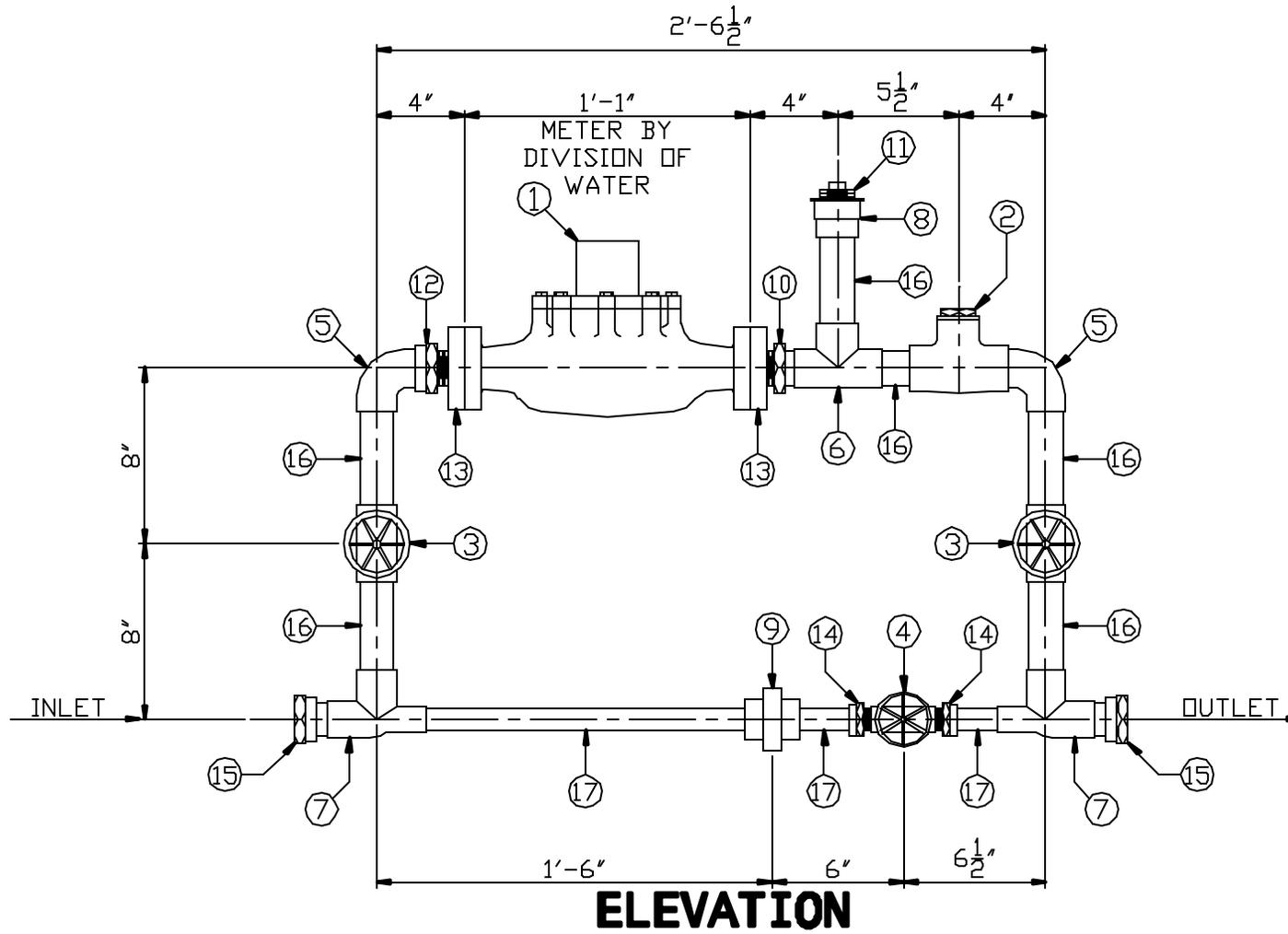


CLEVELAND DIVISION
OF WATER
CONSTRUCTION
STANDARDS

Meter Settings



ITEM (4) TO BE SET AN AN ANGLE WITH LOCK AND CABLE.

NOTE:

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.

ADJUSTMENTS TO THE BYPASS (ITEM 17) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

ALL BOLTS AND GASKETS BY SUPPLIER.

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT STANDARD 1 1/2' METER SETTING WITH 1 1/2' METER FOR VAULTS	
DRAWN BY RSK	-SCALE-
DATE 10-1-1997	3" = 1'-0"
CHECKED BY NJS DATE 10-1-97	STD-M01

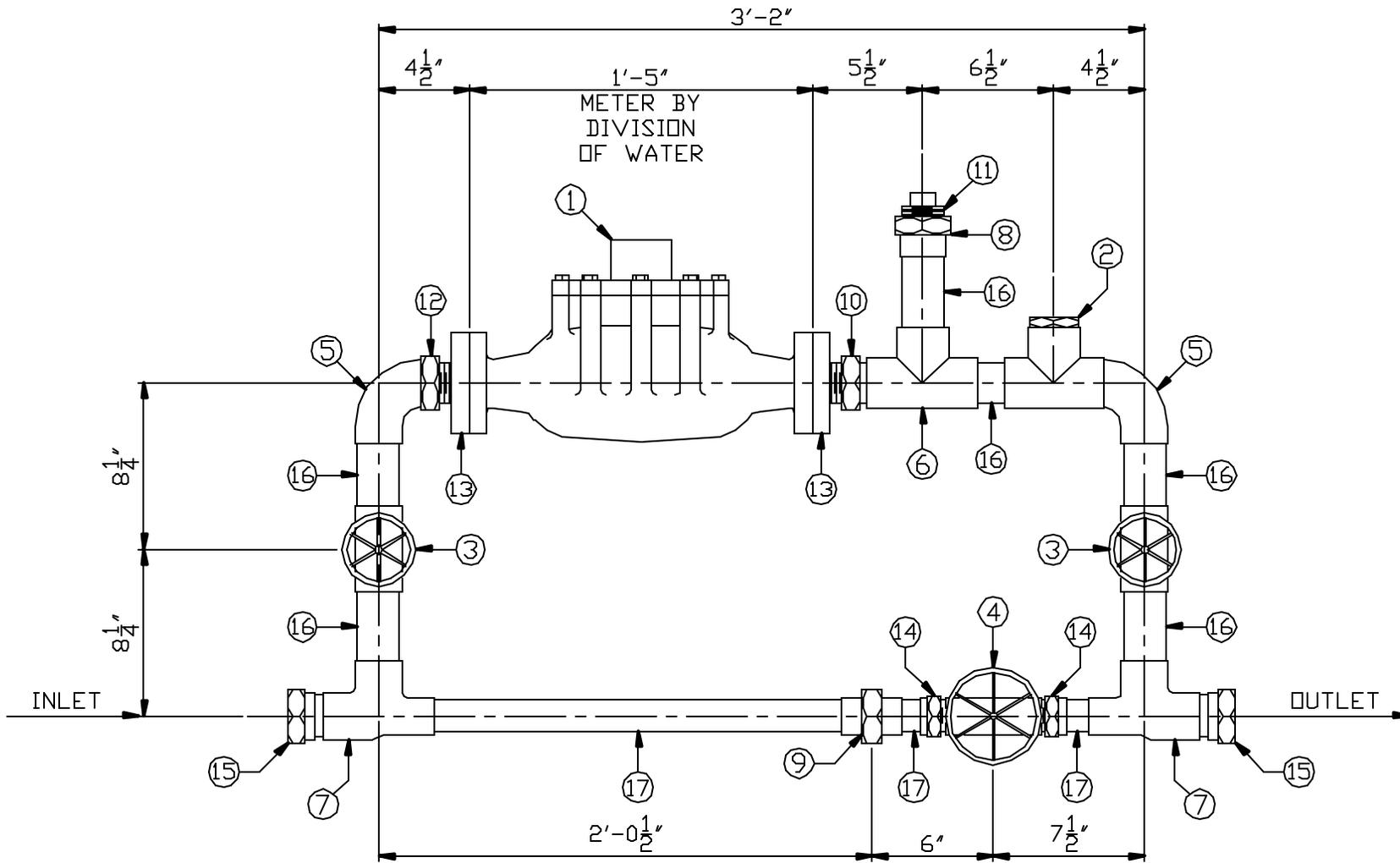
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 1-1/2" METER SETTING WITH 1-1/2" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	1-1/2"	METER BY C.W.D.
2	1	1-1/2"	STREAMLINE SWING CHECK VALVE, COPPER TO COPPER
3	2	1-1/2"	STREAMLINE HAND WHEEL GATE VALVES
4	1	1"	STREAMLINE O.S. & Y. GATE VALVE
5	2	1-1/2"	STREAMLINE STREET ELBOW, COPPER TO COPPER
6	1	1-1/2"	STREAMLINE TEE, COPPER TO COPPER
7	2	1-1/2" x 1" x 1-1/2"	STREAMLINE TEE, COPPER TO IRON, FEMALE
8	1	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
9	1	1"	STREAMLINE UNION, COPPER TO COPPER
10	1	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, MALE
11	1	1-1/2"	BRASS SCREW PLUG
12	1	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
13	2	1-1/2"	OVAL FLANGES, FEMALE
14	2	1"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
15	2	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
16	37"	1-1/2"	COPPER TUBING – HARD
17	30"	1"	COPPER TUBING - HARD
18	1lb.		SPECIAL SOLDER

(SEE DRAWING No. STD-M01 and STD-V01).

12-10-98



ELEVATION

ITEM ④ TO BE AT AN ANGLE WITH LOCK AND CABLE.

NOTE:

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.

ADJUSTMENTS TO THE BYPASS (ITEM 17) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

ALL BOLTS AND GASKETS BY SUPPLIER.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER
CLEVELAND, OHIO

SUBJECT STANDARD 2" METER SETTING
WITH 2" METER FOR VAULTS

DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>10-1-1997</u>	<u>3" = 1'-0"</u>
CHECKED BY <u>NJS</u> DATE <u>10-1-97</u>	

STD-M02

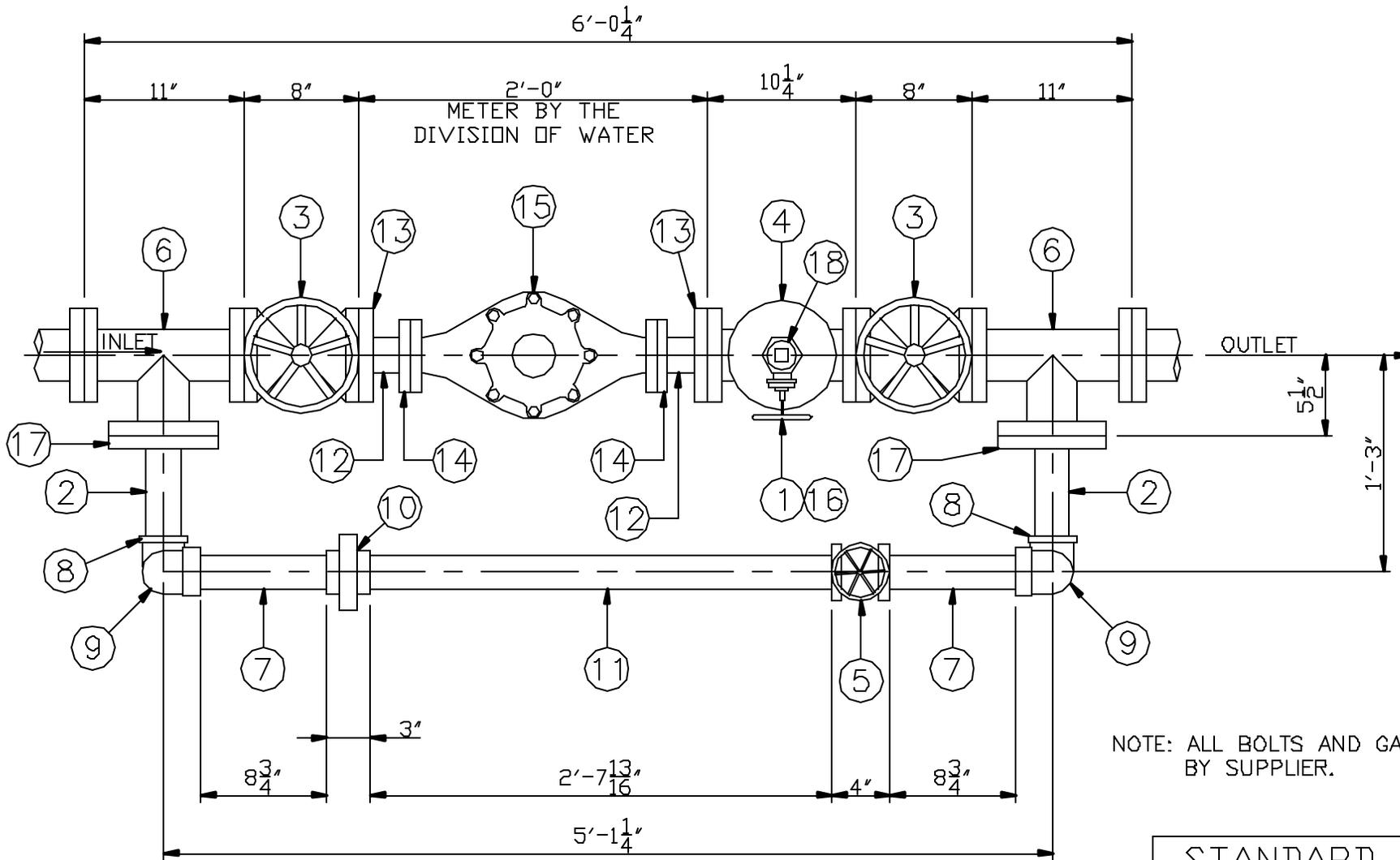
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 2" METER SETTING WITH 2" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	2"	METER BY C.W.D.
2	1	2"	STREAMLINE SWING CHECK VALVE, COPPER TO COPPER
3	2	2"	STREAMLINE HAND WHEEL GATE VALVES
4	1	1-1/2"	STREAMLINE O.S. & Y. GATE VALVE
5	2	2"	STREAMLINE STREET ELBOW, COPPER TO COPPER
6	1	2"	STREAMLINE TEE, COPPER TO COPPER
7	2	2" x 1-1/2" x 2"	STREAMLINE TEE, COPPER TO IRON, FEMALE
8	1	2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
9	1	1-1/2"	STREAMLINE UNION, COPPER TO COPPER
10	1	2"	STREAMLINE COUPLING, COPPER TO IRON, MALE
11	1	2"	BRASS SCREW PLUG
12	1	2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
13	2	2"	OVAL FLANGES, FEMALE
14	2	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
15	2	2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
16	37"	2"	COPPER TUBING – HARD
17	30"	1-1/2"	COPPER TUBING – HARD
18	1lb.		SPECIAL SOLDER

(SEE DRAWING No. STD-M02 and STD-V01).

12-10-98



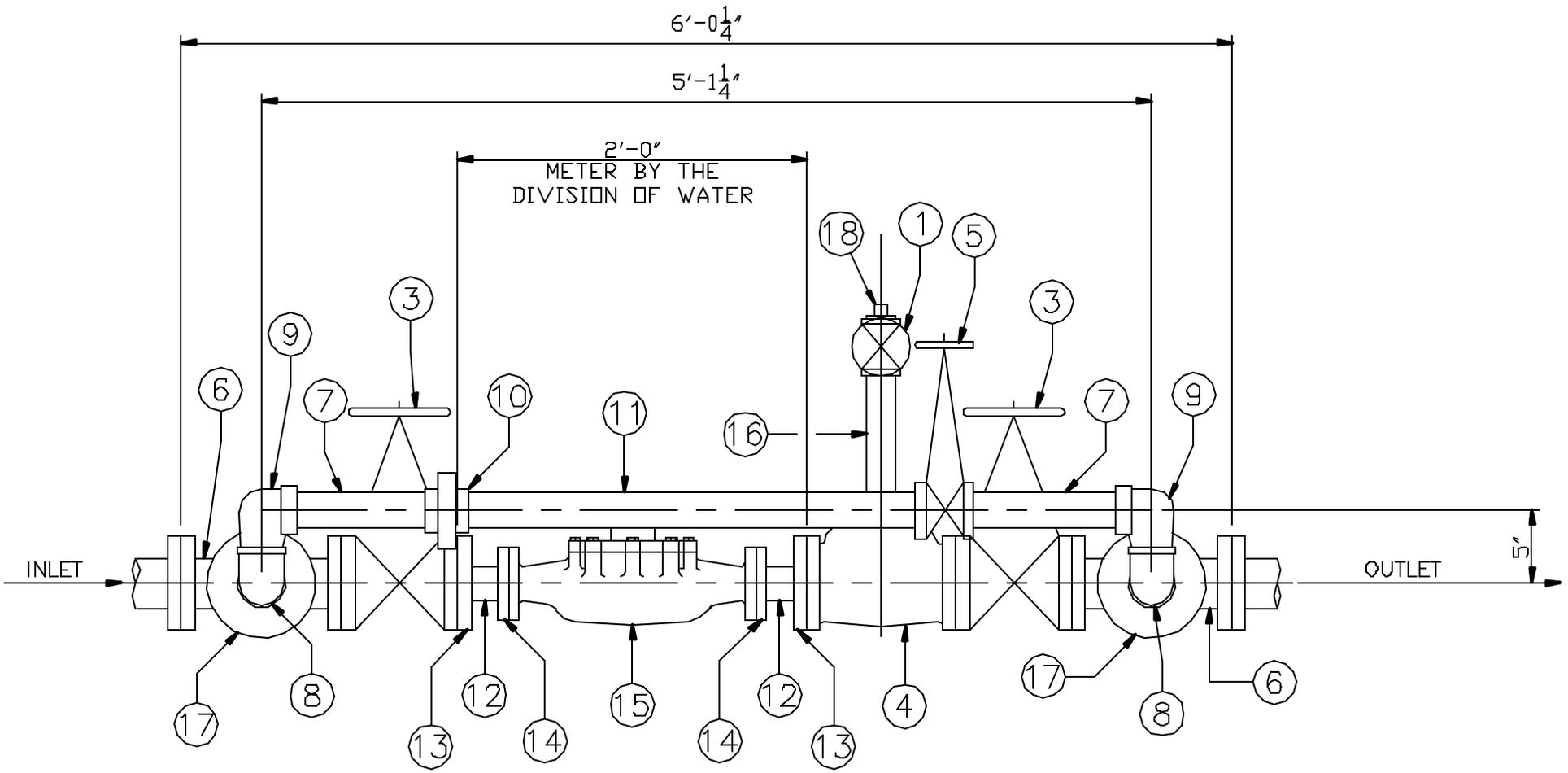
PLAN

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

NOTE:
 MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
 ADJUSTMENTS TO THE BYPASS (ITEM No. 11) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT <u>STANDARD 3" METER SETTING</u> <u>WITH 2" METER FOR VAULTS</u>	
DRAWN BY <u>RSK</u>	-SCALE- <u>3/16" = 1"</u>
DATE <u>10-1-1997</u>	
CHECKED BY <u>NJS</u> DATE <u>10-1-97</u>	

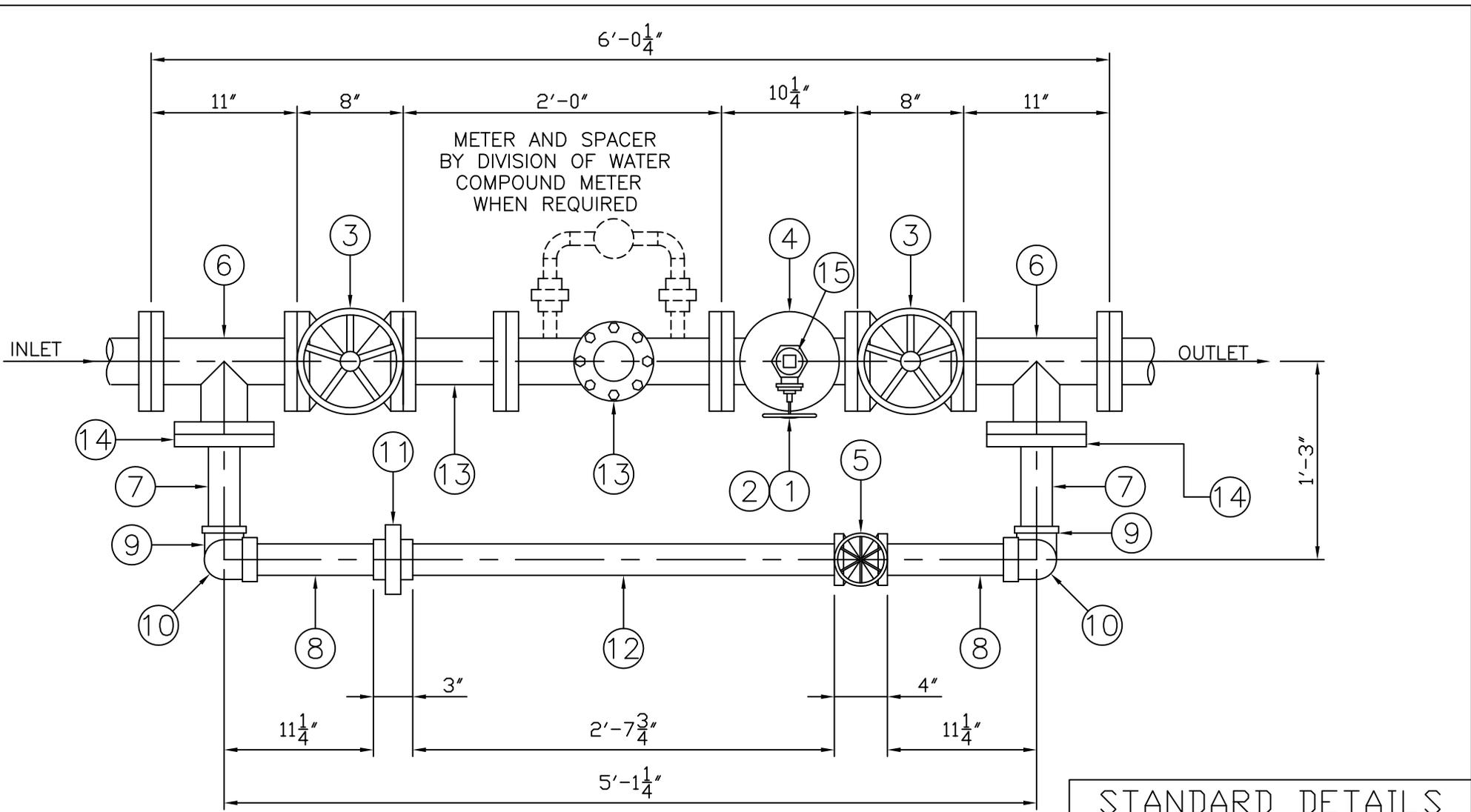
STD-M04



ELEVATION

NOTE: ALL BOLTS AND GASKETS
BY SUPPLIER.

STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT STANDARD 3" METER SETTING WITH 2" METER FOR VAULTS		
DRAWN BY RSK		-SCALE-
DATE 10-1-1997		3/16" = 1"
CHECKED BY NJS DATE 10-1-97		STD-M05



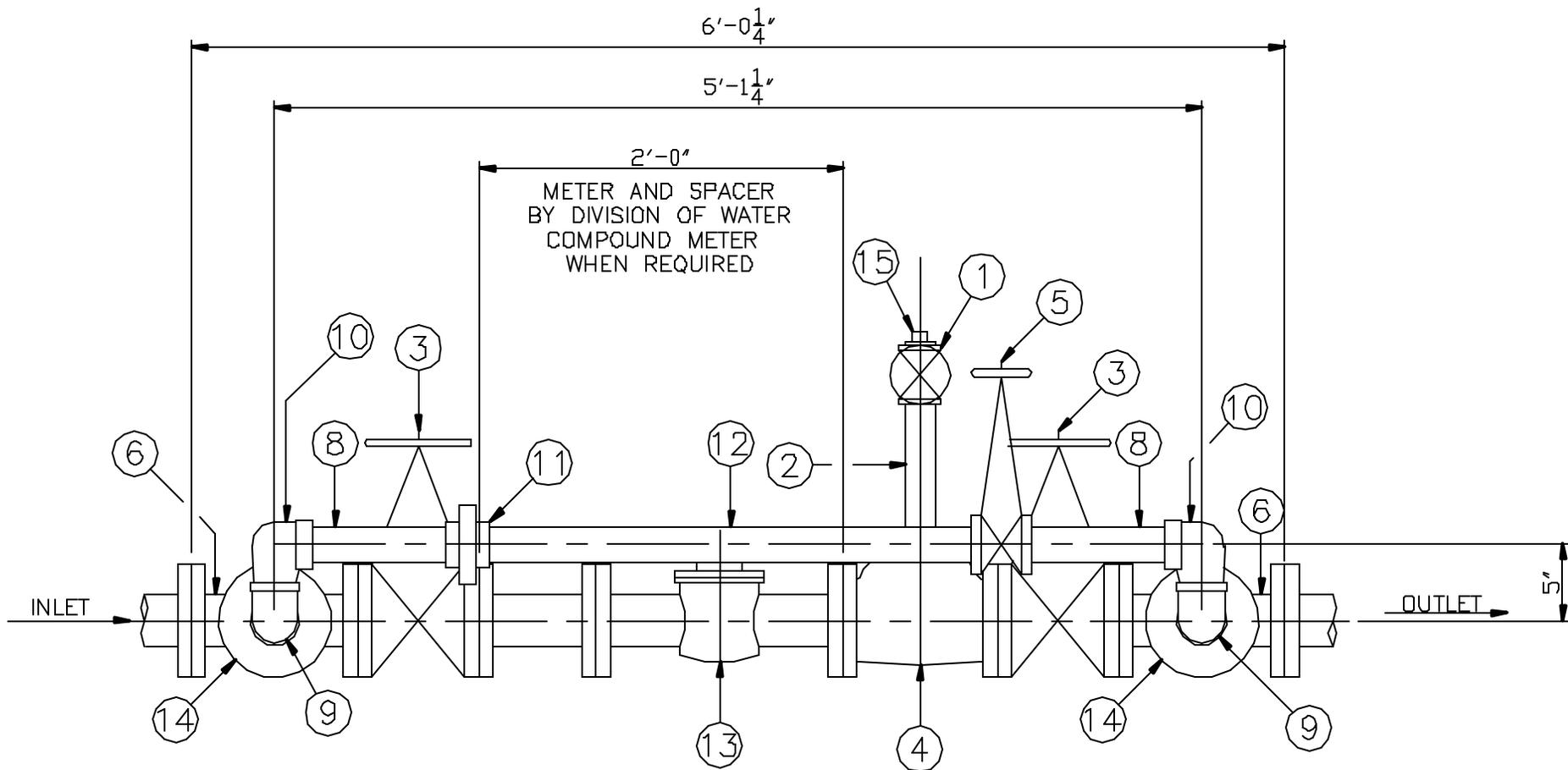
METER AND SPACER
 BY DIVISION OF WATER
 COMPOUND METER
 WHEN REQUIRED

PLAN

NOTE: ALL BOLTS AND GASKETS
 BY SUPPLIER

NOTE:
 MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE
 TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
 ADJUSTMENTS TO THE BYPASS (ITEM No. 12) WILL BE MADE BY THE DIVISION OF WATER
 AS NEEDED.

STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT <u>STANDARD 3" METER SETTING</u> <u>WITH 3" METER FOR VAULTS</u>		
DRAWN BY <u>RSK</u>	-SCALE- <u>3/16" = 1"</u>	STD-M06
DATE <u>10-1-1997</u>	CHECKED BY <u>MJS</u> DATE <u>10-1-97</u>	



ELEVATION

NOTE: ALL BOLTS AND GASKETS
BY SUPPLIER

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT STANDARD 3" METER SETTING WITH 3" METER FOR VAULTS	
DRAWN BY RSK	-SCALE-
DATE 10-1-1997	3/16" = 1"
CHECKED BY NJS	DATE 10-1-97

STD-M07

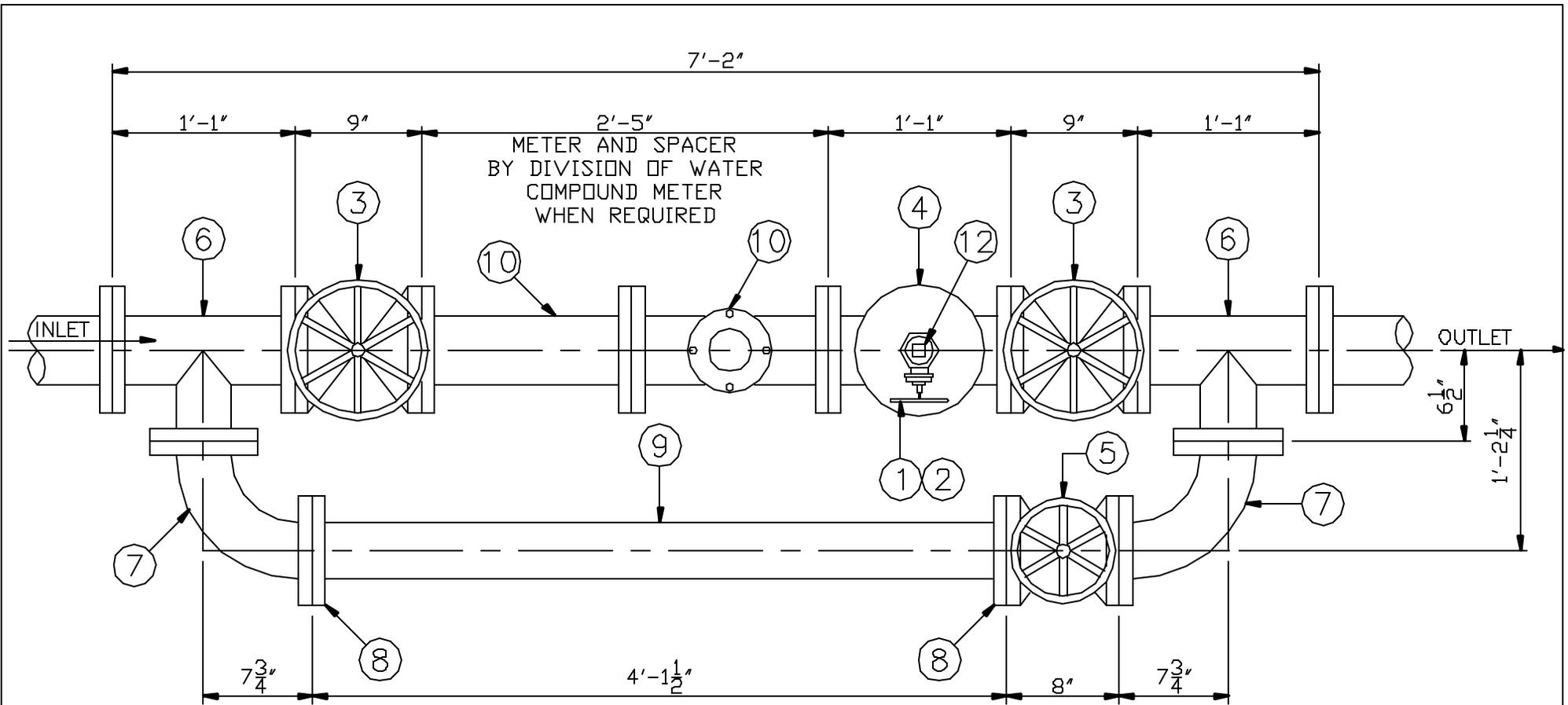
MATERIAL REQUIRED FOR INSTALLATION

STANDARD 3" METER SETTING WITH 3" METER - FLANGED

<u>ITEM</u>	<u>Req'd</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	2"	HAND WHEEL GATE VALVE, SCREWED
2	1	2" x 10"	BRASS NIPPLE
3	2	3"	HAND WHEEL GATE VALVES, FLANGED
4	1	3"	SWING GATE CHECK VALVE, FLANGED
5	1	2"	O.S.Y. VALVE, SCREWED
6	2	3" x 3" x 3"	TEE, FLANGED
7	2	2" x 6"	GALVANIZED NIPPLES
8	2	2" x 10"	GALVANIZED NIPPLE
9	2	2"	GALVANIZED ELBOWS-90 DEG.
10	2	2"	GALVANIZED STREET ELBOWS
11	1	2"	GALVANIZED UNION, MALE TO FEMALE
12	36"	2"	GALVANIZED PIPE, EXTRA HEAVY
13	1	3"	TURBINE METER <u>OR</u> COMPOUND METER METER & SPACER PROVIDED BY C.W.D.)
14	2	3"	BLIND FLANGES, DRILLED & TAPPED FOR 2" x 6" NIPPLES
15	1	2"	BRASS PLUG
16	10	3"	RING GASKETS
17	40	5/8" x 2-1/2"	MACHINE BOLTS
18	2	5/8" x 3"	STUD BOLTS
19	42	5/8"	HEX BOLTS

(SEE DRAWING STD-M06 & STD-M07 & STD-V01).

11-19-98



PLAN

NOTE:
ALL BOLTS AND GASKETS
BY SUPPLIER.

NOTE:
MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
ADJUSTMENTS TO THE BYPASS (ITEM No. 9) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT <u>STANDARD 4" METER SETTING</u> <u>WITH 4" METER FOR VAULTS</u>		
DRAWN BY <u>RSK</u>		-SCALE-
DATE <u>10-1-1997</u>		<u>3/16" = 1"</u>
CHECKED BY <u>MJS</u> DATE <u>10-1-97</u>		STD-M08

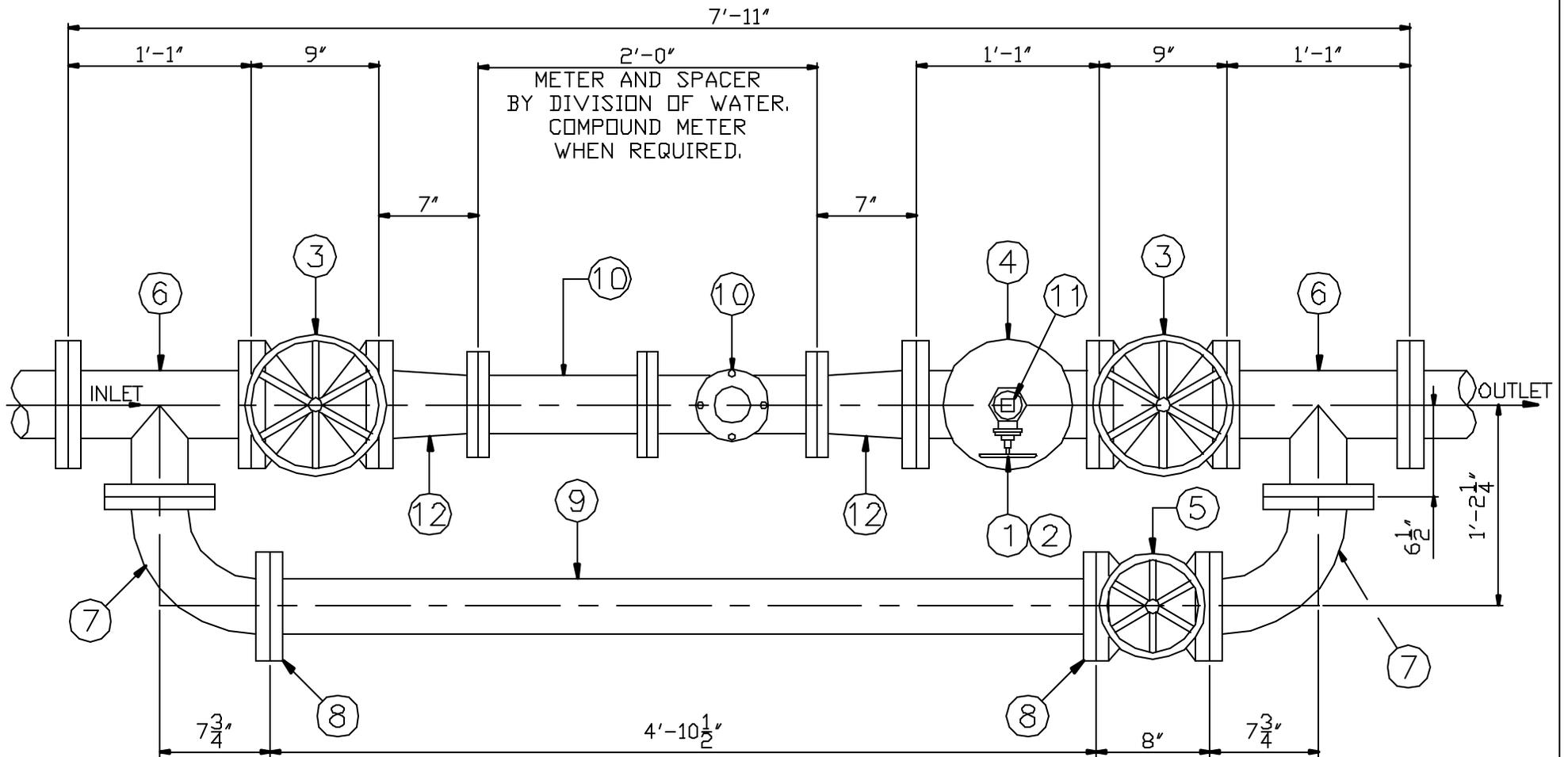
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 4" METER SETTING WITH 4" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	2"	HAND WHEEL GATE VALVE, SCREWED
2	1	2" x 10"	BRASS NIPPLE
3	2	4"	HAND WHEEL GATE VALVES, FLANGED
4	1	4"	SWING CHECK VALVE, FLANGED
5	1	3"	O.S.Y. VALVE, FLANGED
6	2	4" x 3"	CAST IRON TEES, FLANGED
7	2	3"	CAST IRON ELBOWS, FLANGED LONG RADIUS
8	2	3" x 7-1/2"	CAST IRON FLANGE, 4 HOLE
9	5 FT.	3"	GALVANIZED PIPE, EXTRA HEAVY
10	1	4"	TURBINE METER <u>OR</u> COMPOUND METER (METER & SPACER PROVIDED BY C.W.D)
11	1	2"	BRASS PLUG
12	8	4"	FLANGE GASKETS
13	5	3"	FLANGE GASKETS
14	64	5/8" x 3"	MACHINE BOLTS
15	20	5/8" X 2-1/2"	MACHINE BOLTS
16	6	5/8" x 3-1/2"	STUD BOLTS
17	90	5/8"	HEX NUTS

(SEE DRAWING No. STD-M08 & STD-V01).

11-19-98



PLAN

NOTE:
ALL BOLTS AND GASKETS
BY SUPPLIER.

NOTE:
MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
ADJUSTMENTS TO THE BYPASS (ITEM No. 9) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER
CLEVELAND, OHIO

SUBJECT STANDARD 4" METER SETTING
WITH 3" METER FOR VAULTS

DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>5-18-1998</u>	<u>3/16" = 1"</u>
CHECKED BY <u>MJS</u>	DATE <u>5-18-98</u>

STD-M09

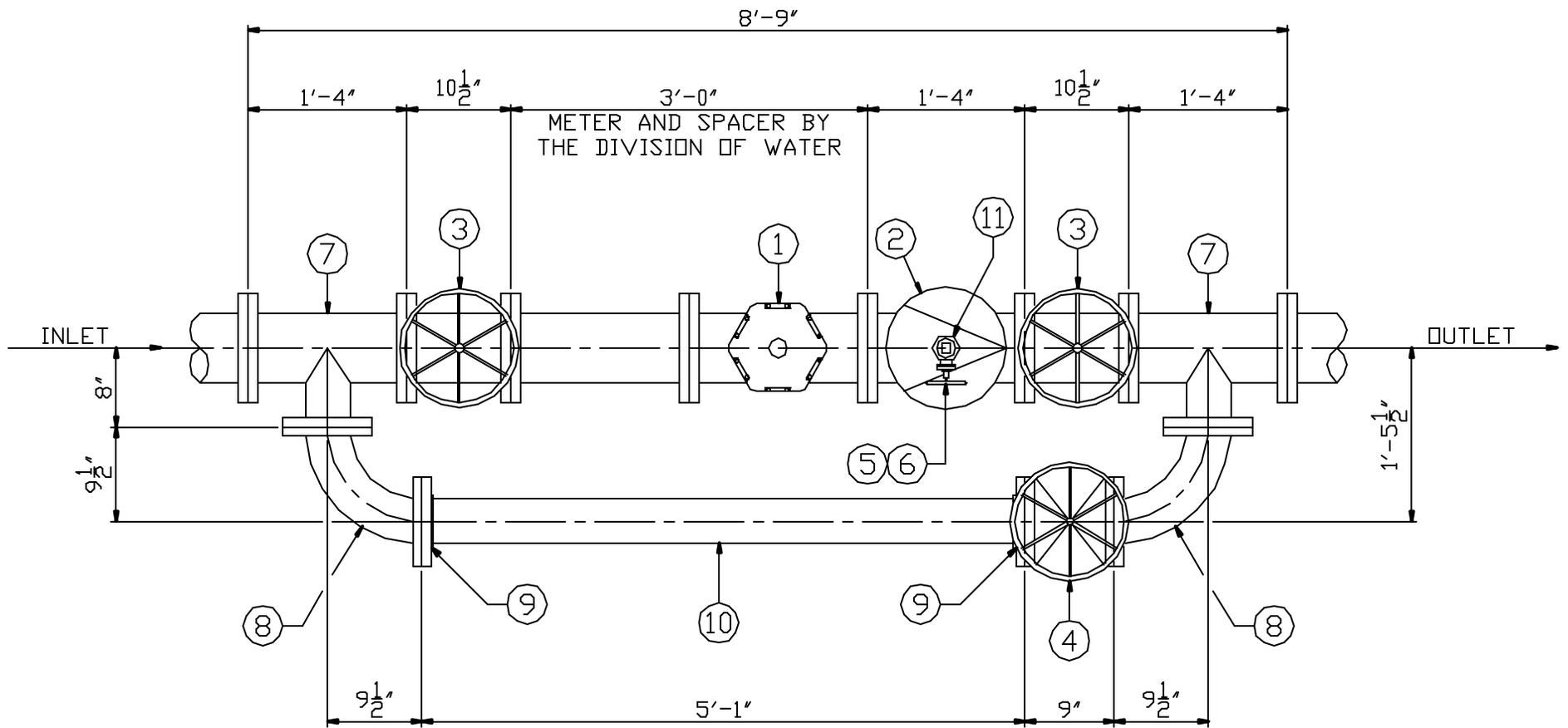
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 4" METER SETTING WITH 3" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	2"	HAND WHEEL GATE VALVE,SCREWED
2	1	2" x 10"	BRASS NIPPLE
3	2	4"	HAND WHEEL GATE VALVES, FLANGED
4	1	4"	SWING CHECK VALVE, FLANGED
5	1	3"	O.S.Y. VALVE, FLANGED
6	2	4" x 3"	CAST IRON TEES, FLANGED
7	2	3"	CAST IRON ELBOWS, FLANGED LONG RADIUS
8	2	3" x 7-1/2"	CAST IRON FLANGE, 4 HOLE
9	58-1/2"	3"	GALVANIZED PIPE, EXTRA HEAVY
10	1	3"	TURBINE METER <u>OR</u> COMPOUND METER METER & SPACER PROVIDED BY C.W.D)
11	1	2"	BRASS PLUG
12	2	4" x 3"	CAST IRON CONCENTRIC REDUCER, FLANGED
13	7	4"	FLANGE GASKETS
14	7	3"	FLANGE GASKETS
15	56	5/8" x 3"	MACHINE BOLTS
16	24	5/8" x 2-1/2"	MACHINE BOLTS
17	8	5/8" x 3-1/2"	STUD BOLTS
18	88	5/8"	HEX NUTS

(SEE DRAWING No. STD-M09 & STD-V01).

11-19-98



PLAN

NOTE:

ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.

ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER
CLEVELAND, OHIO

SUBJECT STANDARD 6" METER SETTING
WITH 6" METER FOR VAULTS

DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>4-26-2005</u>	<u>1-1/2" = 1'-0"</u>
CHECKED BY _____	DATE _____

STD-M10

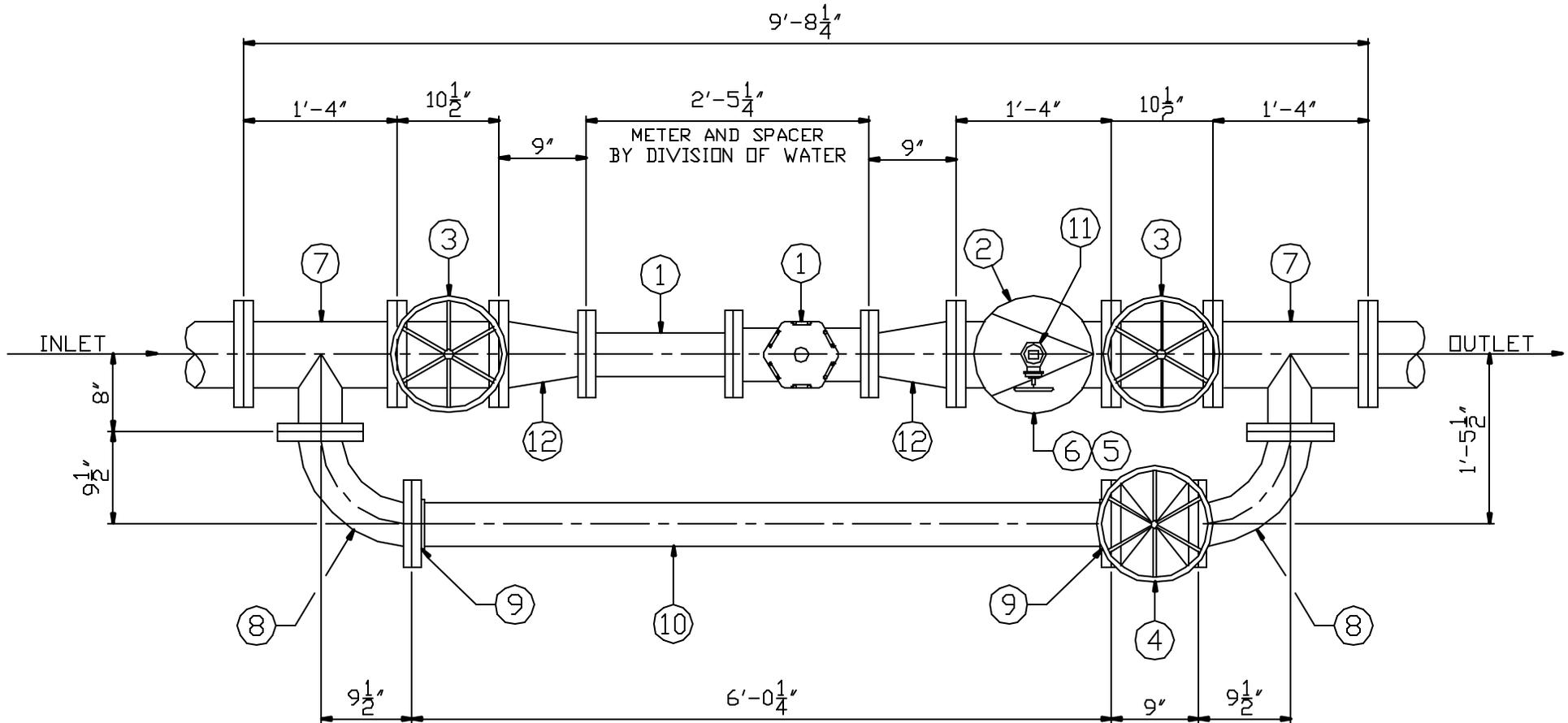
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 6" METER SETTING WITH 6" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	6"	TURBINE OR COMPOUND METER (BY C.W.D.)
2	1	6"	SWING CHECK VALVE, FLANGED
3	2	6"	HAND WHEEL GATE VALVES, FLANGED
4	1	4"	O.S.Y. VALVE, FLANGED
5	1	2"	HAND WHEEL GATE VALVE, SCREWED
6	1	2"	BRASS PLUG
7	2	6" x 4"	CAST IRON TEES, FLANGED
8	2	4"	CAST IRON ELBOWS, FLANGED LR
9	2	4" x 9"	CAST IRON FLANGE, 8 HOLE
10	70"	4"	GALVANIZED PIPE, EXTRA HEAVY
11	1	2" x 10"	BRASS NIPPLE
12	8	6"	FLANGE GASKETS
13	5	4"	FLANGE GASKETS
14	64	3/4" x 3-1/2	MACHINE BOLTS
15	40	5/8" X 3"	MACHINE BOLTS
16	8	3/4" x 4"	STUD BOLTS
17	72	3/4"	HEX NUTS
18	40	5/8"	HEX NUTS

(SEE DRAWING No. STD-M10 & STD-V01).

4-26-2005



PLAN

NOTE:
ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT STANDARD 6" METER SETTING WITH 4" METER FOR VAULTS	
DRAWN BY RSK	-SCALE-
DATE 5-18-1998	1/2" = 1'-0"
CHECKED BY MJS	DATE 5-18-98

STD-M11

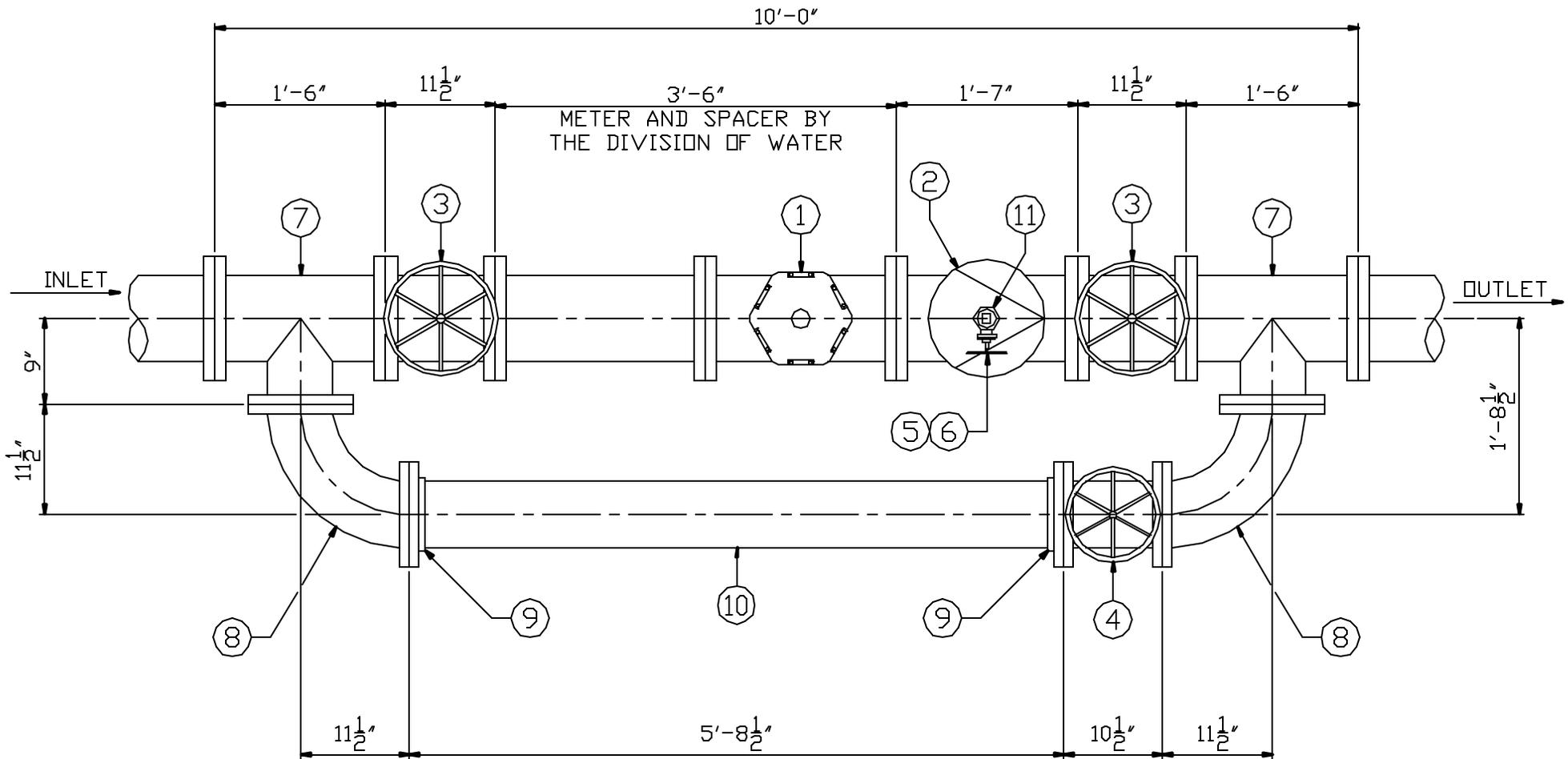
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 6" METER SETTING WITH 4" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	4"	TURBINE OR COMPOUND METER (METER AND SPACER BY C.W.D.)
2	1	6"	SWING CHECK VALVE, FLANGED
3	2	6"	HAND WHEEL GATE VALVES, FLANGED
4	1	4"	O.S.Y. VALVE, FLANGED
5	1	2"	HAND WHEEL GATE VALVE, SCREWED
6	1	2"	BRASS PLUG
7	2	6" x 4"	CAST IRON TEES, FLANGED
8	2	4"	CAST IRON ELBOWS, FLANGED LR
9	2	4" x 9"	CAST IRON FLANGE, 8 HOLE
10	72-1/4"	4"	GALVANIZED PIPE, EXTRA HEAVY
11	1	2" x 10"	BRASS NIPPLE
12	2	6" x 4"	CAST IRON CONCENTRIC REDUCER, FLANGED
13	8	6"	FLANGE GASKETS
14	7	4"	FLANGE GASKETS
15	56	3/4" x 3-1/2"	MACHINE BOLTS
16	56	5/8" X 3"	MACHINE BOLTS
17	8	3/4" x 4"	STUD BOLTS
18	64	3/4"	HEX NUTS
19	56	5/8"	HEX NUTS

(SEE DRAWING No. STD-M11 & STD-V01).

11-19-98



METER AND SPACER BY THE DIVISION OF WATER

PLAN

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.

ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT STANDARD 8" METER SETTING WITH 8" METER FOR VAULTS	
DRAWN BY <u>RSK</u> DATE <u>10-1-1997</u> CHECKED BY <u>MJS</u> DATE <u>10-1-97</u>	-SCALE- $1-1/2" = 1'-0"$
STD-M12	

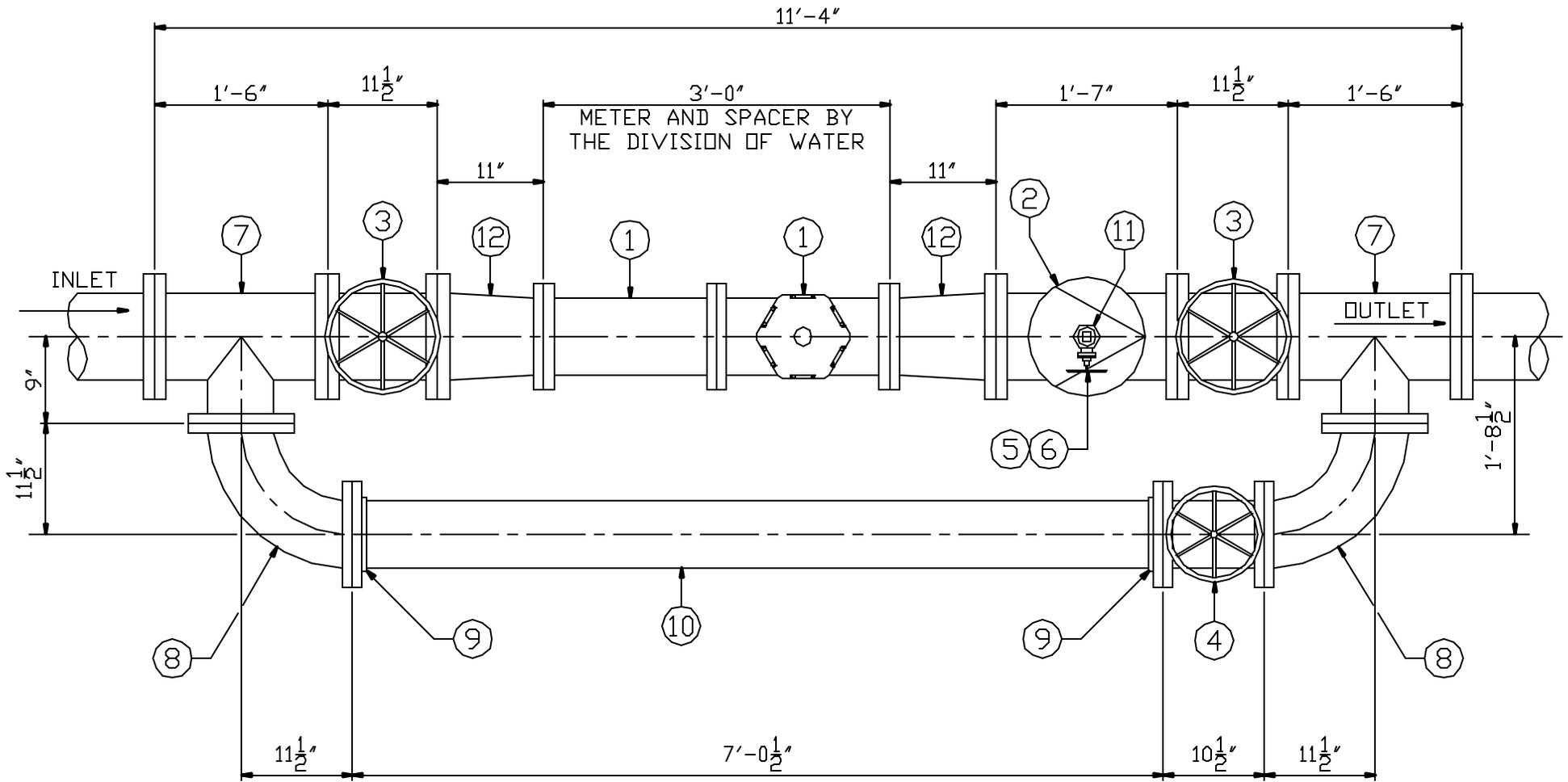
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 8" METER SETTING WITH 8" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	8"	TURBINE OR COMPOUND METER (BY C.W.D.)
2	1	8"	SWING CHECK VALVE, FLANGED
3	2	8"	HAND WHEEL GATE VALVES, FLANGED
4	1	6"	O.S.Y. VALVE, FLANGED
5	1	2"	HAND WHEEL GATE VALVE, SCREWED
6	1	2"	BRASS PLUG
7	2	8" x 6"	CAST IRON TEES, FLANGED
8	2	6"	CAST IRON ELBOWS, FLANGED LR
9	2	6" x 11"	CAST IRON FLANGE, 8 HOLE
10	72"	6"	GALVANIZED PIPE, EXTRA HEAVY
11	1	2" x 10"	BRASS NIPPLE
12	5	8"	FLANGE GASKETS
13	5	6"	FLANGE GASKETS
14	104	3/4" x 3-1/2"	MACHINE BOLTS
15	8	3/4" x 4-1/4"	STUD BOLTS
16	112	3/4"	HEX NUTS

(SEE DRAWING No. STD-M12 & STD-V01).

11-19-98



PLAN

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
 ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
 DIVISION OF WATER
 CLEVELAND, OHIO

SUBJECT STANDARD 8" METER SETTING
WITH 6" METER FOR VAULTS

DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>4-26-2005</u>	<u>1-1/2" = 1'-0"</u>
CHECKED BY _____	DATE _____

STD-M13

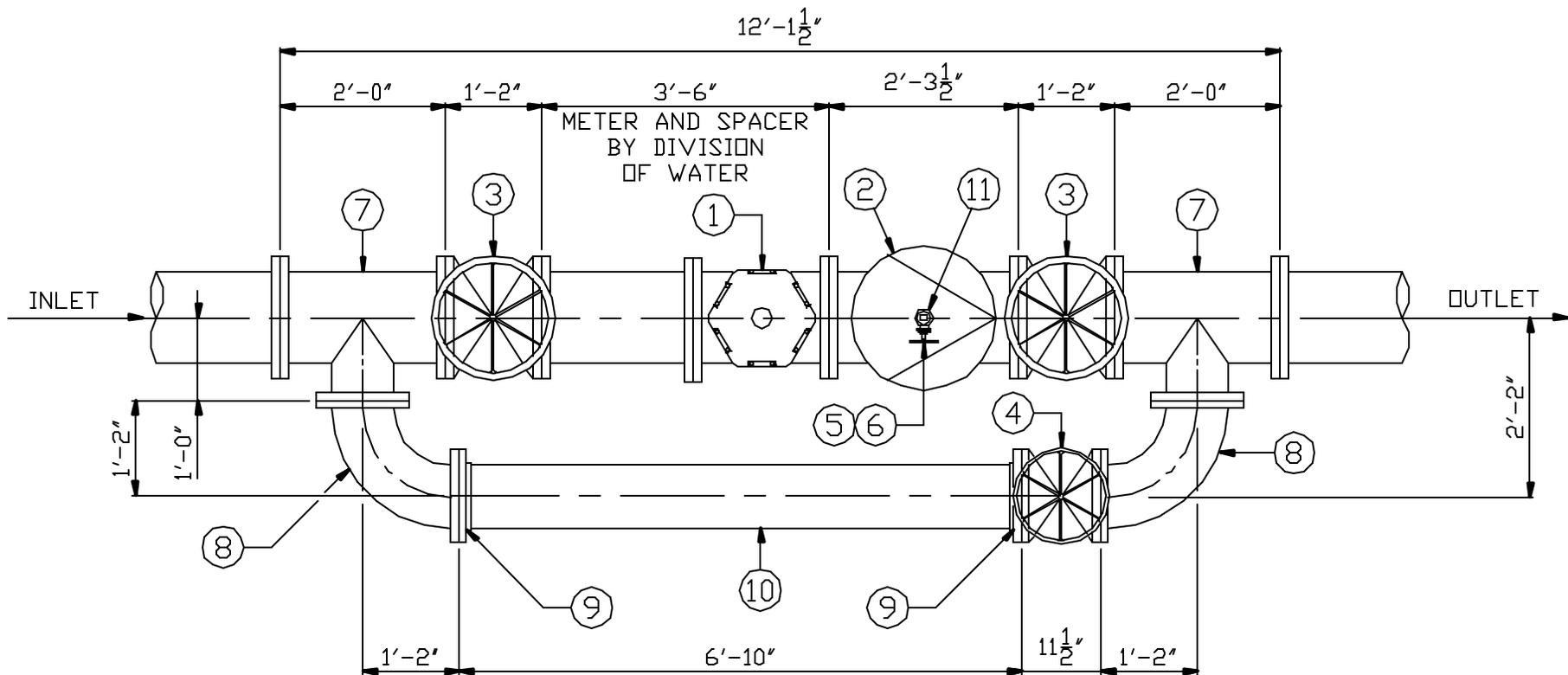
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 8" METER SETTING WITH 6" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	6"	TURBINE OR COMPOUND METER (METER AND SPACER BY C.W.D.)
2	1	8"	SWING CHECK VALVE, FLANGED
3	2	8"	HAND WHEEL GATE VALVES, FLANGED
4	1	6"	O.S.Y. VALVE, FLANGED
5	1	2"	HAND WHEEL GATE VALVE, SCREWED
6	1	2"	BRASS PLUG
7	2	8" x 6"	CAST IRON TEES, FLANGED
8	2	6"	CAST IRON ELBOWS, FLANGED LR
9	2	6" x 11" DIA.	CAST IRON FLANGE, 8 HOLE
10	90"	6"	GALVANIZED PIPE, EXTRA HEAVY
11	1	2" x 10"	BRASS NIPPLE
12	2	8" x 6"	CAST IRON CONCENTRIC REDUCER, FLANGED
13	7	8"	FLANGE GASKETS
14	7	6"	FLANGE GASKETS
15	120	3/4" x 3-1/2"	MACHINE BOLTS
16	8	3/4" x 4-1/4"	STUD BOLTS
17	128	3/4"	HEX NUTS

(SEE DRAWING No. STD-M13 & STD-V01).

4-26-2005



PLAN

NOTE:
ALL BOLTS AND GASKETS BY SUPPLIER.

NOTE:
MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER
CLEVELAND, OHIO

SUBJECT STANDARD 12' METER SETTING
WITH 12" METER FOR VAULTS

DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>10-1-1997</u>	<u>1" = 1'-0"</u>
CHECKED BY <u>MJS</u> DATE <u>10-1-97</u>	

STD-M14

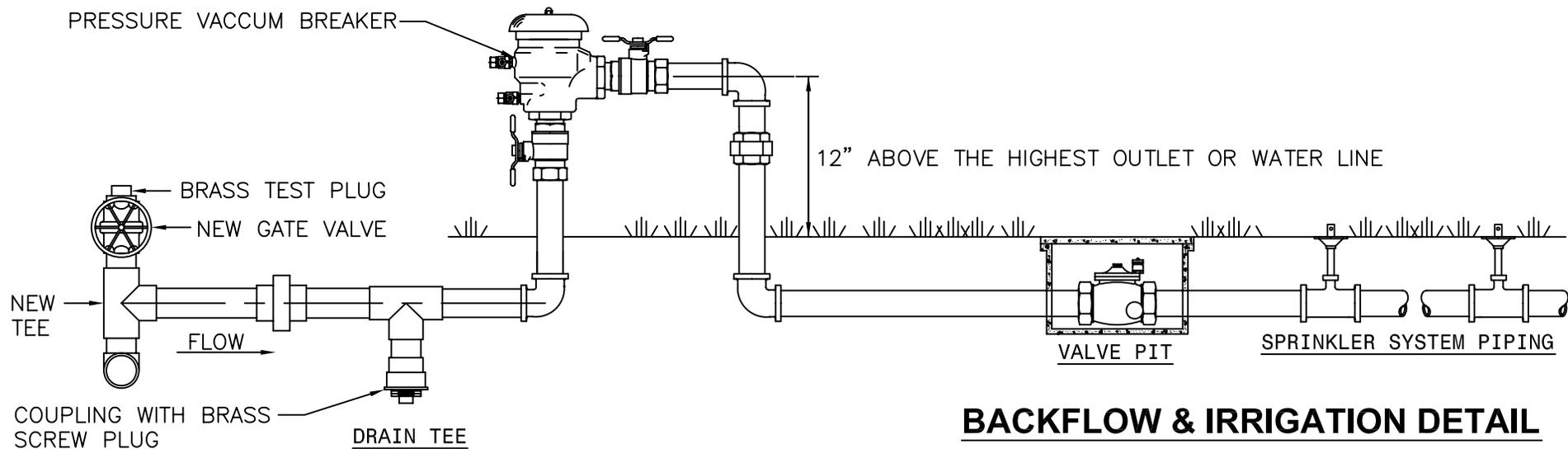
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 12" METER SETTING WITH 12" METER

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	12"	TURBINE METER
2	1	12"	SWING CHECK VALVE, FLANGED
3	2	12"	HAND WHEEL GATE VALVES, FLANGED
4	1	8"	O.S.Y. VALVE, FLANGED
5	1	2"	HAND WHEEL GATE VALVE, SCREWED
6	1	2"	BRASS PLUG
7	2	12" x 8"	CAST IRON TEES, FLANGED
8	2	8"	CAST IRON ELBOWS, FLANGED LR
9	2	8" x 13-1/2"	CAST IRON FLANGE, 8 HOLE
10	82"	8"	GALVANIZED PIPE, EXTRA HEAVY
11	1	2" x 10"	BRASS NIPPLE
12	8	12"	FLANGE GASKETS
13	5	8"	FLANGE GASKETS
14	96	7/8" x 4"	MACHINE BOLTS
15	40	3/4" X 3-1/2"	MACHINE BOLTS
16	8	7/8" x 4-3/4"	STUD BOLTS
17	40	3/4"	HEX NUTS
18	104	7/8"	HEX NUTS

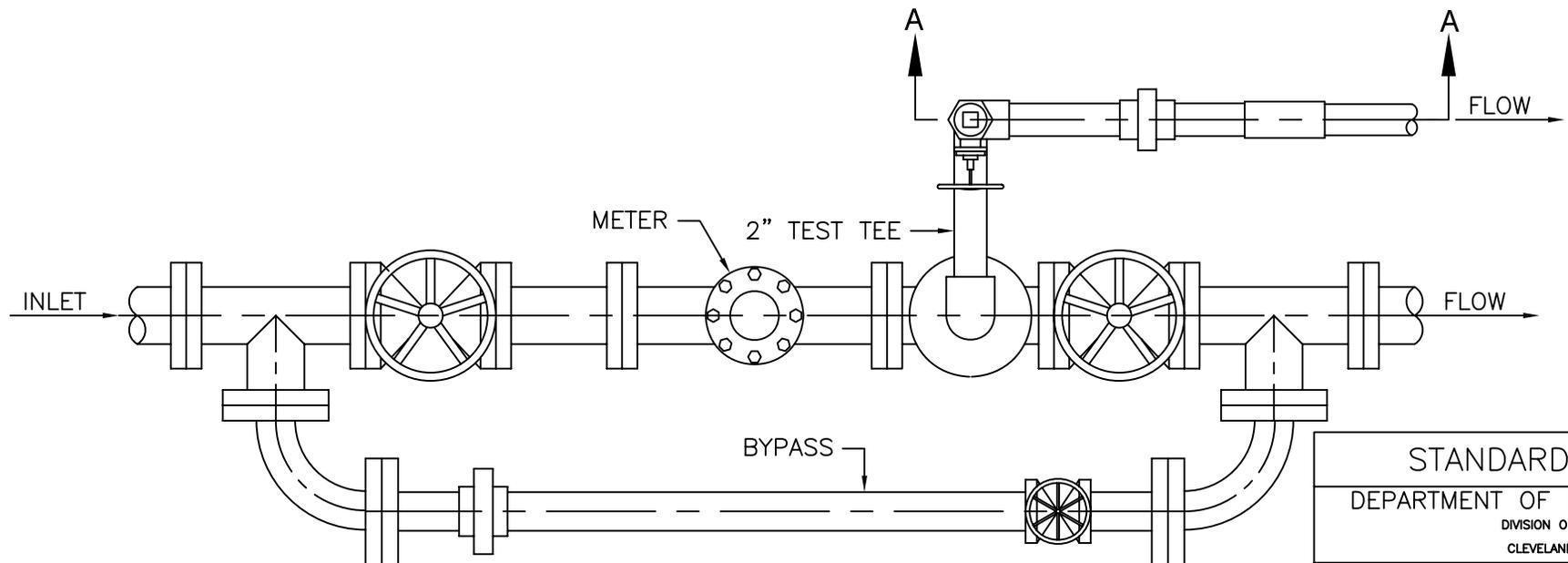
(SEE DRAWING No. STD-M14 & STD-V01).

3-6-2009



SECTION A-A

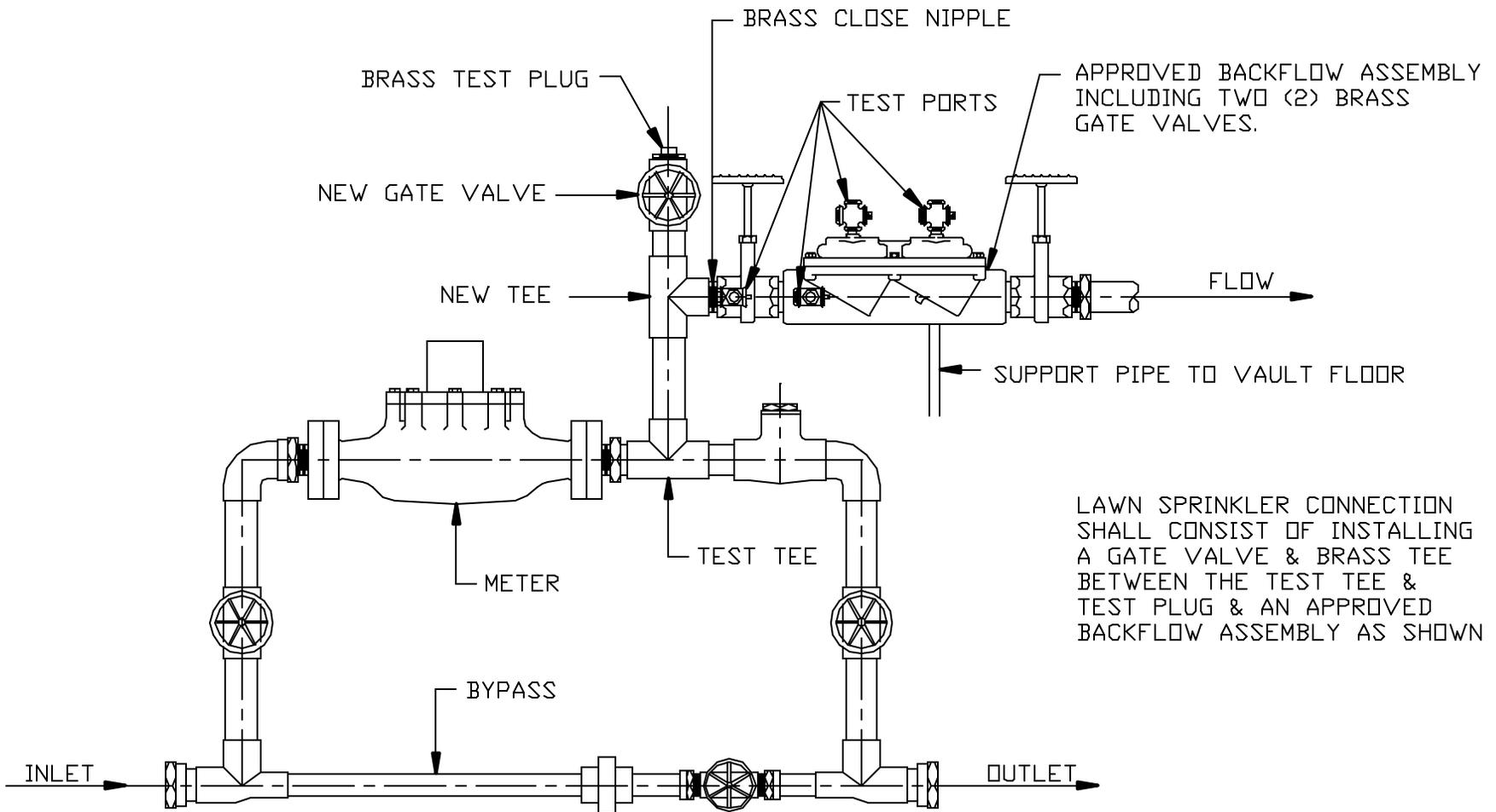
BACKFLOW & IRRIGATION DETAIL



PLAN

STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES		
DIVISION OF WATER		
CLEVELAND, OHIO		
SUBJECT _____		
TYPICAL 3", 4", 6" AND 8" METER SETTINGS WITH		
1", 1½" OR 2" LAWN SPRINKLER CONNECTION		
DRAWN BY <u>RSK</u>	SCALE	STD-M15
DATE <u>1-4-2010</u>	NONE	
CHECKED BY _____	DATE _____	

* FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216) 664-3944.



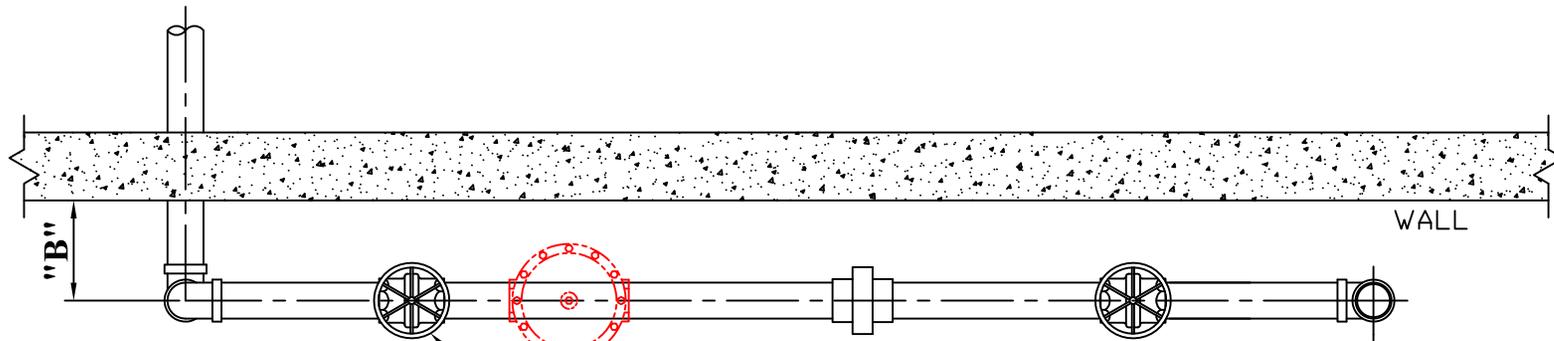
LAWN SPRINKLER CONNECTION SHALL CONSIST OF INSTALLING A GATE VALVE & BRASS TEE BETWEEN THE TEST TEE & TEST PLUG & AN APPROVED BACKFLOW ASSEMBLY AS SHOWN

ELEVATION

* FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216) 664-3944.

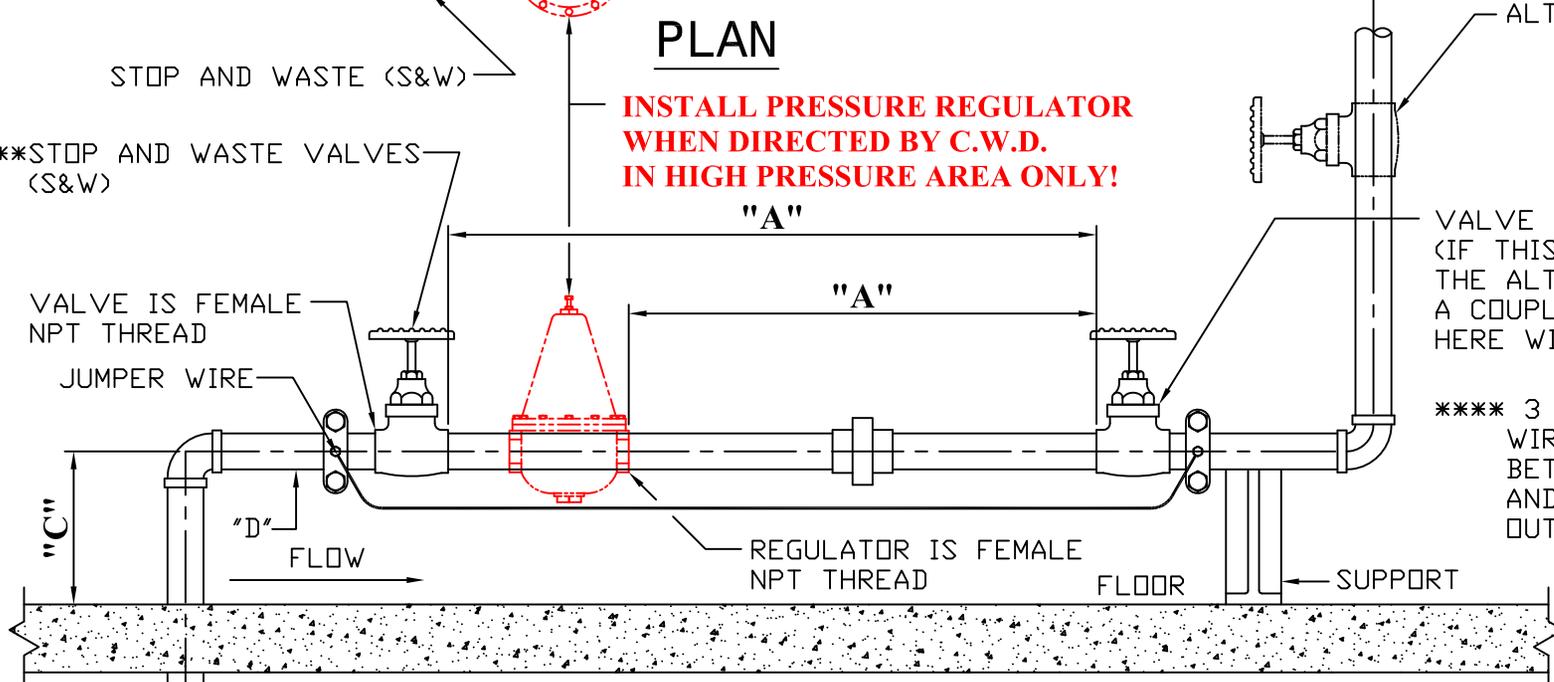
STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT TYPICAL 1½' AND 2' METER SETTING WITH 1' AND 1½' LAWN SPRINKLER CONNECTION	
DRAWN BY <u>RSK</u>	SCALE NONE
DATE <u>10-1-1997</u>	
CHECKED BY <u>MJS</u> DATE <u>10-1-97</u>	

STD-M16



PLAN

**INSTALL PRESSURE REGULATOR
WHEN DIRECTED BY C.W.D.
IN HIGH PRESSURE AREA ONLY!**



ELEVATION

ALTERNATE VALVE LOCATION

VALVE IS FEMALE NPT THREAD
(IF THIS VALVE IS PLACED IN
THE ALTERNATE LOCATION THEN
A COUPLING MUST BE INSTALLED
HERE WITH FEMALE NPT THREADS)

**** 3 CONDUCTOR, 22 GAUGE
WIRE IS TO BE INSTALLED
BETWEEN METER LOCATION
AND ENDPOINT DEVICE ON
OUTSIDE OF HOUSE.

S&W SIZE	METER SIZE	"A"	"B"	"C"
3/4"	5/8"	12 1/2"	6" MIN. 12" MAX.	24" MIN. 36" MAX.
1"	1"	16"		

* NOTE: IF METER SIZE IS REDUCED FROM THE INCOMING LINE SIZE, THE APPROPRIATE REDUCTION SHOULD TAKE PLACE AT POINT "D".

** BALL VALVES MAY BE USED IN PLACE OF STOP AND WASTE VALVES.

*** IF WATER SERVICE IS FOR ANYTHING OTHER THAN A SINGLE OR 2 FAMILY HOUSE, A BACKFLOW PREVENTION DEVICE IS REQUIRED. FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE WATER BACKFLOW UNIT AT 216-664-3944.

STANDARD DETAILS

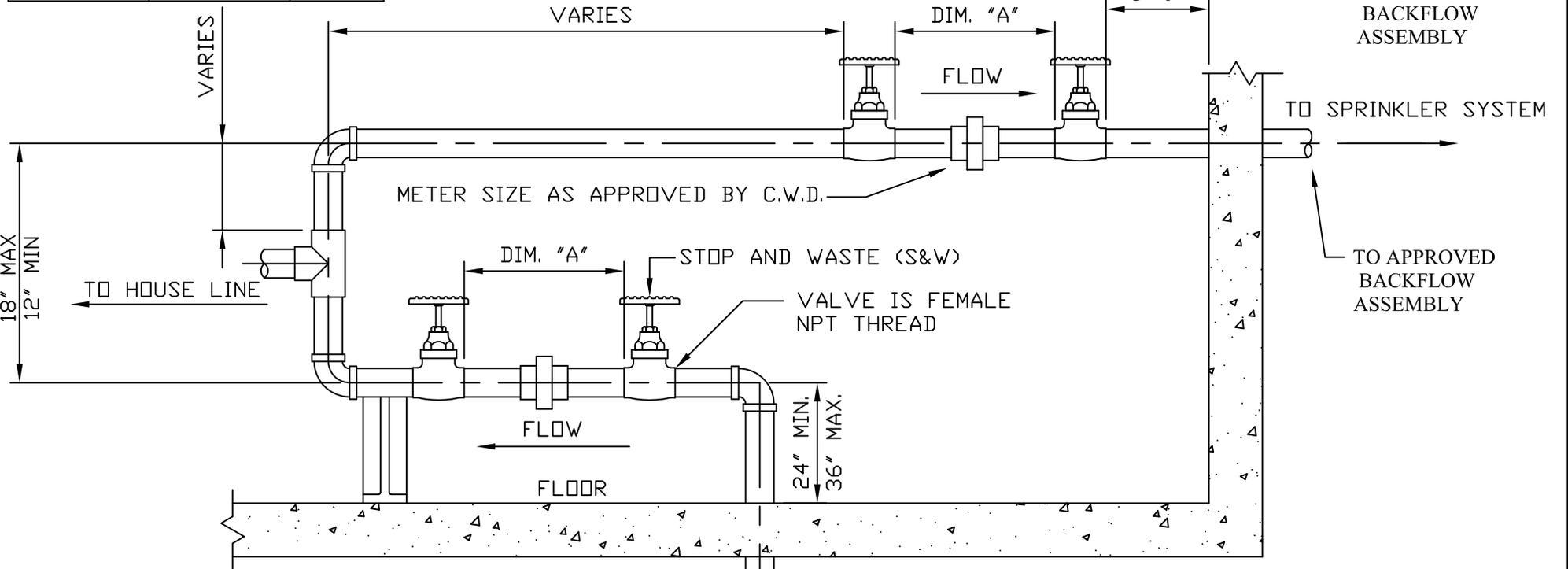
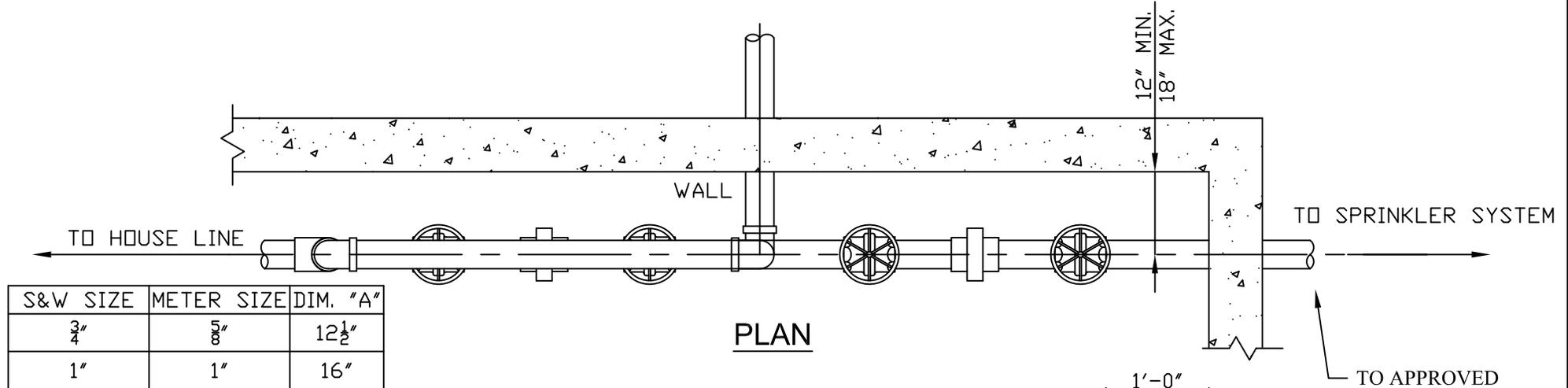
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER
CLEVELAND, OHIO

SUBJECT APPROVED INSIDE BUILDING
METER SETTINGS

FOR 5/8", 1" METERS

DRAWN BY RSK -SCALE-
DATE 2-4-2013 NONE
CHECKED BY DATE

STD-M17



CONTACT LOCAL SEWER AUTHORITY FOR SEWER EXEMPTION INFORMATION OR PERMITS AND SALES AT 216-664-2444 FOR LOCAL SEWER AUTHORITY PHONE NUMBERS.

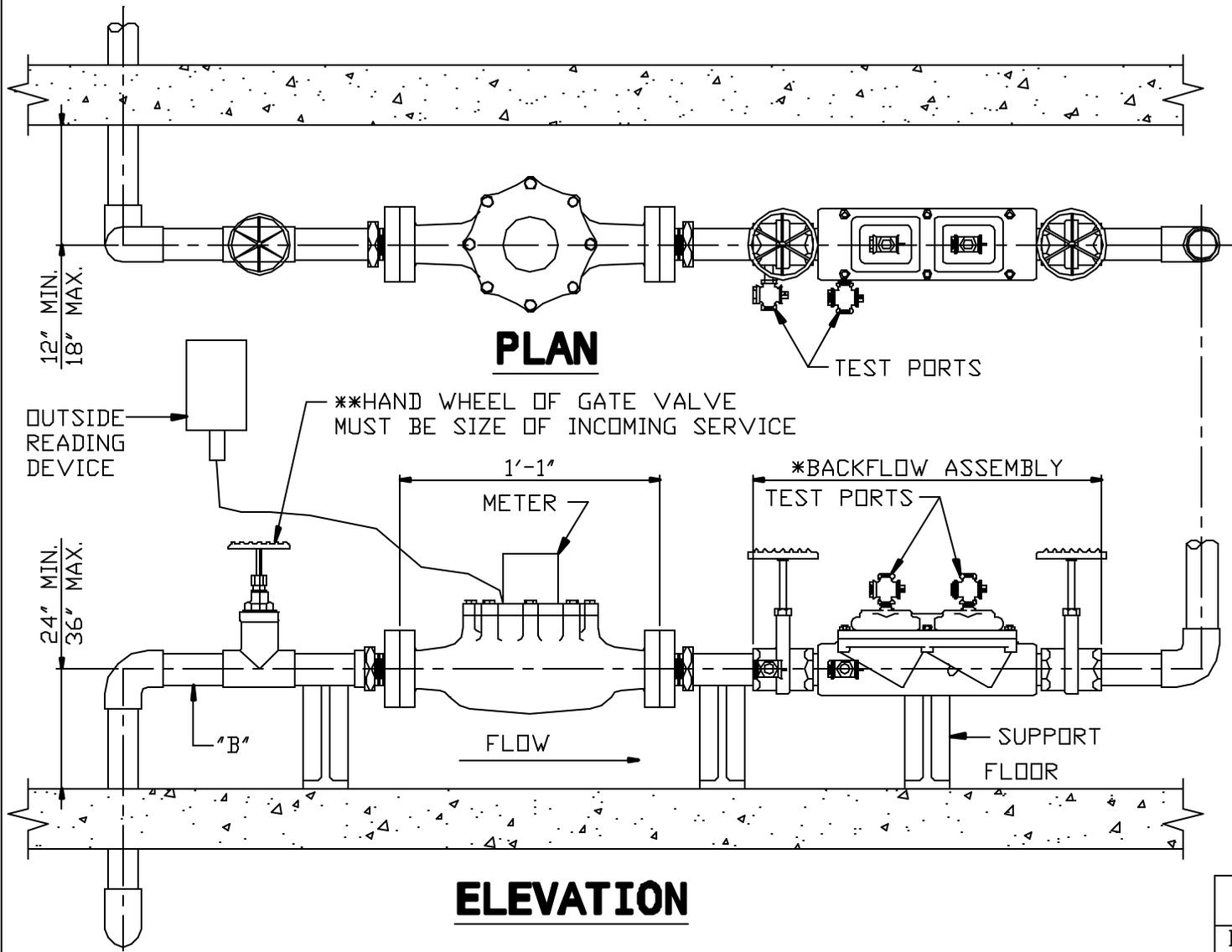
ELEVATION

IF NEW, MUST BE 1", IF EXISTING MAY BE 3/4"

*FOR TYPE AND MODE OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216)664-3944

REMOTES/REGISTERS SHOULD BE SIDE BY SIDE ON EXTERNAL WALL

APPROVED INSIDE BUILDING METER SETTING FOR 5/8", 1" METERS FOR SEWER EXEMPTION, RESIDENTIAL ONLY

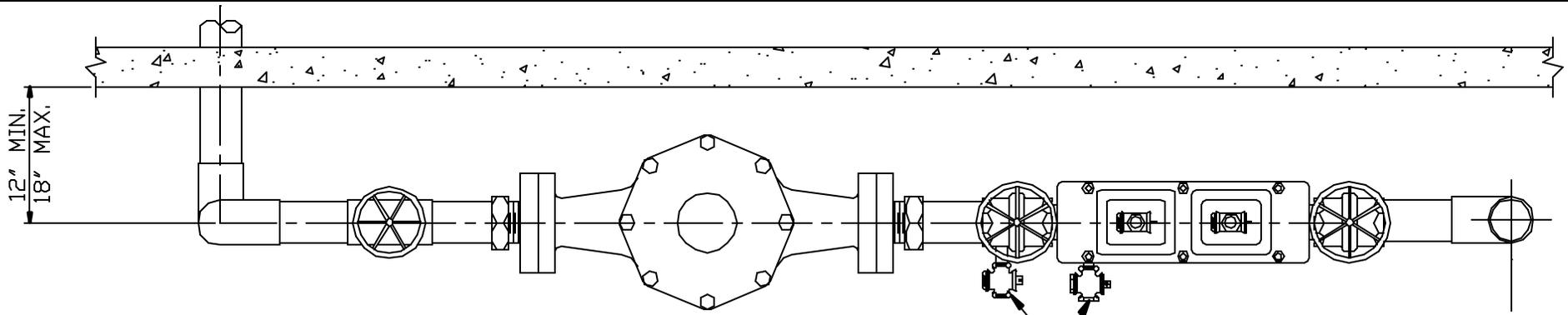


* FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216) 664-3944.

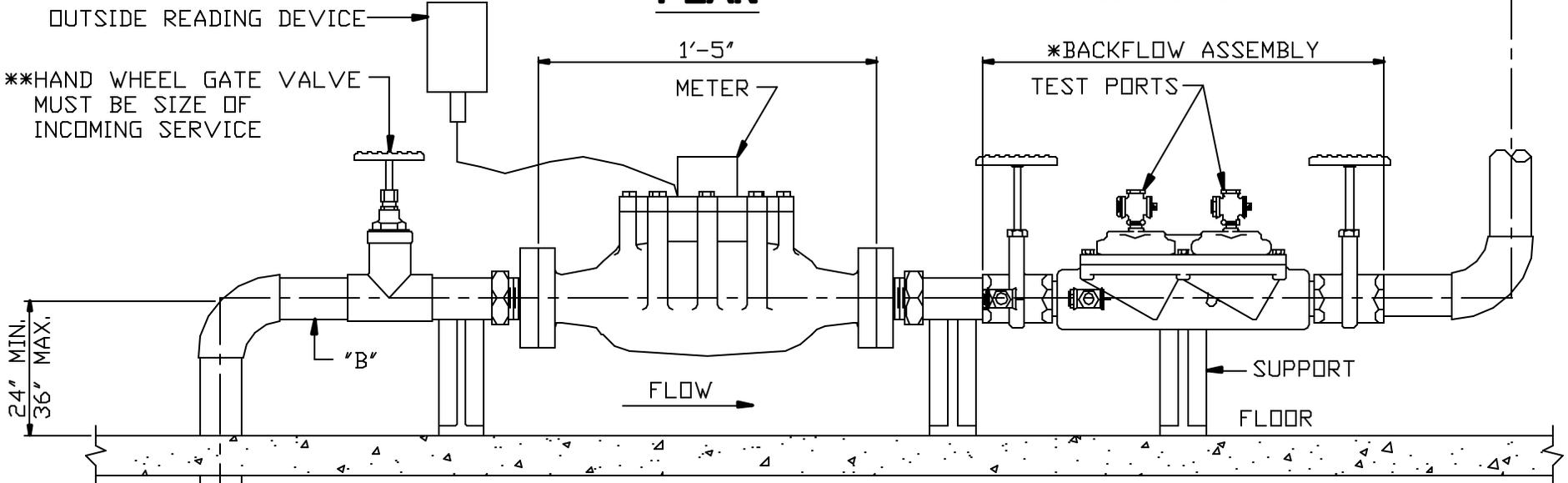
NOTE: IF METER SIZE IS REDUCED FROM INCOMING LINE SIZE, THE APPROPRIATE REDUCTION SHOULD TAKE PLACE AT POINT "B".

** BALL VALVES MAY BE USED IN PLACE OF HAND WHEEL GATE VALVES.

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT <u>APPROVED INSIDE BUILDING METER</u>	
SETTING FOR <u>1 1/2" METER & BACKFLOW ASSEMBLY</u>	
DRAWN BY <u>RSK</u>	SCALE
DATE <u>10-1-1997</u>	<u>3" = 1'-0"</u>
CHECKED BY <u>MJS</u> DATE <u>10-1-97</u>	STD-M20



PLAN



ELEVATION

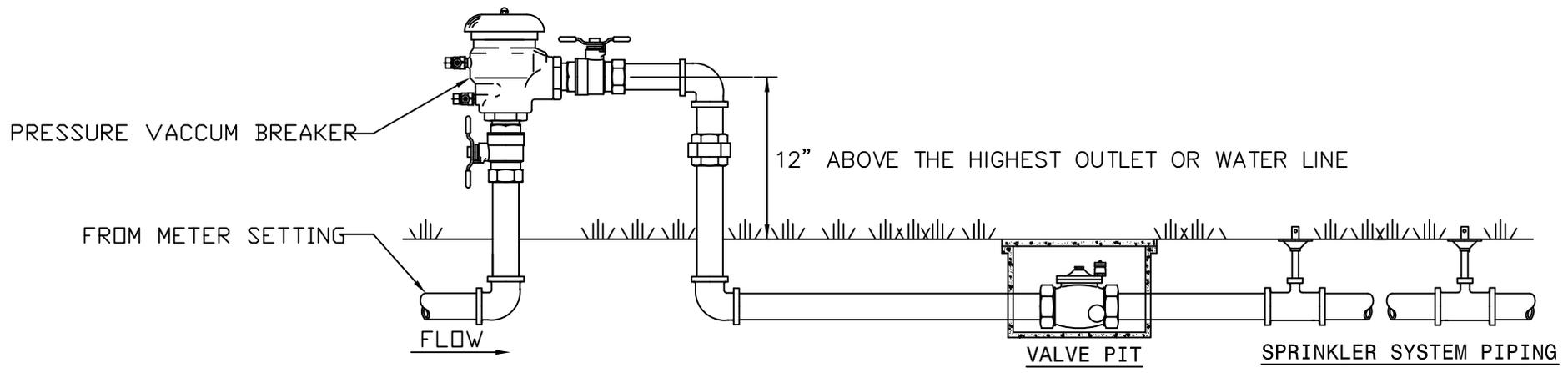
* FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216) 664-3944.

NOTE: IF METER SIZE IS REDUCED FROM THE INCOMING LINE SIZE, THE APPROPRIATE REDUCTION SHOULD TAKE PLACE AT POINT "B".

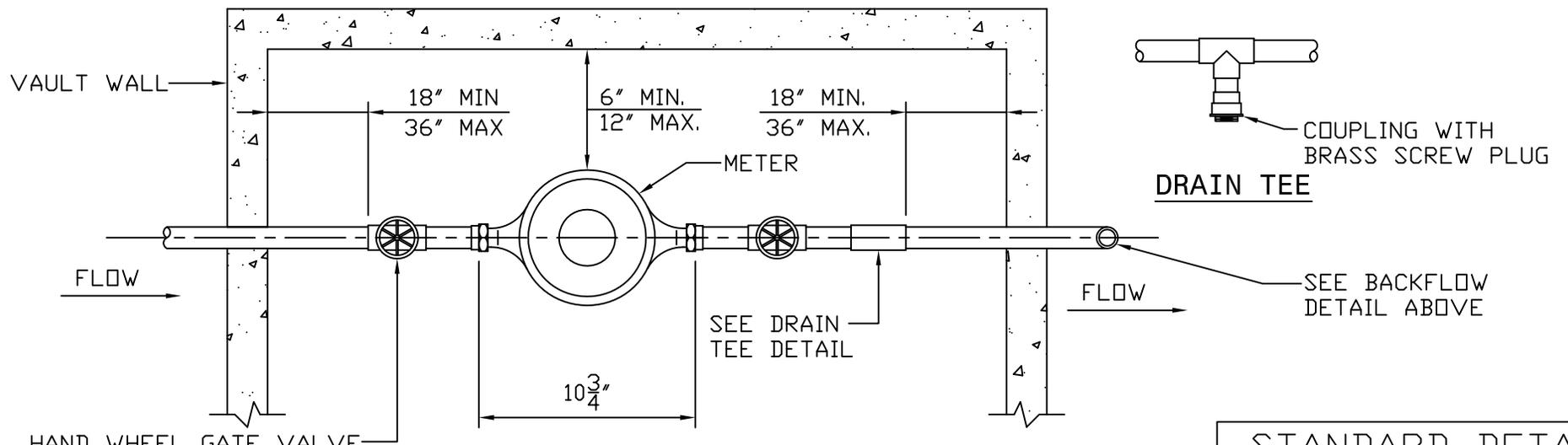
** BALL VALVES MAY BE USED IN PLACE OF HAND WHEEL GATE VALVES.

STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT <u>APPROVED INSIDE BUILDING METER</u>	
SETTING FOR <u>2" METER & BACKFLOW ASSEMBLY</u>	
DRAWN BY <u>RSK</u>	SCALE
DATE <u>10-1-97</u>	<u>3" = 1'-0"</u>
CHECKED BY <u>MIS</u>	DATE <u>10-1-97</u>

STD-M22



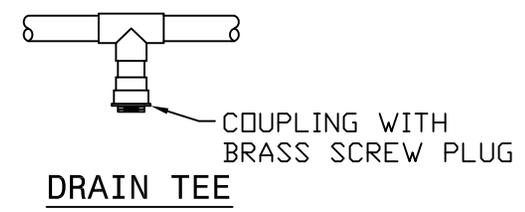
BACKFLOW & IRRIGATION DETAIL



PLAN

HAND WHEEL GATE VALVE MUST BE SIZE OF INCOMING SERVICE. VALVE IS FEMALE NPT THREAD.

* ADDITIONAL DRAIN VALVES OR CONTROL VALVES MAY BE PLACED DOWNSTREAM OF BACKFLOW PREVENTOR.



STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT APPROVED 1" METER SETTING FOR 1" METER & BACKFLOW ASSEMBLY FOR VAULTS * "LAWN IRRIGATION ONLY"		
DRAWN BY RSK	-SCALE- NONE	STD-M24
DATE 8-22-2012		
CHECKED BY _____	DATE _____	

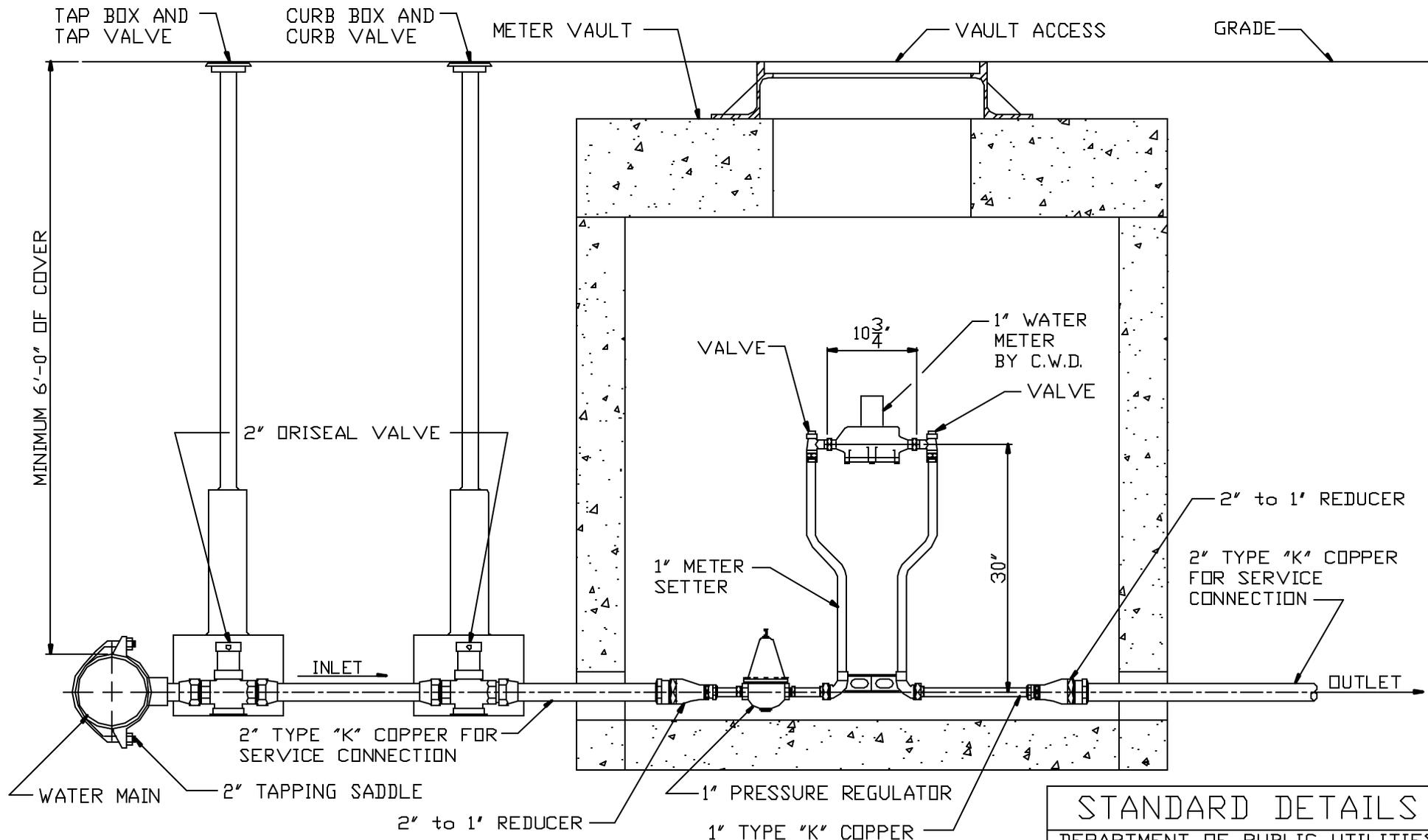
MATERIALS REQUIRED FOR INSTALLATION

STANDARD 1-1/2" METER SETTING WITH 1-1/2" METER FOR 2" CONNECTION

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	1-1/2"	METER BY C.W.D.
2	1	1-1/2"	STREAMLINE SWING CHECK VALVE, COPPER TO COPPER
3	2	1-1/2"	STREAMLINE HAND WHEEL GATE VALVES
4	1	1"	STREAMLINE O.S. & Y. GATE VALVE
5	2	1-1/2"	STREAMLINE STREET ELBOW, COPPER TO COPPER
6	1	1-1/2"	STREAMLINE TEE, COPPER TO COPPER
7	2	1-1/2" x 1" x 1-1/2"	STREAMLINE TEE, COPPER TO IRON, FEMALE
8	1	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
9	1	1"	STREAMLINE UNION, COPPER TO COPPER
10	1	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, MALE
11	1	1-1/2"	BRASS SCREW PLUG
12	1	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
13	2	1-1/2"	OVAL FLANGES, FEMALE
14	2	1"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
15	2	1-1/2"	STREAMLINE COUPLING, COPPER TO IRON, FEMALE
16	37"	1-1/2"	COPPER TUBING – HARD
17	30"	1"	COPPER TUBING – HARD
18	2	1-1/2"	BRASS CLOSE NIPPLE
19	2	2" x 1-1/2"	BRASS REDUCER COUPLING
20	2	2"	COMPRESSION COUPLING, COPPER TO IRON, MALE
21	1lb.		SPECIAL SOLDER

(SEE DRAWING No. STD-M25 and STD-V01).

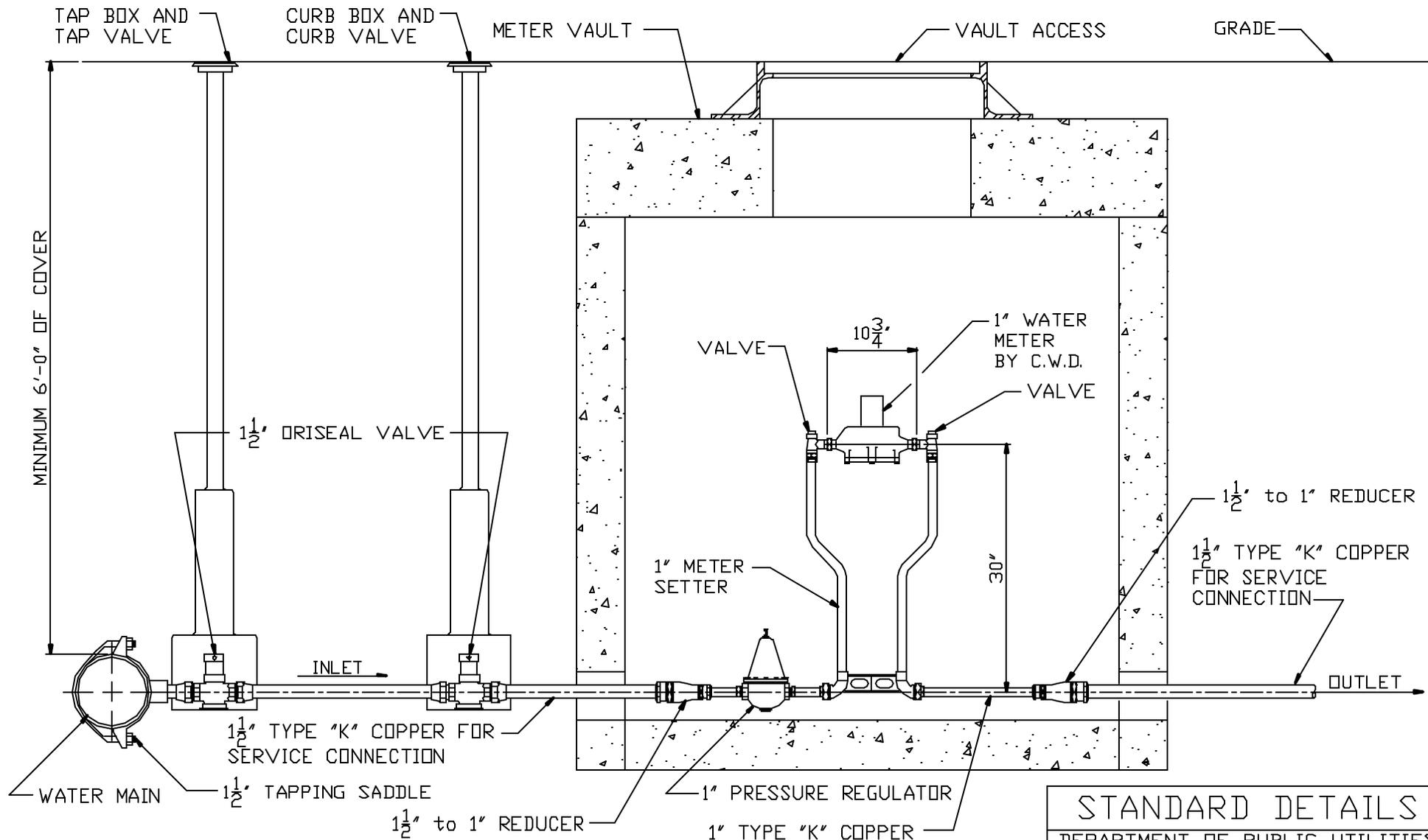
1-12-1999



1" METER SETTER 30" HIGH:
 MUELLER Cat. No. B2404FD WITH H-14222 COUPLING FOR FLARE CONNECTION
 OR H-14227 COUPLING FOR COMPRESSION CONNECTION.
 FORD 70 SERIES COPPER SETTER Cat. No. VV74-30 WITH FLARED OR COMPRESSION CONNECTION.

CONNECTION REDUCER: (2) 2" COMPRESSION COUPLING COPPER TO IRON MALE,
 (2) 2" x 1" REDUCER COUPLING BRASS, (2) 1" COMPRESSION COUPLING COPPER TO IRON MALE.

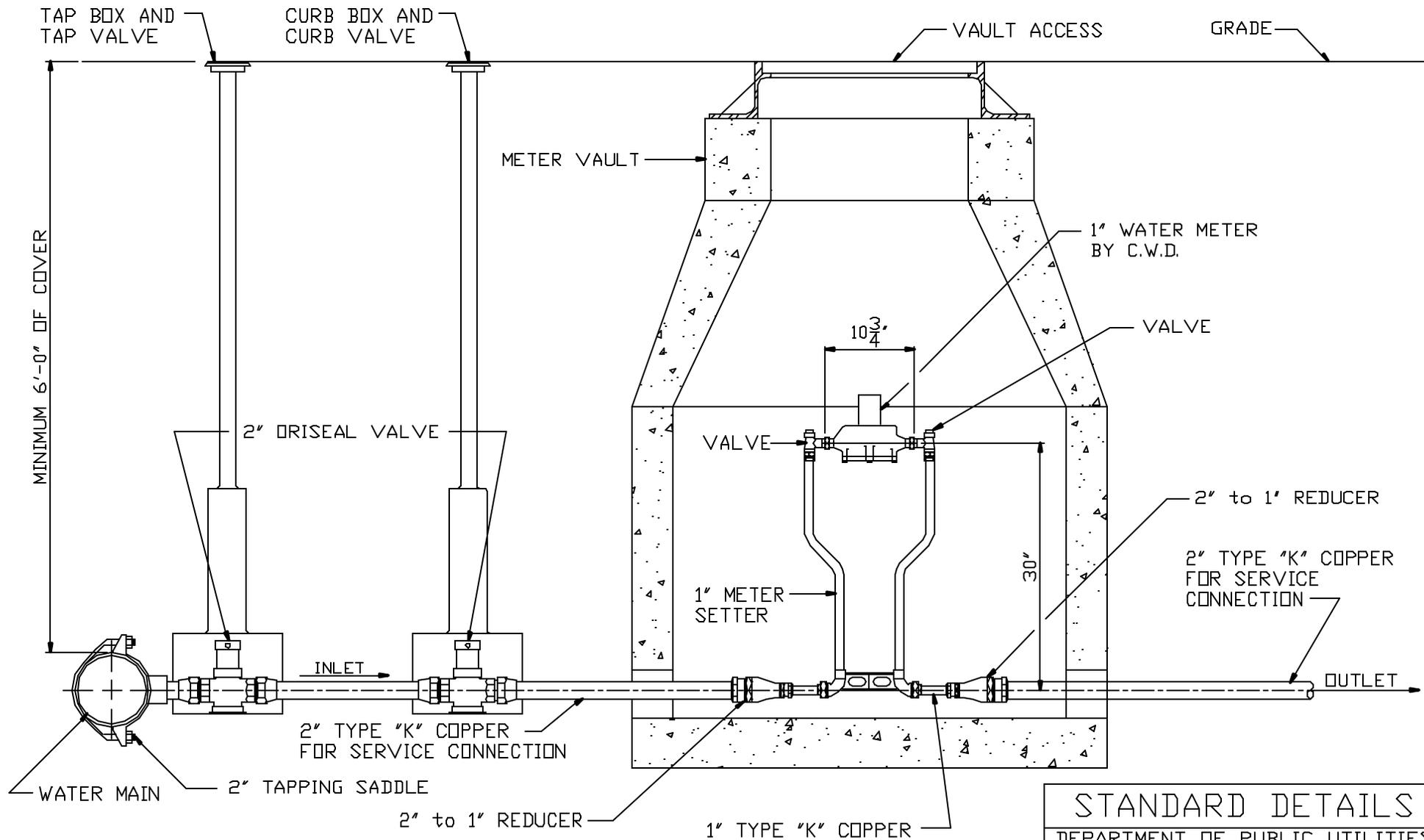
STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT <u>STANDARD 1" METER SETTING WITH</u>		
<u>1" REGULATOR FOR 2" CONNECTION IN VAULT</u>		
DRAWN BY <u>RSK</u>	-SCALE-	STD-M26
DATE <u>1-12-1999</u>	<u>1/2" = 1'-0"</u>	
CHECKED BY <u>MJS</u> DATE <u>1-12-99</u>		



1" METER SETTER 30" HIGH:
 MUELLER Cat. No. B2404FD WITH H-14222 COUPLING FOR FLARE CONNECTION
 OR H-14227 COUPLING FOR COMPRESSION CONNECTION.
 FORD 70 SERIES COPPER SETTER Cat. No. VV74-30 WITH FLARED OR COMPRESSION CONNECTION.

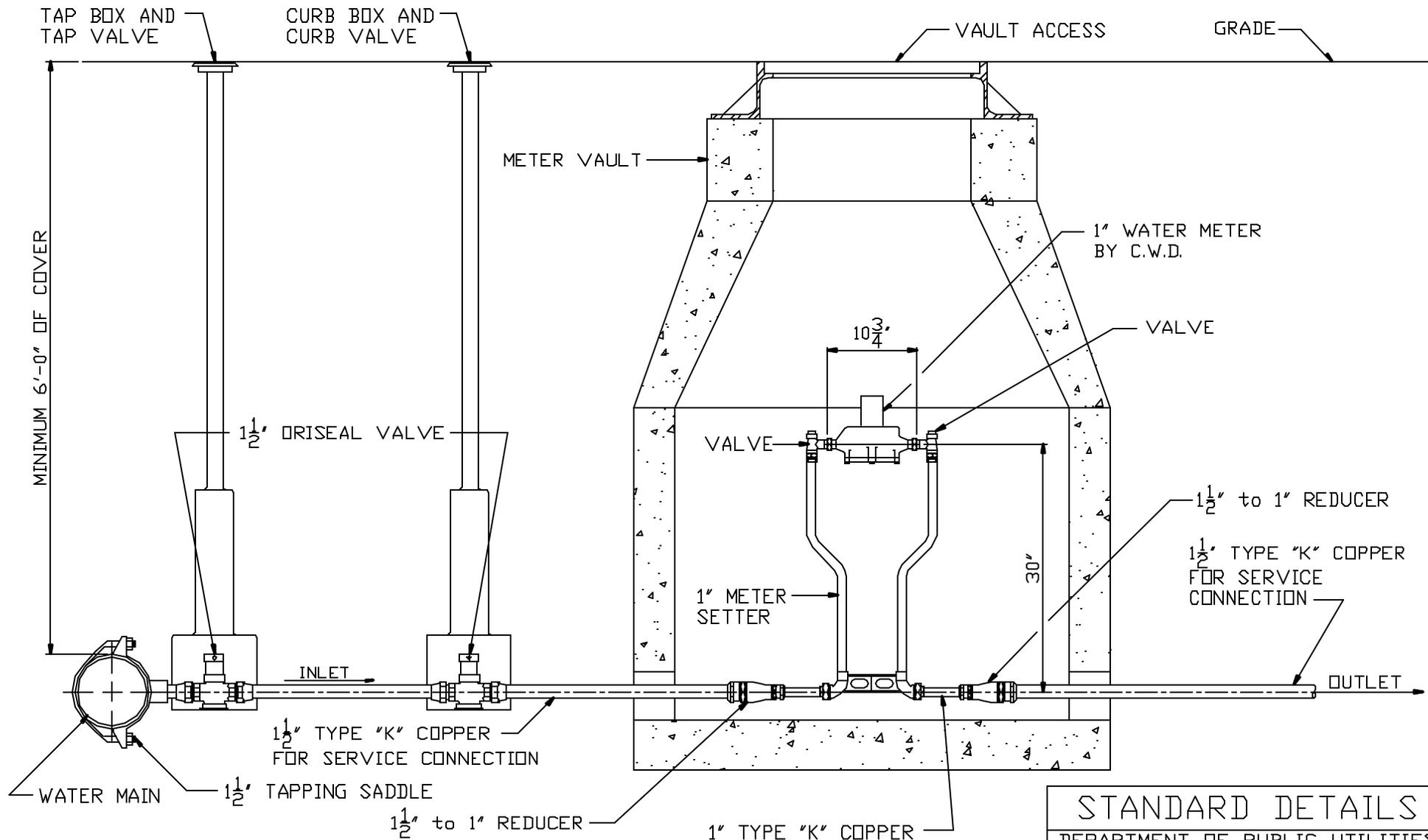
CONNECTION REDUCER: (2) 1/2" COMPRESSION COUPLING COPPER TO IRON MALE,
 (2) 1/2" x 1" REDUCER COUPLING BRASS, (2) 1" COMPRESSION COUPLING COPPER TO IRON MALE.

STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT <u>STANDARD 1" METER SETTING WITH</u>		
1" REGULATOR FOR 1/2" CONNECTION IN VAULT		
DRAWN BY <u>RSK</u>	-SCALE-	
DATE <u>1-12-1999</u>	1/2" = 1'-0"	
CHECKED BY <u>MJS</u>	DATE <u>1-12-99</u>	STD-M27



1" METER SETTER 30" HIGH:
 MUELLER Cat. No. B2404FD WITH H-14222 COUPLING FOR FLARE CONNECTION
 OR H-14227 COUPLING FOR COMPRESSION CONNECTION.
 FORD 70 SERIES COPPER SETTER Cat. No. VV74-30 WITH FLARED OR COMPRESSION CONNECTION.
 CONNECTION REDUCER: (2) 2" COMPRESSION COUPLING COPPER TO IRON MALE,
 (2) 2" x 1" REDUCER COUPLING BRASS, (2) 1" COMPRESSION COUPLING COPPER TO IRON MALE.

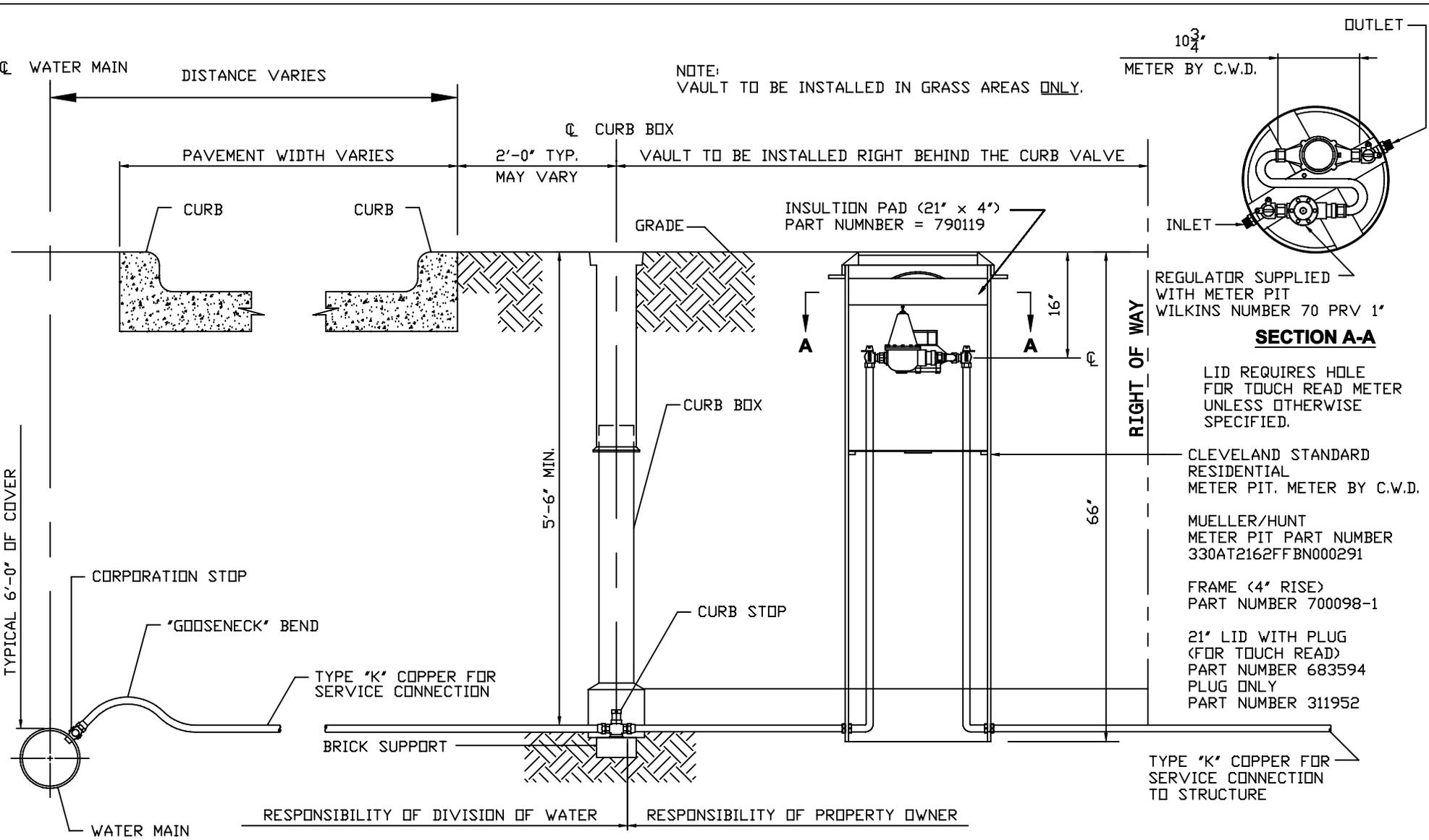
STANDARD DETAILS	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT <u>STANDARD 1" METER SETTING</u>	
FOR 2" CONNECTION IN VAULT	
DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>1-12-1999</u>	$\frac{1}{2}" = 1'-0"$
CHECKED BY <u>MJS</u> DATE <u>1-12-99</u>	STD-M28



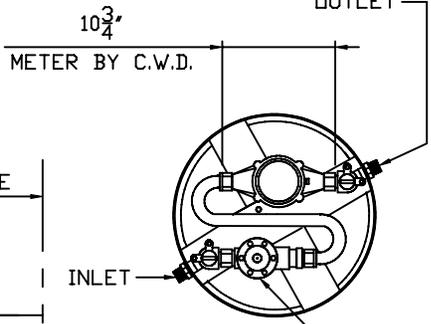
1" METER SETTER 30" HIGH:
 MUELLER Cat. No. B240FD WITH H-14222 COUPLING FOR FLARE CONNECTION
 OR H-14227 COUPLING FOR COMPRESSION CONNECTION.
 FORD 70 SERIES COPPER SETTER Cat. No. VV74-30 WITH FLARED OR COMPRESSION CONNECTION.

CONNECTION REDUCER: (2) 1 1/2" COMPRESSION COUPLING COPPER TO IRON MALE,
 (2) 1 1/2" x 1" REDUCER COUPLING BRASS, (2) 1" COMPRESSION COUPLING COPPER TO IRON MALE.

STANDARD DETAILS		
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO		
SUBJECT <u>STANDARD 1" METER SETTING</u>		
FOR 1 1/2" CONNECTION IN VAULT		
DRAWN BY <u>RSK</u>	-SCALE- 1/4" = 1'-0"	
DATE <u>1-12-1999</u>	STD-M29	
CHECKED BY <u>MJS</u> DATE <u>1-12-99</u>		



NOTE:
VAULT TO BE INSTALLED IN GRASS AREAS ONLY.



REGULATOR SUPPLIED WITH METER PIT WILKINS NUMBER 70 PRV 1"

SECTION A-A

LID REQUIRES HOLE FOR TOUCH READ METER UNLESS OTHERWISE SPECIFIED.

CLEVELAND STANDARD RESIDENTIAL METER PIT, METER BY C.W.D.

MUELLER/HUNT METER PIT PART NUMBER 330AT2162FFBN000291

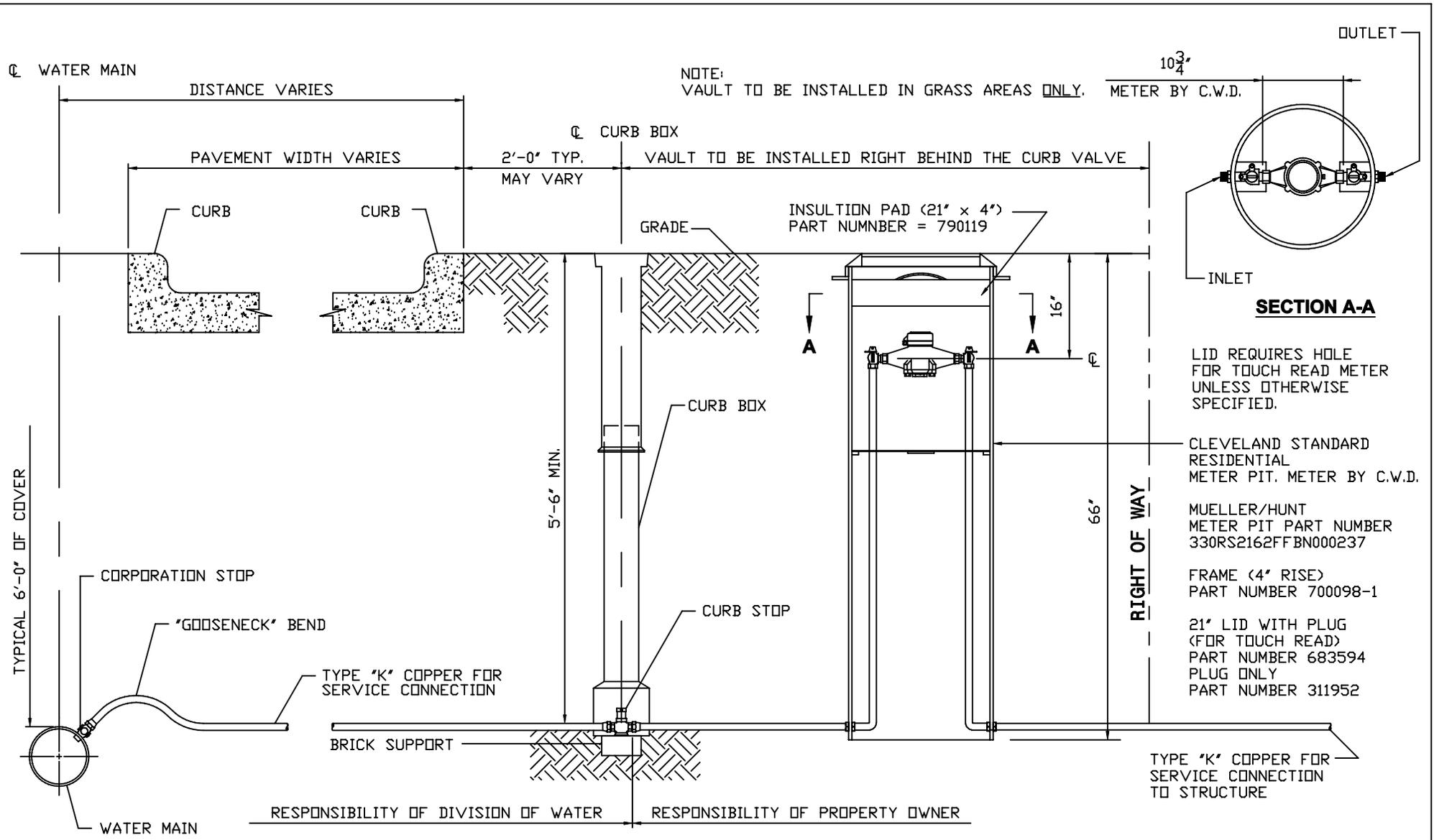
FRAME (4" RISE) PART NUMBER 700098-1

21" LID WITH PLUG (FOR TOUCH READ) PART NUMBER 683594
PLUG ONLY PART NUMBER 311952

TYPE "K" COPPER FOR SERVICE CONNECTION TO STRUCTURE

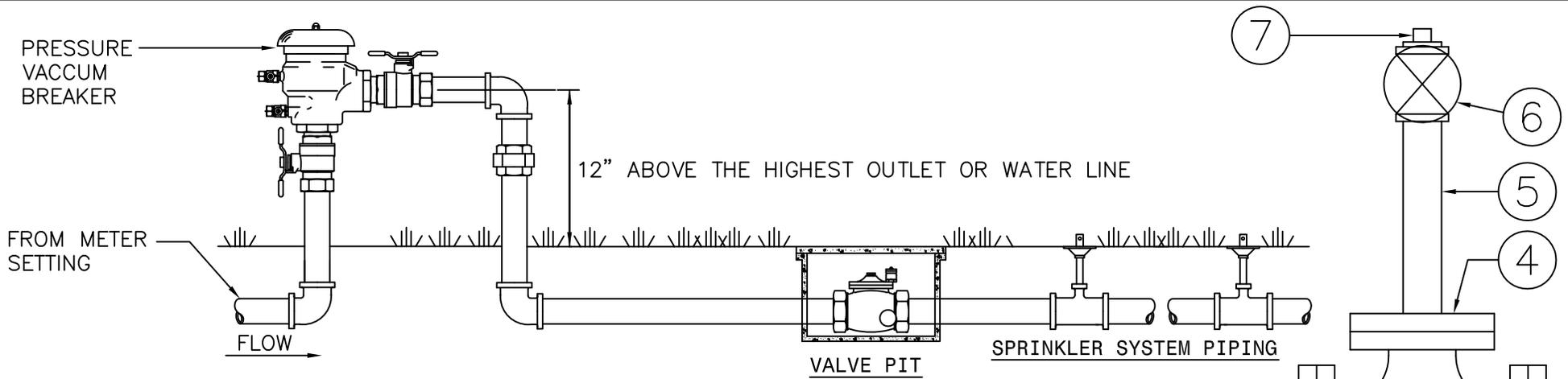
NEW 1" SERVICE CONNECTION WITH CLEVELAND STANDARD METER PIT WITH REGULATOR DETAIL IN PUBLIC RIGHT OF WAY

- NOT TO SCALE -

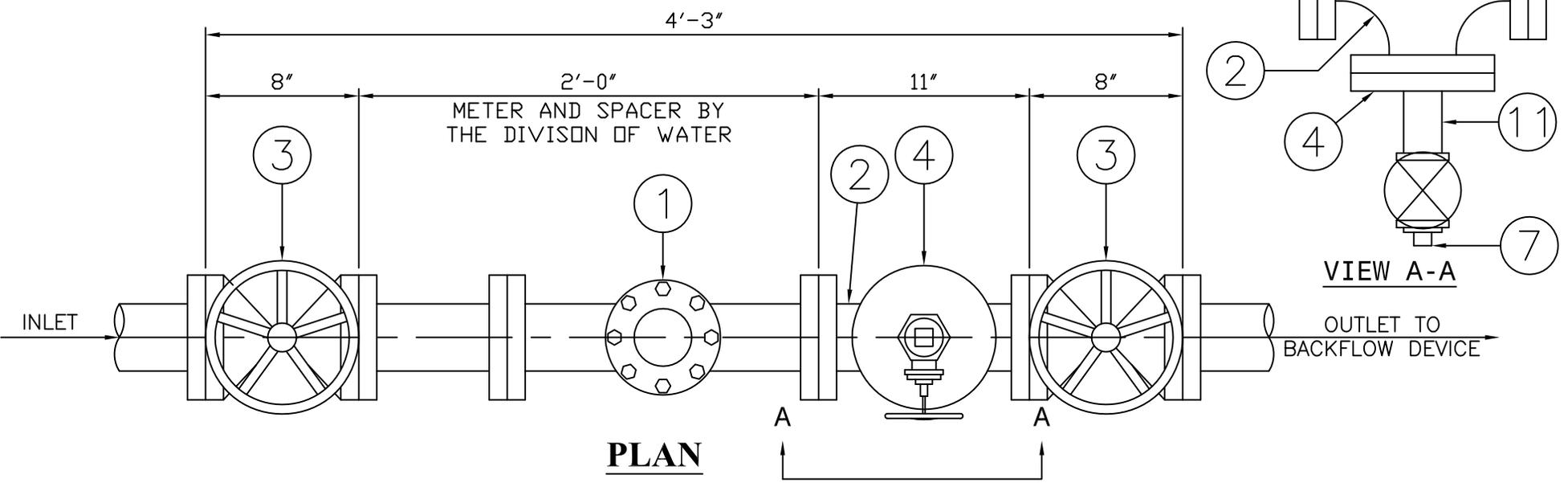


NEW 1" SERVICE CONNECTION WITH CLEVELAND STANDARD METER PIT IN PUBLIC RIGHT OF WAY

- NOT TO SCALE -



BACKFLOW & IRRIGATION DETAIL



3" IRRIGATION METER SETTING WITH 3" METER FOR VAULTS

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.
 MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE VALVES AND TEE SUPPLIED.

* ADDITIONAL DRAIN VALVES OR CONTROL VALVES MAY BE PLACED DOWNSTREAM OF BACKFLOW PREVENTOR.

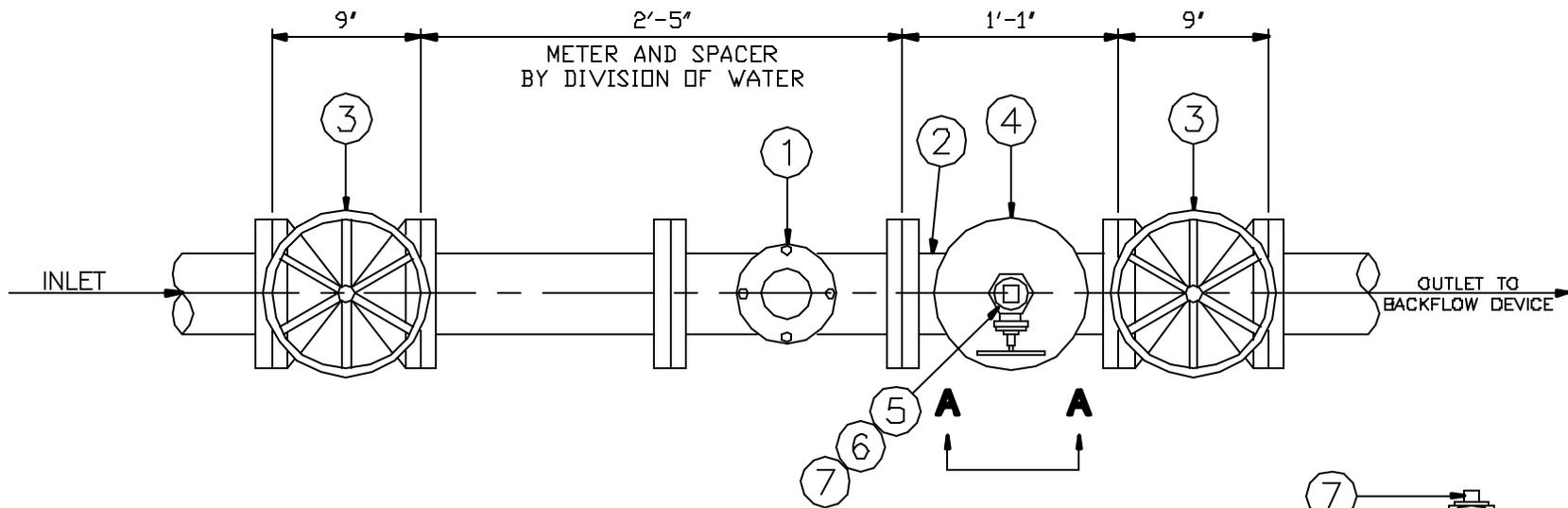
MATERIAL REQUIRED FOR INSTALLATION

3" IRRIGATION METER SETTING WITH 3" METER - FLANGED

<u>ITEM</u>	<u>Req'd</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	3"	TURBINE METER & SPACER (PROVIDED BY C.W.D.)
2	1	3" x 3" x 3" x 3"	CROSS, FLANGED
3	2	3"	HAND WHEEL GATE VALVES, FLANGED
4	2	3"	BLIND FLANGES, DRILLED & TAPPED FOR 2" BRASS NIPPLE
5	1	2" x 10"	BRASS NIPPLE
6	2	2"	HAND WHEEL GATE VALVE, SCREWED
7	2	2"	BRASS PLUG
8	8	3"	RING GASKETS
9	32	5/8" x 2-1/2"	MACHINE BOLTS
10	32	5/8"	HEX NUTS
11	1	2" x 6"	BRASS NIPPLE

(SEE DRAWING STD-M33 & STD-V01).

8-22-2012



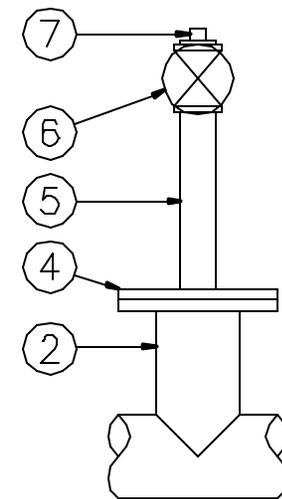
PLAN

4" IRRIGATION METER SETTING WITH 4" METER FOR VAULTS

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE VALVES AND TEE SUPPLIED.

FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216) 664-3944.



VIEW A-A

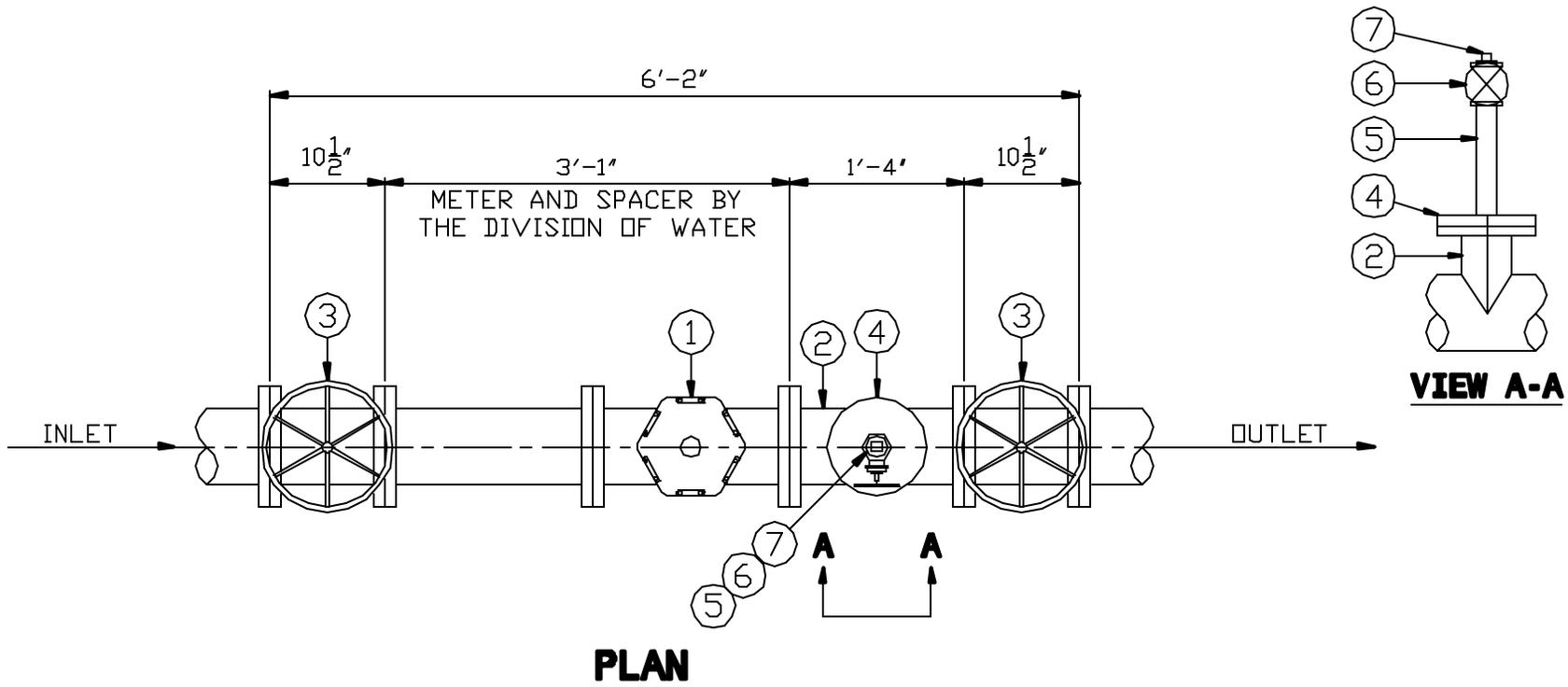
MATERIAL REQUIRED FOR INSTALLATION

4" IRRIGATION METER SETTING WITH 4" METER - FLANGED

<u>ITEM</u>	<u>Req'd</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	4"	TURBINE METER & SPACER (PROVIDED BY C.W.D.)
2	1	4" x 4" x 4"	TEE, FLANGED
3	2	4"	HAND WHEEL GATE VALVES, FLANGED
4	1	4"	BLIND FLANGES, DRILLED & TAPPED FOR 2" BRASS NIPPLE
5	1	2" x 10"	BRASS NIPPLE
6	1	2"	HAND WHEEL GATE VALVE, SCREWED
7	1	2"	BRASS PLUG
8	7	4"	RING GASKETS
9	56	5/8" x 3"	MACHINE BOLTS
10	56	5/8"	HEX BOLTS

(SEE DRAWING STD-M34 & STD-V01).

4-19-2000



6" IRRIGATION METER SETTING WITH 6" METER FOR VAULTS

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE VALVES AND TEE SUPPLIED.

FOR TYPE AND MODEL OF BACKFLOW DEVICE REQUIRED CONTACT THE BACKFLOW UNIT AT (216) 664-3944.

SIZE THE METER VAULT ACCORDINGLY WITH THE BACKFLOW DEVICED USED.

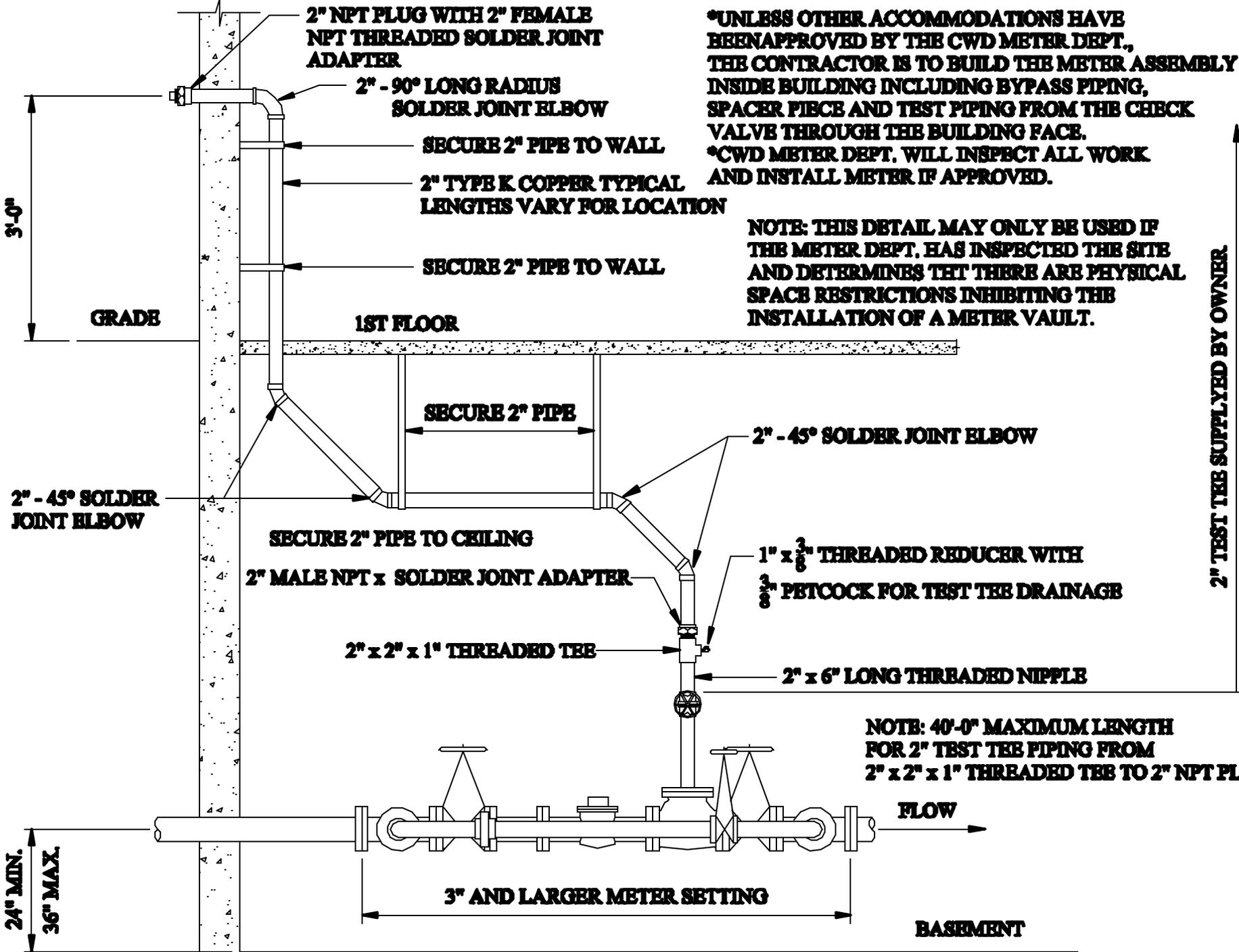
MATERIAL REQUIRED FOR INSTALLATION

6" IRRIGATION METER SETTING WITH 6" METER - FLANGED

<u>ITEM</u>	<u>Req'd</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	6"	TURBINE METER & SPACER (PROVIDED BY C.W.D.)
2	1	6" x 6" x 6"	TEE, FLANGED
3	2	6"	HAND WHEEL GATE VALVES, FLANGED
4	1	6"	BLIND FLANGES, DRILLED & TAPPED FOR 2" BRASS NIPPLE
5	1	2" x 10"	BRASS NIPPLE
6	1	2"	HAND WHEEL GATE VALVE, SCREWED
7	1	2"	BRASS PLUG
8	7	6"	RING GASKETS
9	56	3/4" x 3-1/2"	MACHINE BOLTS
10	56	3/4"	HEX BOLTS

(SEE DRAWING STD-M35 & STD-V01).

4-19-2000

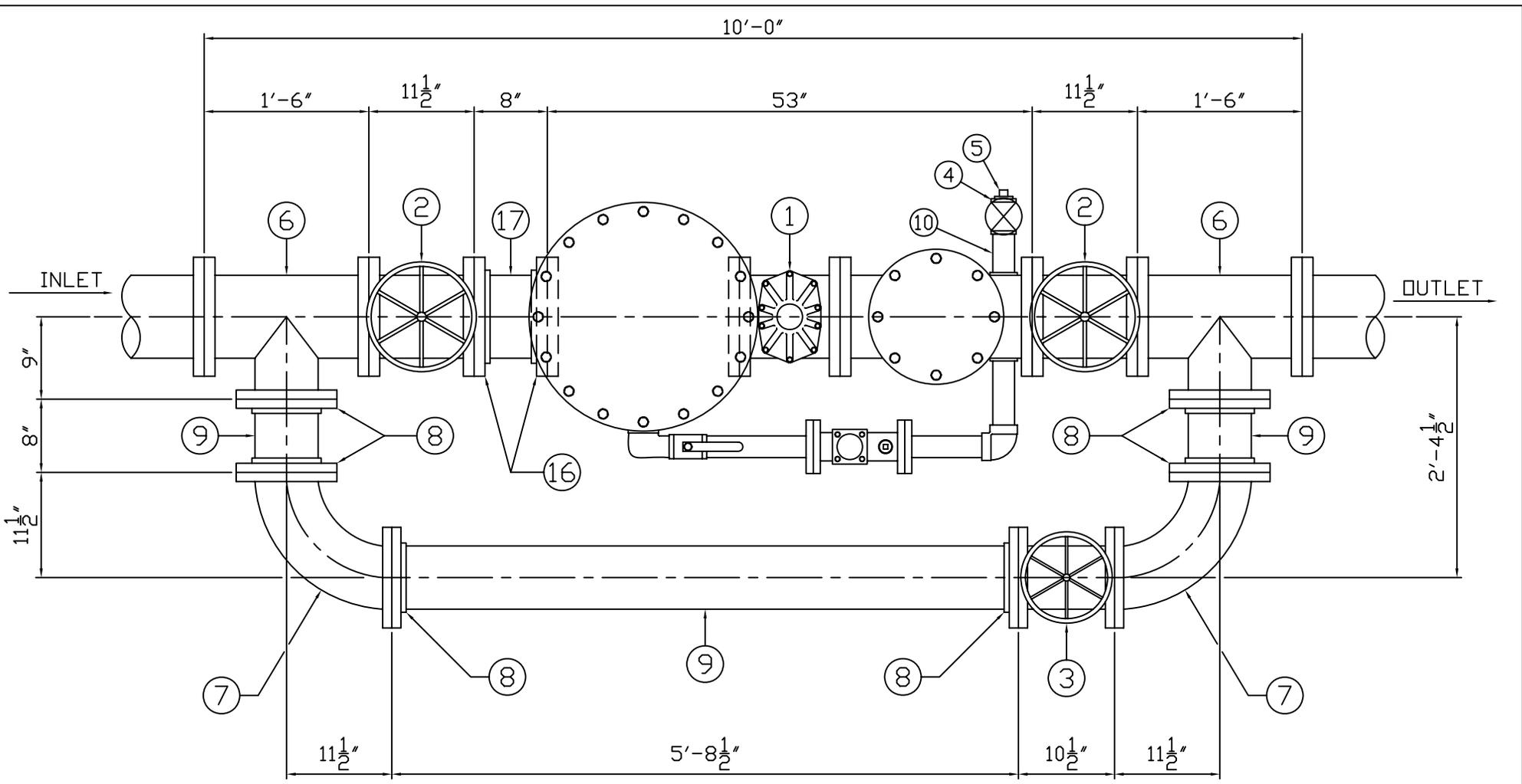


*UNLESS OTHER ACCOMMODATIONS HAVE BEEN APPROVED BY THE CWD METER DEPT., THE CONTRACTOR IS TO BUILD THE METER ASSEMBLY INSIDE BUILDING INCLUDING BYPASS PIPING, SPACER PIECE AND TEST PIPING FROM THE CHECK VALVE THROUGH THE BUILDING FACE.
 *CWD METER DEPT. WILL INSPECT ALL WORK AND INSTALL METER IF APPROVED.

NOTE: THIS DETAIL MAY ONLY BE USED IF THE METER DEPT. HAS INSPECTED THE SITE AND DETERMINES THAT THERE ARE PHYSICAL SPACE RESTRICTIONS INHIBITING THE INSTALLATION OF A METER VAULT.

2" TEST TEE SUPPLIED BY OWNER

NOTE: 40'-0" MAXIMUM LENGTH FOR 2" TEST TEE PIPING FROM 2" x 2" x 1" THREADED TEE TO 2" NPT PLUG



NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

PLAN

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
 ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
 DIVISION OF WATER
 CLEVELAND, OHIO

SUBJECT FM APPROVED 8" COMPOUND
METER ASSEMBLY FOR VAULT
BADGER MODEL FSA-01 OR APPROVED

DRAWN BY <u>RSK</u>	-SCALE-
DATE <u>5-25-2001</u>	<u>1-1/2" = 1'-0"</u>
CHECKED BY _____	DATE _____

STD-M37

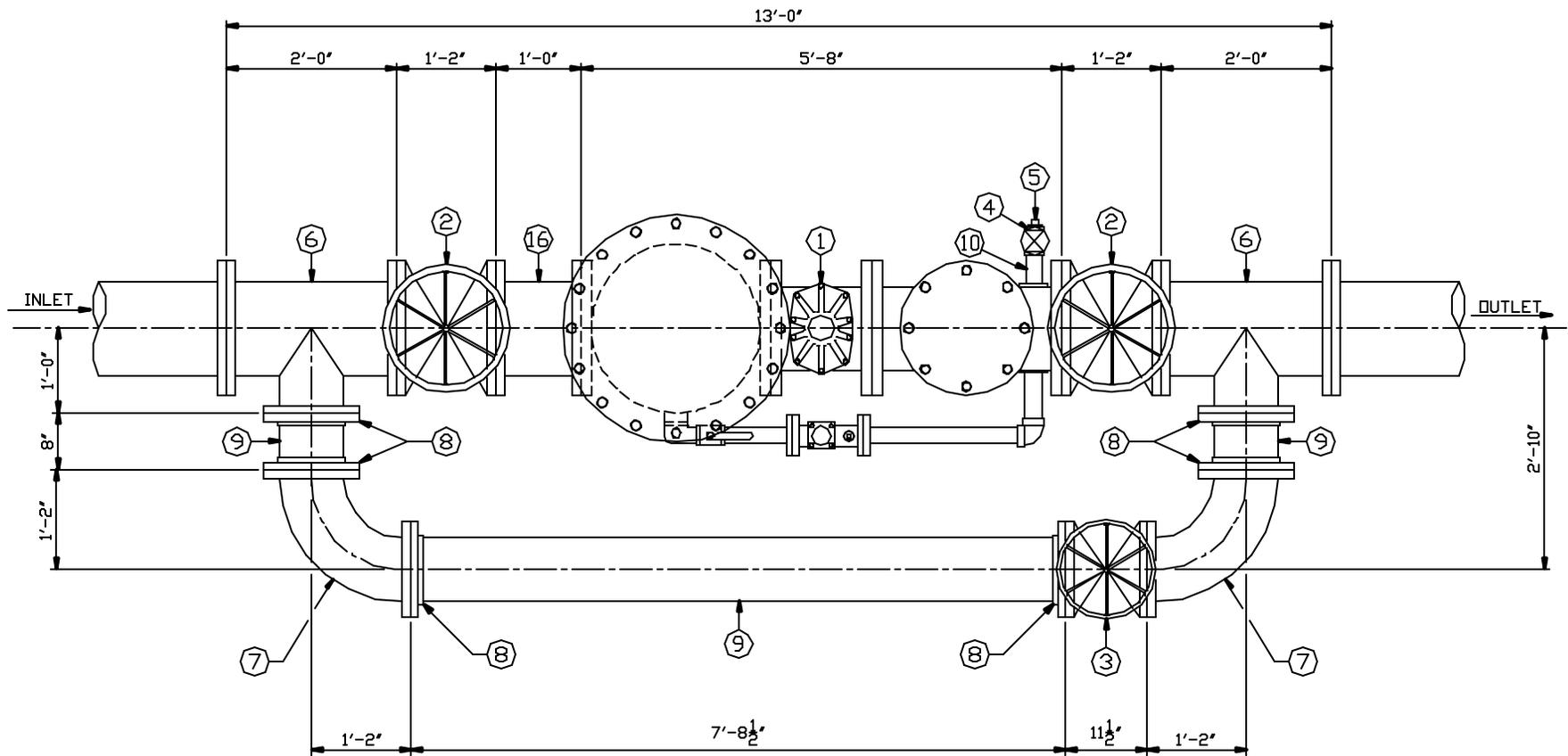
MATERIALS REQUIRED FOR INSTALLATION

FM APPROVED 8" COMPOUND METER ASSEMBLY FOR VAULT

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	8"	FM APPROVED COMPOUND METER ASSEMBLY (BY CONTRACTOR)
2	2	8"	HAND WHEEL GATE VALVES, FLANGED
3	1	6"	O.S.Y. VALVE, FLANGED
4	1	2"	HAND WHEEL GATE VALVE, SCREWED
5	1	2"	BRASS PLUG
6	2	8" x 6"	CAST IRON TEES, FLANGED
7	2	6"	CAST IRON ELBOWS, FLANGED LR
8	6	6" x 11"	CAST IRON FLANGE, 8 HOLE
9	85"	6"	GALVANIZED PIPE, EXTRA HEAVY
10	1	2" x 4-1/2"	BRASS NIPPLE
11	7	8"	FLANGE GASKETS
12	7	6"	FLANGE GASKETS
13	112	3/4" x 3-1/2"	MACHINE BOLTS
14	8	3/4" x 4-1/4"	STUD BOLTS
15	120	3/4"	HEX NUTS
16	2	8" x 13-1/2"	CAST IRON FLANGE, 8 HOLE
17	8"	8"	GALVANIZED PIPE, EXTRA HEAVY

(SEE DRAWING No. STD-M37 & STD-V01).

5-25-2001



PLAN

NOTE: ALL BOLTS AND GASKETS BY SUPPLIER.

MINOR VARIATIONS IN THE OVERALL LENGTH ARE TO BE EXPECTED DEPENDING ON THE TEE'S, VALVES, AND CHECK VALVES SUPPLIED.
 ADJUSTMENTS TO THE BYPASS (ITEM No. 10) WILL BE MADE BY THE DIVISION OF WATER AS NEEDED.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
 DIVISION OF WATER
 CLEVELAND, OHIO

SUBJECT FM APPROVED 12" COMPOUND
 METER ASSEMBLY FOR VAULT

DRAWN BY RSK	-SCALE-
DATE 6-25-2004	1" = 1'-0"
CHECKED BY _____	DATE _____

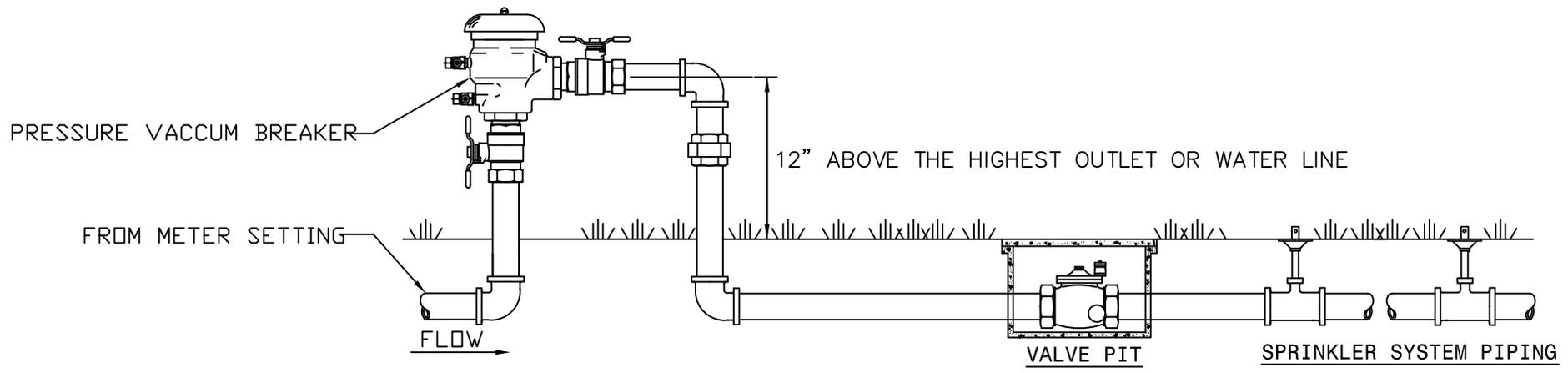
STD-M39

MATERIALS REQUIRED FOR INSTALLATION

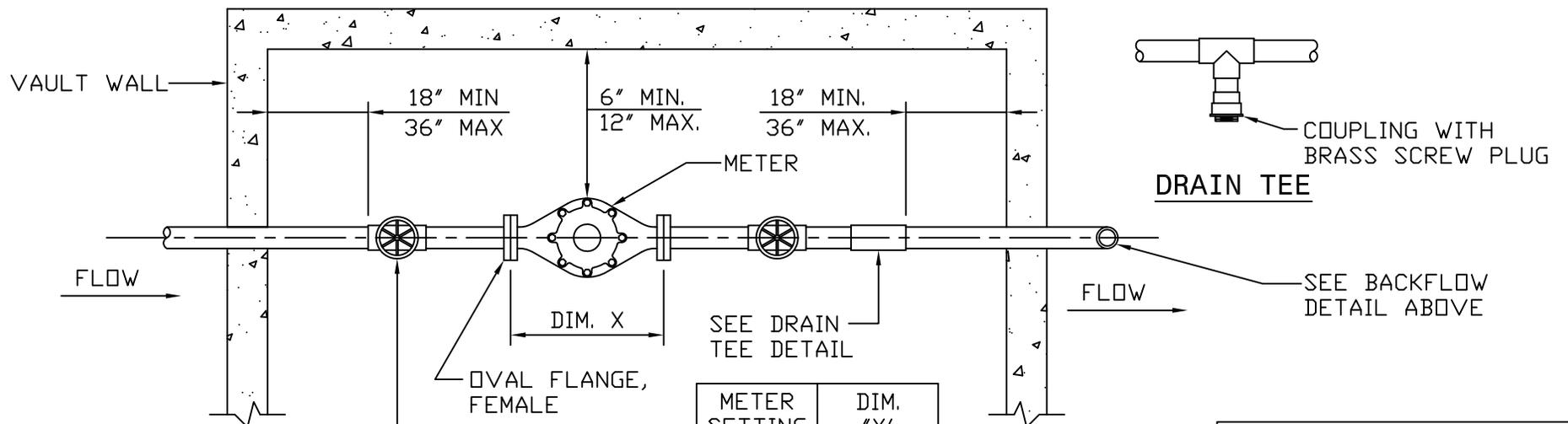
FM APPROVED 12" COMPOUND METER ASSEMBLY FOR VAULT

<u>ITEM</u>	<u>REQ'D</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	12"	FM APPROVED COMPOUND METER ASSEMBLY (BY CONTRACTOR)
2	2	12"	HAND WHEEL GATE VALVES, FLANGED
3	1	8"	O.S.Y. VALVE, FLANGED
4	1	2"	HAND WHEEL GATE VALVE, SCREWED
5	1	2"	BRASS PLUG
6	2	12" x 8"	CAST IRON TEES, FLANGED
7	2	8"	CAST IRON ELBOWS, FLANGED LR
8	6	8" x 13-1/2"	CAST IRON FLANGE, 8 HOLE
9	110"	8"	GALVANIZED PIPE, EXTRA HEAVY
10	1	2" x 4-1/2"	BRASS NIPPLE
11	7	12"	FLANGE GASKETS
12	7	8"	FLANGE GASKETS
13	84	7/8" x 4"	MACHINE BOLTS
14	8	7/8" x 4-3/4"	STUD BOLTS
15	100	7/8"	HEX NUTS
16	1	12" x 12"	LONG FLANGED DUCTILE IRON PIPE
17	56	3/4" x 3-1/2"	MACHINE BOLTS
18	56	3/4"	HEX NUTS

(SEE DRAWING No. STD-M39 & STD-V01)
6-25-2004



BACKFLOW & IRRIGATION DETAIL



HAND WHEEL GATE VALVE MUST BE SIZE OF INCOMING SERVICE. VALVE IS FEMALE NPT THREAD.

PLAN

METER SETTING	DIM. "X"
1½"	1'-1"
2"	1'-5"

* ADDITIONAL DRAIN VALVES OR CONTROL VALVES MAY BE PLACED DOWNSTREAM OF BACKFLOW PREVENTOR.

STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER
CLEVELAND, OHIO

SUBJECT APPROVED 1½" & 2" METER SETTINGS FOR
1½" & 2" METER & BACKFLOW ASSEMBLY FOR VAULTS
* "LAWN IRRIGATION ONLY"

DRAWN BY RSK	-SCALE- NONE	STD-M40
DATE 8-22-2012		
CHECKED BY _____ DATE _____		

MATERIAL REQUIRED FOR INSTALLATION

STANDARD 3" METER SETTING - 2" METER

<u>ITEM</u>	<u>Req'd</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
1	1	2"	HAND WHEEL GATE VALVE, SCREWED
2	2	2" x 6"	GALVANIZED NIPPLES
3	2	3"	HAND WHEEL GATE VALVE NRS, FLANGED
4	1	3"	SWING GATE CHECK VALVE, FLANGED
5	1	2"	O.S.Y. VALVE, SCREWED
6	2	3" x 3" x 3"	TEE, FLANGED
7	2	2" x 10"	GALVANIZED NIPPLE
8	2	2"	GALVANIZED ELBOWS - 90 DEGREES
9	2	2"	GALVANIZED STREET ELBOWS
10	1	2"	GALVANIZED UNION, MALE TO FEMALE
11	36"	2"	GALVANIZED PIPE, EXTRA HEAVY
12	2	2" x 2-1/2"	BRASS NIPPLES
13	2	3" x 7-1/2" DIA.	FLANGES (4 HOLE) WITH 2" TAP
14	2	2"	ELLIPTICAL FLANGES (2 HOLE) (BY C.W.D.)
15	1	2"	DISPLACEMENT METER (METER BY C.W.D.)
16	1	2" x 10"	BRASS NIPPLE
17	2	3"	BLIND FLANGES, DRILLED & TAPPED FOR 2" x 6" NIPPLES FOR ITEM No. 2
18	1	2"	BRASS PLUG
19	9	3"	RING GASKETS
20	2	2"	ELLIPTICAL GASKETS
21	36	5/8" x 2-1/2"	MACHINE BOLTS
22	2	5/8" x 3"	STUD BOLTS
23	38	5/8"	HEX BOLTS

(SEE DWG. STD-M04 & STD-M05 & STD-V01).
11-19-98