

CITY UTILITIES DESIGN STANDARDS MANUAL

**Book 5
Materials (MA)
MA3 Certification of Materials**

June 2015

MA3.01 Purpose

The purpose of this Chapter is to outline requirements for the certification of construction materials for storm, sanitary, and potable water systems.

MA3.02 Referenced Standards

Standards establish uniform guidelines, criteria, methods, processes, and practices for products and materials. Standards are usually developed and maintained by a consensus of members of an association, society, council or institute directly involved with the service, product, or installation.

Associations that produce the standards that are referenced throughout this Book are listed below. Copies of each standard may be obtained by purchasing copies from the association.

1. American Concrete Institute (ACI)
38800 Country Club Dr.
Farmington Hills, MI
48331-3439 USA
1-248-848-3700
<http://www.concrete.org>
2. ASTM International
100 Barr Harbor Drive, PO BOX C700,
West Conshohocken, PA, 19428-2959
1-877-909-ASTM
<http://www.astm.org/>
3. American Water Works Association (AWWA)
6666 W. Quincy Ave.,
Denver, CO, 80235
1-800-926-7337
<http://www.awwa.org/>
4. American Association of State Highway and Transportation Officials (AASHTO)
444 N Capitol St. NW – Suite 249,
Washington, DC, 20001
1-202-624-5800
<http://transportation.org/>
5. Indiana Department of Transportation (INDOT)
Fort Wayne District
5333 Hatfield Road,
Fort Wayne, IN, 46808
1-866-227-3555 (24hour dispatch)
<http://www.in.gov/indot/>

6. Indiana Department of Environmental Management (IDEM)
Indianapolis Central Office
Indiana Government Center North
100 N. Senate Ave.
Indianapolis, IN 46204
1-317-232-8603
<http://www.in.gov/idem/>

MA3.03 Quality

Material requirements listed throughout this Book establish quality. The quality of all materials, the process of manufacturing, and the finished products are subject to inspection by City Utilities. Quality inspections may be made at the place of manufacture, or at the project site, or at both places and the materials shall be subject to rejection at any time on account of failure to meet any of these material requirements. Minimum quality assurance and quality control (QA/QC) requirements are listed throughout this Book. For more stringent requirements the engineer is responsible for adding additional products and QA/QC requirements.

1. Quality Assurance

Quality assurances are procedures for guarding against defects and deficiencies before and during the execution of the Work.

- A. Qualifications

Qualifications specify requirements for, and qualifications of manufacturers, suppliers, fabricators, installers, applicators, erectors, testing agencies, and licensed professionals.

- B. Certifications

Certifications include statements describing certification of compliance with specified requirements.

- C. Preconstruction Testing

Test to be performed to qualify products prior to procurement and before submitting product data submittals. These test are usually on products or assemblies for which a contractor has been given some responsibility for design selection.

- D. Field or Site Samples

Field or site samples are usually used to state requirements for sample field applications of finishes, or other finish materials or coatings.

2. Quality Control

Quality controls are procedures for evaluating completed activities and elements the work.

A. Source Quality Control

Source quality controls are tests or inspections conducted off-site at the manufacturers or fabricators' location. This type of quality control is used for verifying the characteristics of products from manufacturers. Different forms of source quality control include tests, inspections, and manufacturers services.

B. Field or Site Quality Control

Field Quality Controls are tests and inspections for on-site activities and installed materials, manufactured units, equipment, components, and accessories. These are different and separate tests and inspections required for materials and products than those conducted prior to installation or application.

MA3.04 Material Markings

Each length of pipe, all associated appurtenances, and manufactured or precast structures (i.e. manholes, inlets, catch basins, etc.) shall be marked per the requirements of the appropriate standards referenced throughout this Book.

MA3.05 Material Submittals

1. Design Submittals

The extent of design submittals will be evaluated on a case-by-case basis. In general, City Utilities will not require design submittals for standard materials. When non-standard materials and products are proposed, a variance request shall be submitted. Refer to [Chapter GR3 – Variances](#) for the process.

2. Construction Submittals

During construction the Contractor is usually required by the Contract Documents to submit product data, shop drawings, samples, informational submittals, closeout submittals, and maintenance material submittals for the Engineer to review.

At a minimum, construction submittals shall include, comprehensive listing of all materials proposed to be furnished and installed and operations and maintenance manuals.

Based on the project, additional construction submittals may be required. The following are examples of as requested submittals:

- Layout, detail, and shop drawings to insure proper construction, assembly, and installation of the work specified.
 - Satisfactory written certification of compliance with the ASTM, AWWA, AASHTO, etc. Standards.
 - Material supplier information and information describing the method of manufacturing and the composition of the materials.
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- Catalog information and manufacturer brochures showing material specifics, and construction and installation detail.
 - Itemized listing of installation procedures.
 - Results from required quality control test results.
 - Required calculations (i.e. structural).
 - Detail descriptions for future repair, maintenance, connection, etc.
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MA3.06 Pilot Projects

City Utilities may choose to utilize alternative products in pilot projects to determine product performance and application. Potential pilot projects will be derived from materials submitted for approval under the requirements of [Chapter GR3 - Variances](#).