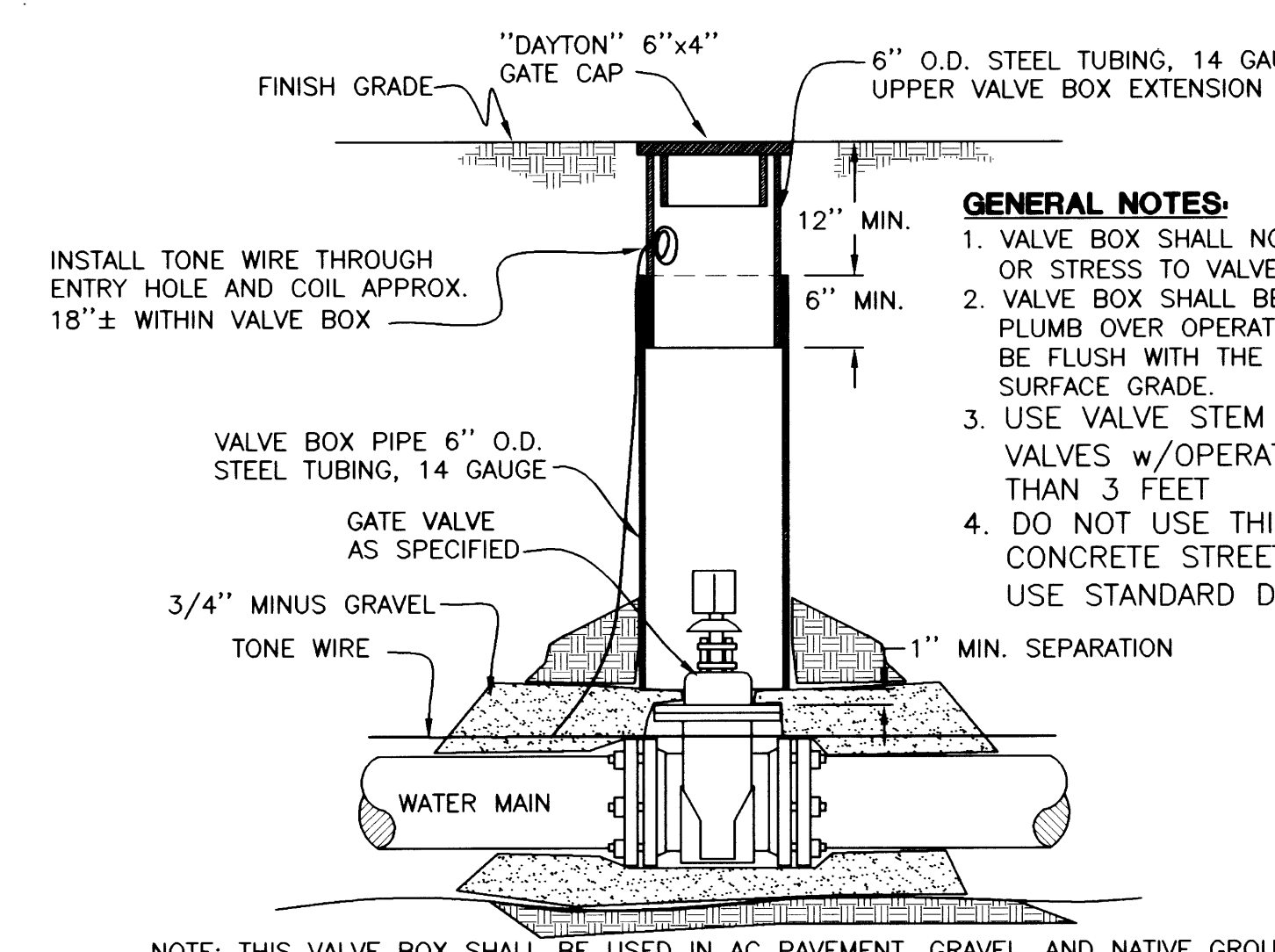


TABLE A THRUST AT FITTINGS IN POUNDS AT 150 POUNDS PER SQUARE INCH OF WATER PRESSURE					TABLE B SAFE BEARING LOAD OF VARIOUS SOILS	
PIPE SIZE	PLUG OR TEE	90° BEND	45° BEND	22 1/2° BEND	SOIL TYPE	SAFE BEARING LOAD, LB./SQ. FT.
4"	2780	3920	2130	1080	MULCH, PEAT, ETC...	0
6"	5700	8060	4370	2210	CLAY	1000
8"	9870	13,950	7560	3830	SAND	2000
10"	16,130	22,800	12,360	6260	SAND & GRAVEL	3000
12"	22,970	32,460	17,580	8910	SAND & GRAVEL CEMENTED WITH CLAY	4000
					HARD SHALE	10,000

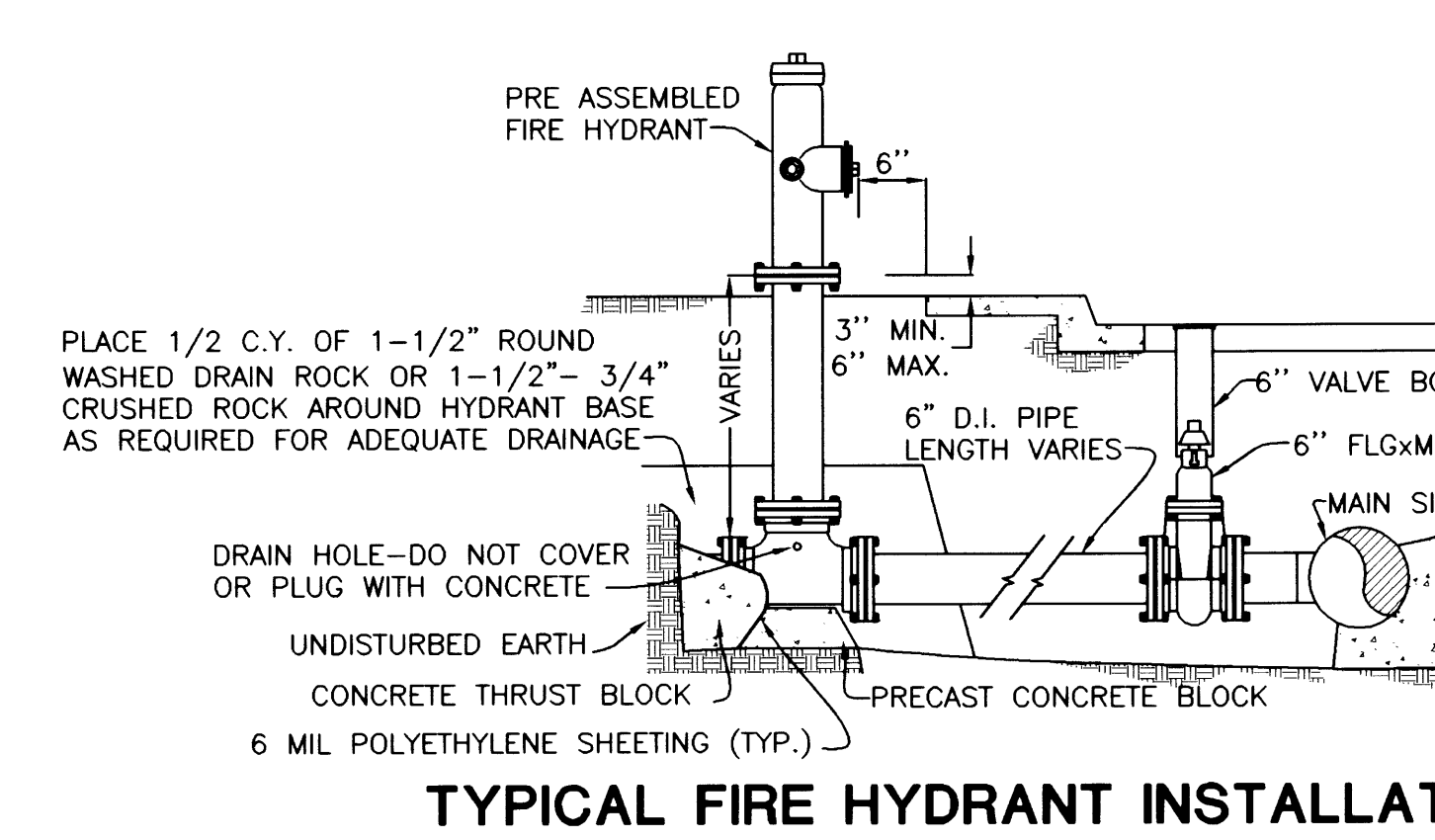
NOTES:

- THRUST BLOCKING SHALL BE PLACED BETWEEN UNDISTURBED EARTH AND THE FITTING TO BE ANCHORED. THE MINIMUM BEARING AREA AGAINST UNDISTURBED EARTH FOR THRUST BLOCKING SHALL BE CALCULATED BY DIVIDING THE THRUST (TABLE A) BY THE SAFE BEARING LOAD (TABLE B). EXAMPLE: A 6", 45° HORIZONTAL BEND WILL BE BLOCKED AGAINST CLAY. THE REQUIRED BLOCKING AREA AGAINST UNDISTURBED EARTH, A=4370 lb./1000 lb./sq.ft.=4.37 sq. ft..
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 psi AT 28 DAYS.
- THRUST BLOCKING SHALL BE PLACED SO THAT THE PIPE AND FITTING JOINTS WILL BE ACCESSIBLE FOR REPAIRS. INSTALL 6 mil POLYETHYLENE SHEETING BETWEEN CONTACT POINTS OF CONCRETE AND FITTINGS.
- THRUST BLOCKING FOR PIPES LARGER THAN 12", PRESSURES GREATER THAN 150 psi OR OTHER SITUATIONS NOT SHOWN HERE ON SHALL BE AS DIRECTED BY THE ENGINEER.

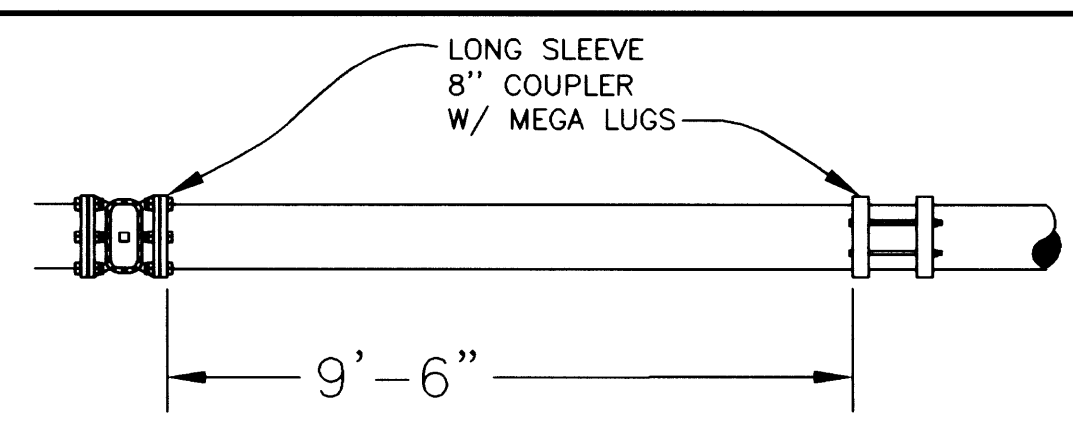
CITY OF ROSEBURG WATER DEPARTMENT DATE: 10/10/1983 STANDARD DWG. NO. 102
REV: 5-11-1999



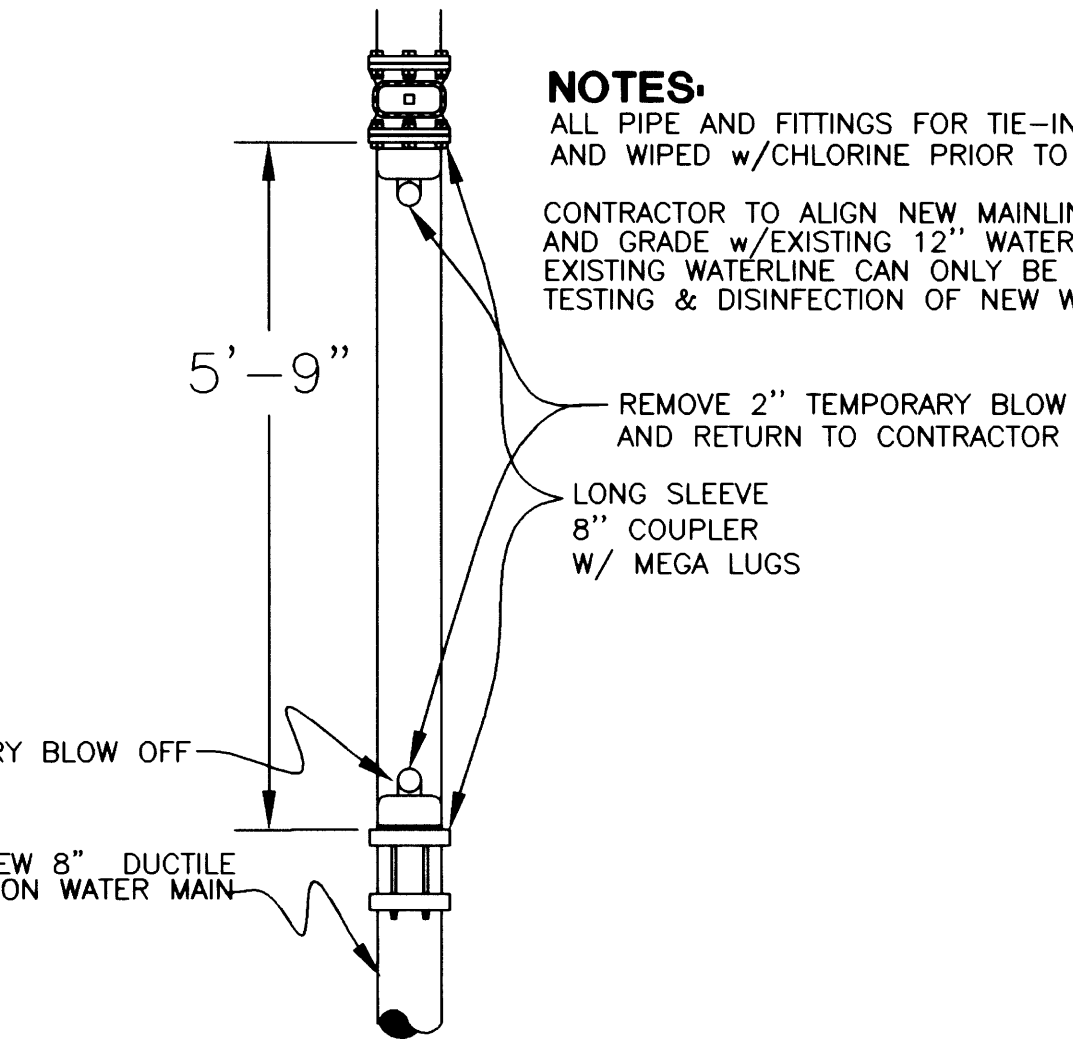
ALTERNATE VALVE AND VALVE BOX ASSEMBLY



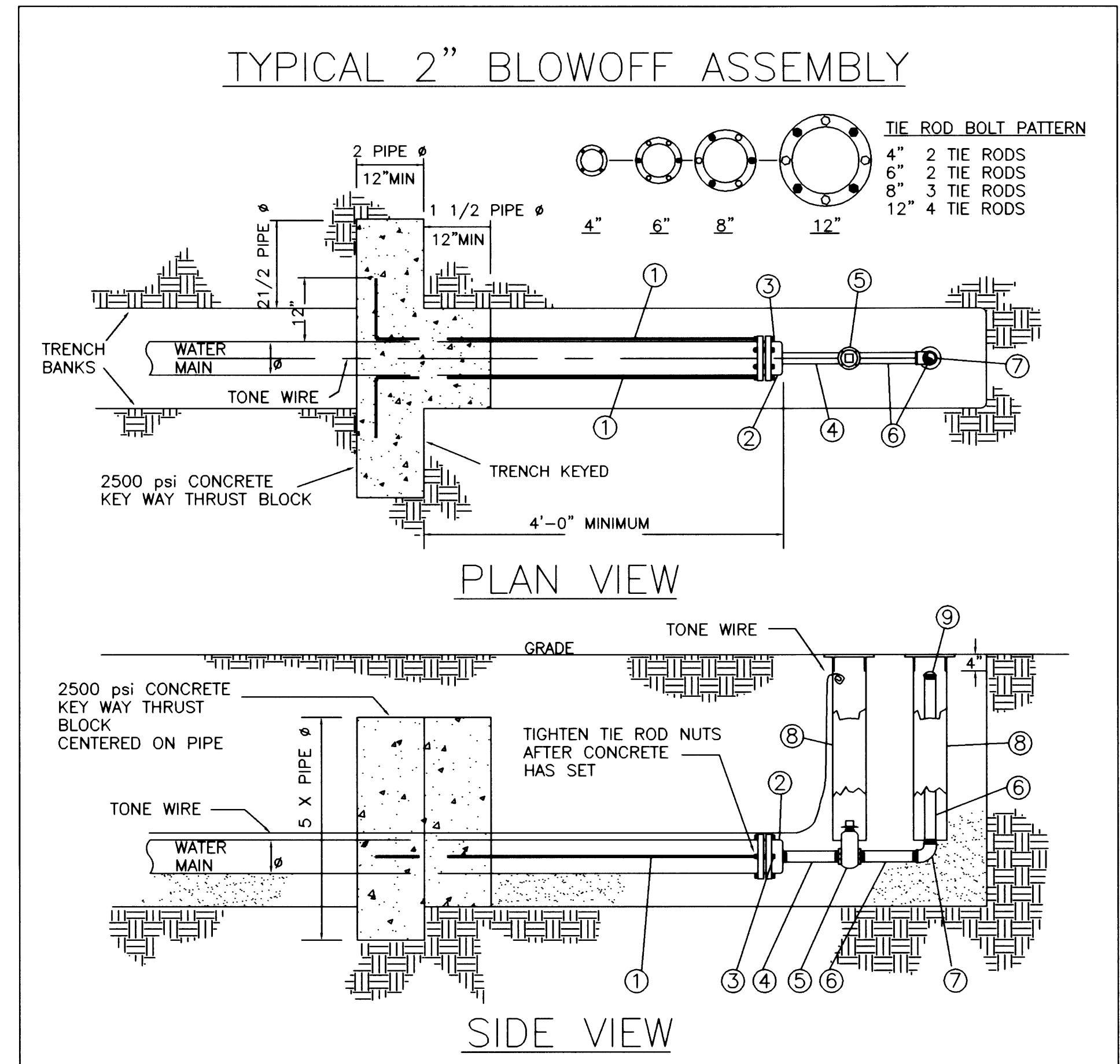
TYPICAL FIRE HYDRANT INSTALLATION
(THRUST BLOCKED)
STANDARD DWG #105



WATER TIE-IN DETAIL (PHASE #1)

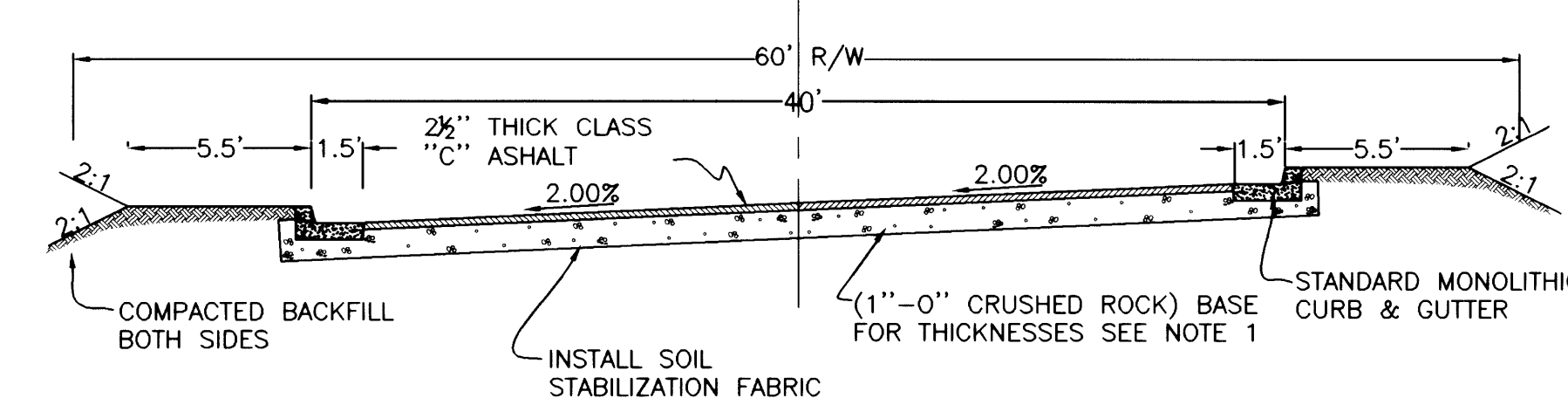


WATER TIE-IN DETAIL (PHASE #2)



- LEGEND**
- 3/4" Ø STEEL TIE ROD, N.C. THD ONE END, BITUMASTIC COATED AFTER INSTALLATION
 - MAIN SIZE CAP WITH 2" I.P. THD OUTLET (MJ X FIPT)
 - STAR "SUPERSTAR TIEBOLT" AND "SUPERSTAR TIENUT" (OPTIONAL)
 - 2" BRASS PIPE NIPPLE
 - 2" GATE VALVE (FIPT) WITH 2" SQUARE OPERATING NUT
 - 2" GALV. IRON PIPE, LENGTH AS REQUIRED
 - 2" GALV. 90° ELBOW (FIPT)
 - 6" STANDARD VALVE BOX WITH LID
 - 2" CAP, HAND TIGHTEN ONLY

CITY OF ROSEBURG WATER DEPARTMENT DATE: 10/13/1983 STANDARD DWG. NO. 104
REV: 4-5-2001

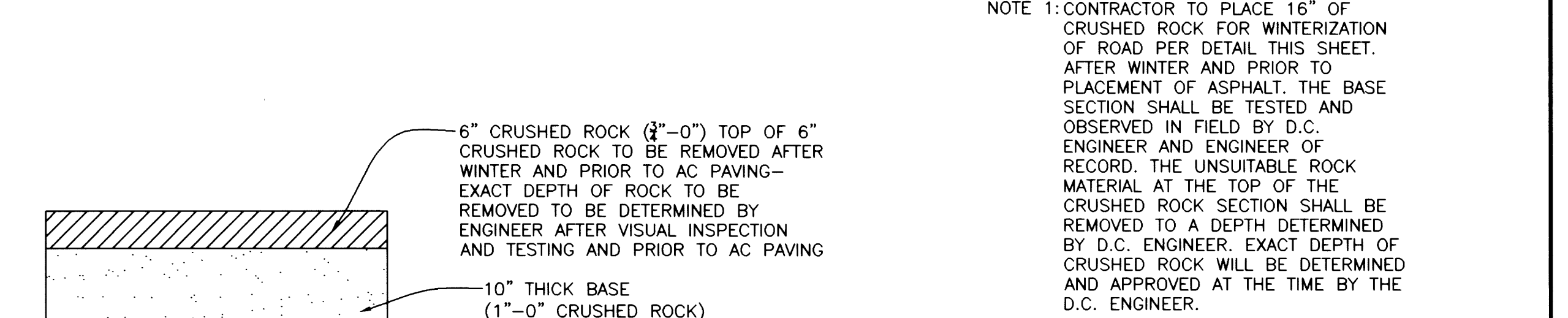


PRELIMINARY ROAD SECTION STRAUSS AVE. NTS

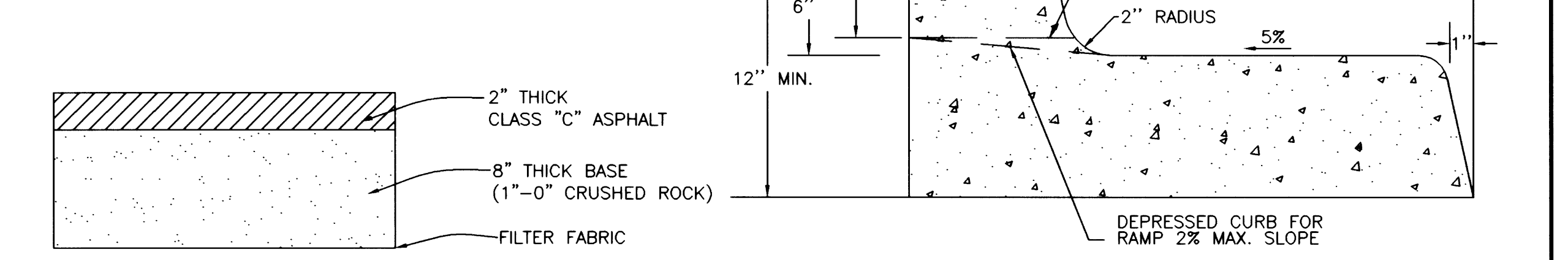


PRELIMINARY ROAD SECTION JACK'S COURT NTS

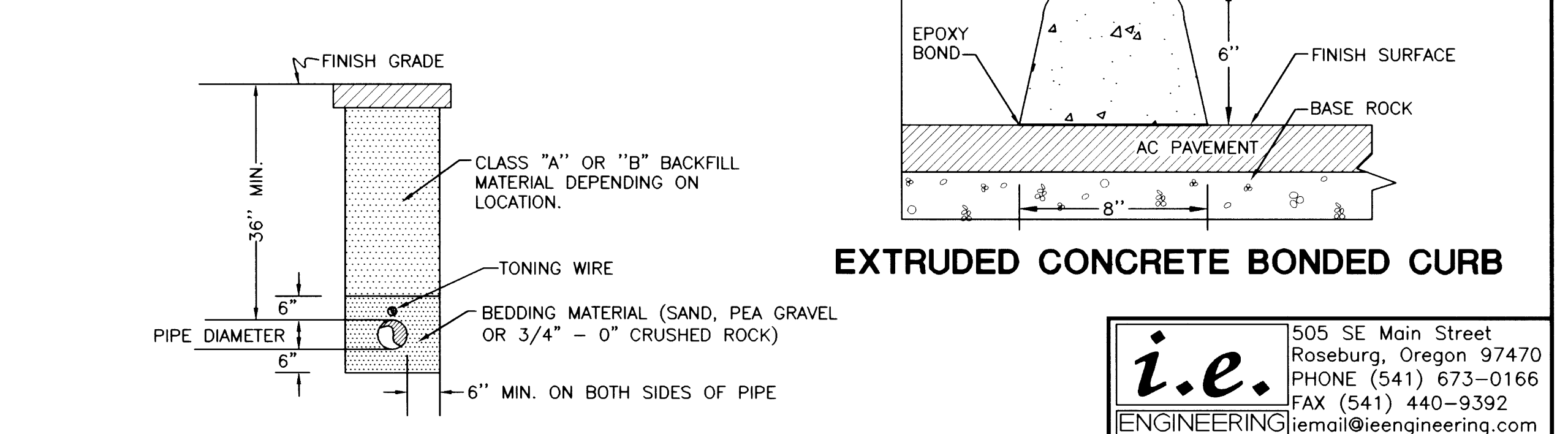
FILED
Date: 9-5-2007 By: J.P.
This survey consists of: 11 Pgs
Map: Co. RD #901A & L
Narrative:
Corner Rpt:
DOUGLAS COUNTY SURVEYOR



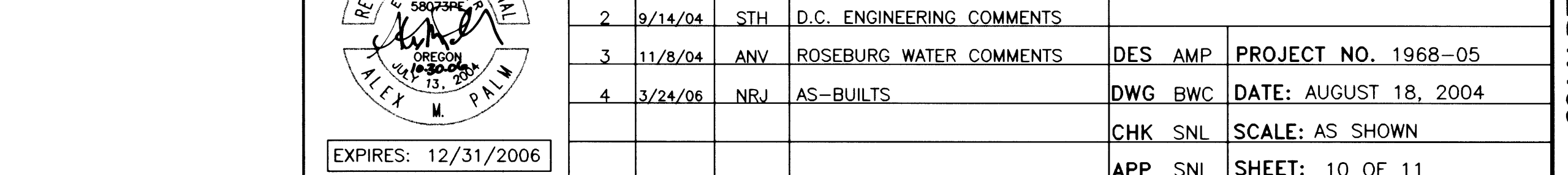
WINTERIZED PAVEMENT SECTION NTS



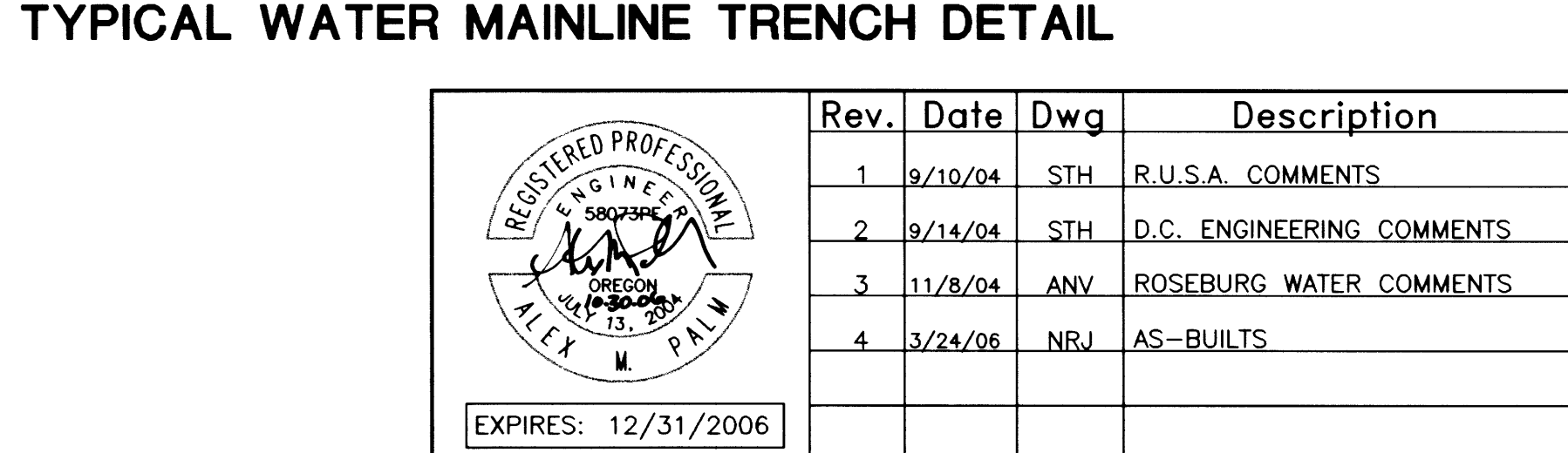
DRIVEWAY PAVEMENT SECTION NTS



TYPICAL CURB AND GUTTER



EXTRUDED CONCRETE BONDED CURB

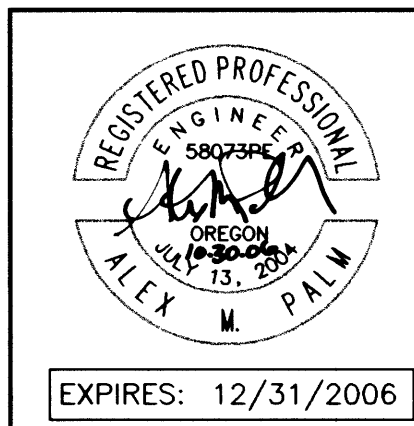


TYPICAL WATER MAINLINE TRENCH DETAIL

i.e. ENGINEERING
505 SE Main Street
Roseburg, Oregon 97470
PHONE (541) 673-0166
FAX (541) 440-9392
Project Name:
SADDLE BUTTE ESTATES
9TH ADDITION
Title:
DETAILS

Rev.	Date	Dwg	Description
1	9/10/04	STH	R.U.S.A. COMMENTS
2	9/14/04	STH	D.C. ENGINEERING COMMENTS
3	11/8/04	ANV	ROSEBURG WATER COMMENTS
4	3/24/06	NRJ	AS-BUILTS

DES AMP PROJECT NO. 1968-05
DWG BWC DATE: AUGUST 18, 2004
CHK SNL SCALE: AS SHOWN
APP SNL SHEET: 10 OF 11



EXPIRES: 12/31/2006
Co. RD. # 901 A & L

CO. RD. #901A & L DETAILS

901ALDT3

DO NOT DUPLICATE