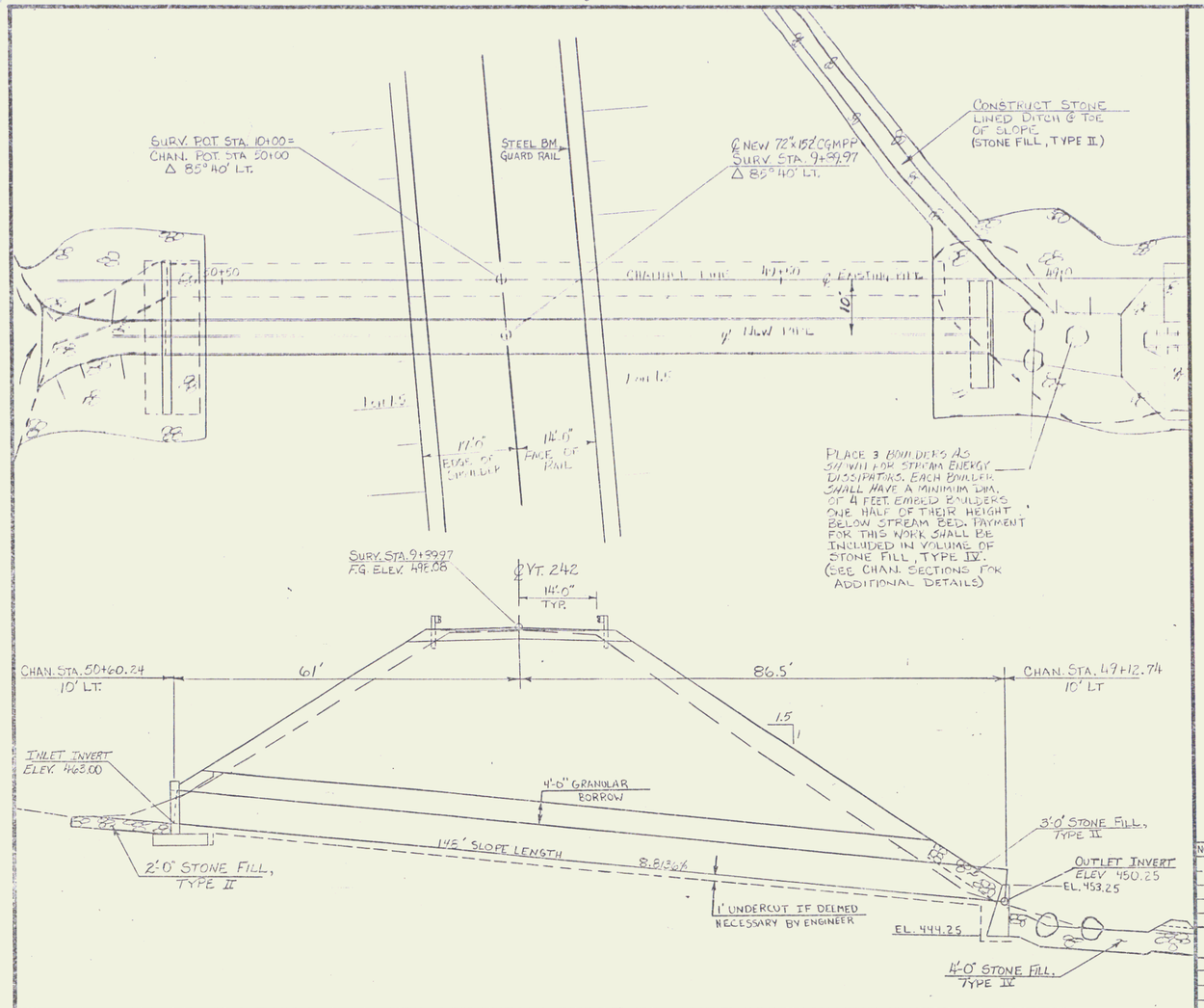
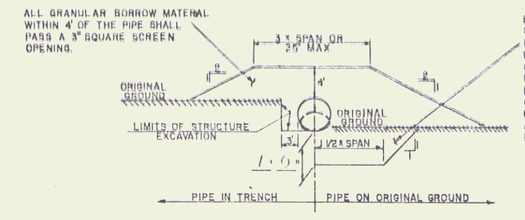


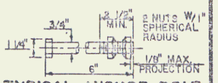
NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1986, AND THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. DESIGN IS FOR HS-20 LIVE LOADING.
2. UNLESS OTHERWISE INDICATED FOUR (4) BOLTS PER LINEAR FOOT FOR STEEL PLATES AND FIVE AND ONE THIRD (5 1/3) BOLTS FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH GALVANIZED ASTM A-449 BOLTS.
3. WHEN NORMAL CONSTRUCTION OR REGULAR ROADWAY TRAFFIC IS MAINTAINED OVER THE PIPE THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 3 FEET OF COMPACTED MATERIAL.
4. ALUMINUM PIPE THAT IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH ZINC CHROMATE, OR BITUMINOUS, OR ASPHALTIC PAINT.
5. PIPES SHALL BE FACTORY ELONGATED 5% (PIPE ARCHES SHALL NOT BE ELONGATED).
6. THE ENDS OF THE PIPE SHALL BE CUT SQUARE (NOT BEVELED TO MATCH SLOPES).
7. AT THE OUTLET END INCLUDE A 10 FOOT PIECE OF 6" UNDERDRAIN EACH SIDE ON SAME GRADIENT AS CULVERT CONFORMING TO SECTION 711.01. COST TO BE INCLUDED IN UNIT PRICE BID FOR THE CULVERT PIPE.
8. BOLT HOLES NEAREST THE VISIBLE EDGE OF LAPPED JOINTS (WHEN VIEWED FROM THE INSIDE OF THE PIPE) SHALL BE PLACED IN THE VALLEYS OF THE CORRUGATIONS.



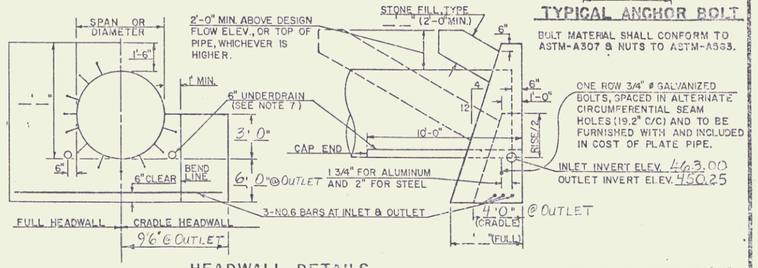
EXCAVATE POOR MATERIAL TO DEPTH SHOWN OR AS DIRECTED BY THE ENGINEER AND REPLACE WITH GRANULAR BACKFILL FOR STRUCTURES OR SAND BORROW. IF LEDGE OR OTHER UNYIELDING MATERIAL IS ENCOUNTERED IT SHALL BE REMOVED TO A DEPTH OF TWELVE (12) INCHES BELOW BOTTOM OF PIPE AND REPLACED WITH SUITABLE MATERIAL AS DIRECTED BY ENGINEER.

TYPICAL BACKFILL SECTION



TYPICAL ANCHOR BOLT

BOLT MATERIAL SHALL CONFORM TO ASTM-A307 & NUTS TO ASTM-A563.



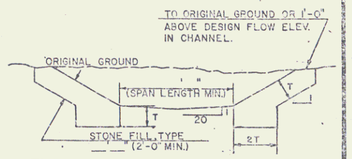
ONE ROW 3/4" ø GALVANIZED BOLTS, SPACED IN ALTERNATE CIRCUMFERENTIAL SEAM HOLES (19.2" C/C) AND TO BE FURNISHED WITH AND INCLUDED IN COST OF PLATE PIPE.

INLET INVERT ELEV. 463.00
OUTLET INVERT ELEV. 450.25

HEADWALL DETAILS

REINFORCING STEEL SCHEDULE

NO. PIECES	SIZE	LENGTH	MARK	TYPE		
SEE SHEET No. 2						



TYPICAL CHANNEL SECTION

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL

HYDRAULIC DATA

DRAINAGE AREA = 0.75 SQ. MI. DESIGN FLOW Q 50

Q_{10} =	135 C.F.S.	Q_{10} HEADWATER ELEVATION =	467.3
Q_{25} =	190 C.F.S.	Q_{25} HEADWATER ELEVATION =	468.5
Q_{50} =	240 C.F.S.	Q_{50} HEADWATER ELEVATION =	469.6
Q_{100} =	290 C.F.S.	Q_{100} HEADWATER ELEVATION =	470.9

TAILWATER DEPTH AT Q 50 = 2.7 FEET, ELEVATION
OUTLET VELOCITY AT Q 50 = 17.7 FEET PER SECOND
ORDINARY HIGHWATER DEPTH 2.4 FEET
COMMENTS: NORMAL STREAM VELOCITY = 14 FPS

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	STEEL	STEEL	ALUMINUM
CORRUGATIONS	6 x 2		
SIZE OF PIPE OR PIPE ARCH	72" ø		
WATERWAY AREA (S.F.)	28		
PLATE THICKNESS (COATED)	0.188"		
BOLT SIZE	3/4" ø		
WEIGHT PER LINEAR FOOT	206 lbs/Ft.		
TOTAL WEIGHT	30,168 lbs.		

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF WESTFIELD	Bridge No.
HIGHWAY NO. VT. 242	Log Sta.
VT. 242 OVER BROOK	Surv. Sta.
72"x148' CG.M.P.P. DETAILS	REV. 8/24/92
Designed by R. WHITCOMB	Drawn by R. WHITCOMB

WESTFIELD
ST 0278 (2)
R.O.W. SHEET 2 OF 5 SHEETS

2

MAR 19 1993