SPRINGFIELD WATER AND SEWER COMMISSION

STANDARD DETAILS

Version 4 – November 1, 2020
Revised: April 13, 2021

William E. Leonard, Commissioner
Vanessa Otero, Commissioner
Daniel Rodriguez, Commissioner

Springfield Water and Sewer Commission

Standard Detail Drawings

WATER DETAILS

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65. (W-16.1) WATER SERVICE CARD DETAIL

66. (W-17.0) SEASONAL WATER SERVICE DETAIL

67. (W-17.1) SEASONAL WATER SERVICE BASE DETAIL

68. (W-17.2) SEASONAL WATER SERVICE COVER DETAIL

SEWER DETAILS

69. (S-01.0) TRENCH DETAIL FOR SEWER PIPES

70. (S-02.0) PRECAST CONCRETE SEWER MANHOLE

71. (S-02.1) PRECAST CONCRETE SEWER PIPE CONNECTIONS

72. (S-02.2) END OF SEWER MAIN

73. (S-02.3) EXTERIOR DROP MANHOLE

74. (S-02.4) INTERIOR DROP MANHOLE

75. (S-02.51) 24-INCH X 4-INCH FRAME ONLY

76. (S-02.52) 24-INCH X 6-INCH FRAME ONLY

77. (S-02.53) 24-INCH X 8-INCH FRAME ONLY

78. (S-02.54) 26-INCH X 6-INCH FRAME ONLY

79. (S-02.55) 32-INCH X 6-INCH FRAME ONLY

80. (S-02.56) 32-INCH X 8 INCH FRAME ONLY

81. (S-02.61) 24-INCH STANDARD SEWER COVER

82. (S-02.62) 32-INCH STANDARD SEWER COVER

83. (S-02.63) 26-INCH REPLACEMENT SEWER COVER

84. (S-02.64) 30-INCH REPLACEMENT SEWER COVER

85. (S-02.65) 24-INCH COMPOSITE LOCKING COVER

86. (S-02.66) 32-INCH COMPOSITE LOCKING COVER

87. (S-03.0) UTILITY CROSSING DETAIL

88. (S-04.0) EXISTING SEWER MAIN TO BUILDING CONNECTION

89. (S-04.1) NEW SEWER MAIN TO BUILDING CONNECTION

90. (S-04.2) CLEAN OUT WITH SWEEP

91. (S-04.3) SEWER SERVICE CONNECTION WITH CHIMNEY GREATER THAN 12 FT DEEP

92. (S-04.4) BUILDING CONNECTION TO SEWER MAIN WITH CONFLICTS

93. (S-05.0) BUILDING AND MAINLINE SEWER REPAIR

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95. (S-08.0) STANDARD EXTERNAL GREASE INTERCEPTOR

96. (S-09.1) LOW PRESSURE SANITARY SERVICE/MAIN 2-1/2” VALVE BOX IN NON-PAVED AREAS

97. (S-09.2) LOW PRESSURE SANITARY SEWER PIPE TRENCH DETAIL

98. (S-09.3) LPSS SERVICE LATERAL DETAIL

99. (S-09.4) LOW PRESSURE SANITARY SEWER MAIN INLINE FLUSHING STRUCTURE DETAIL

100. (S-09.5) LOW PRESSURE SANITARY SEWER MAIN TERMINAL FLUSHING STRUCTURE DETAIL

Springfield Water and Sewer Commission

Standard Detail Drawings

MAP DETAILS

101. (M-01.0) SPRINGFIELD WATER MAINS SERVICE AREA MAP

102. (M-02.0) LUDLOW WATER MAINS SERVICE AREA MAP

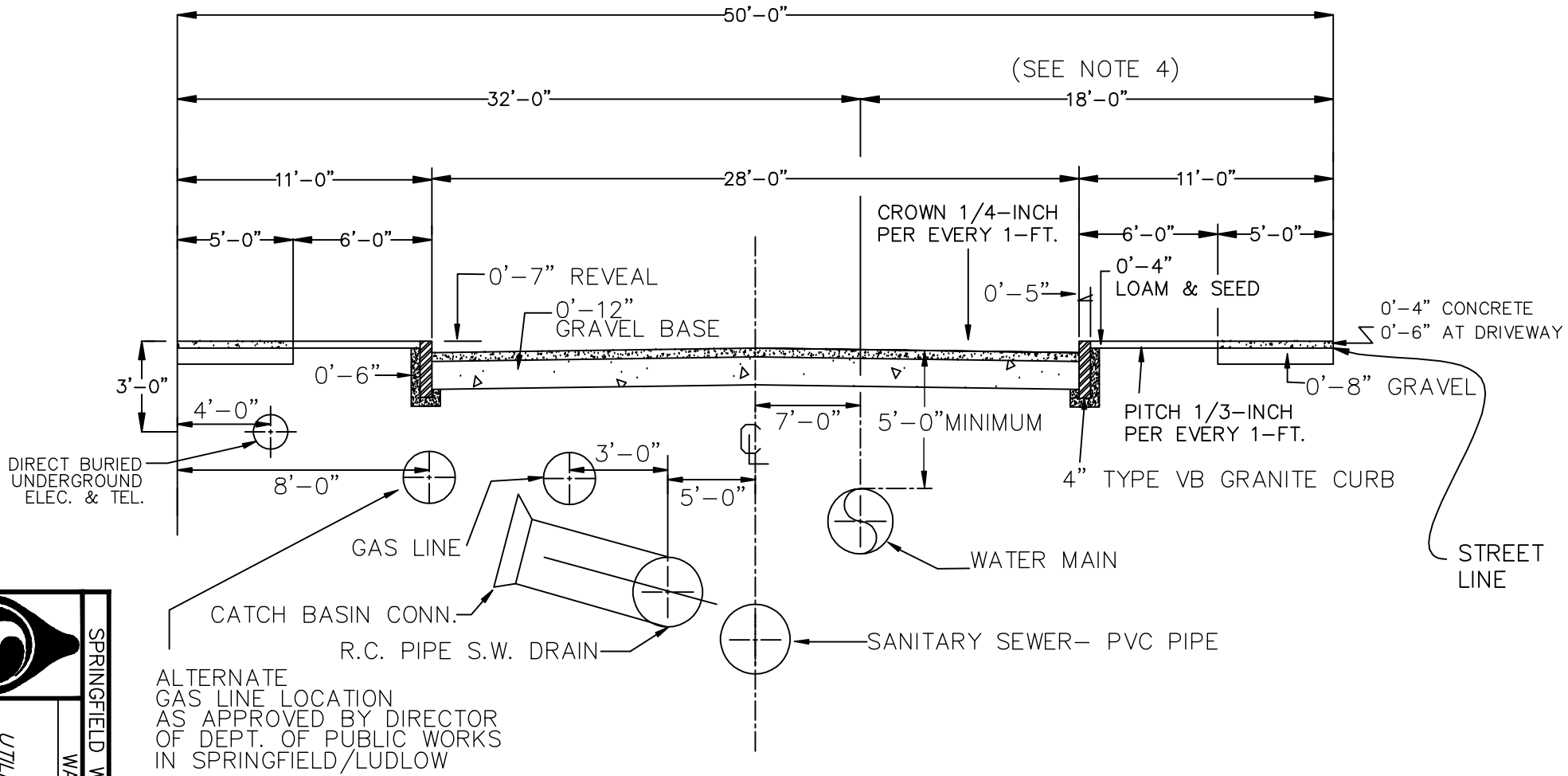
103. (M-03.0) WATER TRANSMISSION MAINS SERVICE AREA MAP COBBLE MOUNTAIN TO PROVIN MOUNTAIN

104. (M-03.1) WATER TRANSMISSION MAINS SERVICE AREA MAP PROVIN MOUNTAIN TO SPRINGFIELD

105. M-04.0) SPRINGFIELD SEWER MAINS SERVICE AREA MAP

Springfield Water and Sewer Commission

Standard Detail Drawings



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ON 50-FOOT WIDE STREETS WATER MAINS SHALL BE INSTALLED 18-FEET FROM THE NORTH OR EAST STREET LINE, ALL OTHER WIDTHS REQUIRE ENGINEERING & TECHNICAL SERVICES APPROVAL.

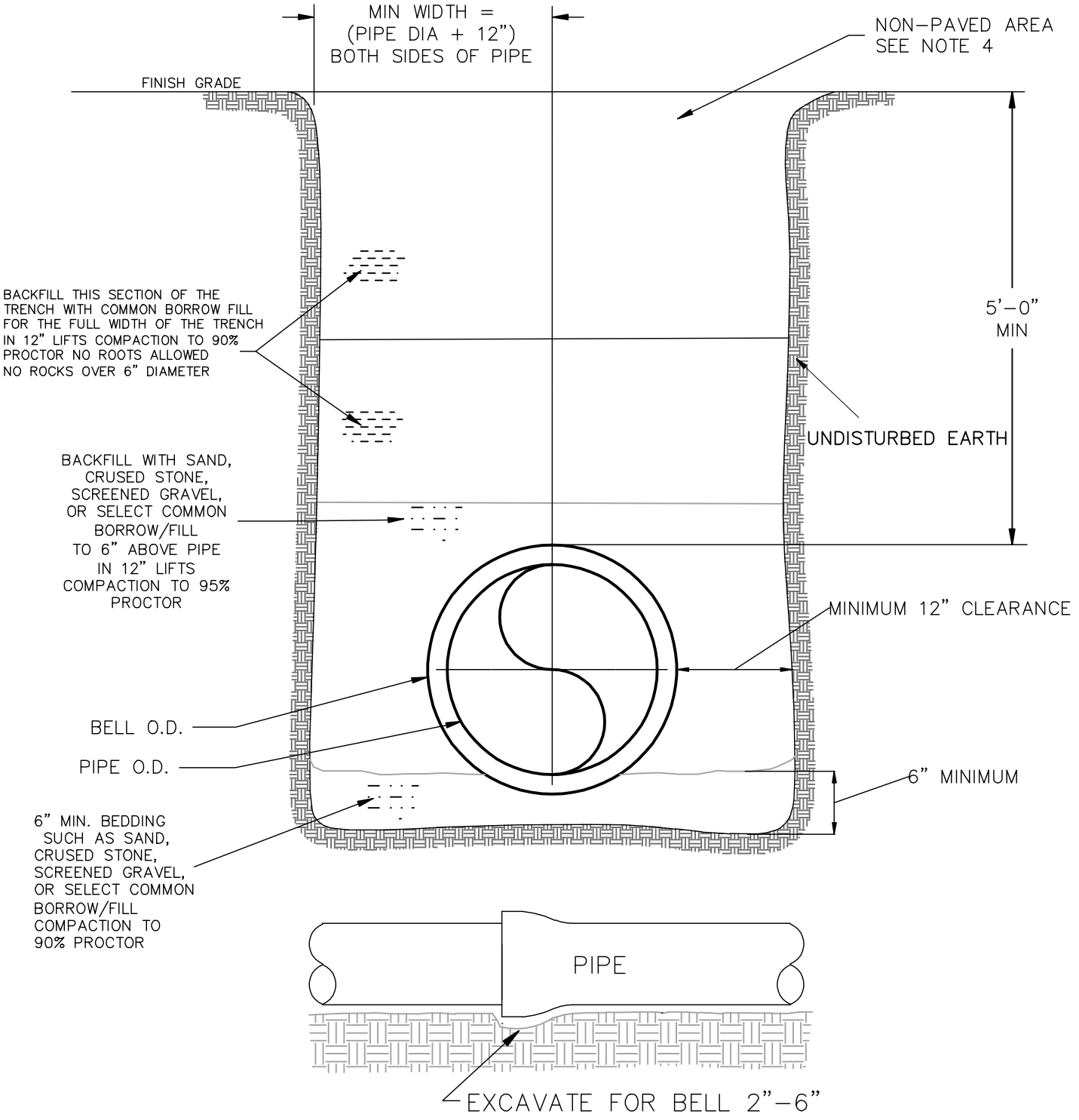
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-01.0

UTILITY SEPERATION DETAIL

SCALE: NTS

REV. DATE
4/1/08 MAB



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3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
5. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
6. FOR LOCATION OF WATER MAINS SEE DTAIL (W-01.0).

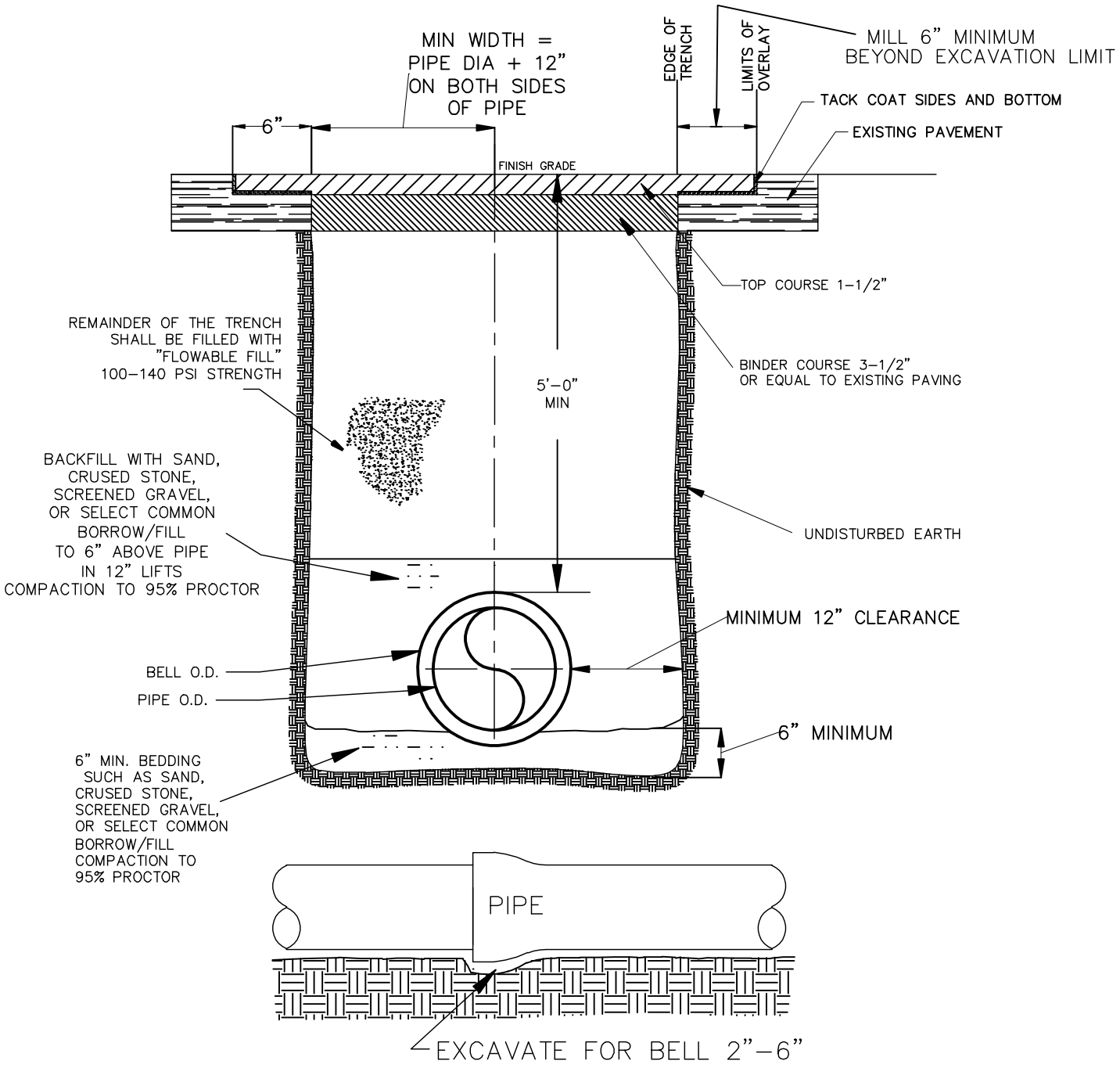
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-02.0

NON-PAVED AREA TRENCH DETAIL

SCALE: NTS

REV. DATE
4/1/08 MAB



EXISTING PAVEMENT
STRUCTURAL GRAVEL
BEDDING SAND
MILLED AND REPLACED WITH TOP COURSE
UNDISTURBED EARTH
EXCAVATED AND REPLACED WITH BINDER COURSE
FLOWABLE FILL
COMMON BORROW
TACK COAT

NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE
3. TO FINISH GRADE.
4. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
5. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
6. FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
7. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
8. REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
9. ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
10. SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
11. MILL TO REMOVE TOP COURSE.
12. LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
13. AFTER TRENCH WORK IS COMPLETED, FILL AROUND PIPE TO BOTTOM WITH GRADED GRAVEL FILL AND COMPACT IN 6-INCH LIFTS.
14. REPLACE LAYERS OF BINDER AND DEEP BASE.
15. TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
16. REPLACE TOP COURSE.
17. SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.

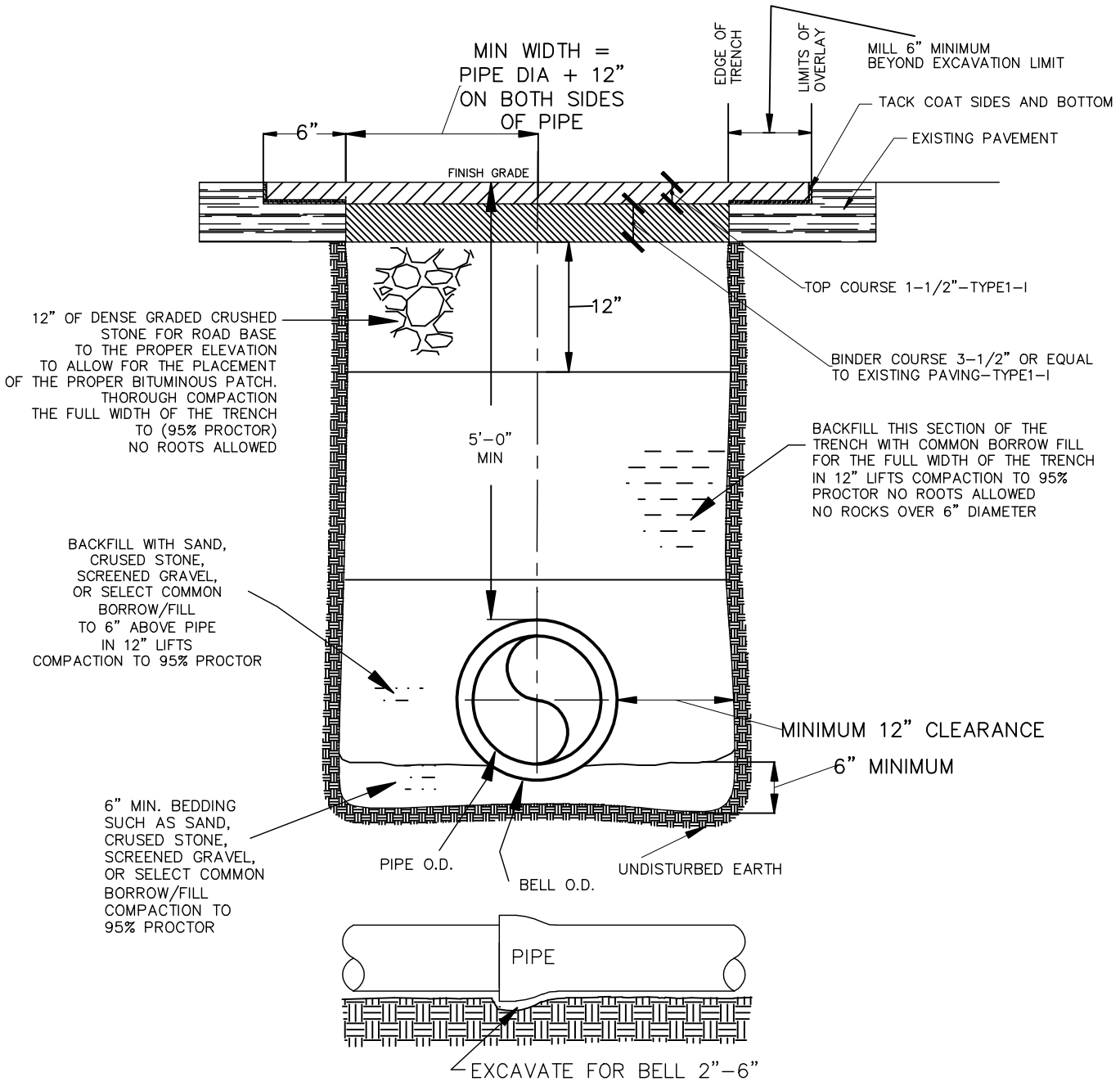
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-02.1

TRENCH BACKFILLING-METHOD 1 FOR LUDLOW ROADWAYS

SCALE: NTS

REV. DATE
4/1/08 MAB



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3. TO FINISH GRADE.
4. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
5. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
6. FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
7. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
8. REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
9. ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
10. SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
11. MILL TO REMOVE TOP COURSE.
12. LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
13. AFTER TRENCH WORK IS COMPLETED, FILL AROUND PIPE TO BOTTOM WITH GRADED GRAVEL FILL AND COMPACT IN 6-INCH LIFTS.
14. REPLACE LAYERS OF BINDER AND DEEP BASE.
15. TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
16. REPLACE TOP COURSE.
17. SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.

EXISTING PAVEMENT
EXCAVATED AND REPLACED WITH BINDER COURSE
DENSE GRADED CRUSHED STONE
COMMON BORROW
BEDDING SAND
TACK COAT
MILLED AND REPLACED WITH TOP COURSE
UNDISTURBED EARTH

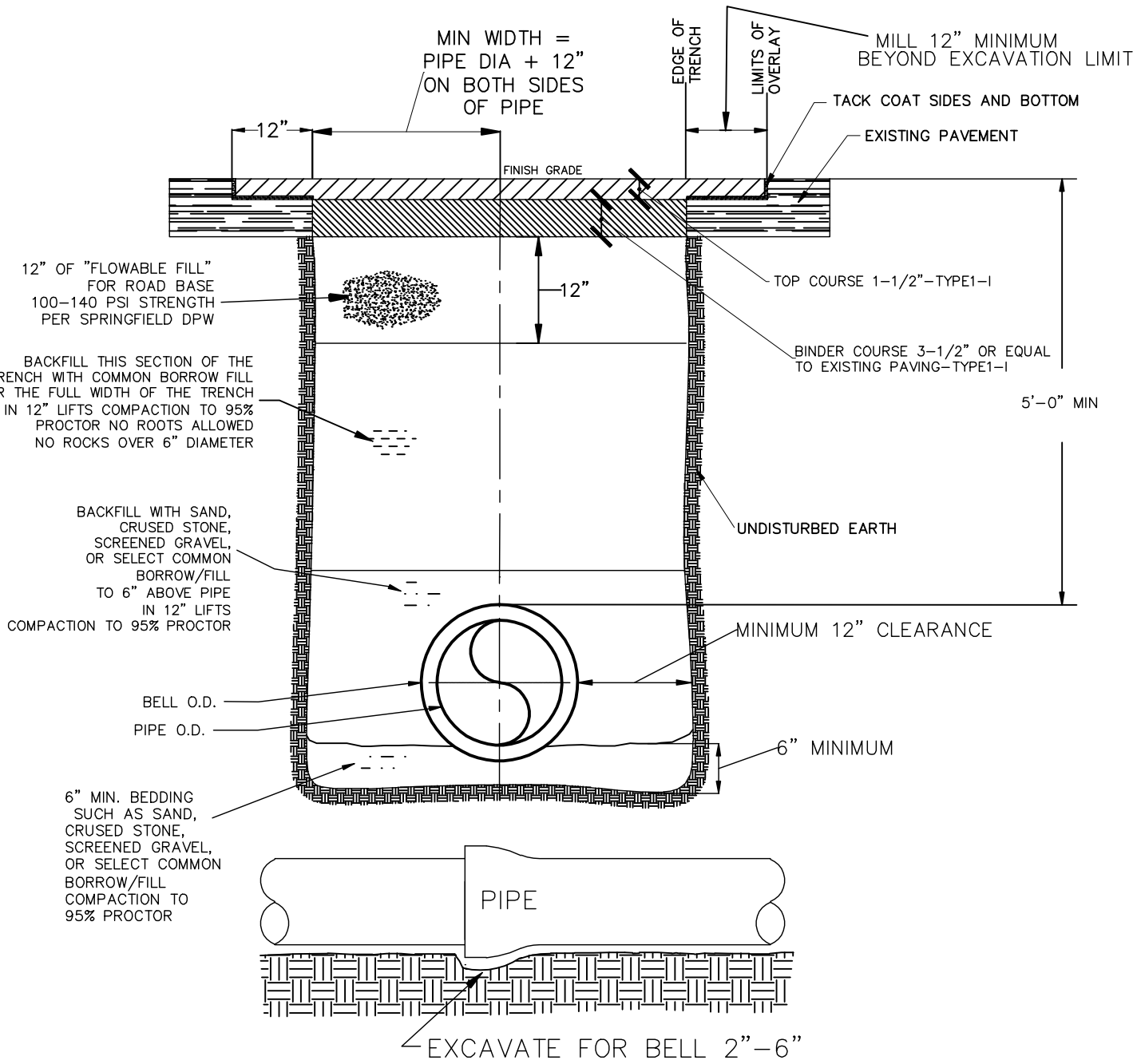
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-02.2

TRENCH BACKFILLING-METHOD 2 FOR LUDLOW ROADWAYS

SCALE: NTS

REV. DATE
4/1/08 MAB
6/18/08 MAB



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3. TO FINISH GRADE.
4. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
5. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
6. FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
7. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
8. REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
9. ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
10. SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
11. MILL TO REMOVE TOP COURSE.
12. LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
13. AFTER TRENCH WORK IS COMPLETED, FILL AROUND PIPE TO BOTTOM WITH GRADED GRAVEL FILL AND COMPACT IN 6-INCH LIFTS.
14. REPLACE LAYERS OF BINDER AND DEEP BASE.
15. TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
16. REPLACE TOP COURSE.
17. SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.

EXISTING PAVEMENT
BEDDING SAND
MILLED AND REPLACED WITH TOP COURSE
UNDISTURBED EARTH
EXCAVATED AND REPLACED WITH BINDER COURSE
FLOWABLE FILL
COMMON BORROW
TACK COAT

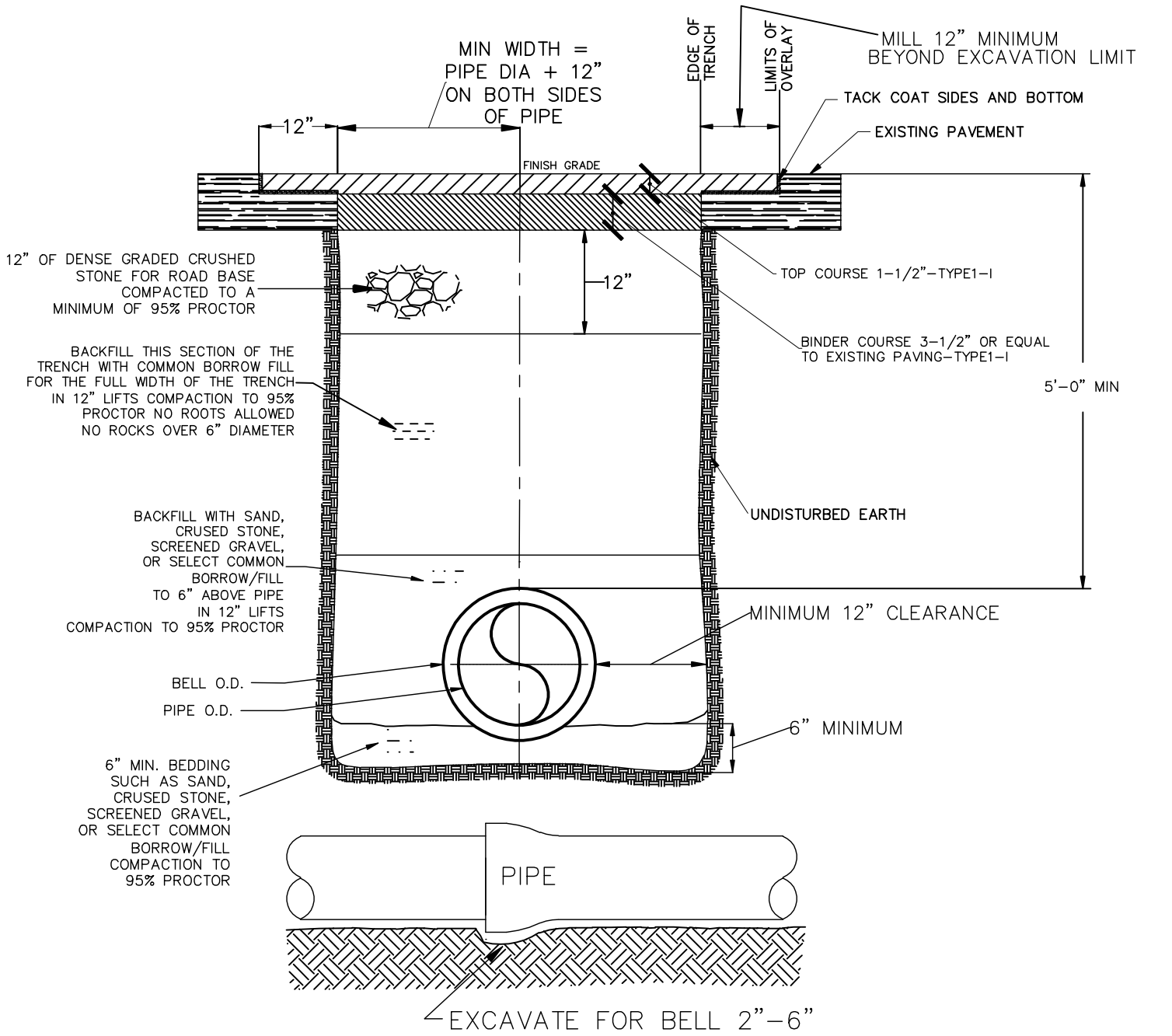
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-02.3

TRENCH BACKFILLING-METHOD FOR ARTERIAL STREETS IN SPRINGFIELD

SCALE: NTS

REV. DATE
4/1/08 MAB
6/18/08 MAB



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6. FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
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8. REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
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10. SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
11. MILL TO REMOVE TOP COURSE.
12. LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
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14. REPLACE LAYERS OF BINDER AND DEEP BASE.
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16. REPLACE TOP COURSE.
17. SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.

EXISTING PAVEMENT
EXCAVATED AND REPLACED WITH BINDER COURSE
DENSE GRADED CRUSHED STONE
COMMON BORROW
BEDDING SAND
TACK COAT
MILLED AND REPLACED WITH TOP COURSE
UNDISTURBED EARTH

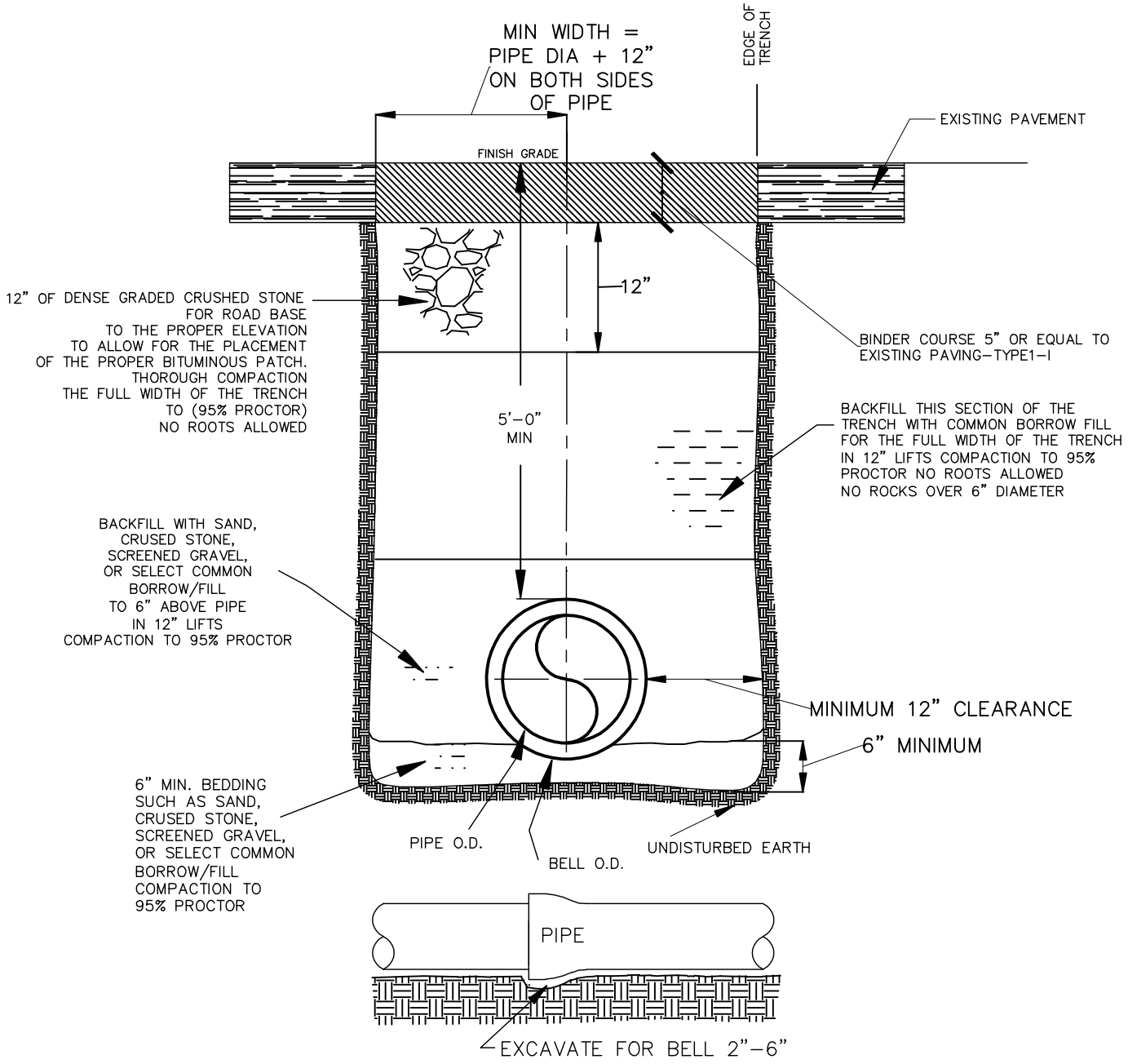
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-02.4

TRENCH BACKFILLING-METHOD FOR RESIDENTIAL STREETS IN SPRINGFIELD

SCALE: NTS

REV. DATE
4/1/08 MAB
6/18/08 MAB



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EXISTING PAVEMENT
EXCAVATED AND REPLACED WITH BINDER COURSE
DENSE GRADED CRUSHED STONE
COMMON BORROW
BEDDING SAND
UNDISTURBED EARTH

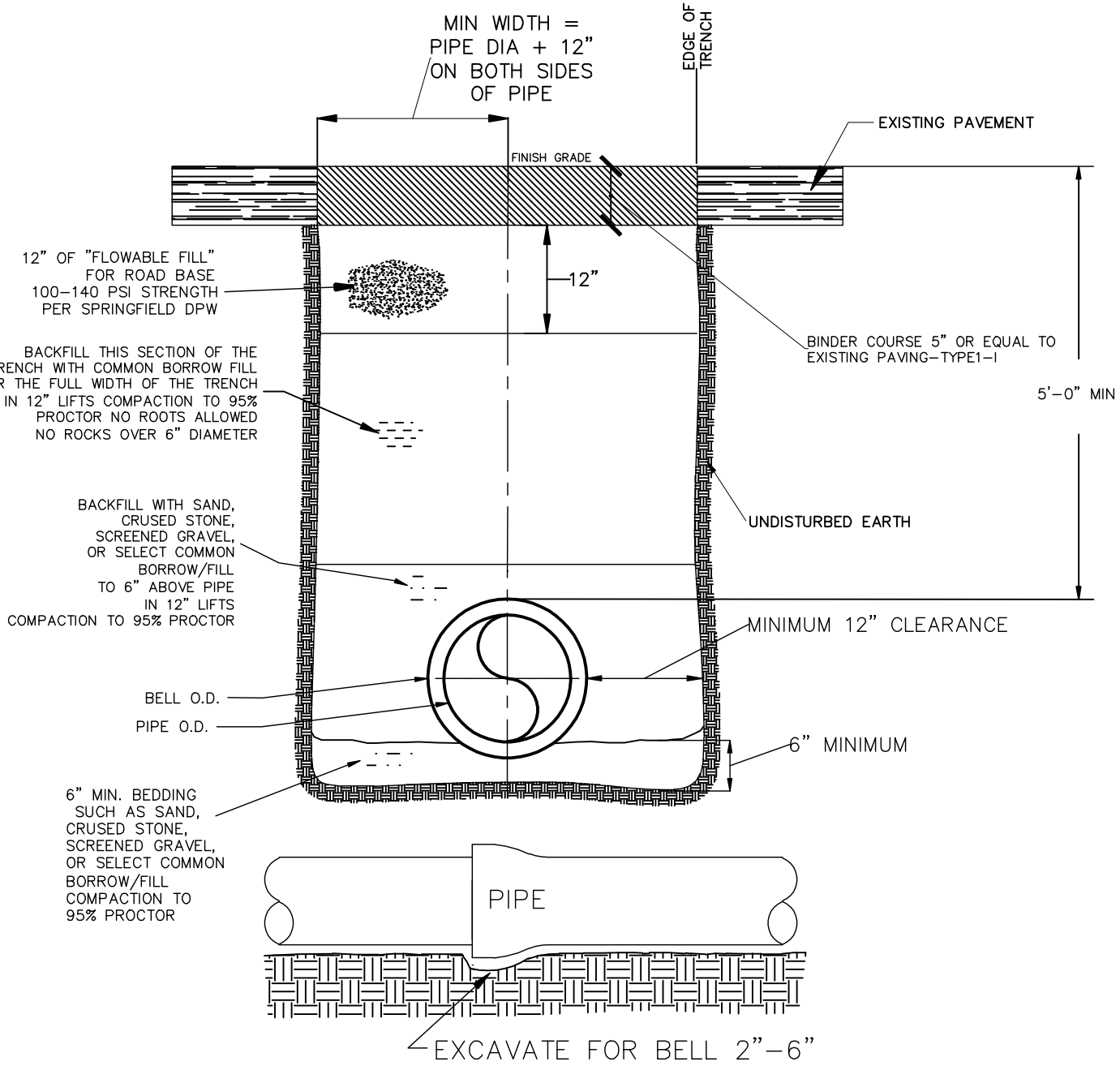
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-02.5

TEMPORARY TRENCH BACKFILLING-METHOD FOR ALL STREETS IN SPRINFIELD & LUDLOW ACCEPT SPRINFIELD ARTERIALS

SCALE: NTS

REV. DATE
6/18/08 MAB



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15. TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
16. REPLACE TOP COURSE.
17. SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.

EXISTING PAVEMENT
EXCAVATED AND REPLACED WITH BINDER COURSE
BEDDING SAND
FLOWABLE FILL
UNDISTURBED EARTH
COMMON BORROW

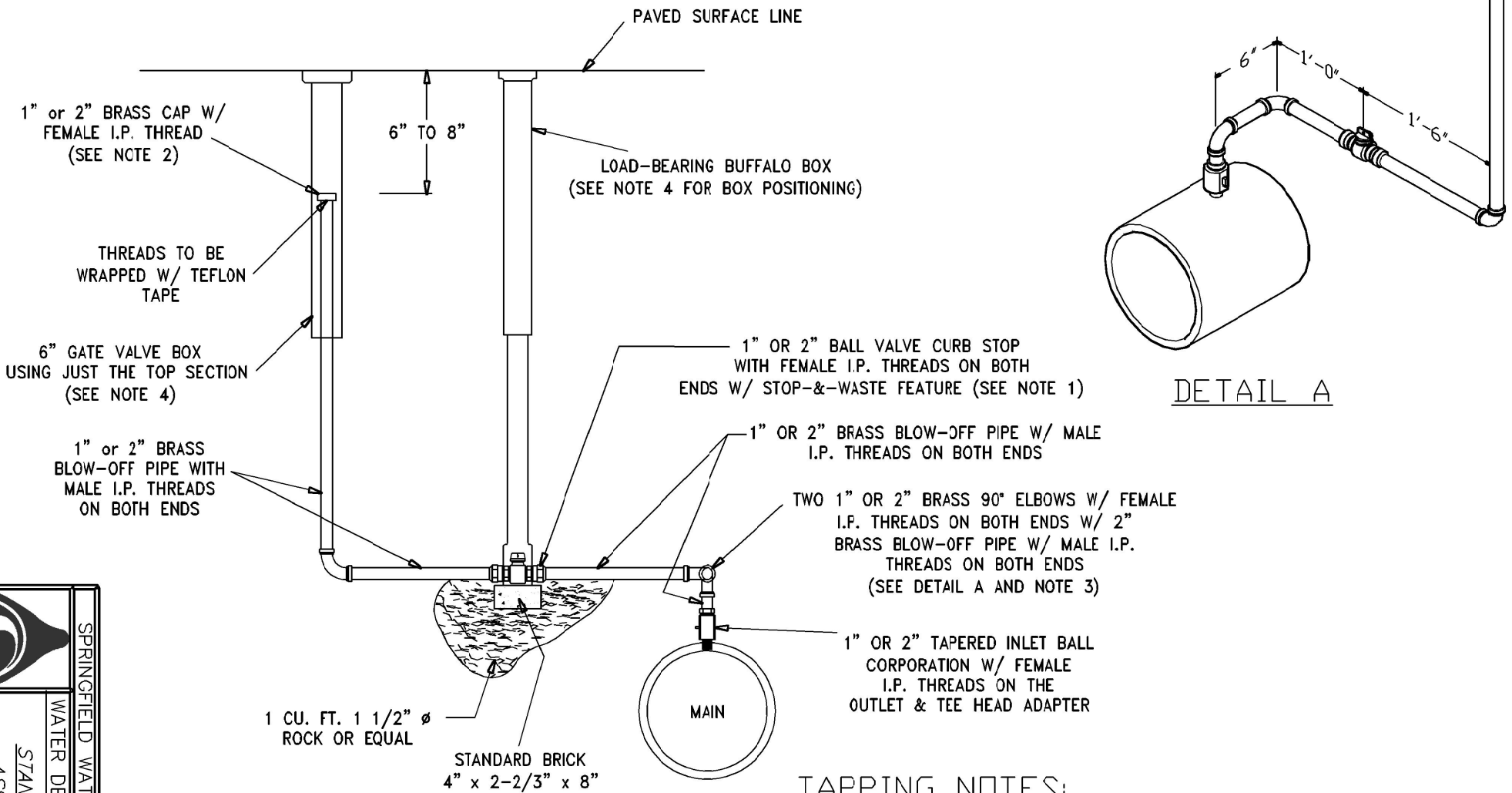
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–02.6

TEMPORARY TRENCH BACKFILLING–METHOD FOR ALL ARTERIAL STREETS IN SPRINGFIELD

SCALE: NTS

REV. DATE
6/18/08 MAB



DETAIL A

TAPPING NOTES:
FOR 1"=USE DIRECT TAPPING
FOR 2"=MUST USE SWSC SADDLE

NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELNES AND POLICIES.
2. INSTALL STOP-&-WASTE W/ DRAIN HOLE ON THE DOWNSTREAM SIDE (AWAY FROM WATER MAIN).
3. CAP IS TO BE INSTALLED HAND TIGHT.
4. SWING ELBOWS ALLOW FOR PIPE MOVEMENT.
5. VALVE BOX AND BUFFALO BOX ARE TO BE SET TO GRADE IN PAVEMENT AND BURIED 6" BELOW GRADE IN UNPAVED ROADS. RISER PIPE TO BE SET 2" BELOW VALVE BOX TOP IN UNPAVED ROADS.

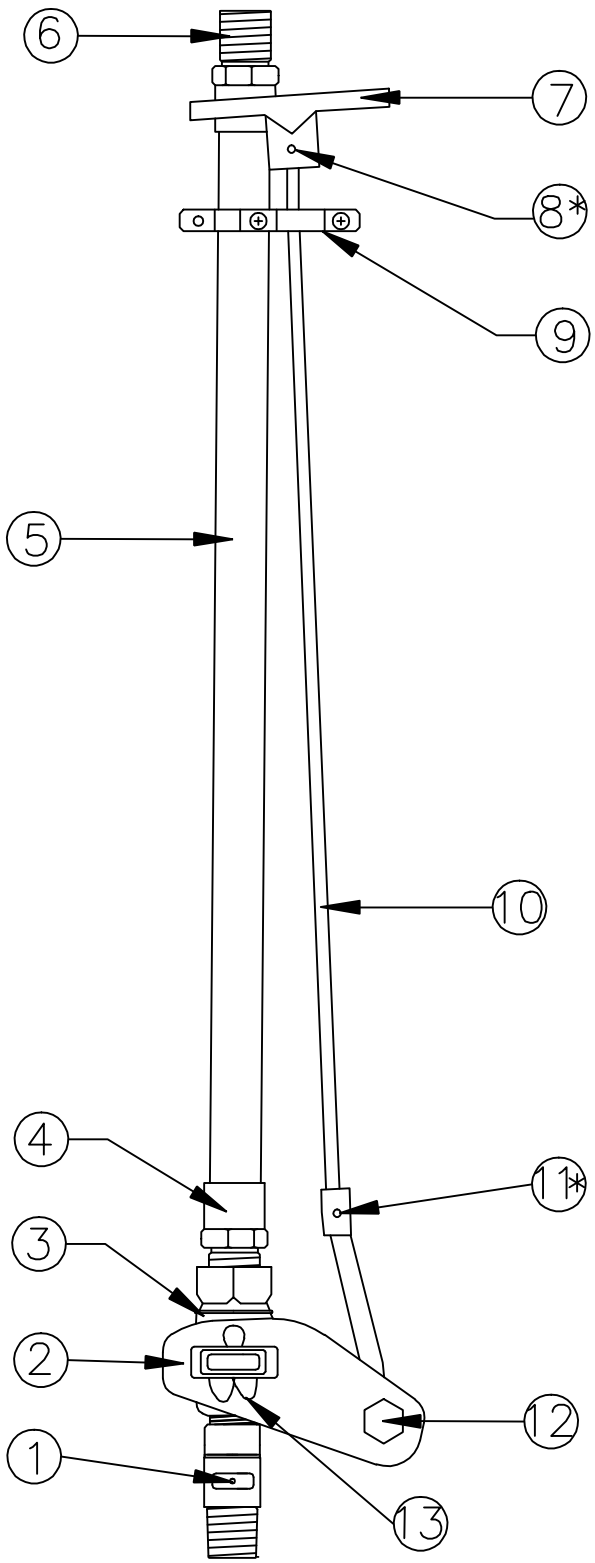
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-03.0

STANDARD AIR VALVE ASSEMBLY DETAIL

SCALE: NTS

REV.	DATE
	4/1/08 MAB



NO.	DESCRIPTION
1	BALL TYPE COPORATION: USE (Mueller B25008) OR APPROVED EQUAL. AWWA/CC X Male Iron Pipe (IP) Threads
2	LOWER OPERATING LEVER: Cast or Stamped Brass to Spec.
3	BALL TYPE CURB STOP: FOR 1" AIR VALVE: USE (FORD B11-444SW) OR APPROVED EQUAL. FOR 2" AIR VALVE: USE (FORD B11-777SW) OR APPROVED EQUAL. Female Iron Pipe (IP) Threads Both Ends and Stop and Waste on the Riser Side of Stop.
4	LOWER MALE ADAPTER: Copper (Domestic)
5	RISER: Copper Type L (Domestic)
6	UPPER MALE ADAPTER: Copper (Domestic)
7	T-HANDLE: Cast Brass
8*	OPERATING ROD T-HANDLE SECUREMENT: Stainless Steel Roll Pin
9	ROD TO RISER CONNECTION: Split Ring (By Size of Riser), Attached to ½" Split Ring by Coated ⅜"-16 x 1 ¼" Set Screw and Stainless Steal ⅜" Spacer Nut
10	OPERATING ROD: Brass Round (CDA 360, ASTM B-16)
11*	LOWER MECHANISM SECUREMENT: Stainless Steel Roll Pin
12	3/8" x 1/2" STAINLESS STEEL BOLT: With Nylock Safety Nut
13	LOWER LEVEL TO VALVE COTTER PIN: Marine Type Brass

NOTE:
* - VISUALLY OBSTRUCTED

*USE OF THIS DEVICE REQUIRES APPROVAL BY THE SWSC PRIOR TO INSTALLATION

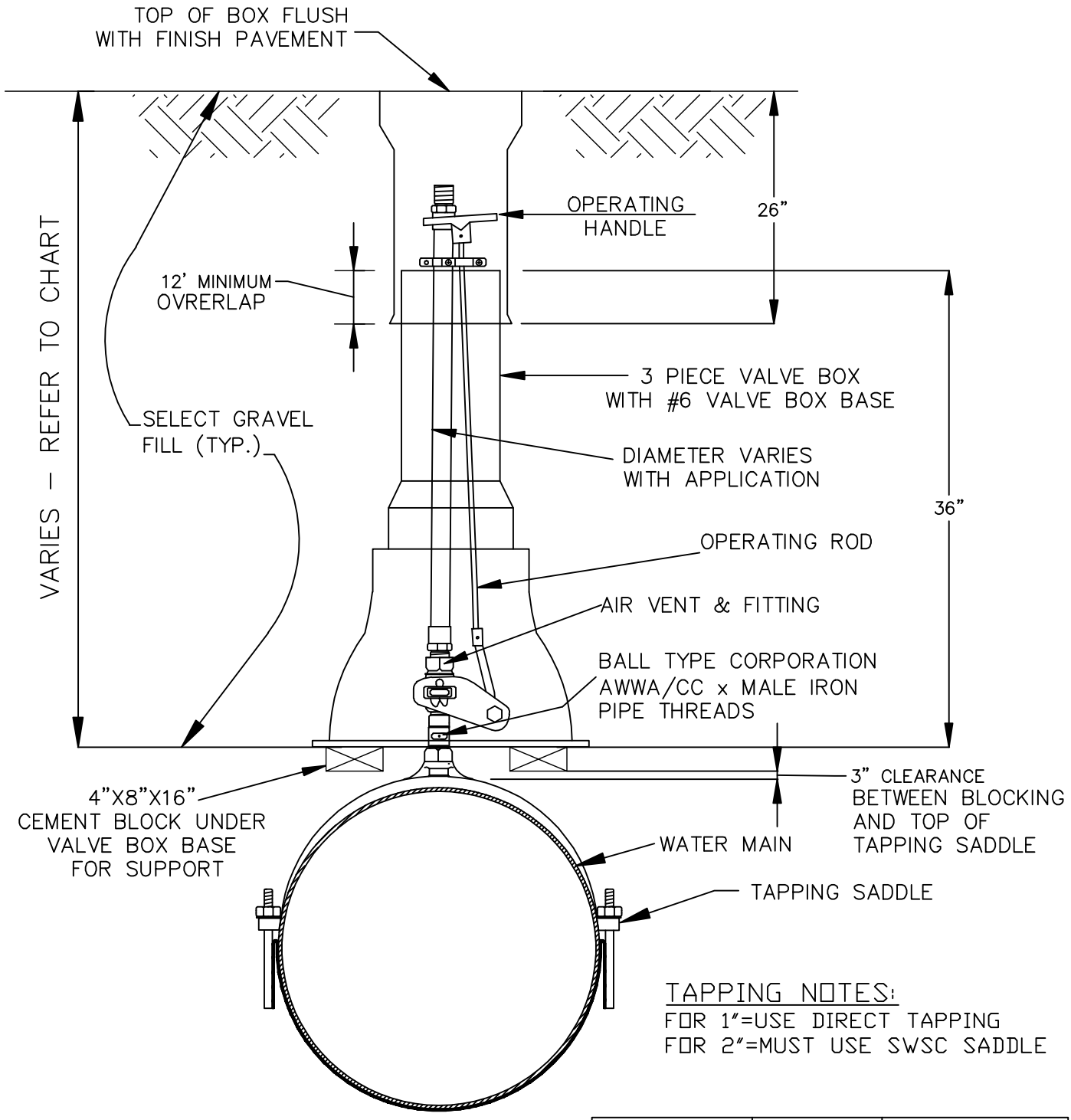
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-03.1

AIR VALVE
ONE PIECE ASSEMBLY DETAIL

SCALE: NTS

REV. DATE
4/1/08 MAB



TAPPING NOTES:
FOR 1"=USE DIRECT TAPPING
FOR 2"=MUST USE SWSC SADDLE

VALVE DIAMETER	PIPE LENGTH	REQUIRED COVER
1"	30"	4.0'
1"	36"	4.5'
1"	42"	5.0'
2"	30"	4.0'
2"	36"	4.5'
2"	42"	5.0'
CUSTOM	*CUSTOM*	*AS REQUIRED BY ENGINEER*

*USE OF THIS DEVICE REQUIRES APPROVAL BY THE SWSC PRIOR TO INSTALLATION

NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND OLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

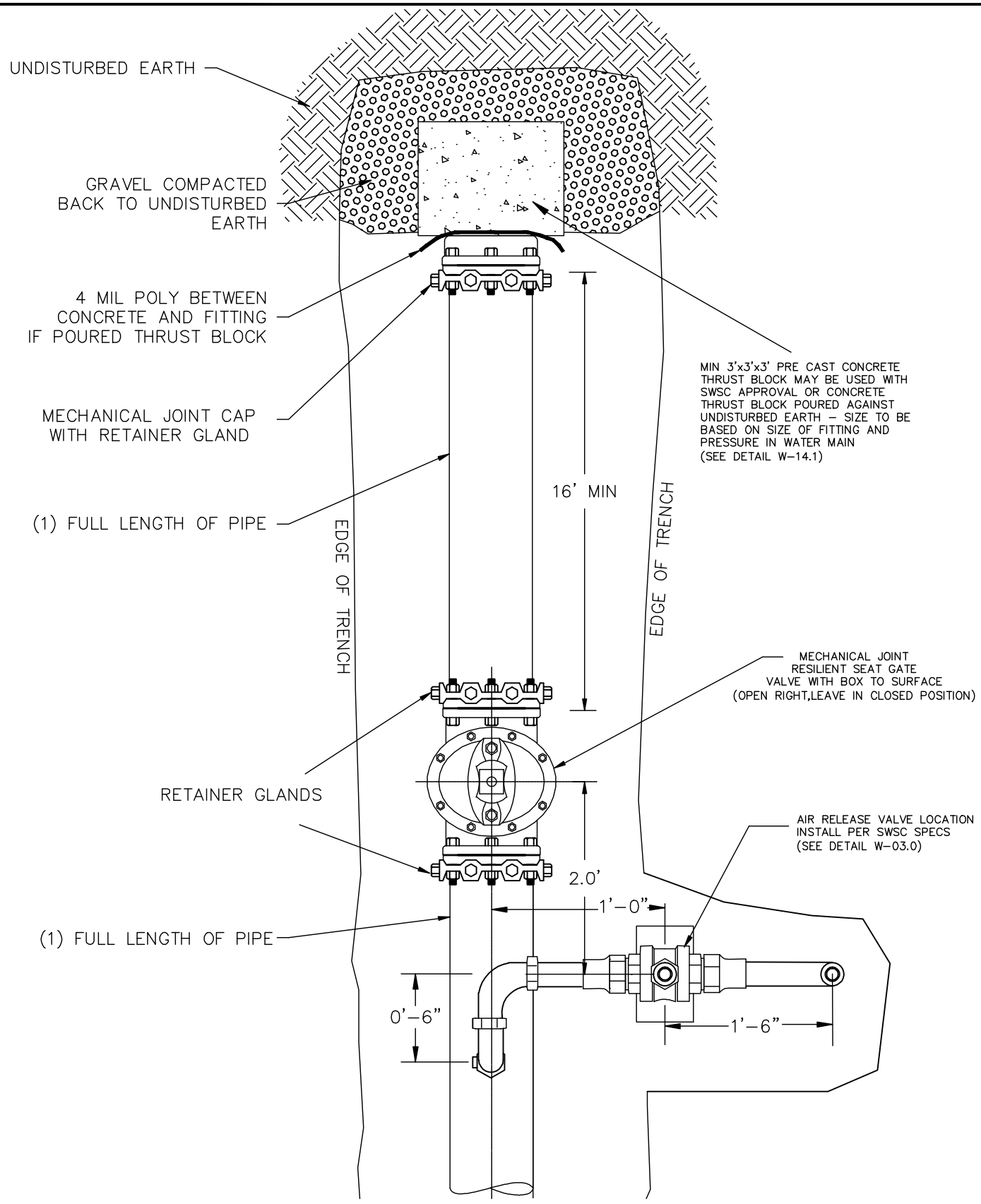
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-03.2

AIR VALVE
ONE PIECE ASSEMBLY DETAIL

SCALE: NTS

REV. DATE
4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W–02.0, W–02.1, W–02.2, W–02.3 OR W–02.4 FOR TRENCH DETAILS.

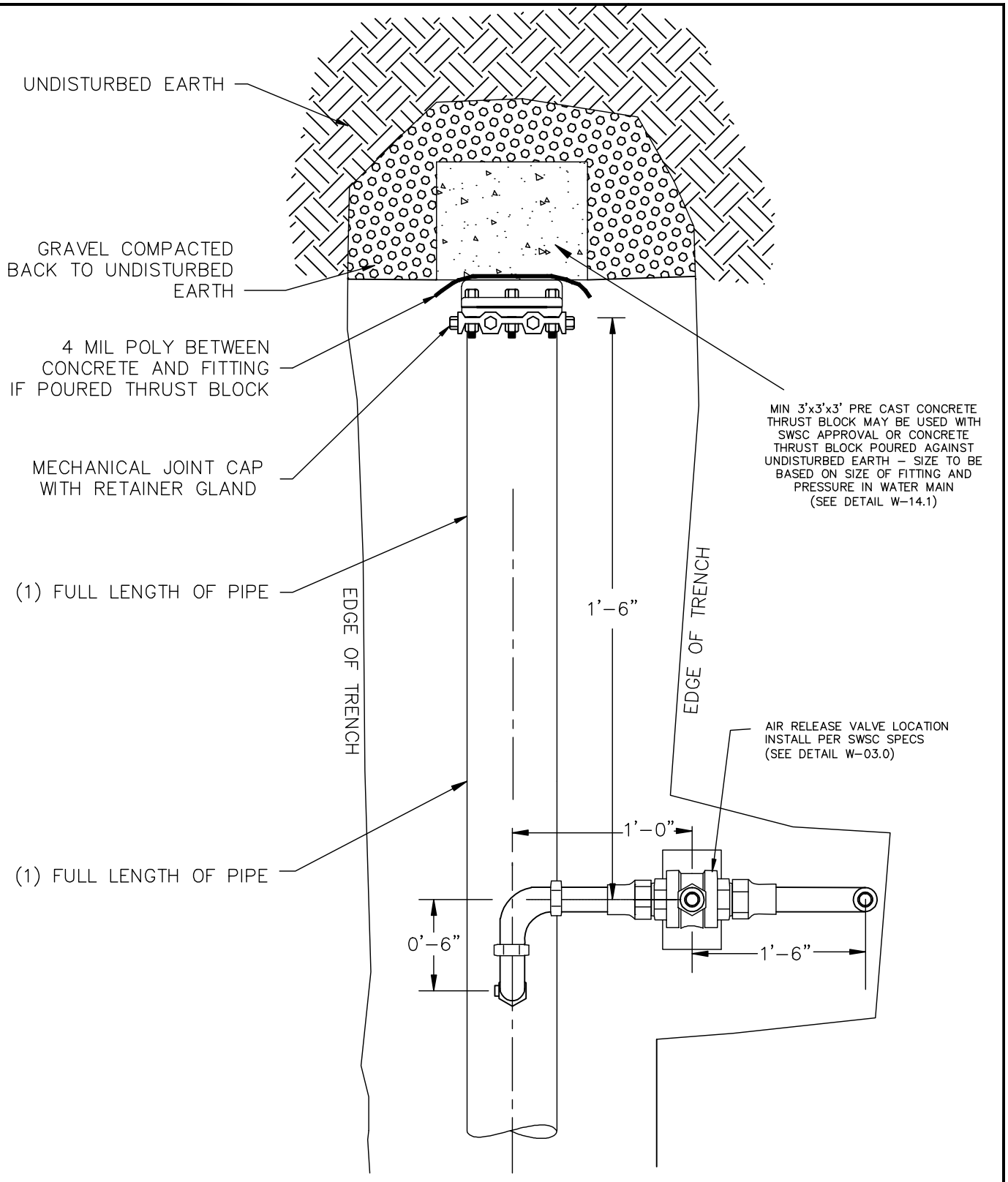
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–04.0

END OF MAIN

SCALE: NTS

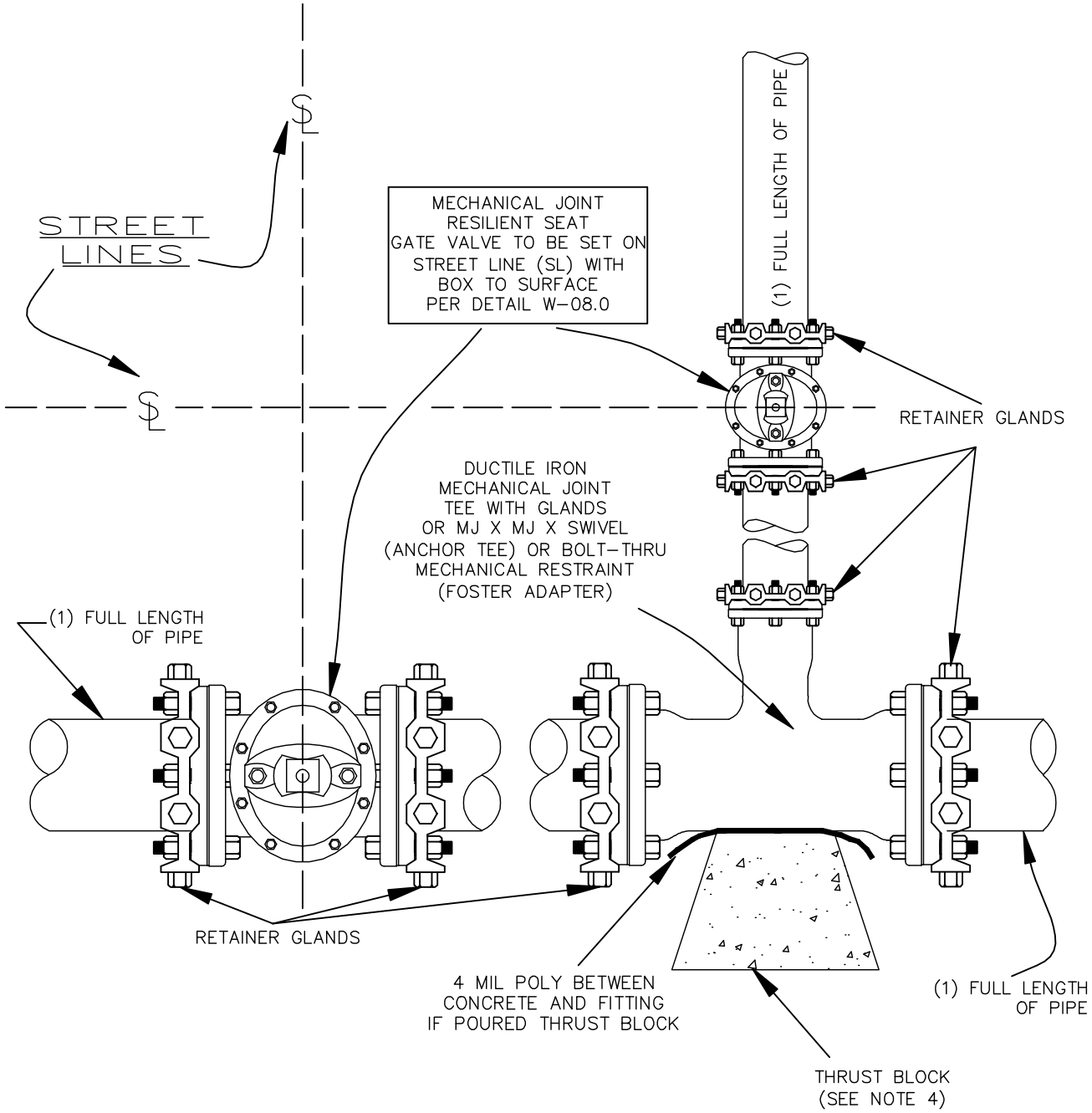
REV. DATE
4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W–02.0, W–02.1, W–02.2, W–02.3 OR W–02.4 FOR TRENCH DETAILS.

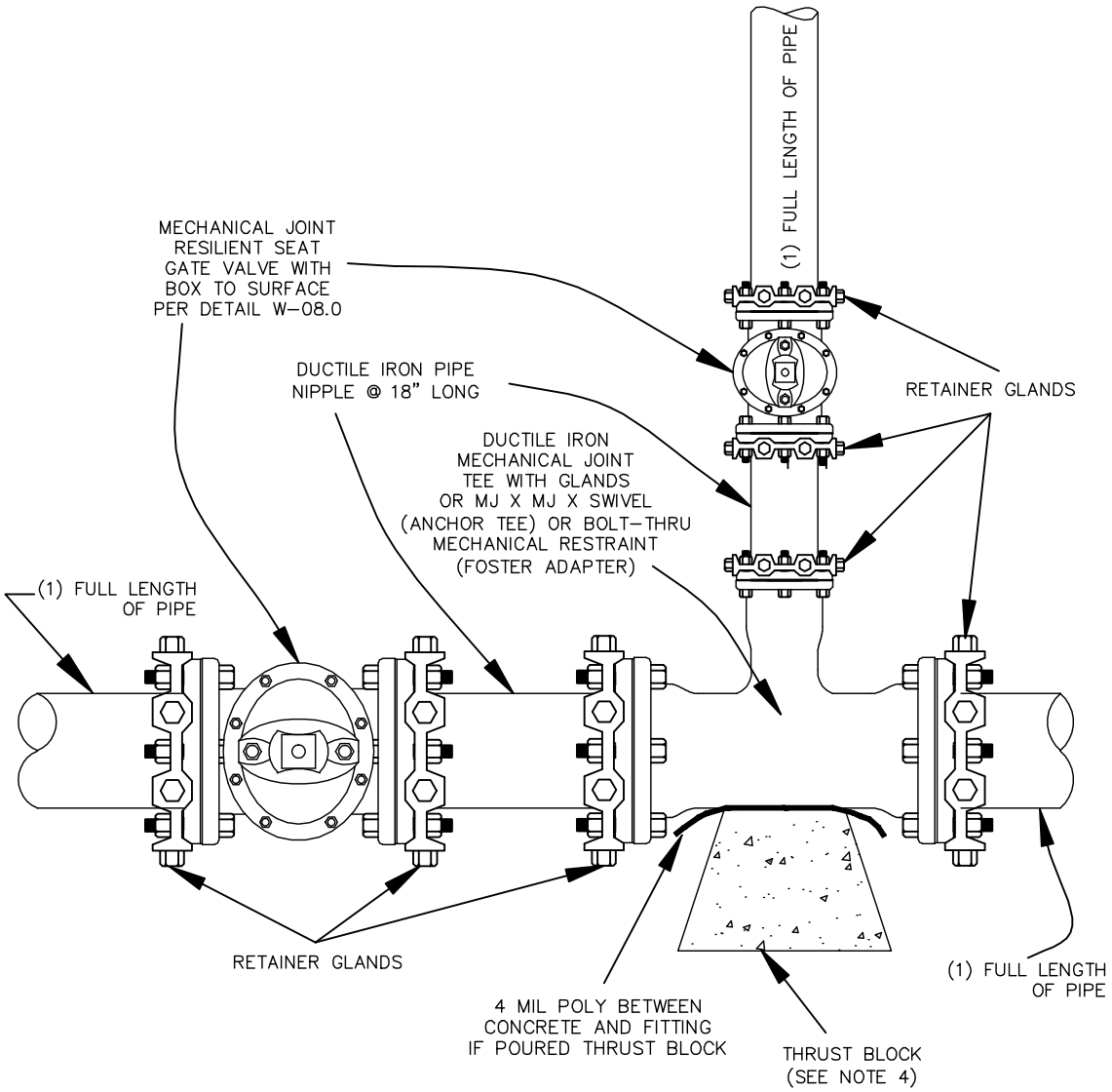
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W–04.1	REV. DATE
		4/1/08 MAB
	END OF MAIN DETAIL	
	SCALE: NTS	



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH SWSC APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH – SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN SEE DETAIL (W-14.1).
5. THE MECHANICAL JOINTS OF THE PIPES BETWEEN THE VALVES AND THE FITTINGS SHALL BE RESTRAINED VIA RETAINER GLANDS. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS. (SEE DETAIL ABOVE).
6. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-05.0	REV. DATE
		4/1/08 MAB
	STANDARD TEE INSTALLATION	
	SCALE: NTS	



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH SWSC APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH – SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN SEE DETAIL (W-14.1).
5. THE MECHANICAL JOINTS OF THE PIPES BETWEEN THE VALVES AND THE FITTINGS SHALL BE RESTRAINED VIA RETAINER GLANDS. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS. (SEE DETAIL ABOVE).
6. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

THIS DETAIL MUST BE APPROVED FOR USE BY THE S.W.S.C BEFORE IT CAN BE INSTALLED

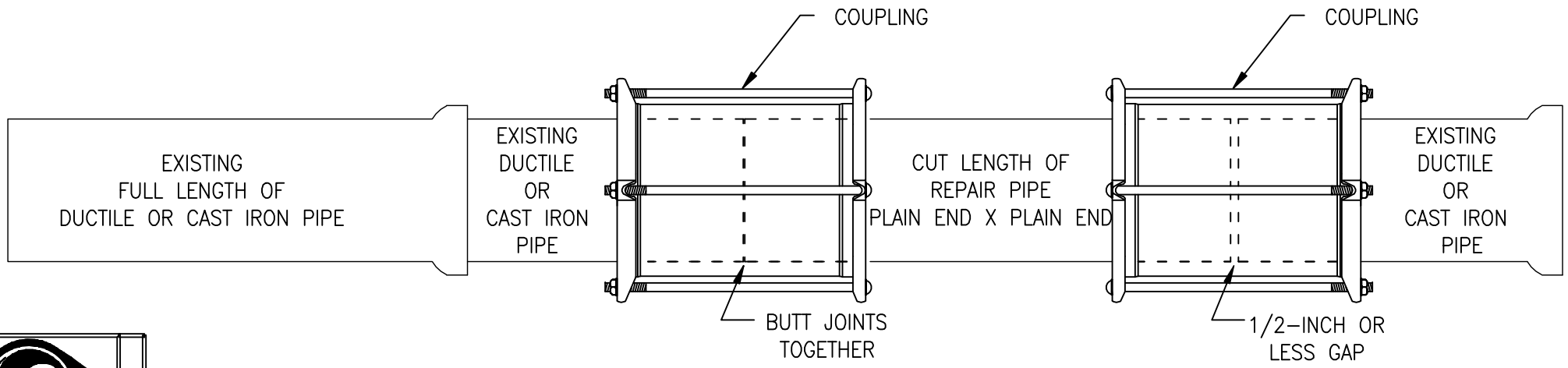
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-05.1

ALTERNATE 1
TEE INSTALLATION

SCALE: NTS

REV. DATE
4/1/08 MAB



SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–06.0

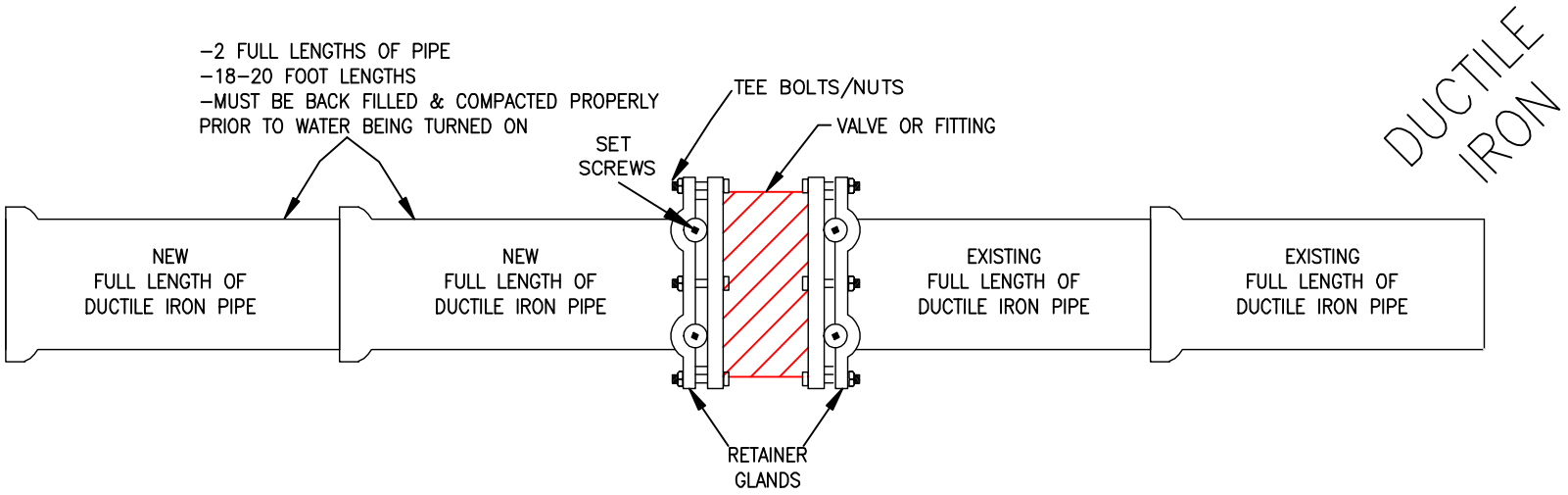
REPAIR TO EXISTING
WATER MAINS

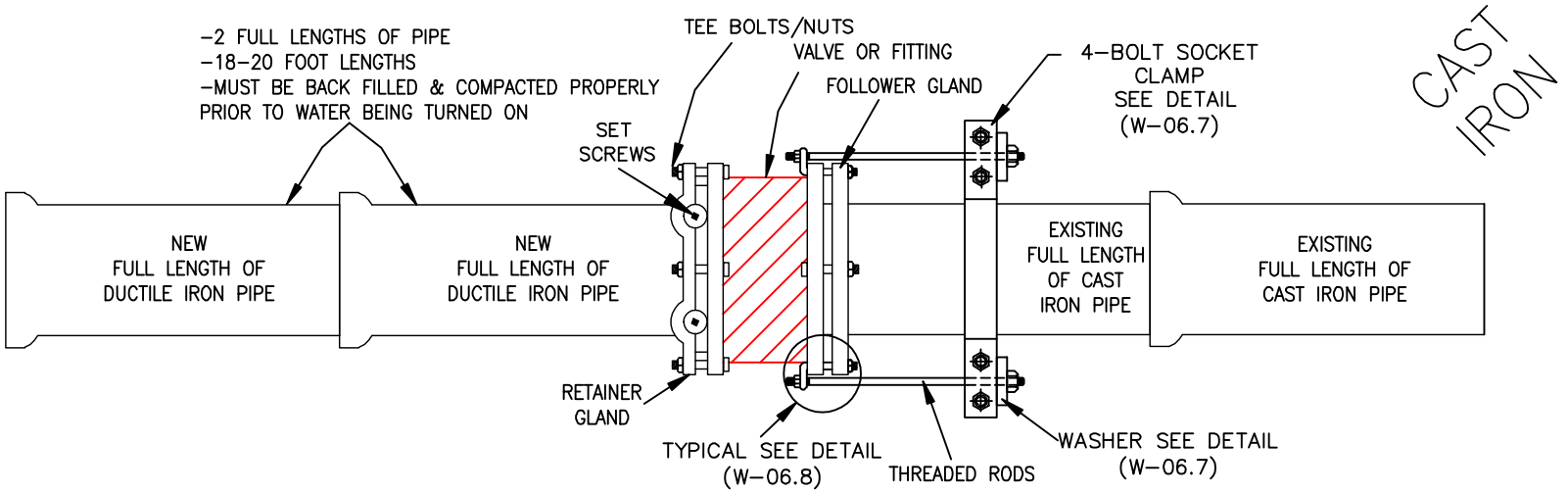
SCALE: NTS

REV. DATE
4/1/08 MAB

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W–02.0, W–02.1, W–02.2, W–02.3 OR W–02.4 FOR TRENCH DETAILS.
4. THESE METHODS SHALL BE USED UNLESS OTHERWISE APPROVED BY ENGINEERING AND TECHNICAL SERVICES DEPARTMENT.
5. WHEN REPARING NEAR A VALVE OR A FITTING USE AN APPROVED METHOD OR CALL ENGINEERING AND TECHNICAL SERVICES (ET&S).





NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

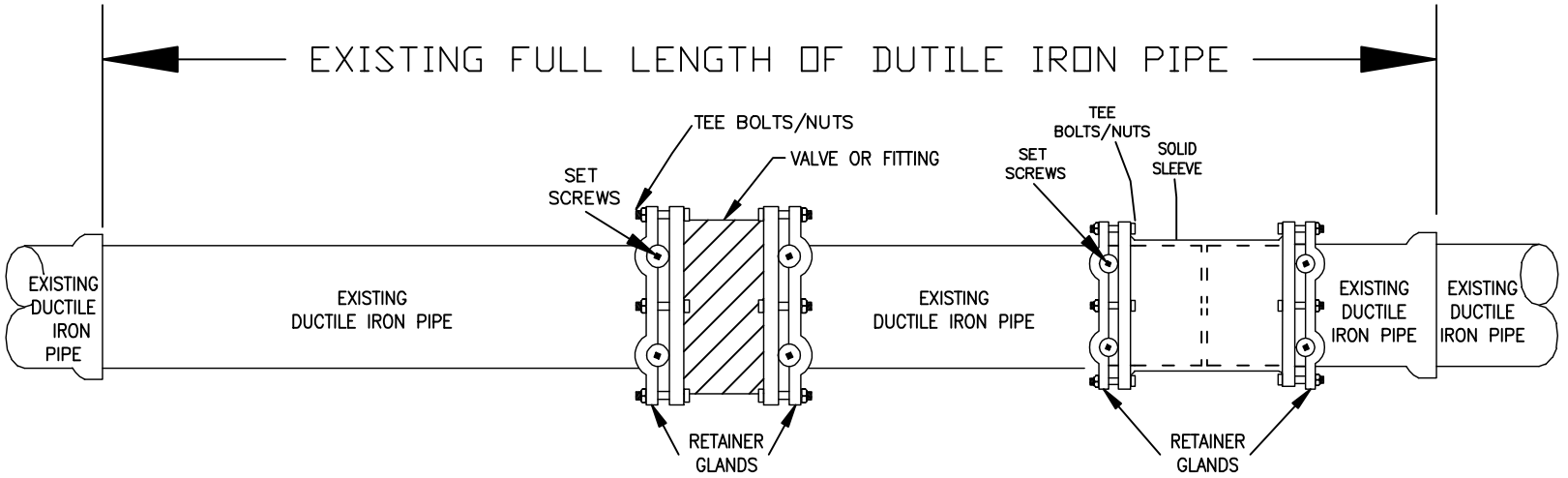
SPRINGFIELD WATER AND SEWER COMMISSION

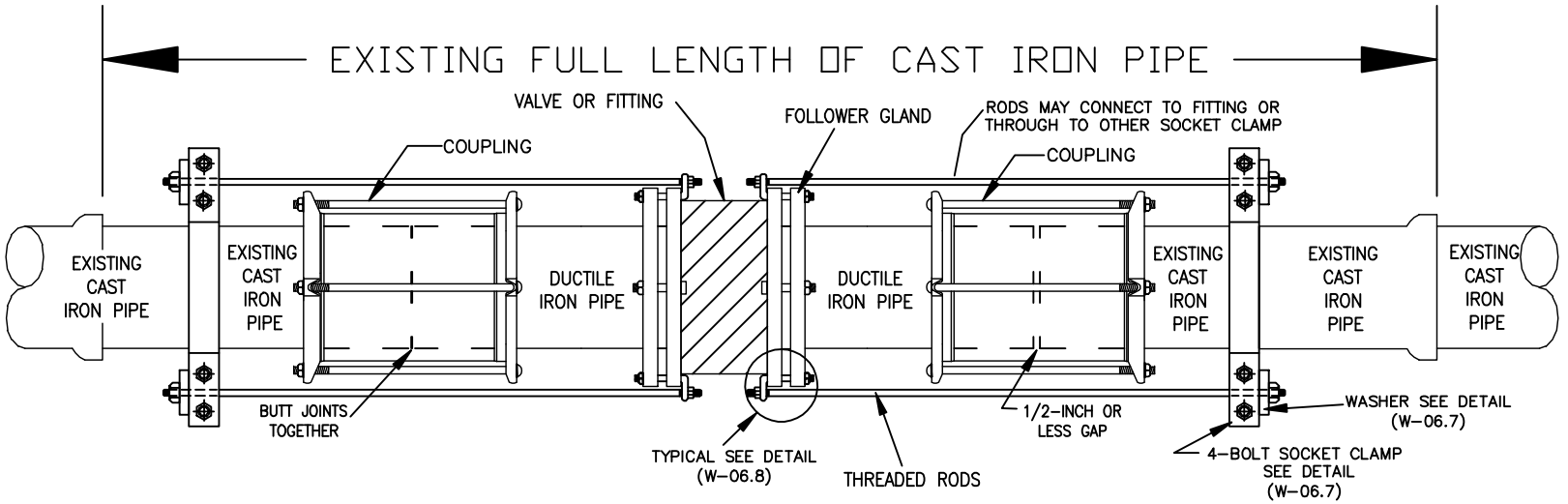
WATER DETAIL W-06.1

INSTALL VALVE OR FITTING
AT A DEAD END
OF A WATER MAIN

SCALE: NTS

REV.	DATE
	4/1/08 MAB





NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

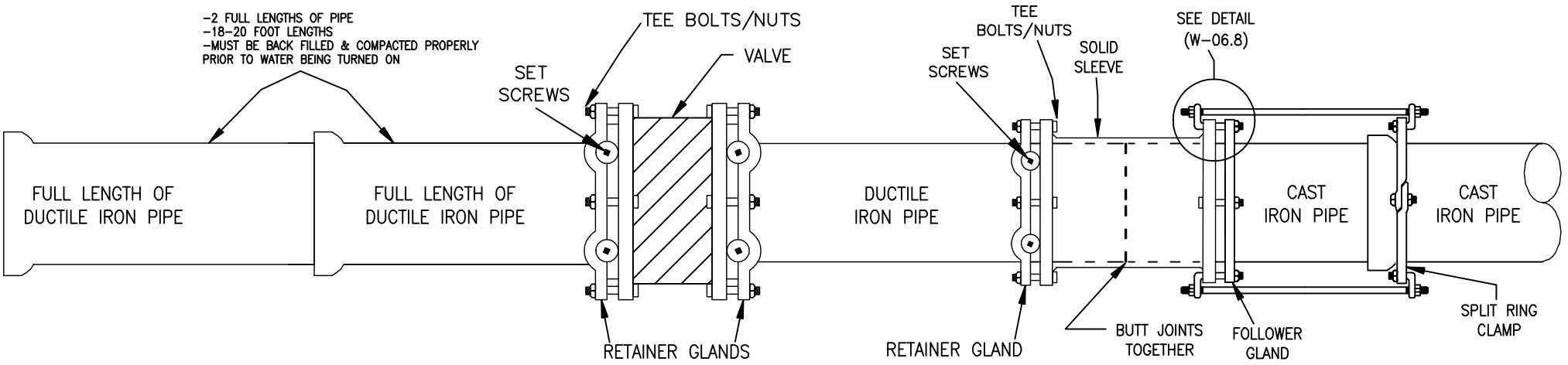
SPRINGFIELD WATER AND SEWER COMMISSION

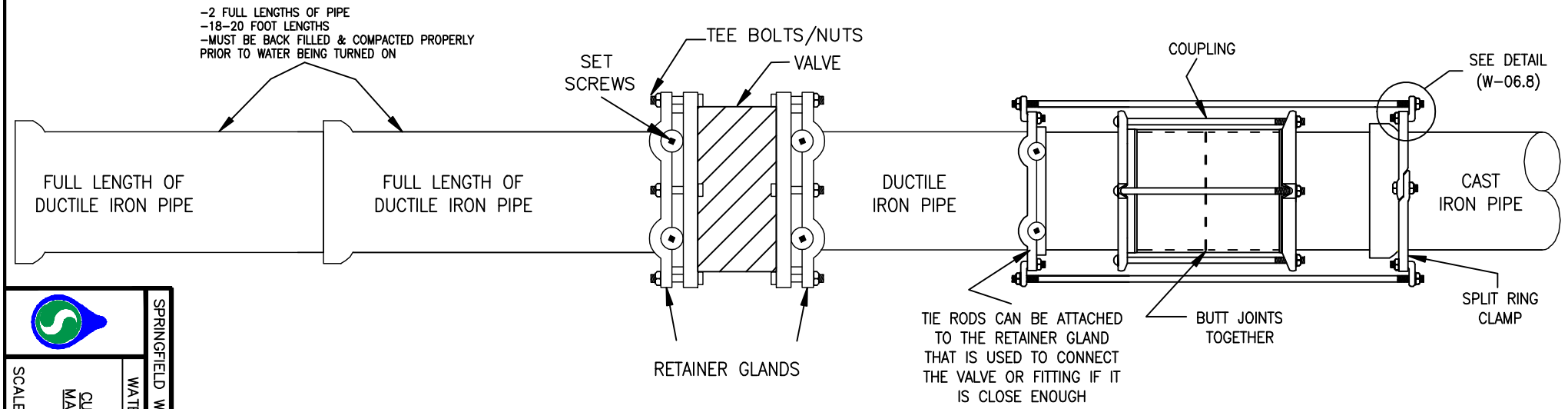
WATER DETAIL W-06.2

CUTTING-INTO EXISTING WATER MAIN TO REPLACE VALVE OR FITTING

SCALE: NTS

REV.	DATE
	4/1/08 MAB





SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.3

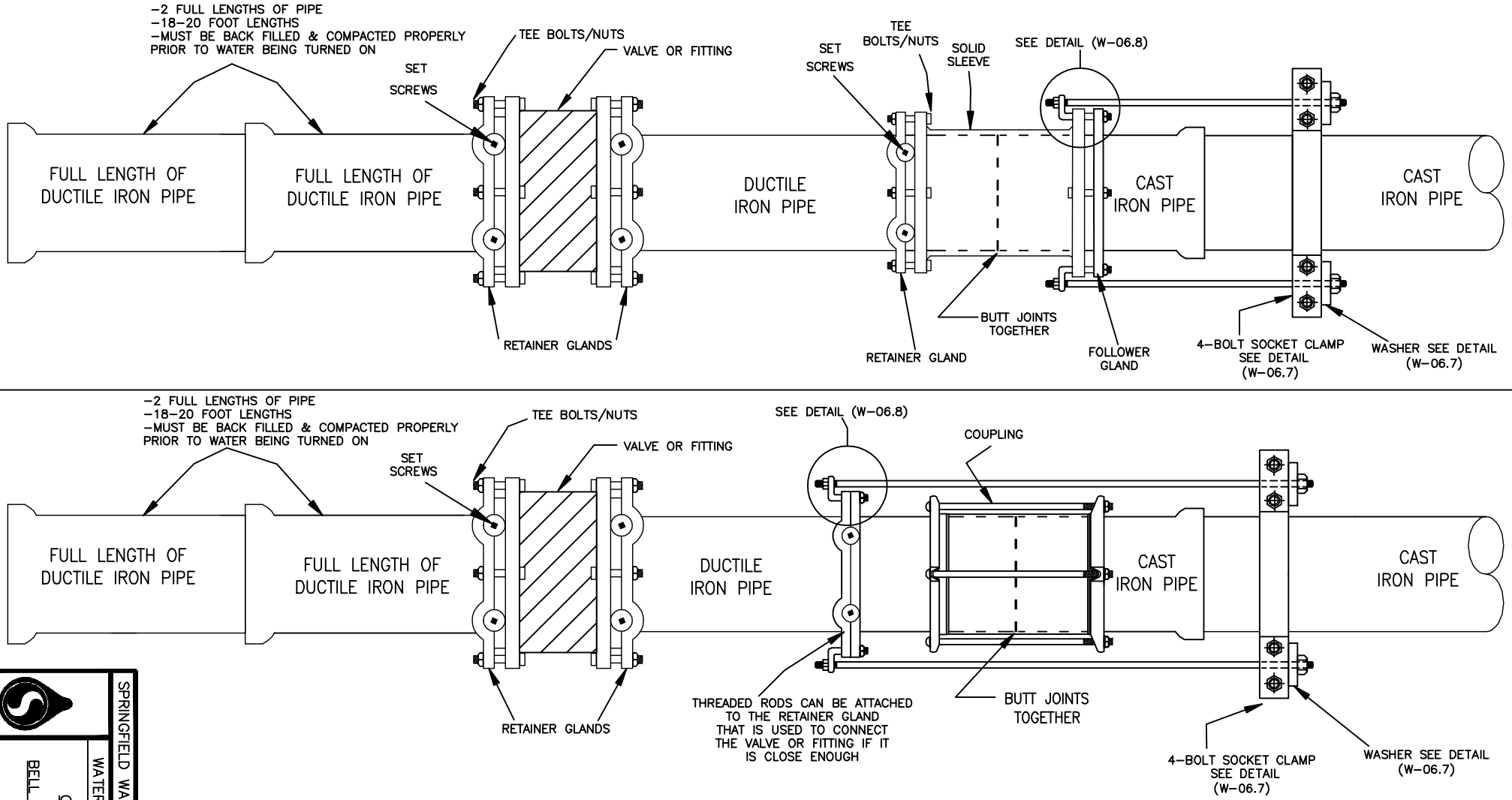
CUTTING INTO EXISTING WATER MAIN WITH BELL FACING VALVE

SCALE: NTS

REV.	DATE
	4/1/08 MAB

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.



SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.4

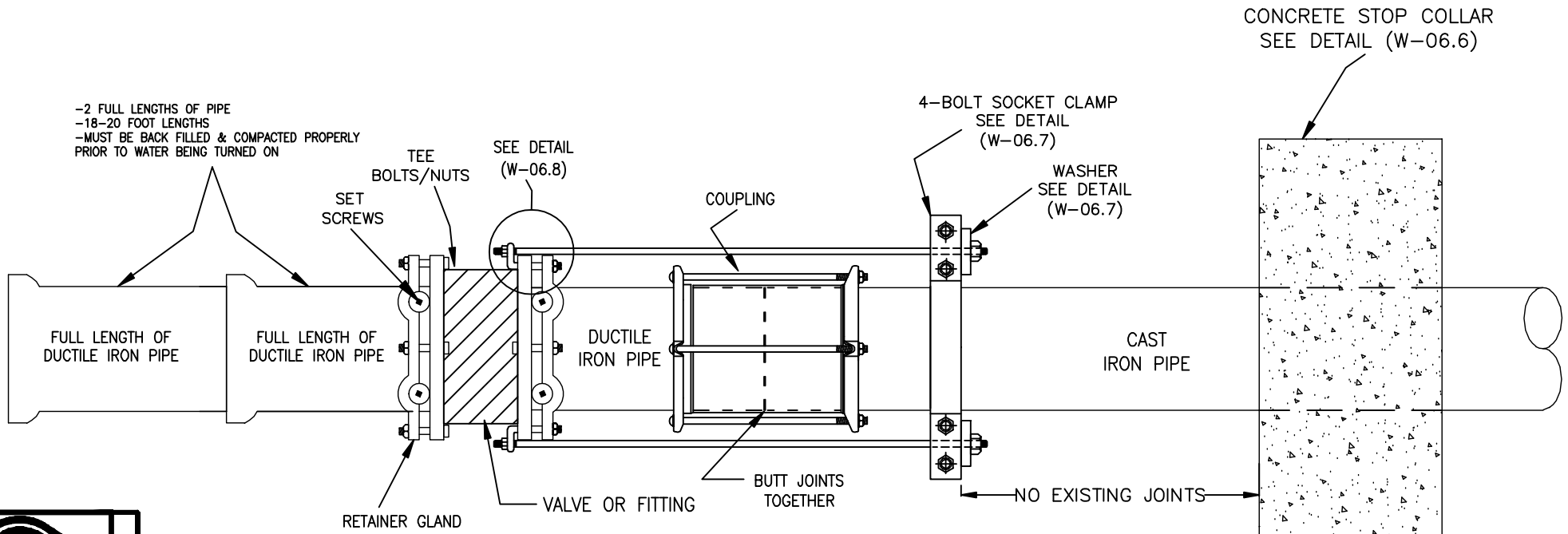
CUTTING-INTO EXISTING
WATER MAIN WITH
BELL FACING AWAY FROM VALVE

SCALE: NTS

REV.	DATE
	4/1/08 MAB

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION

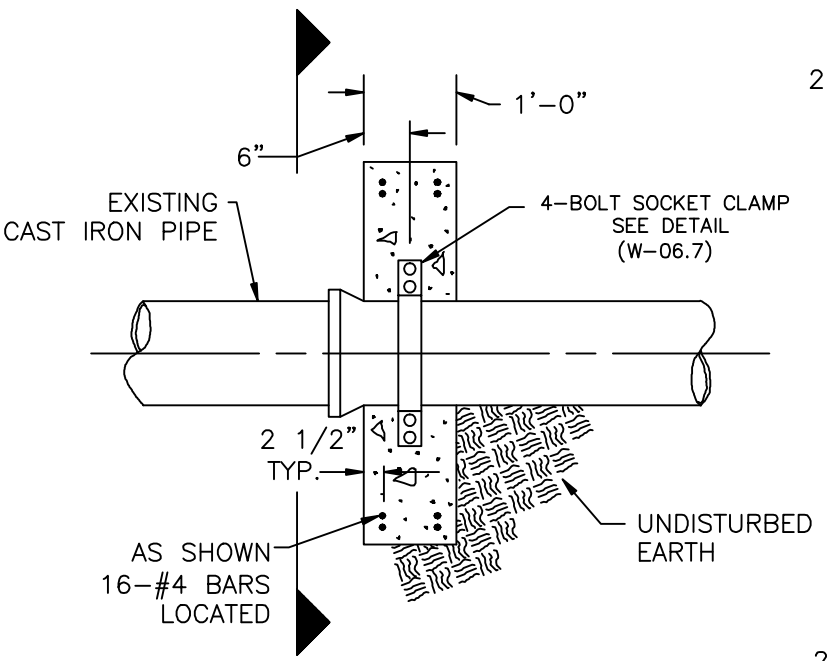
WATER DETAIL W-06.5

CUTTING-INTO EXISTING WATER MAIN WITH NO BELL FOUND

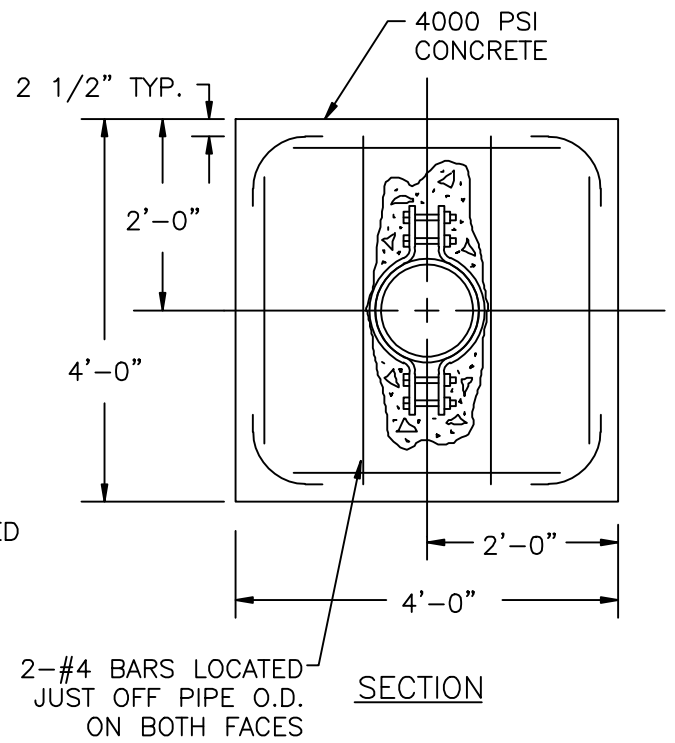
SCALE: NTS

REV. DATE
4/1/08 MAB

CONCRETE THRUST COLLAR



PLAN



SECTION

SPECIAL NOTE:

1. IN LIEU OF CONCRETE STOP COLLAR THE CONTRACTOR MAY MECHANICALLY RESTRAIN (BY APPROVED METHOD) THREE (3) FULL PIPE LENGTHS FROM PROPOSED LOCATION OF STOP COLLAR.

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B–7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE–BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE–BY–CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–06.6

CONCRETE THRUST COLLAR

SCALE: NTS

REV. DATE
4/1/08 MAB

SOCKET CLAMP DATA CHART

Nominal Pipe Size (in inches)	Max Hydrostatic Test Pressure (in PSI)	Force (1) on Clamp (in lbs.)	Clamp (2 & 3) Inside Diameter (in inches)	Length of Clamp (2 & 3) (in inches)	Width of Clamp (2 & 3) (in inches)	Thickness of Clamp (2 & 3) (in inches)	Minimum Bolt Size (in inches)	Thickness of CI Clamp Washer (4) (in inches)	Size of CI Clamp Washer (4) (in inches)	Thickness of Steel Clamp Washer (4) (in inches)	Size of Steel Clamp Washer (4) (in inches)	Nominal Threaded Rod (7) Diameter (in inches)	Number of Nominal Threaded Rod (7)	Associated Hardware
4	250	4550	5	14 5/8	2	1/2	5/8 x 3 1/2	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
6	250	9340	7 1/8	16 7/8	2	1/2	5/8 x 3 1/2	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
8	250	16080	9 5/16	19 1/8	2 1/2	5/8	5/8 x 4	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
10	250	24180	11 1/2	21 3/8	2 1/2	5/8	3/4 x 4	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
12	250	34230	13 1/2	25 1/8	3	5/8	7/8 x 4 1/2	3/4	3-1/2 dia or 3-1/2 x 3-1/2	1/2	3 dia or 3 x 3	1	1	notes 2, 5, 6, 8, & 9
16	115	27760	17 7/8	31 3/8	4	3/4	1 x 4 1/2	1	4 dia or 4 x 4	1/2	3-1/2 dia or 3-1/2 x 3-1/2	1	2	notes 2, 5, 6, 8, & 9

1 At Max Hydrostatic Test Pressure

2 All Socket Clamps and associated hardware shall meet the requirements of National Fire Protection Association 24

3 Socket Clamps shall be as provided by PHD Manufacturing, Inc. Figure 590, Anvil Company, Figure 595, Cooper B-Line, Figure B3134, Carpenter and Patterson, Figure 158DB, or the equal product of another manufacturer.

4 Socket Clamps Washers shall be as provided by PHD Manufacturing, Inc. Figure 595, Anvil Company, Figure 594, Cooper B-Line, Figure B3134W, Carpenter and Patterson, Figure 258, or the equal product of another manufacturer.

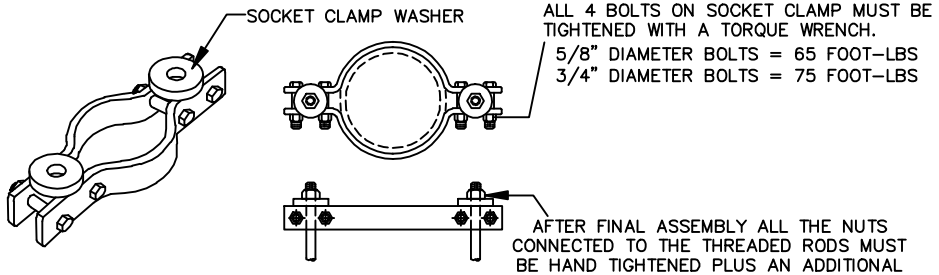
5 Bent Eye Bolts shall be constructed of high strength low alloy steel, per ASTM A588, grade B, Unified National Coarse (UNC) rolled thread.

6 Bent Eye Bolts shall be as provided by PHD Manufacturing, Inc. - Figure 598B, Star National Products - Figures ¾"SST747 or ¾"SST757, Dresser Piping Specialties, Inc. – Style 442, or the equal product of another manufacturer.

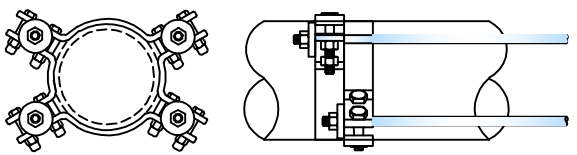
7 Threaded Rods shall be constructed of 4140-alloy steel, per ASTM A193, grade B7, Unified National Coarse (UNC) rolled thread.

8 Washers for bent eye bolts shall be cadmium plated and constructed of case hardened C1006 steel, grade 2, Rockwell hardness B55

9 Heavy hex nuts shall be constructed of medium carbon steel, ASTM A194, grade 2H, and Unified National Coarse (UNC) thread.



TYPICAL SINGLE 4–BOLT SOCKET CLAMP



TYPICAL TWO 4–BOLT SOCKET CLAMP INSTALLATION

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B–7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE–BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE–BY–CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION

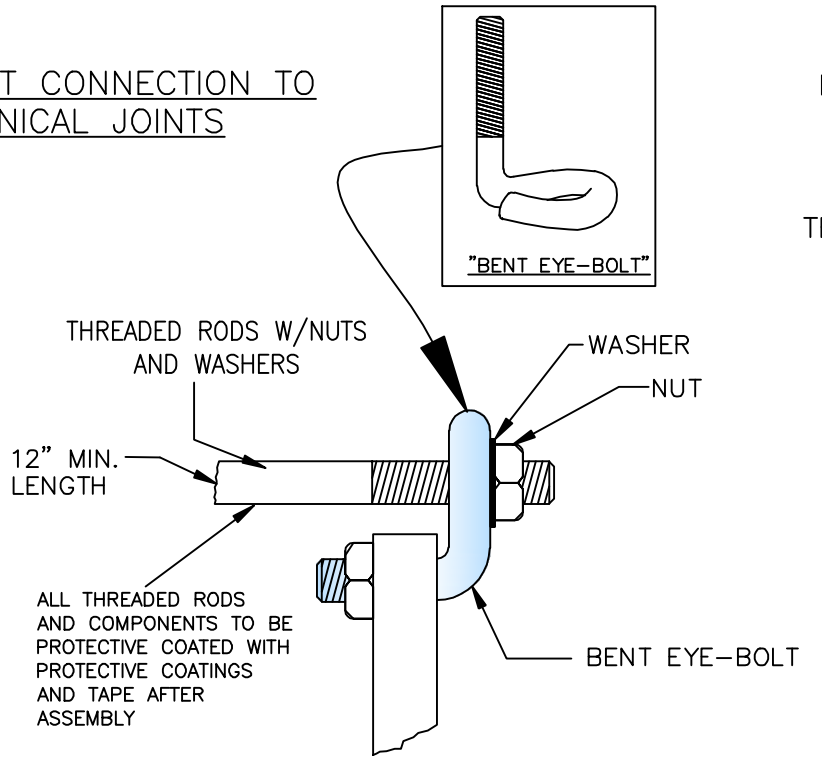
WATER DETAIL W–06.7

SOCKET CLAMP DETAIL

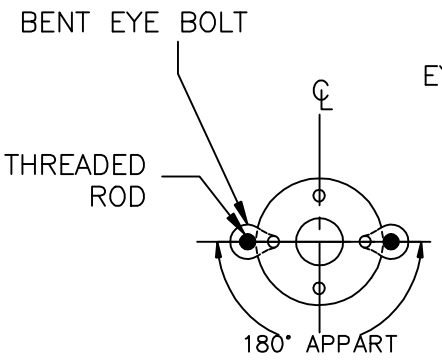
SCALE: NTS

REV. DATE
4/1/08 MAB
6/18/08 MAB

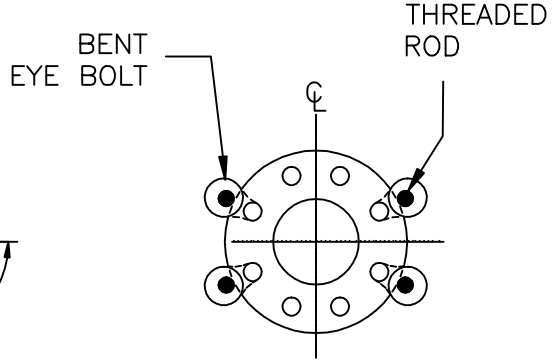
BENT EYE BOLT CONNECTION TO MECHANICAL JOINTS



THRUST RESTRAINT – THREADED ROD



4" THRU 12" JOINTS



16" JOINTS

PIPE SIZE	No. THREADED RODS*
4" THRU 10"	2 – 3/4"ø
12"	2 – 1"ø
16"	4 – 1"ø
GREATER THAN 16"	APPROVAL BY ET&S

*STANDARD LENGTHS ARE 3', 6' & 12'
COUPLINGS MAY BE USED FOR LONGER LENGTHS.

SEE SOCKET CLAMP DATA CHART DETAIL (W-06.7)
FOR HARDWARE, MATERIAL, MANUFACTURERS AND BOLT TIGHTENING REQUIREMENTS

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

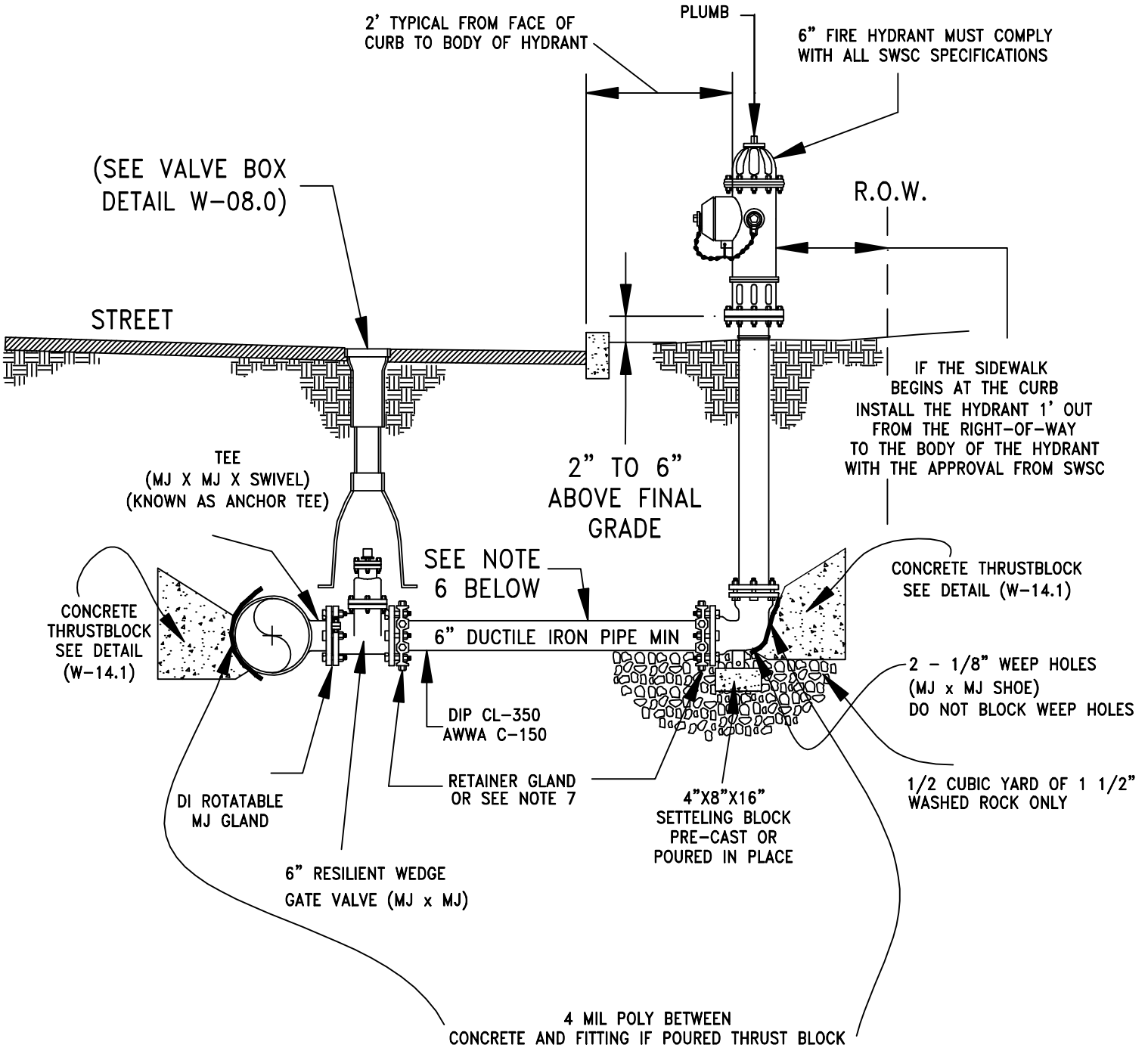
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.8

THREADED ROD DETAIL
CONNECTION TO MJ DETAIL

SCALE: NTS

REV.	DATE
	4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

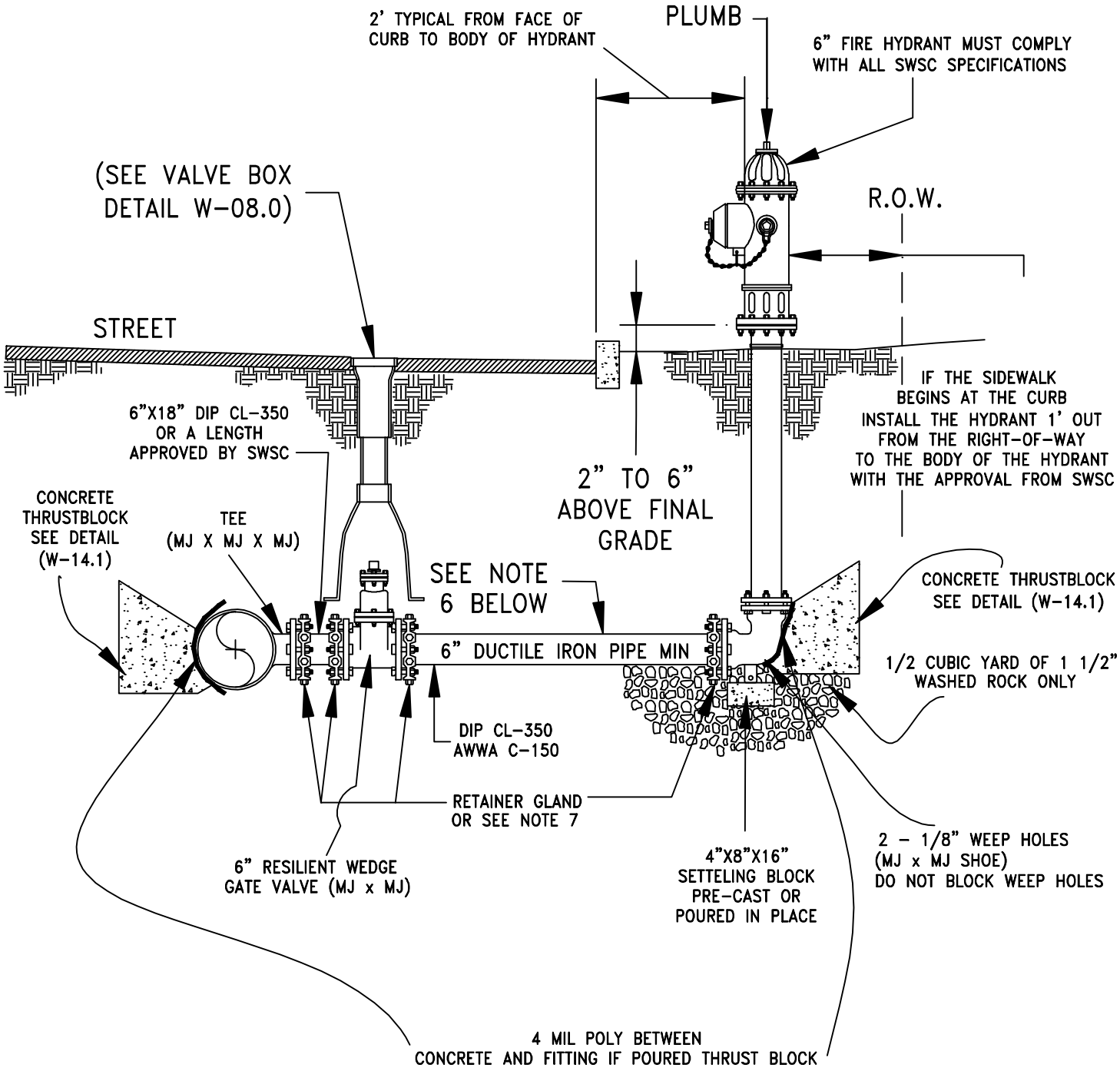
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-07.0

STANDARD FIRE HYDRANT ASSEMBLY

SCALE: NTS

REV. DATE
4/1/08 MAB



THIS DETAIL MUST BE APPROVED FOR USE BY THE S.W.S.C BEFORE IT CAN BE INSTALLED

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

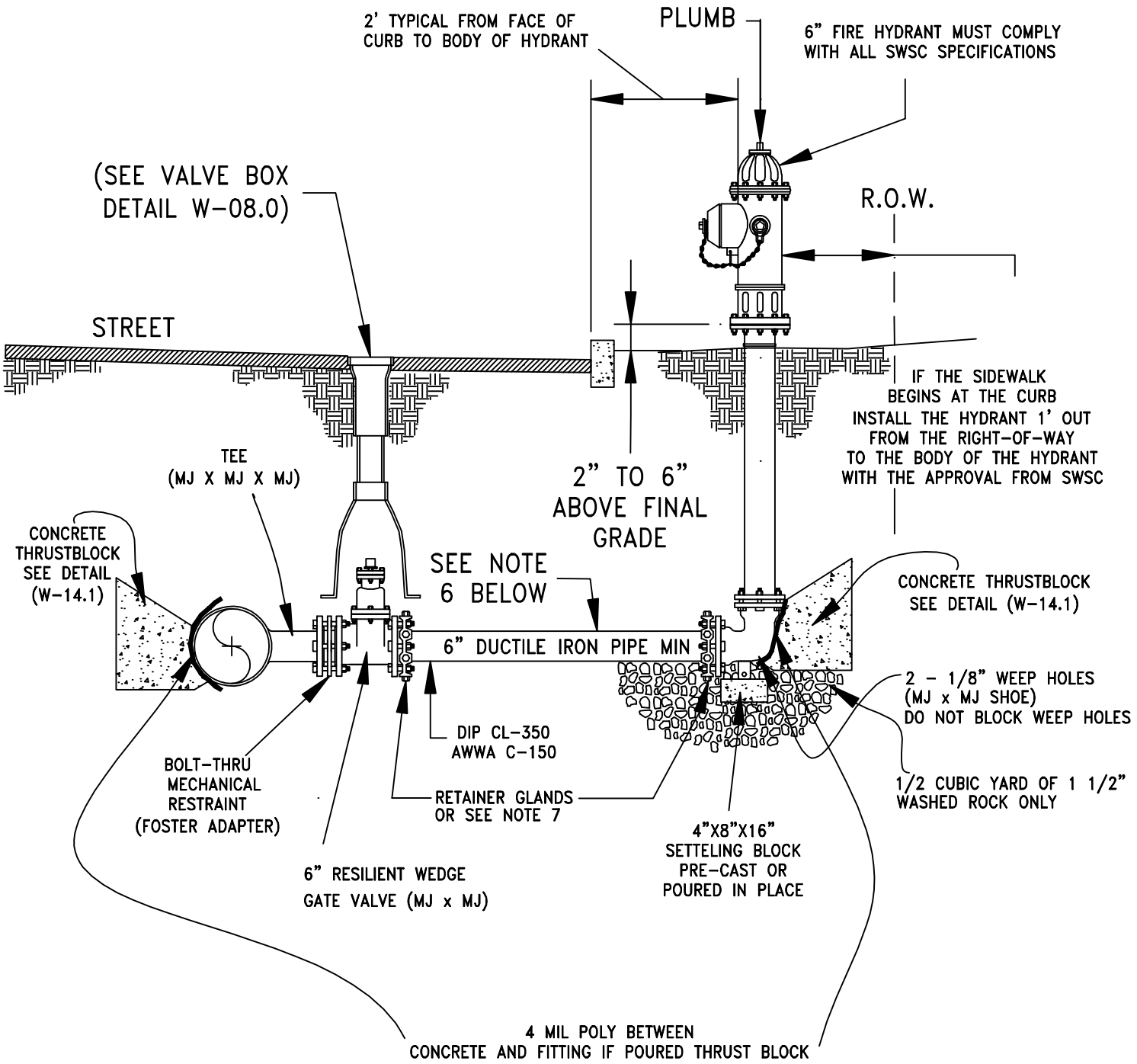
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-07.1

ALTERNATE 1
FIRE HYDRANT ASSEMBLY

SCALE: NTS

REV. DATE
4/1/08 MAB



THIS DETAIL MUST BE APPROVED FOR USE BY THE S.W.S.C BEFORE IT CAN BE INSTALLED

NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

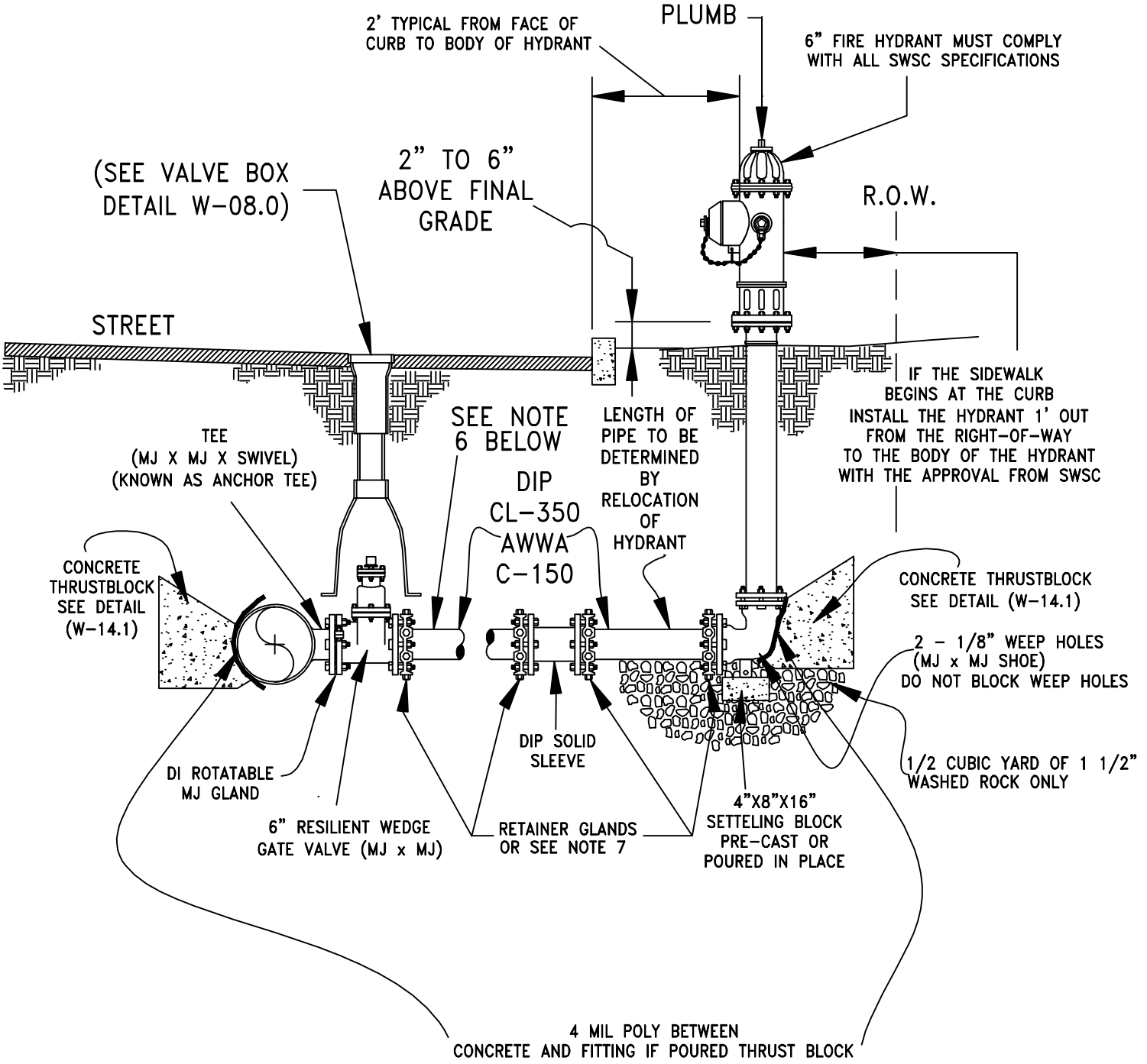
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-07.2

ALTERNATE 2
FIRE HYDRANT ASSEMBLY

SCALE: NTS

REV. DATE
4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

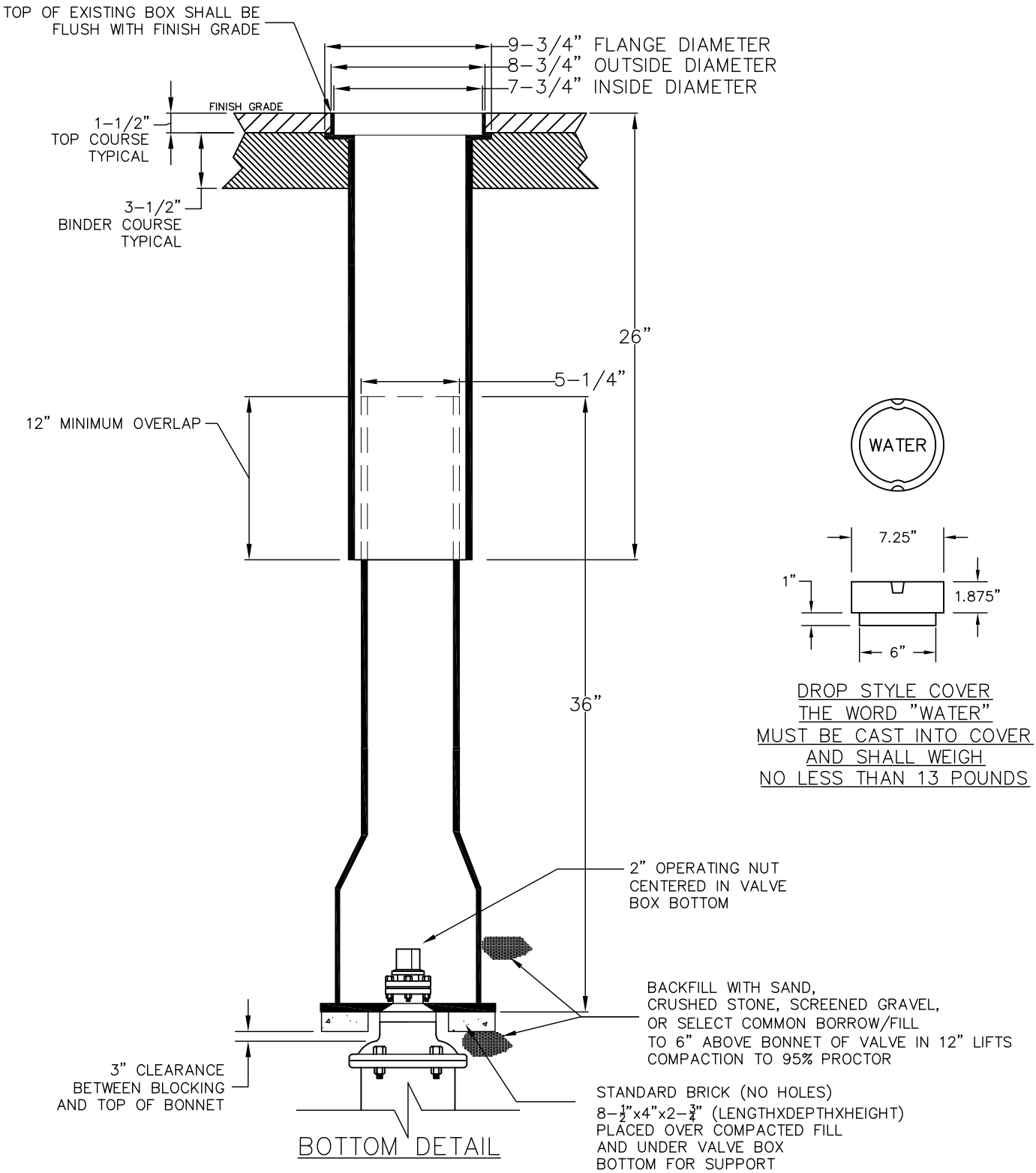
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-07.3

RELOCATION OF FIRE HYDRANT ASSEMBLY (STRAIGHT BACK)

SCALE: NTS

REV. DATE
4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. IF BACKFILLING WITH "FLOWABLE" FILL WRAP THE VALVE BOX WITH 15 POUND FELT ROOFING PAPER OR 4 MIL THICK POLYETHYLENE IN ACCORDANCE WITH DETAIL W-08.1.

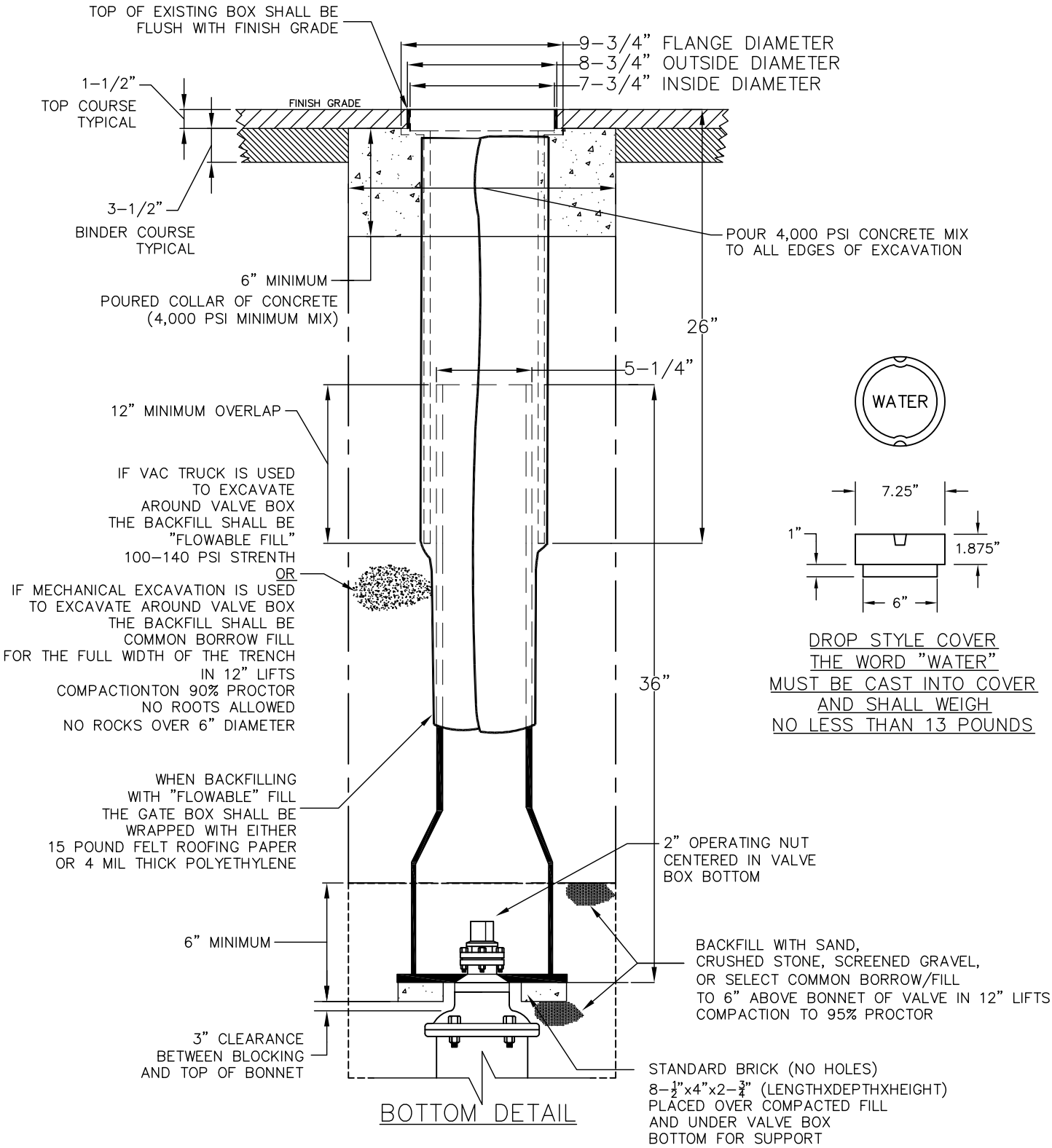
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-08.0

VALVE BOX

SCALE: NTS

REV. DATE
4/1/08 MAB
4/1/09 MAB
4/1/10 MAB
1/9/19 DJP



NOTES:

1. **ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.**
2. **ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.**
3. **SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.**

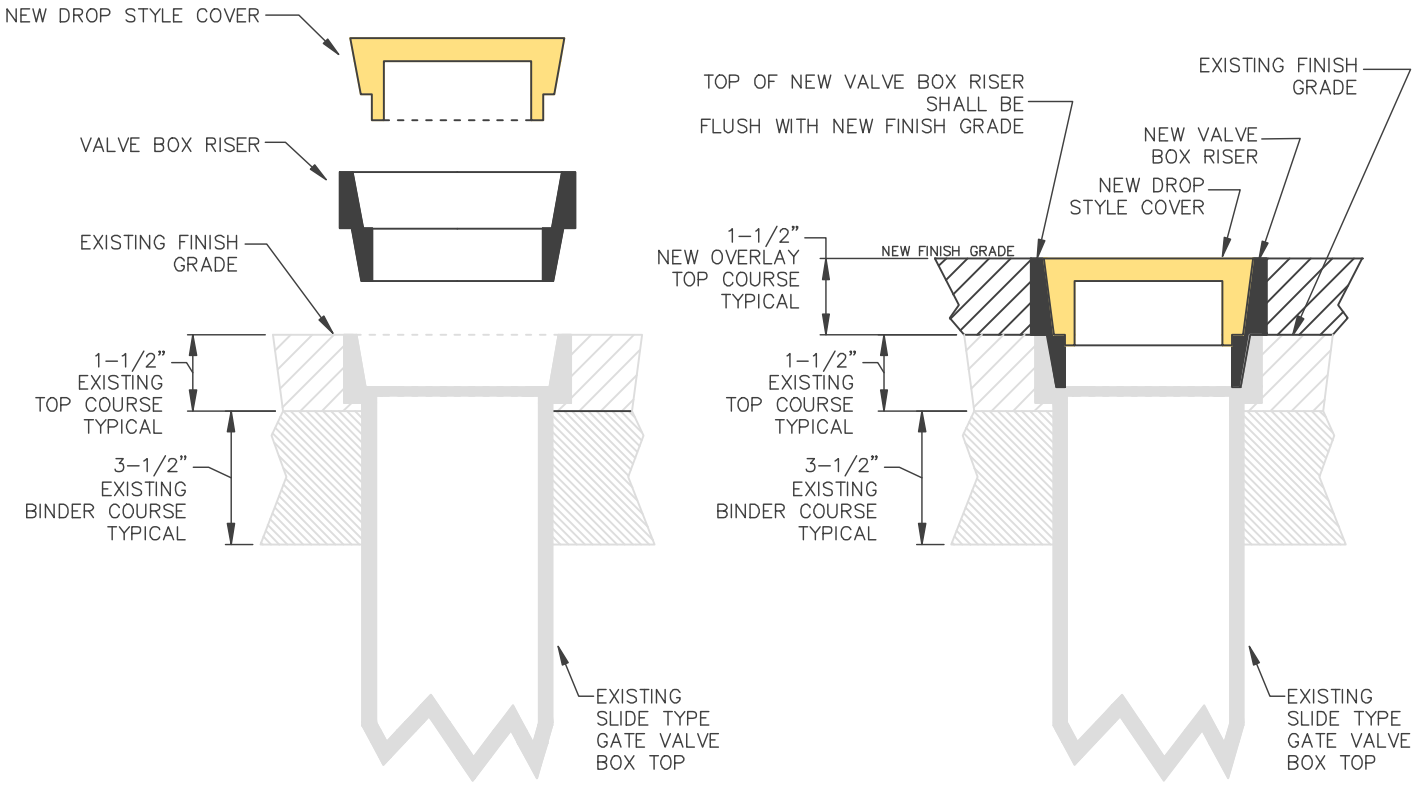
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-08.1

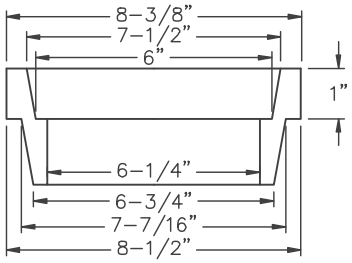
REPLACE, RAISE OR RESET VALVE BOX

SCALE: NTS

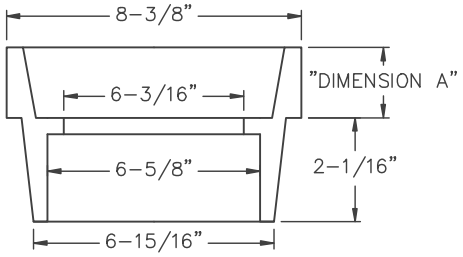
REV. DATE
4/1/09 MAB
1/10/19 DJP



VALVE BOX RISER INSTALLED

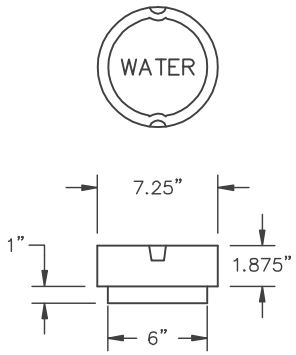


1"
VALVE BOX RISER



1-1/2"-6"
STANDARD VALVE BOX RISER

RISER HEIGHT INCREASE DIMENSION "A"
1"
1-1/2"
2"
3"
4"
6"



NEW DROP STYLE COVER
THE WORD "WATER"
MUST BE CAST INTO COVER
AND SHALL WEIGH
NO LESS THAN 13 POUNDS

NOTE: THESE RISERS WILL WORK SATISFACTORILY WITH MOST 5-1/4" VALVE BOXES.

NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

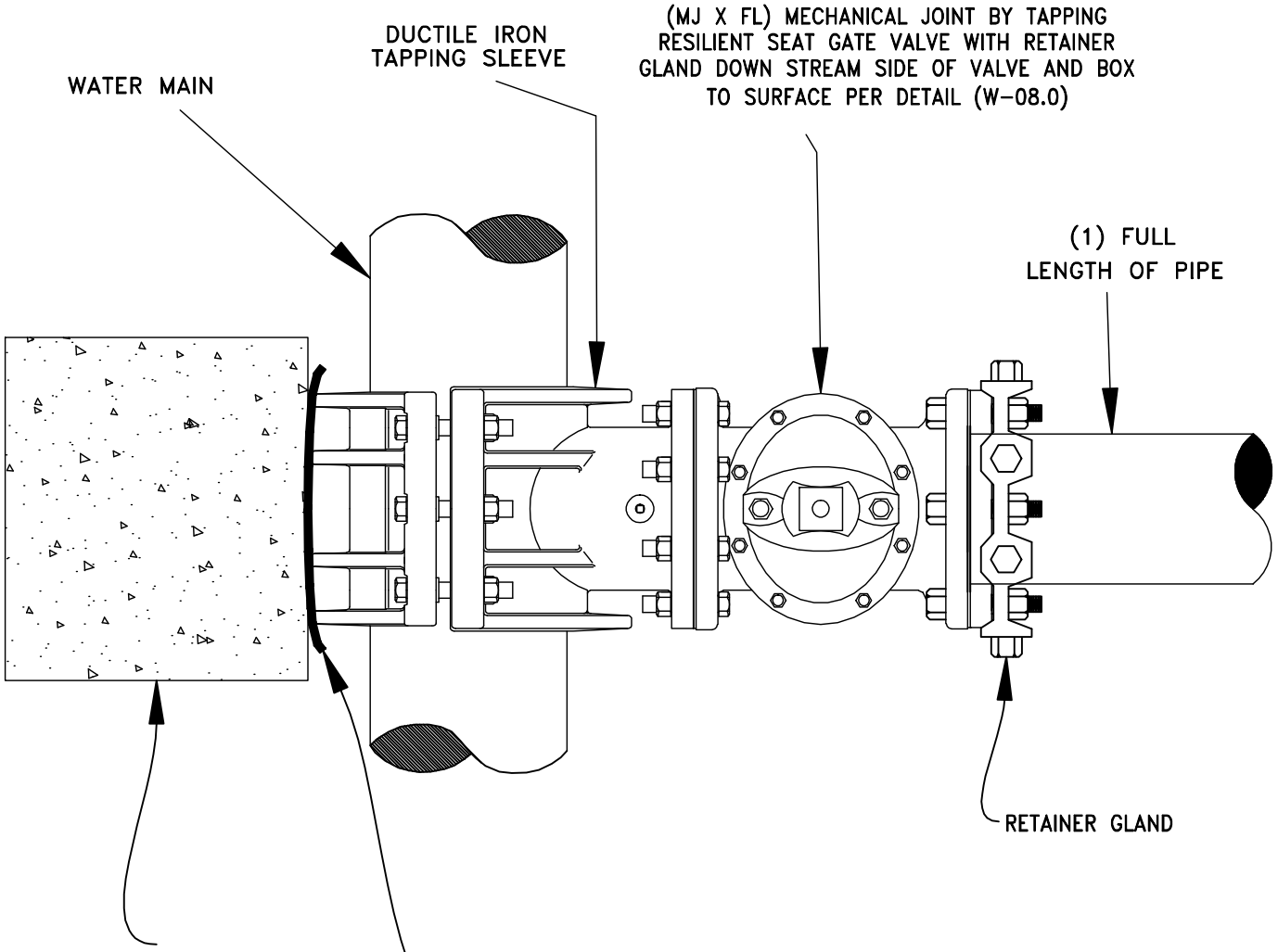
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-08.2

RAISE VALVE BOX WITH RISER

SCALE: NTS

REV. DATE
4/1/09 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

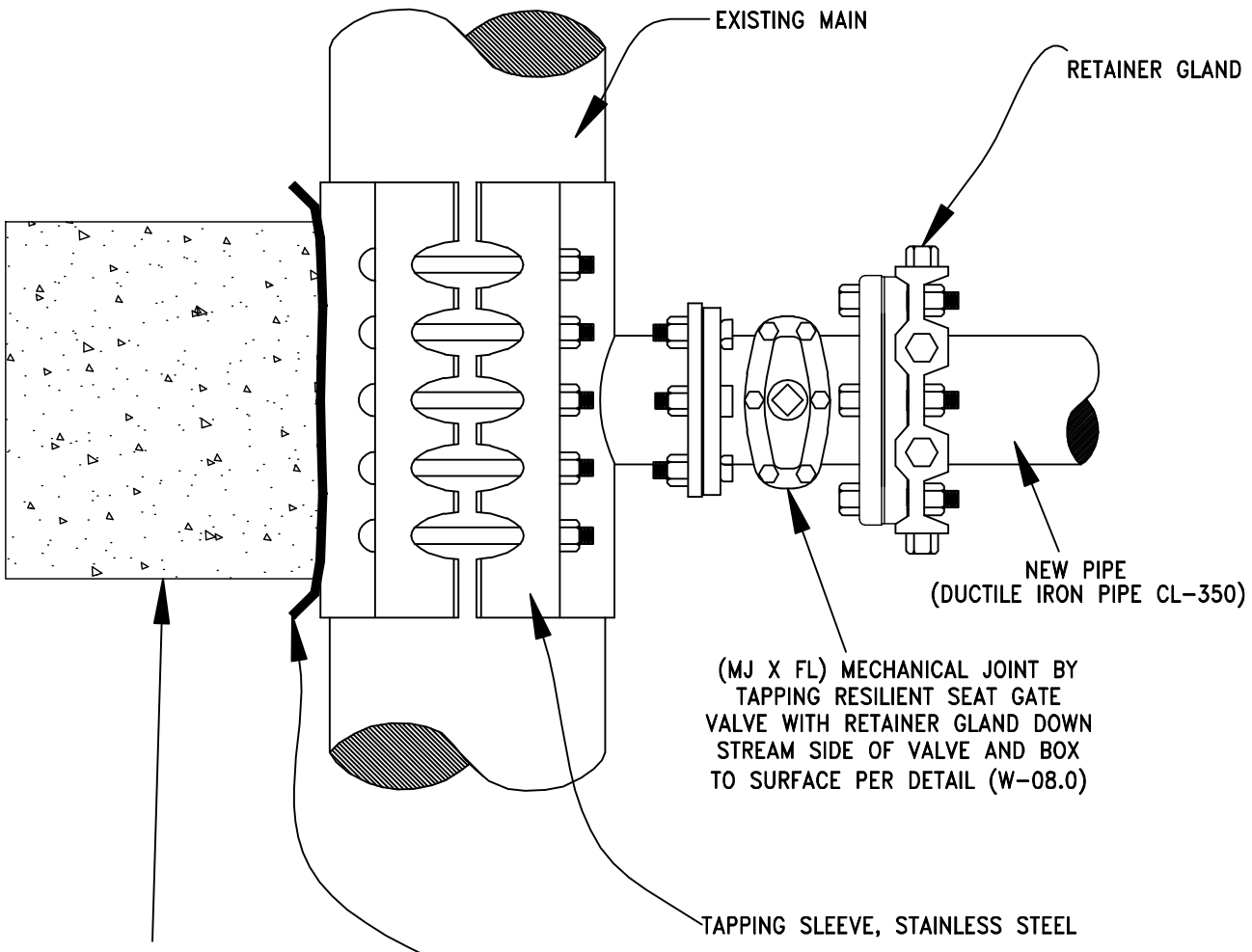
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-09.0

DUCTILE IRON TAPPING SLEEVE

SCALE: NTS

REV. DATE
4/1/08 MAB



NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

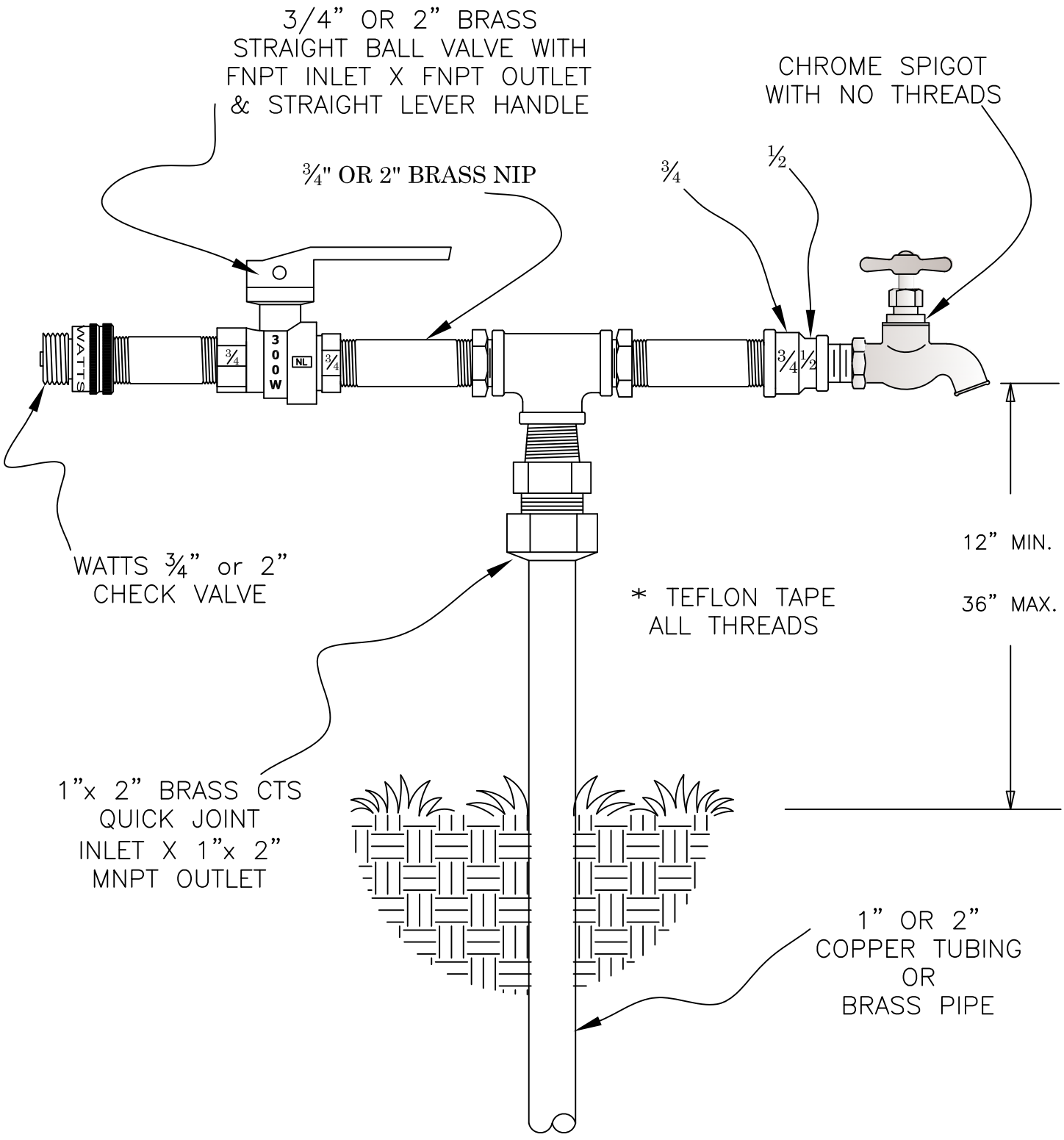
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-09.1

STAINLESS STEEL TAPPING SLEEVE

SCALE: NTS

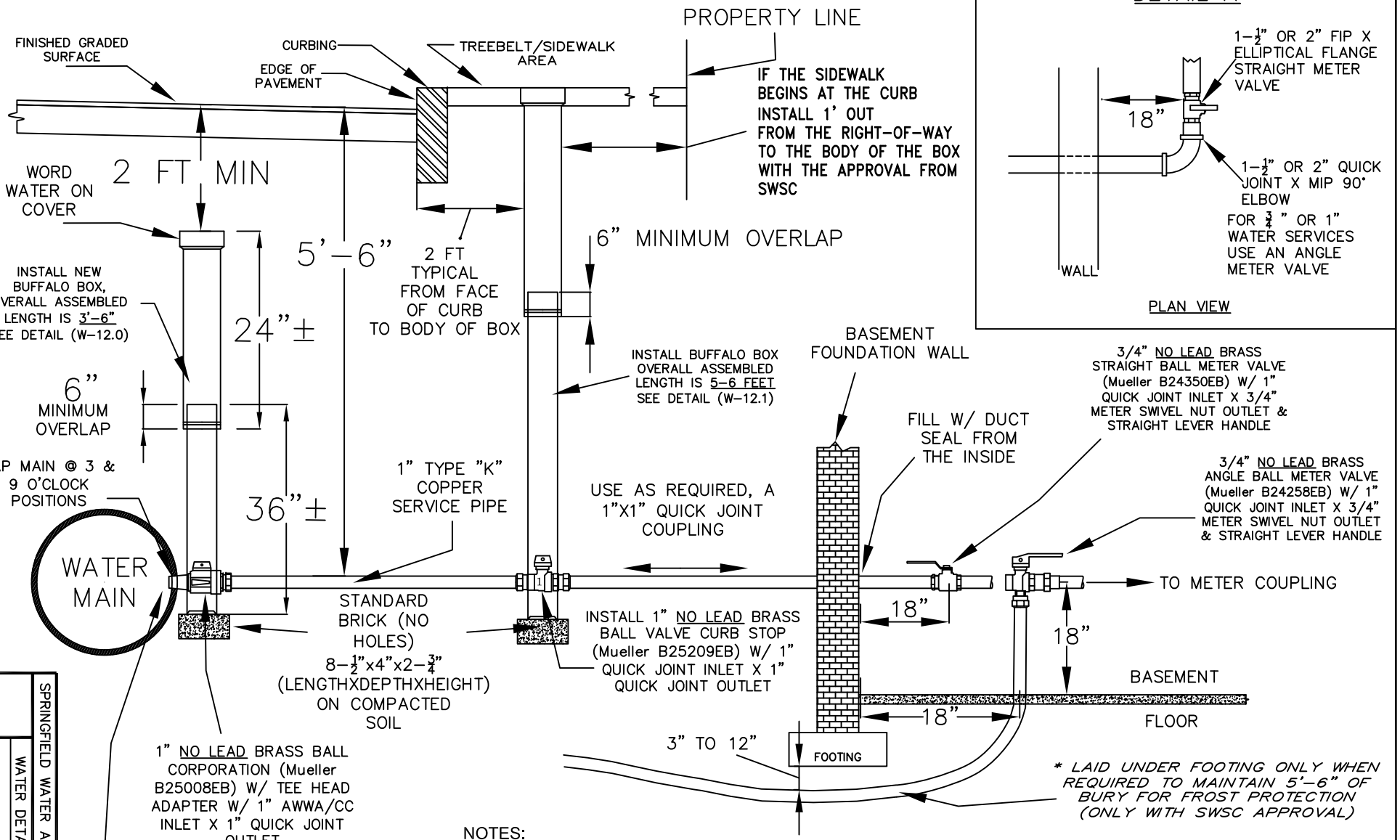
REV. DATE
4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W–10.0	REV. DATE
	FLUSHING DEVICE	1/6/07 MJL 4/1/08 MAB 6/18/08 MAB
	SCALE: NTS	



DETAIL A

PLAN VIEW

TAPPING NOTES:
FOR 1" = USE DIRECT TAPPING
FOR 1-1/2" and 2" = MUST USE SWSC SADDLE

NOTES:

1. **ALL BRASS MUST BE LEAD FREE TYPE.** ALL MUELLER PART NUMBERS REFERENCED IN THIS DRAWING MAY BE USED, FOR ADDITIONAL APPROVED MANUFACTURERS, SEE THE SWSC MATERIAL SPECIFICATIONS.
2. ALL TAPS DONE BY SWSC.
3. BLOCKING UNDER ALL FITTINGS.
4. ALL PIPE OR AWWA/CC THREADED JOINTS TO BE SEALED WITH TEFLON PIPE JOINT SEAL TAPE (PTFE). QUICK TYPE COMPRESSION JOINTS ARE NOT SEALED WITH TEFLON TAPE.
5. ¾" COPPER TUBING SHALL NOT BE USED. ALL SERVICES SHALL BE 1" OR LARGER COPPER TUBING.
6. THE CORPORATION AT THE WATER MAIN IS FOR EMERGENCY USE AND THE BOX WILL BE BURIED 2-FEET BELOW FINISHED GRADE.
7. A SECOND OPERATIONAL CURB STOP SHALL BE INSTALLED IN THE TREEBELT. THE ARCH PATTERN BOX WILL BE SET AT FINISHED GRADE.
8. BOTH CURB BOXES WILL BE MEASURED FOR LOCATION TIES. A MINIMUM OF (3) TIES FOR EACH BOX.
9. TO KEEP A WATER METER 18" FROM WALL SEE DETAIL A.

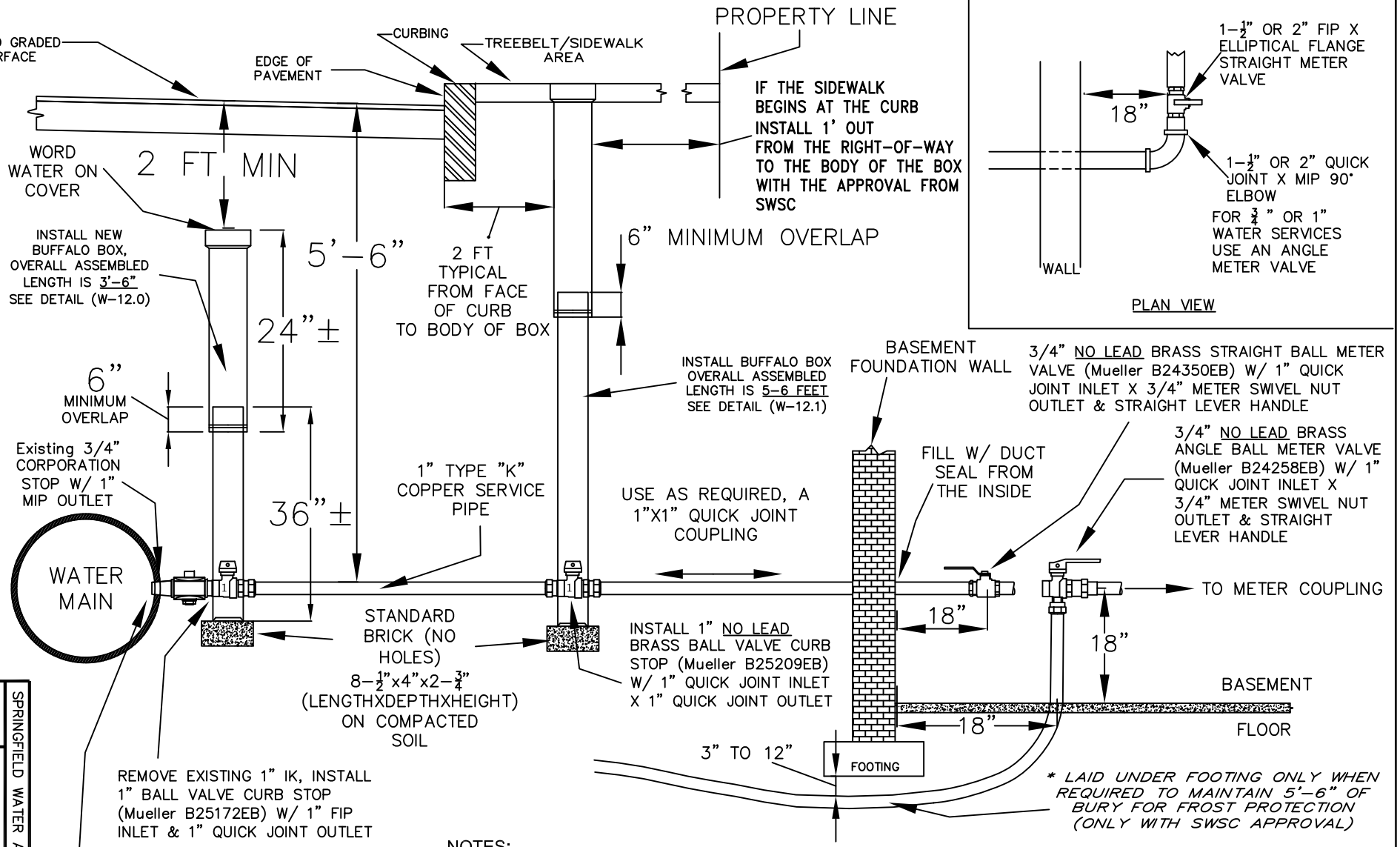
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-11.0

NEW WATER SERVICE

SCALE: NTS

REV.	DATE
	3/3/03 MJL
	4/1/08 MAB
	9/23/20 MAB
	12/8/20 MJL



DETAIL A

PLAN VIEW

NOTES:

1. **ALL BRASS MUST BE LEAD FREE TYPE.** ALL MUELLER PART NUMBERS REFERENCED IN THIS DRAWING MAY BE USED, FOR ADDITIONAL APPROVED MANUFACTURERS, SEE THE SWSC SPECIFICATIONS.
2. ALL TAPS DONE BY SWSC.
3. BLOCKING UNDER ALL FITTINGS.
4. ALL PIPE OR AWWA/CC THREADED JOINTS TO BE SEALED WITH TEFLON PIPE JOINT SEAL TAPE (PTFE). QUICK TYPE COMPRESSION JOINTS ARE NOT SEALED WITH TEFLON TAPE.
5. ¾" COPPER TUBING SHALL NOT BE USED. ALL SERVICES SHALL BE 1" OR LARGER COPPER TUBING.
6. THE CORPORATION AT THE WATER MAIN IS FOR EMERGENCY USE AND THE BOX WILL BE BURIED 2-FEET BELOW FINISHED GRADE.
7. A SECOND OPERATIONAL CURB STOP SHALL BE INSTALLED IN THE TREEBELT. THE ARCH PATTERN BOX WILL BE SET AT FINISHED GRADE.
8. BOTH CURB BOXES WILL BE MEASURED FOR LOCATION TIES. A MINIMUM OF (3) TIES FOR EACH BOX
9. TO KEEP A WATER METER 18" FROM WALL SEE DETAIL A.

SPRINGFIELD WATER AND SEWER COMMISSION

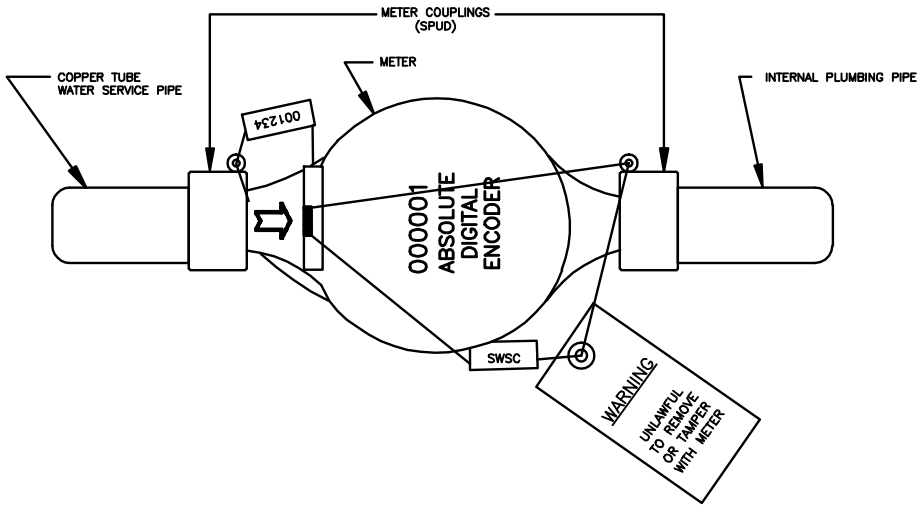
WATER DETAIL W-11.1

REPLACEMENT WATER SERVICE

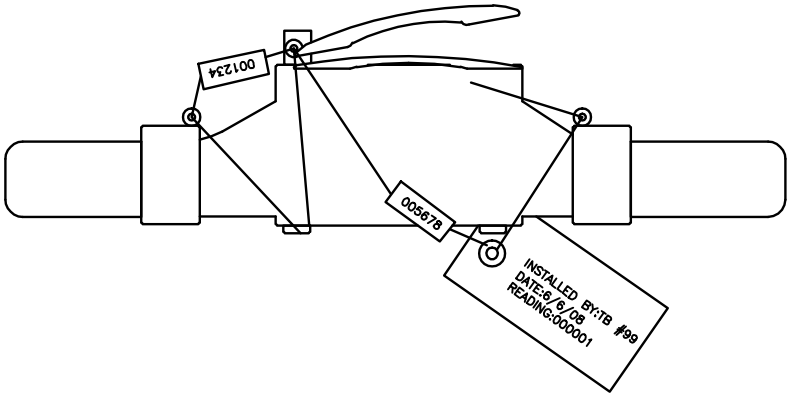
SCALE: NTS

REV.	DATE
	3/3/03 MJL
	4/1/08 MAB
	9/23/20 MAB
	12/8/20 MJL

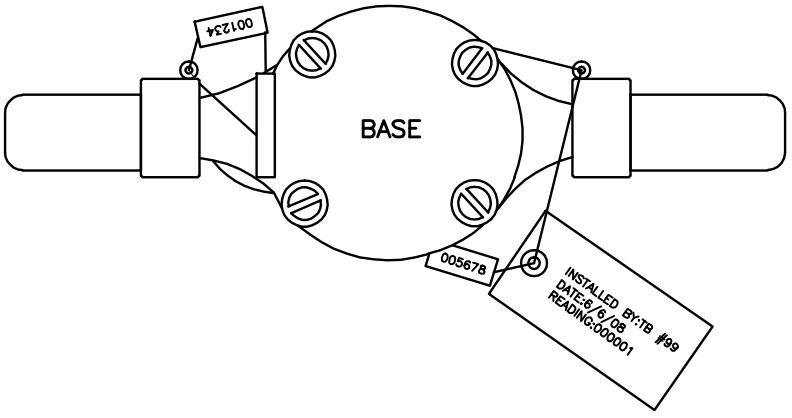
"TOP VIEW"



"SIDE VIEW"



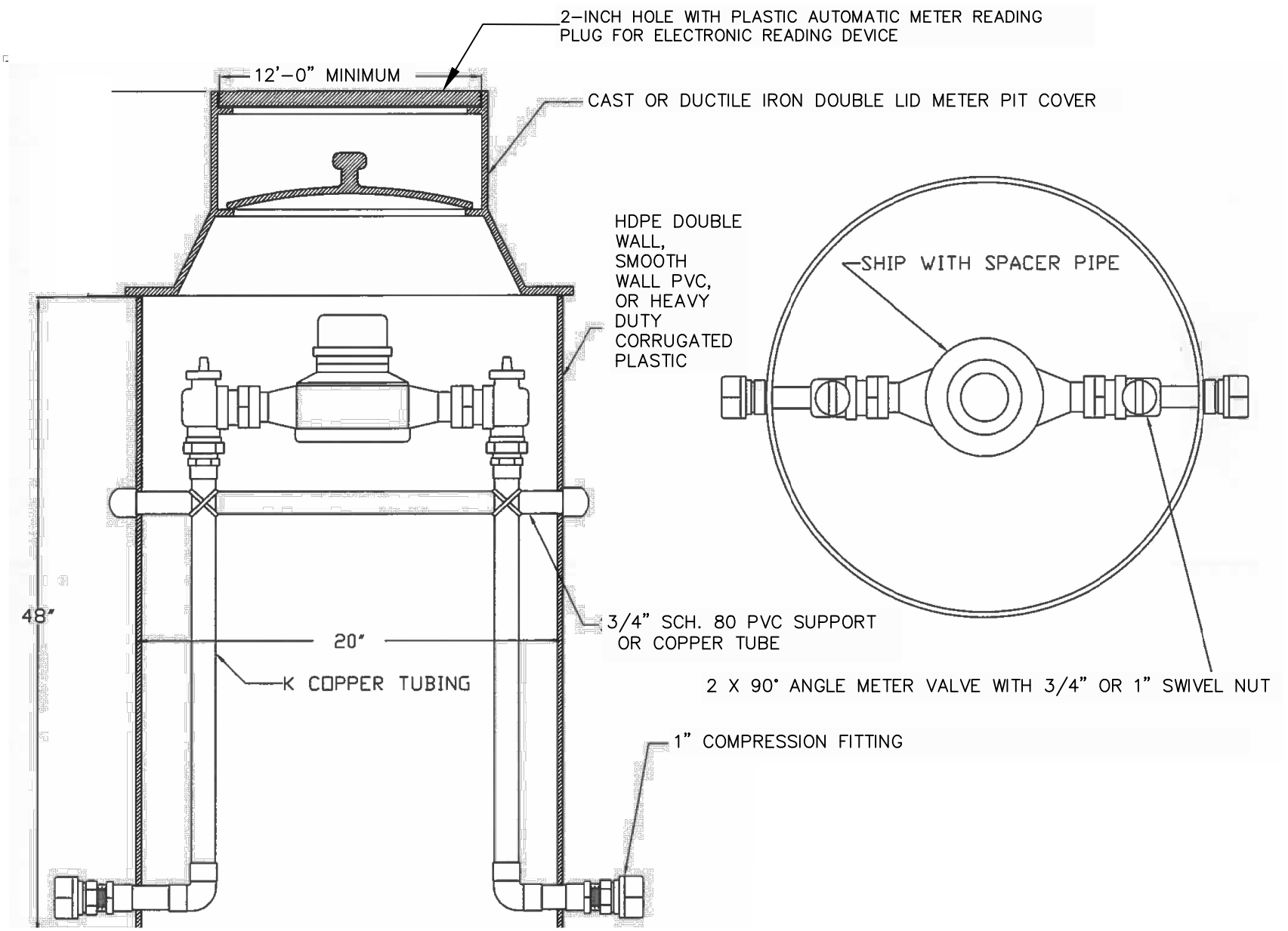
"BOTTOM VIEW"



NOTES:

1. **METERS SHALL BE SEALED BY COMMISSION INSTALLERS & METER READERS ONLY.**

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W–11.2	REV. DATE
		6/18/08 MAB
	WATER METER SEALING DETAIL	
	SCALE: NTS	



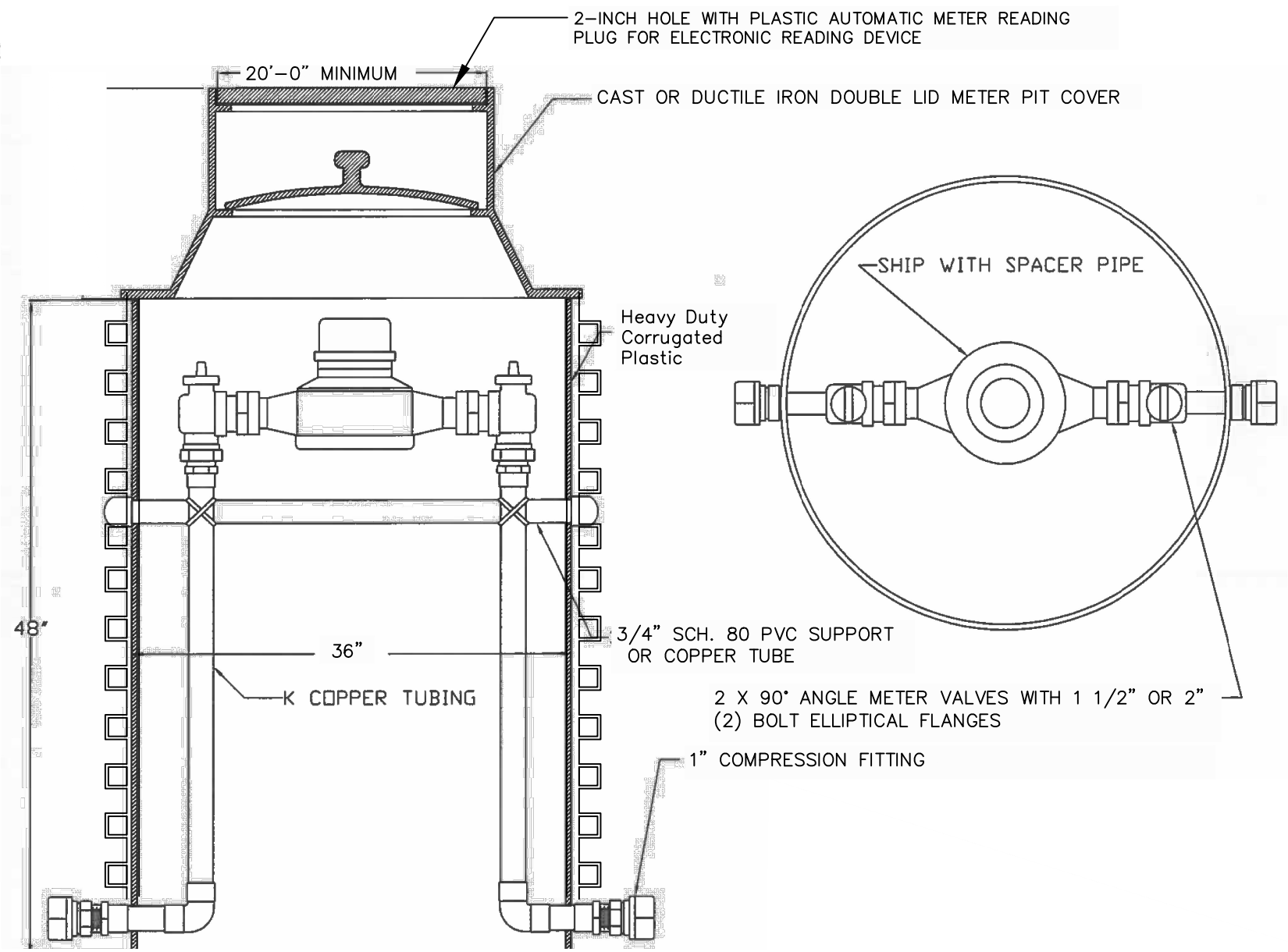
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–11.3

PLASTIC METER PIT FOR 5/8"–1" METERS

REV.	DATE	
	9/18/18	DJP
	7/30/20	LMB

SCALE: NTS



SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–11.4

PLASTIC METER PIT FOR 1½"–2" METERS

SCALE: NTS

REV.	DATE
	9/18/18 DJP
	7/30/20 LMB

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-11.5

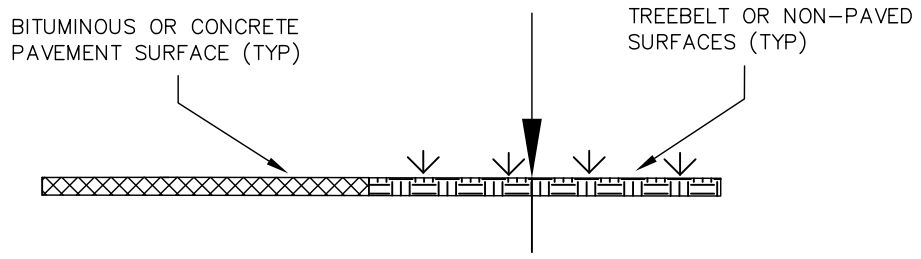
REV. DATE 10/27/20 MJL

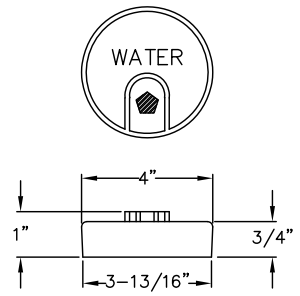
TYPICAL YARD HYDRANT

SCALE: NTS

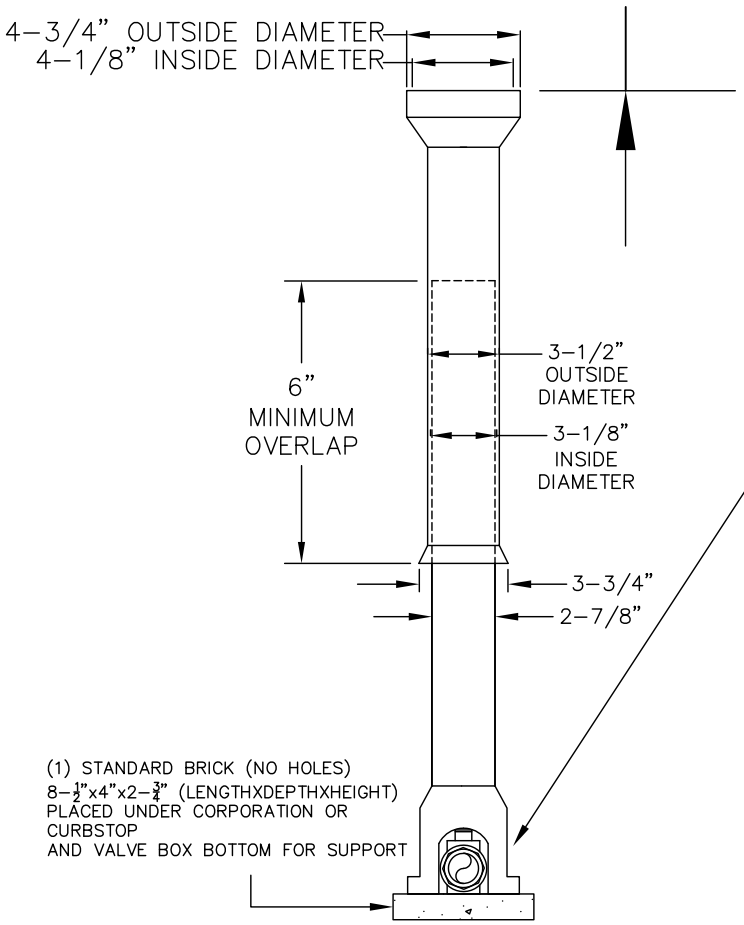
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL 2-INCH PIPING SHALL BE THREADED BRASS.
3. VALVE BOX AND METER PIT SHALL BE SUPPORTED USING BLOCKS.





SERVICE BOX COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "WATER" CAST INTO COVER



SLIDE TYPE
BUFFALO SERVICE BOX

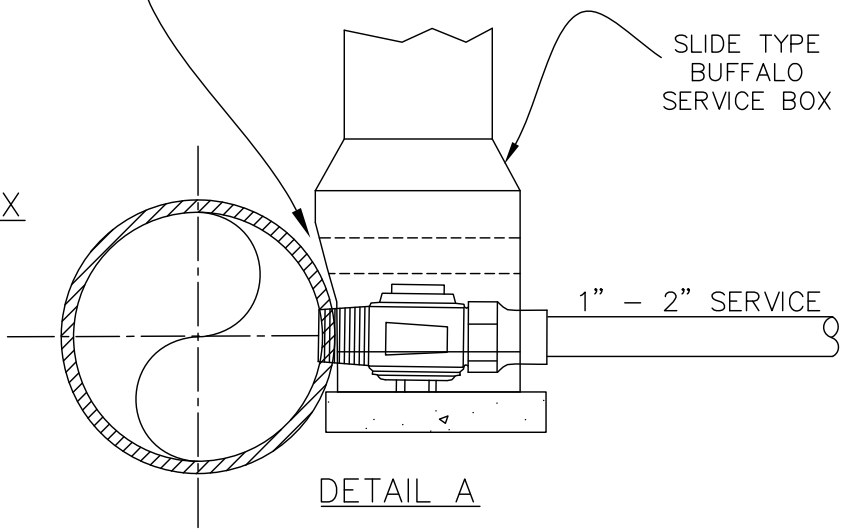
STANDARD SERVICE BOX SEE SWSC TECHNICAL SPECIFICATIONS

THE ARCH PATTERN BASE SHALL ACCOMMODATE 3/4 TO 2-INCH BALL TYPE CORPORATIONS AND BALL TYPE CURB STOPS.

A.) FOR 1-INCH BALL TYPE CORPORATIONS AND BALL TYPE CURB STOPS THE ARCH SHALL BE AT LEAST 5-INCHES TALL WITH A 3-INCH BY 3-INCH ARCH & CENTERED OVER 1-INCH BALL TYPE CORPORATION.

B.) FOR 1-1/2-INCH TO 2-INCH BALL TYPE CORPORATIONS AND BALL TYPE CURB STOPS THE ARCH SHALL BE AT LEAST 7-INCHES TALL WITH A 4-INCH BY 4-INCH ARCH.

APPROXIMATELY 1/2" TO BE REMOVED FROM SIDE OF BASE CLOSEST TO WATER MAIN IN ORDER TO CONFIRM THE BASE IS OVER THE 1-1/2"-2" BALL TYPE CURB STOPS (SEE DETAIL A).

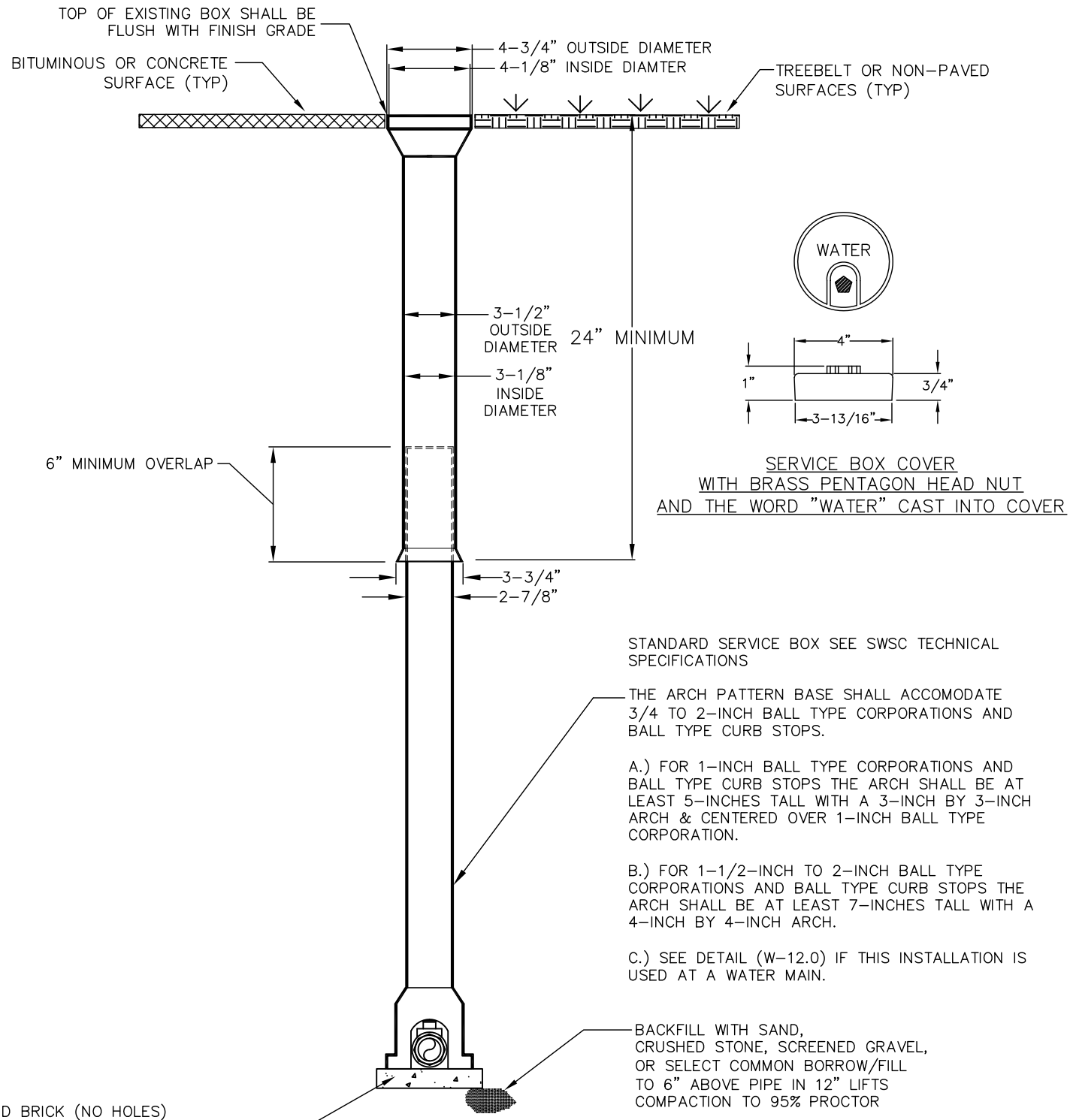


DETAIL A

NOTES:

1. **ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.**
2. **ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.**
3. **SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.**

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-12.0	REV. DATE
		4/1/08 MAB
	TYPICAL SERVICE BOX DETAIL IN PAVED AREAS	4/1/09 MAB
		1/9/19 DJP
	SCALE: NTS	



SERVICE BOX COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "WATER" CAST INTO COVER

SLIDE TYPE
BUFFALO SERVICE BOX

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. IF BACKFILLING WITH "FLOWABLE" FILL WRAP THE SERVICE BOX WITH 15 POUND FELT ROOFING PAPER OR 4 MIL THICK POLYETHYLENE IN ACCORDANCE WITH DETAIL W-12.2.

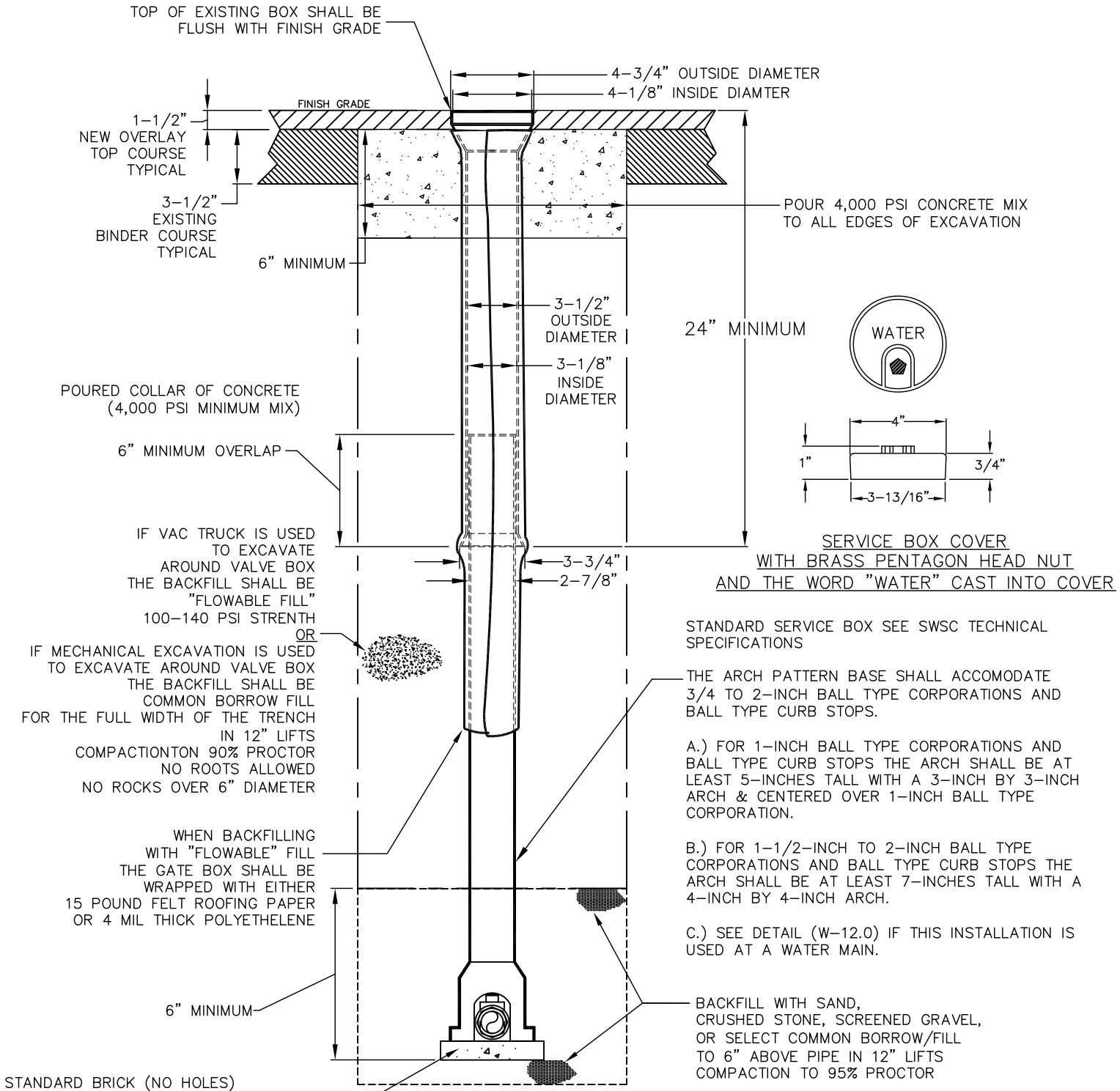
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-12.1

TYPICAL SERVICE BOX DETAIL IN NON-PAVED AREAS

SCALE: NTS

REV. DATE
4/1/08 MAB
4/1/09 MAB
4/1/10 MAB
1/9/19 DJP



SERVICE BOX COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "WATER" CAST INTO COVER

STANDARD SERVICE BOX SEE SWSC TECHNICAL SPECIFICATIONS

THE ARCH PATTERN BASE SHALL ACCOMODATE 3/4 TO 2-INCH BALL TYPE CORPORATIONS AND BALL TYPE CURB STOPS.

A.) FOR 1-INCH BALL TYPE CORPORATIONS AND BALL TYPE CURB STOPS THE ARCH SHALL BE AT LEAST 5-INCHES TALL WITH A 3-INCH BY 3-INCH ARCH & CENTERED OVER 1-INCH BALL TYPE CORPORATION.

B.) FOR 1-1/2-INCH TO 2-INCH BALL TYPE CORPORATIONS AND BALL TYPE CURB STOPS THE ARCH SHALL BE AT LEAST 7-INCHES TALL WITH A 4-INCH BY 4-INCH ARCH.

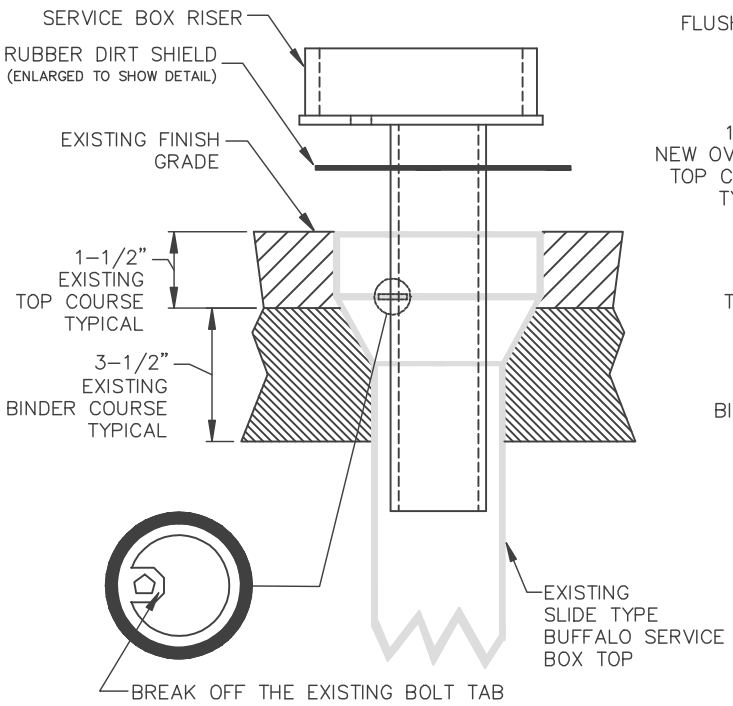
C.) SEE DETAIL (W-12.0) IF THIS INSTALLATION IS USED AT A WATER MAIN.

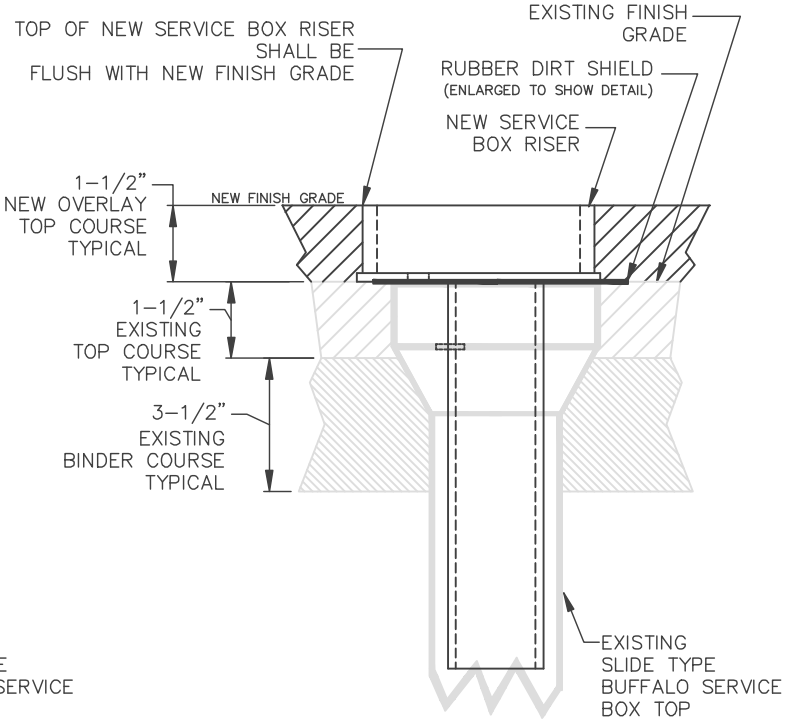
SLIDE TYPE
BUFFALO SERVICE BOX

NOTES:

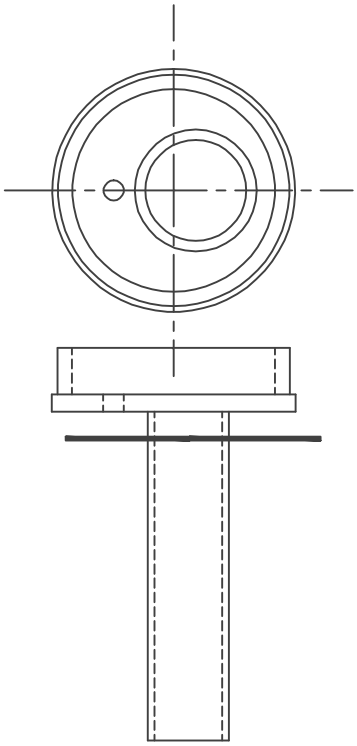
1. **ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.**
2. **ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.**
3. **SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.**

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-12.2	REV. DATE
		4/1/09 MAB
	REPLACE, RAISE OR RESET SERVICE BOX	1/9/19 DJP
	SCALE: NTS	

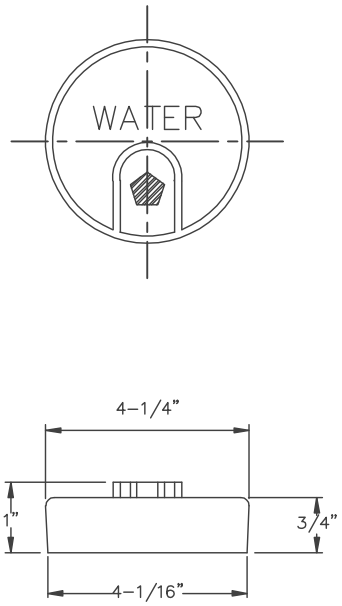




SERVICE BOX RISER INSTALLED



SERVICE BOX RISER

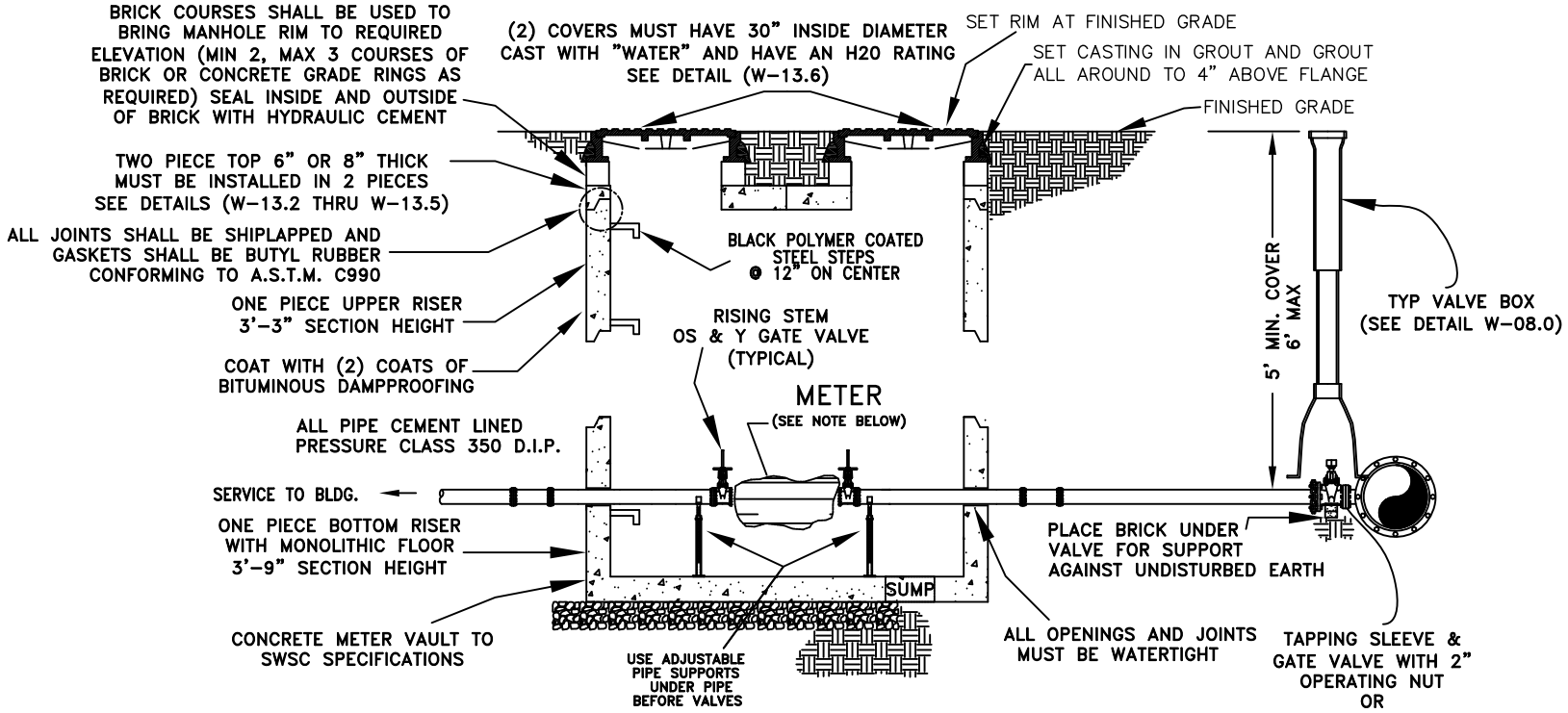


SERVICE BOX RISER COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "WATER" CAST INTO COVER

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W–12.3	REV. DATE
		4/1/09 MAB
	RAISE SERVICE BOX WITH RISER	
	SCALE: NTS	



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. VAULT TOP, WALLS & FLOOR THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS (W-13.2 THRU W-13.3).
3. ALL MATERIALS INCLUDING THE CONE REDUCER (OPTIONAL, IF REQUIRED BY THE SWSC), AND CHECK VALVE (OPTIONAL, IF REQUIRED BY THE SWSC) SHALL BE SUPPLIED BY THE CONTRACTOR..
4. ALL VALVES IN THE VAULT MUST HAVE HAND WHEELS. BYPASS VALVES MUST LOCKABLE OR CHAINABLE.
5. BYPASS PIPE CAN RUN ON OUTSIDE OF THE VAULT WITH A SHUT OFF VALVE.
6. ALL BURIED JOINTS SHALL BE MECHANICALLY RESTRAINED OR LOCKING GASKET. JOINTS IN VAULT OR BUILDING SHALL BE FLANGED.

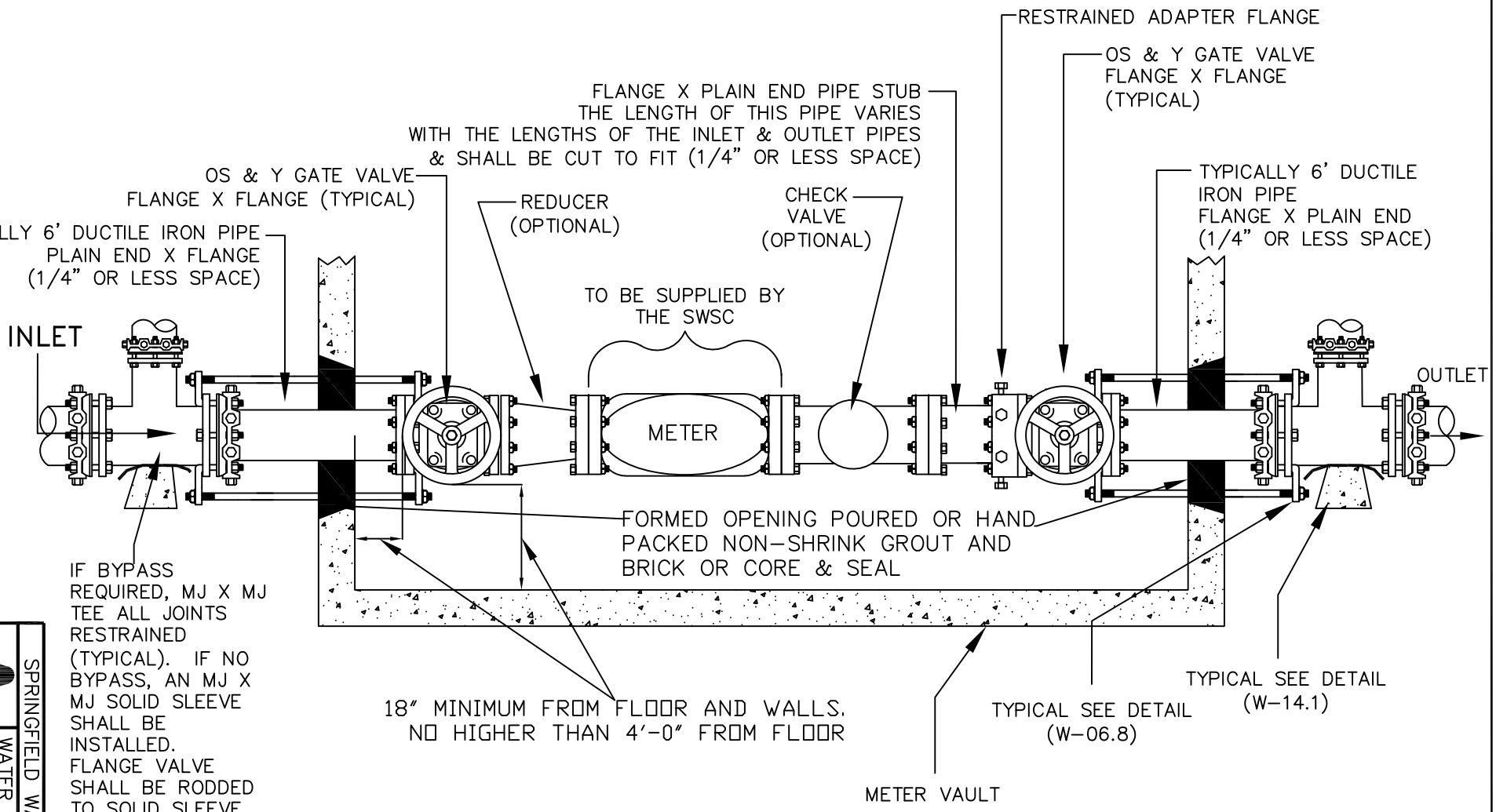
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-13.0

METER VAULT PIPING

SCALE: NTS

REV.	DATE
	9/18/18 DJP



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL MATERIALS INCLUDING THE CONE REDUCER (OPTIONAL, IF REQUIRED BY THE SWSC), AND CHECK VALVE (OPTIONAL, IF REQUIRED BY THE SWSC) SHALL BE SUPPLIED BY THE CONTRACTOR.
3. EACH OS&Y SHALL BE BOLTED TO THE INLET AND OUTLET FLANGE OF THE F X PE PIPES
4. THE OS&Y VALVE SHALL BE RESTRAINED TO THE SOLID SLEEVE OR TEE AND SECURED FROM ANY MOVEMENT.
5. EACH EXTERIOR BEND AND TEE MUST HAVE THRUST BLOCKS.
6. THE INLET AND OUTLET OPENINGS ARE TO BE SEALED AND WATER TIGHT AND FLUSH WITH THE INTERIOR AND EXTERIOR WALLS.
7. METER WILL BE SUPPLIED BY THE SWSC, CONTRACTOR TO CONFIRM WITH THE SWSC THE SPACE TO BE LEFT FOR THE METER CALL CUSTOMER FIELD SERVICES METER DIVISION AT (413-787-6207)

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-13.1

LARGE METER INSTALLATION

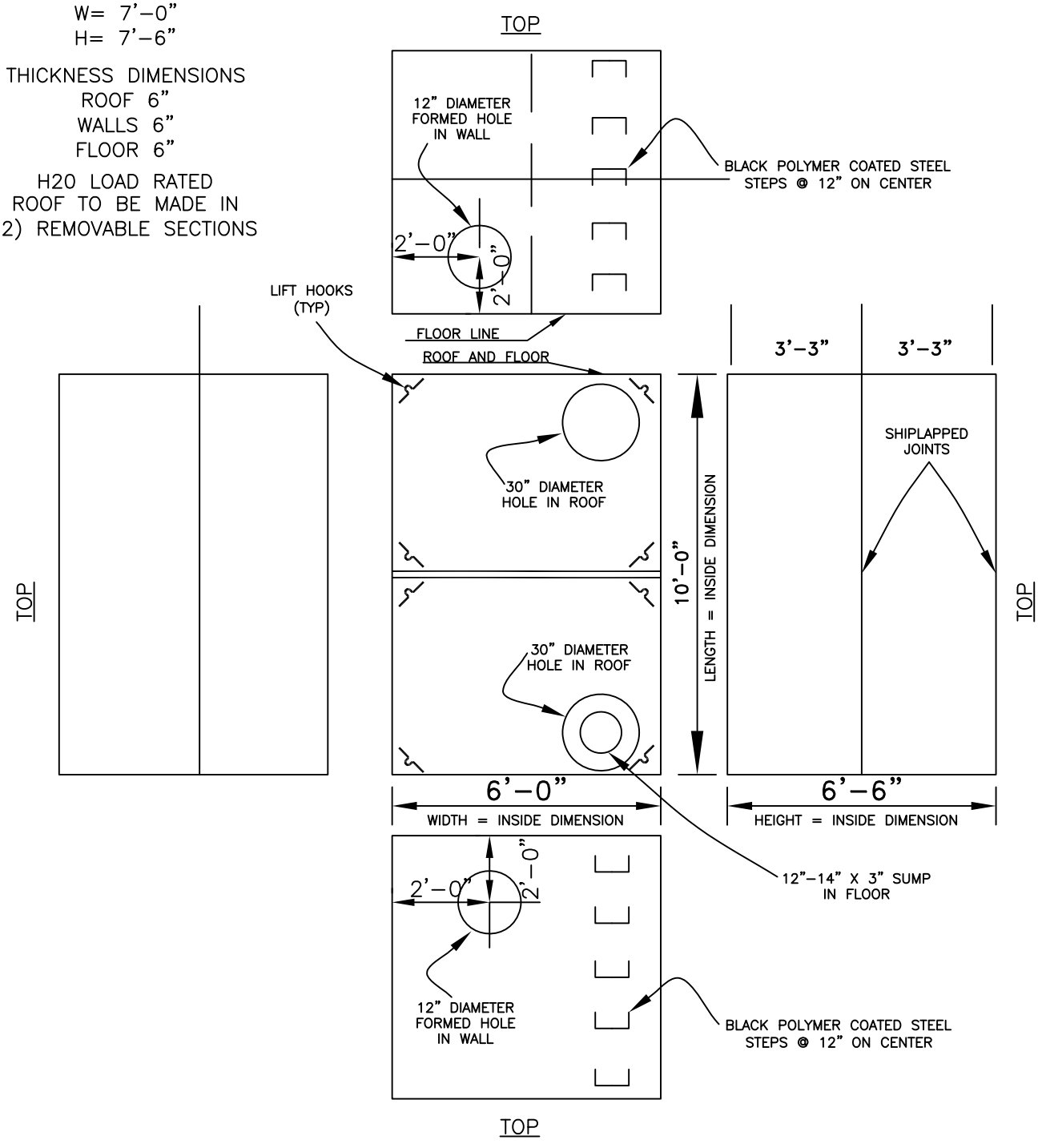
SCALE: NTS

REV.	DATE
	9/18/18 DJP

OUTSIDE DIMENSIONS
L= 11'–0"
W= 7'–0"
H= 7'–6"

THICKNESS DIMENSIONS
ROOF 6"
WALLS 6"
FLOOR 6"

H20 LOAD RATED
ROOF TO BE MADE IN
(2) REMOVABLE SECTIONS



NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. VAULT TOP, WALLS & FLOOR THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS (W–13.2 – W–13.5).
3. FORMED HOLES SHALL BE TAPPERED TOWARD THE INSIDE OF VAULT.
4. ALL JOINTS SHALL BE SHIPLAPPED AND GASKETS SHALL BE BUTYL RUBBER CONFORMING TO A.S.T.M. C990.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–13.2

STANDARD METER VAULT FOR DUCTILE IRON WATER SERVICE PIPE

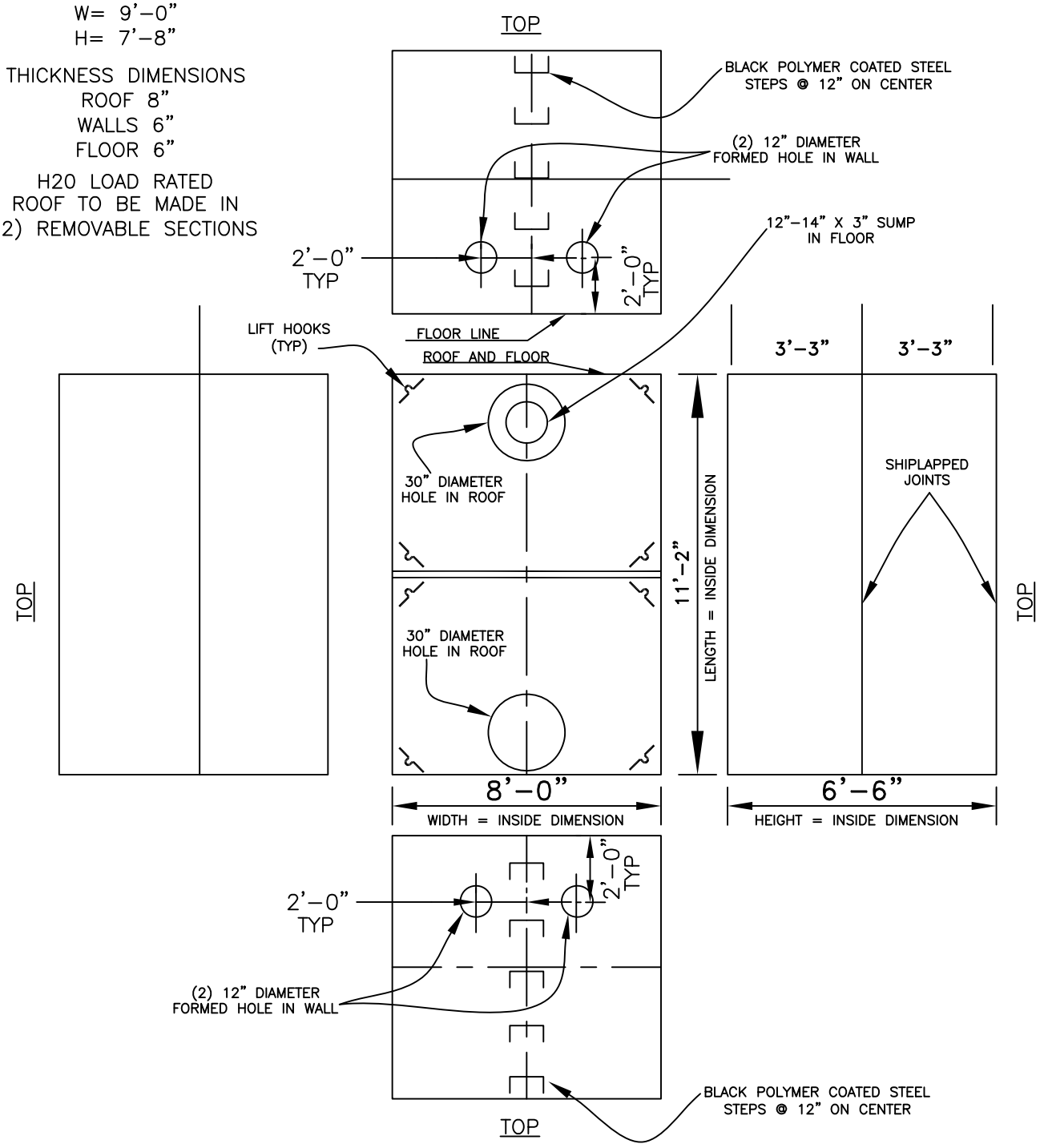
SCALE: NTS

REV. DATE
9/18/18 DJP

OUTSIDE DIMENSIONS
L= 12'–2"
W= 9'–0"
H= 7'–8"

THICKNESS DIMENSIONS
ROOF 8"
WALLS 6"
FLOOR 6"

H20 LOAD RATED
ROOF TO BE MADE IN
(2) REMOVABLE SECTIONS



NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. VAULT TOP, WALLS & FLOOR THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS (W–13.2 – W–13.5).
3. FORMED HOLES SHALL BE TAPPERED TOWARD THE INSIDE OF VAULT.
4. ALL JOINTS SHALL BE SHIPLAPPED AND GASKETS SHALL BE BUTYL RUBBER CONFORMING TO A.S.T.M. C990.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–13.3

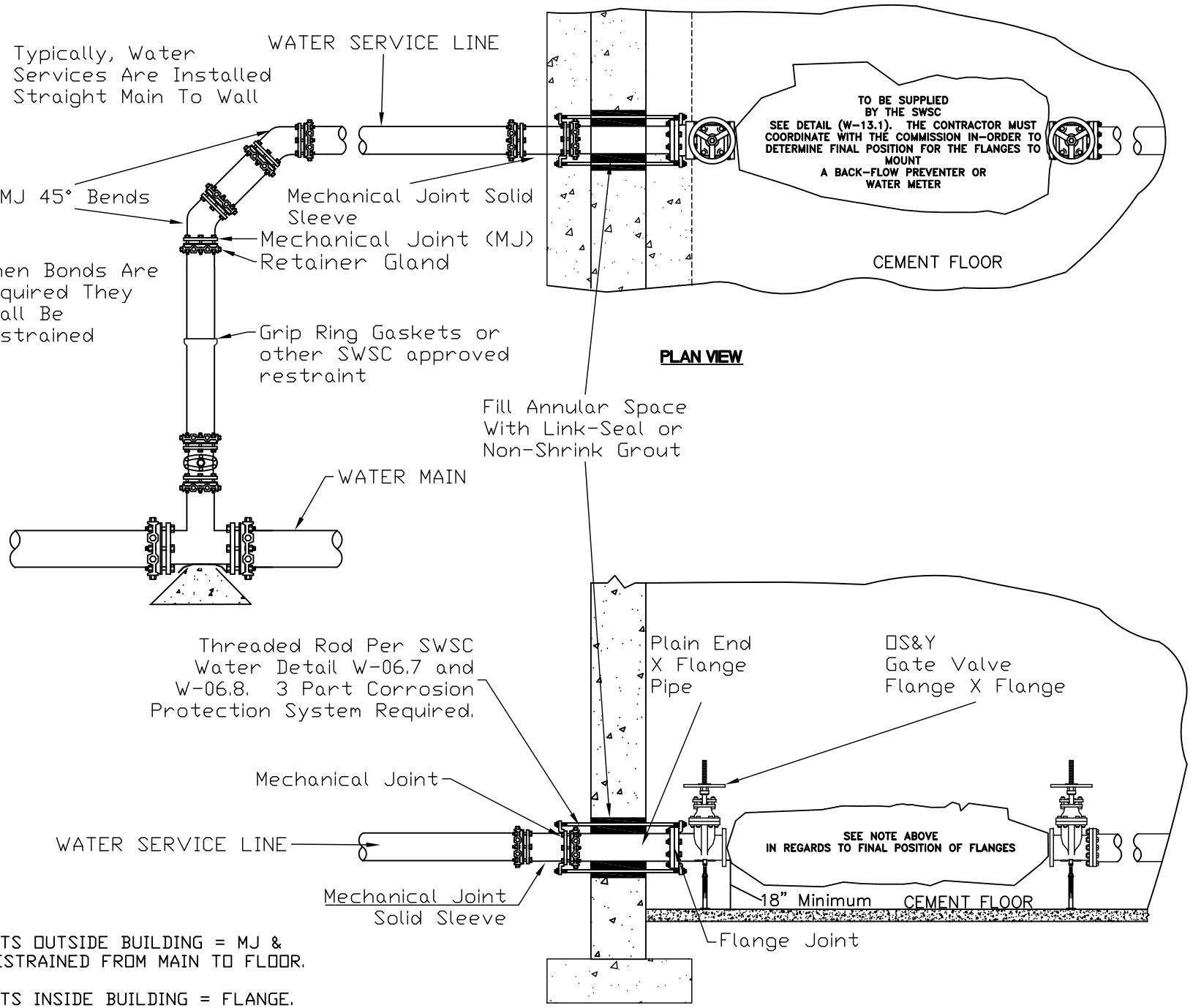
OVERSIZED METER VAULT FOR DUCTILE IRON WATER SERVICE PIPE

SCALE: NTS

REV. DATE
4/1/08 MAB
1/8/19 DJP

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPING UP TO THE FIRST OS&Y MUST BE INSTALLED BEFORE TESTING.
2. FLANGES THAT CONNECT METER MUST BE SUPPLIED BY THE CONTRACTOR.
3. ALL VALVES IN THE BASEMENT/MECHANICAL ROOM MUST BE OS&Y, HAVE HAND WHEELS AND MUST LOCKABLE OR CHAIN-ABLE. NO PORT ALLOWED ON OS&Y EITHER SIDE OF THE METER.
4. ALL PIPES SHALL BE FULLY RESTRAINED FROM 1ST OS+Y VALVE FOR 80-FEET.



ALL JOINTS OUTSIDE BUILDING = MJ & FULLY RESTRAINED FROM MAIN TO FLOOR.

ALL JOINTS INSIDE BUILDING = FLANGE.

FIRST FITTING INSIDE BUILDING TO BE RODDED TO FITTING OUTSIDE BUILDING.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-13.4

TYPICAL DUCTILE IRON WATER SERVICE DETAIL THROUGH FOUNDATION WALL

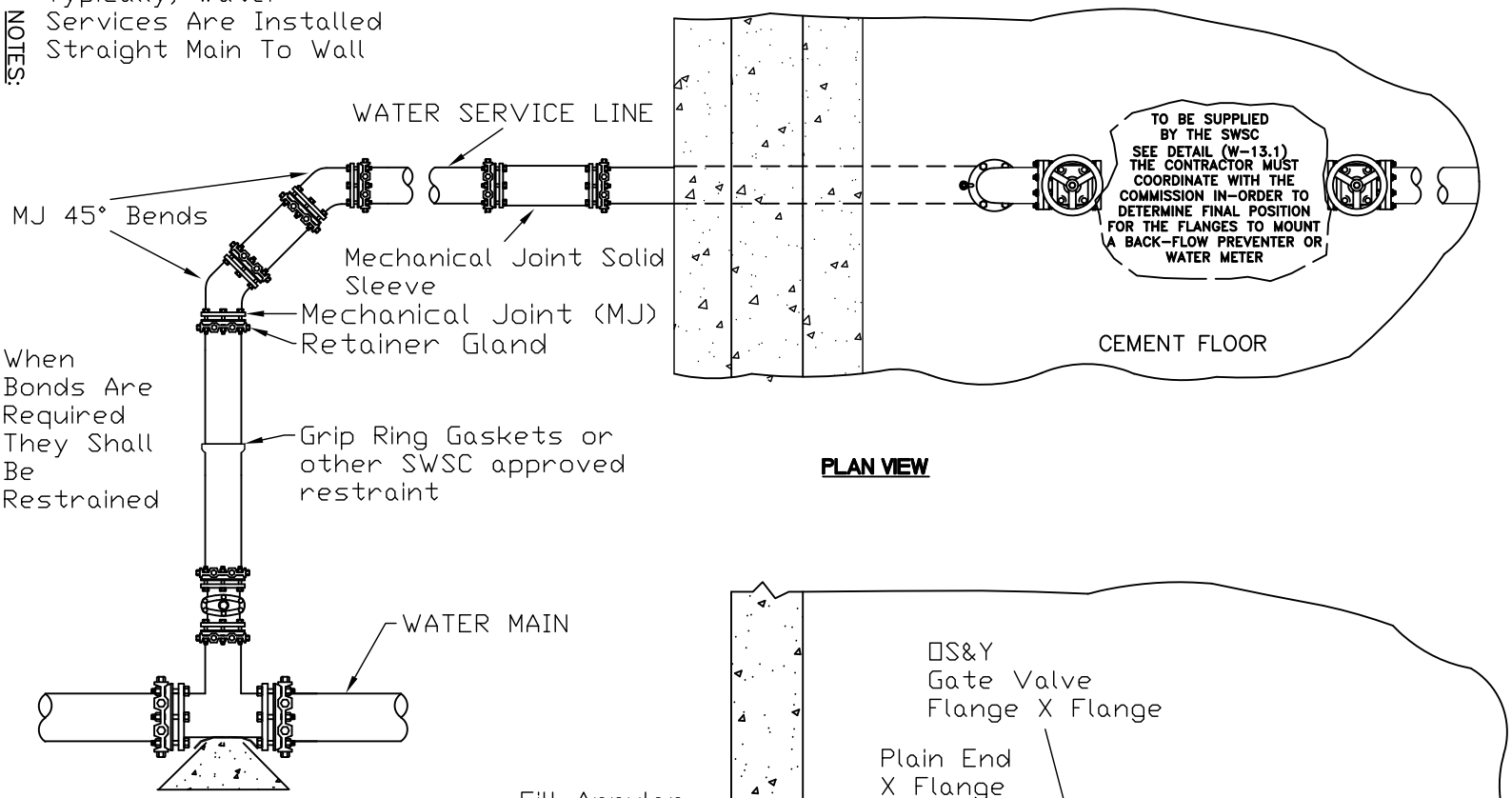
SCALE: NTS

REV. DATE
1/8/19 DJP

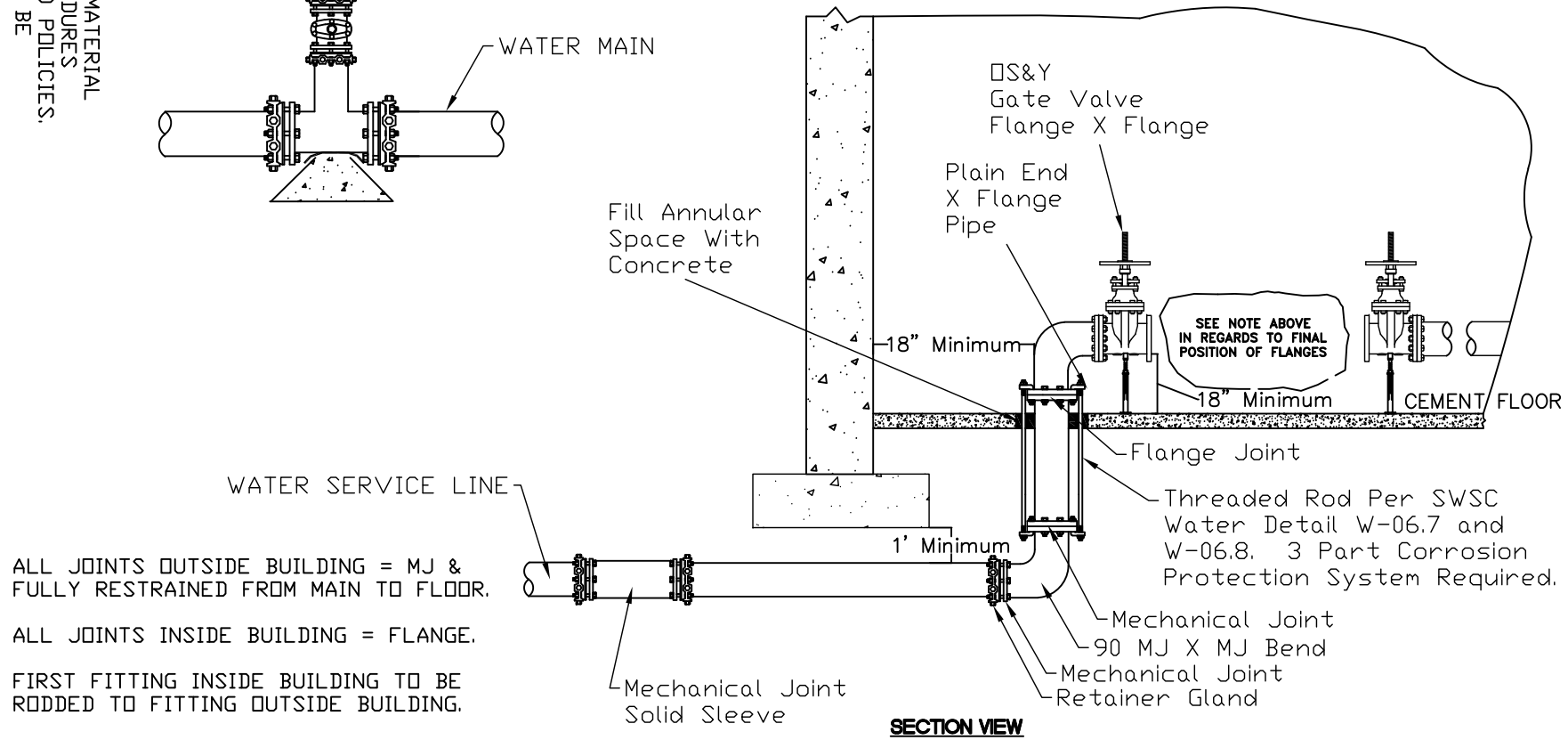
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPING UP TO THE FIRST OS&Y MUST BE INSTALLED BEFORE TESTING.
2. FLANGES THAT CONNECT METER MUST BE SUPPLIED BY THE CONTRACTOR.
3. ALL VALVES IN THE BASEMENT/MECHANICAL ROOM MUST BE OS&Y, HAVE HAND WHEELS AND MUST LOCKABLE OR CHAIN-ABLE. NO PORT ALLOWED ON OS&Y EITHER SIDE OF THE METER.
4. ALL PIPES SHALL BE FULLY RESTRAINED FROM 1ST OS+Y VALVE FOR 80-FEET.

Typically, Water Services Are Installed Straight Main To Wall



PLAN VIEW



SECTION VIEW

ALL JOINTS OUTSIDE BUILDING = MJ & FULLY RESTRAINED FROM MAIN TO FLOOR.

ALL JOINTS INSIDE BUILDING = FLANGE.

FIRST FITTING INSIDE BUILDING TO BE RODDED TO FITTING OUTSIDE BUILDING.

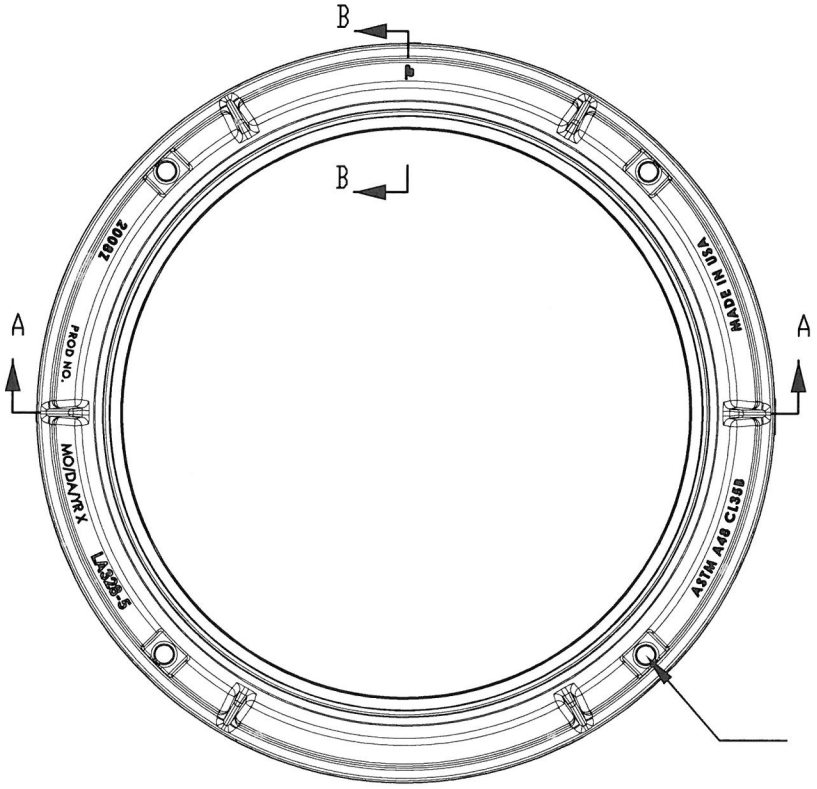
SPRINGFIELD WATER AND SEWER COMMISSION

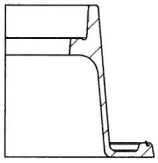
WATER DETAIL W-13.5

TYPICAL DUCTILE IRON WATER SERVICE DETAIL THROUGH CONCRETE FLOOR

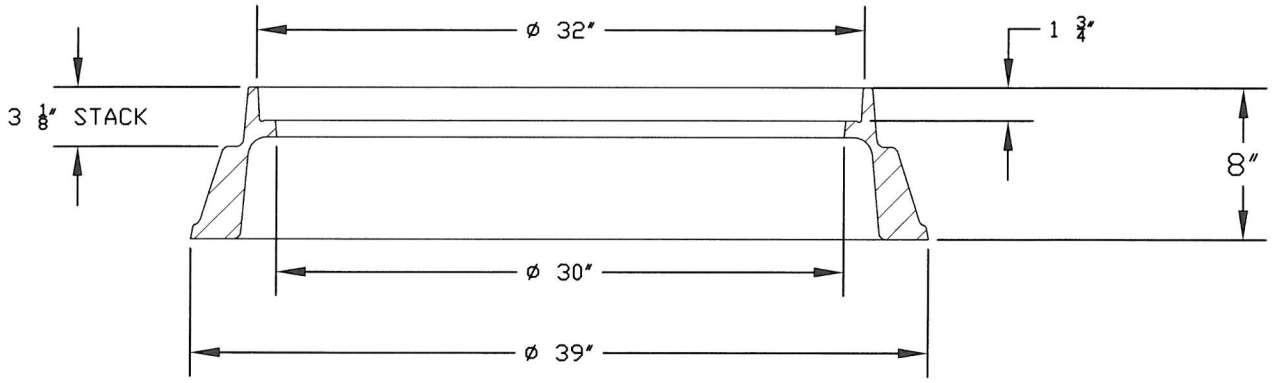
SCALE: NTS

REV. DATE
3/22/17 LMB
1/8/19 DJP





SECTION B-B

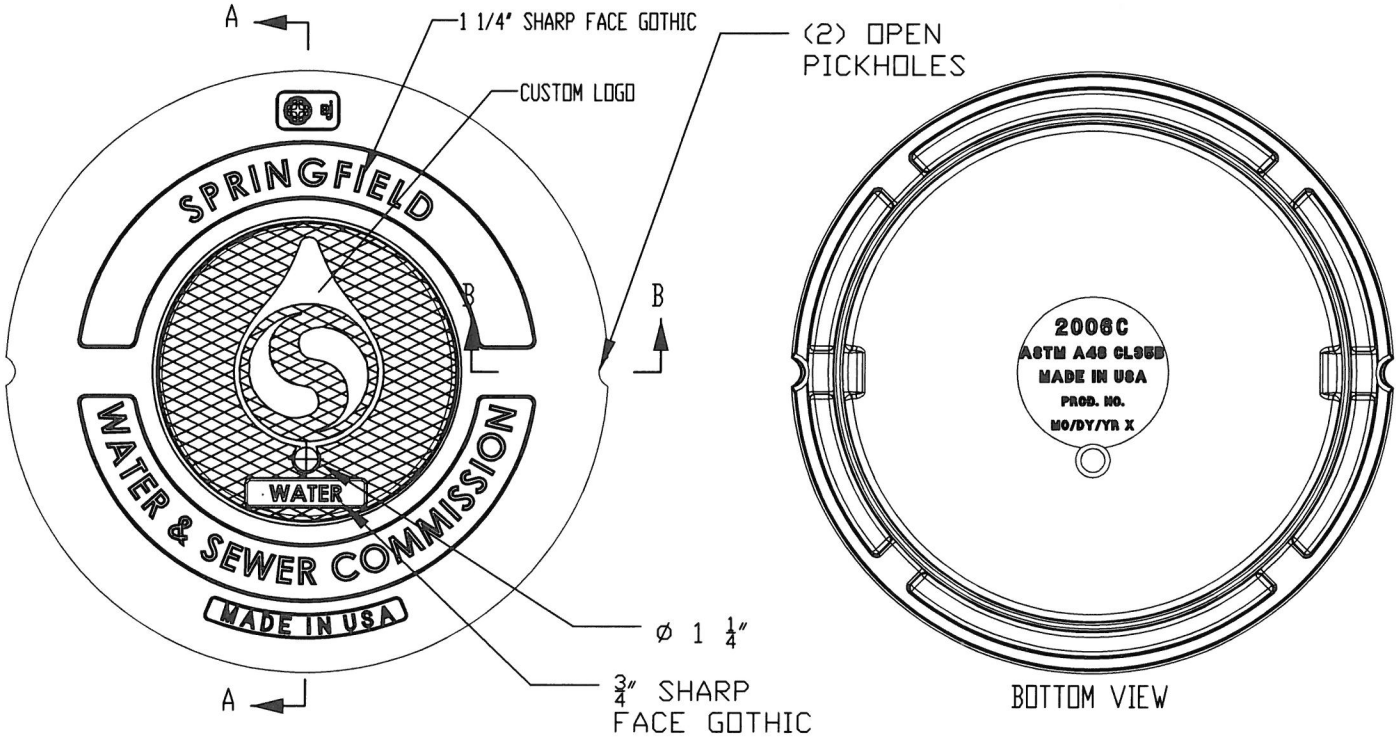


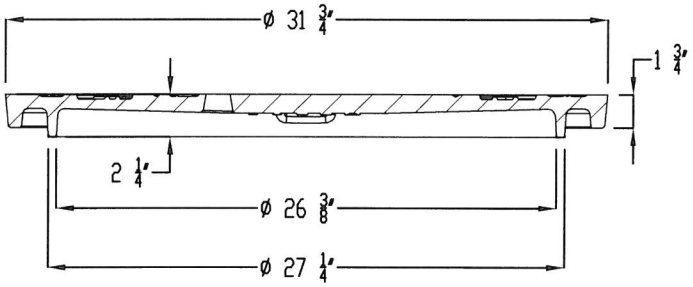
SECTION A-A

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.6	REV. DATE 4/16/19 DJP
	32-inch by 8-inch Frame Only	
	SCALE: NTS	



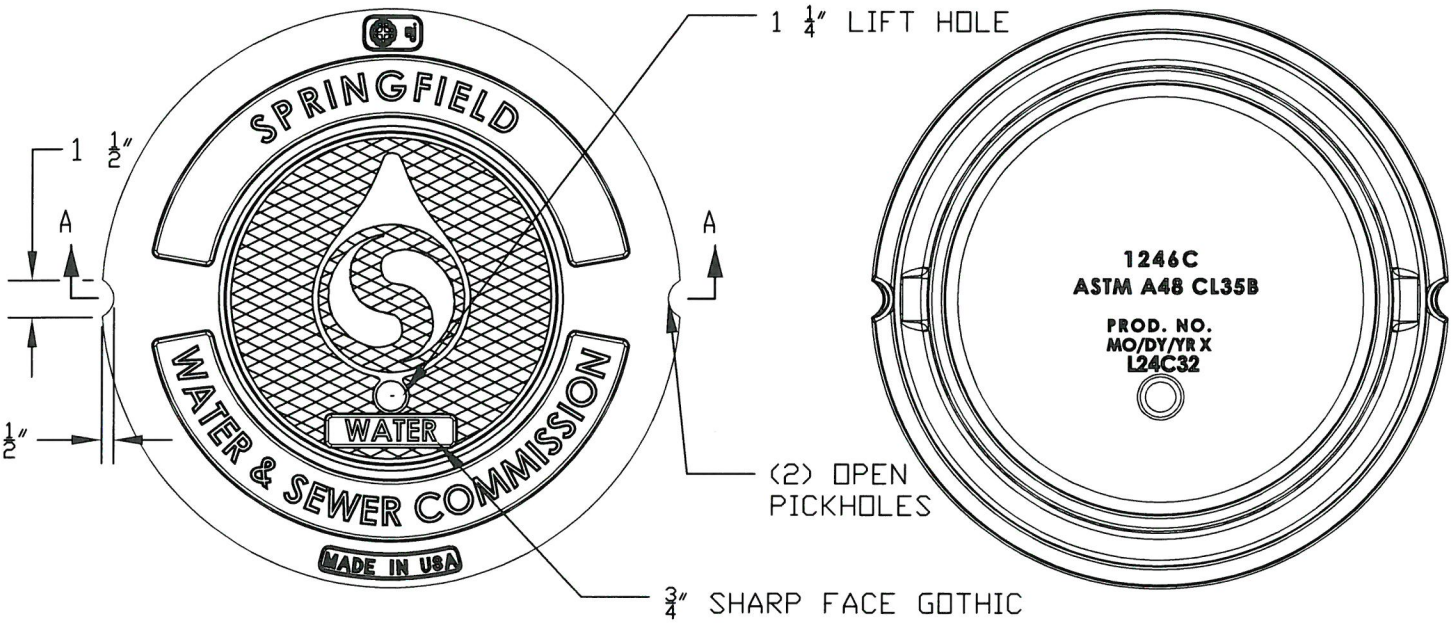


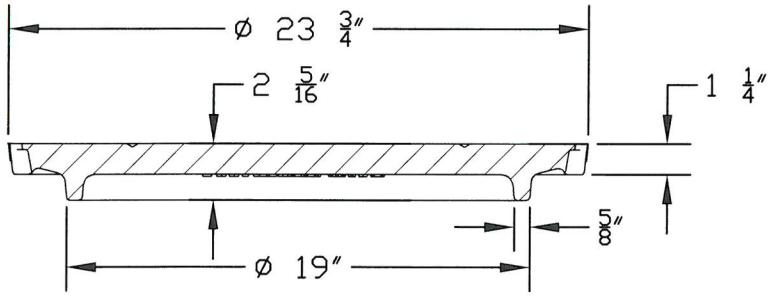
SECTION A-A

SECTION B-B
SCALE 1 : 8

NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.7	REV. DATE
	32-inch Standard Water Cover	4/16/19 DJP
	SCALE: NTS	



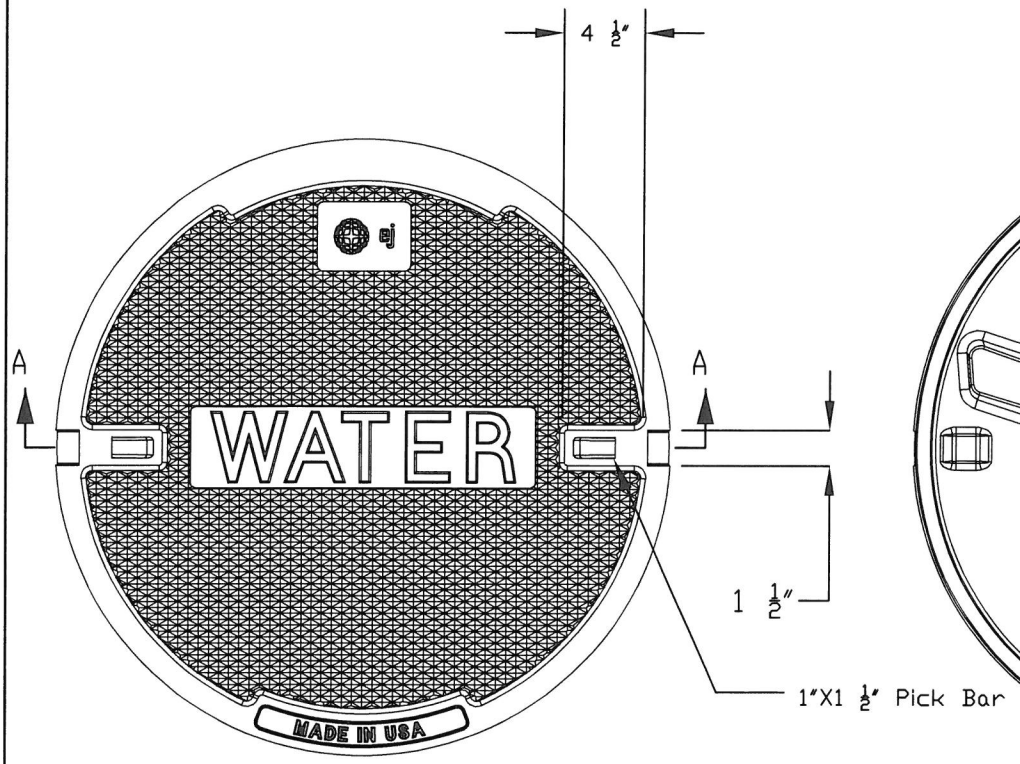


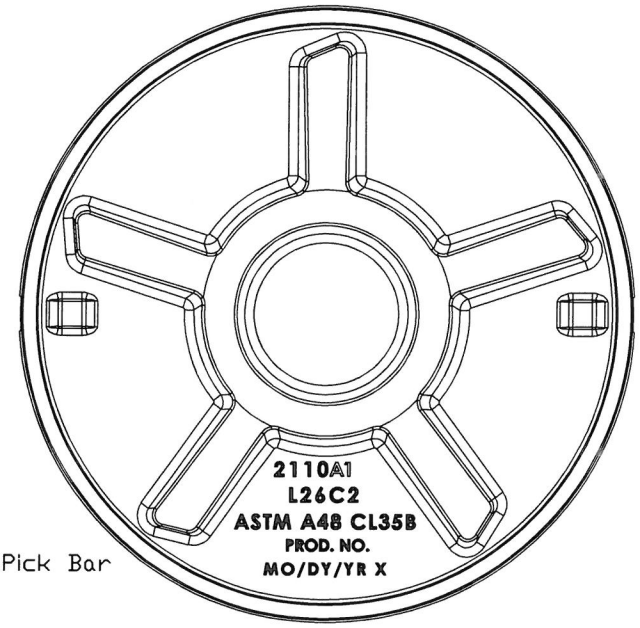
SECTION A-A

NOTES:

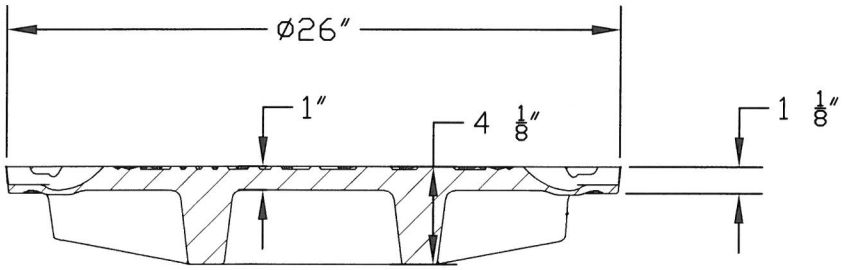
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.8	REV. DATE
	24-inch Replacement Water Cover	4/16/19 DJP
	SCALE: NTS	





BOTTOM VIEW

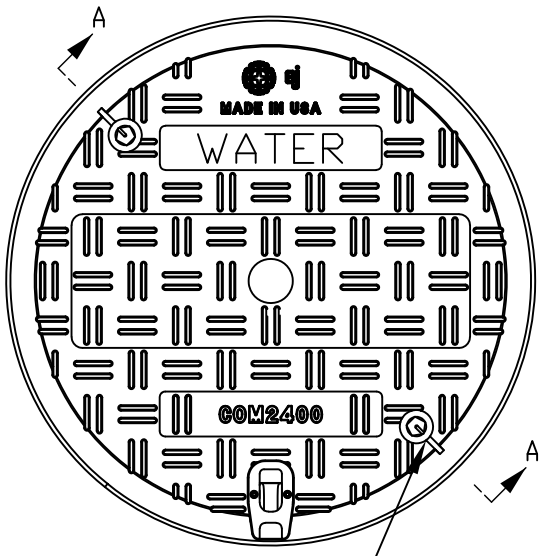


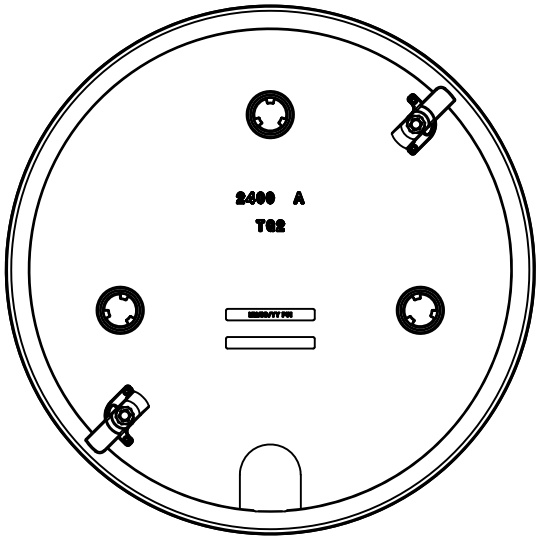
SECTION A-A

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

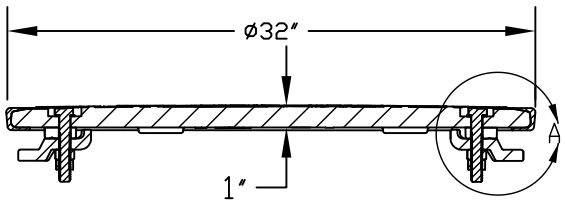
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.9	REV. DATE
	26-inch Replacement Water Cover	4/16/19 DJP
	SCALE: NTS	



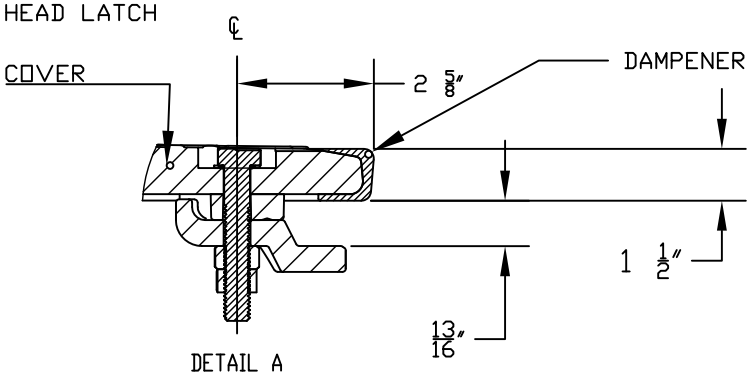


BOTTOM VIEW

¼ TURN PENTA HEAD LATCH



SECTION A-A

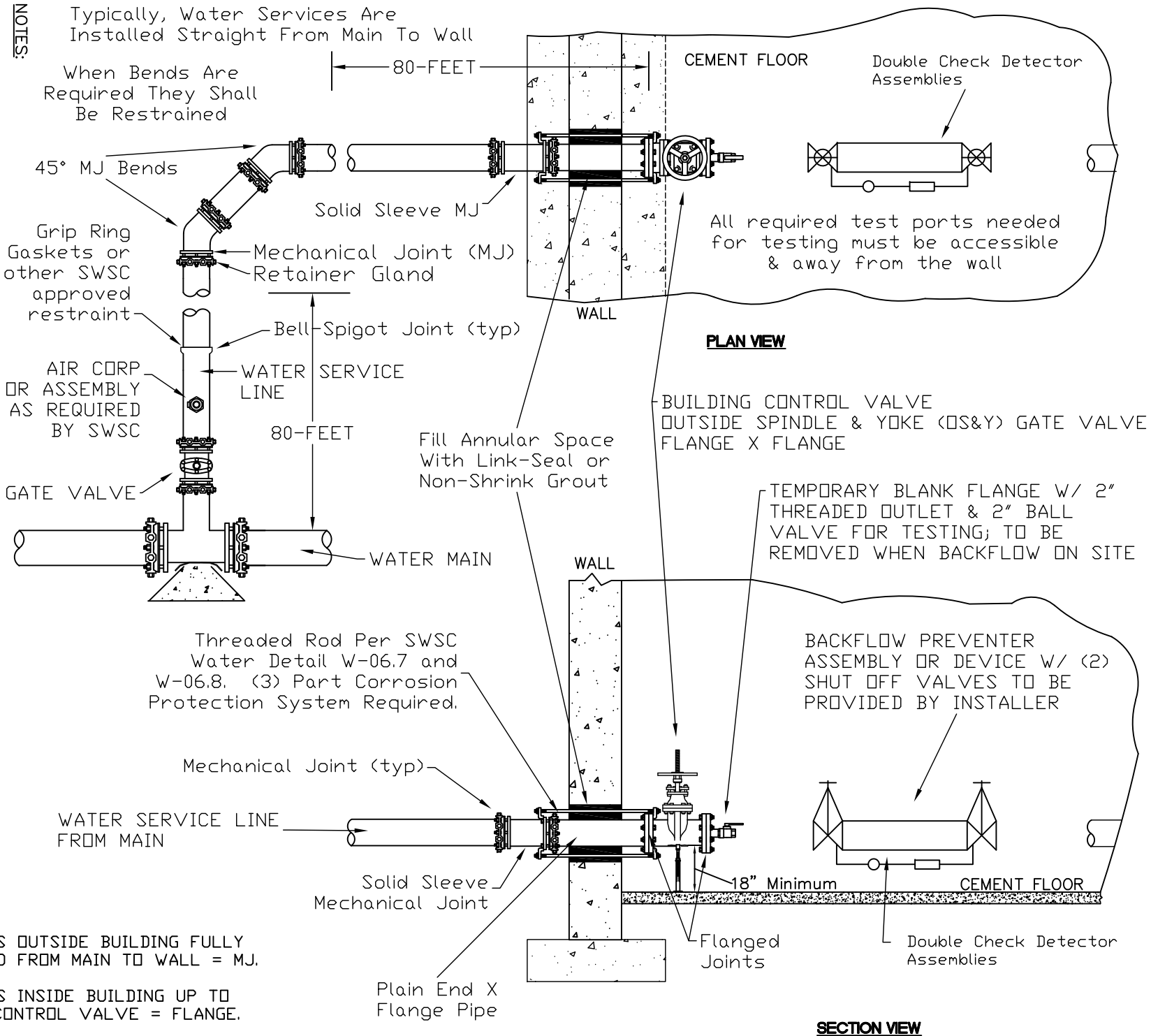


DETAIL A
SCALE 1:3

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. COVER SHALL BE MADE FROM FIBER REINFORCED POLYMER (FRP) ASTM C1028
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.10	REV. DATE
	32" Composite Locking Cover	4/19/19 DJP
		4/6/21 MJL
	SCALE: NTS	



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. BACKFLOW PREVENTION DEVICE OR ASSEMBLY SHALL BE INSTALLED ONTO OS&Y BUILDING CONTROL VALVE.
4. ALL VALVES AFTER THE BUILDING CONTROL VALVE MAY BE OS&Y GATE VALVE OR BUTTERFLY VALVE W/ TAMPER SWITCH. MUST BE LOCKABLE OR CHAINABLE.
5. ANY COMBINATION OF FLANGE ON GROOVED CONNECTIONS AFTER BUILDING CONTROL VALVE ARE ALLOWED.
6. ALL PIPING FROM 1ST FLANGED JOINT TO MAIN OUTSIDE AND FROM MAIN TOWARDS BUILDING, SHALL BE FULLY RESTRAINED FOR 80-FEET.

NOTES:
ALL JOINTS OUTSIDE BUILDING FULLY RESTRAINED FROM MAIN TO WALL = MJ.

ALL JOINTS INSIDE BUILDING UP TO BUILDING CONTROL VALVE = FLANGE.

1ST FLANGED JOINT INSIDE BUILDING TO BE RODDED TO LAST JOINT OUTSIDE BUILDING.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-13.11

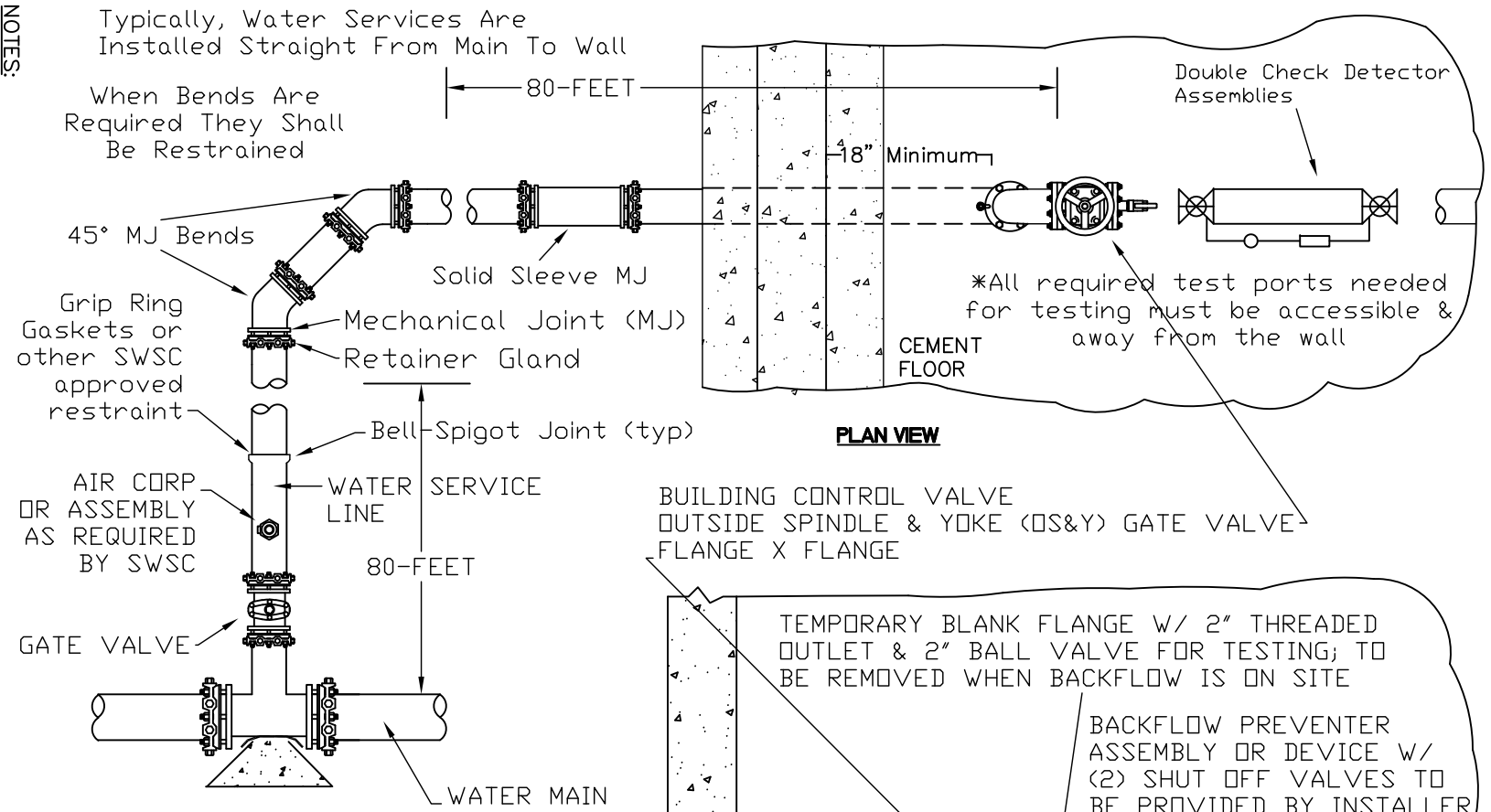
TYPICAL DUCTILE IRON FIRE SERVICE DETAIL THROUGH FOUNDATION WALL

SCALE: NTS

REV.	DATE
	1/8/19 DJP
	10/6/20 MAB
	10/13/20 MJL

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. BACKFLOW PREVENTION DEVICE OR ASSEMBLY SHALL BE INSTALLED ONTO OS&Y BUILDING CONTROL VALVE.
4. ALL VALVES AFTER THE BUILDING CONTROL VALVE MAY BE OS&Y GATE VALVE OR BUTTERFLY VALVE W/ TAMPER SWITCH. MUST BE LOCKABLE OR CHAINABLE.
5. ANY COMBINATION OF FLANGE ON GROOVED CONNECTIONS AFTER BUILDING CONTROL VALVE ARE ALLOWED.
6. ALL PIPING FROM 1ST FLANGED JOINT TO MAIN OUTSIDE AND FROM MAIN TOWARDS BUILDING, SHALL BE FULLY RESTRAINED FOR 80-FEET.



NOTES:
ALL JOINTS OUTSIDE BUILDING FULLY RESTRAINED FROM MAIN TO WALL = MJ.

ALL JOINTS INSIDE BUILDING UP TO BUILDING CONTROL VALVE = FLANGE.

1ST FLANGED JOINT INSIDE BUILDING TO BE RODDED TO LAST JOINT OUTSIDE BUILDING.

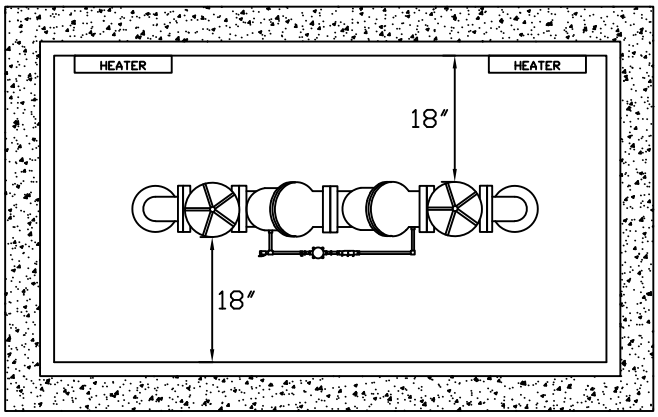
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-13.12

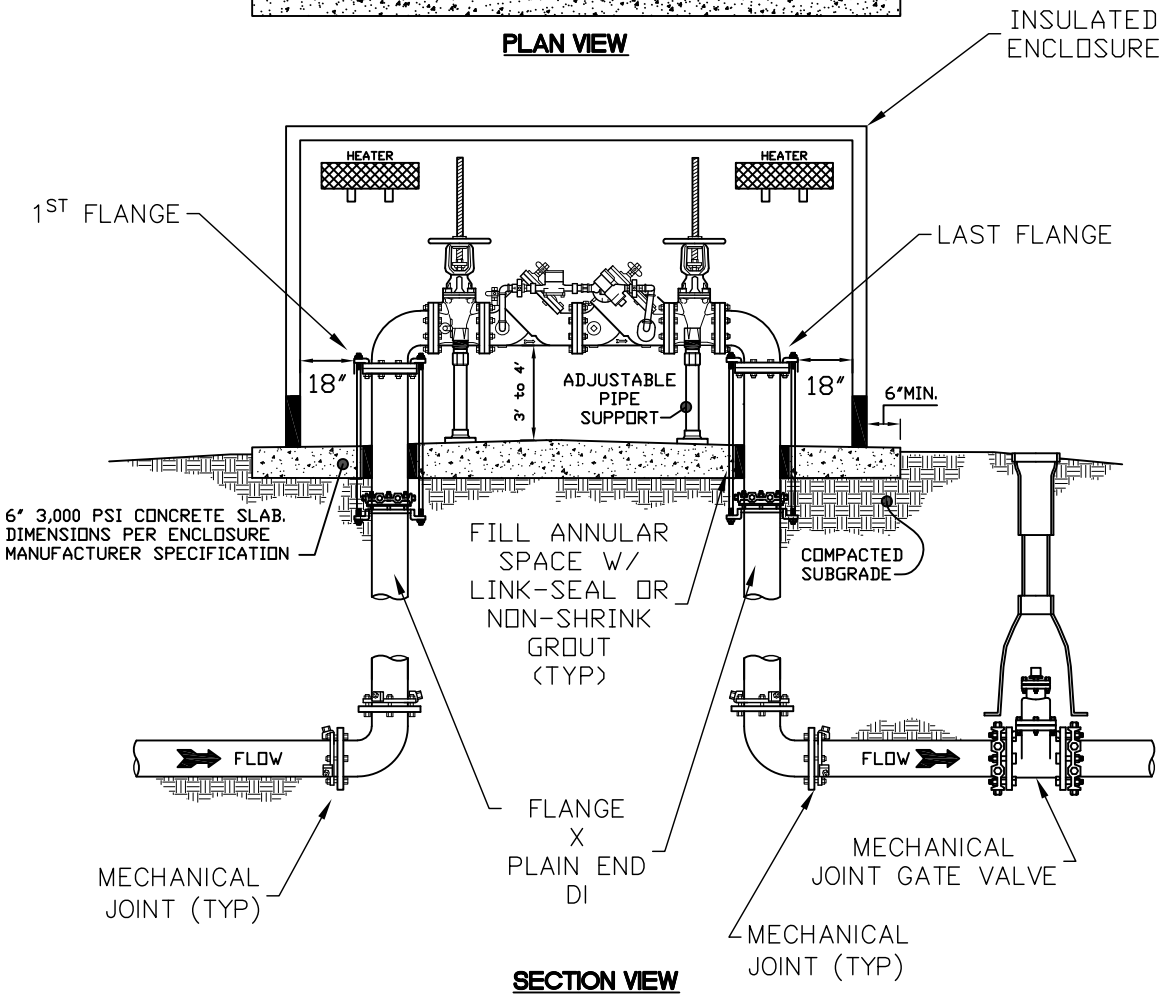
TYPICAL DUCTILE IRON FIRE SERVICE DETAIL THROUGH CONCRETE FLOOR

SCALE: NTS

REV.	DATE
	3/22/17 LMB
	1/8/19 DJP
	10/13/20 MJL



PLAN VIEW

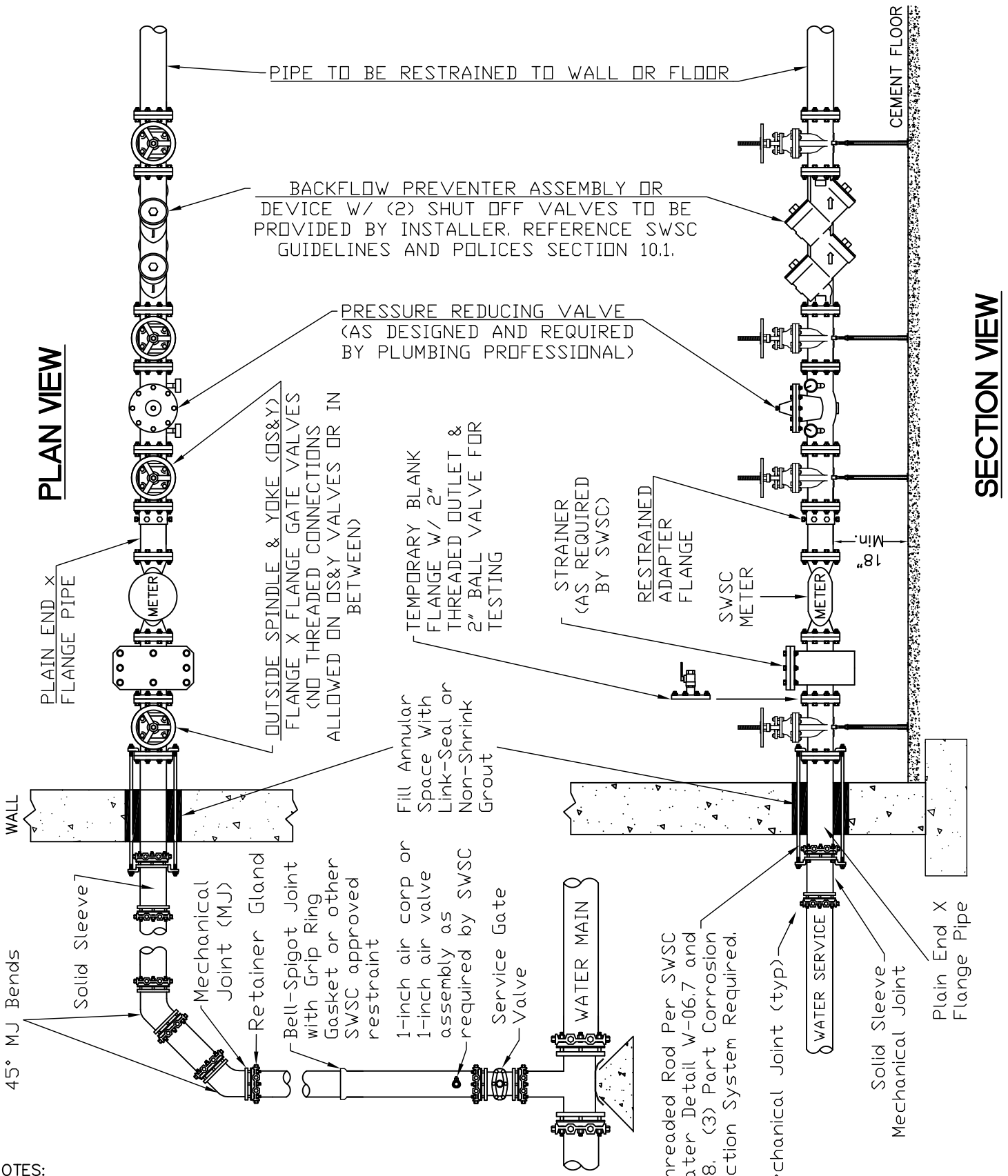


SECTION VIEW

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST FLANGE MUST BE INSTALLED BEFORE TESTING.
3. BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED ONTO 1ST FLANGE.
4. ALL VALVES AFTER THE 1ST FLANGE MAY BE OS&Y GATE VALVE OR BUTTERFLY VALVE W/ TAMPER SWITCH. MUST BE LOCKABLE OR CHAINABLE.
5. ANY COMBINATION OF FLANGE ON GROOVED CONNECTIONS BETWEEN 1ST FLANGE AND LAST FLANGE ARE ALLOWED.
6. ALL PIPING FROM 1ST FLANGED JOINT TO MAIN OUTSIDE AND FROM MAIN TOWARDS BUILDING, SHALL BE FULLY RESTRAINED FOR 80-FEET.
7. ALL JOINTS OUTSIDE HOT BOX FULLY RESTRAINED FROM MAIN TO WALL = MJ.
8. 1ST & LAST FLANGED JOINT IN HOT BOX TO BE FLANGED.
9. 1ST & LAST FLANGED JOINT INSIDE HOT BOX TO BE RODDED TO NEXT JOINTS OUTSIDE HOT BOX.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.13	REV. DATE
	TYPICAL DUCTILE IRON FIRE SERVICE DETAIL IN A HOT BOX	10/28/20 MJL
		10/29/20 DS
	SCALE: NTS	



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. ALL JOINTS OUTSIDE BUILDING SHALL BE FULLY RETRAINED FOR A MINIMUM OF 80FT OR TO THE WATER MAIN, WHICH EVER COMES FIRST.
4. JOINTS INSIDE BUILDING SHALL BE FLANGE x FLANGE. ONLY ONE ADAPTER FLANGE SHALL BE INSTALLED AS SHOWN ON DETAIL.
5. NO THREADED CONNECTIONS ALLOWED INSIDE BUILDING UP TO THE 2ND OS&Y

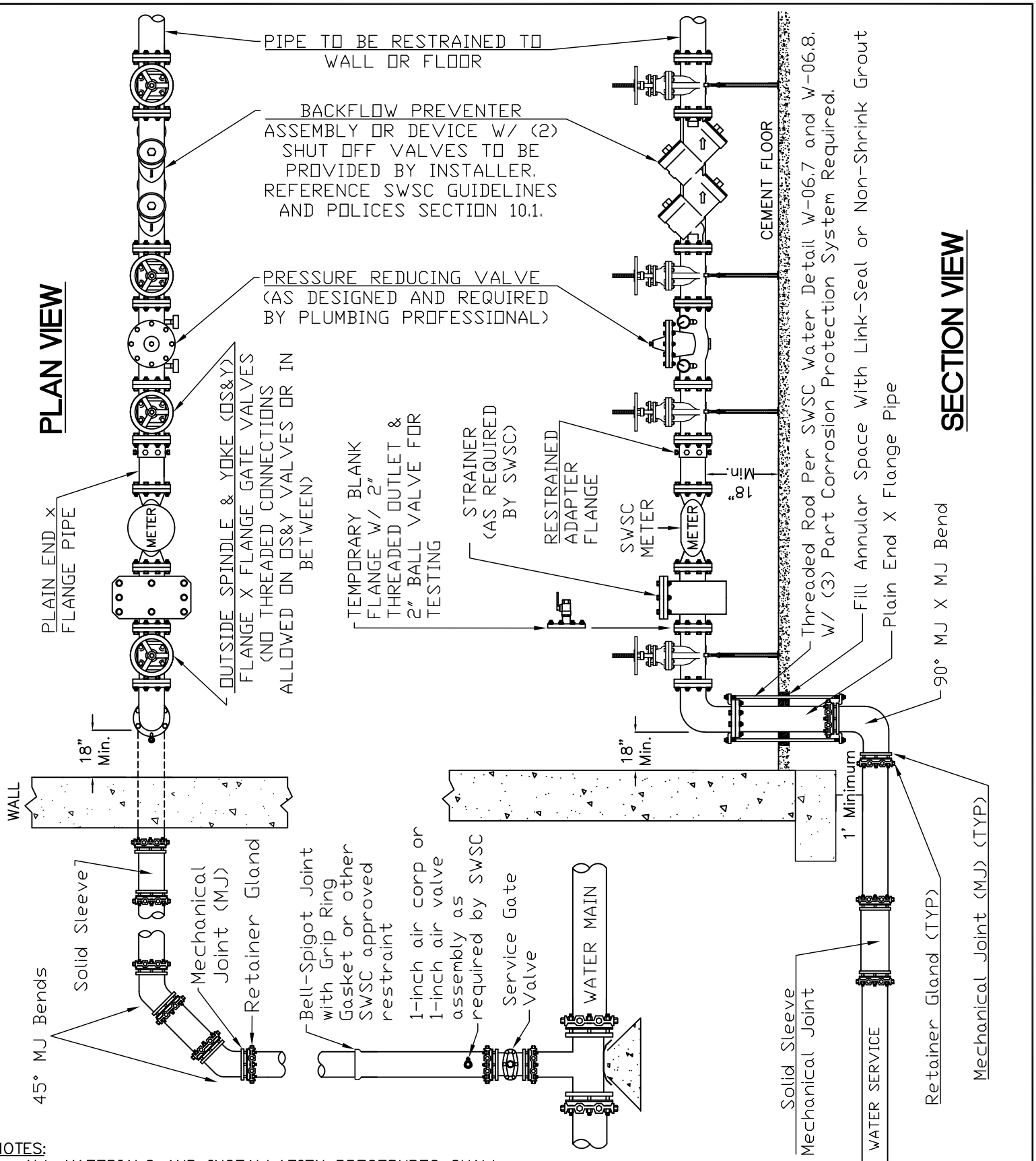
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-13.14

TYPICAL DIP COMMERCIAL & INDUSTRIAL SERVICE DETAIL THROUGH FOUNDATION WALL

SCALE: NTS

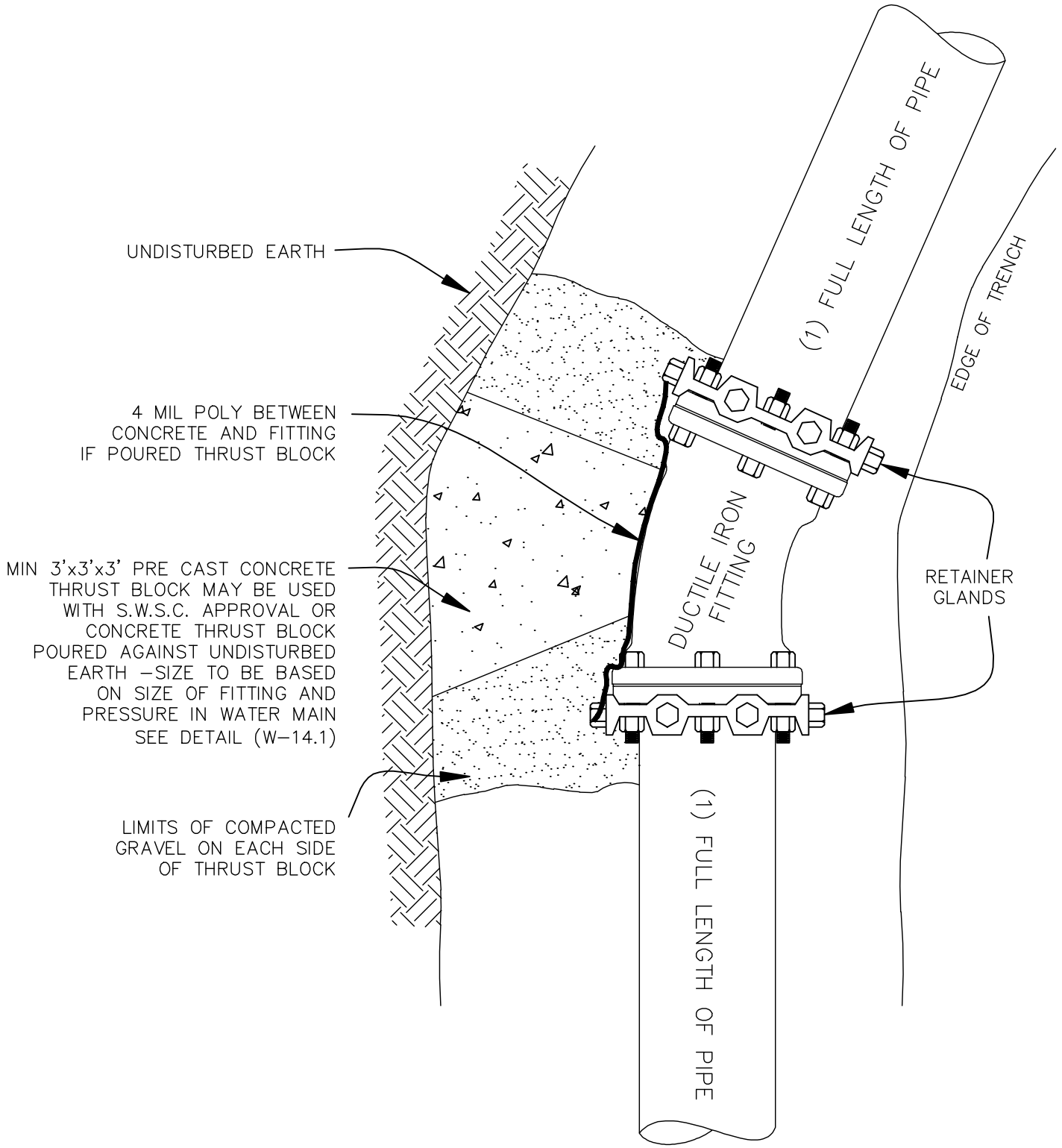
REV. DATE
10/28/20 DS
11/5/20 DS



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. ALL JOINTS OUTSIDE BUILDING SHALL BE FULLY RETRAINED FOR A MINIMUM OF 80FT OR TO THE WATER MAIN, WHICH EVER COMES FIRST.
4. JOINTS INSIDE BUILDING SHALL BE FLANGE x FLANGE. ONLY ONE ADAPTER FLANGE SHALL BE INSTALLED AS SHOWN ON DETAIL.
5. NO THREADED CONNECTIONS ALLOWED INSIDE BUILDING UP TO THE 2ND OS&Y

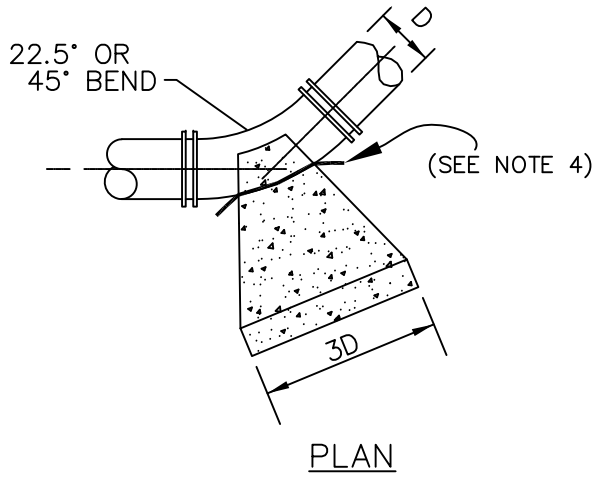
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.15	REV. DATE
	TYPICAL DIP COMMERCIAL & INDUSTRIAL SERVICE DETAIL THROUGH CONCRETE FLOOR	10/29/20 DS
		11/5/20 DS
	SCALE: NTS	



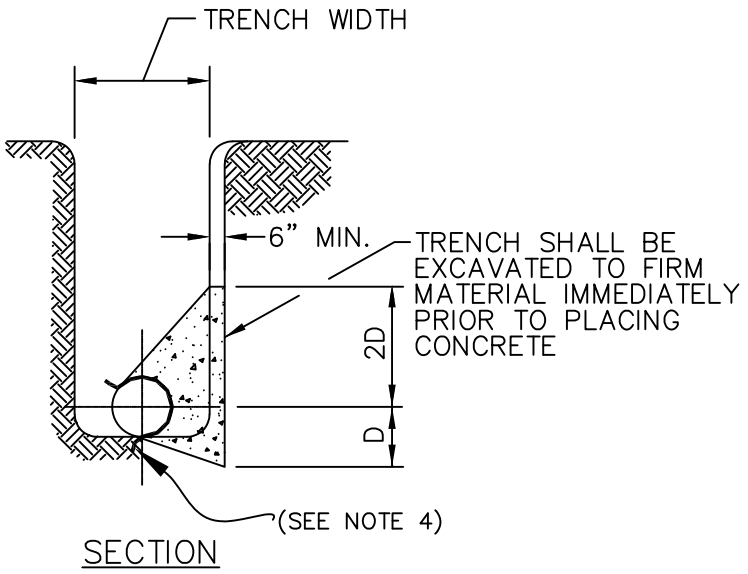
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W–02.0, W–02.1, W–02.2, W–02.3 OR W–02.4 FOR TRENCH DETAILS.

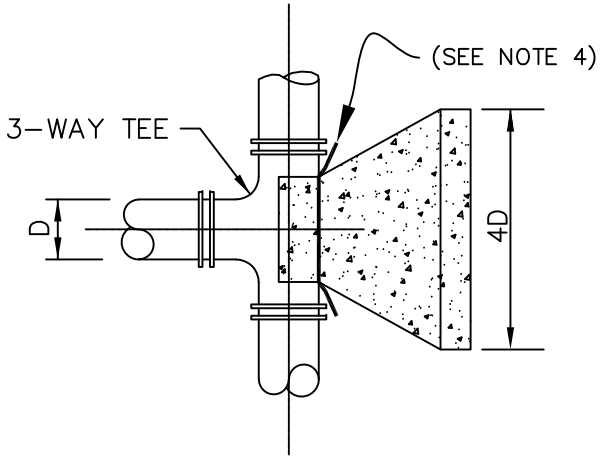
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W–14.0	REV. DATE 4/1/08 MAB
	THRUST BLOCK BEHIND FITTINGS	
	SCALE: NTS	



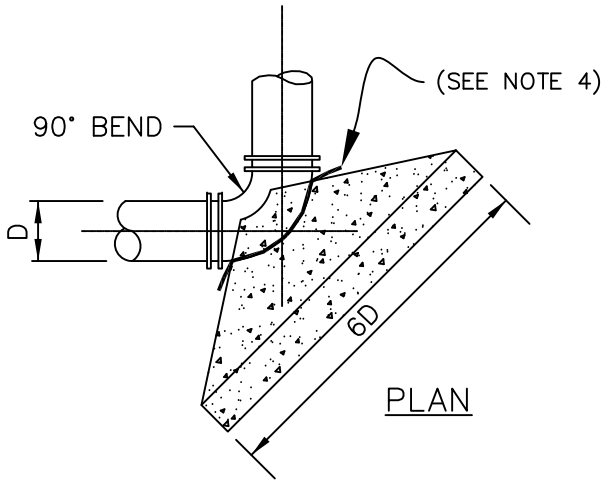
PLAN



SECTION



PLAN



PLAN

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. 4 MIL POLY BETWEEN CONCRETE AND FITTING IF POURED THRUST BLOCK.
5. ANCHORS BASED ON MAXIMUM ALLOWABLE WATER PRESSURE OF 125 PSI SHOULD ONLY BE USED WHEN SOIL CONDITIONS ARE STABLE

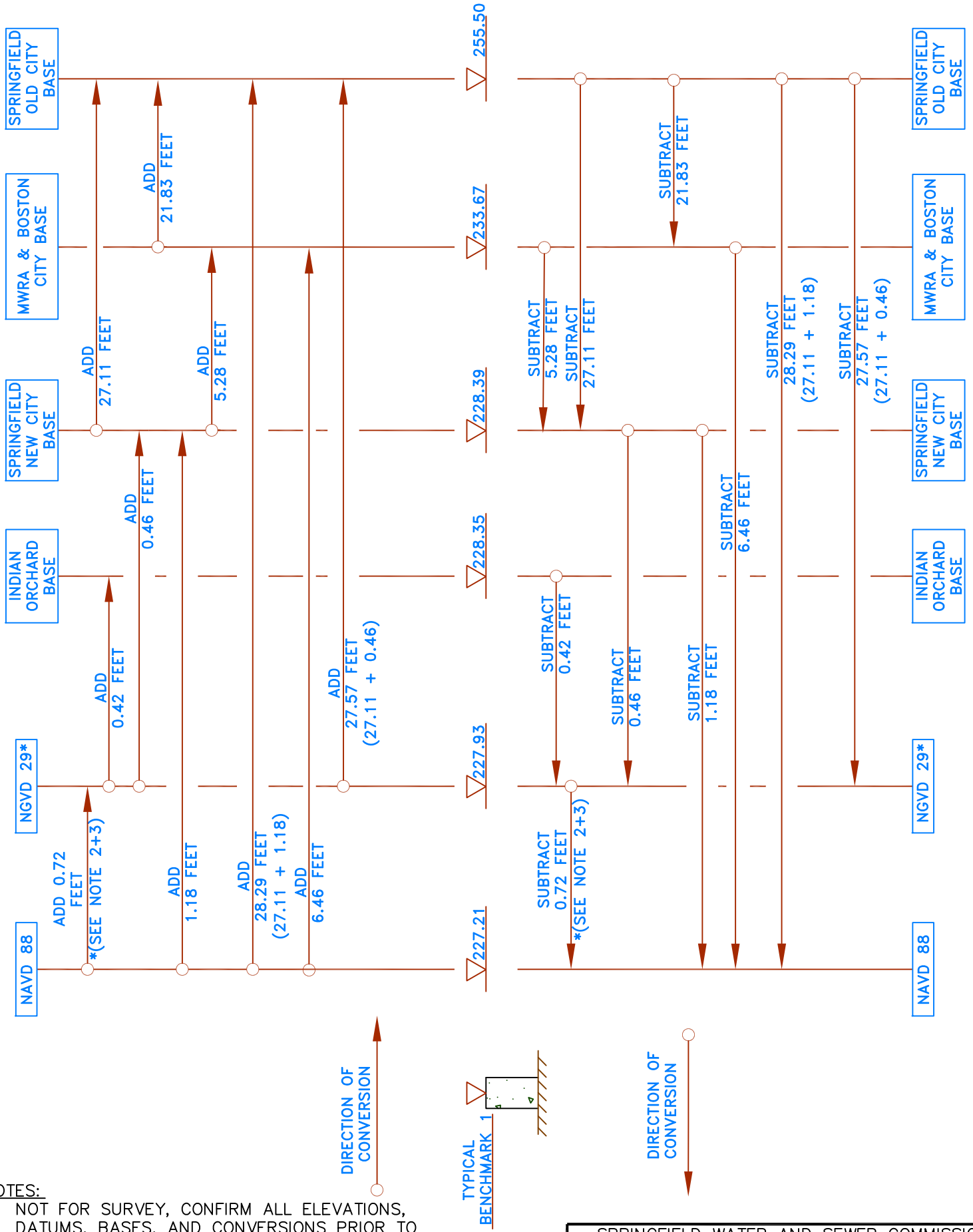
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-14.1

THRUST BLOCKS

SCALE: NTS

REV. DATE
4/1/08 MAB
11/21/19 JFC



NOTES:

1. NOT FOR SURVEY, CONFIRM ALL ELEVATIONS, DATUMS, BASES, AND CONVERSIONS PRIOR TO SURVEY WORK
2. * NGVD 29 IS NOT ALWAYS THE SAME ELEVATION, NGVD 29 IS DEPENDENT ON LOCATION IN SPRINGFIELD, LUDLOW, WESTFIELD, ETC. THE ELEVATION OF NGVD 29 CAN BE 0.65 – 0.72.
3. ROUND TO THE HUNDREDTHS UPON CONVERSION COMPLETION

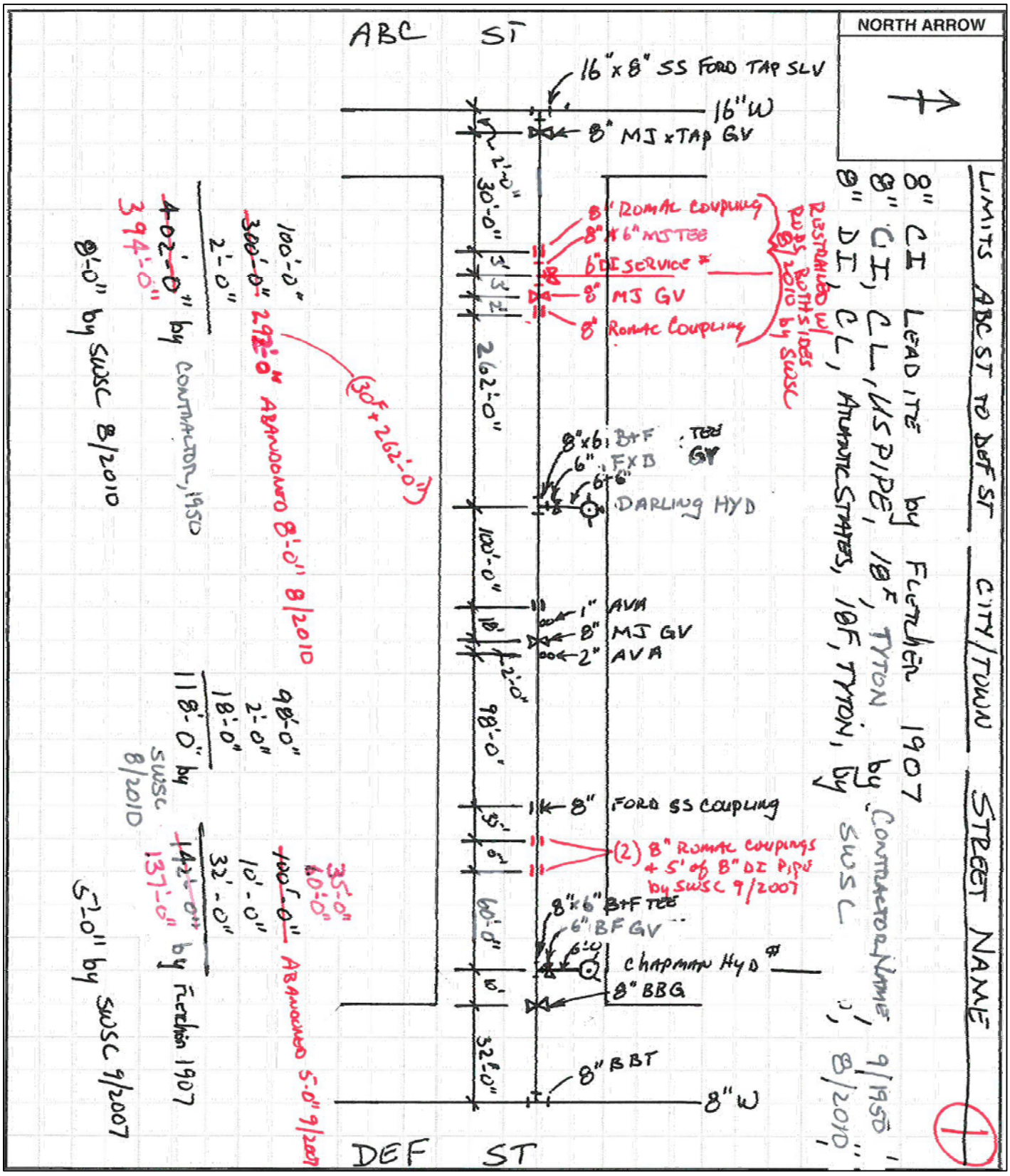
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–15.0

RELATION OF VERTICAL DATUMS TO SPRINGFIELD CITY BASE(S)

SCALE: NTS

REV. DATE
_/_/17 MAB
1/9/19 DJP



NOTES:
1.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-16.0	REV. DATE 10/19/17 DJP
	RECORD SKETCH DETAIL	
	SCALE: NTS	

NO: STREET

OWNER: S. R.

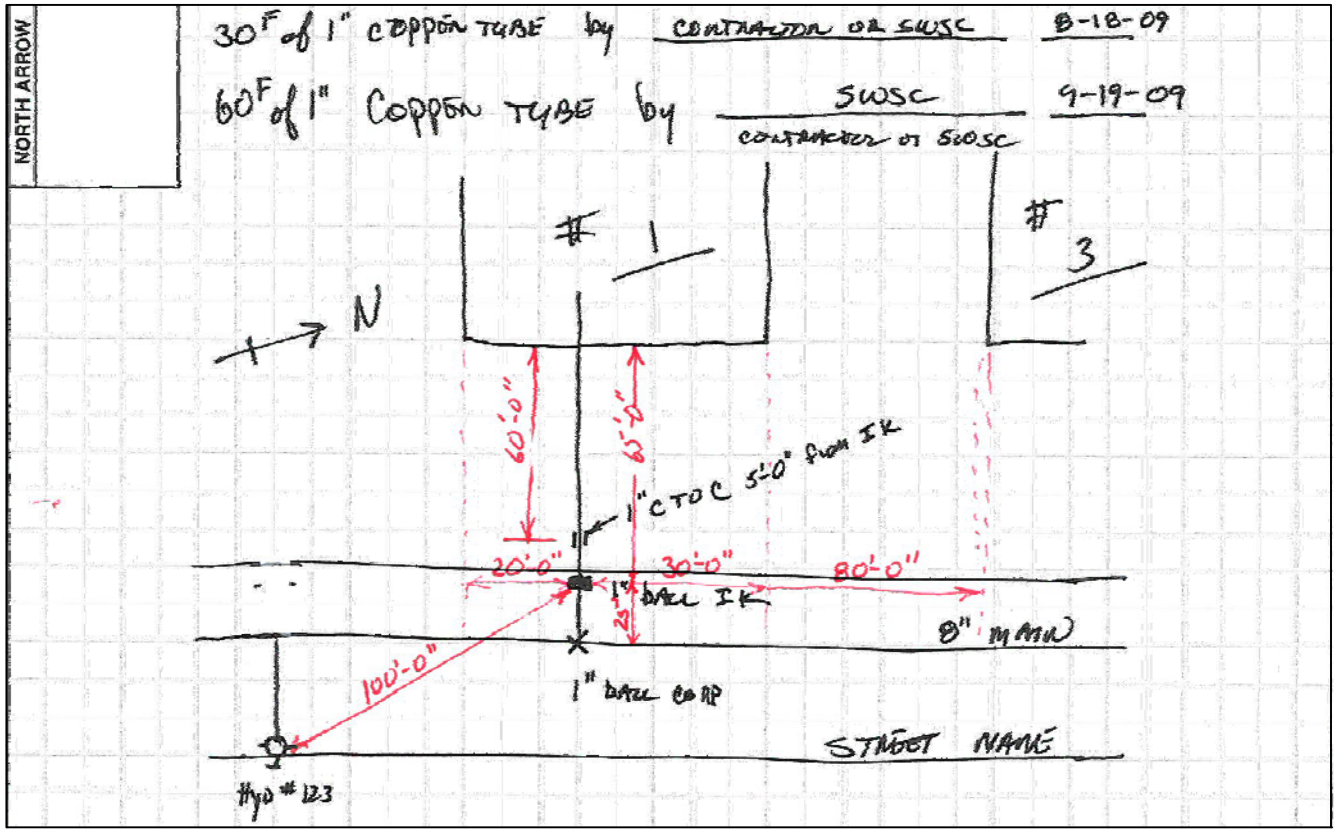
DATE	WORK DONE
8-18-09	SERVICE REPLACED BY CONTRACTOR MAIN TO TWOBOLT
7-19-09	SERVICE EXTEN REPLACED BY SWSC TWOBOLT TO HOUSE

BUFFALO BOX IN TWOBOLT OVER 1" BALL IK
65'-0" OUT FROM HOUSE
20'-0 N OF S LINE OF HOUSE
30'-0" S OF N LINE OF HOUSE
80'-0" S OF S LINE of house # 3
ANOTHER BUFFALO BOX IS BURIED IN STREET OVER
1" BALL CORP 25'-0" E OF IK
1" C TO C IS 5'-0" from IK + 60'-0" OUT FROM HOUSE

NORTH ARROW

30' of 1" COPPER TUBE by CONTRACTOR OR SWSC 8-18-09

60' of 1" COPPER TUBE by SWSC 9-19-09
CONTRACTOR OR SWSC



NOTES:
1.

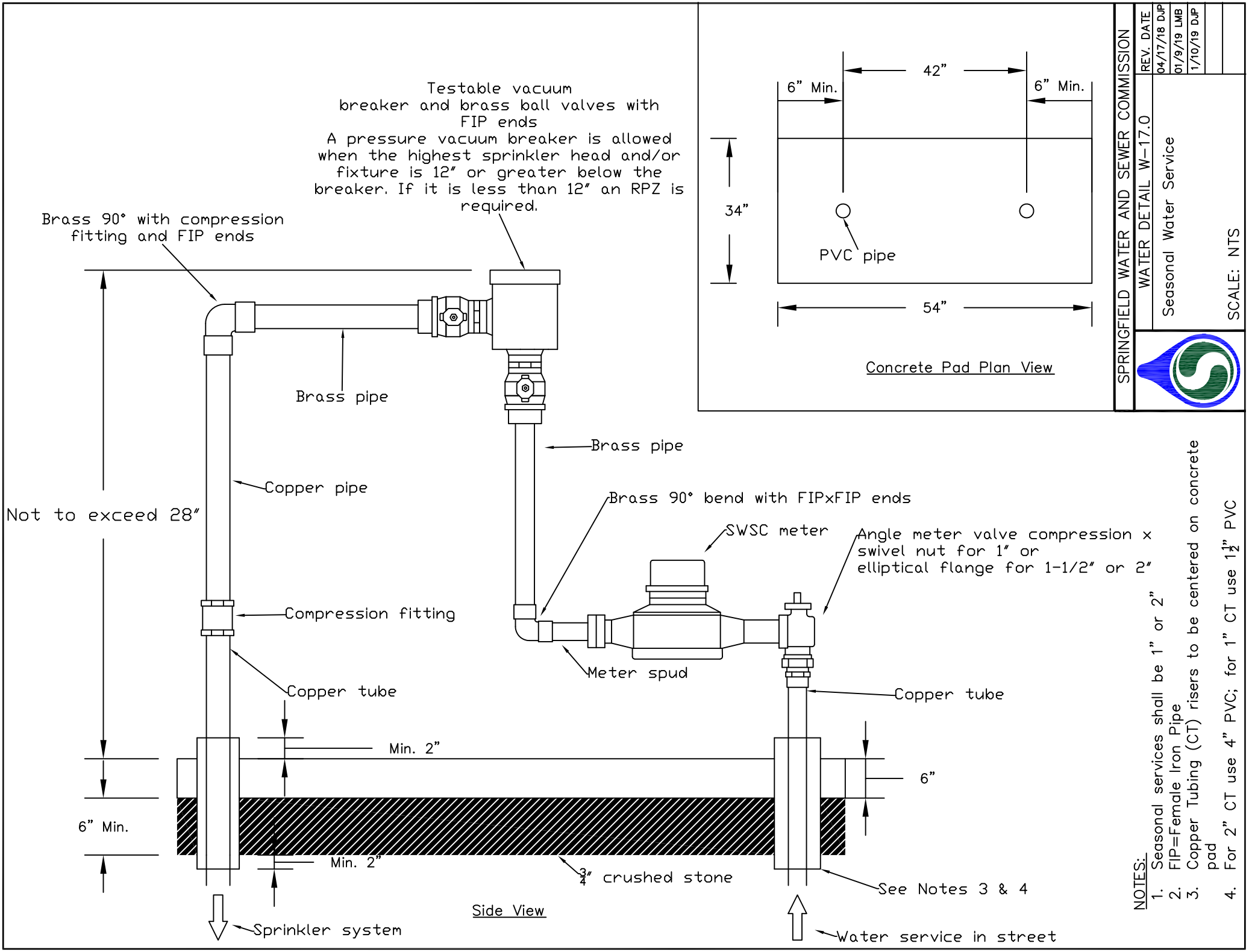
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-16.1

REV. DATE
10/19/17 DJP

WATER SERVICES CARD DETAIL

SCALE: NTS


Testable vacuum
breaker and brass ball valves with
FIP ends
A pressure vacuum breaker is allowed
when the highest sprinkler head and/or
fixture is 12″ or greater below the
breaker. If it is less than 12″ an RPZ is
required.
Brass 90° with compression
fitting and FIP ends
Brass pipe
Brass pipe
Copper pipe
Not to exceed 28″
Brass 90° bend with FIPxFIP ends
SWSC meter
Angle meter valve compression x
swivel nut for 1″ or
elliptical flange for 1-1/2″ or 2″
Compression fitting
Meter spud
Copper tube
Copper tube
Min. 2″
6″
6″ Min.
Min. 2″
3/4″ crushed stone
See Notes 3 & 4
Side View
Sprinkler system
Water service in street
42″
6″ Min.
6″ Min.
34″
PVC pipe
54″
Concrete Pad Plan View
SPRINGFIELD WATER AND SEWER COMMISSION
WATER DETAIL W-17.0
Seasonal Water Service
SCALE: NTS
REV. DATE
04/17/18 DJP
01/9/19 LMB
1/10/19 DJP
NOTES:
1. Seasonal services shall be 1” or 2”
2. FIP=Female Iron Pipe
3. Copper Tubing (CT) risers to be centered on concrete pad
4. For 2” CT use 4” PVC; for 1” CT use 1½” PVC

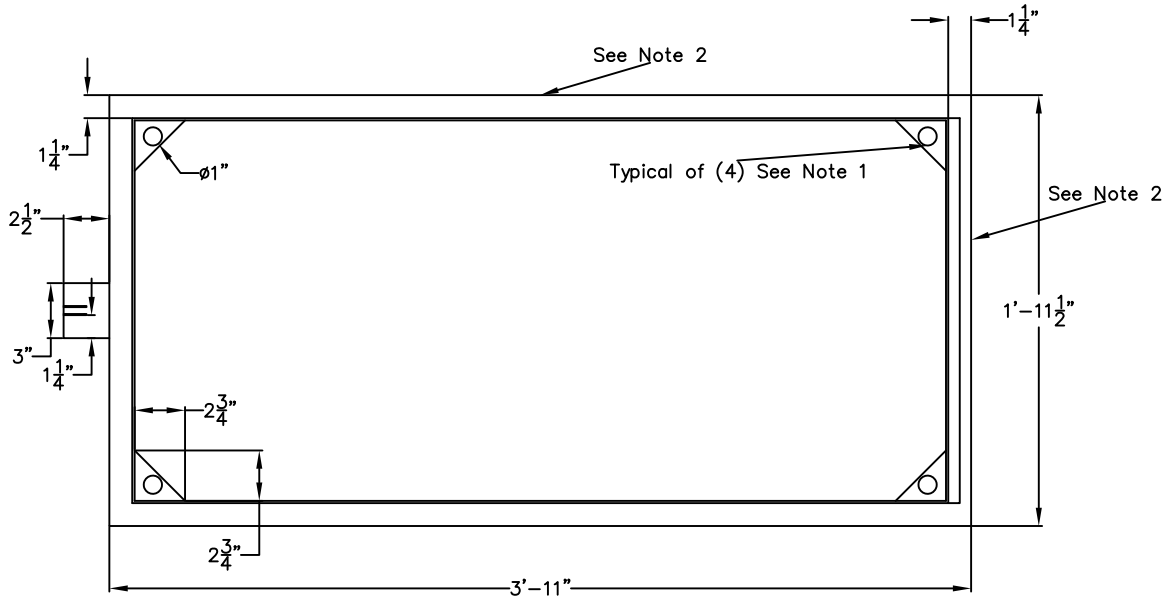
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-17.1

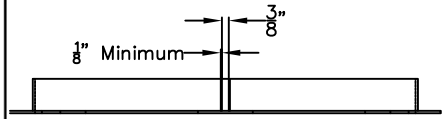
Seasonal Water Service Base

SCALE: NTS

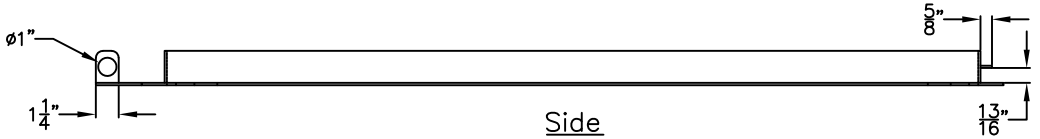
REV.	DATE
	04/17/18 DJP
	01/9/19 LMB
	1/10/19 DJP



Top



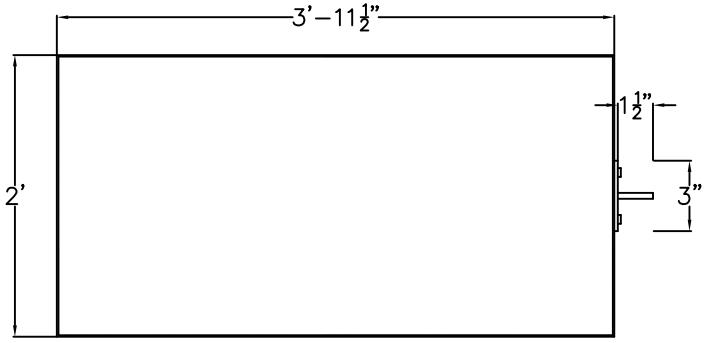
Front



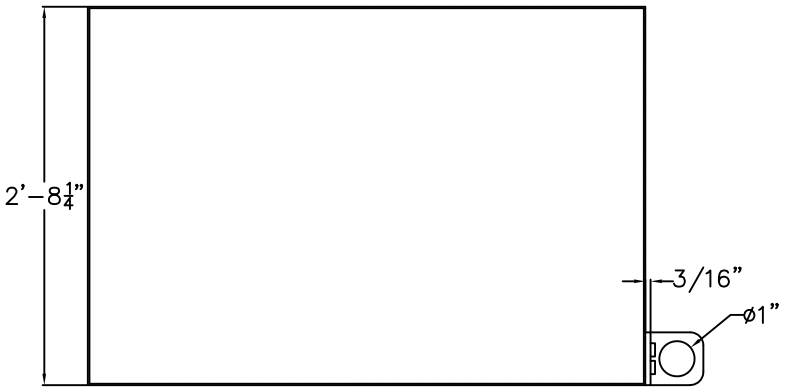
Side

NOTES:

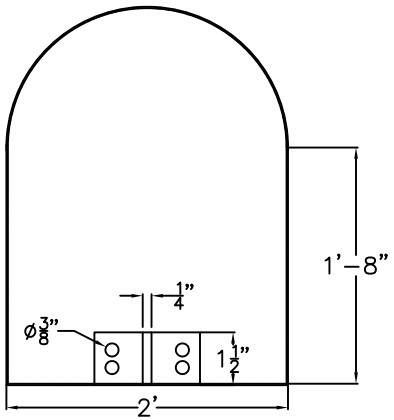
1. Plate steel shall be mild steel 3/16" thick
2. Angle steel shall be 1"x1"x3/16"
3. Coating shall be Forest Green epoxy 6mils thick



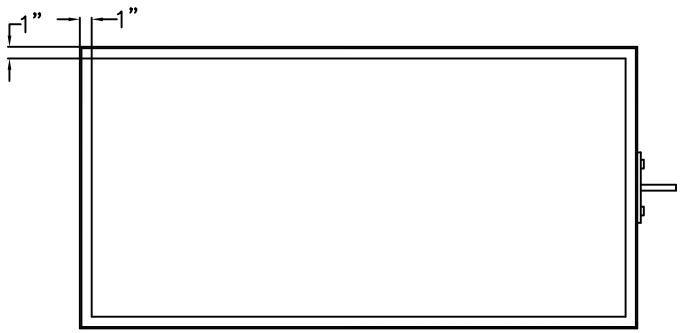
Top



Front



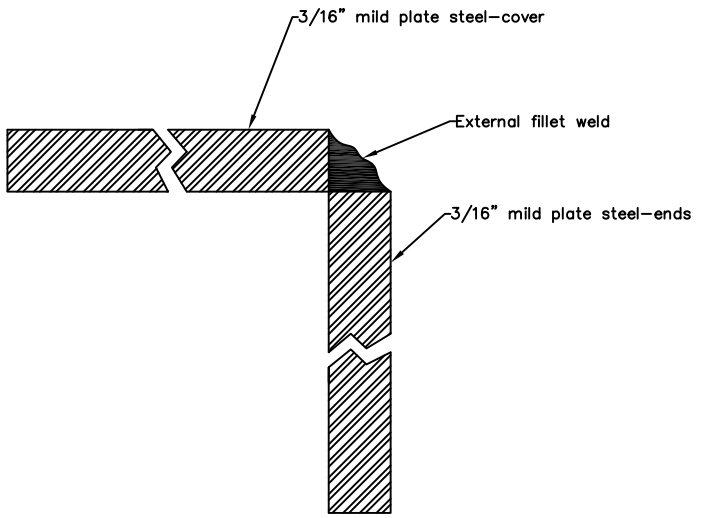
Ends



Bottom

NOTES:

1. Plate steel shall be mild steel $\frac{3}{16}$" thick
2. Coating shall be Forest Green epoxy 6 mils thick
3. Four $\frac{5}{16}$"x1$\frac{1}{4}$" galvanized bolts with $\frac{5}{16}$" flat washers, $\frac{5}{16}$" lock washers, & $\frac{5}{16}$" nuts



Weld Detail

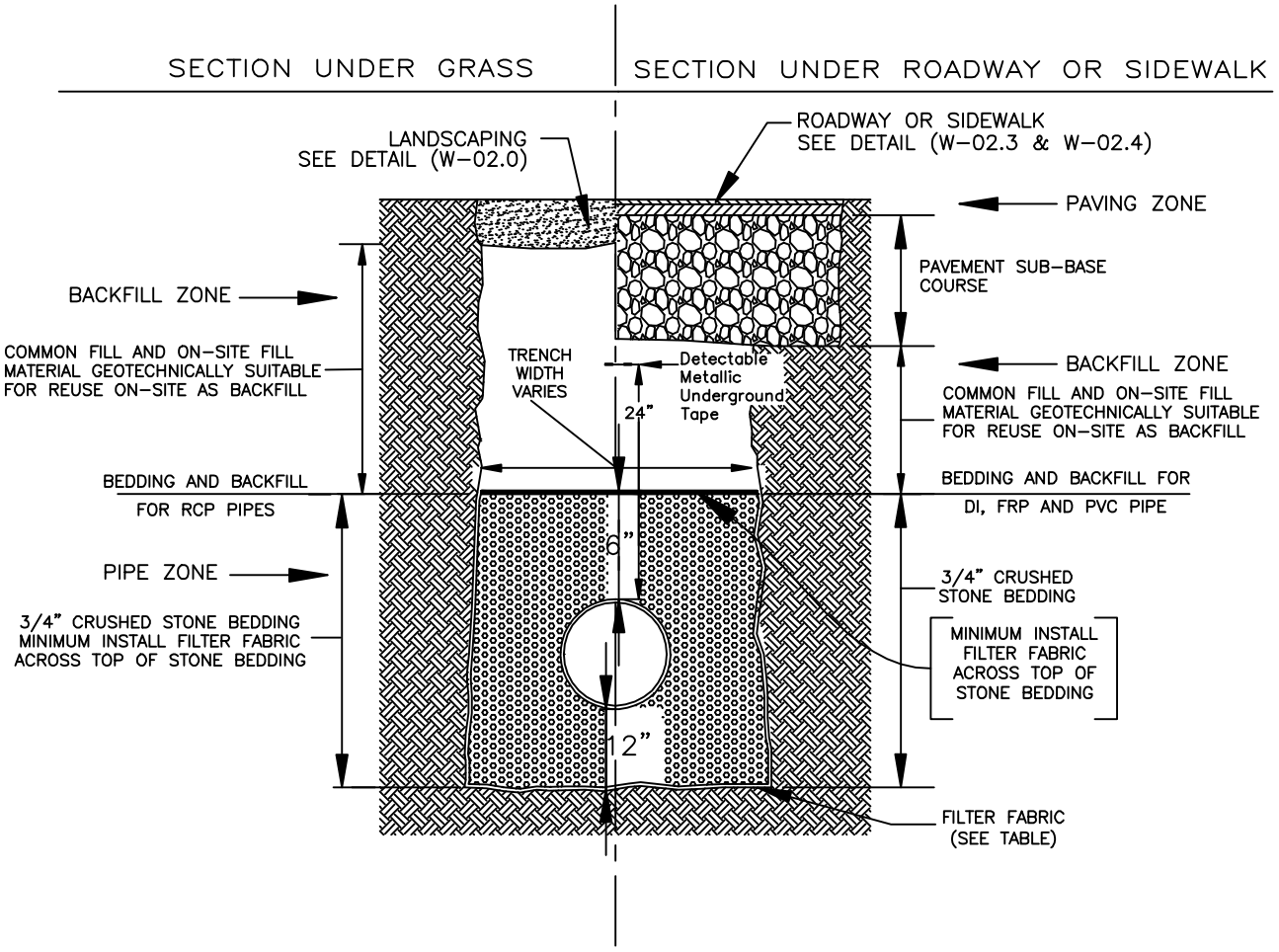
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W–17.2

Seasonal Water Service Cover

SCALE: NTS

REV.	DATE
	1/10/19 DJP



TOTAL STONE BEDDING WRAP
FILTER FABRIC REQUIREMENT

	SOIL TYPE	
	SILT OR CLAY	GRANULAR SOIL
ABOVE GROUND WATER	FILTER FABRIC NOT REQUIRED	FILTER FABRIC NOT REQUIRED
BELOW GROUND WATER	FILTER FABRIC REQUIRED	FILTER FABRIC NOT REQUIRED
2' OVERLAP MINIMUM OF FILTER FABRIC AT TOP OF BEDDING		

NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-01.0

TRENCH DETAIL
FOR SEWER PIPES

SCALE: NTS

REV. DATE
4/1/08 MAB

ELEVATION

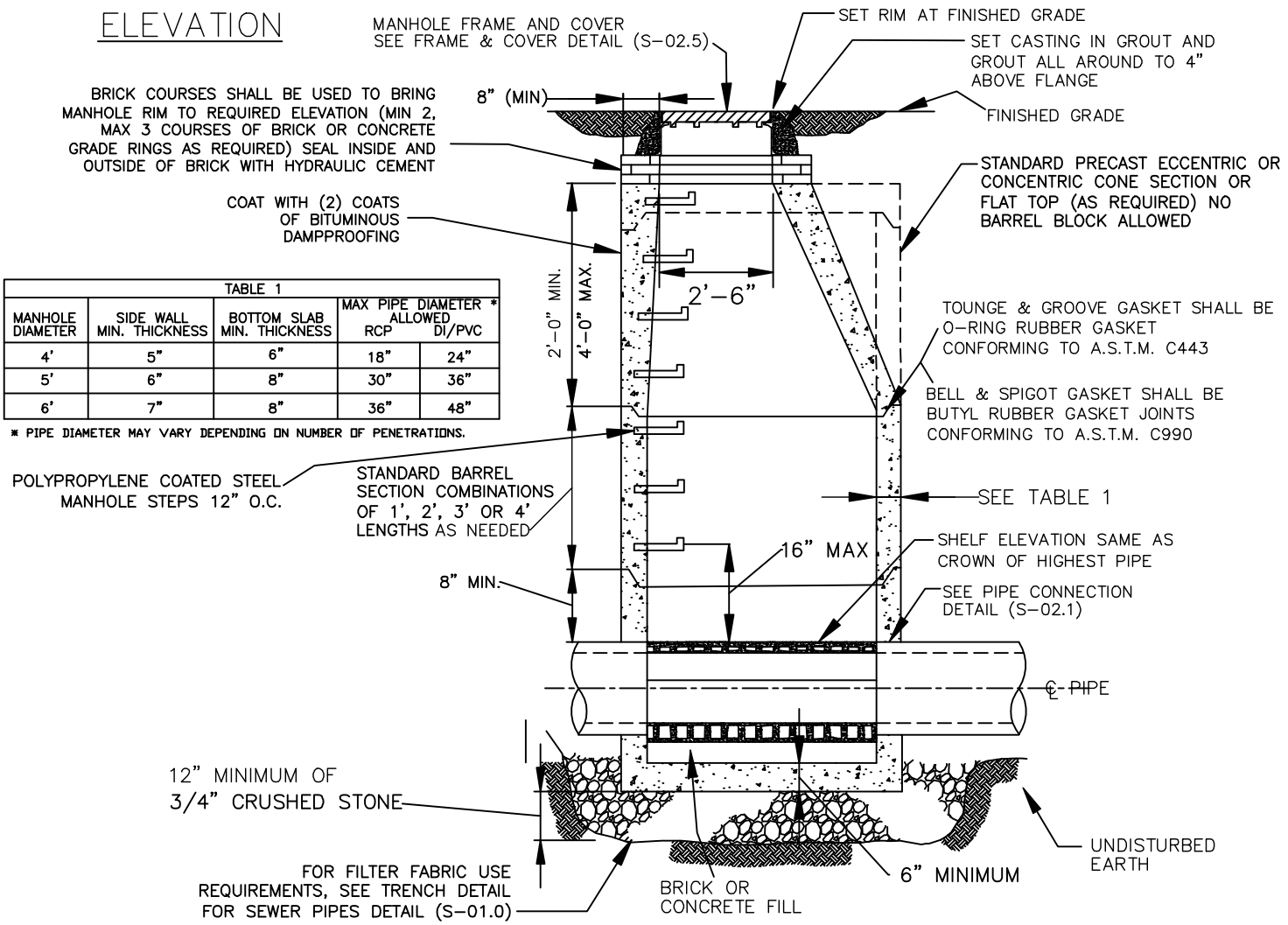
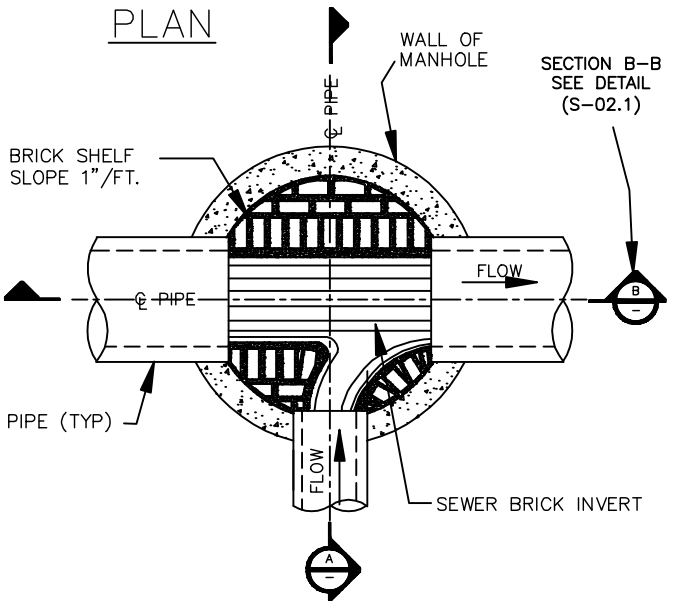


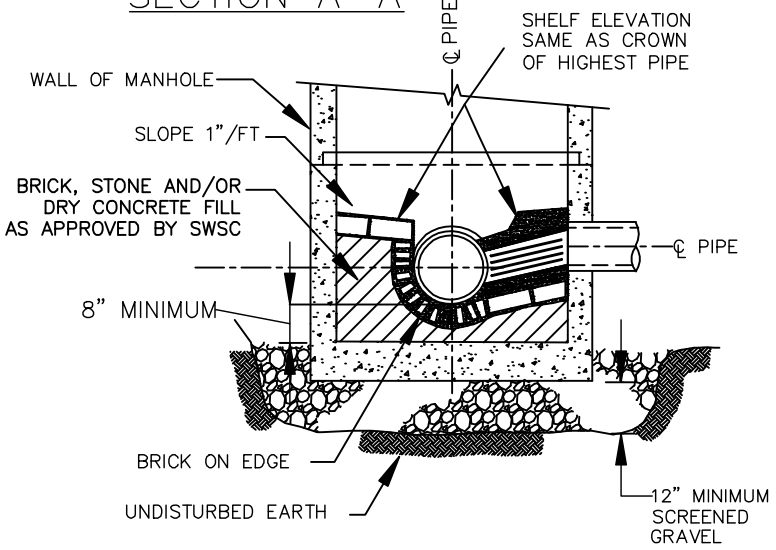
TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * ALLOWED RCP	DI/PVC
4'	5"	6"	18"	24"
5'	6"	8"	30"	36"
6'	7"	8"	36"	48"

* PIPE DIAMETER MAY VARY DEPENDING ON NUMBER OF PENETRATIONS.

PLAN



SECTION A-A



NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.

SPRINGFIELD WATER AND SEWER COMMISSION

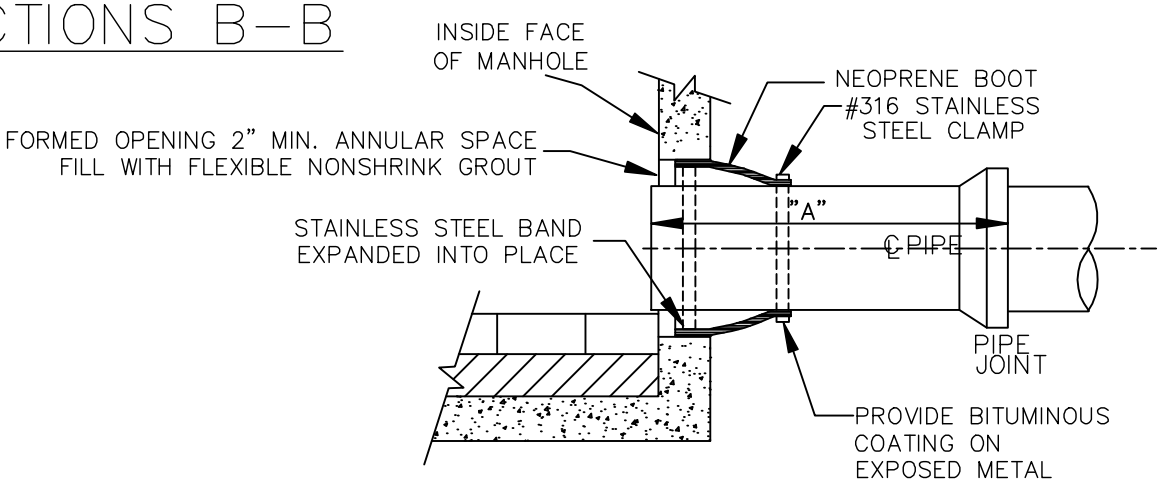
SEWER DETAIL S-02.0

PRE-CAST CONCRETE SEWER MANHOLE

SCALE: NTS

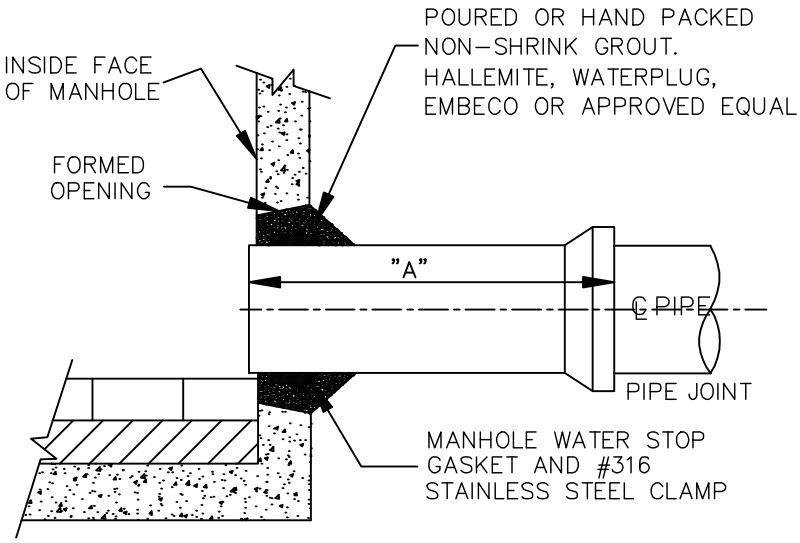
REV. DATE
4/1/08 MAB

SECTIONS B–B



FLEXIBLE MANHOLE SEAL

MAXIMUM STUB LENGTH		
PIPE MATERIAL	"A" (MAX.)	"A" (MIN.)
RC	4'–0"	2'–0"
PVC	3'–3"	2'–0"
DI	4'–6"	2'–0"



HYDRAULIC CEMENT SEAL*

*THIS METHOD REQUIRES SWSC APPROVAL

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H–20 LOADING.
6. PRE–CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON–POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233–82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20–44, ACI 318–83; ASTM C478–82, C890–82, C913–71

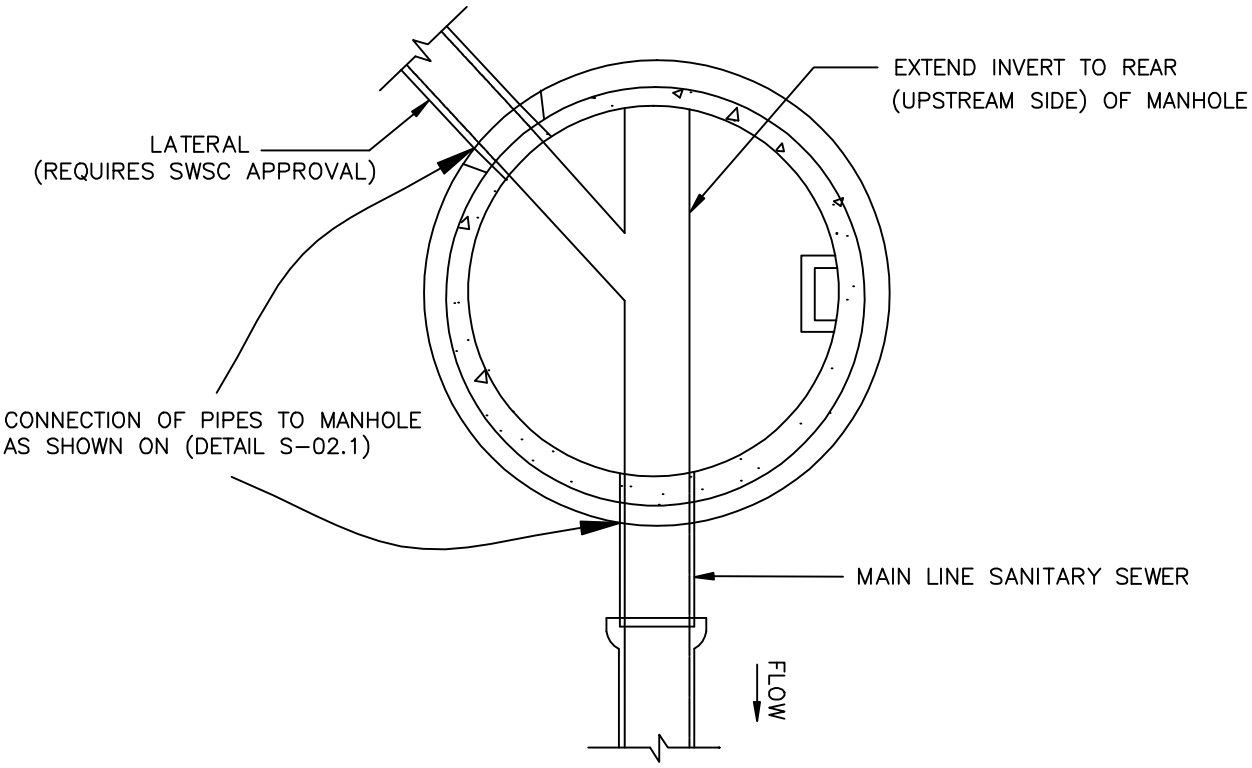
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S–02.1

PRE–CAST CONCRETE SEWER PIPE CONNECTIONS

SCALE: NTS

REV. DATE
4/1/08 MAB

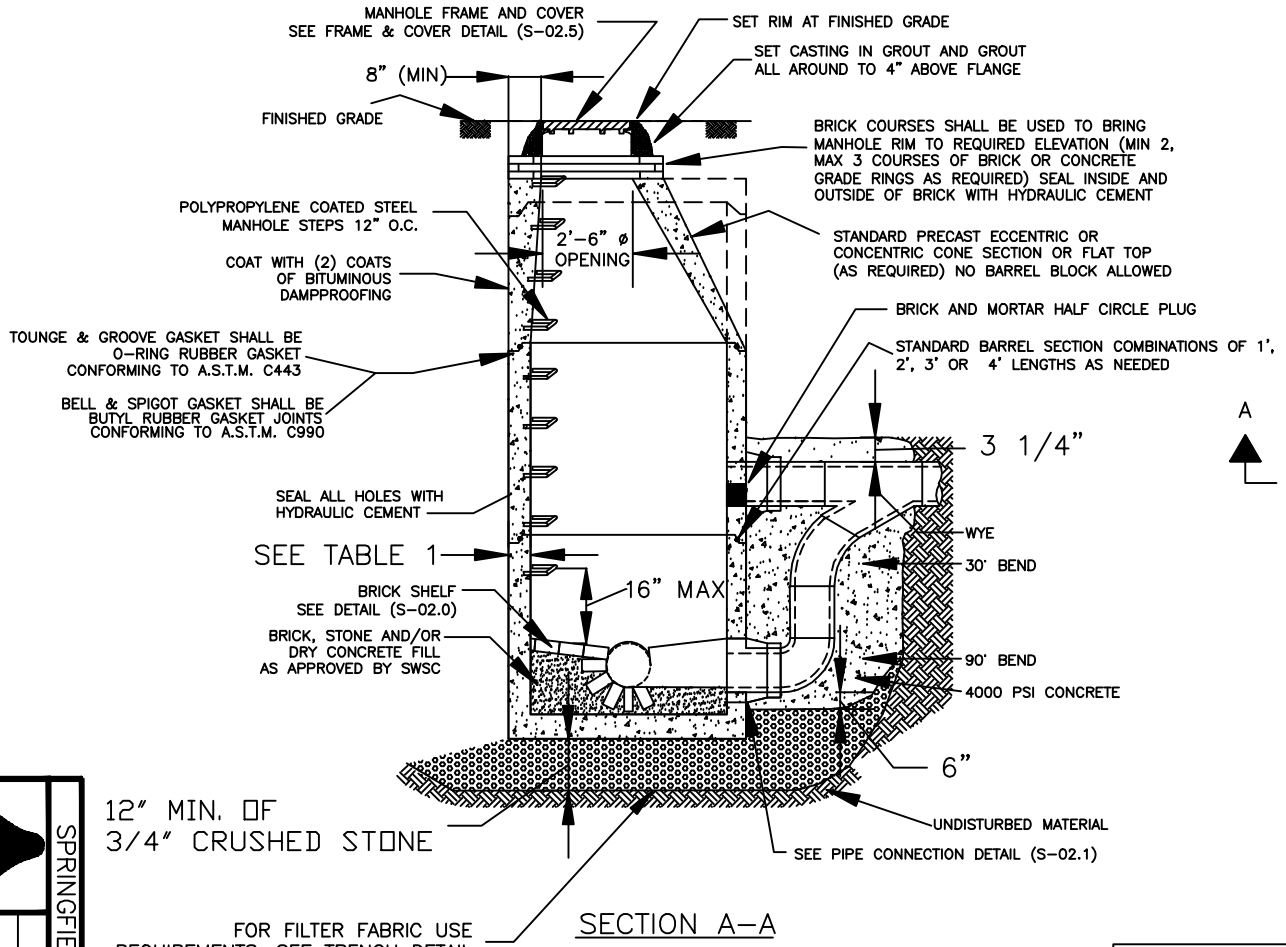


END MANHOLE

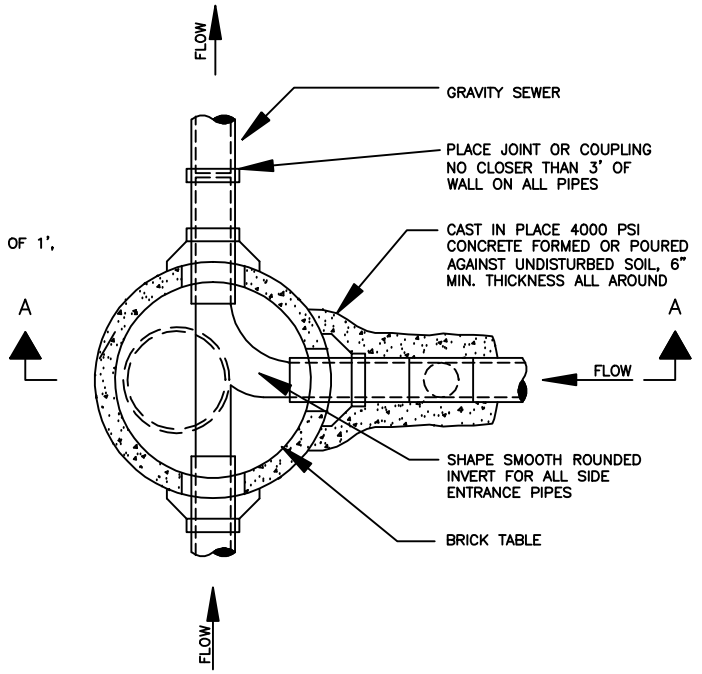
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.2	REV. DATE 4/1/08 MAB
	END OF SEWER MAIN	
	SCALE: NTS	



SECTION A-A



PLAN

TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * ALLOWED RCP	DI/PVC
4'	5"	6"	18"	24"
5'	6"	8"	30"	36"
6'	7"	8"	36"	48"

* PIPE DIAMETER MAY VARY DEPENDING ON NUMBER OF PENETRATIONS.

NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.

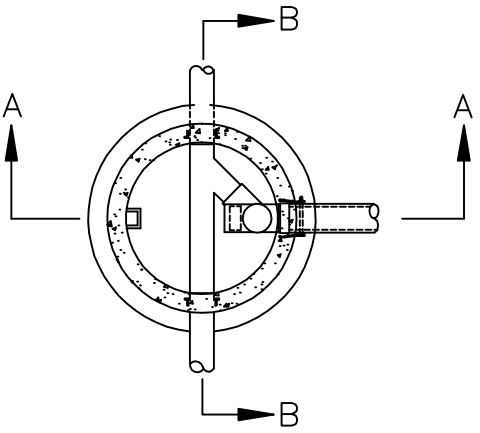
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-02.3

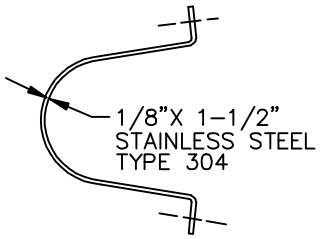
EXTERIOR DROP MANHOLE

SCALE: NTS

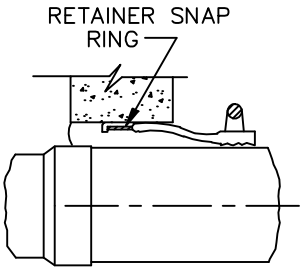
REV.	DATE
	1/1/08 MAB

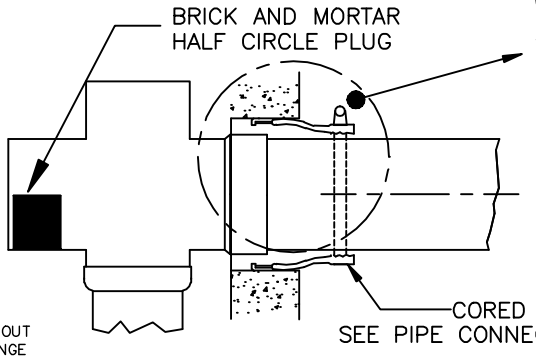


PLAN

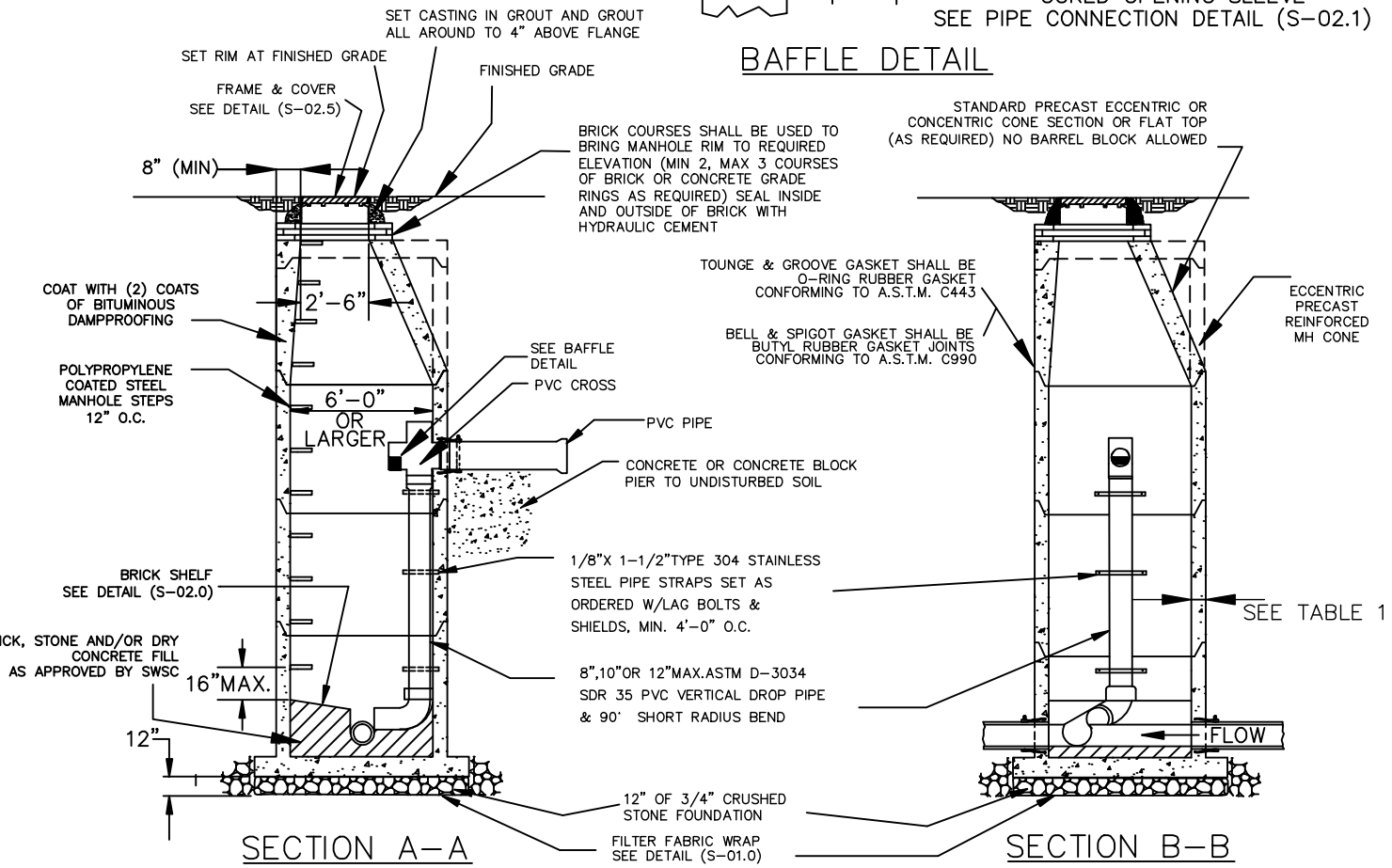


PIPE STRAP





BAFFLE DETAIL



SECTION A-A

SECTION B-B

TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * ALLOWED RCP	DI/PVC
6'	7"	8"	18"	24"
6'	7"	8"	30"	36"
6'	7"	8"	36"	48"

* PIPE DIAMETER MAY VARY DEPENDING ON NUMBER OF PENETRATIONS.

NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.

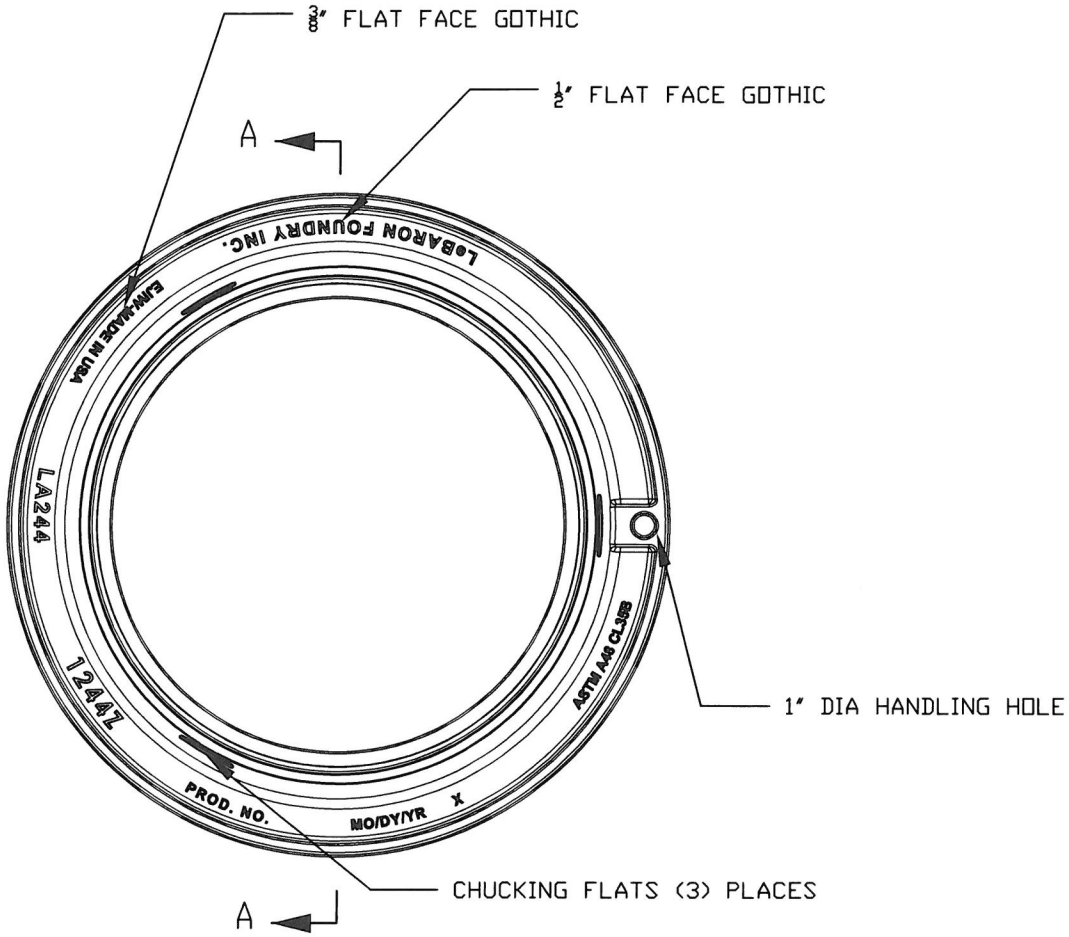
SPRINGFIELD WATER AND SEWER COMMISSION

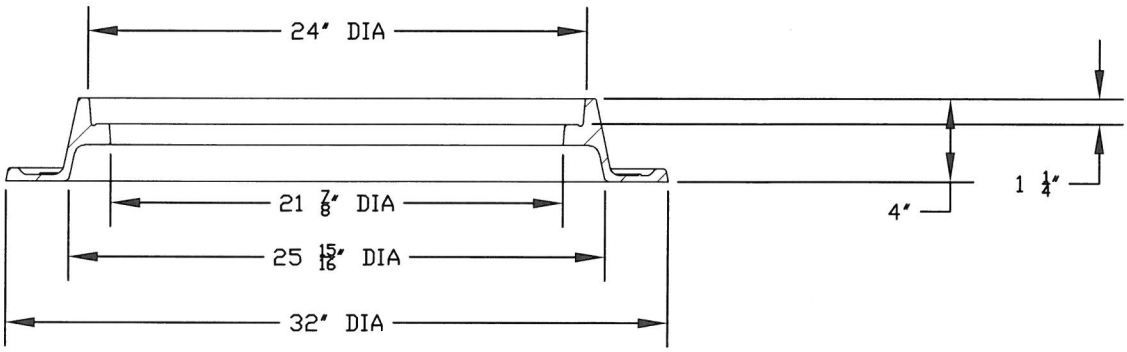
SEWER DETAIL S-02.4

INTERIOR DROP MANHOLE

SCALE: NTS

REV. DATE
4/1/08 MAB
6/18/08 MAB



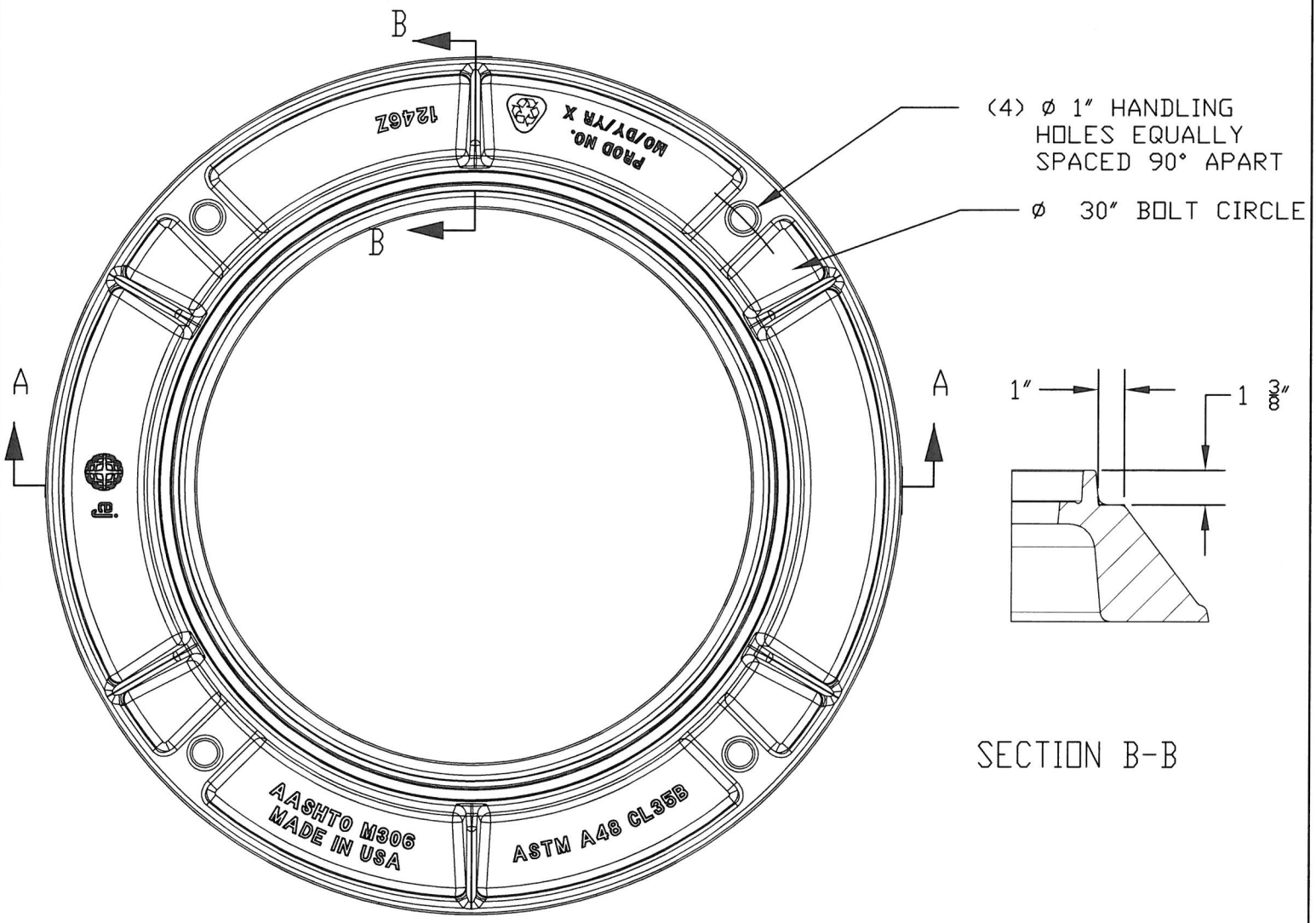


SECTION A-A
SCALE 1:10

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

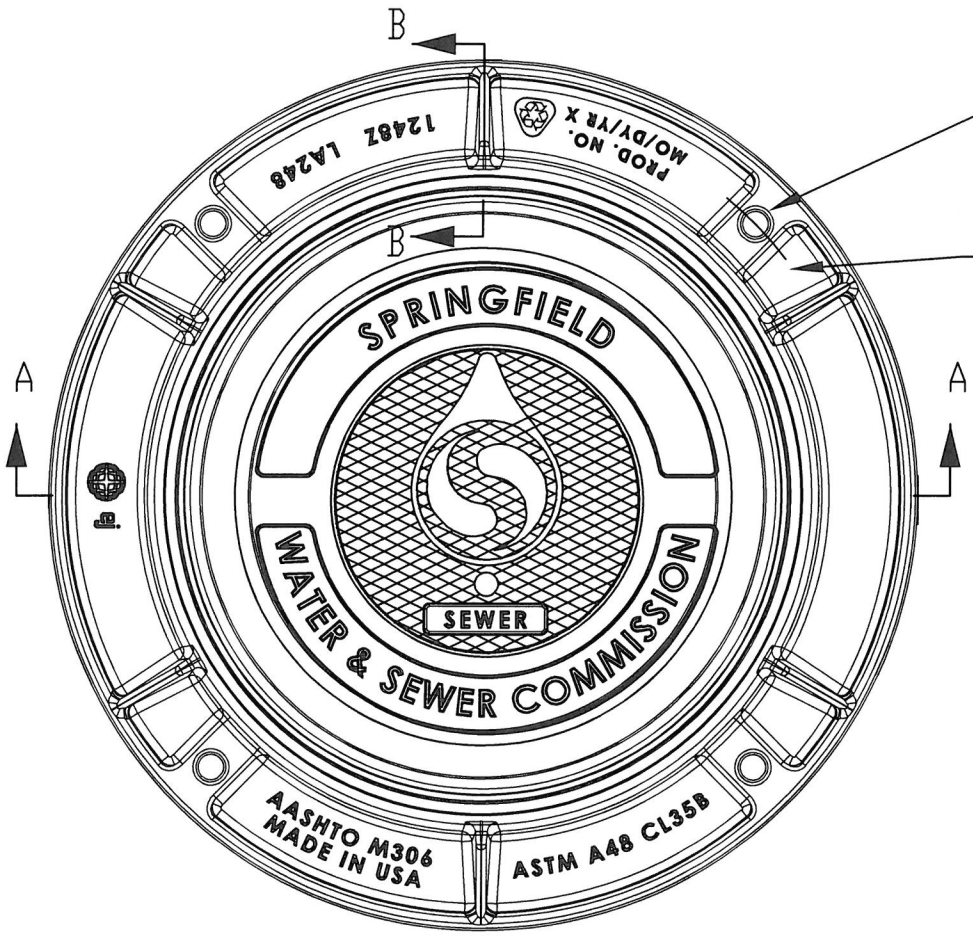
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.51	REV. DATE
		4/16/19 DJP
	24-inch by 4-inch Frame Only	
	SCALE: NTS	



NOTES:

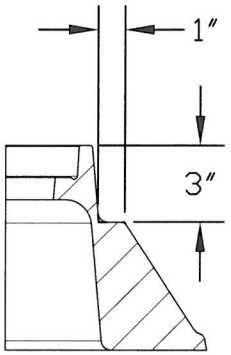
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- $\frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- $\frac{1}{16}$" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.52	REV. DATE
	24-inch by 6-inch Frame Only	4/16/19 DJP
	SCALE: NTS	

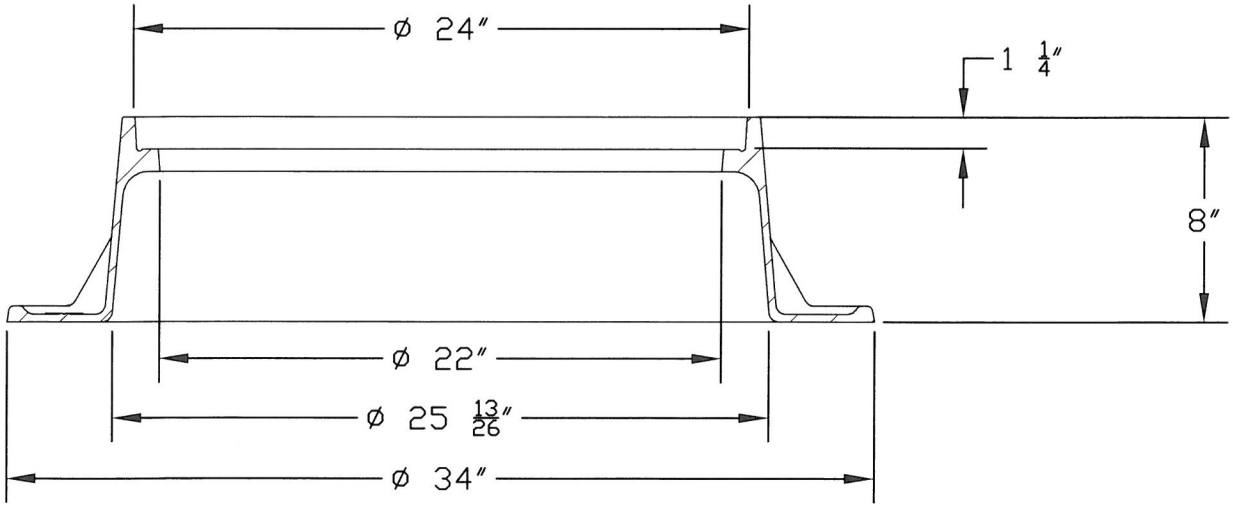


(4) ø 1″ HANDLING EQUALLY SPACED 90° APART

ø 30″ BOLT CIRCLE



SECTION B-B

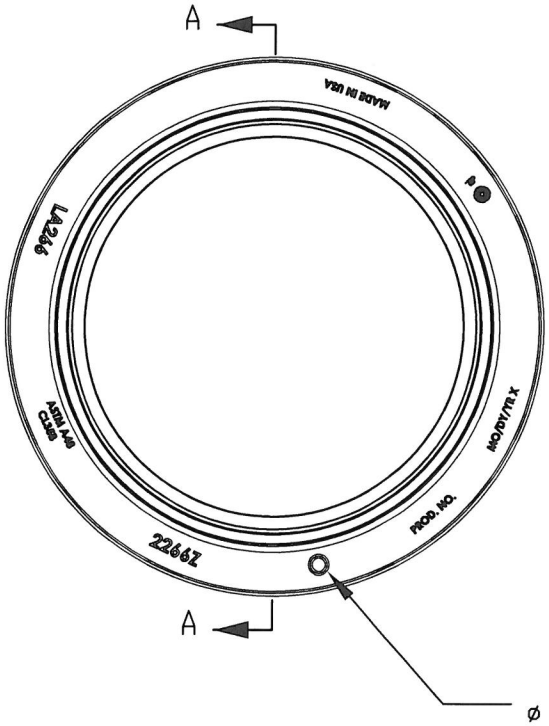


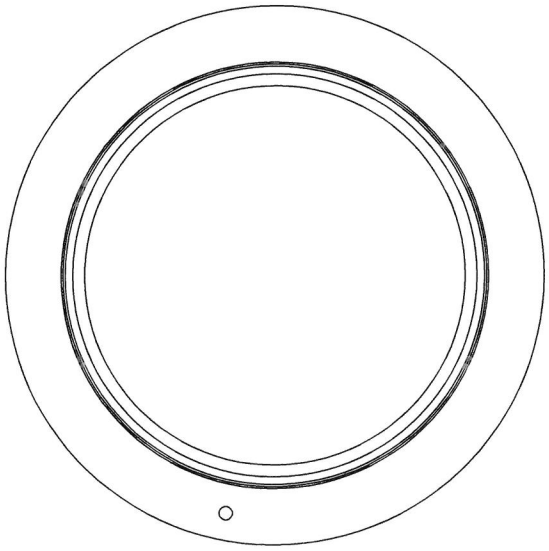
SECTION A-A

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12″ AND AN ADDITIONAL +/- 1/16″ PER FOOT

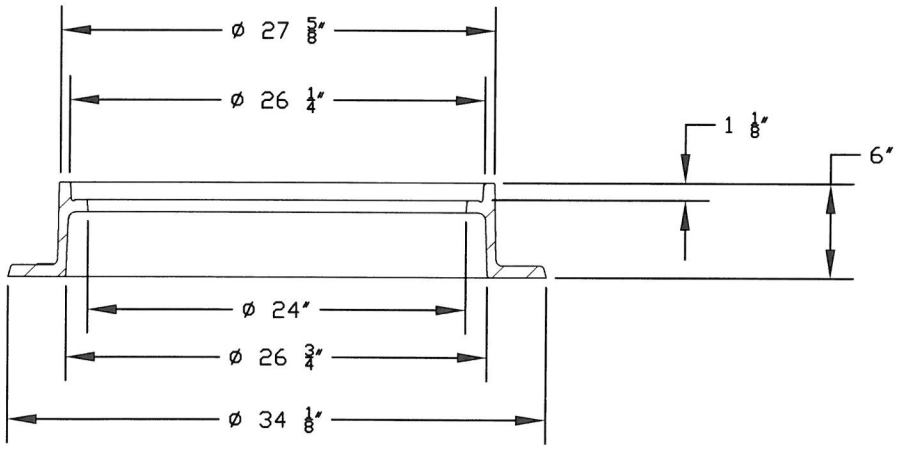
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.53	REV. DATE
	24-inch by 8-inch Frame Only	4/16/19 DJP
	SCALE: NTS	





BOTTOM VIEW

ø 7/8" HANDLING HOLE

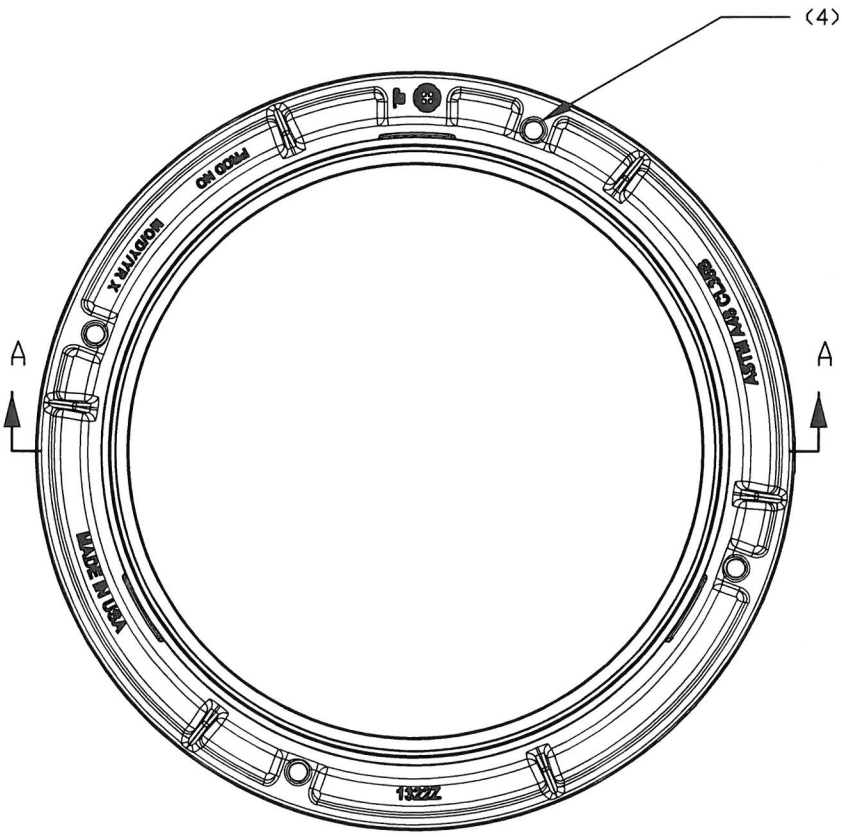


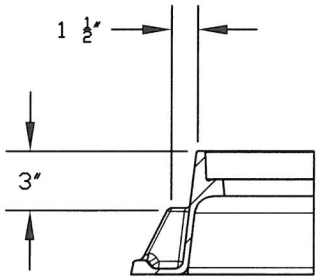
SECTION A-A

NOTES:

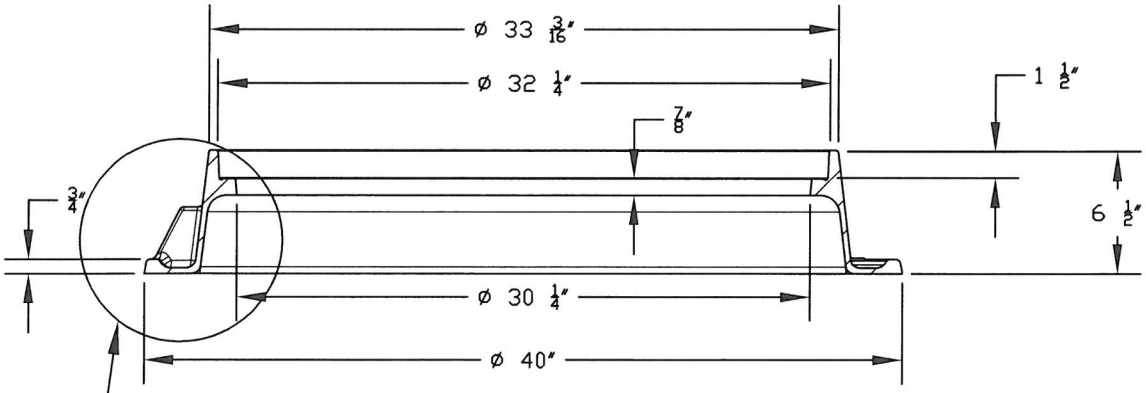
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.54	REV. DATE
	26-inch by 6-inch Frame Only	4/16/19 DJP
	SCALE: NTS	





GUSSET DETAIL

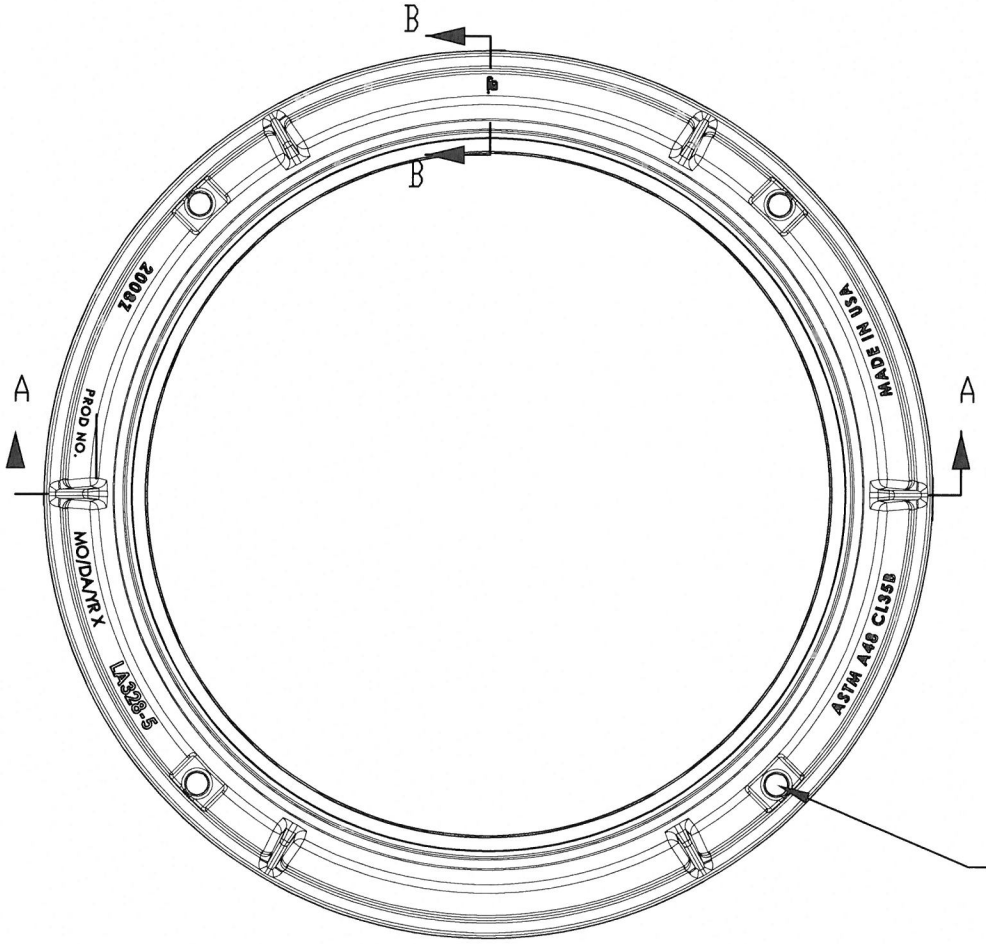


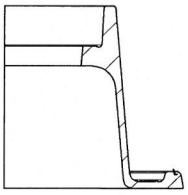
SECTION A-A

NOTES:

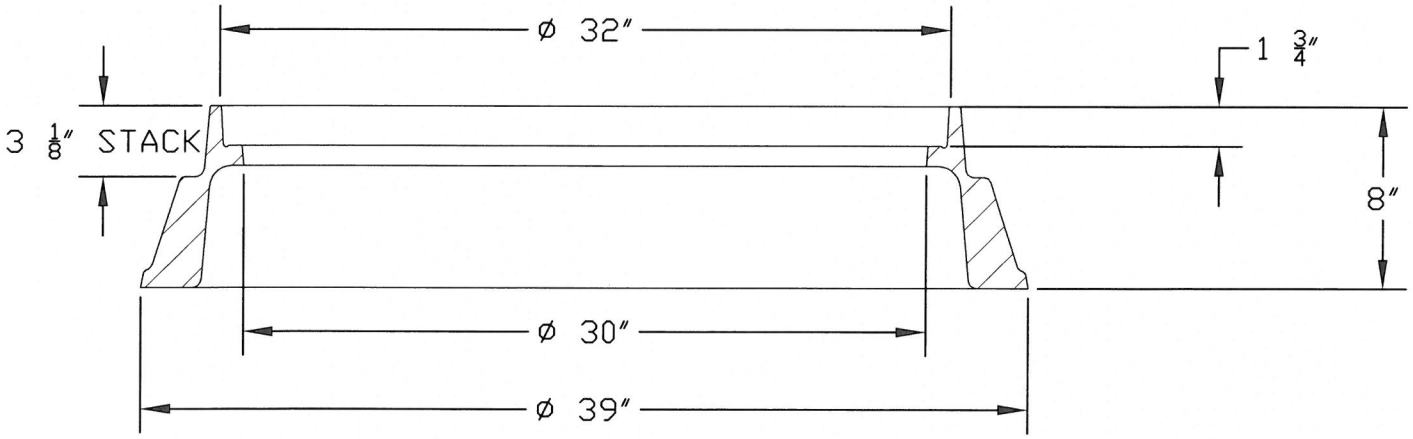
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.55	REV. DATE 4/16/19 DJP
	32-inch by 6-inch Frame Only	
	SCALE: NTS	





SECTION B-B

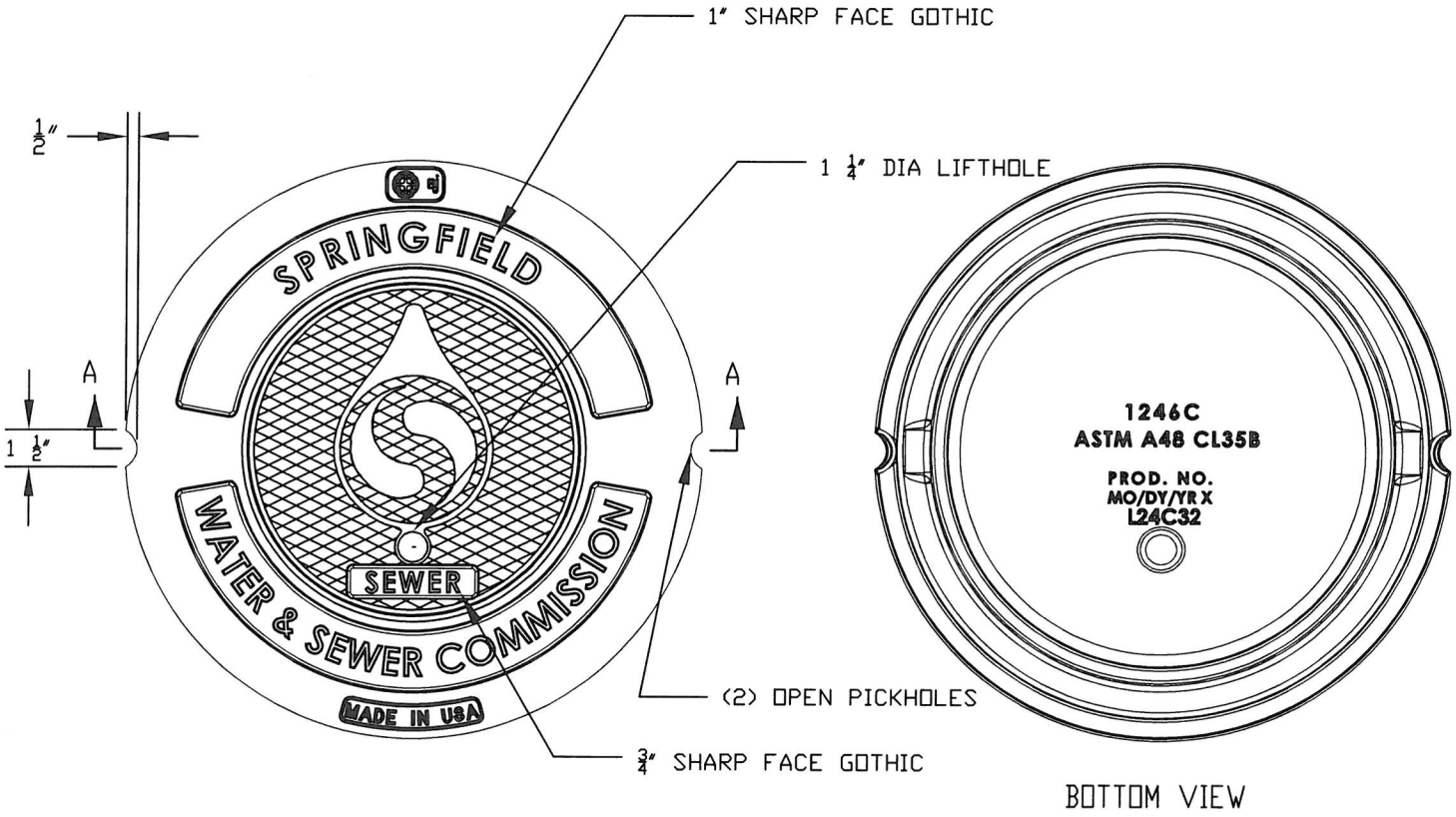


SECTION A-A

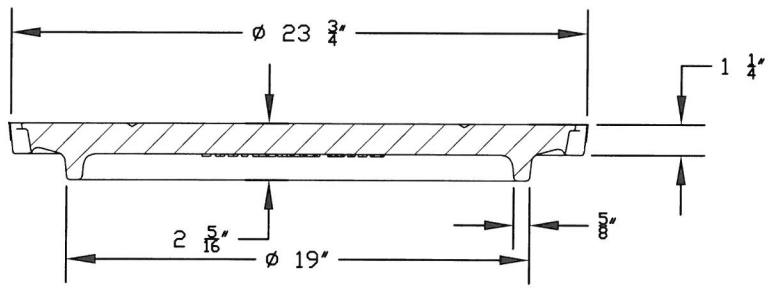
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- $\frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- $\frac{1}{16}$" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.56	REV. DATE
	32-inch by 8-inch Frame Only	4/16/19 DJP
	SCALE: NTS	



BOTTOM VIEW

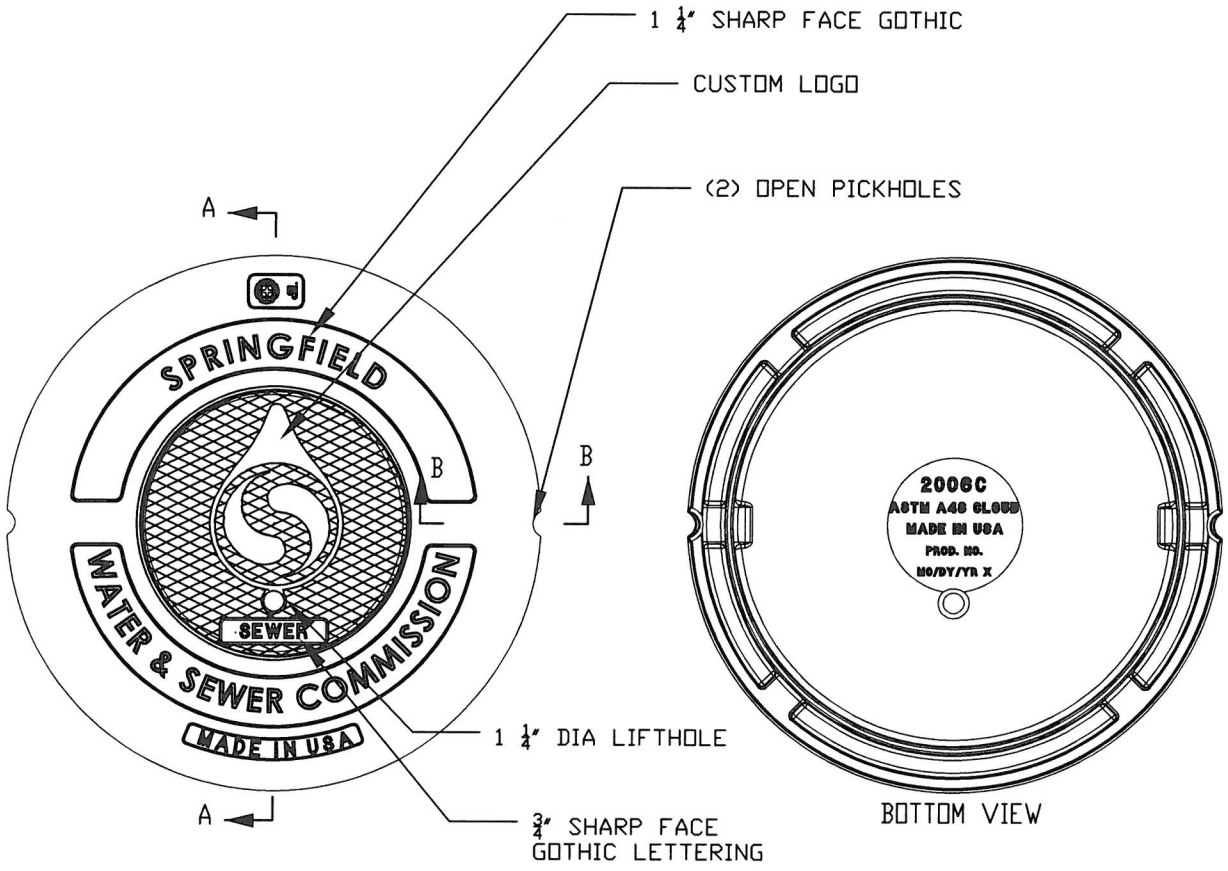


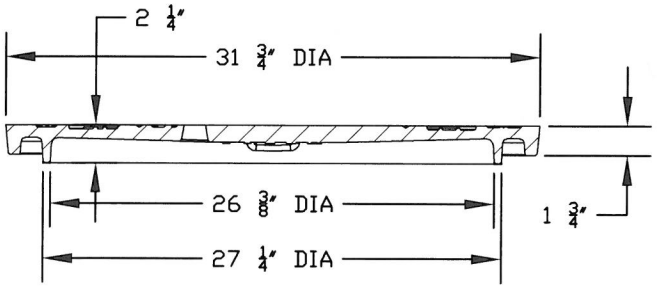
SECTION A-A

NOTES:

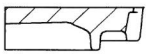
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.61	REV. DATE
		4/16/19 DJP
	24-inch Standard Sewer Cover	
	SCALE: NTS	





SECTION A-A

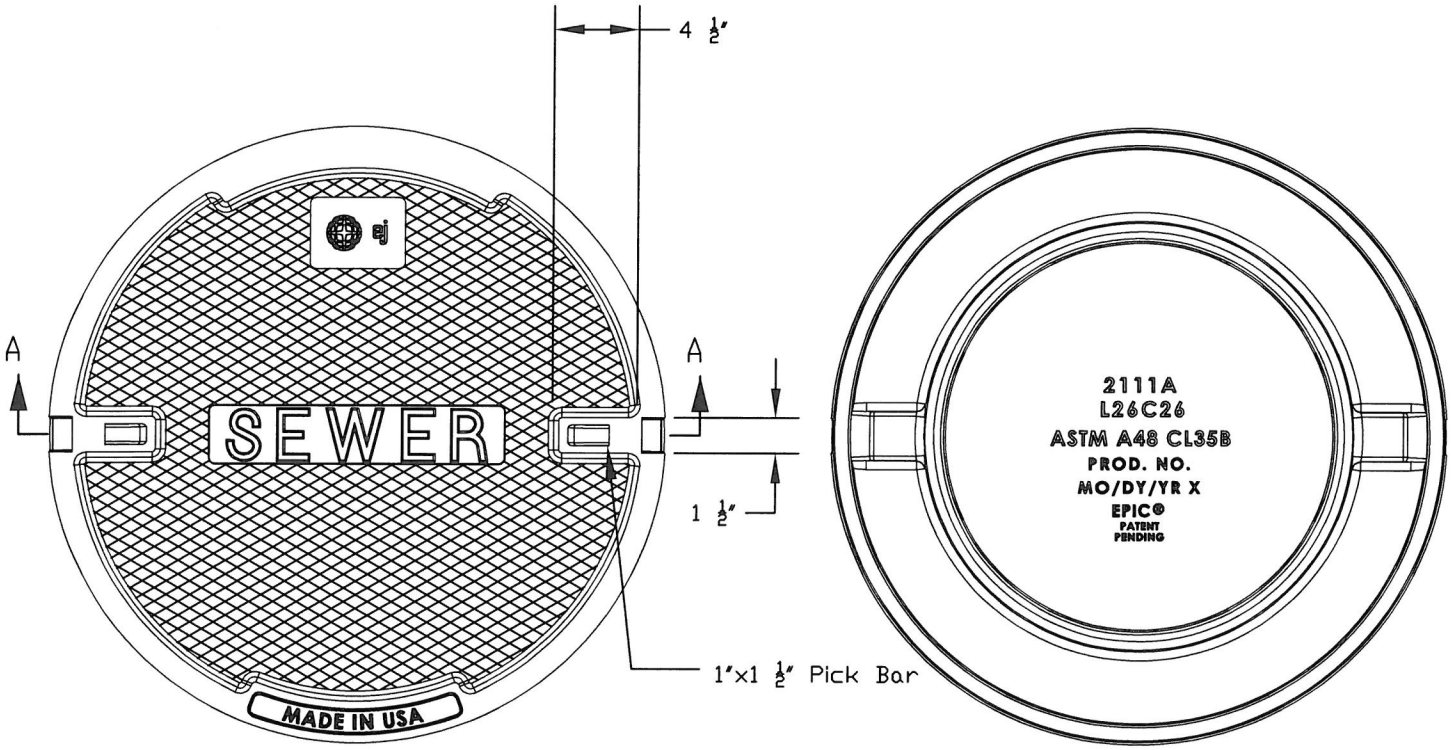


SECTION B-B
SCALE 1 : 8

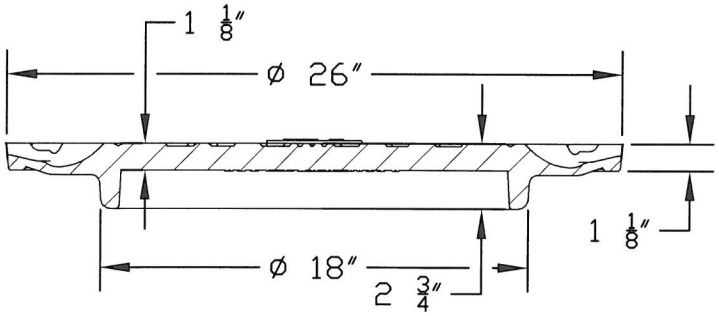
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- $\frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- $\frac{1}{16}$" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.62	REV. DATE
		4/16/19 DJP
	32-inch Standard Sewer Cover	
	SCALE: NTS	



BOTTOM VIEW

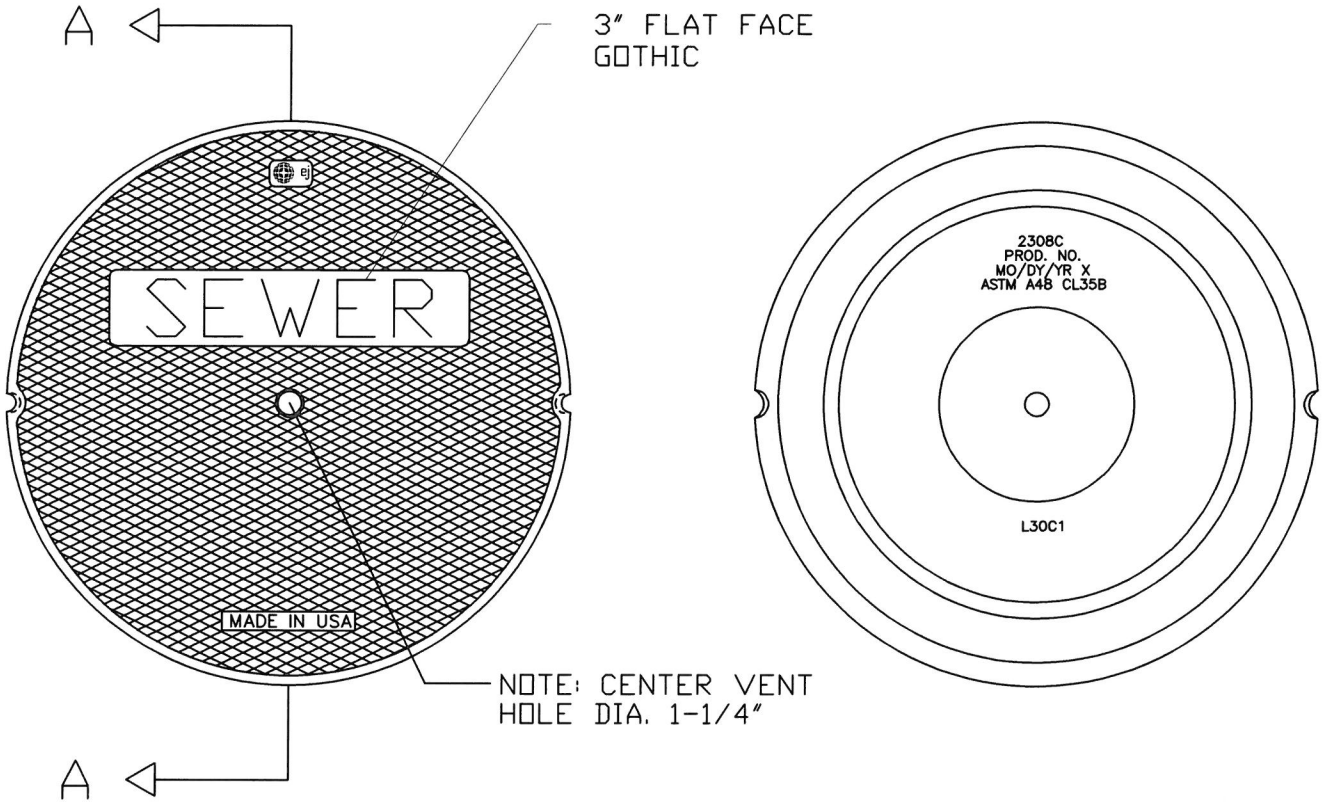


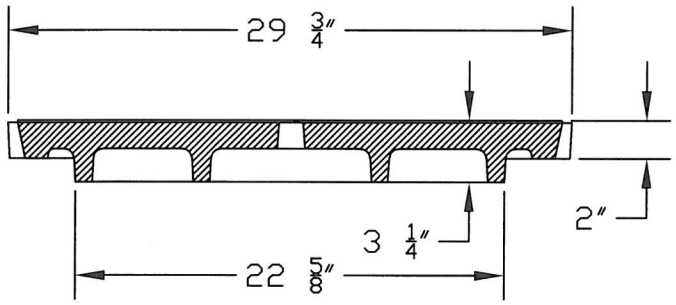
SECTION A-A

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- $\frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- $\frac{1}{16}$" PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.63	REV. DATE
	26-inch Replacement Sewer Cover	4/16/19 DJP
	SCALE: NTS	



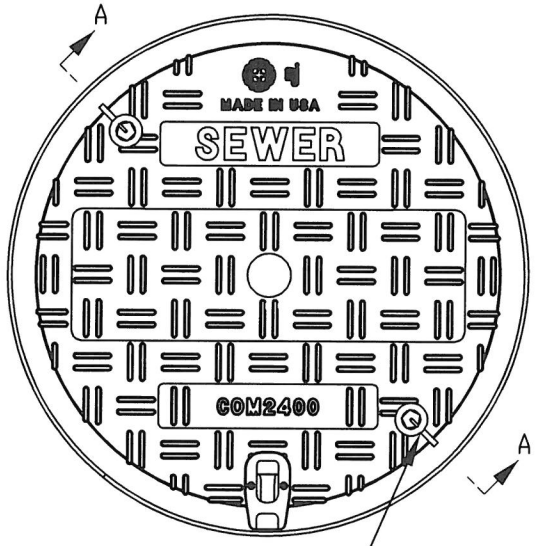


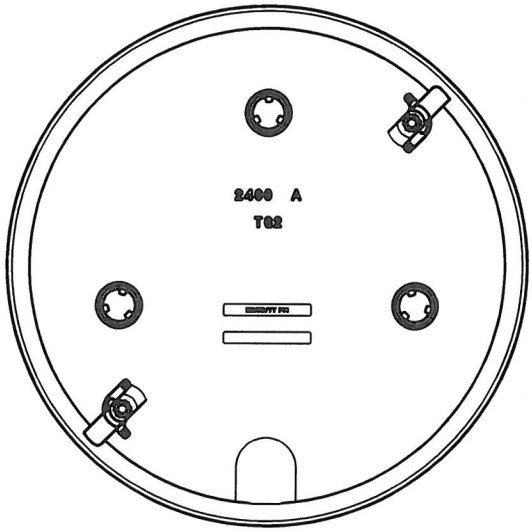
SECTION A-A

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

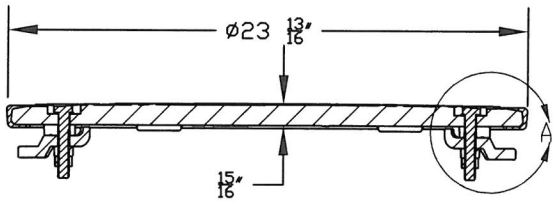
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.64	REV. DATE
	30-inch Replacement Sewer Cover	4/16/19 DJP
	SCALE: NTS	



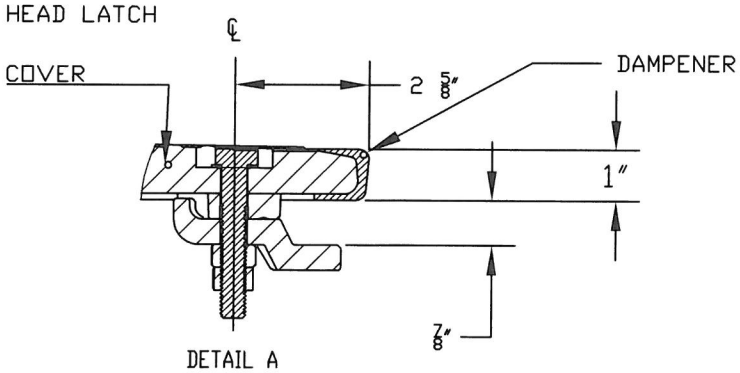


BOTTOM VIEW

¼ TURN PENTA HEAD LATCH



SECTION A-A

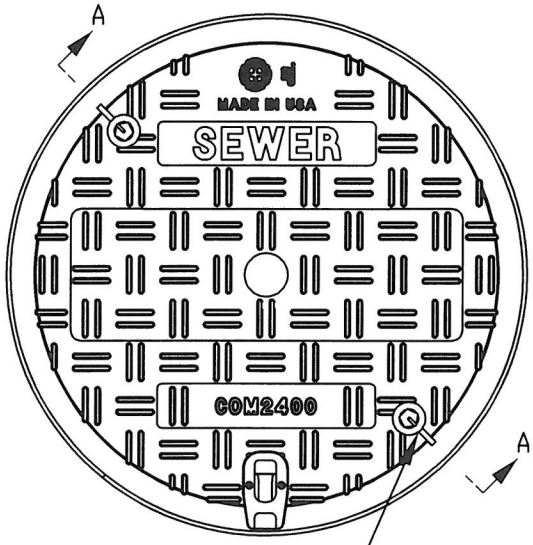


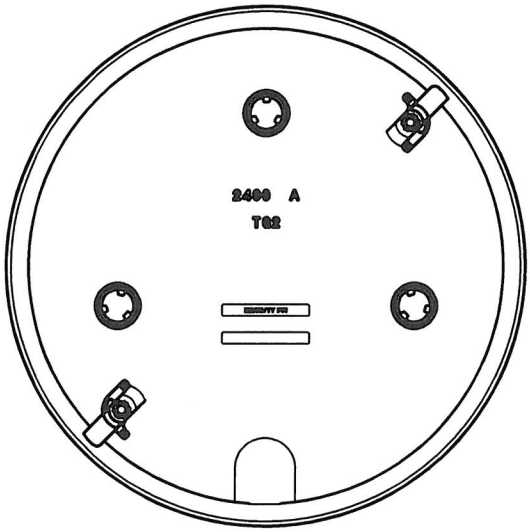
DETAIL A
SCALE 1:3

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. COVER SHALL BE MADE FROM FIBER REINFORCED POLYMER (FRP) ASTM C1028
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

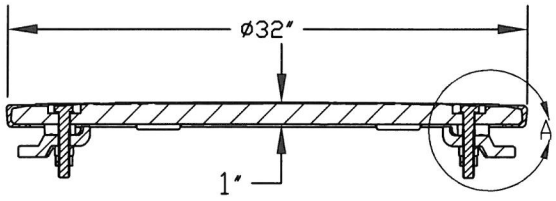
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.65	REV. DATE
	24" Composite Locking Cover	4/19/19 DJP
	SCALE: NTS	



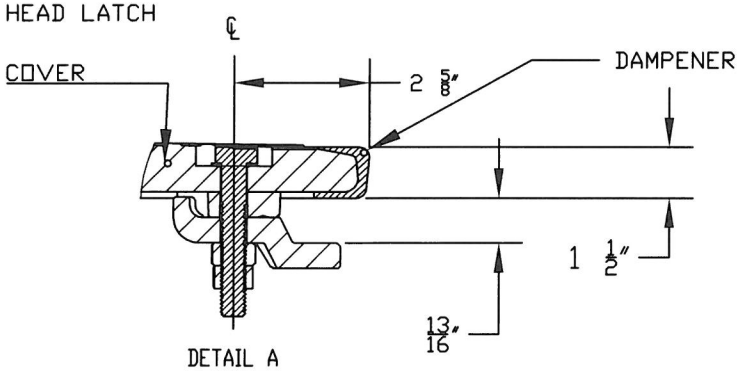


BOTTOM VIEW

¼ TURN PENTA HEAD LATCH



SECTION A-A

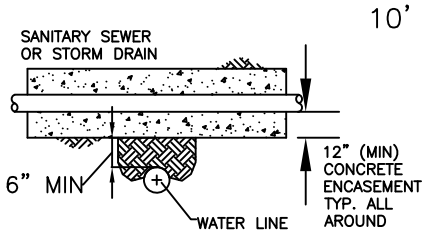


DETAIL A
SCALE 1:3

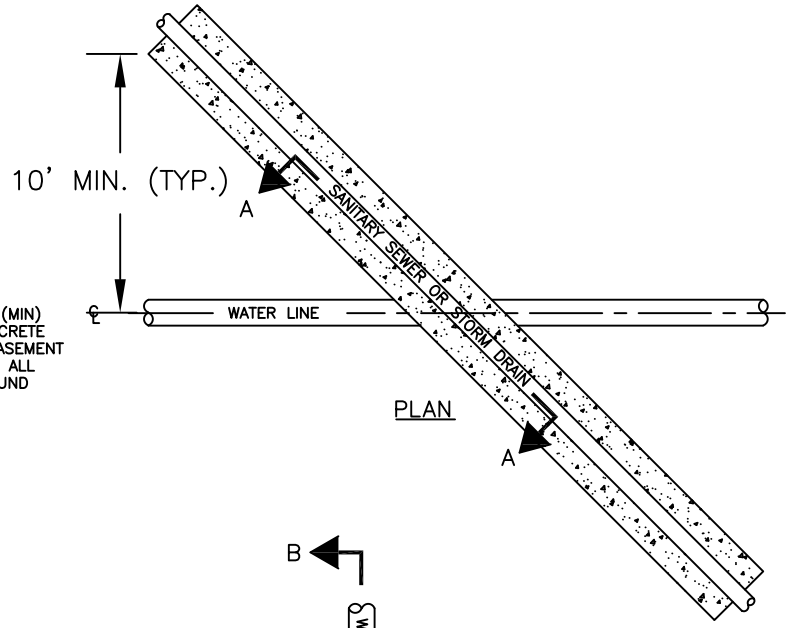
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. COVER SHALL BE MADE FROM FIBER REINFORCED POLYMER (FRP) ASTM C1028
3. DIMENSIONS ARE IN INCHES-FRACTIONAL +/- 1/16 ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL +/- 1/16" PER FOOT

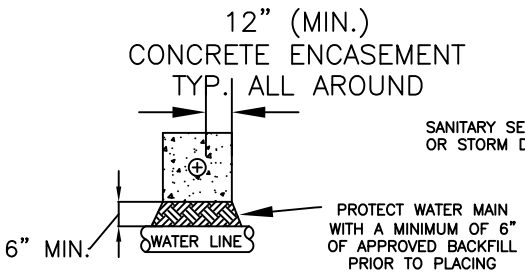
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.66	REV. DATE
	32-inch Composite Locking Cover	4/19/19 DJP
	SCALE: NTS	



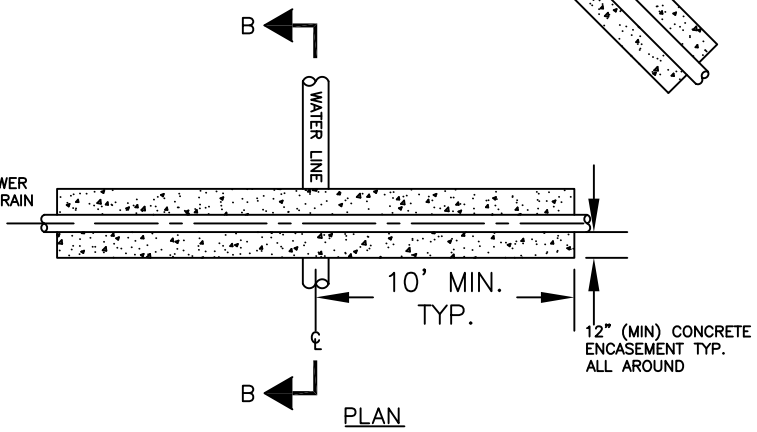
SECTION A–A



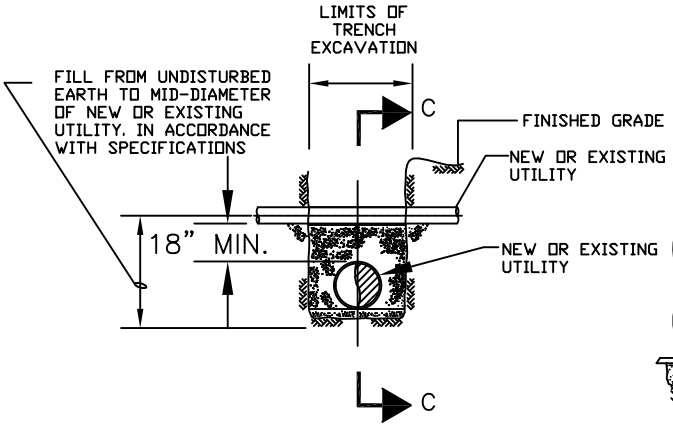
PLAN



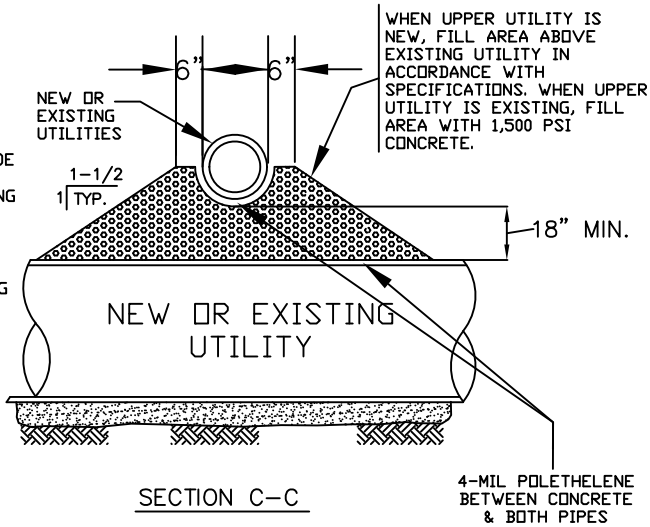
SECTION B–B



PLAN



ELEVATION UTILITY CROSSING



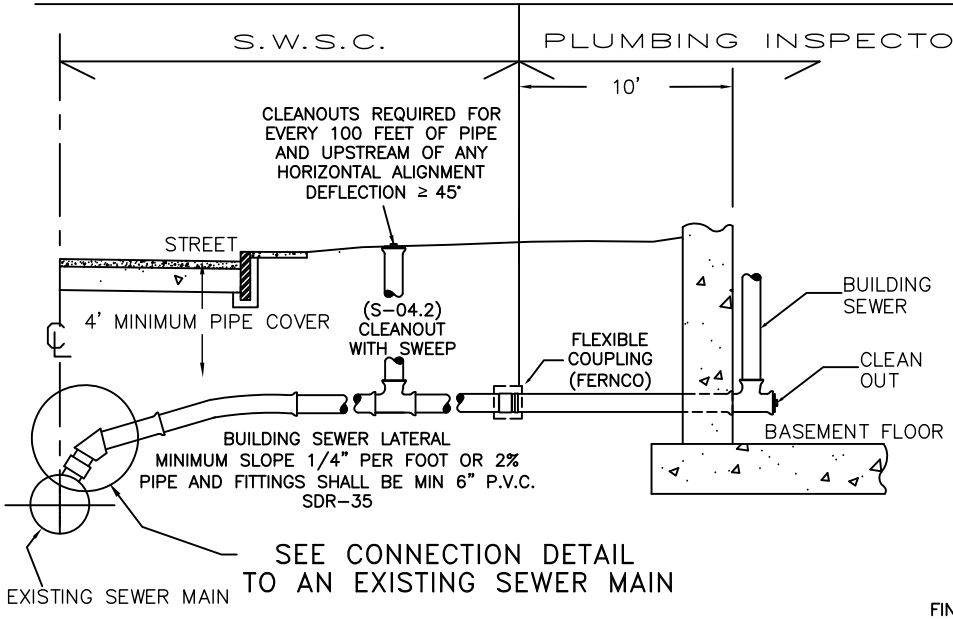
SECTION C–C

NOTES:

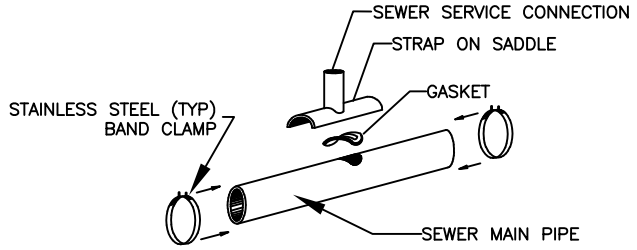
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. IF DEPTH OF COVER ABOVE CONCRETE ENCASEMENT IS GREATER THAN 5'–0" REINFORCEMENT STEEL SHALL BE USED.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S–03.0	REV. DATE
		4/1/08 MAB
		6/18/08 MAB
	UTILITY CROSSING DETAIL	4/6/21 MJL
	SCALE: NTS	

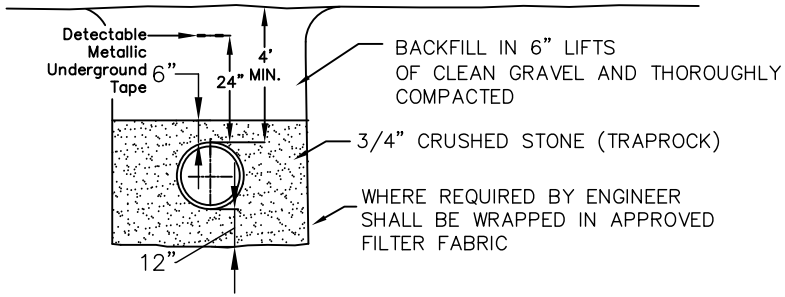
INSPECTION JURISDICTION



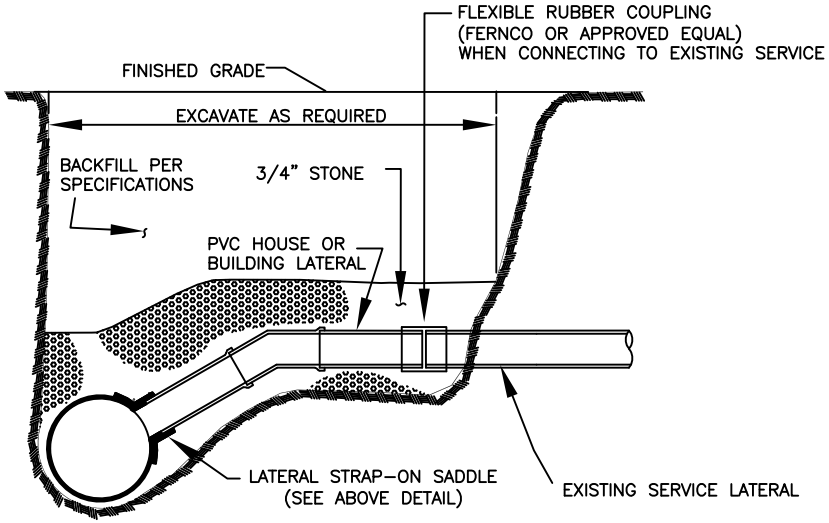
BUILDING SEWER



LATERAL STRAP-ON SADDLE



REFERENCE TRENCH DETAIL S-01.0



CONNECTION TO AN EXISTING SEWER LATERAL

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

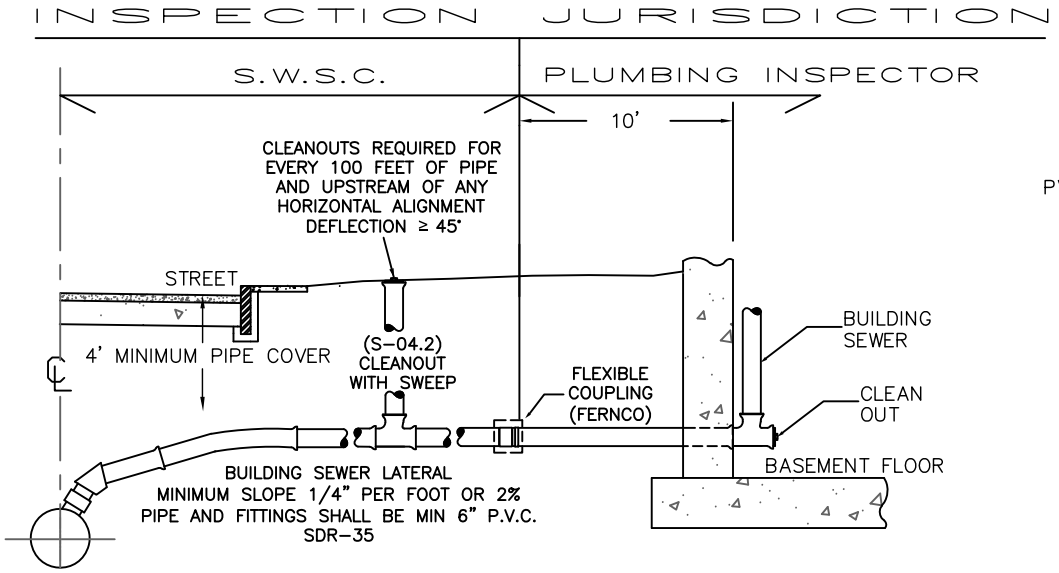
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-04.0

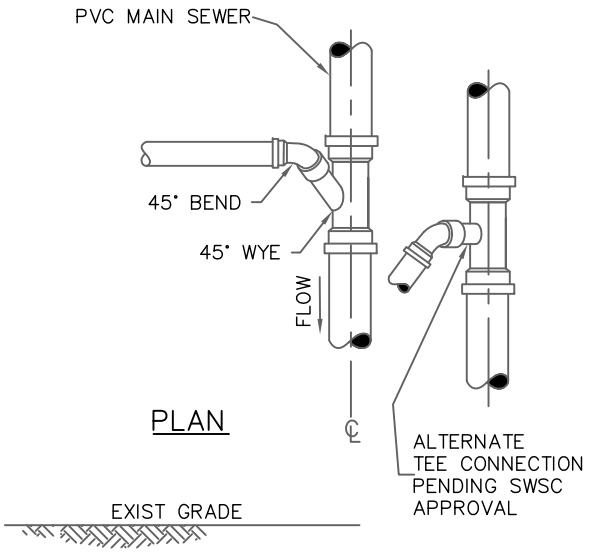
EXISTING SEWER MAIN TO BUILDING CONNECTION

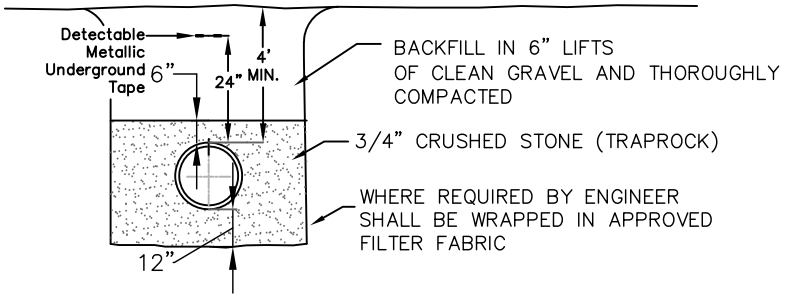
SCALE: NTS

REV. DATE
4/1/08 MAB
10/6/20 DS
3/17/21 MJL

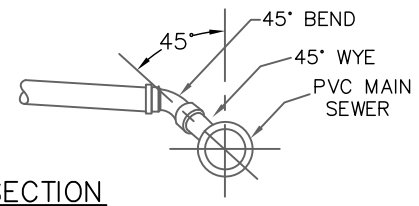


BUILDING SEWER





REFERENCE TRENCH DETAIL S-01.0



LATERAL CONNECTION TO A NEW SEWER MAIN

NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-04.1

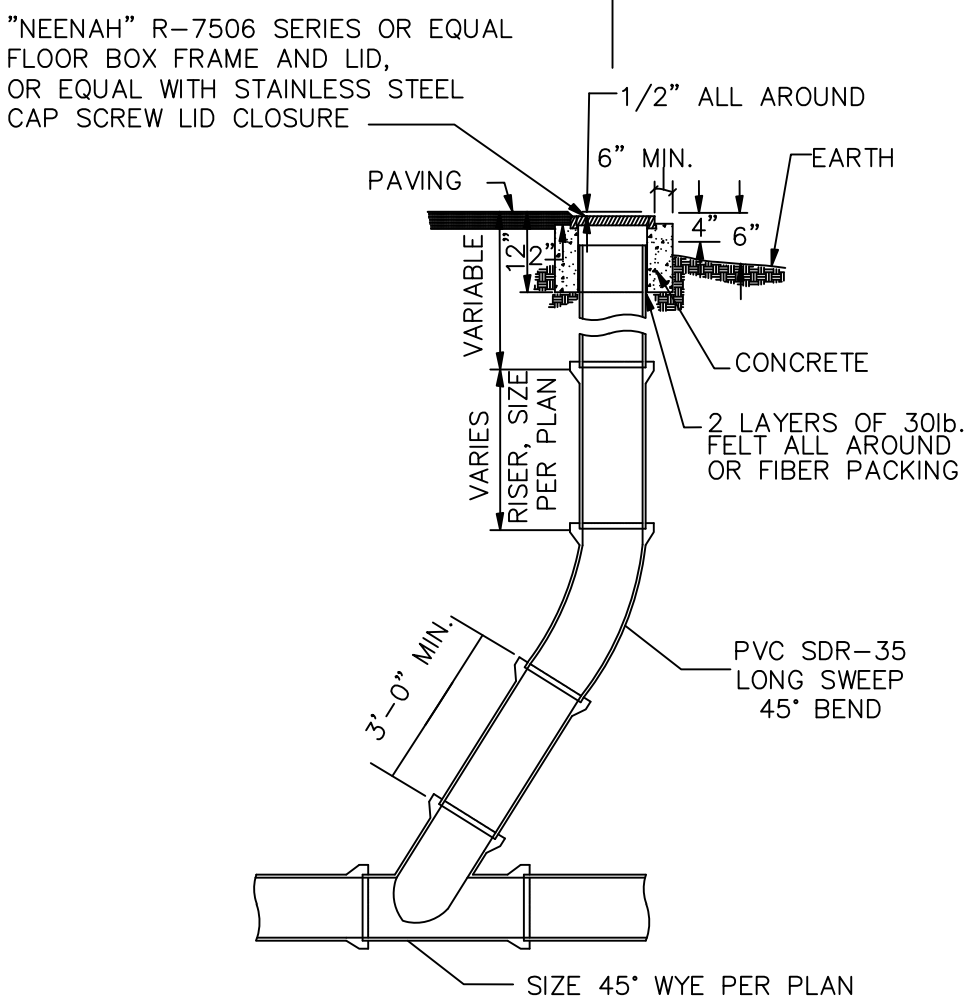
NEW SEWER MAIN TO BUILDING CONNECTION

SCALE: NTS

REV.	DATE
	4/1/08 MAB
	10/6/20 DS
	3/17/21 MJL

DETAIL FOR CLEANOUTS IN PAVED SURFACES

DETAIL FOR CLEAN OUTS IN EASEMENTS

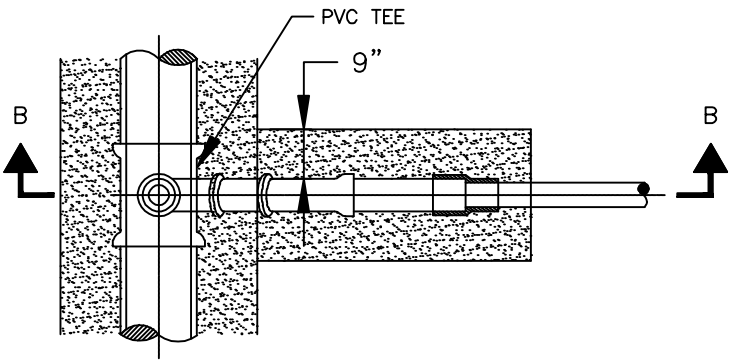


*** REQUIRED** – EVERY 100 FEET OF PIPE AND UPSTREAM OF ANY HORIZONTAL ALIGNMENT DEFLECTION GREATER THAN OR EQUAL TO 45 DEGREES

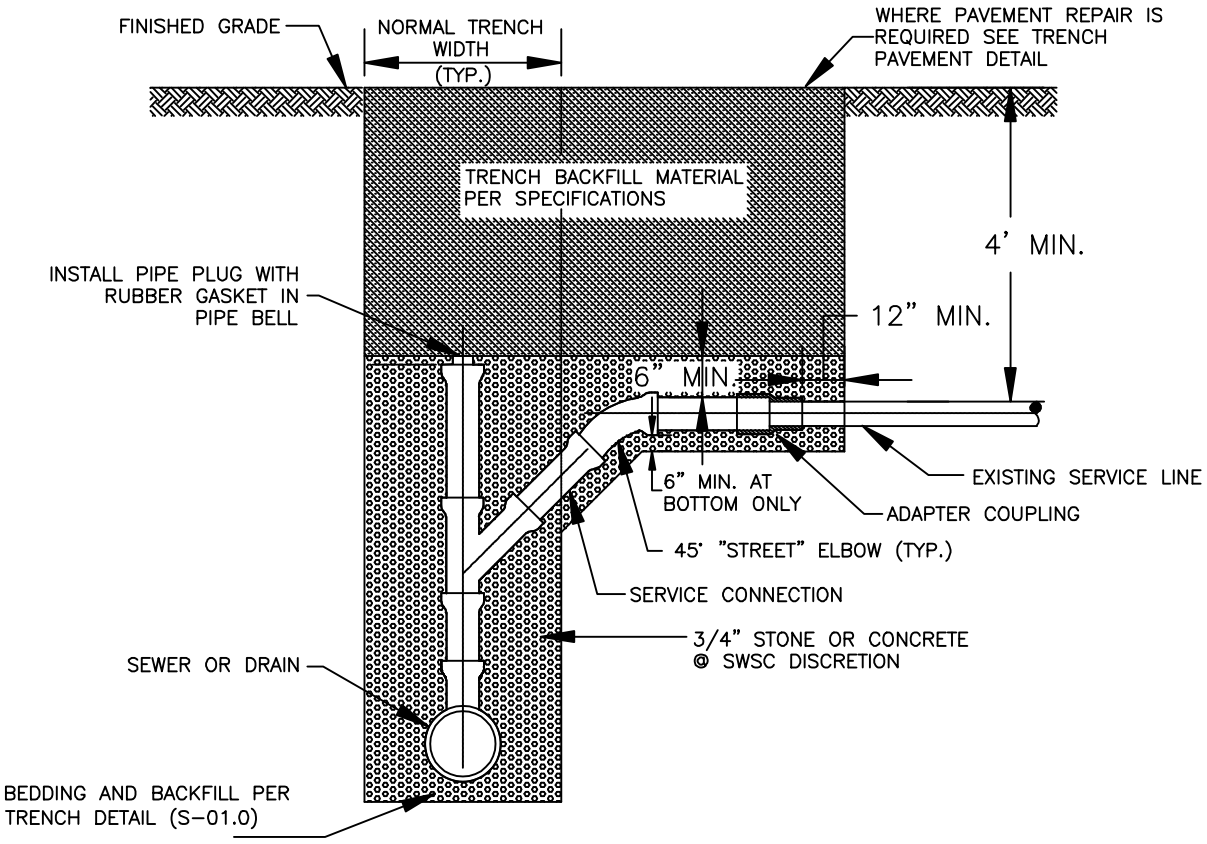
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.
5. CLEAN OUT PIPE DIAMETER SHALL BE THE SAME AS THE SEWER LINE AT THE WYE.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-04.2	REV. DATE
		4/1/08 MAB
	CLEAN OUT WITH SWEEP	10/06/20 DS
	SCALE: NTS	



PLAN

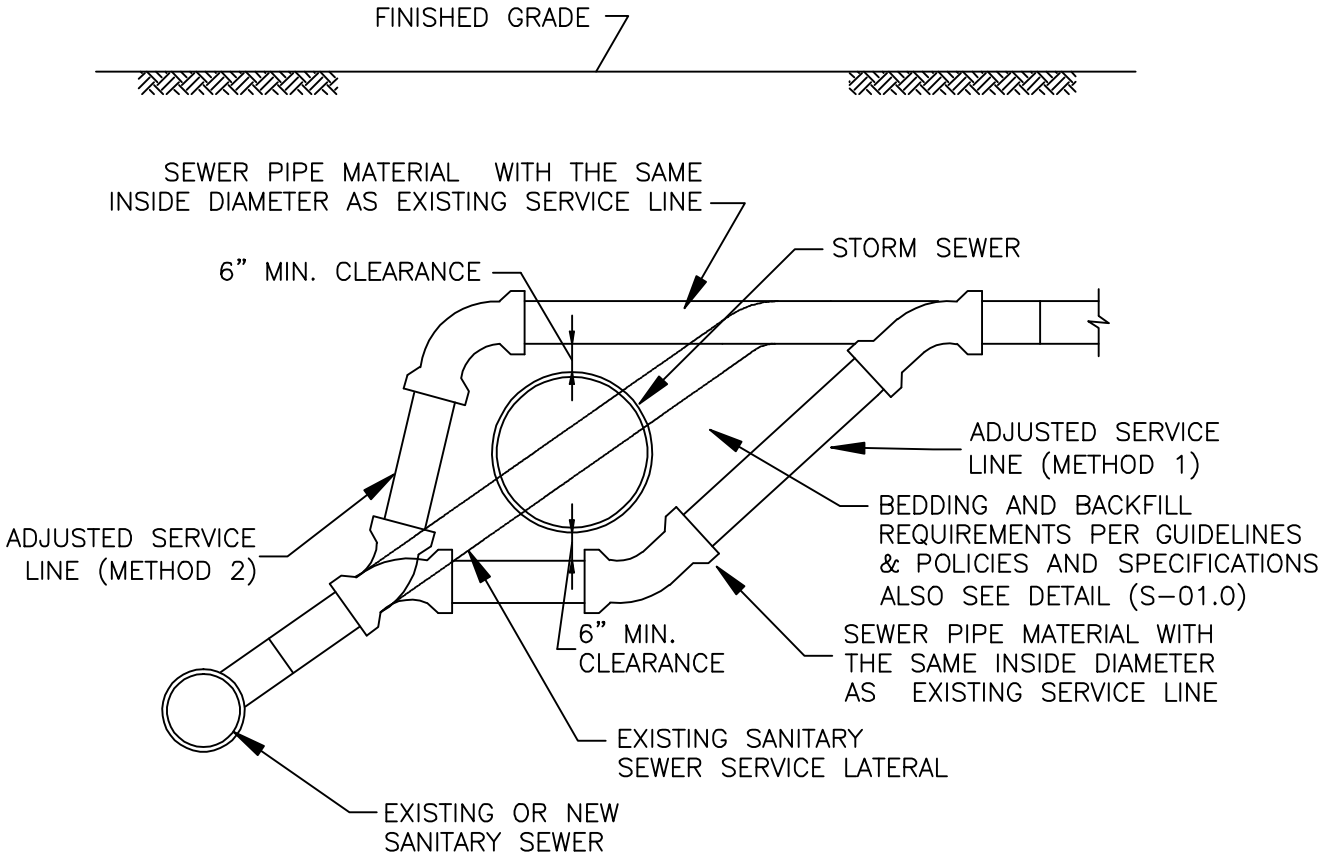


SECTION B-B

SEWER OR DRAIN SERVICE CONNECTION WITH CHIMNEY GREATER THAN 12' DEEP

NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.
5. CLEAN OUT PIPE DIAMETER SHALL BE THE SAME AS THE SEWER LINE AT THE WYE.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-04.3	REV. DATE
		4/1/08 MAB
	SEWER SERVICE CONNECTION WITH CHIMNEY >12' DEEP	
	SCALE: NTS	



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION

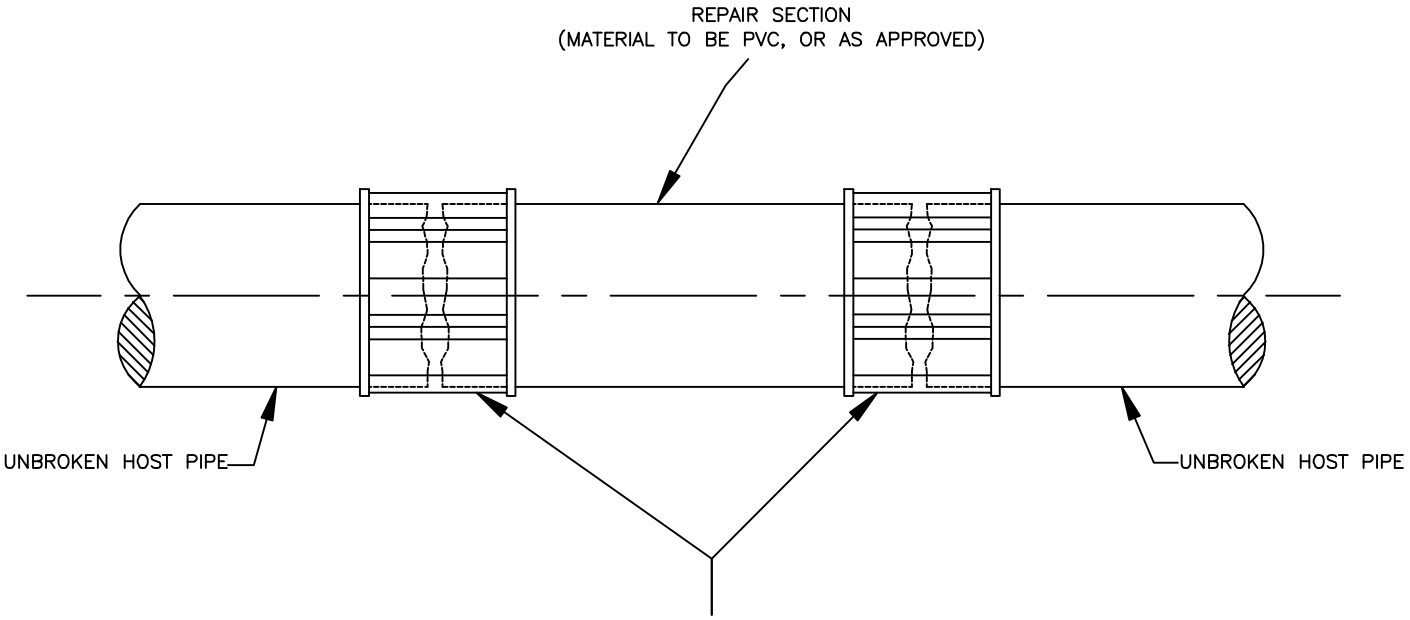
SEWER DETAIL S-04.4

BUILDING CONNECTION TO SEWER MAIN WITH CONFLICTS

SCALE: NTS

REV. DATE
4/1/08 MAB

TYPICAL REPAIR



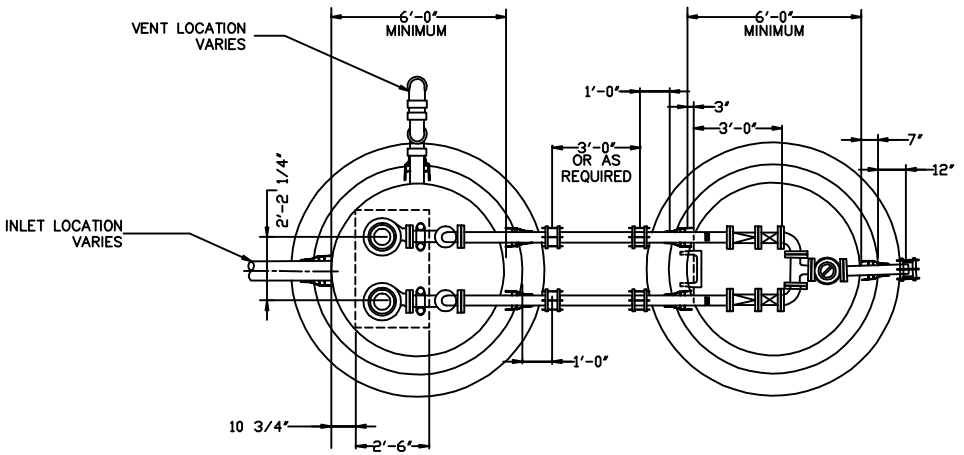
PVC SLIP COUPLINGS, RUBBER COUPLINGS (FERNCO OR APPROVED EQUAL)

BRICK OR EGG SHAPED SEWER REPAIR MAY HAVE ADDITIONAL REQUIREMENTS BY SWSC

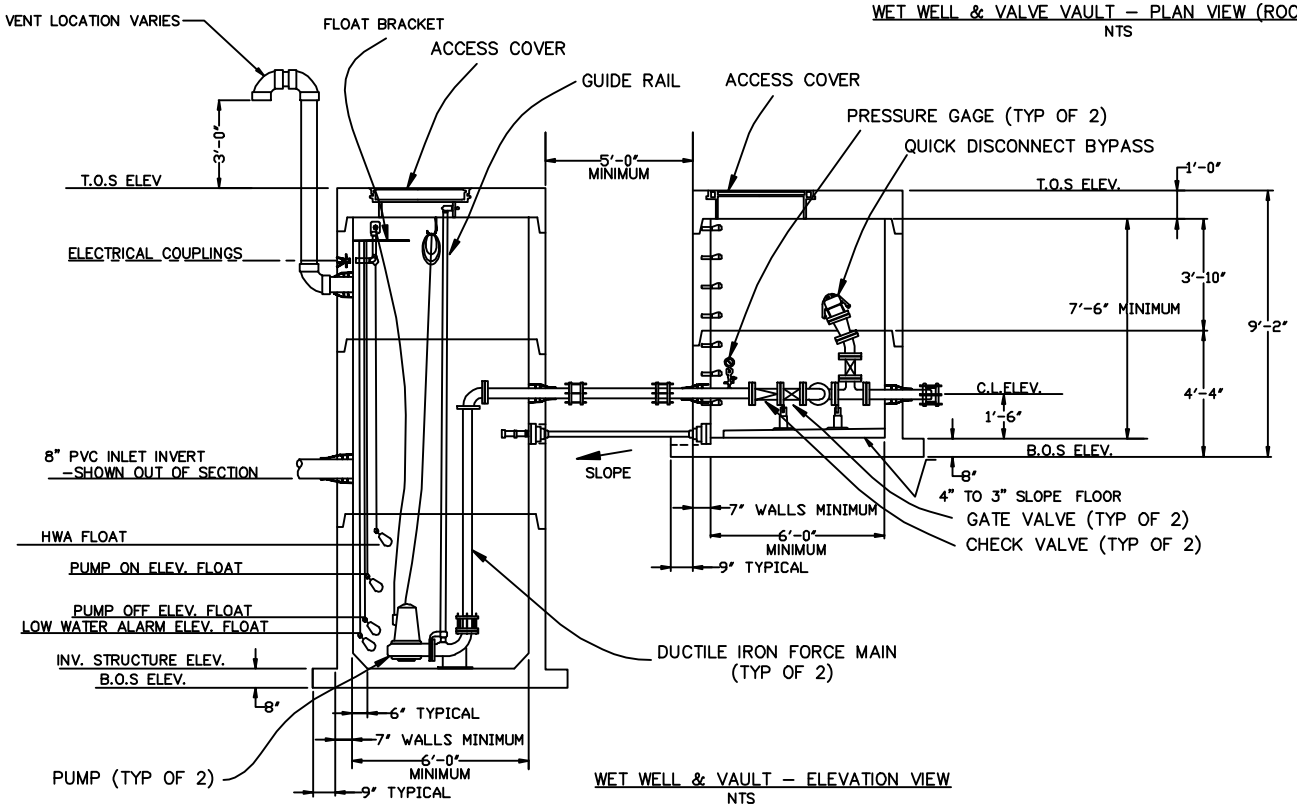
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. SEWER REPAIR SECTION MATERIAL SHALL BE THE SAME MATERIAL AS THE HOST PIPE, OR AS APPROVED BY SWSC.
5. REPAIR SECTION SHALL BE SIZED TO BUTT AGAINST THE HOST PIPES.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-05.0	REV. DATE
		4/1/08 MAB
	BUILDING AND MAINLINE SEWER REPAIR	
	SCALE: NTS	



WET WELL & VALVE VAULT – PLAN VIEW (ROOF REMOVED)
NTS



WET WELL & VAULT – ELEVATION VIEW
NTS

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.

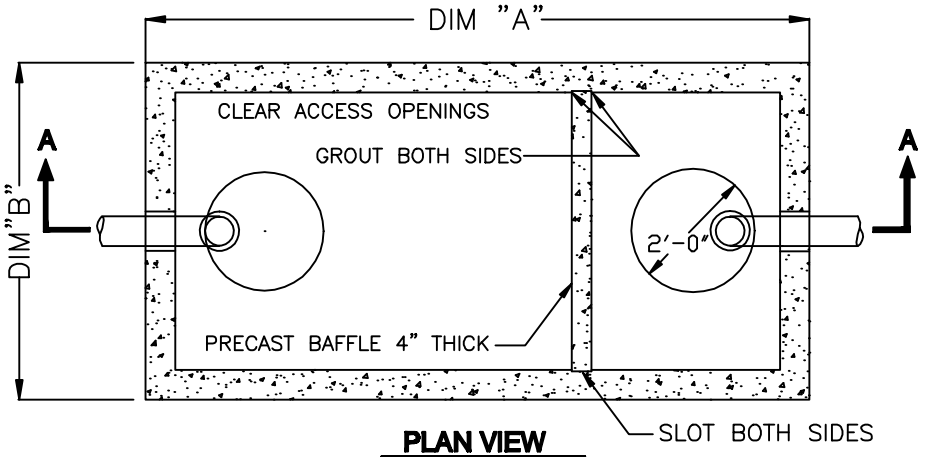
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-06.0

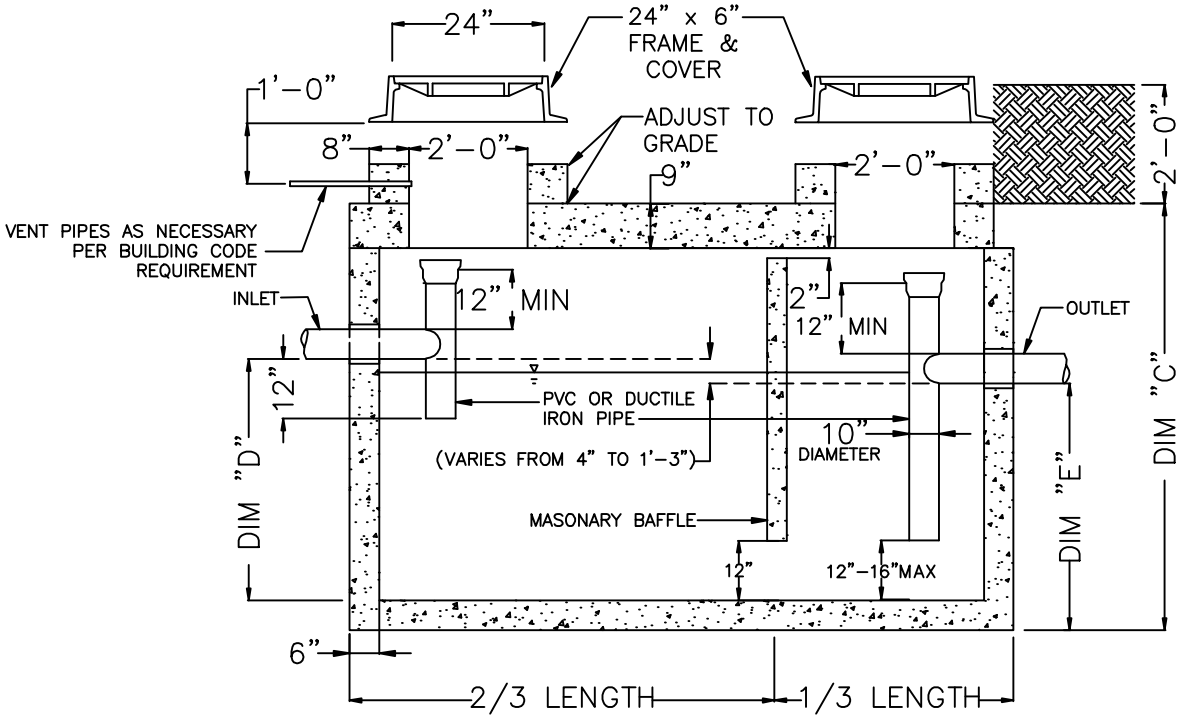
WETWELL & VALVE VAULT PRECAST

SCALE: NTS

REV.	DATE
	4/1/08 MAB



PLAN VIEW



SECTION A-A

SIZING CHART

GALLON CAPATCITY	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
750	7'-0"	4'-8"	7'-0"	4'-3"	3'-11"
1000	9'-0"	5'-0"	7'-2"	4'-2"	3'-10"
1250	9'-0"	5'-0"	7'-2"	5'-2"	4'-10"
1500	11'-2"	5'-8"	7'-2"	4'-4"	4'-0"
1750	11'-2"	5'-8"	7'-2"	4'-11"	4'-7"
2000	12'-8"	6'-8"	8'-0"	4'-7"	3'-10"
2500	12'-8"	6'-8"	8'-0"	5'-6"	4'-9"
2750	12'-8"	6'-8"	8'-0"	6'-0"	5'-3"
3000	15'-7"	9'-7"	8'-6.5"	5'-0"	3'-9"
4000	15'-7"	9'-7"	8'-6.5"	6'-3"	5'-0"
5000	19'-11"	9-11"	8'-11"	6'-2"	4'-9"
6000	19'-11"	9-11"	10'-5"	7'-2"	5'-9"

GENERAL CONSTRUCTION NOTES:

1. CONCRETE : 28 DAY F'c= 4500 psi
2. REBAR : ASTM A615 GRADE 60.
3. MESH : ASTM A-185 GRADE 65
4. DESIGN : AC1318-83 BUILDING CODE
   ASTM C-857 MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST ' CONCRETE UTILITY STRUCTURES
5. LOADS :H-20 LOADING.
6. FILL w/CLEAN WATER PRIOR TO START UP OF SYSTEM.
7. CONTRACTOR TO SUPPLY AND INSTALL ALL PIPING AND SANITARY TEES ,4 CLEAN OUTS, FOR CLEANING TOWARD TRAP AND FOR CLEANING AWAY FROM TRAP ON BOTH THE INLET AND OUTLET / ALT. DUAL SWEEP CLEANOUTS.
8. GRAY WATER ONLY, BLACK WATER SHALL BE CARRIED BY SEPARATE SEWER.
9. TRAP SIZE WILL BE BASED ON 15 GPD PER SEAT OR OTHER APPROVED SIZING CRITERIA.
10. LARGER SIZES MAY BE REQUIRED AS PER REVIEW OF FACILITY.
11. MUST BE PRESSURE TESTED PER ASTM C163-06.
12. BALLAST/BOUYANCY CALCULATIONS REQUIRED IF AVERAGE HIGH GROUND WATER TABLE IS ENCOUNTERED.

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER SERVICE PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. SEWER REPAIR SECTION MATERIAL SHALL BE THE SAME MATERIAL AS THE HOST PIPE, OR AS APPROVED BY SWSC.
5. REPAIR SECTION SHALL BE SIZED TO BUTT AGAINST THE HOST PIPES.

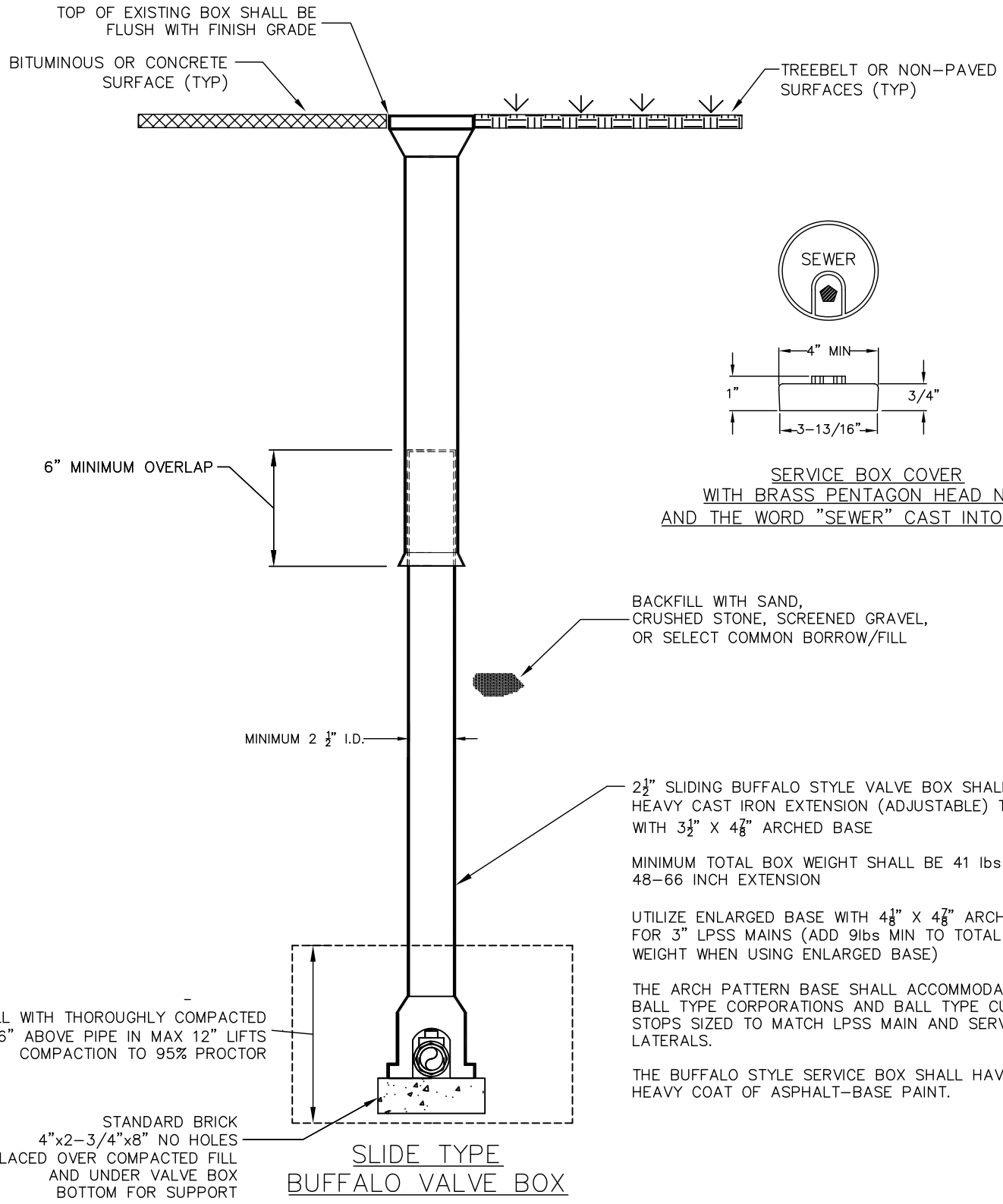
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-08.0

STANDARD EXTERNAL GREASE INTERCEPTOR

SCALE: NTS

REV. DATE
4/1/09 MAB



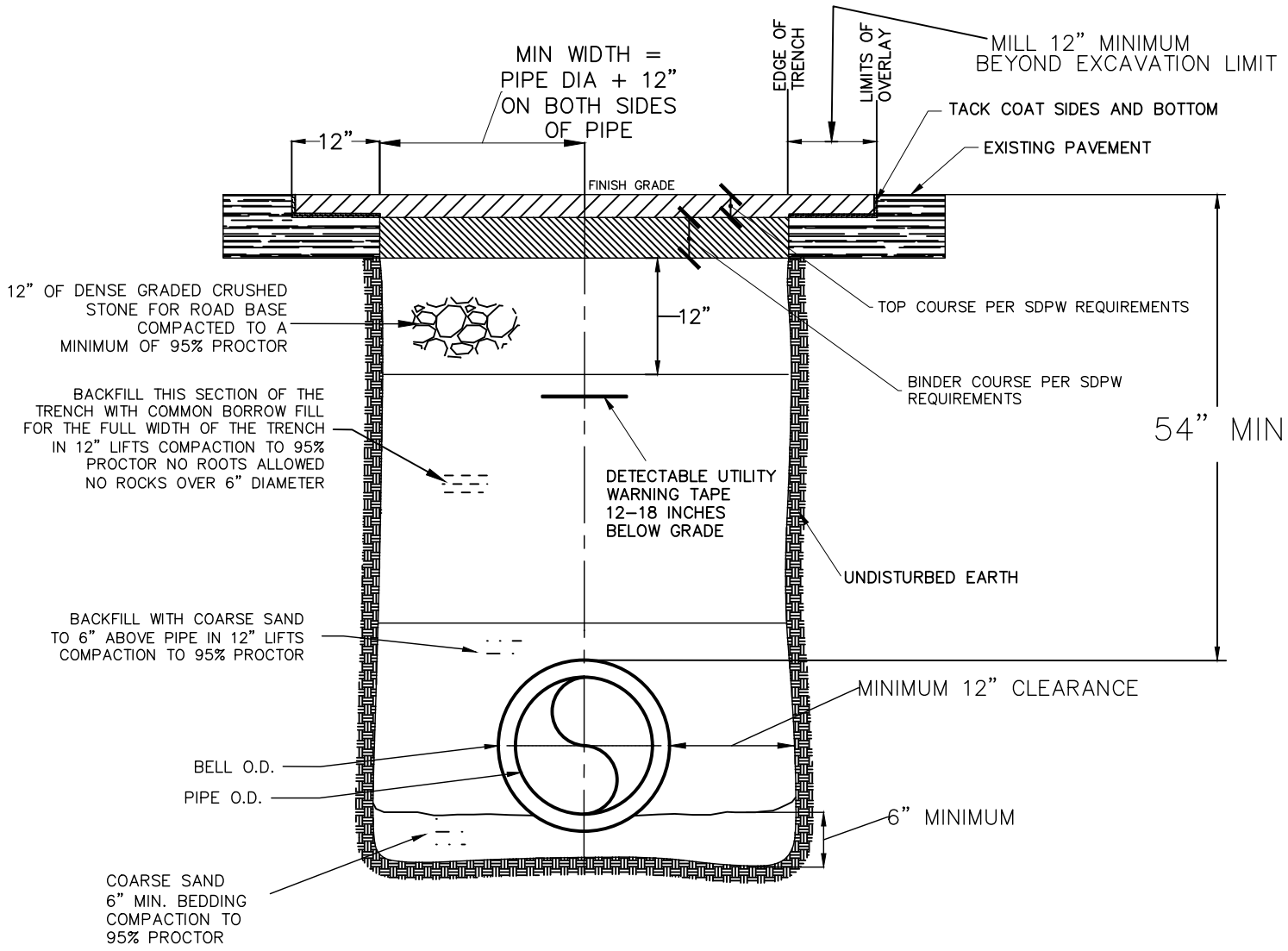
SERVICE BOX COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "SEWER" CAST INTO COVER

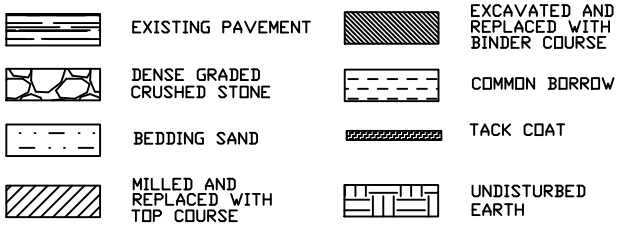
SLIDE TYPE
BUFFALO VALVE BOX

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. LPSS DEPTH SHALL BE 6 INCHES BELOW THE AVERAGE FROST DEPTH (48 INCHES) FOR A TOTAL OF 54 INCHES. PIPE SHALLOWER THAN 54 INCHES SHALL BE INSULATED.
3. SEE DETAIL S-09.3 FOR TRENCH DETAILS
4. IF BACKFILLING WITH "FLOWABLE" FILL WRAP THE SERVICE BOX WITH 15 POUND FELT ROOFING PAPER OR 4 MIL THICK POLYETHYLENE.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-09.1	REV. DATE
	LOW PRESSURE SANITARY SERVICE / MAIN 2 1/2" VALVE BOX IN NON-PAVED AREAS	1/18/19 DS
		10/28/20 DS
	SCALE: NTS	





NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. LPSS DEPTH SHALL BE 6 INCHES BELOW THE AVERAGE FROST DEPTH (48 INCHES) FOR A TOTAL OF 54 INCHES. PIPE SHALLOWER THAN 54 INCHES SHALL BE INSULATED.
3. DETECTABLE WARNING TAPE SHALL BE INSTALLED 12–18 INCHES BELOW GRADE TO ALLOW USE OF A METAL DETECTOR FOR FUTURE FIELD LOCATION AND UTILITY MARKOUT.
4. REQUIREMENTS FOR ROAD BASE, PAVEMENT, AND JOINT SEAL ARE TO BE IN ACCORDANCE WITH THE LATEST VERSION OF THE CITY OF SPRINGFIELD DEPARTMENT OF PUBLIC WORKS – ENGINEERING DIVISION'S "MANUAL FOR OCCUPANCY OF PUBLIC WAYS AND PRIVATE WAYS WITHIN THE CITY OF SPRINGFIELD".
5. TRENCH RESTORATION OUTSIDE OF ROADWAY LPSS ALIGNMENTS SHALL MEET REQUIREMENTS FOR GRAVEL, VEGETATION, LOAM AND/OR SEED IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON–PAVED AREAS.
6. FOR TYPICAL LOCATION OF SEWER MAINS SEE DETAIL (W–01.0).
7. ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

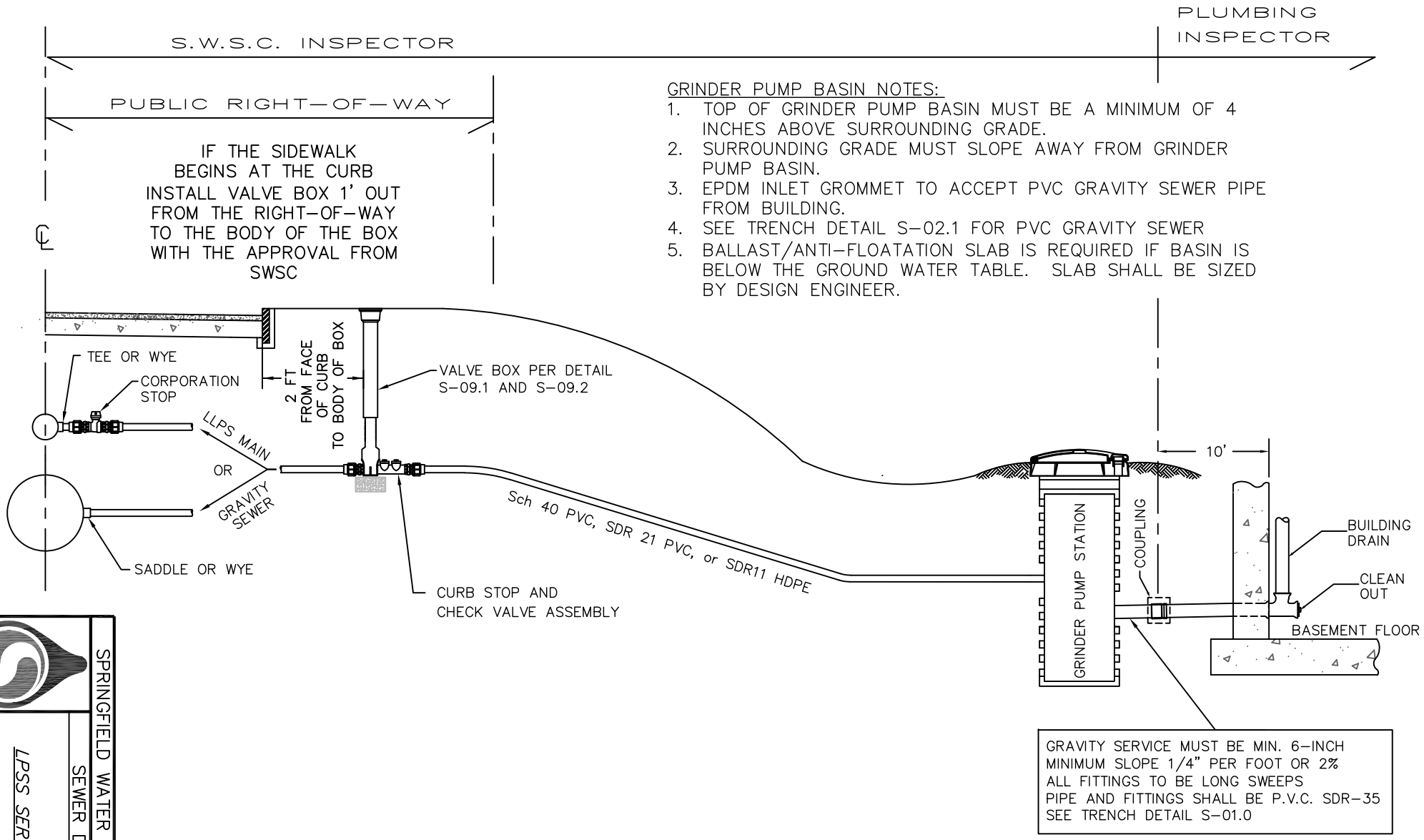
SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL S–09.2

LOW PRESSURE SANITARY SEWER PIPE TRENCH DETAIL

SCALE: NTS

REV. DATE
1–18–19 DS



GRINDER PUMP BASIN NOTES:

1. TOP OF GRINDER PUMP BASIN MUST BE A MINIMUM OF 4 INCHES ABOVE SURROUNDING GRADE.
2. SURROUNDING GRADE MUST SLOPE AWAY FROM GRINDER PUMP BASIN.
3. EPDM INLET GROMMET TO ACCEPT PVC GRAVITY SEWER PIPE FROM BUILDING.
4. SEE TRENCH DETAIL S—02.1 FOR PVC GRAVITY SEWER
5. BALLAST/ANTI—FLOATATION SLAB IS REQUIRED IF BASIN IS BELOW THE GROUND WATER TABLE. SLAB SHALL BE SIZED BY DESIGN ENGINEER.

GRAVITY SERVICE MUST BE MIN. 6—INCH
MINIMUM SLOPE 1/4" PER FOOT OR 2%
ALL FITTINGS TO BE LONG SWEEPS
PIPE AND FITTINGS SHALL BE P.V.C. SDR—35
SEE TRENCH DETAIL S—01.0

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. LPSS PIPE SHALL BE INSTALLED PER TRENCH DETAIL S—09.3
3. ALL SEWER MAIN AND SERVICE PIPE SHALL HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
4. FINAL DETERMINATION OF THE TYPE OF PIPE AND SIZE OF PIPE TO BE USED IS THE RESPONSIBILITY OF THE PROJECT OWNER'S CONSULTING ENGINEER (P.E. IN MASSACHUSETTS) OR THE SEWAGE GRINDER PUMP STATION'S MANUFACTURER.
5. LPSS DEPTH SHALL BE 6 INCHES BELOW THE AVERAGE FROST DEPTH (48 INCHES) FOR A TOTAL OF 54 INCHES. PIPE SHALLOWER THAN 54 INCHES SHALL BE INSULATED.
6. ALL MATERAILS USED FOR THE PRESSURE PORTION OF THE SYSTEM MUST BE PRESSURE RATED FOR AT MINIMUM 160 PSI OPERATING PRESSURE AND SUITABLE FOR THE WASTEWATER ENVIRONMENT AND RESISTANT TO CORROSION.

SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S—09.3

LPSS SERVICE LATERAL

SCALE: NTS

REV.	DATE	
1	1/22/19	DS
	3/17/21	MJL

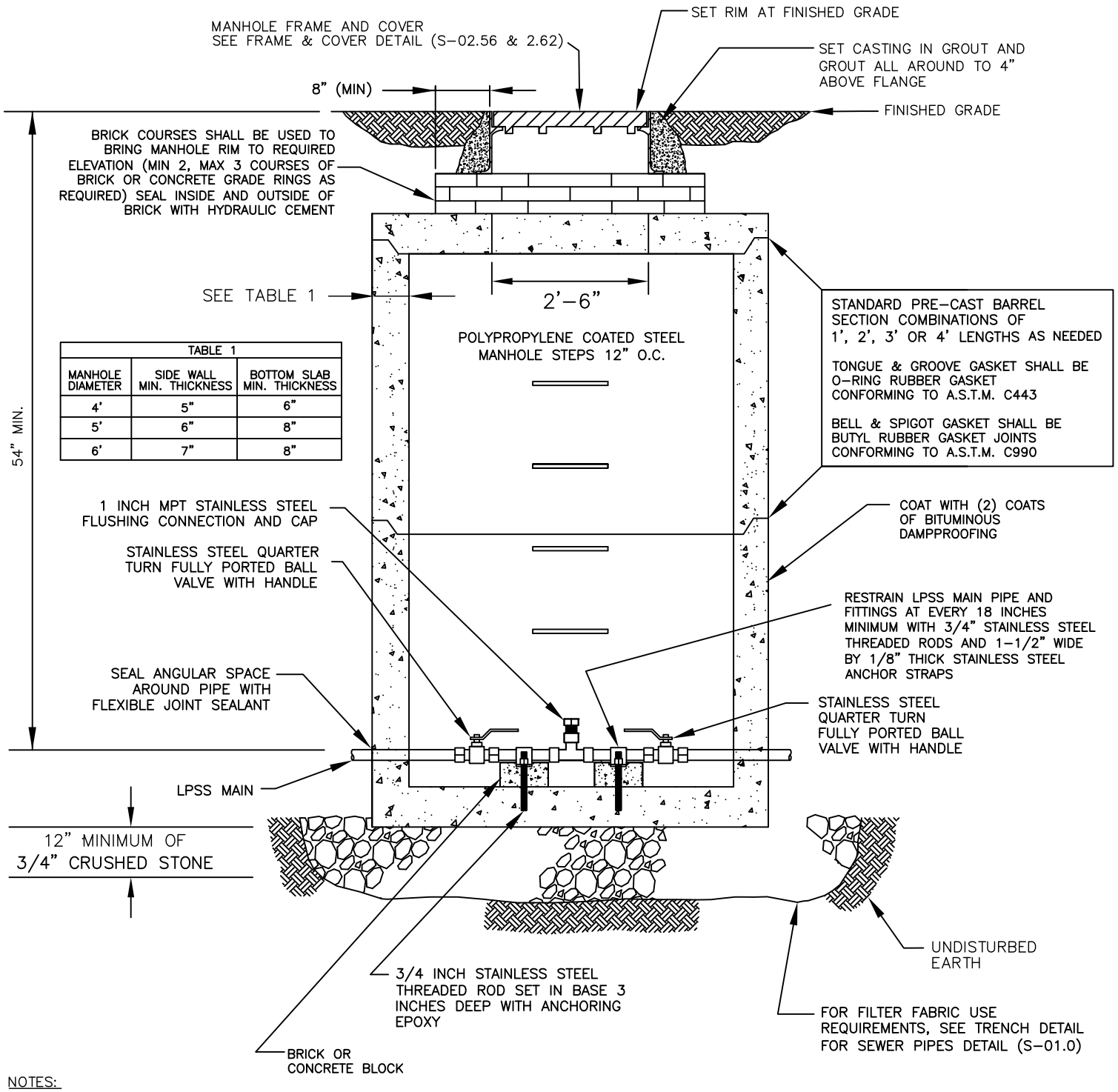


TABLE 1		
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS
4'	5"	6"
5'	6"	8"
6'	7"	8"

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. LPSS MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 54 INCH FROM TOP OF PIPE TO FINISH GRADE.
3. IF 54 INCHES OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. PRE-CAST REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.
11. 90 DEGREE BEND FITTINGS ARE NOT ACCEPTABLE. 45 DEGREE BENDS AT INLET AND OUTLET OF MANHOLE SHALL BE INSTALLED WHERE A 90 DEGREE ALIGNMENT CHANGE IS REQUIRED.

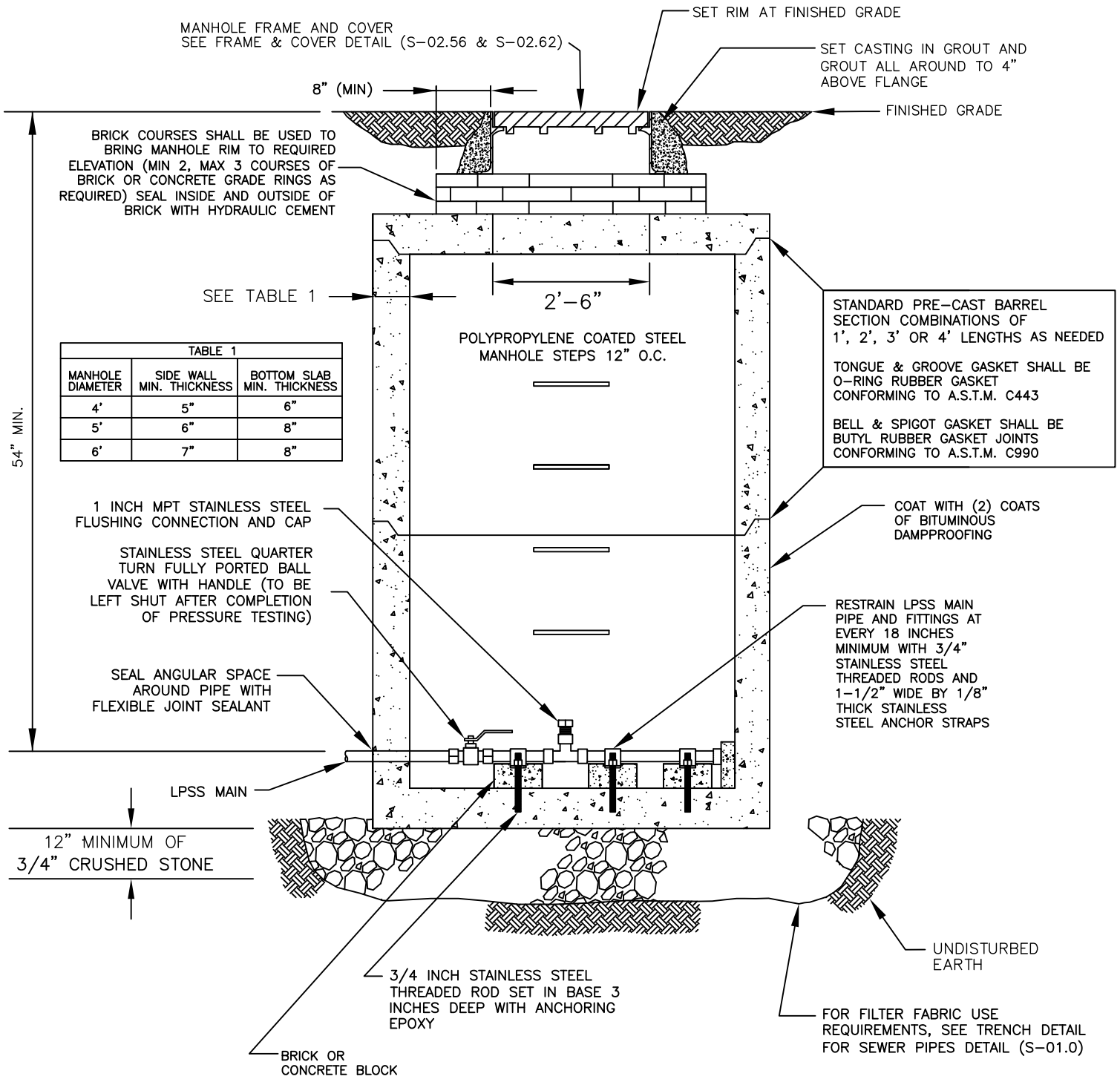
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-09.4

LOW PRESSURE SANITARY SEWER MAIN INLINE FLUSHING STRUCTURE

SCALE: NTS

REV. DATE
1/23/19 DS



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MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS
4'	5"	6"
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6'	7"	8"

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. LPSS PIPE SHOULD HAVE A MINIMUM DEPTH OF 54 INCHES FROM TOP OF PIPE TO FINISH GRADE.
3. IF 54 INCHES OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. PRE-CAST REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.

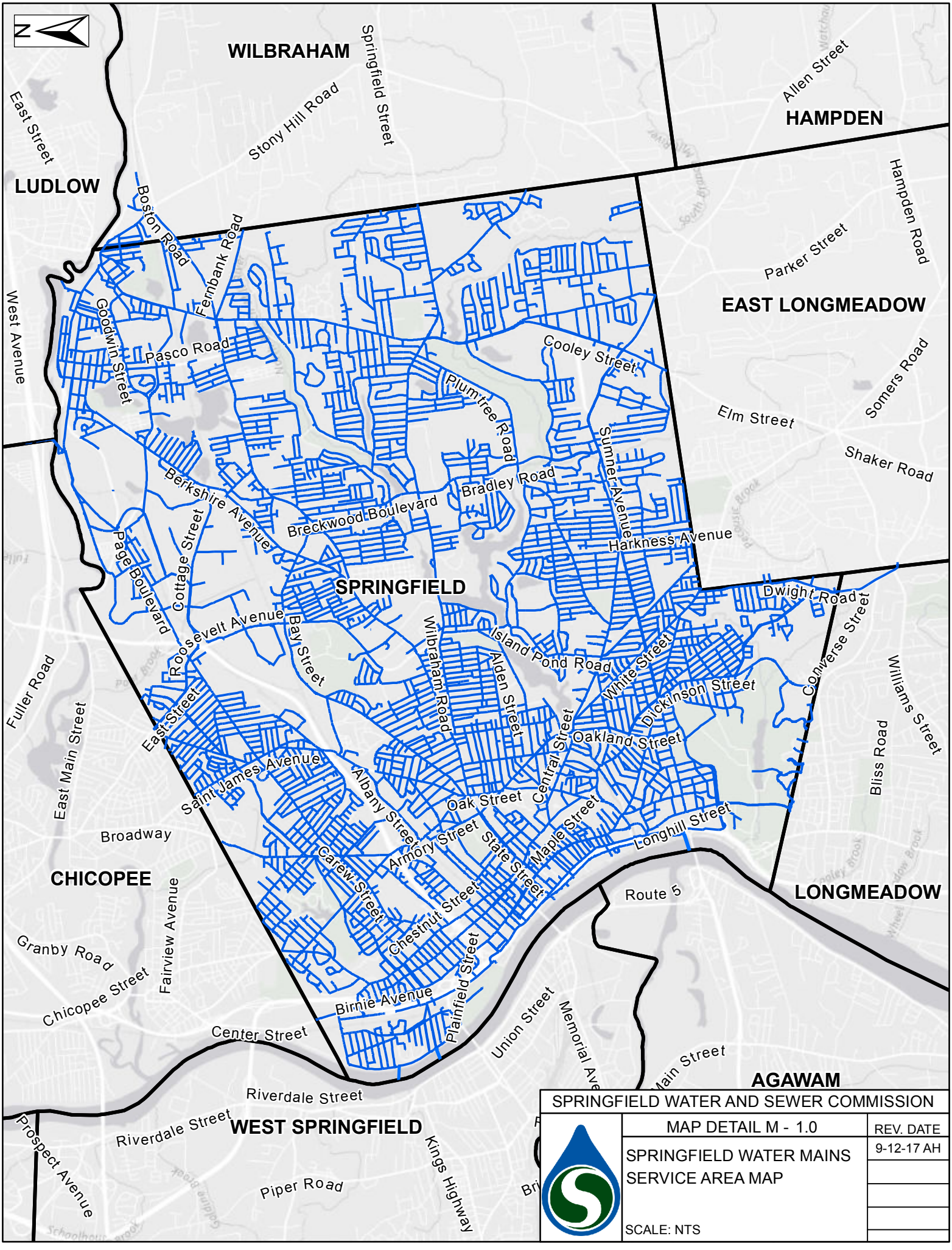
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-09.5

LOW PRESSURE SANITARY SEWER TERMINAL FLUSHING STRUCTURE

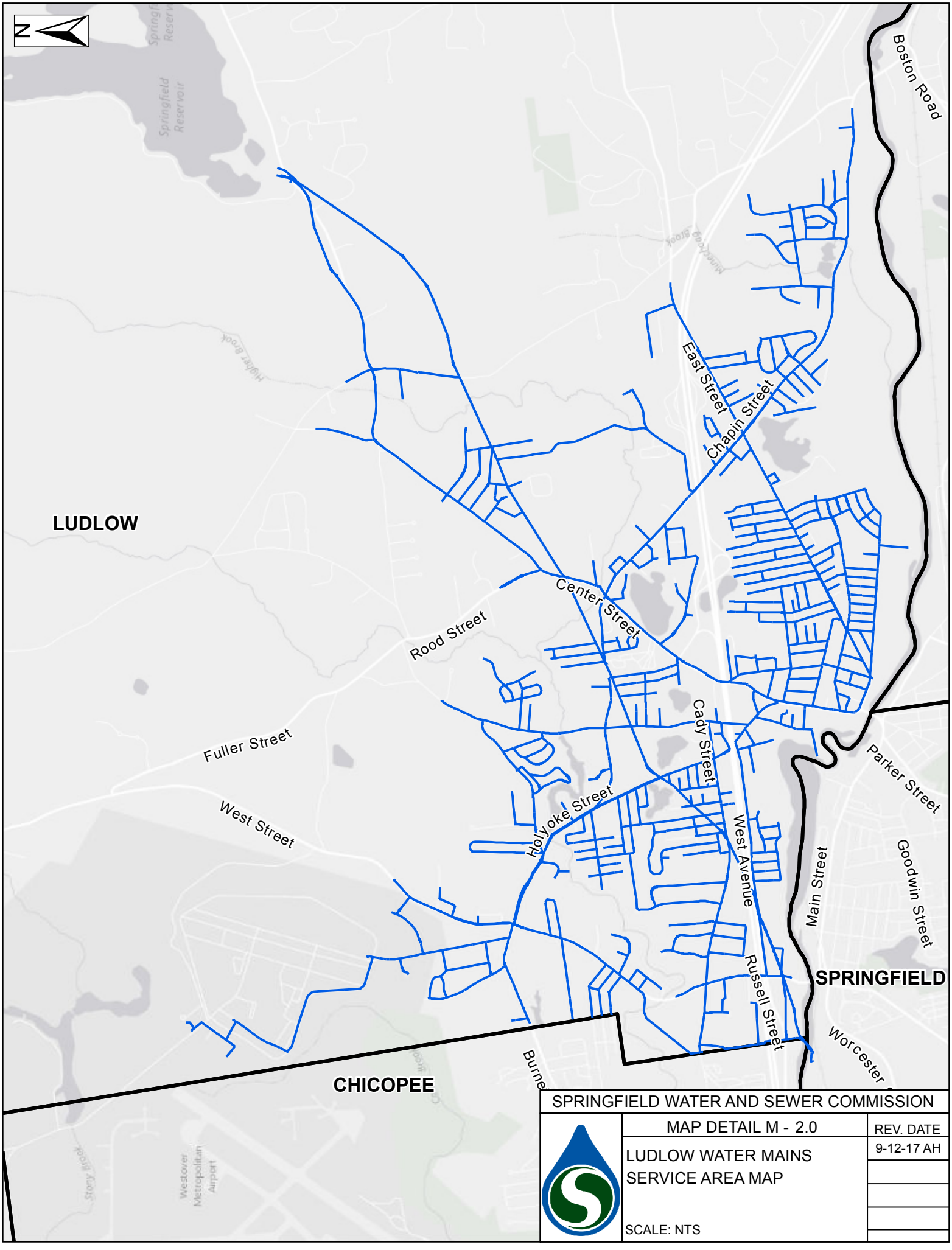
SCALE: NTS

REV. DATE
1/23/19 DS



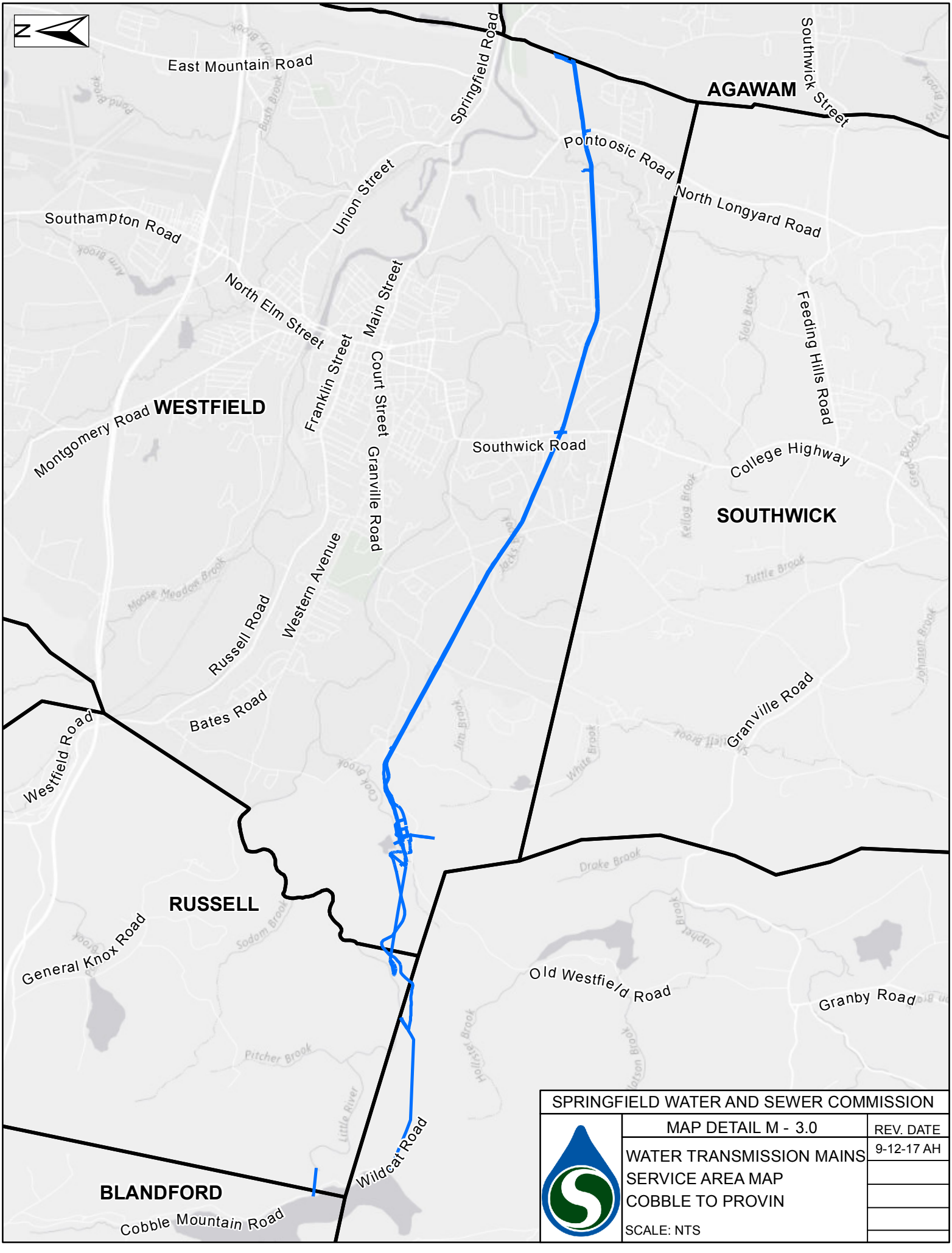
SPRINGFIELD WATER AND SEWER COMMISSION

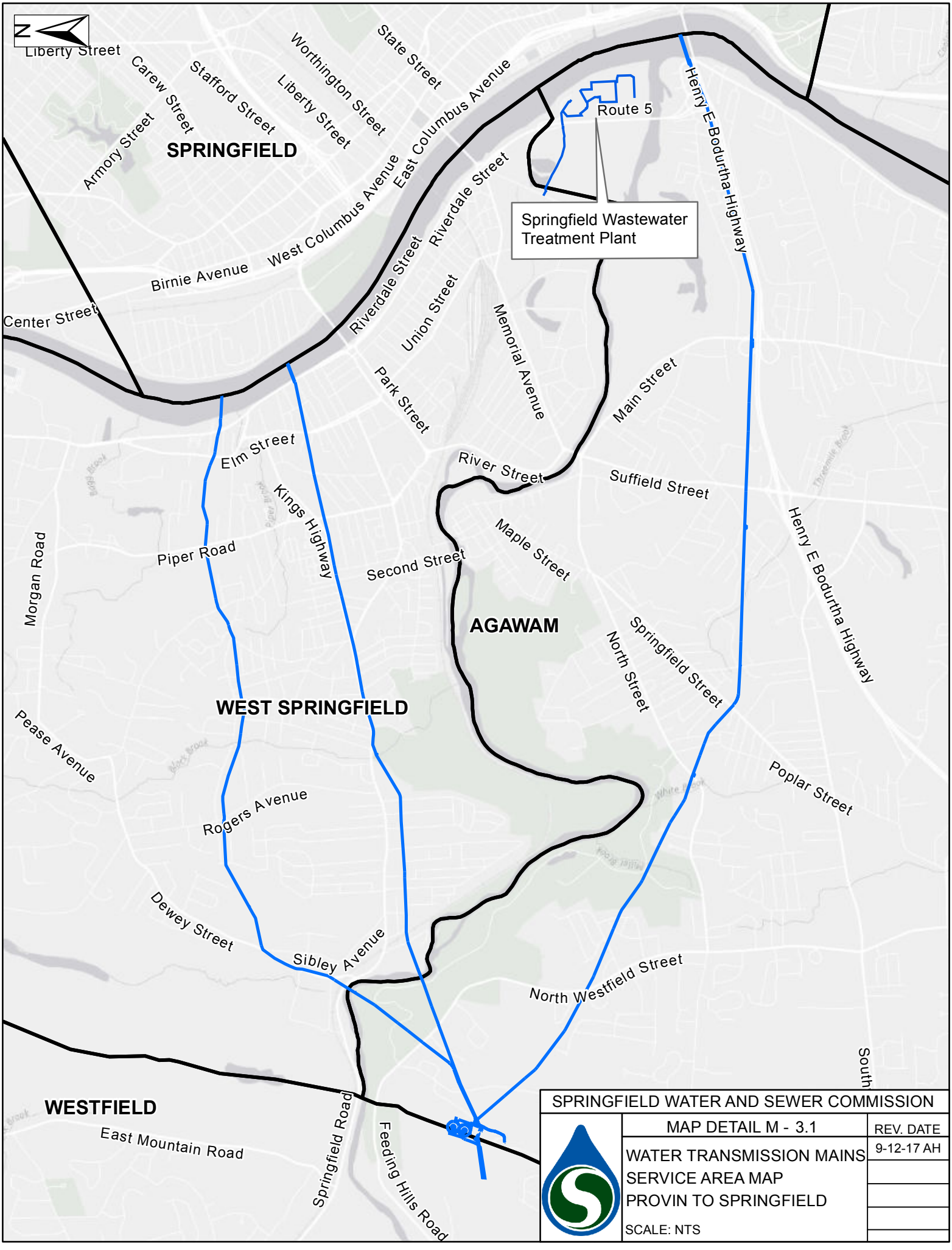
MAP DETAIL M - 1.0	REV. DATE
SPRINGFIELD WATER MAINS SERVICE AREA MAP	9-12-17 AH
SCALE: NTS	



SPRINGFIELD WATER AND SEWER COMMISSION

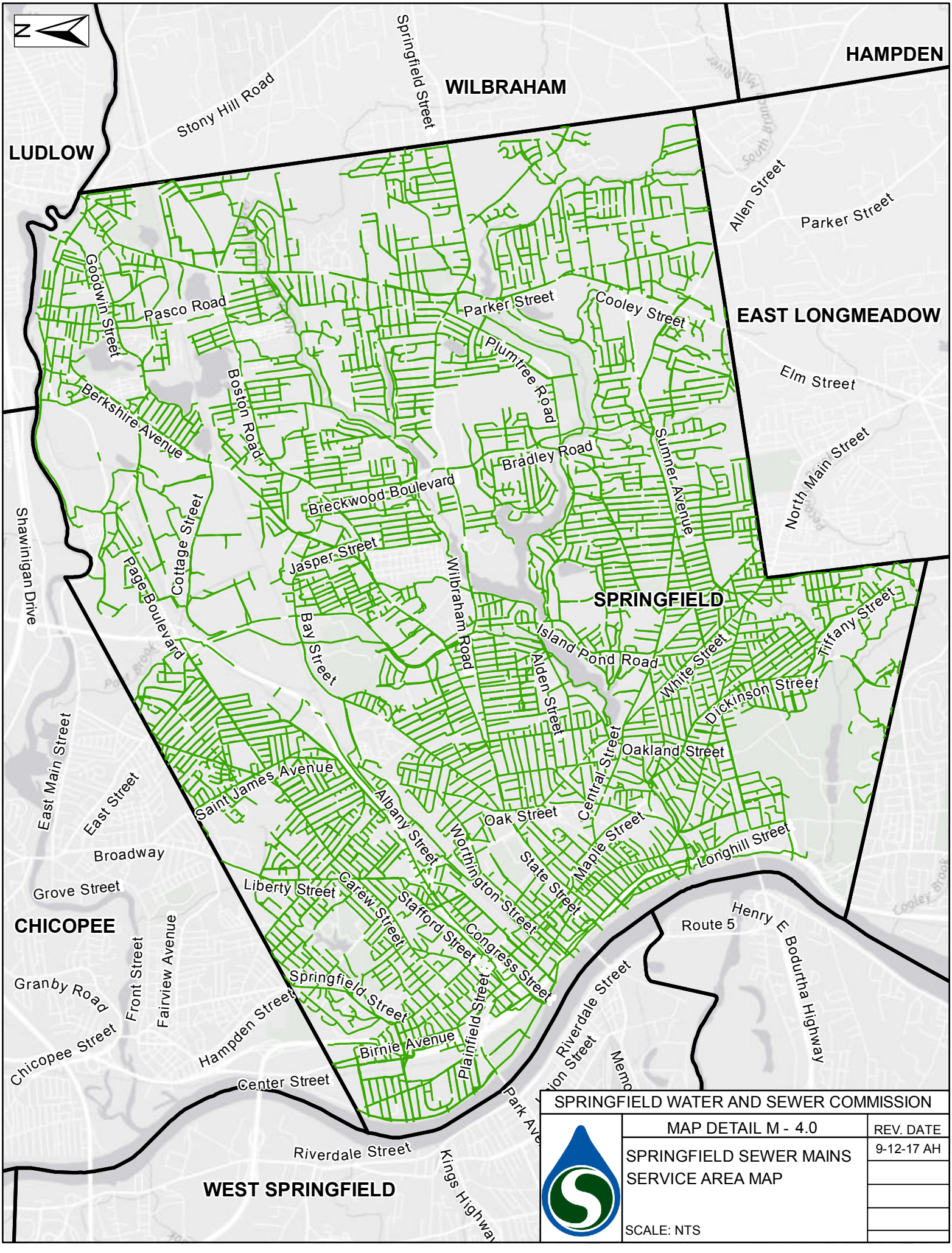
MAP DETAIL M - 2.0	REV. DATE
LUDLOW WATER MAINS SERVICE AREA MAP	9-12-17 AH
SCALE: NTS	


N
East Mountain Road
Springfield Road
AGAWAM
Southwick Street
Pontoosic Road
North Longyard Road
Union Street
Southampton Road
North Elm Street
Main Street
Franklin Street
Court Street
Granville Road
Feeding Hills Road
Montgomery Road
WESTFIELD
Southwick Road
College Highway
SOUTHWICK
Western Avenue
Russell Road
Bates Road
Granville Road
Westfield Road
RUSSELL
General Knox Road
Old Westfield Road
Granby Road
Wildcat Road
BLANDFORD
Cobble Mountain Road
SPRINGFIELD WATER AND SEWER COMMISSION
MAP DETAIL M - 3.0
REV. DATE
9-12-17 AH
WATER TRANSMISSION MAINS
SERVICE AREA MAP
COBBLE TO PROVIN
SCALE: NTS



SPRINGFIELD WATER AND SEWER COMMISSION

MAP DETAIL M - 3.1	REV. DATE
WATER TRANSMISSION MAINS SERVICE AREA MAP PROVIN TO SPRINGFIELD	9-12-17 AH
SCALE: NTS	



SPRINGFIELD WATER AND SEWER COMMISSION

MAP DETAIL M - 4.0	REV. DATE
SPRINGFIELD SEWER MAINS SERVICE AREA MAP	9-12-17 AH
SCALE: NTS	