



Designation: C 655 – 00

Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe¹

This standard is issued under the fixed designation C 655; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

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

1. Scope

1.1 This specification covers reinforced concrete pipe designed for specific D-loads and intended to be used for the conveyance of sewage, industrial wastes, and storm water and for the construction of culverts.

1.2 A complete metric companion to Specification C 655 has been developed—Specification C 655M; therefore, no metric equivalents are presented in this specification.

NOTE 1—Experience has shown that the successful performance of this product depends upon the proper selection of the pipe strength, the type of bedding and backfill, the care that the installation conforms to the construction specifications, and provision for adequate inspection at the construction site. This specification does not include requirements for bedding, backfill, the relationship between field load conditions and the strength designation of pipe, or durability under unusual environmental conditions. These requirements should be included in the project specification.

2. Referenced Documents

2.1 ASTM Standards:

- A 82 Specification for Steel Wire, Plain, for Concrete Reinforcement²
- A 185 Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement²
- A 496 Specification for Steel Wire, Deformed, for Concrete Reinforcement²
- A 497 Specification for Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement²
- A 615/A 615M Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement²
- C 31 Practice for Making and Curing Concrete Test Specimens in the Field³
- C 33 Specification for Concrete Aggregates³
- C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens³

¹ This specification is under the jurisdiction of ASTM Committee C13 on Concrete Pipe and is the direct responsibility of Subcommittee C13.07 on Acceptance Specifications and Precast Concrete Box Sections.

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² Annual Book of ASTM Standards, Vol 01.04.

³ Annual Book of ASTM Standards, Vol 04.02.

- C 42 Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete³
- C 150 Specification for Portland Cement⁴
- C 497 Test Methods for Concrete Pipe, Manhole Sections, or Tile⁵
- C 595 Specification for Blended Hydraulic Cements⁴
- C 618 Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete³
- C 822 Terminology Relating to Concrete Pipe and Related Products⁵
- C 1116 Specification for Fiber-Reinforced Concrete and Shotcrete³
- E 105 Practice for Probability Sampling of Materials⁶

3. Terminology

3.1 *Definitions*—For definitions of terms relating to concrete pipe, see Terminology C 822.

4. Basis of Acceptance

4.1 The acceptability of the pipe design shall be determined in accordance with Section 9. After the pipe design has been accepted, or if the pipe design has been accepted previously in accordance with Section 9, the owner may select and have applied the basis of acceptance described in either 4.1.1 or 4.1.2. Unless designated by the owner at the time of, or before placing an order, either basis of acceptance shall be permitted.

4.1.1 *Acceptance on the Basis of Pipe Load and Material Tests and Inspection of Manufactured Pipe for Defects*—Determine in accordance with Sections 5, 6, 8, and 10.

NOTE 2—It is necessary that samples be selected at random. For guidance see Practice E 105.

4.1.2 *Acceptance on the Basis of Concrete Compression and Materials Tests and Inspection of Manufactured Pipe for Defects*—Determine in accordance with Sections 5, 6, 8 and 11.

4.2 *Age for Acceptance*—Pipe shall be considered ready for acceptance when they conform to the requirements.

⁴ Annual Book of ASTM Standards, Vol 04.01.

⁵ Annual Book of ASTM Standards, Vol 04.05.

⁶ Annual Book of ASTM Standards, Vol 14.02.