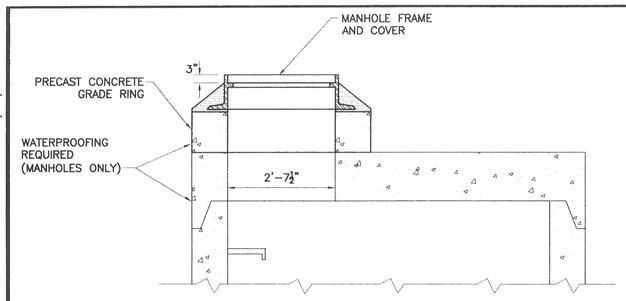
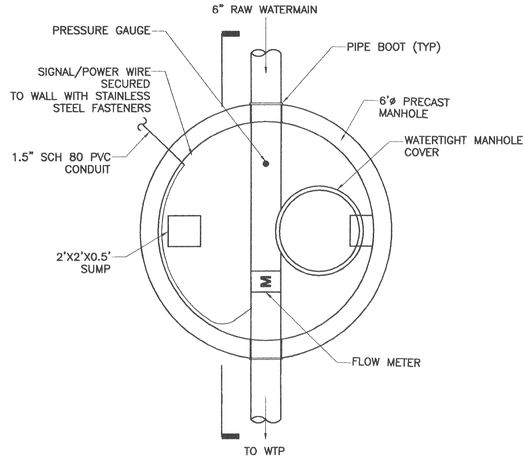
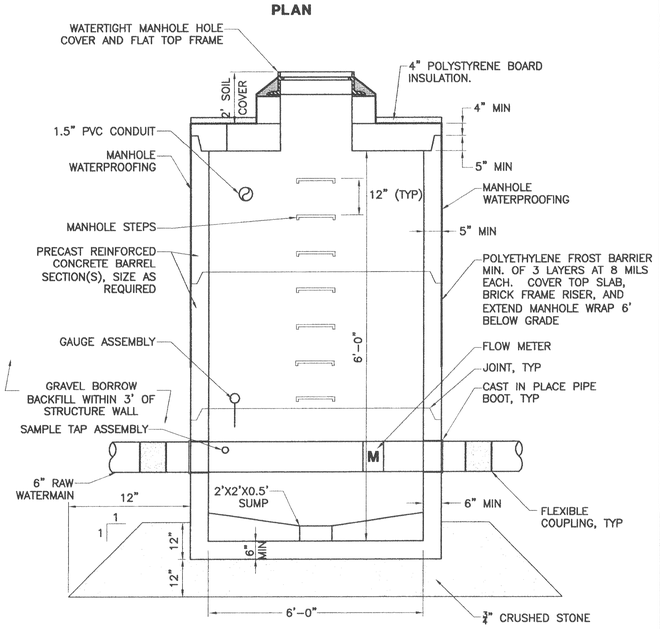
LAST SAVED BY: JJM 8/17/2007 8:55 AM



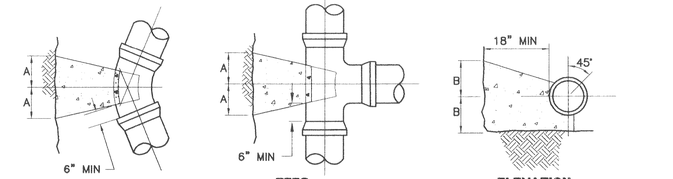


PLAN



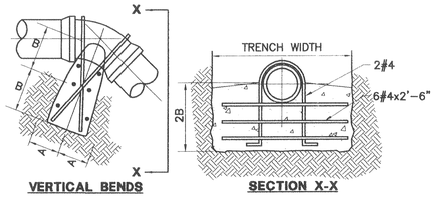
ELEVATION

FLOW METER MANHOLE
NTS



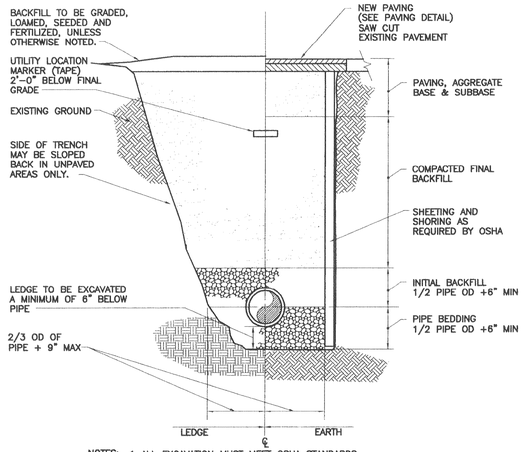
NOTES

1. THRUST BLOCK SIZES SHOWN ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF AND TEST PRESSURES OF 180 PSI.
2. POLYETHYLENE (6 mil) SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT



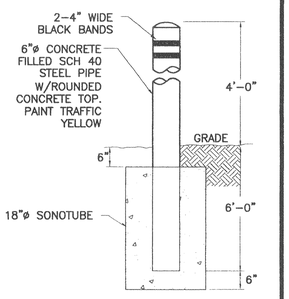
PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		VERTICAL BEND (DOWN)	
	A	B	A	B	A	B	A	B	A	B	A	B
6"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"
8"	20"	15"	14"	12"	9"	9"	9"	6"	18"	12"	33"	24"
10"	21"	21"	18"	15"	15"	9"	9"	9"	20"	18"	40"	27"
12"	27"	24"	23"	15"	15"	12"	12"	9"	25"	18"	48"	30"
16"	37"	30"	30"	21"	21"	15"	13"	12"	32"	24"	57"	36"

THRUST BLOCK DETAIL
NTS

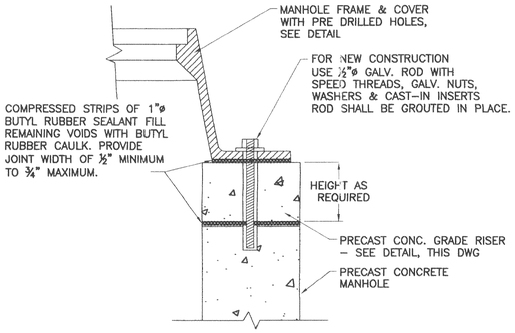


NOTES:
1. ALL EXCAVATION MUST MEET OSHA STANDARDS
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' TO PREVENT TRENCH GROUND WATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.
3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.

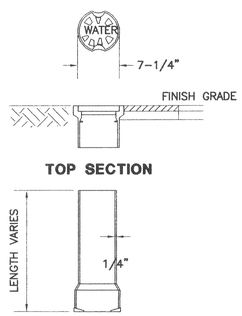
PIPE TRENCH DETAIL
NTS



BOLLARD
NTS



MANHOLE FRAME FASTENING DETAIL
NTS

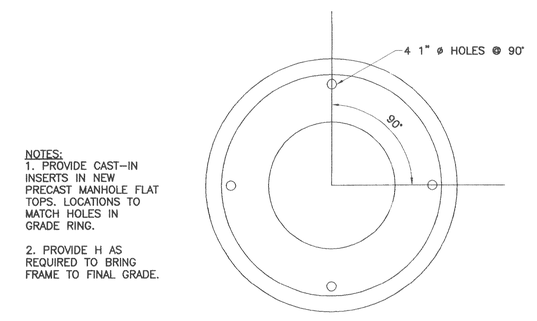


TOP SECTION

MID-SECTION

BOTTOM SECTION

VALVE BOX DETAIL
NTS

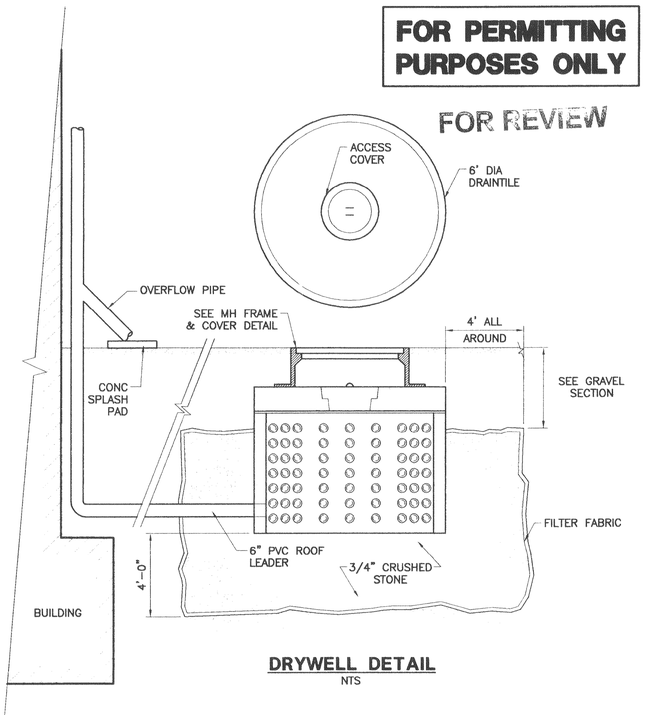


NOTES:
1. PROVIDE CAST-IN INSERTS IN NEW PRECAST MANHOLE FLAT TOPS. LOCATIONS TO MATCH HOLES IN GRADE RING.
2. PROVIDE H AS REQUIRED TO BRING FRAME TO FINAL GRADE.

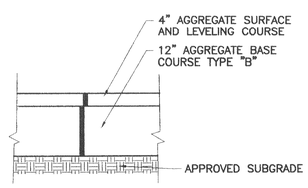
MANHOLE PRECAST GRADE RINGS
NTS

FOR PERMITTING PURPOSES ONLY

FOR REVIEW



DRYWELL DETAIL
NTS



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ACTON CONSERVATION COMMISSION

TYPICAL SECTION OF GRAVEL AREAS
NTS

NO	REVISIONS	DATE	APP'D
1	PROGRESS PRINTS		
2	ISSUED FOR REVIEW		
3	ISSUED FOR BIDDING		

DRAWN BY: JJM
CHECKED BY:
DATE:
APPROVED BY:
DATE:
BOOK NO.
PROJECT NO. 10498B
SCALE

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ACTON WATER DISTRICT
ACTON, MASSACHUSETTS
KENNEDY & MARSHALL WELLS
WATER TREATMENT PLANT

CIVIL DETAILS I

DWG C-5

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