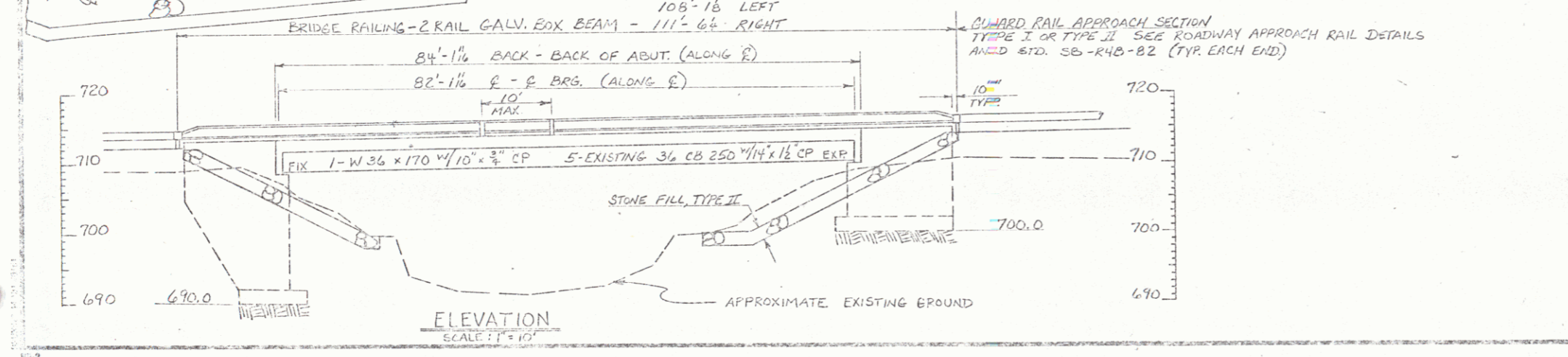
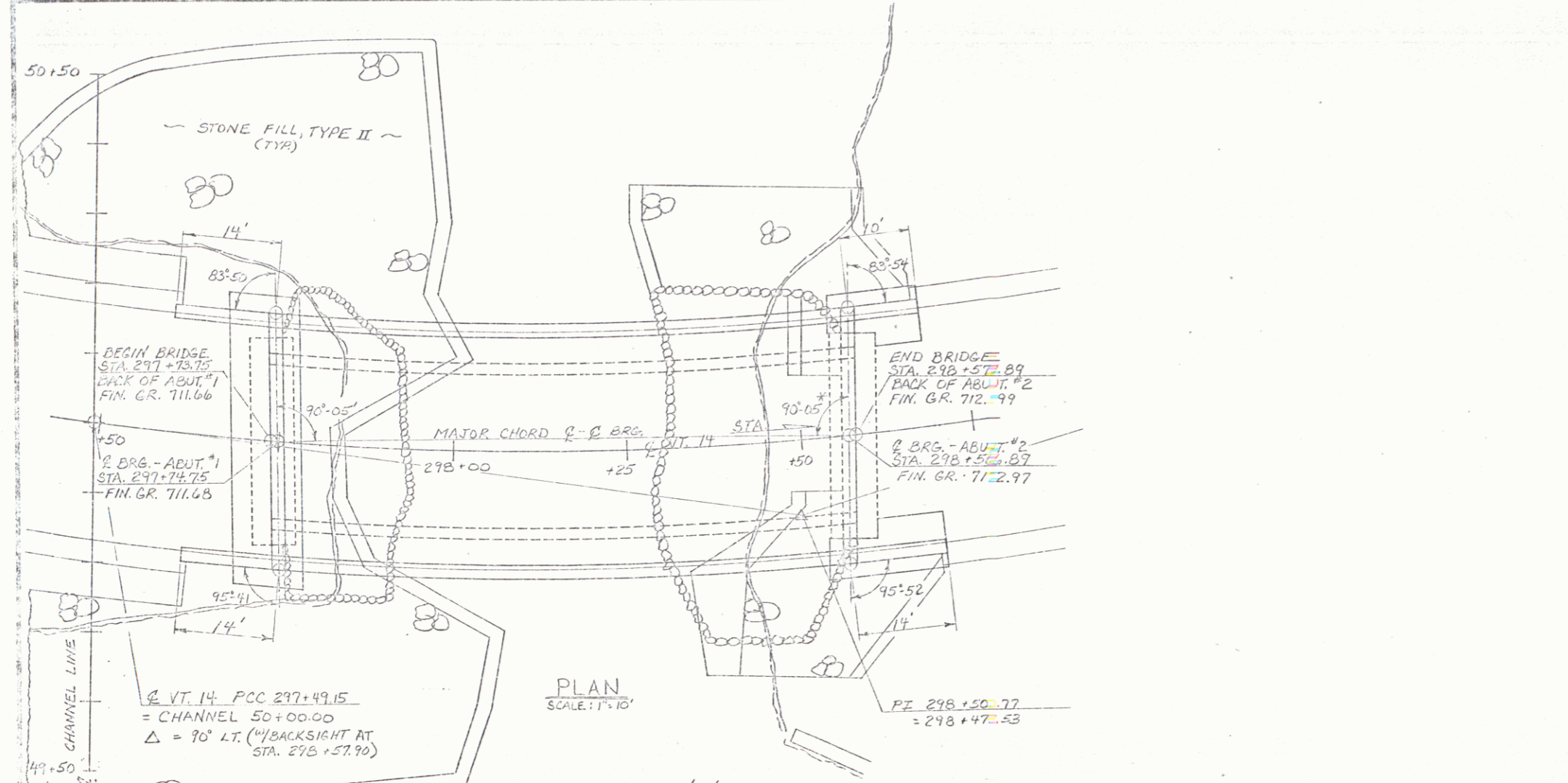
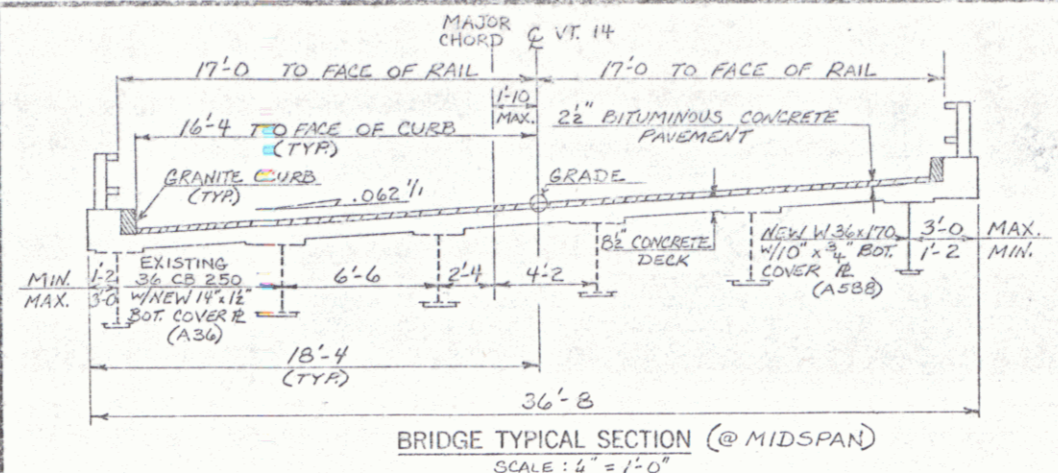


(SEE TYPICAL ROADWAY SECTION)

NEW HIGHWAY SECTION — BRIDGE APPROACHES



EXISTING STRUCTURE

1. STRUCTURE TYPE	SINGLE SPAN ROLLED BEAM	OVERALL LENGTH	84.12 FT.	INVENTORY RATING	H-13
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS	84.12 FT.				
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM	84.12 FT.				
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM)	1410 SQ. FT.	VERTICAL CLEARANCE ABOVE STREAMBED	17 FT.		
5. WATER SURFACE ELEVATION @ Q 233	705.7	WATER SURFACE ELEVATION @ Q			
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD	706.9	ESTIMATED DISCHARGE			
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE	YES	IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR?			
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL	20\"/>				
9. DISPOSITION OF STRUCTURE	RELIABILITY				

NEW STRUCTURE

1. STRUCTURE TYPE	SINGLE SPAN COMPOSITE BEAM	OVERALL LENGTH	84.14 ALONG Q
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS	84.14 FT.		
3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER	17 FT.		
4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM	84.14 FT.		
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM)	1410 SQ. FT.		
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES?	NO		

HYDRAULIC DATA:

Q 233	1450 CFS	WATER ELEVATION	705.7	VELOCITY	2.0 FPS
Q 10	650	WATER ELEVATION	706.9	VELOCITY	3.2
Q 25	1700	WATER ELEVATION	707.7	VELOCITY	4.1
Q 50	1900	WATER ELEVATION	708.3	VELOCITY	4.0
Q 100	5650	WATER ELEVATION	708.3	VELOCITY	5.8

2. DRAINAGE AREA: 501 SQ. MI. CHARACTER OF TERRAIN: ROLLING TO MOUNTAINOUS

3. ARE THERE OBSTRUCTIONS TO A PIER IN THE STREAM? NO

4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO

5. NATURE OF NATURAL STREAMBED: SAND AND GRAVEL (MUCH SEDIMENT DEPOSITED)

6. ESTIMATED SCOUR DEPTH: 1-2 FT. COMMENT ON: SLIGHT

7. WILL ALL WATER PASS THROUGH NEW STRUCTURE? YES

8. VERTICAL CLEARANCE ABOVE Q 50: 17 FT. LIMITED BY: BOTTOM OF BEAMS

9. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? YES

10. AVERAGE DAILY LOW FLOW: 1/2 CS. DEPTH: 7.0 FT. AVERAGE DAILY HIGH FLOW: 100 CFS. DEPTH: 7.1 FT.

11. STREAMBANK OR CHANNEL PROTECTION REQUIRED: STONE FILL TYPE II

12. DISTANCE TO EXISTING UPSTREAM STRUCTURE: 1 MI. SPAN: 84.14 FT. WATERWAY AREA OF FULL OPENING: 1410 SQ. FT.

13. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE: 2.1 MI. SPAN: 87.77 FT. WATERWAY AREA OF FULL OPENING: 500 SQ. FT.

ALLOWABLE STRESSES:

1. DESIGN LIVE LOAD	HS-20-44
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL	N/A
3. ALLOWABLE LOAD FOR PILING	N/A
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL	ASTM A 588, 60 TENSION 67,000 PSI
5. ALLOWABLE STRESS FOR REINFORCING STEEL	GRADE 60 TENSION 75,000 PSI
6. ALLOWABLE STRESS FOR CONCRETE	CLASS A 1: 3,500 PSI; CLASS B 1: 3,500 PSI

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? YES

2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY: ONE

ADDITIONAL DESIGN CONSIDERATIONS

- COVER PLATES FOR EXISTING 36 CB 250 SHALL BE ASTM A 36 STEEL.
- COVER PLATE FOR NEW W 36 X 170 SHALL BE ASTM A 588 STEEL.

LOAD RATING (TONS)

STRESS LEVELS	TRUCK				
	H	HS	302	6 AXLE	34, 44, 54, 64, 74
INVENTORY					
0.55 F _v					
POSTED					
0.67 F _v					
OPERATING					
0.75 F _v					

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF EAST MONTPELIER
HIGHWAY NO. VT 14
VT 14 OVER N. MONTPELIER POND

PRELIMINARY INFORMATION
Designed by J. B. MCCARTHY | Drawn by J. B. MCCARTHY

EAST MONTPELIER
BHF 037-2(7)S
SHEET 9 OF 9