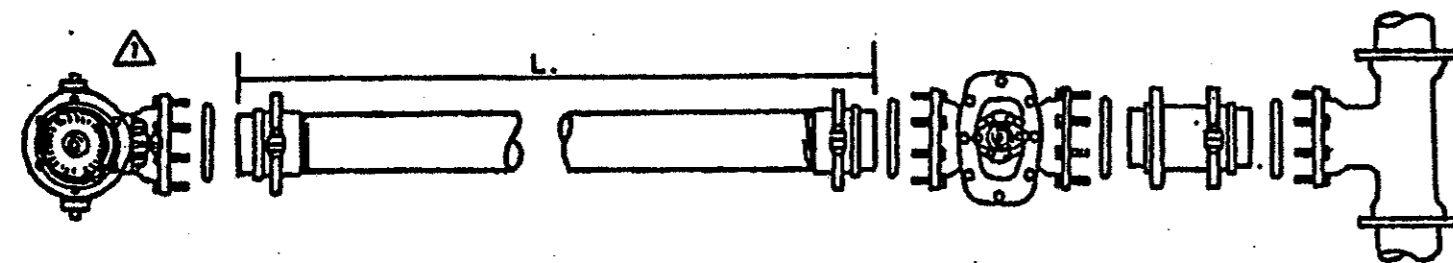
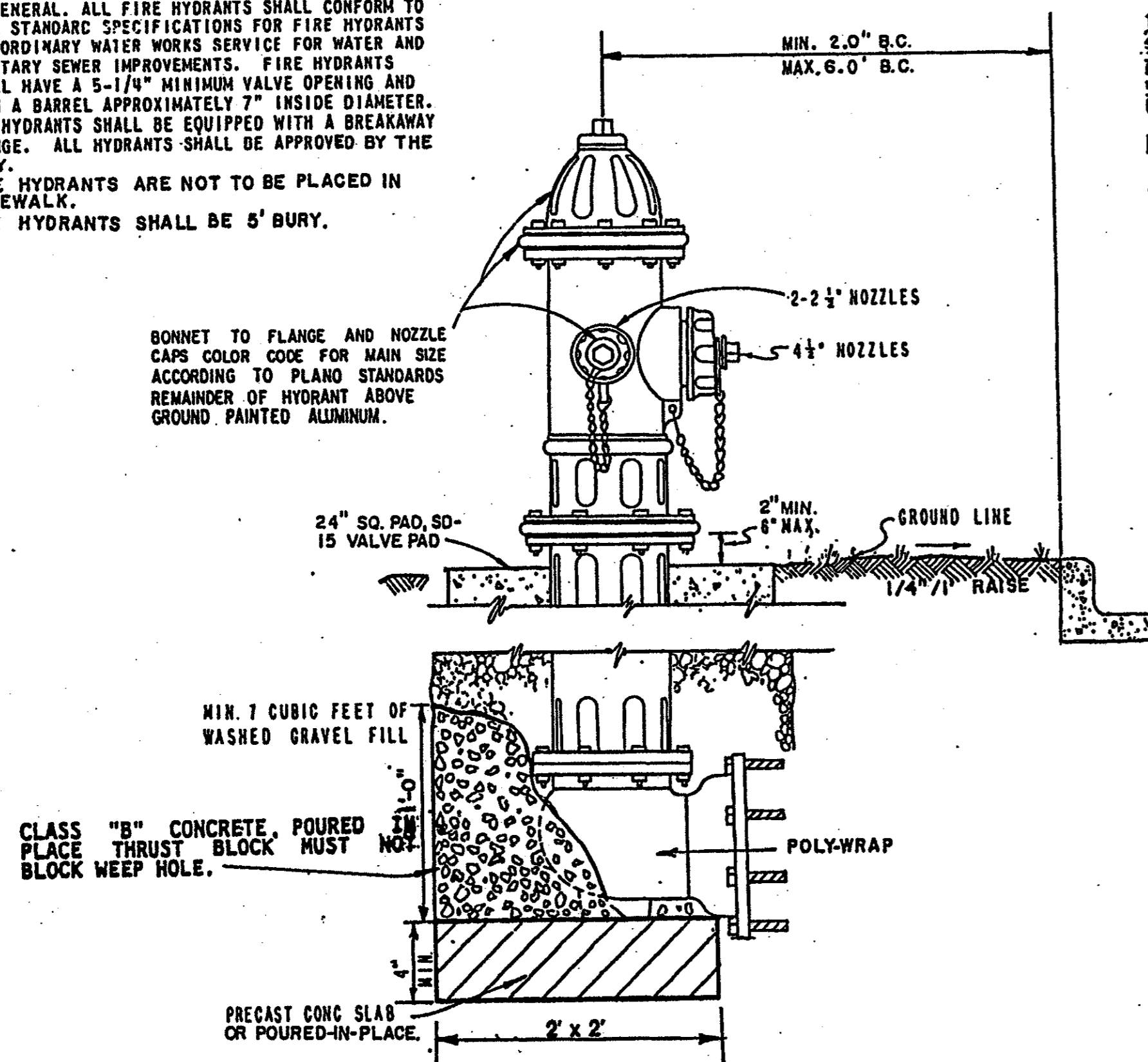


APPROVED FIRE HYDRANTS, VALVES, ETC.

NOTE: IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO ANNA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE FOR WATER AND SANITARY SEWER IMPROVEMENTS. FIRE HYDRANTS SHALL HAVE A 5-1/4" MINIMUM VALVE OPENING AND WITH A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE. ALL HYDRANTS SHALL BE APPROVED BY THE CITY.
FIRE HYDRANTS ARE NOT TO BE PLACED IN SIDEWALK.
FIRE HYDRANTS SHALL BE 5' BURY.



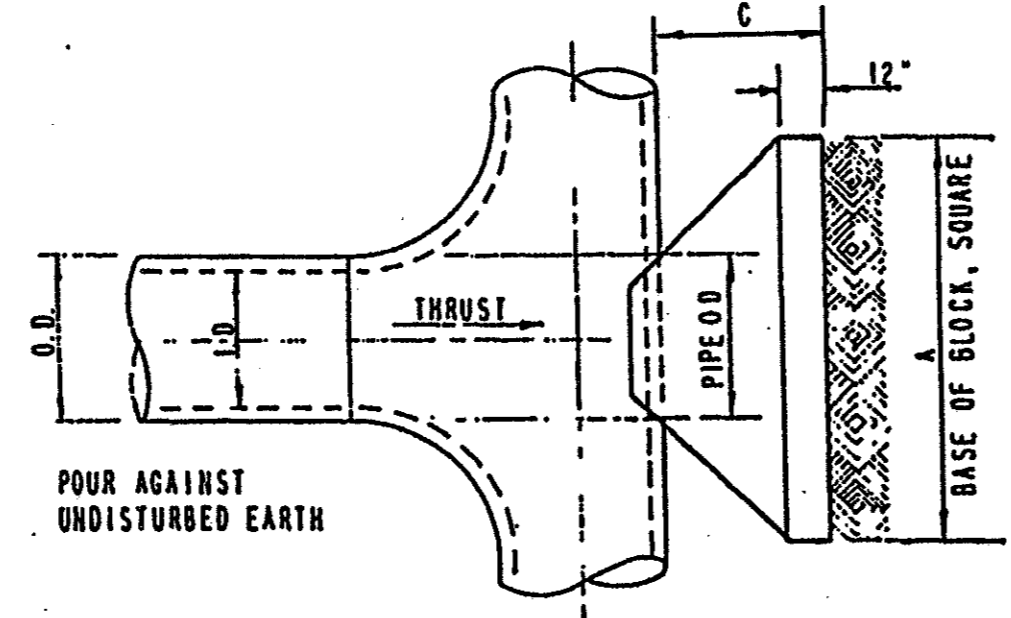
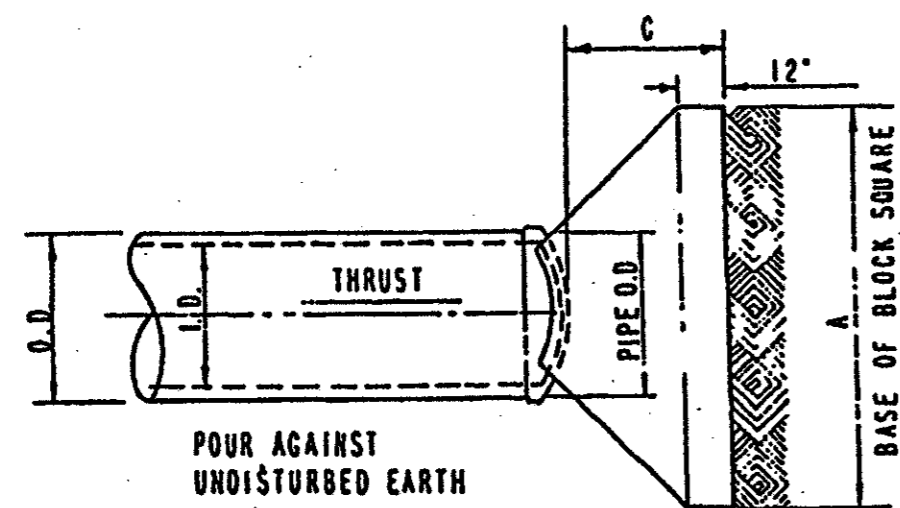
TYPICAL FIRE HYDRANT INSTALLATION

THRUST IN TONS FOR VERTICAL OR HORIZONTAL BENDS

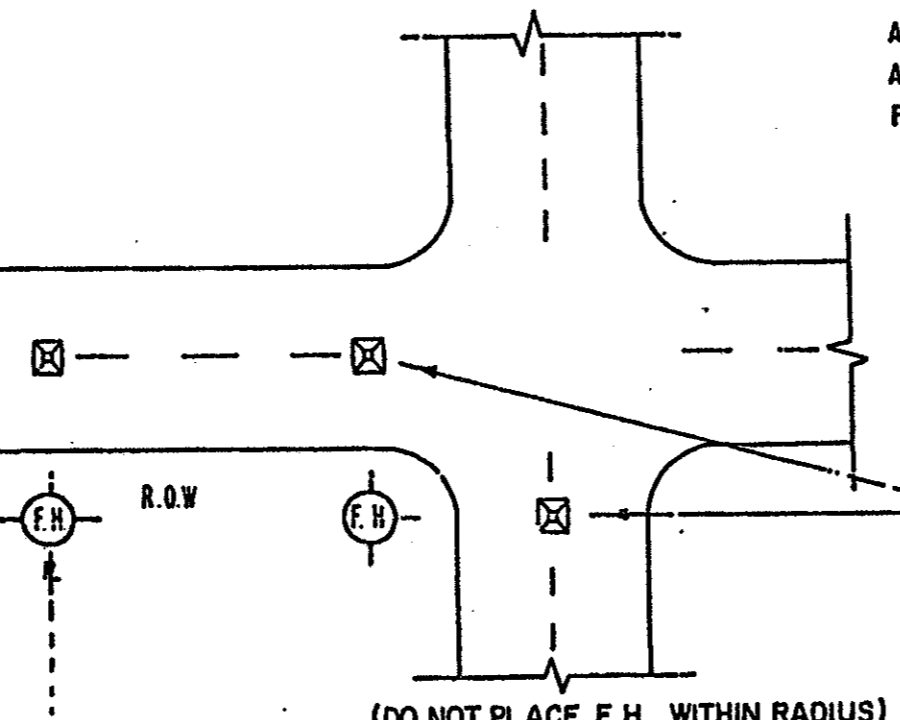
I. D. IN INCHES	Δ							
	11.25°	15°	22.50°	30°	45°	60°	75°	90°
12								
14								
16	2.94	3.90	5.78	7.54	10.66	13.06	14.56	15.08
18	3.72	4.94	7.30	9.54	13.50	16.52	18.42	19.08
20	4.60	6.10	9.02	11.78	16.66	20.40	22.76	23.56
24	6.62	8.78	12.98	16.96	23.98	29.38	32.76	33.92
30	10.34	13.72	20.28	26.52	37.50	45.92	51.22	53.02

TEES & PLUGS

I. D. UNIT	A FT.	C FT.	THRUST TONS
12"			
14"			
16"	3.87	1.57	15.08
18"	4.37	1.77	19.09
20"	4.86	1.97	23.56
24"	5.82	2.36	33.93
30"	7.28	2.95	53.01



TYPICAL PLUG & TEE THRUST BLOCKS

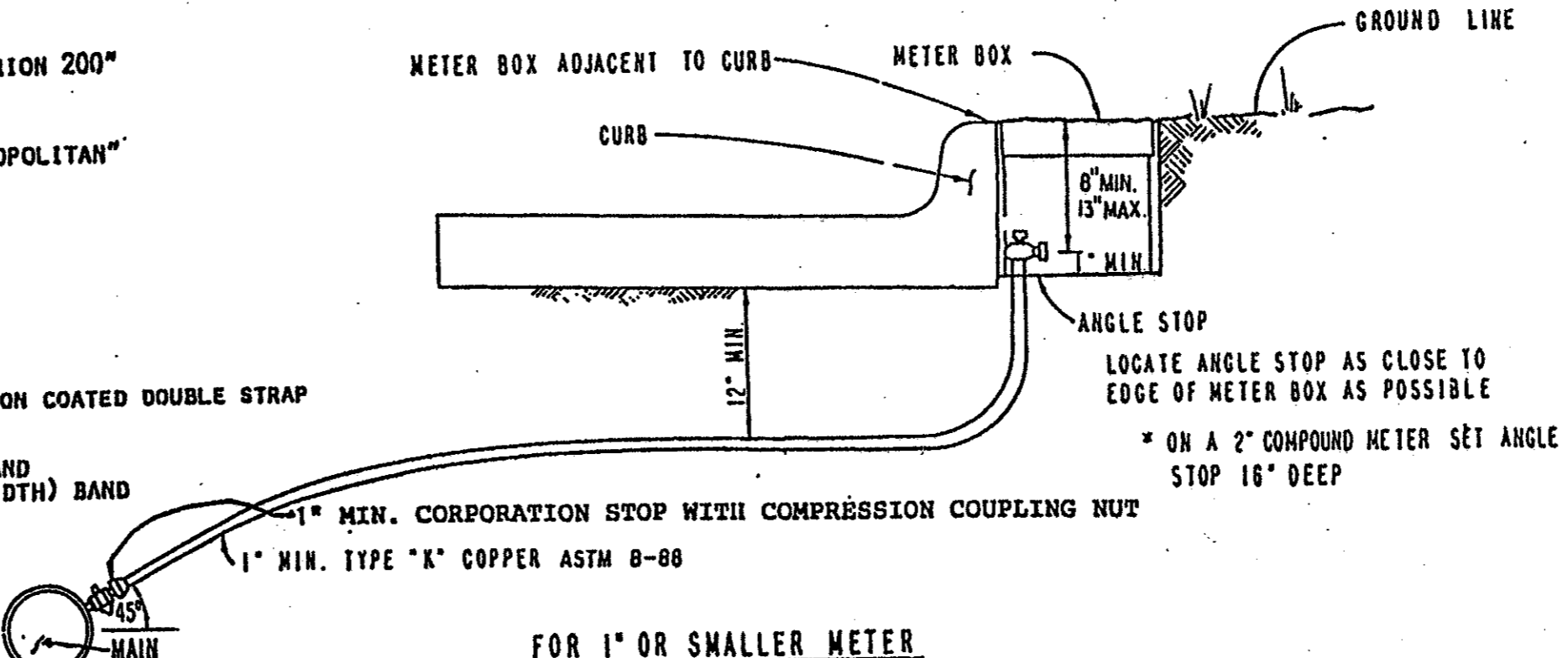


TYPICAL FIRE HYDRANT REFLECTOR INSTALLATION (NO SCALE)

ALL MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS. REFER TO SD-18 FOR SADDLE SPECIFICATION.

NOTE: DOMESTIC WATER SERVICES SHALL NOT BE CONNECTED TO FIRE HYDRANT LINES.

- VALVES-RSGV
- MUELLER
 - AMERICAN DARLING
 - WATEROUS "SERIES 500"
 - KENNEDY
 - U.S. PIPE & FOUNDRY "METRO-SEAL"
 - CLOW
- FIRE HYDRANTS
- MUELLER "CENTURION" & "SUPER CENTURION 200"
 - AMERICAN DARLING "8-84B"
 - WATEROUS "PACER MOD. NO. 67"
 - KENNEDY K 81A "GUARDIAN"
 - UNITED STATES PIPE & FOUNDRY "METROPOLITAN"
 - CLOW "MEDALLION"
- TAPPING SLEEVE
- MUELLER TRAVERSE
 - TYLER TRAVERSE
 - AMERICAN DARLING MJ SPLIT
- TAPPING SADDLES
- ROCKWELL "317" STAINLESS STEEL NYLON COATED DOUBLE STRAP
 - ROCKWELL BRONZE DOUBLE STRAP
 - MUELLER BRONZE DOUBLE STRAP
 - FORD 202S BRASS DOUBLE (WIDTH) BAND
 - FORD FC202 EPOXY COATED DOUBLE (WIDTH) BAND

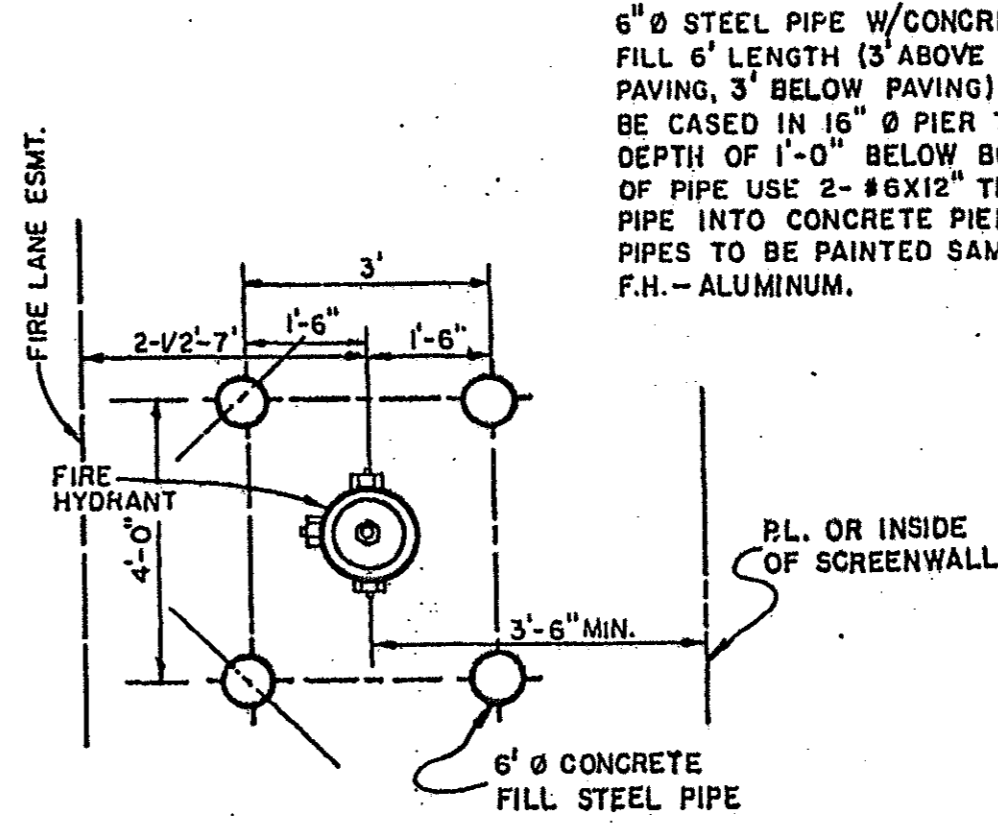


FOR 1" OR SMALLER METER

METER BOX SHALL BE CORRUGATED METAL, 18" DIAMETER, 14" DEEP, SLOTTED FOR SERVICE PIPE FITTED WITH CAST IRON TOP AND LID. LID SHALL BE C.I. BASS & HAYS DOMESTIC MFG. LID WITH #3P HAIRPIN LOCK OR TYLER RING #200-R & WESTERN IRON WORKS #FD W1W 92/20. WATER METER SHALL BE PLACED IN CENTER OF LOT WITH SANITARY SEWER HOUSE CONNECTION LOCATED 10 FEET DOWN STREAM. ALL TAPS SHALL BE MADE AT 45° ANGLE TO & OF PIPE. MINIMUM TAP SIZE TO BE 1-INCH-PER 6.7, 3"(1)(1)(B)(2)(3) OR (5).

TYPICAL SERVICE CONNECTION WITH METER BOX

TYPE K COPPER SERVICE PIPE SOFT ANNEALED	DOUBLE STRAP BRONZE SERVICE SADDLE WITH C.C. THREADS	BASS & HAYS SLOTTED METER BOX
1 INCH	1 INCH	344S
1 1/2 INCH	1 1/2 INCH	554S
2 INCH	2 INCH	554S



FIRE HYDRANT GUARD POST DETAIL SCALE: N.T.S.

NOTE: FOR USE ONLY WHERE CURBS ARE NOT POSSIBLE

GENERAL NOTES:

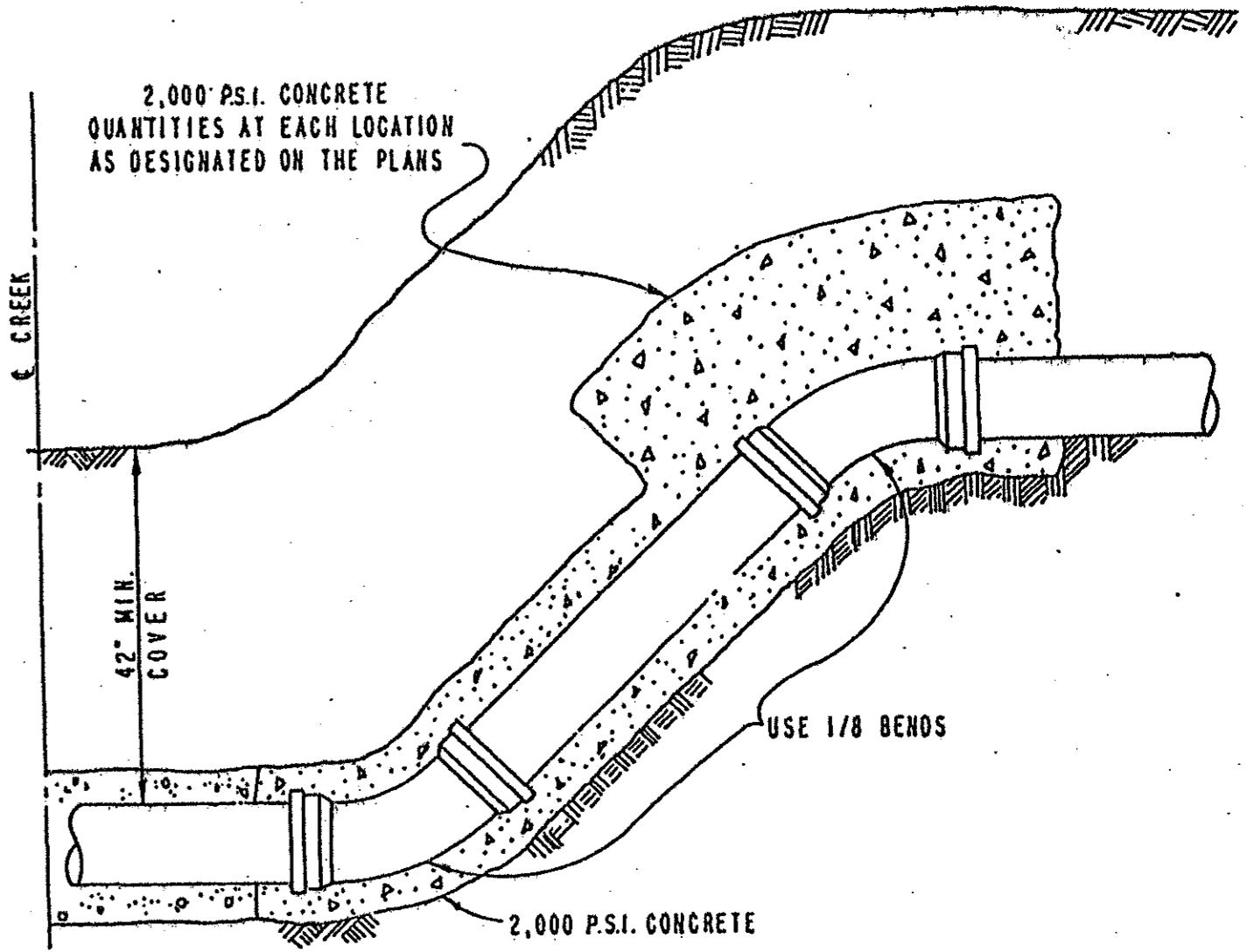
ALL CALCULATIONS ARE BASED ON TOTAL INTERNAL PRESSURE OF 150 P.S.I.

ALLOWABLE SOIL BEARING PRESSURES MUST BE AT LEAST ONE TON PER SQUARE FOOT FOR THE THRUST BLOCKS SHOWN. IN SOILS OF LESSER CAPACITY, INCREASE SIZE AND BEARING AREA PROPORTIONATELY. VOLUMES OF VERTICAL BEND THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. AND THE CORRESPONDING WEIGHT OF THE CONCRETE (AT 4,000 P.C.Y.) EQUALS THE VERTICAL COMPONENT OF THRUST ON THE VERTICAL BEND. ALL BEARING SURFACES OF THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE FOR BLOCKING SHALL BE MINIMUM 2000 P.S.I. CONCRETE. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER, BUT SHALL NOT BE LESS THAN THE DIMENSIONS SHOWN HERE.

POLYPIG SHALL BE PULLED THROUGH WATER LINES BEFORE LINES ARE ACCEPTED BY CITY.

WATER METER BOXES SHALL BE PROTECTED BY A 6" CURB OR BALLARDS WHEN PLACED IN A PAVED AREA.



HALF-SECTION TYPICAL CREEK CROSSING

NCT STANDARD SPECIFICATIONS		S.A.S. 10-13-87	
NO.	REVISION	BY	DATE
PUBLIC WORKS DEPARTMENT OF ENGINEERING			
STANDARD CONSTRUCTION DETAILS WATER			
FIRE HYDRANT - SERVICE CONNECTION			
APPROVED			
DATE: JULY, 1996		SHEET SD-2	