

THRUST BLOCK NOTES

- 1. KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES.
- 2. CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
- 3. REQUIRED VOLUMES OR BEARING AREAS AT FITTINGS SHALL BE AS INDICATED BELOW, ADJUSTED, IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIFICATIONS.
- 4. THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 150 PSIG AND THE WEIGHT OF CONCRETE = 4050 LBS/CU YD. TO COMPUTE VOLUMES FOR DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION: $VOLUME = (TEST\ PRESS./150) \times (TABLE\ VALUE)$.
- 5. BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 150 PSIG AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 LBS/SQ FT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, MULTIPLY TABLE VALUES BY THE FACTOR $(13.33)(P'/S_b)$, WHERE: P' = ACTUAL TEST PRESSURE, PSIG S_b = ACTUAL SOIL BEARING PRESSURE, PSF.
- 6. THRUST BLOCKS FOR VERTICAL BENDS HAVING DOWNWARD RESULTANT THRUSTS SHALL BE THE SAME AS FOR HORIZONTAL BENDS.
- 7. BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER THIS STANDARD.
- 8. BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SQ. FT.
- 9. VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CUBIC YARDS REQUIRE SPECIAL BLOCKING DETAILS. SEE PLANS FOR VOLUMES SHOWN TO LEFT OF SOLID LINE IN TABLE.
- 10. TEST PRESSURES ARE SHOWN IN THE PIPING SCHEDULE.
- 11. CONSULT SOIL ENGINEER FOR ACTUAL SOIL BEARING PRESSURE.

BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)								
FITTING SIZE	TEE, WYE, PLUG, OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED RUN		BEND ANGLE			
			A1	A2	45°	22 1/2°	11 1/4°	
≤ 4	1.0	1.4	1.9	1.4	1.0	—	—	
6	2.1	3.0	4.3	3.0	1.6	1.0	—	
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0	
10	5.9	8.4	11.8	8.4	4.6	2.4	1.2	
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7	
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3	
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0	
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8	
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7	
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8	
30	53.0	75.0	80.0	75.0	41.0	21.0	10.4	

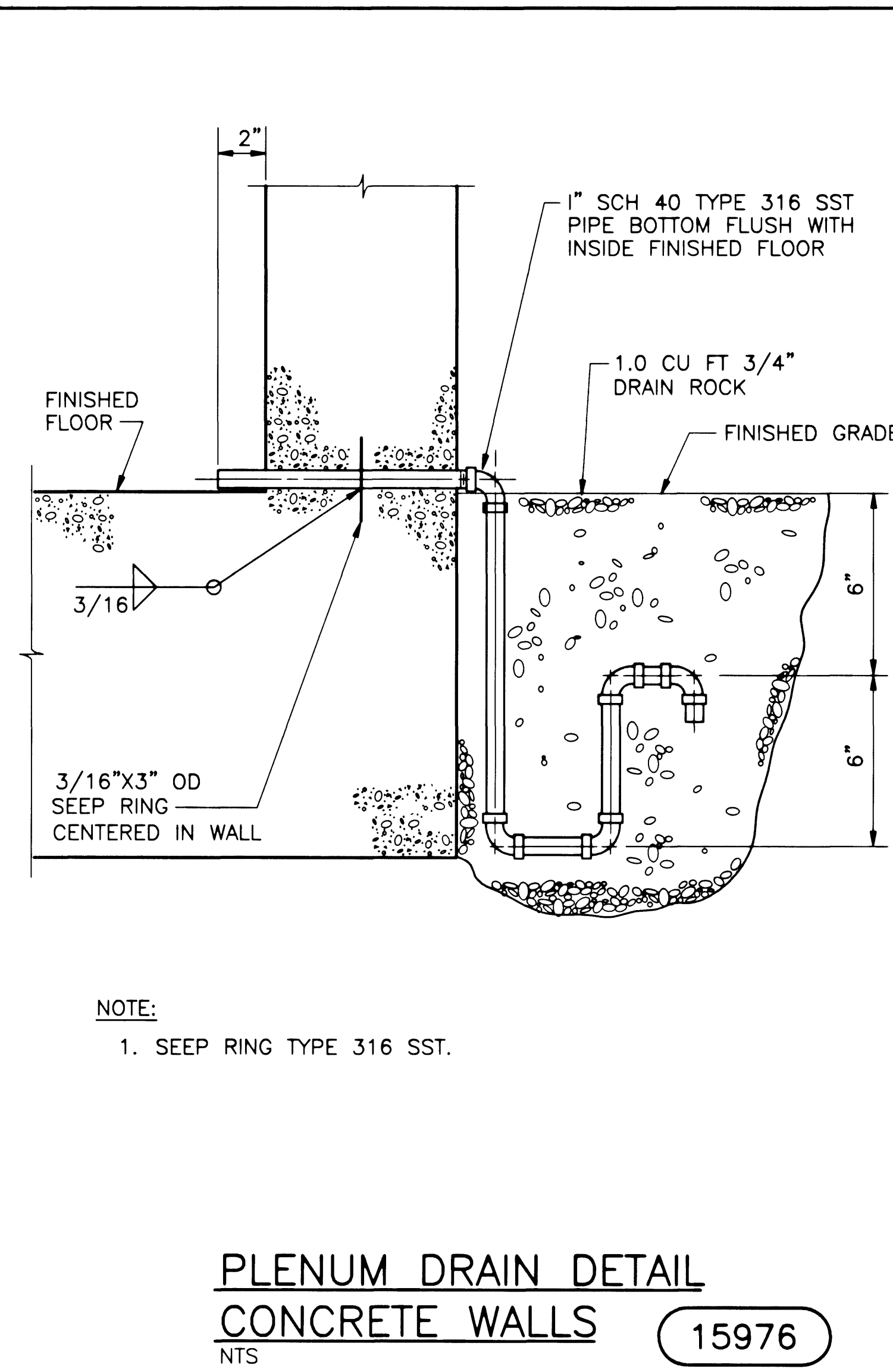
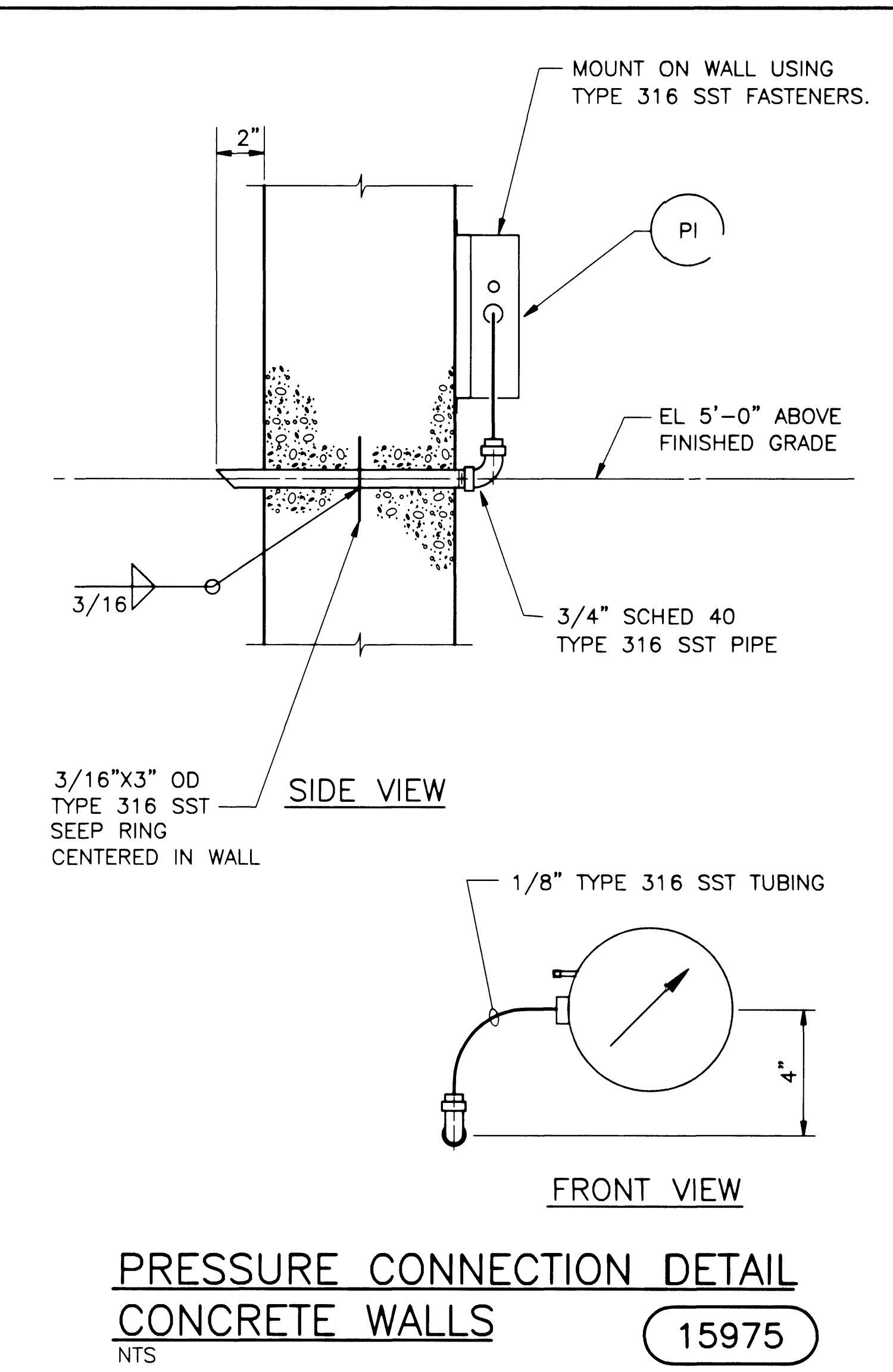
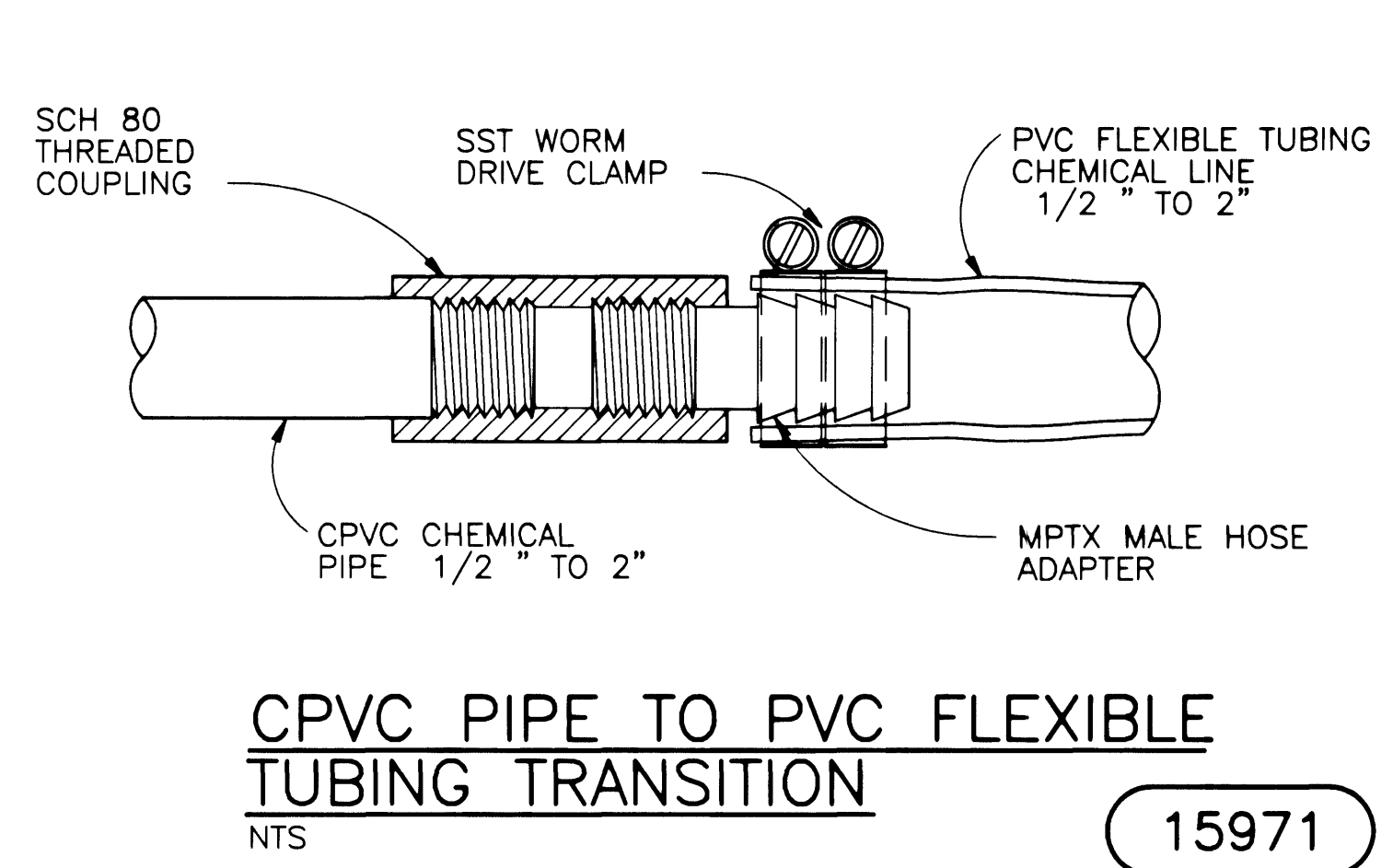
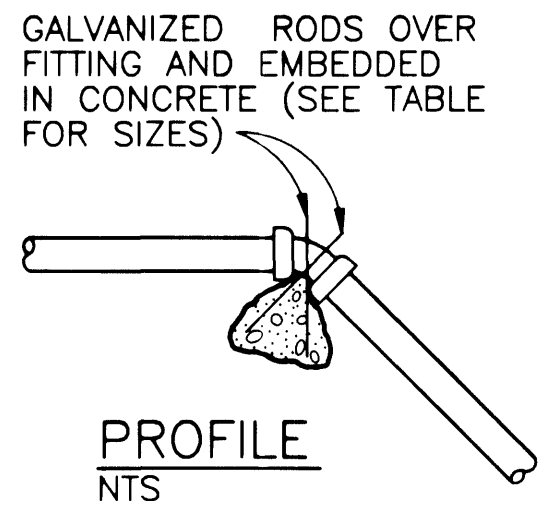
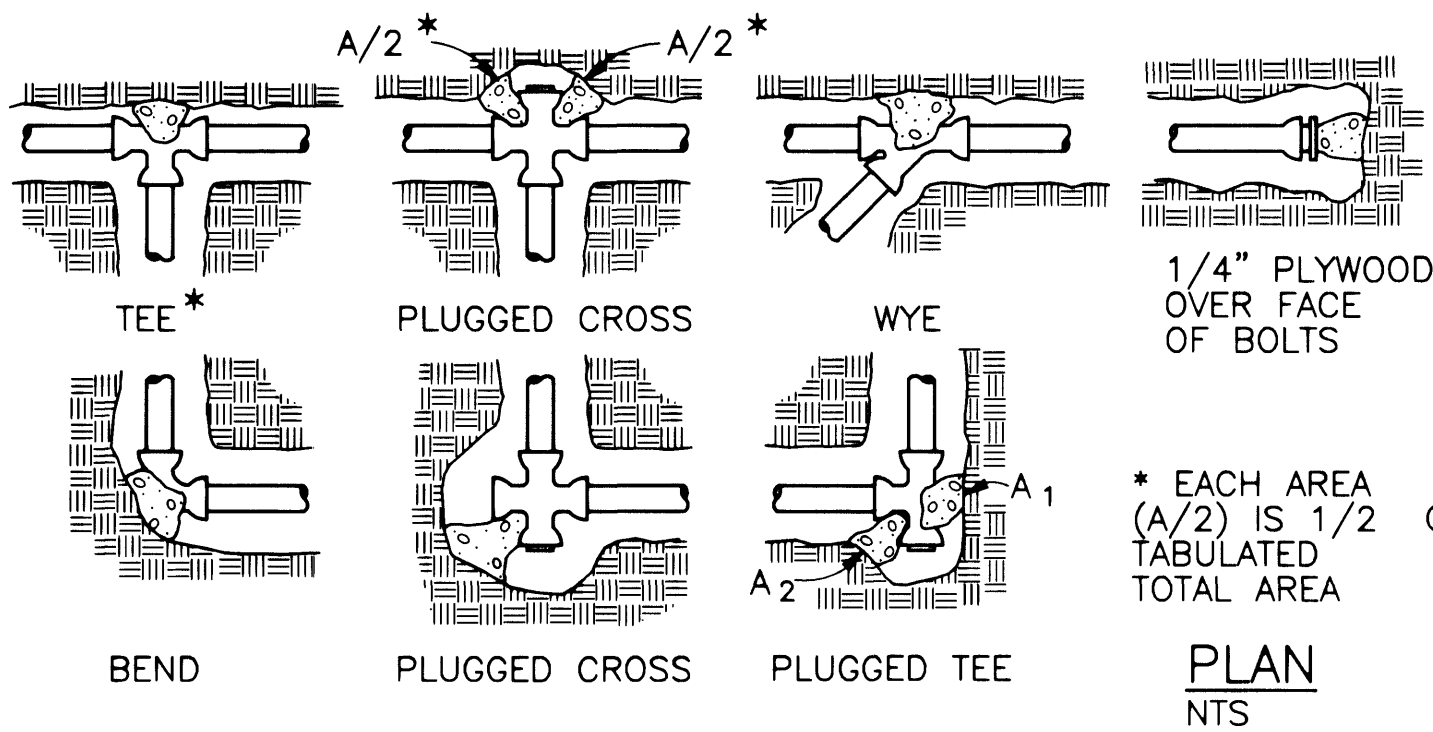
VOLUME OF THRUST BLOCK IN CUBIC YARDS (VERTICAL BENDS)				
FITTING SIZE	BEND ANGLE			
	45°	22 1/2°	11 1/4°	
≤ 4	1.1	0.4	0.2	
6	2.7	1.0	0.4	
8	4.0	1.5	0.6	
10	6.0	2.3	0.9	
12	8.5	3.2	1.3	
14	11.5	4.3	1.8	
16	14.8	5.6	2.3	

FITTING SIZE	ROD SIZE	EMBEDMENT
12" AND LESS	#6	30"
14"-16"	#8	36"

THRUST BLOCK DETAILS

NTS

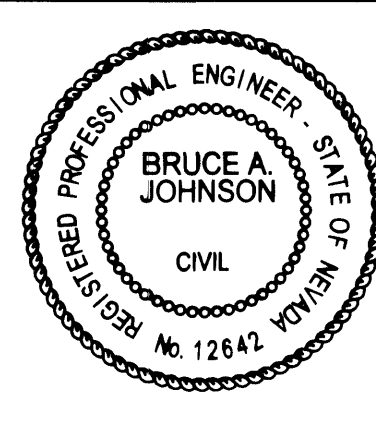
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NOTE:
1. SEEP RING TYPE 316 SST.

C20-MD03.dwg
30-11-1998

Issue No.	Description	Date	Drawn	Checked	Revised	Proj. Mgr.
1	RECORD DRAWING	7-31-01	TJW	BE	LS	BJ
2	39176					



Project Manager	B JOHNSON
Designed	L STEEPS
Designed	J PARKER
Checked	C EASTER
Drawn	B NORVILLE

City of Las Vegas
Water Pollution Control Facility
Plant Expansion
Contract 20 - Odor Control

Date	SEPTEMBER 1998	Project No.	00120-154-141	Scale	NTS	Drawing No.	MD-3	Sheet No.	311.48 73 of 76
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