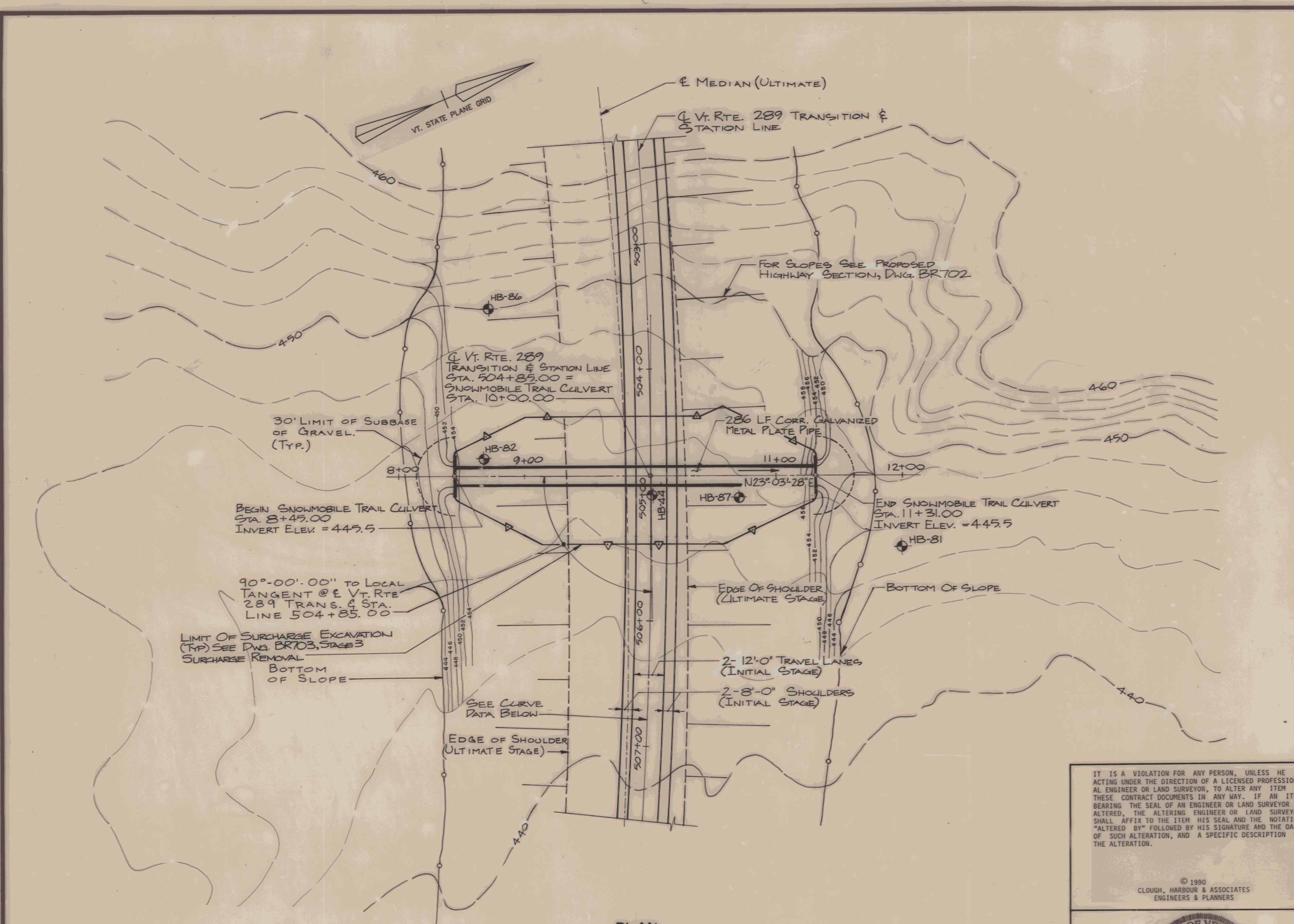




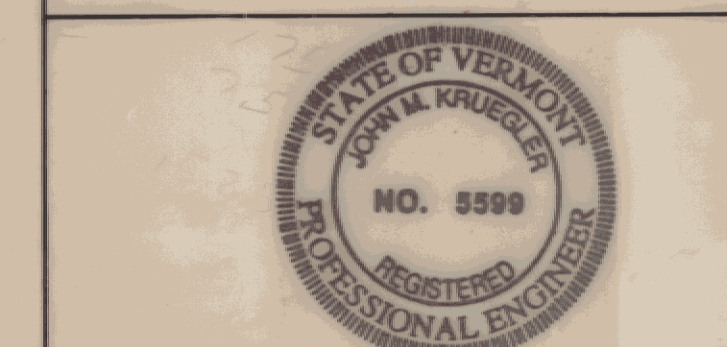
VT. RTE. 289 CURVE DATA # 3
 ΔT = 32° 21' 45" Rt.
 ΔC = 29° 42' 03" Rt.
 ΔP = 01° 30' 00" Rt.
 ΔB = 3619.72'
 ΔL = 1186.78'
 ΔR = 1012.81'
 ΔS = 196.37'
 ΔT = 131.99'
 ΔC = 2314.94'
 ΔP = 1930.00'
 ΔB = 167.44'
 BANK = 0.030 F/ft Rt.

PLAN
 1" = 50'-0"

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS			
	STEEL	STEEL	ALUMINUM
CORRUGATIONS	6" x 2"		
SIZE OF PIPE OR PIPE ARCH	15'-6" DIA.		
WATERWAY AREA (S.F.)	NA		
PLATE THICKNESS (COATED)	0.218"		
BOLT SIZE	3/4"		
WEIGHT PER LINEAR FOOT	618#/ft.		
TOTAL WEIGHT	176.7 KIPS		

IT IS A VIOLATION FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER ANY ITEM IN THESE CONTRACT DOCUMENTS IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

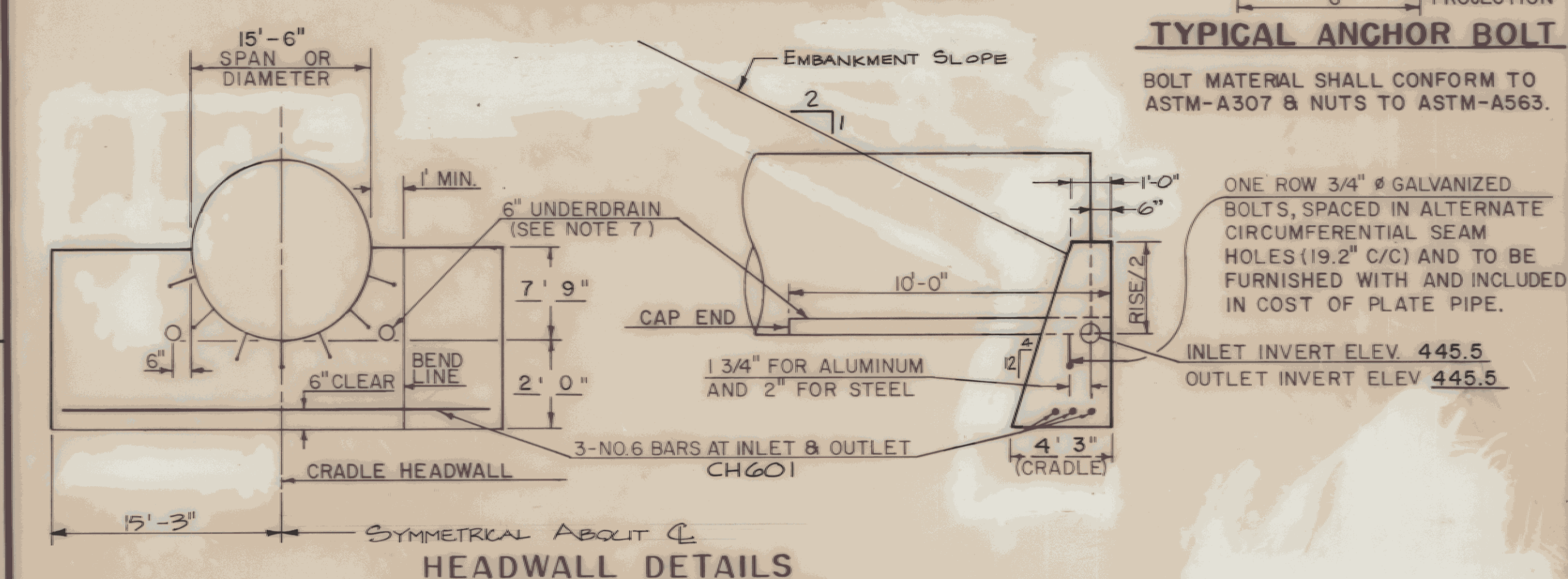
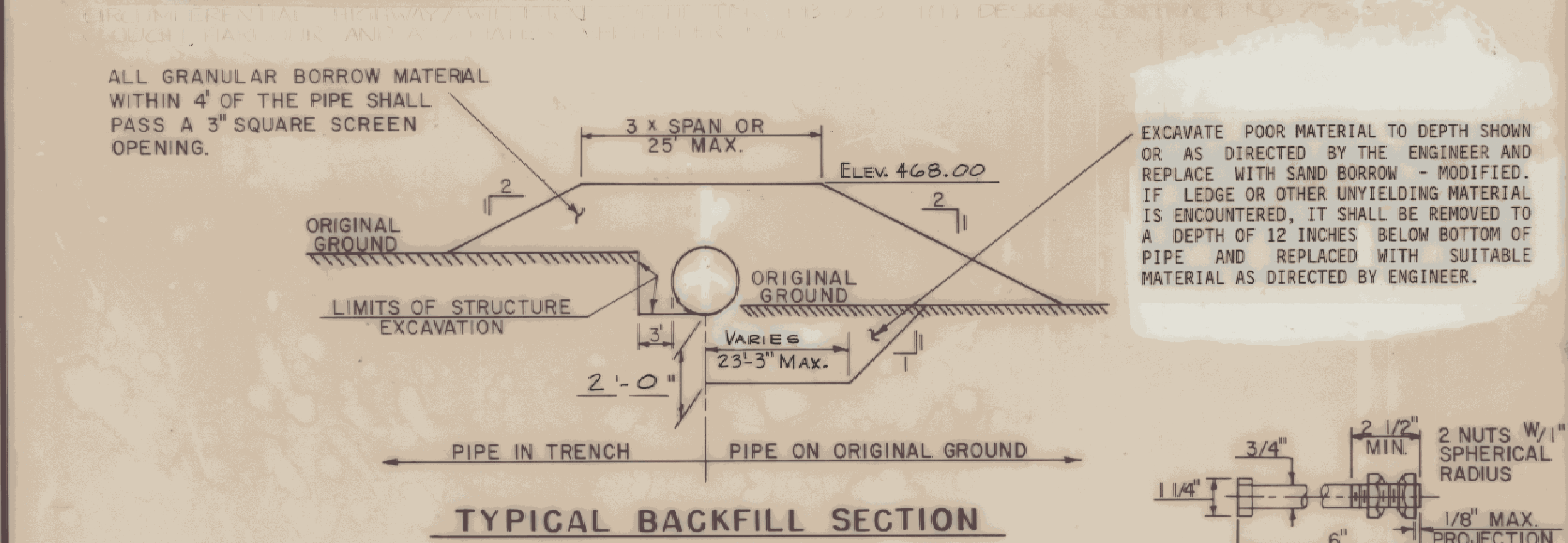
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 CLOUGH, HARBOUR & ASSOCIATES
 ENGINEERS & PLANNERS



RECOMMENDED FOR APPROVAL BY
 John M. Doughty 10/12/90
 DATE

CHA CLOUGH, HARBOUR & ASSOCIATES
 ENGINEERS & PLANNERS

- ### NOTES
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1986, AND THE LATEST AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. DESIGN IS FOR HS-20 LIVE LOADING.
 - UNLESS OTHERWISE INDICATED, 4 BOLTS PER LINEAR FOOT FOR STEEL PLATES AND 5 1/2 BOLTS FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH GALVANIZED AASHTO M164 BOLTS.
 - WHEN NORMAL CONSTRUCTION OR REGULAR ROADWAY TRAFFIC IS MAINTAINED OVER THE PIPE, THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 5 FEET OF COMPACTED MATERIAL.
 - ALUMINUM PIPE THAT IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH ZINC CHROMATE, BITUMINOUS OR ASPHALTIC PAINT.
 - PIPES SHALL BE FACTORY-ELONGATED, 5-PERCENT (PIPE ARCHES SHALL NOT BE ELONGATED).
 - THE ENDS OF THE PIPE SHALL BE CUT SQUARE (NOT BEVELED TO MATCH SLOPES).
 - AT THE OUTLET END, INCLUDE A 10-FOOT PIECE OF 6-INCH 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.
 - PIPE TO BE INSTALLED AFTER SURCHARGING IS COMPLETE. SEE SHEET BR703 FOR SURCHARGE DETAILS.
 - FOR BORING LOGS, SEE "GEOTECHNICAL ENGINEERING REPORT FOR THE PROPOSED CHITTENDEN COUNTY CIRCUMFERENTIAL HIGHWAY/WILLISTON-COLCHESTER PB 033-1(1) DESIGN CONTRACT NO. 2," BY CLOUGH, HARBOUR & ASSOCIATES, AUGUST 1990.
 - BOLT HOLES NEAREST THE VISIBLE EDGE OF LONGITUDINAL LAPPED JOINTS (WHEN VIEWED FROM THE INSIDE OF THE PIPE) SHALL BE PLACED IN THE VALLEYS OF THE CORRUGATIONS.



REINFORCING STEEL SCHEDULE

NO.	PIECES	SIZE	LENGTH	MARK	TYPE
6	6	30'-0"	CHG01	SFR.	

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.15	COMMON EXCAVATION	C.Y.	17450	
203.31	SAND BORROW - MODIFIED	C.Y.	3960	
203.32	GRANULAR BORROW	C.Y.	18970	
204.25	STRUCTURE EXCAVATION	C.Y.	370	
301.15	SUBBASE OF GRAVEL	C.Y.	460	
501.25	CONCRETE CLASS B	C.Y.	42	
507.15	REINFORCING STEEL	LBS.	280	
511.15	186" CORE GALV. METAL PLATE PIPE (0.218") (6" x 2")	EA.	1	

* Denotes Roadway Item REFERENCE TO SHEET 222A OF 400

STATE OF VERMONT AGENCY OF TRANSPORTATION

TOWN OF ESSEX Bridge No. 14-3
 Log Sta. 504+85
 HIGHWAY NO. VT. RTE. 289
 PROJECT NO. PB 033-1(1)
 Bridge Sheet No. BR701 Sheet 222 of 400

Designed by PJB Drawn by DJA
 Checked by RJS Bridge Design Supervisor MWO
 date 10/12/90 date 10/12/90