCE @ 0 _____
 SCOUR: _____
 REQUIRED CHANNEL PROTECTION: _____

EXISTING STRUCTURE

STRUCTURE TYPE: FIVE SPAN SIMPLY SUPPORTED STEEL BEAM W/ CONC. DECK
 CLEAR SPAN (NORMAL TO STREAM): SPAN 1 = 51', SPANS 2, 3, 4&5 = 81'
 VERTICAL CLEARANCE ABOVE STREAMBED: _____
 WATERWAY OF FULL OPENING: _____
 DISPOSITION OF STRUCTURE: REPLACE CONCRETE DECK
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: TIMBER PILES
 WATER SURFACE ELEV. @ 02.33= _____ VELOCITY= _____
 010= _____ " = _____
 025= _____ " = _____
 050= _____ " = _____
 0100= _____ " = _____

PERMIT INFORMATION

AVERAGE DAILY FLOW: _____
 ORDINARY LOW WATER: _____ DEPTH: _____
 ORDINARY HIGH WATER: _____ DEPTH: _____

** PLEASE NOTE THAT A HYDRAULIC REPORT WAS NOT COMPLETED FOR THIS PROJECT.

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: _____ N/A
 CLEAR SPAN (NORMAL TO STREAM): _____
 VERTICAL CLEARANCE ABOVE STREAMBED: _____
 WATERWAY OF FULL OPENING: _____

LONG TERM STREAM BED CHANGES: _____
 IS THE ROADWAY OVERTOPPED BELOW THE 0100? _____ FREQUENCY: _____
 RELIEF ELEVATION: _____ DISCHARGE OVER ROAD @ 0100: _____

UPSTREAM STRUCTURE: TOWN: _____ DISTANCE: _____
 HIGHWAY NO.: _____ STRUCTURE NO.: _____
 STRUCTURE TYPE: _____
 CLEAR SPAN: _____ CLEAR HEIGHT: _____
 YEAR BUILT: _____ FULL WATERWAY: _____

DOWNSTREAM STRUCTURE: TOWN: _____ DISTANCE: _____
 HIGHWAY NO.: _____ STRUCTURE NO.: _____
 STRUCTURE TYPE: _____
 CLEAR SPAN: _____ CLEAR HEIGHT: _____
 YEAR BUILT: _____ FULL WATERWAY: _____

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO HS-25 FOR DECK SLAB
- DESIGN SPAN SPAN 1 = 53', SPAN 2, 3, 4, 5 = 83'
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL _____ N/A ON LEDGE _____ N/A
- ALLOWABLE LOAD FOR PILING _____ N/A TYPE _____ N/A ESTIMATED LENGTH _____ N/A
- STRUCTURAL STEEL AASHTO GRADE $f_y = 36 \text{ ksi}$ OR 50 ksi NEW STEEL
- REINFORCING STEEL GRADE 60
- CONCRETE HIGH PERFORMANCE, CLASS A $f_c 4000 \text{ PSI}$
 CONCRETE HIGH PERFORMANCE, CLASS B $f_c 3500 \text{ PSI}$

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? YES _____ IF YES, ON EXISTING STRUCTURE YES _____ OR ON TEMPORARY BRIDGE NO _____
 - TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY _____ N/A TRAFFIC CONTROL SIGNALS REQUIRED YES _____
- MINIMUM CLEAR SPAN (NORMAL TO STREAM): _____ VERTICAL CLEARANCE ABOVE STREAMBED: _____
 WATERWAY OF FULL OPENING: _____
 ARE SIDEWALKS REQUIRED? NO _____ IF SO, ON WHAT SIDE? _____

LOADING LEVELS (LOAD FACTOR)	LOAD FACTOR LOAD RATING (TONS)				
	H	HS	352	6 AXLE	TRUCK
INVENTORY A=2.17; B=1.00	39*	54*			
POSTED A=1.55; B=1.40	55*	75*	90*	84*	72*
OPERATING A=1.30; B=1.67		90*	107*	126*	100*

STRENGTH RF: $\frac{\phi M_n - 1.3 M_{DL}}{A \times M_{LL+1}}$ * SERVICEABILITY RF: $B \left[\frac{.95 F_y S_{LL+1} - M_{DL} S_{LL+1} - M_{SDL} S_{SDL}}{1.67 M_{LL+1}} \right]$

* - LOAD RATING IS CONTROLLED BY SERVICEABILITY

STATE OF VERMONT
 AGENCY OF TRANSPORTATION

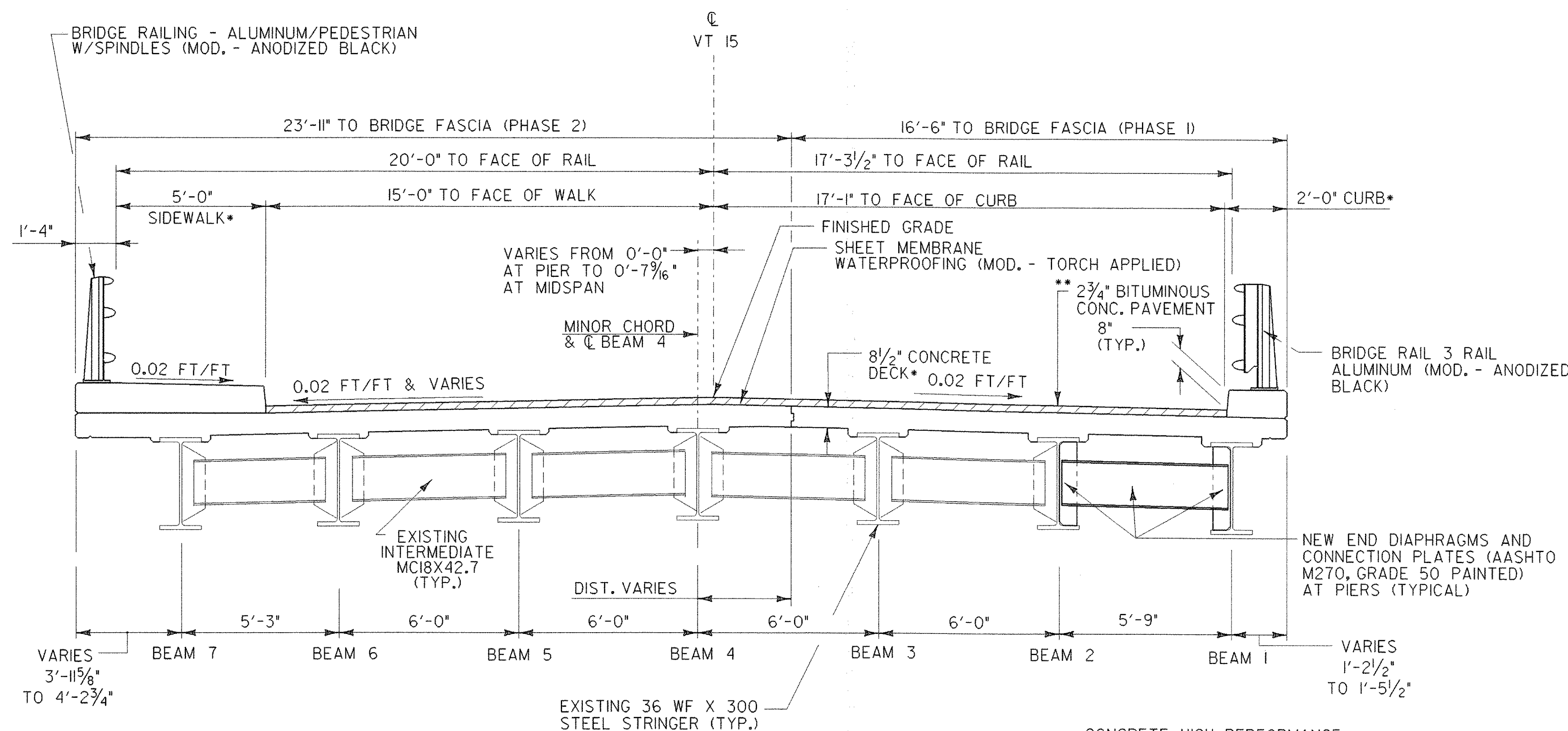
Town Of CAMBRIDGE Bridge No. 20
 Highway No. VT 15 Log Sta. _____
 Surv. Sta. _____

VT 15 OVER LAMOILLE RIVER
 PRELIMINARY INFORMATION SHEET

Designed By B. ERNST Drawn By A. N. BEY
 Checked By K. HINSCH Date _____ Bridge Design Supervisor
 D. STAHNKE Date _____

PROJECT CAMBRIDGE PROJECT NO. BHF 030-2(19)S
 I.G.C. Info. zb308p11.dgn

Bridge Sheet No. _____ Sheet 3 of 68



PROPOSED BRIDGE SECTION

(SPANS 2-5)
 SCALE: 3/8" = 1'-0"

SEE SHEET 27 FOR SPAN I PROPOSED SECTION

* CONCRETE, HIGH PERFORMANCE CLASS A

** (LIFT 2: 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE III)

(LIFT 1: 1/4" BITUMINOUS CONCRETE PAVEMENT, TYPE III)

MATERIAL ITEM	TOLERANCE
PAVEMENT	± 1/4" TOTAL THICKNESS