

# THRUST BLOCKING

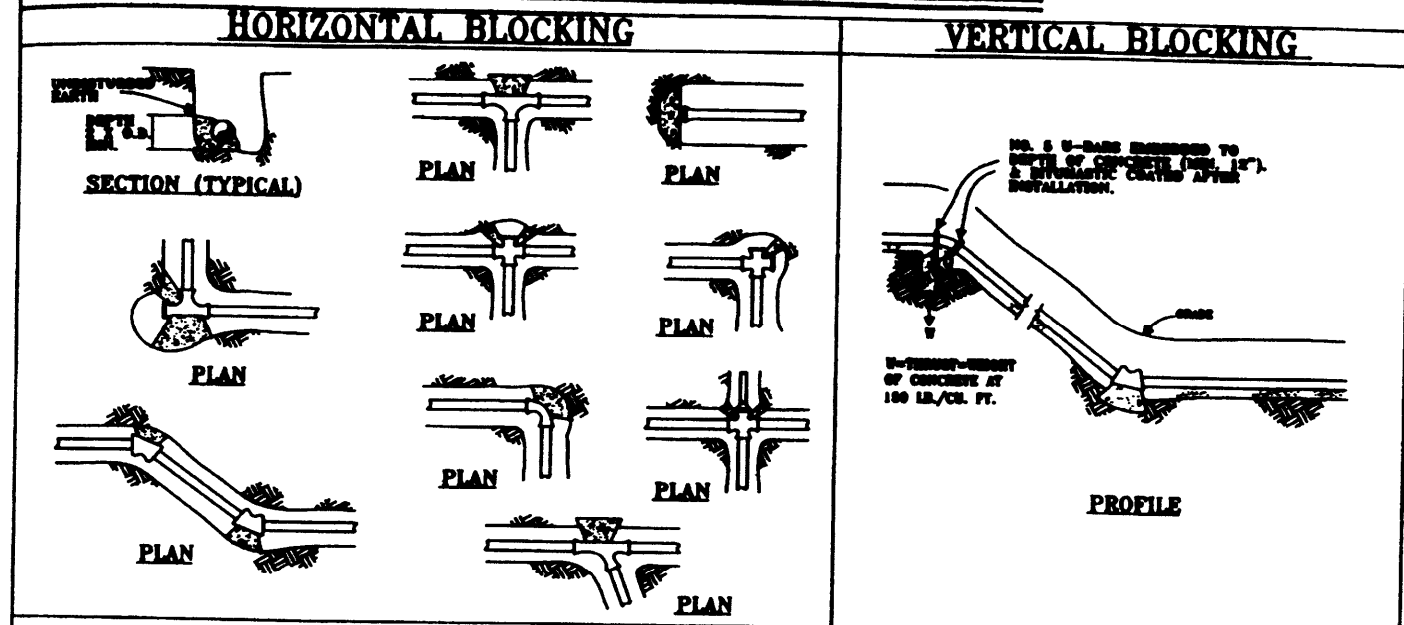
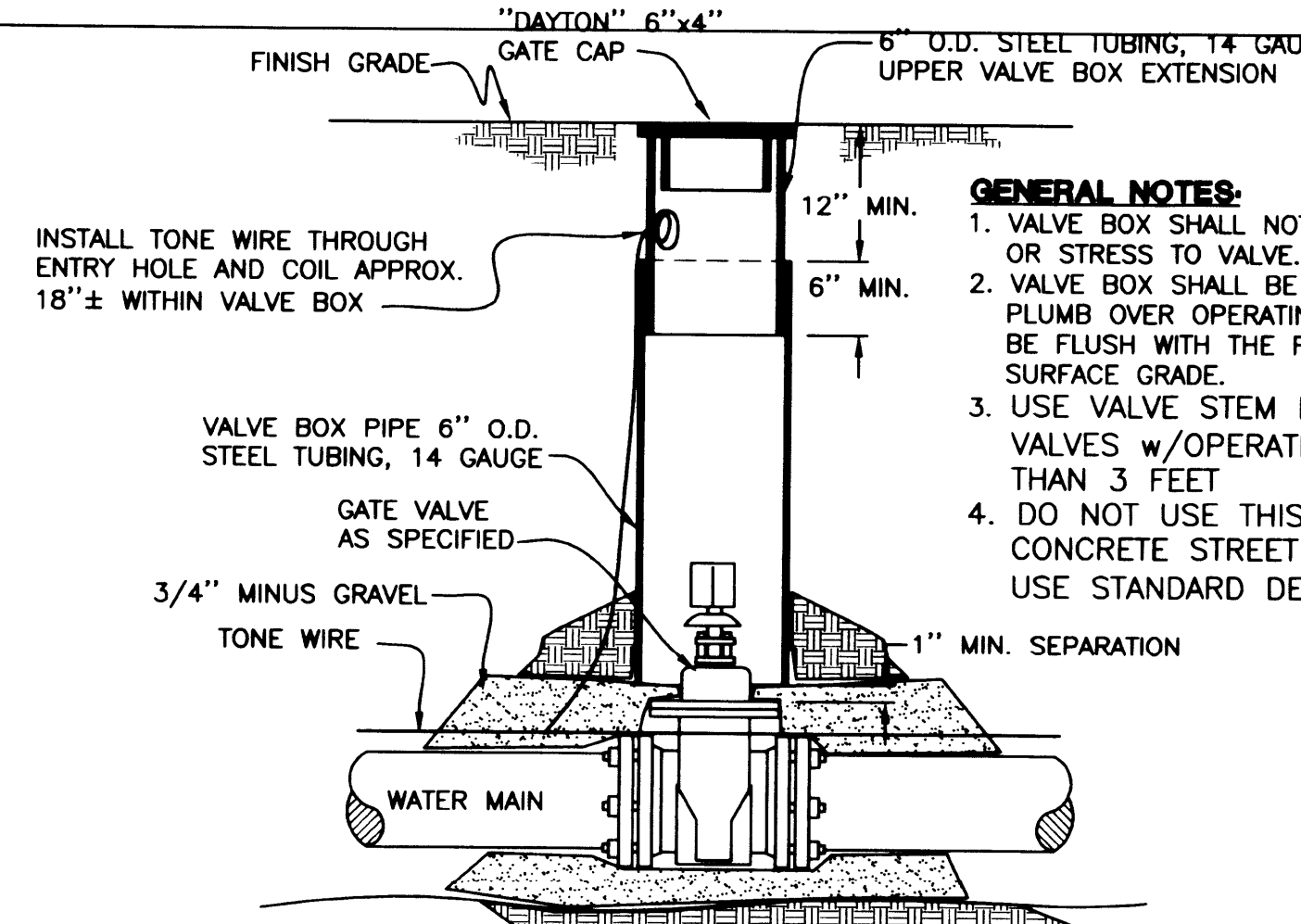


TABLE A THRUST AT FITTINGS IN POUNDS AT 150 POUNDS PER SQUARE INCH OF WATER PRESSURE					TABLE B SAFE BEARING LOAD OF VARIOUS SOILS	
PIPE SIZE	PLUG OR TEE	90° BEND	45° BEND	22 1/2° BEND	SOIL TYPE	SAFE BEARING LOAD, LB./SQ. FT.
4"	2780	3920	2130	1080	MULCH, PEAT, ETC...	0
6"	5700	8060	4370	2210	CLAY	1000
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,  $A = 4370 \text{ lb.} / 1000 \text{ lb./sq.ft.} = 4.37 \text{ sq. ft.}$
  - 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.

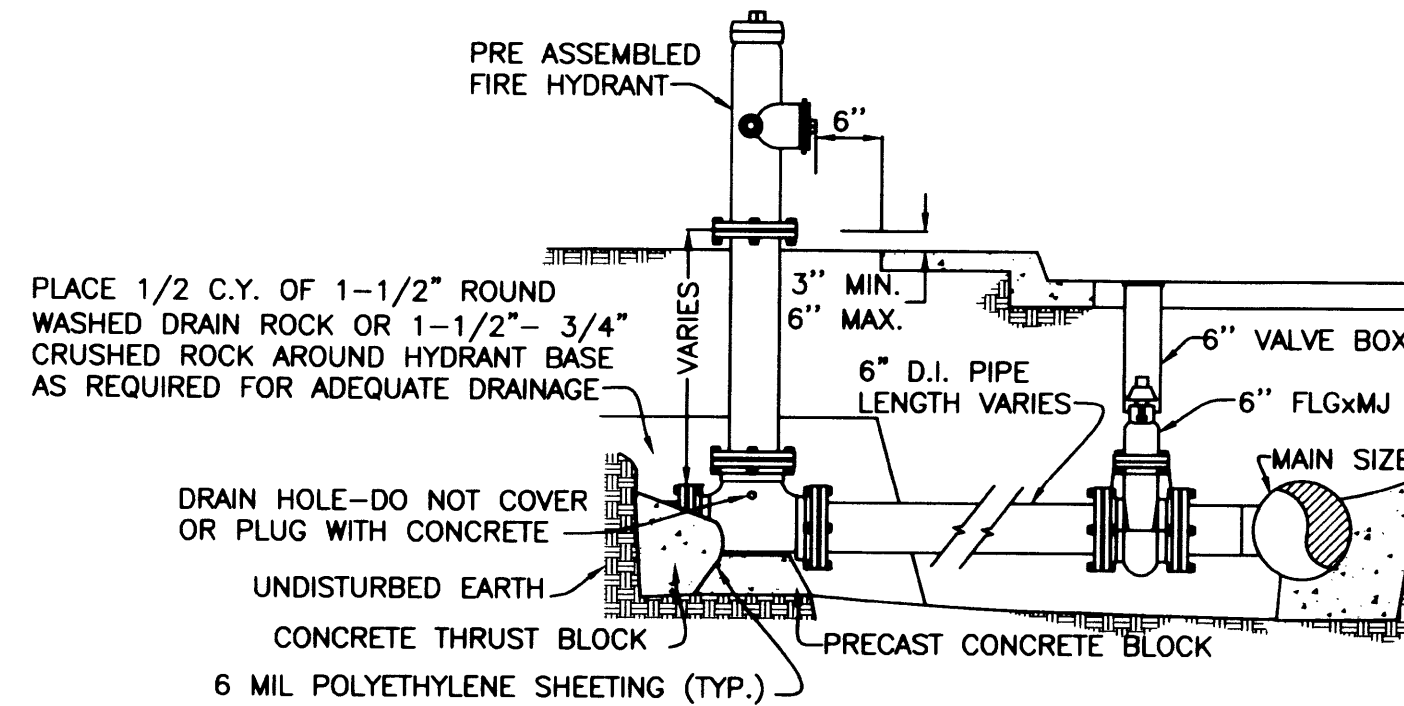
CITY OF ROSEBURG WATER DEPARTMENT DATE: 10/10/1983 STANDARD DWG. NO. 102  
REV: 5-11-1999



- GENERAL NOTES:**
- VALVE BOX SHALL NOT TRANSMIT SHOCK OR STRESS TO VALVE.
  - VALVE BOX SHALL BE CENTERED AND PLUMB OVER OPERATING NUT AND SHALL BE FLUSH WITH THE FINIAL STREET OR SURFACE GRADE.
  - USE VALVE STEM EXTENSION FOR ALL VALVES w/OPERATING NUT DEEPER THAN 3 FEET
  - DO NOT USE THIS ASSEMBLY IN CONCRETE STREET OR SIDEWALK USE STANDARD DETAIL #103

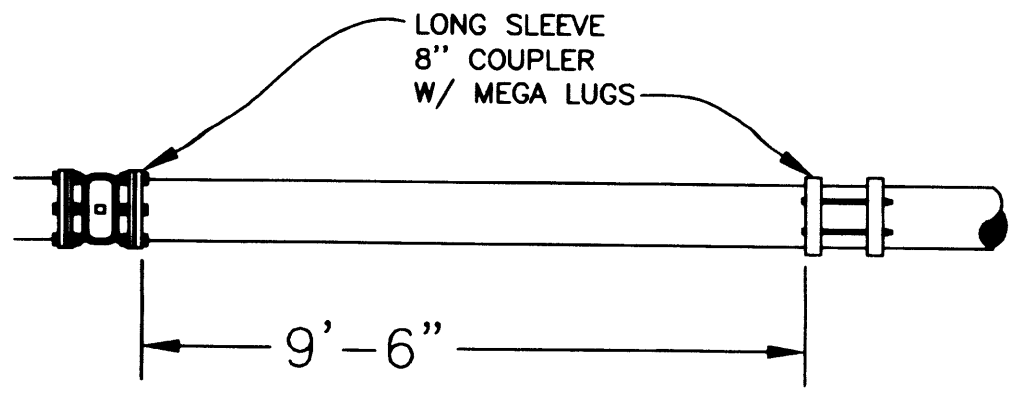
NOTE: THIS VALVE BOX SHALL BE USED IN AC PAVEMENT, GRAVEL, AND NATIVE GROUND AREAS

## ALTERNATE VALVE AND VALVE BOX ASSEMBLY

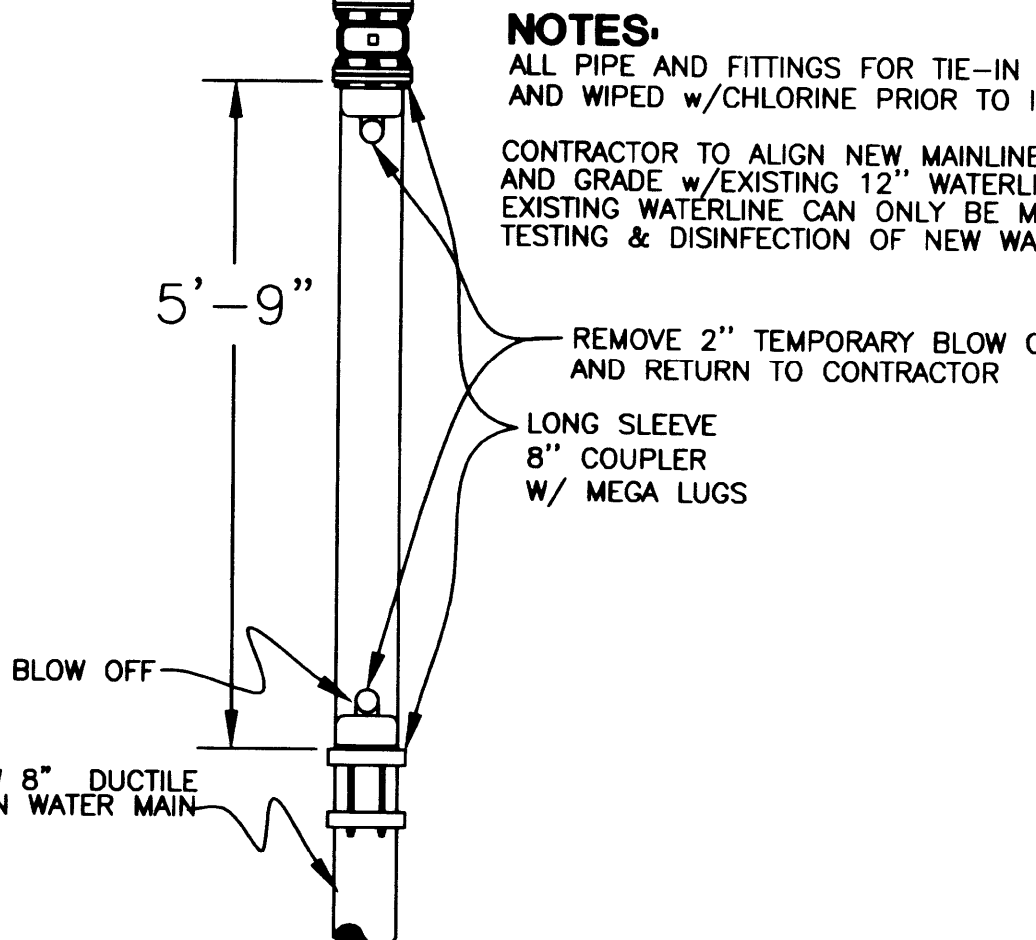


## TYPICAL FIRE HYDRANT INSTALLATION

(THRUST BLOCKED) STANDARD DWG #105



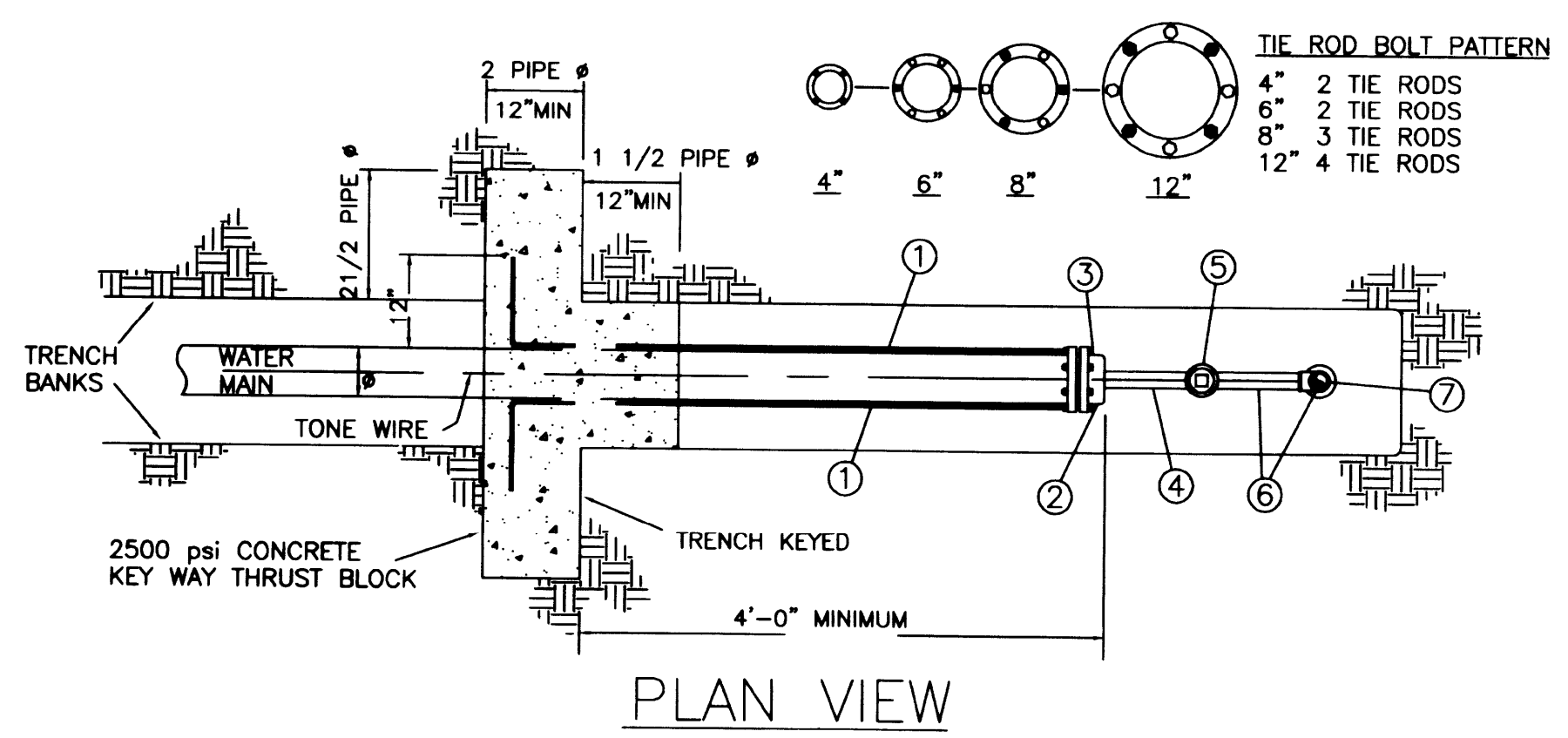
## WATER TIE-IN DETAIL (PHASE #1)



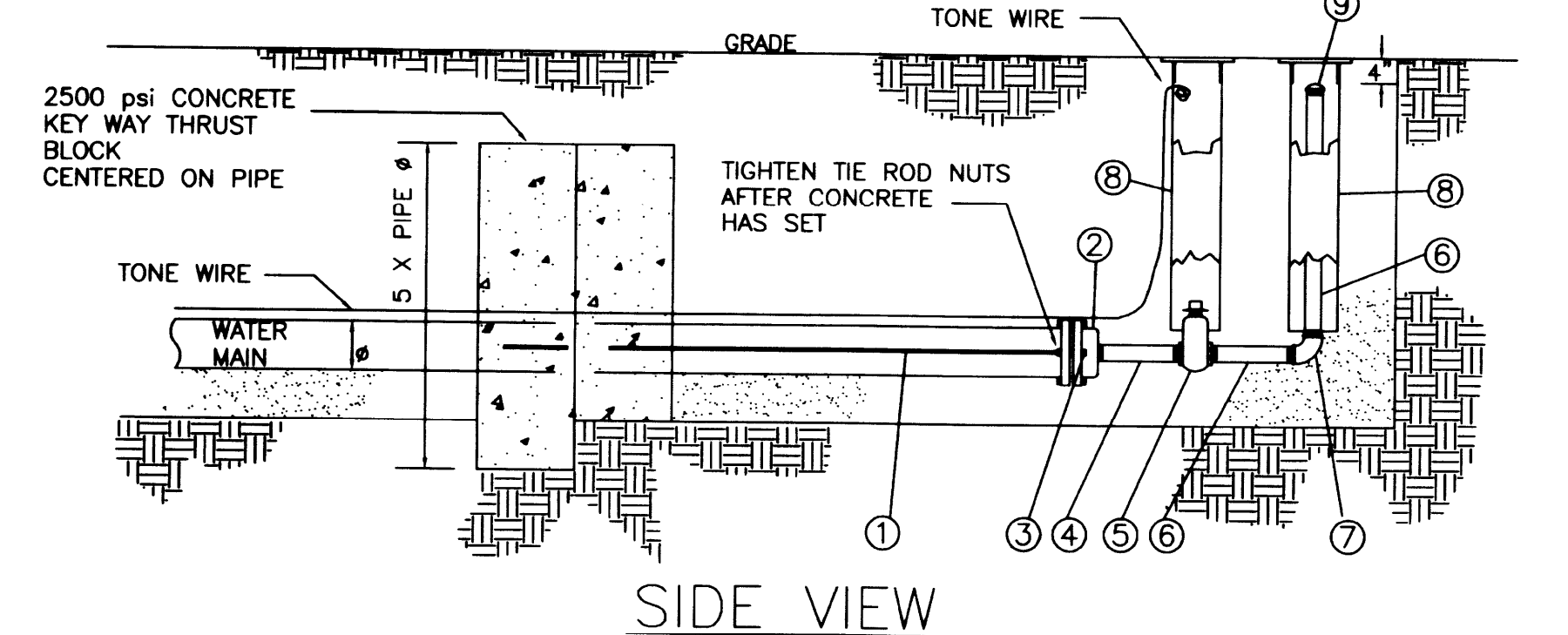
## WATER TIE-IN DETAIL (PHASE #2)

- NOTES:**
- ALL PIPE AND FITTINGS FOR TIE-IN TO BE CLEAN AND WIPED w/CHLORINE PRIOR TO INSTALLATION
  - CONTRACTOR TO ALIGN NEW MAINLINE IN BOTH ALIGNMENT AND GRADE w/EXISTING 12" WATERLINE. CONNECTION TO EXISTING WATERLINE CAN ONLY BE MADE AFTER INSTALLATION, TESTING & DISINFECTION OF NEW WATERLINE HAS BEEN COMPLETED.
  - REMOVE 2" TEMPORARY BLOW OFF AND RETURN TO CONTRACTOR
  - LONG SLEEVE 8" COUPLER W/ MEGA LUGS

## TYPICAL 2" BLOWOFF ASSEMBLY



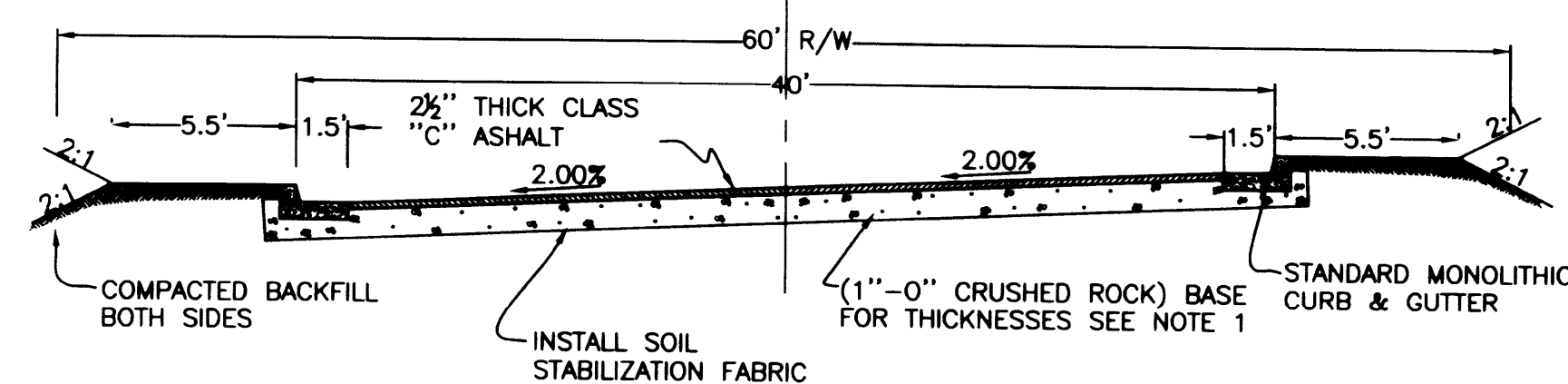
### PLAN VIEW



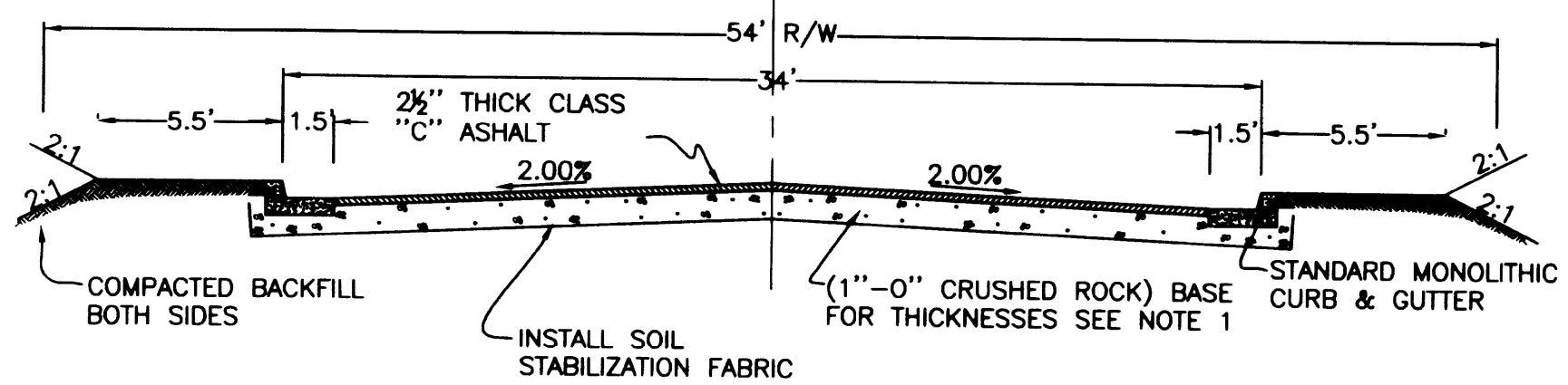
### SIDE VIEW

- LEGEND**
- 3/4" # 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

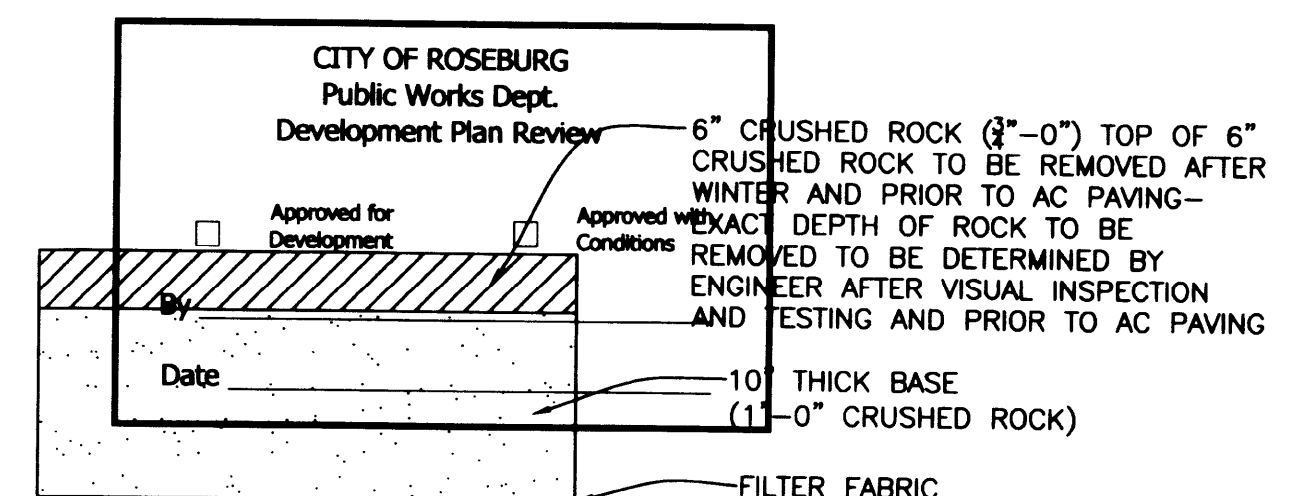


## PRELIMINARY ROAD SECTION STRAUSS AVE. NTS

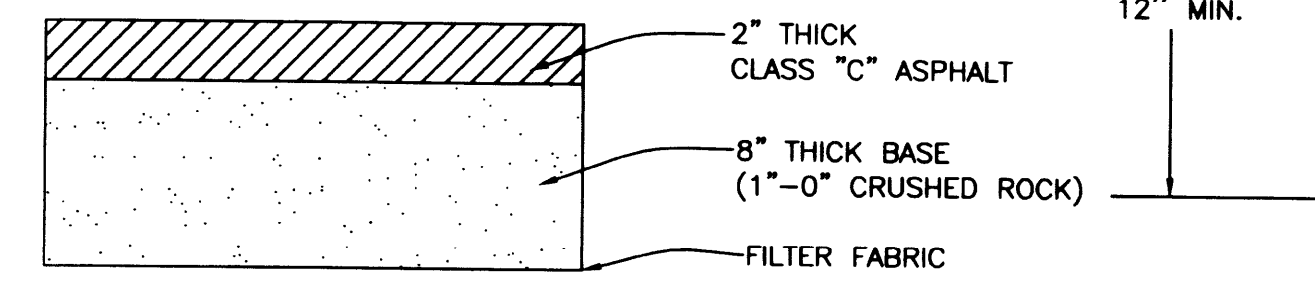


## PRELIMINARY ROAD SECTION JACK'S COURT NTS

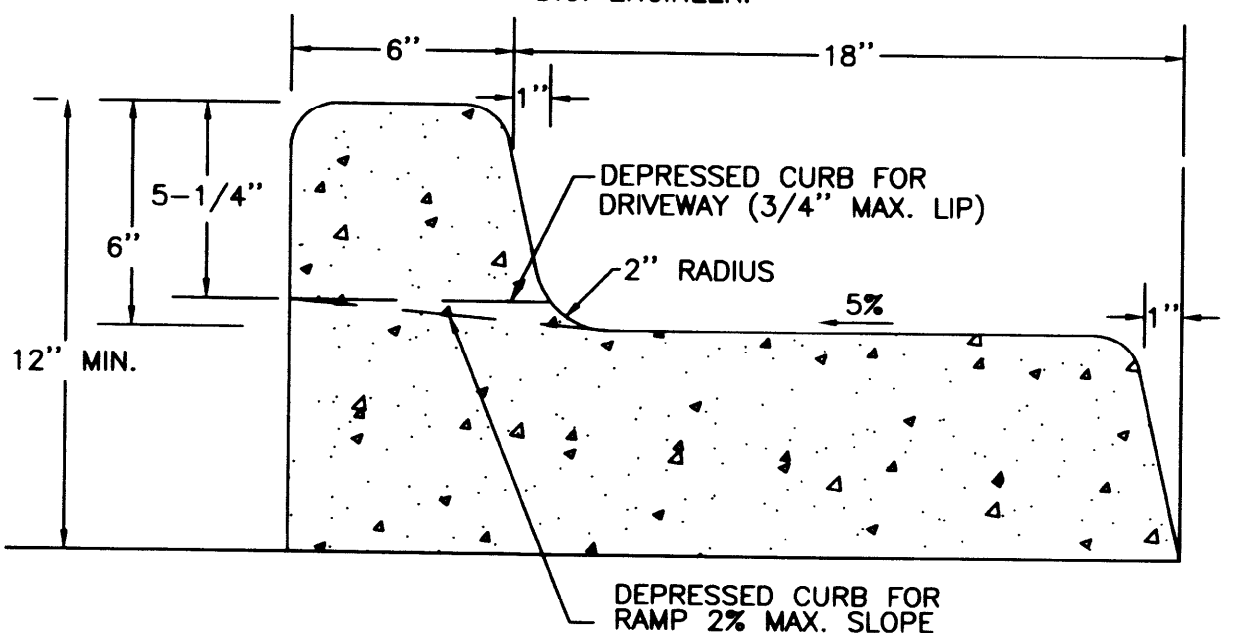
FILED  
Date: 11/24/2004 By: J.P.  
This survey consists of:  
Map:  
Narrative:  
Corner Rpt:  
DOUGLAS COUNTY SURVEYOR



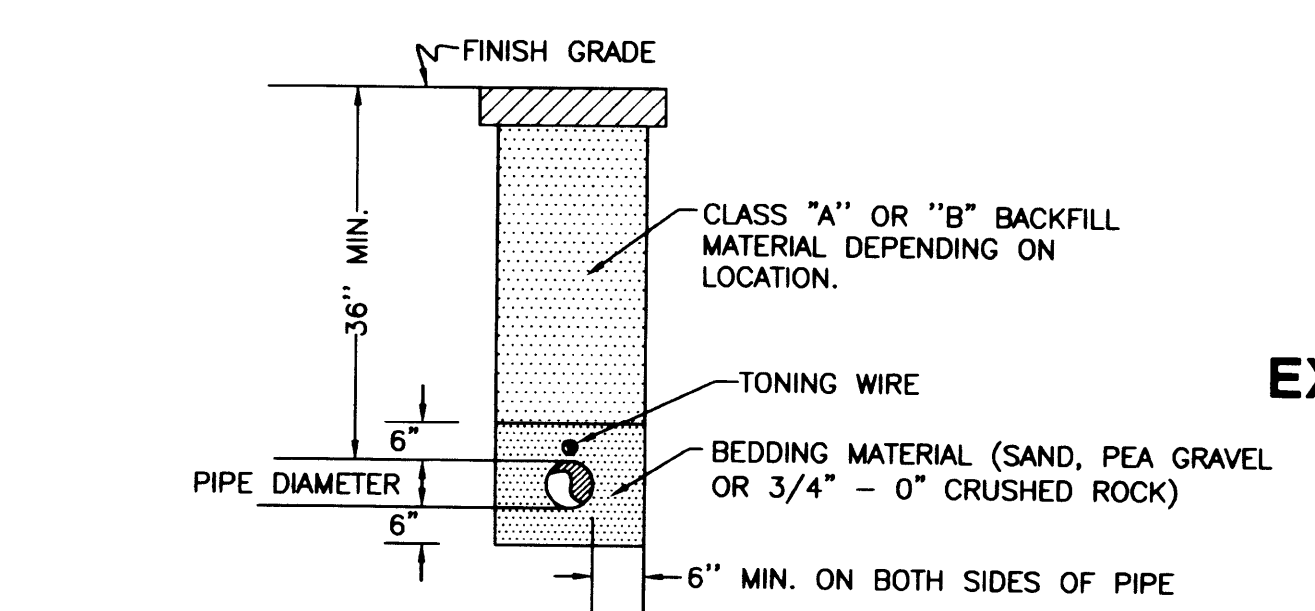
## WINTERIZED PAVEMENT SECTION NTS



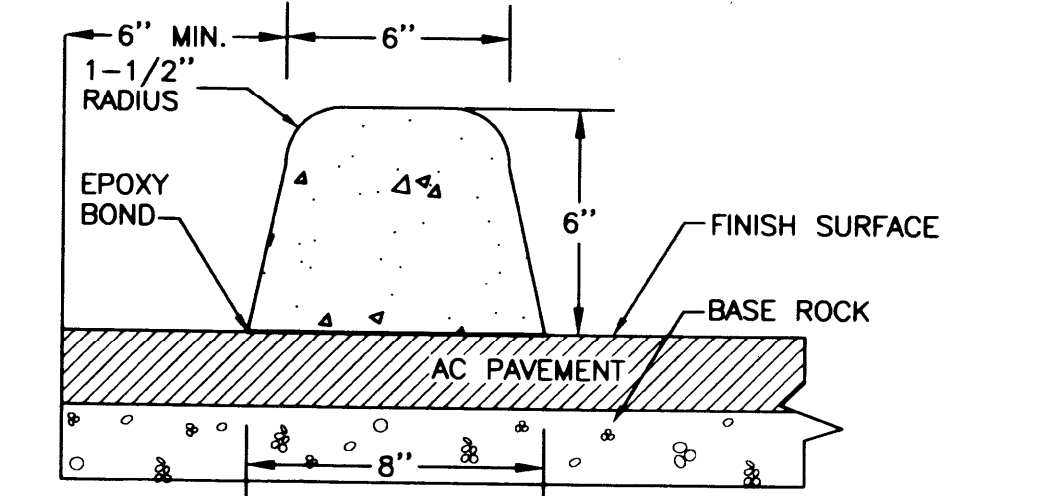
## DRIVEWAY PAVEMENT SECTION NTS



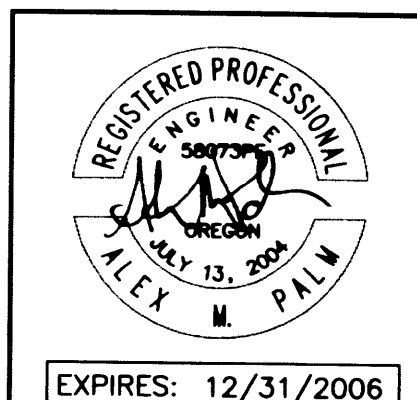
## TYPICAL CURB AND GUTTER



## TYPICAL WATER MAINLINE TRENCH DETAIL



## EXTRUDED CONCRETE BONDED CURB



Rev.	Date	Dwg	Description
1	9/10/04	STH	R.U.S.A. COMMENTS
2	9/14/04	STH	D.C. ENGINEERING COMMENTS
3	11/28/04	AWV	ROSEBURG WATER COMMENTS
4	3/24/06	NRJ	AS-BUILTS

**i.e. ENGINEERING**  
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Project Name:  
**SADDLE BUTTE ESTATES 9TH ADDITION**

Title:  
**DETAILS**

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

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