

# **MUNICIPAL WATER AUTHORITY OF ALIQUIPPA**

## **ALIQUIPPA, PENNSYLVANIA**

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### **WATER SYSTEM**

### **RULES AND REGULATIONS**

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## INDEX TO WATER SYSTEM RULES AND REGULATIONS

ARTICLE I	GENERAL Section 101 to 106
ARTICLE II	DEFINITIONS Section 201 to 205
ARTICLE III	SERVICE Section 301 to 312
ARTICLE IV	MULTIPLE CUSTOMERS ON THE SAME SERVICE LINE Section 401 to 406
ARTICLE V	PUBLIC FIRE PROTECTION SERVICE AND OTHER USE OF HYDRANTS Section 501 to 507
ARTICLE VI	PRIVATE FIRE PROTECTION SERVICE Section 601 to 606
ARTICLE VII	WATER SERVICE CHARGES Section 701 to 705
ARTICLE VIII	WATER METERS Section 801 to 806
ARTICLE IX	BILLING AND COLLECTION Section 901 to 910
ARTICLE X	CONNECTIONS TO SYSTEM Section 1001 to 1018
ARTICLE XI	PROPOSED EXTENSIONS OF SYSTEM BY DEVELOPERS Section 1101 to 1121
ARTICLE XII	DELINQUENCIES, VIOLATIONS AND REMEDIES Section 1201 to 1203
ARTICLE XIII	VALIDITY Section 1301 to 1302
ARTICLE XIV	CONSTRUCTION TYPICAL DETAILS ADOPTED BY THE MUNICIPAL WATER AUTHORITY OF ALIQUIPPA WATER DETAILS (WAT-1 to WAT-19) AND SANITARY DETAILS (SAN-1 to SAN-22)

RESOLUTION NO. 14-01 OF 20 14

**A RESOLUTION OF THE MUNICIPAL WATER AUTHORITY OF ALIQUIPPA, BEAVER COUNTY, PENNSYLVANIA, ESTABLISHING RULES AND REGULATIONS FOR CONNECTION TO, RECEIVING SERVICE FROM, CONSTRUCTION AND EXTENSION OF THE EXISTING WATER DISTRIBUTION SYSTEM BY DEVELOPERS, AND PROVIDING FOR SURCHARGES AND PENALTIES ASSOCIATED THEREWITH.**

WHEREAS, MWAA is desirous of regulating connections to, service from and construction and extension of the existing water distribution system by developers by establishing Water System Rules and Regulations; and

WHEREAS, MWAA is desirous of providing for surcharges and penalties associated with violations of the Water System Rules and Regulations.

NOW, THEREFORE, BE IT RESOLVED by the MUNICIPAL WATER AUTHORITY OF ALIQUIPPA, Beaver County, Pennsylvania, as follows:

**ARTICLE I**  
**GENERAL**

Section 101. These Rules and Regulations are a part of the contract of every customer who takes water, and every such Customer, by the taking of water agrees to be bound thereby.

Section 102. No activities in conflict with the Water System Rules and Regulations shall be permitted by MWAA.

Section 103. Representatives of MWAA shall have the right of access at all reasonable times to all parts of the Premises connected with the Water System and to examine and inspect the connections thereto and the plumbing fixtures for any improper connection, installation maintenance or use. MWAA may make reasonable charges for such inspection to users of the Water System.

Section 104. MWAA may, without notice, if an emergency reasonably requires it, discontinue water service in order to make necessary repairs or connections or to meet any other emergency. MWAA will give notice of discontinuance of service if it is reasonably possible to do so.

Section 105. MWAA shall not be liable for any damage or injury to any person or property caused by the discontinuance of water service for any of the reasons enumerated in

Section 104, or for the purpose of making necessary repairs and connections to meet any emergency, or caused by the failure of Consumers to maintain Customer's service line, or caused by water escaping from Consumer's line, or caused by the total or partial failure of water service of pressure for any cause beyond the control of MWAA. MWAA shall be under no liability for damage or injury by fire to any person or property caused by the total or partial failure of water service or pressure for any cause whether within or beyond the control of MWAA.

Section 106. No agent or employee of MWAA shall have authority to bind it by any promise, agreements, or representation not provided for in these Rules and Regulations, unless such authority is given in writing signed by the General Manager or the Chairman of MWAA.

## ARTICLE II DEFINITIONS

Unless the context specifically indicates otherwise, words and terms used in these Rules and Regulations shall have the following meanings:

Section 201. MWAA shall mean the Municipal Water Authority of Aliquippa, Beaver County, Pennsylvania, a body corporate and politic organized and existing under the laws of the Commonwealth of Pennsylvania.

Section 202. OWNER: The word "Owner" whenever the same appears herein, means the person, firm or corporation or association having an interest as Owner, or a person, firm or corporation representing itself to be the Owner, whether legal or equitable, sole or partial, in any Premises which is, or is about to be supplied with water by MWAA, and the word "Owner" means all so interested.

Section 203. TENANT: Is anyone occupying the Premises under lease from a lessor and obtaining water from the mains of MWAA.

Section 204. CONSUMER: The word "Consumer" shall be defined as the party either Owner or Tenant authorized by the Owner, contracting with MWAA for water service for one (1) family, business, commercial, industrial, institutional, housing development on one Premise owned or tenanted by the party.

Section 205. PREMISES: The word "Premises", as used herein shall be the property or area including the improvements thereon, to which water service is or will be provided through waterlines of MWAA, and as used herein, shall be taken to designate:

1. A building under one roof owned or leased by one Consumer and occupied as one residence or one place of business; or
2. A group or combination of buildings owned by one Consumer, in one common enclosure, occupied by one family or one organization, corporation, or firm as a residence or place of business, or for manufacturing or industrial purposes, or as a hotel, hospital, church, parochial school or similar institution, except as otherwise noted herein; or
3. The one side of a double house having a solid, vertical partition wall; or
4. Each side or each part of a house or building occupied by one family, even though the closet and/or other fixtures are used in common; or
5. Each apartment, office or suite of offices, and/or place of business located in a building or a group of buildings, even though such buildings in a group are interconnected by a tunnel, passageway, covered areaway, patio, or by some similar means or structure; or

6. A public building devoted entirely to public use, such as a town hall, school, fire house; or
7. A single lot or park or playground; or
8. Each dwelling unit in a row of houses; or
9. Each dwelling unit in a double house, in a row of connecting houses, housing project or development building, or in an apartment. Any room, group of rooms, house trailer, enclosure, etc., occupied or intended for occupancy as separate living quarters by a family or other group of persons living together or by persons living alone shall be classified as a dwelling unit; or
10. Each individual and separate place of business and/or occupancy located in one building or group of buildings commonly designated as shopping centers, super market areas, malls, plaza's and by such other terms; or
11. Each dwelling unit in a public housing development owned and operated by the United States of America, a municipal sub-division of the Commonwealth of Pennsylvania, or an agency or instrument of the United States or the Commonwealth of Pennsylvania, by a philanthropic foundation or organization, or some such similar body or organization; or operated under private ownership.

**ARTICLE III**  
**SERVICE**

Section 301. Any party, whether Owner or authorized Tenant of the Premises occupied, desiring a supply of water, must make a written application on the Form WA10 furnished by MWAA which must be properly approved by MWAA or its duly authorized agent before the water will be turned on. The party making the application will be considered the Consumer under this contract, and will be held responsible for all water bills and the proper observance of the Rules and Regulations of MWAA. In case of default in payment of bills rendered, the Owner shall be considered as the Consumer. Water service will not be provided without the written application of the Owner or his duly authorized agent.

Section 302. if the Applicant is a Tenant, The owner must execute and file the WA20 (Owners Authorization).

Section 303. No Owner or authorized Tenant of any Premises supplied with water by this Authority will be allowed to supply water to other persons or families or other Premises, except by written permit from MWAA.

Section 304. Water service not supplied by MWAA, shall not be connected or cross-connected with MWAA's facilities, except upon written consent of MWAA.

Section 305. Service under any application may be discontinued for any of the following reasons:

1. For misrepresentation in application, as to property or fixtures to be supplied or the use of the water supply.
2. For the use of water for any other property or purpose than that described in the application.
3. For willful waste of water through improper or defective pipes, fixtures, devices, meters or otherwise.
4. For failure to protect the meter, connections, service lines or fixtures from freezing and keeping them in good order.
5. For non-payment of any charge for service when due.
6. For molesting any service pipe, meter, curb stop, valve, or any other appliance of MWAA transporting, controlling or regulating the water supply.
7. In case of vacancy of Premises.
8. For violation of any rules of MWAA.

Section 306. Only an authorized representative of MWAA can turn the water supply on or off (at any corporation stop, curb stop, or valve) or disconnect or remove the meter. Violators are subject to the penalties imposed by law.

Section 307. As necessity may arise in case of break, emergency or for other unavoidable cause, MWAA shall have the right to temporarily cut off the water supply, in order to make necessary repairs, connections, etc.; but MWAA will use all reasonable and practical measures to notify the Consumer of such discontinuance of service. In such a case MWAA shall not be liable for any damage or inconvenience suffered by the applicant; or any claim against it at any time for interruption in service, lessening of the supply, inadequate pressure and poor quality of water, and for any causes reasonably beyond its control.

Section 308. MWAA shall have the right to reserve a sufficient supply of water at all times in its reservoirs, to provide for fire and other emergencies, or may restrict or regulate the quantity of water used by Consumers in case of a scarcity, or whenever the public welfare may require it. Lawn or garden watering (sprinkling) shall be discontinued whenever an alarm of fire is rung or water conservation measures are requested of customers.

Section 309. Service will be renewed under a proper application when the conditions under which such service was discontinued are corrected and upon the payment of all charges owed to MWAA.

Section 310. A supply of water for any new Premise must be specifically applied for and reviewed by MWAA. Such a supply may be furnished provided all rules, regulations and fees of MWAA are satisfied and the WA10 is duly made and accepted. Internal plumbing shall be made ready and the water meter and appurtenances installed within 60 days from service line installation. The minimum Monthly Charge will begin the earlier of the 60 days from installation or the meter being installed.

Section 311. Where a water connection has been previously installed and water desired, a complete aWA10 shall be signed by a new Owner or Tenant.

Section 312. A charge fixed by MWAA will be imposed for turning on water in restoration of service after discontinuance for any of the reasons specified under Section 304. Further a charge fixed by MWAA will be imposed for the discontinuance of service for the reasons cited above.

Section 313. A deposit will be required from Consumers taking service for a period of less than thirty (30) days. Monies which may remain in excess of the deposit after discontinuance of service will be returned to the Consumer.

Section 314. Only MWAA personnel and their authorized agents may operate any mainline valves or system hydrants. It is illegal to tamper with these devices. Violators will be subject to the penalties imposed by law.



Section 315. It is considered illegal and a theft of service for the use, consumption or removal of water from the water system without the written approval of MWAA and the installation of a metering device and backflow prevention device. Any water legally removed will be charged at the prevailing rate, plus any applicable fees, based on the water meter readings.

Section 316. For new or expanded water service now or hereafter installed and connected to MWAA's water system, a separate service line will be required to be used exclusively for water supply for each Premise. This separate service line shall be installed and paid for by the Owner. The proposed connection must be approved and inspected by MWAA. The Owner is required to conduct and to pay for all testing under the supervision of MWAA or its authorized representative. All work shall be in accordance with the Rules, Regulations and Standards of the Authority in effect at the time of application. A supply of water shall not be provided until all the requirements of MWAA have been satisfied and all fees (administrative, technical and legal) have been paid. Depending on the size and scope of the project MWAA may require the execution of a developer's agreement and the provision of a performance and maintenance bond.

**ARTICLE IV**  
**MULTIPLE CUSTOMERS ON THE SAME SERVICE LINE**

Section 401. No more than one single Premise shall be supplied by a single service line, except as approved or ordered by MWAA.

Section 402. Each Premise shall have a separate meter and shutoff valve. If the arrangement of the piping serving double houses, apartment houses, office buildings or business blocks do not permit individual metering, the Owner shall be liable for the payment of the bills and each family, office, suite of offices, business or establishment shall be considered as a separate Consumer or Tenant although not supplied through separate service connections and separate meters.

Section 403. Where two or more buildings or two or more families or establishments in a single building, are supplied by a single service line, with the approval of MWAA, and where it is desired to have the occupants of such buildings, or such families, or establishments, contract separately for water furnished, the Owner shall first arrange the service connections and /or the plumbing, in such a way that a separate meter and shut off valve , can be placed upon the supply line of each of said buildings, families or establishments in a single building. A suitable weather tight and heated location shall be provided and maintained by the Owner for grouping all such meters together.

Section 404. No Owner or Tenant of any Premises supplied by MWAA will be allowed to furnish water to other persons or families and in case of violation of this rule, the service will be discontinued.

**ARTICLE V**  
**PUBLIC FIRE PROTECTION SERVICE AND OTHER USE OF HYDRANTS**

Section 501. Upon written request from the duly authorized officials of the municipalities supplied by MWAA, MWAA will install at the designated location on any public street, a public hydrant, together with a service pipe from MWAA's street main to the hydrant provided that the size of the existing street main and surrounding distribution system and the available pressure in the said street main, are, in the judgment of MWAA sufficient to provide a proper service at the hydrant under normal and ordinary conditions.

Section 502. All public hydrants will be maintained by MWAA at its own expense, provided that any expense for repairs caused by the carelessness or negligence of the employees of the municipality or the members of the fire department or any other department of the municipality shall be paid for by the said municipality.

Section 503. The use of public hydrants shall be restricted to the taking of water for the extinguishing of fires, except that a permit will be issued by MWAA. The volume of water used must be reported to MWAA. MWAA reserves the right to limit water usage during the test.

Section 504. No public hydrant shall be used for sprinkling streets, flushing sewers or gutters, showering streets, contractors' or builders' purposes, or for any other than fire purposes, except with the written approval of MWAA. Such approval may be granted when deemed necessary by MWAA and when other means of obtaining water are not available. Any permit so granted shall be revocable at the discretion of MWAA. Terms for the use of the hydrant for purposes other than fire protection shall be set by MWAA for each particular case and at rates fixed by MWAA. The volume of water used must be reported to MWAA. Operation of the hydrants shall only be performed by MWAA staff.

Section 505. Upon written application from the duly authorized officials of a municipality, directing a change in the location of a public hydrant, MWAA will make such change at the expense of the municipality requesting the change. The applicant shall be responsible for all costs related to the relocation including overtime for performing work after hours to minimize service disruptions to Consumers.

Section 506. Upon request of the duly authorized officials of any municipality, MWAA will make inspections at convenient times, and at reasonable intervals, to determine the condition of the hydrants, such inspections to be made by a representative of MWAA and fire chief, or other duly authorized representative of the municipality to which the service is furnished.

Section 507. The entire cost of installation of hydrants, including all pipe lines, valves, connections, shall be paid by the municipality applying for such service, in addition to which the municipality shall pay annually to MWAA a per annum charge for each hydrant installed and in place. The applicant shall be responsible for all costs related to the installation including overtime for performing work after hours to minimize service disruptions to Consumers.

**ARTICLE VI**  
**PRIVATE FIRE PROTECTION SERVICE**

Section 601. Private fire protection service where required or desired shall be through a separate service line used solely for such purposes and subject to the quarterly rate charges for such services. This includes domestic, commercial, institutional and industrial Consumers. The Owner must first complete a Form WA30 furnished by MWAA stating fully the purpose for which the private fire protection service is desired.

Section 602. The Owner is responsible for all components of design, operation and maintenance of the fire protection system including computations for available system pressure and water quantity. A complete system, bearing the seal of a design professional, must be provided with the application showing all component of the proposed work. Installation shall be in accordance with all applicable requirements of Article XI, MWAA assumes no liability for any portion, design or operation of the Private Fire Protection System.

Section 603. For automatic sprinklers or other automatic fire protection devices now or hereafter installed and connected to MWAA's water system located inside a building or buildings, a service line will be required to be used exclusively for fire protection service, this service line to be installed and paid for by the Owner. The proposed connection must be approved and inspected by MWAA. The Owner is required to conduct and to pay for all testing under the supervision of MWAA or it authorized representative. All work shall be in accordance with the Rules, Regulations and Standards of the Authority in effect at the time of application. A supply of water shall not be provided until all the requirements of MWAA have been satisfied and all fees (administrative, technical, and legal) have been paid. Depending on the size and scope of the project MWAA may require the execution of a developer's agreement and the provision of a performance and maintenance bond.

Section 604. No connection or cross connection shall be made between Consumer's private fire protection service facilities to any other independent source of water supply. Further no connection or cross connection shall be made between the Consumers fire protection and non-fire protection systems. The use of anti-freeze systems is prohibited.

Section 605. Private hydrants shall not be located at the sidewalk, or in any place of each access to the public, except with the written consent of MWAA.

Section 606. It is understood and agreed with and between the parties receiving Private Fire Protection Service and MWAA that the provision of service does not contemplate any special service, pressure capacity or facility other than the ordinary changing conditions of the MWAA system which exist from day to day. MWAA hereby declares and it is agreed by the Consumer that MWAA shall be free and exempt from any and all claims for injuries to persons or property by reason of fire, water, failure to supply water, pressure or capacity. A written application, prepared on a MWAA form must be submitted before the connection of any Private Fire Protection System to the public water supply. The Application shall be accompanied by accurate plans showing the proposed fire system and appurtenances and showing any other water

supply system and appurtenances which may exist on the Premise. The Application shall be signed by the Owner of the Premise or his duly authorized agent. The Application must be approved by the Authority before the connection of any Private Fire Protection System to the Authority's water supply system. All plans for the Private Fire Protection System must be sealed by a professional engineer and be in strict accordance with the latest requirements of International Building Code, National Fire Protection Association (NFPA) and industry standard requirements. All costs for plan/application reviews shall be the responsibility of the Applicant/Property Owner.

Section 607. All improved and unimproved surface restoration shall comply with the governing regulation of the Municipality the work is conducted in.

**ARTICLE VII**  
**WATER SERVICE CHARGES**

Section 701. There is imposed upon the Owners of, or Consumers of water in or on, all properties served by the public water distribution system, water service charges for the use of said system, payable in the amounts and as provided in the Water Rate Schedule heretofore adopted by MWAA and as it is hereinafter from time to time amended and modified. Said Owners and Consumers will be jointly and severally liable for the payment of said water service charges and, the penalties therein prescribed for delinquent payments thereof.

Section 702. All bills for water service shall be due when rendered and shall be subject to the penalty provisions set forth in MWAA's Water Rate Schedule. Owners, and where adequate arrangements have been made with MWAA, Consumers will be billed periodically for the water service in accordance with the billing practices of MWAA.

Section 703. Deposits may, at the option of MWAA, be required from all Consumers as shall from time to time be fixed by MWAA.

Section 704. A deposit shall not be considered payment on account of a bill for water service during the time the Consumer is receiving water service.

Section 705. Upon the discontinuance of water service to a Consumer, MWAA may apply the deposit of such Consumer to the payment of any unpaid bill for water service to such Consumer, and will return the unapplied balance of such deposit thereon to said Consumer.

**ARTICLE VIII**  
**WATER METERS**

Section 801. MWAA shall purchase and install the meter required for service to each existing Premise. For any new single or multiple Premise the MWAA shall furnish and provide the meter and appurtenances. The cost for said meter and appurtenances shall be reimbursed to MWAA according to actual costs incurred for the provision of same. The Consumer shall grant to MWAA the right of access to the meter for reading, inspection, tests and repairs.

Section 802. MWAA will determine the location of all meters. If placed within the building, the Consumer shall provide free of charge and expense, an easily accessible weather proof and heated location at the entrance of service pipes to the Premise, with a locking valve at the inlet side of the meter; if MWAA decides that the meter is to be placed outside of a building, it shall be placed in a meter box with a suitable locking valve, all of which shall be furnished, installed and paid for by the Consumer.

Section 803. The Consumer shall be held responsible for all expense for damage to the meter including but not limited to the action of frost, neglect or negligence.

Section 804. No connections or outlets will be permitted on the service pipe or pipes supplying any Premises between the corporation stop and the meter. All water used must pass through the meter.

Section 805. Meters will be maintained by MWAA, so far as ordinary wear and service are concerned. The Consumer shall notify MWAA of any injury to or the non-working of the meter as soon as it comes to his knowledge.

Section 806. MWAA shall upon written request of a Consumer, and if he so desires in his presence or that of his authorized representative, make a test of the accuracy of the meter. A fee shall be paid to MWAA by the Consumer requesting such a test.

**ARTICLE IX**  
**BILLING AND COLLECTION**

Section 901. Bills and notices relating to the water distribution charges and surcharges will be mailed or delivered to the property Owner's last address, or where proper arrangements have been made with MWAA, to the user's last address, as shown on the billing books of MWAA.

Section 902. Each Premise shall have a separate meter and shutoff valve. If the arrangement of the piping serving double houses, apartment houses, office buildings or business blocks do not permit individual metering, the Owner shall be liable for the payment of the bills and each family, office, suite of offices, business or establishment shall be considered as a separate Consumer or Tenant although not supplied through separate service connections and separate meters.

Section 903. The total charge for each Consumer or Tenant is the minimum charge plus commodity charges for the average consumption in excess of the minimum gallon allowance. The total charge for the Premise is the charge for the individual dwelling unit multiplied by the number of dwelling units.

Section 904. All Owners connected to the Water Distribution System shall give MWAA their correct address. Failure to receive bills shall not be considered an excuse for non-payment nor permit an extension of the period during which bills may be payable without penalty.

Section 905. MWAA reserves the right to render bills at monthly intervals for service to large commercial and industrial establishments and to housing developments or wholesale customers served by a single meter as approved by MWAA. In such cases, all minimum bills and quantity charges shall be prorated on the basis of one third of the quarterly rates.

Section 906. When a meter has ceased to register, the quantity may be determined by the average registration of the meter when in order using historic consumption data on file with the MWAA.

Section 907. No abatements on water bills will be made for leaks or for water wasted by damaged fixtures. Water bills are based on metered water consumption. It is the Consumers responsibility to pay for all consumption resulting from faulty plumbing, devices and appliances; water leaks, and damaged fixtures.

Section 908. Miscellaneous Water Charges shall be adopted, and amended as required, by MWAA for the following:

1. Service connections-tap-in fee
2. Charge for Testing Private Meters



3. Charge for Testing Meter at Consumer's Request
4. Charge for collecting delinquent accounts  
NSF or non-negotiable checks, any other  
Outstanding amount when a serviceman calls  
At property
5. Charge for turning water on after service  
Has been discontinued for non-payment of  
Bills, violation of rules, or terms of application
6. Charge for turning off or turning on water  
Temporarily due to seasonal nature of  
Business, vacation, etc.
7. Charge for service call, including turning off  
Or on at Consumers request for internal piping  
Repairs during other than regular working hours
8. Charge for repair of Frozen Meters
9. Deposits by Tenant
10. Water used from hydrants
11. Charge for installation of a new hydrant
12. Charge for the provision of a water meter and appurtenances for new  
construction.
13. Current price to be charge for lockstops or any  
Other material sold by MWAA plus 20%

**ARTICLE X**  
**CONNECTIONS TO SYSTEM**

Section 1001. Any property Owner, or Tenant, desiring the introduction of a service line or lines from the MWAA system into his or her Premises, or an extension or alternation to any of the existing service pipes and fixtures must first complete a WA30 furnished by MWAA stating fully the purpose for which the new service or extension is desired. Additionally the application must be accompanied by a general arrangement plan illustrating the proposed extension or alteration. Upon review and considering the scope of the project, the applicant may be required to submit complete engineered drawings, specifications, permit applications and detailed computation data. Upon satisfactory review of same by MWAA or the authorized representative, the applicant will be required to enter into a Developer's Agreement with MWAA and post and Performance and Maintenance Bond. The applicant is responsible for all Administrative, Legal and Engineering fees associated with the project. The applicant is fully responsible for all costs relative to construction of said project in accordance with the approved Plans and Specifications; the Developers Agreement; and the Rules and Regulations of MWAA. Upon completion of the above, the Application will be considered complete and work may commence.

Section 1002. The application must be signed by the Owner of the Premises or his duly authorized agent, or duly authorized Tenant, either of which shall bind the Owner, which application shall together with the Rules and Regulations of MWAA regulate and control the service of water and wastewater to such Premises.

Section 1003. All required service connection (water or sewage) and inspection fees shall be paid at the time of making application for permission to make a connection.

Section 1004. No work shall commence before the payment of any aforementioned service connection and inspection fees and acceptance of the aforementioned Application.

Section 1005. The main, corporation stop, wye branch, sanitary service pipe to curb, water service pie to curb, stop, site tee and curb service box at the property line shall be furnished and installed by the Applicant at no cost to MWAA. The applicant shall be responsible for all inspection and testing fees. Upon completion, payment of all fees and acceptance of the work the above shall be and remain the property of MWAA. The top of the curb box or site tee shall be exposed at all times and it shall be the responsibility of the Consumer to keep said box exposed. If a change in elevation of the ground, sidewalk or the like is proposed, which will cover the curb box or site tee, the Consumer shall notify MWAA before such change is made.

Section 1006. The Owner or applicant authorized by the Owner shall at his own expense dig and fill the trench and furnish and install the water service line or sanitary service line from the curb stop or wye branch to the Premises to be supplied. Consumer's water service line shall be of a material and at a location approved by MWAA and shall be equipped at an accessible point within the Premises, with a locking meter valve of a pattern and material approved by MWAA.

Section 1007. Consumer's water and sanitary service line shall not: (a) occupy the same trench with, or be placed within eighteen (18) inches of any sewer pipe or any facility of any other public utility; or (b) be placed within three (3) feet of any open excavation or vault; or (c) pass through any Premises other than those served by such Consumer's service line; (d) be laid at a depth of less than four (4) feet below the surface of the ground; or be placed in the same trench.

Section 1008. All connections, service lines and fixtures furnished by the Owner or Authorized Agent shall be maintained by him in good order, and all valves, meters and appliances furnished and owned by MWAA and on the property of the applicant shall be properly protected and cared for by said applicant. All leaks in the service or any other pipe or fixture in or upon the Premises supplied must be immediately repaired by the Owner or Consumer of the Premises. All pipe, meters and fixtures on the customer's Premises shall at all reasonable hours be subject to inspection by employees identified by proper badge or card of MWAA.

Section 1009. The Inspector, designated by MWAA, shall be given at least 24 hour notice before any connection is made to the system so that the Inspector can be present to inspect and approve the work of the building service (water or wastewater) lateral, line extension and connection. The Inspector shall signify his approval to the connection by endorsing his name and the date of approval on the aforementioned connection permit in the possession of the permittee. The Inspector shall be permitted to enter upon all properties receiving water or wastewater service for the purpose of inspection, observation, measurement, sampling and testing; such entries to be made during reasonable daylight hours with prior notification to the customer.

Section 1010. At the time of inspection of the connection, the Owner or Owners of properties shall permit the Inspector full and complete access to all waterline, sanitary sewer and piping arrangements and facilities in each building and in and about all parts of the property. No building service (water or sanitary sewer) lateral shall be covered over, or in any manner concealed, until after it is inspected and approved by said Inspector.

Section 1011. It is the intention of these Rules and Regulations that the entire connection be inspected at one time; however, if the property Owner feels that special conditions warrant more than one inspection, he may request the same subject to such additional inspection fees as MWAA shall determine.

Section 1012. All pipe installed shall be either:

1. Type "K" Copper (Water supply only)
2. PVC pipe conforming to American Society for Testing and Materials (ASTM) D2241 Specification for Polyvinyl Chloride (PVC) Plastic pipe (SDR-26) (Sanitary service only)
3. Ductile iron pipe with rubber ring joint, double cement lined – minimum Class 52 (ANSI A21.51).

4. Ductile iron pipe with rubber joint, epoxy lined – Minimum Class 52 (ANSI A21.51)

All water pipe installed shall be at least ¾ inch diameter. All sanitary service pipe shall be a minimum 6-inch diameter for service laterals and 8-inch diameter for mainlines. Each section of pipe shall be stamped with the manufacturer's certification. Where connections between different types of pipe are required, proper transition fittings shall be utilized.

Section 1013. All piping shall be installed in strict accord with the manufacturer's recommendations. Backfill shall be tamped uniformly around the pipe. All work shall be done in a workmanlike manner and shall provide a durable installation.

Section 1014. Commercial installations must also comply with all local construction regulations.

Section 1015. Any temporary or emergency request relative to a MWAA service line (Water or Sanitary Sewer), or change in location of MWAA's service line (Water or Sanitary Sewer), requested by the Consumer, shall be at the expense of the Consumer.

Section 1016. The service line (Water or Sanitary Sewer) from the curb to the Premises shall be kept in good condition by the Consumer under penalty of discontinuance of service by MWAA.

Section 1017. MWAA shall in no event be responsible for maintaining any portion of the service line (Water or Sanitary Sewer) owned by the applicant; or for damage done by water escaping therefrom, or for lines and fixtures on applicant's property; and applicant shall at all times comply with municipal regulations with reference thereto, and make changes therein, required on account of changes of grade, relocation of mains, or otherwise.

Section 1018. Under no circumstances shall any person not authorized by MWAA open or close the valves in any public or private service line (Water or Sanitary Sewer).

Section 1019. All improved and unimproved surface restoration shall comply with the governing regulation of the Municipality the work is conducted in.

**ARTICLE XI**  
**PROPOSED EXTENSIONS OF SYSTEM BY DEVELOPERS**

Section 1101. Proposed extensions from the MWAA system by Developers or Individuals must first make a written application on the form WA30 furnished by MWAA stating fully the purpose for which the new extension is desired. Additionally the application must be accompanied by a general arrangement plan illustrating the proposed extension or alteration. Upon review and considering the scope of the project, the applicant must proceed with the requirements described herein.

Section 1102. Five (5) copies of plans for proposed extensions shall be submitted to MWAA on 24" x 36" sheets showing plan views to a scale no smaller than 1" = 50' and profiles to a scale of 1" = 10' vertically and no smaller than 1" = 50' horizontally, a north point, a title block, date and the name of the engineer or surveyor and imprint of his registration seal.

Section 1103. All water distribution lines shall be designed in accordance with the Public Water Supply Manual of the Pennsylvania Department of Environmental Protection, and these Rules and Regulations. All sanitary sewers shall be designed in accordance with the Domestic Wastewater Manual of the Pennsylvania Department of Environmental Protection, and these Rules and Regulations

Section 1104. Construction of water distribution lines or sanitary sewers shall not be permitted until the proper State Permits have been obtained.

Section 1105. Prior to final acceptance of any water distribution line or sanitary sewer extensions by MWAA, it shall be necessary for the developer to furnish to MWAA "Record Drawings" showing the angle and location of all fittings, the location of all valves, manholes and the exact location of all house lateral connections relative to known locations in the field.

Section 1106. Easements shall be recorded in the name of MWAA for all waterlines and sanitary sewer lines to be constructed outside of dedicated street rights-of-way.

Section 1107. All sanitary sewers shall be PVC pipe conforming to American Society for Testing and Materials (ASTM) D2241 Specification for Polyvinyl Chloride (PVC) Plastic pipe (SDR-35). Ductile Iron pipe (minimum Class 52-Epoxy lined) conforming to ANSI A21.51 unless otherwise specified for extraordinary ground conditions by MWAA. All water lines shall be Ductile Iron pipe (minimum Class 52-double cement lined) conforming to ANSI A21.51 unless otherwise specified for extraordinary ground conditions by MWAA.

Section 1108. All mainline water piping shall be a minimum of 6-inch diameter and have a minimum laying length of not less than five feet (5'). All mainline sanitary sewer shall be a minimum of 8-inch diameter and have a minimum laying length of not less than five feet (5'). The minimum slope for a sanitary sewer main shall be 0.5%.

Section 1109. The installation of waterlines and sanitary sewers shall start at the lower elevation end of the line and proceed upgrade so that the spigot ends point in the downhill direction. The pipe shall be carefully laid to line and grade. The handling, placing and jointing of pipe shall be in strict accordance with the pipe manufacturer's recommendations.

Section 1110. All waterlines and sanitary sewer lines shall be subject to a pressure test for leakage and in the manner required by MWAA. All manholes are subject to a vacuum test. All waterlines are subject to bacteriological testing upon completion.

Section 1111. The Developer shall file all necessary connection Permits and pay the applicable service connection and inspection fees for each house or building to MWAA which shall become due and payable prior to inspection and approval by the Inspector for each representative house service lateral (Water or sanitary).

Section 1112. The Developer shall be required to submit complete engineered drawings, specification and detailed computation data. Upon satisfactory review of same by MWAA or the authorized representative, the Developer will be required to enter into a Developer's Agreement with MWAA then post a Performance and Maintenance Bond. The Developer is fully responsible for all costs relative to construction of said project in accordance with the approved Plans and Specifications; the Developers Agreement; and the Rules and Regulations of MWAA.

Section 1113. The Developer shall also reimburse MWAA in full for all costs of legal reviews, engineering reviews, and inspection of construction of all waterlines. The amount and type of inspection required shall be determined by MWAA during construction.

Section 1114. No waterline or sanitary sewer extensions constructed by a Developer shall be approved for use and acceptance by MWAA until said extensions are formally approved by MWAA, all building service connection (water and sanitary sewer) and inspection fees have been paid for each building connected to the system, and MWAA has been reimbursed in full for all legal, engineering, and inspection costs incurred during construction, testing and approval.

Section 1115. All such public components shall be conveyed at no cost to MWAA..

Section 1116. Responsibility for Cost – the entire cost of all work shall be borne by the Developer.

Section 1117. The Developer shall deposit with MWAA, in advance, the estimated cost of each month's work; the amount will be adjusted at the end of each month, in connection with resident engineering, legal and/or inspection services.

Section 1118. Agreement – the applicant shall enter into an Developers Agreement with MWAA as described above, prior to the execution of any work. The agreement will contain such pertinent conditions as the following: n

1. The cost of all work to be borne by the Owner, except as otherwise indicated.

2. The highways, streets, alleys, and lanes in which waterline and sanitary sewer extensions are to be located must be dedicated to public use; the lines and grades thereof established, and the rough grading completed.
3. The ownership title to all installations to be conveyed to and vested in MWAA, except as otherwise indicated.
4. MWAA shall have the right to make further extensions beyond or laterally from the main extensions, and to enlarge or improve all water and wastewater facilities.

Section 1119. General Plans – the applicant shall submit a general plan covering the entire area of the municipality or water/sanitary sewage district in the case of a new water distribution or wastewater collection system, and of any extension or modification of any water distribution or wastewater collection system, unless such a general plan of the entire area of the municipality has already been submitted.

1. These plans must show the boundary line of the municipality or water/sewer district to be provided water or sewer service, all existing and proposed streets, watercourses, and other salient topographic features; contour lines with intervals of not less than two feet (2'), and the surface elevations at street intersections and at points where changes of slope occur. The plans must show clearly the locations of all existing water distribution lines and all other utilities.
2. In all cases the plans must clearly show the size of the waterlines or sanitary sewer lines, the character of the material, the elevation at the location of all points of change of slope, the locations of all fittings, valves, manholes, booster stations, lift stations, the elevations of all stream beds, the direction of stream flow, the high and low water elevations of all water surfaces, and such other data.

Section 1120. Detailed Plans – the applicant shall submit detailed plans accompanying the general plans.

1. Profiles shall be prepared with the horizontal scale at least as large as the scale of the corresponding plans, the vertical scale not smaller than 10 feet to 1 inch; the scales are to be indicated on the plans. The profiles shall indicate all the applicable details as set forth relative to the general plans.
2. Detailed plans shall include plans of all waterlines, sanitary sewer lines, waterline appurtenances, sewer line appurtenances, manholes, lift stations, booster stations, structures of all types and such other features.

Section 1121. Report – the application shall be accompanied by an engineer’s report giving a full description of the proposed system and setting forth the basis of design, prepared in accordance with the Pennsylvania Department of Environmental Protection requirements. This report may be in the form of a “Module” as submitted to the Pennsylvania Department of Environmental Protection. The report must include a statement and description of the extent of area which it is proposed to include within the system at the present time and in the future, the estimated per capita rates or volume of water and/or wastewater to be provided for, and such other data and information.

Section 1122. Maintenance Bond Requirements – prior to acceptance of any portion of any line or lines from a developer, the developer must provide MWAA with a maintenance bond supplied by a bonding company licensed to do business within the Commonwealth of Pennsylvania wherein the bonding company as surety will be firmly bound to MWAA to remedy, without cost to MWAA, any defect which may develop in the line during a period of eighteen (18) months from the date of acceptance of the lines, including the work and material utilized by the developer in installing the lines that MWAA will accept. The maintenance bond must guarantee that any defect caused by defective or inferior material or workmanship will be remedied without cost to MWAA during a period of eighteen (18) months from the date of acceptance of the lines.

The maintenance bond shall be in the amount of fifteen percent (15%) of the actual cost of installation of the lines to be accepted by MWAA. The cost of installation is to be determined by MWAA’s Engineer, and the developer must submit to MWAA all reasonable documentation requested by MWAA or its Engineer so as to allow MWAA to set the amount of the bond.

No connection may be made into the lines and no sewer service will be issued by MWAA until MWAA has accepted the line or any portion of the lines constructed by a developer.

MWAA’s acceptance shall be in writing and delivered to the developer indicating the exact date of acceptance. No acceptance of the lines will be performed until all work is performed in complete satisfaction to MWAA’s Engineer and the maintenance bond is posted with MWAA.

Section 1123. Performance Bond Requirements:

1. If any line or any part thereof is to provide service to a parcel of property that is part of a subdivision, or a subdivision plan, the developer must cause to be filed and posted with MWAA, an initial deposit as determined by MWAA to guarantee that MWAA will be reimbursed for all costs of engineering fees, inspection of construction, and/or legal expenses incurred in review and/or right-of-way acquisition for the proposed extension of the system by the developer.

The developer must also cause to be posted with MWAA, prior to recording of any subdivision or subdivision plan served by the proposed extension, a performance bond in the



amount of 110%, of the engineers estimate of the cost of construction of all potable water and sanitary service line that will serve the subdivision including any offsite improvements. .

Section 1124. All improved and unimproved surface restoration shall comply with the governing regulation of the Municipality the work is conducted in.

**ARTICLE XII**  
**DELINQUENCIES, VIOLATIONS AND REMEDIES**

Section 1201. Quarter annual charges for services under these Rules and Regulations shall be net and shall be subject to a penalty of 10 percent if remaining unpaid within ten days after the date of the bill. Bills for water service shall be paid at the office of the Municipal Water Authority of Aliquippa, 160 Hopewell Avenue, Aliquippa, Pennsylvania. In the event of a delinquent account for either water or sewage, or both, after the tenth of the month following the original billing, the water service may be shut off. If not paid within 90 days after such date, the bill plus the penalties shall thereafter bear interest at the rate of one-half of one percent per month or fraction thereof until paid. Service for water or sewage will not be restored until all delinquent bills against the same and the cost of cutting off and restoring service shall have been paid.

Section 1202. All charges for services under the Resolutions, Rules and Regulations together with all penalties thereon, not paid in full shall be deemed to be delinquent. All delinquent charges and all penalties thereon shall be a lien on the property served and shall be entered as a lien against such property in the office of the Prothonotary of Beaver County, and shall be collected in the manner prescribed by law for the filing and collection of such liens.

Section 1203. No abatement of charges will be allowed for vacancy of Premises except from the date that notice in writing has been given to MWAA that the Premises are unoccupied, in which event MWAA will shut off the water and no charge for water will be made during the period of such vacancy. No abatement will be allowed for a period less than the regular billing period of the customer.

ARTICLE XIII  
VALIDITY

Section 1301. All resolutions or parts of resolutions which are in conflict with any Article or Section of this resolution shall be deemed to be repealed to the extent of such conflict. Further, the invalidity of any section, clause, sentence, or provision of this resolution shall not affect the validity of any other part of this resolution which can be given effect without such invalid parts or parts, and if any one or more of the provisions of this resolution shall for any reasons be held to be illegal or invalid or otherwise contrary to law, then such provisions shall be null and void and shall be deemed separable from the remaining provisions hereof, but shall in no way otherwise affect the validity of this resolution.

Section 1302. MWAA reserves the right to, and may, from time to time, revise, amend and readopt such Rules and Regulations as it deems necessary and proper for the use and operation of the Water Distribution System.

APPROVED AND ADOPTED THIS 17<sup>th</sup> DAY OF December,  
20 14.

ATTEST:

MUNICIPAL WATER AUTHORITY OF ALIQUIPPA

Patricia A. Grimes  
Secretary

By:

Keith E. Felt  
Chairman

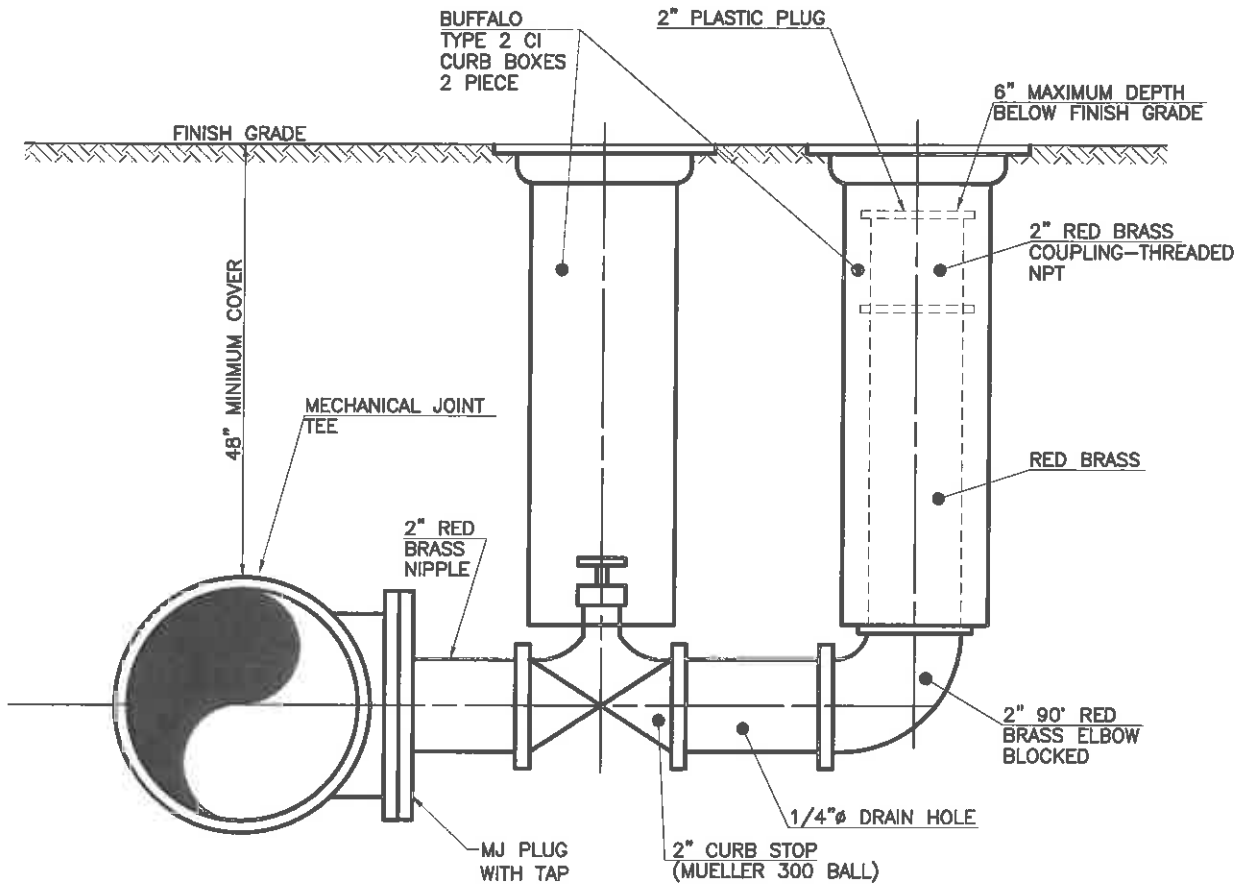
(SEAL)

**ARTICLE XIV**  
**CONSTRUCTION TYPICAL DETAILS ADOPTED BY THE**  
**MUNICIPAL WATER AUTHORITY OF ALIQUIPPA**

**WATER DETAILS**

WAT-1	2" Blow-Off Assembly
WAT-2	1" Blow-Off Assembly
WAT-3	Short Service Connection
WAT-4	Long Service Connection
WAT-5	Gate Valve Assembly
WAT-6	Fire Hydrant Assembly
WAT-7A	Water Line Vertical Blocking (150 psi)
WAT-7B	Water Line Vertical Blocking (300 psi)
WAT-8	Air Vacuum Release Manhole
WAT-9	1" and 2" Meter Setter
WAT-10	5/8" Residential Meter Pit
WAT-11A	Horizontal Thrust Blocking (150 psi)
WAT-11B	Horizontal Thrust Blocking (300 psi)
WAT-12	Special Backfill
WAT-13	Concrete Anchor
WAT-14	Concrete Cradle
WAT-15	Concrete Encasement
WAT-16	Casing Pipe Assembly
WAT-17	Utility Separation
WAT-18	Industrial / Commercial Meter Pit
WAT-19	Trench and Pipe Zone

N:\PROJ\474\11 Rules Roga\STD details\Water\ WAT-01 Blow-off Assem.dwg layout - Blow-off Assembly Userame = jrahc Date = Jan 27, 2015 - 12:05pm



**NOTES:**

1. ALL PIPE AND FITTINGS TO BE LOW LEAD COMPLIANT RED BRASS.
2. PLACE 2 CU. FT. OF STONE UNDER DRAIN HOLE.

**2" BLOW-OFF ASSEMBLY**

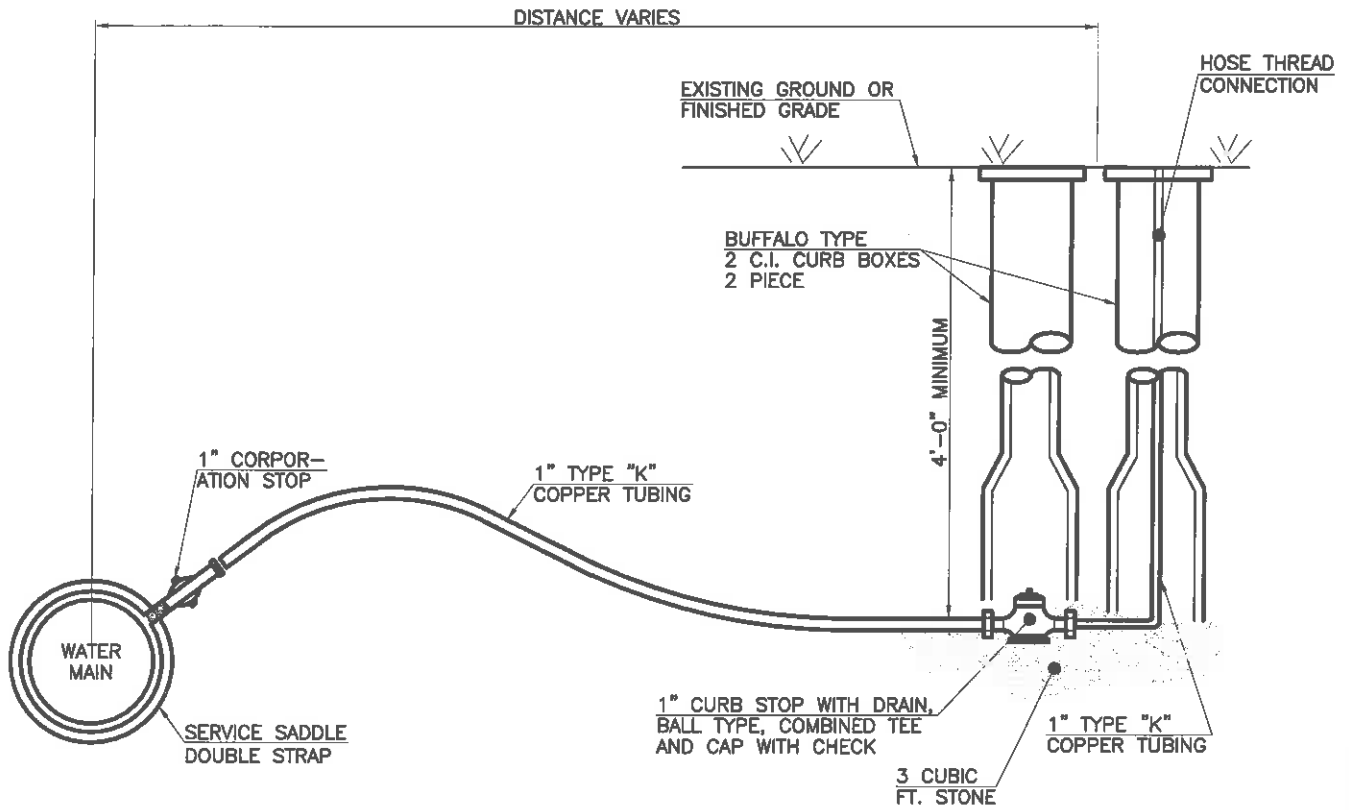
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-01 Blow-off Assem.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**2" Blow-off Assembly**

WAT-01

N:\PROJ\474\11 Rules Rega\STD detodia\Water\WAT-02 Blow-off Assem.dwg layout = Air Release Assembly Username = jshhc Date = Jan 27, 2015 - 12:08pm



**NOTES:**

1. PIPE SIZES 4" THRU 12" FOR CLASS 52 DUCTILE IRON PIPE, CAST IRON AND CAST IRON O.D. PVC PIPE, USE MUELLER BRONZE DOUBLE STRAP THREADED SERVICE CLAMP OR EQUAL.
2. SIZE OF FITTINGS AND LINE SHALL BE 1" OR AS SHOWN ON THE DRAWINGS.
3. LAY COPPER TUBING ON STONE BEDDING.
4. CURB STOP SHALL BE MUELLER BALL.
5. CORPORATION STOP SHALL BE MUELLER BALL.

**1" BLOW-OFF ASSEMBLY**

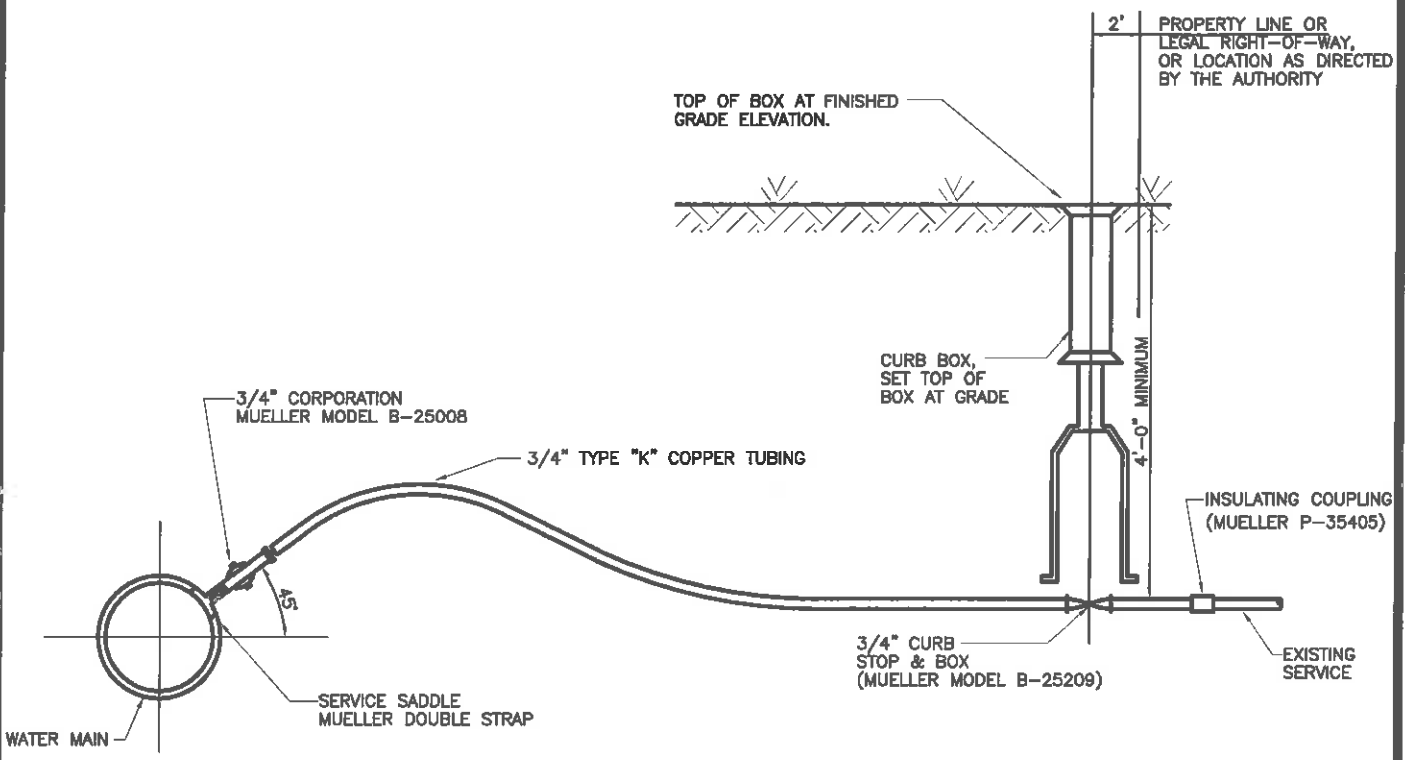
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-02 Blow-off Assem.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**1" Blow-Off Assembly**

WAT-02

N:\PROJ\47A\11 Rules Rega\STD details\Water\WAT-03 Short Serv. Connec..dwg layout = Short Service Connection Detail Username = jphc Date = Jan 27, 2015 - 12:07pm



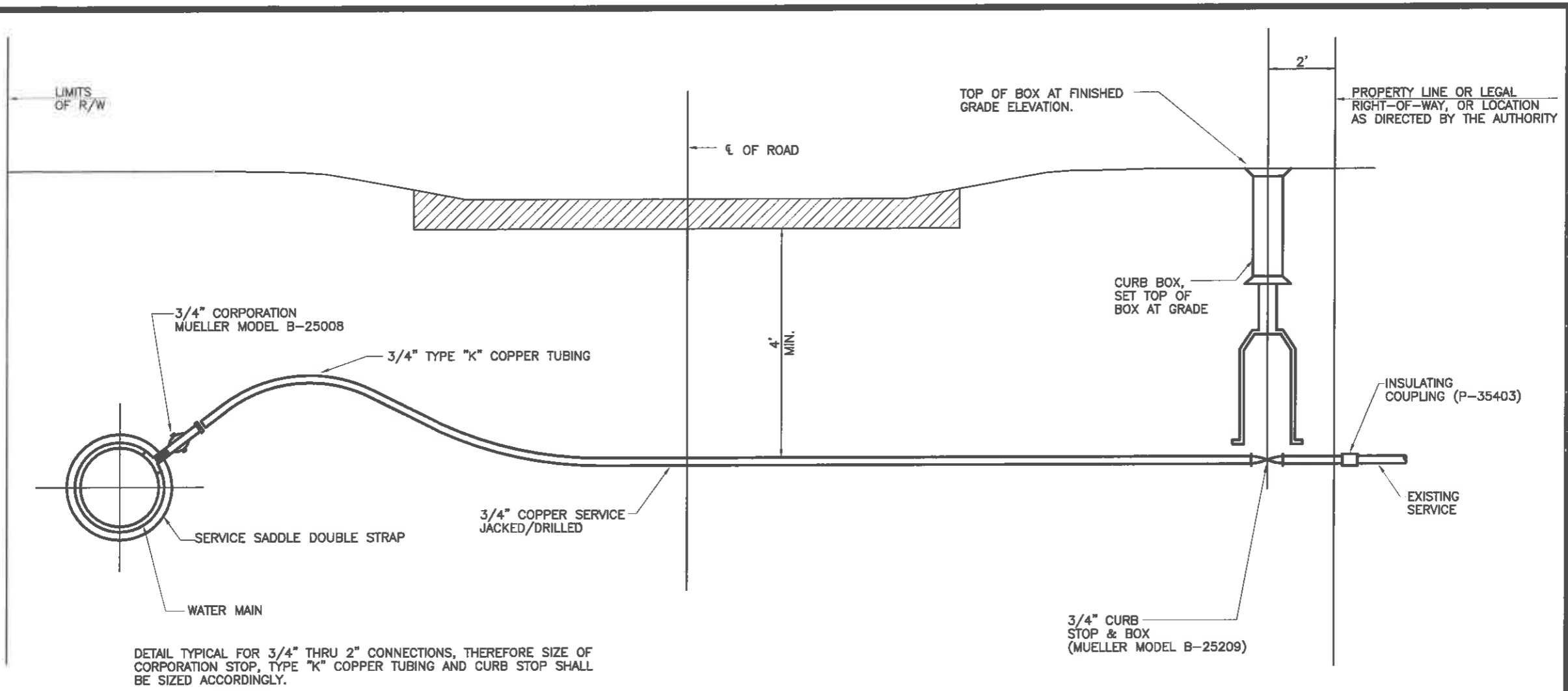
DETAIL TYPICAL FOR 3/4" THRU 2" CONNECTIONS, THEREFORE SIZE OF CORPORATION STOP, TYPE "K" COPPER TUBING AND CURB STOP SHALL BE SIZED ACCORDINGLY.

**SHORT SERVICE CONNECTION**  
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-03 Short Serv. Connec..dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Short Service Connection**  
WAT-03

N:\PROJ\474\11 Rules Reg\STD details\Water\WAT-04 Long Serv. Connection.dwg User: joehc Date: Jun 27, 2015 12:07pm



### LONG SERVICE CONNECTION

N. T. S.

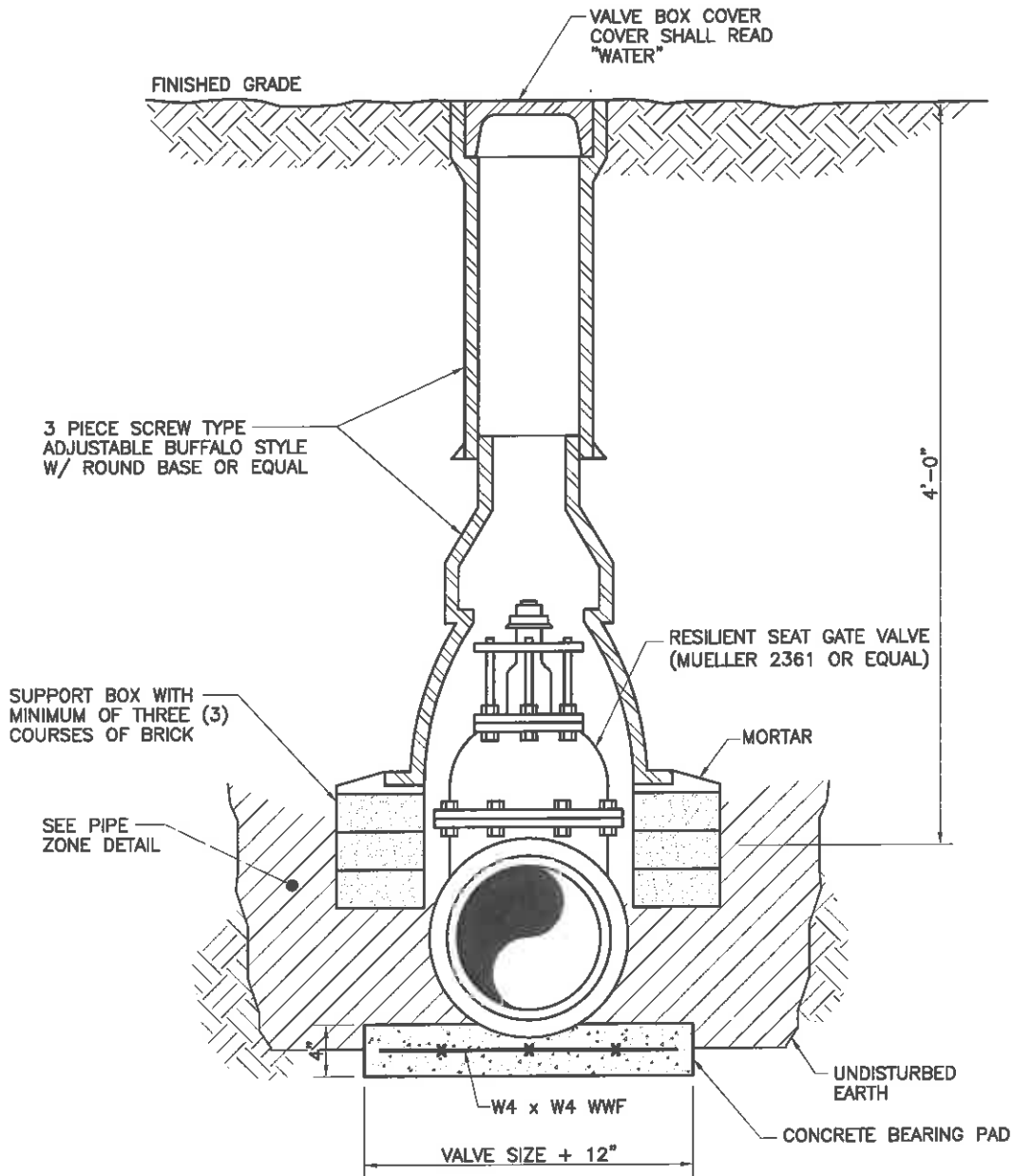
DATE:	December 2014
FILE NAME:	WAT-04 Long Serv. Connec.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Long Service Connection**

WAT-04



N:\PROJ\47\11 Rules Rego\STD details\Water\WAT-05 Gate Valve Assam.dwg layout - Gate Valve Assembly User: jmh Date: Jan 27, 2015 12:06pm



**TYPICAL  
GATE VALVE ASSEMBLY**

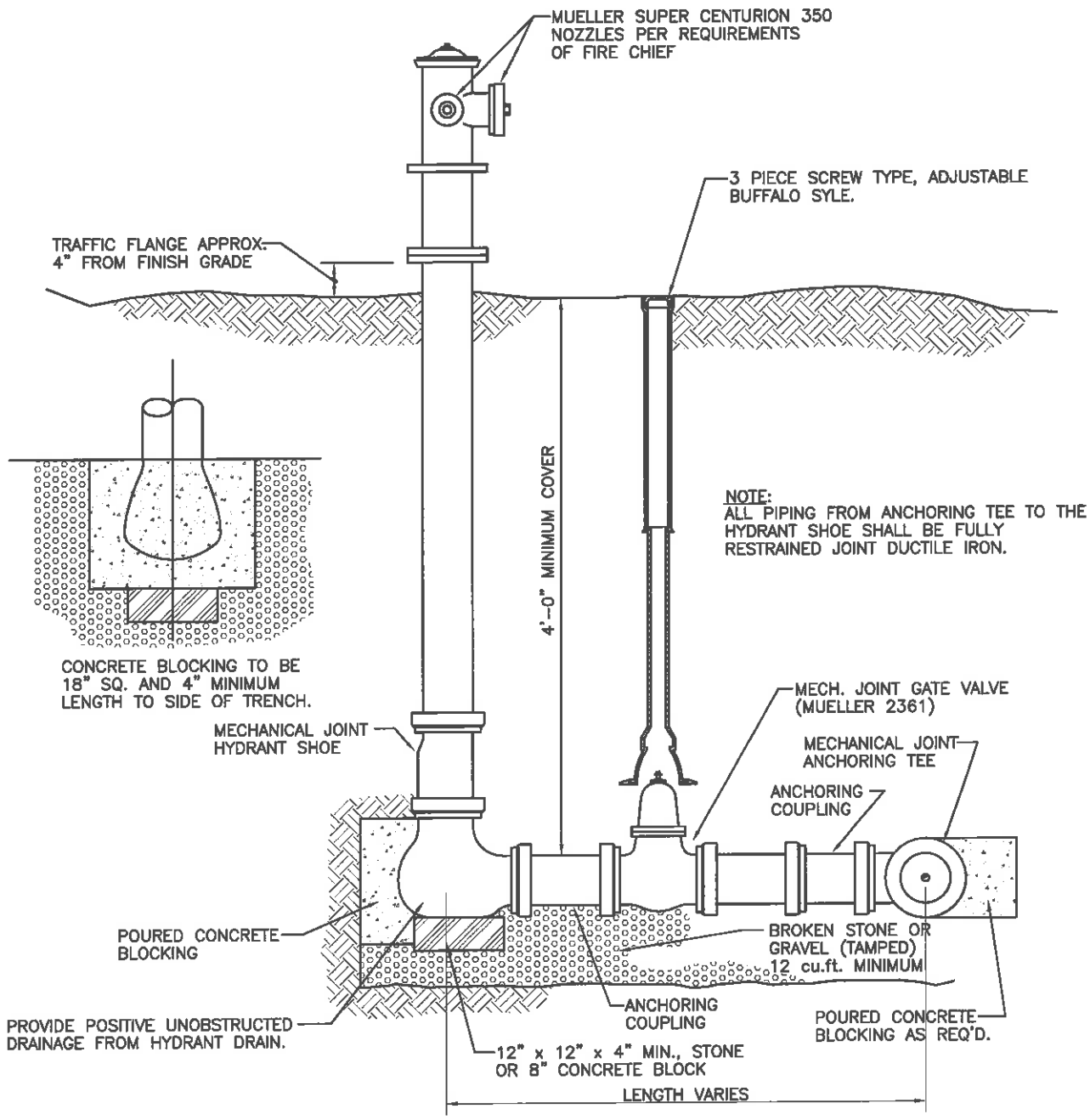
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-05 Gate Valve Assam.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Gate Valve Assembly**

WAT-05

N:\PROJ\17\11 Rules Regs\STD details\Water\WAT-06 Fire Hydrant Assem.dwg layout = Fire Hydrant Assembly Detail Username = joehc Date = Jan 27, 2015 - 12:06pm

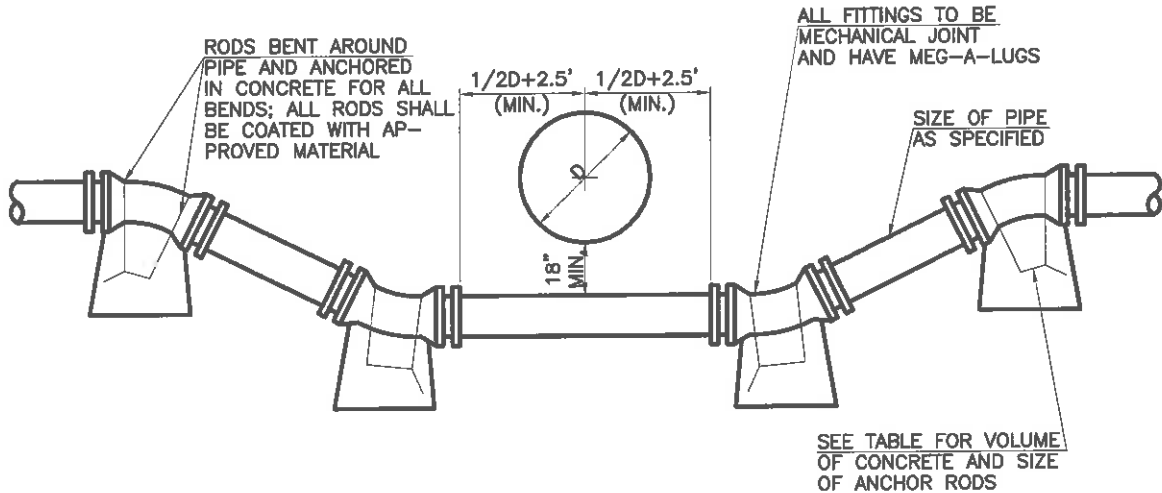


**FIRE HYDRANT ASSEMBLY**  
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-06 Fire Hydrant Assem.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Fire Hydrant Assembly**  
WAT-06

N:\PROJ\47A\11 Rules Regs\STD details\Water\ WAT-07A Vertical Blk 150psi.dwg layout = Vertical Blooding Username = jshc Date = Jan 27, 2015 - 12:12pm



PIPE SIZE	TOTAL PRESSURE IN POUNDS	VOLUME IN CUBIC FEET			SIZE AND No. OF ANCHORS		
		45' BENDS	22.5' BENDS	11.25' BENDS	45' BENDS	22.5' BENDS	11.25' BENDS
4	3900	20	10	5	1-#4	1-#4	1-#4
6	7200	37	19	9	2-#4	1-#4	1-#4
8	11800	60	31	15	2-#4	2-#4	1-#4
10	17100	87	45	22	2-#4	2-#4	2-#4
12	23700	122	62	31	2-#5	2-#4	2-#4

**NOTES:**

1. THE TABLE IS BASED ON 150# TEST PRESSURE.
2. REINFORCE ALL BLOCKS WITH #4 AT 6" E.F. MINIMUM 3" FROM ALL SIDES.

**TYPICAL  
WATER LINE VERTICAL BLOCKING**

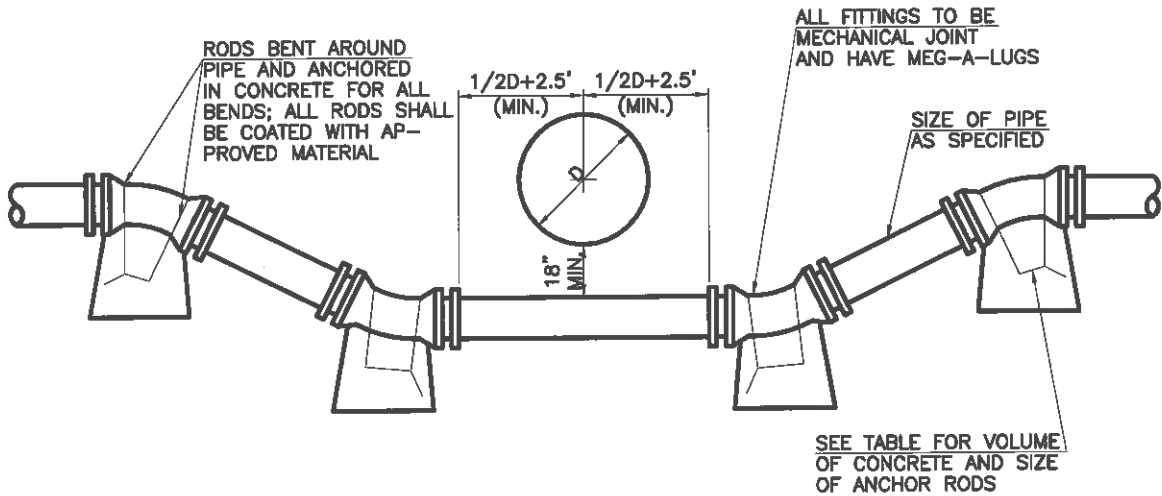
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-07A Vertical Blk 150psi.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Water Line Vertical Blocking (150 PSI)**

WAT-07A

N:\PROJ\474\11 Rules Regs\STD details\Water\ WAT-07B Vertical Blk 300psi.dwg layout = Vertical Blocking Userame = jwhc Date = Jan 27, 2015 - 12:12pm



PIPE SIZE	TOTAL PRESSURE IN POUNDS	VOLUME IN CUBIC FEET			SIZE AND No. OF ANCHORS		
		45° BENDS	22.5° BENDS	11.25° BENDS	45° BENDS	22.5° BENDS	11.25° BENDS
4	3900	40	20	10	1-#5	1-#5	1-#5
6	7200	74	36	18	2-#5	1-#5	1-#5
8	11800	120	62	36	2-#5	2-#5	1-#5
10	17100	174	90	44	2-#5	2-#5	2-#5
12	23700	244	122	62	2-#5	2-#5	2-#5

**NOTES:**

1. THE TABLE IS BASED ON 300# APPLIED PRESSURE.
2. REINFORCE ALL BLOCKS WITH #5 AT 6" E.F. MINIMUM 3" FROM ALL SIDES.

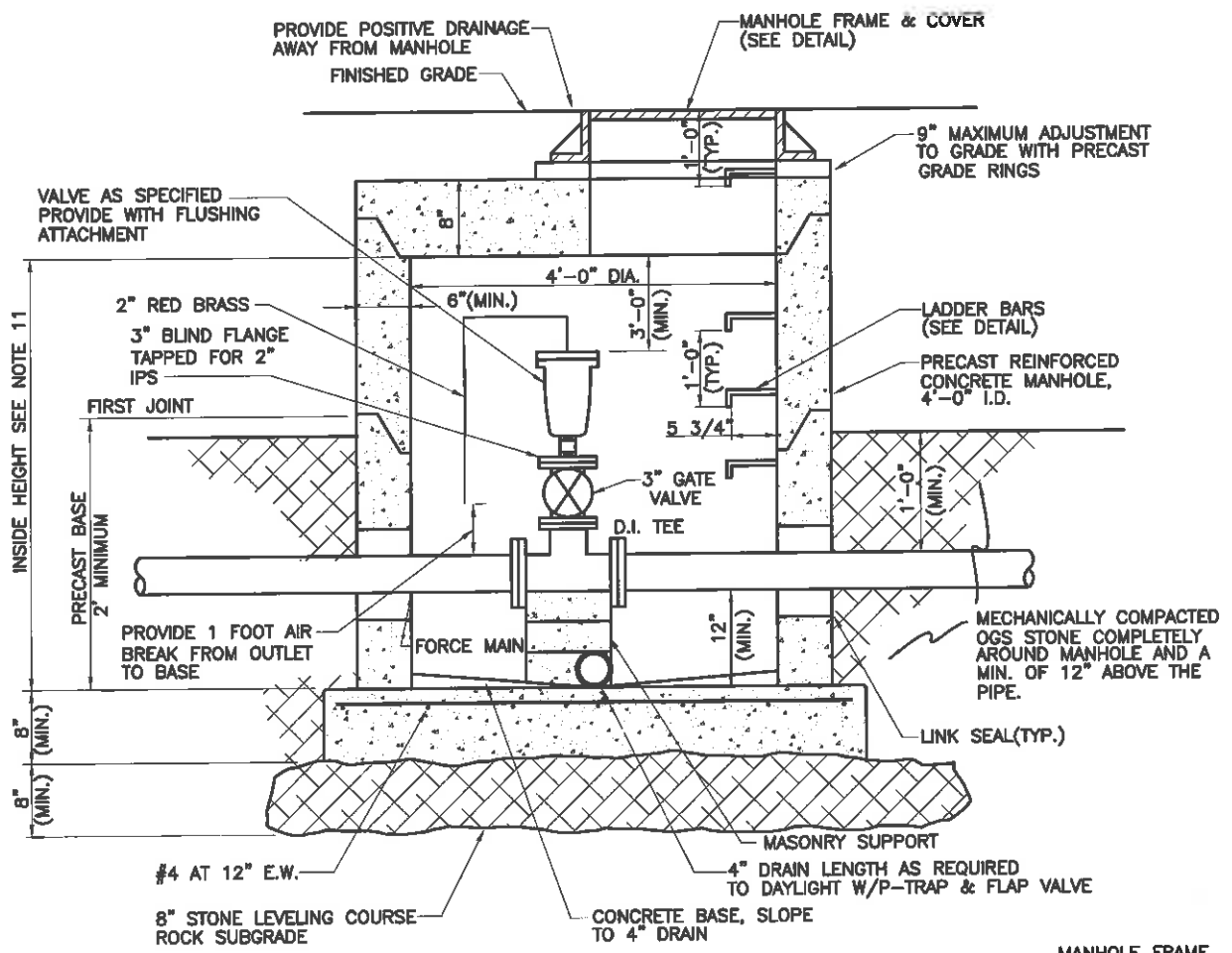
**TYPICAL  
WATER LINE VERTICAL BLOCKING**  
N. T. S.

DATE:	November 2013
FILE NAME:	WAT-07B Vertical Blk 300psi.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Water Line Vertical Blocking (300 PSI)**

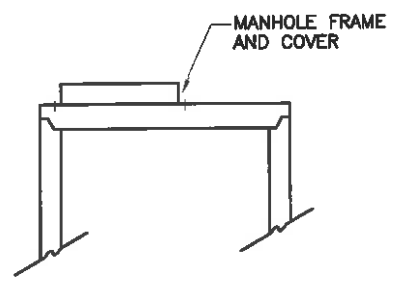
WAT-07B

N:\PROJ\474\11 Release Regg\STD details\Water\WAT-08 Air-Vac.Release Assm Manhole.dwg  
 layout = Air-Vac.Release Assm Manhole.dwg  
 Username = jafhc  
 Date = Jan 27, 2015 - 12:11pm



**NOTES :**

1. ALL CONCRETE TO BE CLASS A CONCRETE, 4000 PSI, 5%± 1% AIR ENTRAINED.
2. MANHOLE BARREL JOINTS TO BE SEALED WITH 1"Ø 2 FLEXIBLE BUTYL RUBBER JOINT SEALANT, USE 1/2"Ø FOR FRAME AND COVER.
3. FRAME AND COVER TO BE ANCHORED WITH 2-3/4" DIA. S.S. ANCHOR BOLTS SET PERMANENTLY ANCHORED INTO CONCRETE.
4. LIFTING HOLES TO BE POINTED WITH NON-SHRINK GROUT, AND LEFT WATERTIGHT, NEAT AND SMOOTH.
5. MAXIMUM ADJUSTMENT TO FINISHED GRADE USING PRECAST GRADE RINGS SHALL NOT EXCEED NINE INCHES (9").
6. PRECAST SECTIONS SHALL CONFORM TO ASTM C-478 AS REVISED.
7. CAST EXTERIOR OF ALL MANHOLE BARREL SECTIONS WITH APPROVED BITUMINOUS COATING.
8. COAT LADDER BARS INTO BARREL SECTIONS AND CONFORM TO ASTM C-478, AS REVISED.
9. PROVIDE ALL RED BRASS AND DUCTILE IRON PIPING, UNLESS NOTED.
10. PROVIDE ALL NECESSARY PIPE, FITTINGS AND/OR ADAPTORS TO MAKE A COMPLETE WATER TIGHT CONNECTION.
11. INSIDE HEIGHT TO BE SET BASED ON VALVE INSTALLED. ADJUST PIPE DEPTH AS REQUIRED. MINIMUM HEIGHT IS 6'-6".



NOTE:  
 MANHOLE SLAB TOP SHALL MEET MINIMUM H-20 LOADING AND SHALL BE USED TO MEET GRADES AND/OR OTHER CONDITIONS AS MAY BE REQUIRED.

**MANHOLE SLAB TOP**

**AIR/VACUUM RELEASE ASSEMBLY**

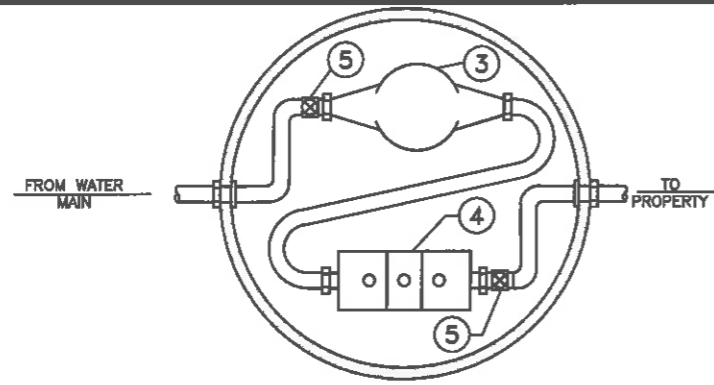
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-08 Air-Vac.Release Assm Manhole.dwg
SCALE:	N.T.S.

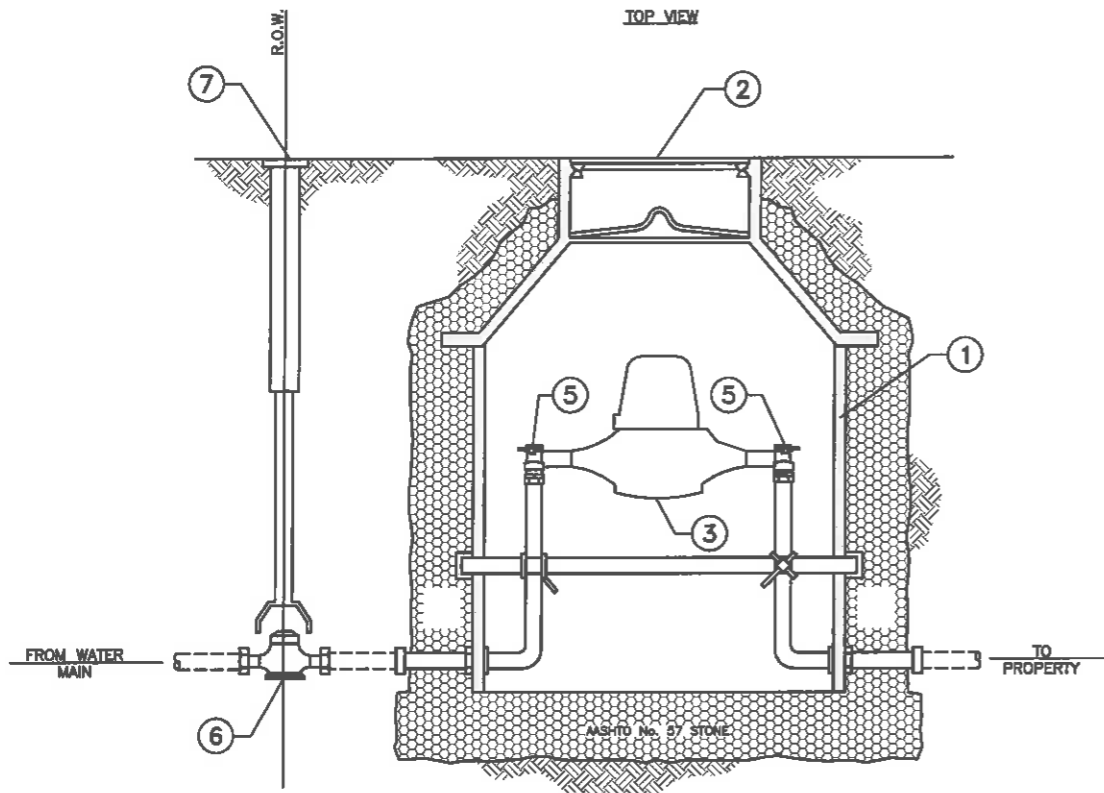
**Municipal Water Authority of Aliquippa**  
**Air/Vacuum Release Assembly**

WAT-08

N:\PROJ\474\11 Rules Reg\STD details\Water\WAT-09 Meter Setter.dwg Username = joehc Date = Jan 27, 2015 - 2:42pm



TOP VIEW



CROSS SECTION VIEW

**1" METER SETTING NOTES:**

1. FORD PLASTIC PIT SETTER OR APPROVED EQUAL 18" DIAMETER OR 20" DIAMETER PVC CYLINDER (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
2. WABASH DOUBLE LID COVER AS MANUFACTURED BY FORD WITH INSULATION BLANKET OR APPROVED EQUAL (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
3. 1" WATER METER (PROVIDED BY MWA).
4. 1" WATT 007, MEETING NSF 61, TESTABLE TYPE DOUBLE CHECK VALVE ASSEMBLY OR APPROVED EQUAL (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
5. SHUT OFF VALVE (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
6. 1" CURB STOP (MUELLER 300 BALL VALVE), (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
7. BUFFALO TYPE CURB BOX 3 PIECE.

**2" METER SETTING NOTES:**

1. FORD PLASTIC PIT SETTER OR APPROVED EQUAL 18" DIAMETER OR 20" DIAMETER PVC CYLINDER (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
2. WABASH DOUBLE LID COVER AS MANUFACTURED BY FORD WITH INSULATION BLANKET OR APPROVED EQUAL (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
3. 2" WATER METER (PROVIDED BY MWA).
4. 2" WATT 007, MEETING NSF 61, TESTABLE TYPE DOUBLE CHECK VALVE ASSEMBLY OR APPROVED EQUAL (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
5. SHUT OFF VALVE (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
6. 2" CURB STOP (MUELLER 300 BALL VALVE), (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
7. BUFFALO TYPE CURB BOX 3 PIECE.

**1" & 2" METER SETTING**

N. T. S.

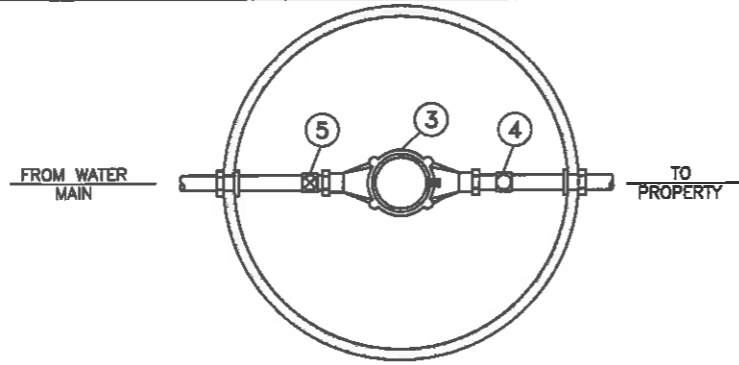
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FILE NAME:	WAT-09 Meter Setter.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**

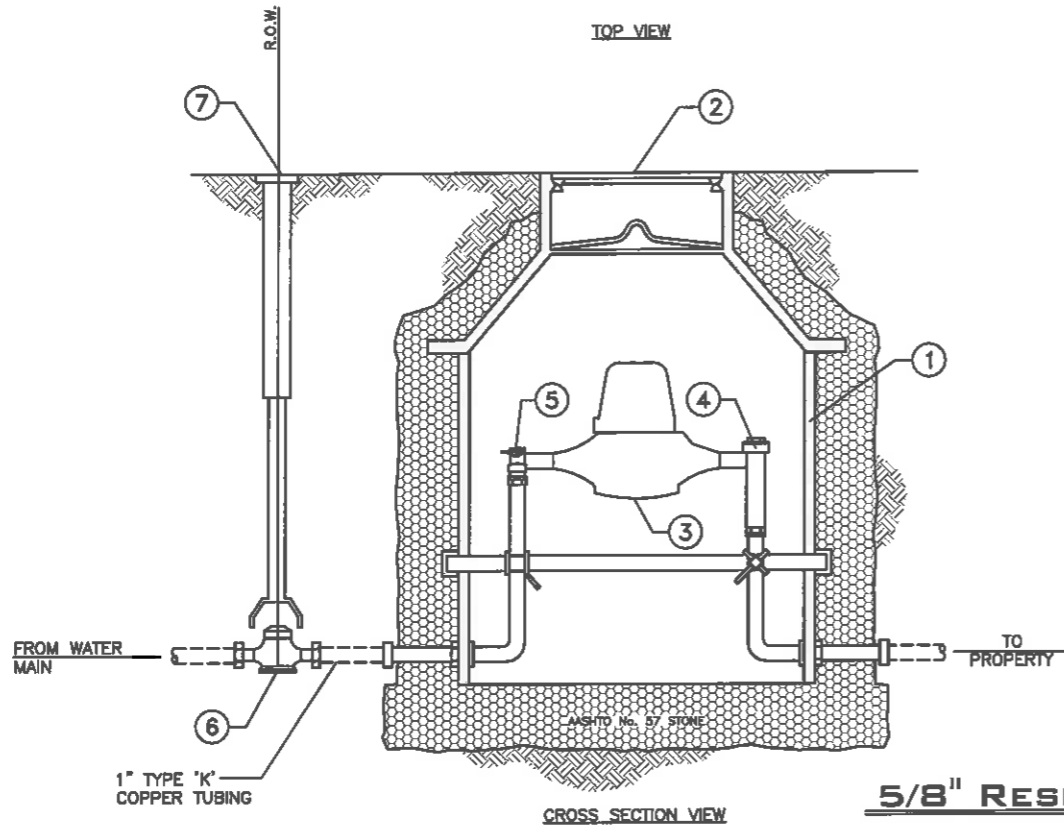
**1" & 2" Meter Setting**

WAT-09

N:\PROJ\474\11 Rules Rega\STD details\Water\WAT-10 Res. Meter Setter.dwg Username = joahc Date = Jan 27, 2015 - 2:43pm



TOP VIEW



CROSS SECTION VIEW

**5/8" RESIDENTIAL METER SETTING NOTES:**

1. FORD PLASTIC PIT SETTER OR APPROVED EQUAL 18" DIAMETER OR 20" DIAMETER PVC CYLINDER (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
2. WABASH DOUBLE LID COVER AS MANUFACTURED BY FORD WITH INSULATION BLANKET OR APPROVED EQUAL (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
3. 5/8" WATER METER (PROVIDED BY MWA).
4. 3/4" WATT DUAL CHECK VALVE ASSEMBLY OR APPROVED EQUAL (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
5. SHUT OFF VALVE (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
6. 1" CURB STOP (MUELLER 300 BALL VALVE), (FURNISHED AND INSTALLED BY APPLICANT/PROPERTY OWNER).
7. BUFFALO TYPE CURB BOX 3 PIECE.

**EXTERIOR METER SETTING NOTES:**

1. METER SETTER IS TO BE LOCATED AT OR NEAR RIGHT OF WAY LINE.
2. METER SETTER IS REQUIRED WHERE A WATER SERVICE LINE EXCEEDS 100-FT TO STRUCTURE BEING SERVED OR WHERE HOMES ARE BUILT ON SLABS.
3. AN EXPANSION TANK SHALL BE INSTALLED ON THE INLET SIDE OF THE WATER LINE TO THE WATER HEATER.
4. A PRESSURE REDUCING VALVE SHALL BE INSTALLED ON THE INLET SIDE OF THE EXPANSION TANK.
5. PIT SETTER SHALL BE LOCATED IN NON-TRAFFIC AND NON-PARKING AREAS.
7. PRIOR TO STARTING WORK OR ORDERING MATERIALS, CONTACT MWA TO REVIEW REQUIREMENTS.
8. NO SOLDER CONNECTIONS PERMITTED ON SERVICE LINE BETWEEN HOUSE AND CURB BOX.

**5/8" RESIDENTIAL METER SETTING**

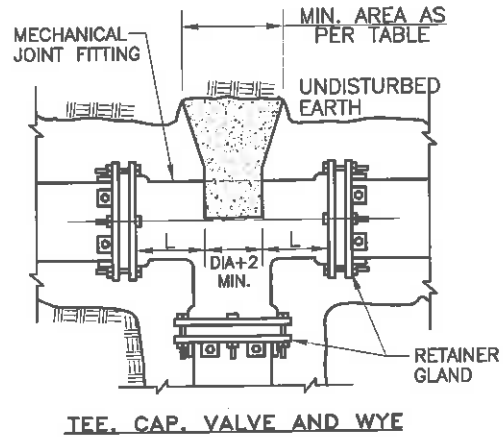
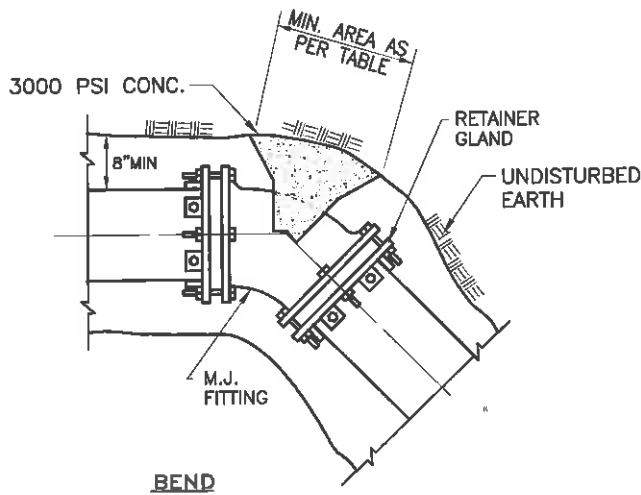
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-10 Res. Meter Setter.dwg
SCALE:	N.T.S.

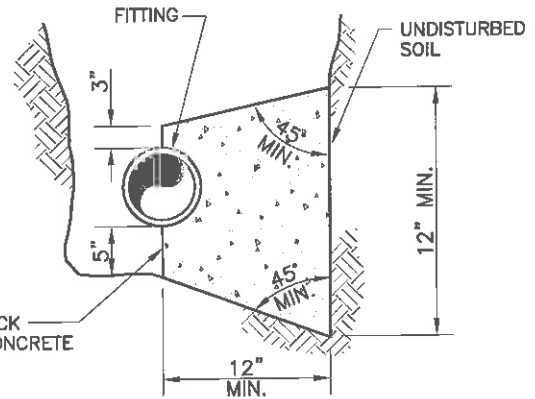
**Municipal Water Authority of Aliquippa**  
**5/8" Residential Meter Setting**

WAT-10

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PIPE SIZE (in)	L (in.)	MINIMUM BEARING AREA OF BLOCK(SQUARE FEET)				
		90° BENDS	45° BENDS	22.5° BENDS	11.25° BENDS	VALVE/TEE OR PLUG
4	5	2.9	1.6	1.0	1.0	2.1
6	6	6.0	3.3	1.7	1.0	4.3
8	6.5	10.3	5.6	2.9	1.5	7.3
10	6	15.4	8.4	4.3	2.2	10.9
12	6.5	21.8	11.8	6.0	3.1	15.4



**NOTES:**

1. EARTH PRESSURE = 2,000 LBS./SQ.FT.
2. APPLIED PRESSURE = 150 P.S.I. + 50% FOR WATER HAMMER OR SURGE
3. IF EARTH IN FIELD WILL NOT SUPPORT THE ABOVE EARTH PRESSURE, AREA OF BLOCK MUST BE INCREASED PROPORTIONATELY.
4. CONCRETE TO BE 3,000 P.S.I., PADOT CLASS A, 3" SLUMP
5. ALL MECHANICAL JOINT FASTENERS (I.E. BOLTS, NUTS, ETC.) SHALL BE FREE OF CONCRETE. ALL FITTINGS SHALL BE MECHANICAL JOINT AND HAVE MEG-A-LUG RETAINER GLANDS( OR EQUAL) INSTALLED TO MANUFACTURERS SPECIFICATIONS.
6. CONCRETE WITH BEARING AREAS GREATER THAN 3 S.F. TO HAVE W4 x W4 WELDED WIRE FABRIC.
7. ALL TEES, WYES, CROSSES & PLUGS, & BENDS OF 10" OR MORE SHALL BE BLOCKED AGAINST FIRM EARTH WITH CONCRETE.

**HORIZONTAL THRUST BLOCKING**

N. T. S.

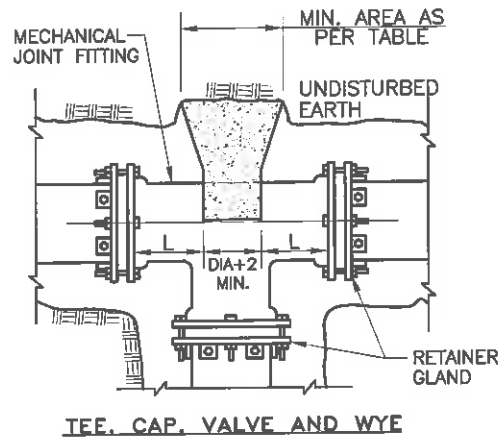
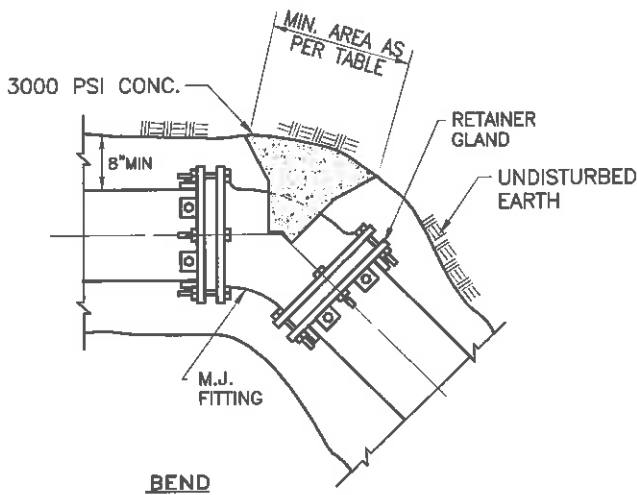
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FILE NAME:	WAT-11A Horiz.Blk 150psi.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Horizontal Thrust Blocking (150 PSI)**

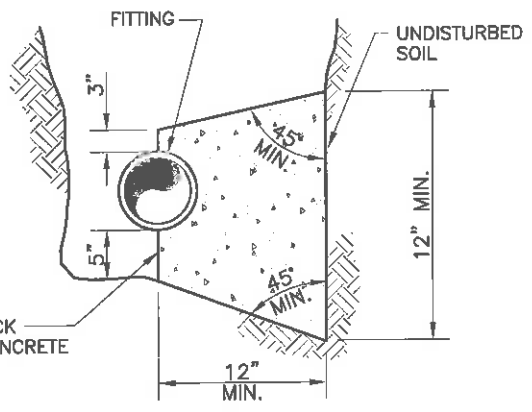
WAT-11A



N:\PROJ\47A\11 Rules Regs\STD details\Water\WAT-11B Horiz. Blk. 300psi.dwg   
 layout = Horizontal Thrust Blocking   
 Username = jofhc   
 Date = Jan 27, 2015 - 12:13pm



PIPE SIZE (in)	L (in.)	MINIMUM BEARING AREA OF BLOCK(SQUARE FEET)				
		90° BENDS	45° BENDS	22.5° BENDS	11.25° BENDS	VALVE/TEE OR PLUG
4	5	4.0	2.2	1.1	1.0	2.8
6	6	9.0	4.9	2.5	1.2	6.4
8	6.5	16.0	8.7	4.4	2.2	11.3
10	6	25.0	13.5	6.9	3.5	17.7
12	6.5	36.0	19.5	9.9	5.0	25.4



**NOTES:**

1. EARTH PRESSURE = 2,000 LBS./SQ.FT.
2. APPLIED PRESSURE = 300 P.S.I.
3. IF EARTH IN FIELD WILL NOT SUPPORT THE ABOVE EARTH PRESSURE, AREA OF BLOCK MUST BE INCREASED PROPORTIONATELY.
4. CONCRETE TO BE 3,000 P.S.I., PADOT CLASS A, 3" SLUMP
5. ALL MECHANICAL JOINT FASTENERS (I.E. BOLTS, NUTS, ETC.) SHALL BE FREE OF CONCRETE. ALL FITTINGS SHALL BE MECHANICAL JOINT AND HAVE MEG-A-LUG RETAINER GLANDS( OR EQUAL) INSTALLED TO MANUFACTURERS SPECIFICATIONS.
6. CONCRETE WITH BEARING AREAS GREATER THAN 3 S.F. TO HAVE W4 x W4 WELDED WIRE FABRIC.
7. ALL TEES, WYES, CROSSES & PLUGS, & BENDS OF 10" OR MORE SHALL BE BLOCKED AGAINST FIRM EARTH WITH CONCRETE.

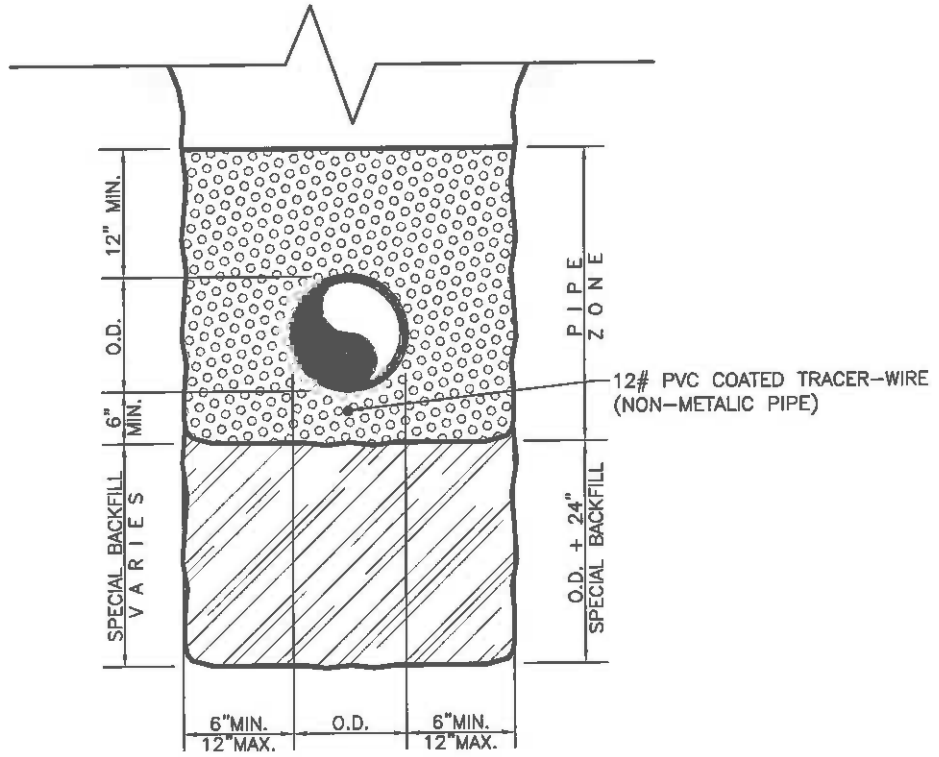
**HORIZONTAL THRUST BLOCKING**

N. T. S.

DATE:	December 2014
FILE NAME:	WAT-11B Horiz. Blk. 300psi.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Horizontal Thrust Blocking (300 PSI)**

**WAT-11B**



**SPECIAL BACKFILL**

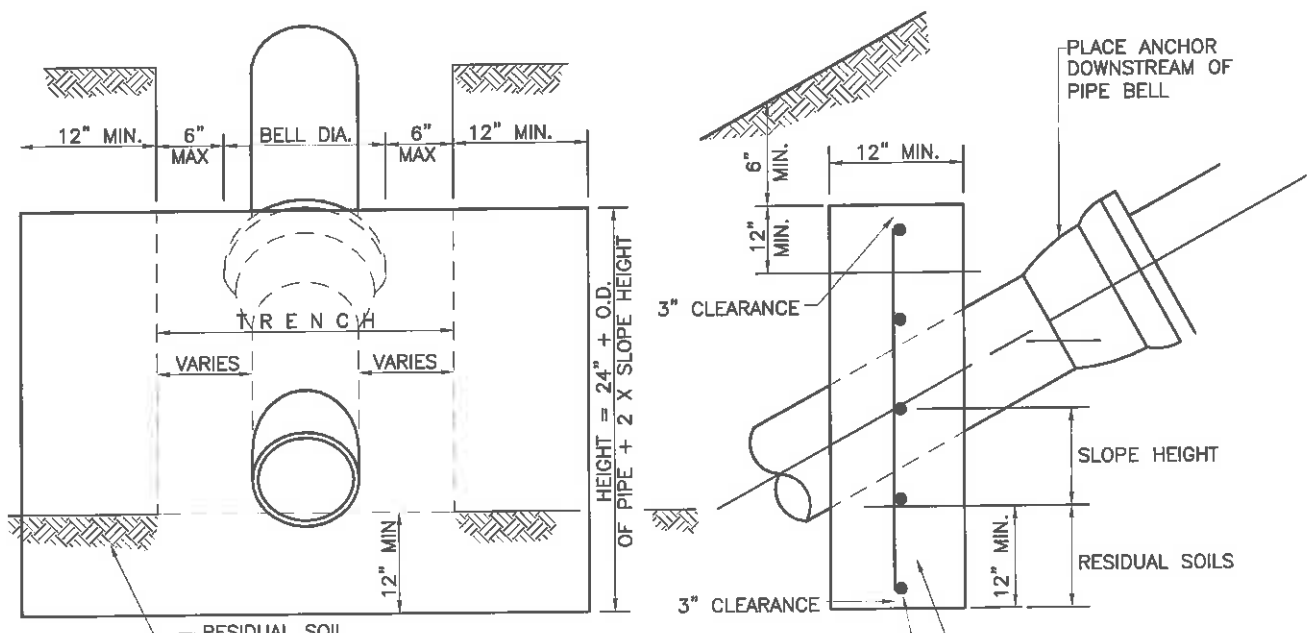
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DATE:	December 2014
FILE NAME:	WAT-12 Special Backfill.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Special Backfill**

WAT-12

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**SPACING REQUIRED**

% GRADE	DISTANCE CENTER TO CENTER
20% TO 35%	36' C. to C.
35% TO 50%	24' C. to C.
50% +	16' C. to C.

#4 @ 12" C/C E.W  
BOTTOM OF PIPE TRENCH

DUCTILE IRON PIPE SHALL BE USED FOR ALL PIPING OVER 20% GRADE.

## CONCRETE ANCHOR FOR PIPE LINES

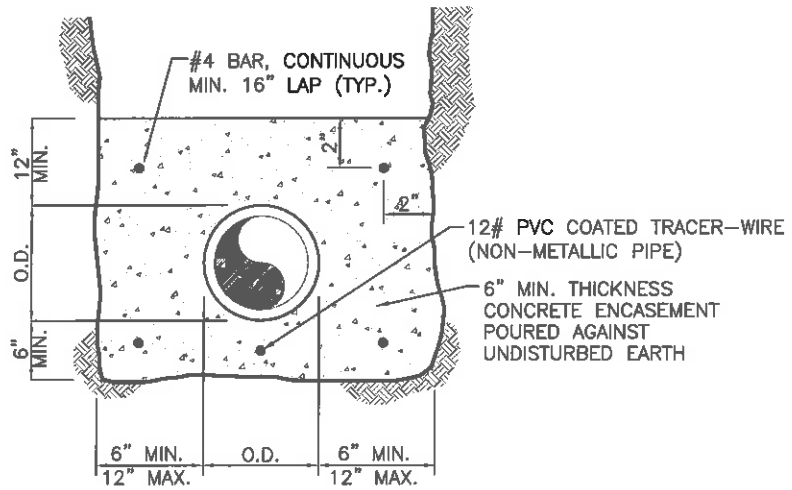
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DATE:	December 2014
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SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Concrete Anchor for Pipe Lines**  
 WAT-13



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## CONCRETE ENCASEMENT

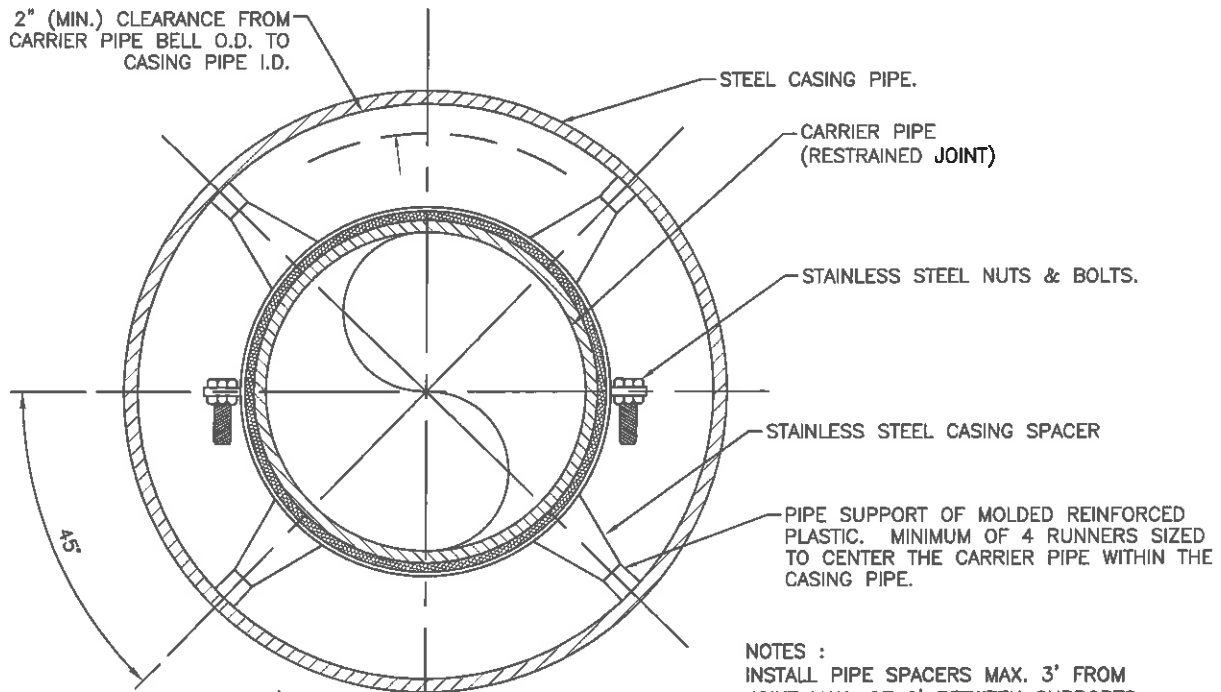
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**Municipal Water Authority of Aliquippa**  
**Concrete Encasement**

WAT-15

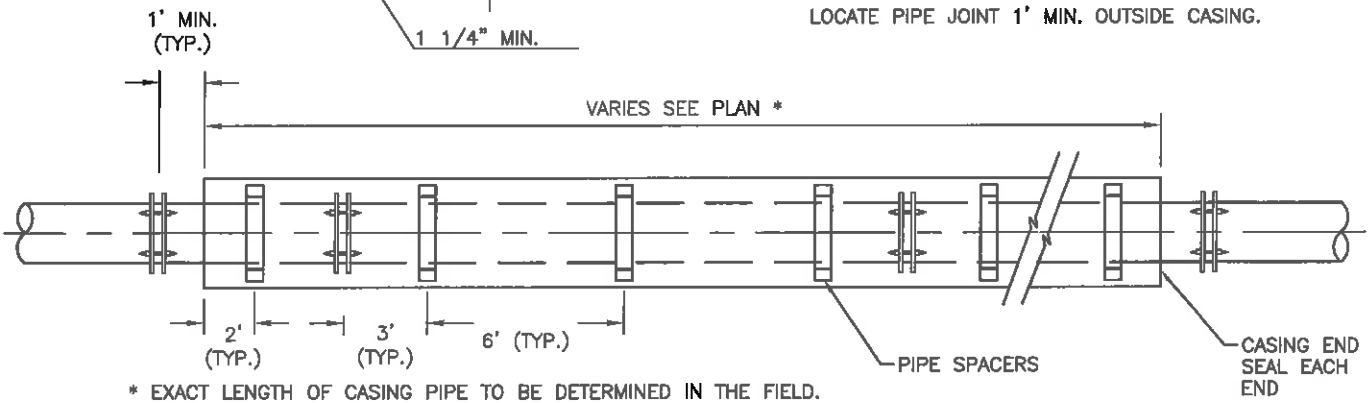
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NOTES :

INSTALL PIPE SPACERS MAX. 3' FROM JOINT MAX. OF 6' BETWEEN SUPPORTS, AND A MAX. OF 2' FROM CASING END.

LOCATE PIPE JOINT 1' MIN. OUTSIDE CASING.



**CASING PIPE ASSEMBLY DETAIL**

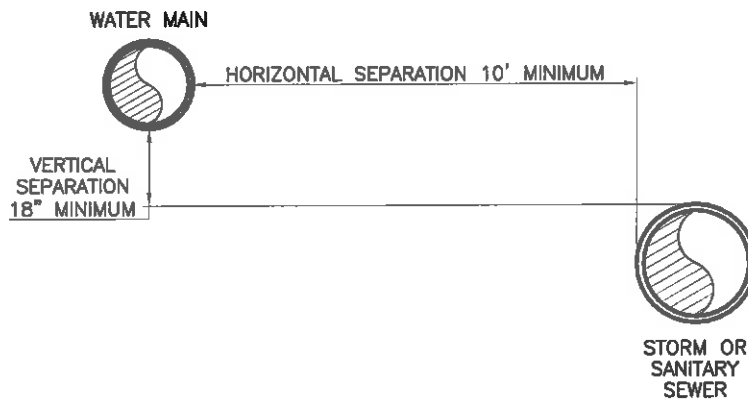
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DATE:	December 2014
FILE NAME:	WAT-16 Casing Pipe Assem.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Casing Pipe Assembly**

WAT-16

N:\PROJ\47A\11 Rules Regs\STD details\Water\ WAT-17 Utility Separation.dwg layout = Utility Separation User:msm Date = Jan 27, 2015 - 12:15pm



**NOTES:**

1. WHEN THE HORIZONTAL SEPARATION OF THE WATER MAIN AND SEWER LINE IS LESS THAN 10', THE VERTICAL SEPARATION BETWEEN THE TOP (CROWN) OF THE SEWER LINE AND THE BOTTOM (INVERT) OF THE WATER MAIN SHALL BE AT LEAST 18". WATERLINE SHALL BE ENCASED IN CONCRETE WHERE SEWER / WATERLINE CROSSINGS OCCUR AND, WHERE THE CONDITIONS PREVENT AN 18" VERTICAL SEPARATION.

2. NO OTHER UNDERGROUND UTILITIES, SUCH AS GAS, ELECTRIC, TELEPHONE, OR CABLE, SHALL BE PLACED ABOVE THE WATERLINE OR WITHIN FIVE FEET OF EACH SIDE OF THE WATERLINE.

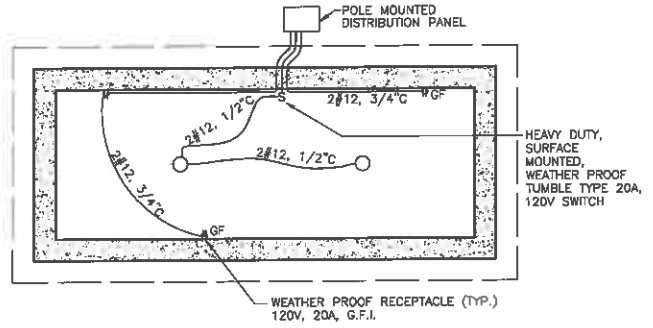
**UTILITY SEPARATION**

N. T. S.

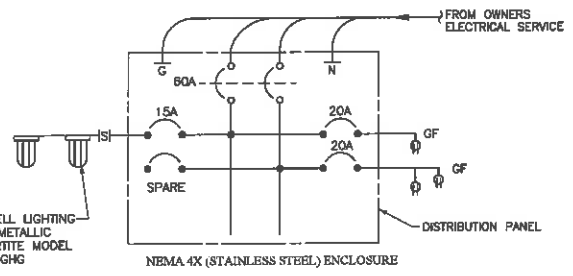
DATE:	December 2014
FILE NAME:	WAT-17 Utility Separation.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Utility Separation**

WAT-17



**WATER METER ELECTRICAL PLAN**  
N. T. S.



**ELECTRICAL SINGLE LINE SCHEMATIC**  
N. T. S.

METER SIZE	VAULT AND PIPING LENGTHS								TOTAL LENGTH OF VAULT
	A	B	C	D	E	F	G	H	
4"	2'-6"	3'-6"	1'-0"	9"	1'-0"	2'-9"	1'-1"	2'-10"	14'-1"
6"	3'-0"	4'-0"	1'-0"	10-1/2"	1'-0"	3'-9"	1'-4"	3'-6"	16'-11"
8"	3'-0"	4'-0"	1'-0"	11-1/2"	1'-0"	4'-5"	1'-6"	4'-4"	19'-2"
10"	3'-3"	4'-3"	1'-0"	13"	1'-0"	5'-8"	1'-10"	5'-4"	22'-9"

**GENERAL ELECTRICAL NOTES**

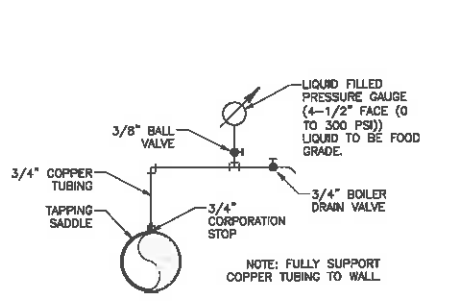
- GROUNDING WIRE(S) AND RELATED APPURTENANCES ARE NOT SHOWN ON THE DRAWINGS. ALL GROUNDING SHALL BE PROVIDED PER SECTION 250 OF THE NATIONAL ELECTRICAL CODE (LATEST EDITION). EQUIPMENT GROUNDING WIRES SHALL BE INSTALLED IN ADDITION TO CONDUCTORS SHOWN (PER TABLE 250-122 OF NEC).
- ALL POWER CONDUITS SHALL BE PVC HEAVY WALL. ALL CHANGES IN DIRECTION SHALL BE MADE USING LONG RADIUS BENDS.
- ALL POWER WIRING INSULATION SHALL BE THIN-THIN. WIRE SIZE TO BE #12. MINIMUM CONDUIT SIZE TO BE 1/2".
- CONTRACTOR TO PROVIDE PULL AND JUNCTION BOXES AS REQUIRED.
- ELECTRICAL SERVICE SHALL BE INSTALLED AND INSPECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.

**GENERAL NOTES**

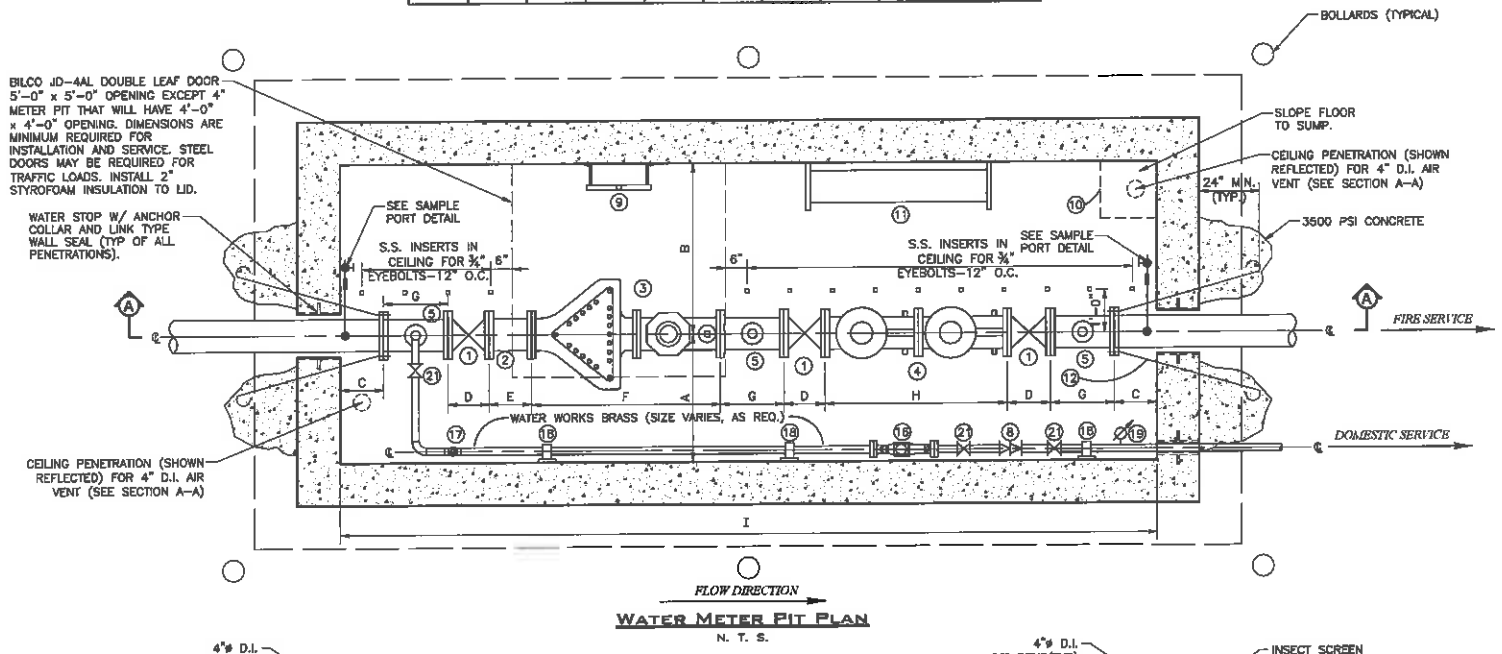
- ALL DUCTILE IRON PIPING SHALL BE CLASS 52 HAVING A MINIMUM WORKING PRESSURE OF 350 PSI.
- THE PRECAST CONCRETE METER PIT SECTIONS SHALL BE FURNISHED TO THE DIMENSIONS SHOWN AND SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING:  
CONCRETE - 4000 PSI @ 28 DAYS  
ENTRAINED AIR - 5% (±1%)  
STEEL - ASTM A496-A615  
- GRADE 60  
DESIGN LOADING - AASHTO HS-25 WITH 30% IMPACT AND EQUIVALENT SOIL PRESSURE OF 130 PSF.  
THE PRECAST CONCRETE METER PIT SHOP DRAWINGS SHALL BE ACCOMPANIED BY COMPLETE STRUCTURAL AND UPLIFT DESIGN CALCULATIONS. UPLIFT CALCULATIONS SHALL ASSUME COMPLETE SUBMERSION OF THE METER PIT. SOIL RESISTANCE TO UPLIFT SHALL BE EVALUATED IN A VERTICAL PLANE ONLY ABOVE THE FLANGED BASE. ALL DESIGN CALCULATIONS SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF PA.
- ALL PRECAST METER PIT JOINTS SHALL BE BOLTED TOGETHER AND SEALED WATER TIGHT PER THE MANUFACTURER'S SPECIFICATIONS.
- ALL PRECAST METER PIT SECTIONS SHALL HAVE A WATERPROOF BITUMASTIC COATING APPLIED TO ALL EXTERIOR SURFACES BELOW FINISHED GRADE.
- ALL INTERIOR PIPING, FITTINGS, VALVES, ETC. SHALL BE PAINTED BLUE ACCORDING TO THE FOLLOWING OR APPROVED EQUIVALENT:  
TAR COATED APPURTENANCES:  
- ONE(1) COAT TNEC SERIES 1 OMNITHANE MIO-ZINC MCU @ 3.0-4.0 MILS DFT  
- TWO(2) COATS TNEC SERIES 446 PERMA-SHIELD MCU @ 6.0-8.0 MILS DFT PER COAT.  
PRIMED OR UNPAINTED APPURTENANCES:  
- ONE(1) COAT TNEC SERIES 1 OMNITHANE MIO-ZINC MCU @ 3.0-4.0 MILS DFT.  
- ONE(1) COAT TNEC SERIES 27 TPOXY POLYAMIDE EPOXY @ 2.0-3.0 MILS DFT.  
- ONE(1) COAT TNEC SERIES 73 ENDURA-SHIELD ALIPHATIC ACRYLIC URETHANE @ 2.0-3.0 MILS DFT.
- PIPE SUPPORTS, THE RODS, ANCHORS AND THRUST RESTRAINT AT FITTINGS AND VALVES SHALL BE PROVIDED SUFFICIENT, TO ALLOW PIPING TO STAND WITH REMOVAL OF METERS, FRICTION CLAMPS OR FLANGES.
- 2" VALVES AND UNDER ARE I.P.S. 4" VALVES AND OVER ARE FLANGED - 125 P.S.I. CLASS FLANGE W/125 P.S.I. DRILLING.
- IT WILL BE NECESSARY FOR THE CUSTOMER TO INSTALL PROPER GRAVITY DRAINAGE OR OTHER MECHANICAL MEANS TO KEEP VAULT DEWATERED. ALL SUBMITTALS SHALL BE APPROVED BY MWAA PRIOR TO FABRICATION AND INSTALLATION.
- GATE VALVES AND PIPING SHOULD BE SAME SIZE AS METER.
- UNLESS NOTED OTHERWISE, ALL COMPONENTS SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CUSTOMER IN ACCORDANCE WITH MWAA RULES AND REGULATIONS.
- BILCO TYPE DOOR TO BE CENTERED OVER METER ASSEMBLY AND ACCESS LADDER.
- THE RODS TO BE EMBEDDED IN CONCRETE. MWAA TO INSPECT BEFORE BACKFILLING.
- INSTALL PIPE BOLLARDS AROUND PERIMETER OF METER PIT TO PREVENT VEHICULAR TRAFFIC FROM TRAVELING OVER PIT.
- METER SIZES TO BE DETERMINED BY THE MWAA BASED ON ACTUAL WATER REQUIREMENTS.
- ALL FLANGE BOLTS TO BE STAINLESS STEEL.
- PROVIDE SUFFICIENT STRAIGHT RUNS OF WATERLINE BEFORE AND AFTER METERS AS RECOMMENDED BY THE METER MANUFACTURER.
- ALL PIPING BELOW 4" TO BE WATER WORKS BRASS MEETING CURRENT NO LEAD REQUIREMENTS. STAINLESS STEEL WILL BE ACCEPTED AS AN ALTERNATIVE.

**FITTING AND EQUIPMENT SCHEDULE**

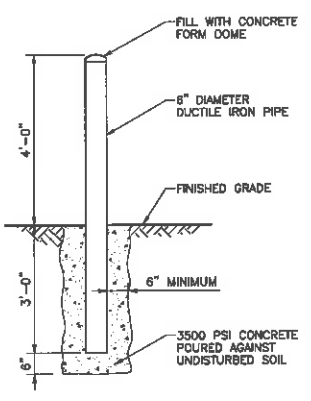
- MUELLER CO. 2360 SERIES RESILIENT SEATED FLG x FLG GATE VALVE WITH RISING STEM (COUNTER CLOCKWISE OPEN)
- FLG x FLG SPOOL PIECE
- SENSUS OMNI F2 METER ASSEMBLY WITH WATERPROOF REGISTER AND TOUCH READ PAD (FURNISHED BY MWAA AT COST OF PROPERTY OWNER)
- DOUBLE CHECK BACK FLOW PREVENTOR (WATTS SERIES 709)
- FLG x FLG TEE
- REDUCING FLANGE
- LOCKING GATE VALVE
- DOUBLE CHECK BACK FLOW PREVENTOR (PER MWAA)
- STAINLESS STEEL LADDER WITH S.S. EXTENSION POST (HALLIDAY PRODUCTS MODEL L1D)
- SUMP FOR DRAIN (INSTALL SUMP PUMP IF REQUIRED - SEE GENERAL NOTE 8 ABOVE)
- FLG x FLG SPOOL PIECE TO MATCH LENGTH OF METER ASSEMBLY
- RESTRAINING RODS 3/4" DIA. - 8 REQUIRED (4 PER FITTING)
- ADJUSTABLE GALVANIZED STEEL PIPE SUPPORT (AS REQ. MINIMUM OF 4) WITH 8" x 8" STL. BASE PLATE
- 1" PVC DRAIN FOR GUTTER OF HATCH TO SUMP/DRAIN (S.S. SUPPORT TO WALL)
- S.S. PIPE HANGERS (QUANTITY AS REQUIRED)
- SENSUS DOMESTIC WATER METER (1-PEARL FOR METERS 1" AND SMALLER, OMNI C2 FOR METERS GREATER THAN 1") WITH WATERPROOF REGISTER AND RADIO READ PAD (FURNISHED BY MWAA AT COST OF PROPERTY OWNER)
- PRESSURE REDUCING VALVE - PRV (NOTE THAT MULTIPLE PRVs MAY BE REQUIRED TO OBTAIN THE DESIRED PRESSURE REDUCTION)
- WALL MOUNTED STAINLESS STEEL PIPE SUPPORT (QUANTITY AS REQUIRED)
- LIQUID FILLED PRESSURE GAUGE (4-1/2" FACE)
- BRASS TEE
- BALL VALVE



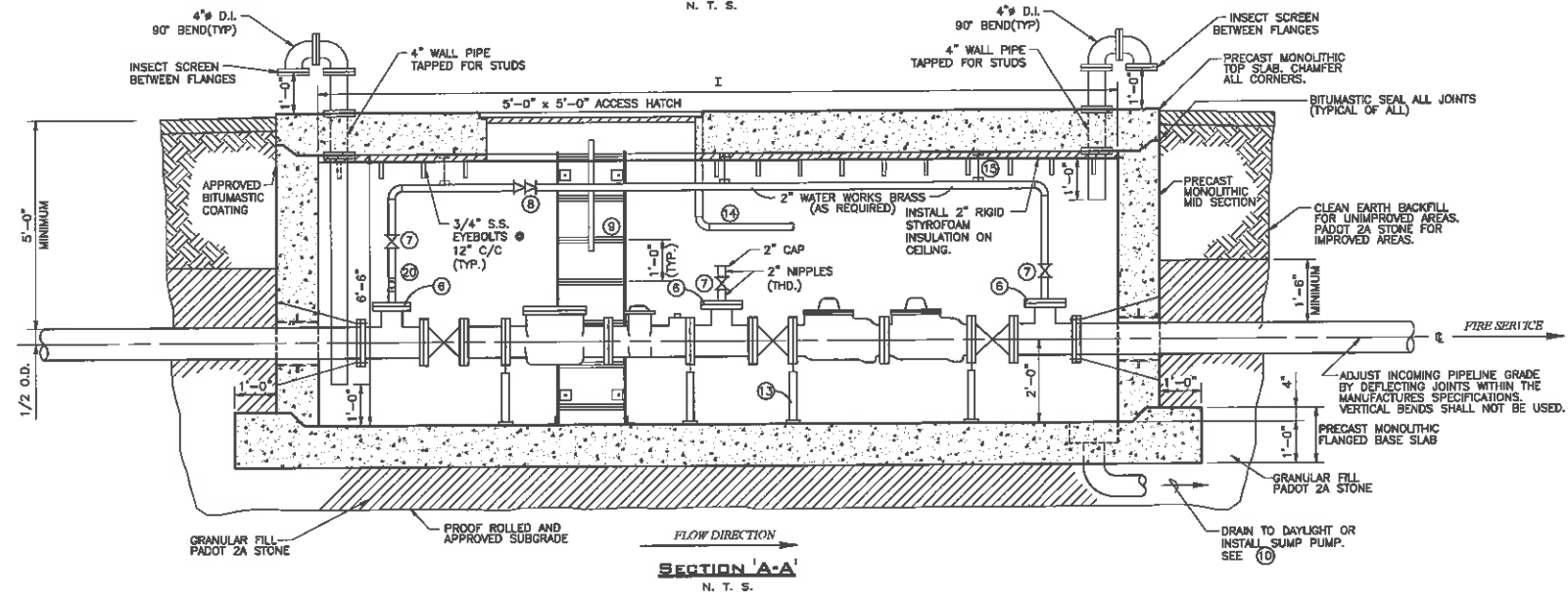
**SAMPLE PORT DETAIL**  
N. T. S.



**WATER METER PIT PLAN**  
N. T. S.



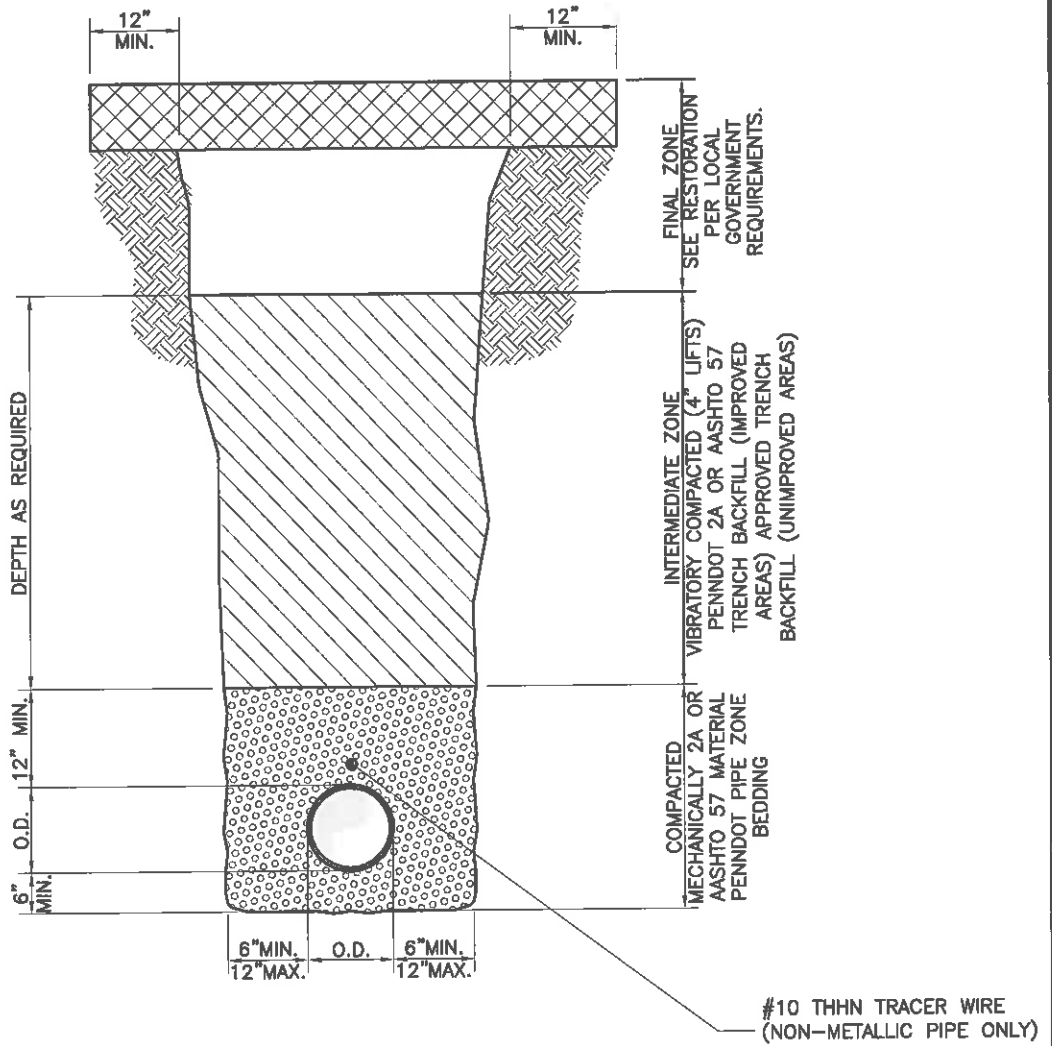
**PIPE BOLLARD DETAIL**  
N. T. S.



**SECTION A-A**  
N. T. S.

Drawn By	Checked By	Approved By	No.	Date	Description	By	No.	Date	Description	By
N.T.S.										





**TYPICAL  
TRENCH AND PIPE ZONES**  
N. T. S.

DATE:	December 2014
FILE NAME:	WAT-19 Trench & Pipe Zones.dwg
SCALE:	N.T.S.

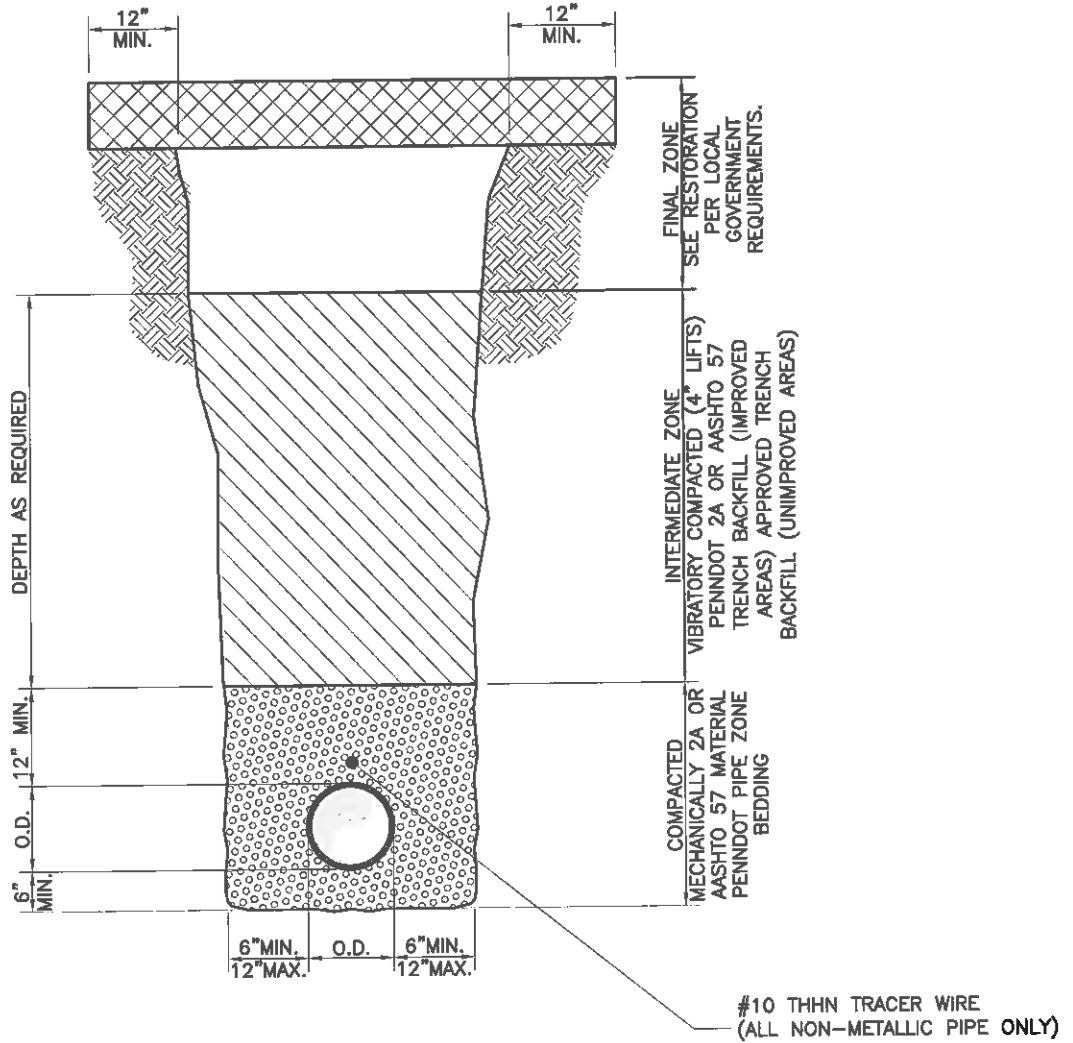
**Municipal Water Authority of Aliquippa  
Trench and Pipe Zones**

WAT-19

**ARTICLE XIV**  
**CONSTRUCTION TYPICAL DETAILS ADOPTED BY THE**  
**MUNICIPAL WATER AUTHORITY OF ALIQUIPPA**

**SANITARY DETAILS**

SAN-1	Trench and Pipe Zones
SAN-2	Utility Separation
SAN-3	Concrete Anchor
SAN-4	Forcemain Horizontal Thrust Blocking
SAN-5	Forcemain Vertical Blocking
SAN-6	Air Vacuum Release Assembly
SAN-7	Concrete Cradle
SAN-8	Concrete Encasement
SAN-9	Casing Pipe Assembly
SAN-10	Forcemains Under Obstruction
SAN-11	Trench Drain
SAN-12	Precast Concrete Sanitary Manhole and Slab Top
SAN-13	Cast In Place or Precast Concrete Sanitary Manhole (5-foot diameter)
SAN-14	Inside Manhole Drop Connection
SAN-15	Manhole Channels
SAN-16	Ladder Bars for Manhole
SAN-17	Standard Sanitary Manhole Frame and Cover
SAN-18	Watertight Sanitary Manhole Frame and Cover (Inner Cover Option)
SAN-19	Typical Sight Tee, Service Line Cleanout and Vent
SAN-20	Wye Connection, Service Lateral, and Sight Tee (New Service)
SAN-21	Wye Connection, Service Lateral, and Sight Tee (Existing Service)
SAN-22	Sewer Termination Manhole Repair



**TYPICAL  
TRENCH AND PIPE ZONES**

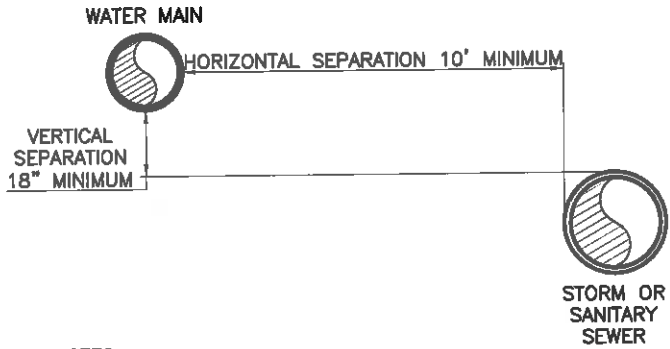
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DATE:	December 2014
FILE NAME:	SAN-01 Trench & Pipe Zones.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Trench and Pipe Zones**

SAN-01

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**NOTES:**

1. WHEN THE HORIZONTAL SEPARATION OF THE WATER MAIN AND SEWER LINE IS LESS THAN 10', THE VERTICAL SEPARATION BETWEEN THE TOP (CROWN) OF THE SEWER LINE AND THE BOTTOM (INVERT) OF THE WATER MAIN SHALL BE AT LEAST 18". ENCASE WATERLINE IN CONCRETE WHERE SEWER / WATERLINE CROSSINGS OCCUR AND, WHERE THE CONDITIONS PREVENT AN 18" VERTICAL SEPARATION.
2. NO OTHER UNDERGROUND UTILITIES, SUCH AS GAS, ELECTRIC, TELEPHONE, OR CABLE, SHALL BE PLACED ABOVE THE WATERLINE OR WITHIN THREE FEET OF EACH SIDE OF THE WATERLINE.

**UTILITY SEPARATION**

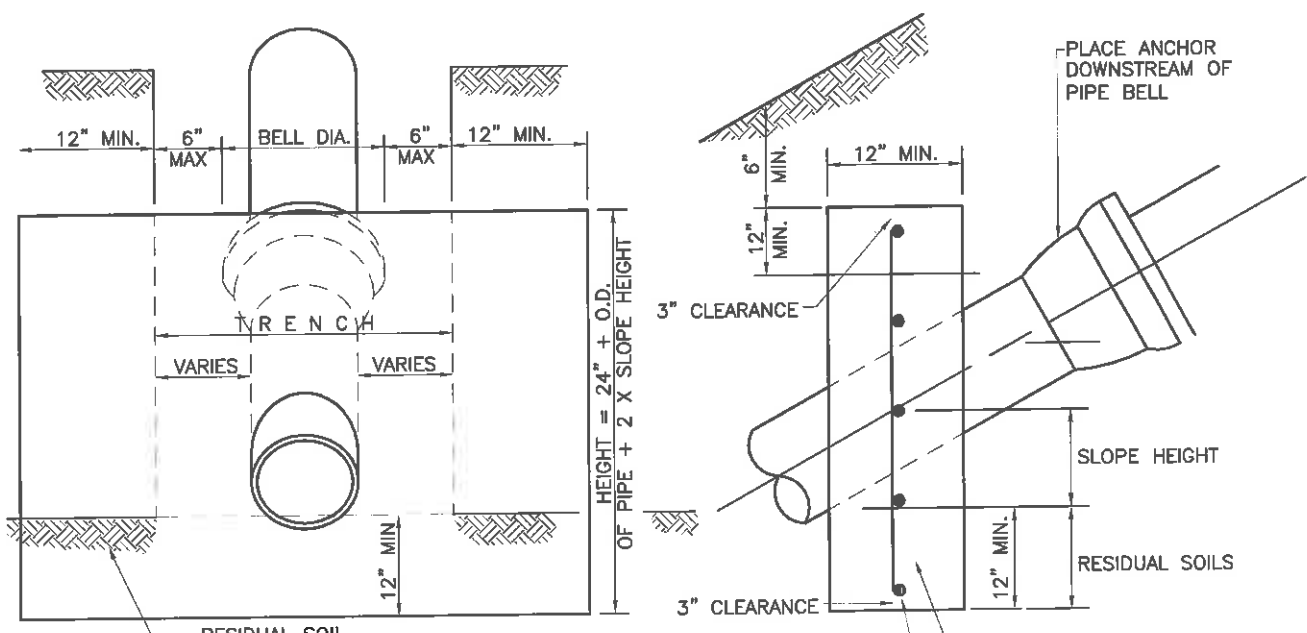
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DATE:	December 2014
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**Municipal Water Authority of Aliquippa  
Utility Separation**

SAN-02

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**SPACING REQUIRED**

% GRADE	DISTANCE CENTER TO CENTER
20% TO 35%	36' C. to C.
35% TO 50%	24' C. to C.
50% +	16' C. to C.

DUCTILE IRON PIPE SHALL  
BE USED FOR ALL PIPING  
OVER 20% GRADE.

## CONCRETE ANCHOR FOR PIPE LINES

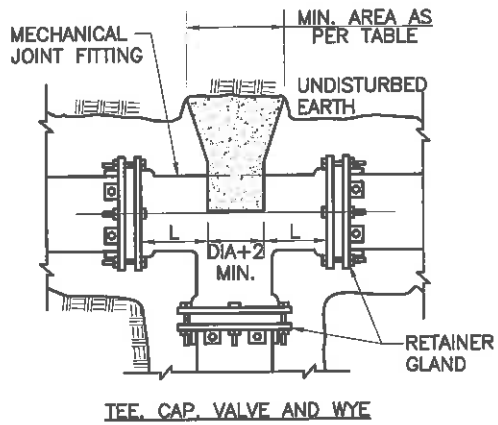
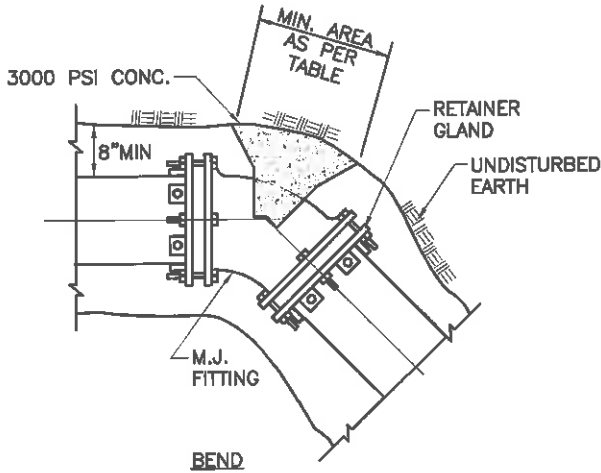
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-03 Concrete Anchor.dwg
SCALE:	N.T.S.

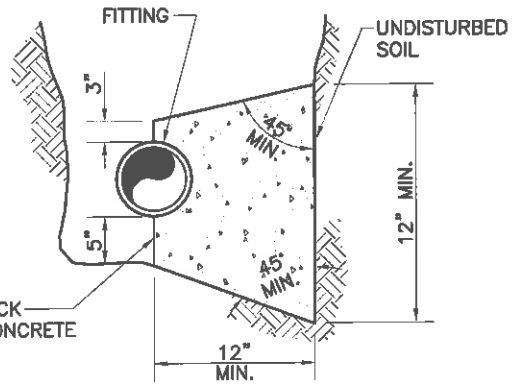
**Municipal Water Authority of Aliquippa**  
**Concrete Anchors for Pipe Lines**

SAN-03

N:\PROJ\47A\11 Rules Rega\STD details\Sanitary\ SAN-04 Forcemain Horiz. Thrust Blocking.dwg  
 layout = Forcemain Horizontal Thrust Blocking  
 Userame = jpath  
 Date = Jan 27, 2015 - 11:08am



PIPE SIZE (in)	L (in.)	MINIMUM BEARING AREA OF BLOCK(SQ. FT.)				
		90° BENDS	45° BENDS	22.5° BENDS	11.25° BENDS	VALVE/TEE OR WYE
4	5	2.9	1.6	1.0	1.0	2.1
6	6	6.0	3.3	1.7	1.0	4.3
8	6.5	10.3	5.6	2.9	1.5	7.3
10	6.5	15.4	8.4	4.3	2.2	10.9
12	7	21.8	11.8	6.0	3.1	15.4



**NOTES:**

1. EARTH PRESSURE = 2,000 LBS./SQ.FT.
2. APPLIED PRESSURE = 150 P.S.I.+50% FOR WATER HAMMER OR SURGE
3. IF EARTH IN FIELD WILL NOT SUPPORT THE ABOVE EARTH PRESSURE, AREA OF BLOCK MUST BE INCREASED PROPORTIONATELY.
4. CONCRETE TO BE 3,000 P.S.I., PADOT CLASS A, 3" SLUMP
5. ALL MECHANICAL JOINT FASTENERS (I.E. BOLTS, NUTS, ETC.) SHALL BE FREE OF CONCRETE. ALL FITTINGS SHALL BE MECHANICAL JOINT AND HAVE MEG-A-LUG RETAINER GLANDS( OR EQUAL) INSTALLED TO MANUFACTURERS SPECIFICATIONS.
6. CONCRETE WITH BEARING AREAS GREATER THAN 3 S.F. TO HAVE W4 x W4 WELDED WIRE FABRIC.
7. ALL FITTINGS TO BE DUCTILE IRON WITH EPOXY LINING.

**FORCEMAIN HORIZONTAL THRUST BLOCKING**

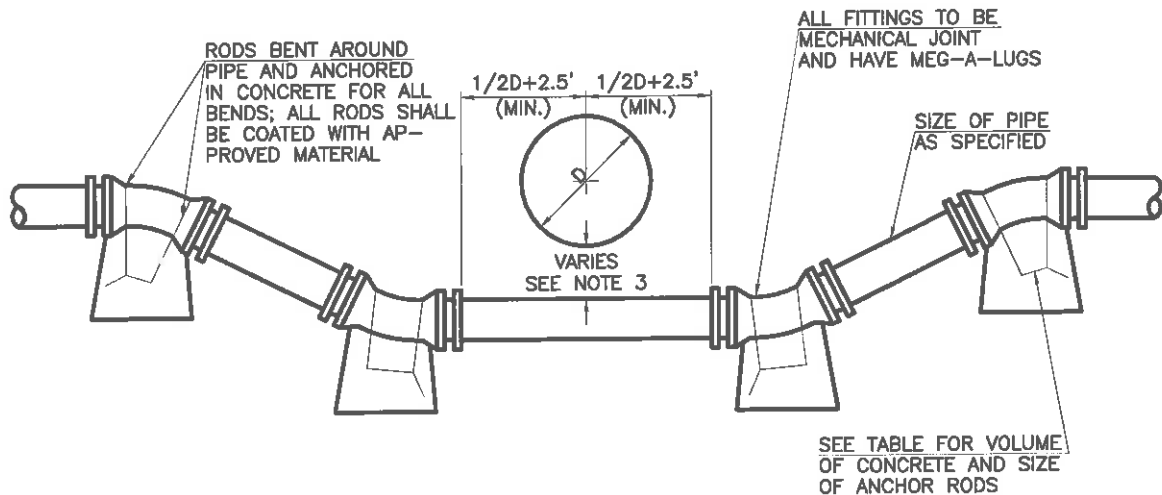
N.T.S.

DATE:	December 2014
FILE NAME:	SAN-04 Forcemain Horiz. Thrust Blocking.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
 Forcemain Horizontal Blocking (150 PSI)**

SAN-04

N:\PROJ\7A\11 Rules Regal\STD details\Sanitary\SAN-05 Vehicle Blk 150psi.dwg layout = Vertical Blocking Username = joehc Date = Jun 27, 2015 - 11:11am



PIPE SIZE	TOTAL PRESSURE IN POUNDS	VOLUME IN CUBIC FEET			SIZE AND No. OF ANCHORS		
		45' BENDS	22.5' BENDS	11.25' BENDS	45' BENDS	22.5' BENDS	11.25' BENDS
4	3900	20	10	5	1-#4	1-#4	1-#4
6	7200	37	19	9	2-#4	1-#4	1-#4
8	11800	60	31	15	2-#4	2-#4	1-#4
10	17100	87	45	22	2-#4	2-#4	2-#4
12	23700	122	62	31	2-#5	2-#4	2-#4
14	31400	160	82	41	2-#6	2-#4	2-#4
16	42000	214	110	55	2-#7	2-#5	2-#4
18	51800	264	135	67	2-#7	2-#5	2-#4
20	63000	322	164	82	2-#8	2-#6	2-#4
24	86000	440	224	112	2-#9	2-#7	2-#5

**NOTES:**

1. THE TABLE IS BASED ON 150# TEST PRESSURE.
2. REINFORCE ALL BLOCKS WITH #4 AT 6" E.F. MINIMUM 3" FROM ALL SIDES.
3. SEE "FORCEMAIN UNDER OBSTRUCTION" DETAIL.

**TYPICAL  
FORCEMAIN VERTICAL BLOCKING**

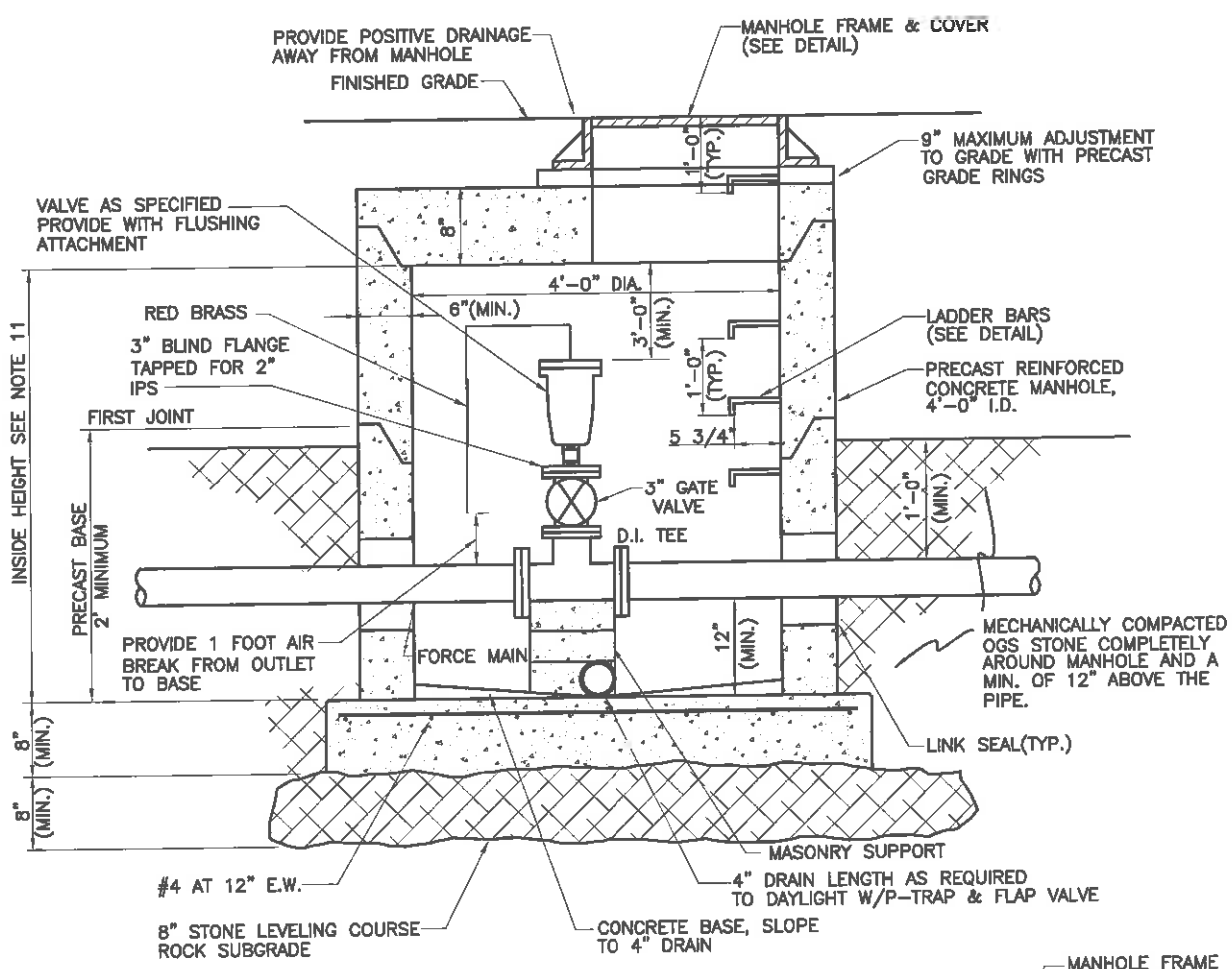
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-05 Vehicle Blk 150psi.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Forcemain Vertical Blocking (150 PSI)**

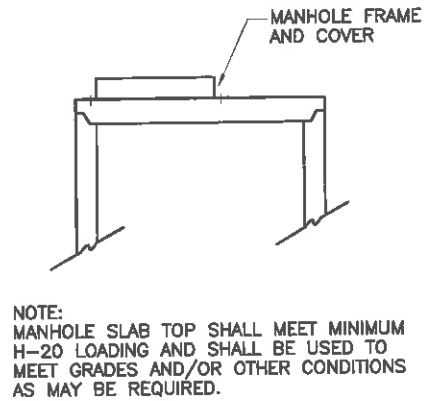
SAN-05

N:\PROJ\47A\11 Rules Rega\STD details\Sanitary\ SAN-06 Air-Vac. Release Assem STP2.dwg  
 Layout = Air Vacuum Release Assembly  
 User name = joehc  
 Date = Jan 27, 2015 - 11:13am



**NOTES :**

1. ALL CONCRETE TO BE CLASS A CONCRETE, 4000 PSI, 5%± 1% AIR ENTRAINED.
2. MANHOLE BARREL JOINTS TO BE SEALED WITH 1"Ø 2 FLEXIBLE BUTYL RUBBER JOINT SEALANT, USE 1/2"Ø FOR FRAME AND COVER.
3. FRAME AND COVER TO BE ANCHORED WITH 2-3/4" DIA. S.S. ANCHOR BOLTS SET PERMANENTLY ANCHORED INTO CONCRETE.
4. LIFTING HOLES TO BE POINTED WITH NON-SHRINK GROUT, AND LEFT WATERTIGHT, NEAT AND SMOOTH.
5. MAXIMUM ADJUSTMENT TO FINISHED GRADE USING PRECAST GRADE RINGS SHALL NOT EXCEED NINE INCHES (9").
6. PRECAST SECTIONS SHALL CONFORM TO ASTM C-478 AS REVISED.
7. COAT EXTERIOR OF ALL MANHOLE BARREL SECTIONS WITH APPROVED BITUMINOUS COATING.
8. CAST LADDER BARS INTO BARREL SECTIONS AND CONFORM TO ASTM C-478, AS REVISED.
9. PROVIDE ALL RED BRASS AND DUCTILE IRON PIPING, UNLESS NOTED.
10. PROVIDE ALL NECESSARY PIPE, FITTINGS AND/OR ADAPTORS TO MAKE A COMPLETE WATER TIGHT CONNECTION.
11. INSIDE HEIGHT TO BE SET BASED ON VALVE INSTALLED. ADJUST PIPE DEPTH AS REQUIRED. MINIMUM HEIGHT IS 6'-6".



MANHOLE SLAB TOP

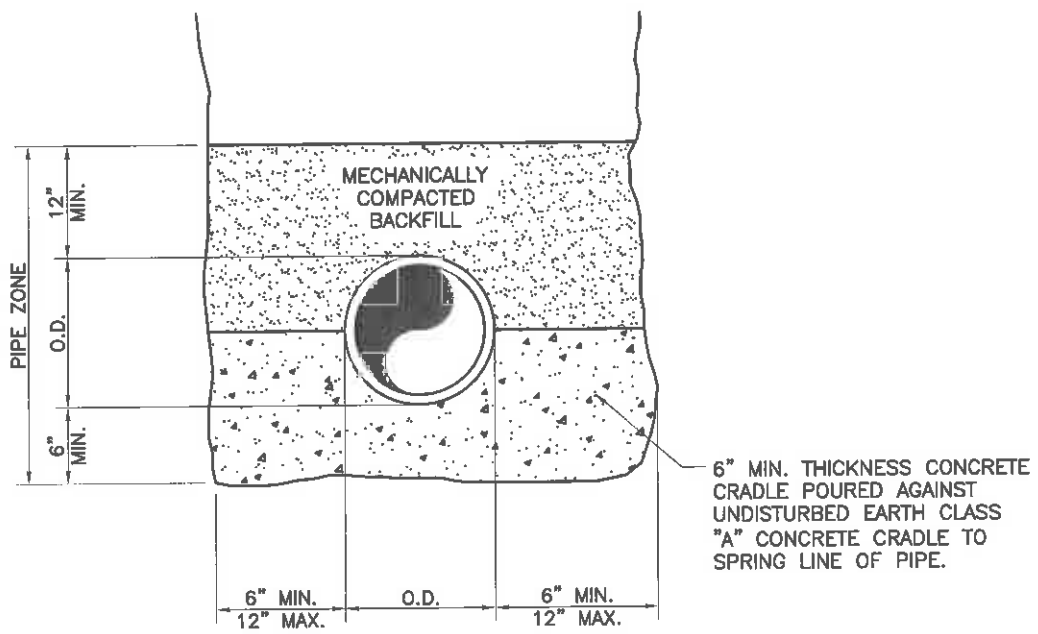
**AIR/VACUUM RELEASE ASSEMBLY**  
 N. T. S.

DATE:	December 2014
FILE NAME:	SAV06 Air-Vac. Release Assem STP2.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Air/Vacuum Release Assembly**  
 SAN-06



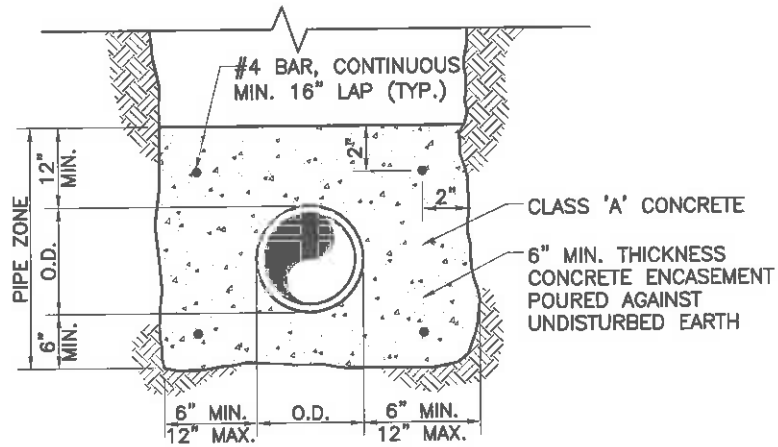
N:\PROJ\474\11 Rules Regn\STD details\Sanitary\ SAN-07 Conc. Cradle.dwg layout - Concrete Cradle Username = joehc Date = Jan 27, 2015 - 11:14am



**TYPICAL  
CONCRETE CRADLE**  
N. T. S.

**NOTE:**  
RESTRAIN PIPE AS REQUIRED TO  
PREVENT FROM FLOATING OR DISPLACEMENT.

DATE: December 2014	<b>Municipal Water Authority of Aliquippa Concrete Cradle</b>
FILE NAME: SAN-07 Conc. Cradle.dwg	
SCALE: N.T.S.	
<b>SAN-07</b>	



**TYPICAL  
CONCRETE ENCASEMENT**

N. T. S.

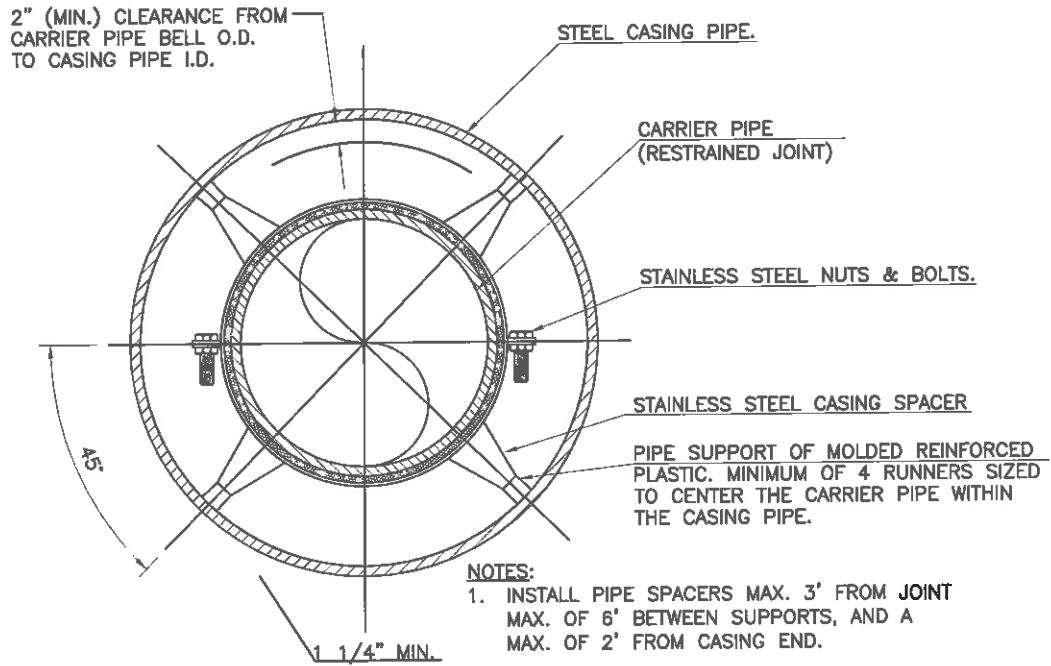
**NOTE:**  
RESTRAIN PIPE AS REQUIRED TO  
PREVENT FROM FLOATING OR DISPLACEMENT.

DATE:	December 2014
FILE NAME:	SAN-08 Conc. Encasement.dwg
SCALE:	N.T.S.

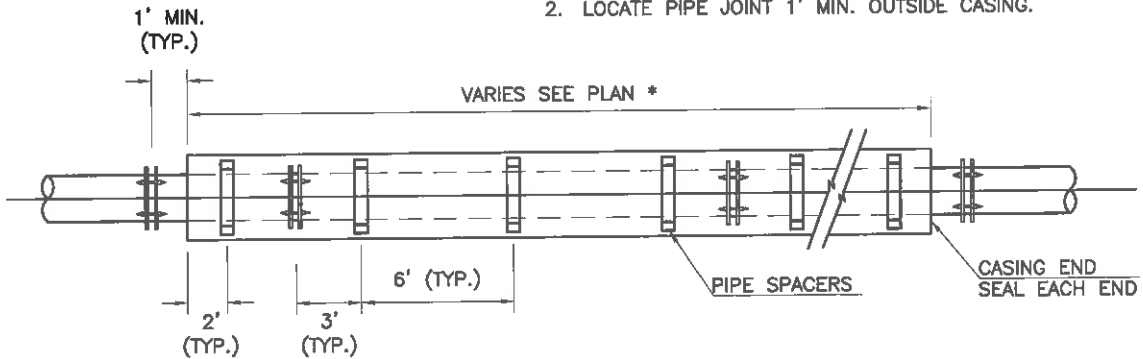
**Municipal Water Authority of Aliquippa  
Concrete Encasement**

SAN-08

K:\PROJ\47A\11 Rules Regs\STD details\Sanitary\SAN-09 Casing Pipe Assem.dwg layout = Casing Pipe Assembly Username = joahc Date = Jan 27, 2015 11:18am



- NOTES:**
1. INSTALL PIPE SPACERS MAX. 3' FROM JOINT MAX. OF 6' BETWEEN SUPPORTS, AND A MAX. OF 2' FROM CASING END.
  2. LOCATE PIPE JOINT 1' MIN. OUTSIDE CASING.



\* EXACT LENGTH OF CASING PIPE TO BE DETERMINED IN THE FIELD.

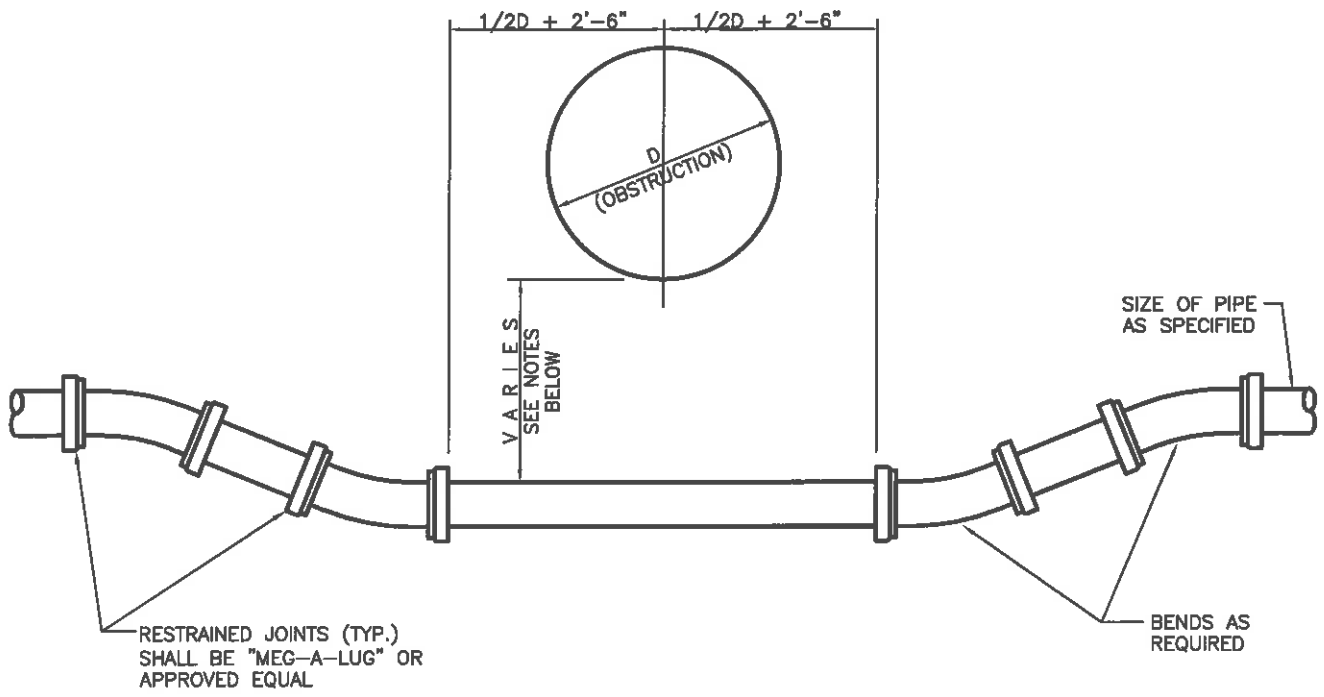
**CASING PIPE ASSEMBLY DETAIL**

N. T. S.

DATE:	December 2014
FILE NAME:	SAN-09 Casing Pipe Assem.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Casing Pipe Assembly**  
 SAN-09

N:\PROJ\474\11 Rules Rega\STD details\Sanitary\ SAN-10 Forcemain Under Obstruction.dwg layout = Forcemain Under Obstruction.dwg Username = joshc Date = Jan 27, 2015 - 11:50am



RESTRAINED JOINTS (TYP.) SHALL BE "MEG-A-LUG" OR APPROVED EQUAL

SIZE OF PIPE AS SPECIFIED

BENDS AS REQUIRED

**NOTES:**

1. ALL PIPE SHALL BE DUCTILE IRON CLASS 52 SELF RESTRAINED JOINT FOR CREEK CROSSINGS WITH A MINIMUM OF 3'-0" COVER FROM THE STREAM BOTTOM TO THE TOP OF THE PIPE AND SHALL EXTEND A MINIMUM OF 10'-0" BEYOND THE TOP OF BANK ON EACH SIDE OF STREAM.
2. FOR CROSSING UNDER EXISTING PIPE OR OBSTRUCTIONS A MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED FROM THE BOTTOM OF THE EXISTING PIPE TO THE TOP OF THE PROPOSED FORCEMAIN.
3. FOR CROSSING UNDER EXISTING PIPE THE CONTRACTOR MAY ELIMINATE FITTINGS, IF DEPTH CAN BE OBTAINED BY DEFLECTING PIPE JOINTS WITHIN ALLOWABLE LIMITS AND IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
4. SEE "FORCEMAIN VERTICLE BLOCKING" DETAIL.

**FORCEMAINS UNDER OBSTRUCTIONS**

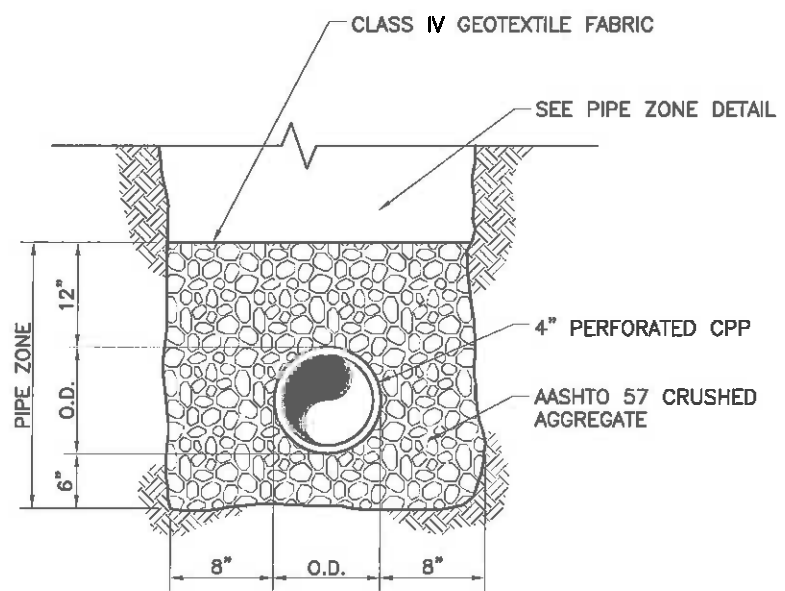
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-10 Forcemain Under Obstruction.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Forecmain Under Construction**

SAN-10

N:\PROJ\47A\11 Rules Rega\STD details\Scrubby\ SAN-11 Trench Drain.dwg layout = Trench Drain Username = joshc Date = Jan 27, 2015 - 11:23am

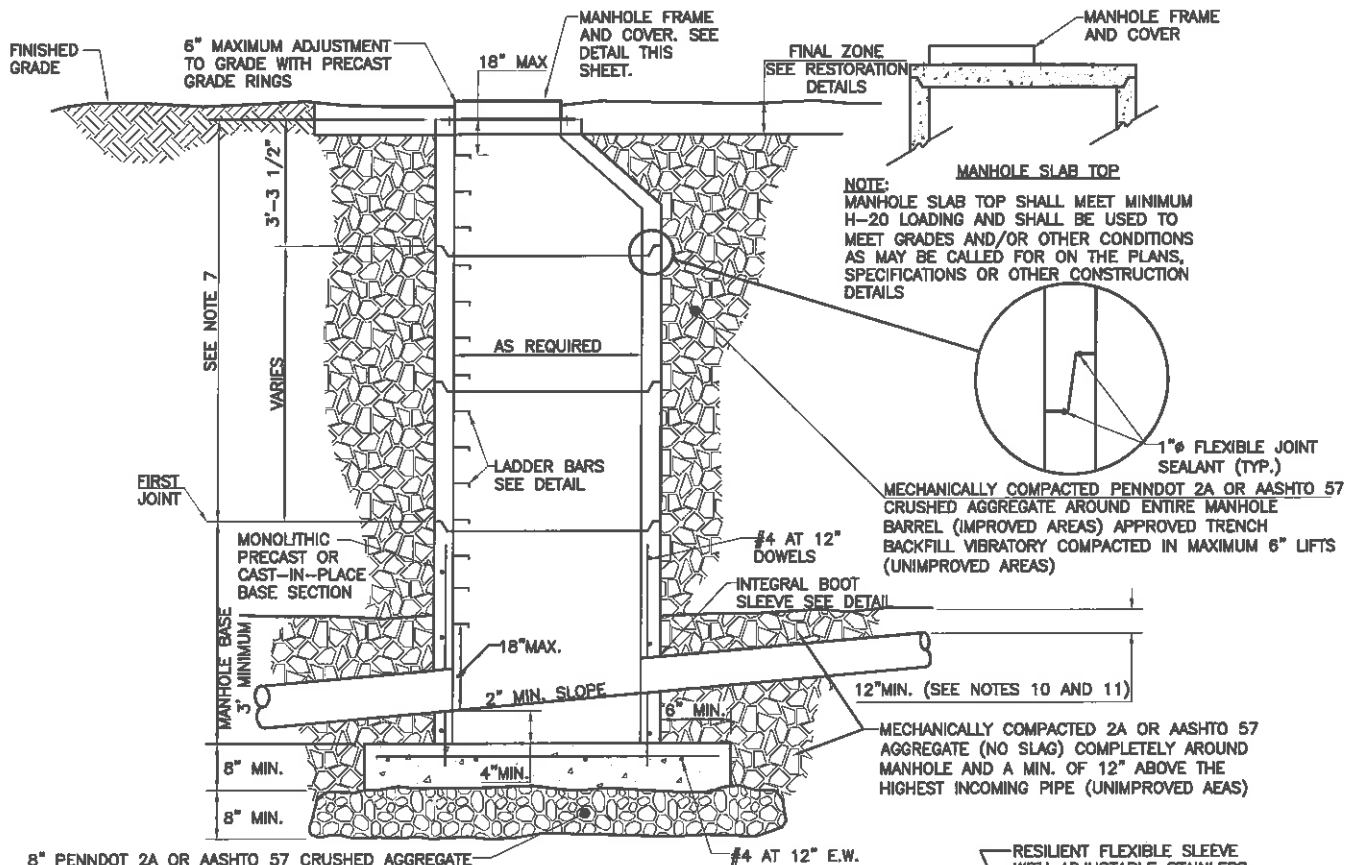


**TYPICAL  
TRENCH DRAIN**  
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-11 Trench Drain.dwg
SCALE:	N.T.S.

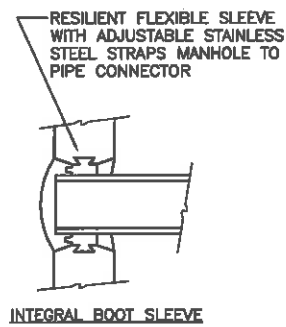
**Municipal Water Authority of Aliquippa**  
**Trench Drain**  
SAN-11

N:\PROJ\474\11 Rules Rega\STD details\Sanitary\ SAN-12 Precast Conc. Manhole & Slab Top.dwg layout = Precast Concrete Manhole And Slab Top Username = jashc Date = Jan 27, 2015 - 11:51am



- NOTES:**
1. ALL CONCRETE TO BE CLASS AAA CONCRETE, 4500 PSI, 5% ± 1% AIR ENTRAINED.
  2. SEAL MANHOLE BARREL JOINTS WITH 2- 1" FLEXIBLE BUTYL RUBBER JOINT SEALANT, USE 1/2" FOR FRAME AND COVER.
  3. ANCHOR FRAME AND COVER WITH 2-3/4" DIA. S.S. ANCHOR BOLTS SET PERMANENTLY INTO CONCRETE.
  4. POINT LIFTING HOLES WITH NON-SHRINK GROUT, WATERTIGHT, NEAT AND SMOOTH.
  5. MAXIMUM ADJUSTMENT TO FINISHED GRADE USING PRECAST GRADE RINGS IS SIX INCHES (6").
  6. CONFORM PRECAST SECTIONS TO ASTM C-478 AS REVISED.
  7. IF THIS DIMENSION IS LESS THAN 3'-3" USE PRECAST SLAB TOP DESIGNED TO MEET LOAD CONDITIONS (H-20 MIN.)
  8. COAT EXTERIOR OF ALL MANHOLE BARREL SECTIONS WITH APPROVED BITUMINOUS COATING.
  9. CAST LADDER BARS INTO BARREL SECTIONS AND CONFORMING TO ASTM C-478, AS REVISED.
  10. WHERE MANHOLES ARE INSTALLED IN IMPROVED AREAS, BACKFILL THE ENTIRE EXCAVATED AREA WITH MECHANICALLY COMPACTED PENNDOT 2A OR AASHTO 57 CRUSHED AGGREGATE (NO SLAG).
  11. WHERE MANHOLES ARE CONSTRUCTED IN UNIMPROVED AREAS, BACKFILL THE ENTIRE EXCAVATED AREA WITH MECHANICALLY COMPACTED PENNDOT 2A OR AASHTO 57 CRUSHED AGGREGATE (NO SLAG). FROM THE BOTTOM OF THE EXCAVATED AREA TO 12 INCHES ABOVE THE HIGHEST PIPE ENTERING THE MANHOLE.

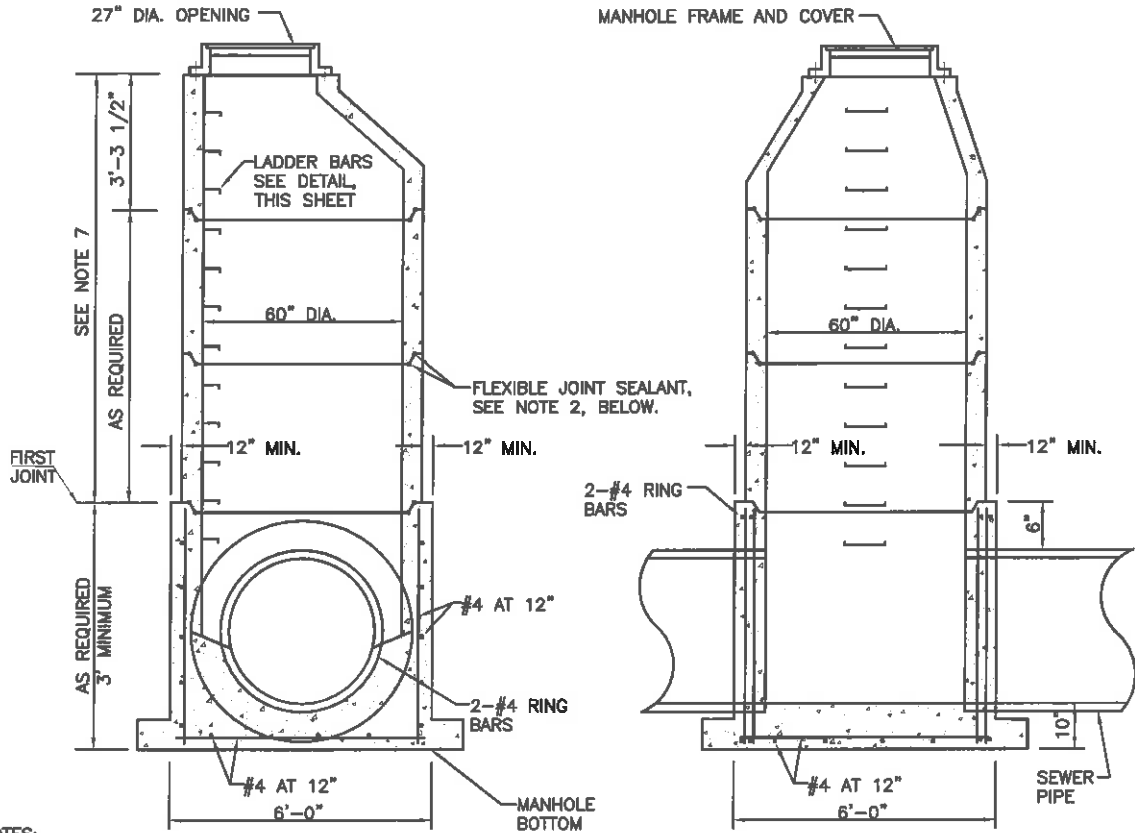
**TYPICAL  
PRECAST CONCRETE SANITARY MANHOLE AND SLAB TOP**  
N. T. S.



DATE:	December 2014
FILE NAME:	SAN-12 Precast Conc. Manhole & Slab Top.dwg
SCALE:	N.T.S.

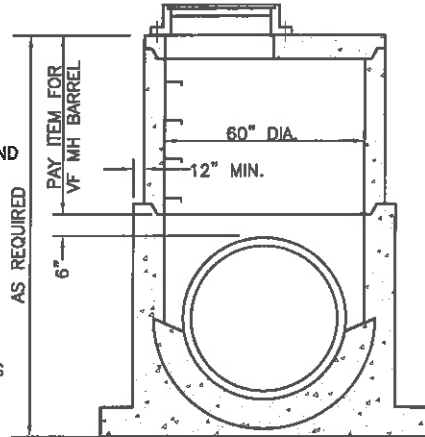
**Municipal Water Authority of Aliquippa**  
**Precast Concrete Sanitary MH and Slab Top**  
SAN-12

N:\PROJ\474\11 Rules Rega\STD details\Sanitary SAN-13 Cast In Place or Precast Conc. Manhole.dwg layout = Cast-In-Place Or Precast Concrete 5ft. Manhole Username = jeehc Date = Jan 27, 2015 -- 11:25am



**NOTES:**

1. ALL CONCRETE TO BE CLASS 'AAA' CONCRETE, 4500 PSI, 5% ± 1% AIR ENTRAINED.
2. SEAL MANHOLE BARREL JOINTS WITH 2- 1"Ø FLEXIBLE BUTYL RUBBER JOINT SEALANT, USE 1/2"Ø FOR FRAME AND COVER.
3. ANCHOR FRAME AND COVER WITH 2-3/4" DIA. S.S. ANCHOR BOLTS SET PERMANENTLY ANCHORED INTO CONCRETE.
4. POINT LIFTING HOLES WITH NON-SHRINK GROUT, AND LEFT WATERTIGHT, NEAT AND SMOOTH.
5. MAXIMUM ADJUSTMENT TO FINISHED GRADE USING PRECAST GRADE RINGS SHALL NOT EXCEED SIX INCHES (6").
6. CONFORM PRECAST SECTIONS TO ASTM C-478 AS REVISED.
7. IF THIS DIMENSION IS LESS THAN 3'-3" USE PRECAST SLAB TOP DESIGNED TO MEET LOAD CONDITIONS.(H=20 MIN).
8. COAT EXTERIOR OF ALL MANHOLE BARREL SECTIONS WITH APPROVED BITUMINOUS COATING.
9. CAST LADDER BARS INTO BARREL SECTIONS AND SHALL CONFORM TO ASTM C-478, AS REVISED.
10. WHERE MANHOLES ARE INSTALLED IN IMPROVED AREAS, THE ENTIRE EXCAVATED AREA SHALL BE BACKFILLED WITH PENNDOT 2A OR AASHTO 57 CRUSHED AGGREGATE.
11. WHERE MANHOLES ARE CONSTRUCTED IN UNIMPROVED AREAS, BACKFILL THE ENTIRE EXCAVATED AREA WITH PENNDOT 2A OR AASHTO 57 CRUSHED AGGREGATE FROM THE BOTTOM OF THE EXCAVATED AREA TO 12 INCHES ABOVE THE HIGHEST PIPE ENTERING THE MANHOLE.
12. PROVIDE FLANGED BASE.



**CAST-IN PLACE OR PRECAST CONCRETE  
5' DIAMETER SANITARY MANHOLE**

N. T. S.

DATE:	December 2014
FILE NAME:	Sanitary Cast In Place or Precast Conc. Manhole.dwg
SCALE:	N.T.S.

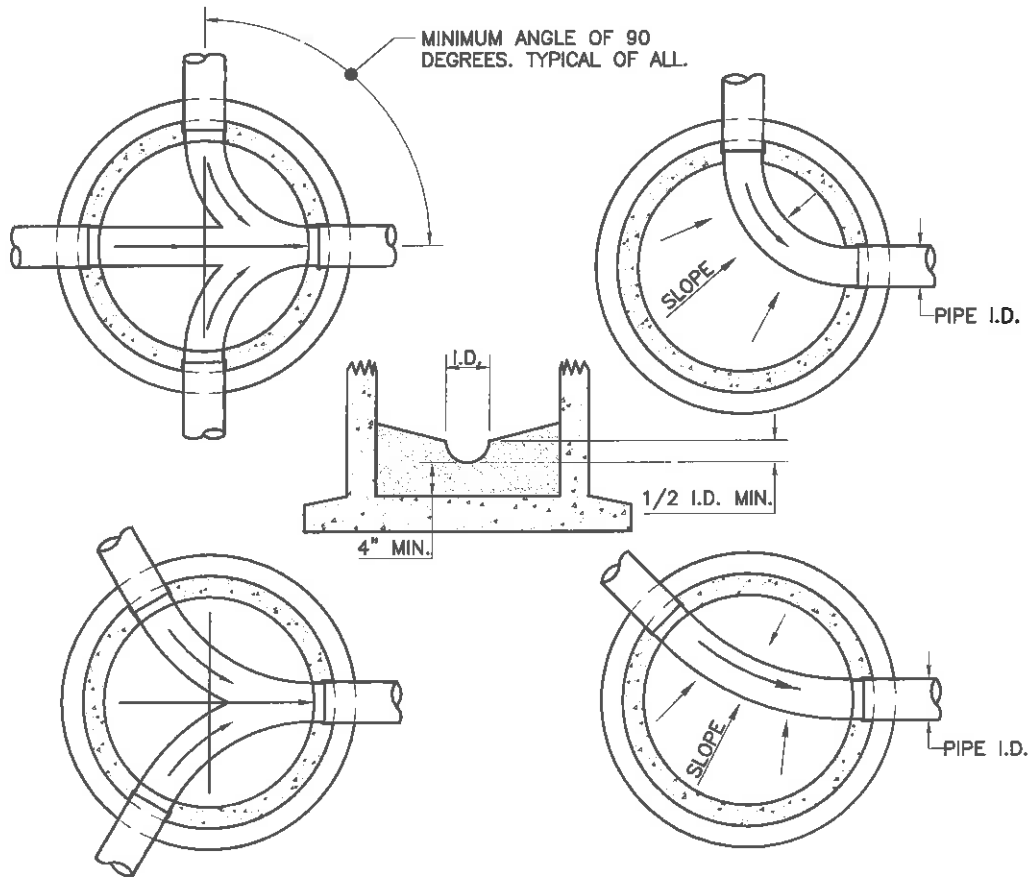
**Municipal Water Authority of Aliquippa  
CIP or Precast Concrete 5' Diameter MH**

SAN-13





N:\PROJ\47A\11 Rules Regs\STD details\Sanitary\SAN-15 Manhole Chann.dwg layout = Manhole Channels Userame = jshhc Date = Jan 27, 2015 - 11:26am



**NOTES:**

1. CHANNELS TYPICAL, NUMBER AND LOCATION TO MEET FIELD CONDITIONS.
2. CHANNELS TO BE SEMI-CIRCULAR IN SECTION.
3. SLOPE MANHOLE FLOOR TO CHANNEL FOR DRAINAGE.
4. USE CLASS 'AAA' CONCRETE TO FORM CHANNELS AND HAVE A MINIMUM DEPTH OF 4 INCHES.
5. PROVIDE SMOOTH FLOAT FINISH. PROVIDE UNIFORM RADIUS.
6. PRE-POURED INVERTS PROHIBITED. ALL INVERTS TO BE FIELD POURED.

**TYPICAL  
MANHOLE CHANNELS**

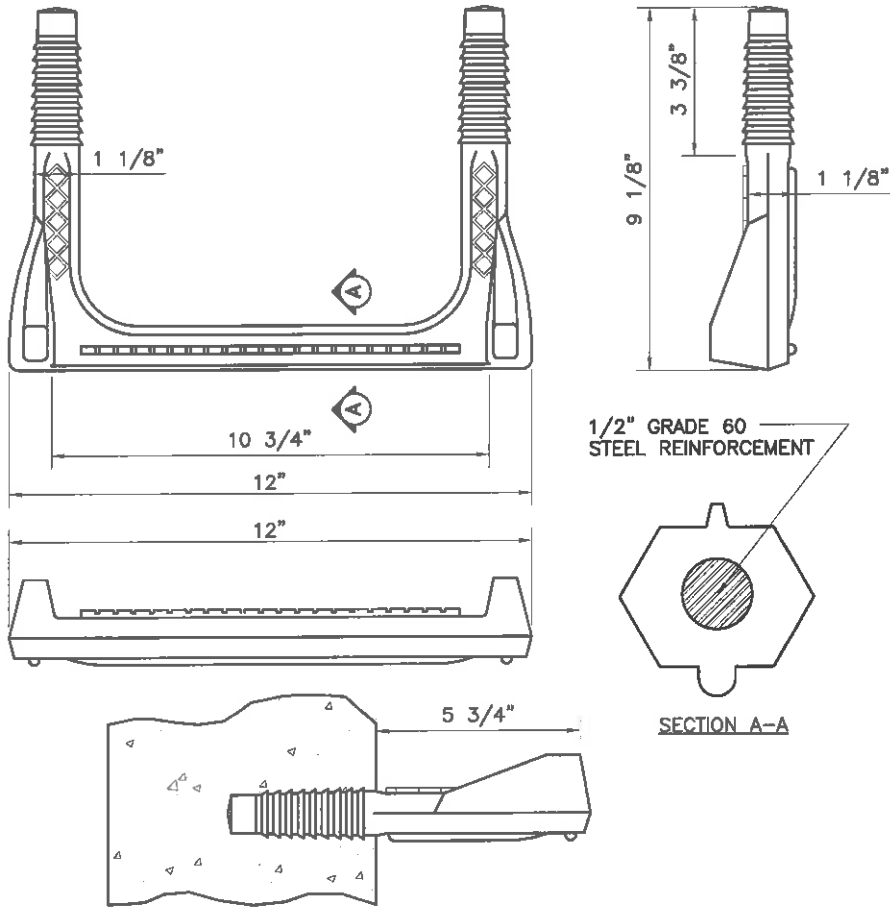
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-15 Manhole Chann.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Manhole Channels**

SAN-15

N:\PROJ\47\11\_Rules Regs\STD\_details\Sanitary\_SAN-16 Ladder Bars for Manhole.dwg layout = Ladder Bars For Manhole Userame = jashc Date = Jan 27, 2015 - 11:28am



**TYPICAL  
LADDER BARS FOR MANHOLE**

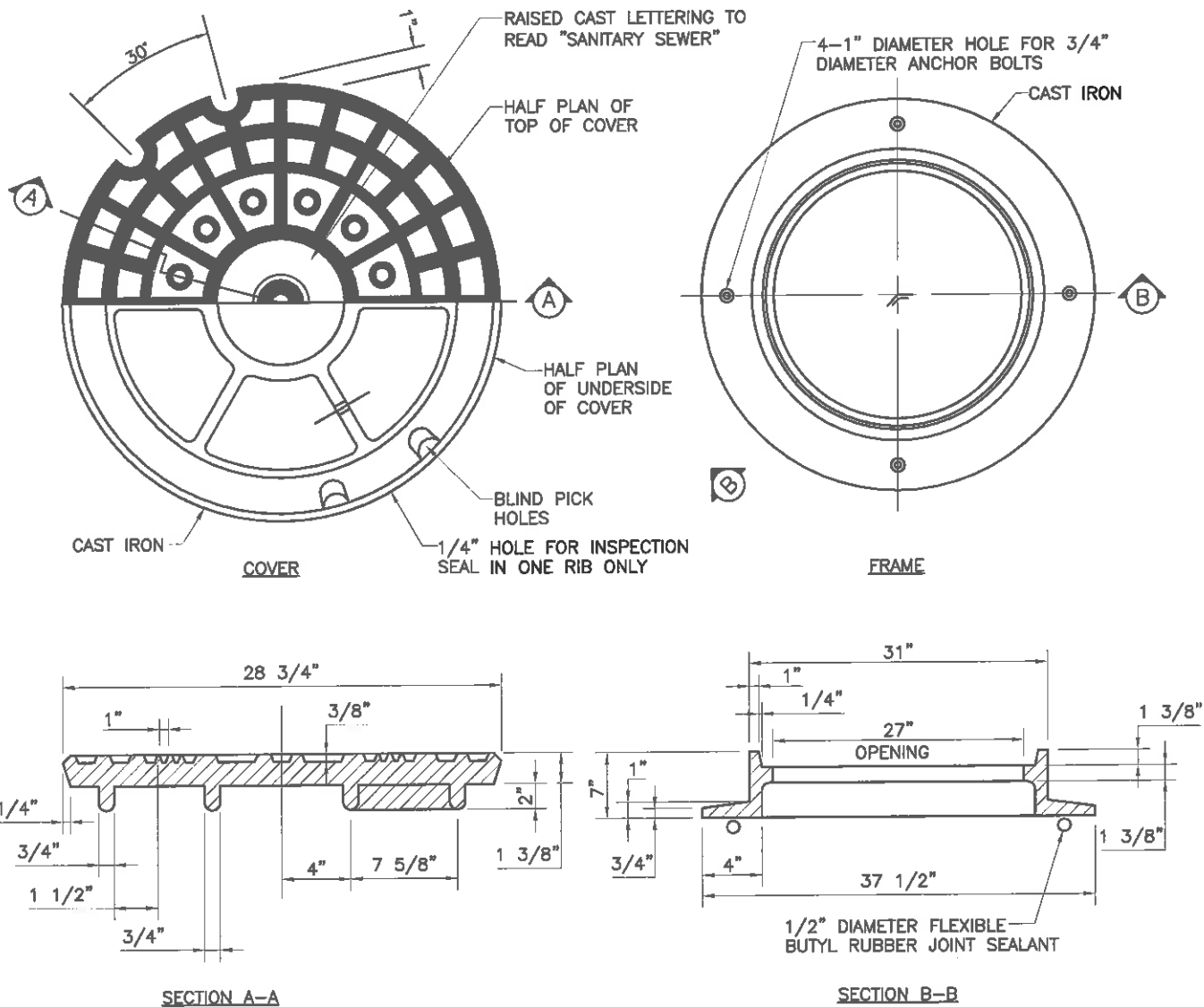
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-16 Ladder Bars for Manhole.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Ladder Bars for Manhole**

SAN-16

N:\PROJ\474\11 Rules Reg\STD details\Sanitary\ SAN-17 Sl. Manhole F&C.dwg layout = Standard Manhole Frame And Cover Use name = joehc Date = Jan 27, 2015 - 11:30am



**TYPICAL  
STANDARD SANITARY MANHOLE FRAME AND COVER**

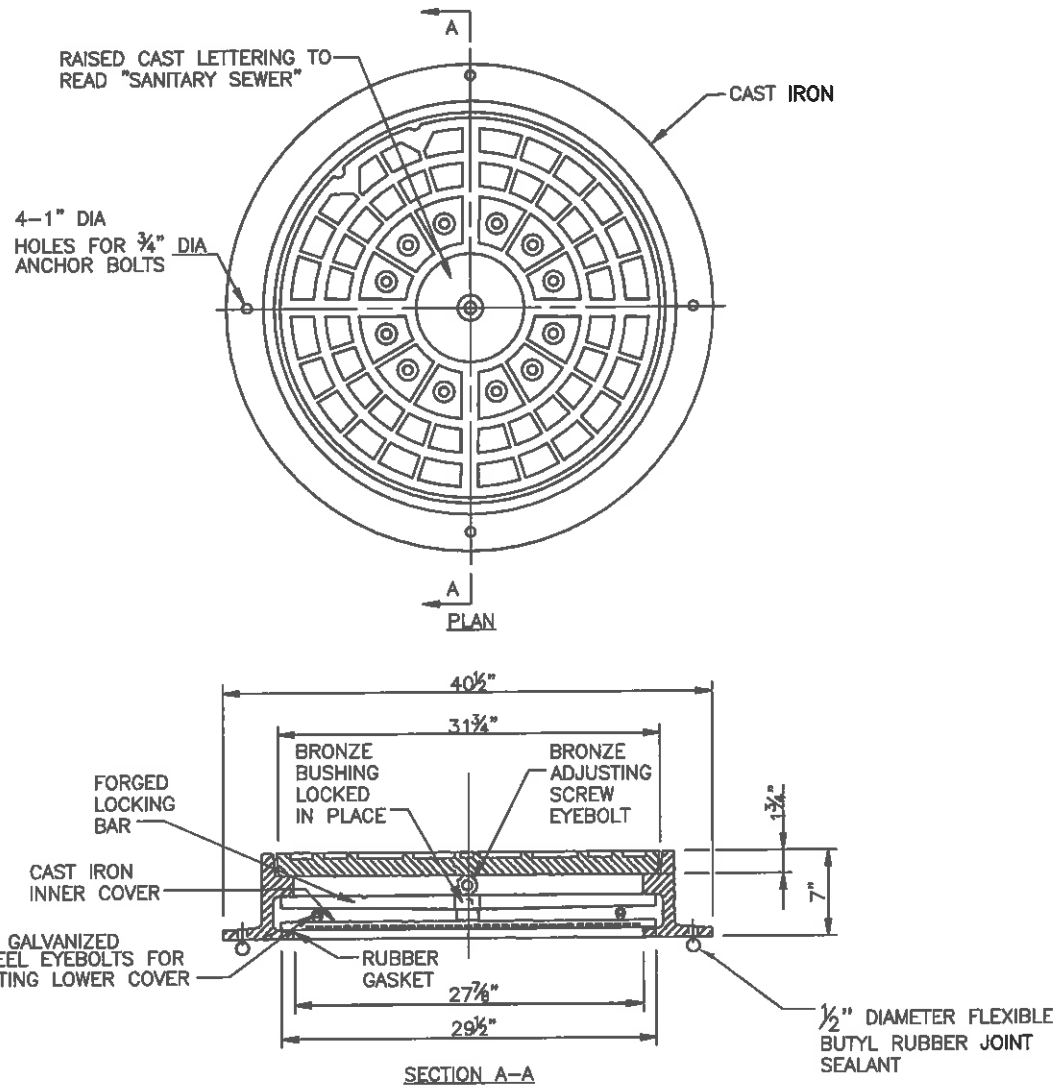
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-17 Sl. Manhole F&C.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Sanitary Manhole Frame and Cover**

SAN-17

H:\PROJ\47A\11 Rules Regs\STD details\Sanitary\SAN-18 W.T. Manhole F&C Lock Bar Option.dwg    Layout = Watertight Manhole Frame And Cover    Username = jcahc    Date = Jan 27, 2015 - 11:31am



- NOTES:**
1. ALL CONTACT SURFACES MACHINED.
  2. PROVIDE SECURITY SADDLE OVER EYEBOLT IF SPECIFIED.
  3. REFER TO STANDARD SANITARY MANHOLE FRAME AND COVER DETAIL FOR DETAIL ON COVER.

**WATERTIGHT SANITARY MANHOLE FRAME AND COVER**

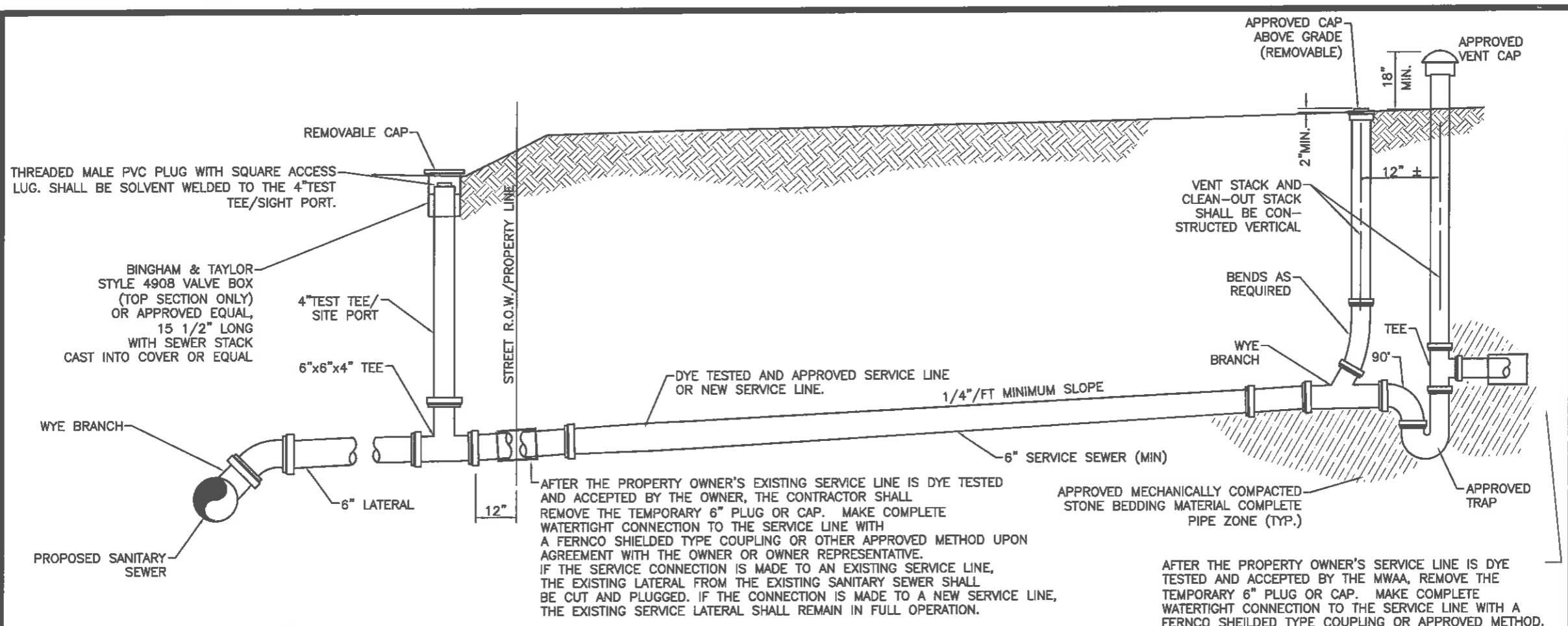
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-18 W.T. Manhole F&C Lock Bar Option.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Watertight Sanitary MH Frame and Cover**

SAN-18

M:\PROJ\474\11 Rules Rega\STD details\Sanitary SAN-19 Typical Sight Tee.dwg User:msm Date: Jan 27, 2015 4:32pm



**NOTES:**

1. PVC PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034-SDR 26 AND ASTM D-3212 JOINTS.
2. PRIOR TO RECONNECTION TO THE EXISTING SERVICE LATERAL THE CONTRACTOR SHALL DYE TEST ROOF DOWN SPOUTS AND STORM WATER DRAIN LINES AS DETERMINED BY THE ENGINEER OR MWA REPRESENTATIVE AND AT NO ADDITIONAL COST TO THE INSTALLATION.
3. THE CONTRACTOR SHALL SCHEDULE ALL HOUSE LATERAL CONNECTIONS WITH THE MWA REPRESENTATIVE AND PROPERTY OWNER PRIOR TO START OF CONSTRUCTION ON PRIVATE PROPERTY.

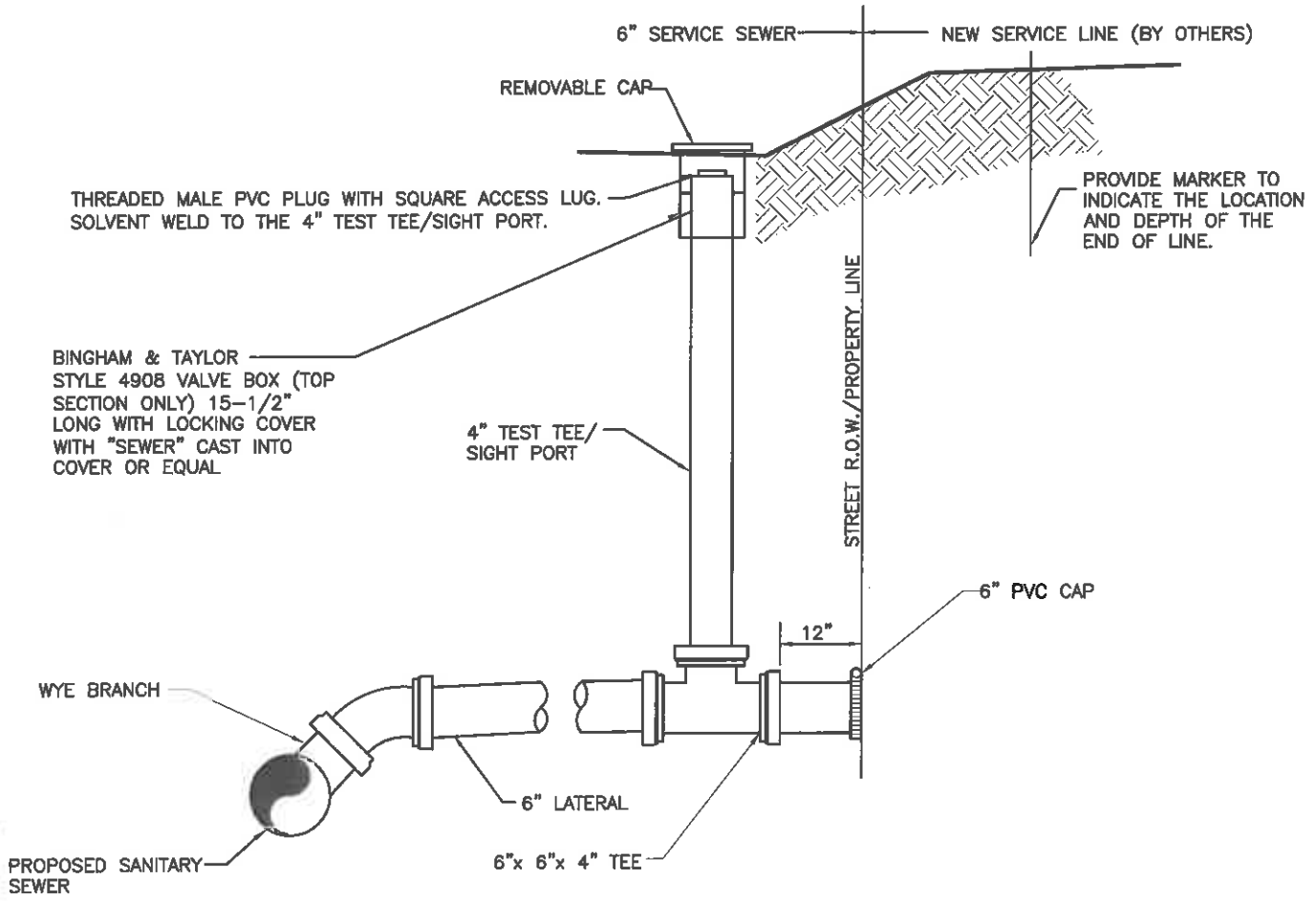
**TYPICAL SIGHT TEE, SERVICE LINE CLEANOUT AND VENT**

N. T. S.

DATE:	November 2013
FILE:	MSM-Typical Sight Tee.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**Typical Sight Tee**  
 SAN-19

N:\PROJ\47A\11 Rules Reg\STD details\Sanitary\ SAN-20 New WYE Serv. Lat. Site T.dwg layout = Wye Connection Service Lat. Sight Tee (New Service) Username = joalc Date = Jan 27, 2015 - 11:37am



**NOTES:**

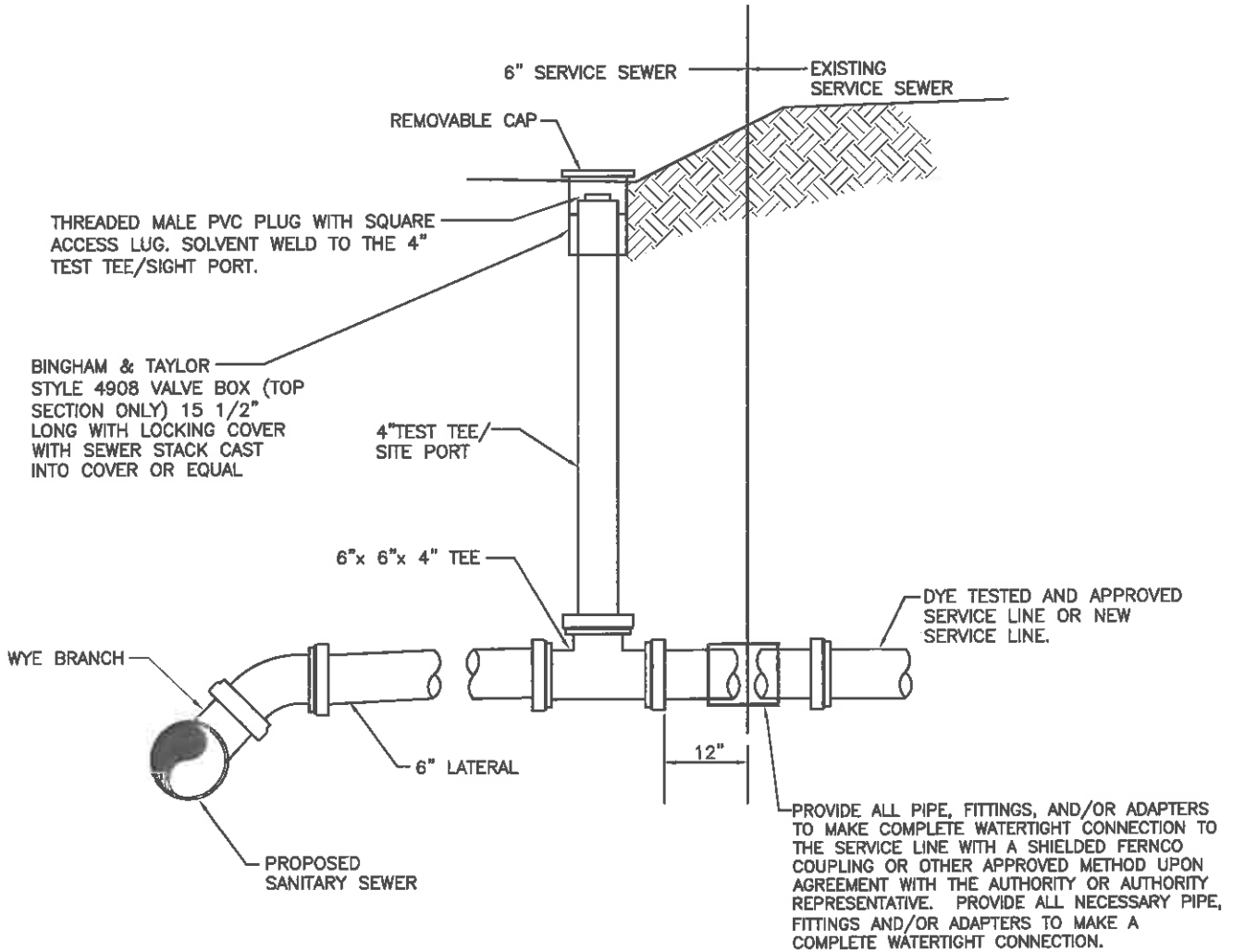
1. CONFORM PVC PIPE AND FITTINGS TO THE REQUIREMENTS OF ASTM D-3034-SDR 26 AND ASTM D-3212 JOINTS.
2. CONSTRUCT ALL LATERALS AT A MINIMUM SLOPE OF TWO PERCENT(2%).
3. INSTALL ALL LATERALS ACCORDING TO THE TRENCH AND PIPE ZONE DETAIL.
4. THE CONTRACTOR TO COORDINATE PLACEMENT OF WYE CONNECTION, SERVICE LATERAL AND SIGHT TEE WITH THE PROPERTY OWNER AND THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.

**TYPICAL**  
**WYE CONNECTION, SERVICE LATERAL**  
**SIGHT TEE DETAIL**  
**N. T. S.**

DATE:	December 2014
FILE NAME:	SAN-20 New WYE Serv. Lat. Site T.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa**  
**New WYE Service Lateral Site Tee**  
 SAN-20

N:\PROJ\474\11 Rules Rego\STD detolla\Sanitary\ SAN-21 Ex. WYE Serv. Lat. Site Tee T.dwg layout = Wye Connection Service Lateral Sight Tee (Existing Service) Username = joehc Date = Jan 27, 2015 - 11:38am



**WYE CONNECTION, SERVICE LATERAL, AND SIGHT TEE**

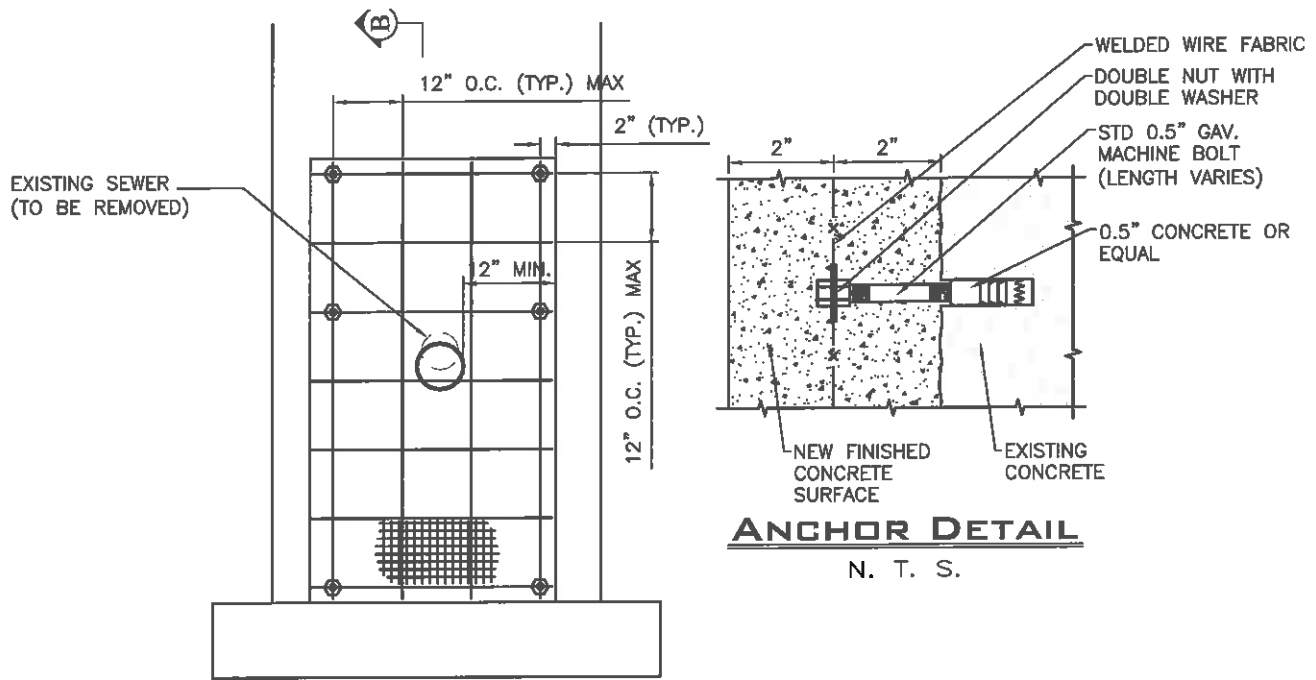
N. T. S.

DATE:	December 2014
FILE NAME:	SAN-21 Ex. WYE Serv. Lat. Site Tee T.dwg
SCALE:	N.T.S.

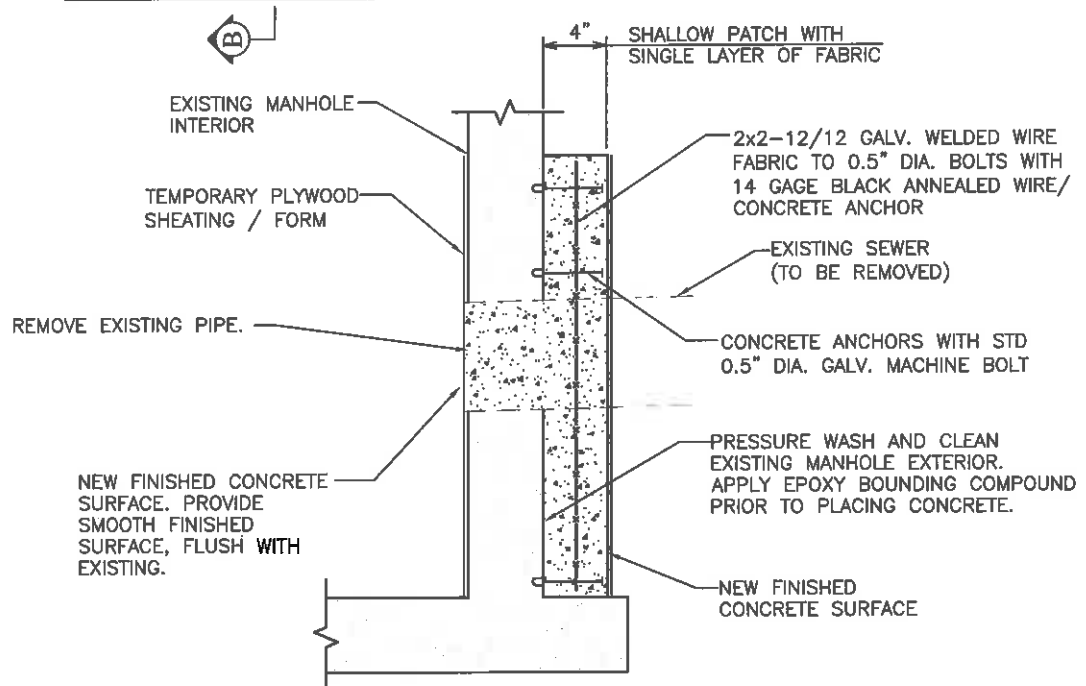
**Municipal Water Authority of Aliquippa  
Existing WYE Service Lateral Site Tee**

SAN-21

N:\PROJ\474\11 Rules Regs\STD details\Sanitary\ SAN-22 Sewer Term. Manhole Repair.dwg Layout = Sewer Termination Manhole Repair Username = jcoffc Date = Jan 27, 2015 - 11:39am



**ANCHOR DETAIL**  
N. T. S.



**SECTION B-B (TYP.)  
SEWER TERMINATION  
MANHOLE REPAIR DETAIL**

N. T. S.

DATE:	December 2014
FILE NAME:	SAN-22 Sewer Term. Manhole Repair.dwg
SCALE:	N.T.S.

**Municipal Water Authority of Aliquippa  
Sewer Termination Manhole Repair**

SAN-22



# APPLICATION

- DOMESTIC
- COMMERCIAL
- INDUSTRIAL
- PUBLIC

Aliquippa, PA: \_\_\_\_\_, 20\_\_

(CHECK APPROPRIATE CLASSIFICATION)

From: \_\_\_\_\_

TENANT

OWNER

### To the MUNICIPAL WATER AUTHORITY OF ALIQUIPPA, Aliquippa, PA

The undersigned hereby make(s) application for supply of water at \_\_\_\_\_ premises known as No. \_\_\_\_\_ (Street/Avenue) \_\_\_\_\_

\_\_\_\_\_ to be occupied as \_\_\_\_\_ (insert

Specific Use); and request(s) the said Authority to make connection with its distribution system, and in consideration for its doing so, agree(s) with the said Authority, its successors and assigns, to take such supply of water as long as water is distributed through its mains, and to pay for the same in accordance with the schedule of rates adopted by said Authority and further agree to conform to the Rules and Regulations adopted from time to time by said Authority (Rules and Regulations now effective being on file in said Authority's office).

Witness: \_\_\_\_\_

Name: \_\_\_\_\_

Account Number: \_\_\_\_\_

Address: \_\_\_\_\_

Service Order: \_\_\_\_\_

Deposit Amount: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Deposit Reference: \_\_\_\_\_

Personal ID#: \_\_\_\_\_

# MUNICIPAL WATER AUTHORITY OF ALIQUIPPA

160 HOPEWELL AVENUE  
ALIQUIPPA, PA 15001  
724-375-5225

## OWNER'S AUTHORIZATION

We/I, \_\_\_\_\_ (name), Owner(s) of premise  
located at \_\_\_\_\_ (address), do constitute  
and appoint \_\_\_\_\_ (Name of tenant or agent),  
and authorize him/her to make written application to the **MUNICIPAL WATER AUTHORITY OF  
ALIQUIPPA**, for water and/or sewer services to the above premise owned by me/us and agree  
to abide by and be subject to the rates, rules, and regulations of the **MUNICIPAL WATER  
AUTHORITY OF ALIQUIPPA**. A copy of the rates, rules, and regulations are available for  
inspection at the Authority's Office.

### OWNERS ARE RESPONSIBLE FOR THE TENANT'S UNPAID BILLS WITH THE AUTHORITY

\_\_\_\_\_  
Witness:

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Account Number:

\_\_\_\_\_  
Address:

\_\_\_\_\_  
Service Order #

\_\_\_\_\_  
Tenant Application Date

\_\_\_\_\_  
Telephone:

\_\_\_\_\_  
Tenant Deposit Reference Number:

\_\_\_\_\_  
Date:

**MUNICIPAL WATER AUTHORITY OF ALIQUIPPA  
APPLICATION FOR FIRE, CONNECTION TO SYSTEM AND/OR EXTENSIONS**

ADDRESS: \_\_\_\_\_ PHONE / FAX \_\_\_\_\_

\_\_\_\_\_ DATE: \_\_\_\_\_

TENANT / OWNER: \_\_\_\_\_

SERVICE (PREMISE) ADDRESS: \_\_\_\_\_

STRUCTURE TYPE: \_\_\_\_\_

TENANT / OWNER TELEPHONE NUMBER: \_\_\_\_\_

OWNER NAME: \_\_\_\_\_

OWNER TELEPHONE NUMBER: \_\_\_\_\_

OWNER ADDRESS: \_\_\_\_\_

CONSULTANTS NAME AND TELEPHONE NUMBER: \_\_\_\_\_

The Applicant (Owner) is requesting to construct:

- PRIVATE FIRE PROTECTION SERVICE (ARTICLE VI)
- CONNECTION(S) TO SYSTEM (ARTICLE X)
- EXTENSION(S) OF SYSTEM (ARTICLE XI)

DETAILED DESCRIPTION OF PROJECT OR REQUEST: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I hereby acknowledge by my signature that I have read and fully understand the Municipal Water Authority of Aliquippa Rules and Regulations applicable to this Application.

Signature of Owner: \_\_\_\_\_

Date: \_\_\_\_\_