
Instructions for use Construction Specification 71—Water Control Gates

1. Applicability

Construction Specification 71 is applicable to the installation of gates for the purpose of water control, including slide gates, flap gates, and radial gates.

2. Material specifications

Material Specifications 571, 572, and 573 complement Construction Specification 71. Table 71-1 is a guide to selection of metal water control gates. When fabricated wooden gates are required for special applications, a material specification tailored to the specific job generally is more appropriate.

3. Included items

Items to be included in contract specifications and drawings follow:

- a. Plans, elevations, and sections showing location of gates and type and size of openings.
- b. Types of gates and applicable material specifications.
- c. Class of gate (seating and unseating heads expressed as a numerical symbol). Example: Class 40-10 denotes a seating head of 40 feet and an unseating head of 10 feet.
- d. Type of frame (flat, spigot, flange, flange with spigot) and details of the method of attaching the gate to the structure or pipe. Include thimble details, when required, together with designation of type of thimble (E, F, C, L, flange and bell, or flange and flare).
- e. Special gate requirements (self-contained, nonrising stem, flush-bottom opening); include material requirements for fabricated metal gates if other than steel is required.

- f. Type and capacity of gate stems, hoists, lifts, stem guides, stem housings, couplings, sleeves, and other appurtenances.
- g. Paint systems to be used in shop and field painting. (Refer to Construction Specification 82, Painting Metalwork.)
- h. Special gate operating requirements, particularly if the gate is intended to operate in other than the fully open or fully closed position. Example: Gate will be required to operate in a partly open position under a full head.

4. Methods

No alternative methods are included.

5. Items of work and construction details

Starting at the top of page 71-3, prepare and outline job specific "Items of Work and Construction Details" (IWCD) in accordance with these instructions. For ease of utilization, the use of recyclable color paper for the IWCD should be considered.

Table 71-1 Guide to selection of metal water control gates

Type of gate	Application	Frequency of use	----- Types of gates satisfactory for exposure condition -----		
			fresh water or slight pollution	moderate pollution (domestic and agricultural sewage, industrial waste)	extreme pollution, (sea water, brackish water)
Slide	Drainage gates	Frequent	MLS-1&2, MMS-1		
	Canal headgates	Infrequent	MMS-1, MHS-1	MHS-2	MHS-3
	Sediment pool drainage gate	Infrequent	MMS-2, MHS-1	MHS-2	MHS-3
	Reservoir water supply	Frequent	MMS-2, MHS-1	MHS-2	MHS-3
	Intake gates	Infrequent	MHS-1, MHS-2	MHS-3	MHS-3
Flap	Accessible gravity outlets	MMF-1, MLF-1	MHF-2	MHF-3	
	Inaccessible gravity outlets	MHF-1, MMF-1	MHF-2	MHF-3	
	Pump outlets, not subject to slamming	MHF-1, MMF-1	MHF-2	MHF-3	
	Pump outlets, subject to slamming	MHF-1R	MHF-2R	MHF-3R	