

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

SECTION 3

CONSTRUCTION REQUIREMENTS

Revised: July 2023

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CONSTRUCTION REQUIREMENTS

3.01 Preconstruction Requirements

A. Submission of the Authority's Agreements

1. Developer shall enter into a Main Extension Agreement (MEA), Water District Main Extension Agreement (WDMEA), Private Main Extension Agreement Off a Public Main (PMEA), or a Water Service Installation Agreement (WSIA) with the Authority and a Private Fire Protection Service Agreement and/or a Maintenance Agreement when required.
2. Developer shall submit two signed and notarized originals of the MEA, WDMEA, PMEAs, or WSIA along with payment, if required, to the Authority at least two weeks in advance of construction. Agreements will not be executed by the Authority until payment is received. One copy will be returned to the Developer after execution by the Authority.
3. Executed agreements become void if the Authority's plan approval expires. After plan approval expiration, the Developer's payment(s) less any of the Authority's costs incurred, shall be returned, and the agreement closed.

B. Submission of Insurance Documents

1. Developer shall, along with every contractor and sub-contractor involved in the water system construction, furnish the required insurance certificate as stipulated in the MEA, WDMEA, PMEAs and WSIA agreements.
2. Submit certificates that are signed by the insurance carrier's authorized representative with the MEA, WDMEA, PMEAs, or WSIA. If the Developer or involved contractor(s) have more than one insurance carrier, then each carrier must sign its own certificate.
3. When a Developer has no employees it is exempt from having to obtain Worker's Compensation insurance. If a Developer has no vehicles, then it is not required to have Comprehensive Auto Liability coverage. These are the only exceptions to the insurance coverage requirements.
4. Whenever there is a partnership, joint venture or other cooperative group, which is not a legal entity and which cannot provide insurance, then the underlying individuals or companies making up the partnership, etc., must be a party to the MEA, WDMEA, PMEAs, or WSIA. All the involved individuals or companies must sign the applicable agreement and provide the required insurance coverages.

C. Submission of permits and approvals

1. Developer shall obtain all necessary permits and approvals required to install the proposed water system, which includes, but is not limited to the following: Department of Public Health (DOPH) Approval of Public Water Supply Improvements, DOPH Approval of Backflow Prevention Device(s), all applicable highway permits, DEC permit(s), Army Corps permit(s), and any special utility crossing approvals (petroleum pipelines, high pressure gas mains, etc.). Submit copies of all permits and approvals prior to the start of construction.
2. The Authority will not schedule any connections to be made, on existing mains, without having all of the proper permits and approvals in hand.

D. Submission of Plans

1. Developer's Engineer shall furnish the Authority with one complete set of contract drawings in PDF format and four prints of the approved utility drawings, including signatures for all involved agencies that can impact the water system design.
2. Developer's Engineer shall furnish the Authority one utility plan in electronic format (AutoCAD in non-Civil 3D formatting) **before** work commences.
3. Developer's Engineer shall furnish GPS records of water main and appurtenances installed.

E. Notification of Engineer

1. Developer shall submit to the Engineer the name of the Contractor who will install the water mains and appurtenances. Submit information with the executed MEA, WDMEA, PMEAs, or WSIA.

F. Submission of Soil Testing Reports

1. Submit results of DIPRA Ten-Point tests performed on soil samples taken from the proposed water main location, at main elevations proposed. If no results are submitted, the water main must be encased in polyethylene tubing.
2. Submit results of sampling for volatile organic compounds and hydrocarbons at Hazmat Spill sites and gas stations (existing or abandoned), areas with contaminated soil or as requested by the Authority

G. Submission of Water System Cut Sheet

1. Developer's Engineer shall provide a copy of the water system cut sheet from which the construction survey controls will be established.

H. Notice for Scheduling Water Main Connections

1. Developer and/or Contractor shall contact the Authority to schedule taps or any other tie-in connections to existing mains in accordance with the Material and Performance Specifications in Section 4. Taps will not be scheduled if any forms, permits, approvals, agreements, insurance or cross connection control approvals are outstanding.

3.02 Contractor's Preliminary Responsibilities

- A. Install the water system in accordance with the Approved Plans, the Material and Performance Specifications in Section 4 and as shown on the Standard Details in Section 5. Any additions, deletions or changes shall first be submitted by the Developer's Engineer for the Authority's review and approval **prior to** constructing any change.
- B. Comply with all restrictions imposed by any permit, easement or approval obtained for this project.
- C. Complete all rough grading, within construction limits of the proposed water system, to within one foot of final grade prior to installing the water main, services and appurtenances.

3.03 Construction Survey Control

- A. Developer's Engineer shall provide, prior to the start of construction, accurately established construction survey control, using stakes and hubs placed on the right-of-way line that is on the same side of the road as the proposed main or on the easement line if no right-of-way is nearby. Label each survey control stake with the offset to water main, station, final road grade at centerline, and the cut or fill required. Place hubs every 100 feet and at the beginning and end of all points of curvature. Place stakes every 50 feet on straight runs, every 25 feet on curves, and as required by the Authority. Stake all property corners that front the water system on both sides of the right-of-way or easement for each parcel receiving an advance service.
- B. The Authority's record drawings are created using exact measurements taken from accurately established survey controls, therefore each stake and hub must be established prior to the installation of the water system. Use of arbitrary off-sets to the proposed water main location is not acceptable. Contact the Authority after survey controls are established to verify if they are acceptable, as no inspection work will be performed without proper survey control.

3.04 Material and Installation Requirements

- A. Developer and Contractor shall perform all work in accordance with the Approved Plans, MEA, WDMEA, PMEA, or WSIA, Material and Performance Specifications in Section 4 and as shown on the Standard Details in Section 5.
- B. All manufactured materials (pipe, valves, fittings, meters, etc.) shall be new and suitable for use in municipal potable water distribution systems. Used or refurbished materials are not

permitted. Materials shall meet the minimum standards of AWWA, ASTM, NSF 60 and 61, or certifying entity acceptable to the Authority.

3.05 Water System Testing Requirements

- A. Developer or Contractor shall pressure test, flush, disinfect and health sample all new water mains and appurtenances in accordance with the Materials and Performance Specifications in Section 4. All testing must be done in the presence of the Authority's Representative and the Developer's Engineer, and all health samples must be taken by the Department of Health or Department of Health approved and certified testing laboratory, at the Developer's cost.
- B. Coordinate filling and flushing with the Authority's Representative as only Authority personnel are permitted to operate valves on existing mains, including new tie-in valves. Under no circumstances shall water from new water systems without a passing health sample be allowed to enter existing water mains.

3.06 Material Affidavit and Cost Statement

- A. Developer shall submit to the Authority within two weeks of receiving passing health sample test results, and prior to the water system being placed in service, a Material Affidavit affirming that all materials installed meet the Authority's standards and a statement of the total quantity and cost of water mains and appurtenances installed under the MEA, PMEA or WSIA.
- B. Material Affidavit and Cost Statements are not required for projects installed under a WDMEA.

3.07 Water System Activation Requirements

- A. After receipt and completion of the items noted below, the Authority's Representative will place the water system in service:
 - 1. Receipt of DOH approval of all health samples.
 - 2. Inspection of all hydrants and valves, by the Authority's Representative, to ensure proper operation and accessibility.
 - 3. Removal and plugging of all sample taps under the inspection of the Authority's Representative.
 - 4. All valves, curb boxes and hydrants brought to within +/- 6 inches of final grade.
 - 5. All hydrants have been painted, weather dependent, and chains removed.
 - 6. Receipt of material affidavit and cost statement, if applicable.

- B. For projects installed under a WDMEA, the Developer's Engineer must submit record drawings, valve cards, hydrant cards, tap cards and operation and maintenance manuals to the Authority for their review and approval. The water system will not be activated until all record documents have been reviewed and approved by the Authority.
- C. If the water system is not activated within six weeks of the Health Sample approvals, the system must be re-chlorinated and new Health Samples collected and approved.

3.08 Guarantee Period

- A. Developer's responsibilities during the Guarantee Period are stipulated in the MEA, WDMEA and WSIA. Nothing, including final acceptance, the expiration of the Guarantee Period or the discovery of a condition covered by this Section following the expiration of said Period, nor partial or entire occupancy or use by the Authority, nor any other provision of the MEA, WDMEA, PMEA or WSIA or these Standards shall waive this warranty or relieve Developer from his obligations under this Section.

~ END OF SECTION ~