



SCOPE AND PURPOSE

The Water Service Requirements presented herein constitute the Rules, Regulations and Policies of the City of Pasadena, Water and Power Department (“PWP”) pertaining to water service connections. These Water Regulations are issued for the guidance and assistance of property owners, as well as contractors, engineers, architects and manufacturers engaged in the installation and design of water service.

The provisions of these requirements are intended to be in accordance with all local, state and federal codes, but are not intended to be a substitute for them. When the requirements of the Water Regulations are more stringent than these codes, then the Water Regulations shall apply.

Any unusual situations that are not covered in these Water Regulations or questions regarding these Water Regulations should be referred to PWP for clarification through a PWP representative.

Adopted by Council Resolution _____ on _____, 2012



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I. Definitions

The following terms and expressions when used in these Water Regulations shall have the indicated meanings:

- a. Applicable fire authority: the Fire Chief of the Pasadena Fire Department or the Fire Chief of the County of Los Angeles.
- b. Applicant: any person requesting potable water, fire service, service installation, main extension, or any other services performed by PWP or its authorized agent.
- c. Approved water supply: a potable water supply of safe, sanitary quality which is approved for human consumption by the authorities having jurisdiction thereof.
- d. Backflow: The undesirable reversal of flow of water or mixtures of water and other liquids, gases or other substances into the distribution pipes of a potable water supply from any source(s) other than an approved water supply source.
- e. Backflow Prevention Assembly: a device to prevent water or other liquids from being discharged from a premise back into the water system.
- f. Bill: Written or electronic demand for payment for services rendered by the City to the Customer.
- g. City: City of Pasadena, California.
- h. Cost: the actual cost to PWP, including all labor, material, supplies, equipment and miscellaneous items, together with any applicable indirect and general charges and administrative overhead, in accordance with the accounting practices of PWP.
- i. Council: City Council of the City of Pasadena, California.
- j. Cross connection: any arrangement or installation of piping or structures, fixtures or vessels whereby the arrangement or configuration may make possible for used, unclean, polluted or contaminated water, mixtures or substances to enter any portion of any approved water supply.
- k. County: The County of Los Angeles, California.
- l. Customer: The person, persons, firm, association, governmental agency, corporation or other concerns who use, are entitled to use, or benefit from the use of water from PWP.
- m. Distribution main: Pipelines located in streets, highways, public ways or private rights-of-way, exclusive of service connections, which are owned and operated by PWP and are used to serve the general public.
- n. Fire Service: All pipes, fittings, valves, meters, and components necessary to convey water for fire protection purposes from the distribution main to the Fire Service backflow prevention assembly.
- o. General Manager: General Manager of PWP or a designee.
- p. Meter: The instrument used for measuring the amount of water delivered to the Customer.



- q. Multi-family accommodation: An apartment building, duplex, condominiums, court group, or any other group of residential units located upon a single premise. Hotels and motels, consisting primarily of guest rooms and/or transient accommodations, are not classed as multi-family accommodations.
- r. Pasadena Water and Power or PWP: Pasadena Water and Power, a department of the City of Pasadena.
- s. Payment: cash, check, credit card, debit card.
- t. Person: Any individual, partnership, corporation, public agency, or other organization operating as a single entity.
- u. Point of connection: The point where the piping of PWP is connected to the piping of the Customer, regardless of the location of PWP's meter.
- v. Premises: All of the real property and apparatus employed in a single enterprise on a contiguous parcel of land undivided by a public thoroughfare are considered to be part of a Customer's premises.
- w. PWP's operating convenience: The term refers to the utilization, under certain circumstances, of facilities or practices not ordinarily employed which contribute to the overall efficiency of PWP's operations; it does not refer to Customer convenience nor to the use of facilities or adoption of practices required to comply with applicable laws, ordinances, rules or regulations, or similar requirements of public authorities.
- x. Regulations: Water Regulations.
- y. Service connection: See Point of Connection.
- z. Single-family dwelling or accommodation: A house, or other dwelling unit which is used as a residence by a single family.
- aa. Staff: Personnel employed by PWP.
- bb. Temporary Service: Water service for construction work or other uses as deemed feasible by PWP, such that service is required for only a limited time.
- cc. Water Rate Ordinance: the ordinance adopted by the City Council which establishes rates and charges for water utility service.
- dd. Water Service Lateral: the pipe and fittings necessary to conduct water from the distribution main to the meter or to the shut-off valve on an unmetered service connection where connection is made with facilities of the Customer.
- ee. Water System: The infrastructure needed to provide and deliver potable water to Customers within PWP's defined service area, including, but not limited to, all distribution mains, service connections, meters, fire hydrants, pressure reducing stations, groundwater wells, pumping stations, reservoirs, and other related facilities.

II. Description of Service

- a. Quantities. PWP will endeavor to supply potable water dependably and safely in adequate quantities to meet the reasonable anticipated and projected needs of Customers.



- b. Pressures. If it is deemed appropriate to either increase or decrease a Customer's on-site pressure, it shall be the responsibility of the Developer or Customer to provide, install and maintain any booster pumps, pressure regulators, relief valves, and such other equipment or facilities required by applicable Regulations and Codes. PWP will provide a recommendation as to such requirements to the Planning Department.
- c. Quality. PWP will endeavor to provide potable water that is wholesome, in no way harmful or dangerous to health and, in so far as practicable, free from objectionable odors, taste, color and turbidity.

III. Communication

- a. The PWP Staff is available to Customers for consultation and guidance regarding interpretation of these Regulations. Oral consultation by Staff shall not be considered binding.
- b. Any notice or bill or other communication from PWP to a Customer shall be made in writing or electronic format, and shall be given in person at the PWP's offices, delivered, sent through the mail, or sent electronically.
- c. Any notice from a Customer may be given to PWP in person at PWP's offices by the Customer, telephone, fax, e-mail, by the Customer's authorized agent, or mailed postage prepaid by the Customer.

IV. Condition of Service

- a. PWP shall furnish service only to the premises specified in the application. A service connection shall not be used to supply water services to any parcel of land other than the parcel for which the service connection is assigned.
- b. When a lot or parcel of land is provided with a service connection and the parcel is subdivided, the service connection shall be considered as belonging to the lot or parcel of land which it directly enters.
- c. PWP shall have the right to refuse to provide service to any premises and at any time to discontinue service if found necessary to do so in order to protect the City against abuse, fraud or contamination.
- d. Any unauthorized person found taking water service from or through any of PWP's facilities will be assessed charges and/or prosecuted under the full extent of the law. Any unauthorized equipment or apparatus found connected to PWP's facilities will be removed by PWP personnel and disposed.
- e. If PWP has knowledge that a Customer failed to comply with any of the Regulations or in the event of discovery of a dangerous condition on a Customer's premises or in the case of a Customer utilizing the service in such a manner as to make it dangerous and the Customer does not remedy same within a stated time, PWP shall have the right to discontinue service to the Customer without notice.



- f. PWP will not furnish service to any premises where the use thereof may be detrimental to PWP's facilities or to the service rendered by PWP to other Customers.

V. Temporary Service

Temporary water services, whether from a fire hydrant or otherwise, are installed at the discretion of PWP for the convenience and use by individuals, contractors and companies doing work of a limited duration. Temporary services are not transferable without PWP's prior written approval.

PWP will furnish temporary service under the following conditions:

- a. Furnishing of temporary service will not result in undue hardship upon PWP or its then existing Customers.
- b. The Applicant shall be required to pay to PWP the cost of installing and removing any facilities necessary in connection with the furnishing of such temporary service by PWP.
- c. The Applicant for such temporary service shall be required to make a deposit with PWP.
- d. The Customer is responsible for fire hydrant meter rental, pick-up and return to PWP.
- e. All requests for construction water or the use of PWP facilities for other temporary purposes shall be made on an approved application form. Charges associated with supplying such connections will be prepaid by the Applicant and water consumed shall be paid for in conformance with these Regulations and the Water Rate Ordinance.

VI. Continuity of Service

- a. PWP will exercise diligence and make all reasonable efforts to furnish and deliver a continuous and sufficient supply of water service to avoid any shortage and prevent interruptions to service. When such interruptions occur, PWP will endeavor to re-establish service with the shortest possible delay consistent with the safety of its Staff, its Customers and the general public.
- b. Whenever PWP finds it necessary to schedule an interruption of service, it will, where feasible, notify all Customers to be affected by the interruption, stating the approximate time and anticipated duration of the interruption. PWP will attempt to provide reasonable notice to Customers of such suspension when feasible, but shall not be liable for failure to do so. In case of interruptions to service due to emergency repairs to PWP facilities, PWP will not be liable for failing to provide notice.



- c. During times of threatened or actual water shortage due to circumstances beyond PWP's control, water service may be discontinued. However, PWP will make every reasonable effort to provide water with due regard to public health and safety.
- d. PWP may discontinue service where water is wastefully or negligently used on a site, or where the Customer has been notified of such wastage and the conditions are not corrected or repaired.

VII. Application for New Service Installation

- a. Prior to the commencement of construction, Customer shall submit a request for service. Upon request, PWP shall provide a list of information to be furnished by the Customer. Such a request for service constitutes an application and does not, in itself, require PWP to provide service. The list of information may include, but is not limited to:
 - i. A composite utility plan identifying the premise and service location
 - ii. Legal address of the premise to be served
 - iii. Assessor Parcel Number of the premise to be served
 - iv. Name of Applicant and mailing address
 - v. Name of Customer and mailing address
 - vi. Date Applicant will be ready for service
 - vii. Existing water service connections
 - viii. Date of application
 - ix. Applicant's role and responsibility for the premises
 - x. Information to establish credit of Applicant and/or deposit
 - xi. Signature of Applicant
 - xii. Such other information as PWP may reasonably require
 - xiii. Current telephone number
 - xiv. E-mail address
- b. PWP shall make the desired service installation within a reasonable period, provided that the Customer requesting service has first met the following requirements:
 - i. All required information for service installation has been provided to PWP.
 - ii. All necessary construction work has been completed on the Customer's side of the meter.
 - iii. All charges to be paid to PWP have been received by PWP.
 - iv. All necessary easements have been obtained.



- c. The Applicant shall pay PWP a deposit equal to the total estimated costs before any work commences. This amount shall be subject to additional billing or a partial refund after the completion of the work and final actual costs are determined. Deposits required for construction of new facilities and/or services shall be paid by cash, money order or check.
- d. It shall be the Applicant's responsibility to ascertain the pressure at his premises, provide, install and maintain any pressure booster pumps, pressure regulators, and relief valves as required.

VIII. Public Fire Hydrants

- a. The applicable fire authority and PWP shall designate the flow rate, size and location of all public fire hydrants to be installed.
- b. Public fire hydrants shall be installed in the public right of way such as parkways and/or sidewalk areas adjacent to the curb.
- c. Private fire hydrants shall be metered and installed on private property.
- d. Fire hydrants are provided for the primary purpose of extinguishing fires and shall be used only by the applicable fire authority or PWP or their authorized representatives, or such other person as may be granted a permit by PWP to take water from a fire hydrant.
- e. In all cases where PWP grants a permit to take water from a fire hydrant, the permitted Customer shall use a special hydrant wrench to operate the fire hydrant. All fire hydrants shall be opened and closed slowly to prevent water hammer and damage to the water system. Any damage caused by the permitted Customer shall be paid for by the permitted Customer.
- f. A backflow prevention assembly may also be required for authorized fire hydrant usage.
- g. A permit to take water from a fire hydrant will specify the rate at which water from the hydrant will be sold.
- h. All water taken from a fire hydrant shall be metered unless prior arrangement has been made with PWP.
- i. Public fire hydrants shall be installed where required and shall be paid for by the Customer and shall remain the property of PWP. Specifications for such service shall be established by PWP and shall provide for the installation of a lateral isolation valve, fittings and fire hydrant in accordance with PWP's standards.
- j. A fire hydrant flow test may be requested for the design of fire sprinkler system, insurance rating, or other purposes. PWP will perform the fire flow test upon payment of the appropriate fee per the City's General Fee Schedule.
- k. PWP reserves the right to remove a Customer from use of a fire hydrant if the use is causing damage, contamination or a disturbance to the water system.



IX. Fire Services

Water service solely for private fire protection purposes to a Customer owned fire sprinkler system, including fire hose cabinets which are an integral part of the sprinkler system, are classified as a fire service connection (restricted water use).

Water service to Customer owned fire protection facilities that include private fire hydrants or other manually controlled outlets may, at the option of PWP, be classified as either a fire service connection or a domestic service connection.

- a. The minimum billable size for a dedicated fire service connection is four (4) inches, except for single family dwellings.

The size of a fire service connection available at any site is limited to the size, pressure and volume within the existing water main serving the property. Where the demand exceeds the water main capacity the Applicant is responsible for the total costs of a water main enlargement or extension required to meet the capacity.

- b. Fire services shall be installed where required and shall be paid for by the Customer. All fire services shall be metered and protected from backflow
- c. PWP shall designate the installation of an approved Double Check Detector assembly (DCDA) or Detector Check Meter assembly (DCM).

- i. DCDA

1. The DCDA incorporates an integral bypass detector meter.
 2. The DCDA shall be installed and maintained above the flood plain.
 3. The DCDA shall be provided by, owned, maintained, and tested by the Customer.
 4. The DCDA shall comply with all backflow prevention requirements of Appendix "A-2" "Cross Connection Policy" of these Regulations.
 5. PWP shall read the DCDA bypass meter monthly.
 6. PWP's responsibility for the fire line ends at the property line.

- ii. DCM

1. The DCM incorporates a bypass detector meter.
 2. The DCM shall be installed in a vault in the public right of way or easement.
 3. The DCM shall be provided by the Customer.
 4. PWP shall read the bypass meter monthly.
 5. PWP's responsibility for the fire line ends at the DCM.
 6. The Customer shall install an approved double check valve assembly (DCVA) within 20-feet of the DCM.



7. The DCVA shall comply with all backflow prevention requirements of Appendix "A-2" "Cross Connection Policy" of these Regulations.
 - d. The use or attempted use of water through any dedicated fire system for any purpose other than fire protection purposes, without the prior written consent of PWP in each case, shall constitute illegal use and shall be cause for immediate shut off of the fire service. PWP will make no further deliveries of water through such service and PWP will not maintain the service until a suitable billing meter of the type and size approved by PWP is installed in place of the detector meter. The cost and expense of the installation of such meters shall be borne by the Customer and shall be paid in advance to PWP, based on an estimate by PWP of the cost of such installation.
 - e. If the actual installation cost is more than that estimated by PWP, the Customer shall forthwith, upon demand, pay such excess. In the event the cost is less than that estimated by PWP, PWP will refund the excess to the Customer.
 - f. If backflow prevention is deemed necessary by PWP for the fire service, a double check detector assembly or reduced pressure assembly with a by-pass meter shall be installed by the Customer on his property and shall comply with all backflow prevention requirements of Appendix "A-2" "Cross Connection Policy" of these Regulations.

X. Construction Standards

- a. All construction associated with the water system shall be done in conformance with PWP standards. Standards may be modified for the convenience of PWP on a case by case basis.
- b. PWP sets certain requirements and design standards to be consistent with requirements of the Fire Department regarding water main fire flows and spacing of fire hydrants as required the adopted codes and regulations and as amended in the Pasadena Municipal Code.
- c. Refer to Appendix "A-1" for some of PWP's current construction standards.

XI. Water Connection

- a. PWP's operating convenience or necessity may require the construction of facilities in order to make connection to an Applicant's premises. All costs of such construction shall be paid or contracted for by the Applicant.



- b. A water service and meter may be evaluated for its continuing integrity. Should PWP find a service, meter, vault or other appurtenance to be substandard and no longer suitable for continued use, replacement and/or construction of new facilities may be required. PWP may require that a portion or all of the costs of such replacement and/or construction be paid or contracted for by the Applicant or Customer prior to construction.
- c. All service pipes shall be of suitable capacity as determined by applicable plumbing and fire codes.
- d. No work by PWP will proceed prior to the Applicant's submittal of plans showing the proposed service location, or prior to Applicant's payment.
- e. The water service will end at the curb, public right of way or property line at the option of PWP. Where the location of the meter box or vault on the City side of the property line is not practicable, the meter box or vault shall be located on the Customer's premises or such other location that may be agreed upon by PWP at its option. The Customer shall be responsible for the expense of installation and maintenance of the lines on the Customer's side of the property line connecting to PWP's service where construction of the Customer's facilities began.
- f. PWP's ownership and responsibility to all such meters, pipe, equipment, and materials shall end at the meter.
- g. Only duly authorized employees of PWP are allowed to connect or disconnect any water meter or service from PWP's water mains.
- h. The water meter shall be accessible at all times for inspection, reading and testing regardless of whether the meter is in a public right of way or on the Customer's premises.
- i. Water meter boxes/vaults shall be located a minimum of five (5) feet away from driveways except at the option of PWP for its operating convenience.
- j. Where static water pressure is in excess of eighty (80) pounds per square inch, or other pressure as may be stipulated by the City's adopted version of the Uniform Plumbing Code Section, an approved pressure regulator shall be provided, installed, and maintained by the Customer and the pressure reduced below eighty (80) pounds per square inch.
- k. All valves installed by PWP on the inlet side of the water meter shall be for the exclusive use of PWP and shall not be operated by anyone other than authorized employees of PWP.
- l. The Customer shall pay for a traffic rated vault and cover when the water service is within five (5) feet of a driveway or any other area subject to traffic loads.
- m. Water service connections two (2) inches and smaller may be relocated one time, up to four (4) feet away from its original location and the relocation cost shall be paid by the Customer at total cost. Relocations greater than four (4) feet shall require abandonment of the old service and installation of a new service shall be paid by the Customer at total cost.



- n. The use of water on any premises which may cause water or other matter to enter or be forced into PWP's water distribution system or if apparatus is connected to the service which may in any way be detrimental to the service rendered by PWP, to its other Customers or to the general public is prohibited and shall be considered by PWP to be a violation of the Regulations.
- o. The Customer may request that PWP turn on or turn off of the water service at the PWP valve for the purpose of making repairs or changes to Customer's plumbing. The Customer will be billed for the turn-on or turn-off according to the rate set in the City's General Fee Schedule.

XII. Connection, Extension, Replacement and Construction of Water Mains

- a. An Applicant applying for water service to a lot which may be served from an alley, where no service is available from the street, shall be required to provide stub-outs to the street to within four (4) feet of the curb line. Such stub-outs shall be adequately monumented as to location and include a detailed site plan with dimensions as to location. A site inspection will be required prior to sign-off. When the water service is required for fire protection, stub-out shall be designed to carry adequate fire flows from both the alley and the street sides of the system.
- b. Where service may be provided from more than one water main fronting Applicant's property, the point of connection and meter location will be at PWP's discretion.
- c. The Customer shall pay for the abandonment of services no longer necessary to serve the property.
- d. An Applicant applying for water service where no water distribution main exists shall, before such application is accepted, pay the cost of a main extension to the property to be served.
- e. The Applicant shall deposit with PWP the estimated amount of the cost to PWP of extending the distribution main to provide service to the Applicant's property, including administration and overhead. Upon receipt of this deposit, PWP will proceed with the plans for the installation of the water main extension. If upon completion of the installation the actual cost is greater than the amount deposited, the Applicant shall pay the difference to PWP. If, however, the actual cost, including administration and overhead cost, is less than the estimated amount deposited the difference will be refunded by PWP.
- f. PWP reserves the right to require a water main replacement if a development or redevelopment does not meet current water system standards or would demand more capacity for consumption or fire suppression than existing water mains could adequately supply. PWP shall have the sole authority for making the determination of existing mainline capacity and the demand for capacity to the development or redevelopment. The cost of any mainline replacement required to serve the development or redevelopment shall be borne entirely by the Applicant.



XIII. Special Facilities

The General Manager may establish and enforce charges and conditions for furnishing and supplying water service to any property of a character not adequately provided for in these Regulations.

- a. When water service is required for a property at an elevation above an existing water tank or reservoir that cannot be served adequately by PWP, payment of any costs associated with providing service shall be required in addition to all other charges set forth in these Regulations before application for water service to the property can be accepted by PWP.
- b. Construction of special facilities shall include the entire cost of the facilities required, including, but not limited to:
 - i. Cost of the land for reservoir, booster pumping plant, water main to the reservoir site, and access roadway to the reservoir site; cost of the reservoir, booster pumping plant, water mains and necessary equipment appurtenant thereto, and the cost of installation thereof; grading, paving, retaining walls, curbs, drainage work and structures; and other necessary work to make said water plant facilities a permanent operating water installation integrated with the water system.
 - ii. Location, size, capacity, and other specifications for the design and construction shall be prescribed by PWP.
 - iii. All of the aforesaid land acquisitions, water plant and installations, facilities and equipment, shall be dedicated to the City as contribution to PWP's water system.
- c. Special Facilities required for specific developments may be designed and constructed by the Developer, if permitted by PWP. The developer/owner shall have the responsibility for engineering, constructing, sanitizing and testing of the pipelines, appurtenances, service laterals and installation of water meter vaults, in accordance with PWP's standard plans and specifications and are subject to PWP inspection and acceptance. The developer/owner shall pay the applicable fees and charges as set forth in these Regulations, Water Rate Ordinance and/or General Fee Schedule.
 - i. Applicant shall make a deposit for engineering plan checking and review services upon first plan submittal with PWP to cover the actual cost of Staff time and materials to review submitted plans. Upon determination that the deposit amount is inadequate to cover the actual costs for plan checking services, Applicant shall make additional deposits as necessary with PWP. Further plan checking services shall be suspended until additional deposit is made. Upon acceptance of the constructed water facilities by PWP, PWP will refund any remaining deposit balance or apply it to the water improvements.



- ii. The complete engineering plan shall be prepared by a civil engineer registered in the State of California and shall include submission of a full set of detailed improvement plans to PWP along with a plan check deposit.
- iii. After all changes, modifications and additions to the water plans as requested by PWP have been made and approved, developer/owner shall supply a complete set of original plans to PWP. Said original plans shall become the property of PWP.
- iv. The developer/owner shall have the required installation performed by a licensed contractor, and shall furnish cash deposit and post a Performance bond in an amount equal to 125% of PWP's estimated cost of installation. Cash deposit or bondable estimated installation costs shall be based upon the estimated construction cost of the water system improvements and applicable fees and charges.
- v. The cash or Performance bond may be released, in part, upon final completion and acceptance of the water facilities by PWP; except that an amount equal to ten percent (10%) of the surety bond, but not less than \$1,000 will be withheld to cover the costs of possible maintenance, repair and replacements. Final release shall be made one (1) year after acceptance of the water system.
- vi. If the developer/owner fails to complete all of the specified improvements in accordance with the approved water plans and specifications within the twelve (12) months after commencing said work, the General Manager may order such work performed by PWP forces, and may utilize the cash deposit, if furnished, or call upon the surety company for funds to cover reimbursement.
- vii. All laboratory analyses required in connection with chlorination and sanitizing the newly-installed systems shall be performed by a State of California laboratory licensed and certified to perform such tests. All charges in connection therewith shall be borne by the developer/owner with test results forwarded to PWP.
- viii. The inspection fee shall be in accordance with the City's General Fee Schedule.
- ix. All applicable fees and charges must be paid prior to commencing construction of water facilities.

XIV. Water Meters

- a. No meter shall be installed which is larger in size than the diameter of the existing water service lateral. The following chart reflects the minimum and maximum meter size based on the service diameter.



Service Size	Allowable Meter Size
3/4"	3/4" and 5/8"
1"	3/4" 5/8" and 1"
1 1/2"	1-1/2" and 1"
2"	2" and 1-1/2" and 1"
4"	4" and 3"
6"	6" and 4"
8"	8" and 6"
12"	10"

- b. All domestic meters and fire service detector check meters shall be installed in a vault structure.
- c. When the location of a water meter is to be changed at the Customer's request, the change will be made by PWP at cost, including administrative and overhead costs, prepaid by the Customer.
- d. When requesting a change in meter size the rate of flow shall not exceed the rated capacity for the water meter.
- e. When a change in meter size is approved by PWP the Customer shall prepay the total estimated cost including administrative and overhead for all work including the abandonment of facilities.
- f. PWP considers the meter accurate by the standards of the water industry when a water meter is found to register between 97 percent and 103 percent correct.
- g. PWP shall not be required to install or allow to remain installed a meter which in PWP's opinion will not accurately measure water flows.
- h. Temporary connections involving usage of existing meter services, such as for construction or demolition projects, shall be made in conformance with these Regulations including the applicable fees and charges.

XV. Cross-Connection Policy

PWP has established requirements and regulations for cross-connection and backflow prevention complementary to those imposed by State and Municipal regulations. Please refer to Appendix "A-2" of these Regulations.

XVI. Easements

Where pipelines and/or other infrastructures pass through property other than the premises to be served, the Customer shall obtain, at no cost to PWP, an easement from the owner of such property. PWP may also require that the Customer furnish an easement for the pipelines and appurtenances on the service premise. At no time will PWP approve plans that include hardscape landscaping (except grass or shallow root plantings) or structures (such as walls, drainage systems, or permanent structures of any type) placed within easements.



XVII. Length of Commitments

- a. Commitments on methods of service made by PWP for any service installation must be reviewed by PWP if more than six (6) months have elapsed between the meeting with PWP planners and the projected start date of construction.
- b. Cost estimates or flat charges obtained from PWP are only valid for 90 days, at which time they may be reviewed and re-estimated.

XVIII. Customer Construction Interfering with Existing PWP Facilities

- a. All costs incurred by PWP for moving, removing or relocating any PWP facilities which interfere with a Customer's construction, will be borne by the Customer.
- b. Should construction by a Customer place PWP facilities in violation of clearance required by any state or federal codes, the City may place a hold on the Customer's building permit until the violation is corrected.
- c. PWP will require a payment for the estimated cost of any relocation work prior to the start of that work.



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PASADENA
Water&Power

**PWP WATER CONSTRUCTION
STANDARDS**
(Appendix A-1)

PWP Water Construction Standards

GENERAL NOTES:

1--ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREEN BOOK), INCLUDING ANY SUPPLEMENTS, AND THE LATEST EDITION OF THE CITY OF PASADENA "SUPPLEMENTS AND MODIFICATIONS TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".

2--NO STOCKPILING OF MATERIAL AND CONSTRUCTION EQUIPMENT IN OR ON PUBLIC STREETS OR SIDEWALKS WILL BE PERMITTED ON THIS PROJECT. MATERIAL AND EQUIPMENT PLACED IN OR ON PUBLIC STREETS, SIDEWALKS AND IN THE CONSTRUCTION AREAS SHALL BE USED THE SAME DAY.

3--THE WORK HOURS SHALL BE FROM 7:00AM TO 4:00PM.

4--NOTIFY "UNDERGROUND SERVICE ALERT (USA)" OF SOUTHERN CALIFORNIA (1-800-422-4133) TWO FULL WORKING DAYS (48 HOURS MINIMUM) PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES, INCLUDING PAVEMENT REMOVAL, EXCAVATION AND AC OVERLAY WHICH COULD AFFECT ANY UNDERGROUND UTILITY.

5--NOTIFY ALL AFFECTED UTILITY COMPANIES AT LEAST TWO FULL WORKING DAYS (48 HOURS MINIMUM) PRIOR TO BEGINNING ANY CONSTRUCTION IN THE VICINITY OF THEIR FACILITIES.

6--NOTIFY ALL BUSINESSES AND RESIDENTS AT LEAST TWO FULL WORKING DAYS (48 HOURS MINIMUM) PRIOR TO START OF CONSTRUCTION.

7--ALL TRAFFIC CONTROL MUST COMPLY WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" PARTS 5 AND 6 AND THE "WORK AREA TRAFFIC CONTROL HANDBOOK", (WATCH HANDBOOK).

8--DEFLECT MAIN AS REQUIRED TO MAINTAIN PIPE ALIGNMENT AS SHOWN.

9--WATER MAIN SHALL HAVE A MINIMUM COVER OF 42 INCHES, UNLESS OTHERWISE INDICATED ON THE PLANS. EXCEPTIONS TO THIS REQUIREMENT MAY BE MADE BY THE WATER DEPARTMENT TO PROVIDE NECESSARY CLEARANCE FROM SANITARY SEWERS AND TO ACCOMMODATE CONFLICTS WITH OTHER UTILITIES AND EXISTING WATER MAINS. IF MINIMUM COVER CANNOT BE MET, APPROVAL MUST BE OBTAINED FROM THE WATER DEPARTMENT.

10--ESTABLISH DEPTH OF COVER TO TOP OF EXISTING UTILITIES AS REQUIRED.

11--PREPARE AND SUBMIT CONSTRUCTION AS BUILTS.

12--WATER PRESSURE AT THE INTERSECTION OF XXXXXXXXXX AND XXXXXXXXXXXX IS APPROXIMATELY XX P.S.I.

13--THE WATER MAIN IS IN THE XXXXXXXXX PRESSURE ZONE.

14--RESTORE A.C. PAVEMENT PER STANDARD DRAWING S-416 AND CONCRETE PAVEMENT PER STANDARD DRAWING S-417.

15--REMOVE AND RECONSTRUCT CONCRETE PAVEMENT TO NEAREST LONGITUDINAL JOINT OR CRACK WITHIN 3 FEET OF EDGE OF TRENCH.

16--ALL JOINTS ON ALL FITTINGS TO BE RESTRAINED WITH MEGALUG GLANDS, UNLESS OTHERWISE INDICATED ON THE PLANS.

17--RECUR LOOP DETECTORS WHERE APPLICABLE AS NECESSARY. RESPONSIBILITY FOR REPLACEMENT AND COST IS PART OF THIS PROJECT.

18--STORM DRAIN - MAINTAIN 36" OF COVER OVER MAIN AS NECESSARY TO CLEAR STORM DRAIN BY 18" MINIMUM. OTHERWISE, CONCRETE BLANKET OVER STORM DRAIN IS REQUIRED PER APWA STANDARD PLAN 225-1, UNLESS NOTED OTHERWISE.

19--TEMPORARILY PAVE STREET AND OPEN TO TRAFFIC AFTER INSTALLATION OF PIPE.

20--FINAL PAVEMENT RESTORATION SHALL BE COMPLETED WITHIN TWO WEEKS OF THE COMPLETION OF EACH PROJECT PHASE, UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

21--ALL PAVEMENT MARKINGS, RAISED PAVEMENT MARKERS, AND TRAFFIC HUMPS TO BE REPLACED IN KIND.

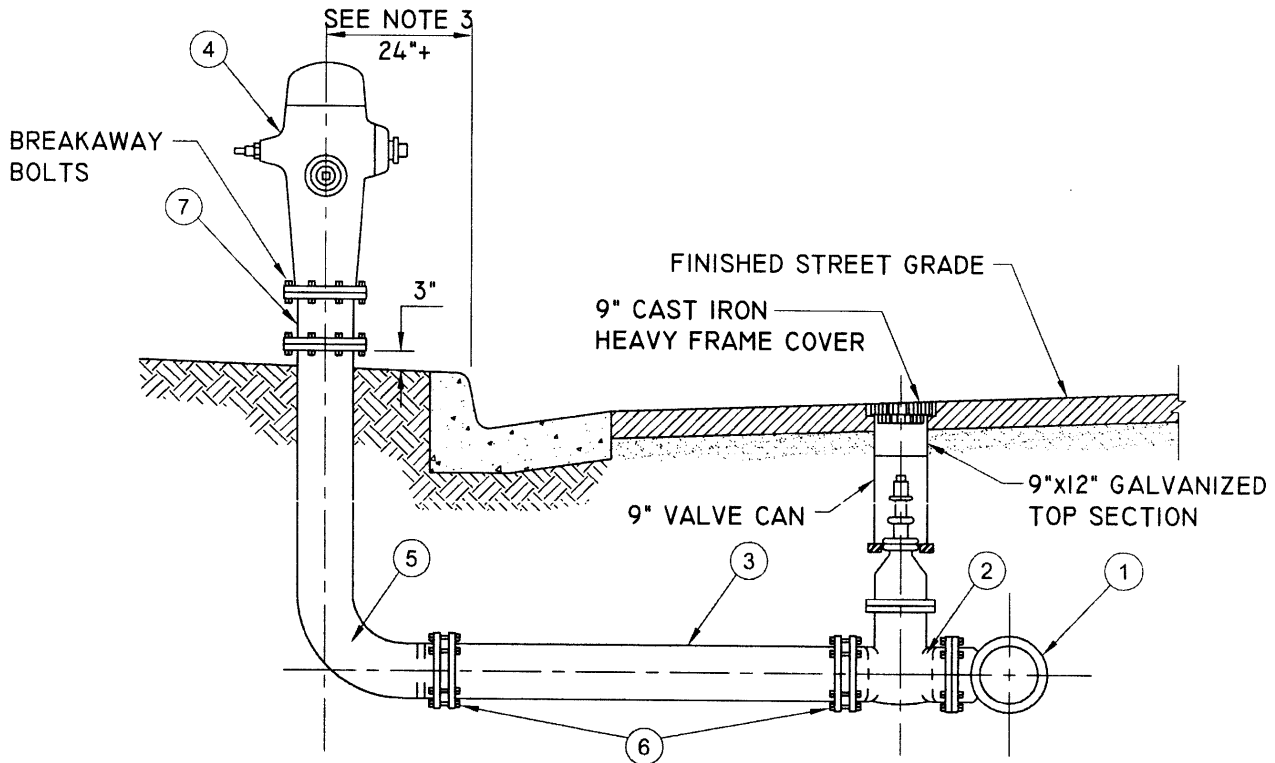
22--DUCTILE IRON PIPING SHALL BE MINIMUM CLASS 52 OR BETTER.

23--PAVEMENT RESTORATION TO BE EXISTING PLUS 1 INCH PER S-416 AND S-417.

24--ALL 3/4" DOMESTIC SERVICES LATERALS SHALL BE UPGRADED TO 1" COPPER.

LIST OF MATERIALS

ITEM	DESCRIPTION
1	TEE (MAIN SIZE x 6" FLG OUTLET)
2	VALVE (6" FLG x MJ)
3	DUCTILE IRON PIPE (6")
4	FIRE HYDRANT (WET BARREL), 6" x 4" x 2 1/2"
5	6" x REQ. LENGTH FIRE HYDRANT BURY
6	MEGALUGS OR APPROVED EQUAL
7	BREAK AWAY FLANGED SPOOL



NOTES:

1. FIRE HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATION SECTION II-19-H.
2. BREAK-OFF CHECK VALVE W/ SOLID BOLTS TO BE INSTALLED WHERE INDICATED ON PLANS OR WHEN REQUIRED BY UTILITY.
3. DISTANCE TO BE 24" FROM CURBFACE OR 5'-3" WHEN 4' WIDE SIDEWALK IS ADJACENT TO CURB.
4. FIRE HYDRANTS SHALL BE JONES J3710 OR APPROVED EQUAL.
5. CONTRACTOR SHALL USE ADDITIONAL RESTRAINED BENDS NECESSARY TO AVOID OTHER EXISTING OR PROPOSED UTILITIES WHEN REQUIRED.
6. FOR ALL CASES, THE LOCATION OF FIRE HYDRANTS SHALL MEET ADA REQUIREMENT THAT A MINIMUM 48-INCH CLEARANCE BE MAINTAINED FROM ANY OBSTRUCTION IN THE WALK.
7. FIRE HYDRANT SHALL BE LOCATED A MINIMUM OF 5' FROM BCR, ECR, OR DRIVEWAY APPROACH.
8. FOR ROLLED CURBS THE DISTANCE FROM THE EDGE OF THE PAVEMENT TO THE FIRE HYDRANT SHALL BE AS DIRECTED BY THE ENGINEER.
9. TAPPING SLEEVES, WHEN INDICATED PER PLAN OR AS DIRECTED BY UTILITY SHALL BE PER SPECIFICATION SECTION II-19-G. TAPPING VALVES 12" AND SMALLER SHALL BE RESILIENT WEDGE VALVES.

CITY OF PASADENA-WATER AND POWER

STANDARD FIRE HYDRANT INSTALLATION

REVISION: - UNITS: DUAL

STANDARD PLAN:

C-1327

DRAWN BY:
NELSON RODRIGUEZ

APPROVED BY:

CHECKED BY:
JOSEPH GACHIRI

CIVIL ENGINEER

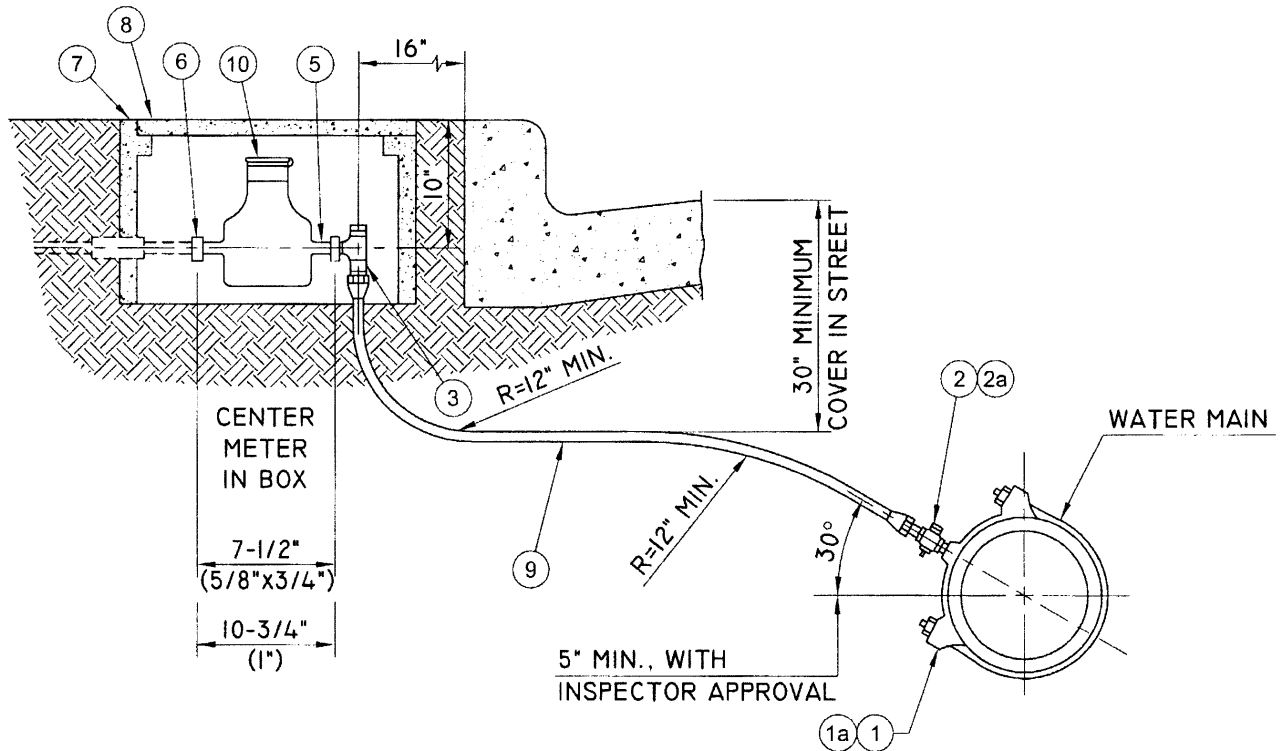
RCE NO. XXXXX EXPIRES MONTH XX, 2007

DATE

SHEET 1 OF 1

LIST OF MATERIALS

ITEM	DESCRIPTION	FORD	JONES	MUELLER
1	DOUBLE STRAP SERVICE SADDLE C.I.	202B CC TAP	J-979 CC TAP	2R2B CC TAP
1a	DOUBLE STRAP SERVICE SADDLE STL	202BS CC TAP	J-969 CC TAP	2R2BS CC TAP
2	CORPORATION STOP (CC x COMPRESSION)	FB1000-4G or Q	J-1937SG	B-25008-100
2a	CORPORATION STOP (CC x FIP)	FB1000-4Q or G	J-1932	
3	ANGLE METER STOP	BA43-444WR-G or Q	J-1963WSGLS	B-24258-100-3
4	COPPER TO COPPER COMPRESSION UNION	C44-44-G or Q	J-2609SG	H-15403
5	BUSHING, 1 1/4 x 1 (FOR 5/8" & 3/4" METERS)	A34	J-128-H	H-10889
6	METER COUPLING (3/4" OR 1" x 2 1/2")	C38-44-2.63	J-130	H-10891
7	METER BOX			
8	POLYMER CONCRETE COVER & LID			
9	1" COPPER TUBING, TYPE K, SOFT ONLY			
10	WATER METER			



NOTES:

1. USE COPPER TO COPPER COMPRESSION UNIONS TO JOIN LENGTHS OF COPPER TUBING. SEE ITEM 5.
2. INSTALL CORPORATION STOP WITH KEY UP.
3. TAPS SHALL BE MADE AT LEAST 24" FROM ANY OTHER TAP OR COUPLING.
4. STANDARD 1" WATER SERVICE IS USED FOR 5/8" x 3/4" AND 1" METERS.
5. SERVICE SADDLE AND CORPORATION STOP SHALL BE CC (AWWA) THREAD.
6. A TRAFFIC LOAD RATING COVER SHALL BE USED IN AREAS WITHOUT CURB, IN AREAS WITH ROLLED OR TYPE "F" CURB, OR WHERE THE METER IS LOCATED WITHIN 5 FEET OF THE BCR, ECR OR A DRIVEWAY APPROACH.
7. ANGLE METER STOPS SHALL BE PROVIDED WITH 360° TEE HEAD ROTATION WITH LOCK TAB.

CITY OF PASADENA-WATER AND POWER

1-INCH WATER SERVICE INSTALLATION

DRAWN BY:
NELSON RODRIGUEZ

APPROVED BY:

CHECKED BY:
JOSEPH GACHIRI

CIVIL ENGINEER

3

RCE NO. XXXXX EXPIRES MONTH XX, 2007

DATE

REVISION: UNITS:
- DUAL

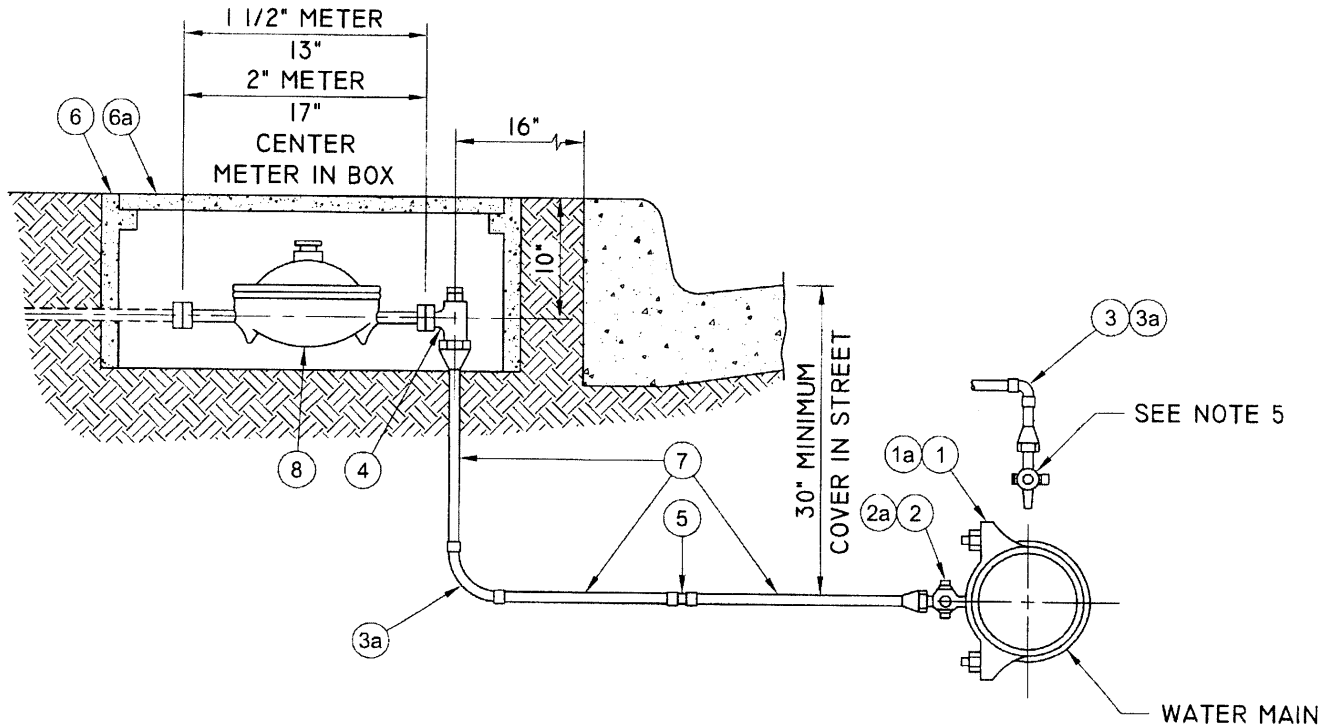
STANDARD PLAN:

W-101

SHEET 1 OF 1

LIST OF MATERIALS

ITEM	DESCRIPTION	FORD	JONES	MUELLER
1	DOUBLE STRAP SERVICE SADDLE C.I.	202B CC TAP	J-979 CC TAP	2R2B CC TAP
1a	DOUBLE STRAP SERVICE SADDLE STL	202BS CC TAP	J-969 CC TAP	2R2BS CC TAP
2	CORPORATION STOP (CC x COMPRESSION)	FB1000-4G or Q	J-1937SG	B-24276-200-3
2a	CORPORATION STOP (CC x FIP)	FB1000-4Q or G	J-1932	
3	90° ELL COMPRESSION x MIP	L84-77-G or Q	J-2619SG	H-15531
3a	90° ELL COMPRESSION x COMPRESSION	L44-77-G or Q	J-2611SG	H-15526
4	ANGLE METER STOP	BFA43-777WR-G or Q	J-1975WSGLS	B-24258-100-3
5	COPPER TO COPPER COMPRESSION UNION	C44-77-G or Q	J-2609SG	H-15403
6	METER BOX			
6a	POLYMER CONCRETE COVER & LID			
7	2" COPPER TUBING, TYPE K, 20' LENGTHS, SOFT ONLY			
8	WATER METER			



NOTES:

1. INSTALL CORPORATION STOP WITH KEY UP.
2. SERVICE SADDLE AND CORPORATION STOP SHALL BE CC (AWWA) THREAD.
3. TAPS SHALL BE MADE AT LEAST 24" FROM ANY OTHER TAP OR COUPLING.
4. STANDARD 2" SERVICE IS USED FOR 1-1/2" METER AND 2" METER.
5. WATER MAIN MAY BE TAPPED W/SERVICE SADDLE CORPORATION STOP FROM TOP WHEN FINISHED SURFACE IS GREATER THAN 5 FEET OVER TOP OF PIPE.
6. A TRAFFIC LOAD RATING COVER SHALL BE USED IN AREAS WITHOUT CURB, IN AREAS WITH ROLLED OR TYPE "F" CURB, OR WHERE THE METER IS LOCATED WITHIN 5 FEET OF THE BCR, ECR OR A DRIVEWAY APPROACH.
7. ANGLE METER STOPS SHALL BE PROVIDED WITH 360° TEE HEAD ROTATION WITH LOCK TAB.
8. TURBINE METER REQUIRES WATER ENGINEERING APPROVAL.
9. NO PACK JOINT COMPRESSION FITTINGS.

CITY OF PASADENA-WATER AND POWER

2-INCH WATER SERVICE INSTALLATION

REVISION: - UNITS: DUAL

STANDARD PLAN:

W-102

DRAWN BY:
NELSON RODRIGUEZ

APPROVED BY:

CHECKED BY:
JOSEPH GACHIRI

CIVIL ENGINEER

4

RCE NO. XXXXX EXPIRES MONTH XX, 2007

DATE

SHEET 1 OF 1

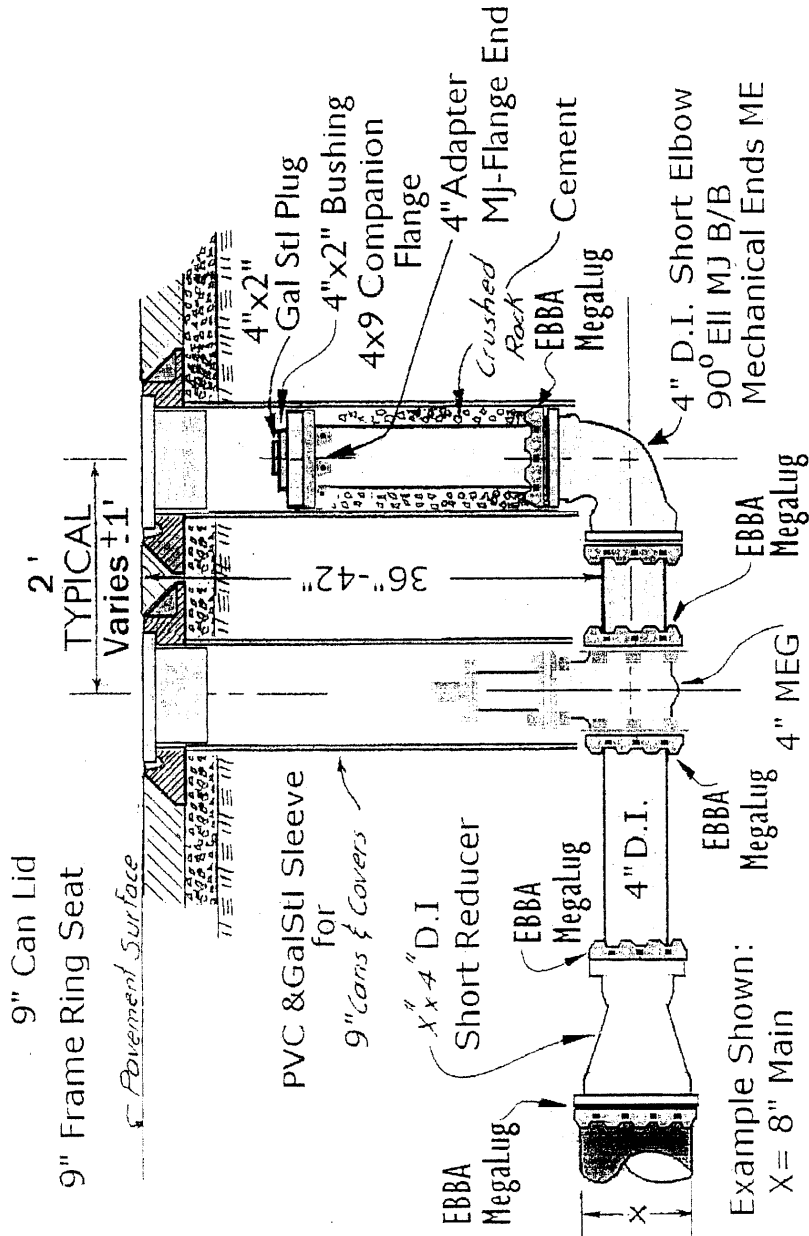
G-709 REV

PASADENA WATER DEPARTMENT

G-709 REV

STANDARD BLOWOFF DETAILS

As Shown for End Of Main Addition



MATERIAL

- 1- 8"by4" Reducer
- 5'- 4" DI Pipe
- 1- 4" MJ FE Adapter D.I.
- 6- 4" MegaLugs
- 1- 4" Gate Valve MEG-RS
- 1- 4" 90° Ell MJ B/B
- 1- 4"by2" Std Gal Bushing
- 1- 4"by2" Std Gal Plug
- 1- 4"by9" (8 Hole) Companion Flange
- 8 ea- 5/8" x 2 3/4" Hex Head Bolts
- 8 ea- 5/8" Nuts
- 2ea- 9" Heavy Cover C.I. Ring Seat
- 2ea 9"x12" Top Section
- 1- Bag Cement
- Crushed Rock

PASADENA WATER

Drawing **G-709**

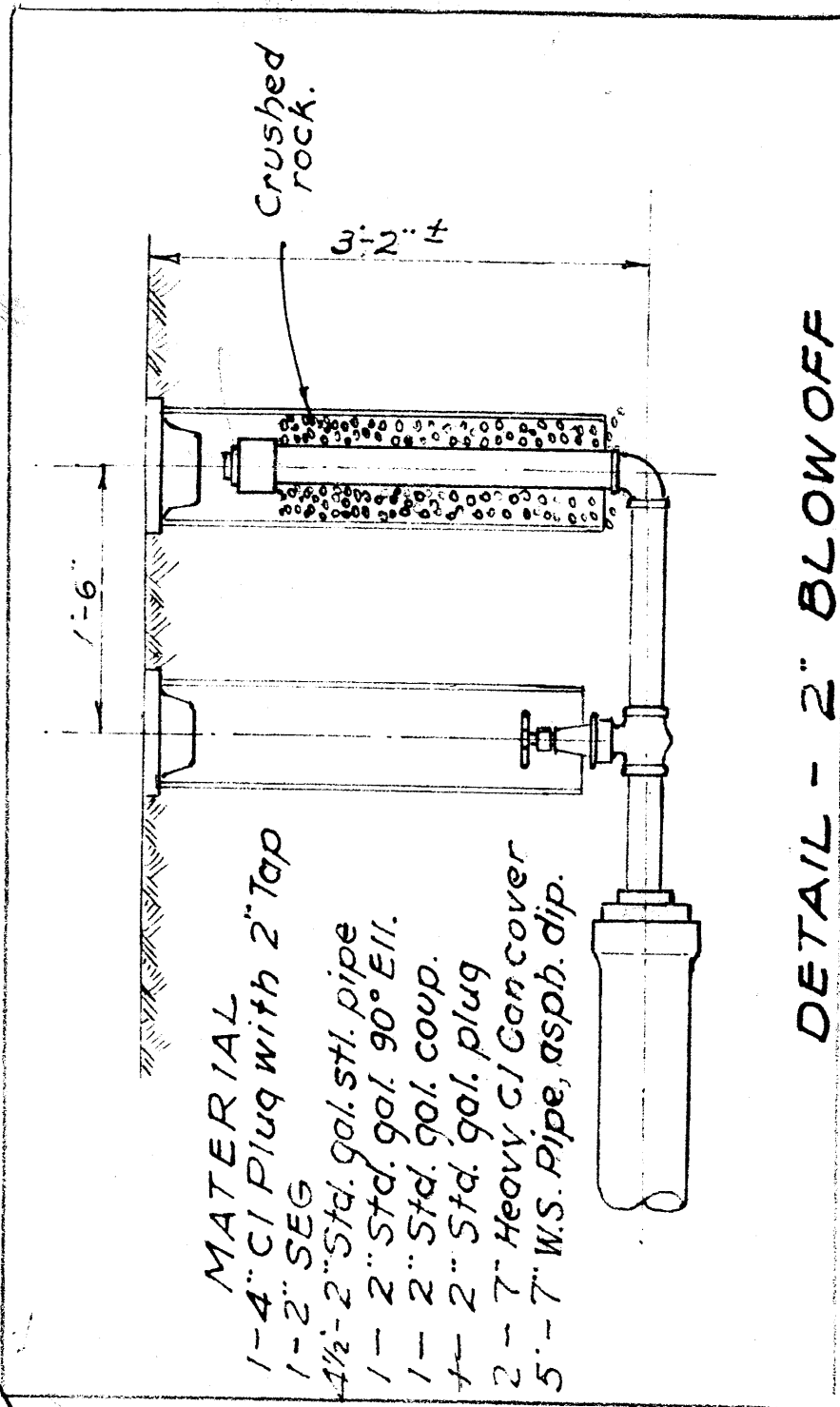
Approved *Blair* ENGINEER

Approved *Blair* CHIEF ENGINEER AND GENERAL MANAGER

Original By: W.H.T. Revised From Nov. 7, 1947

Revised 5 OCT 1946

2
6" CI Plug
1 MSRC
6" CI Pipe
18"
6" CI Pipe
11.41531
Easement



- MATERIAL**
- 1- 4" CI Plug with 2" Tap
 - 1- 2" SEG
 - 4 1/2'- 2" Std. gal. stl. pipe
 - 1- 2" Std. gal. 90° Ell.
 - 1- 2" Std. gal. coup.
 - 1- 2" Std. gal. plug
 - 2- 7" Heavy CI Can cover
 - 5'- 7" W.S. Pipe, asph. dip.

DETAIL - 2" BLOW OFF

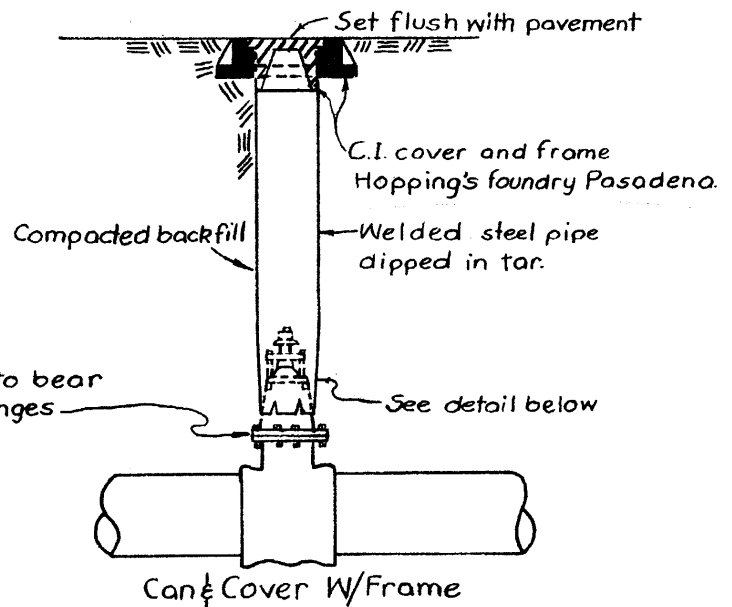
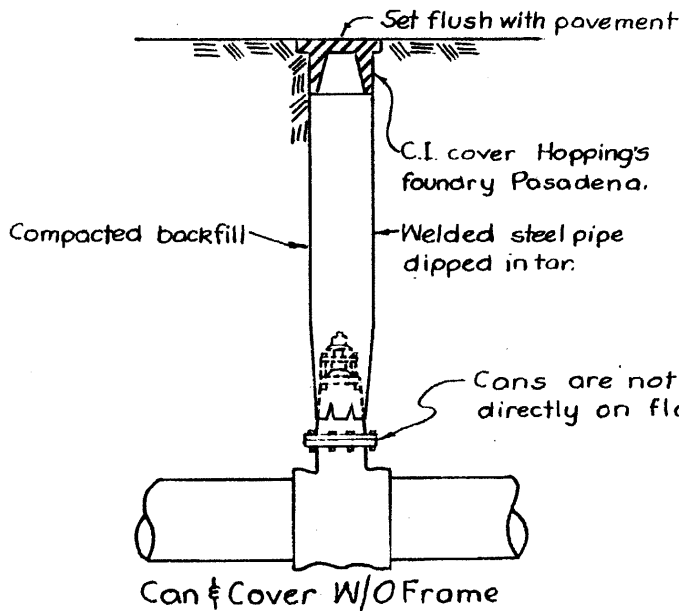
SCALE 1" = 1'-0"

2" BLOW-OFF
Copy
Paste to other

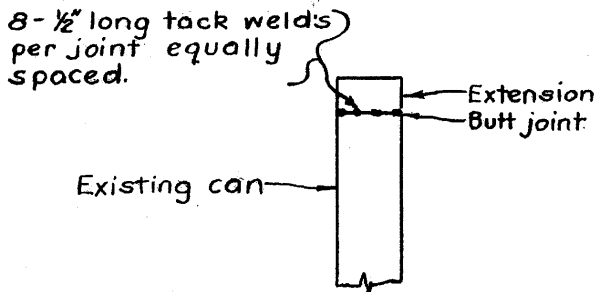
PASADENA WATER DEPT.

STANDARD DETAILS FOR GATE & BLOWOFF CANS & COVERS

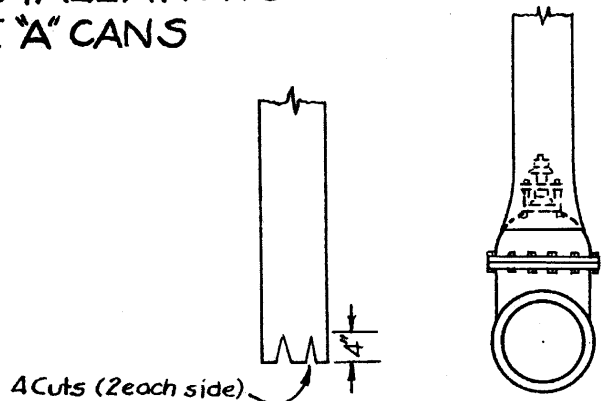
Type Designation		Gate Size	Dia. of Can	Gage
W/O Frame	W/ Frame			
Type A	A-F	4" & 6"	7"	#15
Type A	A-F	8" & 12"	9"	#15
Type A	A-F	16" & Over	12"	#12
Type X	X-F	Indicates can extensions all sizes (see detail below)		



TYPICAL INSTALLATIONS OF TYPE "A" CANS



Typical detail of can extensions
Type "X"



Flaring ends of type "A" cans

Approved *Leonis Jones*
CHIEF ENGINEER & GENERAL MANAGER

Duncan A. Blackburn
ENGINEER

G-910
Sheet 1 of 2 sheets