

Table of Revisions

COLLIER COUNTY UTILITIES STANDARDS MANUAL
 TABLE OF REVISIONS
 COLLIER COUNTY PUBLIC UTILITIES PLANNING AND PROJECT MANAGEMENT DEPARTMENT
 AS OF 07/2011

CHANGES TO UTILITIES		
Section	Sub-Section/ Detail #	Revision Summary
1	1.4	Update meter requirements to only require leak detection meters on fire service lines.
3	W-8	Add detail, previously deleted, and update.
3	W-9	Update detail.
3	W-9A	Update detail.
3	W-10	Delete detail.
3	W-11	Add detail, previously deleted, and update.
3	W-11A	Update detail.
3	W-15	Delete detail.
3	W-16	Add detail, previously deleted, and update.
4	Appendix G	Update list.

Proposed Revision to Section 1, Design Criteria

Proposed additions in text are noted in **bold**.

Proposed deletions in text are noted in ~~strike-through~~.

Section 1, Design Criteria, Page 6, text revisions in 1.4

1.4 Fire Service Systems

All private fire service systems for sprinkler systems, wet standpipe systems, and privately-owned or controlled distribution systems ~~shall be metered with a Fire Service, line-sized, meter and~~ shall be installed with an appropriate back flow prevention device **with a leak detection meter**. The meter shall be owned and maintained by the private service owner. The COUNTY requires all privately-owned backflow devices to be certified at the time of installation and on an annual basis by a Certified Back Flow Tester (University of Florida, TREEO Center, or equivalent certification program). The results shall be submitted to the County Manager or designee. The County Manager or designee will require all privately owned metering devices to be certified for accuracy at the time of installation. Fire meter devices using a three quarter to two inch ($\frac{3}{4}$ " to 2") metering device shall be re-calibrated to manufacturer's specifications every five (5) years, replaced every ten (10) years, or replaced immediately upon meter failure. Fire meter devices greater than two inches (2") shall be re-calibrated to manufacturer's specifications every five (5) years and replaced immediately upon meter failure. The County Manager or designee will inform the owner by mail prior to the due date. Private owner(s) shall submit certification results to the County Manager or designee within sixty (60) days of the due date.

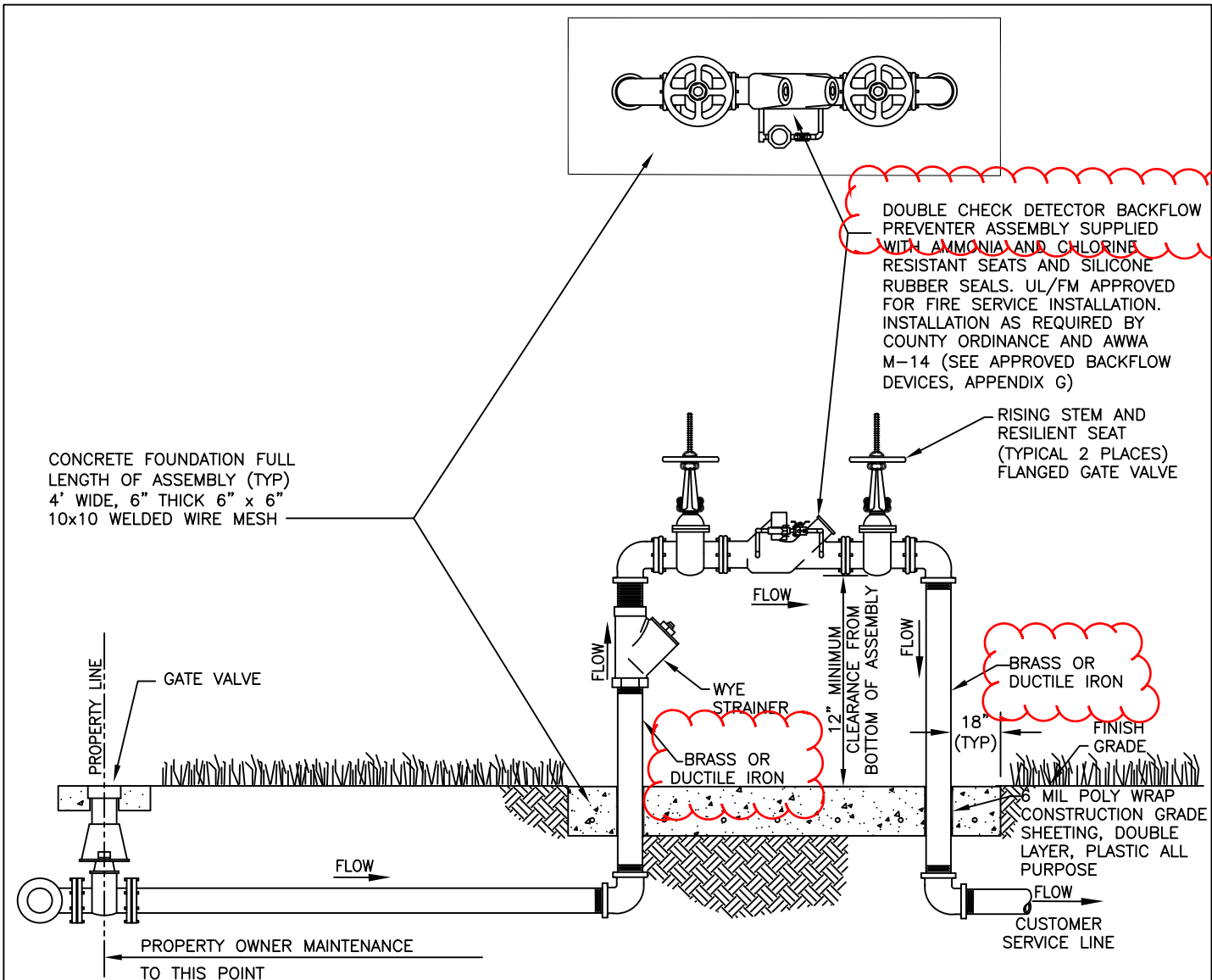
1.4.1 Fire Service Meters for Residential Systems

Residential projects such as, but not limited to, single family, multi-family condominiums, trailer parks, mobile home parks, etc. utilizing a master meter shall pass all fire flow through such meter. The meter shall be sized to pass the domestic coincident draft plus rated fire flow at the AWWA pressure loss specifications.

1.4.2 Fire Service Meters for Commercial and Other Non-residential Systems

Commercial projects such as, but not limited to, shopping centers, malls, retail, and industrial buildings shall pass all fire flow through a potable master meter or have a separate fire service connection to the water distribution main. The Fire Service meter and isolation valves shall be extended above final grade as shown in the Utilities Detail Drawings. For meter reading purposes, metering devices shall lie within a County Utility Easement (CUE) that shall be dedicated separately to the Board for the appropriate Water-Sewer District or in conjunction with the easements for any on-site utility system(s).

The Owner shall purchase and install an ~~approved AMR meter and~~ approved backflow devices **with a leak detection meter** at no expense to the ~~appropriate~~ Water-Sewer District.



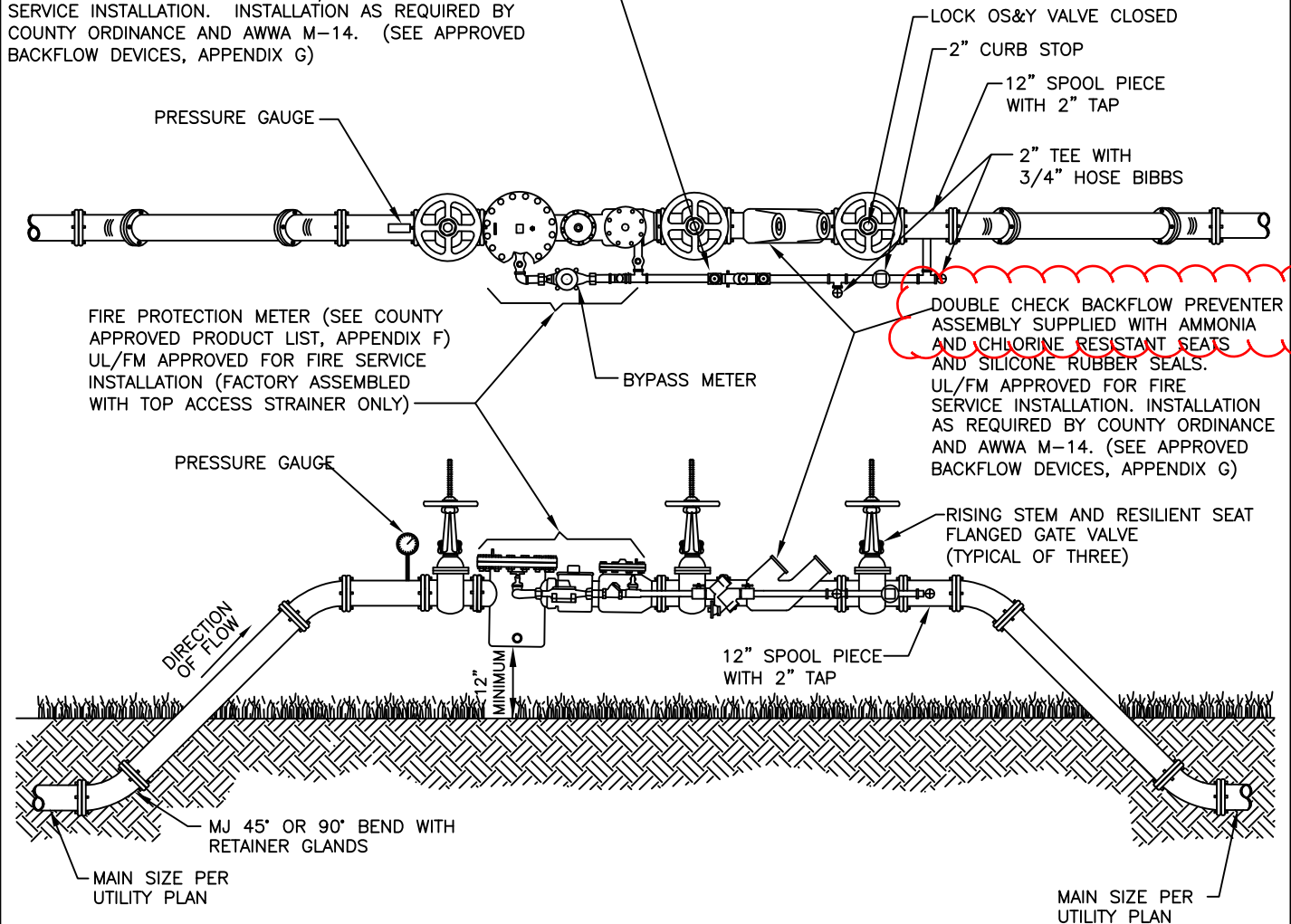
NOTES:

1. ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING AFTER THE INLINE GATE VALVE AT THE PROPERTY LINE OR RIGHT-OF-WAY LINE.
2. COUNTY WILL REQUIRE DEDICATION OF MATERIAL UP TO AND INCLUDING THE INLINE GATE VALVE FROM THE COUNTY'S WATER MAIN.
3. BACKFLOW DEVICE REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE COUNTY WATER DEPARTMENT.
4. ALL PLANTING SHALL BE A MINIMUM OF 1.5' FROM EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
5. THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
6. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61
7. A REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE USED WHEN HIGH HAZARDS, AS DEFINED BY AWWA M-14 (e.g., RISK OF CHEMICAL ADDITION, MEDICAL FACILITIES, INDUSTRIAL FACILITIES, PROPERTIES USING RECLAIMED WATER, ETC.), EXIST.

**3" AND SMALLER FIRE SYSTEM
DETECTOR CHECK ASSEMBLY DETAIL**
NTS

W-8
REVISED: JULY 2011

2" REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY SUPPLIED WITH AMMONIA AND CHLORINE RESISTANT SEATS AND SILICONE RUBBER SEALS. UL/FM APPROVED FOR FIRE SERVICE INSTALLATION. INSTALLATION AS REQUIRED BY COUNTY ORDINANCE AND AWWA M-14. (SEE APPROVED BACKFLOW DEVICES, APPENDIX G)

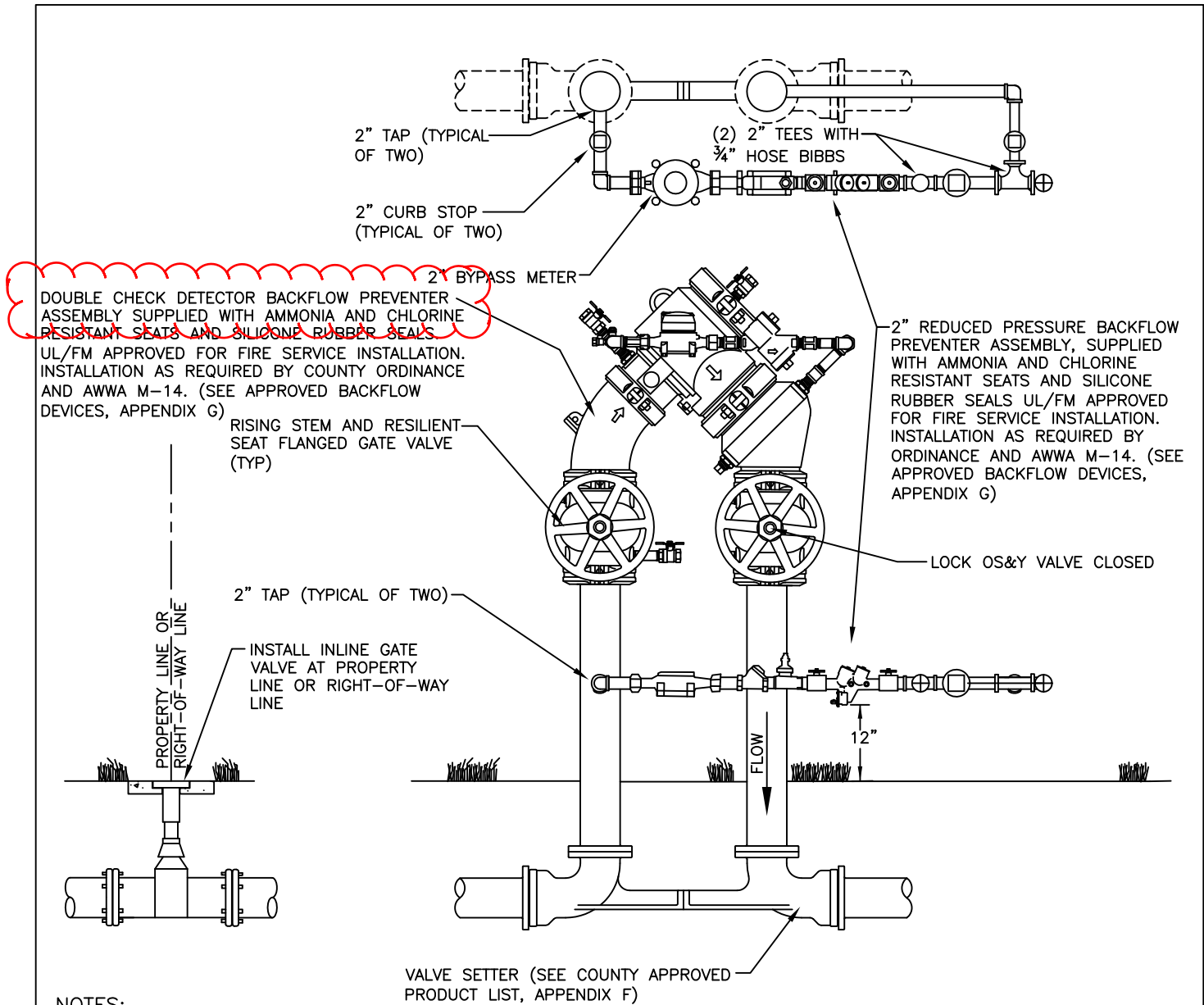


NOTES:

1. ALL ABOVE GROUND PIPE SHALL BE FLANGED END DUCTILE IRON PIPE, PRESSURE CLASS 350. ALL NUTS AND BOLTS SHALL BE STAINLESS STEEL.
2. WATER MAIN EXTENSION AND ASSEMBLY IS REQUIRED TO BE FLUSHED, CHLORINATED AND GIVEN BACTERIAL CLEARANCE BY THE WATER DEPARTMENT LAB BEFORE PLACEMENT IN SERVICE.
3. BACKFLOW UNIT AND METER REQUIRES INITIAL CERTIFICATION FOR OPERATION AND ACCURACY WITH RESULTS AND ANNUAL TESTS SUBMITTED TO THE COLLIER COUNTY WATER DEPARTMENT.
4. INSPECTIONS ARE REQUIRED FOR SYSTEM TIE-IN AND ASSEMBLY CONNECTION.
5. THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
6. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.
7. A 4'x8' SIGN WITH 3" LETTERS OR BIGGER SHALL READ: "IN CASE OF FIRE, OPEN VALVE."
8. A REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE USED WHEN HIGH HAZARDS, AS DEFINED BY AWWA M-14 (e.g., RISK OF CHEMICAL ADDITION, MEDICAL FACILITIES, INDUSTRIAL FACILITIES, PROPERTIES USING RECLAIMED WATER, ETC.), EXIST.

**TEMPORARY BACKFLOW PREVENTER AND
FIRE PROTECTION METER TIE-IN ASSEMBLY**
NTS

W-9
REVISED: JULY 2011

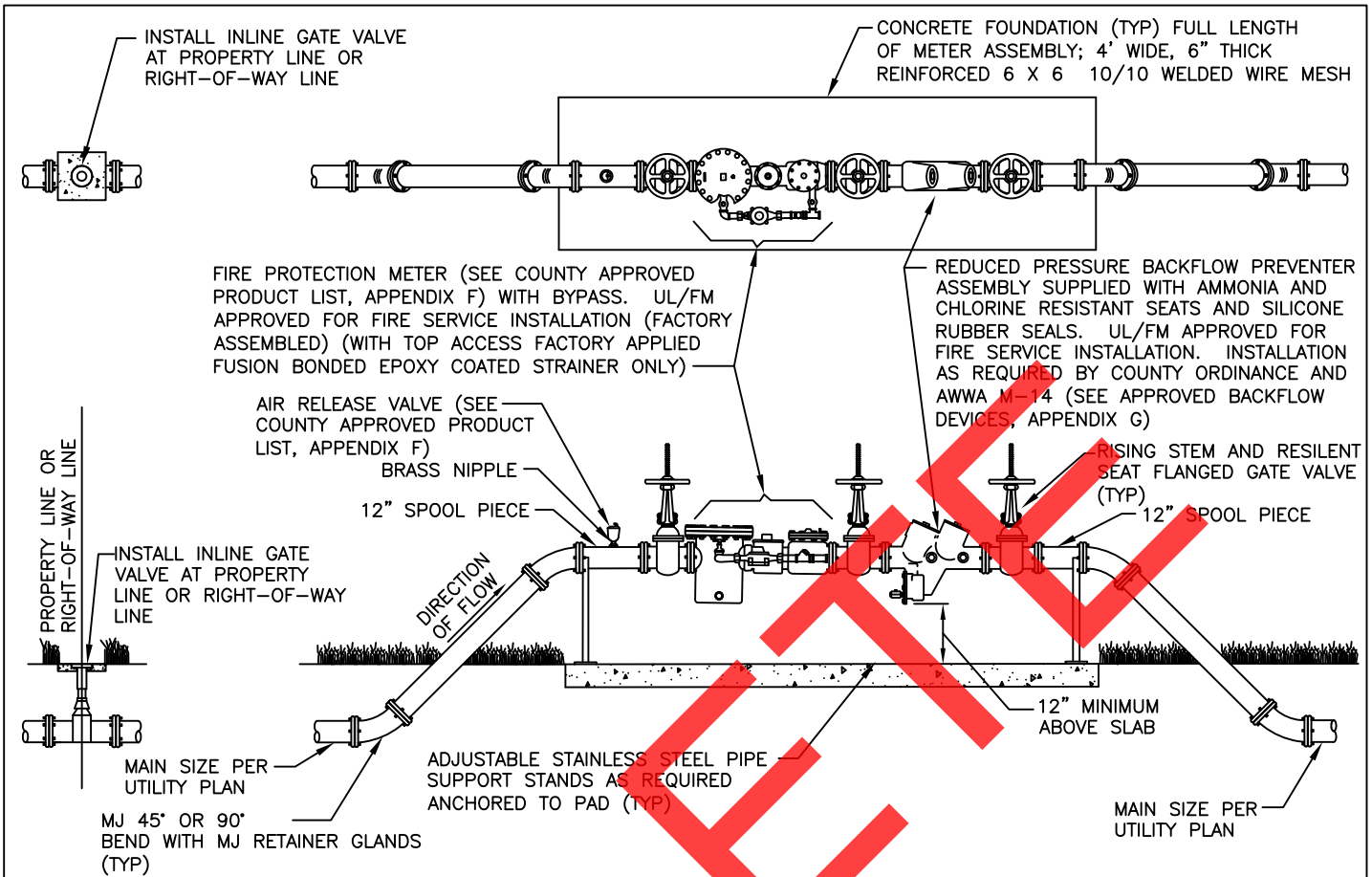


NOTES:

1. ALL ABOVE GROUND PIPE SHALL BE FLANGED END DUCTILE IRON PIPE, PRESSURE CLASS 350. ALL NUTS AND BOLTS SHALL BE STAINLESS STEEL.
2. WATER MAIN EXTENSION AND ASSEMBLY IS REQUIRED TO BE FLUSHED, CHLORINATED AND GIVEN BACTERIAL CLEARANCE BY THE WATER DEPARTMENT LAB BEFORE PLACEMENT IN SERVICE.
3. BACKFLOW UNIT AND METER REQUIRES INITIAL CERTIFICATION FOR OPERATION AND ACCURACY WITH RESULTS AND ANNUAL TESTS SUBMITTED TO THE COLLIER COUNTY WATER DEPARTMENT.
4. INSPECTIONS ARE REQUIRED FOR SYSTEM TIE-IN AND ASSEMBLY CONNECTION.
5. THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
6. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.
7. A 4'X8' SIGN WITH 3" LETTERS OR BIGGER SHALL READ: "IN CASE OF FIRE, OPEN VALVE"
8. A REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE USED WHEN HIGH HAZARDS, AS DEFINED BY AWWA M-14 (e.g., RISK OF CHEMICAL ADDITION, MEDICAL FACILITIES, INDUSTRIAL FACILITIES, PROPERTIES USING RECLAIMED WATER, ETC.), EXIST.

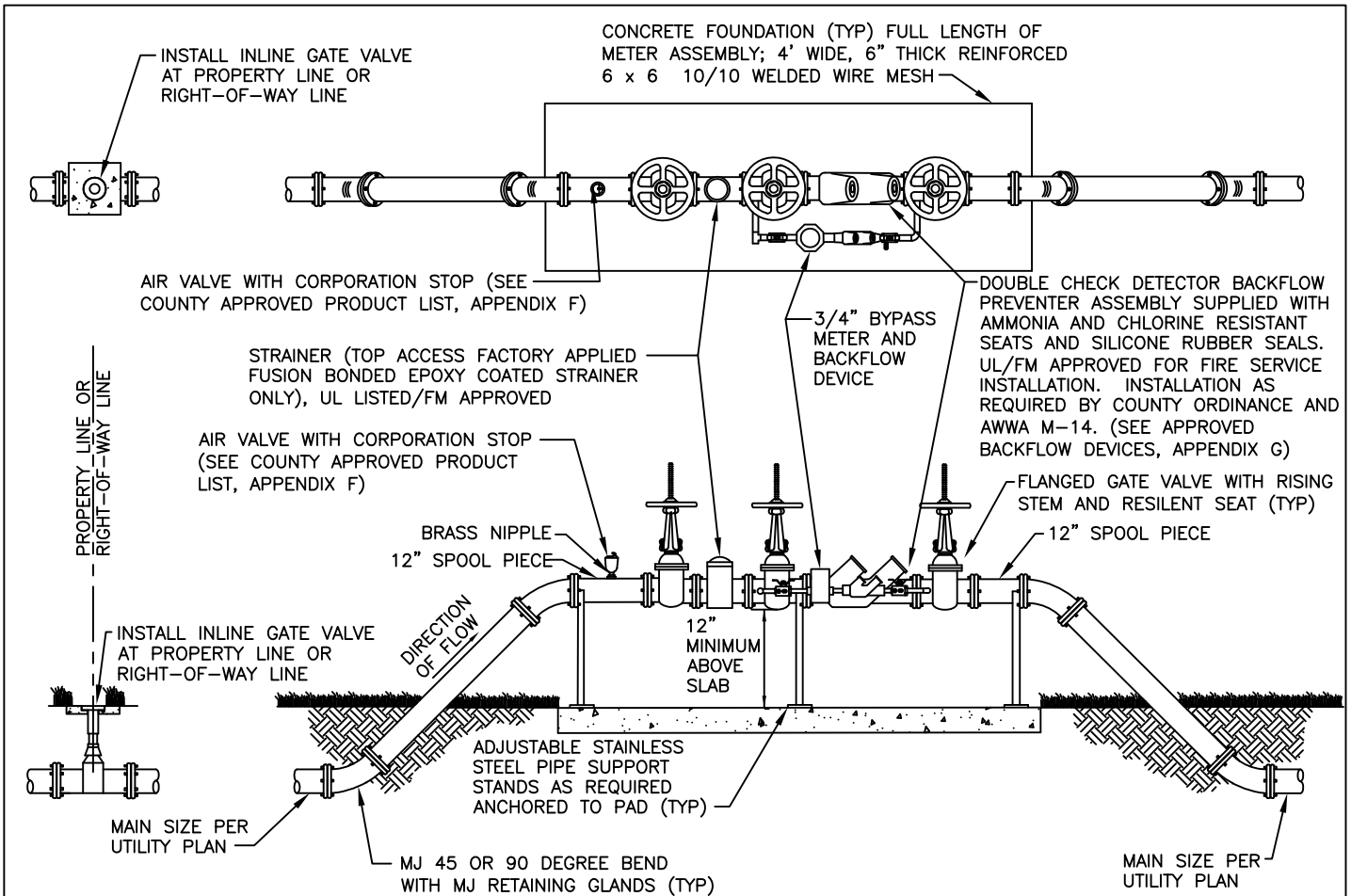
**ALTERNATE TEMPORARY BACKFLOW PREVENTER AND
FIRE PROTECTION METER TIE-IN ASSEMBLY**
NTS

W-9A
REVISED: JULY 2011



NOTES:

1. ALL ABOVE GROUND PIPE WILL HAVE FLANGED END DUCTILE IRON PIPE, PRESSURE CLASS 350. ALL NUTS AND BOLTS SHALL BE STAINLESS STEEL.
2. (4) VEHICULAR GUARD POSTS TO BE INSTALLED AROUND METER. CONFIGURATION TO BE ILLUSTRATED ON CONSTRUCTION DOCUMENTS SUBMITTED FOR REVIEW AND APPROVAL.
3. AS THIS UNIT WILL REQUIRE PERIODIC TESTING, FACILITIES REQUIRING CONTINUOUS WATER SERVICE MAY WISH TO INSTALL PARALLEL UNITS TO PREVENT SERVICE INTERRUPTIONS. (SEE W-15)
4. ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING FROM THE FIRST ISOLATION VALVE PRIOR TO ASSEMBLY.
5. COUNTY WILL REQUIRE DEDICATION OF THE MATERIAL UP TO AND PRIOR TO VALVE ON THE ASSEMBLY FROM THE COUNTY'S WATER MAIN.
6. BACKFLOW UNIT REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE COUNTY WATER DEPARTMENT.
7. ALL PLANTINGS SHALL BE A MINIMUM OF 1.5' FROM THE EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
8. THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
9. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.
10. REFER TO APPROPRIATE SPECIFICATION IN MANUAL FOR GATE VALVES AND APPURTENANCES.

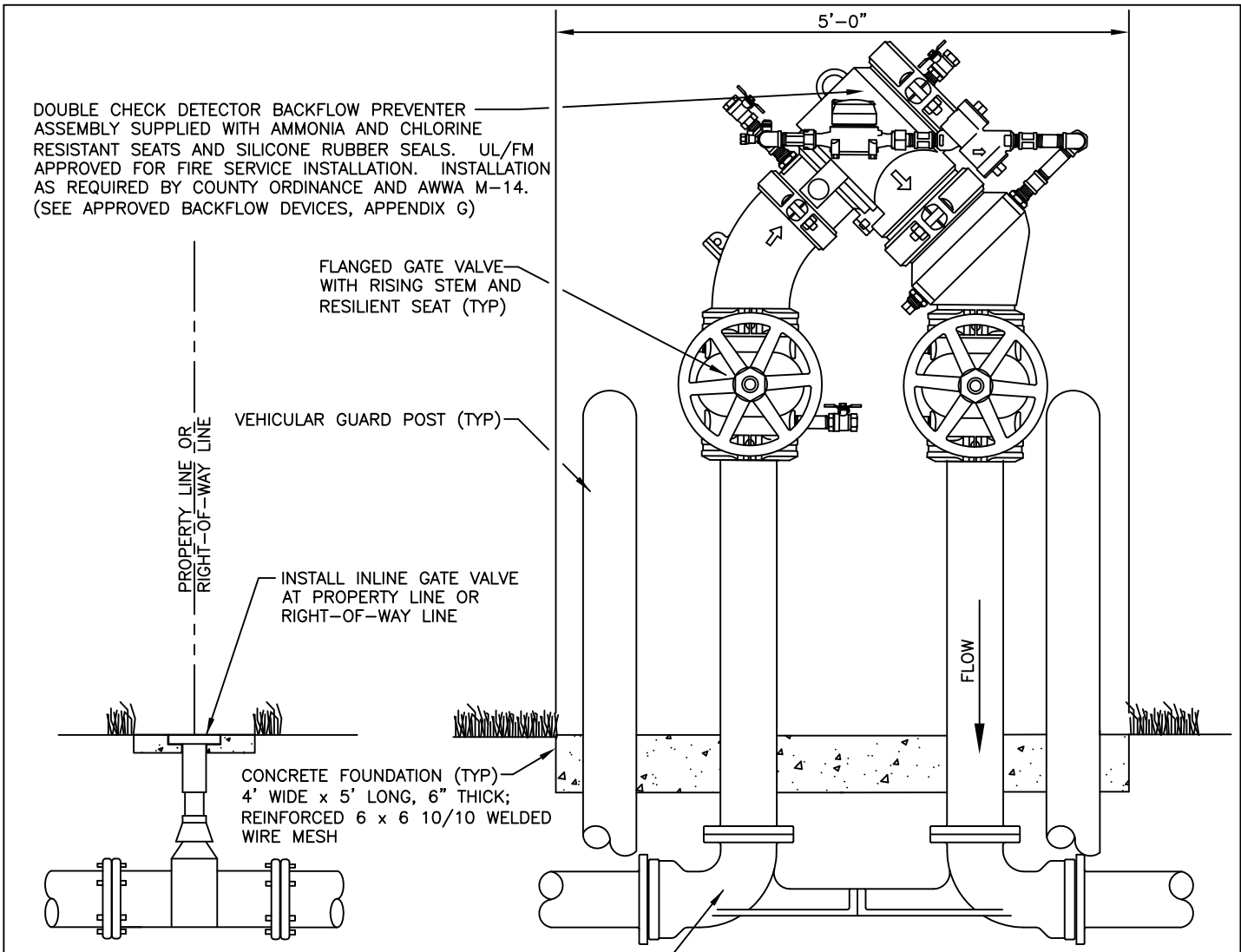


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3. AS THIS UNIT WILL REQUIRE PERIODIC TESTING, FACILITIES REQUIRING CONTINUOUS WATER SERVICE MAY WISH TO INSTALL PARALLEL UNITS TO PREVENT SERVICE INTERRUPTIONS.
4. ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING AFTER THE INLINE GATE VALVE AT THE PROPERTY LINE OR RIGHT-OF-WAY LINE.
5. COUNTY WILL REQUIRE DEDICATION OF MATERIAL UP TO AND INCLUDING THE INLINE GATE VALVE FROM THE FROM THE COUNTY'S WATER MAIN.
6. BACKFLOW DEVICE REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE COUNTY WATER DEPARTMENT.
7. ALL PLANTING SHALL BE A MINIMUM OF 1.5' FROM THE EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
8. THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
9. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61
10. A REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE USED WHEN HIGH HAZARDS, AS DEFINED BY AWWA M-14 (e.g., RISK OF CHEMICAL ADDITION, MEDICAL FACILITIES, INDUSTRIAL FACILITIES, PROPERTIES USING RECLAIMED WATER, ETC.), EXIST.

**4" AND LARGER FIRE SYSTEM
DETECTOR CHECK ASSEMBLY DETAIL
NTS**

W-11
REVISED: JULY 2011



DOUBLE CHECK DETECTOR BACKFLOW PREVENTER ASSEMBLY SUPPLIED WITH AMMONIA AND CHLORINE RESISTANT SEATS AND SILICONE RUBBER SEALS. UL/FM APPROVED FOR FIRE SERVICE INSTALLATION. INSTALLATION AS REQUIRED BY COUNTY ORDINANCE AND AWWA M-14. (SEE APPROVED BACKFLOW DEVICES, APPENDIX G)

FLANGED GATE VALVE WITH RISING STEM AND RESILIENT SEAT (TYP)

VEHICULAR GUARD POST (TYP)

PROPERTY LINE OR RIGHT-OF-WAY LINE

INSTALL INLINE GATE VALVE AT PROPERTY LINE OR RIGHT-OF-WAY LINE

CONCRETE FOUNDATION (TYP) 4' WIDE x 5' LONG, 6" THICK; REINFORCED 6 x 6 10/10 WELDED WIRE MESH

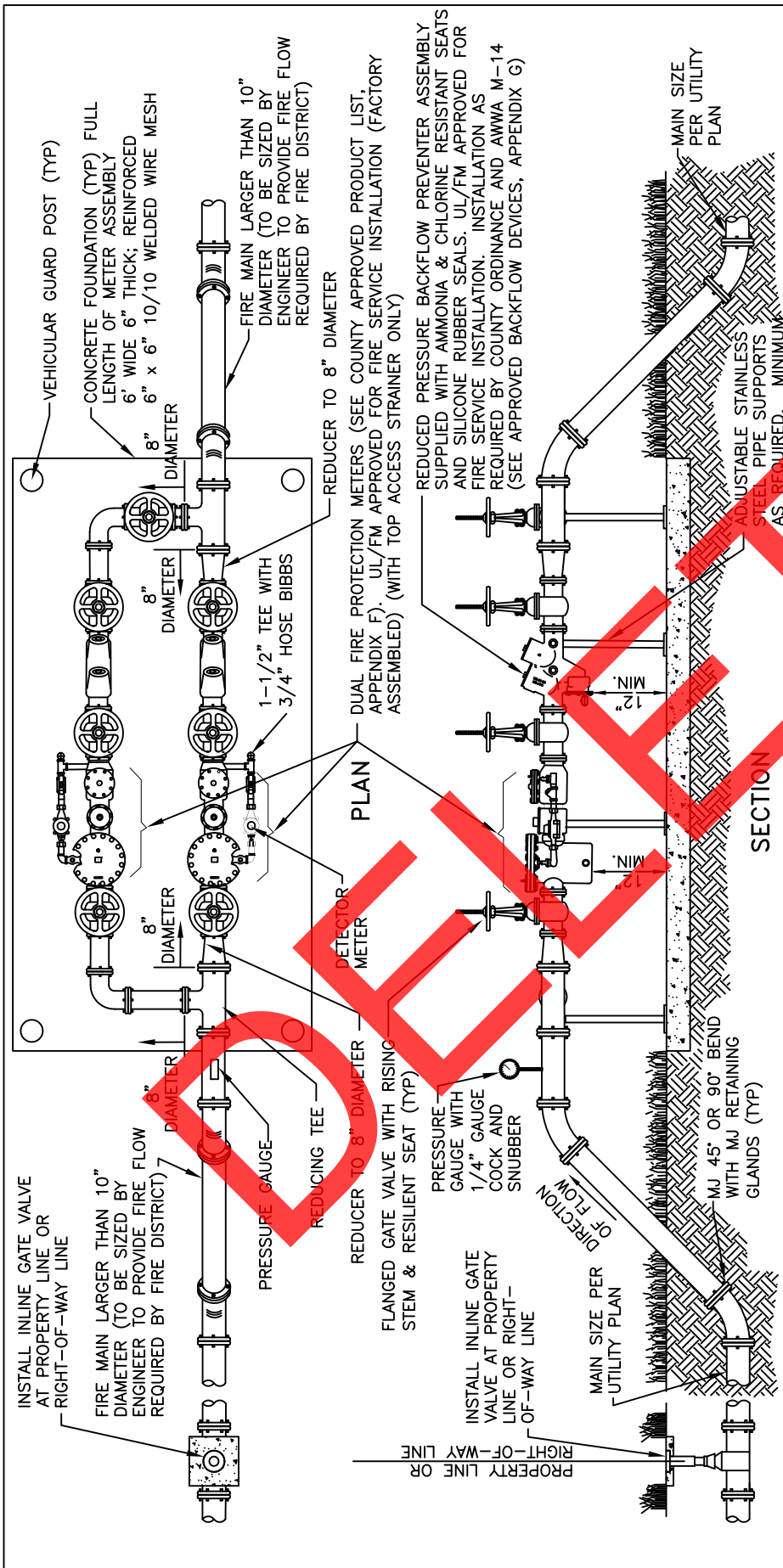
VALVE SETTER (SEE COUNTY APPROVED PRODUCT LIST, APPENDIX F)

NOTES:

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3. AS THIS UNIT WILL REQUIRE PERIODIC TESTING, FACILITIES REQUIRING CONTINUOUS WATER SERVICE MAY WISH TO INSTALL PARALLEL UNITS TO PREVENT SERVICE INTERRUPTIONS.
4. ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING AFTER THE INLINE GATE VALVE AT THE PROPERTY LINE OR RIGHT-OF-WAY LINE.
5. COUNTY WILL REQUIRE DEDICATION OF MATERIAL UP TO AND INCLUDING THE INLINE GATE VALVE FROM THE COUNTY'S WATER MAIN.
6. BACKFLOW DEVICE REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE COUNTY WATER DEPARTMENT.
7. ALL PLANTING SHALL BE A MINIMUM OF 1.5' FROM THE EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
8. THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
9. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.
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**4" THROUGH 10" ONLY COMPACT FIRE SYSTEM
DETECTOR CHECK ASSEMBLY DETAIL
NTS**

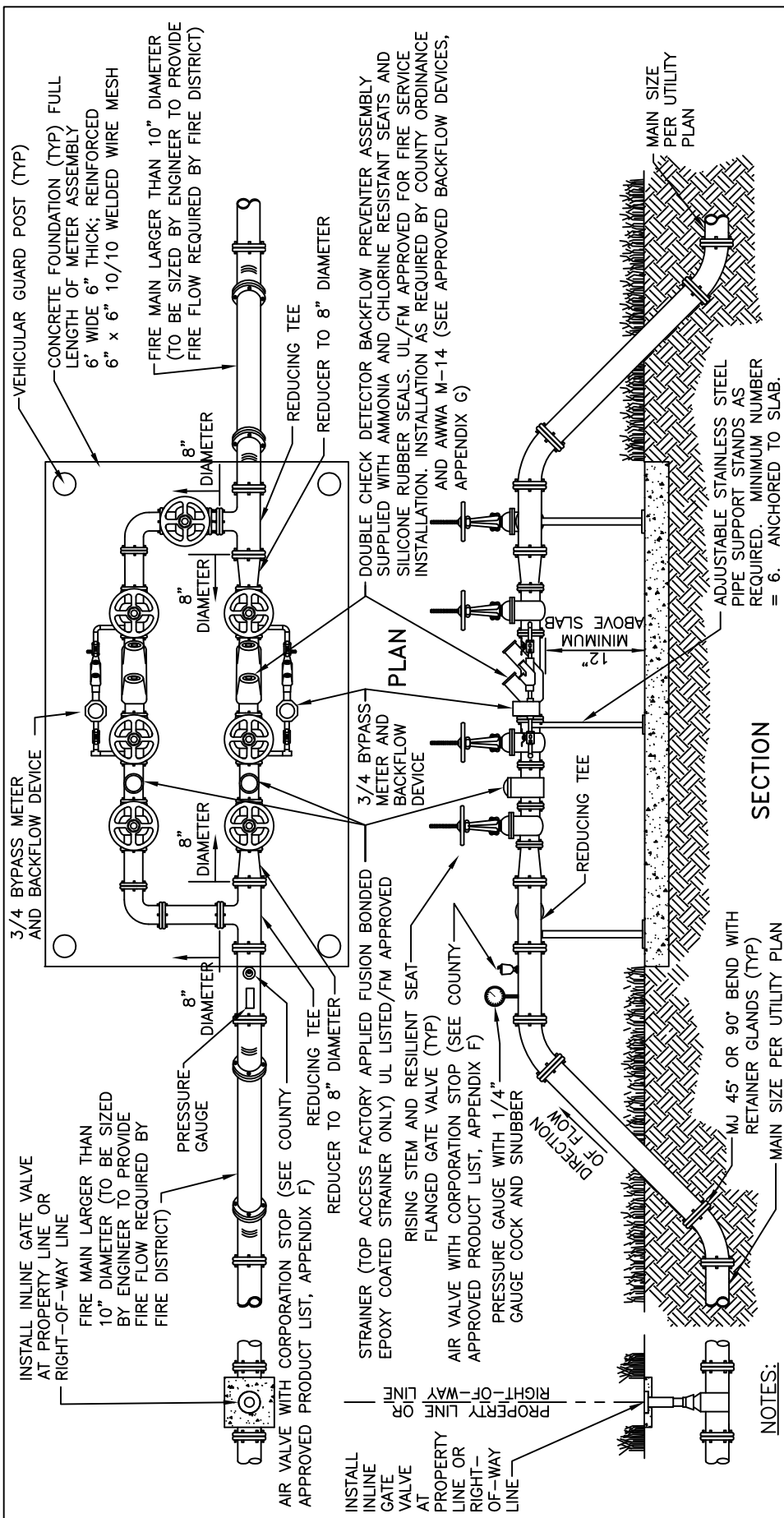
W-11A
REVISED: JULY 2011



NOTES:

1. ALL ABOVE GROUND PIPE WILL HAVE FLANGED END DUCTILE IRON PIPE, PRESSURE CLASS 350. ALL NUTS & BOLTS SHALL BE STAINLESS STEEL.
2. (4) VEHICULAR GUARD POSTS TO BE INSTALLED AROUND METER. CONFIGURATION TO BE ILLUSTRATED ON CONSTRUCTION DOCUMENTS SUBMITTED FOR REVIEW AND APPROVAL.
3. ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING AFTER THE INLINE GATE VALVE AT THE PROPERTY LINE OR RIGHT-OF-WAY LINE.
4. BACKFLOW DEVICES REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE COUNTY WATER DEPARTMENT.
5. ALL PLANTING SHALL BE A MINIMUM OF 1.5' FROM THE EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
6. ALL ABOVE GROUND PIPING INCLUDING ASSEMBLY SHALL BE PAINTED RUSTOLEUM FEDERAL SAFETY RED.
7. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.
8. STRAINER SHALL HAVE FUSION-BONDED EPOXY COATING.

**FIRE SERVICE DUAL METER ASSEMBLY
WITH OVER 10" FIRE MAIN (DUAL 8" METERS)**
NTS



- NOTES:**
1. ALL ABOVE GROUND PIPE WILL HAVE FLANGED END DUCTILE IRON PIPE, PRESSURE CLASS 350. ALL NUTS AND BOLTS SHALL BE STAINLESS STEEL.
 2. (4) VEHICULAR GUARD POSTS TO BE INSTALLED AROUND ASSEMBLY. CONFIGURATION TO BE ILLUSTRATED ON CONSTRUCTION DOCUMENTS SUBMITTED FOR REVIEW AND APPROVAL.
 3. ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING AFTER THE INLINE GATE VALVE AT THE PROPERTY LINE OR RIGHT-OF-WAY LINE.
 4. COUNTY WILL REQUIRE DEDICATION OF MATERIAL UP TO AND INCLUDING THE INLINE GATE VALVE FROM THE COUNTY'S WATER MAIN.
- NSF STANDARD 61**
5. BACKFLOW DEVICE REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE COUNTY WATER DEPARTMENT.
 6. ALL PLANTING SHALL BE A MINIMUM OF 1.5' FROM THE EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
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 9. A REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE USED WHEN HIGH HAZARDS, AS DEFINED BY AWWA M-14 (e.g., RISK OF CHEMICAL ADDITION, MEDICAL FACILITIES, INDUSTRIAL FACILITIES, PROPERTIES USING RECLAIMED WATER, ETC.), EXIST.

**FIRE SERVICE DUAL DETECTOR CHECK ASSEMBLY
OVER 10" FIRE MAIN DETAIL (DUAL 8" ASSEMBLIES)**

Approved Backflow Devices

VENDOR	SIZE	MODEL NO.	TYPE	USE
Ames / Watts	3/4" - 2"	400B / 919	RP	Residential or commercial potable water locations
Watts	3/4" - 2"	909-009 Series	RP	Residential or commercial potable water locations
Wilkins	3/4" - 2"	975	RP	Residential or commercial potable water locations

Ames / Watts	2.5" - 10"	C-400 / 957	RP	Large size meter - potable water for commercial or residential applications
Watts	2.5" - 10"	909	RP	Large size meter - potable water for commercial or residential applications
Wilkins	2.5" - 10"	375	RP	Large size meter - potable water for commercial or residential applications

Ames	3/4" - 2"	4000B-LBV 4000B-FP	RP	Combo services: fire and domestic lines
Watts	3/4" - 2"	009LF	RP	Combo services: fire and domestic lines
Wilkins	3/4" - 2"	975XL (w/OS&Y only)	RP	Combo services: fire and domestic lines

Ames Colt	2.5" - 10"	C-400 (w/OS&Y only)	RP	Combo services: fire and domestic lines
Watts	2.5" - 10"	909 (w/OS&Y only)	RP	Combo services: fire and domestic lines
Wilkins	2.5" - 10"	375	RP	Combo services: fire and domestic lines

Ames	2"	3000B	DCDA	Fire Lines - Standard
Watts	2" - 3"	007	DCDA	Fire Lines - Standard
Wilkins	2"	950XLTD AF	DCDA	Fire Lines - Standard

Ames	2.5" - 10"	C300/M300	DCDA	Fire Lines - Standard
Watts	3" - 10"	709	DCDA	Fire Lines - Standard
Wilkins	2.5" - 12"	350	DCDA	Fire Lines - Standard
Wilkins	4" - 10"	450 (N-Shape)	DCDA	Fire Lines - Standard

Note: All fire line Backflow Devices shall be UL or FM approved for fire service installation. Above is a small list, others may be used if requirements are met and information is provided