



DEVELOPMENT PROCEDURE AND DESIGN MANUAL FOR WATER LINE CONSTRUCTION

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Article I. General

Section 1.01 Purpose

The manual outlines the procedures and obligations used for the orderly and financially sound extension of the Chester Metropolitan District (District) public water system to serve a new development. These requirements also apply to new construction of residential homes on existing platted lots within the District. The term "new development" is defined as any residential or commercial development or service requirement that increases the demand on the District's water supply and/or distribution system whether by increasing the intensity of use or by altering the use of land. The manual is applicable to the entire District's service area.

Section 1.02 Definitions

Access/water easement - A permanent easement signed by the owners of all property subject to such easement that provides for: continuous and unrestricted, public vehicular and pedestrian access to the properties subject to said easement; and the construction, reconstruction, operation, maintenance, and repair of one or more water lines and associated facilities.

Backflow - The flow of any substance from a customer's property back into the water distribution system. Backflow can result from improper connection of pressurized equipment to the plumbing system or from accidental pressure drops in the public water system which can be caused by pipe breaks or other equipment failure. Backflow of contaminated water into the public system can create a hazardous situation to other customers.

Capital Improvements Program - A budget plan for provision of infrastructure and other capital needs for the community.

Capital Recovery Fees (CRF) – Also called capacity fees, these fees are assessed to new developments and customers to recover the cost of current and future infrastructure based on their maximum anticipated allotment of water capacity in the District's system. These fees are used to build or upgrade facilities required for growth while minimizing the financial impact on our existing customers.

Construction Plan (Plan) – Documents prepared by a registered Engineer that reflect all applicable design standards and technical specifications of the District and SCDHEC for the installation of water facilities.

Developer - An individual, firm, or corporation which is improving property or is causing property to be improved by the provision of streets, buildings, or other infrastructure or by the assembly or subdivision of property.

District - The Board of Directors of the Chester Metropolitan District (CMD), its delegates, and/or employees.

Domestic service - Provision of potable water for the purposes of consumption and hygiene for an individual or family.

Drainage pattern - A ditch, creek, berm, depression or other feature along which water, if present, would accumulate and flow naturally downhill.

Easement - A grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land affected by such easement.

Encroachment - Agreement with the SC DOT, local municipality, public/private utilities, or railroad to place water facilities within their right of way.

Engineer - A person currently licensed as a Professional Engineer by the South Carolina State Board of Registration for Professional Engineers and Land Surveyors; Division of Occupational and Professional Licensing; Department of Labor, Licensing and Regulation.

Extension - A new or proposed water main.

Final acceptance - Documented agreement between Chester Metropolitan District and the contractor or developer of a project that the work is satisfactorily completed and that there are no outstanding claims or deficiencies. Completion of the project may also involve submittal of maps, affidavits, tax statements, easements, quit-claim deeds, or other documents that are required by contractual agreement.

Fire line - A water service requested and installed for the purpose of providing enhanced fire protection to an individual property.

Fire Protection - Provision of adequately sized water mains, water volumes, and fire hydrants at suitable intervals to allow use by fire departments in fighting fires. The level of protection varies with land use and development type.

Irrigation service - A water service requested and installed for the purpose of irrigating lawns or property. Water provided through such a service does not return to the wastewater collection system.

Licensed utility contractor - An individual, firm, or corporation which is licensed by the South Carolina Department of Labor, Licensing, and Regulation to perform public utility and/or unclassified construction projects which have a contract value not exceeding their license limitation.

Land Surveyor - A person currently licensed as a Professional Land Surveyor by the South Carolina State Board of Registration for Professional Engineers and Land Surveyors; Division of Occupational and Professional Licensing; Department of Labor, Licensing and Regulation.

New construction or development - The establishment or substantial improvement of streets, buildings, useable property, or infrastructure where such facilities did not exist or were not suitable for the newly intended purposes including the division of land into two or more parcels.

Permits - Documentation of permission by Federal, State, and/or local agencies which have regulatory jurisdiction over the construction and operation of water utilities to expand or modify the public water system.

Permit to Operate - A permit issued by the SCDHEC District Engineer that authorizes usage of a new water system.

Potable Water - Drinking water that is of sufficiently high quality that it is suitable for human consumption or use.

Public water system - The water pipes, storage facilities, pumping stations, treatment facilities and appurtenances that are owned, operated, and maintained by District.

Residential dwelling - A room or combination of rooms designed for year-round habitation, containing a bathroom and kitchen facilities, and designed for or used as a permanent residence by at least one family.

Right of Way - A non-possessory interest in the land of another for the purpose of constructing, reconstructing, operating and maintaining water facilities.

Record Drawings - Drawings that are used to record as-built conditions of the water systems at the completion of construction.

Subdivision - All divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose, whether immediate or future, of sale, or building development of any type. Subdivision shall also refer to uses of land not ordinarily considered a subdivision but requiring utility installations. Examples of these uses are mobile home parks, multi-family projects, townhouses, apartments, and planned unit developments.

Temporary construction easement – A temporary right in a specific tract of land for which the owner grants the right to use the land for a limited period of time in order to provide space needed to construct water facilities.

Treatment facility - A plant designed and constructed for the purpose of removing pollutants and/or other impurities from raw water.

Article II. Development Requirements

Section 2.01 Water Service Availability

The District owns, operates, and maintains hundreds of miles of water pipelines throughout Chester County. However, there are some areas where service is not yet available. Potential Developers should request information on the availability of water while performing due diligence prior to purchasing a parcel or tract of land for development.

Developers requesting availability must submit a Water Availability Request Form (**Section 4.01**), which is used to describe the location, purpose, scope, and size of a potential project. Upon review of the availability request, a pre-design meeting may be required if staff determines that the project is of sufficient magnitude or if the developer is planning to phase the development. Based on the outcome of the pre-design meeting, a preliminary design submittal may be required to confirm the design intent prior to submission of the detailed design package. Approval of the preliminary plan is on a conditional and conceptual basis and does not constitute final approval of the plan for construction.

If service to a single home or business is requested, complete a water service application and return it to the Customer Service Department for review.

Section 2.02 Single Unit Services

Typically, project submittals consisting of service lines only will not require a construction permit for installation from the SC Department of Health and Environmental Control (SCDHEC). Service applications will not be accepted by Customer Service until such time as all applicable fees are paid and plans are approved. These fees may include a capital recovery fee, connection fee, or service inspection fee. **Capital recovery fees must be paid in full prior to final approval of construction plans and beginning of construction. If a building is expanded or has a change in use that will increase the expected water usage, capital recovery fees must be paid.**

Dedicated fire services will require a meter and must have a backflow preventer. The District will conduct a review of the plans to ensure the service locations, materials, and backflow prevention devices meet the District's requirements. All services 4-inches or greater to be installed by the Developer and inspected by the District. Two-inch services can be installed by the Developer or the District. One-inch and smaller services will be installed by the District. It is the responsibility of the Developer's engineer to determine the appropriate service and meter sizes. The engineer shall send the District three copies of the final water plans and a pdf version for approval.

The District does not guarantee minimum water pressure or flow rates will be available to operate irrigation and/or plumbing fixtures. The customer should carefully consider the impacts that a split service option may have on available water pressure and flow rates.

All water service connections shall be constructed in accordance with all applicable building and plumbing codes.

Section 2.03 Main Extensions

Developers desiring service from the District at a location not currently served by the District or from a main not currently sized for requirements of the development, may extend or improve the system as described in this document. All Developer initiated extensions shall be paid fully by the Developer with no contribution from the District.

Section 2.04 Easements

Water mains may be constructed along existing, publicly maintained streets within the District service area. *Publicly maintained streets* shall mean SCDOT numbered roads, SC or US numbered highways, or municipal streets (all references to “street” shall be construed to refer to “publicly maintained street,” unless otherwise expressly provided). In areas where there are existing, public utilities in streets which do not satisfy this definition and extensions are requested, the District shall review each such request on a case-by-case basis taking into consideration the merits of each case, among other factors.

When the installation of a water main and associated service connections within a publicly maintained street is not feasible, the water main may be located within an access/water easement when the District determines that the below criteria are satisfied.

- No suitable publicly maintained street exists or is proposed for construction where the proposed water system can be located and no other practical, acceptable means of providing public water service to residents exists as determined by the District.
- The access/water easement width is a minimum of 20 feet plus additional temporary construction easement, as needed, and is determined by the District to be suitable for the construction, re-construction, operation, and maintenance of the proposed water system.
- The access/water easement grantor(s) must agree to keep the access/water easement free from structures, fences, gates, barricades, wells, septic systems, trees, landscaping, or other conditions or obstacles that could impede or limit vehicular or equipment access required to construct, re-construct, operate, or maintain the installed water system.
- The access/water easement must provide access to water service for multiple, individually owned parcels of land that will have individually metered services.
- The District will not be financially responsible for the removal or relocation of the water mains, services, or appurtenances as may be needed for future changes in land use, roadway construction (including changes in horizontal and/or vertical alignment), re-grading the access/water easement or adjacent lands, or other activity that may conflict with the District’s continued rights to re-construct, operate and maintain said water facilities.
- No other utilities, piping or cables, underground or overhead, public or private, will be permitted within the access/water easement except with prior, written approval by the District.
- The access/water easement will be in form and substance acceptable to the District and shall contain such provisions as the District determines are reasonably necessary or convenient to provide for the implementation of this Policy.
- The Developer is responsible for acquiring and recording all such easements for both on-site and off-site water system improvement construction prior to the commencement of water system improvement construction.
- The expenses of obtaining, preparing and recording easements needed for water system improvements for the new development will be paid by the Developer, including but without limitation, the consideration paid to the landowner. In the event the District must exercise its power of eminent domain to acquire any such easement, the developer will pay all costs, expenses, appraisal fees, expert fees and damage awards for which the District becomes liable, on demand, including its attorney's fees.

Easements which will be transferred to the District by plat, must be shown on the tract or parcel map and must have the correct easement widths. Once the plat is recorded at the courthouse, the Developer is required to provide a recorded copy to the District.

Section 2.05 Size or Length of Water Mains

The size, depth, length, and location of the mains extended will be determined or approved by the District based on prevailing industry standards and normal service requirements. In the event facilities designed in this manner

will not satisfy the applicant's needs the applicant may withdraw the application. If the application is withdrawn, the applicant forfeits costs incurred by the District up to the date of withdrawal.

This Policy is intended to provide for the construction of water mains sized to provide long term service and serve future growth. If the District decides to require the Developer to increase the size or the length of an appropriately sized mains which is necessary to serve the area, the District will be responsible for only the portion of the design, material, and installation costs associated with the increase in size and/or lengthening the water main. The design cost shall be agreed upon with the District prior to beginning the design or amending the design of the project. Three competitive bids from District approved contractors may be required in order to determine the incremental cost of materials and installation associated with upsizing or lengthening facilities beyond the capacity needed to supply all phases of a development. Increases in the length of water main will only be measured beyond the development's frontage along a right-of-way or easement. The District reserves the right to increase the main to the size and/or length it deems necessary for future growth.

Section 2.06 Construction Water

Filling and flushing of new water mains consumes large quantities of non-metered water over the period of system construction. The methods for Contractors utilizing water for construction purposes and coordination with District personnel are the responsibility of the Contractor.

The Contractor shall install a bypass jumper with meter and backflow prevention device to acquire water for the purpose of construction needs, filling, pressure testing, and disinfection of the new system. Large flows required for flushing must be coordinated with the District. Only District personnel are to operate or give permission to operate any valve for providing water for heavy flushing and filling. Main line valves separating approved and non-approved systems are to remain closed at all times except when opened by District personnel for line flushing. Water can be acquired through the jumper connection specified above anytime as needed.

The District will periodically check the tap valve during the project development and if it is found opened without prior authorization the Developer may be charged for unauthorized water usage. The Contractor shall notify the District prior to flushing the new water line. Any Contractor failing to notify the District for coordination of water used for flushing or opening of the main control valve, an unauthorized water usage charge may be applied. All fines and/or water charges must be paid prior to acceptance of the system for operations and maintenance.

If a hydrant is requested for the purpose of filling a tanker, hydro-seeder, etc., the person requesting water should complete a hydrant use application with the District's Customer Service Department and pay the prevailing deposit for securing a hydrant meter to be installed by the District's meter department. Any equipment connected to the hydrant and used for transporting water shall have an approved air gap or reduced pressure zone backflow prevention assembly installed. Upon completion of use of the hydrant, the Applicant shall contact the Customer Service Department to remove the meter. The Applicant will be refunded the deposit less any outstanding volume usage charge plus any charge for damage to the meter.

Section 2.07 Project Closeout Procedure

(a) Inspections

Routine and unscheduled inspection of ongoing projects will be made by District personnel during the construction phase to ensure conformance with the approved plans and specifications, as well as compliance with this policy manual. Projects approved for construction by the District automatically authorize District personnel access to the construction site at all times for the purpose of inspecting constructed facilities or observing construction operations in progress. The District will take appropriate action, as outlined herein, when improper material or unacceptable workmanship is detected on the project and will notify the Contractor, Engineer, and/or Developer.

The District shall make periodic checks during all phases of construction to ensure that the Contractor is complying fully with project design and specifications as well as the policies and procedures herein established. Any deviation

or revision to the approved engineering plans shall be furnished in writing to the Engineer of Record. The Contractor shall not initiate any deviations or revisions until the Engineer and the District have approved the change in writing.

There are certain items that must be witnessed or inspected by the District as part of the construction approval. The Contractor or Engineer shall notify the District a minimum of 48 hours prior to beginning or covering up the indicated items. The Contractor will be responsible for uncovering or re-testing items at their own cost, if the Contractor covers up or proceeds without notification or approval from the District. These required items include:

1. Water main tap inspection
2. Pressure test observation
3. Tracer wire conductivity test
4. Water main connection

A punch list inspection will be conducted at the request of the Developer's Engineer, who is responsible for coordinating the inspection schedule with the District. Typically, this inspection should be performed after final grading and associated roadwork is completed and all storm drainage is installed. As-builts should be submitted to the District for approval prior to testing and punch list inspection.

A final inspection may be requested only by the Developer's Engineer once all items identified during the punch list inspection have been corrected. The Developer's Engineer and the District shall prepare a written punch list of any defects noted during the final inspection and distribute copies to the Developer and Contractor.

(b) Project Closeout Documents

The following items must be completed and submitted to the District before acceptance of the constructed improvements by the District.

1. Water main hydrostatic pressure test results
2. Hydrant flow test results
3. Disinfection testing (BacT) results
4. Final inspection and signoff by the District and the Engineer of Record
5. Maintenance bond
6. Engineer's Certification Letter
7. Certificate of Non-litigation – Letter signed by the Developer, Engineer, and Contractor that there are no liens or legal actions that would affect the dedication of the water system to the District.
8. Contractor guaranty – Letter signed by the Contractor stating that all work described or shown in the construction documents was performed and guaranteed for a period of twelve months.
9. As-built drawings are submitted and approved by the District. Drawings shall be submitted as a hard copy, pdf file, and AutoCAD file. Drawings shall have, at a minimum, the information listed in **Section 4.03**.
10. A "Permit to Operate" is issued by SCDHEC.
11. Deeds/plats to water easements.

Upon completion and final acceptance by the District of all facilities constructed under this policy and verification the systems are designed and constructed in accordance with prevailing District standards and specifications, such facilities will become the property of the District and the District will be responsible for their operation and maintenance. Final acceptance cannot occur until SCDHEC issues a "Permit to Operate" for the system. The warranty period will begin once all the above information is received by the District.

(c) Maintenance Bond

A maintenance bond or letter of credit (bond) shall be required on all water construction projects. The purpose of the bond is to protect and ensure the integrity of systems taken over by the District throughout the warranty

period. The bond shall be provided once the “Permit to Operate” is obtained and shall extend through the warranty period and an additional 6 months to correct any defective items.

The amount of the bond shall be 10% of the total water construction cost or \$5,000, whichever is greater. The amount must be sufficient to cover all possible repairs required during the warranty period, as well as the manpower costs associated with locating any newly constructed water mains in conjunction with ongoing site work done during the remainder of construction. The bond will be cashed in the event that a repair is made to the system by District personnel during the warranty period. Acceptable forms of the bond are a surety bond, irrevocable standby letter of credit, or certified/cashiers check. Once the District completes the warranty inspection and the 18-month time period has elapsed, the bond will be released. However, if dry utilities are still not installed by the end of the warranty period, the maintenance bond must be extended.

Section 2.08 Project Warranty Period and Inspections

The warranty period begins with the issuance of the SCDHEC “Permit to Operate.” The District will perform a warranty inspection (to include the area in the SCDOT right-of-way impacted by the project) during the last quarter of the warranty period. If needed, a punch list will be developed and submitted to the Engineer and Developer for correction. It is the responsibility of the Developer to contact the Contractor, who will be given 30 days to complete the punch list before the District arranges for the work to be done. If the District performs the corrections, an invoice for the cost of the work will be sent to the Developer. If the Developer declines to pay for the corrective work performed by the District, the maintenance bond will be liquidated for the outstanding amount due.

Section 2.09 Fees/Charges

Customers applying for a new water service or extension are subject to one or more of the charges shown below.

1. **Engineering Fee** – This fee is will serve to fund the cost of reviewing developer and customer plans, specifications, design documents, sketches, calculations, and providing other associated administrative services and construction inspection services associated with new development and the installation of new services.
2. **Tap Fee** - This fee is based on the average actual cost incurred by the District to construct service connections.
3. **Capital Recovery Fee** - This fee is to recover from new customers a portion of the incremental cost of providing capacity in the treatment facilities and water distribution system, which have been constructed to allow for new development and expansion of the system. This fee is calculated each year based on the actual book value for these facilities and the system treatment capacity reflected in that value. Capacity charges apply to separate irrigation meters, split service irrigation meters, and fire lines also.
4. **Deposit** - This is a security fee based on the meter size.

Section 2.10 Fire Services

Where a fire service is required by the governing fire department or codes, a dedicated fire service may be installed for new or renovated buildings (except those classified as single-family residential) at the Applicant’s cost. In the case of existing buildings that have domestic water service and the owner desires to add a fire sprinkler system, an additional dedicated fire service may be installed at the Owner’s cost. Typically, a single dedicated fire main, meter, and backflow protection assembly will be installed for each building, for which a fire service is requested, regardless of use. In all cases, the District’s cross-connection control policies will apply, and the materials used between the District’s main and the backflow preventer must be compliant with the District’s cross-connection control polices and standard specifications. Meters are required on all dedicated fire service. In all cases, the Applicant for fire service, dedicated and dual-purpose, shall submit plans prepared by a professional engineer to the District for review and approval prior to installation.

Fire services that require the use of a booster pump must also include a water storage tank. The water storage tank must be adequately sized to provide the volume of water required by the governing fire department or codes. No booster pump shall have a direct connection to the District's water system, including through a bypass piping system.

Section 2.11 Hydrants

Hydrant operation will be controlled and closely monitored by the District to ensure the integrity of the water system. Contamination of the potable system can occur due to improper use of or connection to hydrants. No one except District personnel, the local fire department, and authorized customers are approved to use a fire hydrant or post hydrant within the District's service area. Any unauthorized use of a hydrant may be subject to unauthorized or illegal usage fees.

While the hydrants installed along the District's distribution system perform a valuable role in providing a water supply for fire protection, their primary role is in flushing the District's water transmission and distribution pipelines to maintain quality of water delivered to and used by our customers. The District flushes and tests its hydrants on an annual basis to determine and record operating characteristics such as flow rate, as well as static and residual pressure. The test information is used to monitor water distribution system flow characteristics and as a tool to model system performance for use in designing water supplies to new developments and areas where water service is currently unavailable or rehabilitation of existing infrastructure. The test results are also provided as a service to the fire districts in Chester County.

The flow and pressure characteristics of the District's water transmission and distribution systems should be used only to determine baseline operating conditions, from which fire protection systems can be designed for and built to meet the requirements of the fire district. It is the responsibility of the developer and his engineer to design a fire protection system that meets the requirements of the fire district based on the available system flows and pressures at the point of connection.

Section 2.12 No Guarantee of Level of Service

The District does not warrant nor guarantee that the capacity, volume, pressure, or quantity of service provided will be adequate to meet the needs of any customer other than typical single family residential service. The customer is responsible for judging the adequacy of service for their intents and purposes prior to applying for service from the District.

The current level of service provided in any part of the water system which may be above that required to provide normal, domestic service is not guaranteed for any time in the future.

The District accepts customers on a first come, first served basis. Completion of studies or cost estimates for provision of service do not constitute any obligation or intent of the District to reserve capacity. The applicant's request for or receipt of such studies does not guarantee the applicant's ability to secure water service.

Section 2.13 Project Cancellation

Any project without "Activity" from the Developer, the Developer's engineer or the Developer's utility contractor for a period of twelve (12) months, concerning intent to proceed with the project, will be considered canceled by the District. The District shall notify the Developer of the status change and if no provisions are implemented to keep the project active within thirty days, any letter of availability issued by the District for utility service shall be considered withdrawn. For the purpose of this policy, examples of "Activity" include such actions as plan submittals, payment of fees, meetings with the District's Engineering & Distribution Department Staff, written correspondence concerning design, submittal of permit applications, and water construction activities. Examples not considered "Activity" are submittals to other municipal planning departments or review boards, telephone calls, and correspondence with other permitting agencies. Upon cancellation, tap and/or engineering fees (does not include Capital Recovery Fees) paid to the District may be reimbursed minus any costs incurred by the District.

Once a project has been canceled by the District, any continued progress will require the Developer or his Engineer to re-submit the project plans. The District will re-evaluate the project on the basis of service availability, fees and design standards to ensure conformance with requirements in place at the time the project is re-initiated. When the project is re-initiated, the appropriate fees will be assessed in conformance with the prevailing District fee structure. Credit will be given to the original Developer or Applicant for any portion of the Capital Recovery Fees previously paid.

The Developer may cancel a project in writing and the above requirements will apply.

Section 2.14 Metering

The District will only allow one water meter per residential or commercial unit, with the following exceptions: irrigation system or yard sprinkler or fire service line. Exceptions may be considered on a case-by-case basis. The District's cross-connection control policy applies for all service connections.

All meters shall be purchased from the District at the District's cost. Meter's greater than two-inches are special orders and may have extended delivery times. Ordering and payment for these meters should be completed as soon as possible to avoid delay in water service.

Meters shall not be placed within any sidewalks, driveways, paved areas, or within 10' of the radius of a road intersection.

1. **Individual Meters** - An individual water meter is required for each of the following types of domestic services:

- Each one-family detached dwelling
- Each unit in a one-family attached dwelling
- Each unit in a two-family dwelling
- Each unit in a multiple dwelling with fewer than three (3) stories
- Mobile homes
- Each commercial establishment
- Each commercial establishment in a multiple occupancy building with one (1) story.

Exceptions will be reviewed on a case-by-case basis.

2. **Master Meters** - A master water meter is defined as a water meter that serves more than one (1) dwelling unit, premise, or establishment. A master meter is required to provide domestic water service for each multiple family dwelling building with three (3) or more stories, and each multiple occupancy commercial building with two (2) or more stories. In such cases, the meter may serve as a dual-purpose meter for domestic needs and fire suppression needs, if applicable. Exceptions will be reviewed on a case-by-case basis.

Section 2.15 Cross-Connection Control Policy

All private connections to the District's water system shall be protected with a backflow prevention device in accordance with the District's *Cross-Connection Control Policy*. Below are a few highlights of the policy:

1. All testable backflow prevention devices are the responsibility of the Customer, including installation, testing, and repair.
2. All new commercial irrigation customers shall have an approved reduced pressure backflow preventer assembly. The backflow preventer assembly shall be in an above ground enclosure.
3. Low hazard residential irrigation connections shall have, at a minimum, a dual check backflow prevention device.

4. Residential (potable and irrigation) 1-inch and ¾-inch dual check backflow prevention devices are replaced by the District per SCDHEC requirements and the District's *Cross-Connection Control Policy*.
5. All commercial water services shall have a minimum of a double check valve backflow prevention device. Reduced pressure backflow prevention devices shall be required for any service where hazardous materials are used or where positive protection for the public water supply is required. Typical applications include hospitals, medical and dental laboratories, mortuaries, industrial plants, dry cleaners, irrigation systems, or as determined by the District.
6. No piping systems which by-pass an installed backflow preventer shall be allowed under any circumstances.
7. The Customer shall provide an annual inspection of each device by a certified tester and submit the results of said test to the District. For service connections that are considered by the District to pose an extremely high hazard, semi-annual or quarterly inspections and test may be required.
8. Should an Owner fail to provide a certified test within 30 days after notice, the District shall terminate water service until a satisfactory certified test is submitted. A reconnection fee may also apply.
9. The Customer shall perform any maintenance identified within 30 days of notice or the District will terminate water service until the device is repaired or replaced and a satisfactory certified test is submitted. A reconnection fee may also apply.
10. All testable backflow prevention devices shall be installed in an above ground enclosure, adjacent to the meter, in a location not subject to possible flooding.

Section 2.16 **Process for Appeal**

This policy has been approved by the Chester Metropolitan District Board of Directors for implementation by the District. It is Board of Director's intent that the District apply the provisions of this policy equitably to all customers and potential customers. It is recognized that there may be situations where disagreements may develop concerning equitable treatment. If the District is unable to satisfy any customer complaint, the customer may request an appeal. The appeal request must be made in writing to the attention of the Customer Relations Committee. Customer Relations Committee meetings are scheduled on a case-by-case basis. The customer will be notified in writing only, of the meeting date. Failure of the customer to appear at the appointed time will result in immediate denial of the request. All decisions made by the Customer Relations Committee are final. The burden is on the customer to demonstrate inequitable application of this Policy.

Article III. Design and Permitting

Section 3.01 **Design Approval**

The purpose of the design approval is to verify that the Developer, through his/her Engineer, is presenting a project that meets SCDHEC regulations and the District's Standard Specifications. Once the design package is approved by the District, SCDHEC will issue a project-specific construction permit. No modifications shall be allowed to the development which increases the number of units or equivalents (i.e., demand) to be served by the system without additional approval by the District.

Section 3.02 **Materials, Construction Methods, and Standard Details**

All water system design shall comply with SCDHEC's Primary Drinking Water Regulation and the District's approved *Standard Specifications for Water Line Construction*. These specifications may be purchased from the District or downloaded and printed freely from the District's website.

Section 3.03 **Engineering Calculations**

Appropriate water design criteria, including number of services, the corresponding usage designations (residential, multi-family, commercial), and unit contributory loadings, must be provided with supporting hydraulic design

calculations stamped and signed by the Engineer of Record. The calculations are needed to determine the technical basis of design derived from the requirements of the proposed project and the availability of sufficient water capacity to meet or exceed those requirements. At a minimum, the following elements are required for review and approval of the project design calculations:

- Project Summary (with the total number of parcels and associated usage designations)
- Average Daily Water Demand
- Peak Hourly and Instantaneous Flow Demands
- Fire Hydrant Flow/Pressure Test: Results may be obtained by contacting the District and supplying the hydrant number found on the hydrant.
- Model Analysis of Proposed Water Distribution System
 - Peak Instantaneous Demand Analysis
 - Fire Flow Analysis
- Conclusions and Recommendations

Section 3.04 Hydraulic Design

The minimum size of water main in the distribution system shall be 4-inches, unless otherwise approved by the District. The minimum size of water main in the distribution system which provides fire protection and serves hydrants shall be 6-inches in diameter. Larger size mains shall be required as necessary to allow the withdrawal of the required flow while maintaining the minimum residual pressure specified. The District shall have the final determination of water main sizing.

Design shall be based on a Hazen-William "C" value of 140 for PVC pipe and 120 for ductile iron.

The water distribution systems and any extensions shall be designed to supply the demands of all customers while maintaining the following minimum pressures and velocity.

1. 25 PSI for maximum instantaneous demand;
2. 20 PSI for peak hourly flow plus fire flow;
3. 40-60 PSI normal working pressure;
4. 2.5 feet per second minimum for flushing.

No extension shall be made of an existing line when the existing line does not meet the flow and minimum pressure requirements.

Pressure reducing valves shall be installed on the customer side of the meter whenever the maximum system pressure at the service connection is greater than 80 PSI.

The following loadings and peaking factors shall be used for water system design. Flows may be adjusted to account for other water usage not included in the standard tables, i.e. process water, irrigation, etc.

- Average daily flow = Use "Unit Contributory Loadings to All Domestic Wastewater Treatment Facilities" in the Standards for Wastewater Facility Construction: R.61-67.
- Maximum daily flow = Average daily flow x 2
- Peak hourly flow = Average daily flow x 4
- The maximum instantaneous demand shall be calculated using the Community Water System Source Book by Joseph S. Ameen, as reference. See the following tables:

Table 1 - Maximum Instantaneous Flows Residential Areas (Ameen, Table XXI)

Number of Residences Served	Flow per Residence in GPM
1 (First)	15.0
2 – 10*	5.0
11 – 20**	4.0

21 – 30	3.8
31 – 40	3.4
41 – 50	3.2
51 – 60	2.7
61 – 70	2.5
71 – 80	2.2
81 – 90	2.1
91 – 100	2.0
101 – 125	1.8
126 – 150	1.6
151 – 175	1.4
176 – 200	1.3
201 – 300	1.2
301 – 400	1.0
401 – 500	0.8
501 – 750	0.7
751 – 1,000	0.5
*Second, third, etc., through tenth residence served.	
**Eleventh, twelfth, etc., through twentieth residence served.	

Table 2 - Maximum Instantaneous Flows for Commercial Areas (Ameen, Table XXII)

Type of Business	GPM on Basis Shown
Barber Shop	3.0 per chair
Beauty Shop	3.0 per chair
Dentist Office	4.0 per chair
Department Store*	1.0 to 3.0 per employee
Drug Store	5.0
with Fountain Service	Add 6.0 per fountain area
Serving Meals	Add 2.0 per seat
Industrial Plants**	4.0 plus 1.0 per employee
Laundry	30.0 per 1,000 pounds of clothes
Launderette	8.0 per unit
Meat Market, Super Market	6.0 per 2,500 sq. ft. of floor area
Motel, Hotel	4.0 per unit
Office Building	0.5 per 100 sq. ft. of floor area or 2.0 per employee
Physicians Office	3.0 per examining room
Restaurant	2.0 per seat
Single Service	6.0 to 20.0 total
Drive-in	2.0 to 7.0 total
Service Station	10.0 per wash rack
Theater	0.2 per seat
Drive-in	0.2 per car space
Other Establishments***	Estimate at 4.0 each
*Including customer service	
**Not including process water	
***Non-water using establishments	

Table 3 - Maximum Instantaneous Flows for Institutions (Ameen, Table XXIII)

Type of Institution	Basis of Flow (GPM)
Boarding Schools, Colleges	2.0 per student

Churches	0.4 per member
Clubs: Country, Civic	0.6 per member
Hospitals	4.0 per bed
Nursing Homes	2.0 per bed
Prisons	3.0 per inmate
Rooming Houses	Same as residential*
Schools: Day, Elementary, Junior, Senior High	
Number of Students	GPM per Student
0 – 50	2.00
100	1.90
200	1.88
300	1.80
400	1.72
500	1.64
600	1.56
700	1.44
800	1.38
900	1.32
1,000	1.20
1,200	1.04
1,400	0.86
1,600	0.70
1,800	0.54
2,000	0.40
*Each unit of an apartment building should be considered as an individual residence.	

Section 3.05 Location and Depth

Water mains should generally be located only within the limits of street or highway rights-of-way. Where this is not possible because of construction conditions, underground conflicts, or requirements of the controlling agency, location in private easements may be approved by the District. Water mains should be located out of paved areas or sidewalks and a minimum of six feet from the edge of pavement or back of curb. Alignment should be chosen so as to minimize conflicts with utilities and underground structures.

Depth of water lines shall be set to minimize high and low points and at sufficient depth to prevent freezing. A minimum cover of 42-inches is required except where short sections at shallower depth are required to avoid major utility conflicts. Where the centerline grade of the pipe alignment is higher than the edge of pavement, the top of the water main shall be at least 36-inches below the edge of pavement.

Water mains shall be installed along the entire development’s road or easement frontage.

Section 3.06 Service Taps

All water service taps shall be a minimum of one size smaller than the water main being tapped. If the tap size required is the same size as the main being tapped, a MJ tee will be required. Direct taps larger than two-inches shall not be allowed.

Section 3.07 Looping and Dead End Lines

Dead end lines shall be minimized by looping of all mains whenever possible. All lines serving 15 residents or more shall be looped unless approved otherwise by the District. The lengths of small dead end lines shall not exceed the following:

1. One inch in diameter – 150 ft.
2. One and one-quarter inch in diameter – 200 ft.
3. One and one-half inch in diameter – 300 ft.
4. Two inches in diameter – 1,500 ft.

A line that dead ends on a cul-de-sac shall not follow around the outside of the edge of road, but be installed in a straight line across. Dead end mains shall be equipped with a means to provide adequate flushing.

Section 3.08 Fire Protection

When fire protection is to be provided, system design should be such that fire flows and facilities are in accordance with the requirements of the State Primary Drinking Water Regulations, State Insurance Services Office, and the District. The minimum fire flow shall be 1,000 GPM with a minimum residual pressure of 20 PSI. The minimum size of water mains for providing fire protection and service fire hydrants shall be six inch in diameter. Larger size mains will be required, if necessary to allow the withdrawal of the required fire flow while maintaining the minimum residual pressure specified. Standard hydrants shall not be placed on systems using only hydropneumatic storage.

Fire hydrants shall be installed at the following maximum spacing, unless otherwise approved:

1. Street intersections;
2. Commercial, multifamily, residential (lot size < one acre) – 500 feet;
3. Residential (lot size > one acre) – 800 feet;
4. Transmission lines – 2,500 feet.

Section 3.09 Valve Spacing

A sufficient number of valves shall be provided on water mains to minimize inconvenience and sanitary hazards during repairs. Valves should be located at the following spacing and locations:

1. Commercial – maximum of 500 feet;
2. Residential – maximum of one block or 800 feet;
3. Transmission mains – maximum of 2,500 feet;
4. Pipe line intersections and changes in pipe diameter;
5. Hydrant leads.

Three valves shall be provided at tees and four valves at crosses, with valves located as close to the fittings as possible. Where valves must be located away from intersections, they should be located at hydrant installations. If the line is a one-way feed, the valve should be on the dead-end side of the hydrant lead.

Section 3.10 Air Releases and Air Relief and Vacuum Valves

Mains shall be designed to minimize high points. At high points in water mains where air can accumulate, provision shall be made to remove the air by means of an air release valve. Air releases shall be provided at high points on all 12-inch and larger water mains. Also, air releases shall be provided at high points on 6-inch and 8-inch water mains where air cannot be adequately released from the main through service connections.

The open end of an air relief pipe from automatic valves or from a manually operated valve shall be extended to the top of the pit and provided with a screened downward facing elbow. Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur.

Section 3.11 Blow-offs and Flushing Devices

Where dead-end lines occur, they shall be provided with a fire hydrant if flow and pressure are sufficient, or with a post hydrant or readily accessible blow-off valve in a box for flushing purposes, except for the following cases:

1. Lines one and one half inches in diameter and smaller will not require blow-offs;
2. Two inch lines shorter than 200 feet will not require a blow-off. However, a service connection shall be installed at the end of the line or another acceptable means of bleeding chlorine through the lines must be provided.
3. Blow-offs shall be sized to provide a minimum velocity of 2.5 feet per second in the line and maintain a residual pressure of 25 PSI;
4. Lines 10-inches and larger require flows greater than 500 GPM to achieve a 2.5 feet per second scouring velocity. This would require a standard fire hydrant or other approved blow-off, for flushing which must be designed to provide a minimum of 500 GPM in excess of peak hourly flow and a minimum residual pressure of 20 PSI;
5. No flushing device shall be directly connected to any sewer.

Section 3.12 Thrust Restraint

Thrust restraint for water mains shall be provided by concrete thrust blocks bearing on undisturbed soil or by approved restrained joints. The bearing area for thrust blocks shall be based on the required test pressure of 200 PSI and a field determination of the load bearing capacity of the soil.

Restrained joints shall be as specified in the District's current Standard Specifications or as recommended by the pipe manufacturer and approved by the Engineer. Restrained lengths shall be calculated by the design engineer for each application. Calculations shall be based on a test pressure of 200 PSI and skin friction coefficients supplied by the pipe manufacturer with a safety factor of 1.5.

Section 3.13 Stream Crossings

Water mains that cross streams shall be ductile iron pipe only and shall meet the District's current Standard Specifications. A minimum cover of 48-inches shall be provided between the top of the pipe and the stream bed. The pipe and joints shall be protected against stream bed erosion, unstable subsoil conditions, and any other anticipated horizontal or vertical loading. Protective measures may include rip rap, concrete encasement, driven or drilled piers at each pipe joint or use of ball and socket pipe. For large stream crossings, the Engineer may require specific designs based on subsurface soil investigations.

Section 3.14 Survey Requirements

All new water mains shall be field surveyed under the supervision of a Surveyor registered in the State of South Carolina. Surveys should include the following at a minimum:

1. All existing underground utilities (water, sewer, gas, storm drains, telephone, electric power, cable TV, etc.) along the route shall be located horizontally. Where potential for significant elevation conflicts with the proposed water main exist, the existing utilities shall be exposed and elevations determined.
2. Vertical control shall be tied to the SC State Plan Coordinate. Temporary bench marks shall be established at intervals of approximately 1000 feet and tied back to the established vertical control.
3. Horizontal alignment shall be referenced to the edge of pavement, right-of-way line, or another identifiable feature. Center line profile shots shall be taken at 50 foot intervals with closer shots at break points such as culverts, creeks, etc.

Section 3.15 Construction Plan Requirements

Construction plans shall be signed and sealed by an Engineer registered in the State of South Carolina. Water system construction drawings and information shall not be included on plan sheets with information that must be approved by an authority other than the District. This requirement is necessary to ensure that the Contractor has the correct, approved water plans and there is no duplicate or erroneous information included on plans for other jurisdictions. All plans submitted to the District for plan checking and approval of water facilities shall be submitted on 24" x 36" sheets. All plans shall contain the minimum information as described in **Section 4.02**.

Section 3.16 Encroachment Permits

SCDOT Encroachment Permits are required on for work within SCDOT rights-of-ways. All encroachment permit applications for water line projects shall be reviewed by the District prior to submittal to the applicable agency. The time required to receive an encroachment permit can be lengthy and varies by agency. The Developer and Engineer are encouraged to allow adequate time in their schedule for the encroachment permitting process.

Article IV. Miscellaneous Forms and Requirements

Section 4.01 Water Availability Request Form

Date: _____

A. **Owner/Developer:** _____ Phone# _____

Address: _____ E-mail _____

Owner Engineer: _____ Phone# _____

Address: _____ E-mail _____

B. Development Name: _____

Development Location: _____

Parcel # (Attach Plat, if available): _____

C. Type of Development (Circle appropriate choice)

Residential Multi-Family Commercial Industrial Institutional

Type of Business: _____

Number of Units: _____ Building Area (SQ FT): _____

D. Anticipated Water Capacity Required (GPM) _____

Site plans and water use calculations may be required to complete the request

Section 4.02 Design Drawing Requirements

At a minimum, the following elements are required on their respective sheets for proper review of a standard design submittal:

(a) General Information

1. Boundary survey shall be prepared by a SC licensed professional land surveyor and meet the requirements of **Section 3.14**.
2. Design drawings shall be prepared by a SC licensed professional engineer and include his/her seal and signature certification.
3. Water designs shall use the District's Standard Specifications on file with SCDHEC and available at the District's website (www.cmdcsd.com).
4. Each drawing sheet shall have the following information provided and/or updated as necessary:
 - Project title;
 - Sheet title;
 - Sheet number;
 - Plan date;
 - Scale used;
 - Engineer name and contact information;
 - Revision block with description and date of each revision;
 - North arrow;

(b) Cover Sheet

1. Project name in sufficient detail to describe the scope of development;
2. Legal name and address of the developer, person in charge and contact information;
3. Project development data, including governmental jurisdiction, tax map number and 911 street address;
4. Site specific data, including GPS location, number of parcels and/or units, and usage designation (single family, multi-family, commercial);
5. Vicinity map showing the general project location, including any municipal boundaries, roads and water bodies within 3 miles of the project;
6. Legend;
7. South Carolina 811 contact information.

(c) Index Sheet

1. Project map showing the overall site plan;
2. Labeled roads, streets and parcels within the project boundary;
3. Layout of water and sewer mains, structures, and pump stations;
4. Information on properties adjacent to the proposed project location, including property owner and tax map number, as well as all roads, parcels, subdivisions, major developments and municipalities within 1000 FT of the project;
5. Location and names of streams, lakes, swamps, and wetlands and any other water bodies, including areas subject to flooding;
6. MSL elevations of proposed major system appurtenances (i.e. pump stations, junction manholes, main valve clusters, etc.);
7. Orientation of multiple sheets indexed to show the match lines on connecting drawings (the orientation of the map must be maintained on all subsequent sheets);
8. Other elements that may be shown on the index sheet include municipality, utility, and/or agency contact information, as well as the design engineer's general notes.

(d) Utility Plan Sheet

1. Existing and/or proposed physical layout of the development, shown in sufficient detail to show roads, streets, lot layouts and phasing limits, as well as water bodies and wetlands;
2. Site plans drawn to a scale no greater than 1" = 10'-0" and no less than 1" = 60'-0";
3. Sheet match lines, take care to avoid splitting a lot, street intersection, or other physical feature that can be shown in total;
4. All existing (in gray scale) and proposed (in bold) water and sewer infrastructure;
5. Other existing or proposed utilities in proximity to the water and sewer systems, including storm drains as well as electrical, communications, and natural gas lines, shown in plan and section views;
6. All existing and proposed rights-of-way, utility easements;
7. Size and material of existing water main;
8. Pipe size;
9. Pipe material and type;
10. Valve locations;
11. Fire hydrant, blow offs, and air release valve locations;
12. Water services and meter locations, including service sizes;

(e) Utility Profile Sheet

1. Where applicable, the profile should be shown below the utility site plan on the same drawing sheet. The following profile elements must be represented:
2. Constructed/finished grade;
3. Stationing to match the plan view;
4. Pipe diameter;
5. Pipe type and class (DIP, PVC, etc.);
6. Any known conflicting utilities;
7. Separation of all storm drainage crossing water/sewer pipelines;
8. Stream crossings identified;
9. Aerial crossings identified;
10. Water mains 8-inches or less in diameter do not require profile views on the construction plans except, when in the opinion of the design engineer, a profile view is needed to convey a specific vertical alignment or utility conflicts. High points and low points are to be identified for location of air releases and blow offs.

(f) Water Detail Sheets

Provide the contractor with standard details that are specific to the proposed project.

Section 4.03 As-Built Record Drawings

The purpose of the as-built record drawings is to verify that the water system serving the project was installed per the District's Standard Specifications, in accordance with the SCDHEC approved construction permit, and recorded to show the actual locations of the water assets turned over to the District for long term ownership, operation and maintenance.

The as-built drawings shall be based on a field survey and the construction drawings will be modified to reflect the field as-built survey. As-built drawings should be produced in a clear and legible manner. Only information pertinent to the water facilities being dedicated to the District should be shown. No reference shall be made to any future or proposed facilities.

The Engineer shall submit 3 sets of paper copies (24"x36") for review and approval. The following information shall be included on the record drawings:

(a) General Notes

1. Developer's name, address, and telephone number (all sheets);
2. Contractor's name, address, and telephone number (all sheets);
3. Engineer's name, address, and telephone number (all sheets);
4. Engineer's seal and signature (all sheets);
5. Street names, 911 address, and lot numbers (all sheets);
6. The "Record Date" must be boldly marked on each plan sheet;
7. Only information pertinent to the location of water facilities being dedicated to the District should be shown;
8. Plans shall show all facilities abandoned in place, but no reference shall be made to any proposed or removed facilities;
9. Phased projects will be required to submit as-built drawings for subsequent phases, which include as-built information on all prior phases. Lot numbers throughout all phases shall run consecutively and not repeated on later phases. Naming convention shall remain consistent throughout phases;
10. Indicate all storm sewer, water, and wastewater pipeline utility crossings. Include vertical and horizontal separation distances, depth of cover, and pipe materials. Show the location of all dry utilities (electric, cable, telephone, natural gas, etc.);
11. Water, wastewater, and storm drains are to be shown concurrently on plan view drawing sheets.
Do not submit separate sheets for these utilities;
12. Site plans drawn to a scale no greater than 1" = 10'-0" and no less than 1" = 60'-0".

(b) AutoCAD Notes

1. Submit one electronic file containing the water utilities that were shown as-built in addition to the site where the utilities were constructed. The files must have an insertion point of 0,0,0 referencing the South Carolina State Plane Coordinate System. Preserve the project integrity by maintaining the site as a whole rather than breaking it up into multiple drawing files.
2. Layer the water features, including text, individually on separate layers.
3. All survey points shall be included on a separate layer.
4. All entities and object colors must be drawn BYLAYER.
5. All dimensions shall be to the nearest one hundredth of a foot in the vertical plane and the nearest tenth of a foot in the horizontal plane, with angles to the nearest minute. Dimensions to be on a separate layer.

(c) Easements & Plats

1. Show all easements conveyed and surveyed boundaries of any property deeded to the District.
2. Show where water facilities are located within private property through which an easement will be granted. A surveyor will establish metes and bounds of such easements.
3. Water lines located within public rights-of-way shall be referenced to permanent visible structures such as centerline or edge of pavement, manholes, catch basins, and power poles. Right-of-way boundaries may be used as a last resort.

(d) Water Mains and Associated Features

1. Water mains shall be referenced to permanent visible structures, including road centerlines, edges of pavement, buildings, manholes, catch basins, and power poles. Rights-of-way/property line boundaries may be used in the absence of the other references noted. Tie down locations of all valves, bends, and tees, to fire hydrants, manholes, buildings, markers, or other permanent structures. A minimum of two tie-down dimensions are required for each fitting. Show depth of cover on all valves and fittings if greater than 5 feet.
2. A "blow-up" is required of all valve clusters and other areas of congestion if not clearly shown otherwise. Show distance from hydrant to main line. Blow-up diagrams shall indicate type of

valve/fitting, size and at least two tie-down dimensions to the nearest permanent visible objects. All dimensions shall be shown to the nearest foot. These dimensions may be computed from field survey locations when greater than 25 feet. Show depth of cover if less than 3' or greater than 5' deep.

3. Show tie-down locations of water service termination points to permanent structures such as buildings, manholes, or fire hydrants. Property corners may be used in the absence of other reference points when visible permanent structures are not nearby.
4. Provide on plans the type and manufacturer of all valves, linear feet of water main, as well as the size, type, and class of pipe.

Section 4.04 Certificate of Non-Litigation

Date: _____

Executive Director

Chester Metropolitan District
Post Office Box 550
Chester, South Carolina 29706

Certificate of Non-Litigation for (Project Name): _____

Dear Sir:

This is to certify that there are no pending or threatened actions at law that will affect the fee simple dedication of the **water utilities** for the above referenced project. I further certify that all affected contractors, sub-contractors, material suppliers, engineers, attorneys, or other persons, firms or corporations retained for the purpose of designing, planning, and/or constructing the **water utilities** on the referenced project have been paid in full.

Witness

Developer

Witness

Contractor

Witness

Witness

Engineer

Witness

Witness

Section 4.05 Contractor Guaranty

WHEREAS, Chester Metropolitan District, as the ultimate owner and operator of _____ (project name) water utility systems, located at _____ (street address, lot, block, or tract), requires tangible assurance as to the quality of materials and workmanship used on the project; and,

WHEREAS, _____ (contractor), as the duly licensed and responsible contractor having constructed and/or supervised the construction of the project, desires to assure Chester Metropolitan District that the quality of materials and workmanship meet published standards governing the construction of such utilities work;

THEREFORE, it is hereby agreed that neither final payment by the developer nor any provision in the contract with the developer, no partial or entire use of the constructed utility improvements by Chester Metropolitan District or the public shall constitute an acceptance of work not performed in accordance with approved plans, or relieve the contractor of liability or responsibility for faulty materials or workmanship. It is further agreed that the contractor shall promptly remedy any defects in the work, with the exception of damages construed as acts of God, at his own expense, and pay for any damage to other work resulting therefrom which shall appear within twelve (12) months from the date the "Permit to Operate" is issued by SC DHEC.

THEREFORE, the contractor hereby certifies that all work described or shown on the construction documents was performed. If it can be demonstrated that work was not performed, then the contractor shall remedy the oversight at his own expense or reimburse Chester Metropolitan District for the cost plus twenty (20%) per cent for administrative costs. This clause shall be in effect indefinitely.

IN WITNESS WHEREOF, this instrument of **GENERAL GUARANTY** is hereby executed.

Attest: _____ (Authorized Signature of Contractor)

For: _____ (Company Name)

At: _____ (Company Address)

Submitted and sworn to before me this _____ day of _____, 20 _____

By _____ (Authorized Official) for _____ (Company)

Notary Public for South Carolina
My commission expires _____

Section 4.06 Dedication Agreement

WHEREAS, the undersigned desires to obtain water service from Chester Metropolitan District within _____(project name).

WHEREAS, in order to obtain such service, the undersigned has agreed to pay all costs associated with the installation of required facilities in street or highway rights-of-way, or private rights-of-way which the undersigned has formally granted to the District at no cost for permanent public use ownership for any and all purposes without restriction or limitation; and

WHEREAS, the District has agreed to provide water service to the undersigned upon the fulfillment by the undersigned of all of the terms and conditions set forth above, as well as the payment of prescribed fees, subject to payment of regular prescribed rates for all services rendered and subject to entry into an application for water service.

NOW, THEREFORE, in consideration of the matters and things aforesaid which are hereby fully affirmed, ratified and approved, the undersigned hereby irrevocably transfers and assigns to Chester Metropolitan District, its successors and assigns, certain water system facilities installed or to be installed by and at the expense of the undersigned as follows:

_____feet of _____inch water line together with necessary valves, fittings, and/or other appurtenances. All right, title and interest in any and all equipment, lines, pipes, fixtures and related facilities installed in connection therewith (collectively referred to hereinafter as the "Equipment"), including, without limitation, all of the following types or classifications of rights or interests: all plans, specifications, maps, drawings (including as-built drawings) and other renderings of the infrastructure; all warranties, claims and any similar rights to the infrastructure; any and all permits for the infrastructure installed (including assignment of any permit to operate); and all intangible rights, goodwill and rights of the infrastructure.

IN WITNESS WHEREOF, the undersigned has executed these presents under seal.

In the presence of:

1st Witness

(Signature of Developer)

2nd Witness

(Print name of Developer)

Submitted and sworn to before me this _____ day of _____, 20_____

By _____(Authorized Official) for _____(Company)

Notary Public for South Carolina
My commission expires _____

Section 4.07 Cost Certificate

I, _____ (developer or representative name) who constructed _____ (project name), hereby attest that the cost of the water improvements, including engineering and related development costs, is as follows:

_____ Pipeline Size	_____ Pipeline Length	_____ Pipeline Cost
_____ Pipeline Size	_____ Pipeline Length	_____ Pipeline Cost
_____ Pipeline Size	_____ Pipeline Length	_____ Pipeline Cost
_____ Pipeline Size	_____ Pipeline Length	_____ Pipeline Cost

Number of Hydrants

Name of Developer

Signature of Developer or Representative

SWORN to before me

This _____ day of _____, 20_____

Notary Public for South Carolina
My commission expires _____