



Standard Specification for Precast Concrete Water and Wastewater Structures¹

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This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers the recommended design requirements and manufacturing practices for monolithic or sectional precast concrete water and wastewater structures with the exception of concrete pipe, box culverts, utility structures, septic tanks, grease interceptor tanks, and items included under the scope of Specification C478.

NOTE 1—Water and wastewater structures are defined as solar heating reservoirs, cisterns, holding tanks, leaching tanks, extended aeration tanks, wet wells, pumping stations, distribution boxes, oil-water separators, treatment plants, manure pits, catch basins, drop inlets, and similar structures.

NOTE 2—Installation and sealant requirements should receive special consideration due to special features of the application.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:²

- A184/A184M Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
- A416/A416M Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete
- A421/A421M Specification for Stress-Relieved Steel Wire for Prestressed Concrete
- A615/A615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
- A706/A706M Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement
- A1064 Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
- C33 Specification for Concrete Aggregates

¹ This specification is under the jurisdiction of ASTM Committee C27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.30 on Water and Wastewater Containers.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

C39/C39M Test Method for Compressive Strength of Cylindrical Concrete Specimens

C94/C94M Specification for Ready-Mixed Concrete

C125 Terminology Relating to Concrete and Concrete Aggregates

C150 Specification for Portland Cement

C173 Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method

C231 Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

C260 Specification for Air-Entraining Admixtures for Concrete

C330 Specification for Lightweight Aggregates for Structural Concrete

C478 Specification for Circular Precast Reinforced Concrete Manhole Sections

C494/C494M Specification for Chemical Admixtures for Concrete

C595 Specification for Blended Hydraulic Cements

C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete

C685/C685M Specification for Concrete Made by Volumetric Batching and Continuous Mixing

C890 Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures

C990 Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants

C1157 Performance Specification for Hydraulic Cement

2.2 American Concrete Institute Standard:

ACI 318 Building Code Requirements for Reinforced Concrete³

2.3 Federal Specification:

SS-S-210A Sealing Compound, Preformed Plastic, for Expansion Joints and Pipe Joints⁴

³ Available from American Concrete Institute (ACI), P.O. Box 9094, Farmington Hills, MI 48333-9094, <http://www.aci-int.org>.

⁴ Available from Standardization Documents, Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094. Attn: NPODS.