



Standard Practice for Installing Factory-Made Corrugated Steel Pipe for Sewers and Other Applications¹

This standard is issued under the fixed designation A 798/A 798M; 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 practice covers procedures, soils, and soil placement for the proper installation of corrugated steel pipe and pipe-arches produced to Specification A 760/A 760M or A 762/A 762M, in either trench or embankment installations. A typical trench installation and a typical embankment (projection) installation are shown in Figs. 1 and 2, respectively. The pipes described in this practice are manufactured in a factory and furnished to the job in lengths ordinarily from 10 to 30 ft [3 to 9 m], with 20 ft [6 m] being common, for field joining. This practice applies to structures designed in accordance with Practice A 796/A 796M.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.3 The values stated in either inch-pound units or SI units shall be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system must be used independently of the other, without combining values in any way. SI units are shown in brackets in the text for clarity, but they are the applicable values when the installation is to be performed using SI units.

2. Referenced Documents

2.1 ASTM Standards:

- A 760/A760M Specification for Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains²
- A 762/A762M Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains²
- A 796/A796M Practice for Structural Design of Corrugated Steel Pipe, Pipe-Arches, and Arches for Storm and Sanitary Sewers and Other Buried Applications²
- A 902 Terminology Relating to Metallic Coated Steel Products²

¹ This practice is under the jurisdiction of ASTM Committee A05 on Metallic Coated Iron and Steel Products and is the direct responsibility of Subcommittee A05.17 on Corrugated Steel Pipe Specifications.

Current edition approved April 10, 2001. Published June 2001. Originally published as A 798 – 82. Last previous edition A 798/A 798M–97a.

² *Annual Book of ASTM Standards*, Vol 01.06.

- D 698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ [600 kN-m/m³])³
- D 1556 Test Method for Density of Soil in Place by the Sand-Cone Method³
- D 2167 Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method³
- D 2487 Classification of Soils for Engineering Purposes (Unified Soil Classification System)³
- D 2922 Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)³
- D 2937 Test Method for Density of Soil in Place by the Drive-Cylinder Method³

3. Terminology

3.1 *Definitions*—For definitions of general terms used in this practice, see Terminology A 902.

3.2 Definitions of Terms Specific to This Standard:

- 3.2.1 *bedding*—the earth or other material on which a pipe is supported.
- 3.2.2 *haunch*—the portion of the pipe cross section between the maximum horizontal dimension and the top of the bedding.
- 3.2.3 *invert*—the lowest point on the pipe cross section; also, the bottom portion of a pipe.
- 3.2.4 *pipe*—a conduit having full circular shape; also, in a general context, all structure shapes covered by this practice.
- 3.2.5 *pipe-arch*—an arch shape with an approximate semi-circular crown, small-radius corners, and large-radius invert.

4. Significance and Use

4.1 Corrugated steel pipe functions structurally as a flexible ring which is supported by and interacts with the compacted surrounding soil. The soil constructed around the pipe is thus an integral part of the structural “system.” It is therefore important to ensure that the soil structure or backfill is made up of acceptable material and well-constructed. Field verification of soil structure acceptability using Test Methods D 1556, D 2167, D 2922, or D 2937, as applicable, and comparing the results with Test Method D 698 in accordance with the specifications for each project is the most reliable basis for installation of an acceptable structure. The required density and

³ *Annual Book of ASTM Standards*, Vol 04.08.