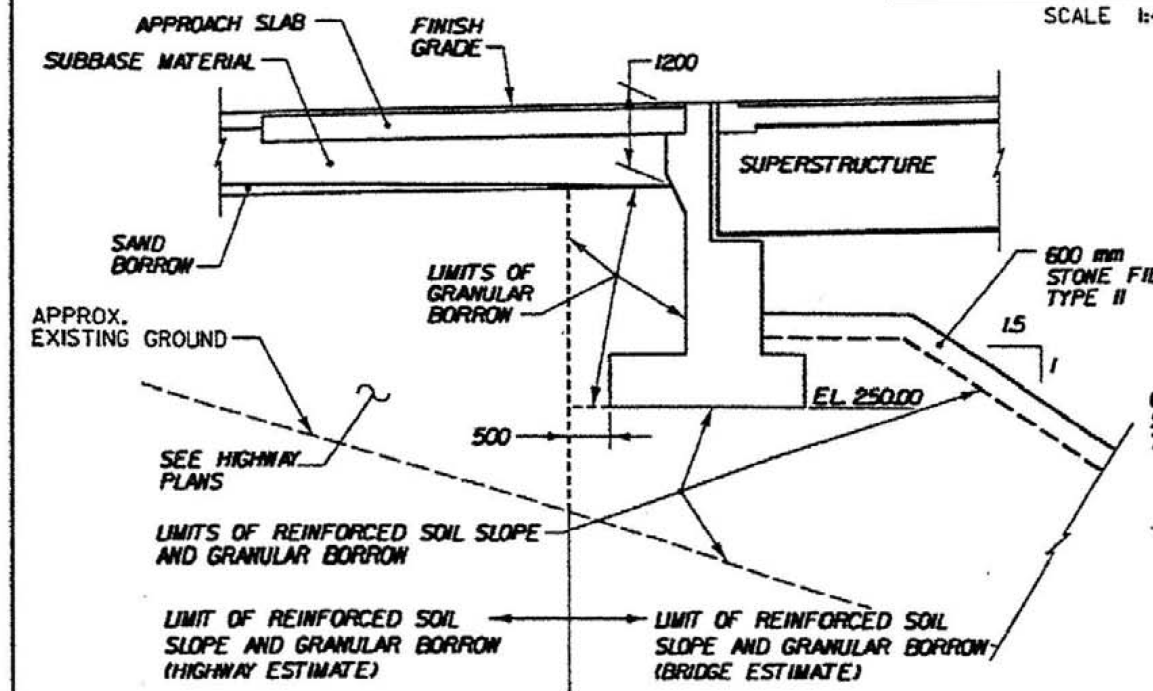
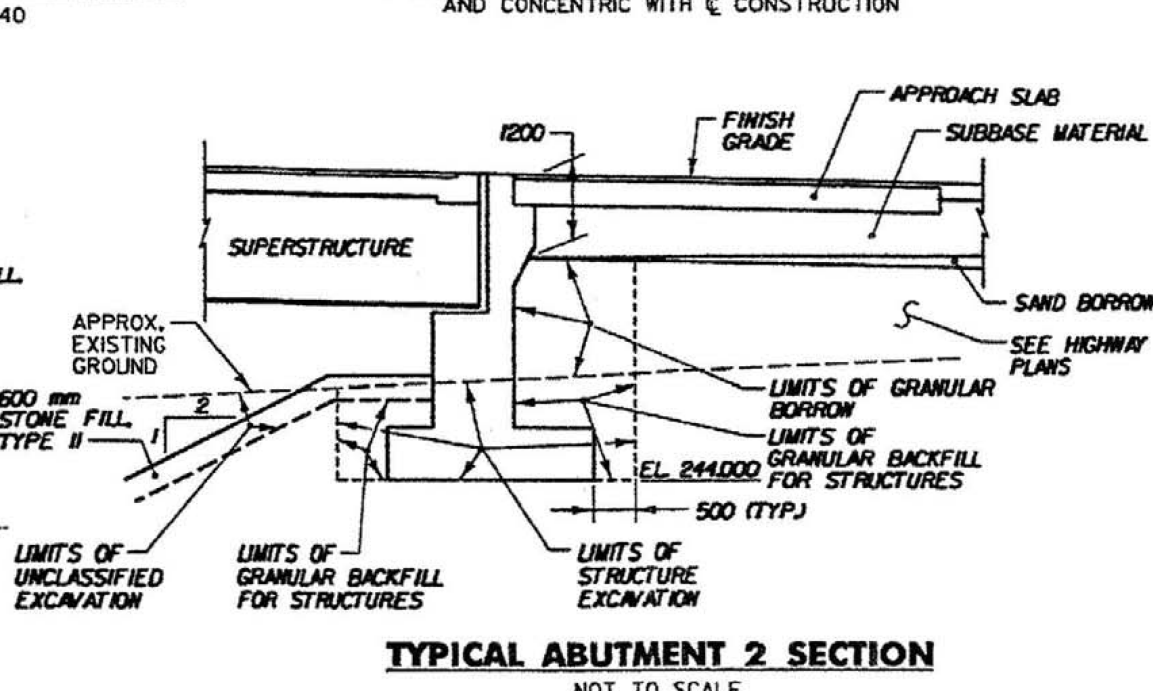


BRIDGE TYPICAL SECTION
SCALE 1:40

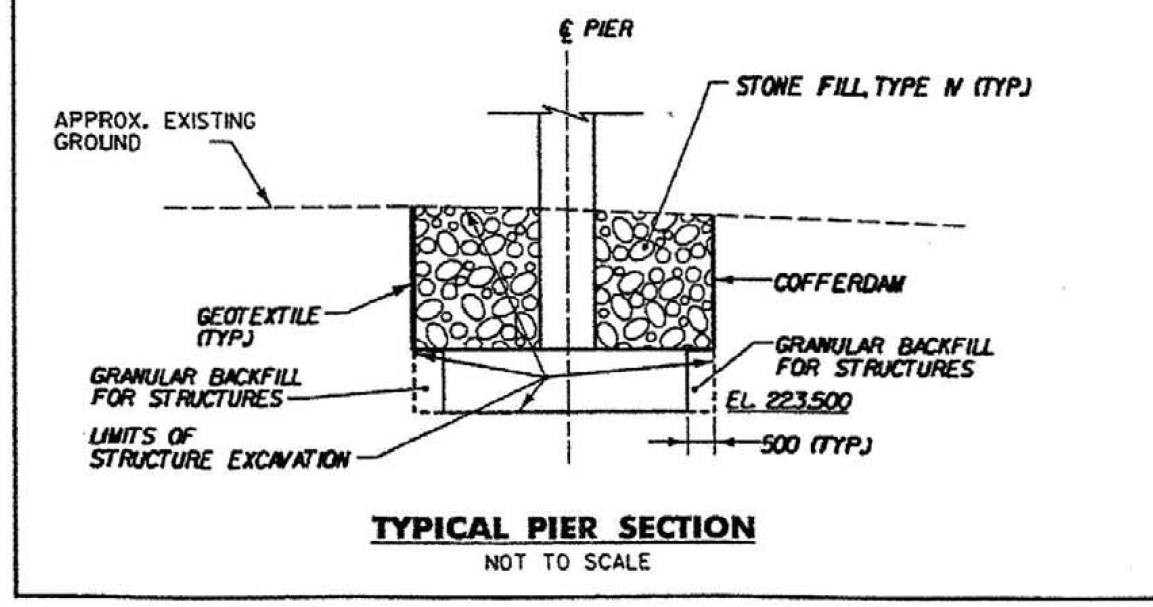
NOTE: ALL DIMENSIONS ARE RADIAL AND CONCENTRIC WITH ϵ CONSTRUCTION



TYPICAL ABUTMENT 1 SECTION
NOT TO SCALE



TYPICAL ABUTMENT 2 SECTION
NOT TO SCALE



TYPICAL PIER SECTION
NOT TO SCALE

INDEX OF SHEETS

- BR500 PRELIMINARY INFORMATION SHEET
- BR501 GENERAL PLAN AND ELEVATION
- BR502-504 CONSTRUCTION IMPACTS PLANS, NOTES & DETAILS
- BR505-506 BORING INFORMATION SHEETS
- BR507-510 BORING LOGS
- BR511 CHANNEL AND PIER DETAILS
- BR512-519 CHANNEL CROSS SECTIONS

NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

FINAL HYDRAULICS REPORT



HYDROLOGIC DATA

DRAINAGE AREA: 29.1 sq. km
 CHARACTER OF TERRAIN: Mountainous
 CHARACTER & TYPE OF STREAM: Stream, perennial in alluvium
 NATURE OF STREAMBED: Cobble layer inter-laced with sand & gravel
 02+33= 27 cms 050+ 83 cms
 010+ 46 cms 0100+ 71 cms
 025+ 56 cms 0500+ 121 cms
 DATE OF FLOOD OF RECORD: Unknown
 WATER SURFACE ELEV.: Unknown ESTIMATED DISCHARGE: Unknown
 NATURAL STREAM VELOCITY @ 050+ 2.49 mps
 ICE CONDITIONS: Moderate DEBRIS: Slight
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? Yes
 IS ORDINARY RISE RAPID? Yes
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE.
 WATERSHED STORAGE: HEADWATERS: UNIFORM THROUGHOUT WATERSHED
 IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

STRUCTURE TYPE: N/A YEAR BUILT: N/A
 CLEAR SPAN NORMAL TO STREAM: N/A
 VERTICAL CLEARANCE ABOVE STREAMBED: N/A
 WATERWAY OF FULL OPENING: N/A
 DISPOSITION OF STRUCTURE: N/A
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: N/A
 WATER SURFACE ELEV. @ 02+33= 230.4 VELOCITY: 1.94 mps
 010+ 230.8 " 2.31 mps
 025+ 231.0 " 2.44 mps
 050+ 231.1 " 2.49 mps
 0100+ 231.2 " 2.60 mps
 LONG TERM STREAM BED CHANGES: N/A

IS THE ROADWAY OVERTOPPED BELOW THE 0100? N/A FREQUENCY: N/A
 RELIEF ELEVATION: N/A DISCHARGE OVER ROAD @ 0100: N/A
 UPSTREAM STRUCTURE: TOWN: N/A DISTANCE: N/A
 HIGHWAY NO.: N/A STRUCTURE NO.: N/A
 STRUCTURE TYPE: N/A
 CLEAR SPAN: N/A CLEAR HEIGHT: N/A
 YEAR BUILT: N/A FULL WATERWAY: N/A
 DOWNSTREAM STRUCTURE: TOWN: BENNINGTON DISTANCE: 0.9 km
 HIGHWAY NO.: N.H. BRANCH ST. STRUCTURE NO.: N/A
 STRUCTURE TYPE: N/A
 CLEAR SPAN: N/A CLEAR HEIGHT: N/A
 YEAR BUILT: N/A FULL WATERWAY: N/A
 * COMPLETE INFORMATION WILL BE PROVIDED ON FINAL PLANS

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO: HS-20-44
2. DESIGN SPAN: 71.5 m - 71.5 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: 290 kPa (Abut. 1), 480 kPa (Pier) & 380 kPa (Abut. 2) ON LEDGE: N/A
4. ALLOWABLE LOAD FOR PILING: N/A TYPE: N/A ESTIMATED LENGTH: N/A
5. STRUCTURAL STEEL AASHTO GRADE: M270M GR345M HYBRID WITH ASTM A709M OR HPS485M WEATHERING STEEL
6. REINFORCING STEEL GRADE: 420
7. CONCRETE CLASS A: $f_c = 30$ MPa OC/DA
 CONCRETE CLASS A: $f_c = 30$ MPa HIGH PERFORMANCE CONCRETE
 CONCRETE CLASS B: $f_c = 25$ MPa

TRAFFIC MAINTENANCE

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

LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK				
	H	HS	3S2	6 AXLE	3A, STR. 4A, STR. 5A, SEMI
INVENTORY A = 2.17					
POSTED A = 1.55					
OPERATING A = 1.30					

SEMI-FINAL PLAN SUBMISSION
DATE 12-08-04



STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of: BENNINGTON Bridge No.:
 Highway No.: Log Sta.:
 Surv. Sta.:
 VT ROUTE 279 OVER FURNACE BROOK
PRELIMINARY INFORMATION SHEET
 Designed By: M. HANN Drawn By: R.A. BOTZENHART
 Checked By: Date: Bridge Design Supervisor: K.M. WOJTKOWSKI Date:
 PROJECT: BENNINGTON PROJECT NO.: NH FOIS-1K5
 TVGA CAD Drawing No. pl_sheet Date:
 Bridge Sheet No. BR500 Sheet 26 of 112