

SANITARY SEWER

CONSTRUCTION STANDARDS SHEET INDEX

SANITARY SEWER

<u>SHEET NO.</u>	<u>TITLE</u>
D-101*	SHALLOW MANHOLE TYPE "A"
D-102*	STANDARD MANHOLE TYPE "B"
D-103*	DROP MANHOLE TYPE "D"
D-104*	STANDARD MANHOLE TYPE "E"
D-105	SEWER SERVICE AT DEAD ENDS & CUL-DE-SACS
D-106	MANHOLE BASES
D-107	STANDARD MANHOLE STEPS
D-109 *	TAP SADDLE CONNECTIONS
D-110	SLIP LINER TAP CONNECTIONS
D-111	TRENCH CUTS (MANHOLES) TRENCH WIDTHS
D-112	TRENCH DETAILS-TRENCH PAY WIDTH (3 SHEETS)
D-113	REPOSE FOR SLOPING SIDES OF EXCAVATIONS
D-115	SEWER SERVICE LOCATION
D-116	SANITARY SEWER MAINS
D-117*	TYPICAL SANITARY SEWER AIR RELIEF DETAIL
D-118*	PRESSURE SANITARY SEWR CLEANOUT DETAIL
D-119 *	1-1/2" PRESSURE SANITARY SEWER LATERAL DETAIL
D-120*	2" PRESSURE SANITARY SEWER LATERAL DETAIL

NOTE: * REVISED 2013/2014

ALL DETAIL SHEETS WERE REVISED TO SAY PUBLIC WORKS

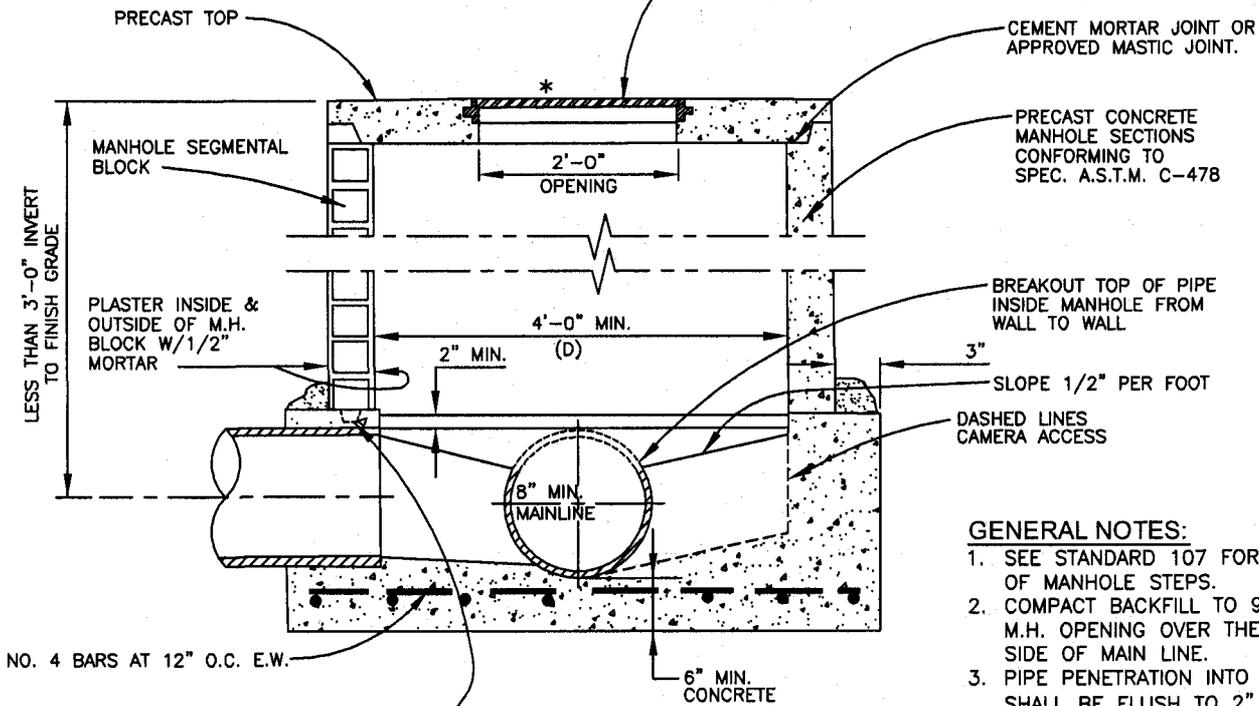
NOTES

ALL SANITARY SEWER MH COVERS TO BE VENTED & HAVE THE WORD "SEWER" CAST INTO LID.

ALL STORM SEWER MH COVERS TO BE VENTED & HAVE THE WORD "STORM" CAST INTO LID.

NEENAH FOUNDRY NO. R-1596 OR AS DIRECTED BY THE CITY ENGINEER.

* C.I.M.H. RING & COVER (INVERTED TYPE) CENTERED (TYPICAL) RECESSED INTO FLAT TOP, (SHOWN).

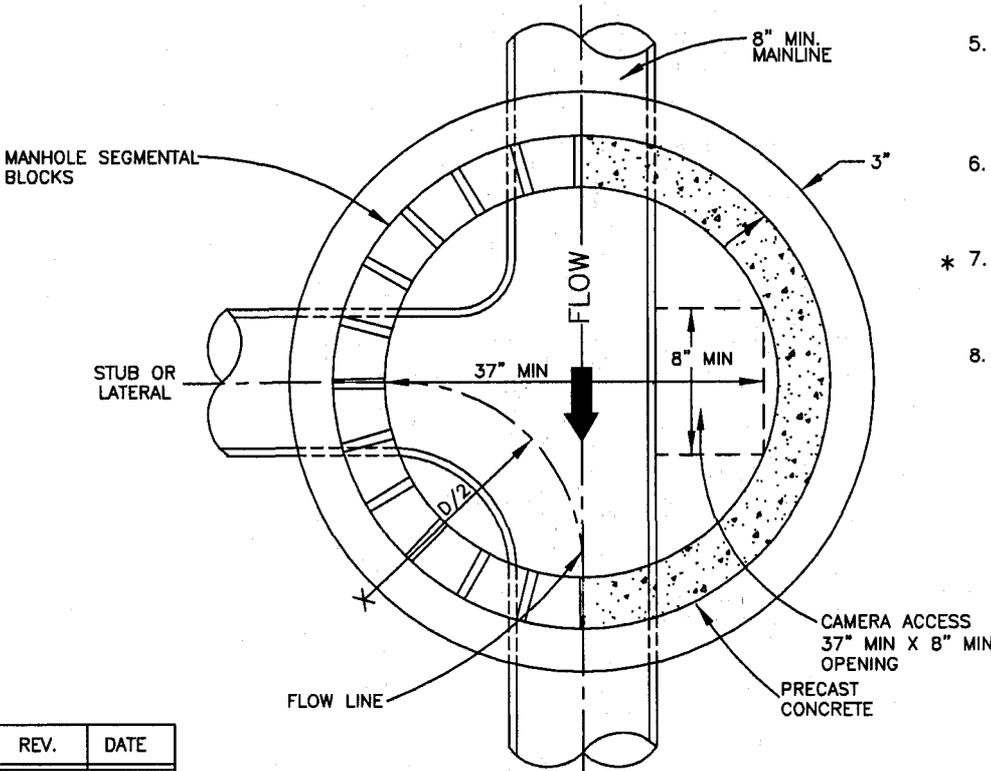


NO. 4 BARS AT 12" O.C. E.W.

SEE STANDARD 106 FOR DETAIL ON CONSTRUCTION KEYWAY

GENERAL NOTES:

1. SEE STANDARD 107 FOR PLACEMENT OF MANHOLE STEPS.
2. COMPACT BACKFILL TO 95% POSITION M.H. OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.
3. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRING LINE OF PIPE.
4. MANHOLE COVER SHALL HAVE A 5/8" MIN TO 1" MAX DIAMETER VENT HOLE CENTERED IN COVER.
5. FOR PRETREATMENT MANHOLES, CONTACT THE CITY LAB, PRE-TREATMENT COORDINATOR FOR PURCHASE OF A PREFABRICATED PIPE SECTION.
6. ALL LIFTING HOLES AND GAPS BETWEEN MANHOLE RINGS AND LID, ETC... SHOULD BE FILLED WITH NON SHRINK GROUT.
- * 7. MANHOLES IN A NON-PAVED AREA SHALL HAVE A ROUND CONCRETE APRON OR BE RAISED A MIN 6" OR AS DIRECTED BY THE CITY ENGINEER.
8. FIBERGLASS MANHOLES SHALL BE MANUFACTURED FROM COMMERCIAL GRADE POLYESTER RESIN OR OTHER SUITABLE POLYESTER OR VINYL ESTER RESINS WITH FIBERGLASS REINFORCEMENTS. MANHOLE SHALL BE A ONE PIECE UNIT MANUFACTURED TO MEET OF EXCEED ALL SPECIFICATION OF A.S.T.M. D-3753 LATEST EDITION. FIBERGLASS MANHOLE MANUFACTURER SHALL DEMONSTRATE CONTINUED EXPERIENCE AS A MANUFACTURER OF FIBERGLASS WASTEWATER PRODUCTS FOR A PERIOD OF NOT LESS THAN FIVE YEARS. IN ADDITION ALL APPROVED MANHOLE MANUFACTURERS SHALL BE ISO9001.



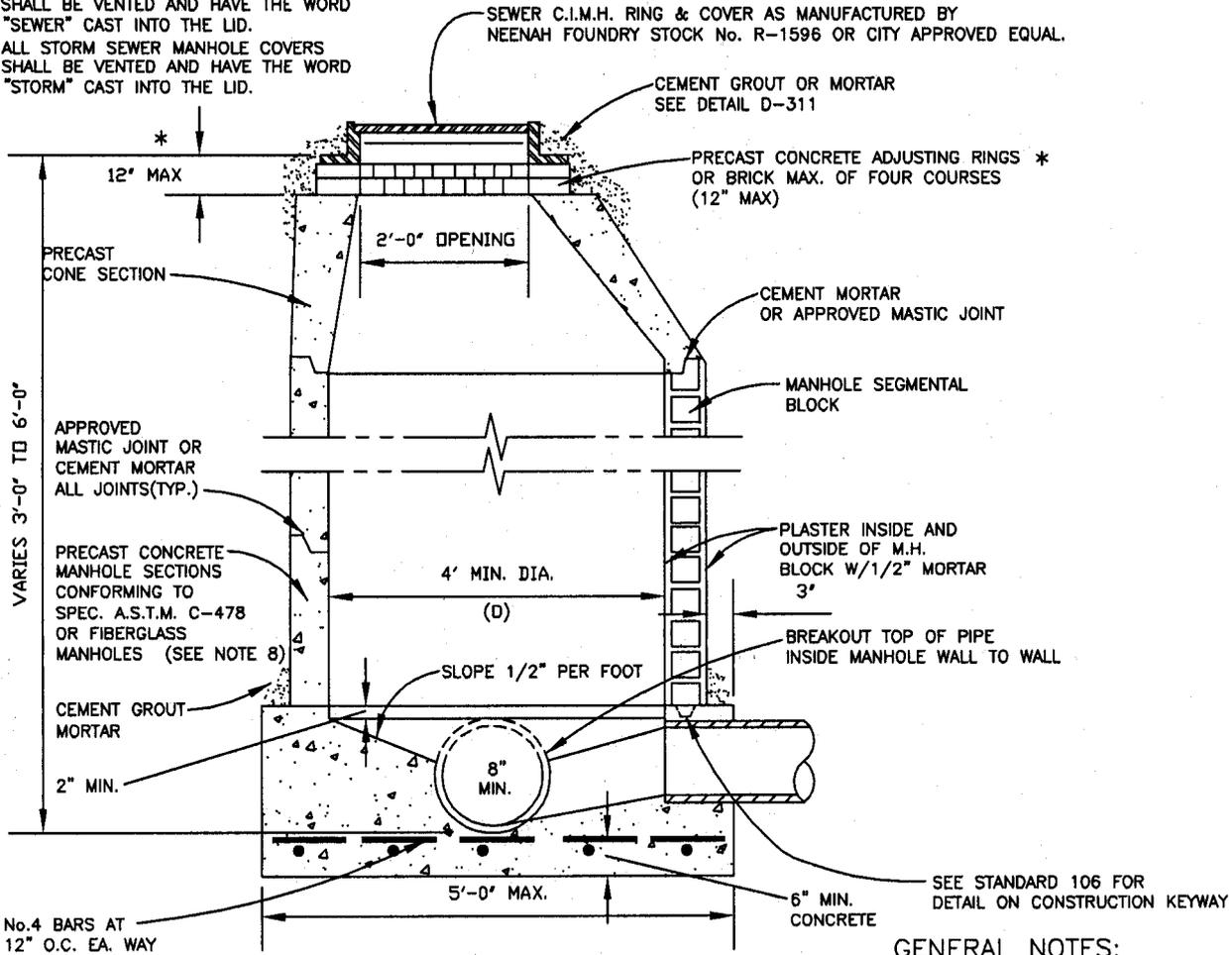
REV.	DATE
*	08/13

CONSTRUCTION STANDARDS	SHALLOW MANHOLE TYPE "A"	CITY OF FARMINGTON
	STANDARD NO. D-101 SHEET 1 OF 1	PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE 8/27/13

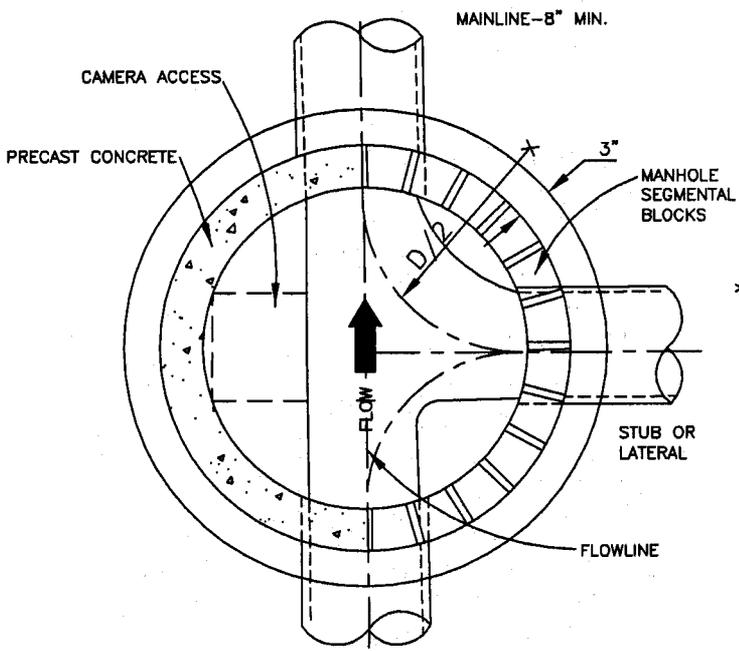
NOTE:

- 1) ALL SANITARY SEWER MANHOLE COVERS SHALL BE VENTED AND HAVE THE WORD "SEWER" CAST INTO THE LID.
- 2) ALL STORM SEWER MANHOLE COVERS SHALL BE VENTED AND HAVE THE WORD "STORM" CAST INTO THE LID.



GENERAL NOTES:

1. COMPACT BACKFILL TO 95%
2. POSITION M.H. OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.
3. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRING LINE OF PIPE.
4. MANHOLE COVER SHALL HAVE A 5/8" MIN TO 1" MAX DIAMETER VENT HOLE CENTERED IN COVER.
5. FOR PRETREATMENT MANHOLES, CONTACT THE CITY LAB, PRE-TREATMENT COORDINATOR FOR PURCHASED OF A PREFABRICATED PIPE SECTION.
6. ALL LIFTING HOLES AND GAPS BETWEEN MANHOLE RINGS AND LID, ETC... SHOULD BE FILLED WITH NON SHRINK GROUT.
- * 7. MANHOLES IN A NON-PAVED AREA SHALL HAVE A ROUND CONCRETE APRON OR BE RAISED A MIN. 6" OR AS DIRECTED BY THE CITY ENGINEER.
8. FIBERGLASS MANHOLES SHALL BE MANUFACTURED FROM COMMERCIAL GRADE POLYESTER RESIN OR OTHER SUITABLE POLYESTER OR VINYL ESTER RESINS WITH FIBERGLASS REINFORCEMENTS. MANHOLE SHALL BE A ONE PIECE UNIT MANUFACTURED TO MEET OR EXCEED ALL SPECIFICATION OF A.S.T.M. D-3753 LATEST EDITION. FIBERGLASS MANHOLE MANUFACTURER SHALL DEMONSTRATE CONTINUED EXPERIENCE AS A MANUFACTURER OF FIBERGLASS WASTEWATER PRODUCTS FOR A PERIOD OF NOT LESS THAN FIVE YEARS. IN ADDITION ALL APPROVED MANHOLE MANUFACTURERS SHALL BE ISO9001.



REV.	DATE
*	1/08 8/13

CONSTRUCTION STANDARDS

SHALLOW MANHOLE TYPE "B"

STANDARD NO. D-102 SHEET 1 OF 1

CITY OF FARMINGTON
PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE 8/27/13

MANHOLE DEPTH	DIMENSION	
	A	B
0'-0" TO 15'	0'-3"	0'-6"
OVER 15'-0"	0'-6"	0'-10"

SEWER C.I.M.H. RING & COVER AS MANUFACTURED BY NEENAH FOUNDRY STOCK No.R-1596 OR CITY APPROVED EQUAL.

CEMENT GROUT OR MORTAR SEE DETAIL D-311 & 312.

PRECAST CONCRETE ADJUSTING RINGS * OR BRICK MAX. OF FOUR COURSES (12" MAX)

PRECAST CONE SECTION

CEMENT MORTAR OR APPROVED MASTIC JOINT

DROP BOWL PER RELINER OR APPROVED EQUAL.

PLASTER INSIDE AND OUTSIDE OF M.H. BLOCK 1/2" MORTAR

MANHOLE SEGMENTAL BLOCKS

ANCHOR DROP BOWL

PRECAST CONCRETE MANHOLE SECTIONS CONFORMING TO SPEC. A.S.T.M. C-478

4' MIN. DIA. (D)

STAINLESS STEEL STRAPS

ANCHOR WITH STAINLESS STEEL STRAPS AT TOP AND BOTTOM IF LESS THAN 10 FEET IF OVER 10 FEET AT 10 FEET O.C.

CEMENT GROUT OR MORTAR
BREAKOUT TOP OF PIPE INSIDE MANHOLE WALL TO WALL

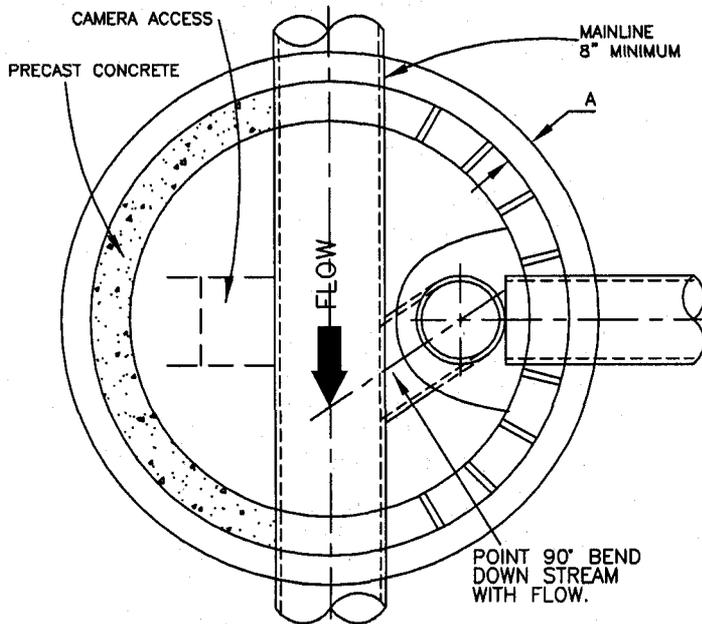
SLOPE 1/2" PER FOOT
2" MIN.

SEE STANDARD 106 FOR DETAIL ON CONSTRUCTION KEYWAY

REINFORCING
#4 @ 12" O.C. EA. WAY FOR M.H. DEPTH OF 10 TO 16'
#4 @ 6" O.C. EA. WAY FOR M.H. DEPTHS OF 16' OR GREATER

GENERAL NOTES:

1. ALL SANITARY SEWER MANHOLE COVERS SHALL BE VENTED AND HAVE THE WORD "SEWER" CAST INTO THE LID.
2. ALL STORM SEWER MANHOLE COVERS SHALL BE VENTED AND HAVE THE WORD "STORM" CAST INTO THE LID.
3. COMPACT BACKFILL TO 95% OF MODIFIED PROCTOR.
4. POSITION M.H. OPENING OVER THE UPSTREAM SIDE OF LINE.
5. PIPE PENETRATION INTO M.H. SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRING LINE OF PIPE.
6. MANHOLE COVER SHALL HAVE A 5/8" MIN TO 1" MAX DIAMETER VENT HOLE CENTERED IN COVER.
7. DROP DISTANCE VARIES.
8. ALL LIFTING HOLES AND GAPS BETWEEN MANHOLE RINGS AND LID, ETC... SHOULD BE FILLED WITH NON SHRINK GROUT.
- * 9. MANHOLES IN A NON-PAVED AREA SHALL HAVE A 2FT CONCRETE APRON AROUND LID (SEE DETAIL) OR BE RAISED A MIN. 6" OR AS DIRECTED BY THE CITY ENGINEER.
10. FIBERGLASS MANHOLES SHALL BE MANUFACTURED FROM COMMERCIAL GRADE POLYESTER RESIN OR OTHER SUITABLE POLYESTER OR VINYL ESTER RESINS WITH FIBERGLASS REINFORCEMENTS. MANHOLE SHALL BE A ONE PIECE UNIT MANUFACTURED TO MEET OF EXCEED ALL SPECIFICATION OF A.S.T.M. D-3753 LATEST EDITION. FIBERGLASS MANHOLE MANUFACTURER SHALL DEMONSTRATE CONTINUED EXPERIENCE AS A MANUFACTURER OF FIBERGLASS WASTEWATER PRODUCTS FOR A PERIOD OF NOT LESS THAN FIVE YEARS. IN ADDITION ALL APPROVED MANHOLE MANUFACTURERS SHALL BE IS09001.
11. SEE STANDARD D-107 FOR PLACEMENT OF MANHOLE STEPS.



REV.	DATE
*	1/08 8/13

CONSTRUCTION STANDARDS

DROP MANHOLE TYPE "D"

STANDARD NO. D-103 SHEET 1 OF 1

CITY OF FARMINGTON

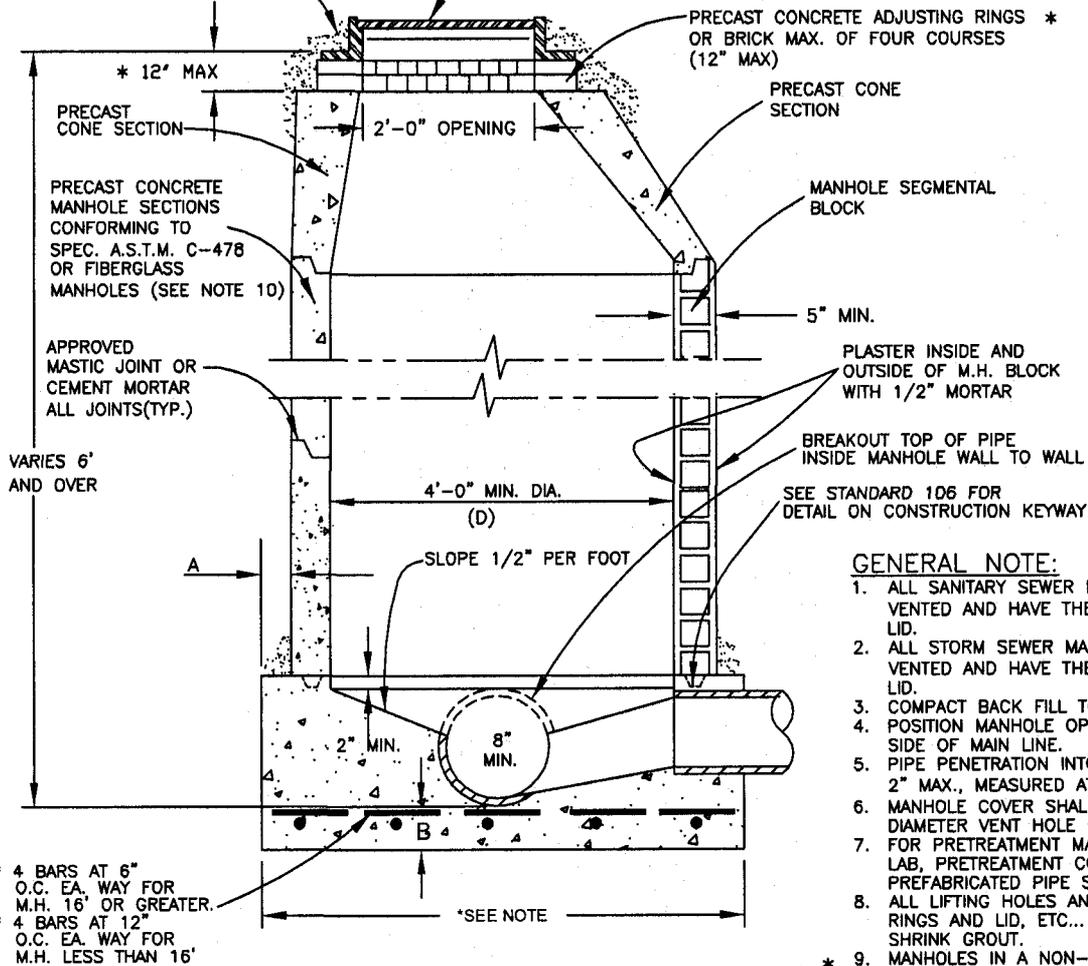
PUBLIC WORKS DEPARTMENT

APPROVED *M. J. W. A.* DATE 8/27/13

CEMENT GROUT OR MORTAR
SEE DETAIL D-311

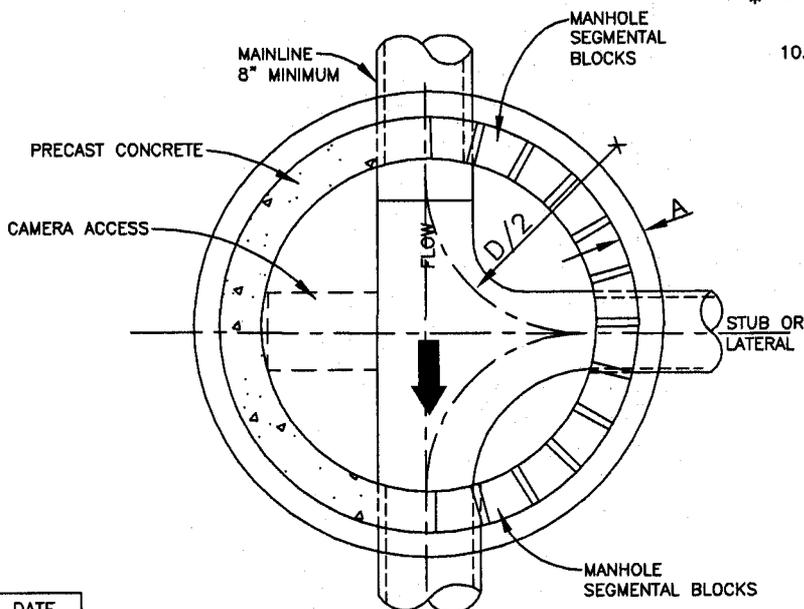
SEWER

C.I.M.H. RING & COVER AS MANUFACTURED BY
NEENAH FOUNDRY STOCK No. R-1596 OR CITY APPROVED EQUAL.



GENERAL NOTE:

1. ALL SANITARY SEWER MANHOLE COVERS SHALL BE VENTED AND HAVE THE WORD "SEWER" CAST INTO THE LID.
2. ALL STORM SEWER MANHOLE COVERS SHALL BE VENTED AND HAVE THE WORD "STORM" CAST INTO THE LID.
3. COMPACT BACK FILL TO 95%.
4. POSITION MANHOLE OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.
5. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRING LINE OF PIPE.
6. MANHOLE COVER SHALL HAVE A 5/8" MIN. TO 1" MAX. DIAMETER VENT HOLE CENTERED IN COVER.
7. FOR PRETREATMENT MANHOLES, CONTACT THE CITY LAB, PRETREATMENT COORDINATOR FOR PURCHASE OF PREFABRICATED PIPE SECTION.
8. ALL LIFTING HOLES AND GAPS BETWEEN MANHOLE RINGS AND LID, ETC... SHOULD BE FILLED WITH NON SHRINK GROUT.
- * 9. MANHOLES IN A NON-PAVED AREA SHALL HAVE ROUND CONCRETE APRON OR BE RAISED A MIN. 6" OR AS DIRECTED BY THE CITY ENGINEER.
10. FIBERGLASS MANHOLES SHALL BE MANUFACTURED FROM COMMERCIAL GRADE POLYESTER RESIN OR OTHER SUITABLE POLYESTER OR VINYL ESTER RESINS WITH FIBERGLASS REINFORCEMENTS. MANHOLE SHALL BE A ONE PIECE UNIT MANUFACTURED TO MEET OR EXCEED ALL SPECIFICATIONS OF A.S.T.M. D-3753 LATEST EDITION. FIBERGLASS MANHOLE MANUFACTURER SHALL DEMONSTRATE CONTINUED EXPERIENCE AS A MANUFACTURER OF FIBERGLASS WASTEWATER PRODUCTS FOR A PERIOD OF NOT LESS THAN FIVE YEARS. IN ADDITION, ALL APPROVED MANHOLE MANUFACTURERS SHALL BE ISO9001 REGISTERED.



MANHOLE DEPTH	DIMENSION	
	A	B
6' TO 15'	0'-3"	0'-6"
OVER 15'	0'-6"	0'-10"

NOTE:

MAINLINE SIZE	MANHOLE DIMENSION
8" TO 24"	4'-0"

REV.	DATE
*	1/08 8/13

**CONSTRUCTION
STANDARDS**

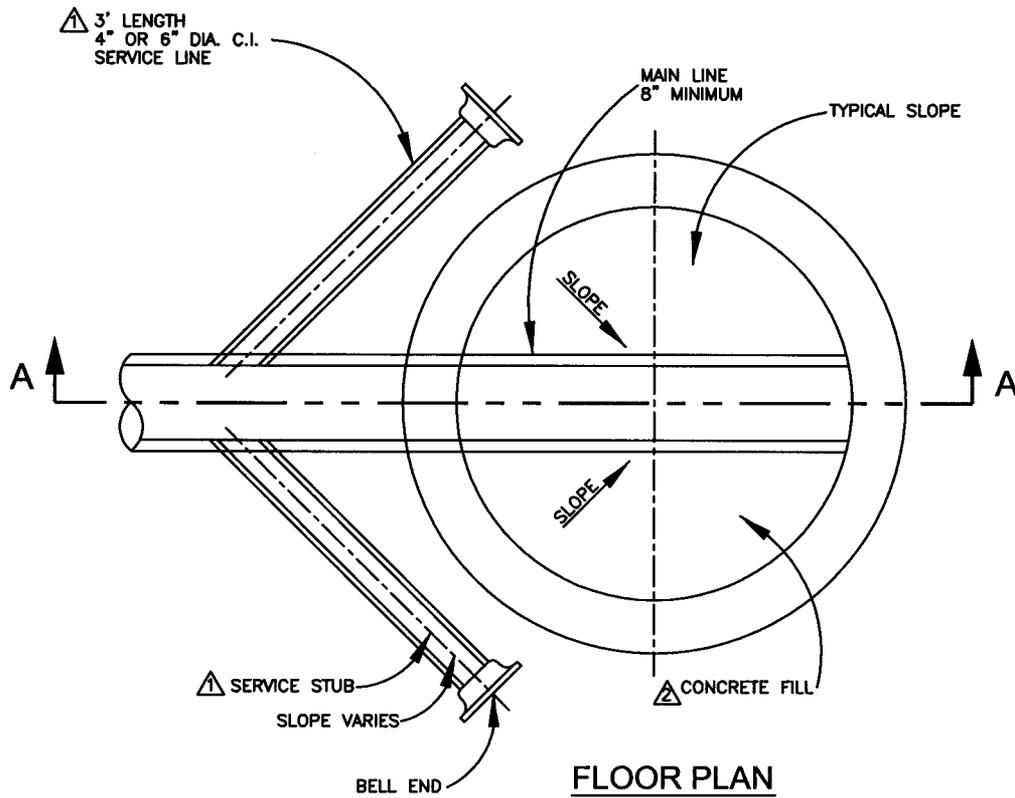
**STANDARD MANHOLE
TYPE "E"**

STANDARD NO. D-104 SHEET 1 OF 1

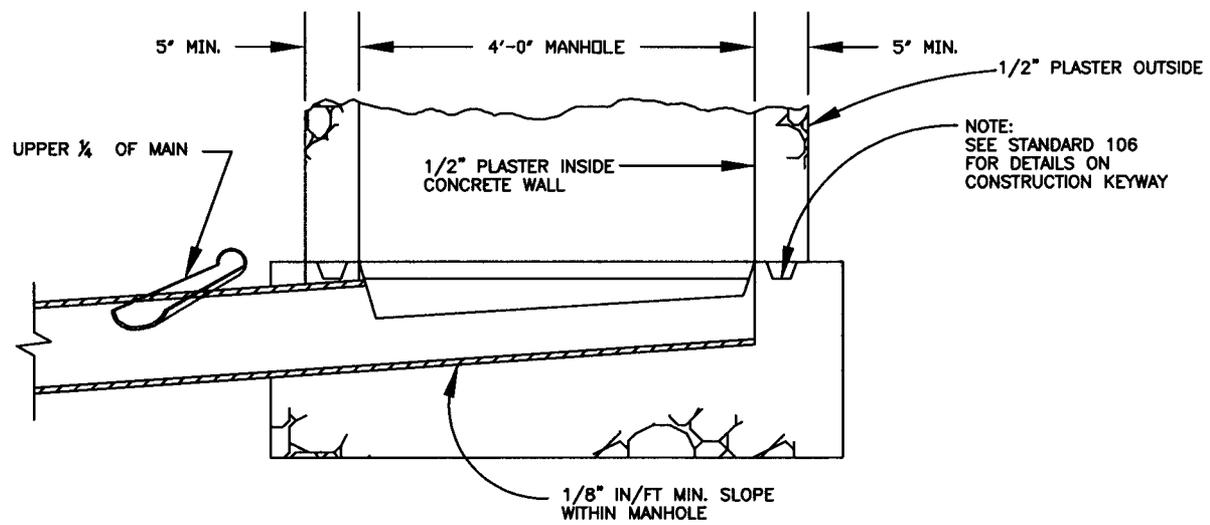
CITY OF
FARMINGTON

PUBLIC
WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 8/27/13



FLOOR PLAN



SECTION A-A

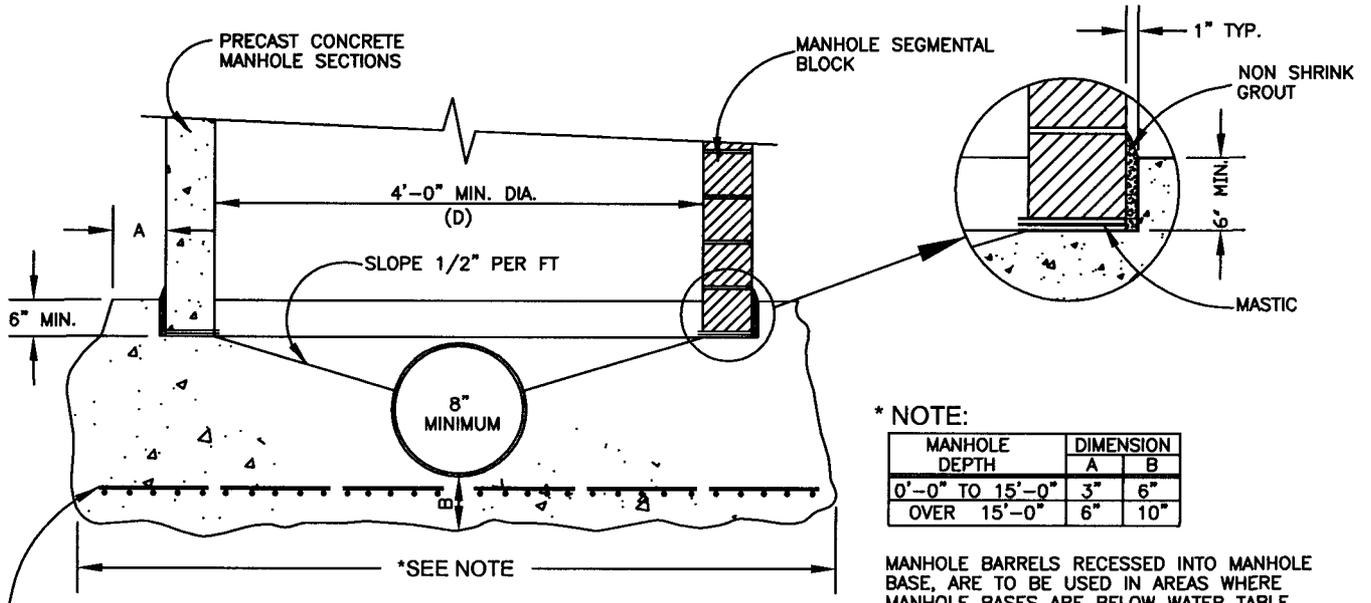
REV.	DATE
△	12/05/05
△	1/22/08

CONSTRUCTION STANDARDS

SEWER SERVICE AT DEAD ENDS & CUL-DE-SAC
 STANDARD No. D-105 SHEET 1 OF 1

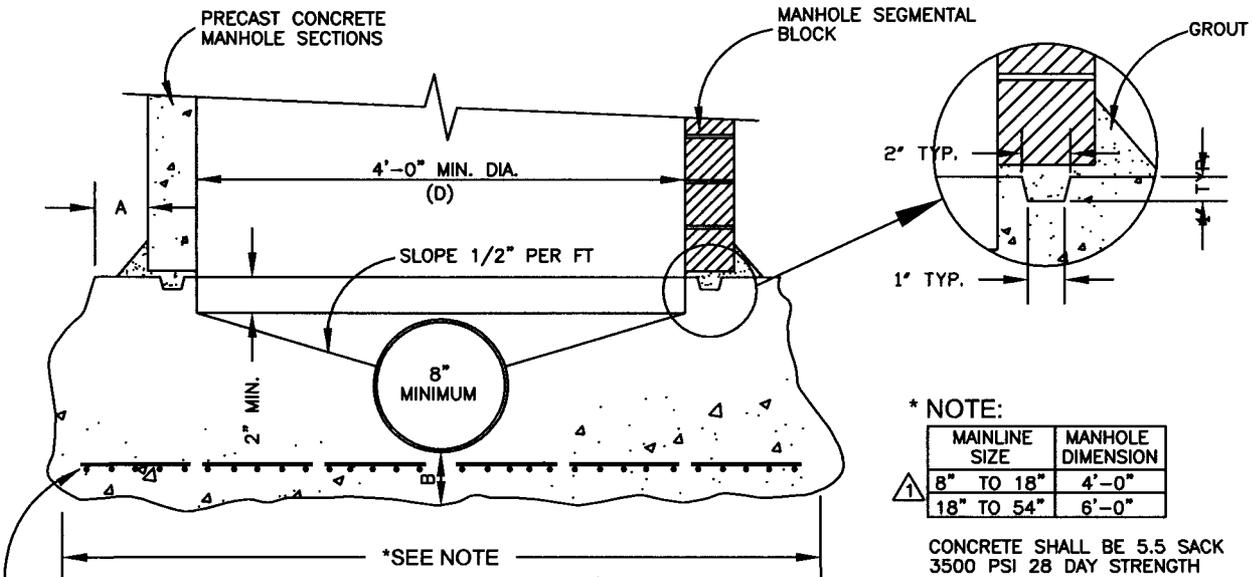
CITY OF FARMINGTON
 PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE *4/15/08*



BELOW WATER TABLE

- #4 BARS AT 6" O.C. EACH WAY FOR MANHOLE 16' OR GREATER
- #4 BARS AT 12" O.C. EACH WAY FOR MANHOLE LESS THAN 16'



STANDARD

- #4 BARS AT 6" O.C. EACH WAY FOR MANHOLE 16' OR GREATER
- #4 BARS AT 12" O.C. EACH WAY FOR MANHOLE LESS THAN 16'

REV.	DATE
⚠	12/27/06

CONSTRUCTION STANDARDS

MANHOLE BASES

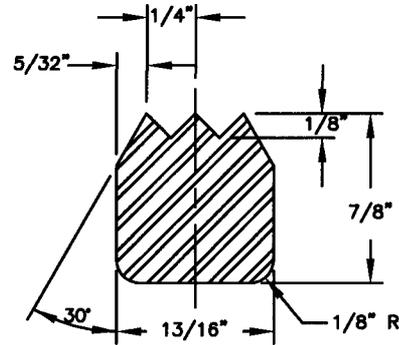
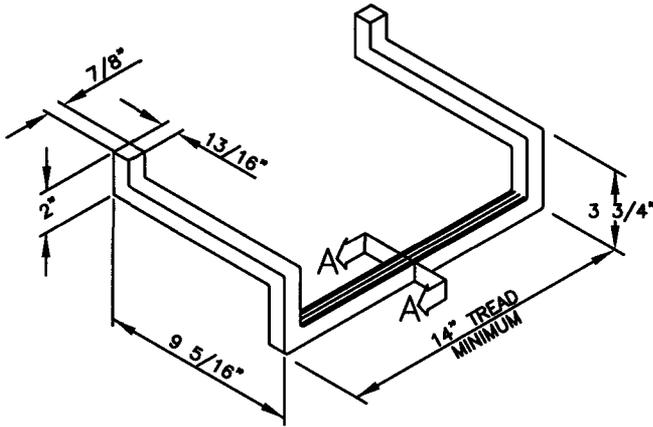
STANDARD No. D-106 SHEET 1 OF 1

CITY OF FARMINGTON
PUBLIC WORKS DEPARTMENT

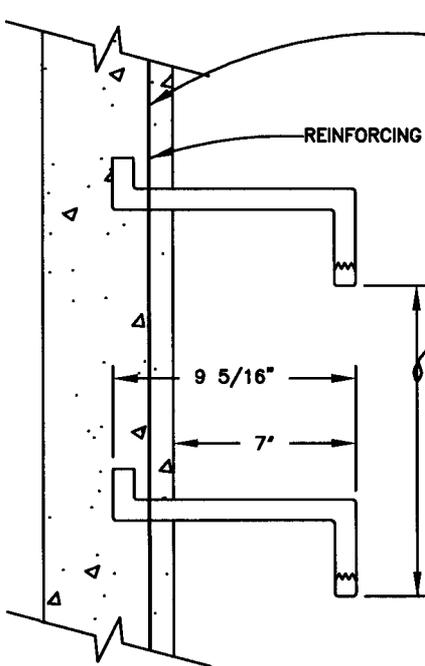
APPROVED *[Signature]* DATE 4/15/08

NOTE:

STEPS SHALL BE SIMILAR AND EQUAL TO COPOLYMER POLYPROPYLENE PLASTIC EQUAL TO M.A. INDUSTRIES MODEL PS2 - PF.



SECTION A-A



CONCRETE WALL SECTION
STEPS TO BE HOOKED BEHIND
REINFORCING STEEL WHEN CONC.
SECTIONS ARE CAST.

VERTICAL SPACING 12" TO 16 1/2" WITH
BOTTOM STEP 8" ± ABOVE BENCH AND
TOP STEP 18" MAX. BELOW RIM.

NOTE:

- 1) ALUMINUM ALLOY SPECIFICATIONS
 - A. FED SPEC. QQ - A - 200/B
 - B. MIN. TENSILE STRENGTH = 38,000 P.S.I.
 - C. MIN. YIELD STRENGTH = 35,000 P.S.I.
 - D. MIN. ELONGATION = 10% IN 2"
- 2) MIN. LOAD CAPACITY APPLIED CENTER OF STEP
 - A. 1,000 LB. WITH 6" PROJECTION FROM WALL
 - B. 1,500 LB. WITH 4" PROJECTION FROM WALL
- 3) WEIGHT PER STEP = 223 LBS.
- 4) STEPS TO BE CAST UNALTERED IN MANHOLE WALL IN A STRAIGHT LINE, VERTICALLY, AT THE SAME TIME THE BARREL OR CONE SECTIONS ARE CAST.
- 5) THE PORTION OF THE STEPS EMBEDDED IN THE CONCRETE SHALL BE COATED WITH BITUMINOUS MATERIAL AS SPECIFIED OR APPROVED BY CONTRACTING OFFICER.

REV	DATE
1	2/1/82
2	11/30/83
3	1/22/08

**CONSTRUCTION
STANDARDS**

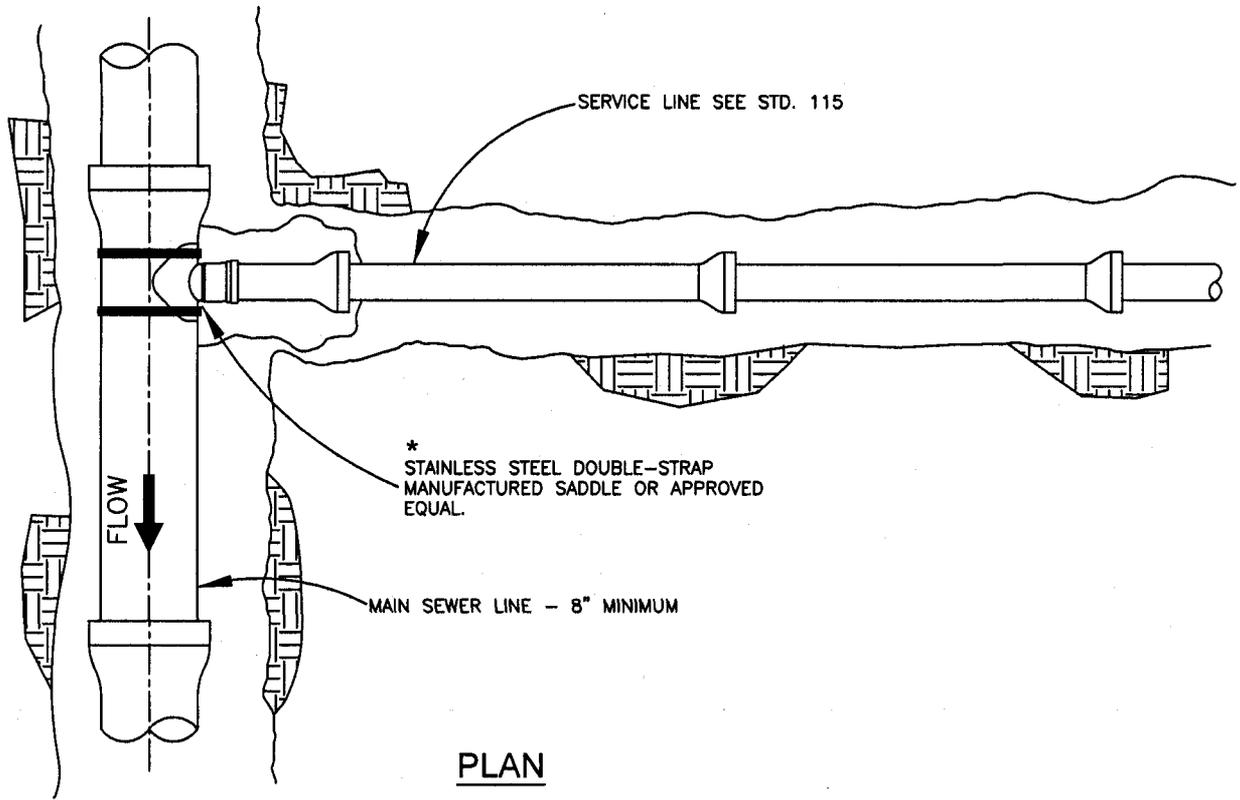
**STANDARD
MANHOLE STEPS**

STANDARD No. D-107 SHEET 1 OF 1

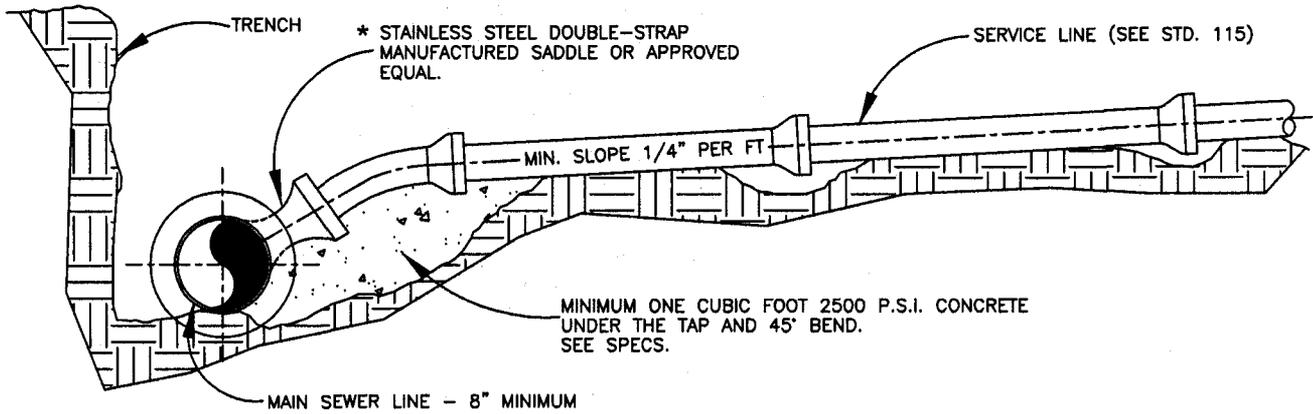
CITY OF
FARMINGTON

PUBLIC
WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 4/15/08



PLAN



ELEVATION

NOTES:

1. ALL SERVICE LINES SHALL CONFORM TO LOCAL PLUMBING CODE.
2. SERVICE LINE SHALL NOT PROTRUDE INTO SEWER MAIN.

REV	DATE
	1/08
*	8/13

CONSTRUCTION
STANDARDS

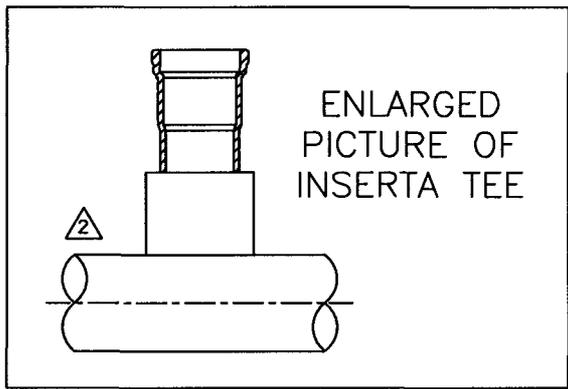
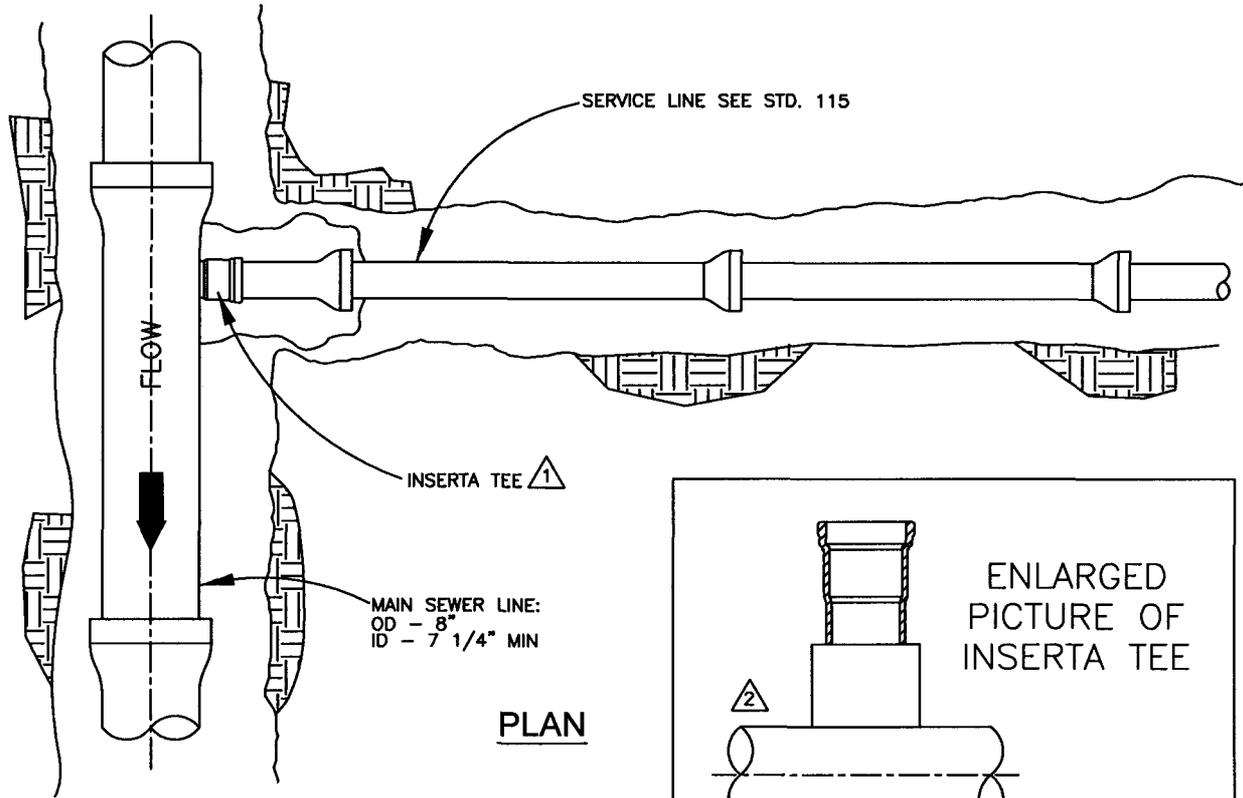
TAP SADDLE
CONNECTION

STANDARD No. D-109 SHEET 1 OF 1

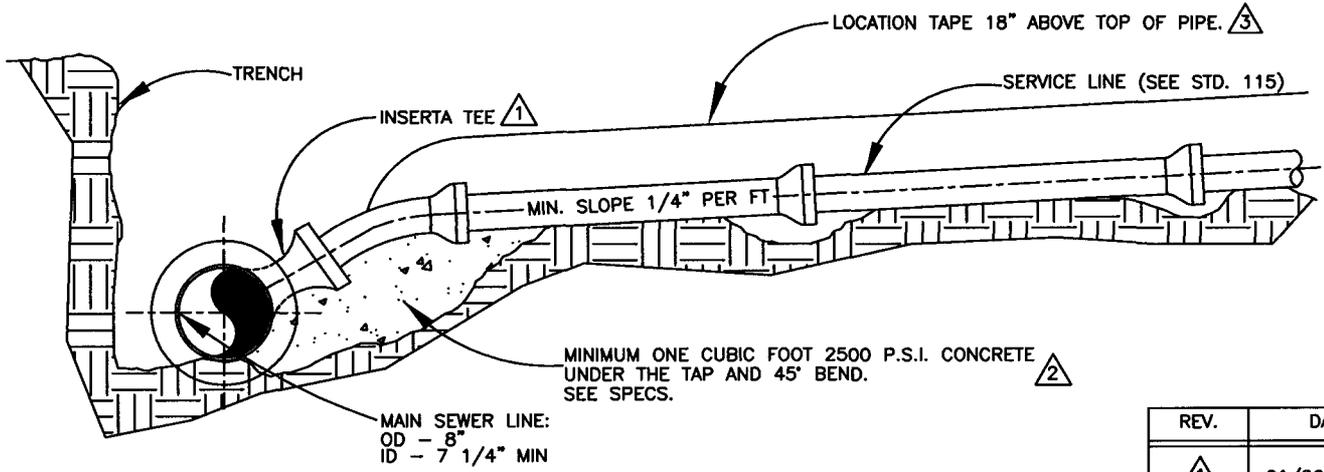
CITY OF
FARMINGTON

PUBLIC
WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 8/27/13



- 1) ALL SERVICE LINES SHALL CONFORM TO LOCAL PLUMBING CODE.
- 2) SERVICE LINE SHALL NOT PROTRUDE INTO MAIN.



REV.	DATE
1	01/26/06
2	1/22/08
3	04/22/10

CONSTRUCTION STANDARDS

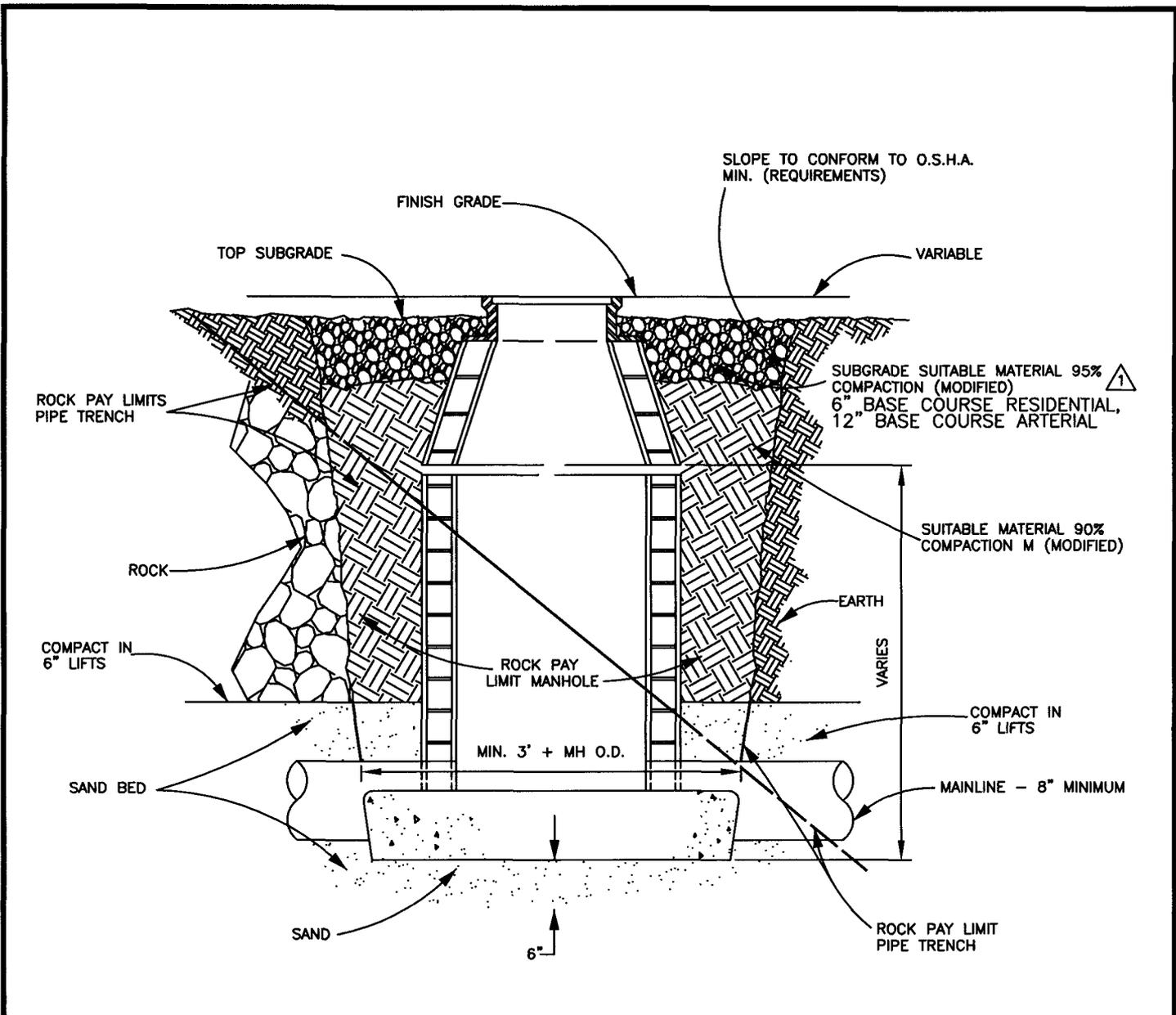
**SLIP LINE
TAP CONNECTION**

STANDARD No. D-110 SHEET 1 OF 1

CITY OF
FARMINGTON

PUBLIC
WORKS
DEPARTMENT

APPROVED *[Signature]* DATE *5/31/11*



NOTE:

△ AS DETERMINED BY A.S.T.M. D-1557
 A.A.S.H.T.O. DEG T-147-FIELD TEST
 MOISTURE CONTENT OF ALL COMPACTION
 SUBGRADE MATERIAL IN PLACE SHALL
 BE NO GREATER THAN OPTIMUM NOR
 ANY LESS THAN OPTIMUM MINUS 5%

CUT AND BACKFILL IN ROCK
 FOR MANHOLES

REV.	DATE
△1	1/22/08

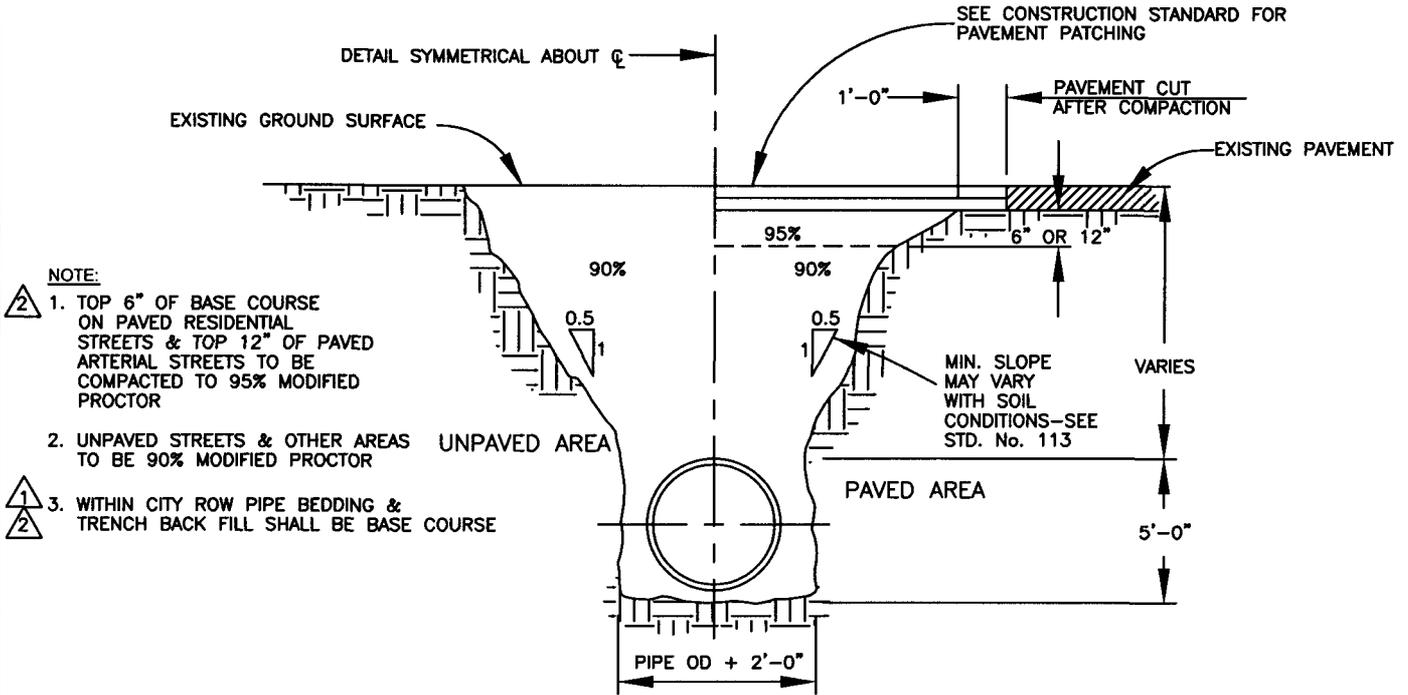
**CONSTRUCTION
 STANDARDS**

**TRENCH CUTS
 (MANHOLES)
 TRENCH WIDTHS**
 STANDARD No. D-111 SHEET 1 OF 1

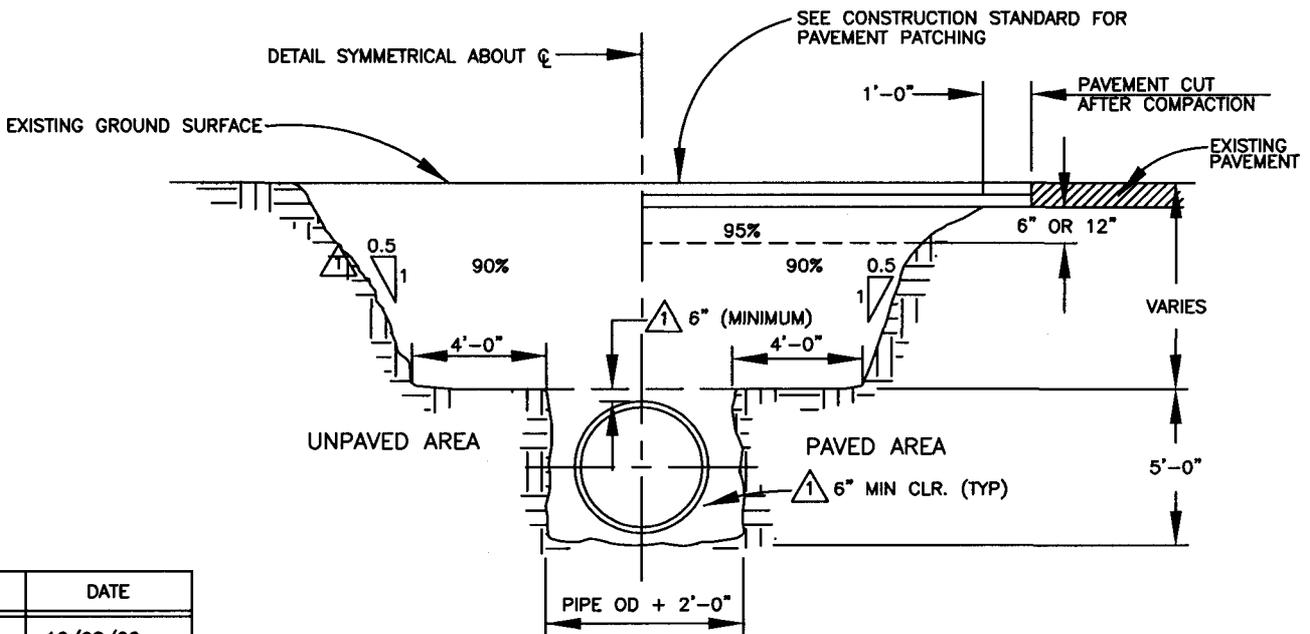
CITY OF
 FARMINGTON
 PUBLIC
 WORKS
 DEPARTMENT

APPROVED *[Signature]* DATE 4/15/08

PIPE DIA.	TRENCH WIDTH	PIPE DIA.	TRENCH WIDTH
8"	2'-6"	30"	6'-6"
10"	2'-8"	36"	7'-0"
12"	3'-0"	42"	8'-0"
15"	3'-0"	48"	8'-6"
18"	4'-6"	54"	10'-6"
21"	4'-6"	66"	13'-0"
24"	5'-6"	72"	14'-0"



TRENCHING DETAIL - PIPE LESS THAN 72" O.D.



TRENCHING DETAIL - PIPE OVER 72" O.D.

REV.	DATE
①	12/08/02
②	1/22/08

CONSTRUCTION
STANDARDS

TRENCH DETAILS

STANDARD No. D-112 SHEET 1 OF 3

CITY OF
FARMINGTON

PUBLIC
WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 4/15/08

PIPE SIZE	TRENCH PAY WIDTH									
	3'	4'	6'	8'	10'	12'	14'	16'	18'	20'
4	5.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
6	5.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
8	5.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
10	5.50	5.50	7.50	9.50	11.50	13.50	15.50	17.50	19.50	21.50
12	5.50	5.50	7.50	9.50	11.50	13.50	15.50	17.50	19.50	21.50
14	5.75	5.75	7.75	9.75	11.75	13.75	15.75	17.75	19.75	21.75
15	5.75	5.75	7.75	9.75	11.75	13.75	15.75	17.75	19.75	21.75
16	5.75	5.75	7.75	9.75	11.75	13.75	15.75	17.75	19.75	21.75
18	6.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
20	6.25	6.25	8.25	10.25	12.25	14.25	16.25	18.25	20.25	22.25
21	6.25	6.25	8.25	10.25	12.25	14.25	16.25	18.25	20.25	22.25
24	6.50	6.50	8.50	10.50	12.50	14.50	16.50	18.50	20.50	22.50
27		6.75	8.75	10.75	12.75	14.75	16.75	18.75	20.75	22.75
30		7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00	23.00
36		7.50	9.50	11.50	13.50	15.50	17.50	19.50	21.50	23.50
42			10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
48			11.50	13.50	15.50	17.50	19.50	21.50	23.50	25.50
54			12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00
60			12.50	14.50	16.50	18.50	20.50	22.50	24.50	26.50
66				15.00	17.00	19.00	21.00	23.00	25.00	27.00
72				23.50	25.50	27.50	29.50	31.50	33.50	35.50
78				24.00	26.00	28.00	30.00	32.00	34.00	36.00
84				24.50	26.50	28.50	30.50	32.50	34.50	36.50
90				25.00	27.00	29.00	31.00	33.00	35.00	37.00
96				25.50	27.50	29.50	31.50	33.50	35.50	37.50
102				26.00	28.00	30.00	32.00	34.00	36.00	38.00
108				26.50	28.50	30.50	32.50	34.50	36.50	38.50

NOTE:

1. PAYMENT FOR PAVEMENT REMOVAL AND REPLACEMENT SHALL BE BASED ON ACTUAL TRENCH WIDTHS UP TO THE WIDTH NOTED ABOVE & WILL BE PAID FOR ACTUAL TRENCH MEASUREMENT.
2. EXCESSIVE TRENCH WIDTH ABOVE THAT LISTED IN THE TABLE ABOVE WILL BE AT THE CONTRACTORS EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE PAID. IF CONDITIONS EXIST THAT REQUIRES ADDITIONAL REMOVAL CONTRACTOR SHALL REQUEST CITY ENGINEER APPROVAL.
3. IN THE EVENT A LINE IS LOCATED SUCH THAT REMOVAL OF CURB, GUTTER AND SIDEWALK IS REQUIRED PAVEMENT WIDTH SHALL BE LIMITED TO 1/2 THE PAY WIDTH PLUS THE DISTANCE FROM THE CENTERLINE OF THE PIPE TO GUTTER. PAYMENT FOR REMOVAL AND REPLACEMENT OF CURB AND SIDEWALK SHALL BE AS MEASURED IN THE FIELD.
4. THE ADDITIONAL 1' PAVEMENT CUT BACK SHALL BE MADE AFTER BACKFILLING AND TESTING IS COMPLETE. THIS CUT SHALL BE REMOVED TO A NEAT LINE. IF THE CONTRACTORS OPERATION PRODUCES A JAGGED EDGE HE SHALL BE REQUIRED TO REMOVE ADDITIONAL PAVING UNTIL A NEAT STRAIGHT LINE IS OBTAINED.

REV.	DATE
△	1/22/08

CONSTRUCTION STANDARDS

TRENCH PAY WIDTH

STANDARD No. D-112 SHEET 2 OF 3

CITY OF FARMINGTON

PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE 4/15/08

TRENCH SHORING-MINIMUM REQUIREMENTS

SIZE & SPACING OF MEMBERS

DEPTH OF TRENCH	CONDITION OR KIND OF EARTH	UPRIGHTS		STRINGERS		CROSS BRACES—SEE NOTE 1							
		MINIMUM DIMENSION	MAXIMUM SPACING	MINIMUM DIMENSION	MAXIMUM SPACING	WIDTH OF TRENCH							
		INCHES	FEET	INCHES	FEET	UP TO 3'	3 TO 6'	6 TO 9'	9 TO 12'	12 TO 15'	MAXIMUM SPACING		
FEET				INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	FEET	FEET	FEET	
5' TO 10'	HARD, COMPACT. . . . .	.3X4 OR 2X6	6			2X6	4X4	4X6	6X6	6X8	4	4	6
	LIKELY TO CRACK. . . . .	.3X4 OR 2X6	3	4X6		2X6	4X4	4X6	6X6	6X8	4	4	6
10' TO 15'	SOFT, SANDY, OR FILLED. . . . .	.3X4 OR 2X6	CLOSE SHEETING	4X6	4	4X4	4X6	6X6	6X8	8X8	4	4	6
	HYDROSTATIC PRESSURE. . . . .	.3X4 OR 2X6	CLOSE SHEETING	6X8	4	4X4	4X6	6X6	6X8	8X8	4	4	6
15' TO 20'	HARD. . . . .	.3X4 OR 2X6	4	4X6	4	4X4	4X6	6X6	6X8	8X8	4	4	6
	LIKELY TO CRACK. . . . .	.3X4 OR 2X6	2	4X6	4	4X4	4X6	6X6	6X8	8X8	4	4	6
OVER 20'	SOFT, SANDY, OR FILLED. . . . .	.3X4 OR 2X6	CLOSE SHEETING	4X6	4	4X6	6X6	6X8	8X8	10X10	4	4	6
	HYDROSTATIC PRESSURE. . . . .	.3X6	CLOSE SHEETING	8X10	4	4X6	6X6	6X8	8X8	10X10	4	4	6
OVER 20'	ALL KINDS OR CONDITIONS. . . . .	.3X6	CLOSE SHEETING	4X12	4	4X12	6X8	8X8	10X10	10X10	4	4	6
	ALL KINDS OR CONDITIONS. . . . .	.3X6	CLOSE SHEETING	6X8	4	4X12	8X8	8X10	10X10	10X12	4	4	6

NOTES: 1) TRENCH JACKS MAY BE USED IN LIEU OF, OR IN COMBINATION WITH, CROSS BRACES. SHORING IS NOT REQUIRED IN SOLID ROCK, HARD SHALE, OR HARD SLAG. WHERE DESIRABLE, SHEET STEEL PILING AND BRACING OF EQUAL STRENGTH MAY BE SUBSTITUTED FOR WOOD.

REV.	DATE
1	1/22/08

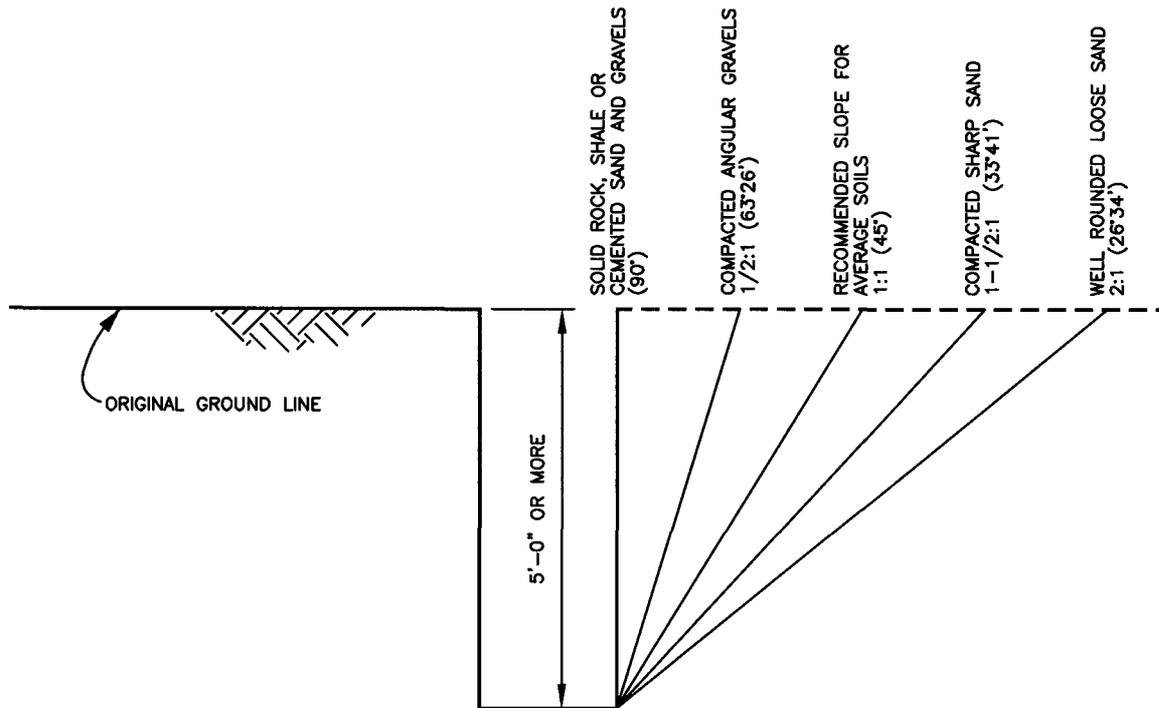
CONSTRUCTION STANDARDS

TRENCH DETAILS

STANDARD No. D-112 SHEET 3 OF 3

CITY OF FARMINGTON
PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE 4/15/08



NOTES

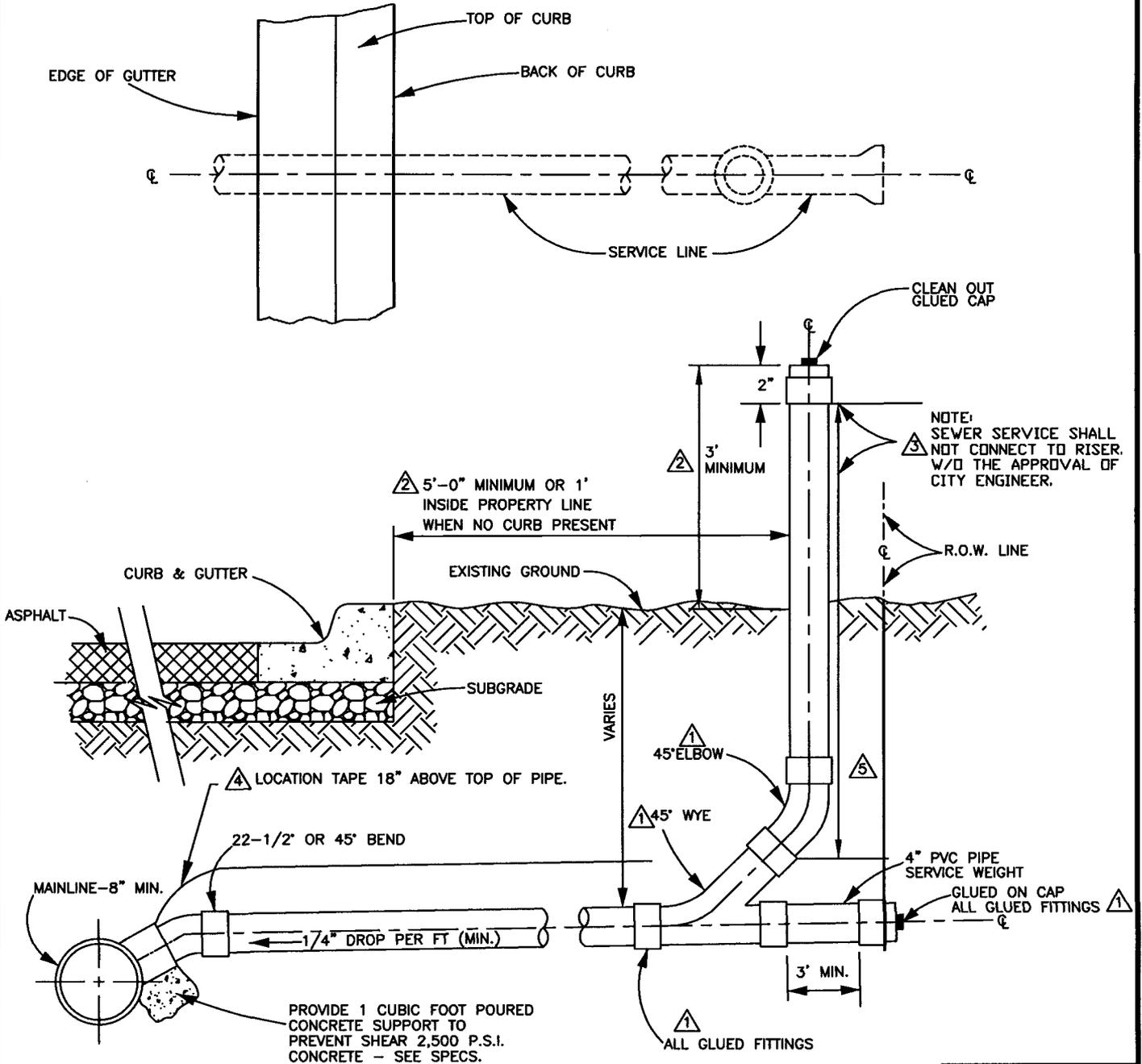
1. SIDES OF TRENCHES IN HARD OR COMPACTED SOIL, INCLUDING EMBANKMENTS SHALL BE SHORED, OR OTHERWISE SUPPORTED OR SLOPED WHEN THE TRENCH IS MORE THAN 5 FEET IN DEPTH AND 8 FEET OR MORE IN LENGTH.
2. CLAYS, SILLS, LOAMS OR NON HOMOGENOUS SOILS REQUIRE SHORING AND BRACING. THE PRESENCE OF GROUND WATER REQUIRES SPECIAL TREATMENT.
3. STANDARD DETAIL 112 SHALL BE APPLICABLE WHEN EXCAVATING IN PAVED STREETS.
4. ALL PAYMENT WILL BE BASED ON TRENCH PAY WIDTHS AS OUTLINED IN CITY STANDARD 112. NO EXTRA PAYMENT OUTSIDE THOSE LIMITS LISTED IN COF 112 WILL BE PAID.

<p>CONSTRUCTION STANDARDS</p>	<p>APPROXIMATE ANGLE OF REPOSE FOR SLOPING SIDES OF EXCAVATIONS</p> <p>STANDARD No. D-113 SHEET 1 OF 1</p>	<p>CITY OF FARMINGTON</p> <hr/> <p>PUBLIC WORKS DEPARTMENT</p>
--------------------------------------	---	--

APPROVED *[Signature]* DATE 4/15/08

NOTES: 

1. ALL SERVICE LINES SHALL CONFORM TO LOCAL PLUMBING CODE.
2. SERVICE LINES SHALL NOT PROTRUDE INTO SEWER MAIN.
-  3. SEWER SERVICE SHALL BE A COMBO OR 45° WYE WITH 45° ELBOW.



REV.	DATE
	11/22/04
	12/01/05
	12/02/05
	04/22/10

CONSTRUCTION STANDARDS

SEWER SERVICE LOCATION

STANDARD No. D-115 SHEET 1 OF 1

CITY OF FARMINGTON

PUBLIC WORKS DEPARTMENT

APPROVED *[Signature]* DATE 5/31/11

SANITARY SEWER MAINS
MINIMUM SLOPES

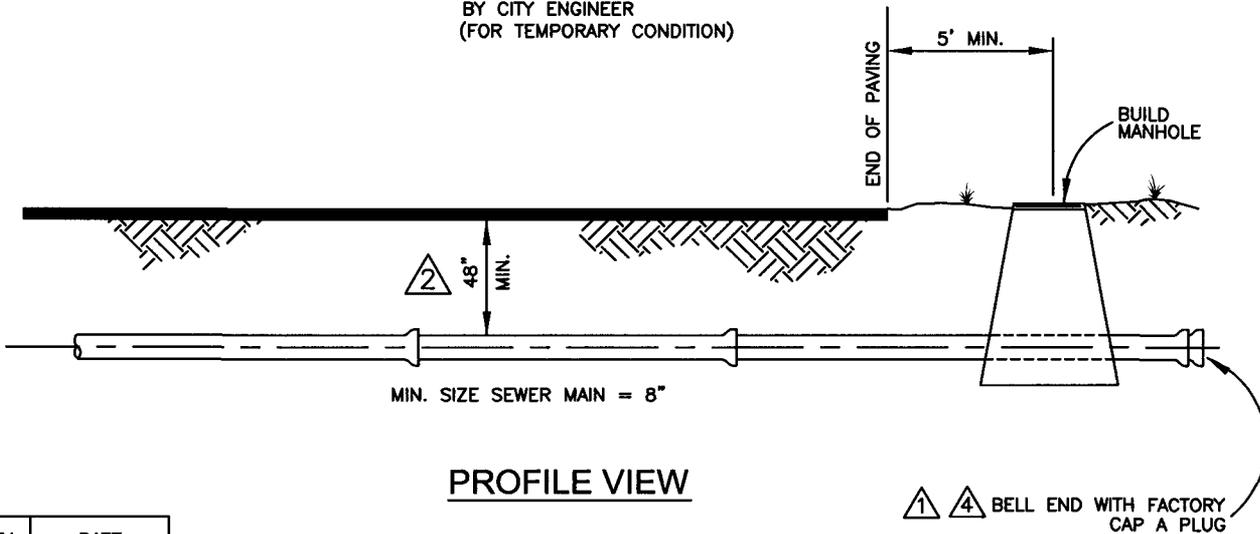
SIZE	SLOPE, FT./FT.
8"	0.004
10"	0.003
12"	0.0022
15"	0.0015
18"	0.0012
21"	0.0010
24"	0.0009
27" & LARGER	0.0008

NOTES:

1. PRIOR TO BACKFILLING, RECORD INVERT ELEVATIONS AND LOCATION ON CONSTRUCTION PLANS FOR AN AS-BUILT RECORD.
2. SEE LATEST EDITION OF THE N.M. STANDARD SPECIFICATIONS FOR PUBLIC WORKS FOR A LIST OF ACCEPTABLE SEWER MAIN MATERIALS & PIPE.
3. MINIMUM 4'-0" COVER UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- ⑤ 4. MAXIMUM MANHOLE SPACING 400 FEET.
5. THIS TYPE OF INSTALLATION WILL ONLY BE USED IF THE DOWN STREAM MANHOLE IS LESS THAN 100 FEET FROM END OF LINE.
6. MANHOLE WILL BE BUILT AT END OF MAINLINE UNLESS ALTERNATE IS APPROVED BY CITY ENGINEER OR BY DESIGNEE.
- ① ③ 7. STUB OUT FOR FUTURE MAINLINE EXTENSION SHALL BE CONST. A MAX. OF 5' WITH BELL END AND FACTORY PLUG BEYOND LAST MANHOLE.

ALTERNATE

WHEN APPROVED
BY CITY ENGINEER
(FOR TEMPORARY CONDITION)



REV.	DATE
①	12/09/02
②	11/19/04
③	12/02/05
④	01/27/06
⑤	12/27/06

CONSTRUCTION
STANDARDS

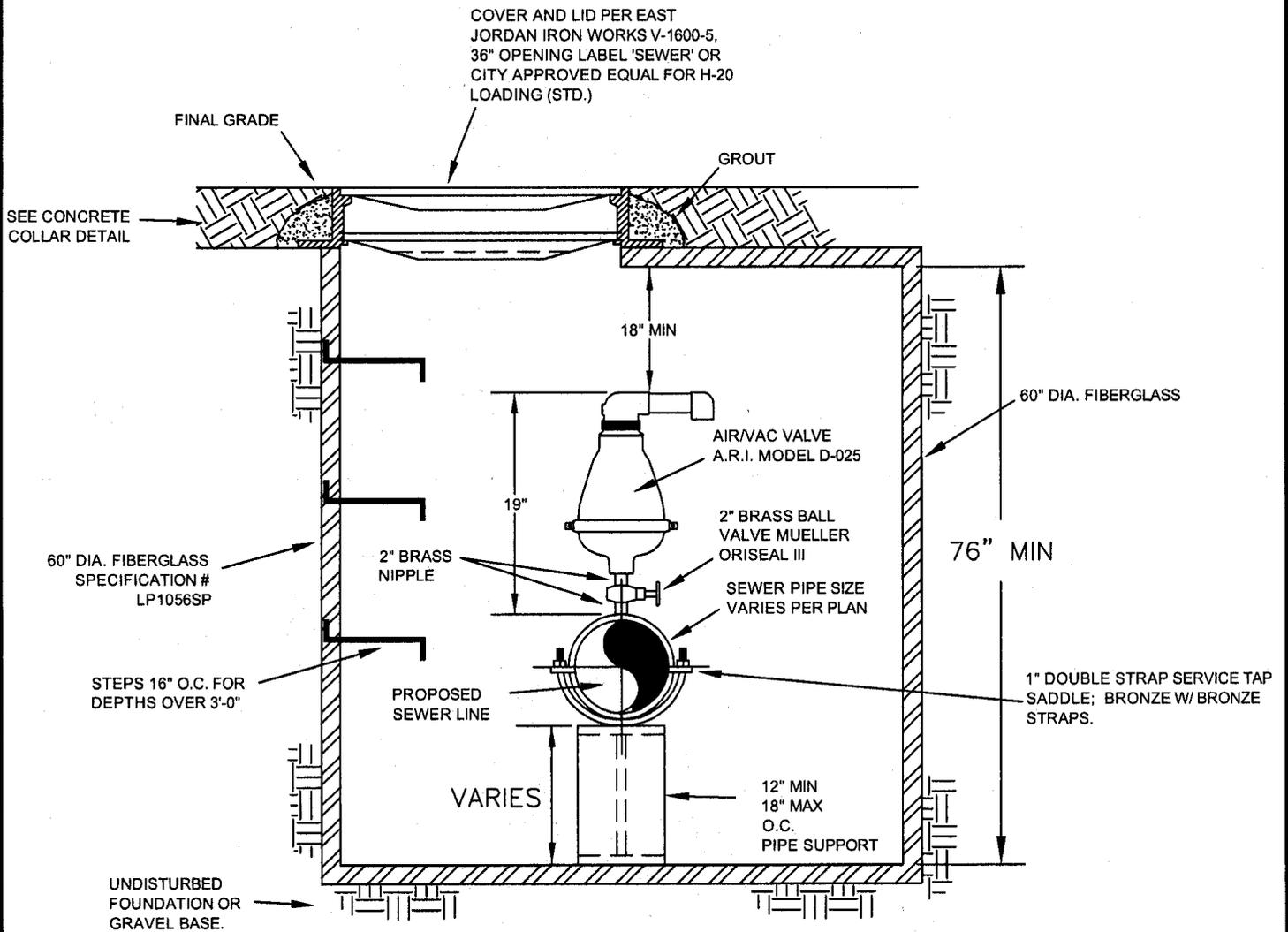
SANITARY SEWER MAINS

STANDARD No. D-116 SHEET 1 OF 1

CITY OF
FARMINGTON

PUBLIC
WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 4/15/08



NOTE:

FIBERGLASS SHALL BE A ONE PIECE UNIT
 MANUFACTURED BY L.F. MANUFACTURING
 INC., GIDDING TEXAS, 1-800-237-5791,
 OR APPROVED EQUAL.
 SEE SPECIFICATION FOR APPROVAL

REV	DATE
	8/13

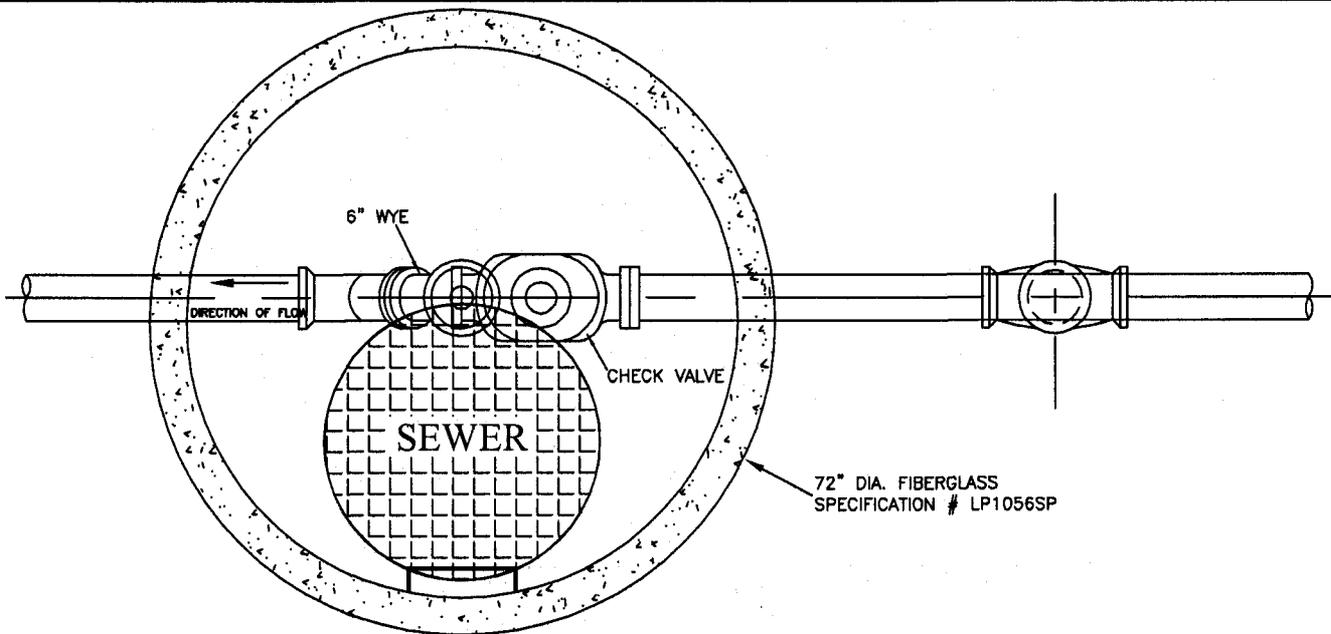
**CONSTRUCTION
STANDARDS**

**TYPICAL SANITARY
SEWER AIR RELIEF DETAIL**

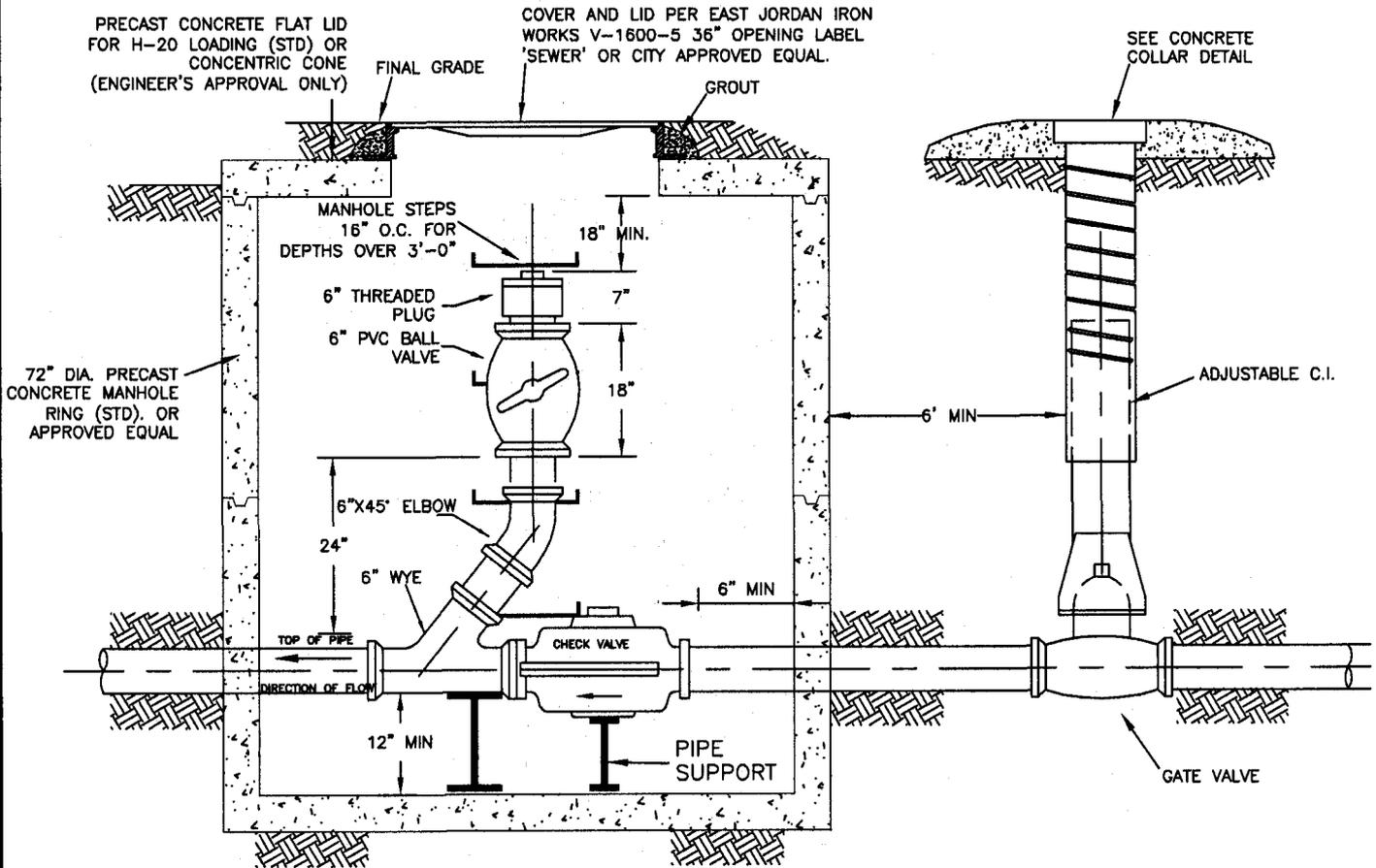
STANDARD No. D-117 SHEET 1 OF 1

CITY OF
FARMINGTON
PUBLIC WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 8/27/13



PLAN VIEW



SECTION VIEW

REV.	DATE
	8/13

CONSTRUCTION
STANDARDS

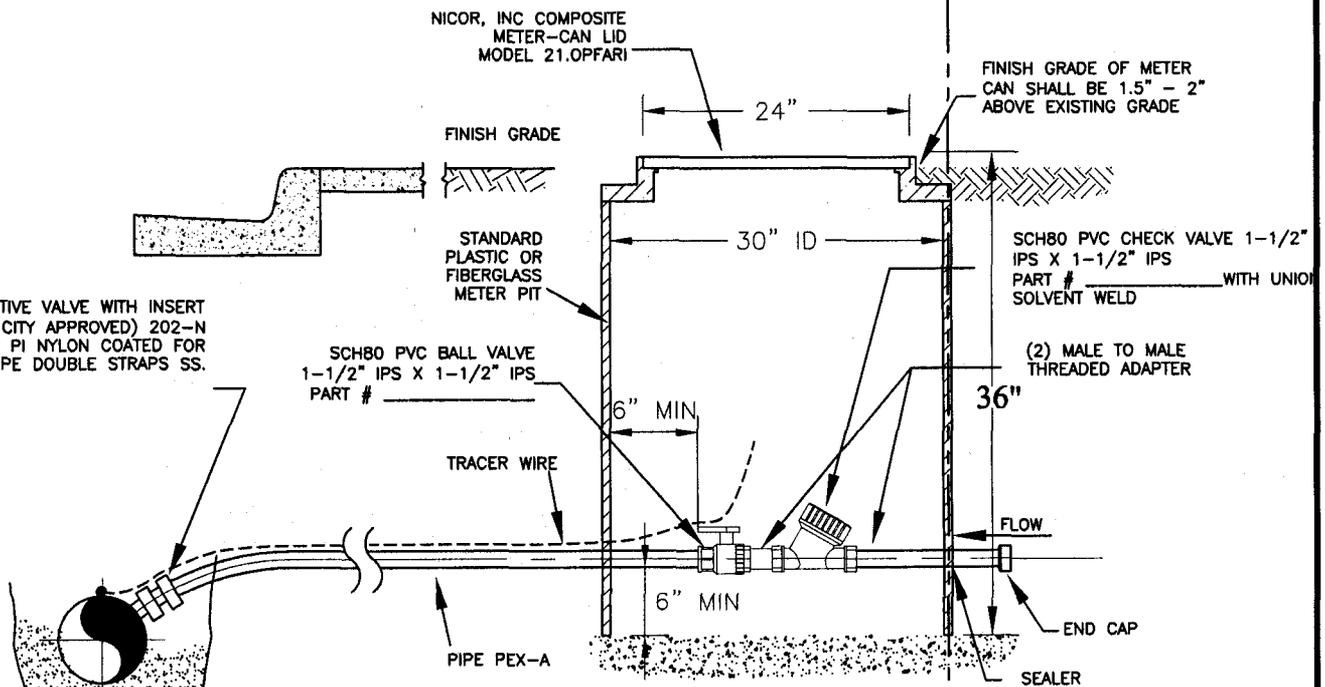
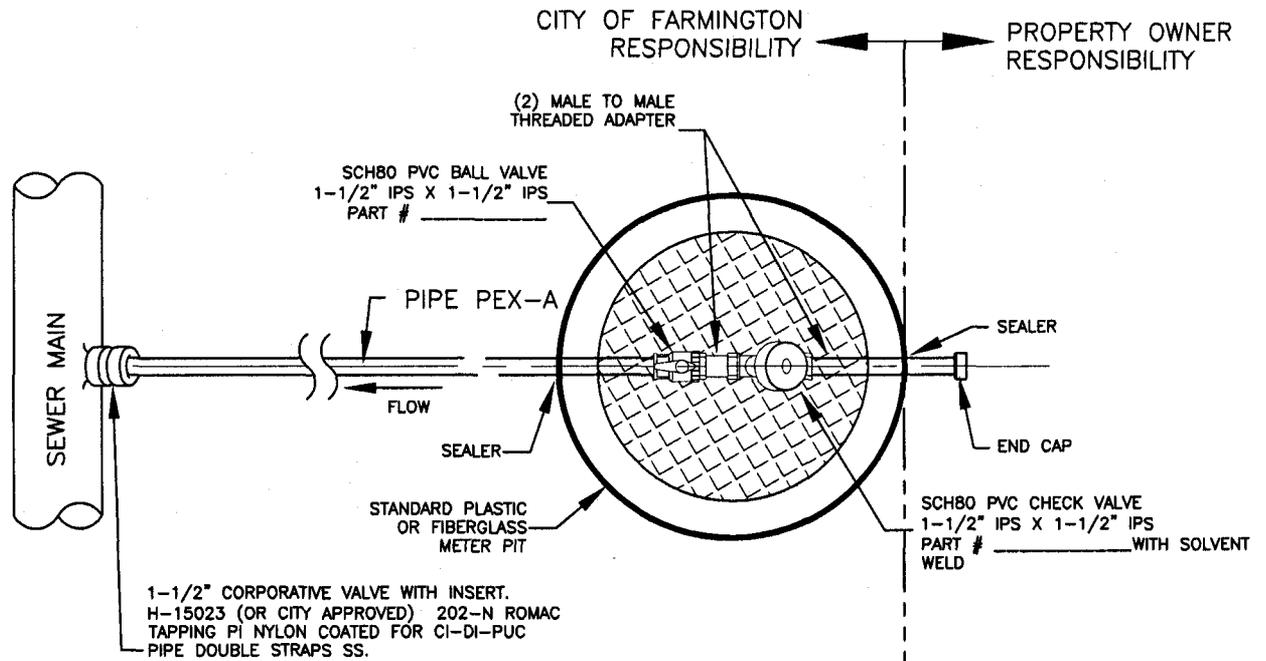
**PRESSURE SANITARY
SEWER CLEANOUT DETAIL**

STANDARD No. D-118 SHEET 1 OF 1

CITY OF
FARMINGTON
PUBLIC WORKS
DEPARTMENT

APPROVED *M. P. A.* DATE 8/27/13

REV	DATE
	8/13



1-1/2" CORPORATIVE VALVE WITH INSERT
H-15023 (OR CITY APPROVED) 202-N
ROMAC TAPPING PI NYLON COATED FOR
CI-DI-PUC PIPE DOUBLE STRAPS SS.

- NOTE:**
1. CONTRACTOR SHALL REMOVE END CAP AND CONNECT TO EXISTING 1-1/2" CAP.M
 2. CONTRACTOR SHALL BORE A HOLE INTO EXISTING BOX TO RUN PIPE THROUGH AND PROVIDE SEALER TO PREVENT WATER SEEPAGE.
 3. ONLY CENTRAL PUMPS ALLOWED FOR CONNECTIONS.

CONSTRUCTION STANDARDS

1-1/2" PRESSURE SANITARY SEWER LATERAL DETAIL

CITY OF FARMINGTON

PUBLIC WORKS DEPARTMENT

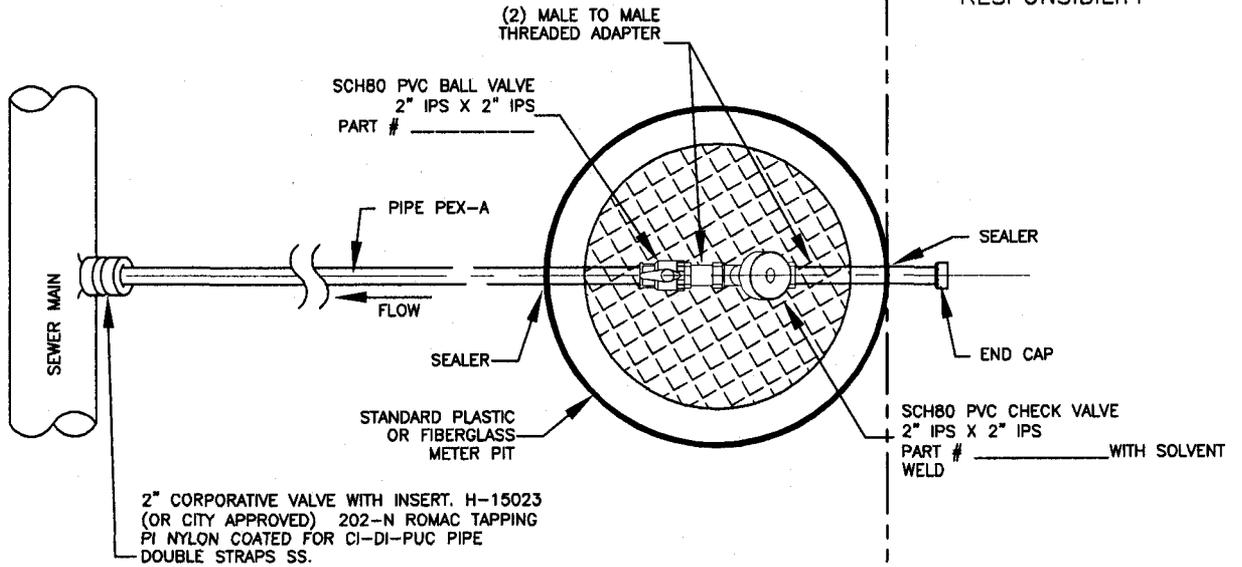
STANDARD No. D-119 SHEET 1 OF 1

APPROVED *[Signature]* DATE 8/27/13

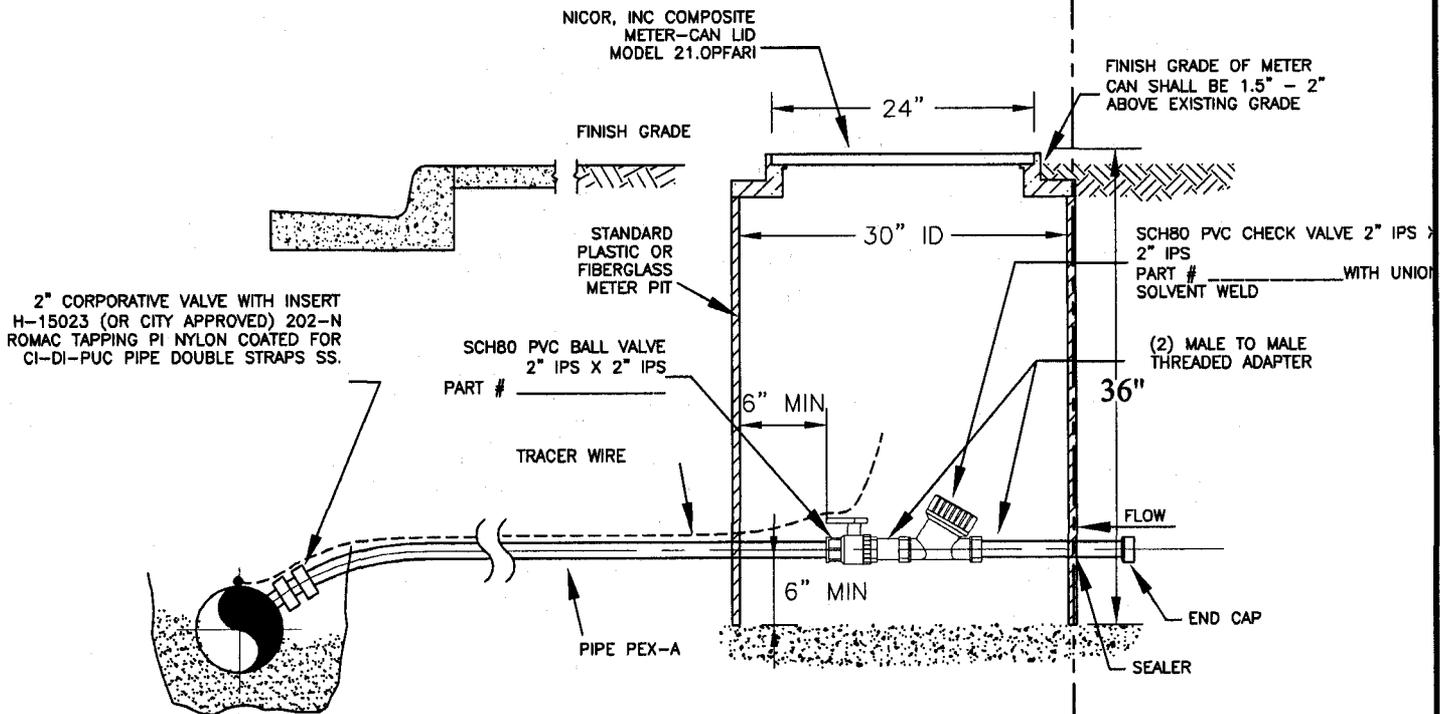
REV	DATE
	8/13

CITY OF FARMINGTON
RESPONSIBILITY

PROPERTY OWNER
RESPONSIBILITY



PLAN VIEW



SECTION VIEW

- NOTE:
1. CONTRACTOR SHALL REMOVE END CAP AND CONNECT TO EXISTING 2" CAP.M
 2. CONTRACTOR SHALL BORE A HOLE INTO EXISTING BOX TO RUN PIPE THROUGH AND PROVIDE SEALER TO PREVENT WATER SEEPAGE.
 3. ONLY CENTRAL PUMPS ALLOWED FOR CONNECTIONS.

CONSTRUCTION
STANDARDS

**2" PRESSURE SANITARY
SEWER LATERAL DETAIL**

STANDARD No. D-120 SHEET 1 OF 1

CITY OF
FARMINGTON
PUBLIC WORKS
DEPARTMENT

APPROVED *[Signature]* DATE 8/27/13