

**APPLICATION FOR COMMERCIAL BUILDING PERMIT**

4/17/00

**CITY OF SACRAMENTO**  
**DEVELOPMENT SERVICES DIVISION**  
**PERMIT SERVICES SECTION**  
 1231 I Street, Rm. 200  
 Sacramento, CA 95814 (916) 264-7619 FAX 264-7046

ACTIVITY # <u>0004003</u>	Insp. Area
---------------------------	------------

Applicant **MUST** complete ALL Unshaded areas

ADDRESS 4201 FLORENCE PERKINS ROAD Suite \_\_\_\_\_  
 PARCEL # 78-202-16-61-150-56 / 61-150-57 / 78202-02-06

<b>CONTACT</b> Name <u>PAI BROWN</u> Street Address <u>P.O. Box 276430</u> City/State/Zip <u>SACTO 95827</u> Phone <u>983 21660</u> FAX <u>983 2816</u> E-mail: _____		<b>LICENSED CONTRACTOR</b> Lic No. # <u>530683</u> Name <u>FVA Whitmore Co, Inc</u> Address <u>P.O. Box 276430</u> City/State/Zip <u>SACTO 95827</u> Phone <u>983 1600</u> FAX _____ E-mail: _____	
<b>ARCHITECT/ENGINEER</b> Name <u>WELD-BROWER</u> Address <u>PO 493151</u> City/State/Zip <u>REDDING CA 96049</u> Phone <u>530 221 6920</u> FAX <u>530 221 6988</u> E-mail: _____		<b>OWNER</b> Name <u>DAVIS FAM. TRUST</u> Address <u>5970 1ST AVE</u> City/State/Zip <u>SACTO 95817</u> Phone <u>456 8770</u> FAX _____ E-mail: _____	

→ Will permittee have any employees on the jobsite?  No  Yes → INSURANCE CO: \_\_\_\_\_  
 → WORKER'S COMPENSATION POLICY # \_\_\_\_\_ EXPIRATION DATE: \_\_\_\_\_

NATURE OF WORK IN DETAIL: ~~FIRE SUPPRESSION~~  
12 NEW FIRE HYDRANTS & LOOPS  
Ref 9905675C correction notice

OCCUPANT/TENANT: \_\_\_\_\_ VALUATION: \$ 50,000

FLOOD STATUS:		S.C.A.T. <u>201; 207; 206</u>								
JOB DESCRIPTION		BLDG	SHELL	APT	TI ( )	REM ( )	SW	<b>FIRE</b>	ADD	OTH
INSPECTION DISCIPLINES		BLDG	MECH	<del>PLUMB</del>	ELEC	SITE	<b>FIRE</b>		<b>FIRE</b>	
# Stories	1st flr Area	Total Area	Use Zone	Occp Group	Const type	Fire Req. Y / N		Fed Code	Vio. File	
						SPR	ALARM		[H]	[Quad]
B	L	<del>MS</del>	M	E	<b>F</b>	S	D	PW	<b>UTIL</b>	
					<u>LISA</u>					

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

REGIONAL SANITATION FEES?  Yes  No HEALTH DEPARTMENT?  Yes  No  
 WATER FLOW TEST FOR NEW BUILDINGS OR ADDITIONS?  Provided  Faxed



WEINTRAUB GENSHLEA CHEDIAK SPROUL

*A Law Corporation*

Lan Wang  
Troy Malaspino  
October 19, 2000  
Page 2

Department can agree on target dates for implementing the plans and further target dates for implementing the permanent fire plans once they are agreed upon between the Fire Department and Florin Perkins.

Fire protection and resuming business operations are of paramount concern to Florin Perkins. They will make themselves and their fire engineers available to the City to discuss any issues relating to the enclosed temporary fire plans or the permanent fire plans submitted for review on October 13, 2000.

If you have any questions regarding the foregoing, please feel free to call our office. Otherwise, we anticipate receiving a response to the enclosed fire plans within the next ten days.

Very truly yours,

WEINTRAUB GENSHLEA CHEDIAK SPROUL

Louis A. Gonzalez, Jr.

cc: Florin Perkins  
B.J. Bergmann  
Jeff Scharff  
Bill Owens

**City of Sacramento**  
**Water and Sewer Service Quotation**  
 FY 99/00

Date: 10/24/00	Time:	Planning No.:	Plan Check No.: 0004003
Address: 4201 Florin Perkins Rd		Parcel No.: <del>078-0202-016</del> 061-0150-058	
Description: Fire looped system for existing landfill			
Subdivision Map:			Water Page No.: 101
Estimate By: RT			
Engineering Firm: Sacramento Engineering Consultants 10555 Old Placerville Road 916.368.4468		Project Engineer: Phone No.: 916.368.4468 Fax No.: 916.368.4490	
Sewer Jurisdiction: <input type="checkbox"/> County		<input type="checkbox"/> City	
Comment No.1 Comment No.2 Comment No.3 Comment No.4 Comment No.5 Comment No.6			
TOTAL WATER DEV. FEES: \$0		10 hrs x \$75 per hour = \$750	
TOTAL SEWER DEV. FEES: \$0		or \$300.00 (whichever is greater)	
		Total on-site grading and drainage review fee: <b>\$750</b>	

**Water Service Quotations**

Main Size	Serv. Size			St. Tap	Esmt. Tap	Description	No. of Tap	No. of Meter	Tap Fee/ea.	Meter Fee/ea.	Total Tap cost	Development Fees
	D	I	F									
10			10		x		2		\$2,560		\$5,120	
											\$0	
											\$0	
											\$0	
											\$0	
											\$0	
											\$0	
<b>4" TAP AND 3" METER</b>												
											n/a	
											n/a	
<b>ABANDONMENT</b>												
					in.							
					in.							
<b>CREDIT</b>												
					in.							
					in.							
							0		Fire Hydrant			
<b>Total for Water</b>											<b>\$5,120</b>	<b>\$0</b>

**Sewer Service Quotations**

Main Size	Service Size	Description	QTY	Full St W (FT)	No. OF MH	Total Tap cost	Development Fees
		Development Fee Only				\$0	
		Easement Tap + MH + Dev. Fee				\$0	
		Street Tap + MH + Dev. Fee				\$0	
		Credit					\$0
<b>Total for Sewer</b>						<b>\$0</b>	<b>\$0</b>

Note: Total cost = Qty. x Street/2 x Tap Fee + MH Fee, MH Fee is \$1200.00

*Robert J. [Signature]*  
10/24/00

Sewer Tap Construction Charge: \$0  
 Water Main Construction Charge: \$5,120  
**Total For Address: \$5,120**

REVISION ON ACTIVE PERMIT

NEW PLAN CHECK NO#: 0100220  
 OLD PLAN CHECK NO#: 0004003

DATE: 1-5-00

This sheet is to be used only when a permit has been issued, is still active, and the applicant wishes to make changes to the existing approved plans.

All revisions clouded? YES  NO

JOB ADDRESS 3801 - 4201 Florin Rd Perkins SUITE \_\_\_\_\_ PERMIT NO 0004003

AREA: \_\_\_\_\_ DBA: \_\_\_\_\_

DESCRIPTION OF REVISIONS Fire Plan

keep track of hours

DISCIPLINE	B	L	<u>P</u>	M	E	<u>F</u>	S	<u>R</u>	D
CHECKED BY									
ROUTE TO									
CODE									
HOURS SPENT									

CONTACT: Cal Brown

ADDRESS: PO Bx 276430  
Sacramento CA 95827

PHONE#: 916 383-2660

# OF PLANS SUBMITTED 3 SUBMITTED TO WH

I understand that I am responsible for all plan check fees that I incur during the course of this additional plan check and that any approved plans not claimed and paid for within 3 months of notification will be disposed of and an invoice procedure for the amount due will be initiated. I further understand that an unclaimed revision may result in delay of final approval for the subject project.

DATE NOTIFIED	PLAN BIN

APP FEE	PAID
<u>85.-</u>	<u>pd</u>

\_\_\_\_\_  
 Applicant signature Date

AGENCY	TOTAL HRS	TOTAL FEES
BLDG		
PW		
PLEASE PAY THIS AMOUNT		

~~AES~~ Northern California

Box 1525 Nevada City, California 95959

530/ 265-4889

*Dedicated to Practical Applied Solutions  
In Solid & Hazardous Waste Management*

Florin Perkins Landfill, Inc.  
P.O. Box 276430  
Sacramento, California 95827

12 November 2001

Via Facsimile

Attention: Mr. Kelly Faucet

RE: Inspection of Soil Conditions:  
Hydrant No. 2 Branch Tee and Shoe;  
Florin Perkins Landfill Permanent Fire System  
4201 Florin Perkins Road, Sacramento, CA

Dear Kelly:

Per our telephone conversation on Friday 09 November, I performed field inspection of the above referenced thrust bearing surfaces for the fire supply system at this location on the evening of 10 November. Based on our conversations, the branch tee bearing had consisted of inter-bedded layers of cohesive soils and rock with void spaces, and had been unacceptable to the City Building inspector.

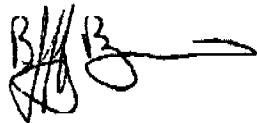
Also based on these conversations, you have removed materials at the Hydrant No. 2 branch tee soil bearing area, and have replaced this materials with cohesive soils free of organic and other deleterious materials, moisture conditioned to near to slightly above perceived optimal moisture content, and compacted these soils in 6 to 8-inch lifts for structure backfill using a "Wacker"-type compactor, compacting each lift for 5 to 10 minutes. Emplacement of this structure backfill was not directly observed, but based on our conversations, was reportedly placed over an area roughly 2.5 times the required horizontal bearing for the thrust block, and approximately 3 1/2 to 4 feet back from the thrust block outside pour line. Minor voids within otherwise competent, cohesive soils were observed near the base of the bearing plane at the Hydrant No. 2 shoe, but are appear insignificant in relation to required bearing.

Based on field observations, including pocket penetrometer, and information provided by yourself, the Hydrant No. 2 branch tee, and the Hydrant No. 2 shoe soil bearing areas appear adequate for the thrust block sizing required by the approved plan set for this fire system.

Please let me know if the foregoing satisfies your needs and those of the City Building Inspector. This memorandum may be affixed to the building inspection plan set being maintained at the scale house.

Sincerely,

AES NORTH, Inc.



B. Jeffrey Bergmann, P.E.

Principal Engineer

*printed on recycled paper*



Copy for  
inspection folder

OFFICE OF THE  
CITY ATTORNEY

SAMUEL L. JACKSON  
CITY ATTORNEY

WILLIAM P. CARNAZZO  
CHIEF ASSISTANT CITY ATTORNEY

RICHARD E. ARCHIBALD  
ASSISTANT CITY ATTORNEY

SENIOR DEPUTY CITY ATTORNEYS  
BRUCE C. CLINE

SHANA S. FABER  
SANDRA C. TALBOTT

CITY OF SACRAMENTO  
CALIFORNIA

980 NINTH STREET, TENTH FLOOR  
SACRAMENTO, CA 95814-2736  
PH 916-264-5346  
FAX 916-264-7455

June 25, 2001

**VIA FACSIMILE (916) 446-1611 & U.S. MAIL**

Louis A. Gonzalez  
WEINTRAUB GENSHLEA CHEDIAK SPROUL  
400 Capital Mall, Eleventh Floor  
Sacramento, California 95814

DEPUTY CITY ATTORNEYS

DIANE B. BALTER

PAUL A. GALE

GERALD C. HICKS

STEVEN Y. ITAGAKI

STEVEN T. JOHNS

MARCOS A. KROPF

RICHARD A. LOVELL

JOHN M. LUEBBERKE

GUSTAVO L. MARTINEZ

EMILY RANDON

JOE ROBINSON

MATTHEW D. RUYAK

DEBORAH R. SCHULTE

MICHAEL T. SPARKS

ROBERT D. TOKUNAGA

STEPHEN P. TRAYLOR

LAN WANG

BRETT M. WITTER

SUSANA ALCALA WOOD

**Re: Florin Perkins Landfill v. City**

Dear Mr. Gonzalez:

Please find two letters that I have enclosed from City staff regarding coordinating the transition from the temporary fire protection system to the permanent fire protection system.

Thank you for your attention to this matter.

Sincerely,

SAMUEL L. JACKSON

City Attorney

  
LAN WANG

Deputy City Attorney

LW/jg  
Enclosures

cc: Robert Tokunaga  
Jeff Scharff (via facsimile and U.S. mail)

Louis A. Gonzalez  
Re: *Florin Perkins Landfill v. City*  
June 25, 2001  
Page 2

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Bill Owens (via facsimile and U.S. mail)  
Nick Buchberger  
Troy Malaspino  
Bryon Nakashima  
Lisa Beaver  
Dave Brent  
Mike Dragash  
Jeff Heard  
Robert Thaug

W:\Florin-Perkins\Corresp\Gonzalez 06-25-01 ltr.wpd



rw

DEPARTMENT OF  
UTILITIES  
ENGINEERING SERVICES

CITY OF SACRAMENTO  
CALIFORNIA

June 19, 2001  
010321 RT:RT

1395 - 35TH AVENUE  
SACRAMENTO, CA  
95822-2911  
PH 916-264-1400  
FAX 916-264-1497

Cal Brown  
4201 Florin Perkins  
Sacramento, CA 95827

Dear Mr. Brown:

RE: WATER TAP FOR THE FIRST PHASE OF PERMANENT FIRE PLAN

As everybody knows, Florin Perkins is in the process of making the transition from a temporary or interim fire protection system to a permanent fire protection system. As a part of that transition process, a water supply is of course necessary for that permanent system, and the water is to be supplied by and through a City water tap.

In response to Florin Perkins' letter dated May 24, 2001, the City is ready to provide the first water tap for the permanent fire protection system. However, a number of conditions must be met, and these conditions are outlined further below. These conditions are provided in hopes of facilitating the transition from the temporary fire protection system to the permanent one.

Accordingly, please be advised the following work/tasks need to be completed:

- Make payment for the taps at the Department of Utilities' Customer Service Office at 1395 35<sup>th</sup> Avenue.
- After the above payment is made, the City crew will install a 10-inch fire service. Florin Perkins shall coordinate with the tapping supervisor (916-264-5371) regarding the logistics of said installation.
- Once the service has been installed to the property line, Florin Perkins shall furnish and install the approved double check detector assembly (DCDA) valve with meter by-pass (AMES 3000ss model per your submittal) and a fire department connection.
- Florin Perkins shall then obtain an independent testing service provider and have the DCDA tested and certified.
- Prior to connecting to the City water system, the installation of the on-site pipes (first phase) must pass an inspection by the City.


- Following the direction of the City inspector, Florin Perkins shall test, disinfect and flush the system and then connect the on-site system into the City system.

Please be advised that during construction of the permanent fire water system, there shall be no time in which the site will be without fire suppression capabilities. If Florin Perkins predicts or anticipates a shut down of the temporary fire suppression system for any time during the construction of the permanent fire protection system, Florin Perkins must notify the City of Sacramento and seek the approval of the City of Sacramento's Fire Prevention Division prior to any such shut down. If the City approves such a shut down, a fire watch may be necessary, and Florin Perkins shall cooperate fully in establishing any such fire watch.

In addition, please be advised that the water taps provided herein are for fire service only, and it is not intended, for example, for domestic, industrial or irrigation use, or any other non-fire service use. Such use shall reclassify the water taps and the system as a non-dedicated fire line, and as such, the City will require Florin Perkins to install meters, reduced pressure principle back-flow prevention devices and pay for the water development fees. Further, Florin Perkins will be asked to retrofit the permanent fire system if the pressure losses from these devices result in the system with less than the required pressures for the designed fire system capacities.

If there are any questions, please call me at 916-264-8891.

Sincerely,



Robert Thaung, Associate Engineer  
Department of Utilities



DEPARTMENT OF  
PLANNING  
AND  
BUILDING

BUILDING DIVISION

CITY OF SACRAMENTO  
CALIFORNIA

1231 I STREET  
ROOM 200  
SACRAMENTO, CA  
95814-2904  
NICK BUCHBERGER  
PRINCIPAL INSPECTOR  
(916) 264-5920

06/15/2001

Ken Whitmire  
Capitol Contractors  
PO Box 276430  
Sacramento, Ca 95827

**Re: Florin Perkins Landfill**

Dear Mr. Whitmire:

During construction of the temporary hydrant system, certain issues were discussed concerning the proper installation of the piping system. I have detailed those requirements plus some that were not discussed. Some but not all of the things that the plumbing inspector will be looking for while inspecting the permanent system are as follows:

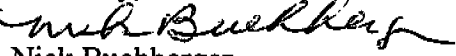
1. All portions of the piping system shall be inspected before covering.
2. All thrust blocks shall be installed and sized per City of Sacramento Standard Drawing SD- 7.
3. Thrust blocks installed in loose fill areas shall be designed to resist piping movement by shear weight of concrete alone.
4. Locating wire shall be:
  - a. continuous throughout the entire system.
  - b. installed on top of the piping.
  - c. insulated along the side of metallic piping, valves and valve box risers.
  - d. spliced with a split bolt connection per City of Sacramento standard drawing SD- 2.
  - e. installed at the valve box risers and at the fire hydrants per City of Sacramento standard drawing SD-1 and SD-2.
5. Backflow assemblies shall be installed per City of Sacramento standard drawing SD-15.
6. Pipe bedding and initial backfill shall be compacted sand. Secondary backfill shall be native soil free of concrete or other debris. Special care should be taken in those areas where the piping is installed in the landfill area.
7. The entire system shall be hydrostatically tested at 150 psi.

8. Disinfection of the system shall be accomplished by procedures set forth in Standard Specifications For Public Works section 27-14. Test reports by a independent test lab shall be submitted to the City Water Dept. prior to connection to the domestic water supply.
9. The entire system shall be flushed.

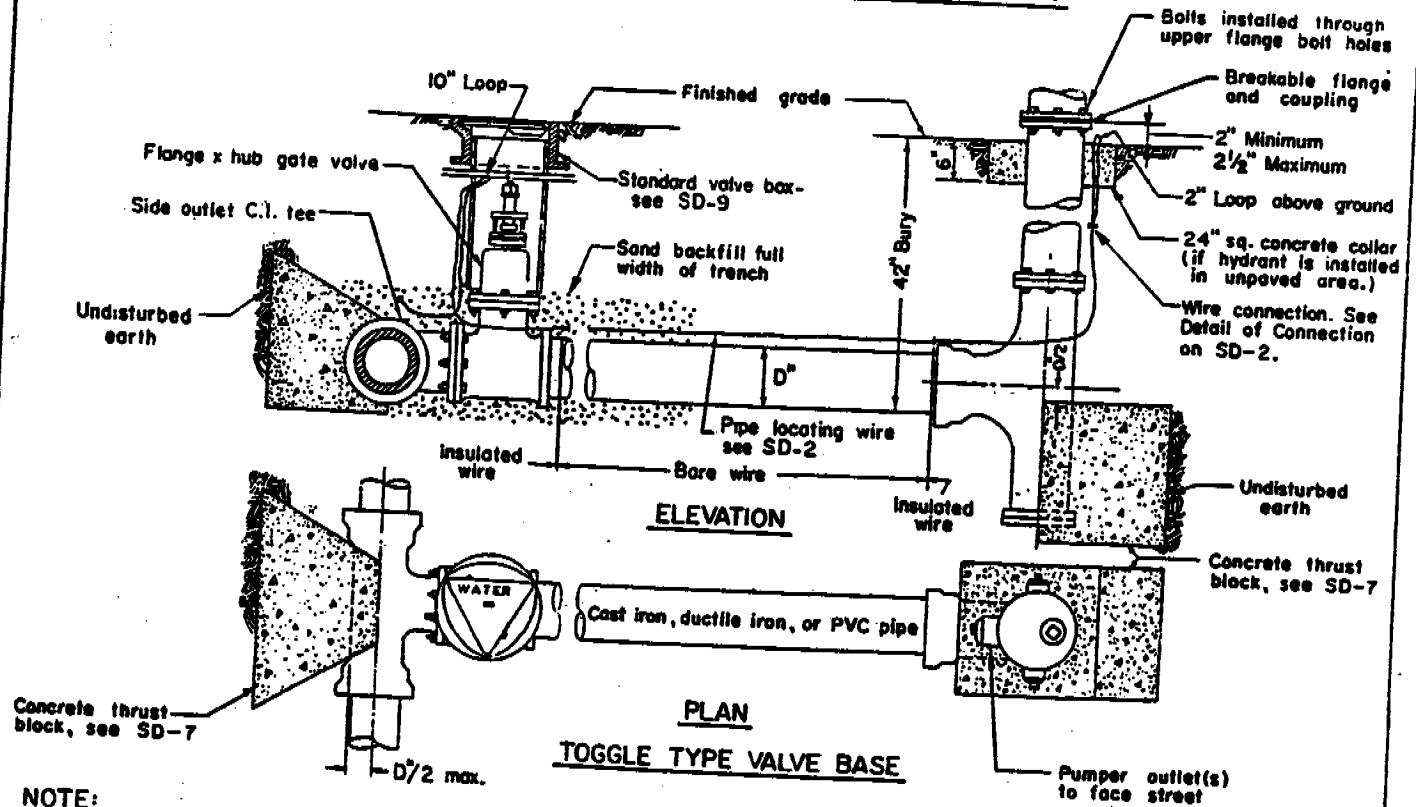
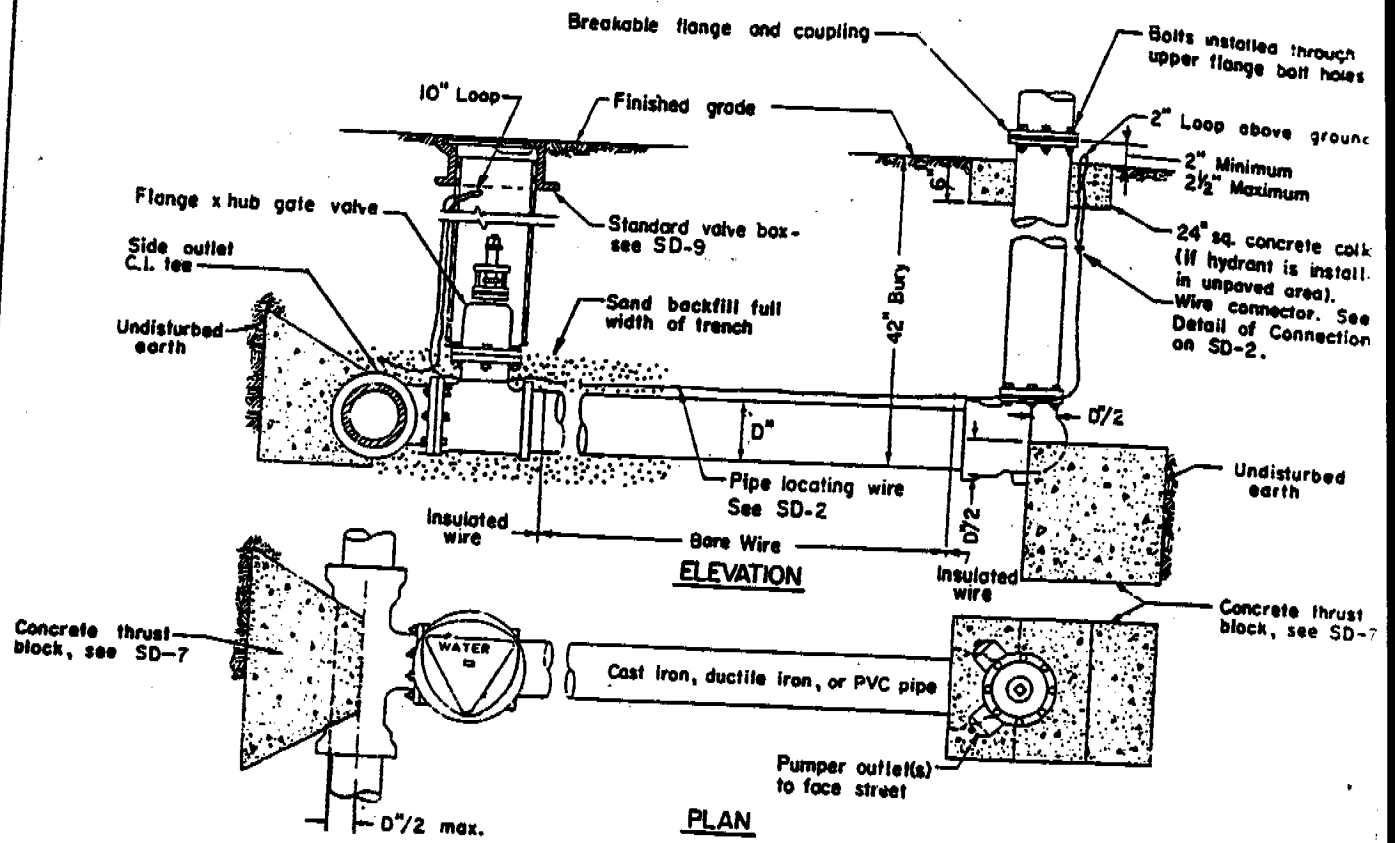
Attached are copies of referenced drawings and code sections. The above list covers some of, but not all, the requirements for the installation of fire hydrant piping.

Please feel free to contact me if you need more information.

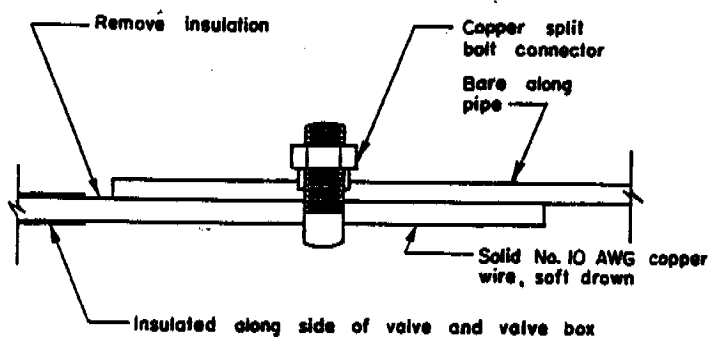
Sincerely,



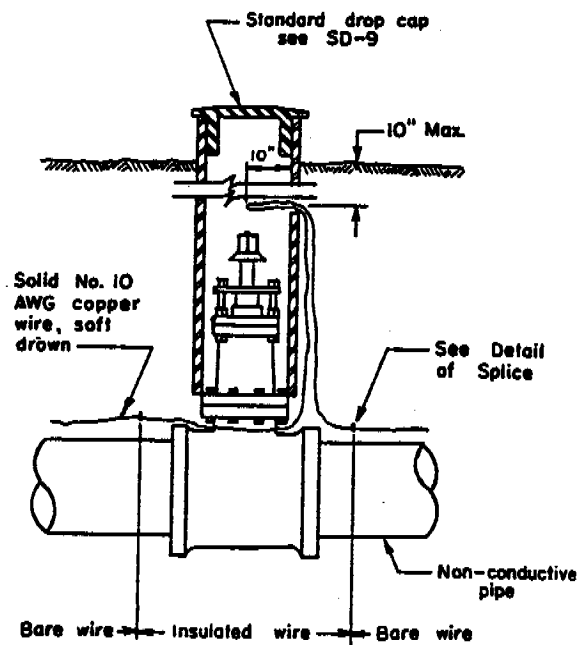
Nick Buchberger



**NOTE:**  
 1. All pipe and valves shall be:  
 6" for Standard Hydrants or 8" for Double Pumper Hydrants.

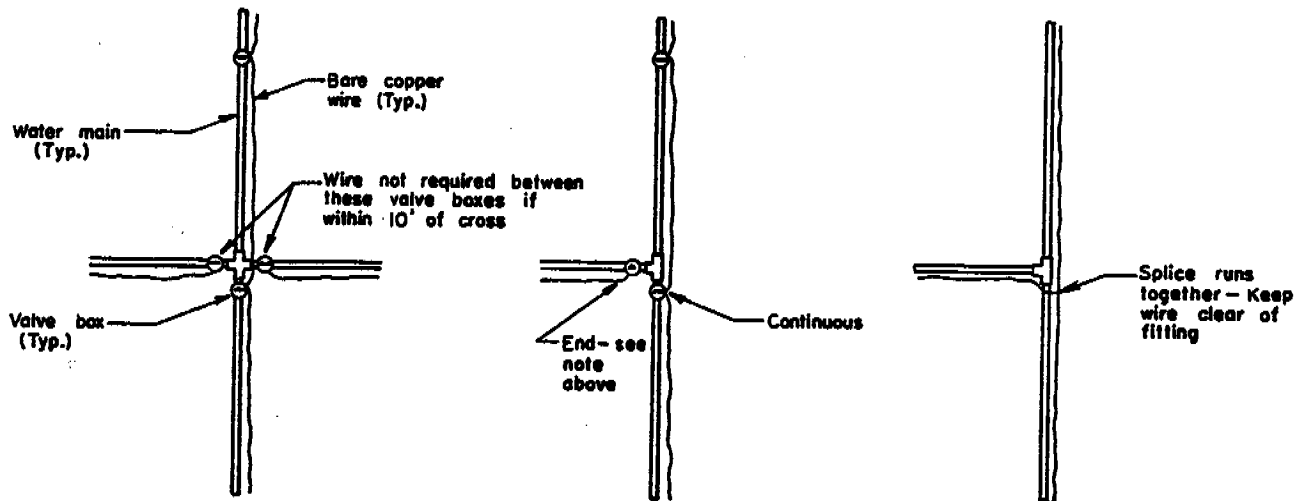


**DETAIL OF CONNECTION**



**INSTALLATION AT VALVE BOX**

**NOTE:** If wire ends at valve box, run single insulated lead up to 10' below ground.



**TYPICAL PLACING AT MAIN INTERSECTIONS**

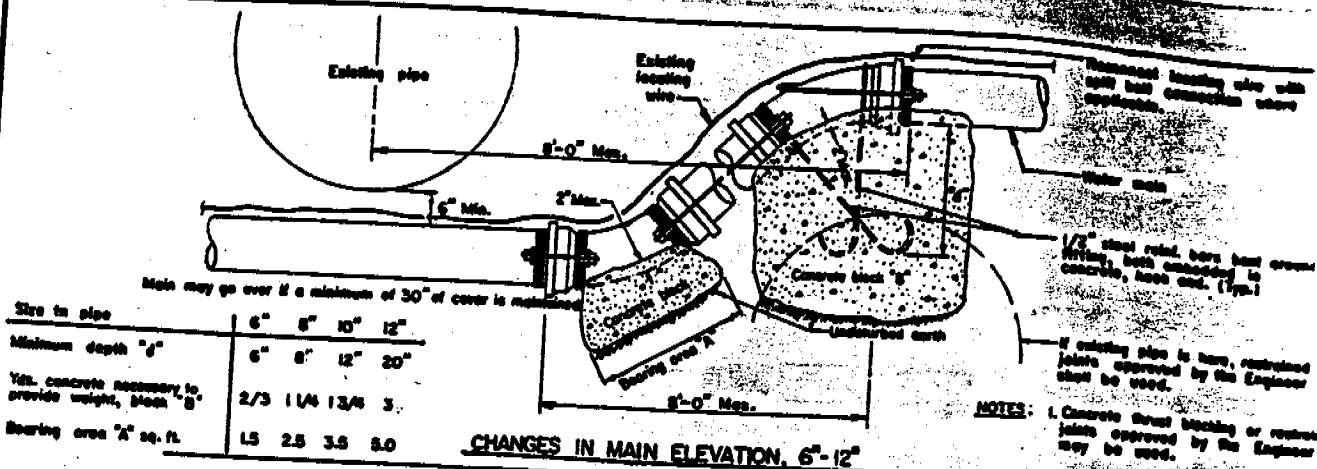
**NOTES:**

1. Wire to be continuous between valve boxes, except where boxes are within ten (10) feet of pipe intersection.
2. Bare wire not to touch valve or fittings. (Coated wire only.)
3. Locating wire to be laid at top of pipe.

CITY OF SACRAMENTO  
WATER DIVISION

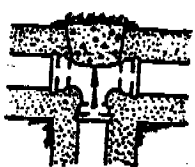
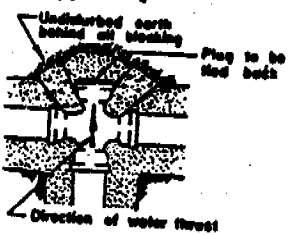



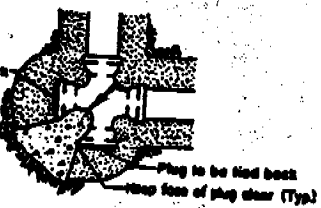

PIPE LOCATING WIRE FOR  
NON-CONDUCTIVE WATER MAINS

APPROVED BY: *Jim Dequena* SCALE: NONE  
DATE: JAN. 1989 DWG. NO. SD-2



Size to pipe	6"	8"	10"	12"
Minimum depth "d"	6"	8"	12"	20"
Vol. concrete necessary to provide weight, block "B"	2/3	1 1/4	1 3/4	3
Bearing area "X" sq. ft.	1.5	2.5	3.5	8.0

**CHANGES IN MAIN ELEVATION, 6"-12"**

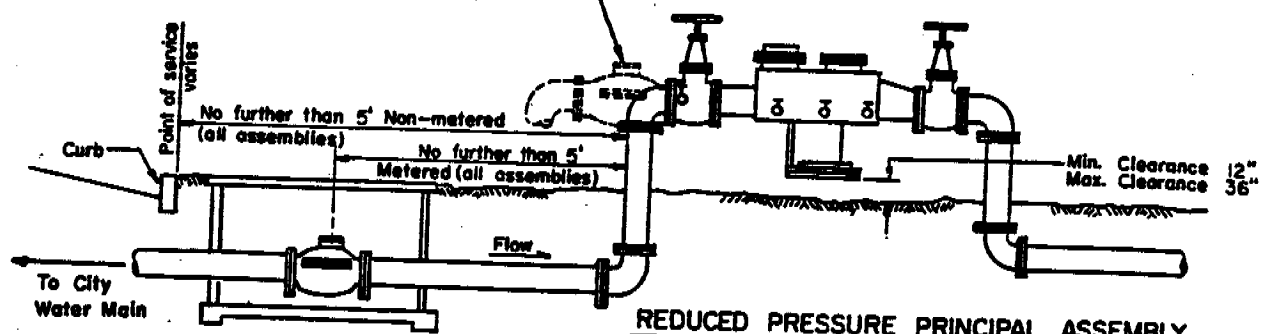
Type of fitting	Required total bearing area, square feet			
	Main size 6"	8"	10"	12"
 TEE OR DEAD END	2	3	4.5	6
 CROSS AND PLUG	3	4.5	6.5	9
 90° ELL	2.5	4	6	9
 45° ELL	1.5	2.5	3.5	5
 22 1/2° ELL	1	1	2	2.5
 CROSS AND PLUGS	2.5	4	6	9
 TEE AND PLUG	2.5	4	6	9

- NOTES:**
1. Above bearing areas based on 100 psi service pressure and 2000 psi soil bearing capacity. Where soil conditions require adjustment of allowable bearing pressure, in the opinion of the engineer, required blocking areas will be adjusted.
  2. Use Class "D" Concrete for blocking. See Standard Specifications.
  3. Vertical changes in direction require blocking as shown above.
  4. Concrete thrust block shall not completely enclose fitting.
  5. Restrained joints may be used in case of concrete blocking with approval of the Engineer.

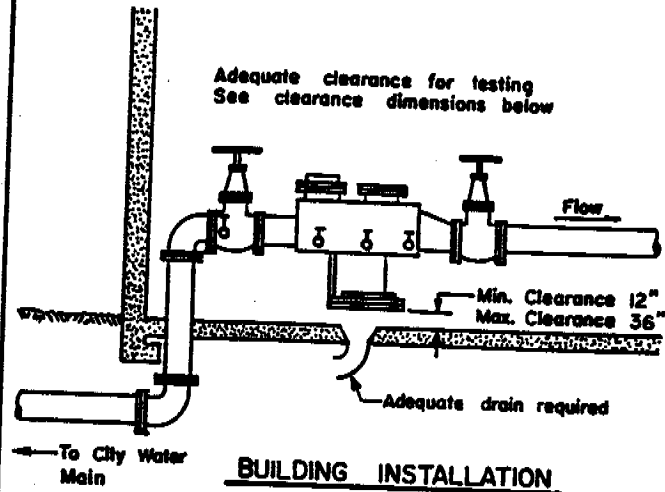
**THRUST BLOCKING FOR WATER MAINS, 6"-12"**

CITY OF SACRAMENTO WATER DIVISION	CHANGES IN MAIN ELEVATION & THRUST BLOCKING FOR WATER MAINS	APPROVED BY: <i>[Signature]</i>	SCALE: NONE
		DATE: JAN. 1989	DWG. NO. SD-7

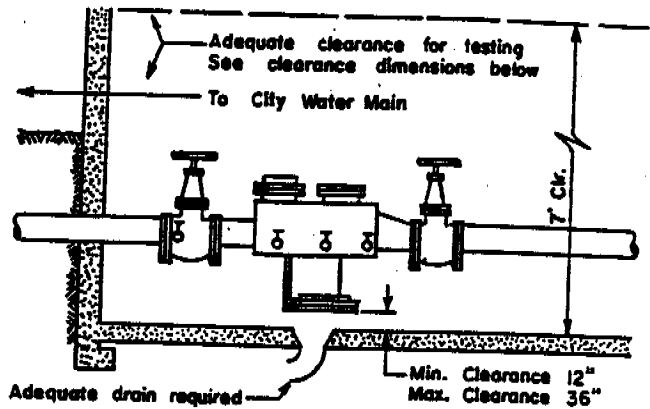
Water meter 3" and larger may be installed above ground ground at city's option (all assemblies)



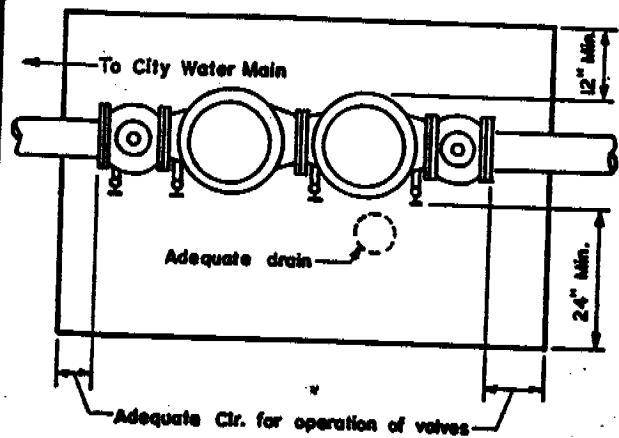
**REDUCED PRESSURE PRINCIPAL ASSEMBLY  
ABOVE GROUND INSTALLATION**



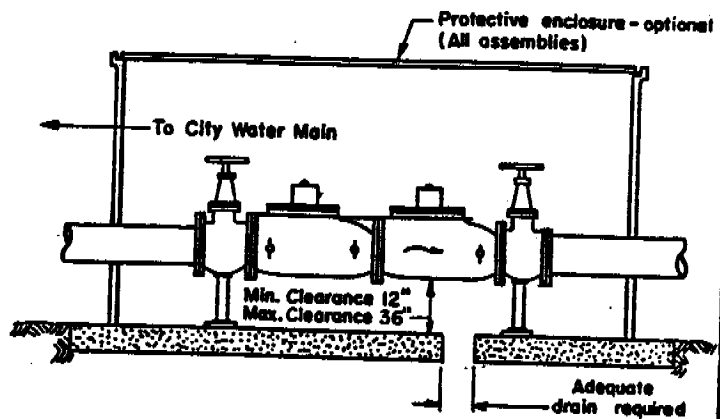
**BUILDING INSTALLATION**



**BASEMENT INSTALLATION**



**MINIMUM CLEARANCES-ALL INSTALLATIONS**



**DOUBLE CHECK VALVE  
ABOVE GROUND INSTALLATION**

**NOTES**

1. For approved list of backflow prevention assemblies contact the Engineer.
2. No outlet, tap, tee, or connection between water main and backflow prevention assembly is allowed.
3. PVC pipe shall not be used for the above ground portion of the installation.
4. Supports recommended for assemblies 3" and larger.

**CITY OF SACRAMENTO**  
WATER DIVISION

BACKFLOW PREVENTION ASSEMBLIES  
TYP. INSTALL. WITH MINIMUM CLR.

APPROVED BY: *[Signature]* DATE: JAN. 1989  
SCALE: NONE  
DWS. NO. SD-15

Gate valves for water services four inches (4") through twelve inches (12") in diameter shall be installed within a box and riser. Boxes and risers shall be as specified in and installed in accordance with Standard Drawing SD-10.

Service saddles shall be bronze.

No fitting (tee, ell, etc.) shall be tapped to accommodate any service.

#### 27-14 DISINFECTION OF WATER MAINS

In general, the intent of this section is to present procedures essential for the disinfection of newly constructed water mains and water distribution systems. The basic procedure consists of the following:

- (a) Preventing contaminating materials from entering the water mains during construction and removing any contaminants by flushing that may have entered the water main during construction.
- (b) Disinfecting any residual contamination that may remain.
- (c) Determining the bacteriological quality by laboratory testing after disinfection.

Precautions shall be taken to protect pipe interiors, fittings, and valves against contamination during the construction of the water distribution system.

Pipe delivered for construction shall be strung so as to minimize the entrance of foreign material. When pipe laying is not in progress, as for example, at the close of the day's work, all openings in the pipeline shall be closed by caps or plugs. Joints of all pipe in the trench shall be completed before work is stopped. If water accumulates in the trench, the plugs shall be water tight and shall remain in place until the trench is dry.

Water distribution mains up to and including twelve inches (12") in diameter shall be disinfected using the Tablet Method. The Tablet Method shall employ the use of five (5) gram calcium hypochlorite tablets as a disinfectant and should give an average chlorine dose of approximately twenty-five (25) milligrams per liter. The five (5) gram calcium hypochlorite tablets shall contain at least sixty-five percent (65%) available chlorine by weight. The tablets, 6-8 to the ounce, are designed to dissolve slowly in water. These tablets shall meet the requirements of AWWA B-300, standard for hypochlorites.

Because preliminary flushing cannot be performed when tablets are used, cleanliness must be exercised during construction of the water main.

The calcium hypochlorite tablets shall be placed in each section of pipe and also in hydrants, hydrant branches, and other appurtenances. They shall be attached by an adhesive at the top of the pipe. If the tablets are fastened before the pipe section is placed in the trench, their position should be marked on the section to assist in keeping the tablet's position at the top of the pipe.

The adhesive shall be Permatex No. 1, or approved equal. There shall be no adhesive on the tablet except on the broad side next to the surface to which the tablet is attached. The tablets must be fastened to the pipe to prevent washing to the pipe end.

The number of calcium hypochlorite tablets\* required for main disinfection is shown by the following table.

Pipe Diameter in.	Length of Pipe Section (feet)				
	13 or less	18	20	30	40
	Number of 5 gram Calcium Hypochlorite Tablets				
4	1	1	1	1	1
6	1	1	1	2	2
8	1	2	2	3	4
10	2	3	3	4	5
12	3	4	4	6	7
16	4	6	7	10	13

\* Based on 3.25 grams of available chlorine per tablet. Any portion of tablet rounded to next higher number.

When the installation of the water distribution system has been completed, the main(s) shall be filled with water at a velocity of less than one foot (1') per second. During filling, air shall be released from all high points in the line. If required, the Contractor shall provide a corporation stop at high points to provide air vents and insure that all air is released.

In addition, as the chlorinated water flows past tees and crosses, related valves and hydrants shall be operated so as to disinfect appurtenances.

The chlorinated water shall be allowed to stand in the pipeline at least twenty-four (24) hours. At the end of this period (prior to flushing), City personnel shall obtain water samples from a tap placed near the upstream end of the pipeline. All samples shall show no less than ten (10) milligrams per liter (mg/l) total residual chlorine or the disinfection procedure shall be repeated as directed by the Engineer.

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When approved by the Engineer, the chlorinated water should be flushed from the pipeline until the chlorine concentration in the water leaving the main is no higher than that generally prevailing in the existing distribution system, or less than one mg/l total residual chlorine.

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Before the water main is placed in service as part of the existing distribution system, a sample or samples shall be collected by City personnel. The Contractor shall notify the City at least twenty-four (24) hours in advance of the time that bacteriological samples are to be drawn for testing. The Contractor shall furnish and install temporary sampling devices in accordance with Standard Drawing SD-6. The devices shall be installed in locations indicated by the Engineer. Bacteriological examination of the samples shall meet the following criteria:

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- (a) Total Coliform less than 1 per 100 milliliters.
  - (b) Total Plate Count less than 500 bacteria per milliliter.
  - (c) If the initial disinfection fails to produce satisfactory samples, disinfection shall be repeated as directed by the Engineer.

The water shall also meet State and Federal drinking water standards; Title 22, California Administrative Code and the 1986 Amendments to the Safe Drinking Water Act of 1974, as issued by the United States Environmental Protection Agency (EPA).

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Water mains shall not be placed in service for any purpose whatsoever until the City's Water Quality Laboratory has determined that the water main has been disinfected.

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#### 27-15 PRESSURE TESTING WATER MAIN INSTALLATIONS

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After disinfection of the system and prior to making connections, the entire system shall be pressure tested by the Contractor independent of the existing system or systems to be connected.

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Each section of the pipe to be tested shall be slowly filled with water, and all air shall be expelled from the pipe. The release of the air can be accomplished by opening fire hydrants and service line cocks at the high points of the system and blow-offs at all dead ends. The valve controlling the admission of water into the section of pipe to be tested should be opened wide before shutting the hydrants or blow-offs. After the system has been filled with water and all air expelled, all the valves controlling the section to be tested shall be closed.