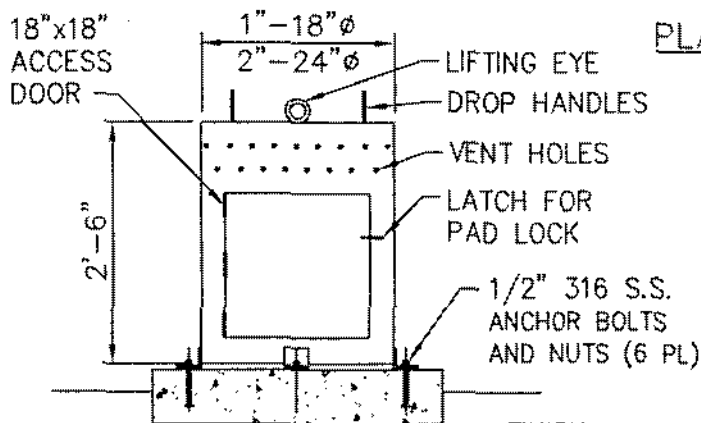
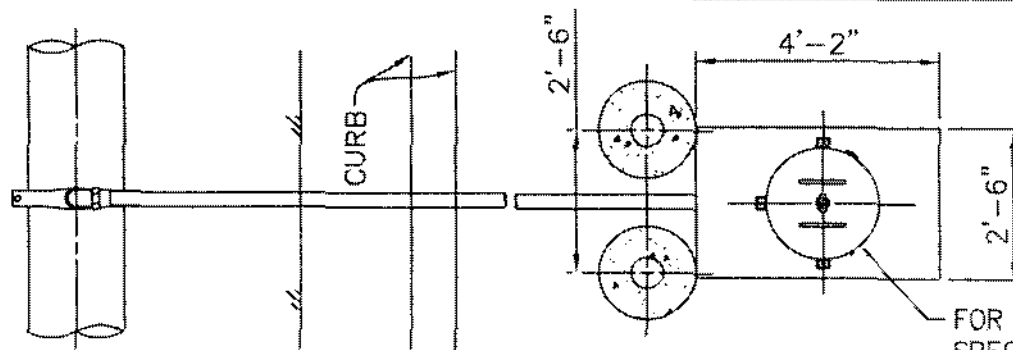


CITY OF COACHELLA
INFRASTRUCTURE DEVELOPMENT STANDARDS

DESCRIPTION	STD. NO.
WATER	
1" and 2" Air Vac & Air Release Assembly	W-1
2" Blow-Off Installation	W-2
4" PVC Blow-Off Installation	W-3
6" Fire Hydrant Installation	W-4
Pipe Bedding and Trench Backfill for Potable Water Mains	W-5
Reduced Pressure Backflow Prevention Device (3/4" Thru 2")	W-6
Reduced Pressure Backflow Prevention Device (4" & Larger)	W-7
Standard Water Service Lateral (Under 2")	W-8
Compact Service Meter Box 4" and Larger	W-9
Fire Detector Check Assembly (4", 6" or 8" D.C.)	W-10
Water Appurtenance Locations	W-11
Water Valve Box Installation	W-12
Concrete Thrust Blocks	W-13.1
Thrust Block Bearing Areas	W-13.2
Water Main Plug Assembly	W-14
Test Station	W-15
Standard Guard Post Installation	W-16



EXISTING OR FINISHED GRADE PER PLAN

8" SLIP CAN AND COVER PER STD. DWG. W-10

(X) COPPER FLARE TO IRON PIPE THREAD ADAPTER

(X) BRASS 90° CORP. ADAPTOR

2" WIDE STRAP BRONZE SADDLE

WATERLINE

(X) BRASS BALL VALVE

(X) BRASS CORP. STOP

SLOPE UP
@ 1/2" PER FT

(X) COPPER PIPE (TYPE K)

PROFILE

GUARD POST PER STD. DWG. W-13

AIR VAC PER APPROVED MATERIAL LIST

ENCLOSURE PER DETAIL HEREON

(X) BRASS BALL VALVE

470-C-2000 CONCRETE

(X) BRASS CORP. STOP

(X) COPPER FLARE TO IRON PIPE THREAD

18" R MIN BEND

NOTES:

1. ALL GALV. AND BRASS BURIED PIPE OR FITTINGS SHALL BE COATED WITH APPROVED WAX TAPE BEFORE BACKFILLING.
2. LOCATIONS OF AIR VAC AND AIR RELEASE ASSEMBLY SHALL BE PLACED PER STD. DWG. W-9.
3. ACCESS DOOR TO BE PAD LOCKED WITH DISTRICT KEYED, S.S. LOCK.
4. X=1" FOR 1" AIR VALVE, 2" FOR 2" AIR VALVE.

CITY OF COACHELLA

APPROVED:

RCE 24878 EXP. 12/31/07

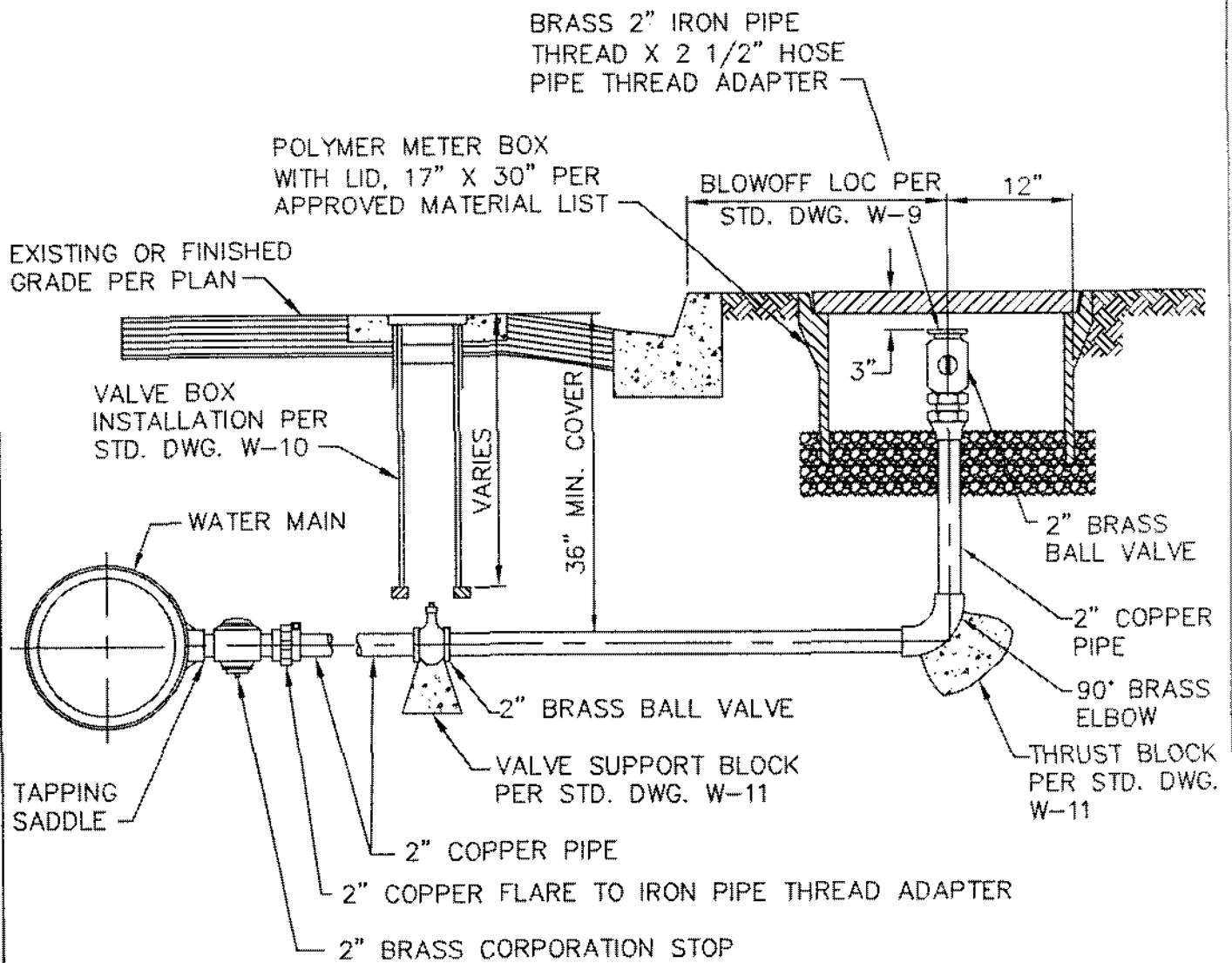
REVISION	APPROVED	DATE

1" AND 2" AIR VAC
& AIR RELEASE
ASSEMBLY

STANDARD DRAWING NO.

W-1

JUNE 2007

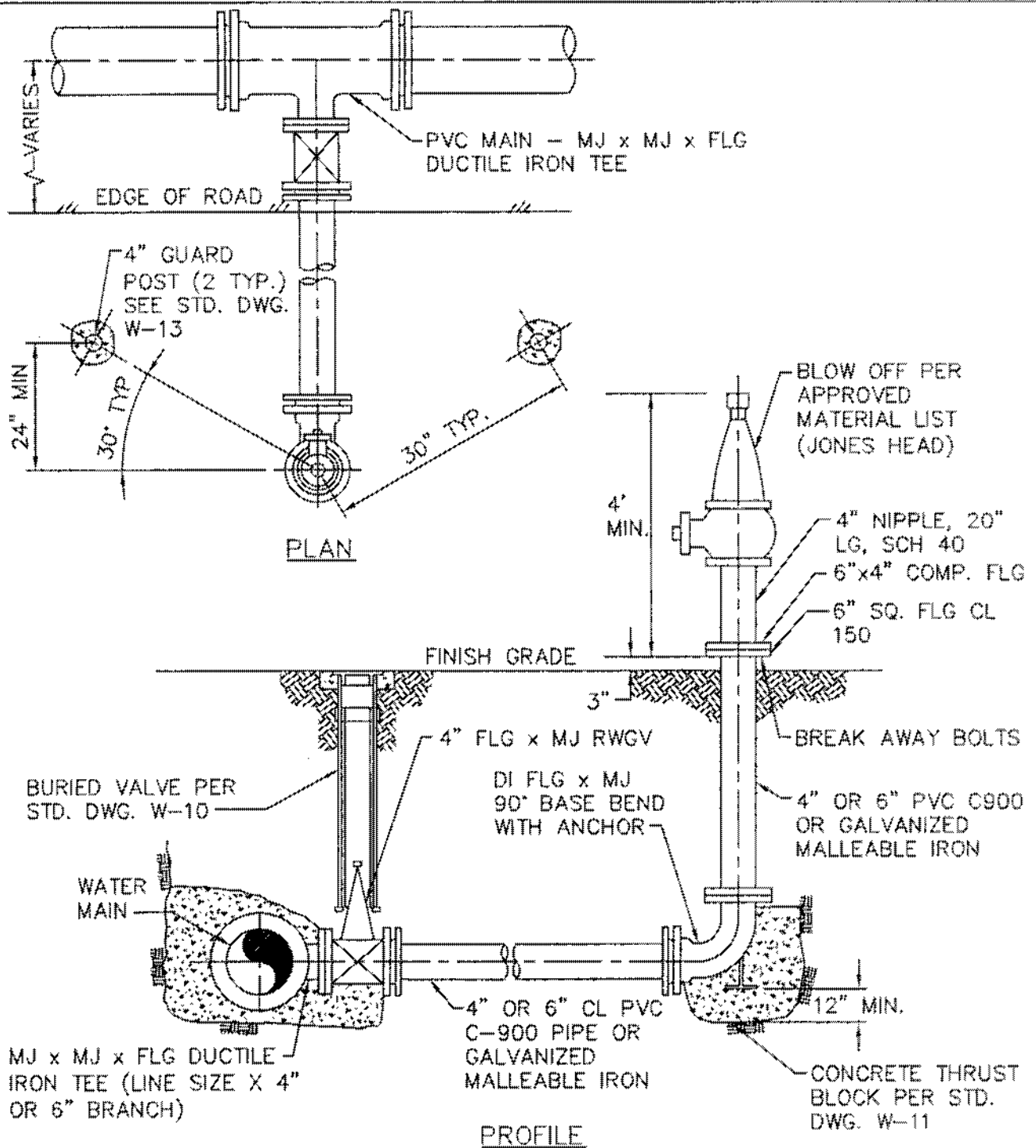


CITY OF COACHELLA

APPROVED:		
<i>[Signature]</i>		
RCE 24870	EXP. 12/31/07	
REVISION	APPROVED	DATE

2" BLOW-OFF
INSTALLATION

STANDARD DRAWING NO.
W-2
JUNE 2007



NOTES

1. REFER TO W-9 "APPURTENANCE LOCATIONS & NOTES" FOR LOCATION.
2. BLOW-OFFS SHALL BE EPOXY COATED CHROME YELLOW.
3. ALL JOINTS SHALL BE RESTRAINED.
4. ALL UNDERGROUND IRON & STEEL SHALL BE POLYETHYLENE ENCASED PER ANSI/AWWA C105.

CITY OF COACHELLA

APPROVED:

Eng. R. Chaves
RCE 24870 EXP. 12/31/07

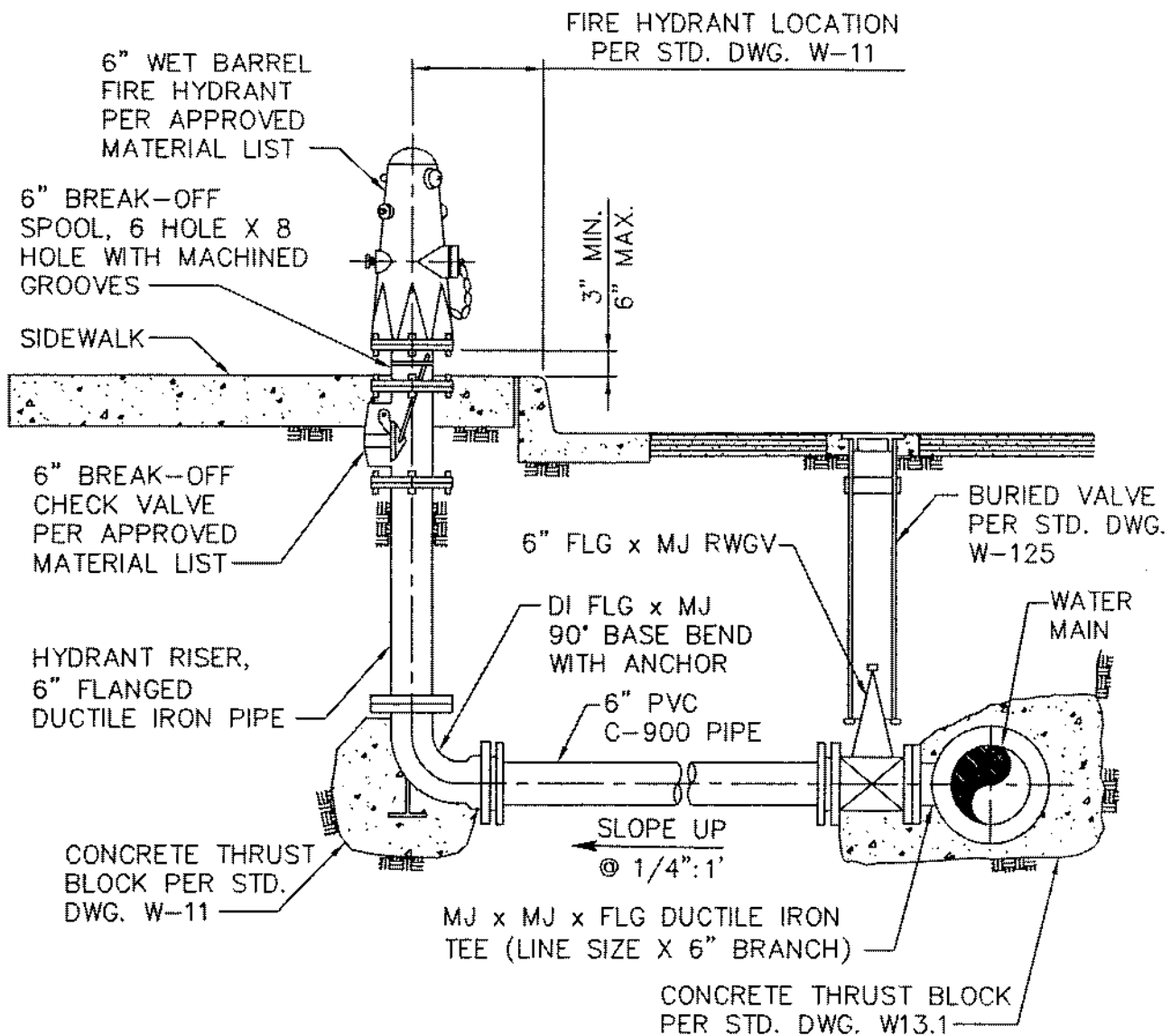
REVISION	APPROVED	DATE

4" OR 6" PVC OR GALVANIZED
MALLEABLE IRON BLOW OFF
ASSEMBLY INSTALLATION

STANDARD DRAWING NO.

W-3

JUNE 2007



CITY OF COACHELLA

APPROVED:

Dong X. Huaro
RCE 24870 EXP. 12/31/07

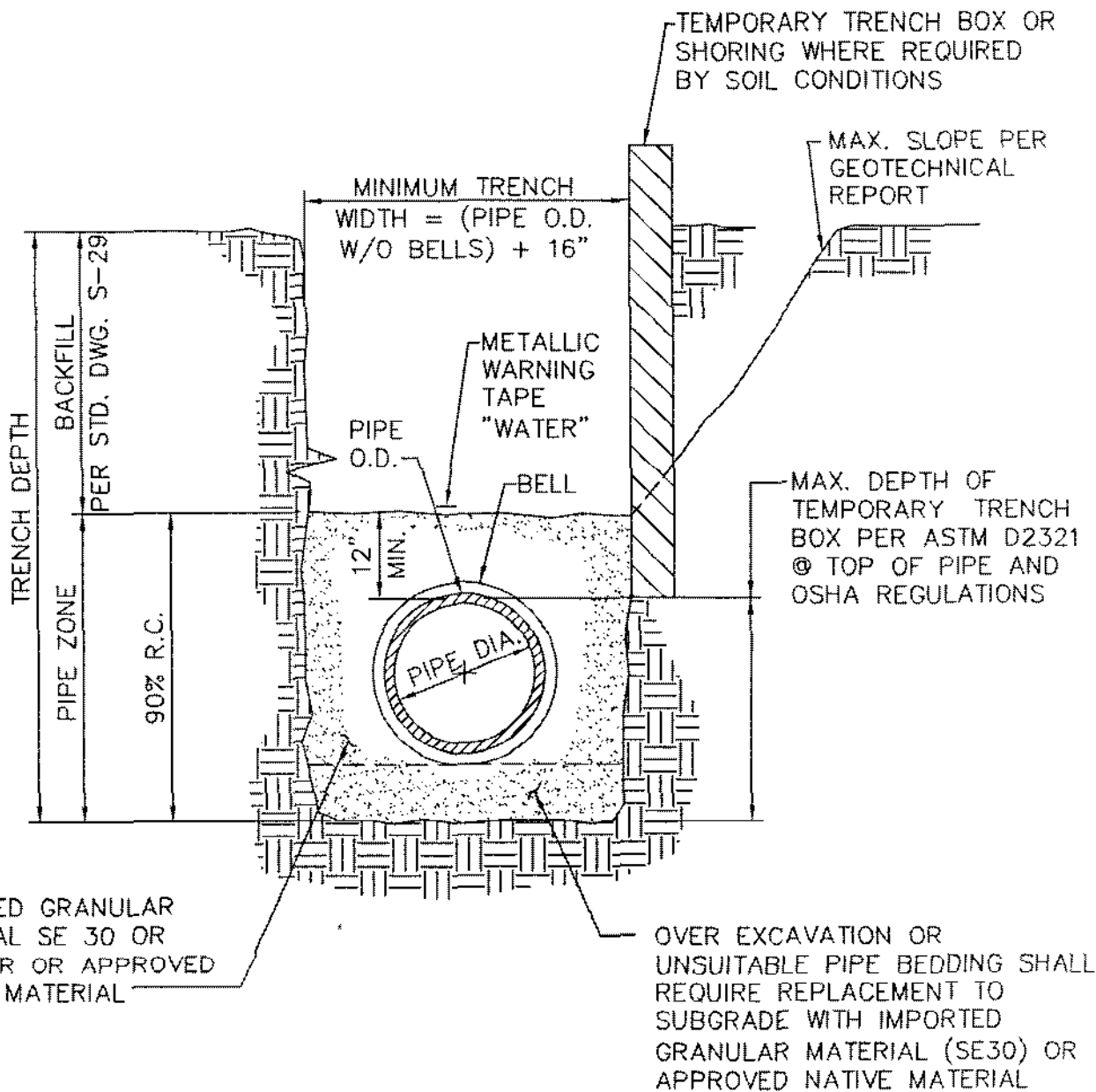
REVISION	APPROVED	DATE

6" FIRE HYDRANT
INSTALLATION

STANDARD DRAWING NO.

W-4

JUNE 2007



NOTE

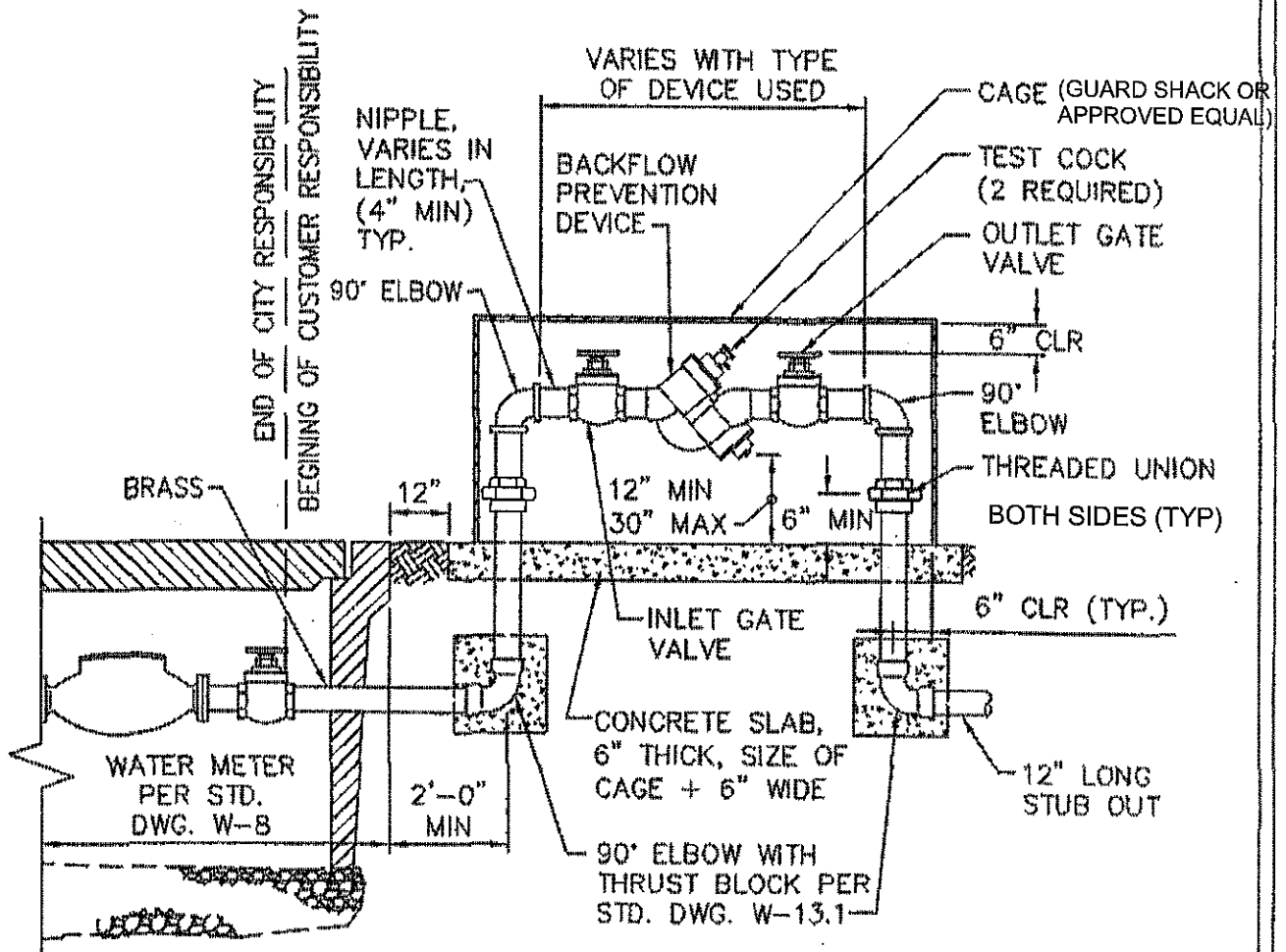
1. EXCAVATE BELL HOLES AT EACH PIPE JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT.

CITY OF COACHELLA

APPROVED:		
<i>[Signature]</i>		
RCE 24870 EXP. 12/31/07		
REVISION	APPROVED	DATE

PIPE BEDDING AND
TRENCH BACKFILL FOR
POTABLE WATER MAINS

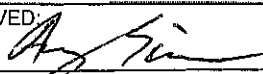
STANDARD DRAWING NO.
W-5
JUNE 2007



NOTES

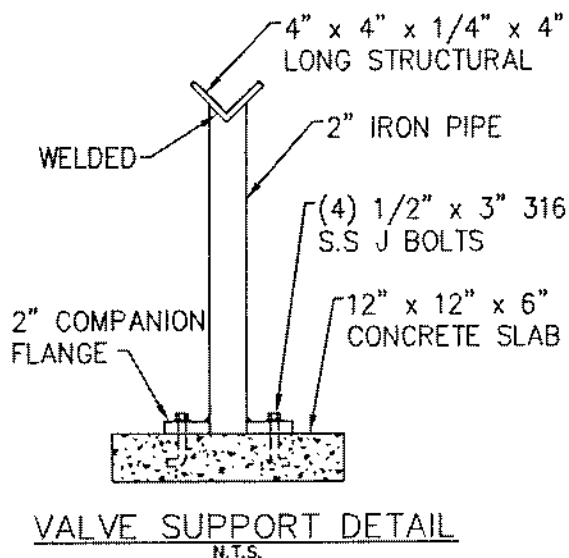
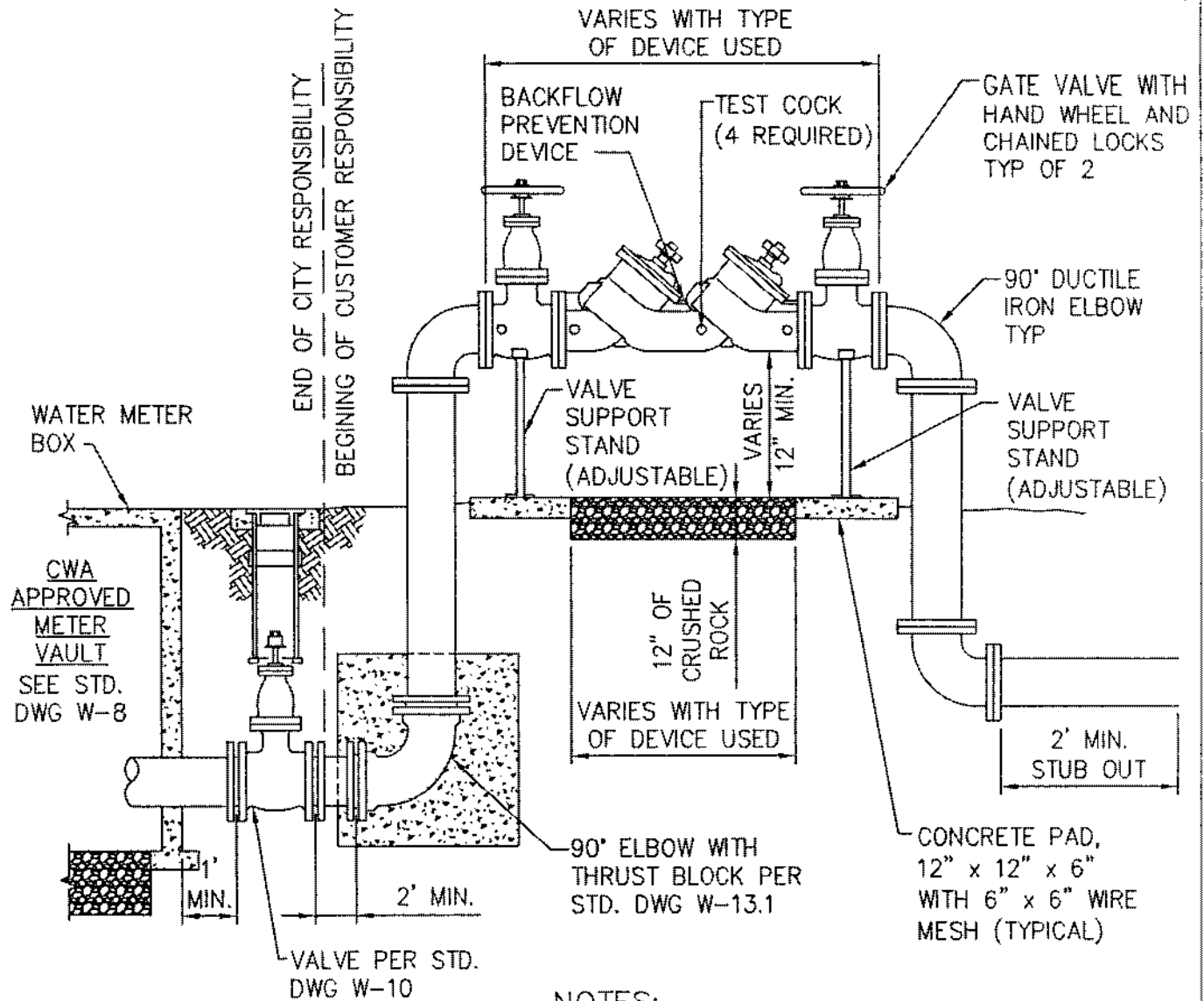
1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL BACKFLOW PREVENTION DEVICES SHALL BE AS CLOSE TO THE WATER METER AS POSSIBLE. MAXIMUM DISTANCE TO BE 5 FEET.
3. THE BACKFLOW PREVENTION DEVICE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE WATER METER AND THE BACKFLOW DEVICE.
5. APPROPRIATE TEST COCKS SHALL BE IN PLACE AT ALL TIMES.
6. CITY SHALL HAVE ACCESS TO BACKFLOW PREVENTION DEVICE AT ALL TIMES.
7. PIPING MATERIAL SHALL BE RED BRASS OR "L" HARD COPPER. PIPING INSTALLATION SHALL BE PER CURRENT UNIFORM PLUMBING CODE, WITH WAX TAPE WRAPPED JOINTS.
8. ALL EXPOSED PIPE, FITTINGS, AND VALVES TO BE EPOXY COATED.

CITY OF COACHELLA

APPROVED: 		
R.C.E. 72868 EXP. 6/30/24		
REVISION	APPROVED	DATE

**REDUCED PRESSURE
BACKFLOW
PREVENTION DEVICE
(3/4" THRU 2")**

STANDARD DRAWING NO.
W-6
AUGUST 2023



NOTES:

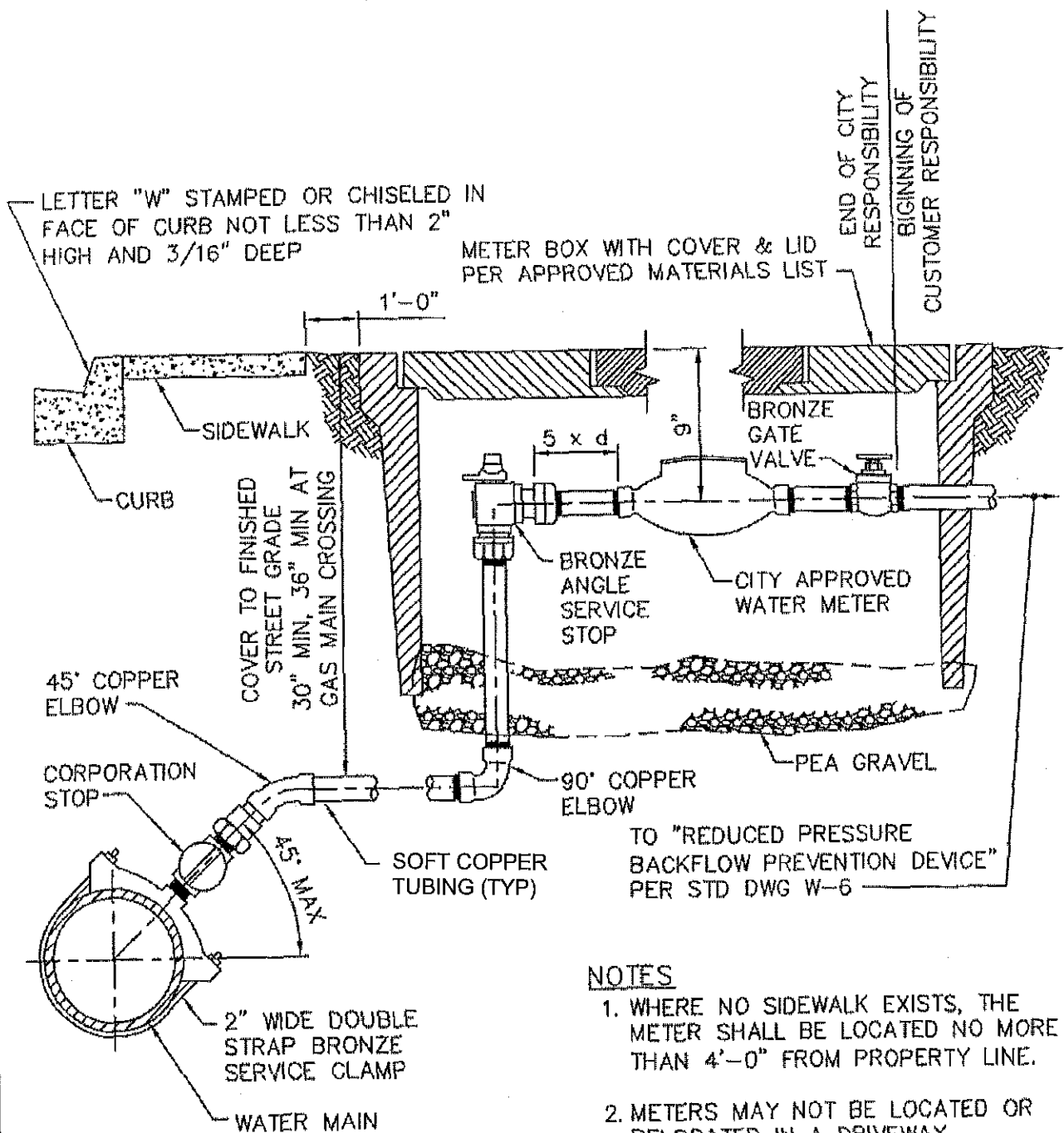
1. ALL INSTALLATIONS SHALL BE ABOVE GROUND.
2. ALL BACKFLOW PREVENTION DEVICES SHALL BE SET AS CLOSE TO THE WATER METER AS POSSIBLE.
3. THE BACKFLOW PREVENTION DEVICE SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. NO CONNECTIONS SHALL BE MADE BETWEEN THE WATER METER AND THE BACKFLOW DEVICE.
5. APPROPRIATE TEST COCKS SHALL BE IN PLACE AT ALL TIMES.
6. CITY SHALL HAVE ACCESS TO BACKFLOW PREVENTION DEVICE AT ALL TIMES.
7. ALL EXPOSED PIPE, FITTINGS, SUPPORT STANDS, AND VALVES TO BE EPOXY COATED.
8. ALL PIPES AND FITTINGS SHALL BE RESTRAINED.

CITY OF COACHELLA

APPROVED:		
<i>[Signature]</i>		
RCE 24800	EXP. 12/31/07	
REVISION	APPROVED	DATE

REDUCED PRESSURE
BACKFLOW
PREVENTION DEVICE
(4" & LARGER)

STANDARD DRAWING NO.
W-7
JUNE 2007



NOTES

1. WHERE NO SIDEWALK EXISTS, THE METER SHALL BE LOCATED NO MORE THAN 4'-0" FROM PROPERTY LINE.
2. METERS MAY NOT BE LOCATED OR RELOCATED IN A DRIVEWAY.
3. IF METER BOX IS TO BE INSTALLED IN SIDEWALK, WRAP BOX WITH 1/4" BLACK FELT.

CITY OF COACHELLA

APPROVED:

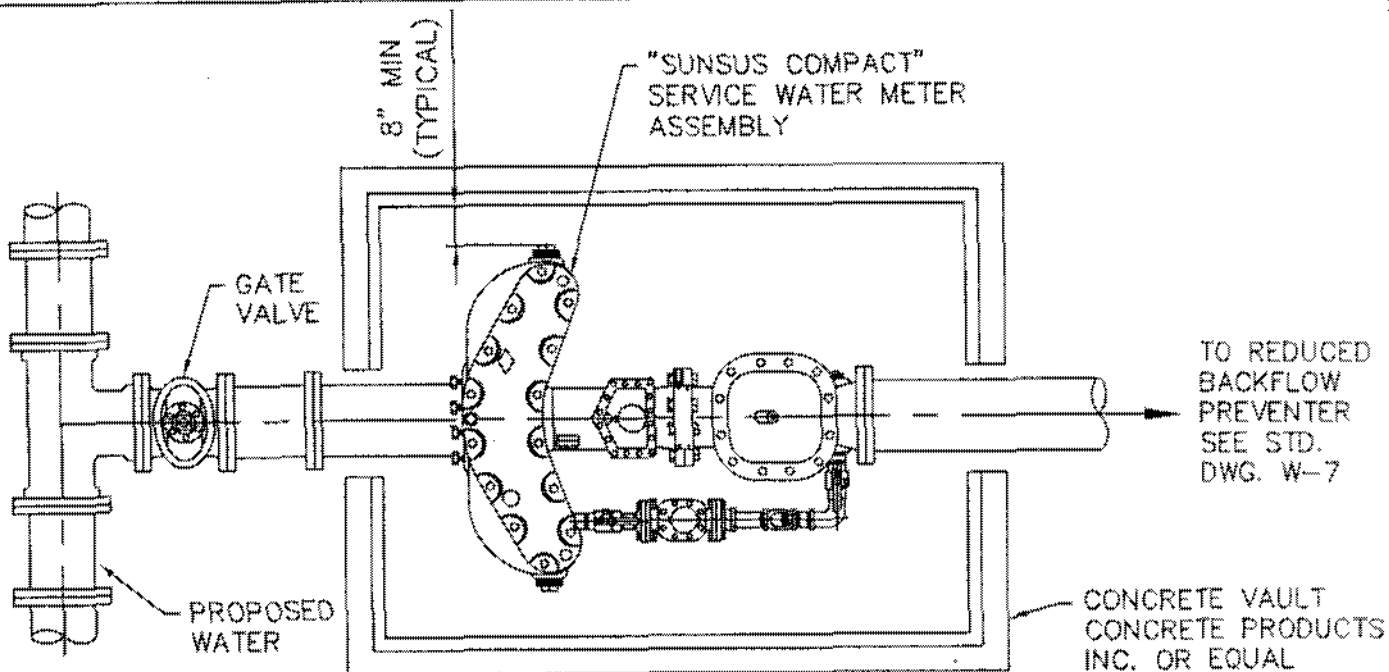
R.C.E 72868 EXP. 6/30/24		
REVISION	APPROVED	DATE

STANDARD WATER SERVICE (UNDER 2")

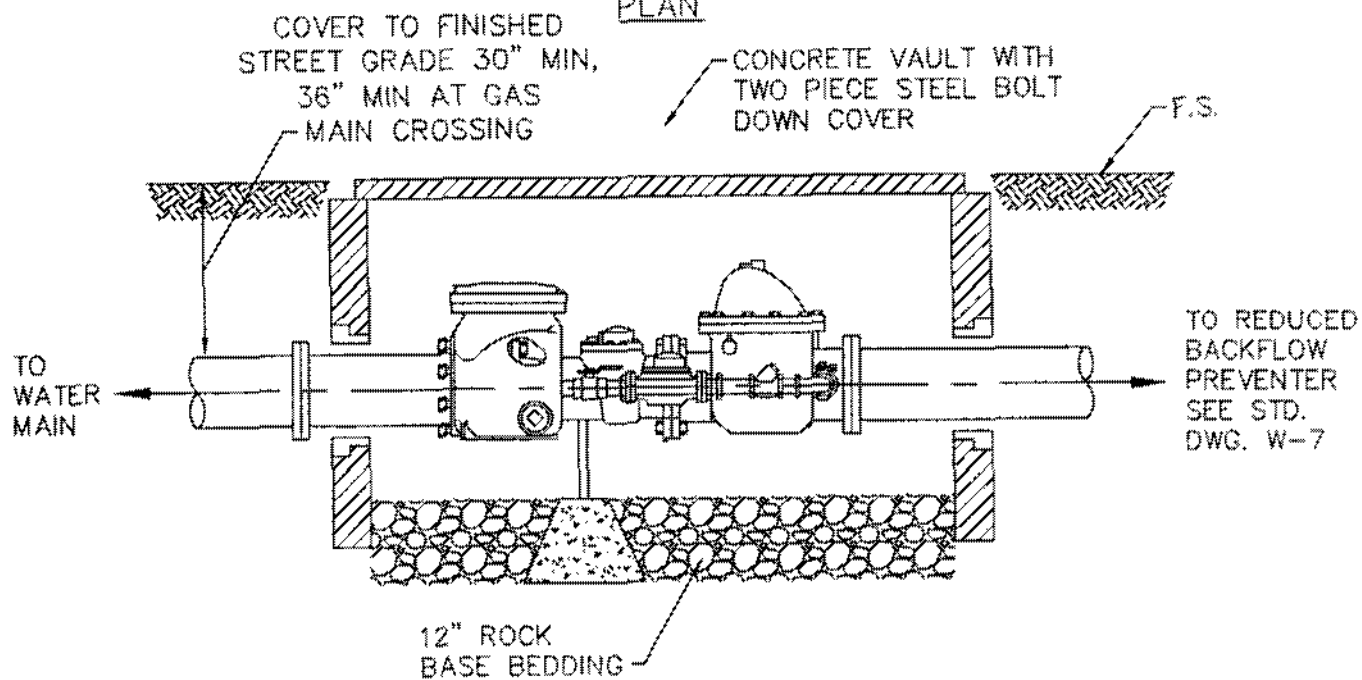
STANDARD DRAWING ..

W-8

AUGUST 2023



PLAN



PROFILE

NOTES

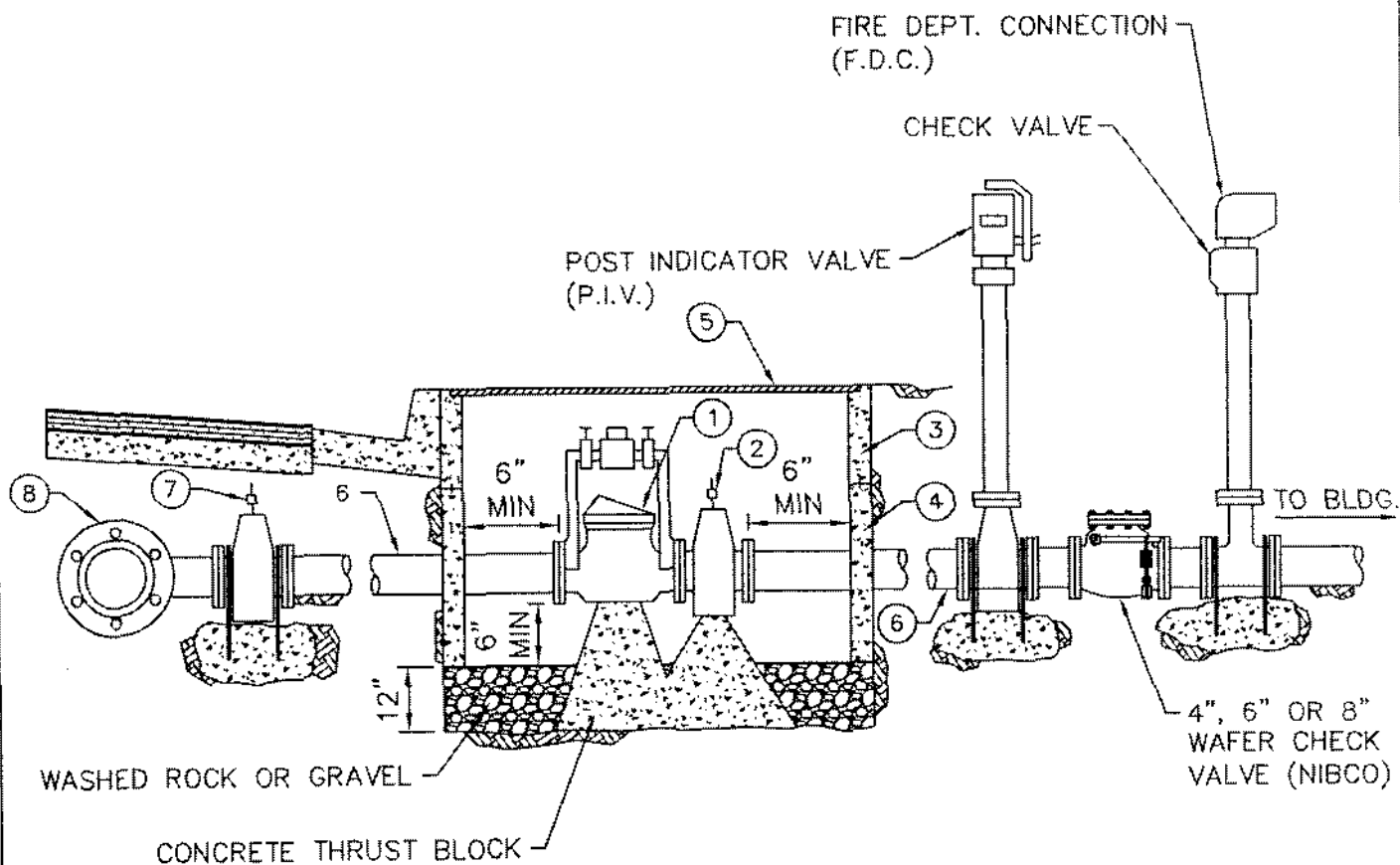
1. WHERE NO SIDEWALK EXISTS, THE METER SHALL BE LOCATED NO MORE THAN 4'-0" FROM PROPERTY LINE.
2. METERS MAY NOT BE LOCATED OR RELOCATED IN A DRIVEWAY.
3. IF METER BOX IS TO BE INSTALLED IN SIDEWALK, WRAP BOX WITH 1/4" BLACK FELT.

CITY OF COACHELLA

APPROVED:		
<i>[Signature]</i>		
RCE 24870	EXP. 12/31/07	
REVISION	APPROVED	DATE

**COMPACT SERVICE
METER BOX
4" AND LARGER**

STANDARD DRAWING NO.
W-9
JUNE 2007



ITEM NO.	SIZE AND DESCRIPTION	MATERIAL SPECIFICATIONS
①	4", 6" OR 8" DETECTOR CHECK WITH 5/8" BY-PASS METER	MUELLER A-2130-6 OR APPROVED EQUAL
②	4", 6" OR 8" RESILIENT SEAT GATE VALVE, FLANGED x MECHANICAL JOINT	MUELLER A-2370-16 OR APPROVED EQUAL
③	2'-6" x 4'-0" (4" OR 6") OR 3'-0" x 5'-0" (8") UTILITY BOX TOP SECTION	BROOKS W-200 T. OR W-400 T.
④	2'-6" x 4'-0" (4" OR 6") UTILITY BOX WITH 4" WALLS OR 3'-0" x 5'-0" (8") WITH 4 1/2" WALLS	BROOKS W-200 OR W-400 SERIES
⑤	2'-6" x 4'-0" (4" OR 6") OR 3'-0" x 5'-0" (8") UTILITY BOX COVER	BROOKS W-200 -20
⑥	4", 6" OR 8" x REQUIRED LENGTH OF PIPE, FLANGED AND/OR MECHANICAL JOINT EACH END	PVC, CML/CMC, DUCTILE IRON PIPE
⑦	4", 6" OR 8" RESILIENT SEATED GATE VALVE, FLANGED x MECHANICAL JOINT	MUELLER A-2370-16 OR APPROVED EQUAL
⑧	MAIN SIZE x 4", 6" OR 8" TEE	DUCTILE IRON OR APPROVED EQUAL

CITY OF COACHELLA

APPROVED:

Donny J. Lucero

RCE 24670 EXP. 12/31/07

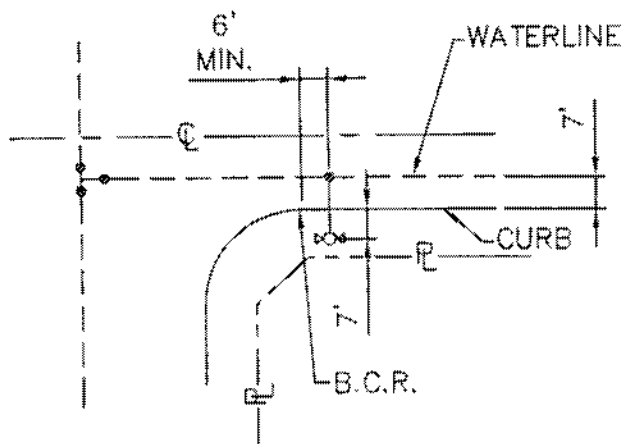
REVISION APPROVED DATE

FIRE DETECTOR CHECK
ASSEMBLY (4", 6" OR 8" D.C.)

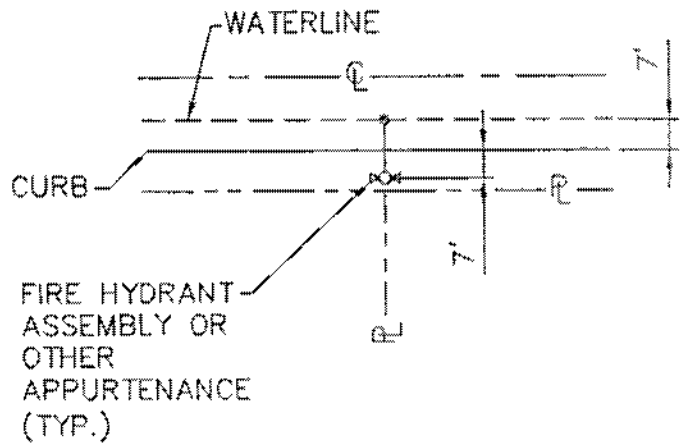
STANDARD DRAWING NO.

W-10

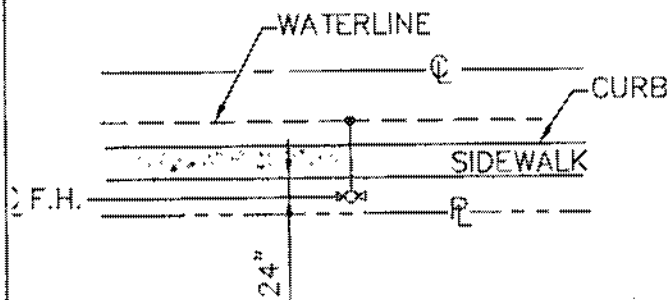
JUNE 2007



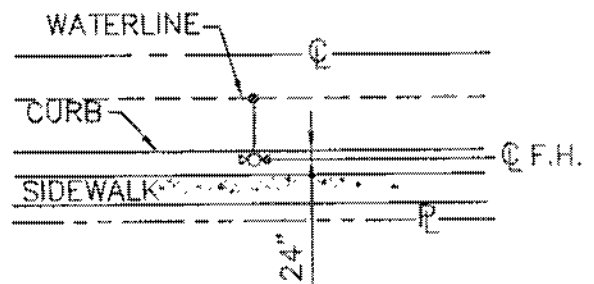
INTERSECTIONS



NO SIDEWALK



CURB & SIDEWALK
ADJACENT



CURB & SIDEWALK
SEPARATED

NOTES

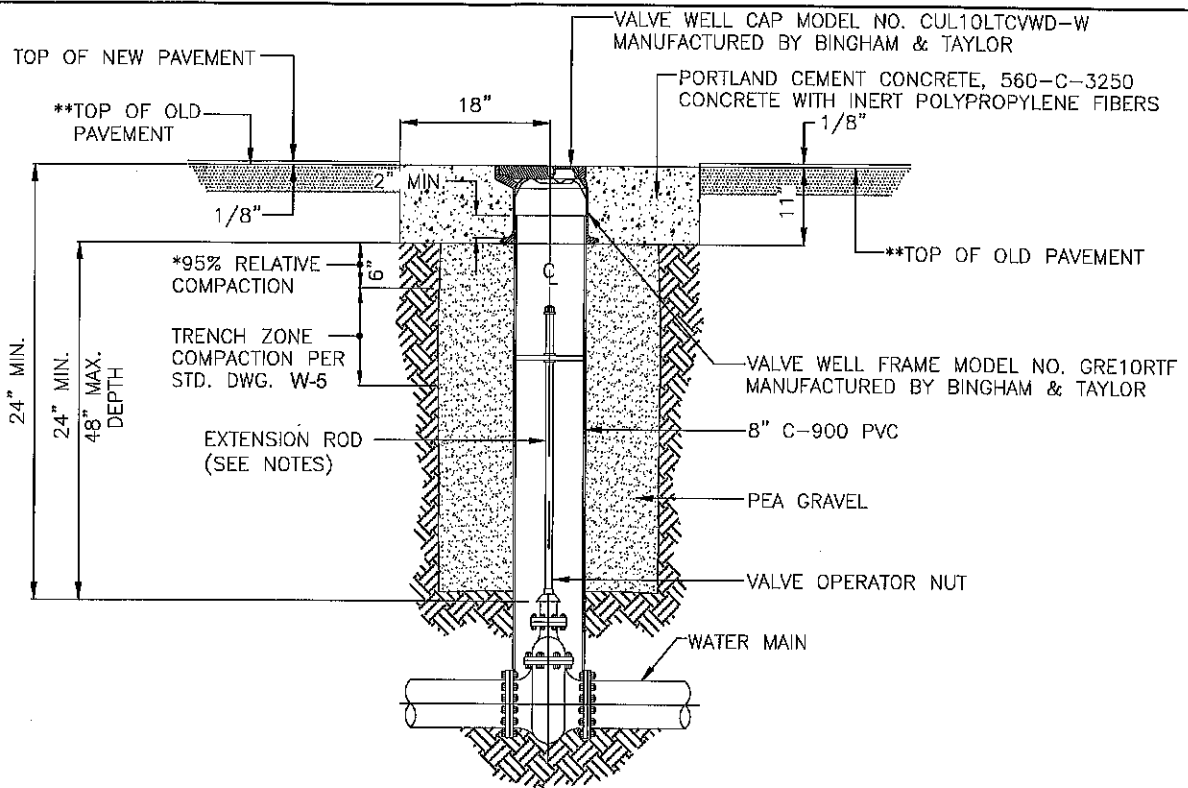
1. ALL APPURTENANCES WILL BE STAKED FOR LOCATION AND ELEVATION.
2. GUARD POSTS ARE NOT REQUIRED WHERE FIRE HYDRANTS ARE ADJACENT TO SIDEWALKS OR CURB AND GUTTER.
3. APPURTENANCES SHALL MEAN THE FOLLOWING, BUT ARE NOT LIMITED TO, AIR VAC/RELEASE ASSEMBLIES, BLOW OFF ASSEMBLIES, AND TEST STATIONS.

CITY OF COACHELLA

APPROVED:		
RCE 24870	EXP. 12/31/07	
REVISION	APPROVED	DATE

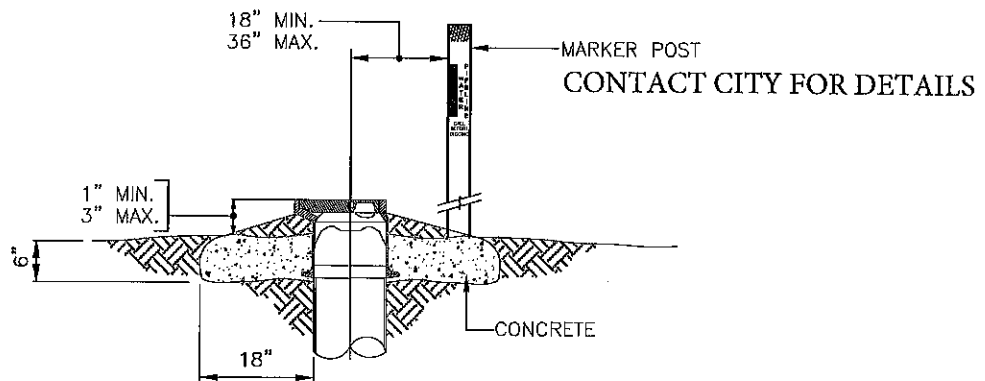
**WATER
APPURTENANCE
LOCATIONS**

STANDARD DRAWING NO.
W-11
JUNE 2007



TYPICAL INSTALLATION (STREET, ALLEY, DIRT ROAD OR SHOULDER)

NTS



TYPICAL INSTALLATION (UNTRAVELED AREAS)

NTS

NOTES:

WHERE VALVE OPERATING NUT IS GREATER THAN 48" BELOW THE SURFACE, AN EXTENSION ROD FOR VALVE OPERATION, WITH CIRCULAR CENTERING GUIDE, SHALL BE REQUIRED. THE TOP OF THE EXTENSION ROD SHALL BE MIN. 24" AND MAX. 48" BELOW THE SURFACE

1. FOR VALVE OPERATOR WELL CAP SEE STD. DRAWING W-12.1
2. FOR MARKER POST SEE STD. DRAWING W-12 (CONTACT CITY FOR DETAILS)
3. *PER TRENCH BACKFILL DRAWING -COC STD. W-5
4. **DEFINED AS 6 MONTHS OR OLDER

APPROVED:

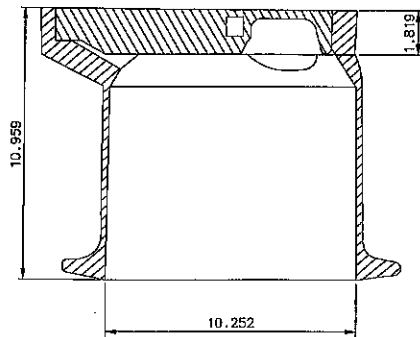
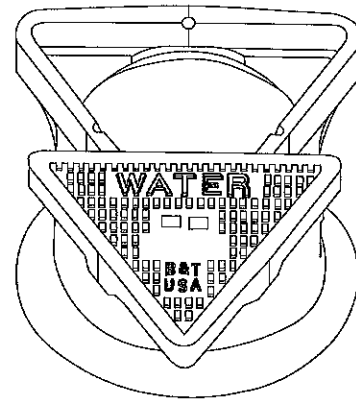
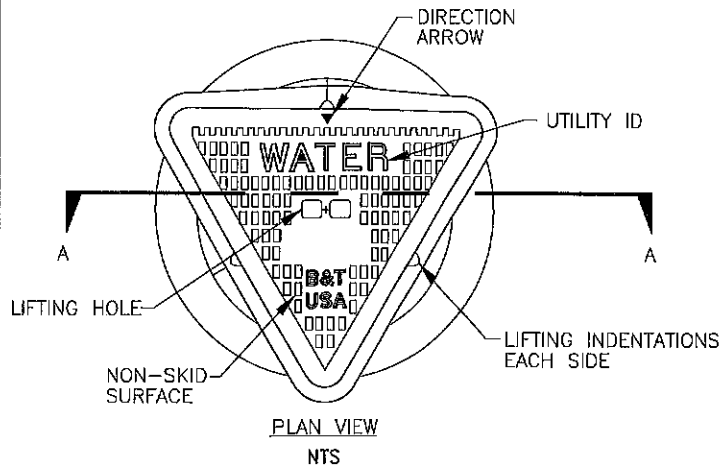
CITY OF COACHELLA

**DETAIL OF DOMESTIC WATER
VALVE OPERATOR WELL INSTALLATION**

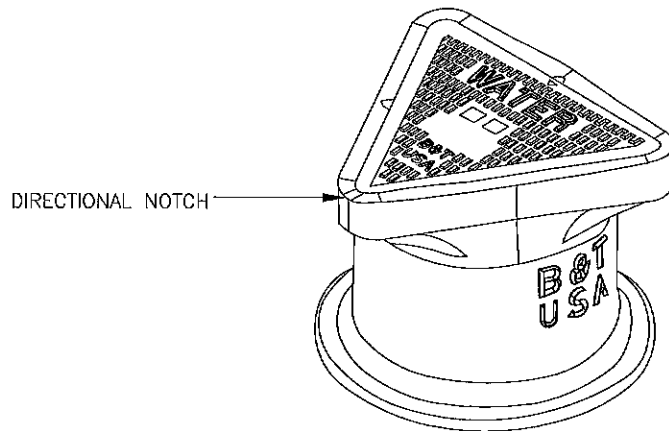
R.C.E. 72868
EXP. 6/30/24

AUGUST 2023

DRAWING NUMBER: W-12



SECTION A-A
NTS



NOTES:

1. ALL METALLIC MATERIALS SHALL BE CAST IRON OR DUCTILE IRON.
2. FRAME AND LID SHALL HAVE CAST SEAT AND SIDE TO ASSURE CLOSE FIT.
3. FOR INSTALLATION, SEE STANDARD DRAWING W-12
4. FRAME AND LID SHALL EXCEED H-20 WHEEL LOADING.
5. APPROVED MODELS:
 - 10 INCH HEAVY MARK V TRI RIM W/FLANGE MODEL NO. GRE10RTF MANUFACTURED BY BINGHAM & TAYLOR
 - 10 INCH MARK V TRI LID CVWD-WATER YELLOW POWDER MODEL NO. CUL10LTCVWD-W MANUFACTURED BY BINGHAM & TAYLOR CONFIRM COLOR WITH CITY PRIOR TO ORDERING

APPROVED:

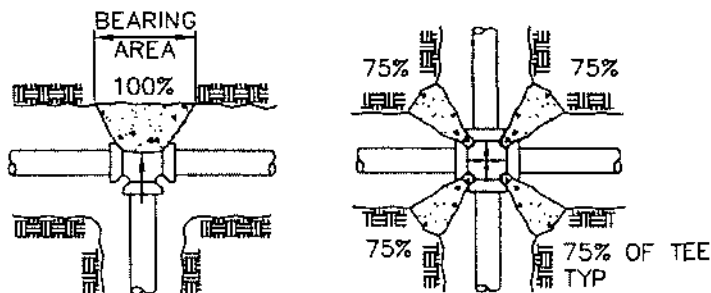
R.C.E. 72868
EXP. 6/30/24

CITY OF COACHELLA

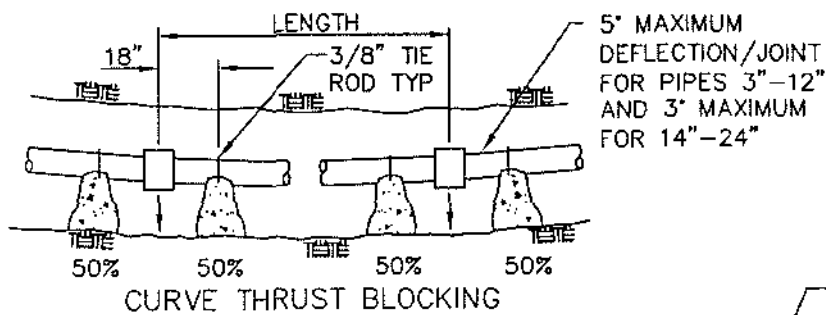
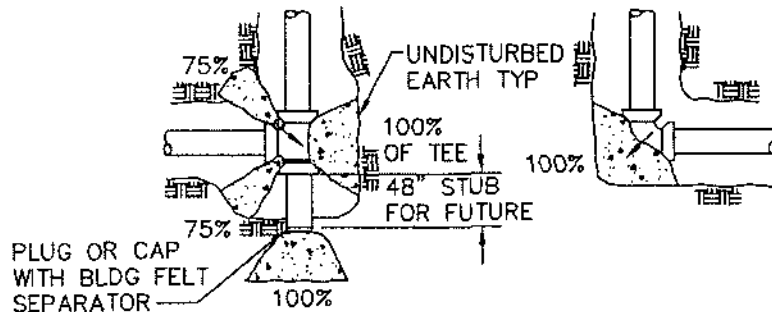
**DETAIL OF DOMESTIC WATER VALVE
OPERATOR WELL CAP AND FRAME**

AUGUST 2023

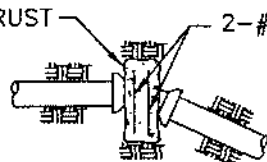
DRAWING NUMBER: W-12.1



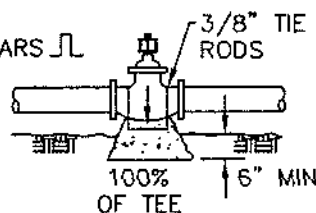
PLANS



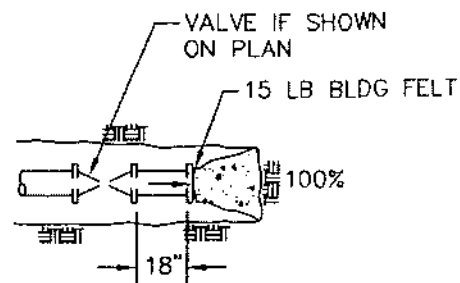
WEIGHT OF CONCRETE
TO RESIST 100% OF
TOTAL THRUST



VERTICAL BEND



VALVE



DEAD-END

NOTES:

1. SEE STD. DWG. W-14 FOR BEARING AREAS.
2. SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL.
3. ARROWS (—) INDICATE THRUST DIRECTION.
4. FIGURE (100%) AT THRUST BLOCK INDICATES PER CENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA.
5. CONCRETE FOR THRUST BLOCKS TO BE 450-C-2000.
6. CONCRETE THRUST BLOCK TO BE POURED AGAINST UNDISTURBED EARTH.

CITY OF COACHELLA

APPROVED:

[Signature]
RCE 24870 EXP. 12/31/07

REVISION	APPROVED	DATE

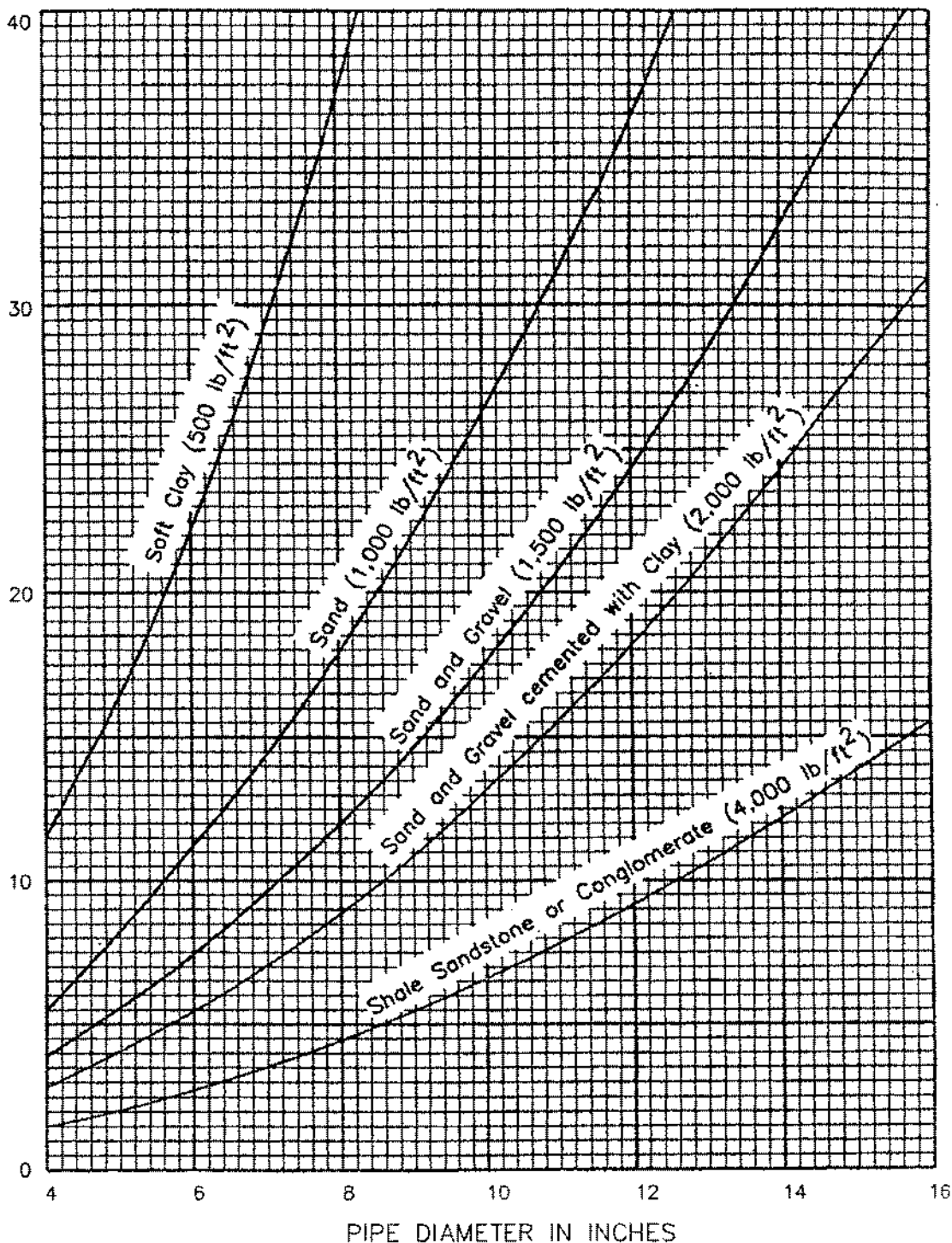
CONCRETE
THRUST BLOCKS

STANDARD DRAWING NO.

W-13.1

JUNE 2007

BEARING AREA OF THRUST BLOCK IN SQUARE FEET



NOTES:

- VALUES FROM CURVES ARE FOR TEES AND DEAD ENDS:
 FOR 90° BEND: 1.40 VALUE FROM CURVE
 FOR 45° BEND: 0.80 VALUE FROM CURVE
 FOR 22.50° BEND: 0.40 VALUE FROM CURVE
- FOR LOCATION OF THRUST BLOCK SEE STD. DWG. W-11.
- BASED ON 225 PSI TEST PRESSURE AND BEARING VALUES OF DRY SOILS.

CITY OF COACHELLA

APPROVED:

Long A. Liao
 RCE 24870 EXP. 12/31/07

REVISION	APPROVED	DATE

**THRUST BLOCK
BEARING AREAS**

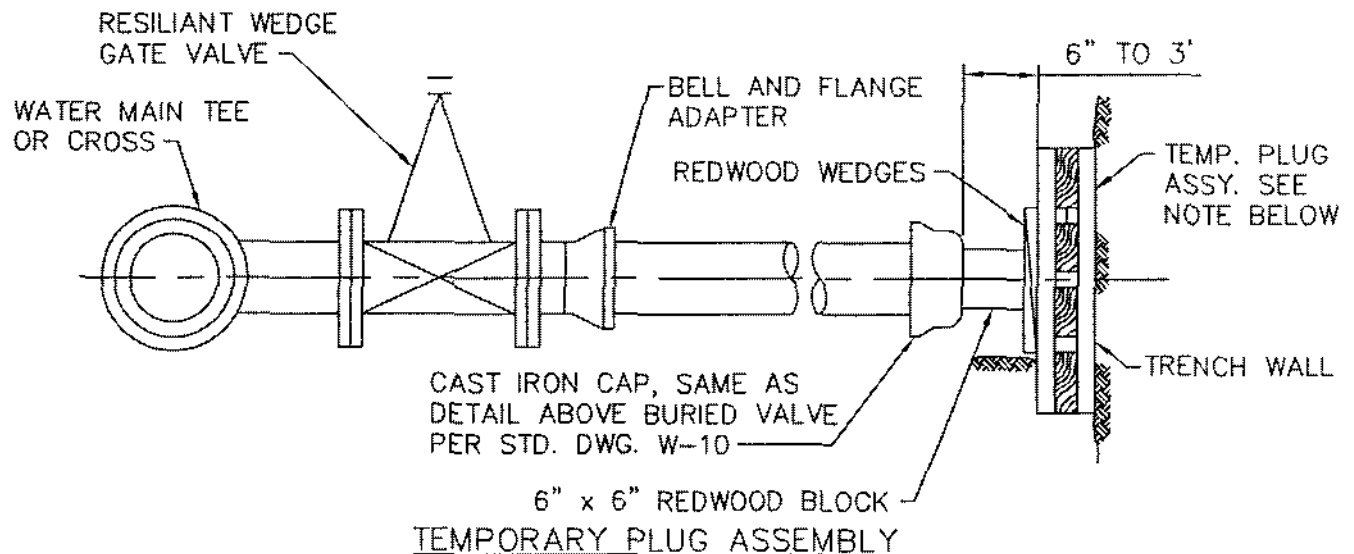
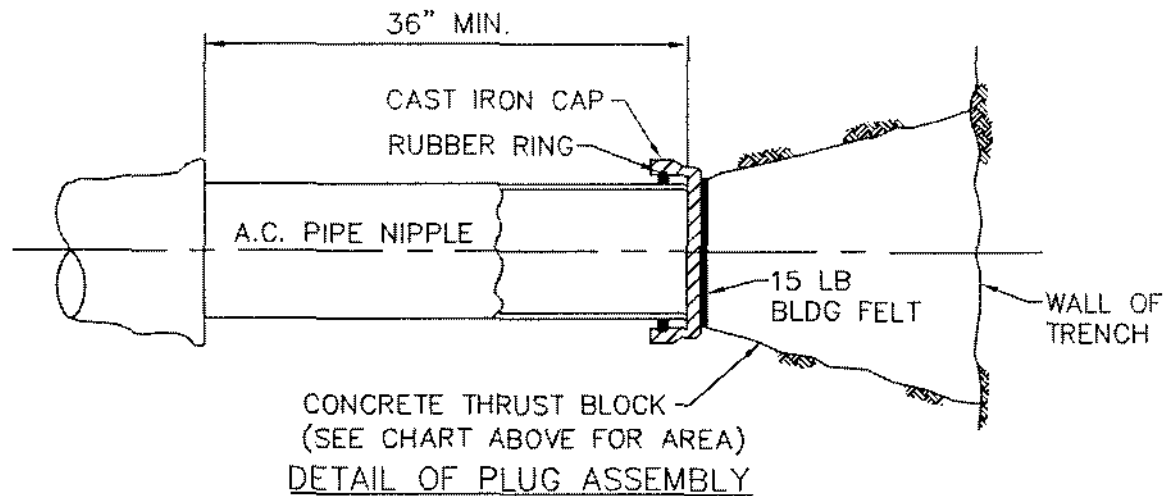
STANDARD DRAWING NO.

W-13.2

JUNE 2007

SIZE OF PIPE	4"	6"	8"	10"	12"
BEARING AREA IN SQUARE FEET	3	5	8	12	17

THRUST BLOCK DATA



NOTE:

AT TEMPORARY PLUG INSTALLATIONS, IN PLACE OF CONCRETE THRUST BLOCK, USE GRILLAGE MADE OF 2" x 6" REDWOOD BLOCKS, DIMENSIONS AS FOLLOWS:

WIDTH = WIDTH OF TRENCH PLUS 16"

THICKNESS = 6"

HEIGHT =

6" PIPE = 1'-3"

8" PIPE = 2'-0"

10" PIPE = 3'-0"

CITY OF COACHELLA

APPROVED:

Tommy A. Luero
RCE 24870 EXP. 12/31/07

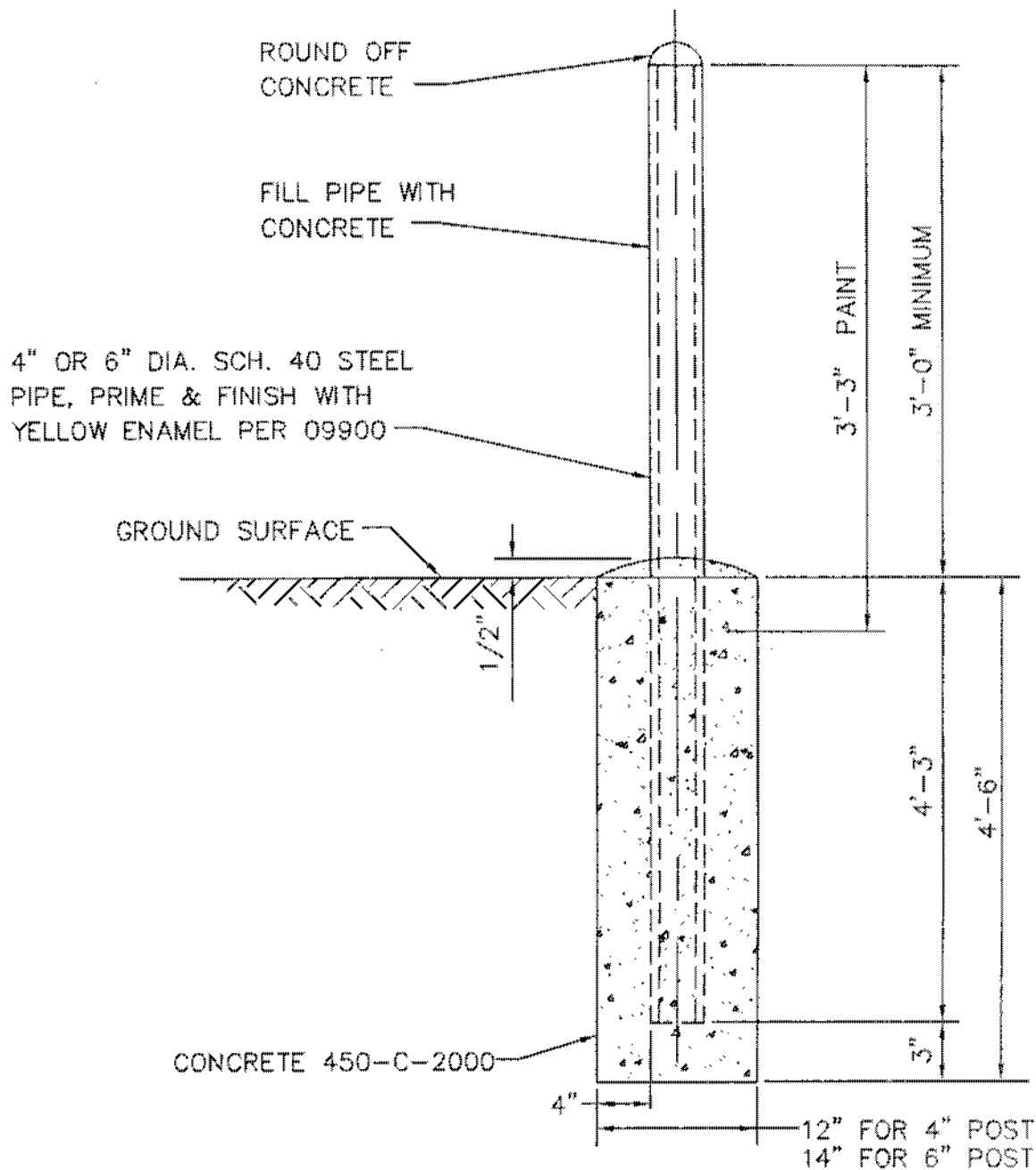
REVISION	APPROVED	DATE

WATER MAIN PLUG ASSEMBLY

STANDARD DRAWING NO.

W-14

JUNE 2007



NOTES:

1. LOCATION SHALL BE AS SHOWN ON PLAN VIEW, OR AS DIRECTED IN THE FIELD BY CITY ENGINEER.
2. FOR AREAS OF 25 MPH OR LESS 4" DIA. POSTS SHALL BE USED, FOR SPEED GREATER THAN 30 MPH 6" DIA. POSTS SHALL BE USED.

CITY OF COACHELLA

APPROVED:

<i>[Signature]</i>		
RCE 24879	EXP. 12/31/07	
REVISION	APPROVED	DATE

**STANDARD GUARD POST
INSTALLATION**

STANDARD DRAWING NO.

W-16

JUNE 2007