

**MONROE
COUNTY
WATER
AUTHORITY**

Rochester, New York



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**Uniform Design and Construction Standards
for Extending Water Distribution Systems**

REVISED: OCTOBER 2023

FOREWORD

Publication of these Uniform Design and Construction Standards for Extending Water Distribution Systems will supersede former Authority editions.

The Uniform Design And Construction Standards For Extending Water Distribution Systems may be revised by issuance of a supplement to correct errors and omissions found in these Standards and to reflect advanced thinking and the changing water and construction industry technology. Each supplement will supersede any previous supplement by inclusion of all pertinent portions and will be in effect upon the date of issuance by the Authority. Copies of current Standards are available on Monroe County Water Authority's web site at the following address: <https://www.mcwa.com/engineering-data/>

Special provisions and drawings will be provided, when necessary, to supplement or modify these Design and Construction Standards.

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**UNIFORM DESIGN AND CONSTRUCTION
STANDARDS FOR EXTENDING WATER
DISTRIBUTION SYSTEMS**

SECTION 1

GENERAL REQUIREMENTS

Revised: October 2023

GENERAL REQUIREMENTS

SECTION 1

INDEX

<u>ARTICLE</u>	<u>TITLE</u>
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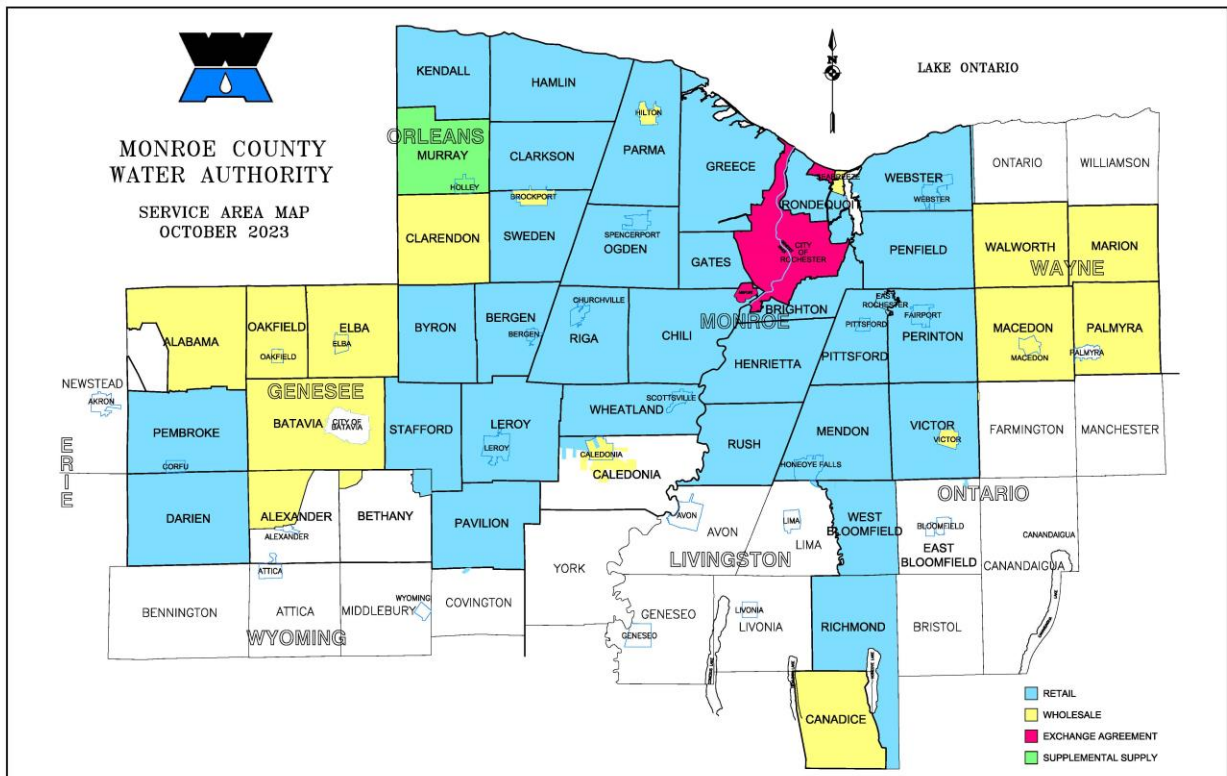
Article 1 – General Statement and Intent

1.01 General Statement

Monroe County Water Authority (Authority) provides high quality, safe and reliable water, in a financially responsible manner.

The Authority was created by State legislation in 1950 to solve the water supply needs of this community. In 1959 the Authority took over the assets of the private, New York Water Service Corporation and had 27,000 retail customers, serving just portions of the County’s inner ring towns and portions of the City. As surrounding towns and villages faced new water supply challenges, the Authority’s service area has steadily grown. The Authority currently serves over 215,000 wholesale and retail customers including towns and villages in Monroe and five adjacent counties as well as parts of the City of Rochester.

The Authority’s system infrastructure includes two operations centers, a meter shop, three water treatment plants, (Shoremont, Webster and Corfu), 43 remote pump stations; 58 water storage facilities, and over 3,400 miles of transmission and distribution water mains.



1.02 Intent

The Uniform Design and Construction Standards for Extending Water Distribution Systems presents the minimum design and construction criteria for developing water distribution systems within the Authority's jurisdiction. All proposed water system extensions must be designed in accordance with these Standards. Application shall include site plans, computations, and when required design stipulations for construction practices.

The Developer and the Developer's Engineer are responsible for designing water system extensions in accordance with these Standards and all applicable Laws and Regulations, and for making timely, accurate and complete application submittals to the Authority. Authority approval is required for any change to Approved Plans. The Developer is solely responsible for obtaining all requisite permits and approvals from other regulatory agencies for the Work, including reaffirmations in the event of revisions or expirations of prior approvals. The Developer and Contractor shall select the means, methods, and sequences for constructing the facilities, except as expressly set forth in these Standards or otherwise directed by the Authority.

The Developer or the Contractor shall pay all costs of constructing facilities in accordance with these Standards, except as set forth in these Standards or otherwise directed by the Authority. The Authority assumes no liability for, and does not agree to pay any costs of, constructing facilities. No statements, actions, or omissions of an Authority officer or employee may be construed as an assumption of liability for, or an agreement to pay any costs of, constructing facilities.

Article 2 – Definitions

The following terms, whenever used in these General Requirements or in the other Standards, have the meanings indicated which are applicable to both the singular and plural thereof:

- 2.01 **Monroe County Water Authority** - Is a New York public benefit corporation, or any officers duly authorized to act for the Authority, with whom a Developer or Owner may enter into an Agreement.

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- 2.02 **Advance Taps** - Services (from the water main to the curb stop) installed at the time of water main installation which are not put into immediate use. Advance taps aged more than five years and composed of non-copper or galvanized material are considered abandoned and the customer must make payment for a complete new service.

- 2.03 **Agreement for Providing Maintenance to Private Water Distribution Systems and/or For Inspection and Maintenance of Hydrants and Hydrant Guard Valves on Private Property** - An agreement between the Authority and an Owner providing for the Authority to maintain a private water system and/or private fire hydrants at the Owner's expense.
- 2.04 **Air-Gap** - The physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressurized receiving vessel. An "approved air-gap separation" shall be at least double the supply pipe diameter measured vertically above the vessel's overflow rim and not less than one inch or 2.54 cm.
- 2.05 **Air-Relief** - The removal of air from a distribution system either during filling of new mains, or entrained in existing pipe. Entrained air will accumulate and cause flow resistance with subsequent downstream pressure loss and possible flow blockage.
- 2.06 **Air Relief Valve** - A valve assembly that can remove air trapped in a water main.
- 2.07 **Air/Vacuum Relief Valve** - A valve assembly that controls any removal or addition of air in a water main.
- 2.08 **Approved Plans** - Plans prepared by the Developer's Engineer which have been reviewed, approved and signed by the Authority.
- 2.09 **Appurtenances** - Required components of the water main infrastructure including machinery, appliances, and assemblies that allows intended water main operation.
- 2.10 **Auxiliary Water Supply** - A water supply that is not operated, maintained, or owned by Authority.
- 2.11 **Backflow** - An undesirable reversal of flow that may cause the mixture of water and other liquids, gases or other substances to enter into the public potable water supply distribution pipes from any unauthorized source.
- 2.12 **Backflow Preventer** - A physical appurtenance or assembly that prevents a backflow event from occurring on a service connection thereby protecting the public water supply.
- 2.13 **Backflow Prevention Assembly-Approved** - A testable assembly reviewed and approved by the Authority and Department of Health having jurisdiction.
- 2.14 **Backpressure** - An undesirable reversal of flow in a customer's water service or other unauthorized source that occurs when water pressure is artificially increased to a point that it pushes water and other liquids, gases or other substances into the public potable water supply's distribution pipes.
- 2.15 **Backsiphonage** - An undesirable reversal of flow in a customer's water service or other unauthorized source that occurs when there is a reduction in system pressure in the public water supply which generates a negative or sub-atmospheric pressure to a point that it draws water and other liquids, gases or other substances into the public potable water supply's distribution pipes.

- 2.16 **Blow-Off** - The primary purpose of a blow-off assembly is to purge or “blow off” accumulated sediment from the main’s lowest elevations or dead-ends. The blow-off is also effective for dewatering lines or reservoir repair or inspection.
- 2.17 **Bypass Valve** - A small valve attached to a larger valve used to relieve (i.e. equalize) pressure against the larger valve’s seat.
- 2.18 **Check Valve** - A valve which opens to permit normal (i.e. forward) flow and positively shuts off to prevent return (i.e. reverse) flows. Valve positively closes, drip tight when outlet pressure exceeds inlet pressure. Valve comes completed with controlled closing action to prevent pressure surges (i.e. water hammer).
- 2.19 **Combined Service** - A metered water service connection serving a dual purpose by providing both fire protection and domestic water supply.
- 2.20 **Construction Water** - A temporary meter and backflow prevention device that is installed to deliver a water supply for construction purposes.
- 2.21 **Contamination** - Contaminants to a potable supply can create an actual or potential hazard to the public health. Contaminants may range from changes in color, taste or odor to sewage, industrial fluids or waste liquids, compounds or other materials.
- 2.22 **Contractor** - The construction firm, including all subcontractors, hired by a Developer, to install water facilities in accordance with the Approved Plans and these Standards.
- 2.23 **Corporation Stop** - A corporation stop or corporation cock is a buried valve directly connected to the water main for water service lines sized 1”, 1.5”, or 2”. There is no valve box to operate a corporation stop.
- 2.24 **Cross-Connection** - Any physical connection, permanent or temporary, or arrangement of piping or fixtures between two otherwise separate piping systems, one of which contains potable water and the other contains non-potable water or industrial fluids through which, or because of which, backflow may occur into the potable water system.
- 2.25 **Cross-Connection Control Specialist (Certified)** - An individual certified by New York State Department of Health to test approved backflow prevention devices.
- 2.26 **Curb Stop** - A valve, at a location specified by the Authority that controls the flow of water to the Owner’s service. When within the ROW or an easement granted to the Authority, this valve is also used to demarcate Authority and customer’s ownership of the service line.
- 2.27 **Dead-end Mains** - A water main which terminates with a cap, permanent blow off, plug or dead-end hydrant assembly.
- 2.28 **Decommissioned Well** – A private or public well that no longer is active as a source of water supply. Follow procedures as outlined by NYSDOH Individual Water Supply Wells - Fact Sheet #4 - Decommissioning Abandoned Wells. In some locations, one or more regulatory agencies and/or

municipalities may have specific requirements for decommissioning abandoned water wells. The Local Health Department should be consulted for information on regulatory requirements prior to decommissioning.

- 2.29 **Dedicated Public Rights-of-Way** – A plot of ground reserved for the public’s use or betterment. The uses are, but not limited to, utilities and roadways.
- 2.30 **Defective** - An adjective which refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Executed Agreement or the Uniform Design and Construction Standards, or does not meet the requirements of any inspection, test or approval reference standard, or has been damaged prior to the expiration of the Guarantee Period.
- 2.31 **Department of Health** - The Department of Health refers to New York State or applicable County Departments.
- 2.32 **Developer** - An individual, corporation, municipality, or business entity requesting a public water supply, either by a service connection installation or by construction of an extension of a water main, for a proposed or existing structure(s).
- 2.33 **Developer’s Engineer** - An individual or entity designated by the Developer as their consulting Engineer or Architect, registered in the State of New York, who prepares the required plans and acts on the Developer’s behalf.
- 2.34 **Developer’s Guarantee** - Developer guarantees that the design, workmanship, materials and equipment used in the construction of the water main extension shall be free from defects and flaws, in accordance with the Approved Plans, and satisfy all performance test requirements included in the latest edition of the Uniform Design and Construction Standards for Extending Water Distribution Systems.
- 2.35 **Domestic Service** - A metered service connection through which water is obtained for all purposes exclusive of fire protection, including residential, commercial and industrial uses.
- 2.36 **Double Check Detector Assembly (DCDA)** - An assembly composed of two (2) internally loaded, independently acting, approved check valves, located between two (2) tightly closing shutoff valves attached at each assembly end, fitted with four (4) properly located test cocks and having a bypass line consisting of a meter, small diameter double check assembly with test cocks and isolation valves.
- 2.37 **Double Check Valve Assembly (DCVA)** - An assembly composed of two (2) internally loaded, independently acting, approved check valves, located between two tightly closing shutoff valves attached at each assembly end and fitted with four (4) properly located test cocks.
- 2.38 **Easement** - A plot of land reserved under County recording rules which allows the Authority to own, operate, maintain and replace facilities on private property (outside the public right-of-way). Easements shall be of the form and content prescribed by the Authority.
- 2.39 **Engineer** - The Authority’s Chief Engineer or their designated representative.

- 2.40 **Exclusive Easement** - A plot of land reserved under County recording rules which allows the holder of the easement to be the sole utility within said plot of land to own, operate, maintain and replace facilities on private property (outside of the public right-of-way).
- 2.41 **Executed Agreement** - A binding Agreement as defined elsewhere in this Section between the Authority and Developer, Municipality or others, that defines scope of work, fees and charges, guarantee, indemnification, and easement and insurance requirements.
- 2.42 **Fire Service** - A water service which is sized, constructed and used solely for the purpose of providing fire protection to a parcel.
- 2.43 **Frontage Easement** - An easement along the length of a property that is adjacent to the public right-of-way.
- 2.44 **Guarantee Period** - The guarantee period is that time frame, as defined in the Executed Agreement, in which the Developer is responsible for all costs of repair or replacement of any work, equipment or material, or parts thereof, which fail to meet the Developer's Guarantee. The Developer is also responsible for the repair of all failures or deficiencies not covered by the guarantee, but are required for the maintenance of the system during this guarantee period.
- 2.45 **Hazardous Substance** - "Hazardous Substance" means, without limitation, asbestos, radon, polychlorinated byphenyls, methane, urea formaldehyde foam insulation, and petroleum and petroleum products, as well as any other flammable, explosive, corrosive, radioactive, hazardous, extremely hazardous or toxic substance, waste or material, or constituent and degradation products which are regulated as, defined as, or included in the definition of "Hazardous Substance, hazardous materials, hazardous wastes, toxic substances, or pollutants" under any applicable federal, state or local law, statute, ordinance, rule or regulation regarding protection of the environment and/or health or safety, including but not limited to Comprehensive Environmental Response, Compensation and Liability Act, as amended (42 U.S.C. Section 9601, et seq.), the Hazardous Materials Transportation Act, as amended (49 U.S.C. Section 1801, et seq.), the Resource Conservation and Recovery Act, as amended (42 U.S.C. Section 6901, et seq.), the Toxic Substance Control Act, as amended (15 U.S.C. Section 2601, et seq.), the Occupational Safety and Health Act, as amended (29 U.S.C. Section 651, et seq.), the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Section 11001, et seq.), the Safe Drinking Water Act, as amended (42 U.S.C. Section 300(f), et seq.), the Refuse Act (33 U.S.C. Section 407, et seq.), Articles 15 and 27 of the New York State Environmental Conservation Law, or any other applicable environmental law, and in the regulations and rules promulgated thereunder.
- 2.46 **Hydraulic Analysis** - The electronic-based engineering process used to calculate the available pressure(s) and flow(s) in existing or proposed water mains and appurtenances.
- 2.47 **Hydraulic Grade Line (HGL)** - The level water would rise to if a small tube that is freely vented to atmospheric pressure were connected to a pipe. The HGL is equal to the pressure, in feet, at a given point in the distribution system plus the elevation.
- 2.48 **Inspector** - The Authority's representative authorized to make detailed inspections to determine compliance with the Approved Plans and these Standards.

- 2.49 **Jumper** – See Spacer.
- 2.50 **Junction Node** - A point in a hydraulic analysis where there is an input, demand or intersection of multiple pipes.
- 2.51 **Laws and Regulations; Laws or Regulations** - Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction over Owner, Developer, Developer’s Engineer, Contractor, Engineer, or the Project.
- 2.52 **Main Extension Agreement (MEA)** - A written contract between the Authority and a Developer specifying the requirements for extensions from water mains owned or leased by the Authority, and how said extensions will be operated when dedicated to the Authority. Incorporated into the contract are all Approved Plans whether attached to the contract or not.
- 2.53 **Monroe County Water Authority’s Representative** - The individual duly authorized by the Engineer to act as the representative for matters pertaining to the extension of water distribution systems.
- 2.54 **Owner** - An individual, corporation or partnership that owns the parcel of land on which the water system will be extended. The Owner may include the Developer or a subsequent purchaser of the property.
- 2.55 **Potable Water** – Water that has been tested and meets NYSDOH standards for public water supply.
- 2.56 **Pressure Reducing Valve (PRV)** - A valve used to protect or regulate against downstream static pressure damage with a regulator that immediately responds and limits the downstream pressure thus preserving the integrity of the downstream pipe and appurtenances during system changes.
- 2.57 **Pressure Zones** - Geographical areas of a distribution system which are served by a tank, reservoir or pump system at a specified source pressure head. A pressure zone may be completely isolated from the general distribution system or it may be interconnected through operable main line valves and pressure reducing valves.
- 2.58 **Private Fire Protection Service Agreement** - An agreement between the Authority and an Owner that specifies the requirements for installing, operating and maintaining a private fire service.
- 2.59 **Private Fire Service** - Approved water service connections used exclusively for fire protection purposes.
- 2.60 **Private Water Facilities** - Water facilities not owned by the Authority after their installation and completion.
- 2.61 **Punch List** - A document prepared by the Authority during the final inspection, prior to the end of the Guarantee Period, listing work required of the Developer in order for a project to meet standards agreed upon in the Executed Agreement.

- 2.62 **Premises** - A property, parcel or location having an individual tax account number, whether or not occupied by a structure, and shall include the entire front footage thereof abutting on a street, if any, whereat the service of water is requested or furnished for any part thereof.
- 2.63 **Private Main Extension Agreement Off a Public Main (PMEA)** - An agreement between the Authority and a Developer and/or Owner specifying requirements for a private water system extended from water mains owned or leased by the Authority. Used when extensions will not be dedicated to the Authority, but will be maintained by the Authority under a Maintenance Agreement.
- 2.64 **Public Water Facilities** - Are all water facilities owned, operated, and maintained by the Authority after completion of construction and testing and final acceptance.
- 2.65 **Radioactive Material** - Radon and source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. Section 2011, et seq.), and the Uranium Mill Tailings Radiation Control Act of 1978, as amended (42 U.S.C. Section 7901, et seq.).
- 2.66 **Reduced Pressure Detector Assembly (RPDA)** - An assembly composed of an approved, reduced pressure zone assembly (RPZ) and a bypass line water meter with an approved meter-size reduced pressure zone assembly (RPZ).
- 2.67 **Reduced Pressure Zone Assembly (RPZ)** - An assembly of two (2) independently acting, approved, check valves together with a hydraulically operating, mechanically independent, differential pressure relief valve located between the check valves, test cocks, and resilient-seated shutoff valves located at each end. The assembly operates to maintain the pressure in the zone between the two (2) check valves at an acceptable level less than the pressure on the public water supply side of the assembly. In case of leakage of either of the two check valves or an inlet pressure less than two (2) psi, the differential relief valve operates to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere.
- 2.68 **Residual Pressure** - The water main pressure in a water distribution system that remains when a specific rate of flow, (e.g. fire flow), is withdrawn from the system.
- 2.69 **Restrained Joint** - A manufactured joint comprised of a welded retaining ring and glands and designed to prevent separation.
- 2.70 **Service Connection** - The service connection consists of the corporation stop at the distribution main, the service line material, and the curb stop (or other valve) at the customer's service line. The Authority owns, operates, and maintains this portion of the service connection.
- 2.71 **Service Saddle** - A fitting (i.e. sleeve) for taps sized 1 ½ and 2-inches designed for use with a threaded corporation stop.
- 2.72 **Sewer** - A pipeline designed to carry storm water or municipal sewage.

- 2.73 **Shop Drawings** - All submitted and approved drawings, diagrams, illustrations, material certifications, catalog-cut-sheets, schedules and other data or information which are prepared or assembled by or for the Contractor or Developer for a specific aspect of the work.
- 2.74 **Soil Bearing Capacity** - The maximum unit pressure which a soil will withstand without failure or settlement.
- 2.75 **Spacer** - A length of pipe installed in lieu of a meter on a temporary basis while facilities are under construction. It is also referred to as a jumper.
- 2.76 **Standards** - The Authority's standards as defined in their latest revision of Uniform Design and Construction Standards for Extending Water Distribution Systems.
- 2.77 **Standard Details** - The Authority's details as shown their latest revision of Section 5 of the Uniform Design and Construction Standards for Extending Water Distribution Systems.
- 2.78 **State Sanitary Code** - Subpart 5-1, Public Water Systems (Statutory Authority: Public Health Law §225), New York State.
- 2.80 **Static Pressure** - The distribution system's pressure recorded at any given location without adjusting for the pressure drop due to flowing water.
- 2.81 **Subcontractor** - An individual, firm or corporation contractually obligated with the Contractor or with any other Subcontractor for the performance of any part of the Work at the site.
- 2.82 **Tapping Pit** - An excavated hole used for staging and performing a wet or dry water main tap.
- 2.83 **Tapping Sleeve** - A fitting for wet water main taps sized larger than 2 inches.
- 2.84 **Thrust Block** - A poured-in-place block of concrete positioned at those locations in which the water main changes direction or size; the thrust block is sized to counteract the force or thrust that develops at those locations.
- 2.85 **Underground Facilities** - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels and appurtenances or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.
- 2.86 **Water Main** - A series of interconnected pipe that meets AWWA and NSF 61 standards and designed to transmit water for domestic and firefighting purposes. Material types include, but are not limited to, ductile iron pipe (DIP), Cast Iron (CI), Asbestos-cement (AC), Polyvinyl chloride (PVC), and High-Density Polyethylene (HDPE).
- 2.87 **Water Main Upgrade** - Installation of a larger water main than the proper size required to meet the hydraulic requirements for an extension. The Authority makes this determination during the

plan review phase. The larger main is installed for the Authority's system-wide purposes, and part of the upgrade cost is borne by the Authority.

- 2.88 **Water District Main Extension Agreement (WDMEA)** - An agreement between the Authority and a municipality specifying requirements for extension from water mains owned or leased by the Authority, and used when extensions will not be dedicated to the Authority, but will be maintained by the Authority under lease agreement terms.
- 2.89 **Water Service Installation Agreement (WSIA)** - An agreement between the Authority and a Developer and/or Owner specifying requirements for extension from water mains owned or leased by the Authority, and used when the extension shall be installed by a Developer and/or Owner and subsequently dedicated to the Authority.
- 2.90 **Water Storage Tank** – A vessel designed to store potable water that meets AWWA and NSF 61 standards. Built to a sufficient height and capacity to supply the necessary pressure and fire demand to the area served.
- 2.91 **Wet Tap** - A connection made to an existing and fully active water main.
- 2.92 **Work** - Are all items, including labor, equipment and materials, necessary to install a water system in its entirety in accordance with Authority Approved Plans and appropriate Executed Agreement.

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Article 3 - Abbreviations

Whenever used in these General Requirements or in the other Standards the following abbreviations have the meanings indicated which are applicable to both the singular and plural thereof:

ACI	American Concrete Institute	MCDOPH	Monroe County Department of Public Health
ACP	Asbestos Cement Pipe	MCDOT	Monroe County Department of Transportation
AG	Air Gap separation	MCWA	Monroe County Water Authority
AIA	American Institute of Architects	MUTCD	(Manual of) Uniform Traffic Control Devices
ANSI	American National Standard Institute	NEMA	National Electric Manufacturers Association
ASA	American Standard Association	NYSDEC	New York State Department of Environmental Conservation
ASTM	American Society of Testing and Materials	NYSDOT	New York State Department of Transportation
AVAR	Air Vacuum Air Relief (valve)	NSF	National Sanitation Foundation
AWS	American Welding Society	OD	Outside Diameter
AWWA	American Water Works Association	PE	New York State Licensed Professional Engineer
BM	Bench Mark	PL	Property Line
C&G	Curb and Gutter	POC	Points of Connection
CIP	Cast Iron Pipe	PRV	Pressure Reducing Valve
CMP	Corrugated Metal Pipe	PSF	Pounds/Square Foot
CRSI	Concrete Reinforcing Steel Institute	PSI	Pounds/Square Inch
DCVA	Double Check Valve Assembly	PVC	Polyvinyl Chloride pipe
DI	Drop Inlet	RA	Registered Architect
DIP	Ductile Iron Pipe	RCP	Reinforced Concrete Pipe
EL	Elevation	ROW	Right-Of-Way
EX	Existing	RPDA	Reduced Pressure Detector Assembly
FG	Finish Grade	RPZ	Reduced Pressure Zone Assembly
FH	Fire Hydrant	SSPC	Steel Structures Painting Council
FPS	Feet/Second	SP	Steel Pipe
FT	Foot	STA	Station
G	Gas	SW	Sidewalk
GA	Gauge	UL	Underwriters' Laboratories, Inc.
GPM	Gallons/Minute	UPC	Uniform Plumbing Code
HGL	Hydraulic Grade Line	USGS	United States Geological Survey
HNA	Hydraulic Network Analysis	W	Water
ID	Inside Diameter		
IPS	Iron Pipe Size		
LF	Linear Feet		
LS	New York State Licensed Land Surveyor		

Article 4 – Reference to Standards and Publications

4.01 Reference to Standards and Publications

Any reference made in these Standards or on approved drawings to any specification, standard, method, or publication of any scientific or technical society or other organization shall, in the absence of a specific designation to the contrary, be understood to refer to the specification, standard, method, or publication in effect as of the date the work is performed.

For products or workmanship specified by association, trade or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

4.02 Schedule of References

AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street Washington, DC 20001 www.transportation.org
ACI	American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48331 www.concrete.org
AI	Asphalt Institute Research Park Drive PO Box 14502 Lexington, KY 40512 www.asphaltinstitute.org
AGMKT	New York State Department of Agriculture & Markets 10 B Airline Drive Albany, NY 12235 www.agriculture.ny/org
AIA	American Institute of Architects 1735 New York Avenue, N.W. Washington, DC 20006 www.aia.org
AISC	American Institute of Steel Construction One East Wacker Drive, Suite 3100 Chicago, IL 60601-2001 www.aisc.org
AISI	American Iron and Steel Institute 1140 Connecticut Avenue, Suite 705 Washington, DC 20036 www.steel.org
ANSI	American National Standards Institute 1819 L Street, NW – 6 th Floor Washington, DC 20036 www.ansi.org

ASTM	American Society for Testing and Materials 100 Barr Harbor Drive Conshohocken, PA 19428-2959 www.astm.org
AWS	American Welding Society 550 N.W. LeJeune Road Miami, FL 33126 www.aws.org
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235 www.awwa.org
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60173 www.crsi.org
GLUMRB	Great Lakes – Upper Mississippi River Board 10 States Standards www.10statesstandards.com
HYDRAULIC INSTITUTE STANDARDS	9 Sylvan Way Parsippany, NJ 07054 www.pumps.org
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways United States Department of Transportation Federal Highway Administration 1200 New Jersey Avenue SE Washington, DC 20590 www.mutcd.fhwa.dot.gov
NSF INTERNATIONAL	Po Box 130140 789 N. Dixboro Road Ann Arbor, MI 48105 www.nsf.org
NYSDEC	New York State Department of Environmental Conservation 625 Broadway Albany, NY 12233-4500 www.dec.ny.gov
NYSDOT	New York State Department of Transportation 50 Wolf Road Albany, New York 12232 www.dot.ny.us
NYSDOS	New York State – Department of State Division of Code Enforcement and Administration 41 State Street Albany, NY 12207 www.dos.state.ny.us

SSPC	Steel Structures Painting Council 40 24 th Street, 6 th Floor Pittsburg, PA 15222-4656 www.sspc.org
UL	Underwriters' Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 www.ul.com
USACOE	US Army Corp of Engineers Kingsman Building 7701 Telegraph Road Alexandria, VA 22315-3863

Article 5 – Rules and Regulations

5.01 The Authority's Rules for the Sale of Water and the Collection of Rents and Charges (Rules and Regulations) and ordinances shall be adhered to at all times. Copies are available at the Authority's main office. Regulations as established by the Department of Health, New York State Department of Environmental Conservation, and any other applicable regulatory agency for the design and construction of public water system extensions shall also be obeyed at all times.

Article 6 – Developer's Responsibilities

6.01 Developer shall be solely responsible for complying with these Standards, including remedial actions required to meet these requirements, even after the sale of a lot or subdivision.

6.02 Fee and Charge Payment

Developer shall pay all fees and charges upon entering into an Executed Agreement.

6.03 Water Main Upgrades

Developer shall comply with water main upgrades when required by the Authority.

6.04 Changes to Approved Plans

Proposed change(s) to the Approved Plans always require Authority review and approval. The Developer will promptly notify the Authority of the proposed change(s) and temporarily cease work that differs from the Approved Plans until an approval is received to resume work.

6.05 Meter Installation

Developer and Owner shall be responsible for making the required provisions for the installation of meters per the Approved Plans.

6.06 Water System Operation

Developer and Contractor shall not operate valves and service curb stops. Developer and Contractor shall contact the Authority to schedule this work.

6.07 Benchmarks and Reference Points

Developer shall make sure that the Developer's Engineer establishes and maintains throughout the construction phase all benchmarks and reference points needed for the water main, appurtenance and service installations and inspection. Road stationing shall be clearly marked on benchmarks and reference points. Developer shall make sure that the Contractor installs all water mains and appurtenances to the lines and grades shown on the Approved Plans.

6.08 Right-of-Way and Easements

Developer shall make sure that all water mains, appurtenances and services are located within dedicated public rights-of-way or within permanent easements granted to the Authority. Developer shall provide permanent easements in accordance with these Standards. Fully executed easement documents are required to be submitted to the Authority prior to the Authority's plan approval and issuance of the MEA, WDMEA, PMEA, or WSIA for execution.

6.09 Inspection of Work

The Developer shall notify the Authority's Engineering Department at least 48 hours prior to the start of construction of the Work after receiving an Executed Agreement to schedule actual inspection of the Work.

The inspection of the Work by the Authority requires that the Developer provide safe access and furnish reasonable aid.

All materials furnished and all Work performed under these Standards shall be subject to Authority's inspection. Work performed and covered in the absence of said prescribed inspection shall be uncovered or removed and replaced under proper inspection. The Developer shall assume the expense of uncovering, removing and replacing uninspected facilities whether or not the Work was found to be defective.

Failure of the Authority to reject any defective work or materials shall not in any way prevent later rejection if such defect(s) are discovered, or obligate the Authority to final acceptance.

The Authority's inspection is only for the purpose of ascertaining if the Work is in accordance with the Approved Plans and these Standards. The Authority does not assume any liability as a result of inspecting the Work.

6.10 Indemnity

To the fullest extent permitted by law, the Developer shall defend (with counsel satisfactory to the Authority), indemnify, and hold harmless the Authority, its members, officers, agents, representatives, and employees from and against all liabilities, claims, damages, judgments, losses, expenses and demands of any kind whatsoever (including but not limited to all attorneys' fees, even those incurred in enforcing this indemnification provision), which arise out of or result directly or indirectly from (i) the construction and development of the water service(s), performed by the Developer, its contractors, subcontractors, sub-subcontractors, suppliers, vendors, agents, officers, employees, and anyone directly or indirectly employed by Developer or anyone for those acts any of them may be liable or (ii) the failure of Developer to perform its obligations hereunder. The Developer's obligation to indemnify the Authority under this provision includes, but is not limited to, all liabilities, claims, damages, judgments, losses, expenses and demands of any kind whatsoever for:

- A. Injuries to any persons (including, without limitation, the Developer's employees or others) for bodily injury, disease, mental anguish, sickness, or death, and/or
- B. Injuries to any property, including without limitation, the loss of use resulting therefrom.

Without limiting the generality of the foregoing, the obligation to indemnify under this article is to apply irrespective of any breach of a statutory obligation or the application of any rule of apportioned or comparative liability except to the extent that the alleged liability and damage are caused by the negligence of the Authority and indemnification hereunder is precluded by statute.

6.11 Guarantee

Developer shall guarantee the entire Work to fully meet all requirements in these Standards. Guarantee Period requirements are outlined in the Executed Agreement. The Developer shall hold the Authority harmless from claims of any kind arising from damage due to said defects.

Article 7 – Monroe County Water Authority's Responsibilities

7.01 Duties of the Inspector

The Inspector as an Authority Representative that is authorized to inspect all completed work and furnished materials. Inspection may extend to all or any part, of the Work and to the preparation, fabrication, or manufacture of the material to be used. The Inspector will not be authorized to alter or waive the provisions of the plans and specifications. The Inspector will, however, have the authority to reject work or materials.

Work inspection by the Inspector shall not be construed as direct control of the individual workman and the means or methods of accomplishing the Work. The direct control shall be the sole responsibility of the Developer and/or Contractor.

7.02 Upsizing of Water Mains

The Authority reviews and analyzes all main extensions for transmission potential. The Authority may “upgrade” those mains required for transmission purposes. “Upgraded” mains are sized larger than what is hydraulically required to adequately supply the proposed main extension or development.

Upgrade determinations are typically identified during the preliminary review phase for a future MEA or municipal extension (i.e. WDMEA). The development’s hydraulic requirements including the main’s proper size are based on hydraulic analysis.

The Authority determines the value of the pipe and appurtenances to be upgraded based on the difference in cost from the Authority’s required main size and the development’s proper main size. This value is based on the price of the Authority’s most recent material purchases.

An installation credit based on the difference between the Authority’s required main size and the development’s proper main size (or as a bid alternate for municipal extensions) is added to the material cost to determine the Authority’s total upgrade contribution. A letter to the Developer detailing the Authority’s contribution will accompany the MEA, WSIA, or WDMEA.

Upon receipt of a successful health sample, the Authority pays the upgrade cost to the Developer for the actual installed quantities.

~ END OF SECTION ~