

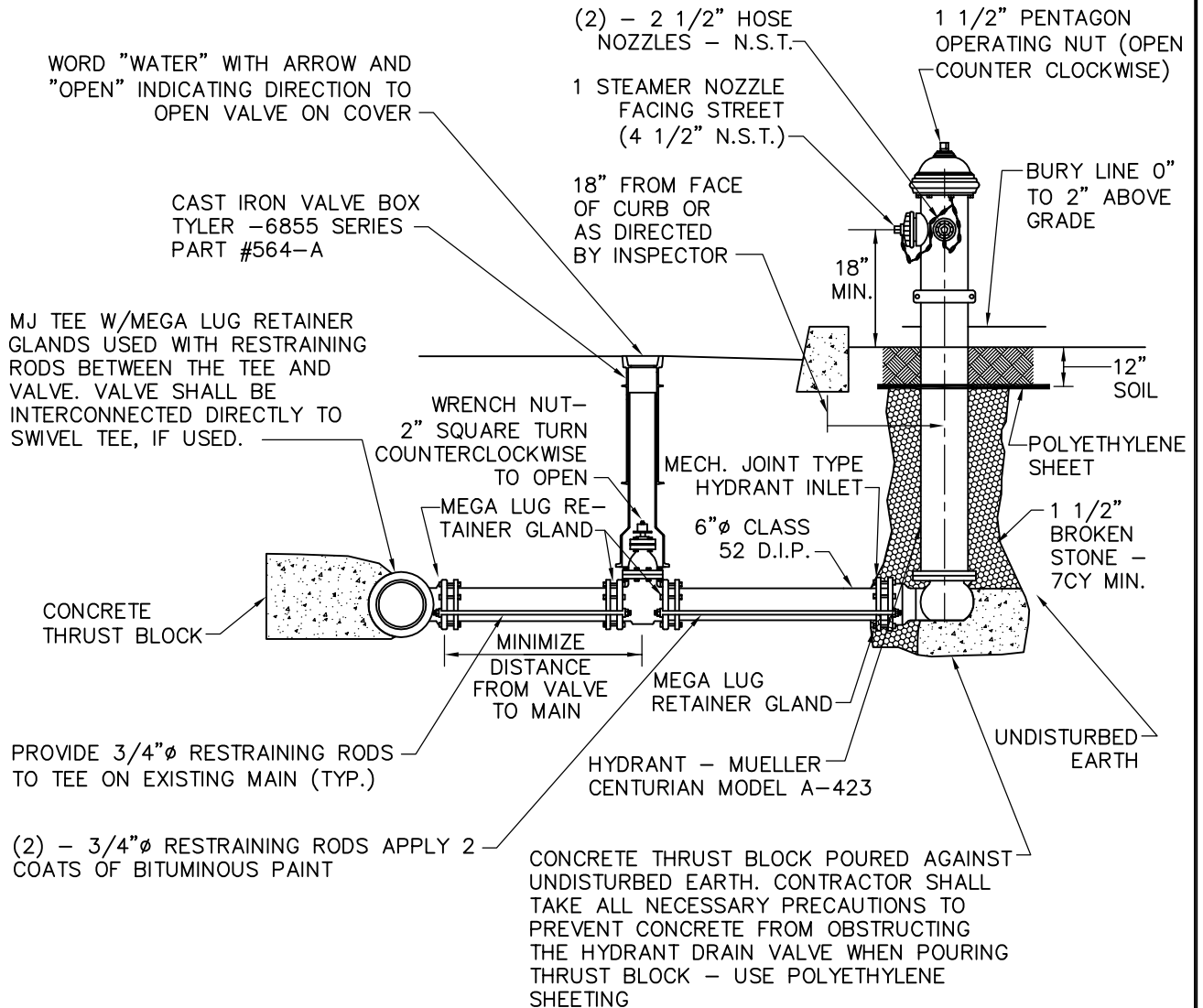


WATER UTILITY

STANDARD CONSTRUCTION DETAILS

<u>Detail #</u>	<u>Description</u>	<u>Drawing No.</u>
001	Fire Hydrant Installation	HMUA-WAT-001
002	Typical Service Connection	HMUA-WAT-002
003	Typical Strapping	HMUA-WAT-003
004	Thrust Blocks	HMUA-WAT-004
005	Pipe Crossing	HMUA-WAT-005
006	Surface Restoration and Trench	HMUA-WAT-006
007	Outdoor Water Meter Pit	HMUA-WAT-007
008	1-1/2" and Larger Outdoor Water Meter Pits – Light Traffic Rated	HMUA-WAT-008
009	1-1/2" and Larger Outdoor Water Meter Pits – Heavy Traffic Rated	HMUA-WAT-009

IN ALL CASES, THE ELEVATIONS OF THE RUN-OUT PIPE SHALL BE ADJUSTED AS NECESSARY SO THE HYDRANT CAN BE SET AT THE PROPER HEIGHT ABOVE GROUND.



ALL MECHANICAL JOINTS TO BE EQUIPPED WITH MEGA LUG RETAINER GLANDS. HYDRANT SHALL HAVE 5 1/4" MAIN VALVE OPENING

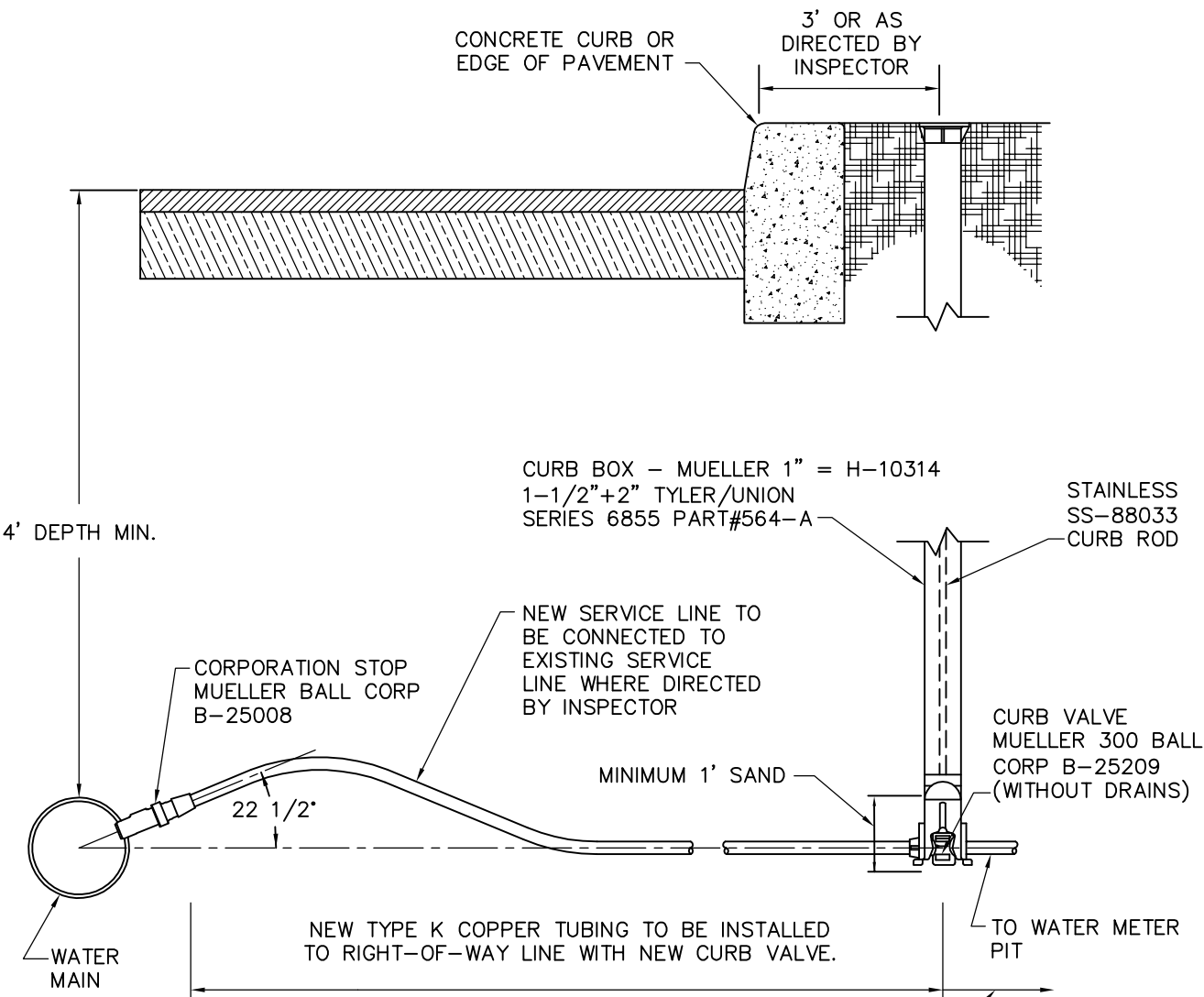
NOTES:

1. THRUST BLOCKS AND VALVE ANCHORING REQUIRED AS SHOWN ON THIS SHEET.
2. HYDRANT BODY SHALL BE PAINTED RED AND BONNET SHALL BE REFLECTIVE (FLOURESENT) GRAY.
3. HYDRANT SHALL NOT BE PLACED WITHIN 15 FT OF EXISTING OR PROPOSED POLES, SIGN POSTS, TREES OR THE LIKE.

FIRE HYDRANT INSTALLATION DETAIL

N.T.S.

6/11/07		GENERAL REVISIONS		STANDARD DETAIL	
Date:	Revision:			FIRE HYDRANT INSTALLATION (HACKETTSTOWN MUA)	
424 Hurley Drive Hackettstown, NJ 07840		Date:	07/28/03	Dwg. No.:	HMUA-WAT-001
				Sh. 1 of 1	



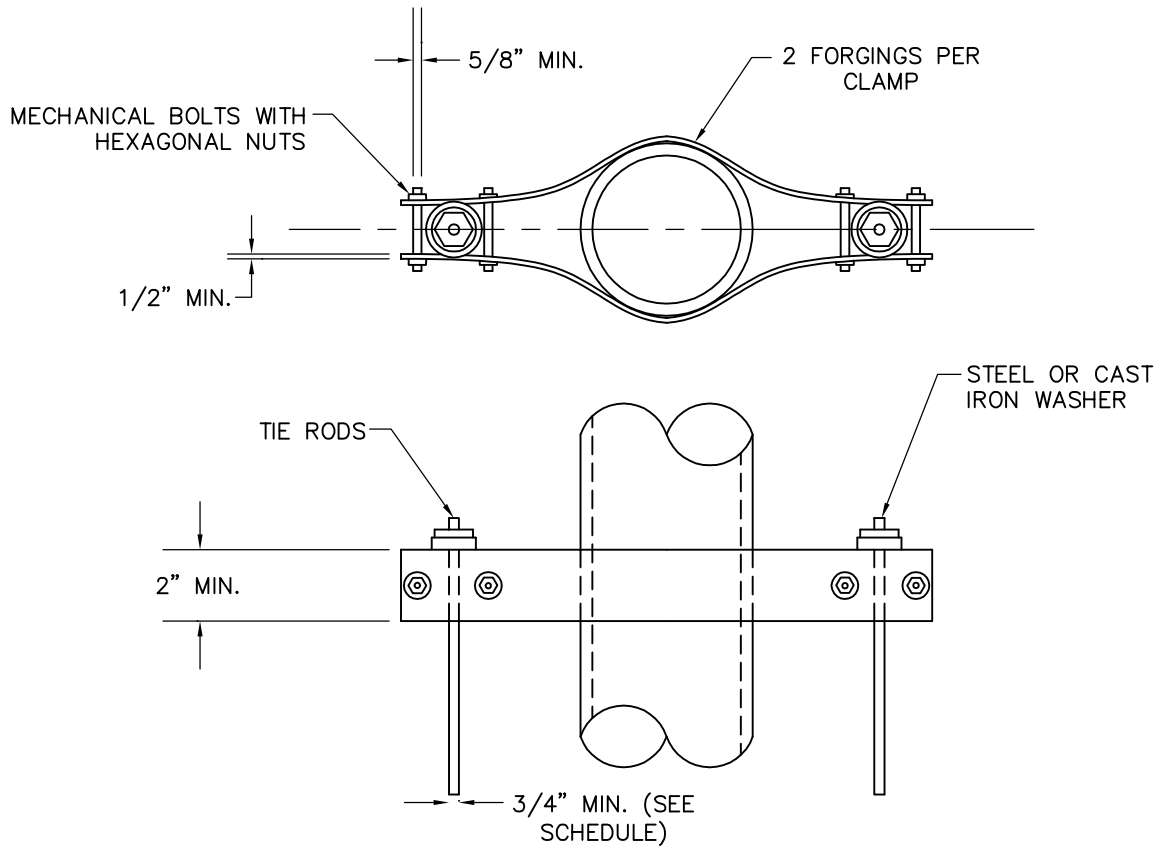
IN AREAS WHERE BUILDINGS TO BE CONNECTED TO THE MAINS INSTALLED UNDER THIS CONTRACT ARE SERVED BY EXISTING MAINS IN SIDEYARDS OR BACKYARDS, THE CONTRACTOR SHALL EXTEND THE SERVICE PIPE INSTALLED UNDER THIS CONTRACT BEYOND THE CURB VALVE TO THE LOCATION OF THE EXISTING SERVICE.

TYPICAL SERVICE CONNECTION DETAIL
N.T.S.

NOTE:

CURB BOX SLEEVE FOR CONCRETE AND PAVEMENT TO BE MUELLER H-10342

6/11/07		GENERAL REVISIONS		STANDARD DETAIL TYPICAL SERVICE CONNECTION (HACKETTSTOWN MUA)	
Date:	Revision:				
424 Hurley Drive Hackettstown, NJ 07840		Date:	07/28/03	Dwg. No.:	HMUA-WAT-002



NOTES:

1. ALL BOLTS, STRAPPING, AND TIE RODS ARE TO RECEIVE 2 COATS OF BITUMINOUS PAINT.
2. STRAPPING TO BE USED WHERE APPROVED BY HMUA ONLY.

SCHEDULE OF TIE RODS		
PIPE DIAMETER	STEEL RESTRAINING RODS REQ'D	
	NO.	DIAMETER
4"	2	3/4"
6"	2	3/4"
8"	2	7/8"
10"	4	3/4"
12"	4	7/8"

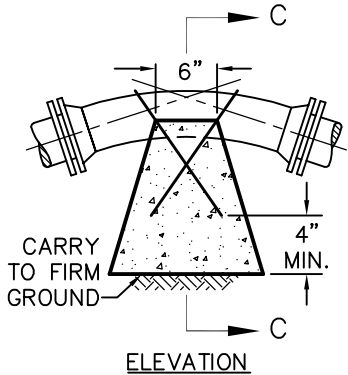
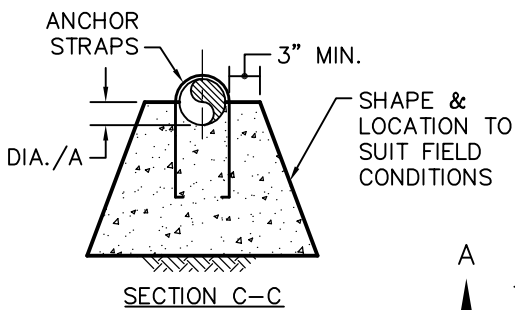
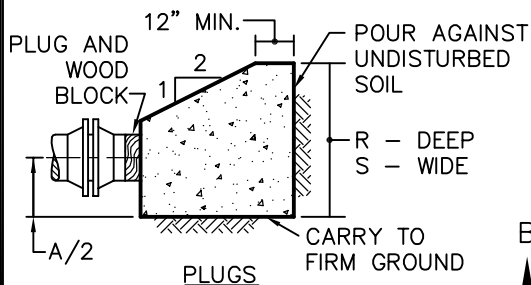
TYPICAL STRAPPING DETAIL
(FOR BURIED PIPE)
N.T.S.

6/11/07		GENERAL REVISIONS		STANDARD DETAIL	
Date:	Revision:			TYPICAL STRAPPING	
				(HACKETTSTOWN MUA)	
424 Hurley Drive		Date:	Dwg. No.:	HMUA-WAT-003	
Hackettstown, NJ 07840		07/25/03		Sh. 1 of 1	

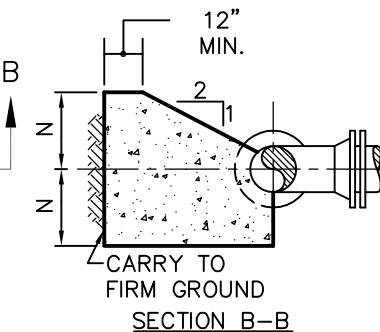
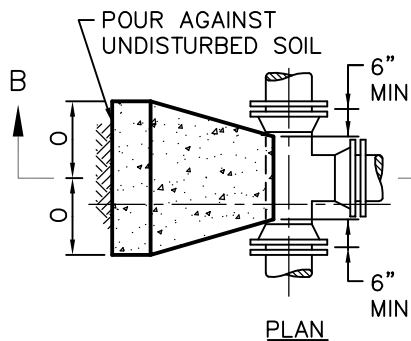
THRUST BLOCKS FOR TEES, HORIZ. & VERTICAL BENDS AND PLUGS								
DESCRIP.	DIMENSION	4"φ	6"φ	8"φ	10"φ	12"φ	14"φ	24"φ
		TEES	N	0'-7"	0'-10"	1'-2"	1'-5"	1'-8"
90° BENDS	O	0'-7"	0'-10"	1'-2"	1'-5"	1'-8"	1'-11"	3'-2"
	P	0'-9"	1'-0"	1'-4"	1'-8"	1'-11"	2'-3"	3'-9"
45° BENDS	Q	0'-9"	1'-0"	1'-4"	1'-8"	1'-11"	2'-3"	3'-9"
	P	0'-7"	0'-9"	1'-0"	1'-3"	1'-5"	1'-8"	2'-9"
22½ BENDS	Q	0'-7"	0'-9"	1'-0"	1'-3"	1'-5"	1'-8"	2'-9"
	P	0'-5"	0'-7"	0'-9"	0'-11"	1'-0"	1'-2"	2'-0"
11¼ BENDS	Q	0'-5"	0'-7"	0'-9"	0'-11"	1'-0"	1'-2"	2'-0"
	P	0'-4"	0'-5"	0'-6"	0'-8"	0'-9"	0'-10"	1'-5"
VERTICAL DOWNWARD	Q	0'-4"	0'-5"	0'-6"	0'-8"	0'-9"	0'-10"	1'-5"
	MIN. CONC.* ANCHORAGE	0.6 CY	1.1 CY	1.9 CY	2.8 CY	3.9 CY	5.2 CY	14.9 CY
22½ BENDS	MIN. CONC.* ANCHORAGE	0.3 CY	0.6 CY	1.0 CY	1.4 CY	2.0 CY	2.7 CY	7.6 CY
	11¼ BENDS	MIN. CONC.* ANCHORAGE	0.2 CY	0.3 CY	0.5 CY	0.7 CY	1.4 CY	3.8 CY
PLUGS	R	1'-2"	1'-8"	2'-4"	2'-10"	3'-4"	3'-10"	6'-4"
	S	1'-2"	1'-8"	2'-4"	2'-10"	3'-4"	3'-10"	6'-4"

* MIN. CONC. ANCHORAGE WITHOUT BACKFILL AND NO GROUND WATER CONDITION. THRUST BLOCKS DESIGNED FOR 150 LB. PER SQ. IN. TEST PRESSURE AND 2000 LB PER SQ. FT. SOIL PRESSURE

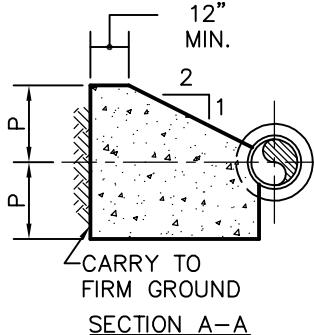
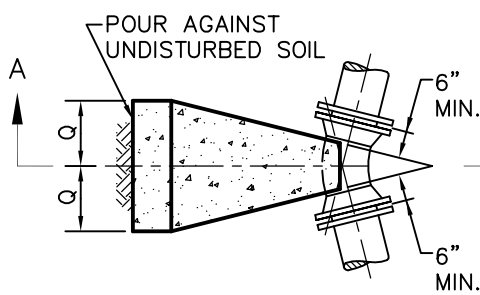
ANCHOR SCHEDULE FOR VERTICAL DOWNWARD BENDS	
SIZE	STRAP SIZE
4"φ	3" BAR
6"φ	4" BAR
8"φ	5" BAR
10"φ	6" BAR
12"φ	7" BAR
14"φ	8" BAR
24"φ	3" x 1/2" - FLAT



VERTICAL DOWNWARD BENDS



TEES

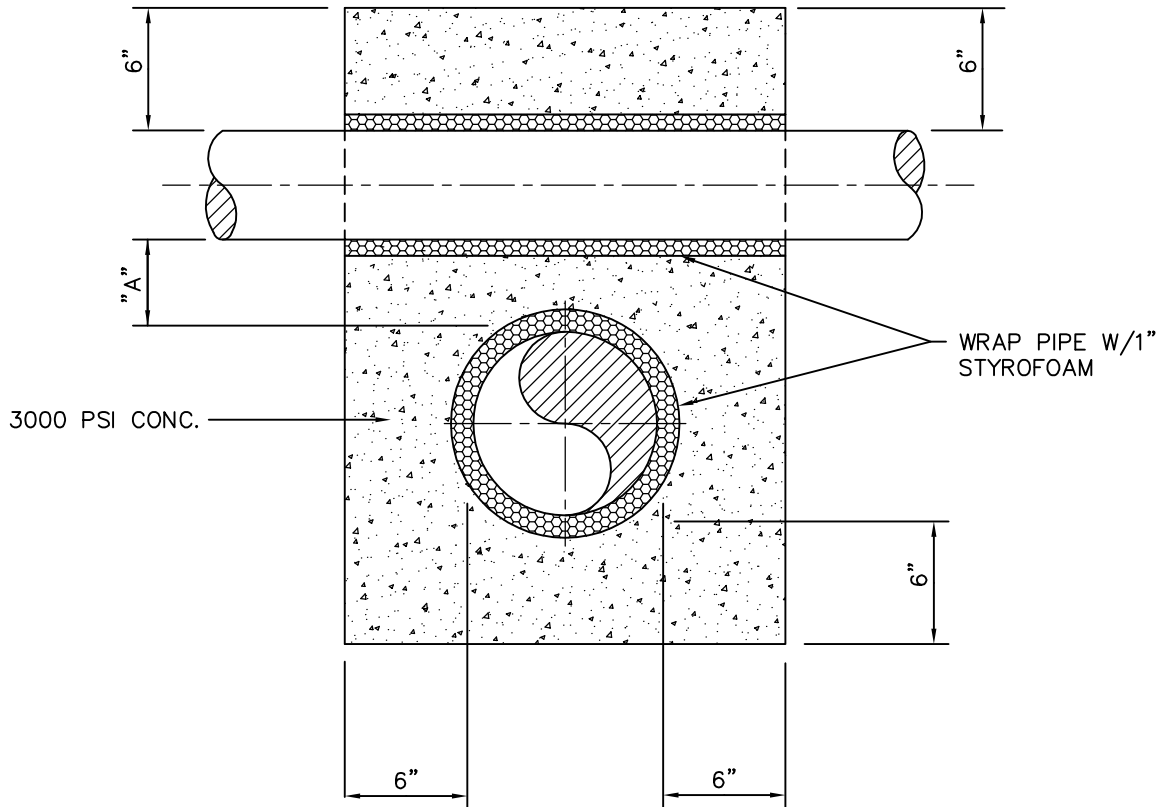


HORIZONTAL AND VERTICAL UPWARD BENDS

THRUST BLOCK DETAILS

N.T.S.

6/11/07 GENERAL REVISIONS		STANDARD DETAIL	
Date:	Revision:	THRUST BLOCKS (150 LB. TEST)	
424 Hurley Drive Hackettstown, NJ 07840		Date: 07/30/03	Dwg. No.: HMUA-WAT-004
		Sh. 1 of 1	

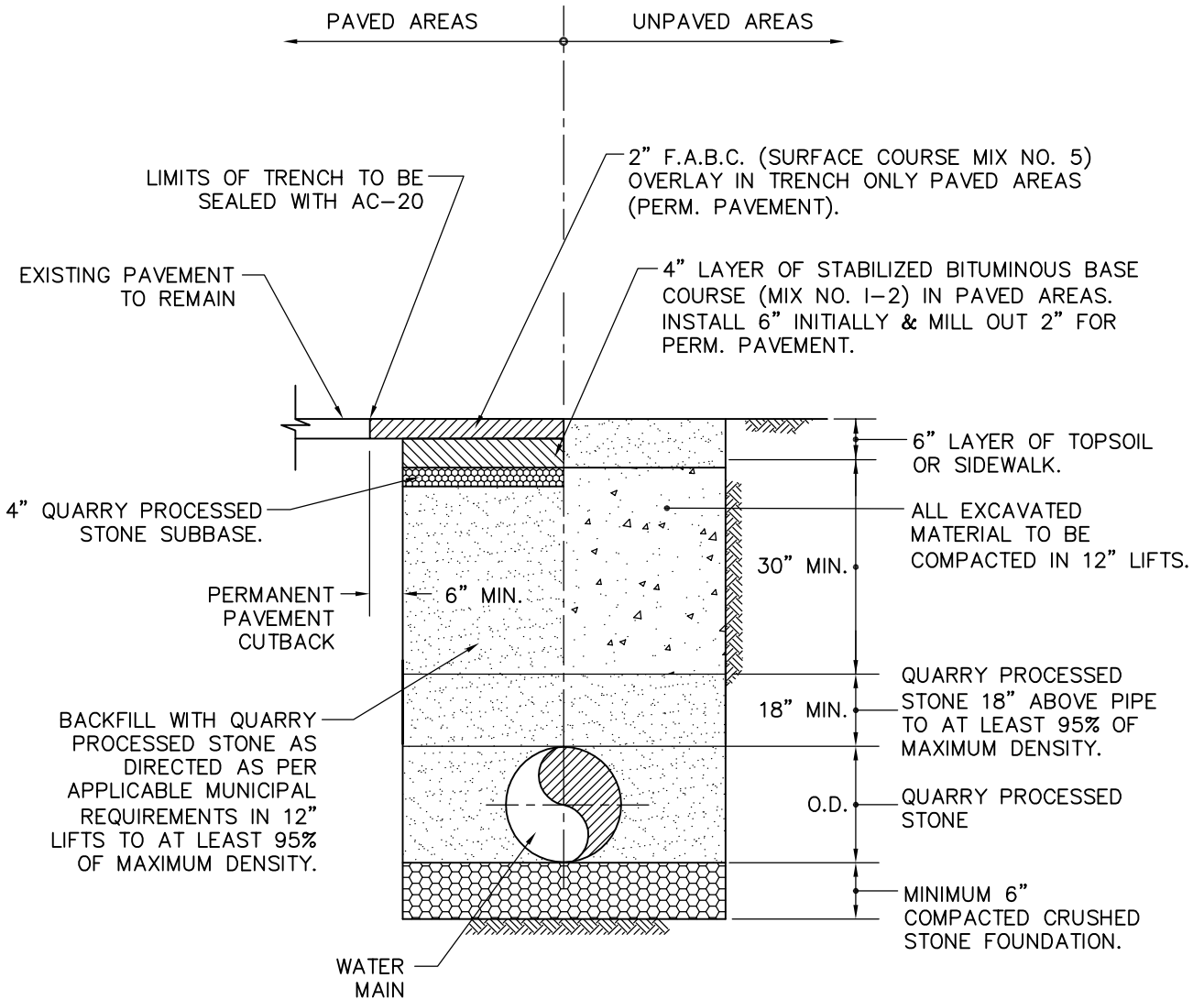


PIPE CROSSING DETAIL
N.T.S.

NOTE:

CONCRETE ENCASEMENT SHALL BE PROVIDED WHERE DIMENSION "A" IS 6" OR LESS OR WHERE DIRECTED BY THE INSPECTOR.

		STANDARD DETAIL	
		PIPE CROSSING (HACKETTSTOWN MUA)	
6/11/07	GENERAL REVISIONS		
Date:	Revision:		
424 Hurley Drive Hackettstown, NJ 07840		Date: 07/30/03	Dwg. No.: HMUA-WAT-005
			Sh. 1 of 1



NOTES:

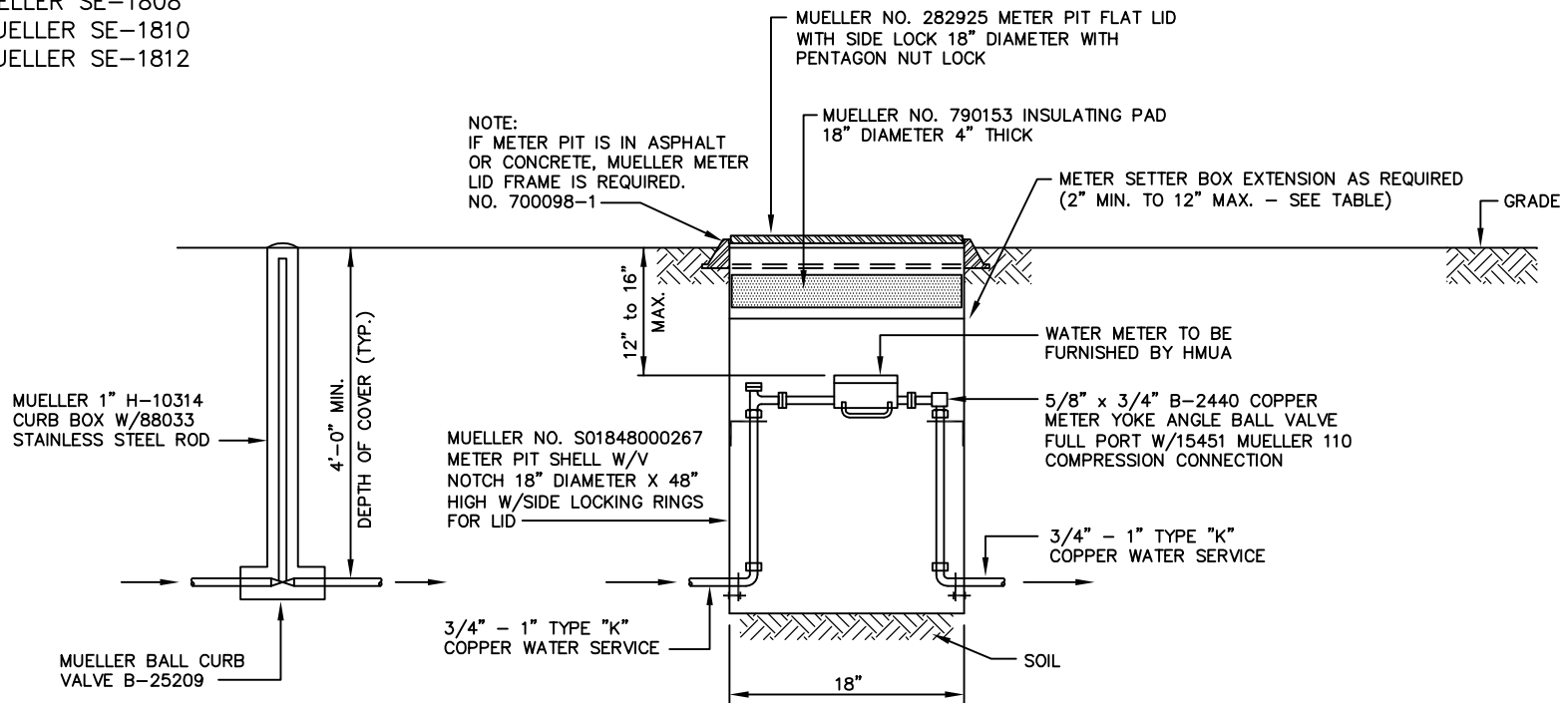
- LIMIT OF TRENCH TO BE CUT TO A NEAT EDGE AND TACK-COATED WITH EMULSIFIED ASPHALT.
- ON AREAS SEALED WITH AC-20, DRY SAND SHALL BE SPRINKLED TO PREVENT PICK UP BY TRAFFIC.
- IN AREAS WITH WET OR UNSTABLE BOTTOMS USE 3/4" CLEAN BROKEN STONE TO STABILIZE TRENCH BOTTOM, TO SOLID, STABLE FOUNDATION.
- CONTRACTOR SHALL REPAIR ANY SETTLED AREAS WITH SURFACE COURSE AFTER A SIX MONTH PERIOD TO ONE WINTER SEASON TO ENSURE NEW REMAINS FLUSH WITH EXISTING PAVEMENT.

SURFACE RESTORATION AND TRENCH DETAIL – WATER MAIN
(MUNICIPAL ROADS AND RIGHTS OF WAY)
 N.T.S.

6/11/07		GENERAL REVISIONS		STANDARD DETAIL SURFACE RESTORATION AND TRENCH (MUNICIPAL ROADS AND RIGHTS OF WAY) (HACKETTSTOWN MUA)	
Date:		Revision:			
424 Hurley Drive Hackettstown, NJ 07840		Date:	07/24/03	Dwg. No.:	HMUA-WAT-006 Sh. 1 of 1

METER SETTER BOX EXTENSIONS

- 2" - MUELLER SE-1802
- 4" - MUELLER SE-1804
- 6" - MUELLER SE-1806
- 8" - MUELLER SE-1808
- 10" - MUELLER SE-1810
- 12" - MUELLER SE-1812

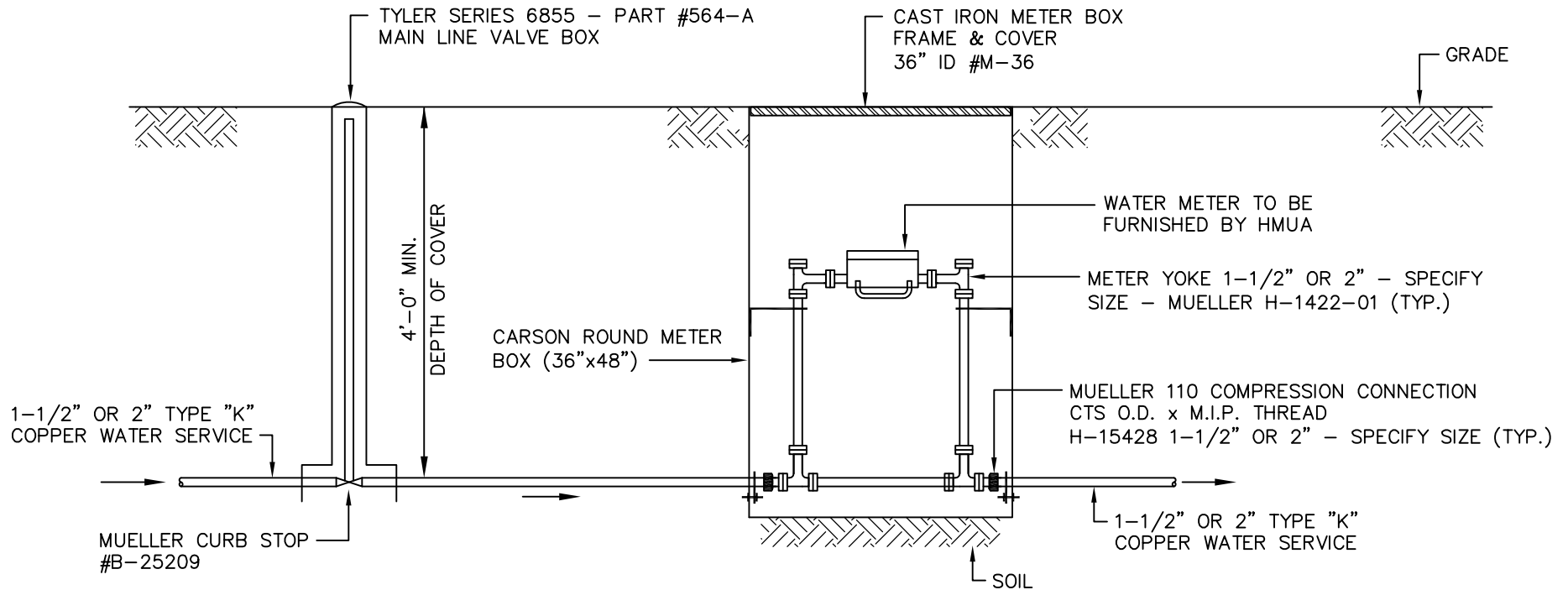


OUTDOOR WATER METER PIT DETAIL

NOTE:

1. THE CURB VALVE, CURB BOX AND OUTDOOR WATER METER PIT SHALL BE LOCATED IN A GRASS AREA WITHIN THE FIRST THREE (3) FEET INSIDE THE CURB AND WITHIN THE PUBLIC ROAD RIGHT-OF-WAY.

6/11/07		GENERAL REVISIONS		STANDARD DETAIL	
Date:	Revision:			OUTDOOR WATER METER PIT (HACKETTSTOWN MUA)	
424 Hurley Drive Hackettstown, NJ 07840		Date: 07/23/03	Dwg. No.:	HMUA-WAT-007	
				Sh. 1 of 1	

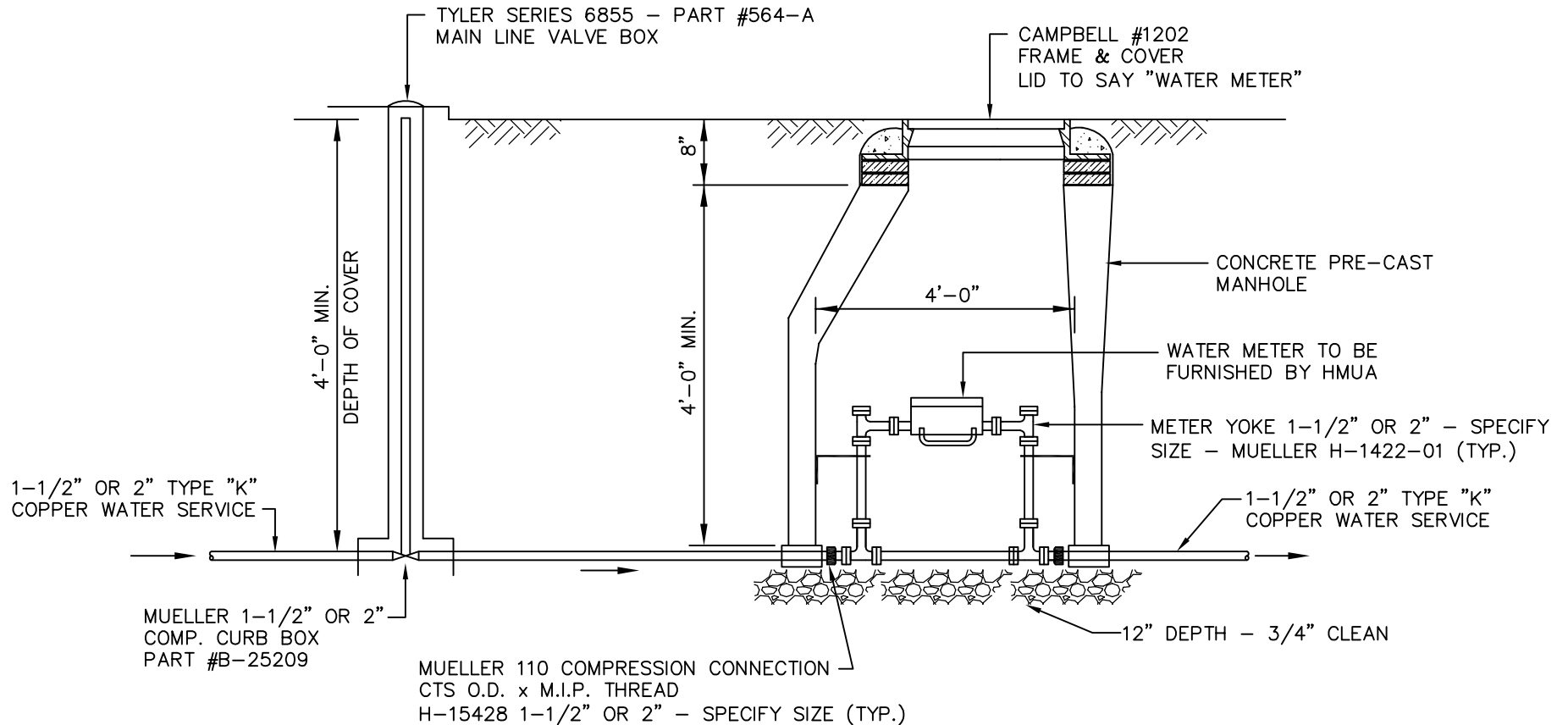


1-1/2" & LARGER OUTDOOR WATER METER PITS-
LIGHT TRAFFIC RATED

NOTE:

1. THE CURB VALVE, CURB BOX AND OUTDOOR WATER METER PIT SHALL BE LOCATED IN A GRASS AREA WITHIN THE FIRST THREE (3) FEET INSIDE THE CURB AND WITHIN THE PUBLIC ROAD RIGHT-OF-WAY.

		STANDARD DETAIL	
		1-1/2" & LARGER OUTDOOR WATER METER PITS LIGHT TRAFFIC RATED (HACKETTSTOWN MUA)	
Date:	Revision:	Date:	Dwg. No.:
		02/25/08	HMUA-WAT-008
424 Hurley Drive Hackettstown, NJ 07840			Sh. 1 of 1



**1-1/2" & LARGER OUTDOOR WATER METER PITS-
HEAVY TRAFFIC RATED**

NOTE:

1. THE CURB VALVE, CURB BOX AND OUTDOOR WATER METER PIT SHALL BE LOCATED IN A GRASS AREA WITHIN THE FIRST THREE (3) FEET INSIDE THE CURB AND WITHIN THE PUBLIC ROAD RIGHT-OF-WAY.

		STANDARD DETAIL	
		1-1/2" & LARGER OUTDOOR WATER METER PITS- HEAVY TRAFFIC RATED (HACKETTSTOWN MUA)	
Date:	Revision:	Date:	Dwg. No.:
		02/25/08	HMUA-WAT-009
424 Hurley Drive Hackettstown, NJ 07840		Sh. 1 of 1	