



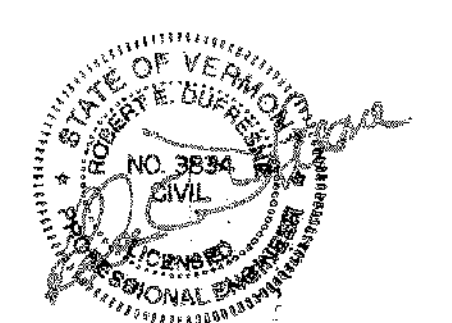
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Project # 416006
 Project Mgr. RAW
 Design RNG
 Drawn EAE
 Checked by R.E. DUFRESNE
 Date December 09
 Scale AS SHOWN
 Approved by RED

Revisions:
 1 10-27-09: REVISIONS PER VTRANS COMMENTS
 2 10-27-09: DELETE NOTE TEXT
 3 12-28-09: DELETE DETAIL
 4 12-28-09: REVISE DRAIN DETAIL

1. ALL DRAWINGS FOR THIS PROJECT SHALL NOT BE REUSED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AND AUTHORIZED PERMISSION OF DUFRESNE & ASSOCIATES, P.C. ANY REVISIONS SHALL BE MADE BY THE CONTRACTOR.

Dufresne & Associates, P.C.



12-29-09

GENERAL DETAILS

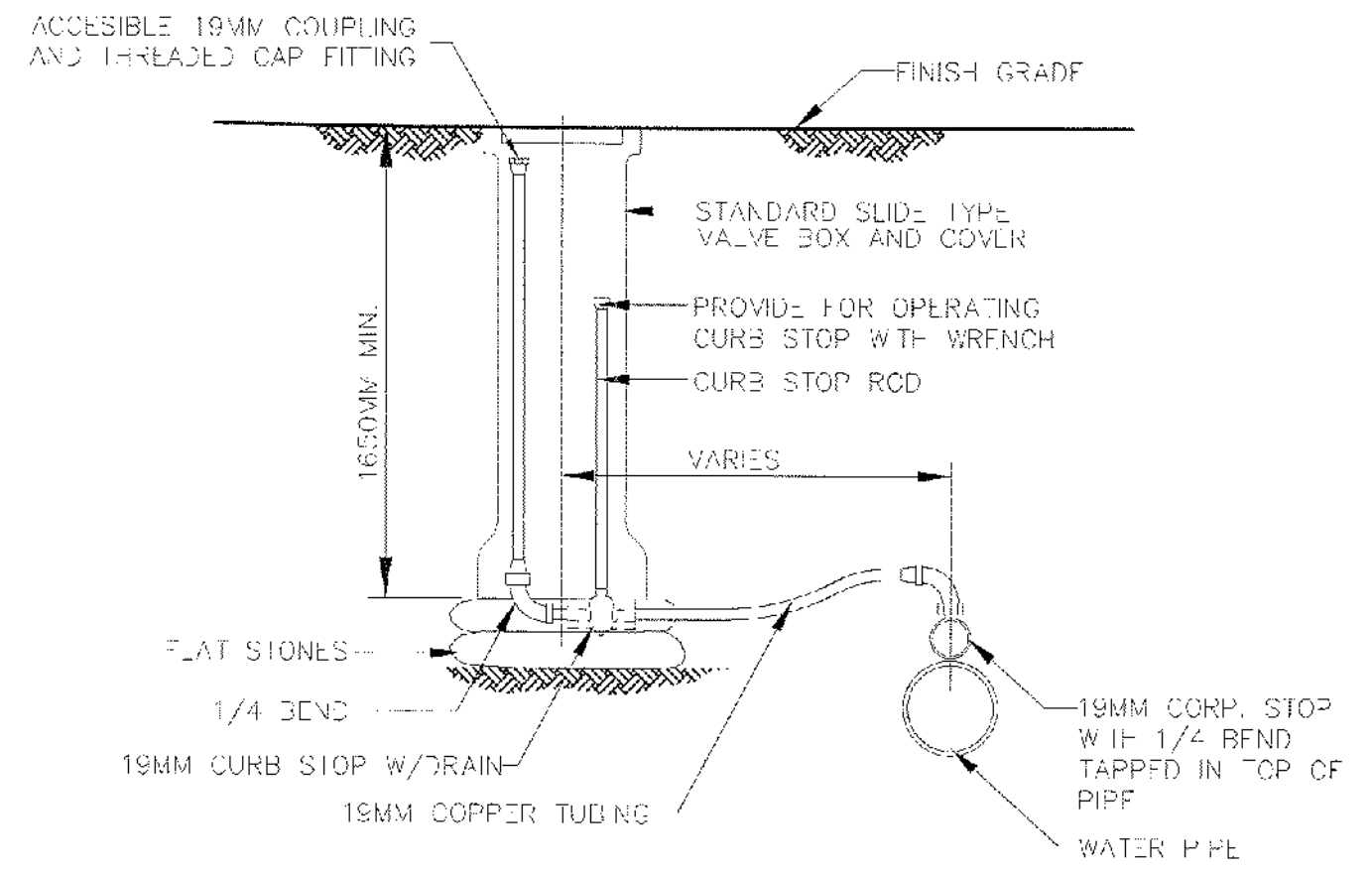
READSBORO, VERMONT

BRIDGE #31

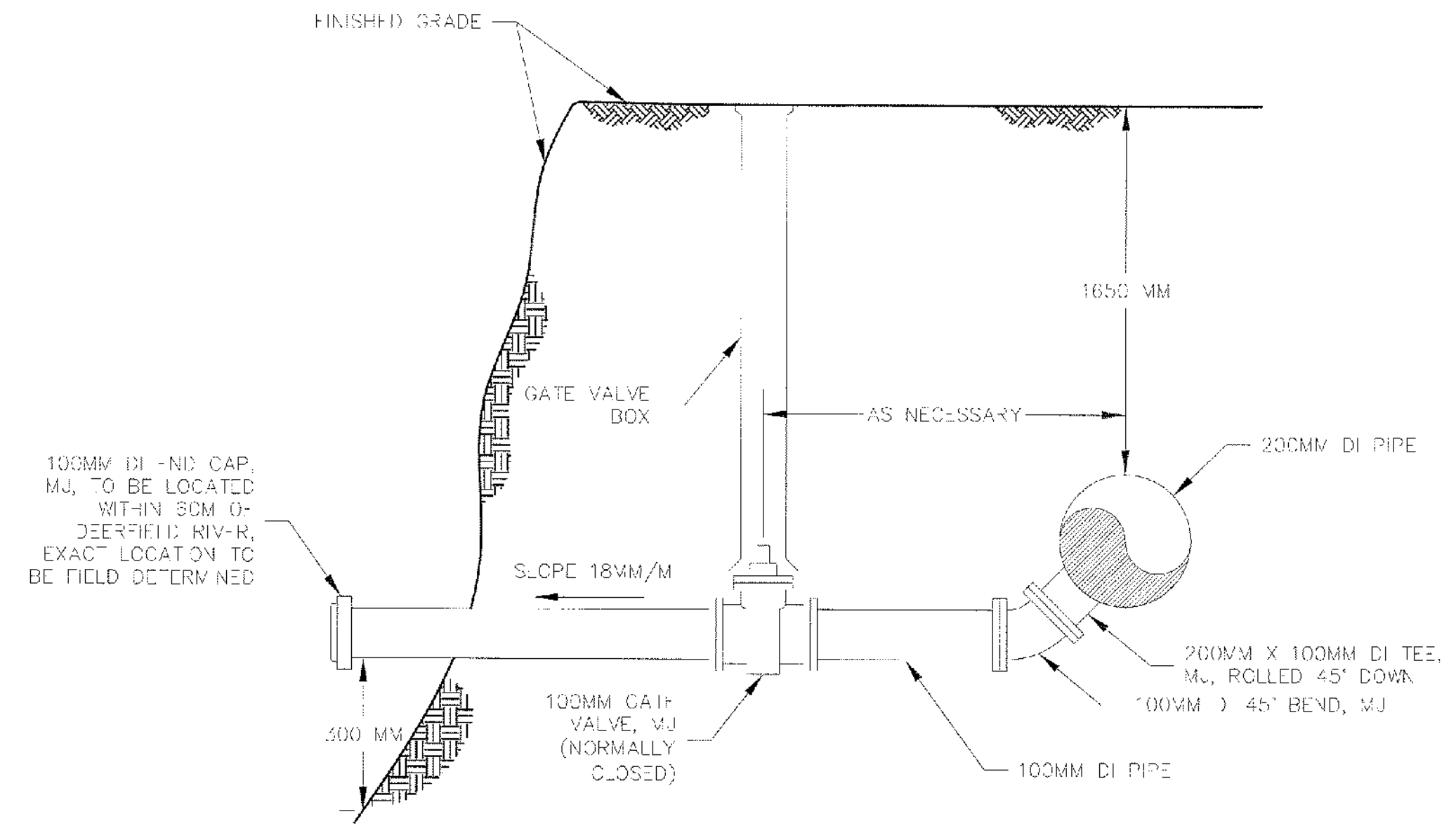
C4

READSBORO
 BRO 1441 (25)
 GENERAL DETAILS
 SHEET 36 OF 60

DWG. NO. 416006-C4ED
 SHEET 1 OF 1



TYPICAL INSTALLATION—TRAVEL WAY FOR
 MANUAL AIR RELEASE / CHLORINATION INJECTION
 NOT TO SCALE

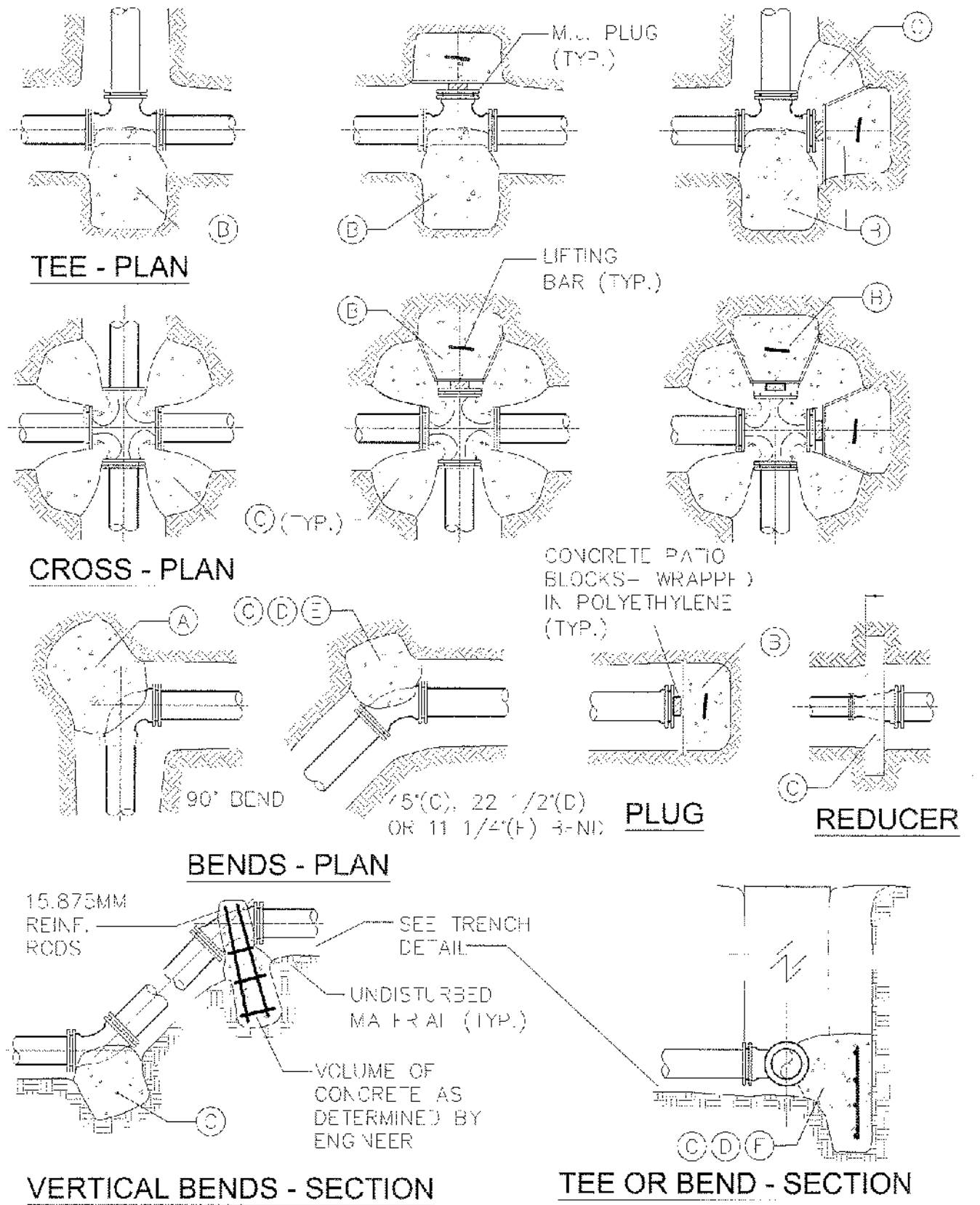


WATER MAIN BRIDGE CROSSING DRAIN
 NOT TO SCALE

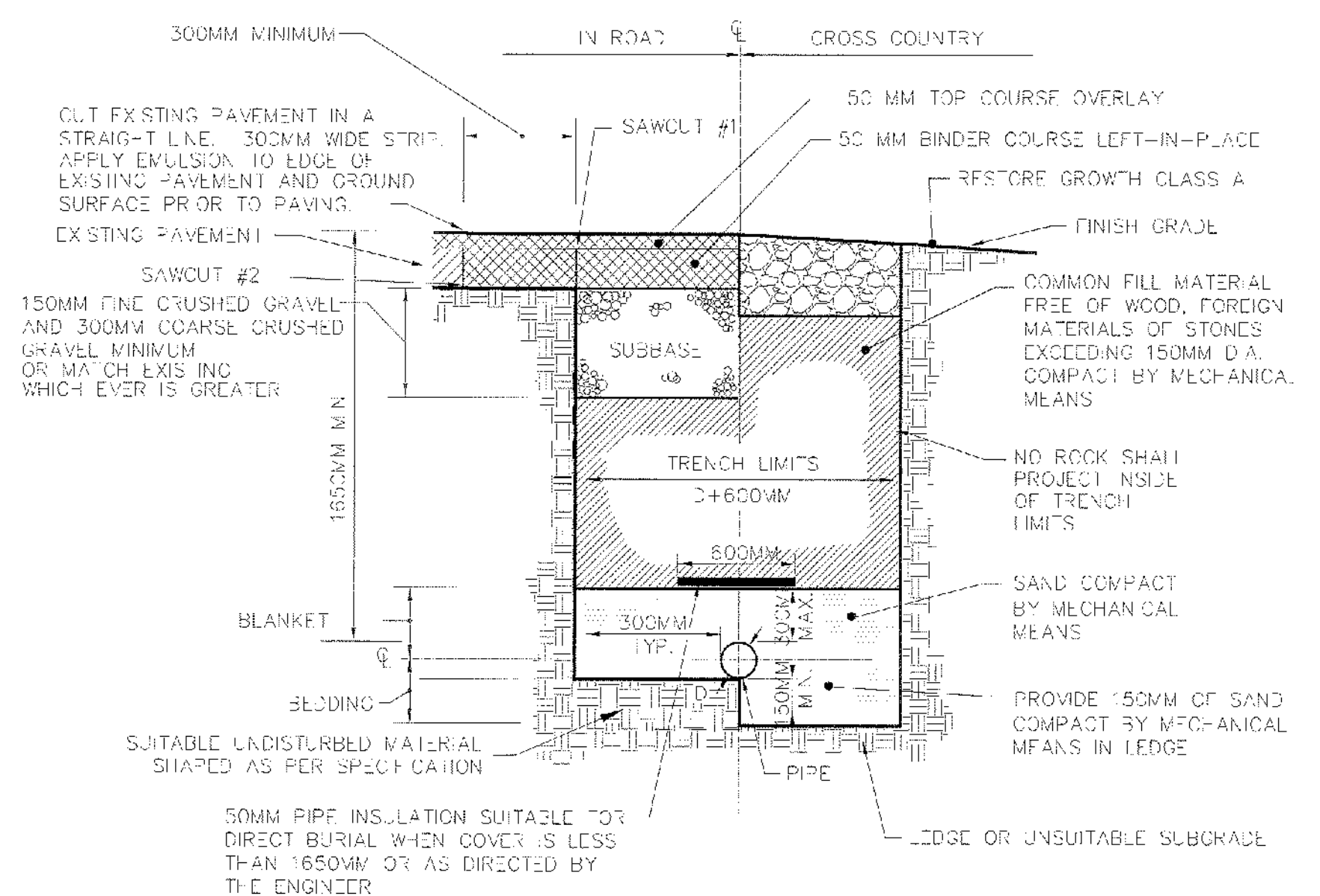
THRUST BLOCK SCHEDULE		SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL											
REACTION TYPE	PIPE SIZE (MM)	PIPE SIZE (MM)											
		100	150	200	250	300	350	400	450	500	600	750	900
(A)	1.71	2.49	4.29	6.45	9.12	12.76	15.85	19.51	24.43	34.85	53.62	76.81	135.12
(B)	1.21	3.53	6.06	9.12	12.70	17.33	22.42	28.16	34.55	49.29	75.83	108.62	191.03
(C)	0.92	0.95	3.28	7.94	6.98	9.38	12.13	15.24	18.70	26.68	41.04	58.78	103.42
(D)	0.47	0.97	1.67	2.52	3.56	4.78	6.19	7.77	9.53	13.60	20.92	29.97	52.72
(E)	0.24	0.49	0.84	1.26	1.79	2.40	3.41	3.93	4.78	6.83	10.51	15.06	28.49

- OTHER TEST PRESSURES FOR REACTIONS ABOVE
- TEST PRESSURE TO BE 200 PSI MIN. AT LOW END OF 1/4" IN-SI SECTION. SQUARE FEET OF CONCRETE THRUST BLOCKING FOR OTHER IN-SI PRESSURES IS DIRECTLY PROPORTIONAL TO TIC ABOVE TAB. F. FOR INSTANCE, AT 200 PSI TEST PRESSURE FOR ABOVE NUMBERS DOUBLE.
- NOTES:
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE EACH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
 - ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 - PLACE CONCRETE PATO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
 - MEGA-LUG RETAINER GLANDS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT MEET THE REQUIREMENTS FOR THRUST RESTRAINT.
 - ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
 - THREADED ROD SHALL BE ANSI A242 F550 PIPE RESTRAINT NUTS TO MATCH AWWA C111. THREADED RODS AND NUTS TO BE FIELD COATED WITH BITUMINOUS PAINT.
 - THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS, PLUGS, OR CROSSES.
 - INSTALL LIFT HOOPS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
 - THRUST BLOCK AREA IS BASED ON SILT SOILS WITH A BEARING STRENGTH OF 1500 LBS/SF AND A SAFETY FACTOR OF 1.5.

THRUST BLOCK DETAILS
 NOT TO SCALE



THRUST BLOCK DETAILS
 NOT TO SCALE



TYPICAL TRENCH SECTION
 NOT TO SCALE

2 3

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