

TYPICAL VALVE SETTING

ALLOWABLE SAFE LATERAL BEARING OF SOILS IN P.S.F.	
MUCK & PEAT	0*
SOFT CLAY	500
SAND	1000
SAND & GRAVEL	1500
SAND & GRAVEL FEMENTED W/CLAY	2000
SHALE	3000

* USE TIE-ROD ANCHORS, WELDED JOINT FITTINGS, ANGED FITTINGS OR TREATED TIMBER PILES W/CONCL. THRUST BLOCKS

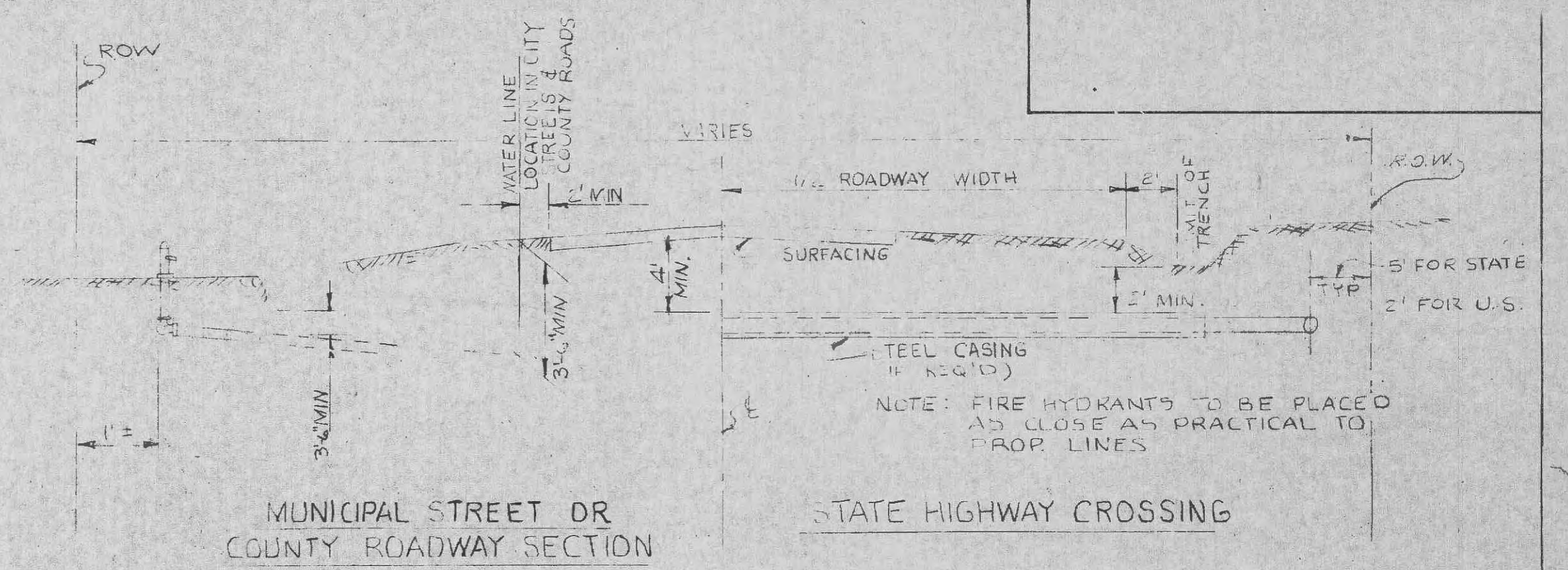
PIPE SIZE	(THRUSTS FOR VARIOUS FITTINGS AND TEST PRESSURES THRUST IN POUNDS)					
	90° BENDS		TEES & DEAD ENDS		22 1/2° BENDS	
2"	1000	700	500	800	500	600
3"	17000	11000	7000	11000	8000	10000
4"	24000	16000	10000	14000	10000	13000
6"	36000	24000	15000	21000	15000	20000
8"	48000	32000	20000	28000	20000	27000
10"	60000	40000	25000	35000	25000	34000
12"	72000	48000	30000	42000	30000	41000

NOTE: FOR AREA OF THRUST BLOCK IN SQ FT DIVIDE APPROPRIATE THRUST BY ALLOWABLE SOIL BEARING. TEST PRESSURES SHALL BE AS INDICATED IN THE SPECIFICATIONS OR SPECIAL CONDITIONS UNDER PRESSURE TESTING OF PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THRUST BLOCKS OR ANCHORAGE FOR VARIOUS PIPE SIZE AND FITTINGS ACCORDING TO APPROPRIATE SOIL BEARING AND TEST PRESSURE. COST OF THRUST ANCHORAGE SHALL BE INCLUDED IN PRICE BID FOR FITTINGS OR PIPE.

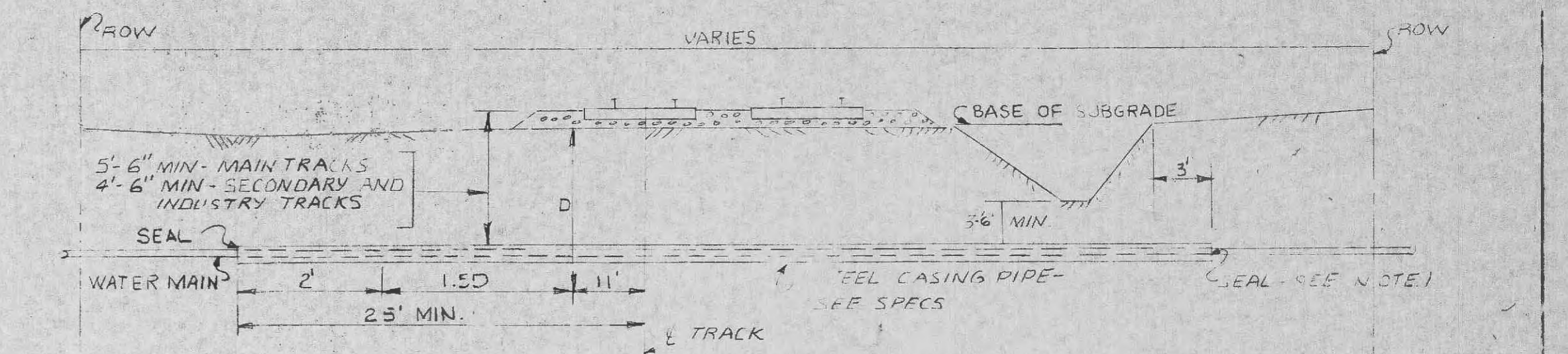
THRUST ANCHORAGE DATA

MAXIMUM SIZE SERVICE STRAP CLAMP PERMITTED				MAXIMUM SIZE TAP PERMITTED IN CAST IRON PIPE	
PIPE SIZE INCHES	CAST IRON SIZE	ASBESTOS CEMENT SIZE	GALVANIZED SIZE	PIPE SIZE	TAP SIZE
2	1"	-	3/4"	2"	1/2"
3	1 1/4"	-	1"	3"	1/2"
4	1 1/2"	-	1 1/8"	4"	3/4"
6	2"	1 1/2"	-	6"	1"
8	3"	2"	-	8"	1 1/4"
10	3"	2"	-	10"	1 1/2"
12	4"	2"	-	12"	2"

MAXIMUM TAP AND SERVICE CLAMP SIZES

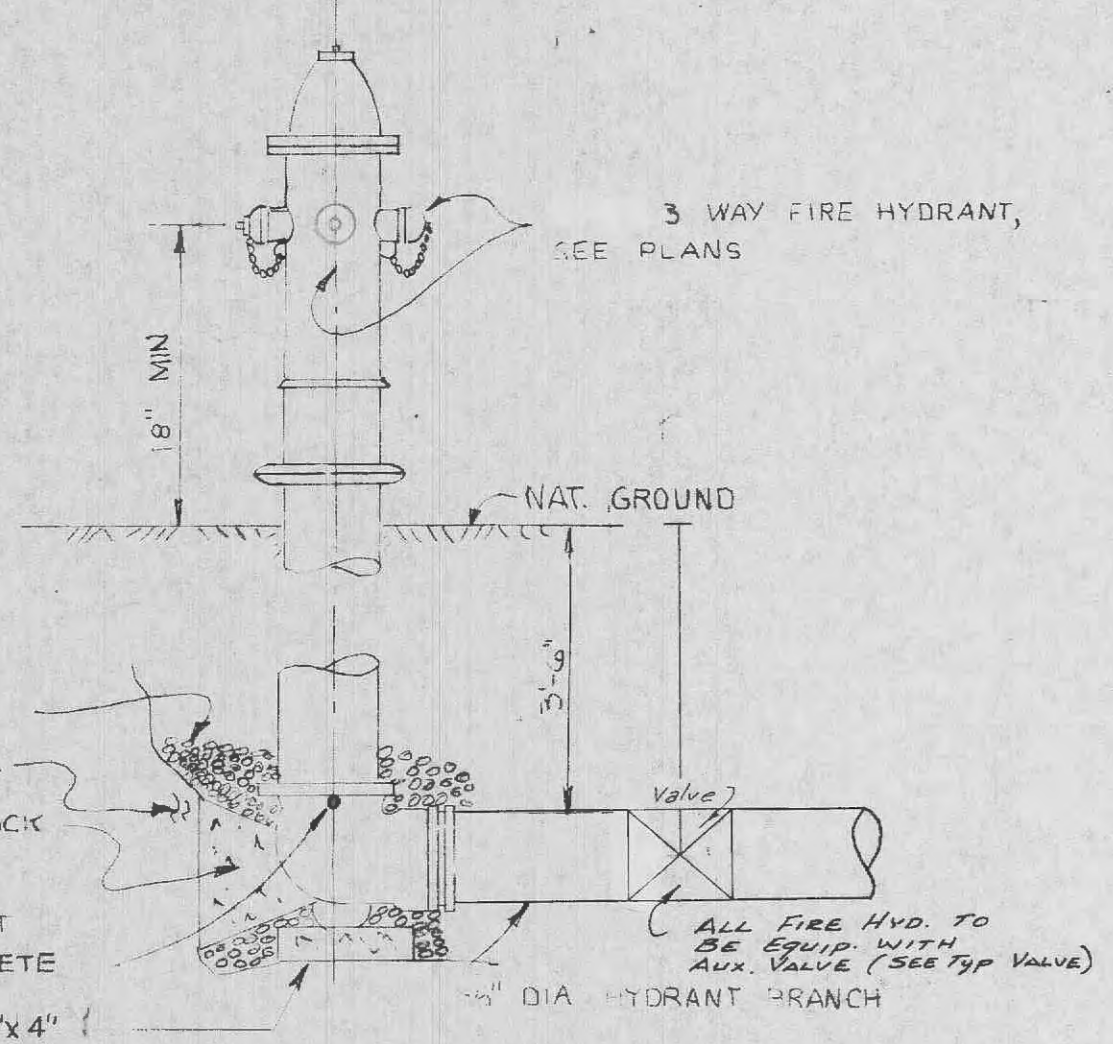


MUNICIPAL STREET OR COUNTY ROADWAY SECTION

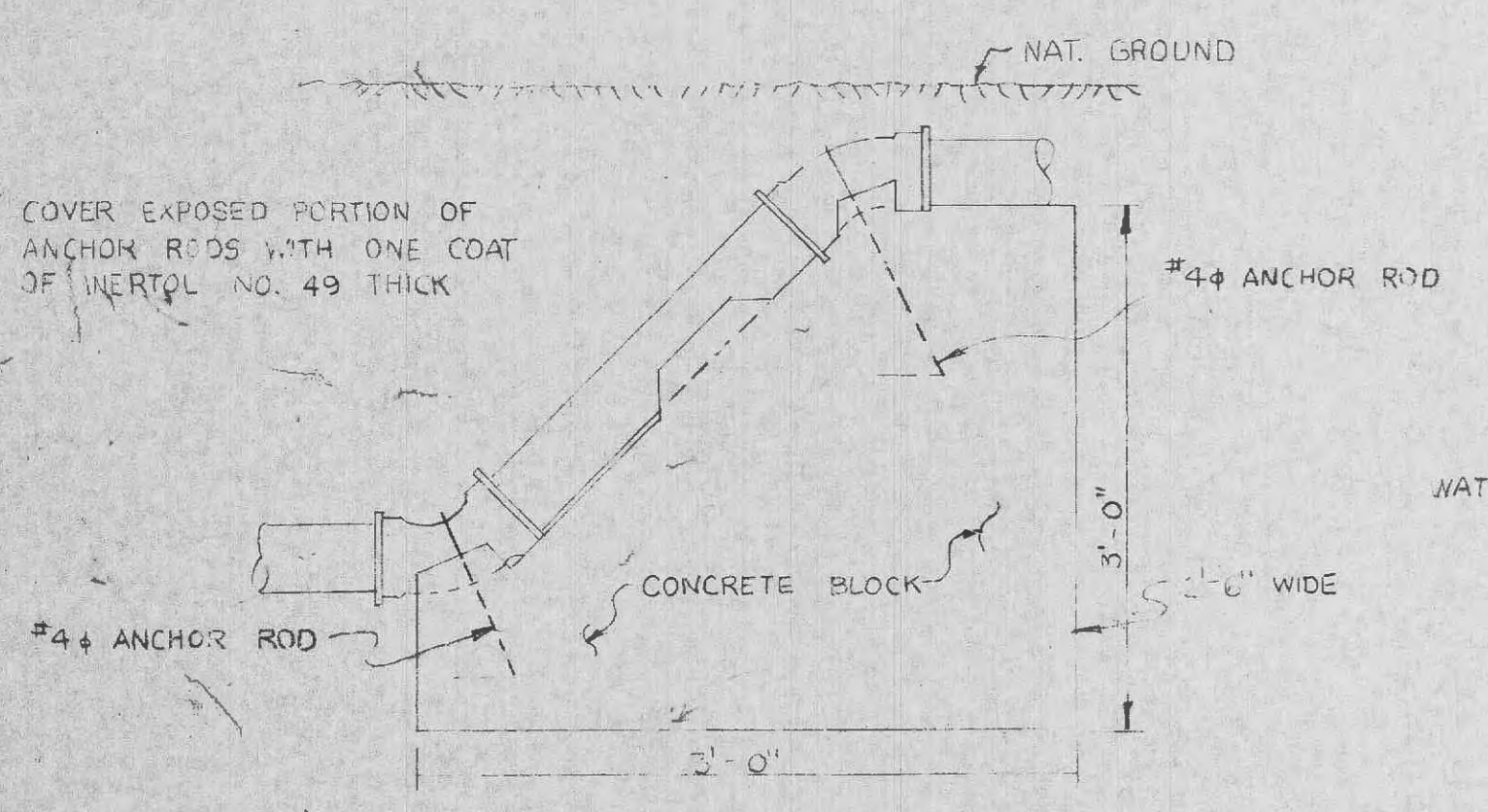


TYPICAL DETAIL OF RAILROAD CROSSING

- NOTES:
- SEAL NOT REQUIRED IF CASING ENDS ABOVE GROUND WHERE DRAINAGE IS AVAILABLE.
 - CASING TO BE JACKED AND BORED.
 - INSIDE DIAM. OF CASING TO BE A MIN. OF 2" GREATER THAN COUPLING DIA. OF LARRIER PIPE FOR 6" AND LESS DIA. LARRIER PIPES AND 2" GREATER FOR OVER 6" DIA. LARRIER PIPES.
 - CASING TO BE COATED IF AND AS REQ'D BY APPROVING AGRD.
 - CROSSINGS TO BE AT 90° TO TRACK, WHERE POSSIBLE.

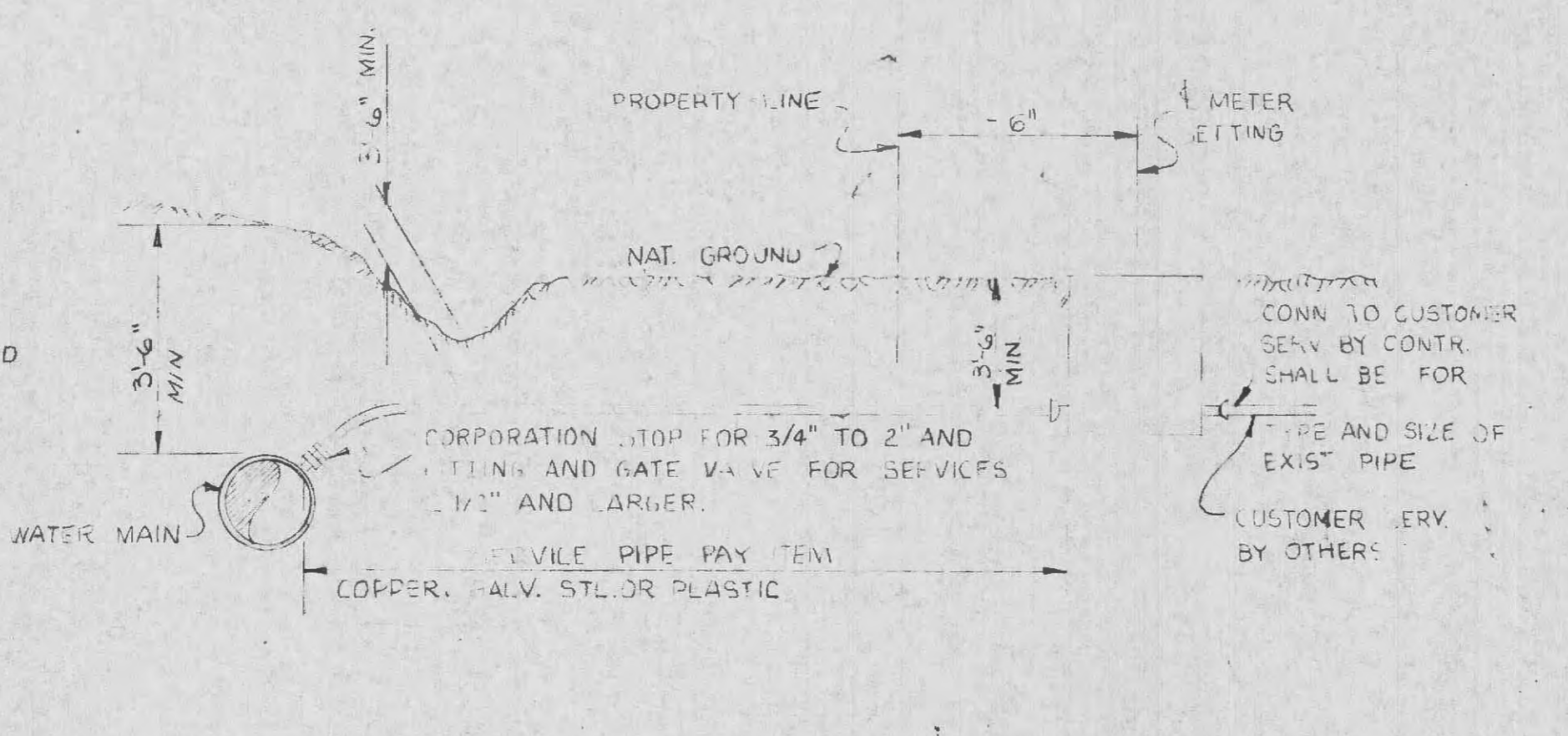


TYPICAL DETAIL FOR FIRE HYDRANT INSTALLATION



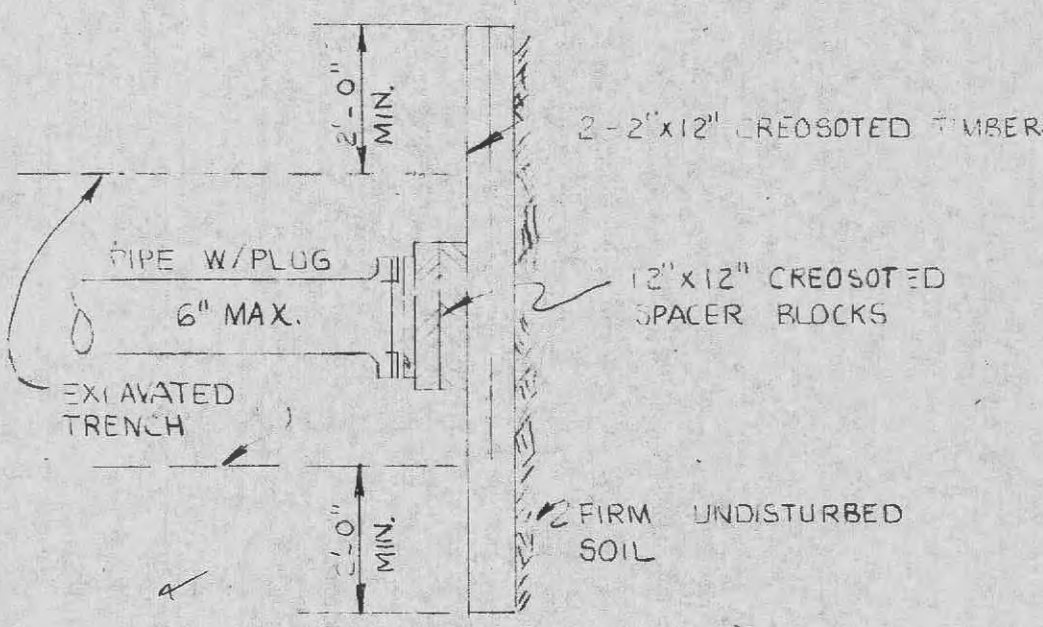
DETAIL THRUST BLOCK FOR VERTICAL OFFSETS

NOTE: 1) ALL RIBBLE CONCRETE AND PLASTIC SERVICE TUBING (PVC) COMPRESSION COUPLINGS W/ INSERT, SHALL BE PROVIDED FOR 2" DIA. X 3/4" METAL 2) 1.12" RIGID PVC SCHEDULE 40 W/ THREADED COUPLINGS SHALL BE PROVIDED FOR 1" AND 1 1/8" METERS.

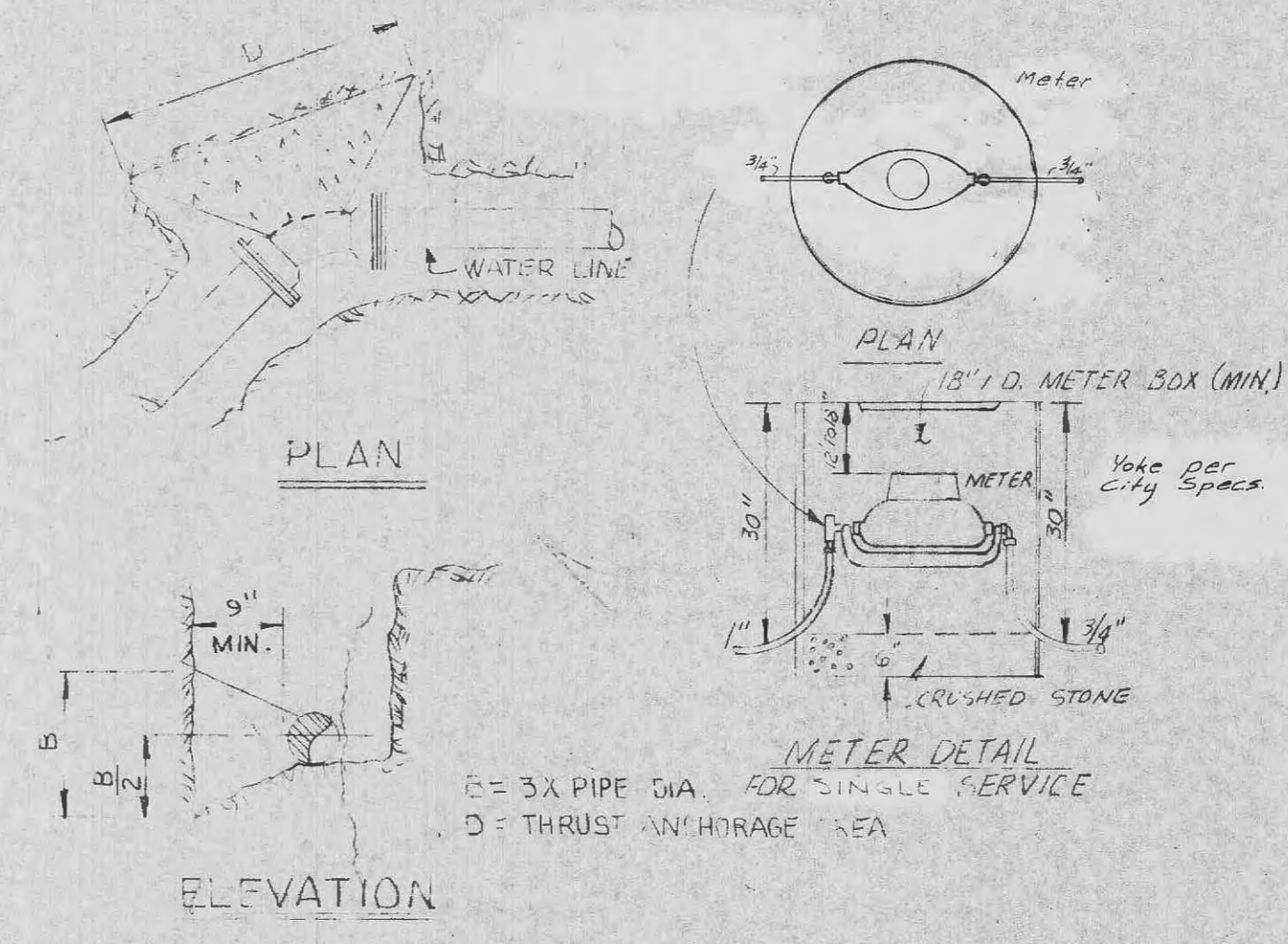


TYPICAL SERVICE ASSEMBLY

NOTE: USE TIMBER THRUST BLOCK FOR TEMPORARY PLUG ON 6" AND LESS PIPE DIA. FOR LARGER PIPE DIA. USE OTHER TYPE OF ANCHORAGE.



PLAN PLUG DETAIL



ELEVATION

DETAILS THRUST BLOCK FOR HORIZONTAL OFFSETS

- NOTES:
- SPECIAL REQ. FOR PLASTIC PIPE:
 - FOR 6" AND 8" DIA. PIPE TEES & CROSSES SHALL BE MECHANICAL JOINT CAST IRON FITTINGS.
 - FOR ALL SIZES OF PVC PIPE, ALL BENDS SHALL BE LONG RADIUS PLASTIC BENDS.
 - FOR ALL SIZES OF PVC PIPE, SCHEDULE 40 PLASTIC ADAPTORS SHALL BE PROVIDED FOR ALL VALVES, TEES, CROSSES & HYDRANTS.
 - FOR ALL SIZES OF PVC PIPE, ALL JOINTS SHALL BE RUBBER RING OR COUPLINGS W/ RUBBER RINGS.
 - SOLVENT WELDING IN THE FIELD WILL NOT BE PERMITTED. HOWEVER, JOINTS OR FITTINGS, JOINTS OR FITTINGS WHICH ARE SOLVENT WELDED AT THE FACTORY ARE ACCEPTABLE.
 - SPECIAL REQUIREMENTS FOR SERVICE CONNECTIONS:
 - DOUBLE STRAP SERVICE SADDLES, SMITH-BLAIR NO. 313 OR EQUAL SHALL BE PROVIDED FOR ASBESTOS CEMENT AND PVC PIPE THAT IS 6" OR LARGER.
 - SPECIAL PLASTIC SADDLES, SMITH-BLAIR 342 OR EQUAL SHALL BE PROVIDED FOR PVC PIPE THAT IS 4" OR SMALLER.
 - SINGLE STRAP SERVICE SADDLES, SMITH-BLAIR 314 OR EQUAL SHALL BE PROVIDED FOR 1 1/2" TAPS ON CAST IRON PIPE THAT IS 6" OR LARGER.
 - CONCRETE DRIVEWAYS:
 - WHERE CONCRETE DRIVEWAYS ARE ENCOUNTERED ON STATE MAINTAINED HIGHWAYS, JACKING & BEARING WILL BE REQUIRED.
 - OPTIONS:
 - ASBESTOS-CEMENT COUPLINGS MAY BE UTILIZED FOR SERVICE CONNECTIONS FOR PVC AND A.C. PIPE.
 - PLASTIC TEES W/ RUBBER RINGS MAY BE SUBSTITUTED FOR TAPPED TEES.

Date	3 MAR 71	PICKETT & RAY	
Drwn	RMP	CIVIL ENGINEERS	
Cl'd		32 Floyd Dr.	St. Charles, Mo. 63301
Rev		MISCELLANEOUS WATER DETAILS	
Rev		Owner/Client	
Rev			