

SECTION 1037 -- REINFORCED CONCRETE PIPE, MANHOLE RISERS, AND FLARED-END SECTIONS

1037.01 -- Description

This *Specification* provides NDR criteria for Reinforced Concrete Pipe (Round, Elliptical, Pipe-Arch), Reinforced Concrete Manhole Risers, and Concrete Flared-End Sections.

1037.02 -- Material Characteristics

1. Each flared-end or pipe section shall have all AASHTO required markings indented, scribed, or marked with permanent water-proof marking paint on the inside top (lift hole side) of each section at the time of manufacture. Furthermore, each section shall also have as a minimum requirement, the class and date of manufacture scribed or indent printed on the outside of the pipe.

2. Reinforced concrete pipe shall be the class as permitted by the NDOR plans and Specifications.

3. a. Round reinforced concrete pipe shall conform to the requirements of AASHTO M 170 with the exception of the minimum circumferential reinforcing (in²/ft (mm²/m) of pipe wall) for 15, 21 and 24 inch (380, 460, 530, 600 mm) Class III pipe, as shown below.

b. AASHTO M 170 Specifications are modified as follows:

c. Only single inner cage, circular reinforcing is allowed for Class III, 15, 18, 21, and 24 inch (380, 460, 530, 600) round RCP as shown:

Table 1037.01

Pipe Size (in) [mm]	Class	Minimum Circumferential Reinforcing (in ² /ft of Pipe Wall) (cm ² /m)
15 [380]	III	0.08 (1.7)
18 [460]	III	0.10 (2.1)
21 [530]	III	0.12 (2.5)
24 [600]	III	0.14 (3.0)

4. Reinforced concrete arch pipe shall conform to the requirements of AASHTO M 206.

5. Reinforced concrete elliptical pipe shall conform to the requirements of AASHTO M 207.

6. Precast reinforced concrete manhole risers, steps, and tops shall conform to the requirements of AASHTO M 199.

7. Concrete flared-end sections shall be of the design shown in the plans and in conformance with the applicable requirements of AASHTO M 170, Class II pipe, AASHTO M 206, Class A-II pipe, or AASHTO M 207, Class HE-II pipe for the diameter of pipe on which it is to be installed.

1037.03 -- Acceptance Requirements

Reinforced concrete pipe, manhole risers, and flared-end sections will be accepted based on the requirements of this Section and sampling and testing requirements in accordance with the *NDR Materials Sampling Guide*.