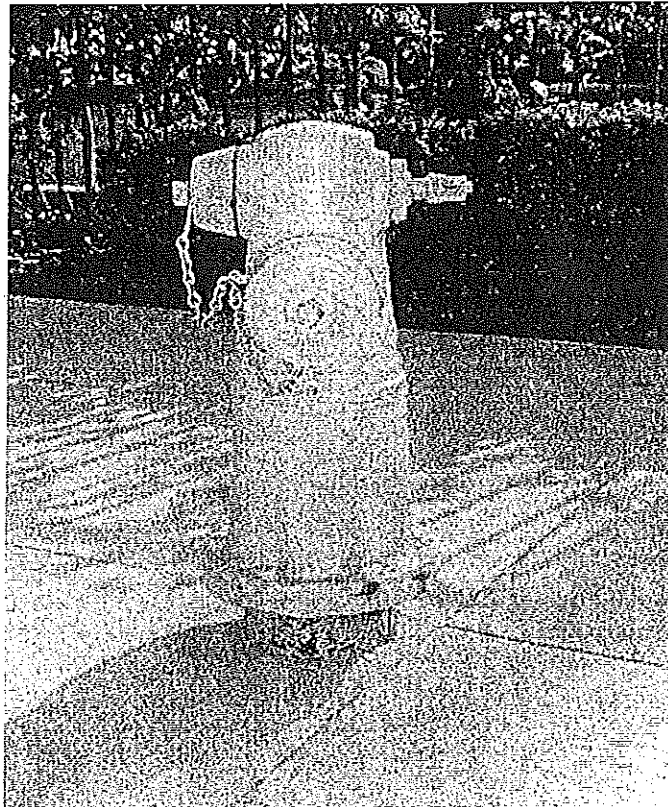


PRICE: \$ 2.00

STANDARD PLANS for WATER FACILITIES

City of Seal Beach
Department of
Public Works



FEBRUARY 2004 EDITION

The following Standard Plans have been adopted by the City of Seal Beach as a guide for standardization of "Public Works" within the City and have been prepared for the guidance of engineers, contractors and developers who have an interest in the preparation of plans and construction of facilities and improvements under the jurisdiction of the City of Seal Beach. Standard plans are to be used in conjunction with the currently adopted edition of the Standard Specifications for Public Works Construction, any adopted supplements or Department amendments as well as any adopted Design Criteria/Manuals and Master Plans. Conformance with these standards will reduce design costs and the processing time needed to review and approve plans. They are not intended to be a substitute for professional engineering knowledge, experience or judgment. Any deviations from what is contained in the following documents must be approved in writing by the Director of Public Works/City Engineer. These standards may be modified from time to time as required. Please visit the Department website at www.sb-publicworks.com to check for new or updated standards.

Douglas A. Dancs, P.E., Director of Public Works/City Engineer

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Standard Plans for Water Facilities

900 – 701	1" Water Service Installation
900 – 702	1 1/2 " & 2" Water Service Installation
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900 – 704	3" Water Meter Assembly
900 – 705	Fire Hydrant Installation
900 – 706	Gate Valve & Valve Box Installation
900 – 707	16" Butterfly & Valve Box Installation
900 – 708	Multiple Water Meter & Service Box Installations
900 – 709	Multiple Water Service Connections to Main
900 – 710	1" Air Release & Vacuum Relief Assembly
900 – 711	Waterline Bedding Details
900 – 712	Thrust Block Details
900 – 713	Pipe Support Assembly
900 – 714	State Health Dept. Exceptions to Basic Separation Standards for DW
900 – 715	Reduced Pressure Backflow Assembly

RESOLUTION NO. 5210

A RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF SEAL BEACH APPROVING STANDARD PLANS FOR
WATER FACILITIES,
2004 EDITION

WHEREAS, The Public Works Department of the City of Seal Beach has presented to the City Council a certain publication which is desired by the Public Works Department to be used in the design and construction of water facilities within the City of Seal Beach; and

WHEREAS, Said publication is the Standard Plans for Water Facilities, 2004 Edition; and

WHEREAS, The City Council desires to approve said publication as the minimum standard to be followed for the design and construction of water facilities within the City of Seal Beach and for projects requiring a Public Works Permit; and to authorize the Director of Public Works/City Engineer to make changes to said publication as required by new regulations, for improvements to the water infrastructure, and for the protection of public health and safety;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SEAL BEACH DOES HEREBY RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. Adoption. adopts said publication as the minimum standard to be followed for the design and construction of water facilities with the City of Seal Beach.

SECTION 2. Authorization. Authorizes the Director of Public Works/City Engineer to make changes to said publication as required by new regulations, for improvements to the water infrastructure, and for the protection of public health and safety.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Seal Beach at a meeting thereof held on the 22nd day of February, 2004 by the following vote:

AYES: Councilmembers Artos, Campbell, Doane, Larson, Yost
NOES: Councilmembers None
ABSENT: Councilmembers None

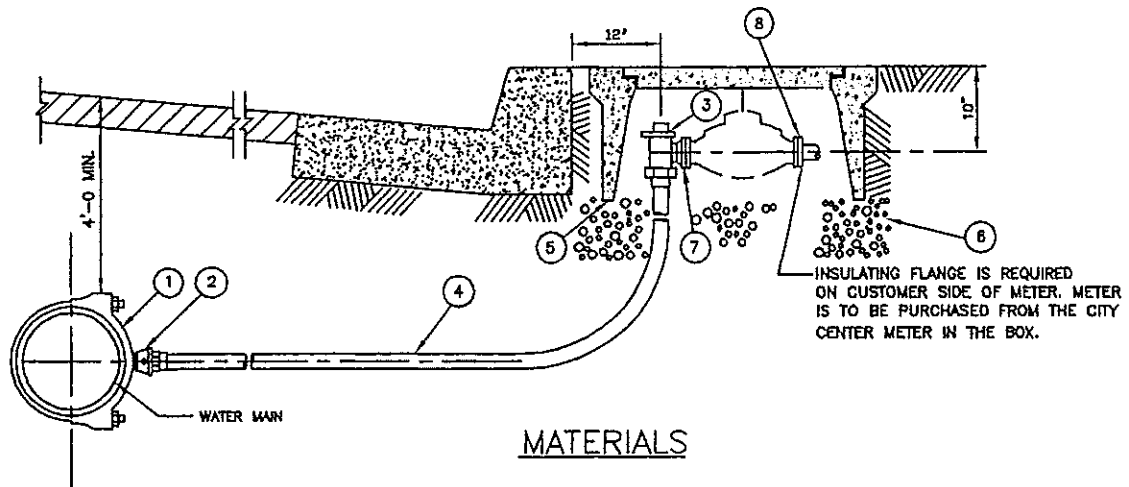
Patricia L. Campbell
Mayor

ATTEST:
Joanne M. Yeo
City Clerk

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF SEAL BEACH)

I, Joanne M. Yeo, City Clerk of the City of Seal Beach, California, do hereby certify that the foregoing resolution is an original copy of Resolution Number 5210 on file in the Office of the City Clerk, passed, approved and adopted by the City Council of the City of Seal Beach at a meeting thereof held on the 23rd day of February, 2004.

Joanne M. Yeo
City Clerk



ITEM NO.	SIZE & DESCRIPTION	MANUFACTURER	SPEC. NO.
①	DOUBLE STRAP BRONZE SERVICE SADDLE 1" C.S. OUTLET FOR NON-PVC	JONES FORD	J-979 C.C. 202B
①A	DOUBLE STRAP BRONZE SERVICE SADDLE 1" C.S. OUTLET FOR PVC	JONES FORD	J-969 C.C. 202BS C.C.
②	1" BRONZE CORPORATION STOP C.S. THREAD X COMPRESSION	JONES FORD	3401 F-1000-4
③	1" X 1" BRONZE ANGLE METER STOP W/LOCKWING (COMPRESSION TYPE)	JONES FORD	J-4201-W KV43-444-W
④	1" COPPER TUBING		COPPER TYPE "K" SOFT
⑤	METER BOX W/LID	BROOKS EISEL	37-T 437-T
⑥	6" BASE OF 3/4" ROCK	SEE CITY STD. SPECS.	
⑦	1" X 1-1/4" METER COUPLING	JONES	J-128-H IF REQ'D
⑧	1" SWIVEL COUPLING	JONES	J-134

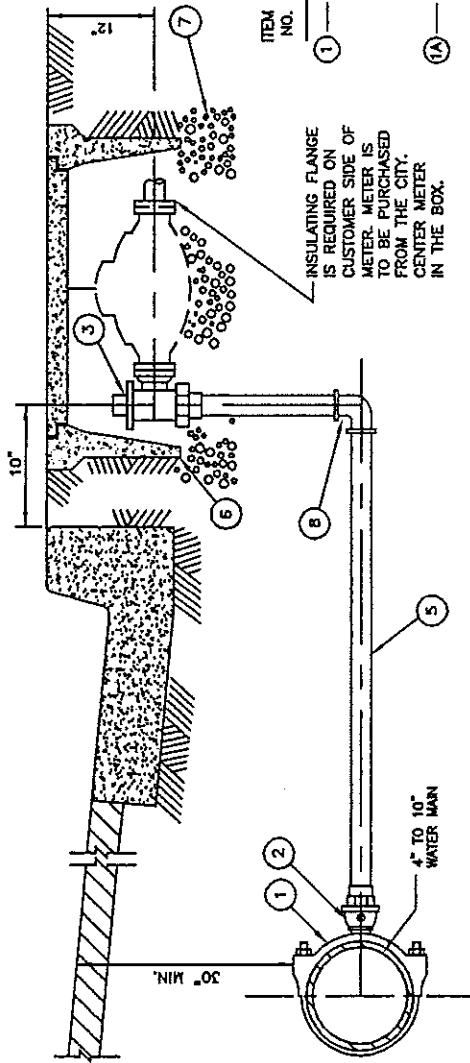
NOTES:

- SERVICE SADDLE SHALL NOT BE INSTALLED WITHIN 18" OF VALVE, COUPLING, JOINT OR FITTING. TAPPED COUPLINGS ARE NOT PERMITTED.
- INSTALL CORPORATION STOP WITH KEY SIDEWAYS IN OPEN POSITION.
- SET TOP OF METER BOX FLUSH WITH SIDEWALK OR CURB AS SHOWN.
- THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP.
- ALL FITTINGS SHALL BE COMPRESSION FITTINGS.
- FOR END OF LINE SERVICE INSTALLATION SEE STD. DWG. 703.
- METER BOX SHALL BE SET IN THE PARKWAY BETWEEN CURB AND SIDEWALK. WHERE THERE IS NO PARKWAY, METER BOX SHALL BE SET IN SIDEWALK. IN ALLEYS, METER BOX SHALL BE 4" TO 6" FROM PROPERTY LINE IN THE PUBLIC RIGHT OF WAY. METER BOXES SUBJECT TO TRAFFIC LOADING SHALL HAVE FLUSH CAST IRON TRAFFIC LID.
- PRIOR TO ORDERING MATERIAL, PLEASE CALL (562)-493-8660 EXT 433 FOR DETERMINATION OF SPECIFIC LID REQUIREMENT (TOUCH READ).
- CHIP 2" "W" IN CURB FACE TO IDENTIFY POTABLE WATER SERVICE LOCATION.

1" WATER SERVICE INSTALLATION

STANDARD PLAN
701-1

REVIEWED 03/28/01 DEPUTY CITY ENGINEER-RCE 57202 APPROVED 03/28/01 DIRECTOR OF PUBLIC WORKS-RCE 36106 DRAWN BY: K.Y. CHECKED BY:	PUBLIC WORKS	REVISIONS		SUPERCEDES W-1	REFERENCES 703
		NO. 1	DESCRIPTIONS 3-21-01. JW REVISIONS		
SHEET 1 OF 1					



CHIP 2" W" IN CURB FACE TO
IDENTIFY POTABLE WATER
SERVICE LOCATION

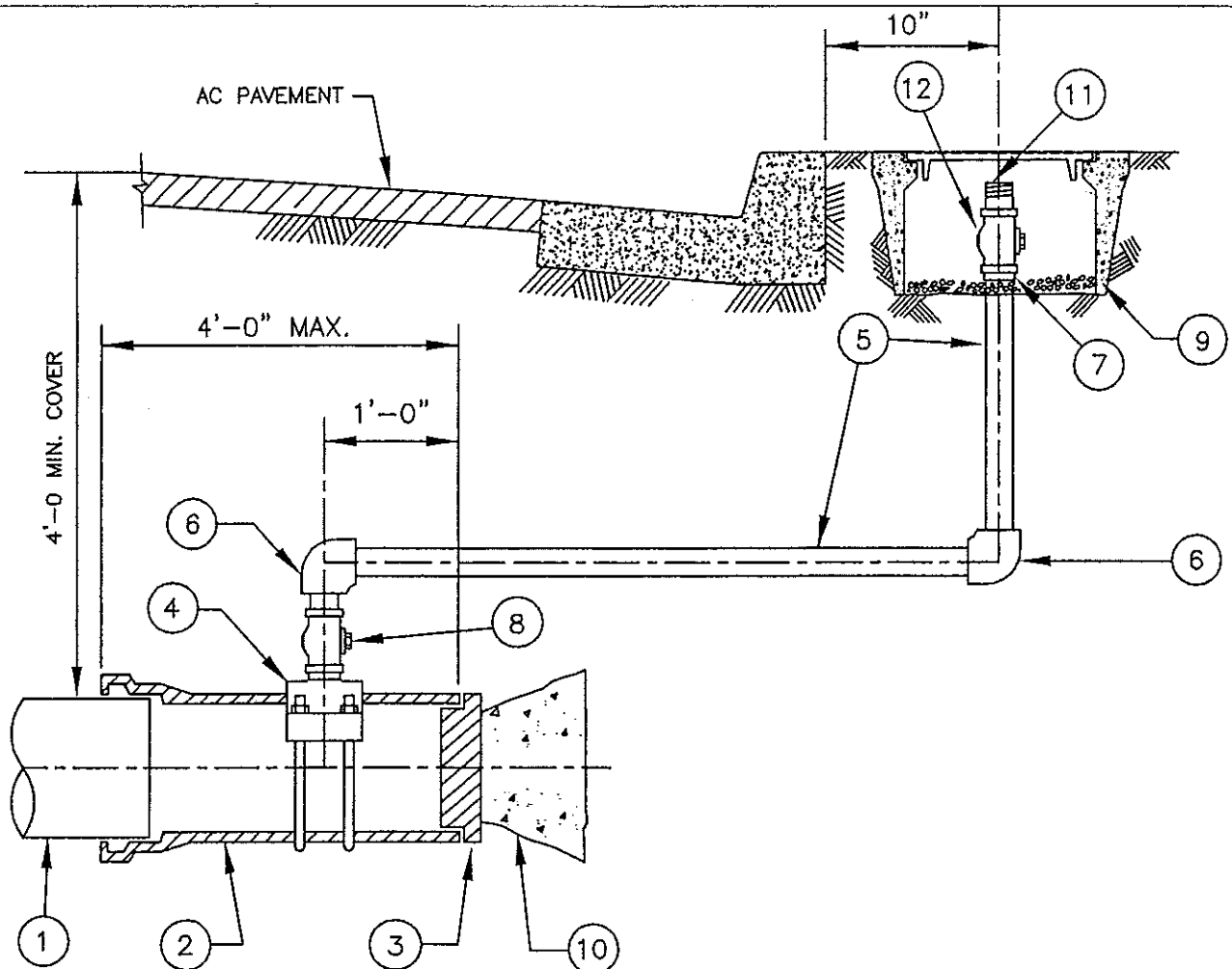
MATERIALS

ITEM NO.	SIZE & DESCRIPTION	MANUFACTURER	SPEC. NO.
①	DOUBLE STRAP BRONZE SERVICE SADDLE 1-1/2" OR 2" I.P. OUTLET (DI OR AC)	JONES FORD	J-979 CC 202B-SIZE CC
①A	DOUBLE STRAP STAINLESS STEEL SERVICE 1-1/2" OR 2" OUTLET (C-800)	FORD JONES	FC202BS CC J-969 CC
②	2" BRONZE CORPORATION STOP	JONES JONES FORD	J-1937 CC 1 1/2" J-1937 CC 2" FB-1000-6 (1 1/2") FB-1000-7 (2")
③	2" BRONZE ANGLE METER STOP W/LOCKING FLANGED.	JONES FORD	J-1975-W FV43-777W 2" FV-43-868W 1-1/2"
⑤	1-1/2" OR 2" COPPER TUBING		COPPER TYPE "K" SOFT
⑥	METER BOX W/LID	BROOKS EISEL	FOR 2" METER 65 655 1/2 T
⑦	6" BASE OF 3/4" ROCK	SEE CITY STD SPECS.	
⑧	2" COPPER 90° ELBOW COMPRESSION FITTING	JONES FORD FORD	J-2611 C 44-66 (1-1/2") C 44-77 (1")

CONSTRUCTION NOTES

- SERVICE SADDLE SHALL NOT BE INSTALLED WITHIN 18" OF VALVE, COUPLING, JOINT OR FITTING. TAPPED COUPLINGS ARE NOT PERMITTED.
- INSTALL CORPORATION STOP WITH KEY SIDEWAYS IN OPEN POSITION.
- SET TOP OF METER BOX FLUSH WITH SIDEWALK OR CURB AS SHOWN.
- THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP.
- ALL FITTINGS SHALL BE COMPRESSION FITTINGS.
- FOR END OF LINE SERVICE INSTALLATION SEE STD. DWG. 703.
- METER BOX SHALL BE SET IN THE PARKWAY BETWEEN CURB AND SIDEWALK, WHERE THERE IS NO PARKWAY, METER BOX SHALL BE SET IN SIDEWALK. IN ALLEYS, METER BOX SHALL BE 4" TO 6" FROM PROPERTY LINE IN THE PUBLIC RIGHT OF WAY. METER BOXES SUBJECT TO TRAFFIC LOADING SHALL HAVE FLUSH CAST IRON TRAFFIC LID.
- PRIOR TO ORDERING MATERIAL, PLEASE CALL (562)-493-8660 EXT 433 FOR DETERMINATION OF SPECIFIC LID REQUIREMENT (TOUCH READ).
- CHIP 2" W" IN CURB FACE TO IDENTIFY POTABLE WATER SERVICE LOCATION.

1 1/2" & 2" WATER SERVICE INSTALLATION		STANDARD PLAN 702	
REVIEWED <i>[Signature]</i> 03/28/01 DEPUTY CITY ENGINEER-RCE 37202	PUBLIC 	REVISIONS NO. DESCRIPTIONS	SUPERCEDES REFERENCES
APPROVED <i>[Signature]</i> 03/28/01 DIRECTOR OF PUBLIC WORKS-RCE 36108	WORKS	1 3-21-01 JW REVISIONS	STDW-2A 703
DRAWN BY: K.Y. CHECKED BY:		SHEET 1 OF 1	



- ① — 6", 8", 10" OR 12" PVC OR DUCTILE IRON PIPE
- ② — D.I. SPOOL
- ③ — MECHANICAL JOINT CAP SADDLE
- ④ — 2" BRONZE DOUBLE STRAP CLAMP (JONES J-979 C.S. THREAD)
AS NEEDED, PER STD. DWG. 702
- ⑤ — 2" COPPER TUBING (LENGTH AS NEEDED)
- ⑥ — 2" COPPER 90° ELBOW
- ⑦ — 2" M.I.P. X SWEAT COPPER ADAPTER, AS NEEDED
- ⑧ — 2" CORPORATION STOP ASSEMBLY (JONES J-1503)
- ⑨ — METER BOX, SIMILAR TO STD. DWG 702, WITH NO READING LID
- ⑩ — THRUST BLOCK PER STD. DWG. 712
- ⑪ — 2" BRASS NIPPLE WITH CAP
- ⑫ — 2" BALL VALVE (J-1900)

PERMANENT END OF LINE BLOW OFF & CHLORINATION ASSEMBLY

STANDARD PLAN
703

REVIEWED *[Signature]* 01/22/01
DEPUTY CITY ENGINEER—RCE 57202

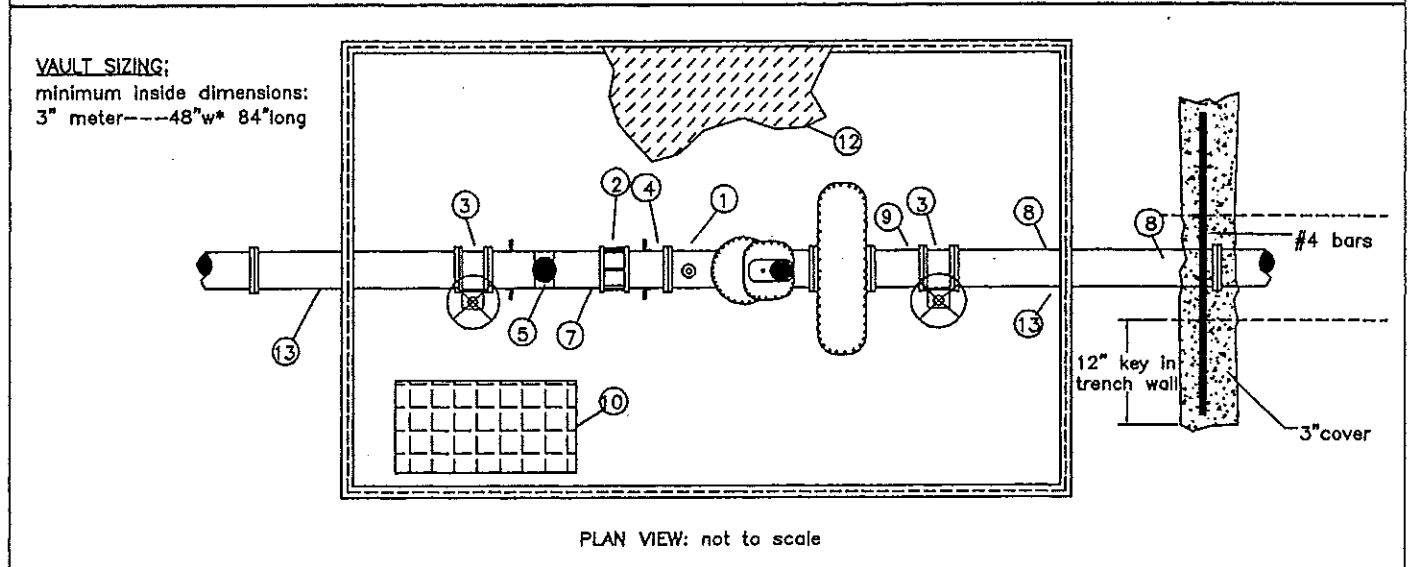
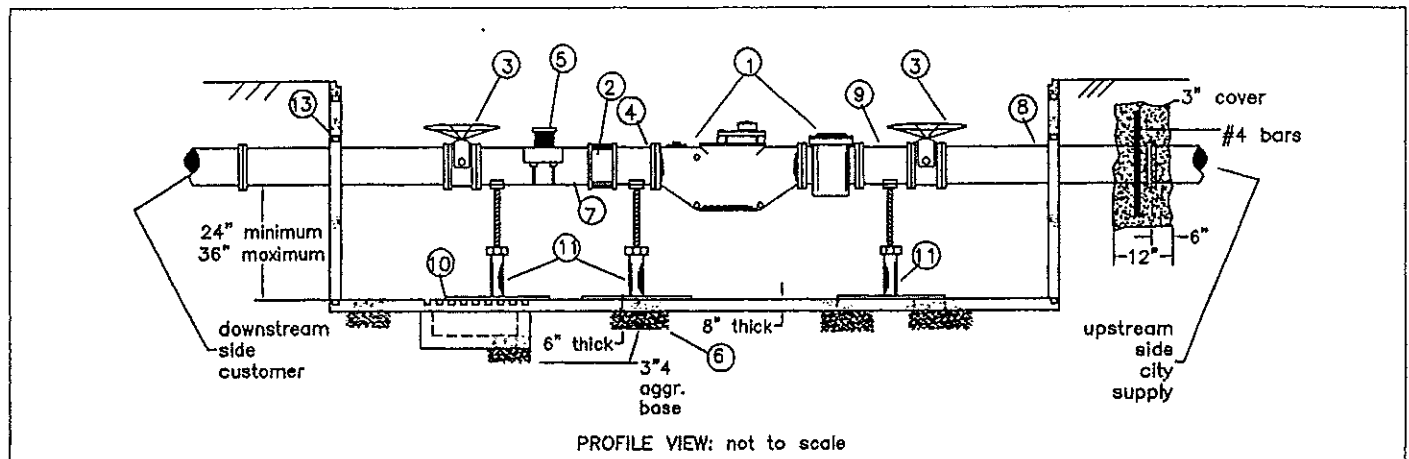
APPROVED *[Signature]* 01/22/01
DIRECTOR OF PUBLIC WORKS—RCE 36106

DRAWN BY: K.Y. CHECKED BY:



REVISIONS	
NO.	DESCRIPTIONS

SUPERCEDES	REFERENCES
W-3	712 702
SHEET 1 OF 1	



CONSTRUCTION NOTES:

1. Compact, single register, compound meter w/attached in line stainless steel meter strainer. (Sensus SRH) Touch read if in a vault.
2. Ductile iron flex coupling. Ford, Romac, Dresser or approved equivalent.
3. Resilient seated gate valve with hand wheel operator & flanged ends.
4. 3" Class 52, mortar lined, DIP spindle piece (FOE). 12" long.
5. 2" corp stop and saddle.
6. 8" thick concrete slab or precast concrete vault floor of equal specification. Reinforced with W1.4*W1.4 weld wire mesh. Concrete shall be C-560-3250 mix. Vault manufacturer shall be as approved by Water Dept. Call (562)-493-8660 ext. 433

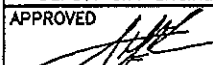
GENERAL NOTES:

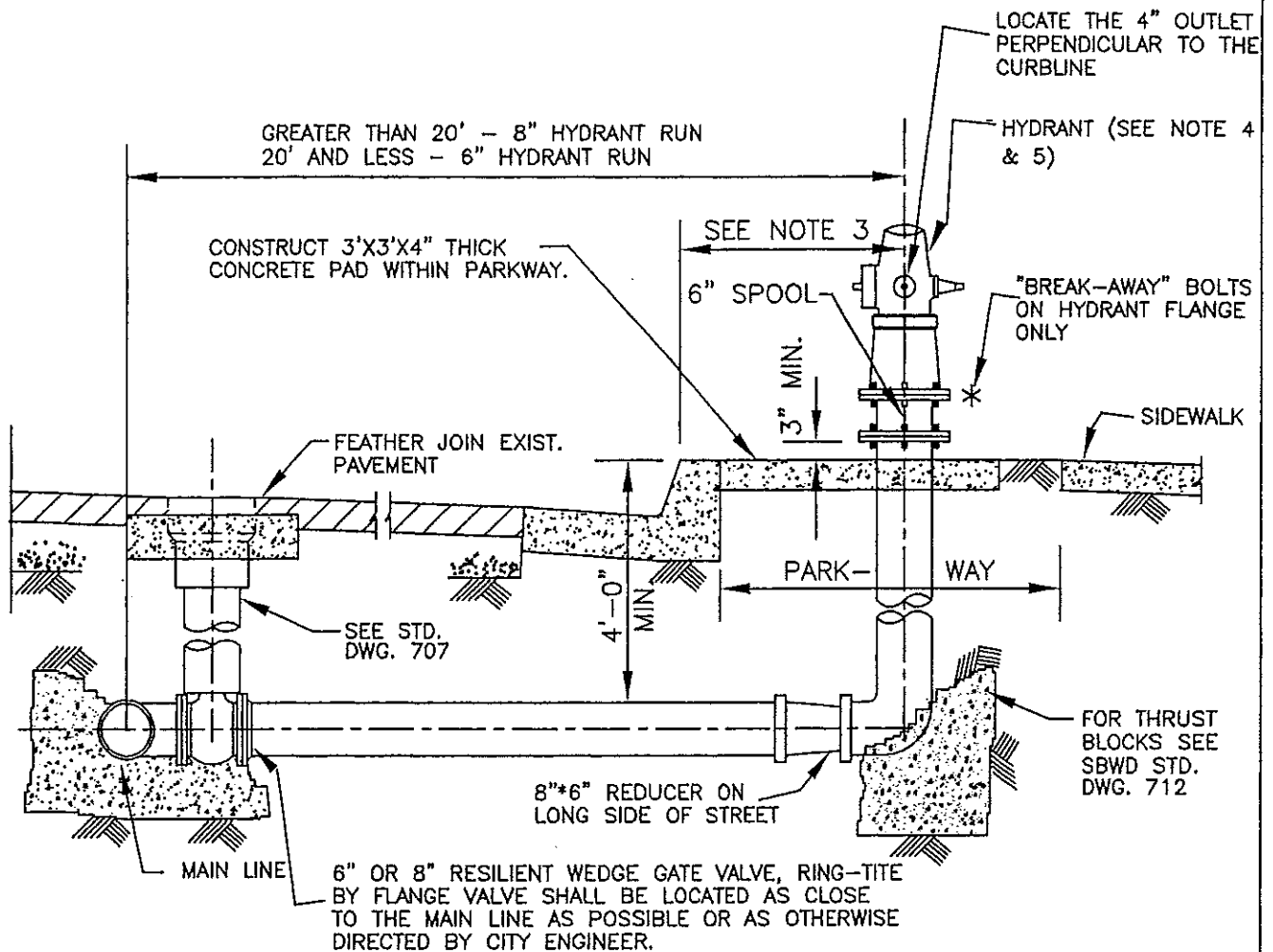
1. All above grade piping shall be painted with an Alkyd Enamel paint system consisting of a 2 mil primer coat and two(2) coats of 2 mils (each) high gloss enamel. Color shall be white, blue or red.
2. All below grade ductile iron fittings and pipings shall be coated with a asphalt mastic material approved by City Engineer.
3. All flange joints shall be connected with type 316 stainless steel fasteners. Mechanical joints shall be joined with either malleable iron or self-weathering CorTen Steel.

7. 3" Class 52 mortar lined, DIP spindle piece (FOE). 18" long. Fabricate integrally with harness assembly lugs.
8. 4" Class 52, mortar lined, DIP spool piece (FBE). 50" long.
9. " Class 52, mortar lined, DIP spool piece (FBE). 12" long. (with 3/4 reducer must be 10 times the pipe diameter from the meter)
10. Recessed 12"x12" sump, filled w/ $\frac{3}{4}$ " in rock.
11. Adjustable steel pipe support, hot-dip galvanized after fabrication per STD-W-32. Paint to match piping and valving.
12. Diamond plate aluminum cover. Spring assisted, two piece cover with locking, hinged, round meter reading lids centered over each meter. Special design required for traffic loading applications.
13. "Link-Seal" mechanical piping seal in annular space between pipe OD. & round, precast vault opening.

3" WATER METER ASSEMBLY

STANDARD PLAN
704

REVIEWED	PUBLIC	REVISIONS	SUPERSEDES	REFERENCES
 01/22/01 DEPUTY CITY ENGINEER-RCE 57202	 WORKS	NO. DESCRIPTIONS	W-4	732
APPROVED  01/22/01 DIRECTOR OF PUBLIC WORKS-RCE 36106				
DRAWN BY: K.Y.	CHECKED BY:			SHEET 1 OF 1



NOTES:

1. HYDRANTS TO BE PAINTED YELLOW ACCORDING TO WATER DEPT. PAINT SCHEDULE.
2. HYDRANT FLANGE GASKET SHALL BE "FULL FACE" AND OF RUBBER COMPOSITION 1/8" THICK.
3. THE LOCATION OF HYDRANTS MUST MEET ALL OF THE FOLLOWING CONDITIONS;
 - A. MAINTAIN MINIMUM 18" DISTANCE FROM BACK OF CURB. (PREFERRED LOCATION)
 - B. MAINTAIN MINIMUM 12" DISTANCE FROM EDGE OF SIDEWALK WHEN PLACED IN PARKWAY.
 - C. MAINTAIN A 48" CLEAR WIDTH OF SIDEWALK FOR PEDESTRIAN ACCESS.

EXCEPTION: WHEN BECAUSE OF RIGHT OF WAY RESTRICTIONS, NATURAL BARRIERS OR OTHER EXISTING CONDITIONS, THE CITY ENGINEER MAY DETERMINE THAT COMPLIANCE WOULD CREATE AN UNREASONABLE HARDSHIP, AND UPON HIS/HER WRITTEN APPROVAL THE CLEAR WIDTH MAY BE REDUCED TO 36 INCHES.

4. FOR HYDRANT IN RESIDENTIAL AREAS USE, HYDRANT WITH 1-4" & 1-2 1/2" FIRE HOSE OUTLETS EAST BAY TYPE JONES 3700 WITH BRASS CAPS, 1 1/8" OPERATING NUTS.
5. FOR HYDRANT IN INDUSTRIAL/COMMERCIAL AREAS USE, HYDRANT WITH 1-4" & 2-2 1/2" FIRE HOSE OUTLETS EAST BAY TYPE JONES 3765 WITH BRASS CAPS, 1 1/8" OPERATING NUTS.

FIRE HYDRANT INSTALLATION

STANDARD PLAN
705

REVIEWED	01/22/01
DEPUTY CITY ENGINEER-RCE 57202	
APPROVED	01/22/01
DIRECTOR OF PUBLIC WORKS-RCE 36106	
DRAWN BY: K.Y.	CHECKED BY:

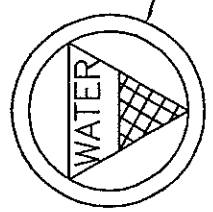
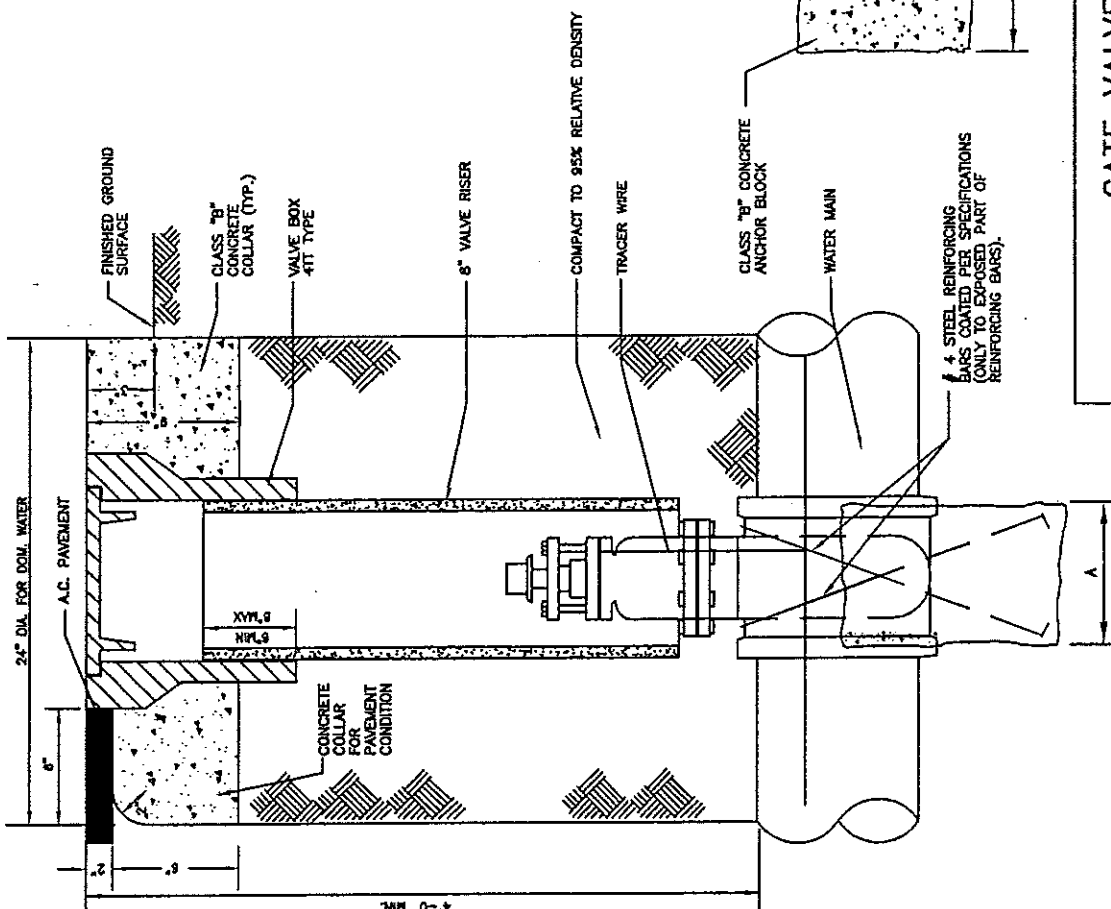
PUBLIC



WORKS

REVISIONS		SUPERCEDES	REFERENCES
NO.	DESCRIPTIONS		
			712
			707

SHEET 1 OF 1



IRON COVER WITH WORD
"WATER" CAST THEREON
FOR DOMESTIC WATER LINES
BROOKS PRODUCTS NO. 41T,
EISEL ENTERPRISES 41T

NOTES:

1. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE NUT EXCEEDS 6 FEET. SEE SBWD STD. DWG. 708
2. WHERE CONCRETE CROSS GUTTERS AT STREET INTERSECTIONS WILL INTERFERE WITH VALVE BOXES, THE PIPELINE SHALL BE MOVED TO A POSITION 7 FEET OFF THE CURB FACE TO CLEAR THE CROSS GUTTER.
3. VALVES TO BE LOCATED ADJACENT TO FITTINGS WHEREVER POSSIBLE.
4. VALVES BOLTED TO FITTINGS WILL NOT REQUIRE ANCHOR BLOCKS.

VALVE SIZE

DIMENSION

A	B
12"	12"
13"	14"
14"	16"
14"	18"

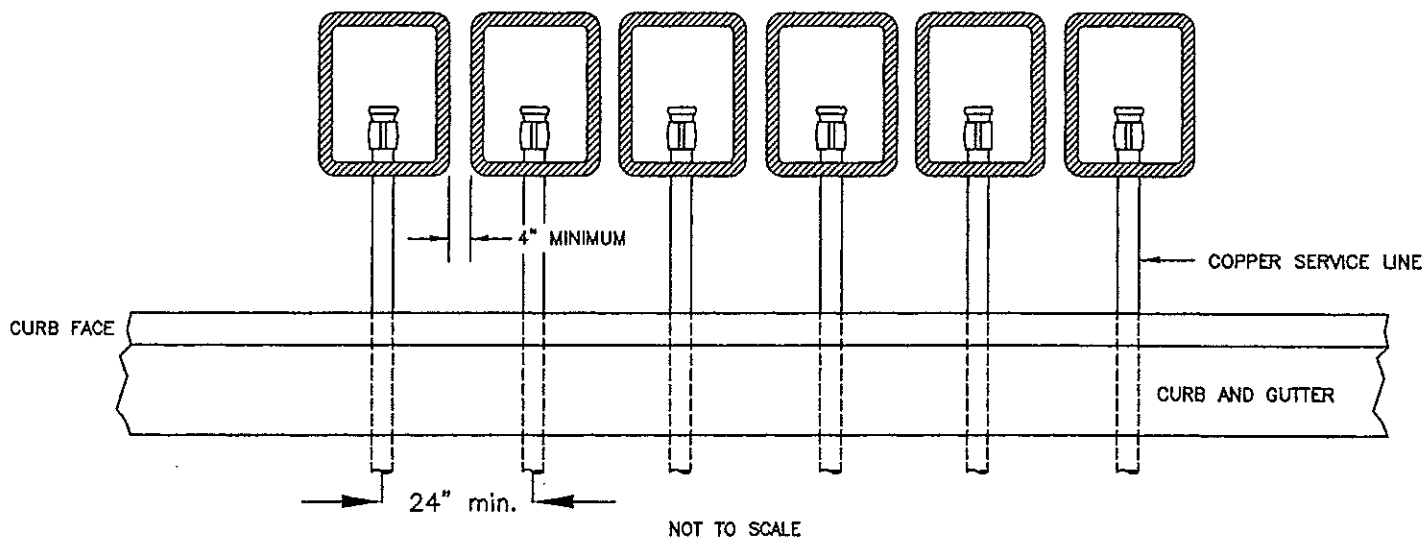
DIMENSION "C" - TRENCH WIDTH PLUS 2X PIPE DIAMETER

GATE VALVE & VALVE BOX INSTALLATION		STANDARD PLAN 706	
REVIEWED	01/22/01	SUPERCEDES	REFERENCES
DEPUTY CITY ENGINEER—RCE 57202		W-7	708
APPROVED	01/22/01		
DIRECTOR OF PUBLIC WORKS—RCE 35105			
DRAWN BY: K.Y. CHECKED BY:			
		SHEET 1 OF 1	



PUBLIC

WORKS



GENERAL NOTES

1. METER BOXES SHALL BE PLACED SUCH THAT SPACE BETWEEN BOXES IS A MINIMUM OF 4 INCHES.
2. WHERE PRACTICAL, A CONCRETE SLAB SHALL BE POURED AROUND AND BETWEEN METER BOXES.
3. REFER TO STD-709 FOR MULTIPLE WATER SERVICE CONNECTIONS TO THE MAIN.
4. CONCRETE METER BOX SHALL BE FROM THE FOLLOWING:

FOR 1" METERS: BROOKS # 37S J & R # 4 1/2 H & C # 437	FOR 2" METERS: BROOKS # 65S J & R # 5 1/2 H & C # 655 1/2
--	--
5. METER BOXES SUBJECT TO TRAFFIC LOADING SHALL HAVE FLUSH CAST IRON COVERS.

MULTIPLE WATER METER & SERVICE BOX INSTALLATIONS

STANDARD PLAN
708

REVIEWED *[Signature]* 01/22/01
DEPUTY CITY ENGINEER-RCE 57202

APPROVED *[Signature]* 01/22/01
DIRECTOR OF PUBLIC WORKS-RCE 36106

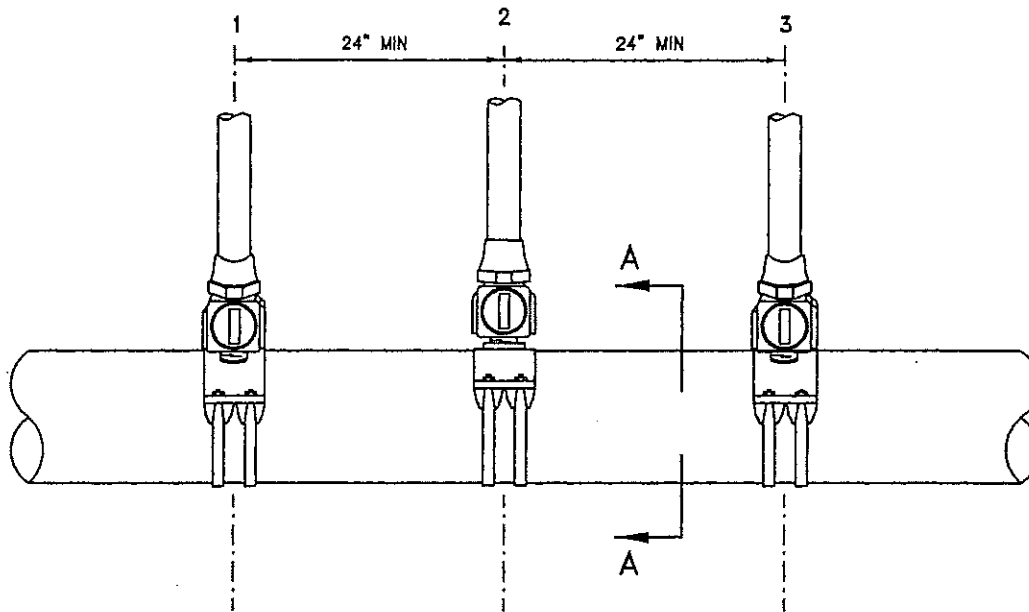
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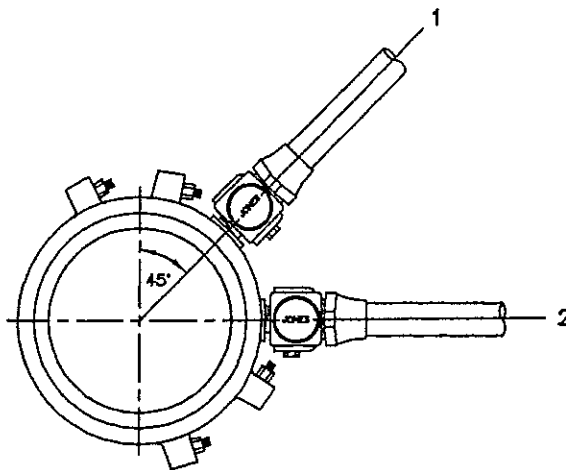
WORKS

REVISIONS		SUPERCEDES	REFERENCES
NO.	DESCRIPTIONS	W-30	709
		SHEET 1 OF 1	

DRAWN BY: K.Y. CHECKED BY:



PLAN VIEW



SECTION A-A

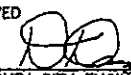
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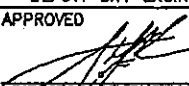
1. REFER TO STD-701 & STD-702 FOR ADDITIONAL WATER SERVICE DETAILS.

MULTIPLE WATER SERVICE CONNECTIONS TO MAIN

STANDARD PLAN
709

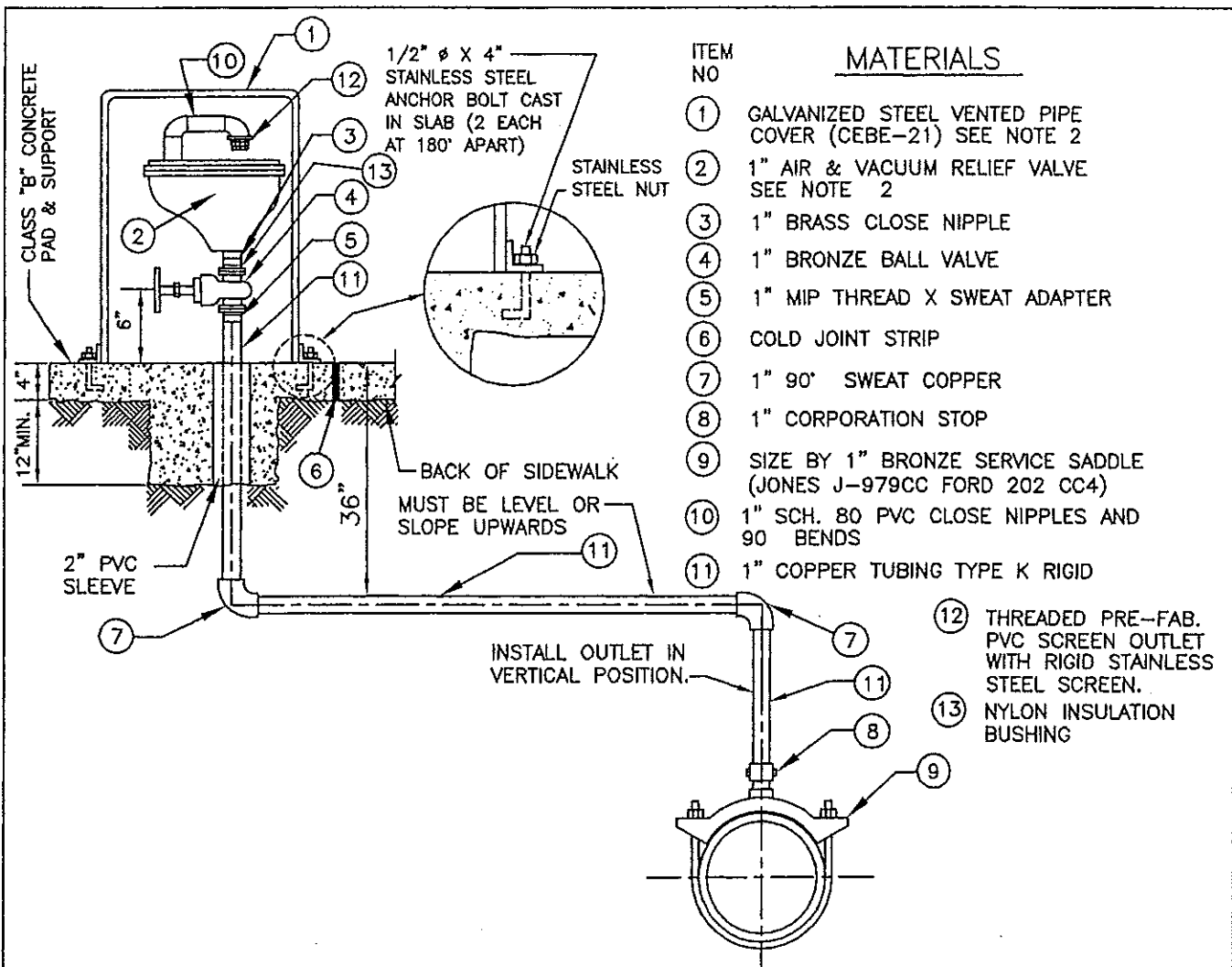
REVIEWED  01/22/01 DEPUTY CITY ENGINEER-RCE 57202		PUBLIC  WORKS	REVISIONS		SUPERCEDES	REFERENCES
APPROVED  01/22/01 DIRECTOR OF PUBLIC WORKS-RCE 36106			NO.	DESCRIPTIONS	W-31	701 702
DRAWN BY: K.Y. CHECKED BY:				SHEET 1 OF 1		

REVIEWED  01/22/01
DEPUTY CITY ENGINEER-RCE 57202

APPROVED  01/22/01
DIRECTOR OF PUBLIC WORKS-RCE 36106

DRAWN BY: K.Y. CHECKED BY:





NOTES:

1. REFER TO STD. DWG. W-701 FOR OTHER NOTES.
2. PAINT PIPE COVER & AIR RELEASE VALVE WITH 1 COAT OF PRIMER AND 2 COATS OF FINISH PAINT
3. THE LOCATION MUST MEET ALL OF THE FOLLOWING CONDITIONS;
 - A. MAINTAIN MINIMUM 18" DISTANCE FROM BACK OF CURB. (PREFERRED LOCATION)
 - B. MAINTAIN MINIMUM 12" DISTANCE FROM EDGE OF SIDEWALK WHEN PLACED IN PARKWAY.
 - C. MAINTAIN A 48" CLEAR WIDTH OF SIDEWALK FOR PEDESTRIAN ACCESS.

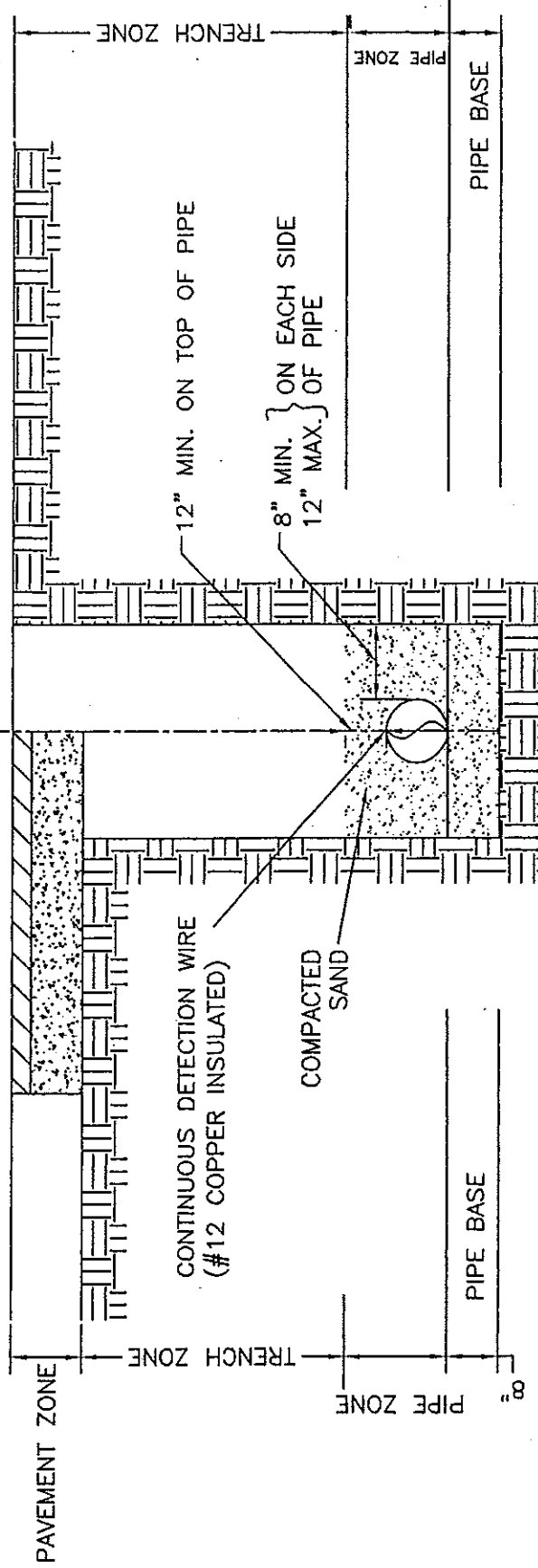
EXCEPTION: WHEN BECAUSE OF RIGHT OF WAY RESTRICTIONS, NATURAL BARRIERS OR OTHER EXISTING CONDITIONS, THE CITY ENGINEER MAY DETERMINE THAT COMPLIANCE WOULD CREATE AN UNREASONABLE HARDSHIP, AND UPON HIS/HER WRITTEN APPROVAL THE CLEAR WIDTH MAY BE REDUCED TO 36 INCHES.

D. MAINTAIN 36" CLEAR DISTANCE FROM ANY OBSTRUCTIONS.

1" AIR RELEASE & VACUUM RELIEF VALVE ASSEMBLY		STANDARD PLAN 710																	
REVIEWED DEPUTY CITY ENGINEER-RCE 57202 01/22/01	PUBLIC WORKS	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 80%;">REVISIONS DESCRIPTIONS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISIONS DESCRIPTIONS									<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">SUPERCEDES</th> <th style="width: 50%;">REFERENCES</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	SUPERCEDES	REFERENCES				
NO.	REVISIONS DESCRIPTIONS																		
SUPERCEDES	REFERENCES																		
APPROVED DIRECTOR OF PUBLIC WORKS-RCE 36106 01/22/01		SHEET 1 OF 1																	
DRAWN BY: K.Y. CHECKED BY:																			

Paved area

Unpaved area



Trench section

NOTES:

* PAVEMENT ZONE:

FOR AC PAVEMENT REPAIR, SEE STD-133-1.
FOR REPAIR OF CONCRETE ALLEY SEE STD-132-1.

* TRENCH ZONE:

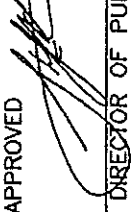
BACKFILL W/CEMENT SLURRY-1 SACK OR COMPACT TO 95
% RELATIVE DENSITY

* PIPE AND PIPE BED ZONE:

SAND SHALL CONFORM TO THE FOLLOWING GRADATION, %100 PASSING
($\frac{3}{8}$ in. sieve), %75-100 PASSING (NO.8 sieve) AND %0-15 PASSING
(NO.200 sieve).

WATERLINE BEDDING DETAILS

STANDARD PLAN
711

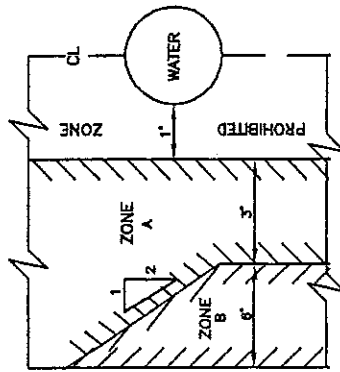
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				NO.			STD-133-1
DEPUTY CITY ENGINEER-RCE 57202				DESCRIPTIONS			STD-132-1
APPROVED				1		Revised dimension top of pipe.	
							
DIRECTOR OF PUBLIC WORKS-RCE 36106		WORKS					
DRAWN BY: K.Y.		CHECKED BY:				SHEET 1 OF 1	

BASIC SEPARATION STANDARDS

1. PARALLEL CONSTRUCTION: THE HORIZONTAL DISTANCE BETWEEN PRESSURE DOMESTIC WATER MAINS AND SEWER LINES SHALL BE AT LEAST 10 FEET.
2. PERPENDICULAR CONSTRUCTION (CROSSING): PRESSURE WATER MAINS SHALL BE AT LEAST ONE FOOT ABOVE SANITARY SEWER LINES WHERE THESE LINES MUST CROSS.
3. SPECIAL PROVISIONS: ALTERNATIVE CONSTRUCTION CRITERIA WHERE THE BASIC SEPARATION STANDARDS CANNOT BE ATTAINED ARE SHOWN BELOW:

SITUATION:

LOCATION OF NEW SEWER, EXISTING DOMESTIC & RECLAIMED WATER LINES

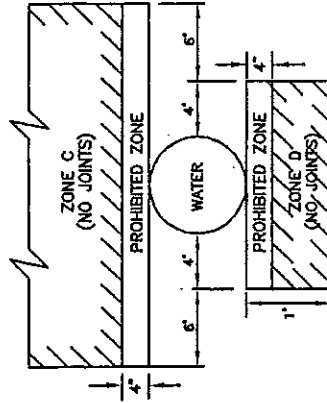


PARALLEL CONSTRUCTION

IF ANY SEWER PIPELINES ARE TO BE CONSTRUCTED WITHIN ANY OF THE ABOVE INDICATED ZONES, SPECIAL CONSTRUCTION SHALL BE REQUIRED AS DESCRIBED BELOW.

ZONE SEWER

- A DO NOT LOCATE ANY PARALLEL SEWER LINES IN THIS AREA WITHOUT STATE AND LOCAL HEALTH DEPARTMENT APPROVAL
- B USE V.C.P. OR D.I.P. WITH COMPRESSION JOINTS.
- C USE D.I.P. WITH MECHANICAL JOINTS OR CLASS 200 P.V.C. - AWWA C900
- D USE D.I.P. OR CLASS 200 P.V.C. - AWWA C900



PERPENDICULAR CROSSING

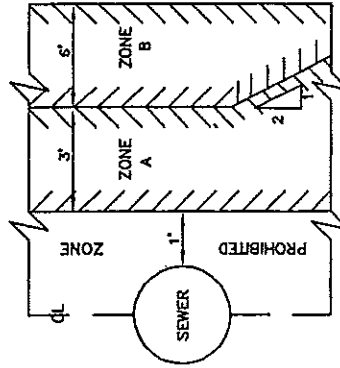
GENERAL NOTES

1. NO PIPE JOINTS SHALL BE PERMITTED WITHIN ZONE D. IT IS THE INTENT OF THESE SPECIFICATIONS THAT NO JOINTS SHALL OCCUR WITHIN ZONE C. IF THAT CANNOT BE ACCOMPLISHED, THE NEW PIPELINE SHALL BE ENCASED IN CONCRETE FOR THE FULL LENGTH OF ZONE C. THE METHOD OF ENCASEMENT SHALL BE PER SBWD STD. DWG. S-10, TYPE "B".
2. ALL D.I.P. MUST HAVE HOT DIP BITUMINOUS COATING AND ALL CLASS 200 P.V.C. MUST MEET DR-14 PER AWWA C900 OR EQUIVALENT.
3. SEWER FORCE MAINS SHALL NOT BE PERMITTED IN ZONES A THROUGH D.
4. THE CONSTRUCTION CRITERIA APPLY TO HOUSE LATERALS THAT CROSS ABOVE A PRESSURE WATER MAIN BUT NOT TO THOSE HOUSE LATERALS THAT CROSS BELOW A PRESSURE WATER MAIN.

SITUATION:

LOCATION OF NEW DOMESTIC & RECLAIMED WATER LINES

TO EXISTING SEWER & RECLAIMED WATER LINES

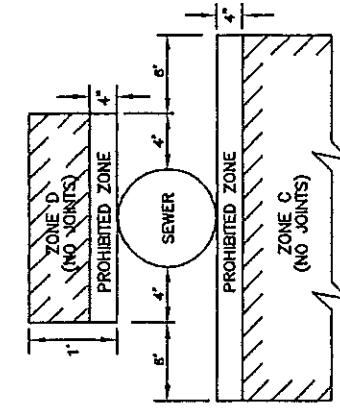


PARALLEL CONSTRUCTION

IF ANY WATER PIPELINES ARE TO BE CONSTRUCTED WITHIN ANY OF THE ABOVE INDICATED ZONES, SPECIAL CONSTRUCTION SHALL BE REQUIRED AS DESCRIBED BELOW.

ZONE DOMESTIC WATER

- A DO NOT LOCATE ANY PARALLEL DOMESTIC WATER MAIN IN THIS AREA WITHOUT STATE AND LOCAL HEALTH DEPARTMENT APPROVAL
- B USE D.I.P. OR CLASS 200 P.V.C. - AWWA C900
- C USE D.I.P. OR CLASS 200 P.V.C. - AWWA C900
- D USE D.I.P. OR CLASS 200 P.V.C. - AWWA C900



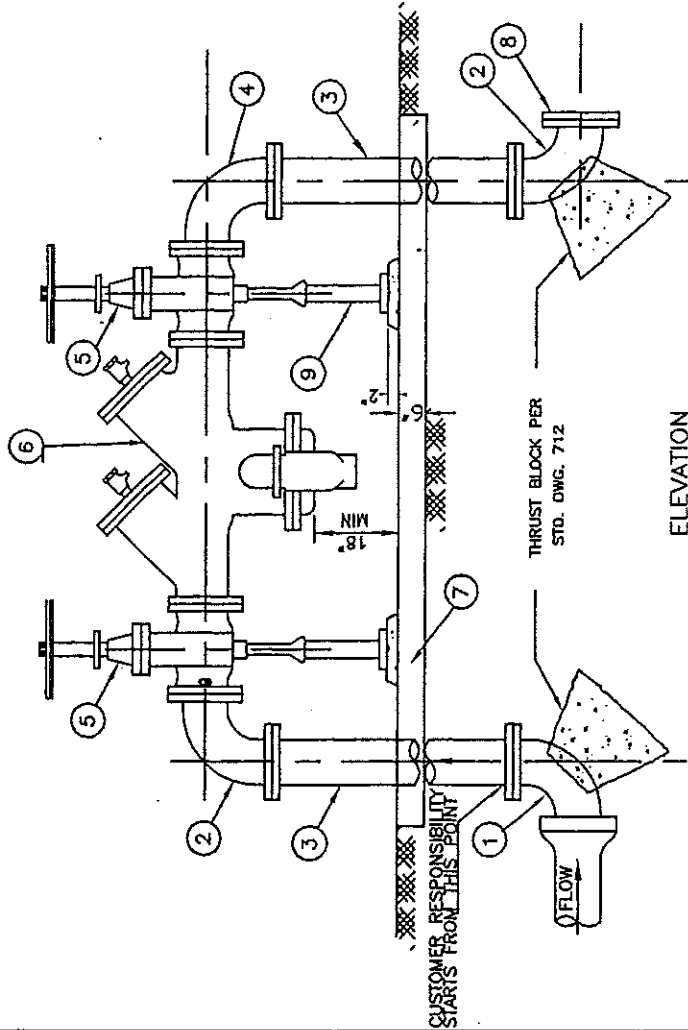
PERPENDICULAR CROSSING

STATE HEALTH DEPT. EXCEPTIONS TO BASIC SEPARATION STANDARDS FOR DW, RW, AND SEWER PIPELINES

STANDARD PLAN W-714

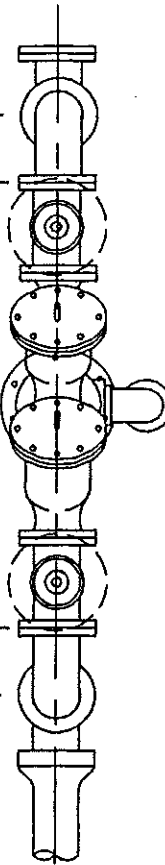
REVIEWED	01/22/01
DEPUTY CITY ENGINEER-RCE 57202	
APPROVED	01/22/01
DIRECTOR OF PUBLIC WORKS-RCE 36106	
DRAWN BY: K.Y.	CHECKED BY:

PUBLIC	REVISIONS	SUPERCEDES	REFERENCES
	NO.	W-14	S-10
WORKS			



LENGTH VARIES DEPENDING ON SIZE &
TYPE OF ASSEMBLY

ELEVATION



PLAN

MATERIALS

- 1 — 90° D.I. ELL FLG x PUSH-ON
- 2 — 90° D.I. ELL FLG x FLG
- 3 — D.I. SPOOL FLG x FLG
- 4 — 90° D.I. ELL FLG x FLG
- 5 — U.S.C.-APPROVED SHUT-OFF VALVES. SEE SPECIFICATIONS
- 6 — U.S.C. APPROVED REDUCED PRESSURE DEVICE (SIZE DEPENDS UPON REQUIREMENT)
- 7 — 6" CONCRETE SLAB
- 8 — D.I. BLIND FLANGE
- 9 — GALVANIZED ADJUSTABLE PIPE SUPPORT. SEE STD. 732

NOTES:

1. NOTIFY WATER DEPT. PRIOR TO INSTALLATION OF UNIT AT (562) 493-8660 EXT. 433
2. INSTALLATION SHALL COMPLY WITH THE LATEST PLUMBING CODES AND APPLICABLE LOCAL AGENCY REQUIREMENTS.
3. STAINLESS STEEL (316 ALLOY) ALL THREAD ROD. 2.0" DIAMETER * 18" LONG. TACK WELD TO TOP HEX NUT.

REDUCED PRESSURE BACKFLOW ASSEMBLY		STANDARD	PLAN
		715	
PUBLIC	REVISIONS	SUPERCEDES	REFERENCES
	NO.	DESCRIPTIONS	
 WORKS		W-20	712 732
REVIEWED  01/22/01 DEPUTY CITY ENGINEER—RCE 57202 APPROVED	01/22/01 DIRECTOR OF PUBLIC WORKS—RCE 36106	DRAWN BY: K.Y. CHECKED BY:	
SHEET 1 OF 1			

