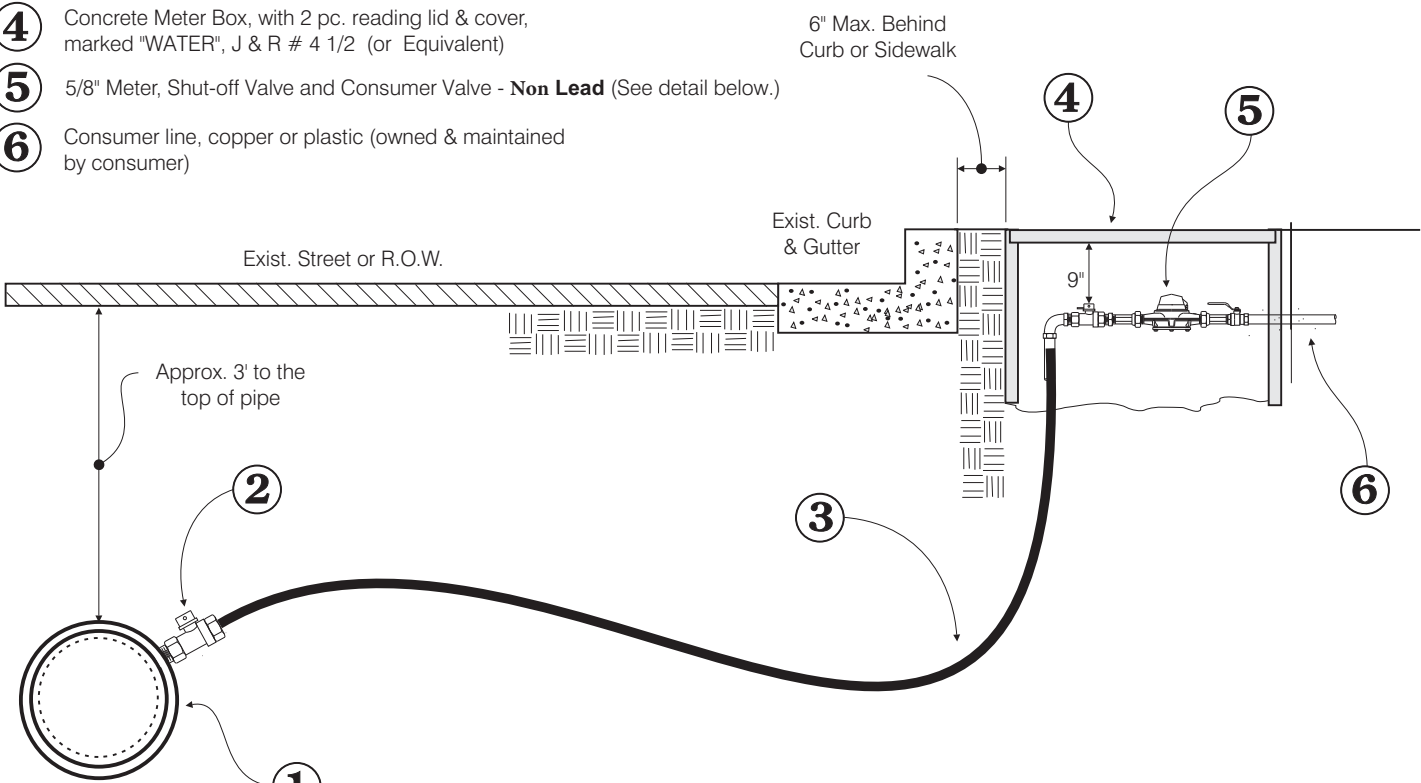


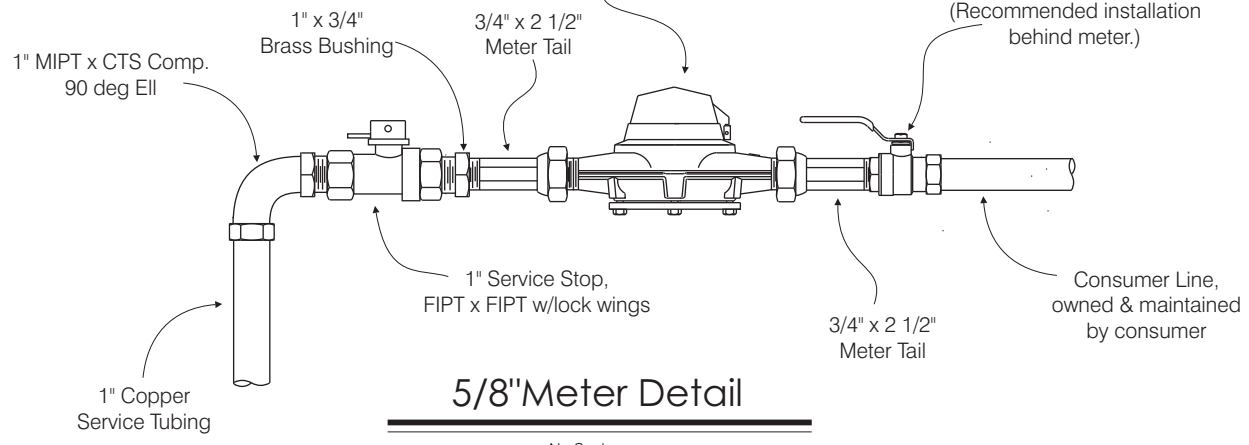
- ① Bronze Service Saddle - **Non Lead**  
For C-900 PVC Pipe: Ford S91 Exact O.D. x 1" IPT Saddle (or Equivalent)  
For A.C. or C.I. Pipe: Ford 202B Dbl. Strap x 1" IPT Saddle (or Equivalent)
- ② 1" Corp. Stop, MIPT x CTS Comp.- **Non Lead**
- ③ 1" Copper Tubing, Type "K" soft
- ④ Concrete Meter Box, with 2 pc. reading lid & cover, marked "WATER", J & R # 4 1/2 (or Equivalent)
- ⑤ 5/8" Meter, Shut-off Valve and Consumer Valve - **Non Lead** (See detail below.)
- ⑥ Consumer line, copper or plastic (owned & maintained by consumer)



Exist. "Cal-Am" Main


5/8" Water Meter to read in gallons, register set for curb read, bronze bottom (Provided by California-American Water)

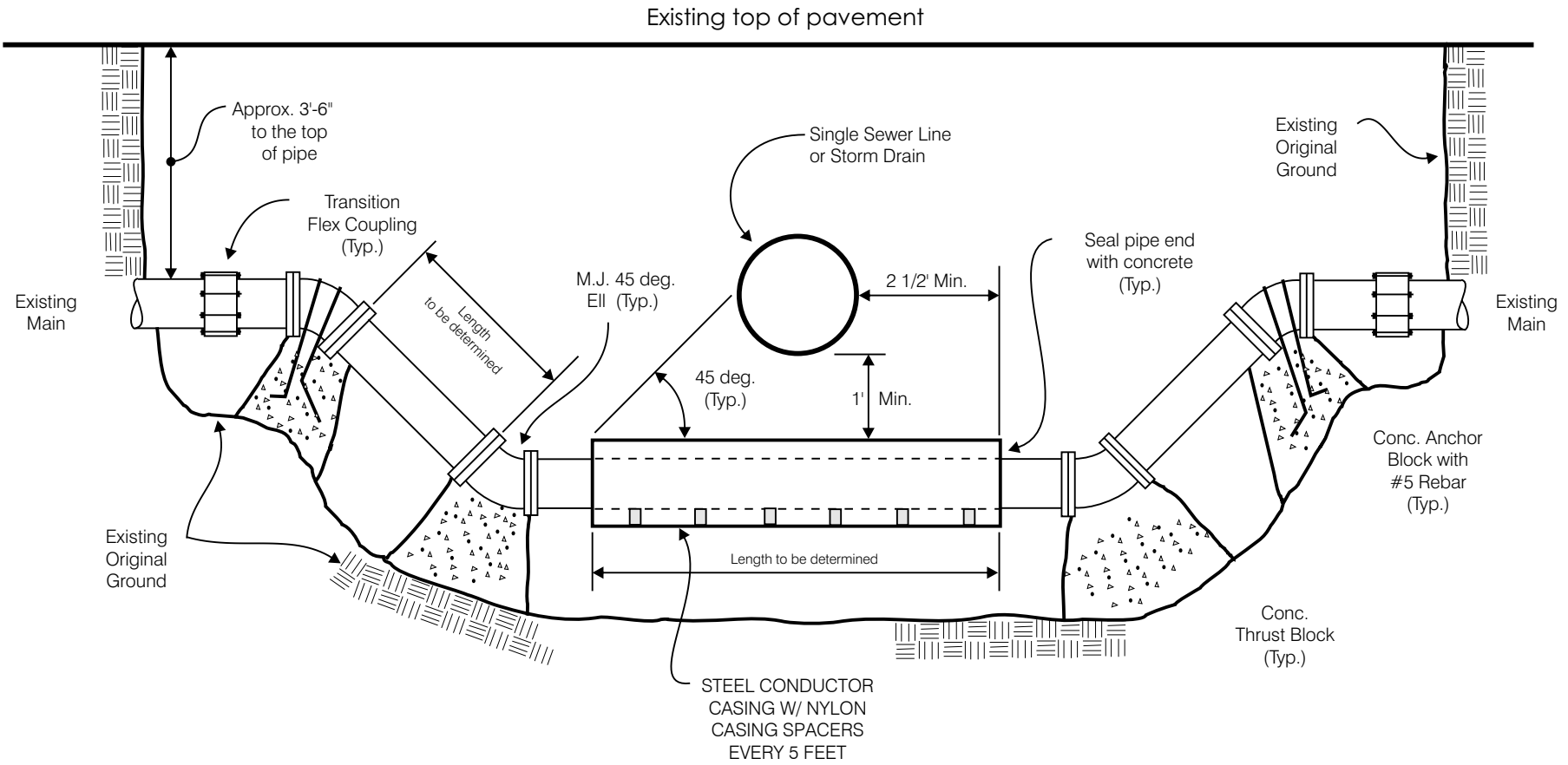
Required 3/4" consumer valve, installed, owned & maintained by consumer. (Recommended installation behind meter.)




**5/8" Meter Detail**

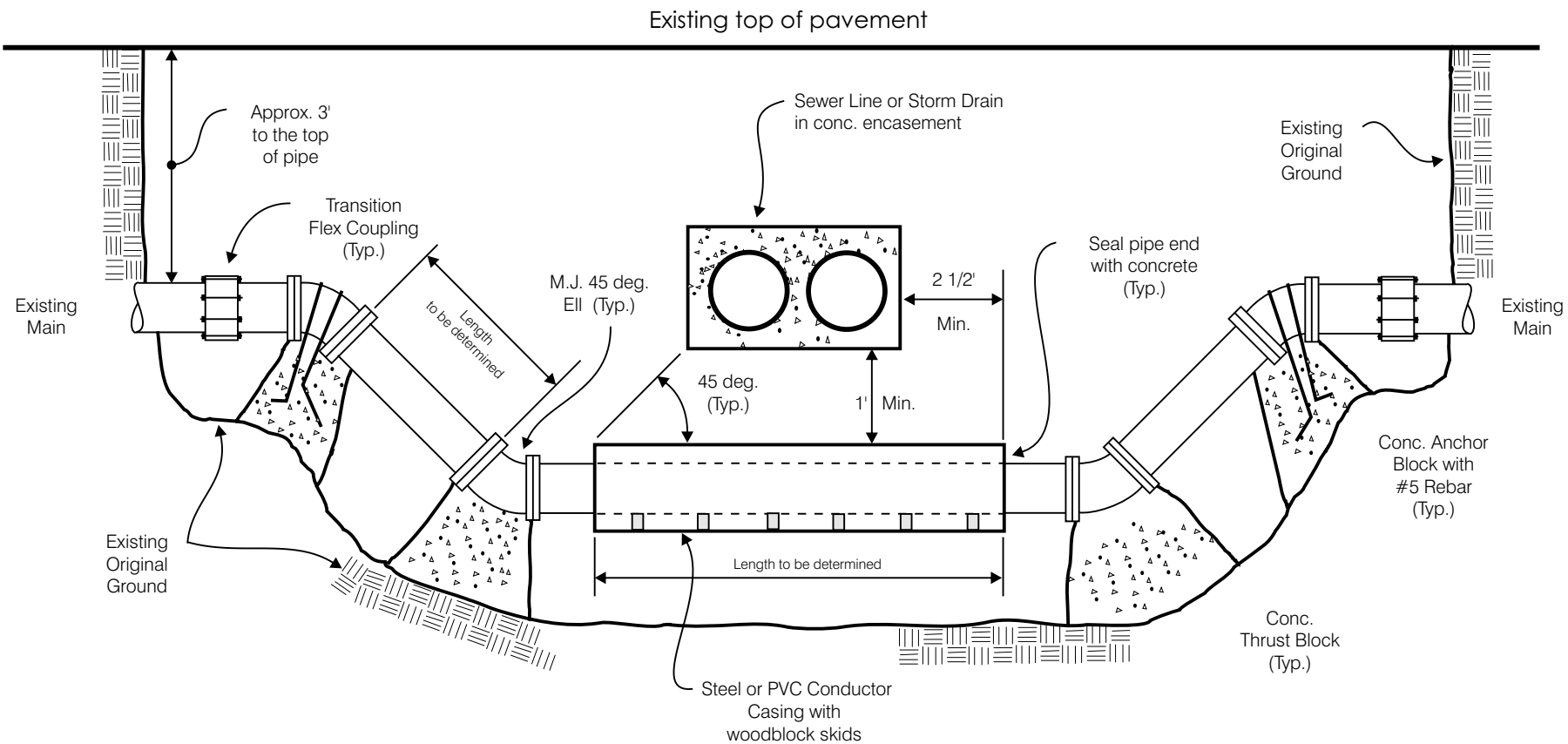
No Scale

		<b>San Diego County Operations Coronado District</b>	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 5/20/19	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A 1" SERVICE INSTALLATION WITH 5/8" METER</b>			Drwg. No. <b>COR-1</b>




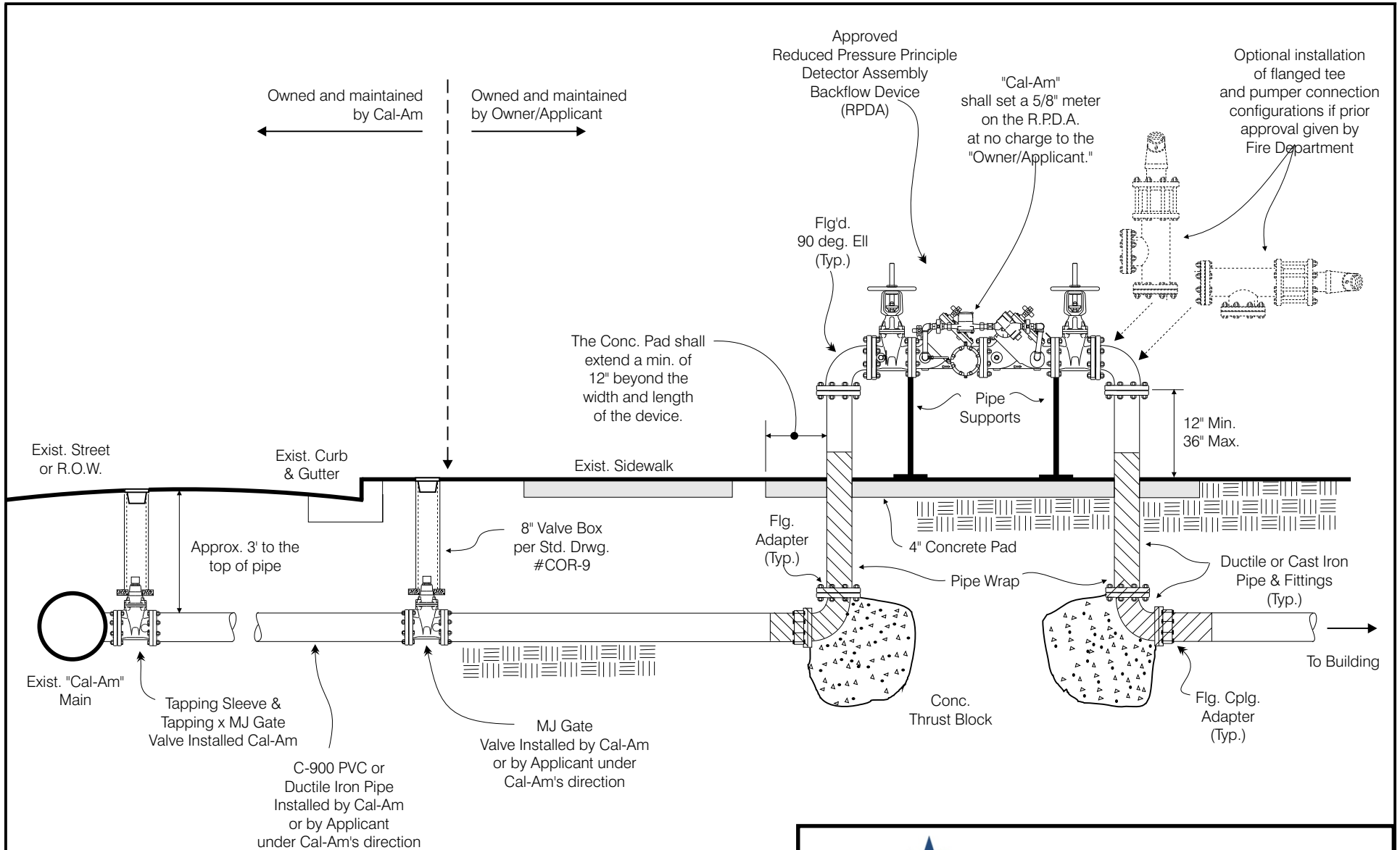
Note: This is a generic offset design. The dimensions will be calculated once the actual depth of the water main and other utilities are determined.

		San Diego County Operations Coronado District	
Approved By: _____ <small>Operations Superintendent</small>		Scale: No Scale	Date: 10/2/97
		Drawn By: <i>Jacob Quick</i>	Revised: 5/20/19
<b>Standard Drawing</b> <b>Offset Fitting, Single Crossing</b>			Drwg. No. <b>COR-10</b>




Note: This is a generic offset design. The dimensions will be calculated once the actual depth of the water main and other utilities are determined.

 <b>CALIFORNIA</b> <b>AMERICAN WATER</b>		San Diego County Operations Coronado District	
Approved By: _____ <small>Operations Superintendent</small>		Scale: No Scale	Date: 10/2/97
		Drawn By: <i>Doug Krufinski</i>	Revised: 4/24/06
<b>Standard Drawing</b> <b>OFFSET FITTING, Multiple Pipe Crossing</b>			Drwg. No. <b>COR-11</b>

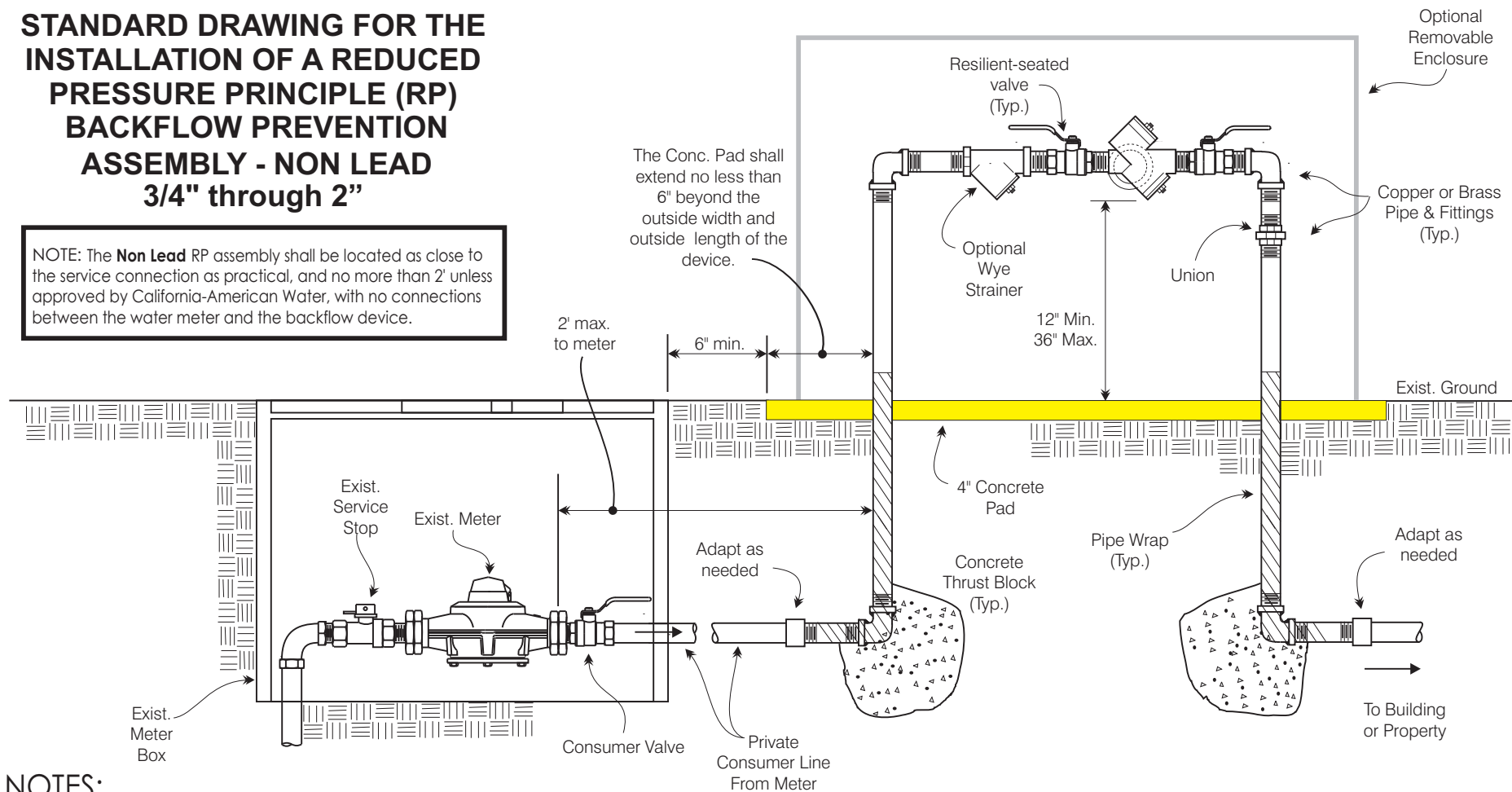


# PRIVATE FIRE PROTECTION SERVICE & R.P.D.A. Installation

		<b>San Diego County Operations Coronado District</b>	
Approved By: _____		Scale: No Scale	Date: 7/18/97
		Drawn By: <i>Doug Krufinski</i>	Revised: 9/24/08
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLY</b>			Drwg. No. <b>COR-12</b>

# STANDARD DRAWING FOR THE INSTALLATION OF A REDUCED PRESSURE PRINCIPLE (RP) BACKFLOW PREVENTION ASSEMBLY - NON LEAD 3/4" through 2"


NOTE: The **Non Lead** RP assembly shall be located as close to the service connection as practical, and no more than 2' unless approved by California-American Water, with no connections between the water meter and the backflow device.



## NOTES:

1. All fittings, risers, unions, elbows and nipples shall be either copper or red brass.
2. Buried pipe & fittings shall be wrapped with 2" wide 8 mil plastic backed adhesive tape.
3. Plastic risers or fittings are not approved.
4. The device shall have 12" of clearance on all sides.
5. The backflow device shall be tested upon installation by a certified backflow device tester.
6. Adapt the inlet & outlet fittings as needed.
7. Consult with local building codes for the requirements of onsite thermal expansion control.
8. The assembly shall be installed horizontally & level unless approved for other orientation(s).
9. The concrete pad shall extend a min. of 6" beyond the outside width and outside length of the device.
10. Teflon tape should be used on all threaded connections.
11. The RP device shall never be installed in a pit or meter box.

Any inside installation shall require prior approval.

		<b>San Diego County Operations Coronado District</b>	
Approved By: _____		Scale: No Scale	Date: 7/18/97
		Drawn By: <i>Jacob Quick</i>	Revised: 5/2/19
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A REDUCED PRESSURE PRINCIPLE ASSEMBLY - NON LEAD</b>			Drwg. No. <b>COR-13</b>

# STANDARD INSTALLATION DRAWING for a REDUCED PRESSURE PRINCIPLE (RP) BACKFLOW PREVENTION ASSEMBLY, 2 1/2" thru 10"

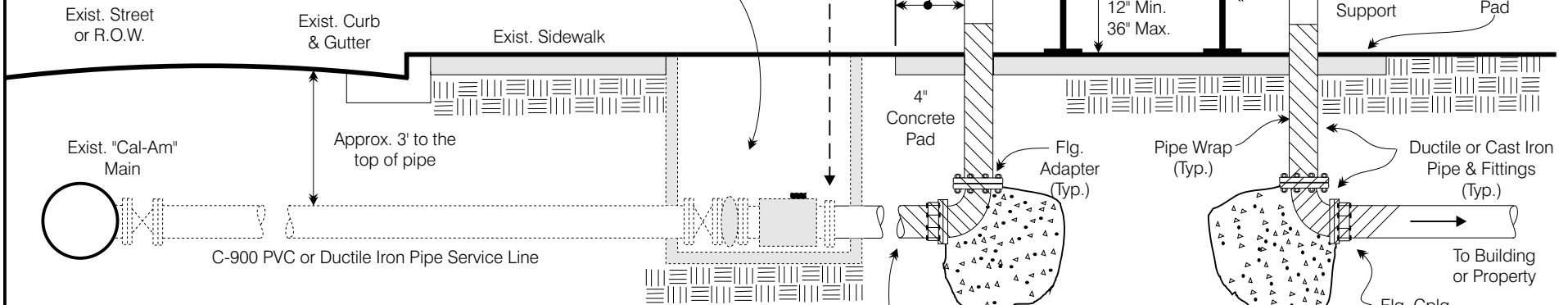
NOTE: The RP assembly shall be located as close to the service connection as practical with no connections between the water meter and the backflow device.

The "Contractor/Owner" shall install an approved reduced pressure principle assembly backflow device (with non-rising resilient seated valves) at the property line, and have the device tested by a certified tester.

Exist. "Cal-Am" meter vault, valve, strainer and water meter  
(See Std. Drwg. COR-18 for Large Meter Station Installation Specifications)


Limit of "Cal-Am" maintenance responsibility

The Conc. Pad shall extend a min. of 12" beyond the width and length of the device.



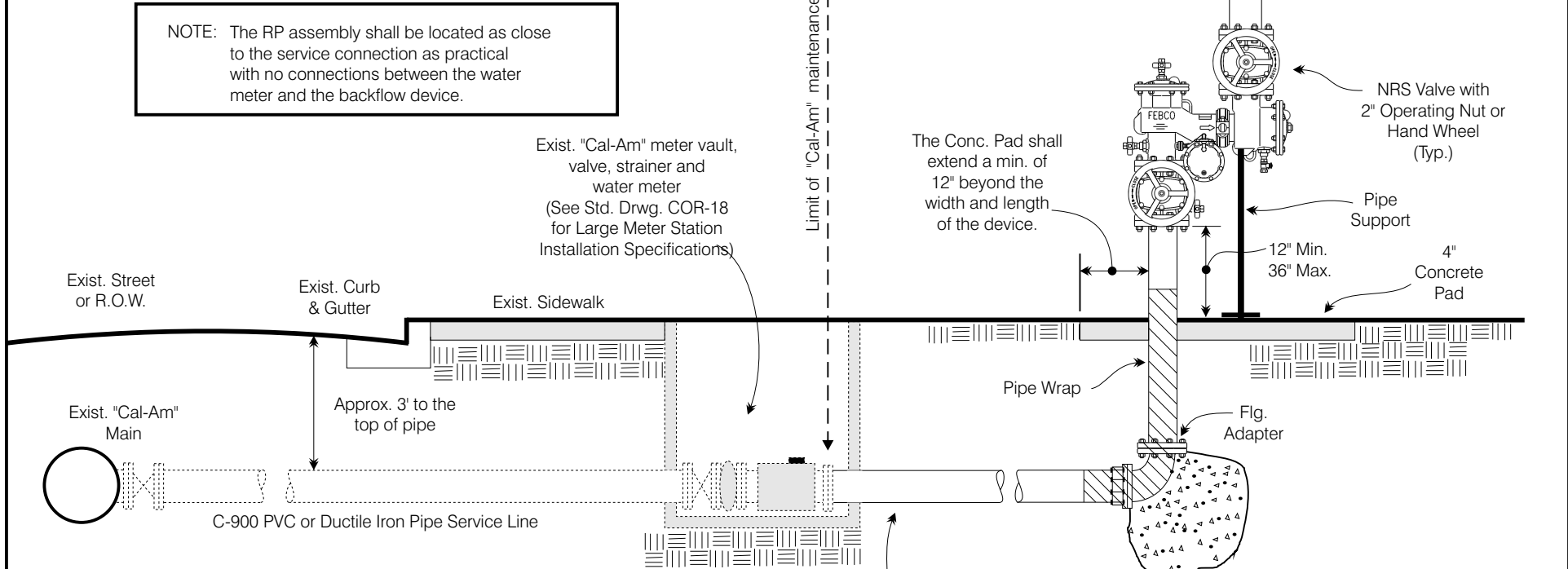
## NOTES:

1. All fittings on assembly shall be flanged.
2. Buried cast or ductile iron pipe & fittings shall be polyethylene wrapped with 2" wide plastic backed adhesive tape 8 mil thick. Use 1/2" overlap.
3. Cast or ductile iron pipe & fittings shall be cement mortar lined.
4. All exposed cast or ductile iron shall be painted with one coat of primer and two coats of exterior enamel.
5. The concrete pad shall extend a min. of 12" beyond the width and length of the device.
6. The backflow device shall be tested upon installation by a certified backflow device tester.
7. Adapt the inlet & outlet fittings to the main as needed.
8. Consult with local building codes for the requirements of onsite thermal expansion control.
9. The assembly shall be installed horizontally & level unless approved for other orientation(s).

		San Diego County Operations Coronado District	
Approved By: _____		Scale: No Scale	Date: 7/18/97
		Drawn By: <i>Doug Krufinski</i>	Revised: 9/24/08
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A REDUCED PRESSURE PRINCIPLE ASSEMBLY</b>			Drwg. No. <b>COR-14</b>


# VERTICLE INSTALLATION DRAWING for a REDUCED PRESSURE PRINCIPLE (RP) BACKFLOW PREVENTION ASSEMBLY, 2 1/2" thru 10"

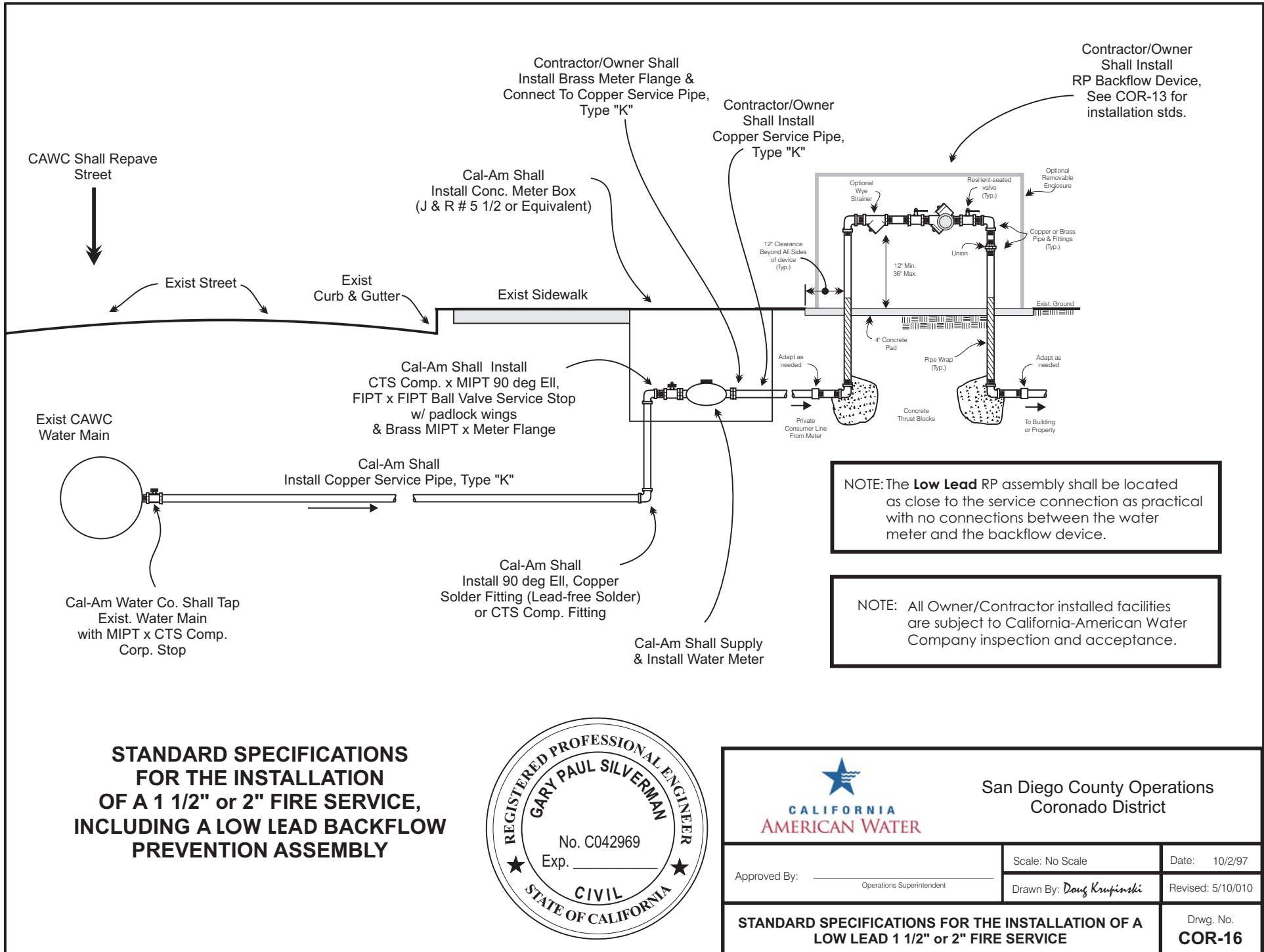
NOTE: The RP assembly shall be located as close to the service connection as practical with no connections between the water meter and the backflow device.



**NOTES:**

1. All fittings on assembly shall be flanged.
2. Buried cast or ductile iron pipe & fittings shall be polyethylene wrapped with 2" wide plastic backed adhesive tape 8 mil thick. Use 1/2" overlap.
3. Cast or ductile iron pipe & fittings shall be cement mortar lined.
4. All exposed cast or ductile iron shall be painted with one coat of primer and two coats of exterior enamel.
5. The concrete pad shall extend a min. of 12" beyond the width and length of the device.
6. The backflow device shall be tested upon installation by a certified backflow device tester.
7. Adapt the inlet & outlet fittings to the main as needed.
8. Consult with local building codes for the requirements of onsite thermal expansion control.
9. The assembly shall be installed horizontally & level unless approved for other orientation(s).

		<b>San Diego County Operations Coronado District</b>	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Doug Krupinski</i>	Revised: 9/24/08	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A VERTICLE REDUCED PRESSURE PRINCIPLE ASSEMBLY</b>			Drwg. No. <b>COR-15</b>



**STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A 1 1/2" or 2" FIRE SERVICE, INCLUDING A LOW LEAD BACKFLOW PREVENTION ASSEMBLY**

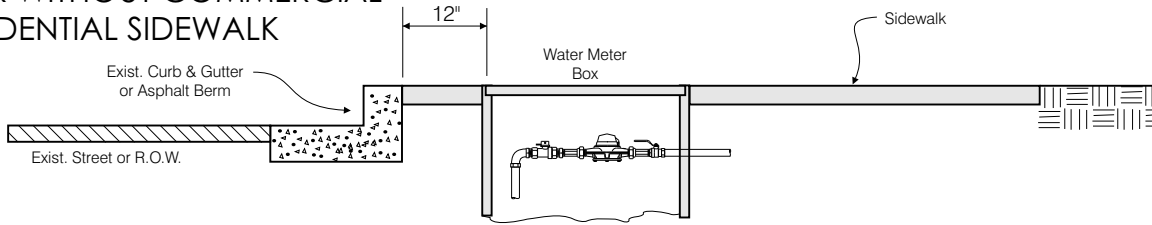


		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 10/2/97	
Operations Superintendent	Drawn By: <i>Doug Krufinski</i>	Revised: 5/10/010	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A LOW LEAD 1 1/2" or 2" FIRE SERVICE</b>			Drwg. No. <b>COR-16</b>

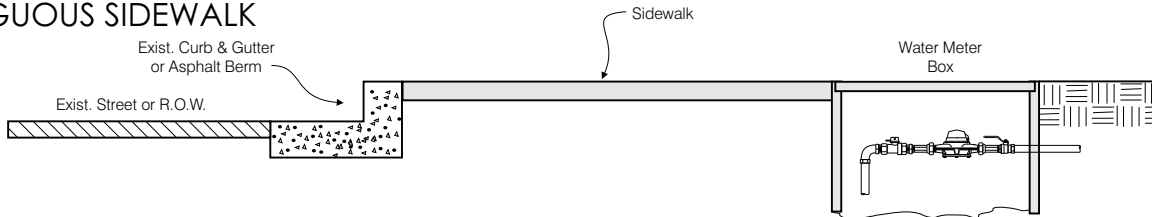




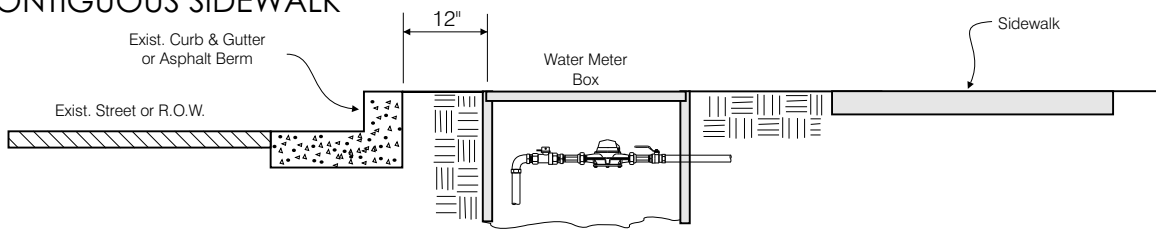
**TYPE A1  
WITH OR WITHOUT COMMERCIAL  
OR RESIDENTIAL SIDEWALK**



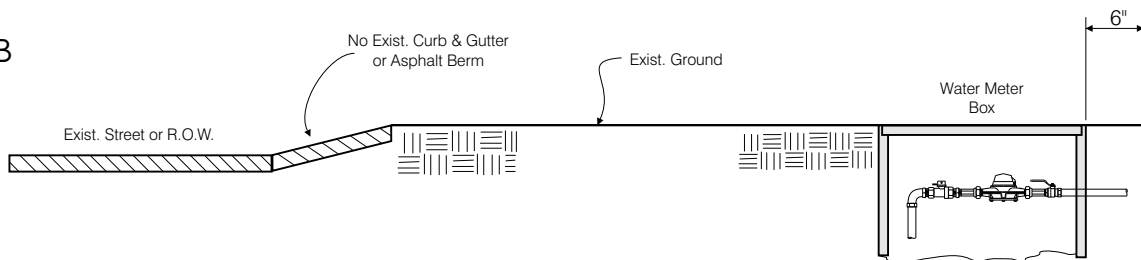
**TYPE A2  
CONTIGUOUS SIDEWALK**



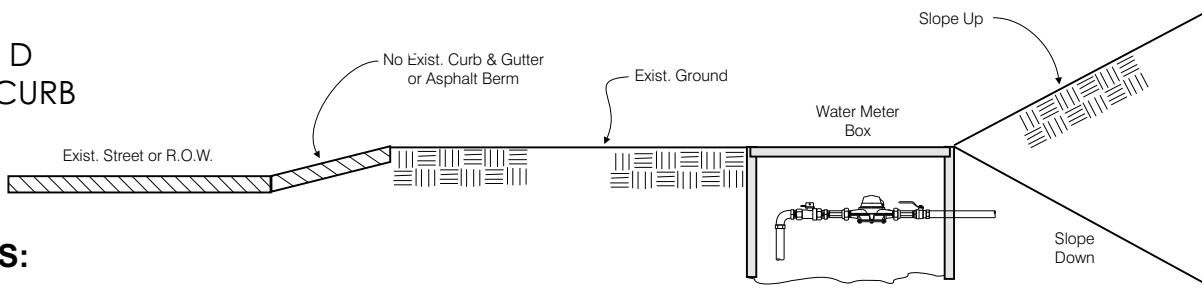
**TYPE B  
NON-CONTIGUOUS SIDEWALK**



**TYPE C  
NO CURB**




**TYPE D  
NO CURB**

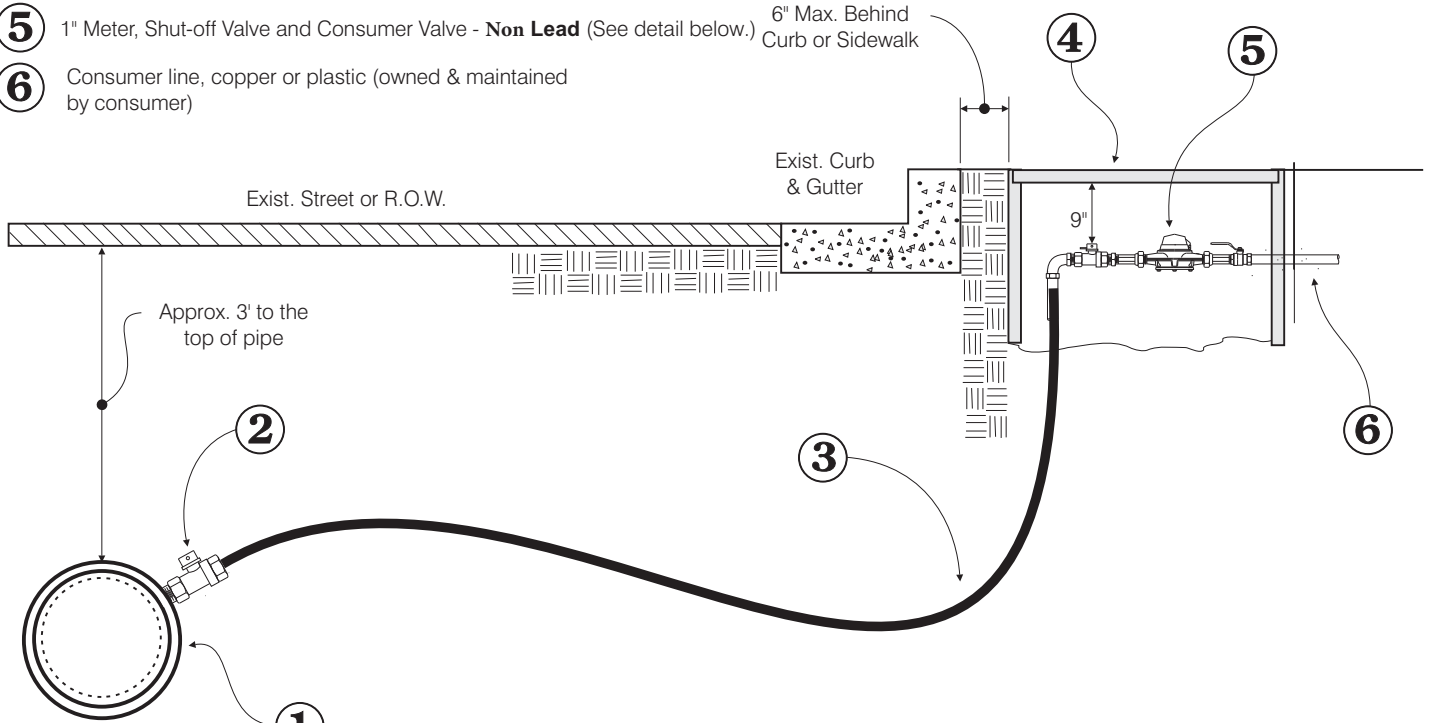


**NOTES:**

1. Meter boxes shall not be located within driveways per S.D. Regional Std. Drwg. W-15
2. Meter boxes will be located in the following order of preference:
  - a) In the parkway between curb and sidewalk.
  - b) Where no parkway exists, within the public right-of-way immediately behind the sidewalk.
  - c) At locations where extra wide sidewalks occupy the entire right-of-way, within the sidewalk at a point close to the curb.
  - d) In unimproved areas, at a point convenient to the water company which is best protected from traffic.
  - e) Where necessary, within the customer's property.

		San Diego County Operations Coronado District	
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97 Revised: 4/24/06	
<b>STANDARD DRAWING                  WATER METER LOCATIONS</b>			Drwg. No. <b>COR-18</b>

- 1** Bronze Service Saddle - **Non Lead**  
For C-900 PVC Pipe: Ford S91 Exact O.D. x 1" IPT Saddle (or Equivalent)  
For A.C. or C.I. Pipe: Ford 202B Dbl. Strap x 1" IPT Saddle (or Equivalent)
- 2** 1" Corp. Stop, MIPT x CTS Comp. - **Non Lead**
- 3** 1" Copper Tubing, Type "K" soft
- 4** Concrete Meter Box, with 2 pc. reading lid & cover, marked "WATER", J & R # 4 1/2 (or Equivalent)
- 5** 1" Meter, Shut-off Valve and Consumer Valve - **Non Lead** (See detail below.)
- 6** Consumer line, copper or plastic (owned & maintained by consumer)



Exist. "Cal-Am" Main

1" Water Meter to read in gallons, register set for curb read, bronze bottom (Provided by California-American Water)

Required 1" consumer valve, installed, owned & maintained by consumer. (Recommended installation behind meter.)

1" MIPT x CTS Comp. 90 deg Ell

1" x 2 1/2" Meter Tail

1" Service Stop, FIPT x FIPT w/lock wings


1" x 2 1/2" Meter Tail

Consumer Line, owned & maintained by consumer

1" Copper Service Tubing

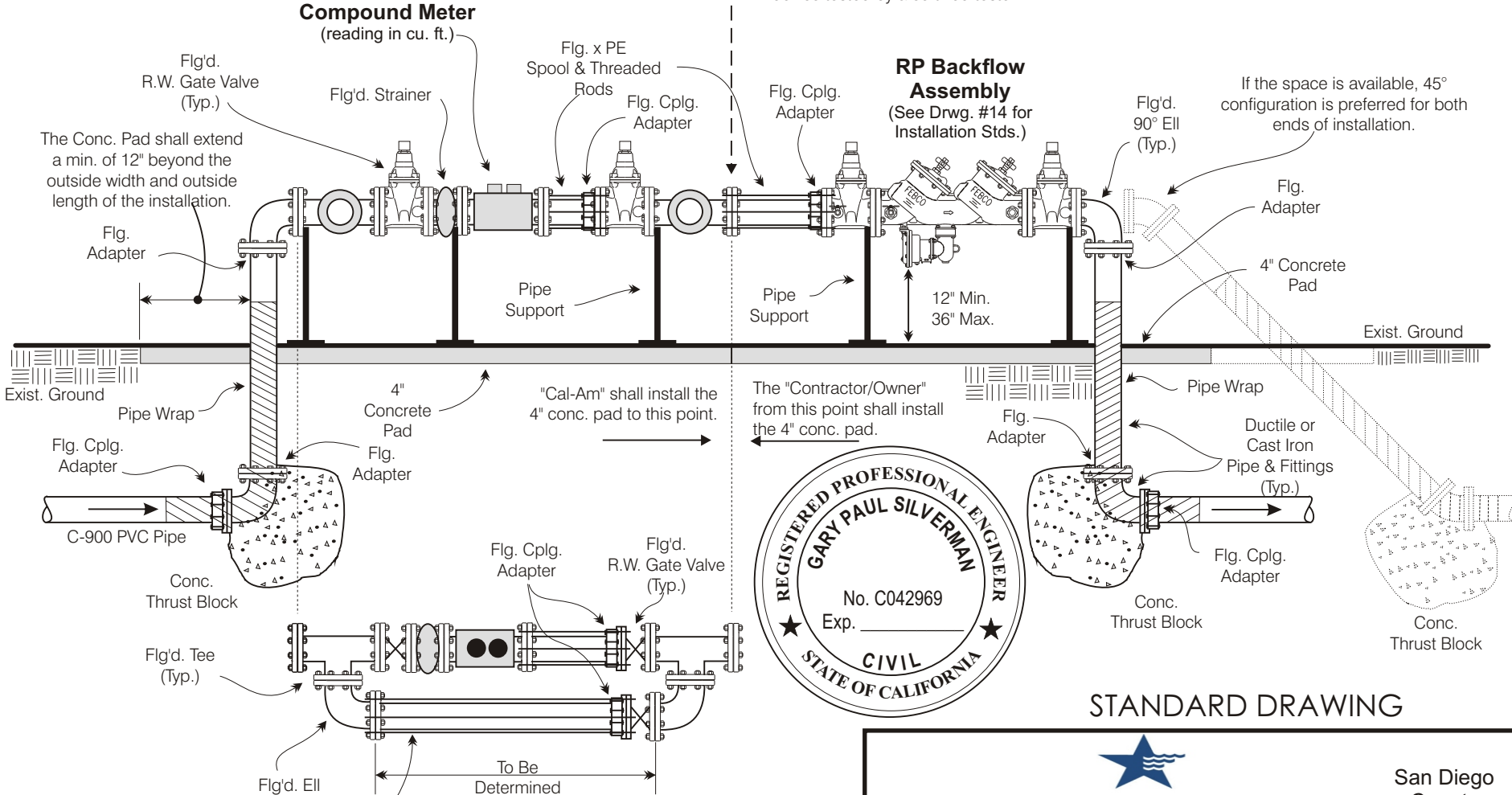
### 1" Meter Detail

No Scale

		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 5/20/19	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A          1" SERVICE INSTALLATION WITH 1" METER</b>			Drwg. No. <b>COR-2</b>

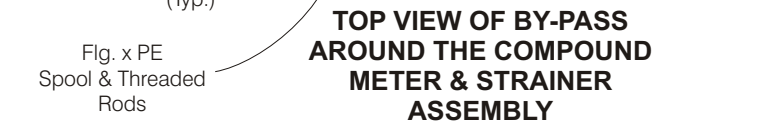
"Cal-Am" shall install a compound meter station (using non-rising resilient seated valves) with a by-pass for meter testing, replacement or repair. "Cal-Am" is responsible for maintenance up to this point.

The "Contractor/Owner" at this point shall install a Fig. x PE Spool & a Flex. Cplg. Adapter. The "Contractor/Owner" is responsible for maintenance from this point. The "Contractor/Owner" shall then install an approved reduced pressure principle backflow assembly (with non-rising resilient seated valves) and have the device tested by a certified tester.



"Cal-Am" shall install the 4" conc. pad to this point.

The "Contractor/Owner" from this point shall install the 4" conc. pad.

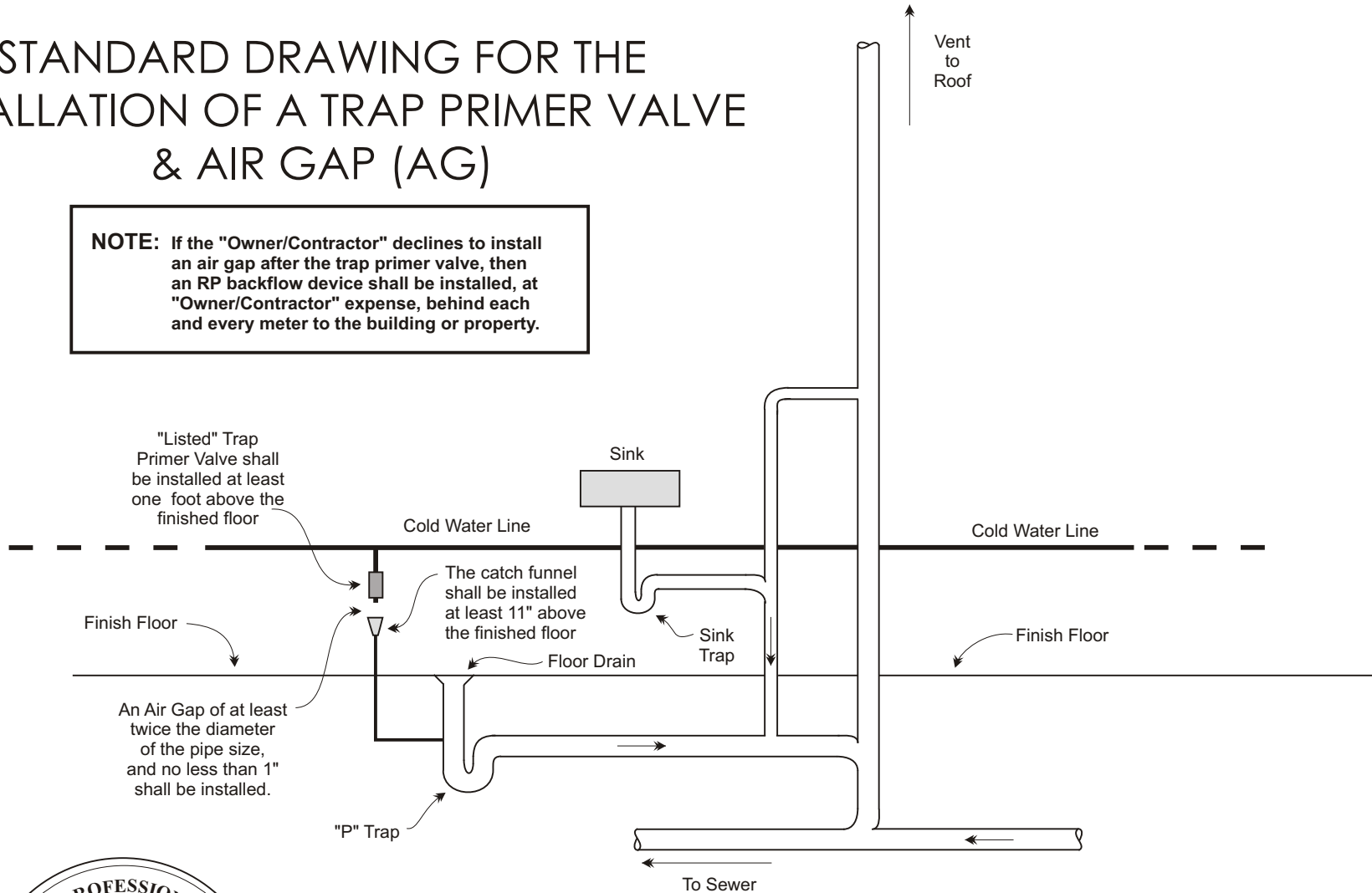



STANDARD DRAWING

		<b>San Diego County Operations</b>	
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97	
		Drawn By: <i>Doug Krupinski</i>	Revised: 4/24/06
<b>Large Meter Station Installation, Including RP Installation</b>			Drwg. No. <b>COR-20</b>

# STANDARD DRAWING FOR THE INSTALLATION OF A TRAP PRIMER VALVE & AIR GAP (AG)

**NOTE:** If the "Owner/Contractor" declines to install an air gap after the trap primer valve, then an RP backflow device shall be installed, at "Owner/Contractor" expense, behind each and every meter to the building or property.



 <b>CALIFORNIA AMERICAN WATER</b>		San Diego County Operations
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
	Drawn By: <i>Doug Krupinski</i>	Revised: 4/24/06
<b>STANDARD SPECIFICATION FOR THE INSTALLATION OF A TRAP PRIMER VALVE &amp; AIR GAP</b>		Drwg. No. <b>COR-21</b>

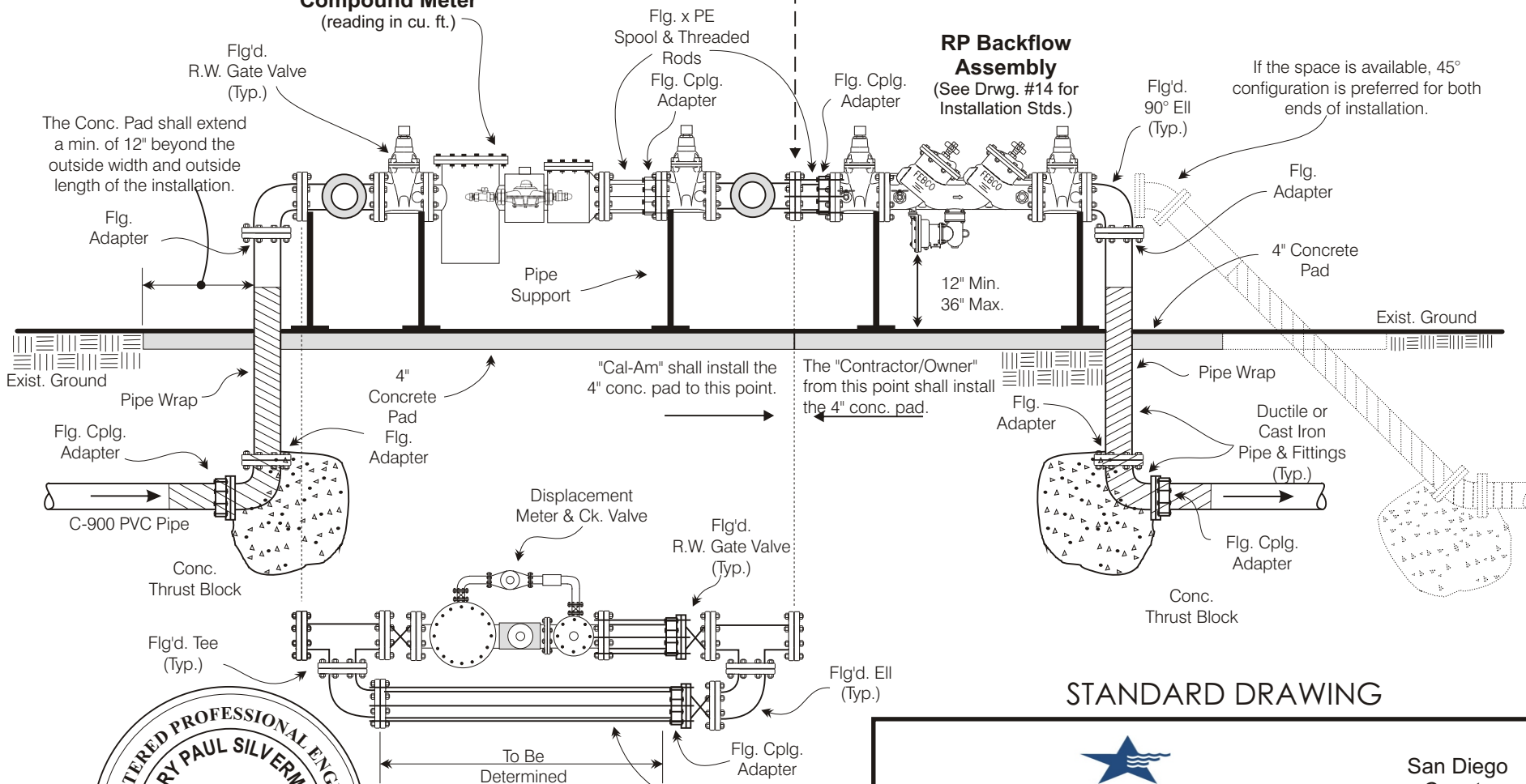
"Cal-Am" shall install a compound meter station (using non-rising resilient seated valves) with a by-pass for meter testing, replacement or repair. "Cal-Am" is responsible for maintenance up to this point.

The "Contractor/Owner" at this point shall install a Fig. x PE Spool & a Flex. Cplg. Adapter. The "Contractor/Owner" is responsible for maintenance from this point.

The "Contractor/Owner" shall then install an approved reduced pressure principle backflow assembly (with non-rising resilient seated valves) and have the device tested by a certified tester.

**Neptune Protectus III Compound Meter**  
(reading in cu. ft.)

**RP Backflow Assembly**  
(See Drwg. #14 for Installation Stds.)



The Conc. Pad shall extend a min. of 12" beyond the outside width and outside length of the installation.

If the space is available, 45° configuration is preferred for both ends of installation.

"Cal-Am" shall install the 4" conc. pad to this point.

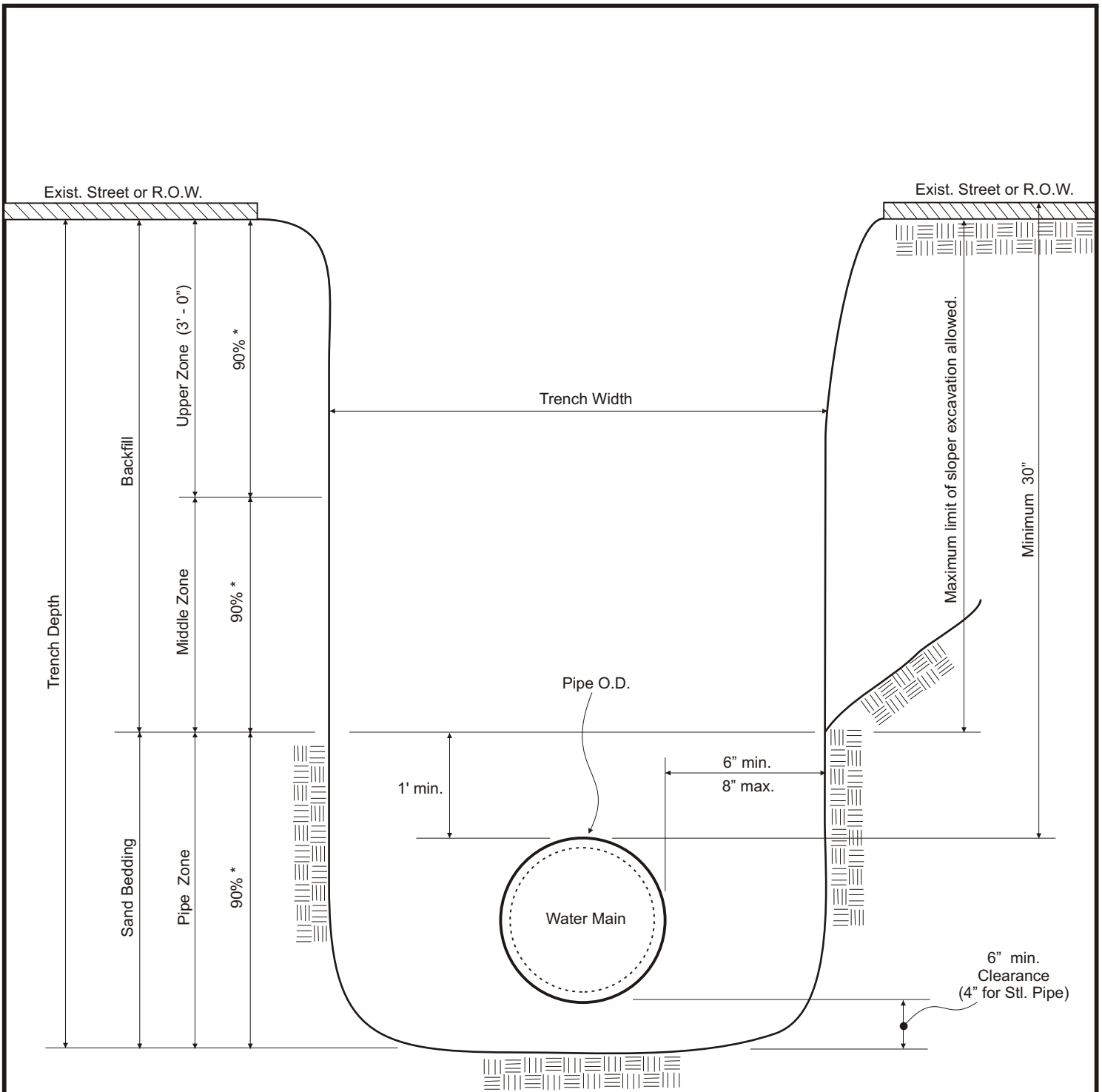
The "Contractor/Owner" from this point shall install the 4" conc. pad.



**TOP VIEW OF BY-PASS AROUND THE PROTECTUS METER & STRAINER ASSEMBLY**

**STANDARD DRAWING**

		<b>San Diego County Operations</b>	
Approved By: _____	Scale: No Scale	Date: 10/2/97	
Operations Superintendent	Drawn By: <i>Doug Krupinski</i>	Revised: 4/24/06	
<b>Large Protectus Meter Installation, Including RP Installation</b>			Drwg. No. <b>COR-22</b>

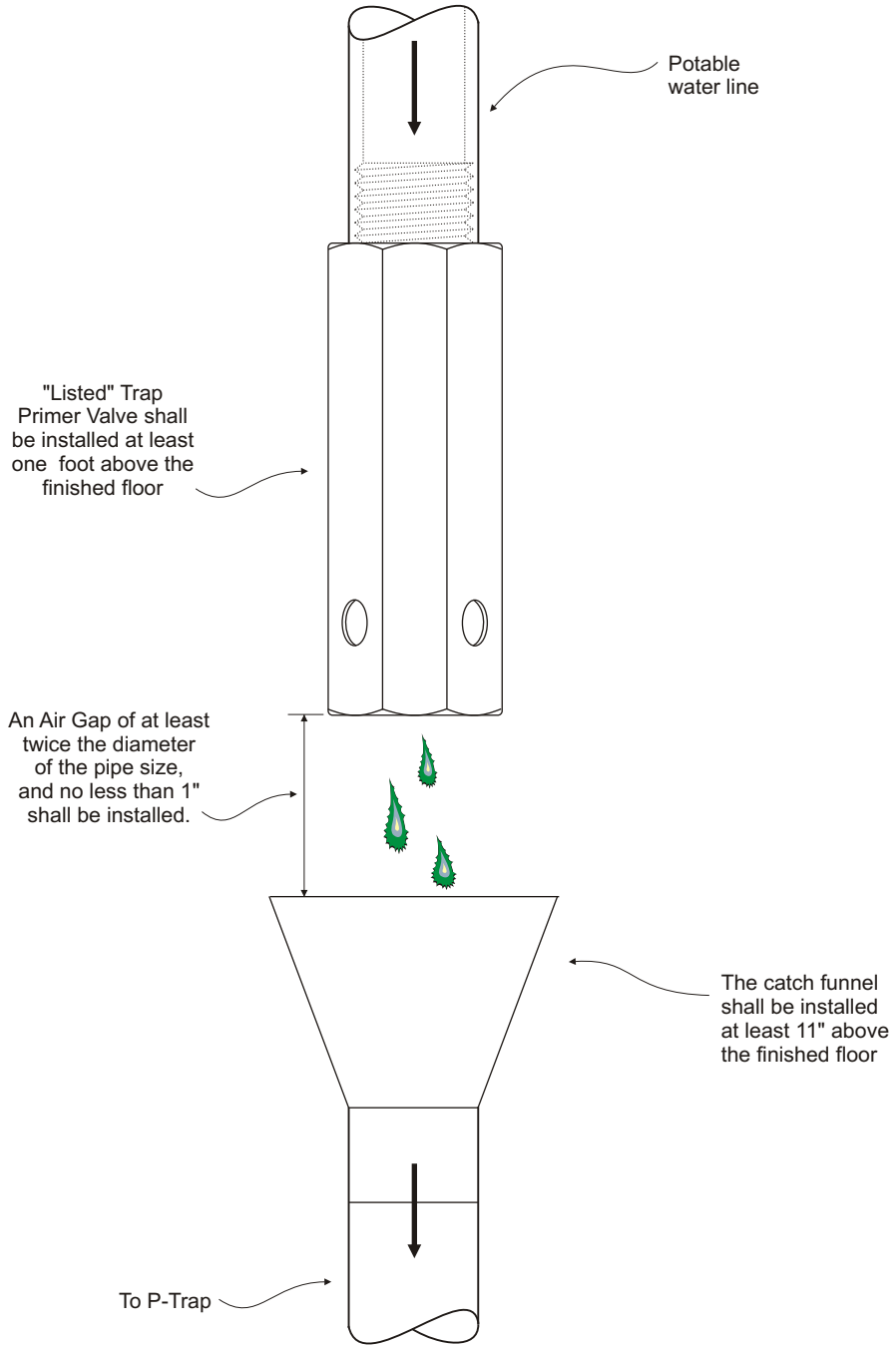


**SECTION**

**NOTE:**

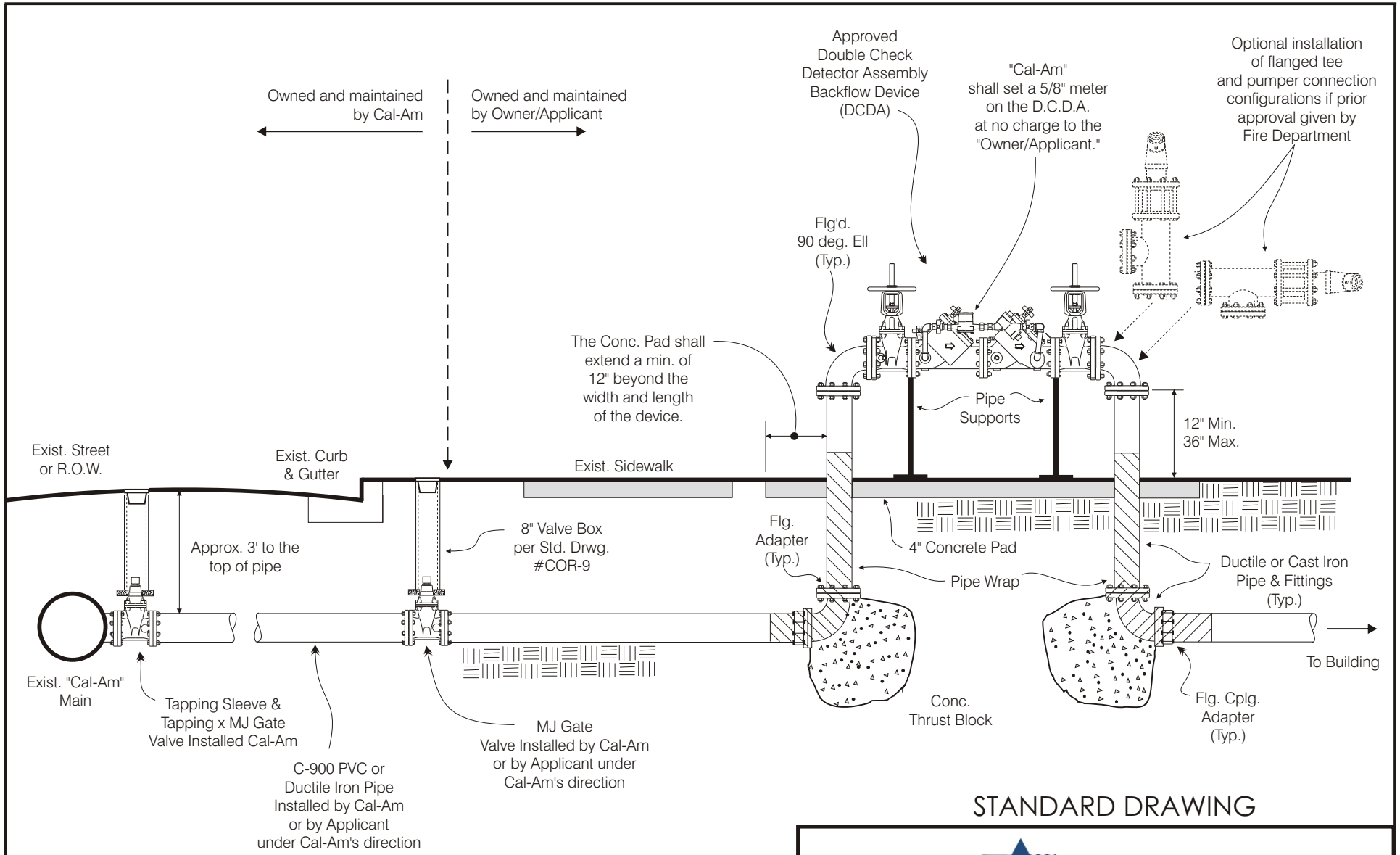
1. (\*) indicates minimum relative compaction.
2. Bedding material shall be screened sand having a sand equivalent (SE) of not less than (50) and an expansion coefficient, when saturated with water, of not more than 0.5 of one percent (0.5%).
3. Water mains of nominal size 4" - 12" shall be of PVC C-900.
4. Water mains greater than 12" nominal size shall be of ductile iron.

		San Diego County Operations
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
Drawn By: <i>Doug Krupinski</i>		Revised: 4/24/06
<b>STANDARD DRAWING</b> <b>Pipe Bedding and Trench Backfill for Water Mains</b>		Drwg. No. <b>COR-23</b>




		San Diego County Operations
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
Drawn By: <i>Doug Krupinski</i>		Revised: 4/24/06
Trap Primer Valve Detail		Drwg. No. <b>COR-24</b>





**PRIVATE FIRE PROTECTION SERVICE & D.C.D.A. Installation**

**STANDARD DRAWING**

		San Diego County Operations	
Approved By: _____	Scale: No Scale	Date: 10/2/97	
Operations Superintendent	Drawn By: <i>Doug Krupinski</i>	Revised: 4/24/03	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A DOUBLE CHECK DETECTOR ASSEMBLY</b>			Drwg. No. <b>COR-25</b>

**These notes shall be utilized on the plan title sheet, or detail sheets where applicable:**

General Utility Notes

1. All water facilities within the public right-of-way shall be installed by California American Water.
2. Disinfection of water facilities, such as fire services or private water mains, shall be performed by the Contractor according to California American Water standards and under California American Water supervision.
3. The Contractor shall install all water facilities within **private property** according to California American Water standards and under California American Water supervision with the exception of water meters which shall be set by California American Water.
4. Within **private property** it is the Contractor's responsibility to adapt the service connection if the service size is different than the meter size.

Standard Specifications

1. California American Water Standard Specifications, dated April, 2006.

Standard Drawings

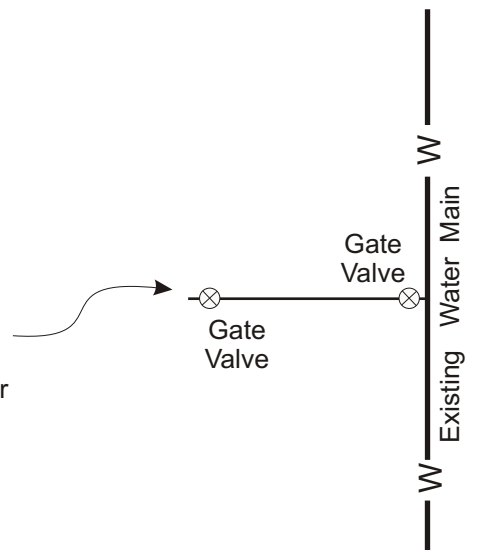
1. California American Water Standard Drawings, dated April, 2006, COR-1 thru COR-28

Standard Title Block to be placed at the bottom of plan title sheet:

<b>California American Water</b>
Reviewed By: _____
Date: _____

**Example of mapping symbology & notation:**

All water facilities within the right-of-way shall be installed by California American Water at developer's expense. California American Water shall own and maintain these facilities within the right-of-way



 <b>CALIFORNIA AMERICAN WATER</b>		San Diego County Operations
Reviewed By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
	Drawn By: <i>Jacob Quick</i>	Revised: 12/27/18
<b>STANDARD DRAWING</b> <b>Standard Notation &amp; Standard Signature Block</b>		Drwg. No. <b>COR-26</b>

**These notes shall be utilized on the plan title sheet, or detail sheets where applicable:**

General Utility Notes

1. All water facilities within the public right-of-way shall be installed by California American Water.
2. Disinfection of water facilities, such as fire services or private water mains, shall be performed by the Contractor according to California American Water standards and under California American Water supervision.
3. The Contractor shall install all water facilities within **private property** according to California American Water standards and under California American Water supervision with the exception of water meters which shall be set by California American Water.
4. Within **private property** it is the Contractor's responsibility to adapt the service connection if the service size is different than the meter size.

Standard Specifications

1. California American Water Standard Specifications, dated April, 2006.

Standard Drawings

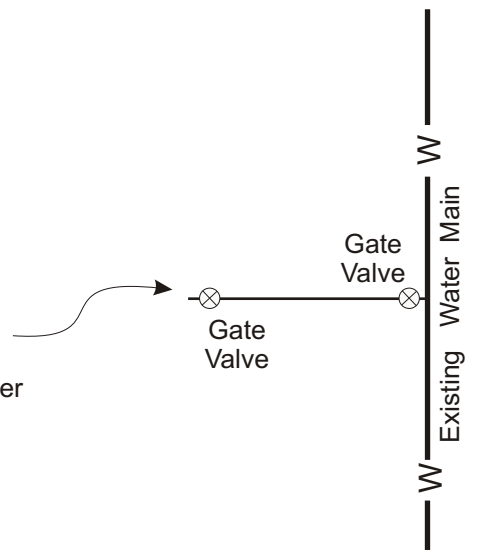
1. California American Water Standard Drawings, dated April, 2006, COR-1 thru COR-28

Standard Title Block to be placed at the bottom of plan title sheet:

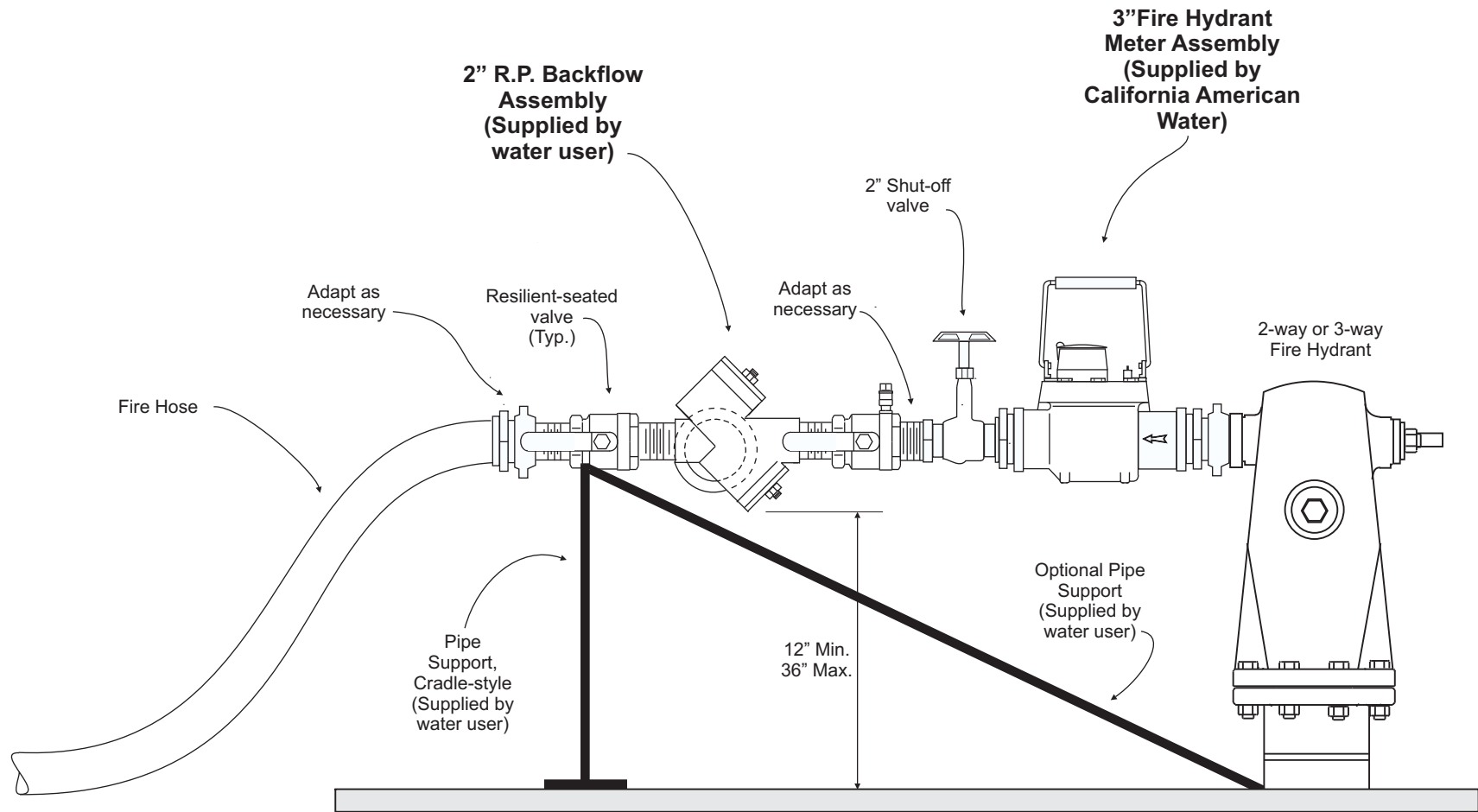
<p><b>California American Water</b></p> <p>Approved By: _____</p> <p>Date: _____</p>
--

**Example of mapping symbology & notation:**


All water facilities within the right-of-way shall be installed by California American Water at developer's expense. California American Water shall own and maintain these facilities within the right-of-way.

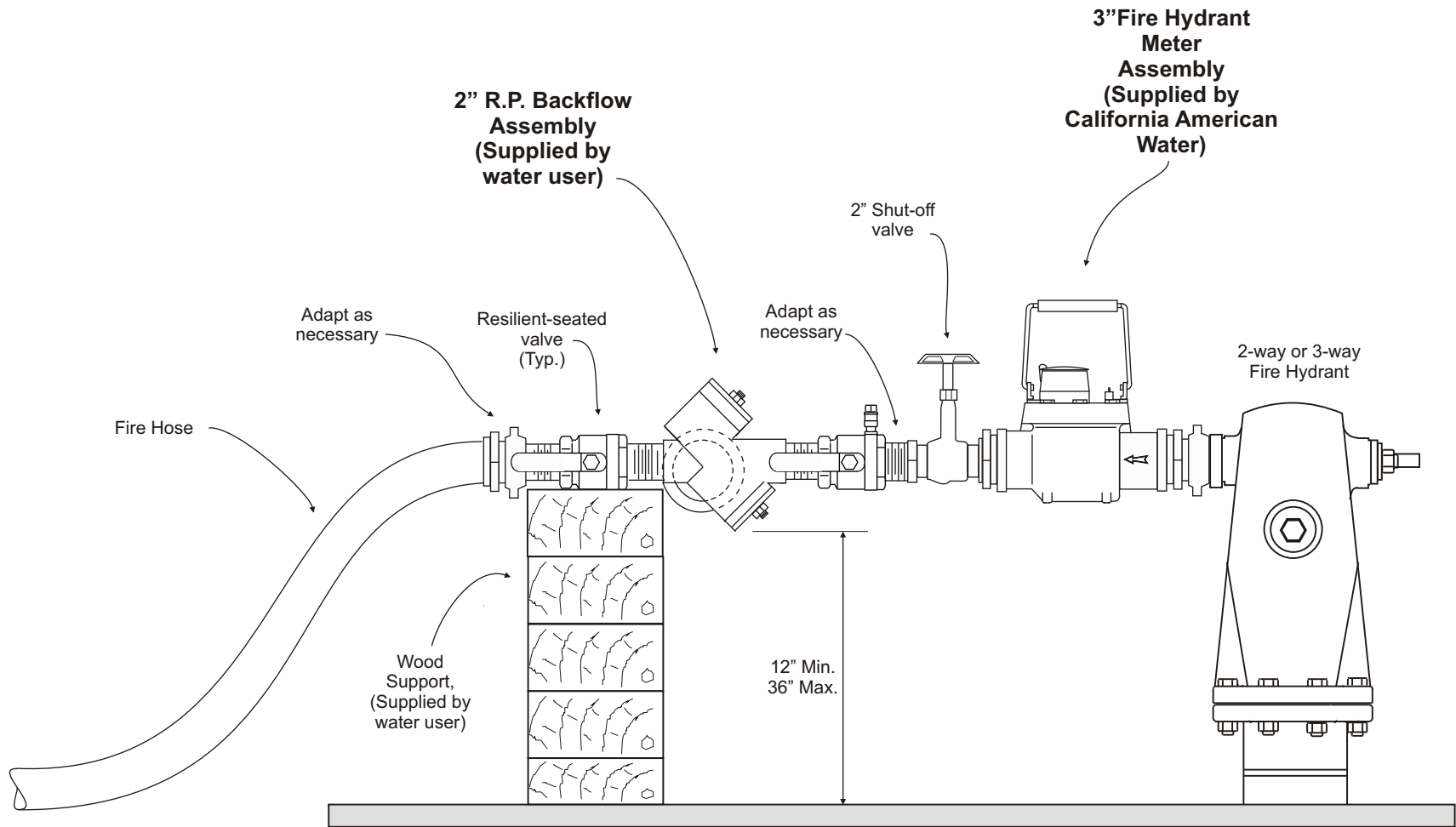


 <b>CALIFORNIA AMERICAN WATER</b>		San Diego County Operations
Approved By: _____ <small style="display: block; text-align: center;">Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
	Drawn By: <i>Doug Krupinski</i>	Revised: 4/24/06
<b>STANDARD DRAWING</b> <b>Standard Notation &amp; Standard Signature Block</b>		Drwg. No. <b>COR-26</b>




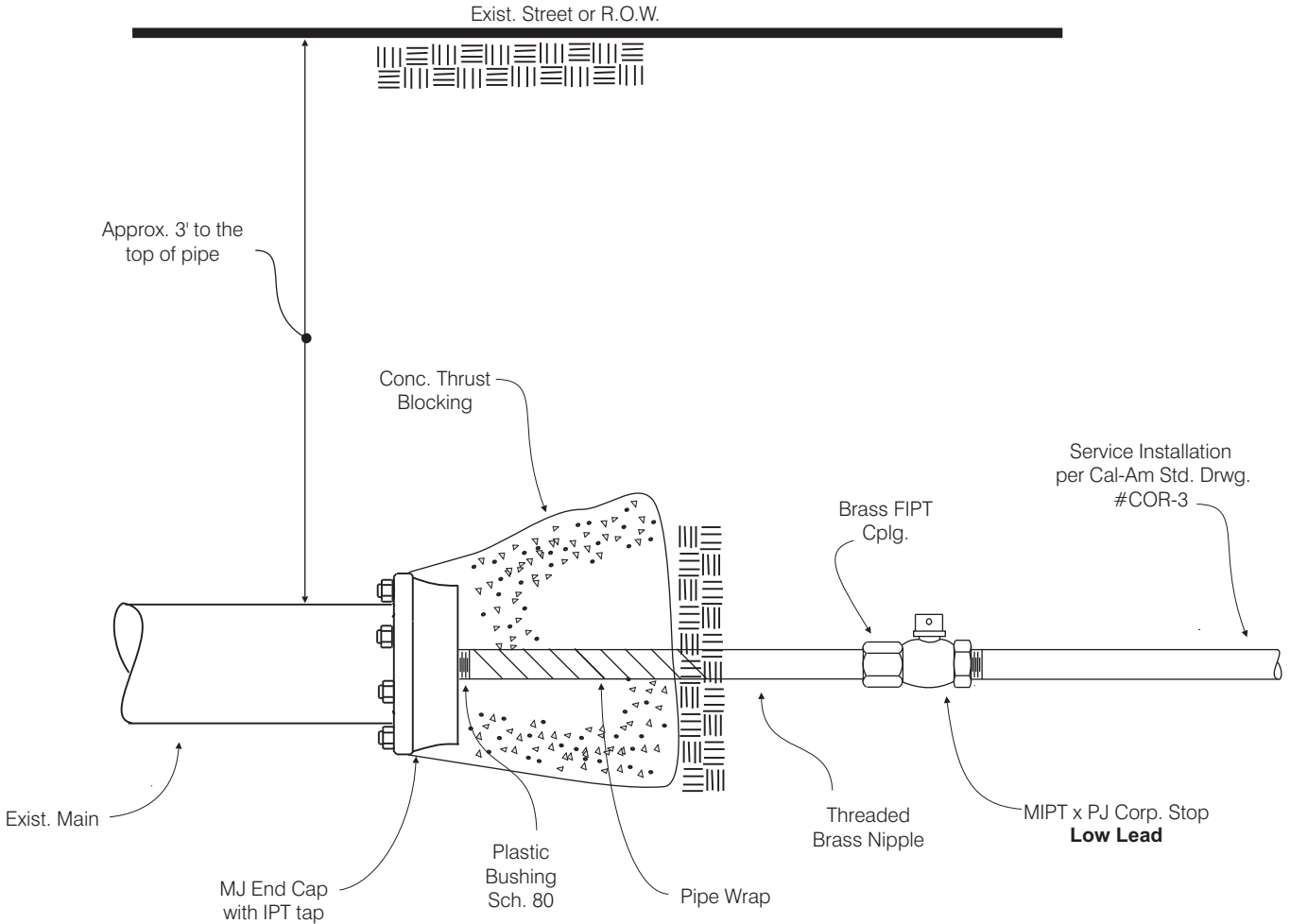
**NOTE: The 3" Fire Hydrant Meter Assembly shall be removed from the hydrant at the end of each working day. It is the responsibility of the applicant to store the meter in a secure place.**


		San Diego County Operations
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
	Drawn By: <i>Doug Krupinski</i>	Revised: 4/24/06
<b>Standard Drawing Fire Hydrant Meter &amp; R.P. Installation</b>		Drwg. No. <b>COR-27A</b>



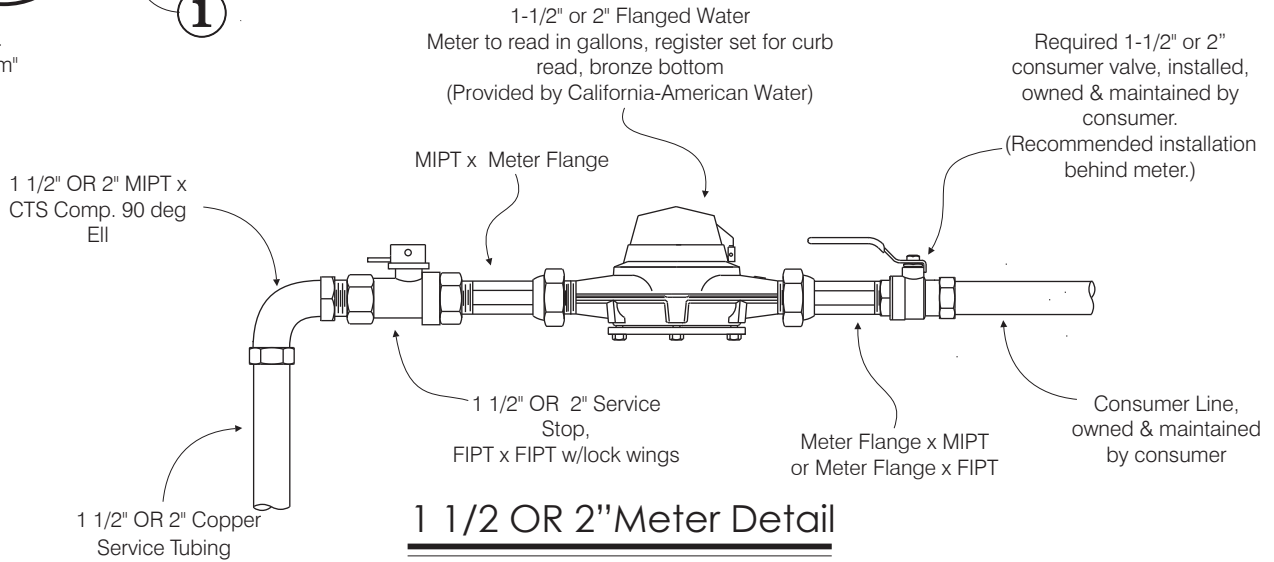
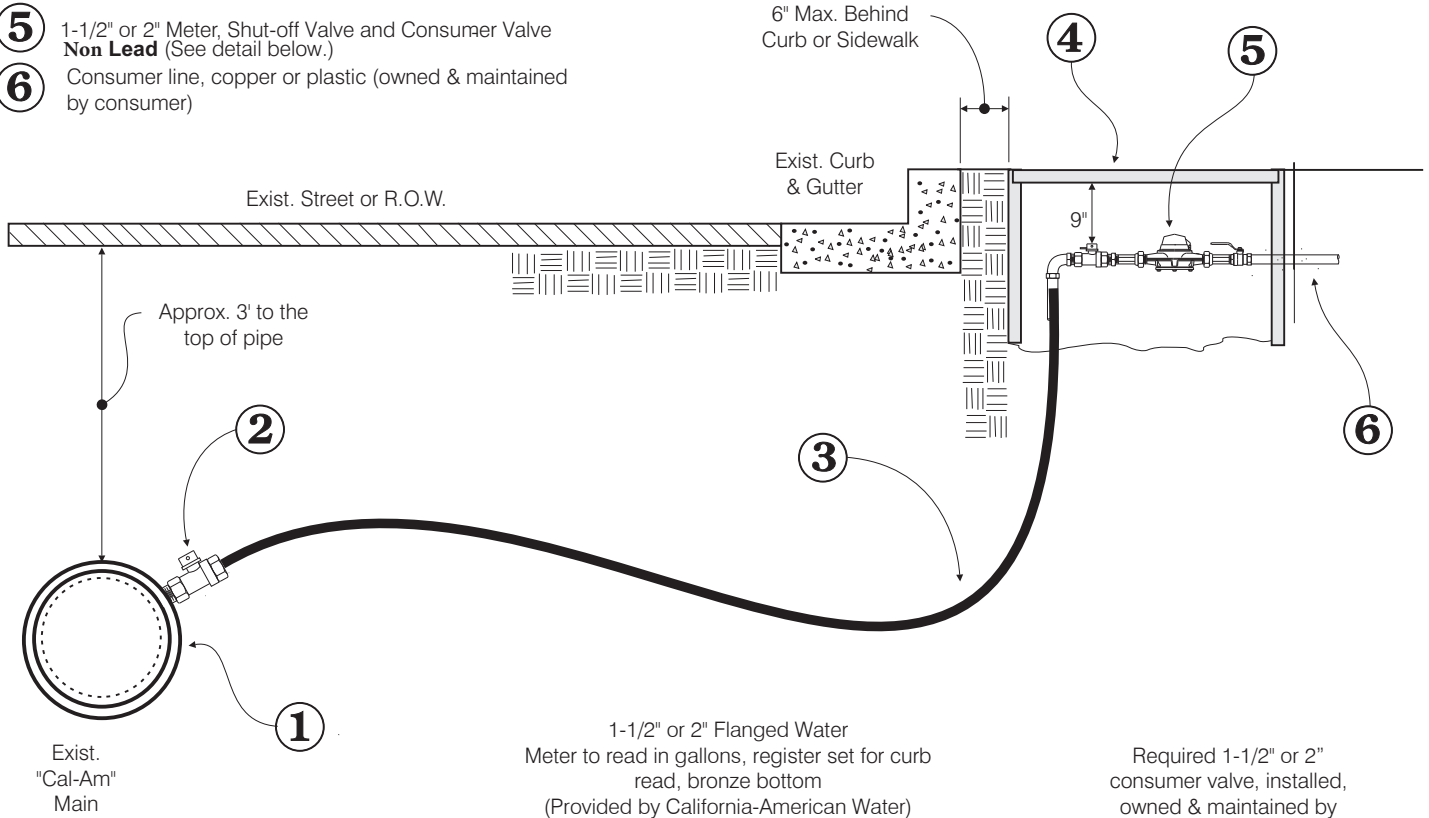
**NOTE: The 3" Fire Hydrant Meter Assembly shall be removed from the hydrant at the end of each working day. It is the responsibility of the applicant to store the meter in a secure place.**

 <b>CALIFORNIA AMERICAN WATER</b>		San Diego County Operations
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
<b>Fire Hydrant Meter &amp; R.P. Alternate Installation</b>		Drawn By: <i>Doug Krupinski</i> Revised: 4/24/06 Drwg. No. <b>COR-27B</b>




		<b>San Diego County Operations</b>
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97
	Drawn By: <i>DJK</i>	Revised: 4/24/06
<b>Standard Drawing Water Service Out Of End Cap</b>		Drwg. No. <b>COR-28</b>

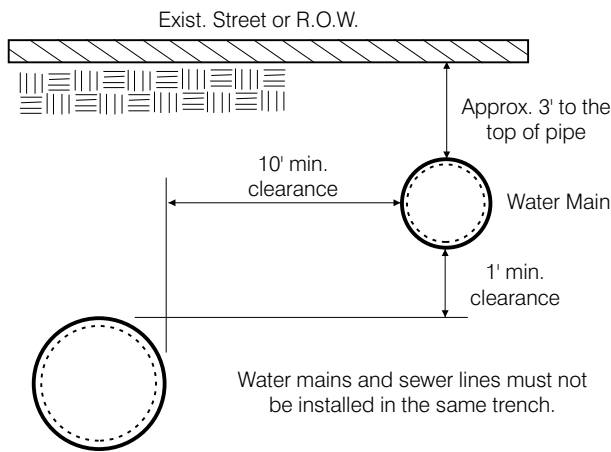
- 1 Bronze Service Saddle - **Non Lead**  
For C-900 PVC Pipe: Ford S91 Exact O.D. x 1" IPT Saddle (or Equivalent)  
For A.C. or C.I. Pipe: Ford 202B Dbl. Strap x 1" IPT Saddle (or Equivalent)
- 2 1-1/2" or 2" Corp. Stop, MIPT x CTS-Comp. -**Non Lead**
- 3 1-1/2" or 2" Copper Tubing, Type "K" soft
- 4 Concrete Meter Box, with 2 pc. reading lid & cover, marked "WATER", J & R # 4 1/2 (or Equivalent)
- 5 1-1/2" or 2" Meter, Shut-off Valve and Consumer Valve **Non Lead** (See detail below.)
- 6 Consumer line, copper or plastic (owned & maintained by consumer)



No Scale

		San Diego County Operations Coronado District	
Approved By: _____		Scale: No Scale	Date: 7/18/97
		Drawn By: <i>Jacob Quick</i>	Revised: 5/20/19
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF          A 1-1/2" or 2" SERVICE INSTALLATION WITH 1-1/2" or 2"          METER</b>			Drwg. No. <b>COR-3</b>

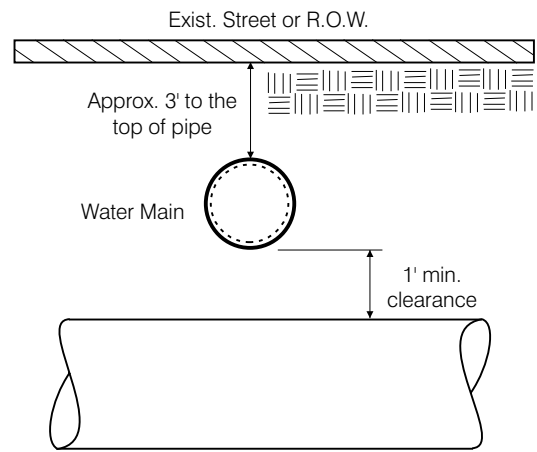
## GRAVITY or FORCE SEWER PARALLEL CONSTRUCTION



Gravity Flow or Force  
Sewer Main

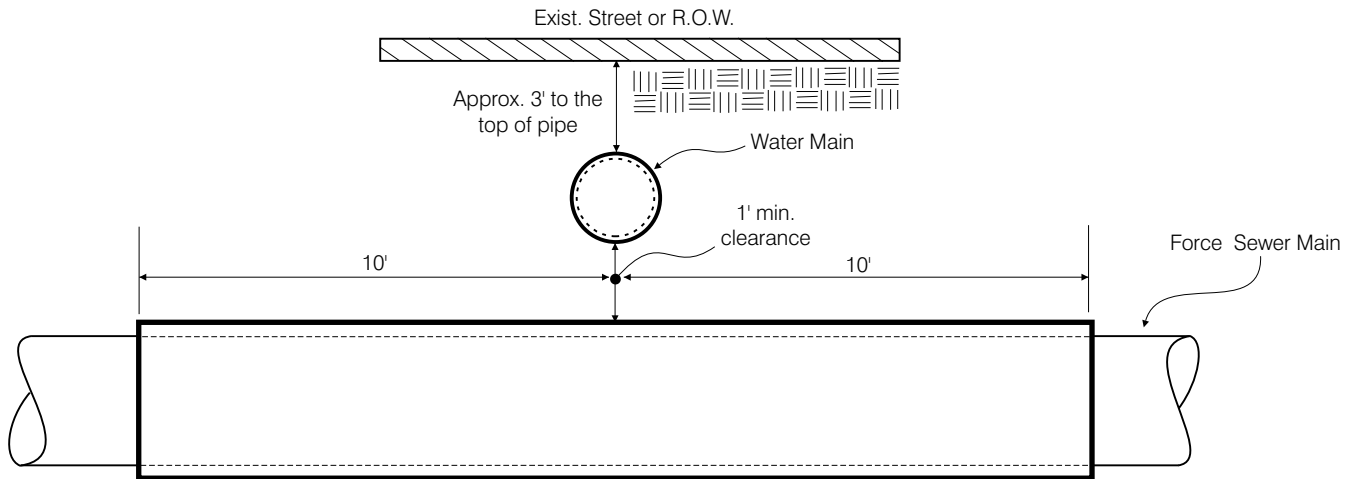
Water mains and sewer lines must not be installed in the same trench.

## GRAVITY SEWER PERPENDICULAR CONSTRUCTION



Gravity Flow Sewer Main


## FORCE SEWER MAIN PERPENDICULAR CONSTRUCTION



When a new sewer force main crosses under an existing water main, all portions of the sewer force main within 10' (**TEN**) feet (horizontally) of the water main shall be enclosed in a continuous sleeve.

Continuous Sleeve Steel Conductor Casing with a wall thickness of not less than 1/4"  
NOTE: Alternative material allowed with prior approval of State of California Department of Health Services

NOTE:  
The "California Waterworks Standards" sets forth the minimum separation requirements for water mains, sewer lines and storm lines. These standards are contained in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572.

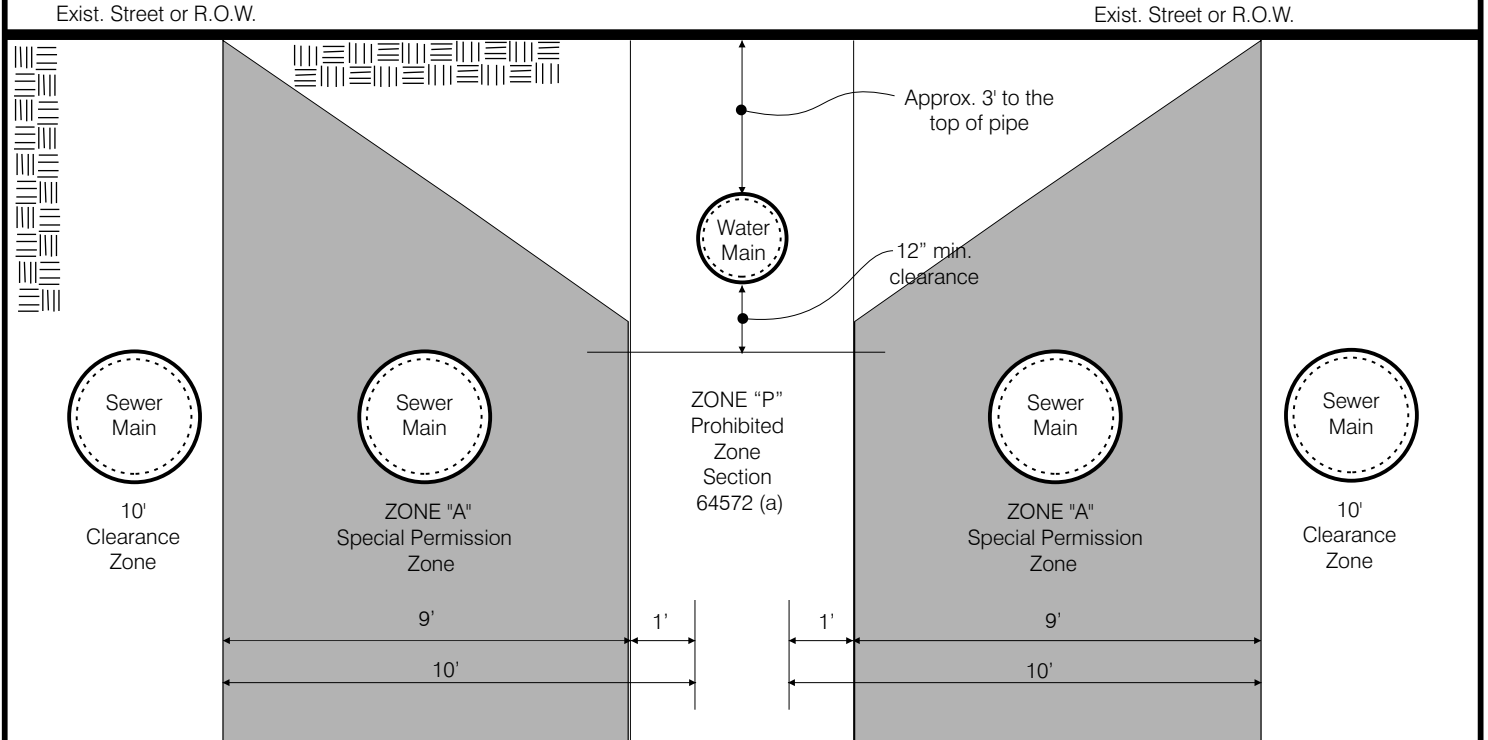
		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 10/4/18	
<b>Required Separation Between A Water Main &amp; A Sanitary Sewer Main</b>			Drwg. No. <b>COR-4A</b>



# SPECIAL CONSTRUCTION REQUIREMENTS


**WHERE REQUIRED WATER MAIN SEPARATION FROM SANITARY GRAVITY SEWER CANNOT BE MAINTAINED**  
 (Sewer force mains shall not be installed within 10' (horizontally) of the water main.)

## PARALLEL CONSTRUCTION

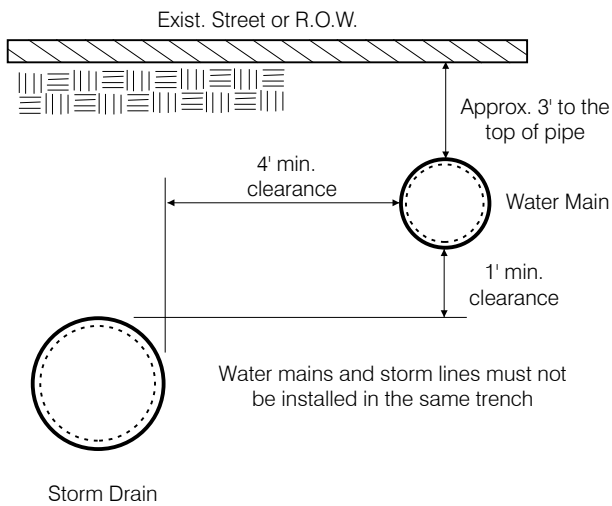


<p><b>ZONE "A"</b> Special Permission Zone</p>	<p><b>Special Construction Required for Gravity Sewer</b></p> <p>Gravity sewer lines parallel to water mains shall not be permitted in this zone without approval from the responsible health agency and water supplier.</p> <p>A gravity sewer line placed parallel to a water line shall be constructed of:</p> <ol style="list-style-type: none"> <li>1. Extra strength vitrified clay pipe with compression joints.</li> <li>2. Plastic sewer pipe with rubber ring joints (per ASTM D3034) or equivalent.</li> <li>3. Ductile iron pipe with Field Lok joints.</li> <li>4. Reinforced concrete pressure pipe with compression joints (per AWWA C302-87)</li> </ol>
<p><b>ZONE "P"</b> Prohibited Zone</p>	<p>Prohibited Zone, per California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572 (a)</p>

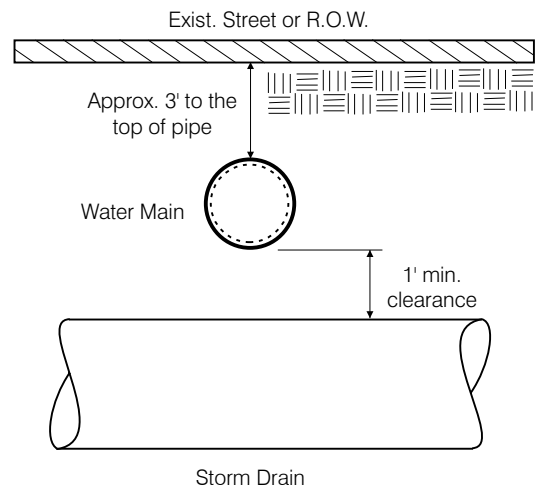
**NOTE:**  
 The "California Waterworks Standards" sets forth the minimum separation requirements for water mains, sewer lines and storm lines. These standards are contained in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572.

		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 4/12/19	
<b>Special Requirements For Separation Between                  A Water Main &amp; A Sanitary Sewer Main</b>			Drwg. No. <b>COR-4B</b>


## STORM DRAIN PARALLEL CONSTRUCTION



## STORM DRAIN PERPENDICULAR CONSTRUCTION



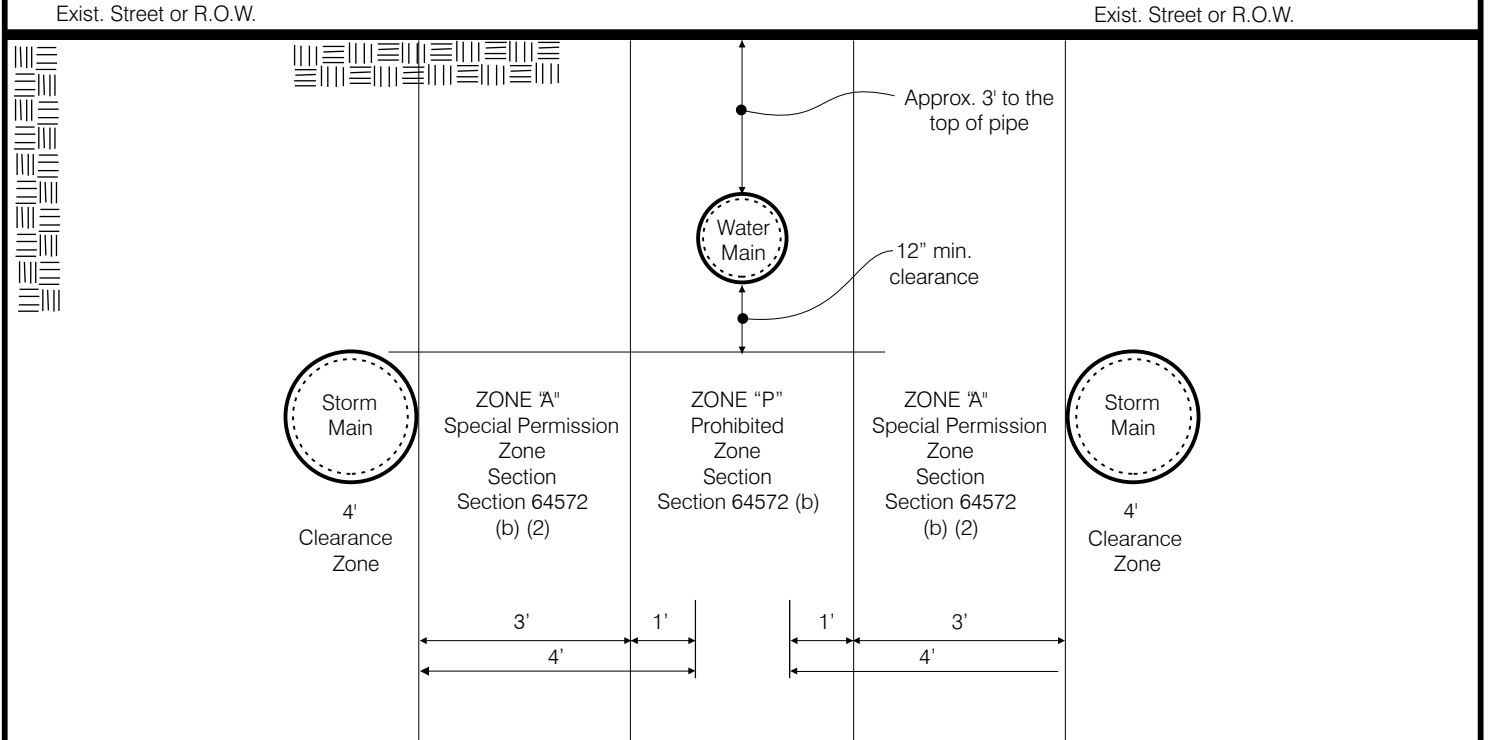
NOTE:  
The "California Waterworks Standards" sets forth the minimum separation requirements for water mains, sewer lines and storm lines. These standards are contained in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572.

		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 6/13/19	
<b>Required Separation Between A Water Main &amp; A Storm Drain</b>			Drwg. No. <b>COR-4C</b>

# SPECIAL CONSTRUCTION REQUIREMENTS


**WHERE REQUIRED WATER MAIN SEPARATION FROM STORM DRAIN CANNOT BE MAINTAINED**  
 (Storm drain shall not be installed within 4' horizontally of the water main)

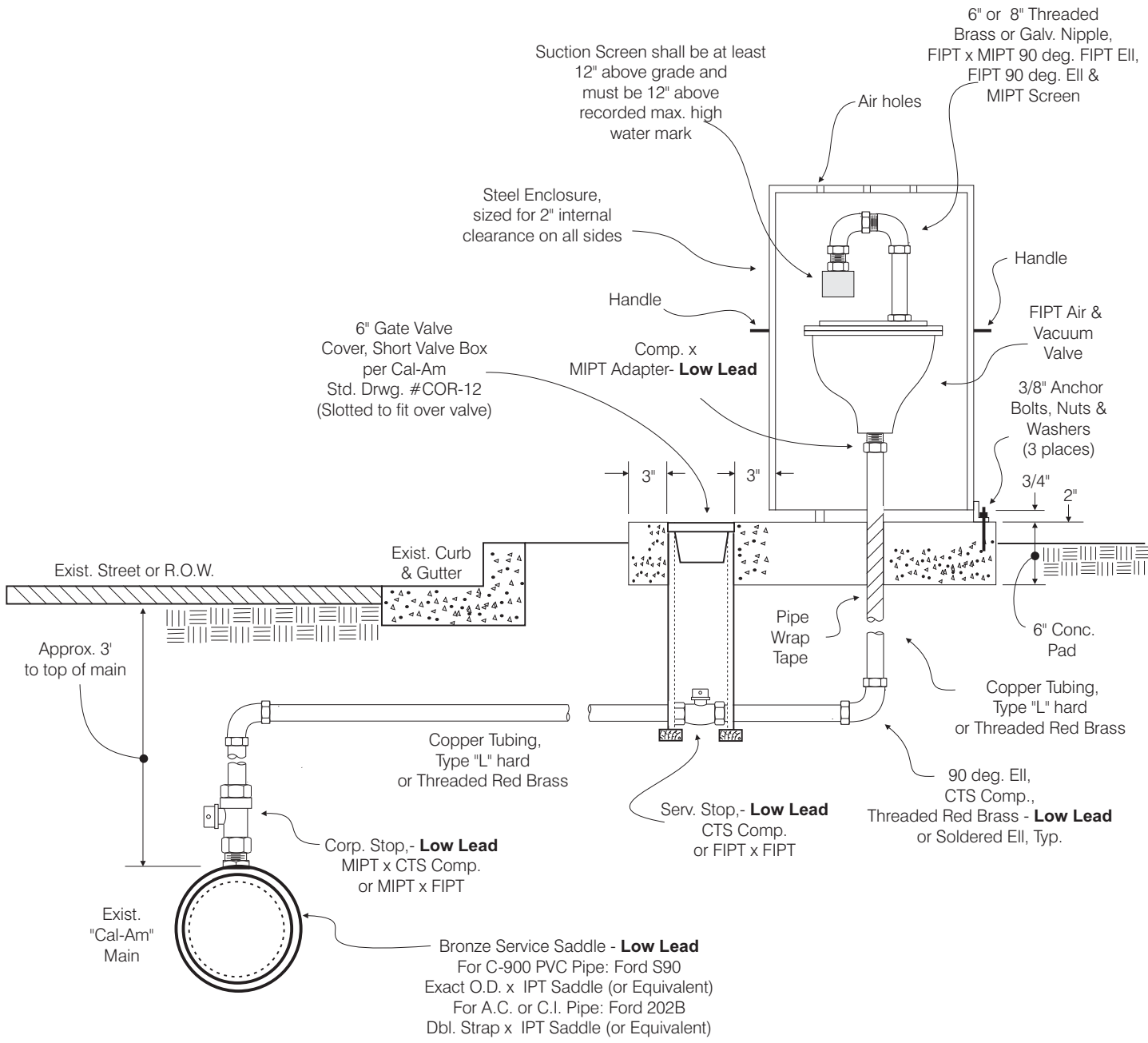
## PARALLEL CONSTRUCTION




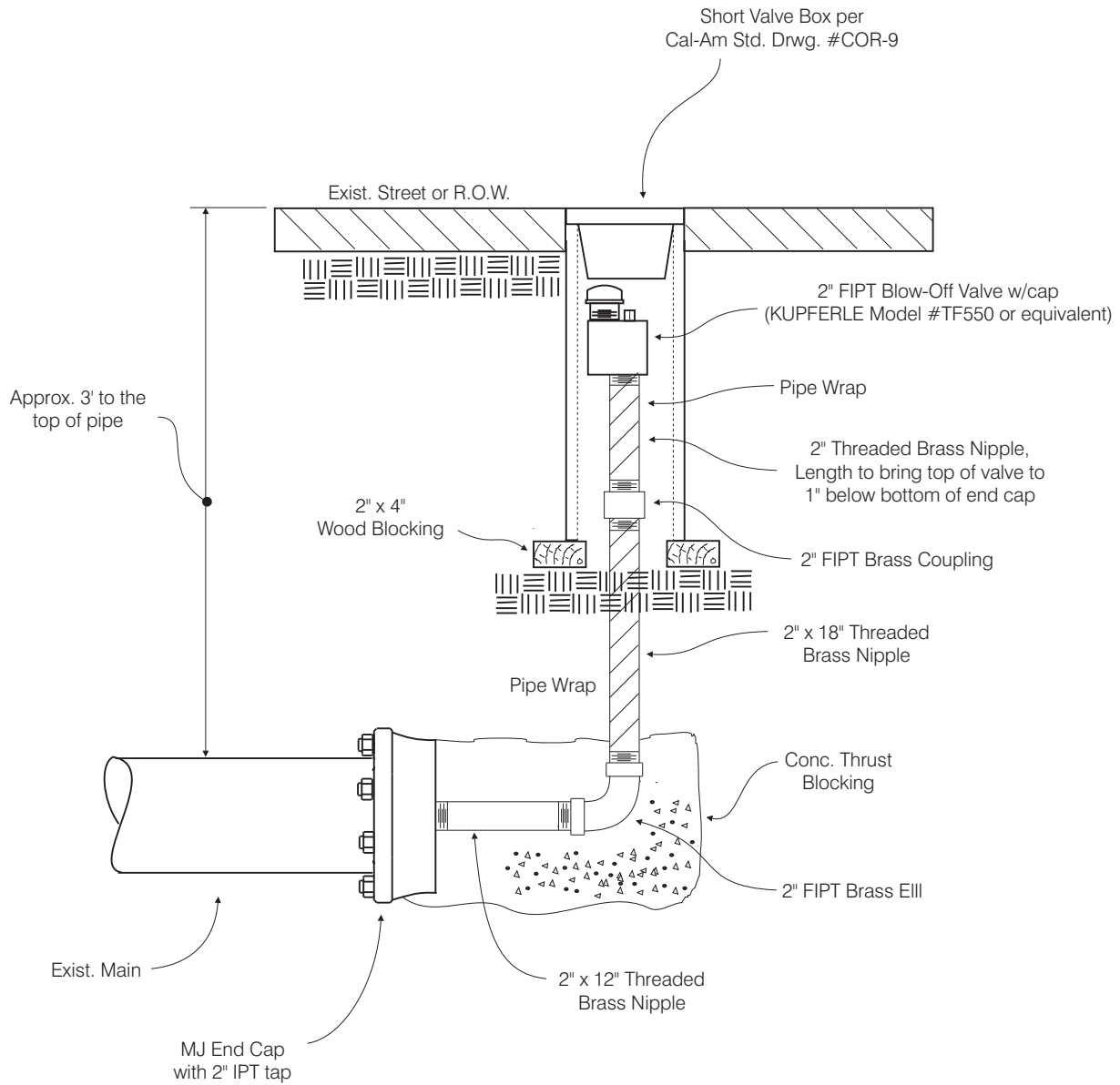
ZONE "A" Special Permission Zone	Special Construction Required for Storm Sewer Storm sewer lines parallel to water mains shall not be permitted in this zone without approval from the responsible health agency and water supplier
ZONE "P" Prohibited Zone	


NOTE:  
 The "California Waterworks Standards" sets forth the minimum separation requirements for water mains, sewer lines and storm lines. These standards are contained in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572.

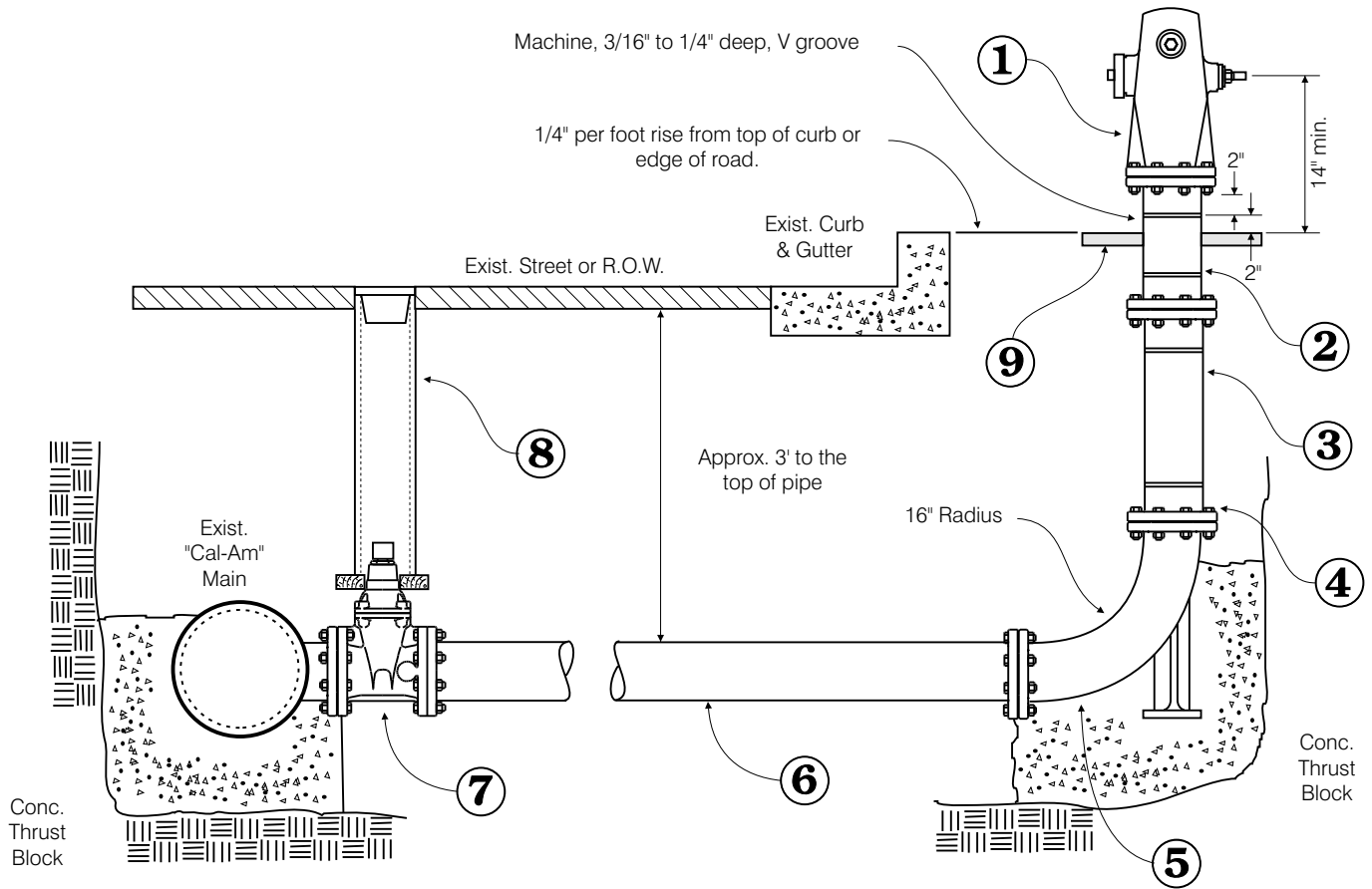
		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 4/12/19	
<b>Special Requirements For Separation Between                  A Water Main &amp; A Storm Drain</b>			Drwg. No. <b>COR-4D</b>



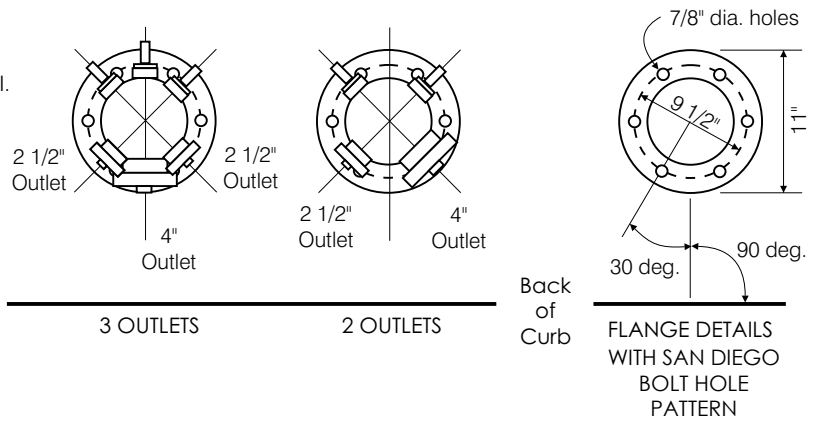
		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Doug Krupinski</i>	Revised: 5/10/10	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION          OF AN AIR &amp; VACUUM VALVE</b>			Drwg. No. <b>COR-5</b>




 <p><b>CALIFORNIA AMERICAN WATER</b></p>		<p>San Diego County Operations Coronado District</p>	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Doug Krupinski</i>	Revised: 5/10/10	
<p><b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A 2" BLOW-OFF ASSEMBLY</b></p>			<p>Drwg. No. <b>COR-6</b></p>

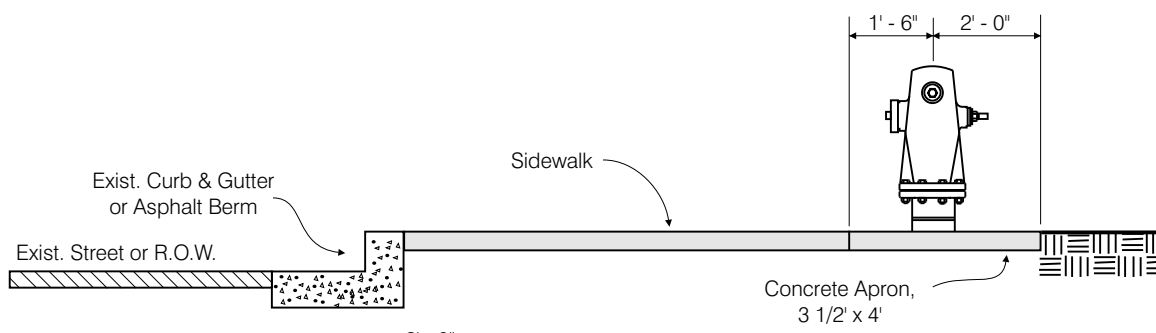


- ① 3-way Fire Hydrant with breakaway bolts
- ② 4" x 6", 6" x 6" or 12" x 6" Extension Spool, Cement Lined C.I.
- ③ 18" x 6" Extension Spool, Cement Lined C.I.
- ④ 3/4" X 3" Plated Hex. Head Bolts & Nuts, Typ.
- ⑤ 6" x 16" Long Radius Bury Ell, MJ x Fig., C.L. C.I.
- ⑥ C900 PVC or Ductile Iron Pipe Service Line (Break-off bolts to be used on ex. spools.)
- ⑦ 6" RW Gate Valve, 2" Op. Nut, Open Left
- ⑧ Valve Box (See Std. Drwg. COR-12)
- ⑨ Conc. Apron (See Std. Drwg. COR-11 for fire hydrant locations)

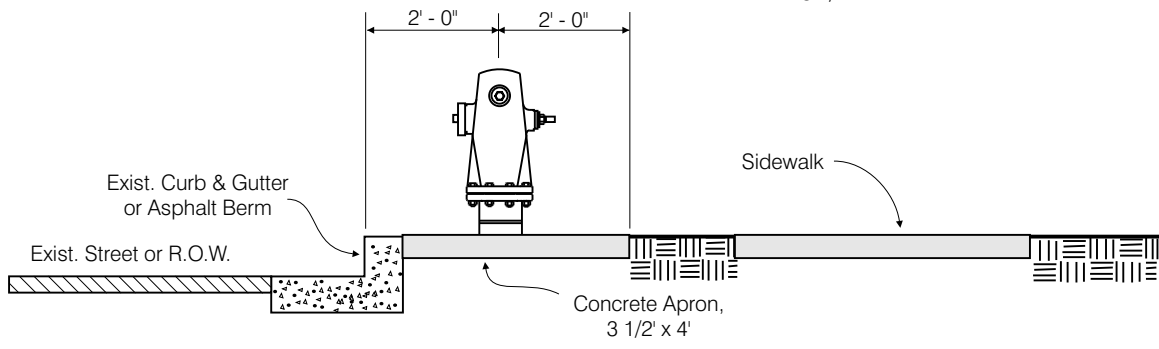


		<b>San Diego County Operations Coronado District</b>	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
	Drawn By: <i>Jacob Quick</i>	Revised: 9/3/19	
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION OF A 6" FIRE HYDRANT</b>			Drwg. No. <b>COR-7</b>

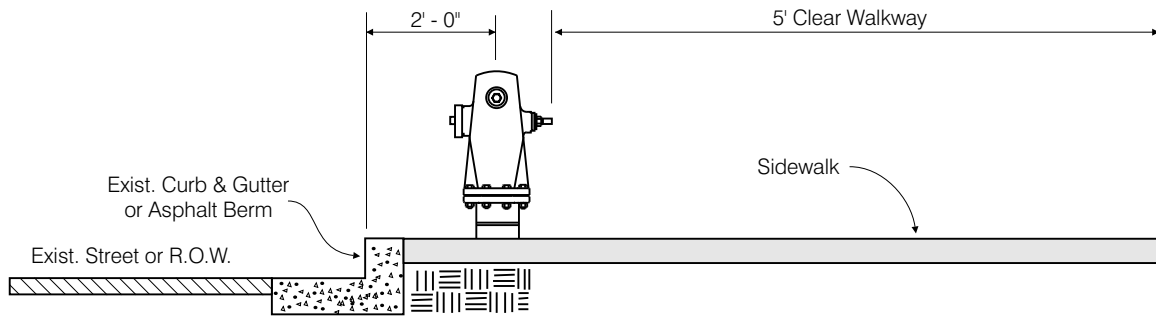
**TYPE A**



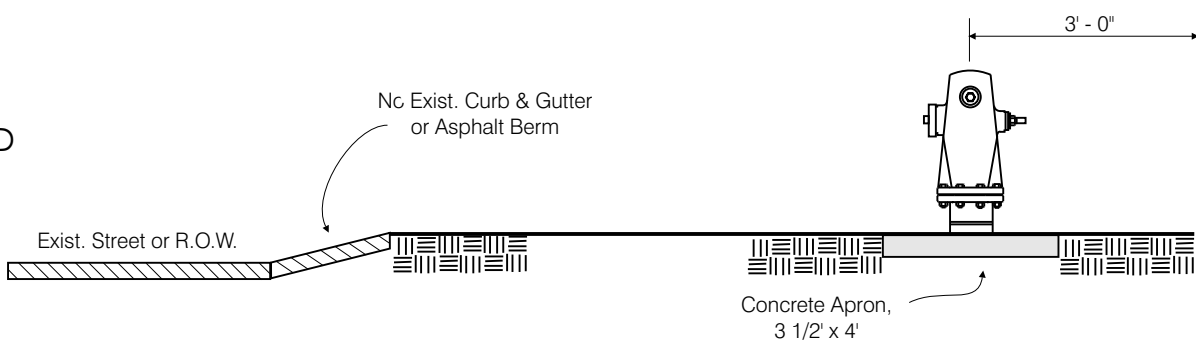
**TYPE B**



**TYPE C**




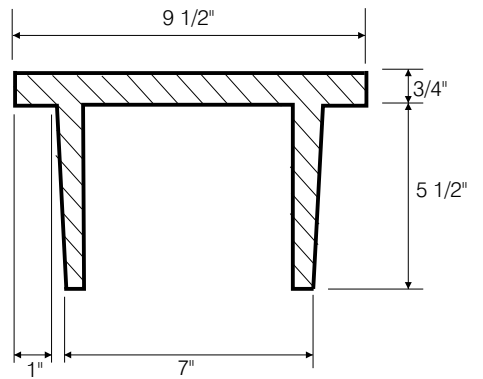
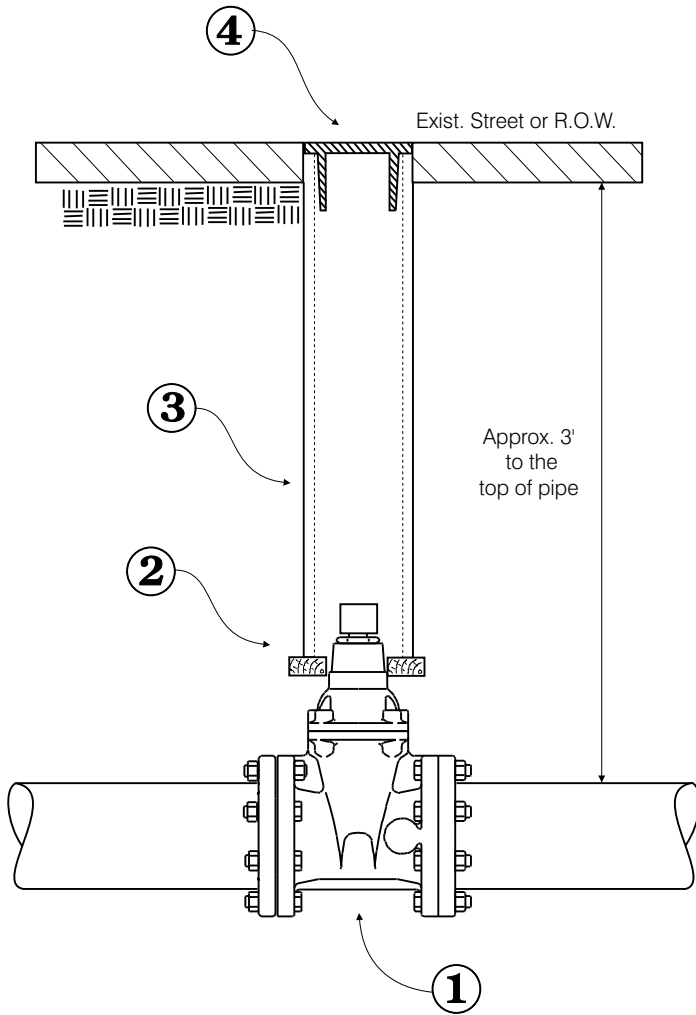
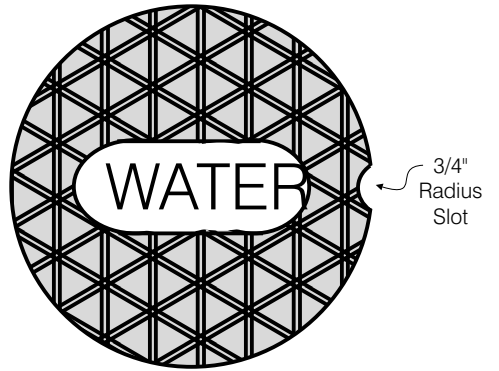
**TYPE D**



**NOTES:**

1. Apron shall be 4" thick (520-C-2500) concrete.
2. When distance from hydrant to the top or toe of the slope is less than 2' - 0", a special hydrant installation will be required by Cal-Am.
3. Where hydrant is not protected by a vertical face of curb protective posts are required. (See San Diego Reg. Std. Drwg. W-16 for details)
4. The centerline of the hydrant shall be located 5' minimum from curb return and minimum 3' - 6" from driveway or any fixed obstruction.


		San Diego County Operations Coronado District	
Approved By: _____	Scale: No Scale	Date: 7/18/97	
		Drawn By: <i>Doug Krupinski</i>	Revised: 9/24/08
<b>STANDARD SPECIFICATIONS FOR THE INSTALLATION                  LOCATION OF A 6" FIRE HYDRANT</b>			Drwg. No. <b>COR-8</b>



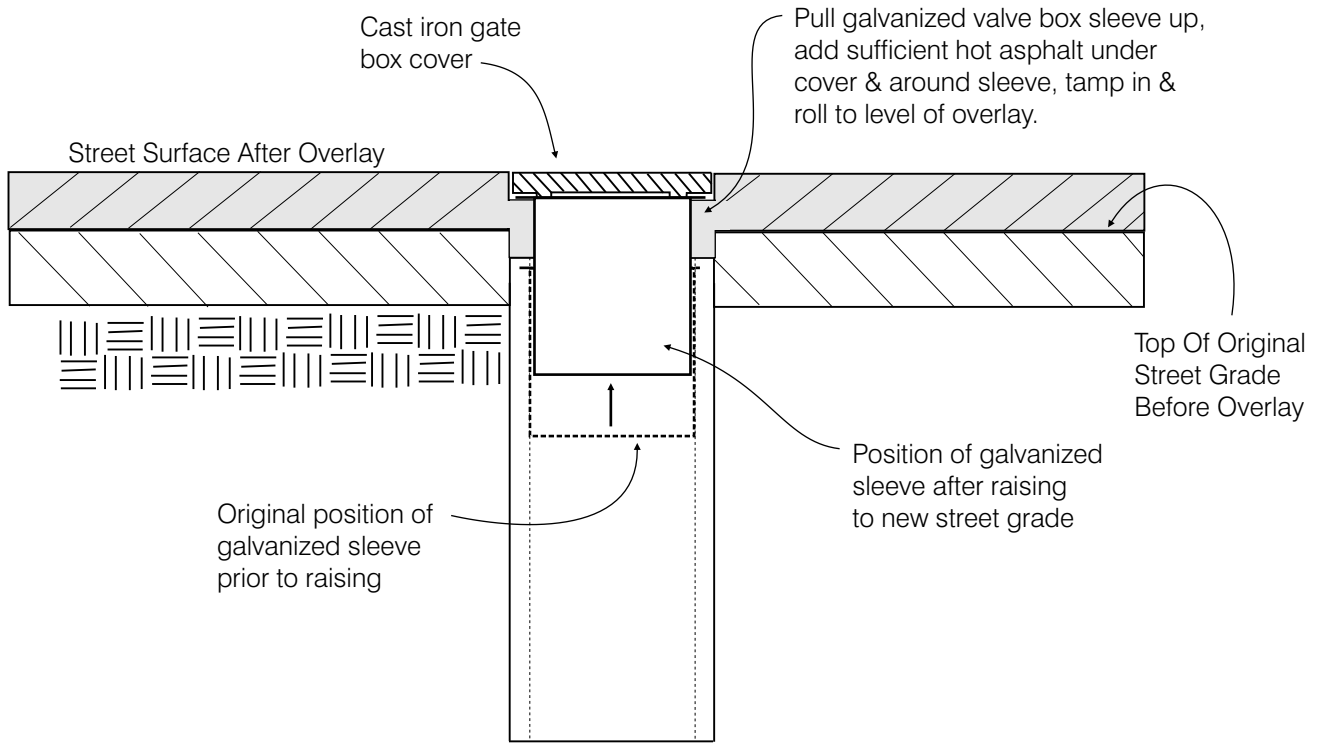
**DETAIL**

8" Cast Iron Valve Box Cap  
marked "WATER"

- ① Gate or Butterfly Valve
- ② 2" x 4" Wood Blocking
- ③ 8" C-900 PVC Pipe, Class 150
- ④ Valve Box Cap per detail

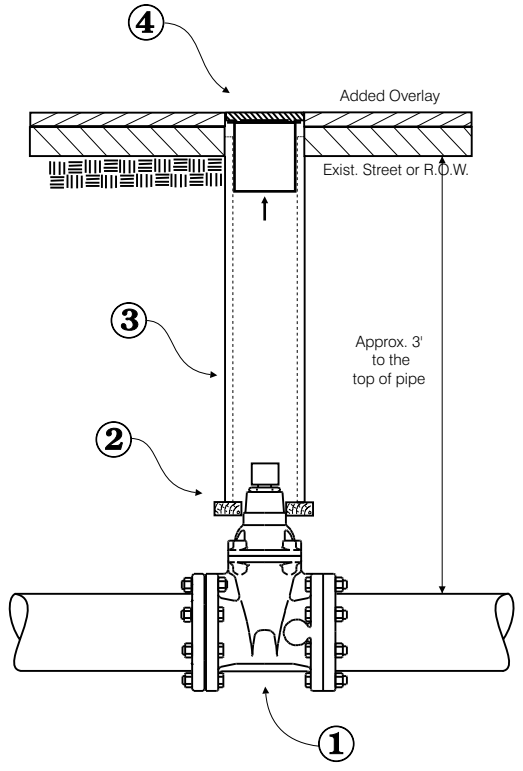
		San Diego County Operations Coronado District	
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 10/2/97	
		Drawn By: <i>Doug Krupinski</i>	Revised: 4/19/06
<b>STANDARD DRAWING          VALVE BOX INSTALLATION</b>			Drwg. No. <b>COR-9A</b>






**RAISING DETAIL**

6" or 8" Cast Iron Valve Box Cap marked "WATER"



- ① Gate or Butterfly Valve
- ② 2" x 4" Wood Blocking
- ③ 8" C-900 PVC Pipe, Class 150
- ④ Valve Box Cap Shall Be Raised per detail

		<b>San Diego County Operations Coronado District</b>	
Approved By: _____ <small>Operations Superintendent</small>	Scale: No Scale	Date: 6/17/05	Revised: 4/26/06
<b>STANDARD DRAWING VALVE BOX DETAIL, RAISING STD.</b>			Drwg. No. <b>COR-9B</b>