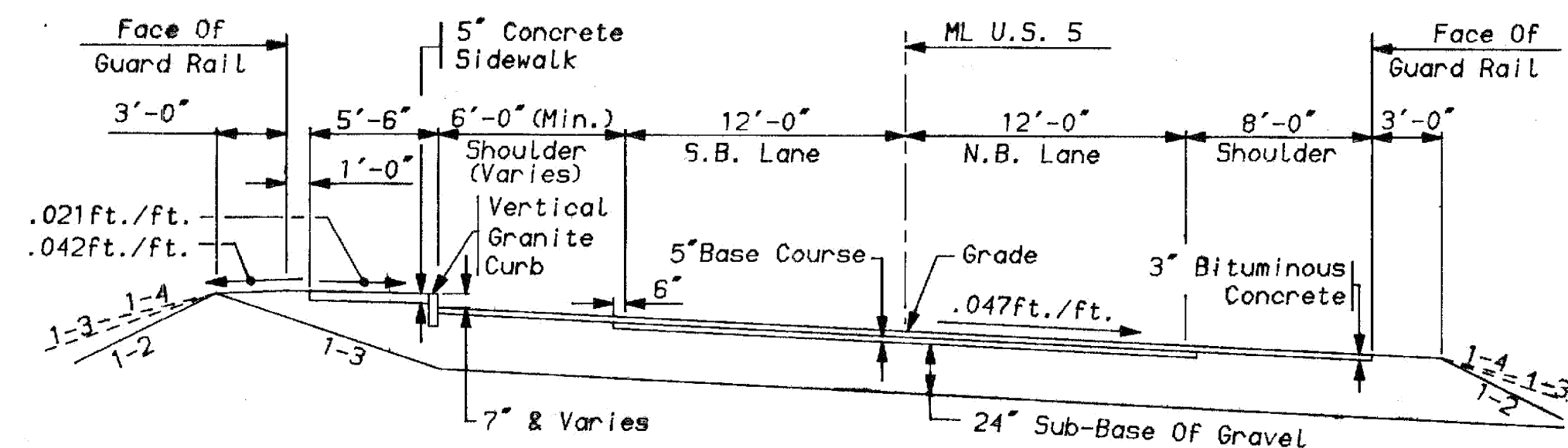
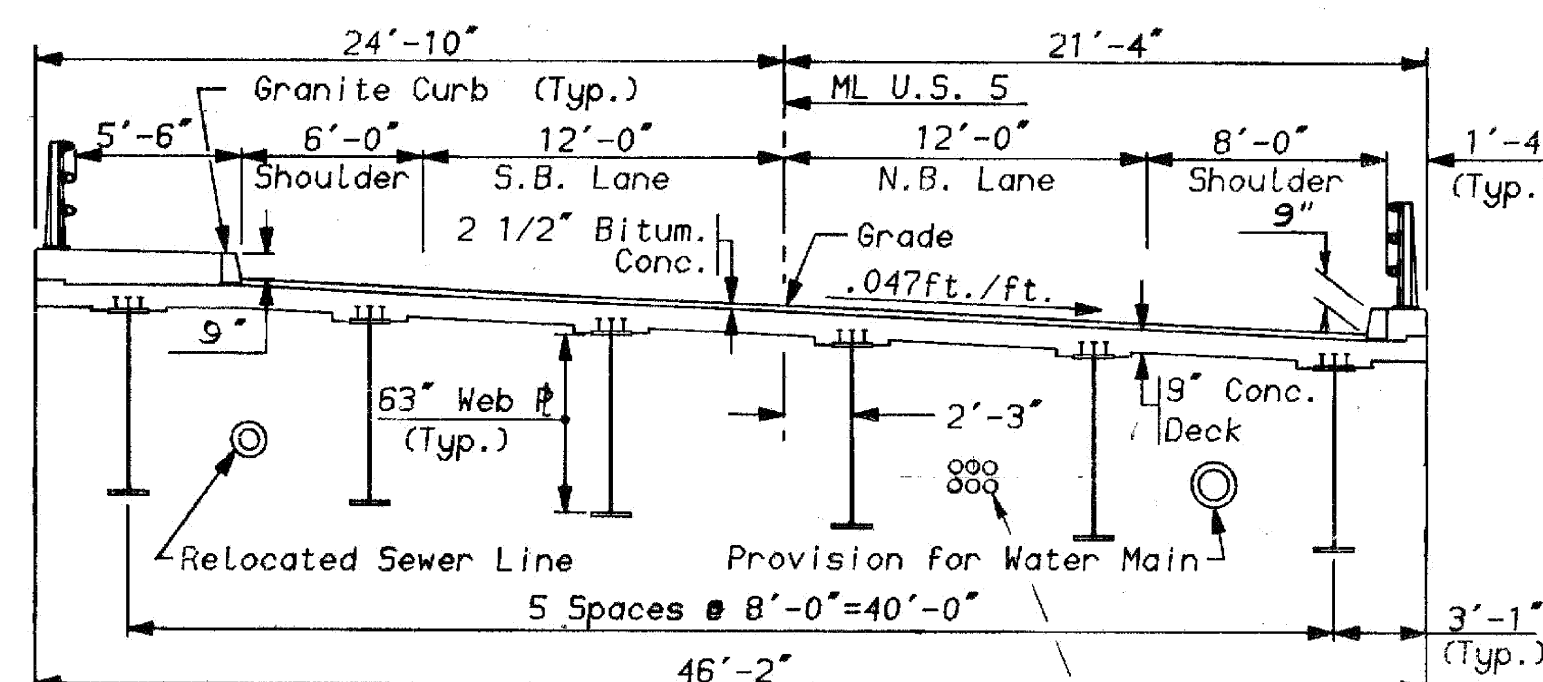
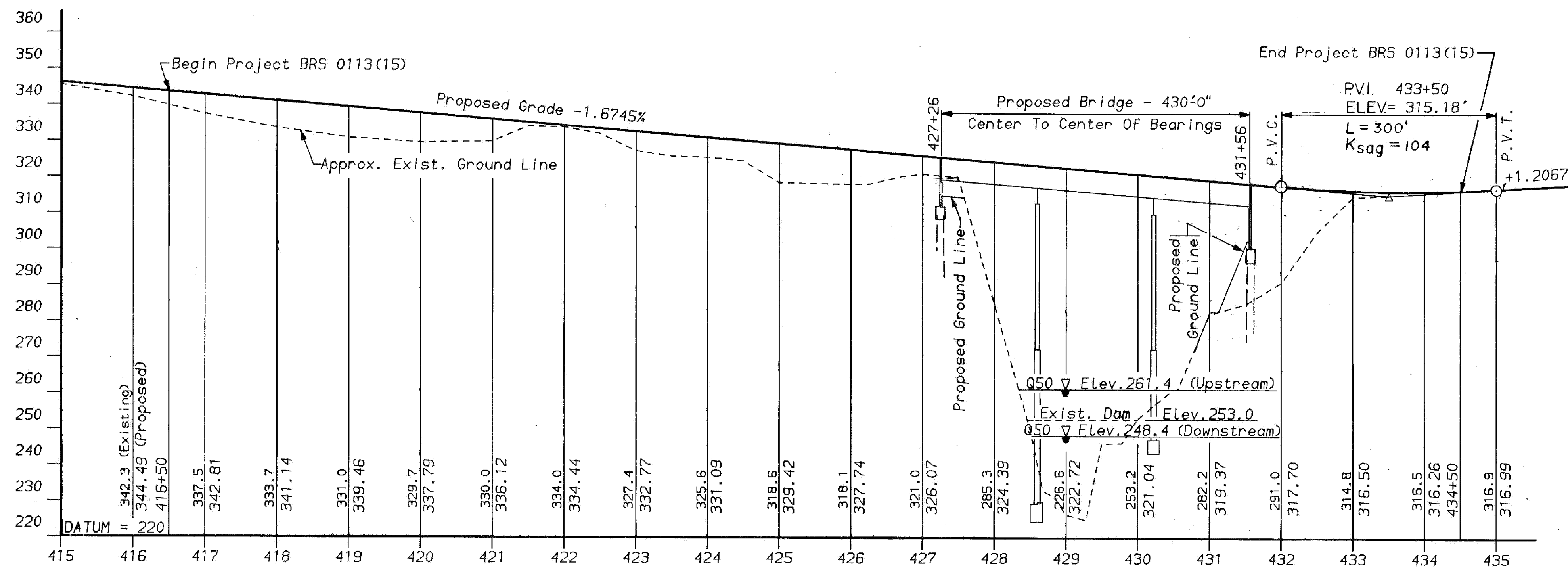




NEW HIGHWAY SECTION - BRIDGE APPROACHES
SCALE: 1" = 6'



BRIDGE TYPICAL SECTION
SCALE: 1" = 6'



PROFILE - ROUTE U.S. 5

SCALES: Vert. 1" = 20'
Horiz. 1" = 100'

STATEWIDE - SOUTHEAST
REGION
BHF MEMB(21)

SHEET 20 OF 34
BRIDGE 33
FOR REFERENCE ONLY

EXISTING STRUCTURE

- STRUCTURE TYPE CONCRETE ARCH & T BEAM APPROACHES OVERALL LENGTH 282'-0" INVENTORY RATING
- SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 25.75' - 130' - 31.5' - 31.5'
- CLEAR SPAN LENGTH(S) NORMAL TO STREAM 24' - 23.5' - 128' - 29.4' - 29'
- WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 1060 Sq. Ft. VERTICAL CLEARANCE ABOVE STREAMBED 60'±
- WATER SURFACE ELEVATION @ Q 233 254.9' WATER SURFACE ELEVATION @ Q 50 261.4
- WATER SURFACE ELEVATION AT FLOOD OF RECORD UNKNOWN YEAR 1936 ESTIMATED DISCHARGE
- DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? YES IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? N.A.
- ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF N.A.
- TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL LEDGE
- DISPOSITION OF STRUCTURE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR

NEW STRUCTURE

- STRUCTURE TYPE CONTINUOUS COMPOSITE WELDED I GIRDER OVERALL LENGTH 430'-0
- SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 134' - 162' - 134' (MEASURED ALONG ML)
- VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER 30'
- CLEAR SPAN LENGTH(S) NORMAL TO STREAM 130' - 152' - 130'
- WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 1360 Sq. Ft. TO Q100 ELEVATION (ABOVE EXISTING DAM CREST OF ELEV. 253.0)
- ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? YES

HYDRAULIC DATA:

1. Q 233	3000 c.f.s.	WATER ELEVATION	254.9'	VELOCITY	5.5 f.p.s.
Q 10	6100 c.f.s.	WATER ELEVATION	259.2'	VELOCITY	7.0 f.p.s.
Q 25	8300 c.f.s.	WATER ELEVATION	260.6'	VELOCITY	7.9 f.p.s.
Q 50	9500 c.f.s.	WATER ELEVATION	261.4' (See Note 2)	VELOCITY	8.3 f.p.s.
Q 100	11500 c.f.s.	WATER ELEVATION	262.5'	VELOCITY	8.9 f.p.s.
2. DRAINAGE AREA	78.1 Sq. Mi.	CHARACTER OF TERRAIN	ROLLING TO MOUNTAINOUS		
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM?	NO				
4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY?	NO	IS ORDINARY RISE RAPID?	NO		
5. NATURE OF NATURAL STREAMBED	LEDGE & BOULDERS				
6. ESTIMATED SCOUR DEPTH	Q 10 2'	COMMENT ON: DRIFT	MODERATE	ICE	MODERATE
7. WILL ALL WATER PASS THROUGH NEW STRUCTURE?	YES IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR?	N.A.			
8. ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF	N.A.				
9. VERTICAL CLEARANCE ABOVE Q 100	50'				
10. ALLOWABLE WATER SURFACE ELEVATION	262.5'	LIMITED BY EXISTING CONDITIONS			
11. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS?	NO	IF YES, DESCRIBE			
12. AVERAGE DAILY LOW FLOW	75 c.f.s.	DEPTH	253.3'	AVERAGE DAILY HIGH FLOW	300 c.f.s.
13. STREAMBANK OR CHANNEL PROTECTION REQUIRED	TYPE IV STONE TO ELEV. 250.0 ON SOUTH RIVER BANK BELOW EXISTING DAM				
14. DISTANCE TO EXISTING UPSTREAM STRUCTURE	1.45 MI.	SPAN 2 @ 62'	WATERWAY AREA OF FULL OPENING	0	
15. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE	800'	SPAN 3 @ 80'	WATERWAY AREA OF FULL OPENING	0	

ALLOWABLE STRESSES:

1. DESIGN LIVE LOAD AASHTO	HS-25				
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL	4 K.S.F.	ON LEDGE	10 K.S.F.		
3. ALLOWABLE LOAD FOR PILING	9000 P.S.I.	TYPE	STEEL H-PILES	ESTIMATED LENGTH	50 FT. MAXIMUM
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL ASTM A 588	TENSION	27.0 K.S.I.			
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION	24.0 K.S.I.	COMPRESSION	20.0 K.S.I.		
6. ALLOWABLE STRESS FOR CONCRETE CLASS A	3,500 P.S.I.				
CLASS B	3,000 P.S.I.				

TRAFFIC MAINTENANCE:

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

ADDITIONAL DESIGN CONSIDERATIONS

- SEE GENERAL NOTES, SHEET No. BR 2.
- DESIGN SPECIFICATIONS ARE 1977* A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES WITH SUBSEQUENT INTERIMS, AS AMENDED BY V.I.A. Q.T.
- DESIGN LOADING IS V.I.A. Q.T. HS25-44 WHICH EQUALS A.A.S.H.T.O. HS20-44 WITH 25% INCREASE
- HYDRAULIC DATA FOR ELEVATIONS BASED ON WHOLE, UNBREACHED DAM WITH CREST AT ELEVATION 253.0. HYDRAULIC DATA FOR VELOCITIES BASED ON DAM BEING REMOVED. EXISTING DAM IS BREACHED.
- Q50 ELEVATION UPSTREAM OF DAM IS AT ELEVATION 261.4. Q50 ELEVATION DOWNSTREAM OF DAM IS ASSUMED TO BE AT ELEVATION 248.4.

* MAJORITY OF PROJECT DESIGNED BEFORE 1983 EDITION WAS RELEASED.

STRESS LEVELS	LOAD RATING (TONS)					
	HS	H	352	6 AXLE	3A. STR.	4A. STR.
INVENTORY	60	42				
0.55 F _y = 27.5						
POSTED						
0.67 F _y = 33.5						
OPERATING						
0.75 F _y = 37.5						

STEINMAN BOYNTON GRONQUIST & BIRDSALL
CONSULTING ENGINEERS
NEW YORK, N.Y.

RECOMMENDED FOR APPROVAL *Warren B. Dwyer* 2/12/85
STRUCTURES ENGINEER DATE
RECOMMENDED FOR APPROVAL *Arthur J. Ross* 2/12/85
CHIEF OF DESIGN DATE
APPROVED BY *Frank E. Smith* 2/13/85
DIRECTOR OF ENGINEERING & CONSTRUCTION DATE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF WESTMINSTER Bridge No. B 33
Log Sta. 432+00
HIGHWAY NO. U.S. 5 Surv. Sta. 430+00
U.S. 5 OVER SAXTONS RIVER
PRELIMINARY INFORMATION SHEET
Designed by T. FISHER Drawn by E. REIZE
Checked by P. CHASE date 9/84 Bridge Design Supervisor T. FISHER date 10/84
PROJECT WESTMINSTER - ROCKINGHAM PROJECT NO. BRS 0113 (15)
Bridge Sheet No. BR 1 Sheet 78 of 262