



EXISTING STRUCTURE

1. STRUCTURE TYPE N/A OVERALL LENGTH _____ INVENTORY RATING _____
 2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS _____
 3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM _____
 4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) _____ VERTICAL CLEARANCE ABOVE STREAMBED _____
 5. WATER SURFACE ELEVATION @ Q 233 _____ WATER SURFACE ELEVATION @ Q _____
 6. WATER SURFACE ELEVATION AT FLOOD OF RECORD _____ YEAR _____ ESTIMATED DISCHARGE _____
 7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? _____ IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR?
 8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL _____
 9. DISPOSITION OF STRUCTURE _____

NEW STRUCTURE

STRUCTURE GEOMETRY:
 1. STRUCTURE TYPE 3 SPAN CONTINUOUS PLATE GIRDER BRIDGE OVERALL LENGTH EB=207'-0 1/2" WB=247'-0 1/2"
 2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS EB=60'-9 3/4" WB=61'-9 3/4"
 3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER EB=28.5' WB=33.7'
 4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM N/A
 5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) N/A
 6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? NO

HYDRAULIC DATA:
 1. Q 2.33 N/A WATER ELEVATION _____ VELOCITY _____
 Q 10 _____ WATER ELEVATION _____ VELOCITY _____
 Q 25 _____ WATER ELEVATION _____ VELOCITY _____
 Q 50 _____ WATER ELEVATION _____ VELOCITY _____
 Q 100 _____ WATER ELEVATION _____ VELOCITY _____
 2. DRAINAGE AREA _____ CHARACTER OF TERRAIN _____
 3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? _____
 4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? _____ IS ORDINARY RISE RAPID? _____
 5. NATURE OF NATURAL STREAMBED _____
 6. ESTIMATED SCOUR DEPTH _____ COMMENT ON: DRIFT _____ ICE _____
 7. WILL ALL WATER PASS THROUGH NEW STRUCTURE? _____ IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR?
 8. VERTICAL CLEARANCE ABOVE Q _____
 9. ALLOWABLE WATER SURFACE ELEVATION _____ LIMITED BY _____
 10. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? _____ IF YES, DESCRIBE _____
 11. AVERAGE DAILY LOW FLOW _____ DEPTH _____ AVERAGE DAILY HIGH FLOW _____ DEPTH _____
 12. STREAMBANK OR CHANNEL PROTECTION REQUIRED _____
 13. DISTANCE TO EXISTING UPSTREAM STRUCTURE _____ SPAN _____ WATERWAY AREA OF FULL OPENING _____
 14. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE _____ SPAN _____ WATERWAY AREA OF FULL OPENING _____

ALLOWABLE STRESSES:
 1. DESIGN LIVE LOAD AASHTO HS-25-44
 2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
 3. ALLOWABLE LOAD FOR PILING 90 KIPS TYPE HP 12X53 ESTIMATED LENGTH ABUTMENTS-44' PIER-16'
 4. ALLOWABLE STRESS FOR STRUCTURAL STEEL ASTM A 588 TENSION 27,000 PSI
 5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24,000 PSI COMPRESSION 20,000 PSI
 6. ALLOWABLE STRESS FOR CONCRETE CLASS A 3,500 PSI 1,400 PSI
 CLASS B 3,500 PSI 1,400 PSI

TRAFFIC MAINTENANCE:
 1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE N/A OR ON TEMPORARY BRIDGE N/A
 2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY _____ TRAFFIC CONTROL SIGNALS REQUIRED _____
 MINIMUM CLEAR SPAN _____ MINIMUM CLEAR HEIGHT _____ MINIMUM WATERWAY AREA _____
 ARE SIDEWALKS REQUIRED? _____ IF SO, ON WHAT SIDE? _____

ADDITIONAL DESIGN CONSIDERATIONS

FAIR HAVEN - RUTLAND
 BHF MEMB(2)
 SHEET 30 OF 45
 BRIDGES 19 E & W
 FOR REFERENCE ONLY

- THE GENERAL NOTE PERTAINING TO SPECIFICATIONS, MATERIALS, AND CONSTRUCTION IS SHOWN ON STANDARD DRAWING SCB-D1-75. OTHER GENERAL NOTES ON THE STANDARD, NOT OTHERWISE SHOWN OR MODIFIED ON THESE PLANS, ARE NOTES 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, AND 16.
- THE STRUCTURE IS DESIGNED FOR AN HS-25-44 LIVE LOAD WITH NO FUTURE PAVEMENT ALLOWANCE.
- FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AT A MAXIMUM OF FOUR (4) FEET.
- WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON BOTH SUBSTRUCTURE AND SUPERSTRUCTURE, EXCEPT THE BOTTOM OF THE DECK BETWEEN DRIP BEADS.
- THE ABUTMENTS AND PIERS ARE DESIGNED TO SET ON FRICTION PILES WITH A DESIGN LOAD CAPACITY OF 90 KIPS PER PILE.
- DRIP PLATES ON GIRDERS 1 AND 5 ARE TO BE PLACED ACCORDING TO DETAIL "C" ON STANDARD SHEET SCB-D7-71.
- IN ALL HORIZONTAL CONSTRUCTION JOINTS, THE SHEAR KEYS SHALL BE FORMED AS DETAILED ON STANDARD DRAWING SCB-D6-73 DETAIL B, AND THEY SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. AN UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
- SEE STANDARD DRAWING SCB-D6-73 DETAIL F FOR DETAILS OF FILLET AT FACE OF CURB AND OTHER DETAILS NOT SHOWN OR MODIFIED ON "CURB AND RAIL DETAIL", SHEET BR 509.
- SEE STANDARD DRAWING SCB-D9-71 DETAIL B, SECTION A-A, C-C, AND D-D FOR POLYURETHANE JOINT SEALER DETAILS TO BE USED BETWEEN CURBS ON SUPERSTRUCTURE AND CURBS ON WINGWALLS AT ABUTMENTS 2 AND 4. PAYMENT TO BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT. OMIT WATERSTOP.
- ALL WEEP PIPES SHALL NOT BE PLACED MORE THAN TEN (10) FEET APART OR WITHIN TWO (2) HORIZONTAL FEET OF ABUTMENTS, PIER CAPS, OR DIAPHRAGMS. WEEP PIPES SHALL BE LOCATED ONLY BETWEEN THE PIERS AND ABUTMENTS.
- THERE ARE FOUR (4) PILE LOADING TESTS INCLUDED IN THE ESTIMATE, ADDITIONAL PILE LOADING TESTS ARE TO BE USED AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- MODIFY STANDARD DRAWING SCB-D4-76, DETAIL "B", BY OMITTING PARAFFIN AT JOINTS IN CURBS AND BY RUNNING REINFORCING STEEL THROUGH JOINTS.

LIST OF SHEETS

BR 501	PRELIMINARY INFORMATION
BR 502	QUANTITY SHEETS
BR 503	BORINGS
BR 504	W.B. PLAN AND ELEVATION
BR 505	E.S. PLAN AND ELEVATION
BR 506	W.B. SUPERSTRUCTURE DETAILS
BR 507	E.S. SUPERSTRUCTURE DETAILS
BR 508	CURTAIN WALL, APPROACH SLAB & DECK STEEL DETAILS
BR 509	DIAPHRAGM AND CURB DETAILS
BR 510	EXPANSION JOINT DETAILS
BR 511	BEARING DEVICE DETAILS
BR 512	BEARING DETAILS, CAMBER DIAGRAMS, POUR SEQUENCES
BR 513	ABUTMENT # 1 DETAILS
BR 514	ABUTMENT # 2 DETAILS
BR 515	ABUTMENT # 3 DETAILS
BR 516	ABUTMENT # 4 DETAILS
BR 517	ABUTMENT FOOTING STEEL DETAILS
BR 518	ABUTMENT PILE LAYOUT
BR 519	PIER # 1 AND # 2 DETAILS
BR 520	PIER # 3 AND # 4 DETAILS
BR 521	REINFORCING STEEL SCHEDULE
BR 522	REINFORCING STEEL SCHEDULE
BR 523	REINFORCING STEEL SCHEDULE

LIST OF STANDARD DRAWINGS

STD. DWG.	SB-R4A-82	9/7/83 R
STD. DWG.	SB-R4B-82	9/7/83 R
STD. DWG.	SCB-D1-75	9/14/81 R
STD. DWG.	SCB-D4-76	1/8/76
STD. DWG.	SCB-D6-73, DET. B, D, F	1/3/79 R
STD. DWG.	SCB-D7-71, DET. C	12/15/76 R
STD. DWG.	SCB-D9-71, DET. B	1/27/75 R

REFERENCE SHEETS

U.S. RTE. 4 PLAN SHEET	STA. 924+00---940+00	(1 SHEET)
U.S. RTE. 4 PROFILE SHEET	STA. 924+00---940+00	(1 SHEET)
DORR DRIVE PROFILE SHEET	STA. 20+00---30+00	(1 SHEET)
U.S. RTE. 4 SECTIONS	W.B. STA. 929+00---932+50	(4 SHEETS)
DORR DRIVE SECTIONS	STA. 24+00---28+00	(1 SHEET)
U.S. RTE. 4 SECTIONS	E.B. STA. 930+00---932+50	(3 SHEETS)

EASTBOUND							WESTBOUND								
LOAD RATING (TONS)															
STRESS LEVELS		TRUCK													
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI		H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY															
0.55 Fy = 27.0 Ksi	41	49							40	47					
POSTED															
0.67 Fy = 33.0 Ksi	58		83		63	63	75		56		79		58	60	70
OPERATING															
0.75 Fy = 37.5 Ksi			101	117							95	110			

RECOMMENDED FOR APPROVAL Warren B. Jones 4/14/83
 STRUCTURES ENGINEER DATE
 RECOMMENDED FOR APPROVAL _____ CHIEF OF DESIGN DATE
 APPROVED BY _____ DIRECTOR OF ENGINEERING & CONSTRUCTION DATE

STATE OF VERMONT
 AGENCY OF TRANSPORTATION

TOWN OF RUTLAND Bridge No. 5
 Log Sta. _____
 HIGHWAY NO. U.S. RTE. 4 Surv. Sta. 1/8 130+81
CB 731+32

U.S. RTE. 4 OVER DORR DRIVE
 PRELIMINARY INFORMATION
 Designed by J.B. McCarthy Drawn by L.C. Gates
 Checked by J.B. McCarthy date 3/83 Bridge Design Supervisor F.W. Bolikum date 4/83
 PROJECT WEST RUTLAND - RUTLAND PROJECT NO. FEGC 020-1(15)
 Bridge Sheet No. BR 501 Sheet 81 of 377