RULES AND REGULATIONS
GOVERNING APPLICATIONS TO
THE LOWER TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

FOR THE CONSTRUCTION OF COMPREHENSIVE

WATER SYSTEMS

IN THE TOWNSHIP OF LOWER

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June 3, 2009
The Lower Township Municipal Utilities Authority
2900 Bayshore Road
Villas, New Jersey 08251

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LIST OF EXHIBITS

I INTRODUCTION AND PURPOSE

These Rules and Regulations have been established to facilitate the review of applications to the Lower Township Municipal Utilities Authority for the construction of comprehensive water systems.

It shall be the duty of the Lower Township Municipal Utilities Authority to promote the distribution and treatment of potable water. It is in the public interest that the Lower Township Municipal Utilities Authority foster and promote the proper installation of comprehensive water systems, appurtenances and/or treatment plants. It is in the public interest that the Lower Township Municipal Utilities Authority foster and promote all reasonable means for the treatment of water in circumstances that are considered environmentally safe.

II DEFINITIONS

As used in these Rules and Regulations, unless a different meaning clearly appears from the context, the following words shall have the following meaning:

Applicant	Means property owner or property owners, or if owned by a company, a proper official of said company; or an authorized agent of the owner, certified to the Authority as such; making application to the Authority for review and approval of plans and specifications for a comprehensive water distribution system and/or connection to the water distribution system.
As Built	Means a record of the plans and details of the facilities as constructed.
Attorney	Means Attorney appointed by the Authority to handle legal affairs associated with the Authority.
Authority	Means the Lower Township Municipal Utilities Authority, in the County of Cape May, State of New Jersey.
Authority Engineer	Means a licensed professional engineer retained or employed by the Authority.
Building Lateral	Shall be defined as the pipe and appurtenances between the building and the shut off valve located at or near the street curb or near the property line.
Easement	The right to use the land of another for a specific purpose not inconsistent with the general property rights of the owner.
Major Subdivision	Means any subdivision classified as such in all municipal ordinances.
Minor Subdivision	Means any subdivision classified as such in all municipal ordinances.
Multi-Family Structure	Means any residence designed, intended for occupancy by or occupied by two or more families.
Non-Residential Structure	Means any building designed or intended for use or occupancy for any purpose other than residential.
Plumbing Subcode Inspector	Means the person duly designated by the Township as the subcode official administering the "State Uniform Construction Code Act."
Service Connection	LTMUA responsibility shall be defined as the pipe and appurtenances between the Authority’s street main and the Authority's curb stop/meter pit or near the property line shut off valve located at or near the street curb or near the property line. The property owner shall be responsible from the curb stop/meter pit to the structure.

Water Main	Means a water pipe in a public street or easement other than a service connection.
Water Master Plan	Means the plan for the water system facilities of the Authority together with any supplements, amendments, alterations or additions thereto or hereafter in existence as approved by the Authority.
Water System	Means all water mains or lines, service connections and all appurtenances necessary and incidental to the distribution of water, owned by the Authority.

III GENERAL RULES OF APPLICABILITY

1. No person except those authorized by the Authority shall be permitted to make connections with or to any water main. All service connections will in every case become the property of the Authority. The property owner remains solely responsible for all building lateral pipes.

2. The Authority shall have the right at all reasonable hours of the day to have access to the water meters upon premises or within the building of the property owners for the purpose of examination of fixtures in use, repairing, reading or replacing of water meters.

3. All building lateral pipes shall be kept in good repair and protected from frost at the expense of the Applicant or property owner.

4. No person or persons, unless authorized by the Authority, shall open or close the Authority's shut off valve located at or near the street curb or near the property line or valves in any of the Authority's water mains.

5. The Authority shall not be held liable for any damage, which may result from leaks, burst pipes, attachments to pipes or from any other cause.

6. The Authority reserves the right to change its rules and regulations for the use of water from time to time, to shut off the water for alterations, extensions and repairs, and to stop and restrict the supply of water whenever it may be found necessary; and the Authority shall not be liable under any circumstances for a deficiency or failure in the supply of water, whether occasioned by shutting off water to make repairs or connections, or for any cause whatsoever.

7. All bills for water usage shall be payable to the Lower Township Municipal Utilities Authority.

8. Any person who shall destroy or injure any of the works or property of the Authority, or who shall commit any act which shall injuriously affect or tend to affect the water system of the Authority, shall be prosecuted to the full extent of the law.

9. The Authority shall own, operate and maintain the water meter equipment. The property owner shall provide the Authority with access to the water meter and equipment. The equipment and the access thereto shall be maintained free of any obstructions such as trees, shrubs, landscaping or other objects. Where water meters are located inside the building (not in a meter pit), the property owner shall be responsible for protecting the meter

equipment from freezing, vandalism or other damage. In the event that the Authority must repair a broken or damaged meter, the property owner must be present to witness said work.

10. The Authority will only provide service to and bill for approved connections. Multi use dwellings will be billed from a master meter regardless of type or number of dwellings. Owners of Multi use dwellings may install individual meters on their tenants for the purpose of usage information (The Authority will not read these meters.) This provision applies to multiple user, tenant, lessee, rental or condominium owner entities. Condominium units may have individual meters read by the Authority provided each condominium unit has a separate service line. A separate turn off valve in the connections between each metered condominium unit shall be strictly prohibited.

IV CONDITIONS REQUIRING INSTALLATION OF AND CONNECTION TO WATER SYSTEMS

Any major subdivision or any multi-family structure regardless of volume of flow, and all non-residential development shall be required to install a water distribution system and to connect to the nearest operational water main in the Authority's system in accordance with the provisions of the Ordinances of Lower Township and of these rules and regulations, except as herein provided.

When public water is available, all new habitable structures or buildings shall be required to supply and install a meter pit, a water meter and assembly in accordance with Lower Township mandatory ordinance No. 2009-01 and the most recently adopted Authority Rules and Regulations.

In the event that the Applicant's lands are deemed by the Authority to be too remote from an operational water distribution main; then a well, treatment plant and storage facility may be required. Said plant and the location thereof shall be subject to approval by the Authority in accordance with the standards and requirements as hereinafter set forth, and as may be required by any other governmental regulatory agencies having jurisdiction thereof.

In areas where lands are deemed by the Authority to be too remote from an operating water distribution main, the Authority shall decide as to whether a "dry" water system shall be required in accord with the Authority's Water Master Plan. The Authority may also, at its discretion, and if requested by an Applicant, accept a sum of monies equal to the cost of the "dry" water system, engineering costs and restoration, if such payment is deemed to be in the Authority's best interest. Such amount shall be unqualified and shall not be deemed to be a performance guarantee. The Authority will indicate the proposed location of the water mains to be included under the Authority's Water Master Plan as well as the size of each main to be included. The Water Master Plan for the Authority's water system facilities shall govern the location and size of all major water mains, and shall include the general location of proposed water storage tanks.

V APPLICATIONS TO THE AUTHORITY

General

Prior to consideration, applications shall be filed with the Authority together with the required fees.

Capacity Feasibility Application

The Applicant shall first complete and submit to the Authority a Capacity Feasibility Application a copy of which is included herewith as Exhibit A. The Authority shall review the application within sixty

(60) days and notify the applicant if water service and capacity is available and if the applicant should proceed with a connection permit or a Preliminary Application. This letter of approval is not a capacity commitment; it is merely an acknowledgment that water is available in the area in question.

The Applicant shall receive written notification from the Authority as to whether:

1. Individual water systems will be permitted.

2. Individual water systems will be permitted together with the installation of comprehensive system of "Dry Lines".

3. An active comprehensive water distribution system shall be required.

Connection Permit

The Authority shall issue a Connection Permit to the applicant at time of Final approval a copy of which is included herewith as Exhibit B. The Connection charges plus costs equal to the Authority's costs of the labor and materials involved with the installation shall be made and shall be payable in advance to the Authority. The amount of the Connection Permit fee shall be set annually by the Authority. The permit shall be valid for a period of one (1) year from date of issue. If the Applicant submits a written request for a permit extension ninety (90) days prior to the expiration of the permit, the Executive Director may extend the permit for an additional one (1) year. Permit fees are non-refundable and shall be null and void upon the expiration date. The Applicant shall be charged the appropriate user charges at the time of completion, issuance of a Township Certificate of Occupancy, or date of Final construction inspection whichever date is earlier.

Applicants making application for a Connection Permit to an existing structure shall be charged the appropriate user charges sixty (60) days from the date of issuance of the connection permit whether the connection to the system is or is not completed.

All application, review and inspection fees shall be paid by certified check or in cash as hereinafter provided. If the cost to the Authority of review or inspection exceeds the amount set forth herein, the Authority shall within 120 days of incurring such excess cost provide the Applicant with evidence of the amount of such excess cost. The Applicant shall remit by certified check or cash to the Authority the amount of any excess cost within 15 days after receipt of a true copy of evidence of such cost. In no event shall the amount charged by the Authority to the Applicant exceed the actual cost to the Authority.

All preliminary and final applications must be submitted at least 45 days before a regular scheduled meeting of the given body. All applications are to be signed by the Owner or by a duly authorized agent or representative and if signed by an authorized agent, shall be accompanied by proof of authorization by affidavit of the owner.

Application for Preliminary Approval

The Applicant shall submit a preliminary application, in duplicate, on a form provided by the Authority, a copy of which is included herewith as Exhibit C. The application shall state whether:

1. Installation of individual water system is proposed.

2. Installation of individual water systems together with a comprehensive system of "Dry Lines" are proposed.

3. An active comprehensive water distribution system is proposed.

4. The Authority shall have ninety (90) days to review the Preliminary Application and plans for approval.

Instructions for Application for Preliminary Approval

An application fee of $200.00 and a review fee of 1½% of the estimated cost of construction as determined by the Applicant's Engineer, subject to review and approval by the Authority's Engineer, and Attorney review fees of $500.00 shall be submitted with the application. The minimum review fee shall be $500.00.

Proposed individual water systems shall be constructed in accordance with New Jersey Statutes, County and Local Ordinances and all State and County regulations.

Should the Authority determine that a comprehensive system of "Dry Lines" or active comprehensive water system shall be required; the Applicant must submit a tentative application in duplicate, on a form provided by the Authority, a copy of which is included herewith as Exhibit C.

The application shall be accompanied by the following supporting data (three (3) copies each):

1. Engineer's Report.

2. General Map of the entire project.

3. Plans of all proposed water mains including service connections

4. General plan for booster pumping stations, treatment plants, and/or water tanks.

5. Construction Cost Estimate.

Data shall contain information described below:

1. Engineer's Report

   A complete engineer's report, setting forth the basis of design, shall be submitted to the Authority for each project.

   All water mains shall be designed to carry the peak hour flows, and, where fire protection is provided, the required fire demand plus the required domestic demand. Average daily consumption shall be as per N.J.A.C. 5:21-5 (Residential Site Improvement Standards).

   Provide calculations for expected flow with peaking factor and adequate fire flow. A Hardy Cross Analysis must be submitted, as required by the Authority, for all subdivisions and developments.

For commercial, industrial, or special types of residential developments, design flows shall be in accordance with NJDEP Safe Drinking Water Act Regulations, latest revision, and are subject to approval by the Authority's Engineer.

The Authority will establish flow standards for any construction not included in the above.

Minimum size of water mains shall be as per N.J.A.C. 5:21-5.3. (Residential Site Improvement Standards).

Material specifications and construction details shall be set forth and shall comply with those specified under "Detailed Information on Design and Construction of Water Systems."

2. General Map of the Entire Project

A general map of the entire project shall be furnished to show booster pumping stations, water distribution system, and water supply, treatment and storage facilities for the project at a scale appropriate for a 24" x 36" sheet and a key map at a scale of 1" = 1000'.

3. Plans of all Proposed Water Distribution Systems

Properly entitled plans shall be of uniform size, 24" x 36" with a ½" border on top, bottom, and right side and a two (2") inch border on the left side. Plans shall be drawn to a scale no smaller than 1" = 50'. Three (3) sets of plans shall be submitted and shall show the following:

a. General Information

The cover shall show the proposed development name, identifying title, block and lot numbers, name and address of the owner of the tract, name and address of the developer, if other then owner, and name address and professional seal of person preparing the plans.

b. Details

Plans shall show all existing and proposed improvements, shall give a complete picture of the systems proposed and are primarily intended to facilitate review. The Engineer for the Applicant shall show all design information on the overall plan. The detail drawings shall be legible and to a scale not less than 1" = 50' horizontal. They shall show roads, curbs, sidewalks, underground utilities, water mains, water services, sewer mains, sewer services, storm drains, lot lines, boundary lines, block and lot numbers and typical street cross-sections in addition to all the items listed below, as well as details of the unusual conditions to be encountered in the construction of the distribution system along with locations of hydrants, service connections, and air release valves. A title and index sheet shall accompany the plan and detail drawings and shall include a key map of the subdivision and its relationship to the surrounding area. All drawings with the exception of the overall plans shall be of uniform size, 24" x 36" with a two (2") inch border on the left side and a ½" border on all other sides. Plans shall show the location of the wells, treatment plants, storage tanks, pressure zones, valves, distribution lines, hydrants, topmost floor and first floor elevation of any proposed buildings and the present and

future extent of the distribution system. Size, type, and class pipe shall be given. Also shown shall be the permanent benchmarks, contours shown at one (1') foot intervals of existing and proposed ground referenced to New Jersey Coast and Geodetic Survey datum. All sheets shall be numbered and bound and shall show the true and magnetic meridian, title, date, and scale including topographical symbols. Conventions and elevations shall be the same as or based upon those used by the U.S. Coast and Geodetic Survey.

c. Symbols

Water mains to be built, as indicated by this application, shall be shown by solid lines, existing water mains to be shown by gray-scaled lines. All topographical symbols and conventions shall be the same as those of the U.S. Geological Survey.

d. Elevations

All permanent benchmarks of New Jersey Coast and Geodetic Survey shall be shown. Elevations of street surfaces shall be placed outside the street lines. The elevations of sewer inverts (storm and sanitary), shown at street intersections, ends of lines, and at changes of grades shall be written parallel with the sewer lines and between the street lines. The elevations of street surfaces shall be shown to the nearest 0.1-foot; the sewer inverts to the nearest 0.01 foot. Sufficient benchmarks shall be permanently established for the area.

e. Distances, Grades and Sizes

The distances and stationing between valves, water main diameters, strength class, and material shall be shown on the plans.

4. General Plans for Water Supply and Storage Facilities

The plans for the water supply, treatment and storage facilities shall include a general site plan showing boundaries, one (1') foot contours, proposed wells, pumping stations and/or treatment plants, storage facilities with capacities, underground piping and underground or overhead wires.

5. Cost Estimate

The cost estimate shall consist of the Applicant's Engineer's cost estimate which shall be subject to the approval of the Authority's Engineer.

The cost estimate shall be in the form as provided in Exhibit F. Cost estimates will not be approved with unit prices that are less than the minimum unit prices provided.

The following will govern the approximate sizes and locations of water mains, points of connection, wells and storage facilities:

If the size of any water main, as shown by the application to be installed by the Applicant is inconsistent with the requirements of the area, the Applicant shall install mains, as required by the Authority. The Authority shall pay the Applicant the difference in the material, labor and excavation

costs as determined by the Authority or its Engineer.

If the Authority requires the installation of a booster pumping station of greater capacity than that capacity determined by the Authority as necessary to serve the Applicant, the Authority shall pay said the difference between the cost of the facilities necessary to serve the Applicant and the facilities required by the Authority as determined by the Authority or its Engineer.

The Authority will not assess the increased cost, if any, of the Engineer's review and inspection fee when the increased cost of such review and inspection to provide facilities in excess of those necessary to serve the Applicant results from an order of the Authority.

If the Authority requires a treatment plant and/or water storage tank of greater capacity than that capacity determined by the Authority as necessary to serve the Applicant, the Authority shall pay said Applicant the difference between the cost of the treatment plant and/or storage tank necessary to serve the Applicant and the cost of the treatment plant and/or storage tank required by the Authority.

The Applicant will furnish individual service connections for each property.

Preliminary approval shall expire three (3) years from the date on which the resolution of preliminary approval is adopted. The Applicant may submit for final approval on or before the expiration date of preliminary approval the whole or a section or sections of the project. The Applicant may apply for and the Authority may grant extensions to such preliminary approval for additional periods of one (1) year each but not to exceed a total extension of two (2) years, provided that if the design standards have been revised by the rules and regulations, such revised standards shall govern.

In the case of a project of 50 acres or more, the Authority may grant an approval longer than three (3) years as shall reasonably be determined by the Authority. The Applicant may apply for and the Authority may grant extensions to such preliminary approval for such additional period of time as shall reasonably be determined by the Authority, provided that if the design standards have been revised by the rules and regulations, such revised standards shall govern.

Whenever the Authority grants an extension of preliminary approval and preliminary approval has expired before the date on which the extension is granted, the extension shall begin on what would otherwise be the expiration date. The Applicant may apply for an extension either before or after what would otherwise be the expiration date.

Application for Final Approval

Upon notification by the Authority that preliminary approval has been granted, an application for final approval may be filed in duplicate on a form provided by the Authority, a copy of which is included herewith as Exhibit D.

Instructions for Application for Final Approval

An application fee of $200.00, an engineering review fee of 2½% of the estimated costs of construction as determined by the Applicant's Engineer, subject to review and approval by the Engineer, and an Attorney review fee of $500.00 shall be submitted with the application. The minimum engineering review fee shall be $500.00. All drawings submitted for final approval shall be identified as "FINAL UTILITY PLAN."

The application shall be accompanied by the following supporting data (three (3) copies):

1. Plans of water distribution system and appurtenances.

2. Profiles of water distribution system and appurtenances.

3. Details of construction of fire hydrants, connections and other appurtenances.

4. Detailed plans of wells, pumping stations, treatment plants, and storage facilities.

5. Specifications for the construction of proposed water system and appurtenances including pumping stations, treatment plants, storage facilities, and method of disinfection.

6. Detailed estimate of entire construction cost. If project is divided into phases, a cost for each phase is to be submitted.

7. Engineer's Report.

8. An application form, filled out in the name of the Authority, to the New Jersey Department of Environmental Protection, with applicable fee, if required by the NJDEP.

9. The Authority shall have ninety (90) days to review the Final Application and plans for approval.

Submittals shall contain information described below:

1. Plans of water distribution system and appurtenances.

   Plans shall conform to the standards set forth under the instructions for Application for Preliminary Approval. Plans shall reflect modifications necessary to comply with comments provided by the Authority's Engineer on the preliminary plan submission.

2. Profiles of water distribution system and appurtenances.

   Profiles shall be provided on sheets of the same size with similar borders and title blocks as the plan sheets. The horizontal scale of the profile details shall match the scale shown on the plan sheets and therefore shall be no smaller than 1" = 50'. The vertical scale shall be ten (10) times the horizontal scale of 1"=50'; the vertical scale shall be 1"=5'. All additional utilities shall be shown on the profile.

3. Details of construction of fire hydrants, connections and other appurtenances.

   Details shall be drawn to standard scales to show clearly the nature of the design and shall conform to the Authority's details.

4. Detailed plans of wells, pumping stations, treatment plants, and storage facilities.

   The plans for the wells, pumping stations, treatment plants, and storage facilities shall include general site plan showing boundaries, one (1') foot contours, proposed pumping stations, wells, underground piping and appurtenances, underground and overhead wires.

The detail plans for wells shall show the depth, size and construction of each well. Results from test well, logging, etc. shall be furnished as the basis for design. The ground strata through which the well is to be driven shall be shown in cross-section. The arrangement of mechanical and electrical equipment within the well house plus connections to the storage tanks and distribution system shall be shown. The method and equipment proposed for applying sodium hypochlorite shall be clearly indicated. If treatment beyond disinfection is required, the plans shall show details of each component of the treatment facility, the method of applying chemicals, master meter, piping, valves, etc. The plans and specifications must indicate provisions for landscaping, paved roads, and walkways. Drawings shall conform to the size specified with these rules and regulations. Storage may consist of an elevated tank or standpipe. The details of all storage facilities shall include tank dimensions, minimum water level and overflow level, capacity, foundation, piping, valve pit dimensions, etc. The plans shall conform to the size specified in the Preliminary Approval.

5. Specifications

Complete specifications for the construction of the proposed water system and appurtenances, including pumping stations and/or treatment plants, method of disinfection, shall accompany the plans. Specifications shall be complete and suitable for construction and shall conform to the standards set forth in the details appended to the Authority's Rules and Regulations. They may be omitted for main extensions, provided specifications for the water system are already filed and reference is made to them in the application. In addition, the requirements of all governmental regulatory agencies must be satisfied by the submitted specifications.

6. Costs Estimate

An itemized list of improvements to be constructed shall be furnished and shall include, but not be limited to, cost of rights of way and easements as may be required and cost of record drawing preparation. The estimate of costs will be subject to review and approval of the Authority Engineer. The estimate must make use of the latest copy of the approved "Standard Unit Price Schedule" for water facilities. Cost estimates will not be approved with unit prices that are less than minimum unit prices provided in the schedule.

7. Engineer's Report

The Engineer's Report shall include but not be limited to, all information required by the New Jersey Department of Environmental Protection and the Authority together with other data furnished with the application for preliminary approval, if requested by the Authority

8. Application to the New Jersey Department of Environmental Protection

The Applicant shall as a condition to receipt of final approval from the Authority, prepare and submit to the New Jersey Department of Environmental Protection, all required plans and specifications, Engineer's Report and the New Jersey Department of Environmental Protection form in duplicate. The Applicant shall prepare and submit the entire exhibit to the New Jersey Department of Environmental Protection in the name of the Authority. All fees shall be paid by the applicant.

9. Application to the New Jersey Department of Transportation

If a project or any portion thereof requires a permit or permits from the New Jersey Department of Transportation, the Authority will sign the application as "applicant" for the New Jersey Department of Transportation's permit. However, the Applicant (not the Authority) shall be responsible to prepare all documentation and submit the application for the permit. The Applicant (not the Authority) shall also be responsible to pay any and all related application/permit fees and to pay the escrow deposit as may be required by the NJDOT.

10. Application to the Cape May County Department of Transportation

If a project or any portion thereof requires a permit or permits from the Cape May County Department of Transportation, the Authority will sign the application as "applicant" for the Cape May County Department of Transportation's permit. However, the Applicant (not the Authority) shall be responsible to prepare all documentation and submit the application for the permit. The Applicant (not the Authority) shall also be responsible to pay any and all related application/permit fees and to pay the escrow deposit as may be required by the Cape May County Department of Transportation.

11. Easements and Parcel Maps

Easements in a form approved by the Authority's Engineer and Attorney and executed by the property owner and/or other parties in interest will be required for all water lines (excluding service connections or building mains) which are not within a public right-of-way.
All required easements to be deeded to the Authority shall be clearly indicated on the drawings. Easements shall be unrestricted and shall be a minimum of 20 feet wide unless depth of pipe, soil conditions, or additional utilities require wider. Where water lines are to be installed in streets that will not be dedicated to the Authority, County or State of New Jersey, the width of the easement(s) shall be the entire width between the curb lines.

Within sixty (60) days from the date of the Resolution of Final Approval, the Applicant shall submit to the Authority a complete Grant of Easement document and a parcel map with a description of the utility easements, which are to be dedicated to the Authority. The easement description shall consist of a metes and bounds survey. The easements shall be dedicated at no cost to the Authority.

Final approval is considered to be the milestone in which the Applicant has satisfied all of the requirements in the final Engineer's Report.

Water allocation will only be committed to the Applicant when final approval is issued by the Authority. Final approval (and the associated water allocation commitment) shall expire two (2) years from the date on which the resolution of final approval is adopted. The Applicant may apply for and the Authority may grant extensions to such final approval for additional periods of one (1) year, but not to exceed three (3) extensions.

In the case of a subdivision or site plan for a planned development of 50 acres or more, conventional subdivision or site plan 150 acres or more, or site plan for development of a nonresidential floor area of 200,000 square feet or more, the Authority may grant extensions to such final approval for such additional period of time as shall reasonably be determined by the Authority.

Whenever the Authority grants an extension of final approval and final approval has expired before the date on which the extension is granted, the extension shall begin on what would otherwise be the expiration date. The Applicant may apply for the extension either before or after what would otherwise be the expiration date.

The Authority shall grant an extension of final approval for a period determined by the Authority, but not exceeding one (1) year from what would otherwise be the expiration date, if the Applicant proves to the reasonable satisfaction of the Authority that the Applicant was barred or prevented, directly or indirectly, from proceeding with the project because of delays in obtaining legally required approvals from other governmental agencies and that the Applicant applied promptly for and diligently pursued these approvals. An Applicant shall apply for the extension before: 1) the expiration date of final approval or; 2) the 91st day after the Applicant receives the last legally required approval from other governmental agencies, whichever occurs later.

No Applicant shall commence construction of any kind until the Authority issues a Construction Permit (letter of permission). The Authority shall not issue a Construction Permit until the Applicant has complied with all conditions of the application and the resolution of final approval, if applicable, and all required fees have been paid. The Construction Permit shall be in a form designated by the Authority and shall be issued at the Executive Director's office of the Authority during regular business hours. The Authority shall direct the Building Inspector that no building permit shall be issued from his department until proof of the issuance of a Construction Permit or a letter of no interest from the Authority is presented. A copy of each Construction Permit or letter of no interest shall be forwarded to the Building Inspector by the Authority at the time of issuance.

Application for a construction permit for the improvements shall be made not later than forty-five (45) days prior to the expiration of final approval. All construction of the said improvements shall be completed within three (3) years from the date of the issuance of the construction permit.

Revised Application

Whenever there is substantive change in the configuration of the system and/or revision of the road pattern, and/or any off-site change related to the project or section is proposed, a revised application for the previous stage of approval is required.

Performance/Maintenance Guarantees Required: Surety, Release

The Authority requires the following as per N.J.S.A. section of the Municipal and County Utilities Authority law, which states:

40:14B-17. Maintenance, performance guarantee; cash requirement

> A municipal authority shall not require that a maintenance guarantee required pursuant to Section 11 of P.L. 1999, c.11 (C.40:14B-73) be in cash of that more than 10% of a performance guarantee pursuant to that section be in cash. A developer may, however, provide at his option some or all of a maintenance guarantee in cash, or more than 10% of a performance guarantee in cash.
>
> The Authority requires that ninety percent (90%) of the performance guarantee be in the form of a bond or letter of credit and the remaining ten percent (10%) be in the form of cash (or check) deposited into an escrow account set up by the Authority specifically for each project.

A Performance Bond or Surety Documents, satisfactory in form to the Authority, shall be submitted to the Authority prior to Authority approval of the application. The Bond or Letter of Credit shall guarantee complete construction within the time period specified by the Authority and shall further guarantee that said construction shall be in accordance with the final plans and specifications approved by the Authority and by the NJDEP and any other applicable regulatory agency.

The Bond or Letter of Credit shall either contain no expiration date and indicate that it remains in effect until acceptance by the Authority of the improvement or shall contain language indicating that the Bond or Letter of Credit shall not expire or shall contain language indicating that the Bond or Letter of Credit shall not expire unless 45 days prior written notice of such expiration has been provided to the Authority's Executive Director.

In the event that any project which has been approved by the Authority is transferred to another owner or developer, the Performance Bond or Surety Documents shall be also transferred to the new owner, in satisfactory form to the Authority, in accordance with these Rules and Regulations prior to the issuance of any permits.

The Bond Surety Documents shall remain in effect until the sanitary sewer collection system and related appurtenances and/or the water distribution system and related appurtenances are installed, tested and protected by an adequate layer of flexible bituminous paving constructed in accordance with prescribed engineering practices, or approved equal. Subject to the recommendation and approval of the Authority Engineer, the Bond or Surety Documents shall remain in effect until the owner or developer has obtained Form "D" approval from the Authority in accordance with their applicable Rules and Regulations and has posted the necessary two (2) year Maintenance Bond equal to fifteen percent (15%) of the Performance Bond.

The developer shall continue to be completely responsible for this Section of the system until it is legally accepted by Authority Resolution. A Section is typically legally accepted after the completion of the final road surfacing when the sewer and water systems receive final inspection and approval from the Authority Engineer.

Any and all approvals for a project shall cease in the event that any Performance Bond or Surety Document terminates, becomes of no further force and effect or if the Surety enters bankruptcy or receivership. In the event, the Authority may issue a stop work order and revoke any permits and approvals until such time as a proper Performance Bond or Surety Document in accordance with these Rules and Regulations is provided to the Authority.

Prior to filing the final subdivision plat, the Applicant shall provide and the Authority shall accept a performance guarantee for the purpose of assuring the installation and maintenance of improvements. For commercial site plans, the performance guarantee shall be submitted by the Applicant at least thirty (30) days prior to the start of construction.

1. The performance guarantee shall be in an amount equal to 120% of the estimated cost of construction of the required improvements, as determined by the Authority Engineer in accordance with the method of calculation set forth herein.

   The Applicant's Engineer shall prepare, for the Authority Engineer's review, an itemized estimate of cost of the improvements covered by the performance guarantee, which itemized estimate of cost shall be appended to each performance guarantee posted by the obligor.

2. The time allowed for installation of the improvements for which the performance guarantee

has been provided may be extended by the Authority by resolution. As a condition of any such extension, the amount of any performance guarantee shall be increased or reduced, as the case may be, to the amount of 120% of the estimated cost of construction determined as herein provided.

3. If the required improvements are not completed or constructed in accordance with the performance guarantee, the Applicant and surety, if any, shall be liable thereon to the Authority for the reasonable cost of the improvements not completed or constructed and the Authority may, either prior to our after receipt of the proceeds thereof, complete such improvements. Such completion or construction of improvements shall be subject to the provisions of the "Local Public Contracts Law", N.J.S.A. (40A:1101 et seq.)

4. Upon substantial completion of all required improvements (except for the top course of paving) and the connection of same to the Authority system, the Applicant may request of the Authority in writing, by certified mail addressed in care of the Chairman, that the Authority Engineer prepare, in accordance with the itemized estimate of cost appended to the performance guarantee, a list of all uncompleted or unsatisfactory completed improvements. If such a request is made, the Applicant shall send a copy of the request to the Authority Engineer. The request shall indicate which improvements have been completed and which improvements remain uncompleted in the judgment of the Applicant. Thereupon the Authority Engineer shall inspect all improvements covered by the Applicant's request and shall file a detailed list and report, in writing, with the Authority, and shall simultaneously send a copy thereof to the Applicant not later than 45 days after receipt of the Applicant's request.

   The list prepared by the Authority Engineer shall state, in detail, with respect to each improvement determined to be incomplete or unsatisfactory, the nature and extent of the incompleteness of each improvement or the nature and extent of, and remedy to correct any completed improvement determined to be unsatisfactory. The report prepared by the Authority Engineer shall identify each improvement determined to be complete and satisfactory together with a recommendation as to the amount of reduction to be made in the performance guarantee relating to the completed and satisfactory improvement, in accordance with the itemized estimate of cost appended to the performance guarantee.

5. The Authority, by resolution, shall either approve and accept the improvements determined to be complete and satisfactory by the Authority Engineer, or reject any or all of such improvements for cause expressed in said resolution, and shall approve and authorize the amount of reduction to be made in the performance guarantee relating to the improvements accepted, in accordance with the itemized estimate of cost appended to the performance guarantee. This resolution shall be adopted not later than 45 days after receipt of the list and report prepared by the Authority Engineer. Upon adoption of the resolution by the Authority, the Applicant shall be released from all liability pursuant to its performance guarantee, with respect to those approved and accepted improvements, provided that a percentage of the amount of the performance guarantee shall be retained to ensure completion and acceptability of all improvements.

   The Applicant's request for a reduction in the amount of the performance guarantee shall apply to the Bond or Letter of Credit portion and not the Cash portion and must be accompanied by an affidavit certifying that all of the contractor(s) and supplier(s) have been paid in full as of the date of the request.

a. The amount of the performance guarantee may be reduced to 30% of the amount of the estimate of cost of construction upon successful completion of the preliminary testing of the system after all of the structures, mains, service connections and appurtenances have been installed. The preliminary testing is optional and is not a requirement of the Authority.

b. The amount of the performance guarantee may be reduced to 20% of the amount of the estimate of cost of construction upon successful completion of the final testing of the system. The final testing will not be conducted until all of the underground utilities (water, sanitary sewer, storm sewer, gas, electric, telephone, etc.) and all of the curbs and sidewalks have been completed along with the gravel base course of road restoration have been installed and approved.

c. The amount of the performance guarantee may be reduced to 10% of the amount of the estimate of cost of construction when the as-built plans in a form and content satisfactory to the Authority Engineer have been submitted by the Applicant and when the only remaining punch list work consists of the final adjustments to set the valve box covers and curb shutoffs to final grade (i.e., final pavement overlay has not been completed).

The performance guarantee may be released by the Authority upon the completion of all final punch list items, resolution of all outstanding complaints, submission of all closeout documents and delivery of a maintenance guarantee by the Applicant to the Authority in a form and content satisfactory to the Authority Attorney and upon formal acceptance of the improvements by the Authority.

A maintenance guarantee shall be posted with the Authority shall be for a period of two (2) years after final acceptance of the improvement, in the amount of 10% of the cost of the improvement, which cost shall be determined by the Authority Engineer according to the method of calculation set forth herein.

In the event that the Applicant has made a cash deposit with the Authority as part of the performance guarantee, then any partial reduction granted in the performance guarantee shall be applied to the cash deposit in the same portion as the original cash deposit bears to the full amount of the performance guarantee.

6. If any portion of the required improvements is rejected, the Authority may require the Applicant to complete or correct such improvements and, upon completion or correction, the same procedure of notification, as set forth in this section shall be followed.

7. Nothing herein, however, shall be construed to limit the right of the Applicant to contest by legal proceedings any determination of the Authority or the Authority Engineer.

8. Prior to the filing of the final subdivision plat, the Applicant shall deposit basic inspection fees as set forth herein. For commercial site plans, the basic inspection fees must be deposited at least thirty (30) days prior to the start of construction. The basic inspection fees are intended for the normal and customary service required to inspect the installation of the facilities. The Applicant shall reimburse the Authority for all reasonable inspection fees paid to the Authority Engineer for the inspection of improvements; provided that the Authority shall require of the Applicant a deposit for the inspection fees in the amount not to exceed, except for extraordinary circumstances, the greater of $500.00 or 10% of the cost of

improvements. The minimum inspection fee is $500.00. For those projects for which the reasonably anticipated inspection fees are less than $10,000, fees may, at the option of the Applicant, be paid in two (2) installments. The initial amount deposited by an Applicant shall be 50% of the reasonable anticipated fees. When the balance on deposit is reduced to 10% of the reasonably anticipated fees because of payment to the Authority Engineer for inspection, the Applicant shall deposit the remaining 50% of the anticipated inspection fees. For those projects for which the reasonably anticipated fees are $10,000 or greater, fees may, at the option of the Applicant, be paid in four (4) installments. The initial amount deposited by the Applicant shall be 25% of the reasonably anticipated fees. When the balance on deposit is reduced to 10% of the reasonably anticipated fees because of payments to the Authority Engineer for inspection, the Applicant shall make additional deposits of 25% of the reasonably anticipated fees. The Authority Engineer shall not perform any inspection if sufficient funds to pay for those inspections are not on deposit. In addition to the above, the Applicant shall be required to pay additional inspection fees to cover extra work, overtime costs or any extraordinary circumstance as documented by the Authority Engineer. The Applicant shall not be responsible for additional inspection fees related to any additional piping and over sizing as may be required by the Authority.

9. In the event that final approval is by stages or sections of the project, the provisions of this section shall be applied by stage or section.

10. To the extent that any of the improvements have been dedicated to the Authority on the subdivision plat or site plan, the Authority shall be deemed, upon the release of any performance guarantee required pursuant to this section, to have accepted dedication for public use of improvements made thereon according to site plans and subdivision plats approved by the Authority.

Installation of Improvements Prior to Filing Plat

Nothing herein shall prevent an Applicant from installing required improvements prior to the filing of the final subdivision plat provided that final approval has been granted by the Authority, all regulatory construction permits have been secured, and inspection fees are posted with the Authority pursuant to the itemized estimate of cost of construction as approved by the Authority Engineer.

Prior to filing the final subdivision plat, the Applicant shall post a performance guarantee to guarantee the completion of any remaining improvements not yet completed.

Upon completion of required improvements or release of a performance guarantee, a maintenance guarantee shall be posted with the Authority. The amount, terms and conditions of any maintenance guarantee shall be as set forth in this section.

Deposits with Authority; Escrow; Interest

Whenever an amount of money in excess of $5,000.00 shall be deposited by an Applicant with the Authority for professional services employed by the Authority to review Applications for a project, for Authority inspection fees in accordance with this section, the money, until repaid or applied to the purposes for which it is deposited, including the Applicant's portion of the interest earned thereon, except as otherwise provided in this section, shall continue to be the property of the Applicant and shall be held in trust by the Authority. Money deposited shall be held in escrow. The money shall be deposited in a banking institution or savings and loan association in this State insured by an agency

of the federal government, or in any other fund or depository approved for such deposits by the State, in an account bearing interest at the minimum rate currently paid by the institution or depository on time or savings deposits. The Authority shall notify the Applicant in writing of the name and address of the institution or depository in which the deposit is made and the amount of the deposit. The entire amount shall belong to the Applicant and shall be refunded to him by the Authority annually or at the time the deposit is repaid or applied to the purposes for which it was deposited, as the case may be.
The provisions of this section shall apply only to that interest earned and paid on a deposit after the effective date of the adoption of these revised Rules and Regulations.

Escrow Payments for Professional Services

The Authority shall make all of the payments to professionals for services rendered to the Authority for review of applications for development, review and preparation of documents, inspection of improvements or other purposes within these Rules and Regulations. Such fees or charges shall be based upon a schedule established by resolution. The application review and inspection charges shall be limited only to professional charges for review of applications, review and preparation of documents and inspections of developments under construction and review by outside consultants when an application is of a nature beyond the scope of the expertise of the professionals normally utilized by the Authority. The only costs that shall be added to any such charges shall be actual out-of-pocket expenses of any such professionals or consultants including normal and typical expenses incurred in processing applications and inspecting improvements.

If the Authority requires of the developer a deposit toward anticipated Authority expenses for these professional services, the deposit shall be placed in an escrow account pursuant to N.J.S.A. (40:14B-20.1) and these Rules and Regulations. The amount of the deposit required shall be reasonable in regard to the scale and complexity of the development. The amount of the initial deposit required shall be established by the rules and regulations of the Authority or by resolution of the Authority, or both. For review of applications for development proposing a subdivision, the amount of the deposit shall be calculated based on the number of proposed lots.

Each payment charged to the deposit for review of applications, review and preparation of documents and inspection of improvements shall be pursuant to a voucher from the professional, which voucher shall identify the personnel performing the service, and for each date the services were performed, the hours spent to ¼ hour increments, the hourly rate and the expenses incurred. All professionals shall submit vouchers to the Authority on a monthly basis in accordance with schedules and procedures established by the Authority. If an Authority employee provides the services, the employee shall prepare and submit to the Authority a statement containing the same information as required on a voucher, on a monthly basis. The professional shall send an informational copy of all vouchers or statements submitted to the Authority simultaneously to the Applicant. The Authority shall prepare and send to the Applicant a statement, which shall include an accounting of funds listing all deposits, interest earnings, disbursements, and the cumulative balance of the escrow account. This information shall be provided quarterly if monthly charges are $1,000.00 or less, or monthly if monthly charges exceed $1,000.00. If an escrow account or deposit contains insufficient funds to enable Authority to perform required application reviews or improvement inspections, the Authority shall provide the Applicant with a notice of the insufficient escrow or deposit balance. In order for work to continue on the development or the application, the applicant shall within a reasonable time period post a deposit to the account in an amount to be agreed upon by the Authority and the Applicant. In the interim, any required health and safety inspections shall be made and charged back against the replenishment of funds.

The close-out procedure to all deposits and escrow accounts shall commence after the Authority has granted final approval and signed the subdivision plat or site plan, in the case of application review escrows and deposits, or after the improvements have been approved as provided in section previous sections. The Applicant shall send written notice by certified mail to the Authority, and to the relevant Authority professional, that the application or the improvements, as the case may be, are completed. After receipt of such notice, the professional shall render a final bill to the Authority within 30 days, and shall send a copy simultaneously to the Applicant. The Authority shall render a written final accounting to the Applicant on the uses to which the deposit was put within 45 days of receipt of the final bill. Any balances remaining in the deposit or escrow account, including interest, shall be refunded to the developer along with the final accounting.

Maintenance Guarantees – Limitations

The Authority shall not require that a maintenance guarantee required pursuant to this section be in cash or that more than 10% of a performance guarantee be in cash.

Easement Documents

The Applicant shall submit to the Authority within sixty (60) days from the date of final approval, a proposed deed of easements describing by metes and bounds all the lands to be dedicated to the Authority for utility purposes.

When blanket easements are required, the Applicant shall add the following note to the Final Plat:

The Lower Township Municipal Utilities Authority shall have an easement of access for the purpose of maintaining the on-site comprehensive water system. Said easement is hereby granted to The Lower Township Municipal Utilities Authority over all or any part of Block_____, Lot_____ for said purpose.

Off-Site Water Facilities

When off-site water facilities are required, said facilities are to be completely constructed, including all pavement restorations, before connecting any on-site facilities to the water system.

Additional Construction Work

The Authority shall reimburse the Applicant for the required additional construction work and the required over sizing of the water main based on the actual construction cost. The Applicant shall submit to the Authority the contractor's cost proposal for the installation of the additional construction work and the required over sizing of the water main for the Authority Engineer's review no later than thirty (30) days prior to the commencement of construction. Payment shall be made to the Applicant by the Authority Engineer to be complete and the related pavement restoration work has been accepted by the Authority Engineer.

Water Service Billing

Billing for water service flows shall be determined from readings taken from a water meter. The water meter shall be installed on the service line at a location approved by the Authority. The water meter and appurtenances must be installed by the Authority. By-pass lines around the water meter shall be strictly prohibited.

The water use as approved on the application for final approval shall be the maximum water usage allowed. If the Authority determines that the water usage per day exceeds the amount approved on the final application, the Authority may require the Applicant to reapply for the additional water used.

VI DETAILED INFORMATION ON DESIGN AND CONSTRUCTION OF WATER SYSTEMS

All materials to be used on the proposed project that will become the property of the Authority upon conveyance by the Applicant shall be manufactured in the United States, whenever available. The Applicant is directed to refer to "Chapter 107, Laws 1982" of the State of New Jersey effective date October 3, 1982.

Water Distribution System Design Criteria

1. General

The following requirements are to be considered minimum requirements for the design and construction of water systems. The Applicant shall, through the proper balance of supply, storage and distribution, secure for the community a water system having a minimum rating as judged by the Insurance Service Office, Fire Suppression Rating Schedule.

Regardless of the size of the project, the water distribution system shall be capable of supplying the necessary domestic flow and fire protection based upon the complete project flow and fire requirements.

2. Distribution System and Appurtenances

In the design of the water distribution system, a C=100 frictional index based on the Williams and Hazen formula shall be used.

The design of the distribution system shall be based upon the required maximum day demand flow plus the fire flow demand or peak hour demand flow whichever is greater. The minimum size of water mains supplying fire flow shall be eight (8”) inches unless approved by the Authority. The minimum size of water main supplying only domestic flow shall be six (6”) inches. The Hardy Cross method or an equivalent method shall be used in balancing loops. Minimum depth of cover shall be four (4’) feet from the top of the pipe to the finished grade. Distribution mains shall be interconnected, where possible, into closed loops so that the supply may be brought to the consumer from more than one direction. Dead end streets shall be provided with looped water mains wherever practical or feasible. All dead-end streets not so looped shall be provided with a means of flushing by the use of a Hydrant Assembly. Dead ends in excess of 400 feet in mains providing fire protection and 600 feet in other mains shall be discouraged. If the requirements for dead ends prevent the feasible development of the project, then the Applicant shall demonstrate to the satisfaction of the Authority the site conditions that prevent the feasible development of the project and the proposed alternate design. Valves of full line size shall be installed with wedge action retainer gland and rodded to ends of all dead-end lines, which may be extended in the future. The dead-end valves shall be followed by one (1) full length of pipe and closed with iron plugs or caps.

Valves shall be located on distribution mains so that not more than one block shall be out of service for one single break. At street intersections, valves shall be located in line with curb lines for ease in finding in the event of a break. Geared valves with by-passes on 16 inch

mains or larger shall be furnished and so indicated on the plans.

A corporation stop shut off with a valve box for air release shall be located at all high points in a distribution system, with adequate means of drainage provided. Unrestricted easements to the Authority water mains shall be a minimum of 20 feet wide. The pipe shall be placed five (5') feet off either easement line to allow sufficient room for maintenance of the existing pipe or installation of a future pipe.

3. Storage Tanks

Storage in elevated tanks or standpipes shall have a total effective capacity which, when combined with pumping capacity, shall be at least equal to the fire demand flow plus the maximum day consumption, or meet the peak hour demand requirements, whichever is greater.

The water levels in all elevated storage shall be as required by the latest revision of the Water Supply Master Plan or as directed by the Authority.

A double acting altitude valve shall be used for water level control in elevated storage tanks and standpipes. A by-pass line and valve shall also be provided.

Hydropneumatic systems will not be accepted.

4. Water Supply

The average daily, maximum daily, and peak hourly water demand rates for commercial, industrial, and institutional areas shall be considered separately in the computation of the total system demand and the quantities to be added shall be determined by the Applicant and approved by the Authority. Maximum daily flow shall be considered as 2.5 times average daily flow. Peak hourly flow shall be considered as 4.0 times average hourly flow.

Fire protection shall be furnished for all projects. The Applicant shall provide fire flows in addition to the maximum daily requirements based upon 250 gallons per capita per day. Fire flow rates established by using formulae currently in use by the American Insurance Association shall determine the flow rates required in any project or portion thereof. The formulae shall be used for high volume districts, single family, attached and multiple family districts. Fire flow for each district shall be computed separately. The minimum allowable fire flow for residential projects shall be 1,000 GPM at a residual pressure of 20 psi and for commercial and/or industrial projects shall be 2,500 GPM at a residual pressure of 20 psi. The system shall be capable of supplying particular fire flow requirements in any part of the system during the maximum day as determined by the Insurance Services office (ISO) Fire Suppression Rating Schedule.

In the event that the design peak hour demand flow rate exceeds the maximum day consumption plus the fire flow rate required above, the system shall be designed for the greater rate.

5. Fire Sprinkler Systems

When a fire sprinkler system is required, one service connection shall be utilized from the

water main to the Right of Way. The Domestic service shall be Teed off with a valve, meter pit, meter and continue into the building. The fire sprinkler system service shall be separate with a valve and continue into the building. Where the sprinkler system service connection enters the building, the Applicant shall be required to install a backflow preventer and a detector check valve assembly on the fire sprinkler service line.

The domestic service connection shall have a separate shut-off valve, valve box and meter located outside of the building, and within the municipal right-of-way or dedicated easement. The fire sprinkler system service connection shall not be metered. In the event that two (2) sprinkler systems service a building, then each service will have its own individual shut-off valve, and valve box located outside of the building, and within the municipal right-of-way or dedicated easement. A detailed working drawing of the service connections shall be submitted to the Authority for approval at least thirty (30) days prior to the start of construction. The submittal shall include the make and model of the backflow preventer and detector check valve assembly including a floor plan showing the location and layout. The Applicant shall be responsible to perform all fire flow tests as may be required for the design of the building sprinkler system.

6. Treatment Requirements

Treatment facilities shall be so designed to produce water that is reasonably uniform and of the quality required by the New Jersey Department of Environmental Protection.

Treatment plants involve a considerable amount of design criteria. If an applicant is required to construct a plant, it must be in conformity with all existing State and Federal regulations. All designs must be fully reviewed and approved by the Authority Engineer.

Construction of Water Distribution System

The methods and materials used for the construction of water distribution systems shall comply with the Authority's Rules and Regulations and with the latest AWWA standards cited herein.

Pipe Materials

Pipe materials to be used in construction of water mains shall be Polyvinyl Chloride (PVC). For concrete encasement, jackings, lopping water mains, bridge crossings, or other special aerial installations, pipe material shall be ductile iron pipe.

PVC pipe shall meet the requirements of AWWA C-900, “Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in. for Water” and shall be furnished in Ductile Iron pipe equivalent outside diameters with rubber gasket joints as listed in C900 standards. Wall thickness of pipe shall be DR 18 class 150. Pipe shall be furnished in 20 foot laying lengths.

Ductile iron pipe shall be centrifugally cast in metal or sand molds in accordance with A.S.A. specification A21.51, minimum thickness Class 52, unless otherwise required. The joint shall conform with the requirements A.S.A. A.21.11 and shall be of a type that employs a single elongated groove gasket to effect a joint seal such as United State Cast Iron Pipe Company’s “Tyton” joint, James B. Clow and Sons, “Bell-tite” or approved equal. The outside of the pipe shall be coated with a uniform thickness of a hot applied coal tar and the inside of the pipe shall be lined with an NSF approved cement and bituminous seal in accordance with the American Standard Specifications for

Cement mortar lining for cast iron pipe and fittings A.S.A., A21.4.

Fittings shall be Compact fittings and be in accordance with AWWA C153/A21.53. The cement lining and hot applied coal tar seal shall be in accordance with AWWA-C104/A21.4.

Certain soil conditions might require the use of a polyethylene wrap to prevent ductile iron ~~/steel~~ pipe corrosion. The Applicant can be required to conduct soil tests and use polyethylene wrap, if directed by the Authority Engineer. Polyethylene encasement shall be in accordance with AWWA C105/A21.5.

Pipe Bedding and Trenching

Trench dimensions, maximum depths, and bedding requirements (including cradles and encasement) for water mains, etc. shall be in accordance with the manufacturer's recommendations and at a minimum shall conform to the details shown on the Water Systems Detail Drawings included as part of these Rules and Regulations.

The applicant's application for review by the Authority shall include trenching dimensions and bedding details including reinforcing bar schedules for concrete cradles where applicable. All PVC pipe shall have magnetic tape laid 12 inches above the pipe crown.

Valves

Gate valves shall be iron body, non-rising bronze stem with resilient-seated wedge. All internal and external ferrous metal surfaces shall be fully epoxy coated. Valves shall be full size. Valves on 16 inch mains or larger shall be butterfly valves and shall have suitable by-passes. All gate valves shall meet or exceed AWWA C500 or C509. All butterfly valves shall meet AWWA C504. Valves shall have a working water pressure rating of 200 psi. Valves shall open left (counter clockwise) and be provided with two (2") inch square wrench nuts. Valves shall be Mueller Model 2360 or US Pipe Metroseal 250 or equal.

Valve boxes shall be Tyler Pipe Valve Box, Model 6850/ Bingham & Taylor Model 4905 "screw type" with cover, or approved equal. Typically, valve boxes shall be of the "screw type" variety. In easement or unpaved area, valve boxes shall be the sliding-type, Tyler Pipe Valve Box, Model 6855/ Bingham & Taylor Model 4908. Cover shall be lettered "WATER". It shall be the responsibility of the Contractor to furnish valve boxes of suitable length for each location such that the rim of the box shall be flush with the ground or paving surfaces.

Hydrants

All hydrants and locations shall conform to Town Ordinance 92-24. In general hydrants shall be located wherever possible at each intersection and shall be spaced not more then 500 feet apart. Commercial and industrial areas will require closer spacing.

Fire hydrants shall have a minimum valve opening of 5 ¼". Unless otherwise directed by the Authority hydrants shall have one 4 ½" connection for fire engine pumps and two 2 ½" connections for direct hose connection. All hose connections shall have National Standard Threads.

In the interest of standardization, only hydrants manufactured by US Pipe or Kennedy Valve are considered acceptable. After construction and before acceptance, fire hydrants will be flow tested

and painted in a color or colors as per Town Ordinance 92-24. All fire hydrants shall be Guardian K81A or Metropolitan M-94 or approved equal, and shall meet AWWA Standard C-502. All hydrants shall be connected to the main line with pipe not less than six (6") inches in diameter. A gate valve and box shall be located between the hydrant and the main.

One (1) hydrant repair kit shall be supplied for each hydrant installed on site.

All hydrants are to be properly secured with thrust blocking or rods. The preferred method is to rod the six (6") inch hydrant valve to the main, thence rod the hydrant to the six (6") inch valve.

When hydrants are installed on "dry" lines, the applicant shall paint all hydrants black to indicate that they are not operable.

A blow-off must be installed at every water main dead end. The blow-off shall meet the same specifications as the hydrants assembly detail.

Fittings

All fittings shall be new and suitable for a minimum working pressure of 150 psi. Fittings shall be compact fittings and be in accordance with AWWA C153/A21.53. The cement lining and hot applied coal tar seal shall be in accordance with AWWA-C104/A21.4. All dead ends on mains to be extended in the future shall be valved, followed by one full length of pipe and closed with ductile iron plugs or caps. Tees, bends, etc. of 11 ¼˚ or greater shall be blocked against movement from water pressure using proper size thrust blocks. All fittings shall have mechanical joint restraint glands as manufactured by Ebaa Iron series 2000PV or Ford Uni-Flange Series 1500 for C-900 pipe or equal. Field loc gasket must be used with ductile iron pipe.

Service Connections

Each new house service connection shall include a corporation stop and saddle, a minimum of 3/4" diameter 200 psi Copper tube size service pipe and fittings, curb stop and box, and service pipe extension beyond the curb stop to the property line for connection by others. Services shall be installed with a minimum cover of 2'-10". Water services shall be installed 12" over and 12" up or a minimum of 36" apart from sewer laterals.

It is the intent that all service laterals be installed perpendicular to the water main, from the service connection to the curb stop/box, accept where approved by the Authority's Engineer on the plans. If the service cannot be run perpendicular, the service lateral shall run horizontally straight from the service connection at the main to the curb stop/box. The location of the curb stop/box shall be as per the detail and no curb stop/box shall be located in any driveways, sidewalks or aprons.

Service saddle shall be coated iron with double stainless steel strap design. Service saddle shall be Ford Model FC202, Mueller Model DR2S or equal. Saddles are required on all connections.

Corporation stops shall be sized to match the service pipe. Corporation stops one (1") inch and smaller shall be plug type/ground key. The ball type shall be used for services larger than one (1") inch. Corporation stops shall have an AWWA/CC taper thread inlet by copper tube size compression outlet. Tapping of the main shall be carried out by personnel experienced in this work using equipment designed for use with the corporation stops specified. Stops shall be installed so as to insure a watertight connection. Corporation stops one (1") inch and smaller shall be Ford Model

F1002, Mueller Model H-15008 or approved equal. Corporation stops larger than one (1") inch shall be Ford Model FB1002, Mueller Model B-25008 or approved equal.

Curb stops shall be sized to match the service pipe. Curb stops will be ball type and shall be copper tube size inlet and outlet. Curb stops shall be Ford series B44, Mueller Model B-25209 or approved equal.

Curb boxes shall be buffalo style, Tyler Pipe series 6500 or approved equal. Cover shall be lettered "WATER". It shall be the responsibility of the applicant's contractor to furnish curb boxes of suitable length for each location such that the rim of the box shall be flush with the ground.

Miscellaneous service fittings shall be provided as required. All such fittings shall be appropriate to the intended service and shall conform to AWWA Specification C800.
Service connections shall be installed along any off-site main to serve all individual properties along the route. The Applicant shall submit to the Authority the contractor's cost proposal for the installation of the off-site service connections for the Authority Engineer's review no later than thirty (30) days prior to commencement of construction. Costs for the installation of said service connections will be reimbursed by the Authority to the Applicant upon certification of the completion of the work by the Authority Engineer and the Authority's approval.

Inspection and approval of the installation of the building lateral from the curb shut off to the building is under the jurisdiction of the Board of Health acting through the Plumbing Subcode Official/Inspector.

Miscellaneous Construction

All water distribution systems shall include any required miscellaneous construction items such as, but not limited to, thrust blocks, bedding, concrete encasement, concrete cradles, insulation, wet taps, end plugs, and other items as may be required by the Authority. All construction methods and materials shall conform to the latest applicable AWWA standards.

Water Meter Pits and Water Meters

All new water service connections shall include a water meter pit. The water meter pit shall be located as per the detail drawings. The Applicant shall furnish and install a meter setter including an angle ball valve on the inlet and outlet, jumper, fittings and other appurtenances as required by the Authority on the service line at a location approved by the Authority. The water meter shall read in thousand gallons and be owned and maintained by the Authority. The size of the water meter shall be the same size as the service line. By-pass lines around the water meter shall be strictly prohibited. The water meter must be installed by the Authority before connection to the water system is made.

There shall be no shrubs, fences or obstructions whatsoever which prevent easy access to the meter pit. All domestic service lines shall be metered with the water meters installed in meter pits placed within the public right-of-ways of the streets. The water service shall not be used until the installation of the meter and all accessories has been completed and the Authority has determined the system is operating properly.

On all commercial projects the Applicant shall furnish and install a strainer on the inlet side of the water meter.

Commercial Connections

All of the service connection components for commercial (non-residential) connections shall conform to the standards of AWWA C800. Domestic service pipe shall be 3/4" minimum diameter, 200 psi, Copper tube size service pipe and shall be installed with a minimum of 2'-10" of cover. All domestic service lines shall be metered with the meters installed in meter pits located within the public right-of-ways of streets.

Meter pit assemblies shall include a PVC pipe meter box with a lockable lid. Meter installation components shall include an inlet and outlet ball valve, meter yoke, fittings and other appurtenances as required by the Authority.

Corporation stops shall be sized to match the service pipe. Corporation stops one (1") inch and smaller shall be plug type/ground key. The ball type shall be used for services larger than one (1") inch. Corporation stops shall have an AWWA/CC taper thread inlet by copper tube size outlet. Tapping of the main shall be carried out by personnel experienced in this work using equipment designed for use with the corporation stops specified. Stops shall be installed so as to insure a watertight connection. Corporation stops one (1") inch and smaller shall be Ford Model F1002, Mueller Model H-15008 or approved equal. Corporation stops larger than one (1") inch shall be Ford Model FB1002, Mueller Model B-25008 or approved equal.

Construction of Wells

Wells shall be constructed and protected against possible contamination in accordance with American Water Works Association Standard A100. Well casings should be welded and made up with threaded couplings, and the protective casing shall have tight joints throughout its entire length.

A gamma ray log and/or a caliper log shall be provided for each well. The flow from each well shall be averaged over a 72-hour period and shall not be less than 300 gpm with a drawdown not lower than five (5') feet above the top of the screen or pump, whichever is higher. Static readings of the well shall be taken every three (3) hours for 12 hours prior to starting the test. During the test, one (1) hour will be permitted for adjustment of equipment during each eight (8) hour period except that the pumping shall be continuous during the final eight (8) hours.

Test water level readings shall be taken at the following time intervals:

6 readings every 5 minutes for 30 minutes
3 readings every 10 minutes for 30 minutes
4 readings every 15 minutes for 60 minutes
2 readings every 30 minutes for 60 minutes
1 reading every 60 minutes for remaining test time

Area of influence of the well shall be determined by at least one (1) observation well. Observation well requirements may be waived for wells over 200 feet in depth. Also, observation shall be made at all existing wells within a 1,000 foot radius regardless of well depth.

Well heads shall be at an elevation higher than the maximum flood level and high enough to permit drainage away from the facilities. All wells, treatment plants, and above ground appurtenances shall be located at least 500 feet from any possible source of contamination and shall be enclosed with a six (6') foot high chain link fence. They shall be provided with a double gate entrance for pedestrian

and truck use.

The maximum pumping permitted from each well field shall be taken at 50% of the normal capacity of the well as determined from the aforementioned 72-hour test. Emergency electrical power must be provided.

Construction of Treatment Plants

No general rules can be formulated for the design of treatment plants and each case will be considered individually based upon the raw water quality. The type and method of treatment must be approved by the New Jersey Department of Environmental Protection. Treatment plant plans and specifications must include provisions for lawns, shrubbery, paved roads and sidewalks. Plants shall be architecturally compatible with the environment. The entire property must be surrounded by a six (6') foot high chain link fence.

Separate gates must be provided for pedestrian and truck use. Detailed estimates of operating and maintenance costs of the proposed treatment plant must be submitted with the engineer's estimate. Emergency electrical power must be provided. All water shall be disinfected before it enters the distribution system and shall have a residual of 0.2 mg/l throughout the system. All standards of U.S. Environmental Protection Agency applicable to protection of the water sources, wells, water mains, equipment, and treatment works shall be met in the design of treatment plants.

The finished water shall meet all potable water standards adopted by the New Jersey Department of Environmental Protection. Adequate light, ventilation, heat and potable water supply shall be provided at the plant. Complete repair and operating tools and accessories shall be provided with the treatment facilities and wells.

Construction of Booster Pumping Stations and Storage Tanks

In general, the requirements of Construction of Wells and Treatment Plants are applicable. Suitable controls and remote telemetering must be provided from the pumping station or storage tank to the Authority's center of operations.

Telemetry must be via an automatic self dialing telephone system such as a RACO-VERBATIM or equal. Storage tanks must be steel and shall be constructed by firms competent in the field of tank erection.

As-Built Plans

After construction and before final acceptance by the Authority, the Applicant shall furnish to the Authority one (1) electronic data file, one (1) mylar reproducible drawing, in ink, approved by the Authority Engineer, and three (3) sets of sealed prints of each drawing showing the distribution system and all facilities as constructed.

The "as-built" plans shall show the exact location of the water mains, water service connections, fire hydrants and main line valves. The as-built plans must indicate the sanitary sewer pipe locations, inverts, lengths and corrected slopes. The as-built plans must indicate the station locations of all water and sanitary sewer service laterals measured from the nearest downstream sewer manhole. All water service curb boxes and sanitary sewer service lateral clean-outs must be triangulated and measured from the nearest downstream sewer manhole, with an offset from the sewer main. All

main line gate valve locations must be triangulated and measured from the nearest downstream sanitary sewer manhole.

All as-built plans must show the size and type of all mains (water and sanitary sewer) and all services (water and sanitary sewer).

All "as-built" plans shall be prepared by, signed and sealed by a Professional Land Surveyor duly licensed by the State of New Jersey. The vertical and horizontal accuracy shall conform to standard mapping tolerances.

Shop and Working Drawings

Prior to construction, the Contractor shall submit two (2) sets of approved, shop or work drawings of concrete reinforcement, materials fabricated especially for the project and materials for which drawings are specifically requested. Such drawings shall show the principal dimensions and construction details. When it is customary to do so, or when the dimensions are of particular importance, the Developer's Engineer shall approve the drawings.

No material shall be purchased or fabricated for equipment until the Authority or Authority's Engineer has reviewed the shop or work drawings.

Operation and Maintenance Manuals

After construction and before final acceptance, the Applicant shall furnish the Authority with five (5) sets of Operation and Maintenance Manuals for facilities constructed.

VII APPROVAL OF PLANS BY STATE AND OTHER AGENCIES

Approval of plans by the New Jersey Department of Environmental Protection must be obtained and will be a condition of the Authority's final approval. The Applicant shall obtain all permits from the New Jersey Department of Environmental Protection where required. Permits to construct water main and/or other structures within the right-of-way limits of State, County, and Municipal roads must be secured and paid for by the Applicant.

The Applicant in the name of the Authority will secure water diversion rights, from the New Jersey Department of Environmental Protection. The Applicant shall obtain well drilling permits.

VIII INSPECTION DURING CONSTRUCTION

General

The Applicant shall give 72-hours notice to the Authority and the Authority Engineer prior to construction. All construction shall comply with the approved plans and specifications and shall be subject to construction review or inspection by the Authority or its authorized representative. In the event of noncompliance, the Authority or its authorized representative may direct or order discontinuance of construction.

The Applicant shall submit a progress report together with the cost of construction at the end of each month to the Authority.

After the final pavement overlay has been completed, all water facilities must pass a final inspection. All of the water gate valve boxes must be set flush with the final pavement overlay. The water lateral shut-offs (curb boxes) and meter pits must be visible, set flush to grade and checked for operation with a valve key. All of the fire hydrants must be set to the proper height and rotated so that the pumper nozzle faces perpendicular to the street. No water lateral shut-offs (curb boxes) or meter pits are permitted in driveways or sidewalks. Following the final inspection, all final punch list work must be completed within thirty (30) days.

No service connections shall be made to a street main whether pressure tested or not, unless said connection is made under the review and inspection of the Authority's representative.

Leakage and Testing

The contractor shall furnish all labor, materials and equipment necessary for the testing. Preliminary pressure and leakage tests shall be made as required to reasonably ensure a successful final acceptance test which will be made under the inspection of the Authority having jurisdiction. The water system shall be tested after all the underground utilities (gas, electric, telephone, etc.) have been completed, the road gravel base has been installed to subgrade and the curbs and sidewalks have been completed. Preliminary tests, which may be performed by the developer, do not preclude the final tests that are required by the Authority.

No work shall be closed or covered up until it has been duly inspected and approved for proper and satisfactory construction and installation. Should uncompleted or unapproved work be covered, the Applicant shall uncover all work so that it can be properly inspected and approved; and after such inspection and approval he will properly repair and replace all work found defective, unsatisfactory, and not in accord with the Plans and Specifications, and after such repair and replacement, he will bring all work to the completeness and status existing before it was closed and covered. After absorption is complete, the pipe (s) and appurtenances shall be pressure-tested for a period of one (1) hour under a pressure equal to twice the maximum possible pressure in each pressure zone but in any case not less than 150 psi. A leakage test shall be conducted after the satisfactory completion of the pressure test.

The duration of each leakage test shall be two (2) hours; and during this period, the main shall be subjected to a pressure equal to twice the maximum possible pressure in the pressure zone, but in any case not less than 150 psi, and shall not be permitted to fall more than 10 psi below that amount.

Leakage is defined as that quantity of water to be supplied into the newly laid pipe, or any valved section thereof, necessary to maintain the specified leakage pressure after the pipe has been filled with water and the air expelled.

No pipe installation will be approved until the leakage is less than the number of gallons per hour as determined by the following formula:

$$L = SDP^{0.5}/133{,}200$$

where:

L = Allowable leakage in gallons per hour
S = Length of pipe tested (feet)

P = Average test pressure during the test (psi)
D = Nominal diameter of pipe (inches)

If leakage occurs greater than the allowable quantity specified, the defective joints or pipes shall be located and repaired until the leakage is within the acceptable allowance. Leakage tests shall be conducted in accordance with AWWA C-600.

Disinfection

Before being placed in service, all water mains, appurtenances, pipe, treatment units and storage tanks shall be disinfected. The mains and tanks shall first be thoroughly flushed to remove all dirt and foreign matter and then filled with water containing a dosage of 50 ppm of chlorine. The chlorinated water shall be retained in the mains and tanks for at least 12 hours after which the mains and tanks shall be flushed.

The Applicant may, at his option, chlorinate storage tanks by spraying all interior surfaces with a solution containing 500 ppm concentration of chlorine. A solution of not less than one (1%) percent of the tank capacity shall be prepared at this concentration and sprayed on all surfaces. The tank shall then stand with drain closed for at least 12 hours. When the required time has elapsed, the tank shall be drained and flushed with water.

After flushing, the mains and tanks shall be filled with water and a bacterial analysis, by a licensed laboratory, shall be made. The results shall meet the standards as set forth by the New Jersey Department of Environmental Protection. Disinfection shall be done in accordance with AWWA, C651, C652 and C653 Standards.

IX USE OF THE WATER SYSTEM

Use of Water System by the Authority

During construction and before final acceptance, the Authority shall have the right to use any completed portion of the system without waiving its right to order correction of any defects.

Illegal Use of the System

Use of the active portion of the water system for construction, flushing of sewers, and the like is strictly prohibited without the expressed permission of the Authority. Any other use for which the system was not specifically designed shall be an "Illegal Use of System," and is strictly prohibited. Such use shall be subject to penalty and/or fine as may be prescribed by law.

X ACCEPTANCE OF IMPROVEMENTS BY THE AUTHORITY

After construction of all proposed improvements has been completed the applicant shall:

1. Obtain from the Authority Engineer a certification that the construction has been completed in accordance with the approved plans and specifications.

2. Submit deeds with metes and bounds description to all lands, easements, and improvements not previously transferred, together with title policies.

3. Submit Affidavits of Title for land, easements, and equipment and a recitation thereon that everything conveyed to the Authority has been paid for in full. Corporate resolution authorizing said transfers if applicable.

4. Submit copy of filed subdivision plat showing all easements containing the filed plat number and filing date.

5. Submit surveys for sites and easements dedicated to the Authority and sealed by a licensed New Jersey Land Surveyor.

6. Submit Bills of Sale for all equipment and facilities, including warranties from manufacturers of equipment.

7. Submit releases from the general site contractor(s) who furnished and installed the facilities.

8. Furnish one (1) electronic data file, one (1) mylar reproducible drawing, in ink, and three (3) sets of sealed prints of the as-built plans prepared by a licensed New Jersey Land Surveyor.

9. Post Surety Maintenance Bond (or irrevocable letter of credit) in a form and content approved by the Authority and to the satisfaction of the Authority Attorney equal to ten (10%) percent of the Estimate of Cost, guaranteeing the satisfactory performance and functioning of the improvements for a minimum of two (2) years.

10. Provide an affidavit that all submittals are true, accurate and complete and that all conveyances are free from any lien or encumbrances.

XI REGULATIONS PERTAINING TO CONSOLIDATION OF LOTS

When any individual or developer consolidates a building lot, where previously each lot had its own water and sewer service lateral, the individual or developer shall be required to abandon the service laterals that will not be used. The water service lateral shall be abandoned at the corporation stop (shut-off-valve) at the water main. The individual or developer shall be required to excavate and locate the connection and close the corporation stop. The individual or developer shall then be required to cut the lateral leaving a short pig tail and crimp the end of the said pipe. The sewer service lateral shall be abandoned by removing the clean-out riser, and then permanently capping the lateral just behind the curb. This procedure shall apply to the consolidation of lots which resulted in the residual property being “unbuildable” under current Authority requirements.

Policy Regarding “Flag” or “Panhandle” Lots

This policy is intended to guide and advise applicants concerning water and sewer service to lots with minimal or no frontage on a public right-of-way.

For lots that have been created by a valid subdivision and which are located one or two lots back or away from the public right-of-way, the Authority jurisdiction will stop near the right-of-way line, as with a lot with normal frontage.

For those lots and situations where there are more than two (2) lots with minimal frontage or where

this situation could occur if other development takes place, the Authority would consider providing service to the lots via a water and/or sewer main, located in the common access driveway/easement area. In this case, the applicant shall provide an easement to the Authority with a minimum width of 20 feet for water and sewer mains.

The construction of the main lines or requirement of a pro-rata share for future construction will be decided by the Authority as if the lots fronted on a public right-of-way. Each will be decided on a case by case basis and the decision will be based on factors including but not limited to: proximity to existing active mains, length of the extension, number of lots in the application, development patterns in the area and other factors deemed to be relevant by the Authority and the Engineer.

XII COMPLIANCE WITH RULES AND REGULATIONS

The Applicant shall comply with all of the Rules and Regulations as set forth herein. Failure to do so will result in a "stop work order" by the Authority. These Rules and Regulations are minimum requirements, and are not intended to replace detail specifications, which are the responsibility of the Applicant. They are intended to apply to usual and non-exceptional conditions. These Rules and Regulations are subject to amendments by the Lower Township Municipal Utilities Authority. The Authority reserves the right to specify additional requirements.

XIII RULES & REGULATIONS IN EFFECT

These Rules and Regulations shall take effect immediately, and a copy shall at all times be kept on file at the principal office of the Authority and shall at all reasonable times be open to public inspection.

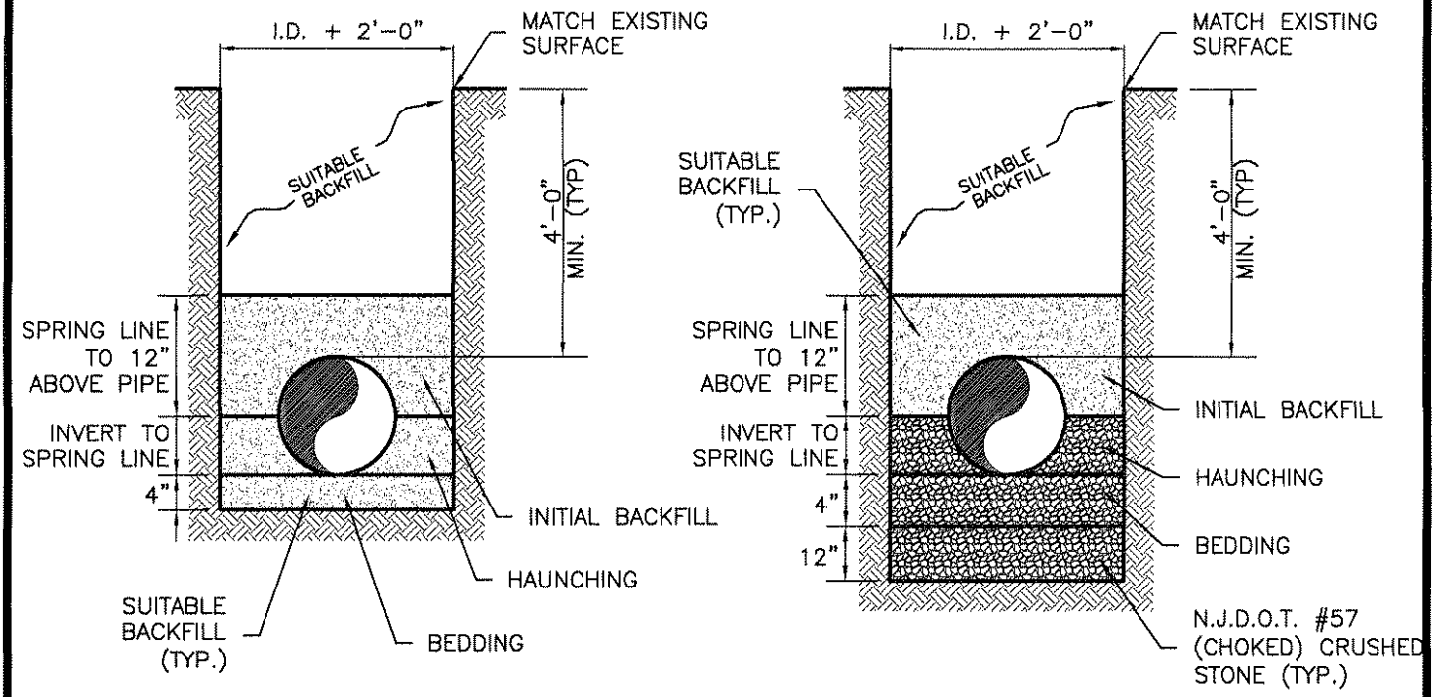
All resolutions, rules or regulations inconsistent herewith are hereby rescinded.

DRAWINGS

RULES AND REGULATIONS

Governing Applications To

THE LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY



BANK RUN SAND AND GRAVEL
(DRY, SUITABLE BEDDING CONDITIONS)

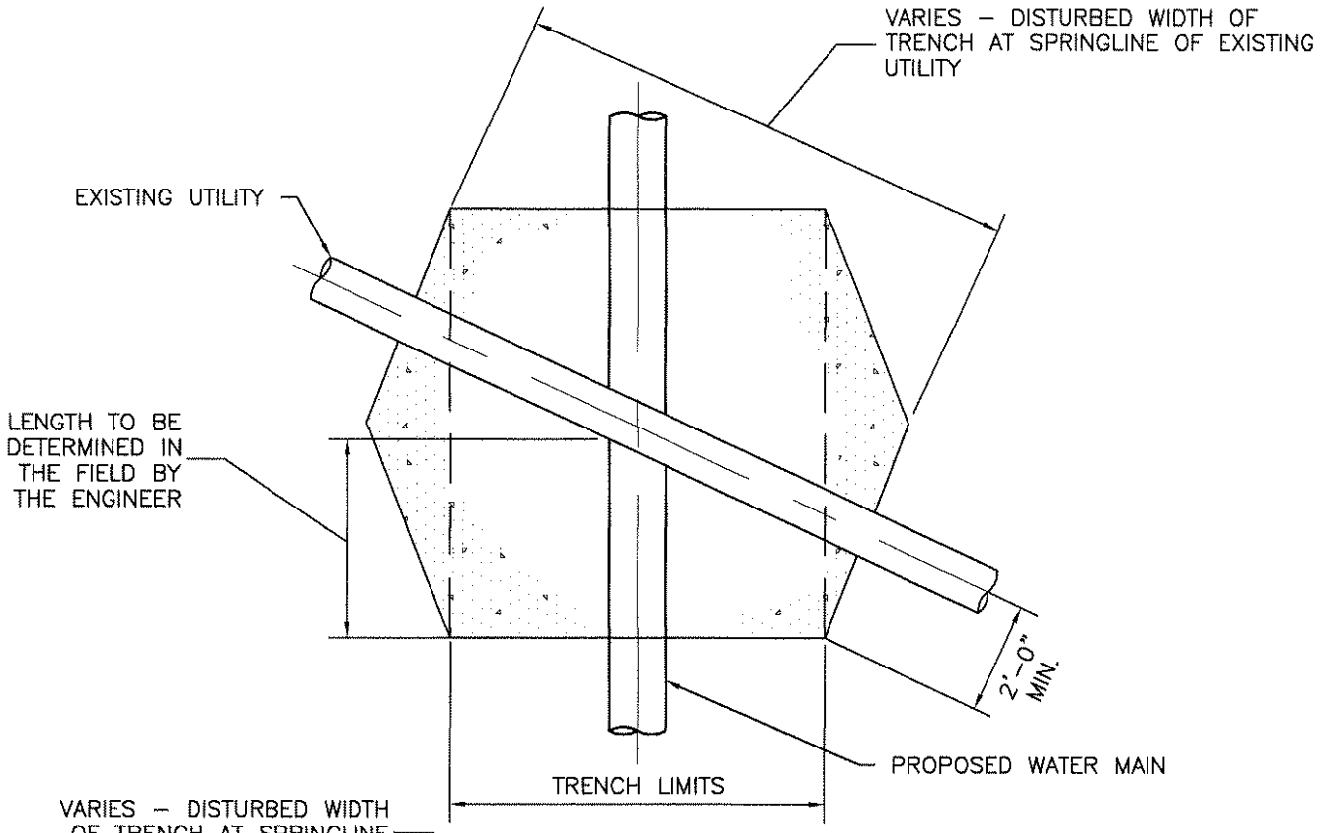
SCREENED GRAVEL OR STONE
(CLAY, WET OR UNSUITABLE BEDDING CONDITIONS)

NOTES:

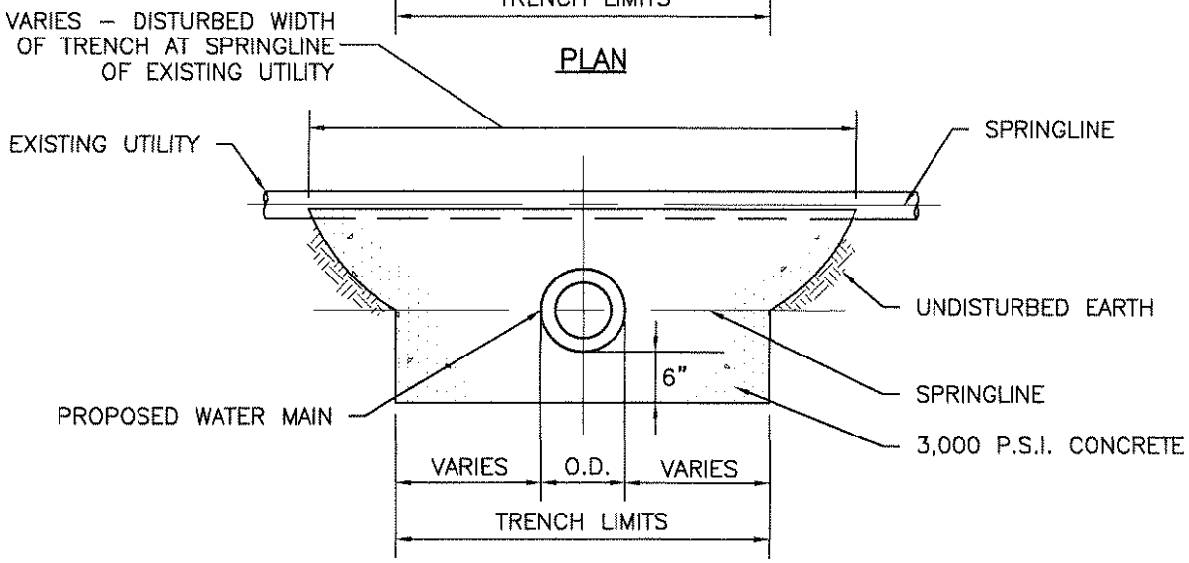
1. SUITABLE BACKFILL SHALL CONSIST OF BANK RUN SAND AND GRAVEL OR SUITABLE EXCAVATED MATERIAL FREE FROM ORGANIC OR DELETERIOUS MATERIAL.
2. SUITABLE BACKFILL TO BE THOROUGHLY COMPACTED IN 6" LIFTS BY MECHANICAL TAMPING (OR BY HAND TAMPING WHEN AND WHERE DIRECTED).
3. SUITABLE BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY OR AS DIRECTED IN THE SPECIFICATION.
4. AREAS SURROUNDING PIPE SHALL BE HAND TAMPED TO FILL ALL CAVITIES.
5. EXCAVATION SHALL COMPLY WITH OSHA REQUIREMENTS.
6. THE CONTRACTOR MUST DEWATER PRIOR TO PLACING THE PIPE IF WET TRENCH CONDITIONS ARE FOUND. THE PIPE MUST REMAIN IN DRY CONDITIONS UNTIL BACKFILLED.

TYPICAL PIPE BEDDING/BACKFILL DETAIL

N.T.S.



PLAN



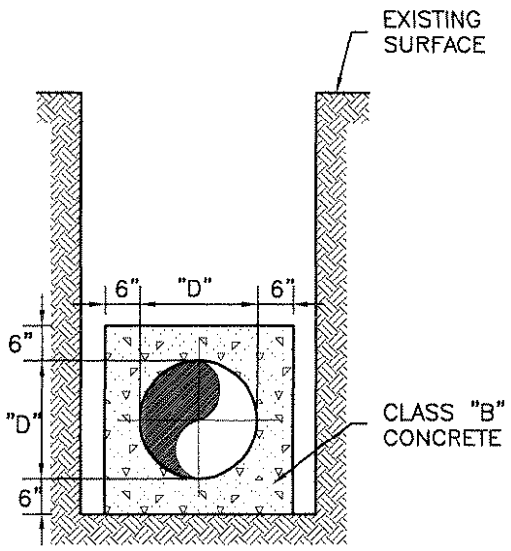
SECTION A–A

NOTES:

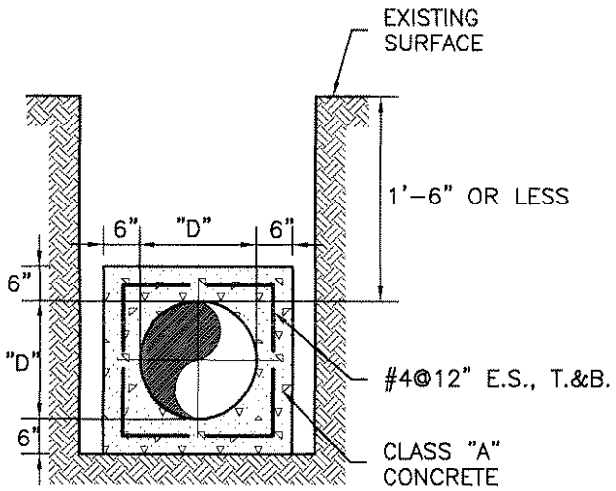
1. WHERE WATER MAINS CROSS UNDER OR OVER AN EXISTING SANITARY SEWER, STORM DRAIN OR OTHER UTILITY AND WHERE THE MINIMUM DISTANCE BETWEEN THEM IS 6" OR LESS, THE ENGINEER MAY ELECT TO CONSTRUCT A CONCRETE CRADLE TO THE SPRINGLINE OF THE UPPER PIPE. THE WIDTH OF THE CRADLE SHALL BE EQUAL TO THE ACTUAL EXCAVATED WIDTH OF THE TRENCH (6" BELOW THE LOWER PIPE) AND VARIES TO THE DISTURBED TRENCH WIDTH AT THE SPRINGLINE OF THE UPPER PIPE. THE LENGTH VARIES AND IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

CONCRETE CRADLE DETAIL

N.T.S.



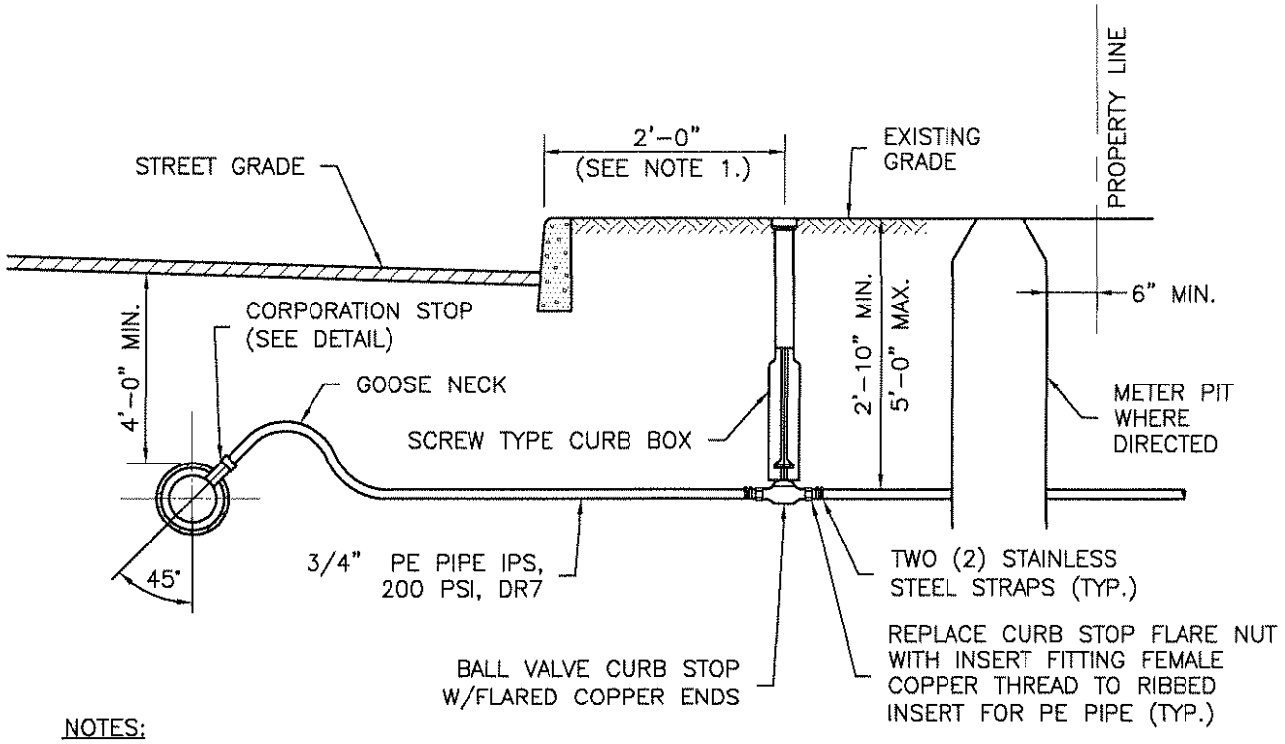
STANDARD



SPECIAL

ENCASEMENT IN CONCRETE

N.T.S.



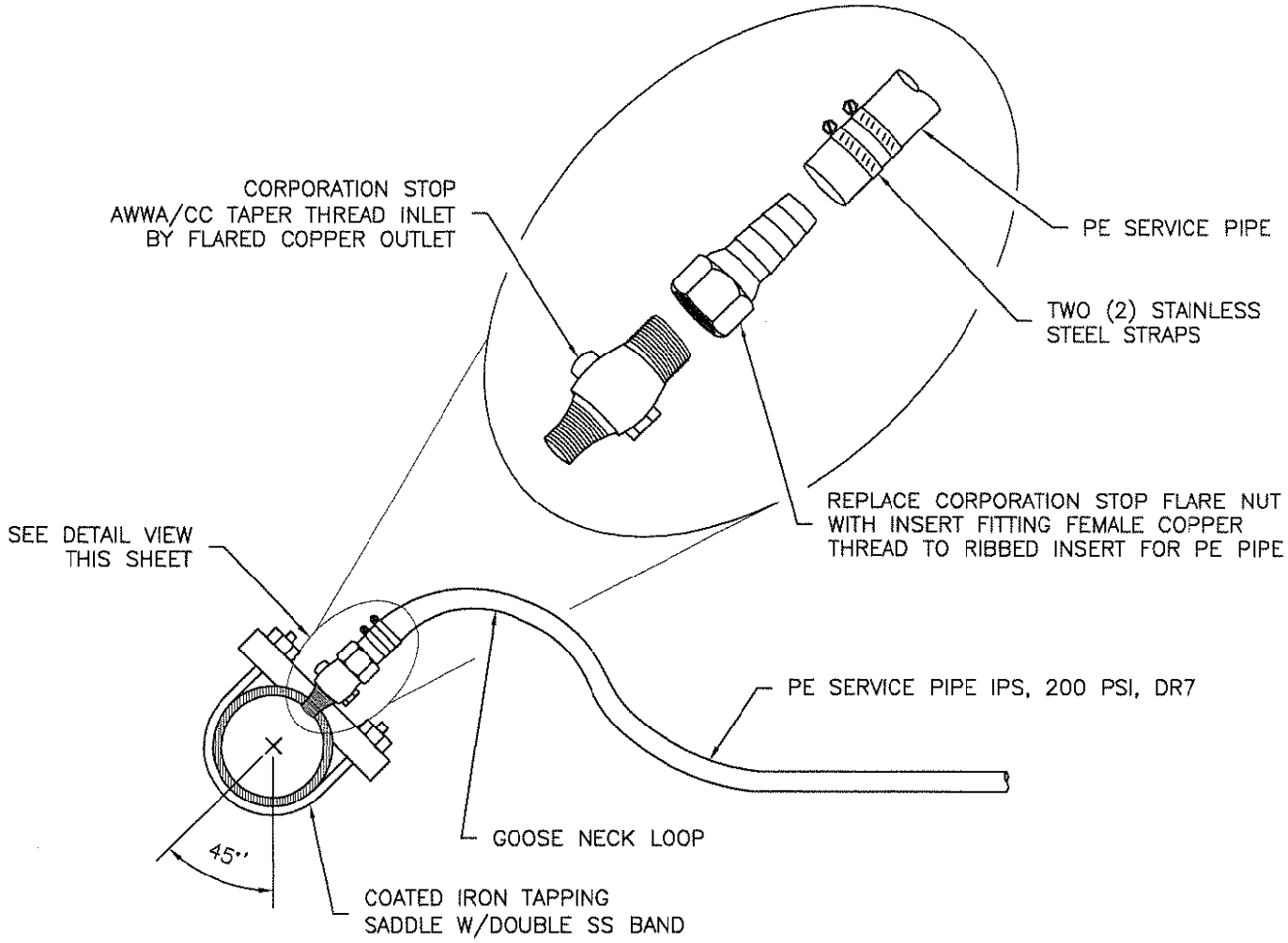
NOTES:

1. THE LOCATION OF THE CURB STOP AND BOX SHALL BE TWO (2) FEET FROM THE CURB IN PLANTED AREAS OR ONE (1) FOOT FROM A PROPOSED SIDEWALK ON THE SIDE NEARER THE RESIDENT.
2. THE CURB STOP/BOX AND METER PIT SHALL NEVER BE PLACED OUTSIDE OF THE STREET R.O.W., IN A CONCRETE SIDEWALK OR IN A DRIVEWAY.
3. THE CONTRACTOR SHALL EXTEND THE SERVICE PIPING TO THE PROPERTY LINE.

TYPICAL WATER SERVICE HOUSE CONNECTION INSTALLATION

N.T.S.

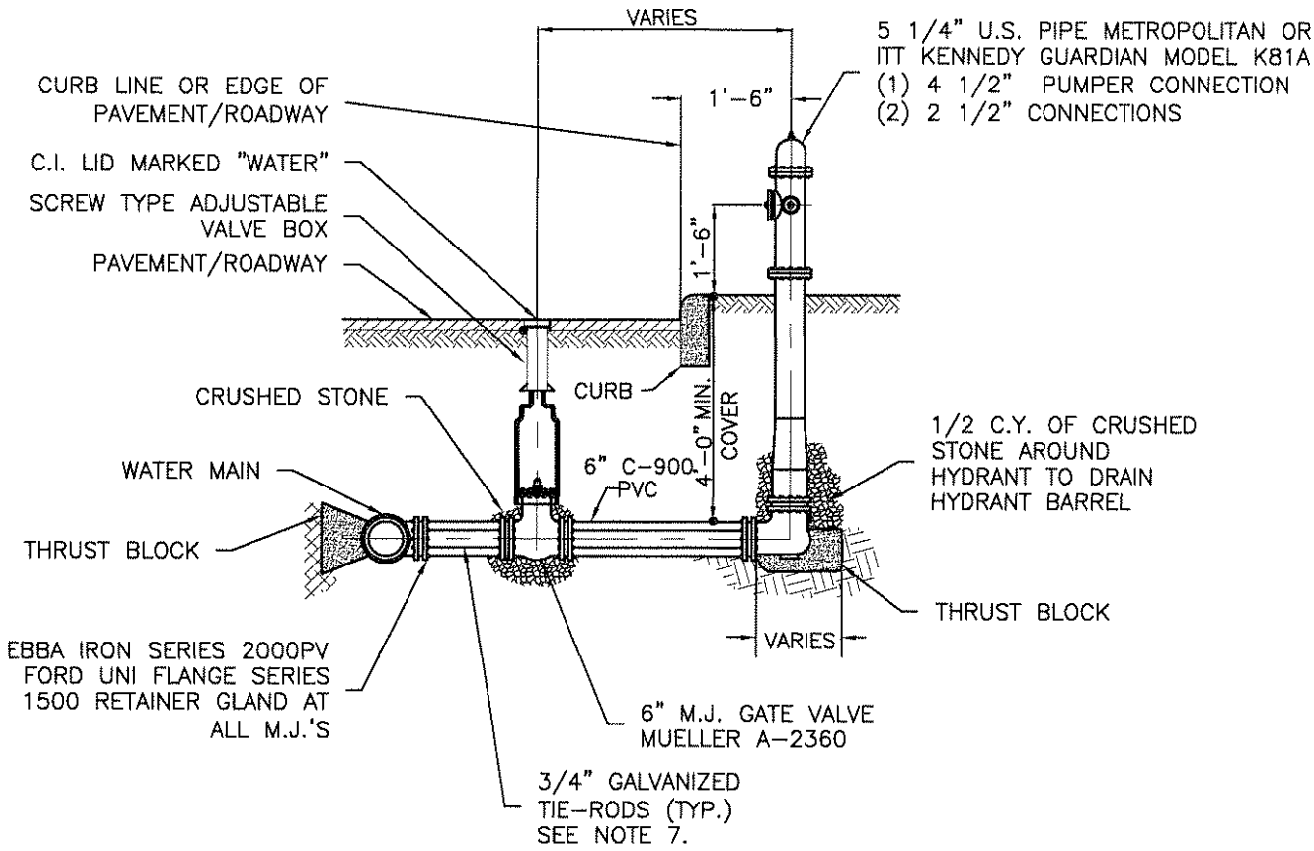
CURB STOP	MUELLER B25204, FORD B22-333 OR APPROVED EQUAL
CURB BOX	TYLER SERIES 6500 OR APPROVED EQUAL
INSERT FITTING	FORD PTC SERIES OR APPROVED EQUAL



CORPORATION STOP DETAIL

N.T.S.

TAPPING SADDLE	MUELLER DR2S, FORD FC202 OR APPROVED EQUAL
CORPORATION STOP 1" AND SMALLER	MUELLER H-15000, FORD F600 OR APPROVED EQUAL
CORPORATION STOP LARGER THEN 1"	MUELLER B-25000, FORD FB600 OR APPROVED EQUAL
INSERT FITTING	FORD PTC SERIES OR APPROVED EQUAL

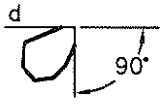
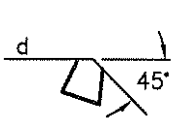
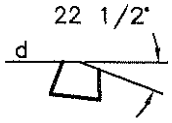
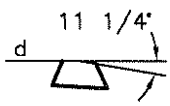
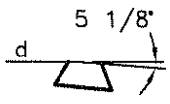


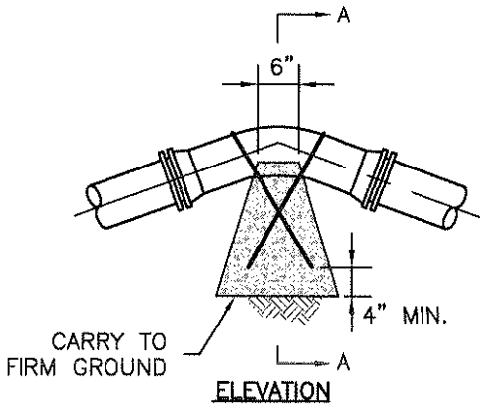
NOTES:

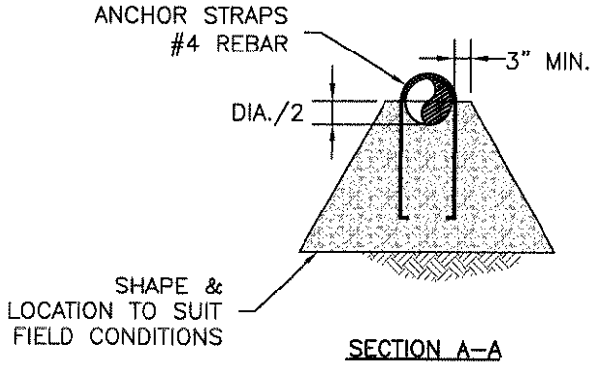
1. CENTER LINE OF FIRE HYDRANT SHALL BE PLACED 1'-6" FROM CURB FACE. PUMPER CONNECTION SHALL BE 1'-6" FROM TOP OF CURB.
2. CONCRETE FOR THRUST BLOCKS SHALL BE N.J.D.O.T., CLASS "B" AND SHALL BE POURED AGAINST UNDISTURBED SOIL.
3. THRUST BLOCK SIZE AND BEARING AREA SHALL CONFORM TO CURRENT A.W.W.A. STANDARDS OR SHALL BE DESIGNATED ON THE PLANS.
4. HYDRANTS SHALL BE LOCATED AT THE LOT LINE SEPARATING PROPERTIES, OR AS DIRECTED BY THE ENGINEER.
5. DRAIN PORTS MUST BE FREE OF CONCRETE OR OTHER PERMANENT OBSTRUCTIONS.
6. HYDRANT 4-1/2" PUMPER CONNECTION SHALL FACE TOWARD THE STREET.
7. CONTRACTOR SHALL PROVIDE 2 (MIN.) 3/4" GALVANIZED TIE-RODS CONNECTED BY PIG EARS, NUTS AND WASHERS FROM TEE TO VALVE AND FROM VALVE TO HYDRANT.
8. CRUSHED STONE SHALL BE PLACED AROUND THE VALVE TO ENSURE PROPER DRAINAGE AND CUSHION.

FIRE HYDRANT DETAIL

N.T.S.

DIAMETER OF PIPE (d)	REQUIRED VOLUME OF CONCRETE FOR THRUST BLOCKS IN CUBIC FEET 150 PSI TEST PRESSURE				
	90° ELBOW	45° ELBOW	22 1/2° ELBOW	11 1/4° ELBOW	5 1/8° ELBOW
					
6"	39	28	15	8	3
8"	63	44	24	12	6
10"	96	68	37	19	9
12"	137	97	53	27	12
16"	239	169	92	47	21
18"	298	211	114	58	27
20"	364	258	139	71	33
24"	521	369	199	102	47
30"	804	568	308	157	72
36"	1152	*815	441	225	103





VERTICAL DOWNWARD BENDS

NOTES:

1. VOLUME OF CONCRETE BASED ON 1 CU. FT. WEIGHING 150 LBS.
2. ALL VERTICAL CONCRETE THRUST BLOCKS SHALL BE CLASS B CONCRETE.
3. NO JOINT SHALL BE COVERED WITH CONCRETE.
4. RETAINER GLANDS SHALL BE USED ON ALL MECHANICAL JOINT CONNECTIONS.
5. * VOLUME OF CONCRETE CALCULATED:

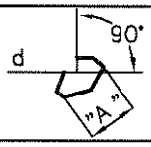
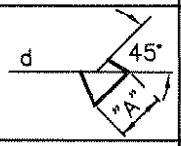
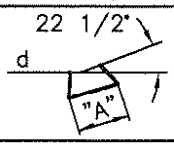
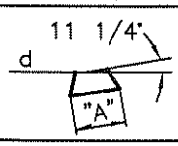
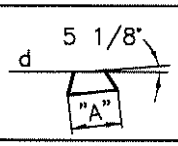
$$\text{Volume of Concrete in Cu.Ft.} = \frac{PA \sin 45^\circ}{\text{Weight of Concrete per Cu.Ft.}}$$

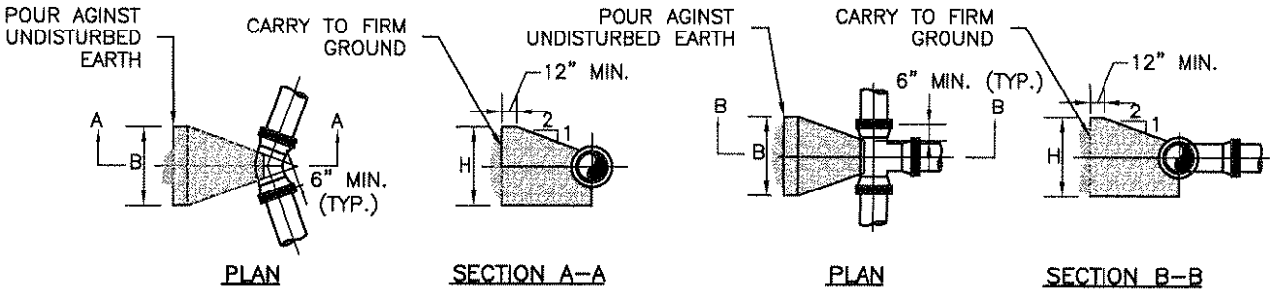
$$= \frac{(150)\ (1152.09)\ (0.7071)}{150}$$

$$= 815 \text{ Cu.Ft.}$$

THRUST BLOCKS
VERTICAL DOWNWARD BENDS

N.T.S.

DIAMETER OF PIPE (d)	CONTACT BEARING AREA OF THRUST BLOCKS WITH EARTH IN SQUARE FEET ("A") 150 PSI TEST PRESSURE					
	90° ELBOW	45° ELBOW	22 1/2° ELBOW	11 1/4° ELBOW	5 1/8° ELBOW	DEAD END
						
6"	2.8	1.5	0.8	0.4	0.2	2
8"	4.4	2.4	1.2	0.6	0.3	3.1
10"	6.8	3.7	1.9	0.9	0.4	4.8
12"	9.7	5.3	2.7	1.3	0.6	6.9
16"	16.9	9.2	4.7	2.3	1.1	12.0
18"	21.1	11.4	5.8	2.9	1.3	19.9
20"	25.8	13.9	7.1	3.6	1.6	18.2
24"	36.9	19.9	10.2	5.1	2.3	26.1
30"	56.8	30.8	15.7	7.9	3.6	40.2
36"	81.5	* 44.1	22.5	11.3	5.1	** 57.6



TO DETERMINE THRUST BLOCK BASE AND HEIGHT DIMENSIONS USE THE FOLLOWING FORMULA:
AREA (A) = BASE (B) * HEIGHT (H)

EXAMPLE: IF A=7 SQ. FT. AND B=3.5 FT. THEN H=2 FT.

NOTES:

1. BEARING AREAS ARE BASED ON UNDISTURBED SOIL WITH A BEARING CAPACITY OF 3000 LBS. PER SQ. FT. FOR A LESSER SOIL BEARING CAPACITY, BEARING AREAS SHALL BE INCREASED ACCORDINGLY.
2. ALL CONCRETE THRUST BLOCKS SHALL BE CLASS B CONCRETE.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
4. NO JOINT SHALL BE COVERED WITH CONCRETE.
5. RETAINER GLANDS SHALL BE USED ON ALL MECHANICAL JOINT CONNECTIONS.
6. BEARING AREA CALCULATED: P=Pressure in Lbs/Sq.In.
   A=Area of the pipe ($A=\pi r^2$)

$$\text{* Bearing Area in Sq.Ft.} = \frac{2\ PA\ \sin(\text{Angle of Bend}/2)}{\text{Soil Bearing Capacity}}$$

$$= \frac{(2)\ (150)\ (1152.09)\ (0.3827)}{3{,}000\ \text{Lbs/Sq. Ft.}}$$

$$= 44.1\ \text{Sq. Ft.}$$

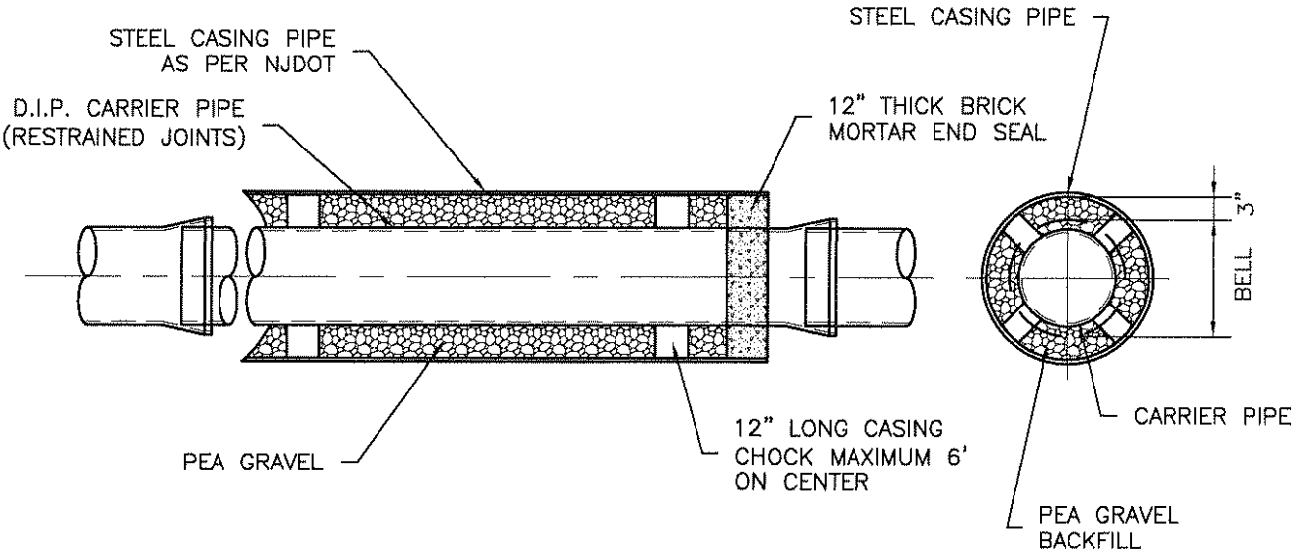
$$\text{** Bearing Area in Sq.Ft.} = \frac{PA}{\text{Soil Bearing Capacity}}$$

$$= \frac{(150)\ (1152.00)}{3{,}000\ \text{Lbs/Sq. Ft.}}$$

$$= 57.6\ \text{Sq. Ft.}$$

THRUST BLOCKS
HORZONTAL BENDS AND VERTICAL UPWARD BENDS

N.T.S.

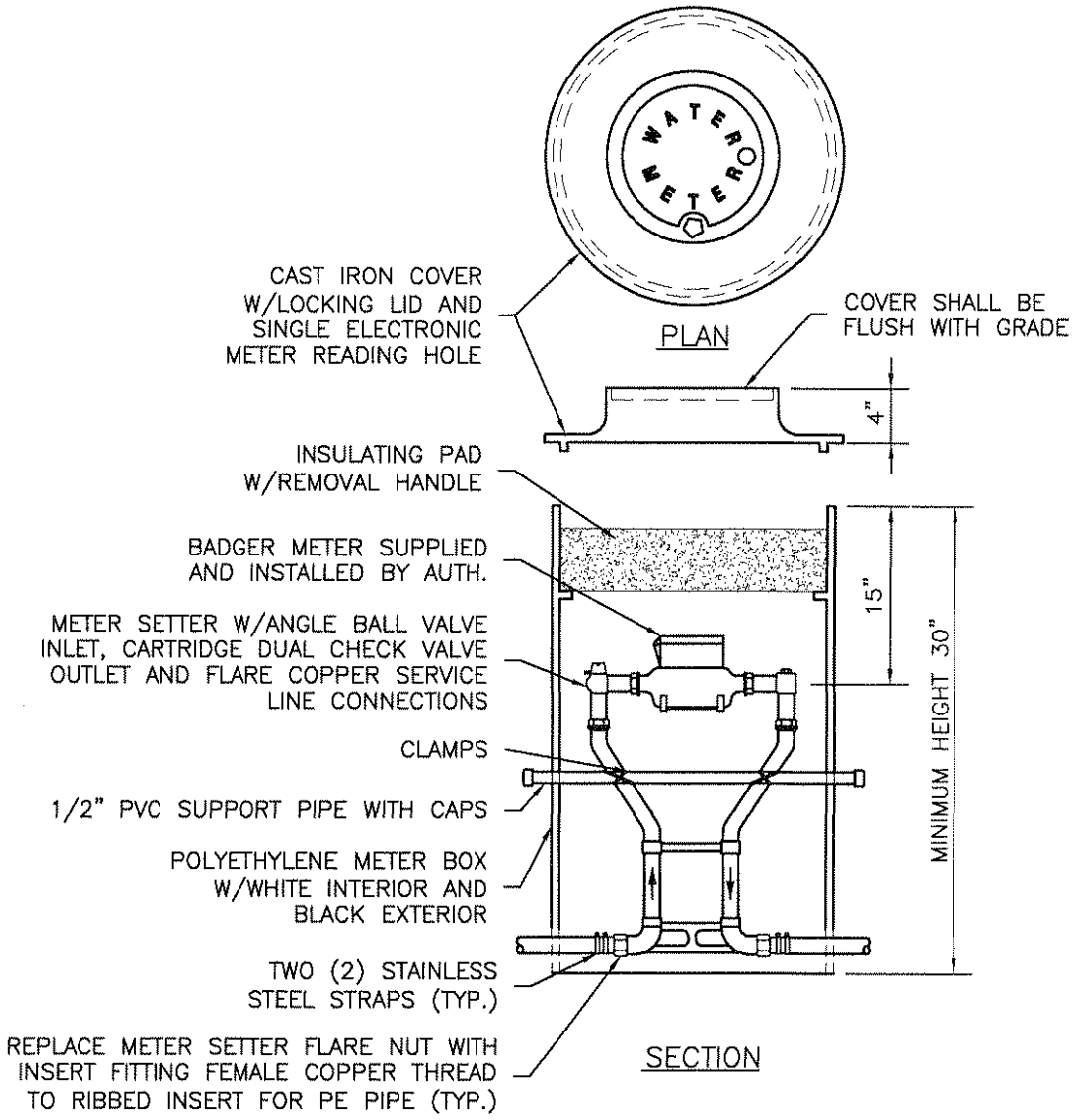


NOTES:

1. CHOCKS SHALL BE POWER SEAL MODEL 4810 OR APPROVED EQUAL. CHOCKS SHALL BE LUBRICATED TO FACILITATE SLIDING OF PIPE THROUGH CASING USING A MATERIAL APPROVED BY THE ENGINEER.
2. CASING LENGTHS SHALL BE WELDED ENSURING THE INTERIOR FACE OF THE STEEL PIPE IS SMOOTH THE ENTIRE PERIPHERY OF EACH JOINT, FOR THE ENTIRE LENGTH OF THE CASING.
3. PEA GRAVEL SHALL BE BLOWN INTO AND COMPLETELY FILL THE VOID BETWEEN THE COMPLETED CASING AND CARRIER PIPES.
4. ALL CARRIER PIPE TO BE CEMENT LINED D.I.P. CL-52 WITH RESTRAINED JOINTS (FIELD-LOC GASKETS).

JACK & BORE PIPE ENCASEMENT DETAIL

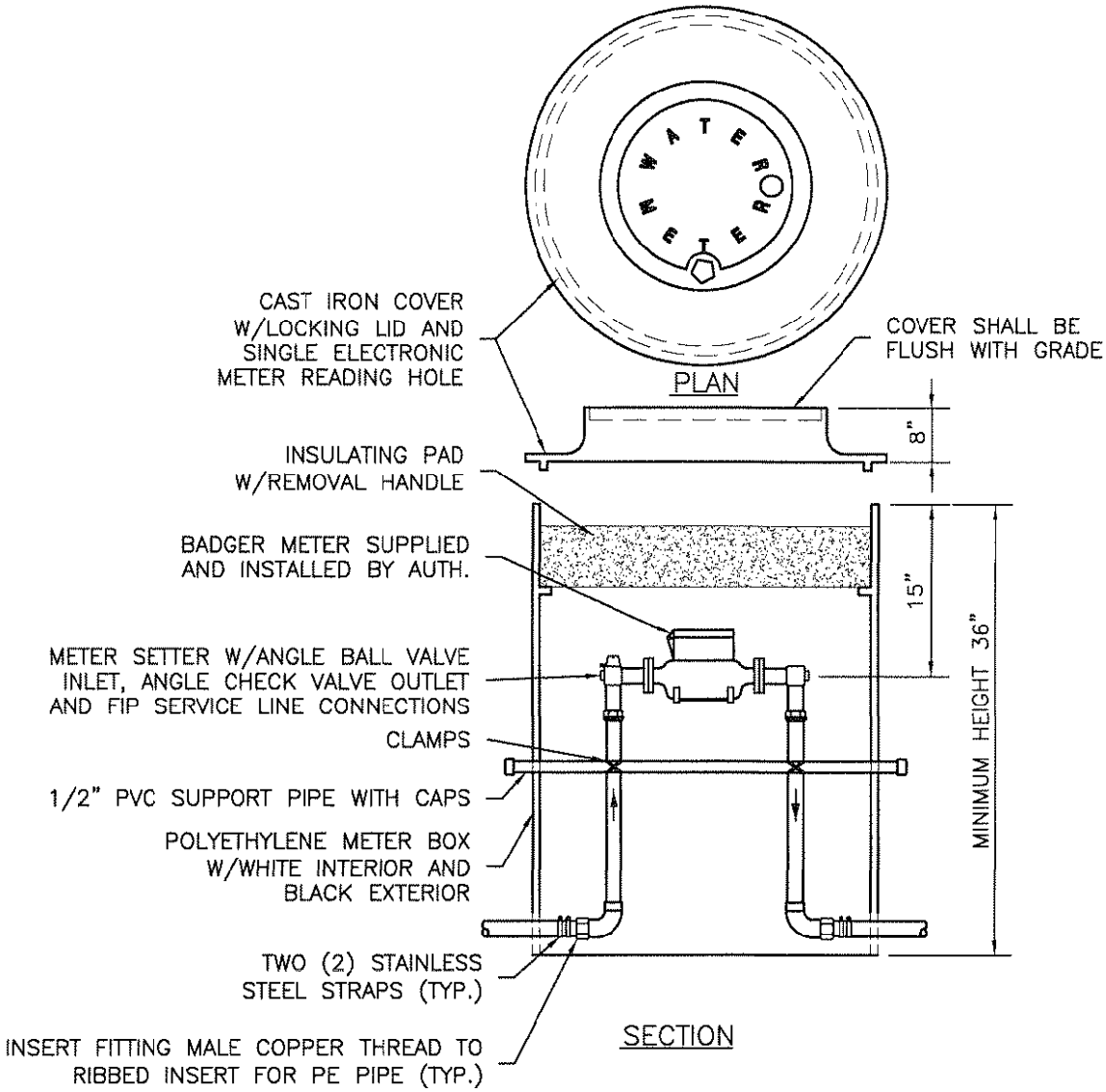
N.T.S.



METER PIT DETAIL
FOR 3/4" AND 1" SERVICES

N.T.S.

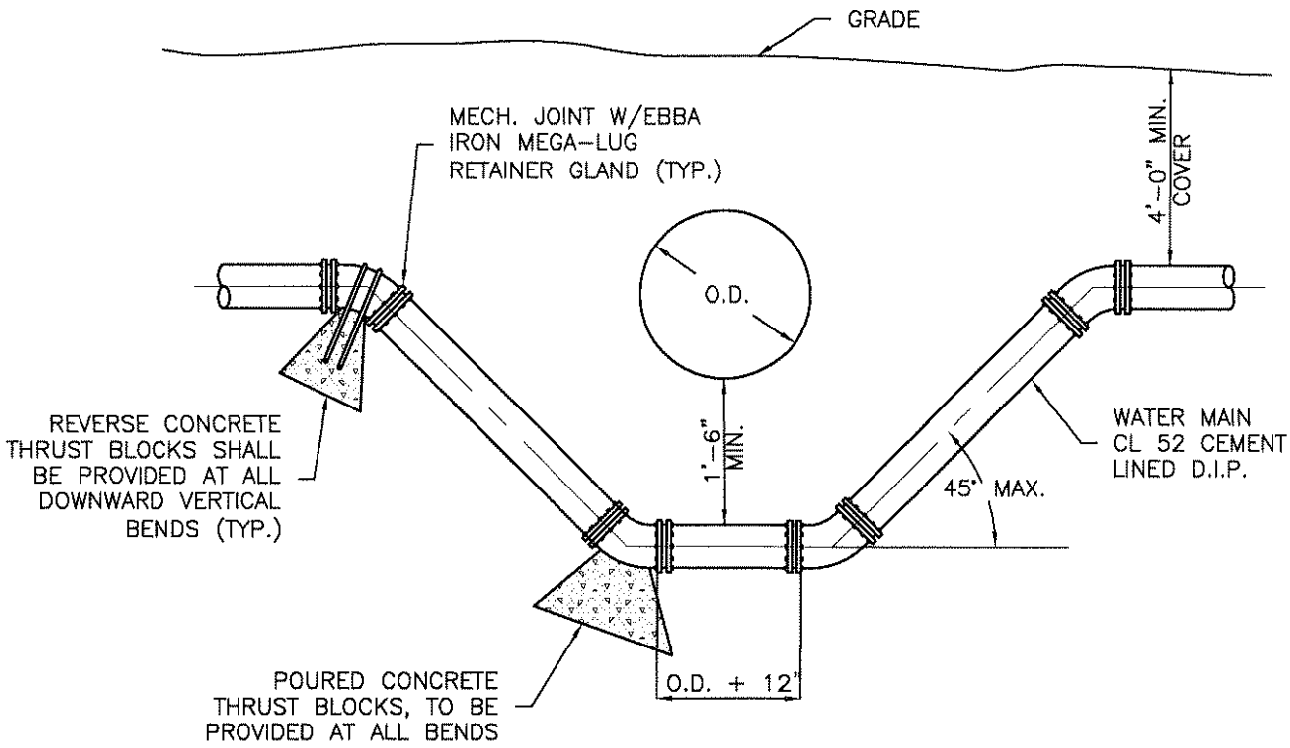
	3/4" SERVICE SIZE	1" SERVICE SIZE
METER PIT	18"ø MID-STATE B SERIES OR APPROVED EQUAL	20"ø MID-STATE B SERIES OR APPROVED EQUAL
INSULATING PAD	FORD CCID-18, MID-STATE OR APPROVED EQUAL	FORD CCID-20, MID-STATE OR APPROVED EQUAL
METER SETTER	FORD VBHC71-18W-22-33 OR APPROVED EQUAL	FORD VBHC74-18W-22-44 OR APPROVED EQUAL
COVER	FORD A32-T OR APPROVED EQUAL	FORD A3-T OR APPROVED EQUAL
INSERT FITTING	FORD PTC-1 OR APPROVED EQUAL	FORD PTC-2 OR APPROVED EQUAL



METER PIT DETAIL
FOR 1 1/2" AND 2" SERVICES

N.T.S.

	1 1/2" SERVICE SIZE	2" SERVICE SIZE
METER PIT	36"ø MID-STATE B SERIES OR APPROVED EQUAL	36"ø MID-STATE B SERIES OR APPROVED EQUAL
INSULATING PAD	FORD CCID, MID-STATE OR APPROVED EQUAL	FORD CCID, MID-STATE OR APPROVED EQUAL
METER SETTER	FORD VBH76-18-11-66 OR APPROVED EQUAL	FORD VBH77-18-11-77 OR APPROVED EQUAL
COVER	FORD MC-36-T OR APPROVED EQUAL	FORD MC-36-T OR APPROVED EQUAL
INSERT FITTING	FORD PTM-4 OR APPROVED EQUAL	FORD PTM-5 OR APPROVED EQUAL

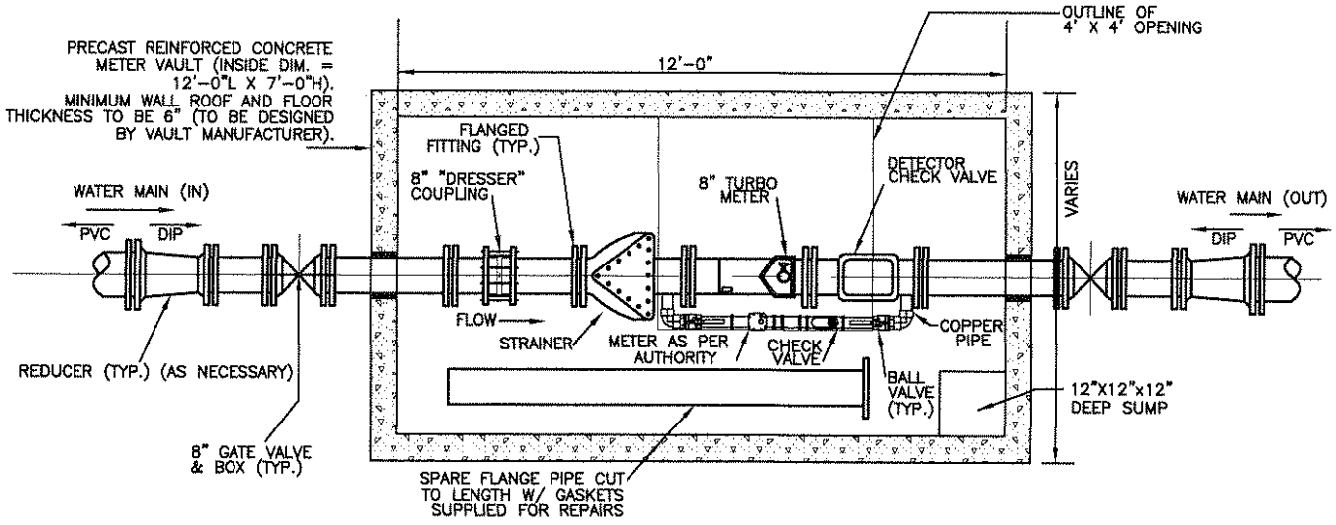


NOTES:

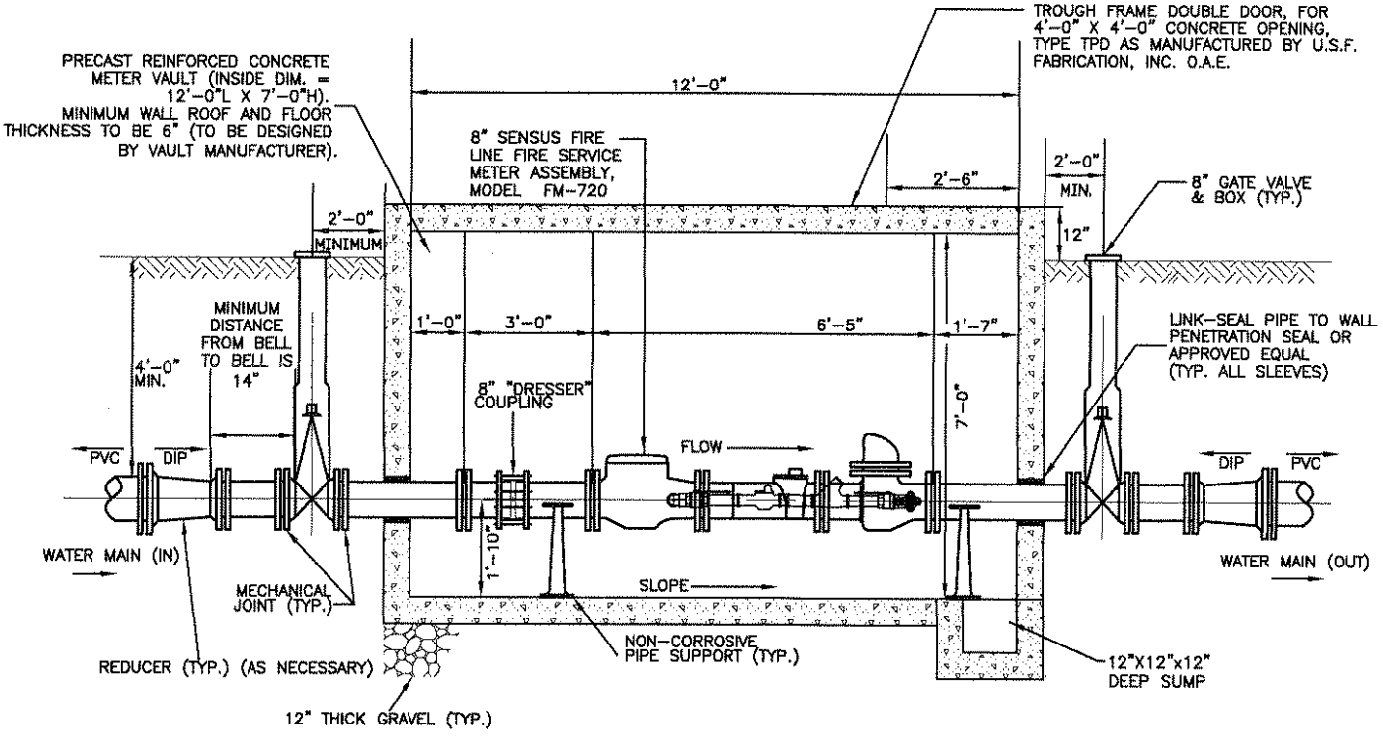
1. WATER MAIN MAY BE LOOPED ABOVE AN OBSTRUCTION, IF 4' MINIMUM COVER IS MAINTAINED ABOVE WATER MAIN AND 1'-6" VERTICAL CLEARANCE OVER THE OBSTRUCTION IS MAINTAINED.
2. WATER MAIN SHALL BE CLASS 52 DUCTILE IRON CEMENT LINED PIPE. ALL JOINTS SHALL BE MECHANICAL JOINT OR PUSH-ON AND ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON (RESTRAINED).
3. ALL MECHANICAL JOINTS SHALL HAVE EBBA IRON SERIES 1100 MEGA-LUG RETAINER GLAND, OR APPROVED EQUAL.
4. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS OR OTHER POINTS OF PIPE DIRECTION CHANGE.
5. VERTICAL CLEARANCE BETWEEN OBSTRUCTING PIPE AND WATER MAIN SHALL BE 1'-6" MINIMUM.
6. TIE RODS SHALL BE UTILIZED TO RESTRAIN PIPE JOINTS. DETAILS OF THE TIE ROD ASSEMBLY SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. TIE RODS SHALL BE SUFFICIENT TO RESTRAIN THE THRUST DEVELOPED AT 150 P.S.I. WORKING PRESSURE.

LOOPING WATER MAIN

N.T.S.



PLAN



NOTES:

1. VAULT DOORS ARE TO BE EQUIPPED WITH STAINLESS STEEL SLAM LOCKS, AND TORSION BARS FOR EASY OPENING.
2. VAULT DOORS ARE TO BE EQUIPPED WITH STAINLESS STEEL SAFETY CHAINS.
3. VAULT SHALL BE EQUIPPED WITH 15/16" SQUARE SERRATED EXTRUSION LADDER WITH SAFETY EXTENSION.
4. EXTERIOR BELOW GRADE TO BE PAINTED WITH TWO COATS OF 16 MILS CONLUX BLACK MASTIC 22.
5. INTERIOR TO BE COATED WITH 12 MILS OF CONLUX EPOXIDE 34 CERAMIC WHITE.

MASTER WATER METER PIT DETAIL

N.T.S.

Lower Township MUA 05/06/2009

Township of Lower, Cape May County, New Jersey

Lower Township Municipal Utilities Authority
2900 Bayshore Road
Villas, New Jersey 08251
(609) 886-7146
(609) 886-4487 Fax
www.ltmua.org

CAPACITY FEASIBILITY APPLICATION

Date:_____

Owner/Applicant:_____

Mailing Address:_____

_____

Phone:_____ **Fax:**_____ **Email:**_____

Project Name:_____

Project Location **Block:**_____ **Lot(s):**_____

Street: _____

RESIDENTIAL

Number of Units:_____

Type of Unit: Single Family _____ **Town home/Condo**_____ **Duplex**_____

Estimated Usage:_____**Gallons per Day:**_____

Size of Water Service:_____ **Size of Meter:**_____

Size of Fire Service:_____

COMMERCIAL

Type of Business:_____

Estimated Usage:_____**Gallons per Day:**_____

Size of Water Service:_____ **Size of Meter:**_____

Size of Fire Service:_____

OWNER/APPLICANT SIGNATURE:_____

_____

LTMUA USE ONLY

SEWER CAPACITY AVAILABLE ☐ **YES** ☐ **NO**

WATER CAPACITY AVAILABLE ☐ **YES** ☐ **NO**

SUPERINTENDENT:_____ **DATE:**_____

EXECUTIVE DIRECTOR:_____ **DATE:**_____

CONNECTION PERMIT

Public Sewer and / or Water Connection

Lower Township Municipal Utilities Authority
2900 Bayshore Road ● Villas, New Jersey 08251
(609) 886-7146 ● Fax (609) 886-4487
www.LTMUA.org

Date: _____ Permit Number 2009 - _____

This permit is valid for one year from approval date.

Permission to connect is hereby granted to:

Name(s): _____

Property Address: _____ Block: _____ Lot: _____

Mailing Address: _____

Telephone Number: _____ Mobile Number: _____

WATER CONNECTION

Water Connection Fee: _____ Amount Paid: _____

Service Size: _____Meter Size: _____ No. of Units: _____

SEWER CONNECTION

Water Connection Fee: _____ Amount Paid: _____

Service Size: _____Meter Size: _____ No. of Units: _____

Superintendent Approval: _____ Date: _____

Executive Director Approval: _____ Date: _____

Plumbing permit fees must be paid to the Lower Township Plumbing Inspector located at 2600 Bayshore Road Villas, NJ 08251. Property owner or their plumber must contact the LTMUA office with the date of connection and plumbing permit number.

Office Use Only

Account Number: _____ Plumbing Permit Number: _____

Lateral Install Date: _____ Water Tap Install Date: _____

Billing Date: _____ Meter Install Date: _____

*APPLICATION NUMBER*_____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY
Application for Review of Preliminary Plans for
Water System Facilities

This application must be filed in duplicate with the Executive Director of the Authority and shall be accompanied by an Application Fee as well as the Attorney Review Fee, and Engineering Review Fee, as per the Authority's Application Fee Schedule.

Application is hereby made for review and approval of preliminary plans for the construction of water system facilities.

1. Does this project require an NJDEP permit YES NO

2. Does this Project require a State road opening permit YES NO

3. Does this Project require a County road opening permit YES NO

4. Applicant's Name:_____

Address: _____

_____

Phone:_____ Fax:_____

Email Address:_____

5. Name and Address of present owner if other than above:

_____

_____

_____

6. Location of Proposed Construction: Block:_____ Lot(s)_____

Street:_____

Project Name:_____

7. Number of connections to be served:_____

Estimated average daily demand per connection in gallons per day:_____

Estimated average daily TOTAL demand in gallons per day:_____

8. Name of person designing plans:

Name:_____ Company:_____

Address:_____

Phone:_____ Fax:_____

Email Address: _____

9. Describe your proposal for water supply:

_____

_____

10. List plans and other supporting data accompanying this application:

a)_____

b)_____

c)_____

d)_____

_____
Signature of Applicant Date

_____
Applicant Name and Title

Make all checks payable to the "LOWER TOWNSHIP MUA"

For Official Use Only

Application Received and Fees Collected by Financial Officer date:_____

Application Fee Paid: $_____

Attorney Review Fee Paid: $_____

Engineering Review Fee Paid: $_____

Authority's Engineer's Report Received:_____ Dated: _____

Action by the Authority:

Authority Meeting Date:_____

Resolution No. _____

Approved: YES NO Disapproved Reason:_____

_____

Secretary _____ Date:_____

*APPLICATION NUMBER*_____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY
Application for Review of Final Plans for
Water System Facilities

This application must be filed in duplicate with the Executive Director of the Authority and shall be accompanied by an Application Fee, Attorney Review Fee, and Engineering Review Fee as per the Authority's Application Fee Schedule.

Application is hereby made for review and approval of final plans for the construction of water system facilities.

1. Applicant's Name:_____

Address:_____

_____

_____

Phone:_____ Fax:_____

Email Address:_____

2. Name and Address of present owner if other than above:

_____

_____

_____

3. Location of Proposed Construction: Block:_____ Lot(s)_____

Street:_____

Project Name:_____

4. Number of connections to be served:_____

Estimated average daily demand per connection in gallons per day:_____

Estimated average daily TOTAL demand in gallons per day:_____

5. Name of person designing plans:

Name:_____ Company:_____

Address:_____

Phone:_____ Fax:_____

Email Address:_____

6. Development Plans: a) Sell lots only YES NO

b) Construction of house for sale YES NO

c) Other_____

7. Does applicant have title in order to convey by fee to the Authority, easements to all areas showing water system facilities and all rights to water system facilities?

_____

_____

8. List plans and other supporting data accompanying and application.

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

h) _____

9. Do the final plans follow the preliminary plans approved by the Authority: YES NO

If no, describe changes: _____

_____

10. Applicant Engineer's estimate of all construction costs, including as-built plans

(attach Engineer's estimate): $ _____

11. Calendar days required to complete the entire project, after approval is granted. _____

_____ _____

Signature of Applicant Date

_____

Applicant Name and Title

Make all checks payable to the "LOWER TOWNSHIP MUA"

For Official Use Only

Application Received and Fees Collected by Financial Officer date:_____

Application Fee Paid: $_____

Attorney Review Fee Paid: $_____

Engineering Review Fee Paid: $_____

Date Performance Guarantee Received:_____ Amount: $_____

Bond Company Name and Bond Number:_____

Bank Name and Letter of Credit Number:_____

Cash Posted and Account Deposit Number:_____

Inspection Fee Received: $_____ Date:_____

Date of Approval by Planning Board:_____

Last Revision Date on Drawings:_____

Authority's Engineer's Report Received:_____ Dated:_____

Action by the Authority:

Authority Meeting Date:_____

Resolution No: _____

Approved: YES NO Disapproved Reason:_____

_____

Secretary:_____ Date:_____

*APPLICATION NUMBER*_____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY
Application for Certification of Completion for
Water System Facilities

This application must be filed in duplicate with the Executive Director of the Authority and shall be accompanied by all of the documents required herein.

Application is hereby made for Certification of Completion for water system facilities.

1. Applicant's Name:_____

Address: _____

Phone: _____ Fax:_____

Email Address: _____

2. Name and Address of present owner if other than above:

_____

_____

_____

3. Location of Construction: Block:_____ Lot(s):_____

Street:_____

Project Name:_____

4. This Application must be accompanied by the following documents:

a) Authority Engineer's certification that the construction has been completed in accordance with the approved plans and specifications.

b) Deeds with metes and bounds description to all lands, easements, and improvements not previously transferred, together with title policies.

c) Affidavits of Title for land, easements, and equipment and a recitation thereon that everything conveyed to the Authority has been paid for in full. Include Corporate resolution authorizing said transfers if applicable.

d) Copy of filed subdivision plat showing all easements containing the filed plat number and filing date.

e) Surveys for sites and easements dedicated to the Authority, signed and sealed by a licensed New Jersey Land Surveyor.

f) Bills of Sale for all equipment and facilities, including warranties from manufacturers of equipment.

g) Releases from the general site contractor(s) who furnished and installed the facilities.

h) Three sets of sealed prints, one mylar reproducible, and electronic files of the as-built plans prepared by a licensed New Jersey Land Surveyor.

I) Surety Maintenance Bond (or irrevocable letter of credit) in a form and content approved by the Authority and to the satisfaction of the Attorney equal to 10% of the Estimate of Cost, guaranteeing the satisfactory performance and functioning of the improvements for a minimum of two (2) years.

j) Affidavit that all submittals are true, accurate and complete and that all conveyances are free from any lien or encumbrances.

_____ _____

Signature of Applicant Date

_____

Applicant Name and Title

For Official Use Only

Date Received: _____

Authority's Remarks: _____

_____

_____

Attorney's Remarks: _____

_____

_____

Date Maintenance Guarantee Received: _____ Amount: $_____

Bond Company Name and Bond Number: _____

Bank Name and Letter of Credit Number: _____

Cash Posted and Account Deposit Number: _____

Date of Expiration: _____

Action by the Authority: Authority Meeting Date: _____

Resolution No: _____

Approved: YES NO Disapproved Reason: _____

_____

Certification of Completion Granted (Effective Date): _____

Date of Release of Performance Guarantee: _____

Secretary: _____ Date: _____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

Development Construction Cost **Potable Water System**

Unit Price Estimating Schedule **1 OF 1**

Application No. **Development Name:**

ITEM DESCRIPTION	UNITS	QUANTITY	MINIMUM UNIT COST	ITEM COST
6" PVC Pipe	LF		$35.00	$0.00
8" PVC Pipe	LF		$37.50	$0.00
10" PVC Pipe	LF		$40.00	$0.00
12" PVC Pipe	LF		$42.50	$0.00
6" Gate Valve & Valve Box	EA		$750.00	$0.00
8" Gate Valve & Valve Box	EA		$1,000.00	$0.00
10" Gate Valve & Valve Box	EA		$1,250.00	$0.00
12" Gate Valve & Valve Box	EA		$1,500.00	$0.00
Dewatering	LF		$15.00	$0.00
Fire Hydrant with Valve Assembly	EA		$2,500.00	$0.00
House Service Connections Including:	EA		$500.00	$0.00
3/4" IPS PE tubing				
3/4" corporation stop & tapping				
3/4" curb stop with box				
Price for larger size service				
determined at time of application	EA		$7,000.00	$0.00
Meter Pit, Meter Setter and Assembly	EA		$500.00	$0.00
Fittings	LBS		$5.00	$0.00
Connections To Existing Mains				
Dry Type	EA		$500.00	$0.00
6" Wet Tap	EA		$4,250.00	$0.00
8" Wet Tap	EA		$4,750.00	$0.00
12" Wet Tap	EA		$5,000.00	$0.00
Air Release Valve & Manhole	EA		$3,250.00	$0.00
Off Site Road Restoration	SY		$25.00	$0.00
As-Built Drawings	LS		$1,000.00	$0.00
Easements	LS			$0.00
Additional Items as Needed:				
1) Valve Pit	LS		$5,000.00	$0.00
2)				$0.00
3)				$0.00
4)				$0.00
5)				$0.00

TOTAL **$0.00**

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY FILING, REVIEW & INSPECTION FEES	
DESCRIPTION	**CHARGE**
WATER	
Application Fee for Preliminary Approval	$200.00
Engineering Review Fee for Preliminary Approval	1.5% of estimated cost of construction
Attorney Review Fee for Preliminary Approval	$500.00
Application Fee for Final Approval	$200.00
Engineering Review Fee for Final Approval	2.5 % of estimated cost of construction
Attorney Review Fee for Final Approval	$500.00
SANITARY SEWER	
Application Fee for Preliminary Approval	$200.00
Engineering Review Fee for Preliminary Approval	1.5% of estimated cost of construction
Attorney Review Fee for Preliminary Approval	$500.00
Application Fee for Final Approval	$200.00
Engineering Review Fee for Final Approval	2.5 % of estimated cost of construction
Attorney Review Fee for Final Approval	$500.00
INSPECTION FEE	10% of estimated cost of construction
PERFORMANCE GUARANTEE	120% of estimated cost of construction
MAINTENANCE GUARANTEE	10% of estimated cost of construction
USE OF FIRE HYDRANTS	
0 to 1,000 gallons of water	$25.00 plus the rate schedule for water used
1,001 to 10,000 gallons of water	$50.00 plus the rate schedule for water used
10,001 gallons of water and over	$100.00 plus the rate schedule for water used