

ITEM 11615.6020 M - QUICK COUPLING VALVE WITH CHAMBER

DESCRIPTION:

Under this item, the Contractor shall furnish all labor, materials and equipment necessary or required to install a quick coupling valve and to construct a cast stone chamber including all incidentals, all plumbing work and connection to water service in accordance with the plans, specifications and directions of the Engineer.

MATERIALS:

Cast Stone: Manufactured by an approved manufacturer having facilities for furnishing the quality of cast stone required.

All cast stone shall be made of the color and finish to match the approved sample. Cast stone shall have a honed finish. The stone shall be well cured, shall be dense and shall have good edges. The cast stone shall be made of a mixture of one (1) part of white air entraining Portland cement and one (1) part of gray air entraining Portland cement and crushed stone aggregate mixed in the proportions to obtain a mixture of maximum density and a finished product of a color to be approved by the Engineer. The cement and aggregate shall be thoroughly mixed in a proportion of one (1) part Portland cement to not over six (6) or less than four (4) parts of aggregate.

The aggregate shall be made by crushing selected pieces of stone to insure uniform color and texture and shall be screened into at least three sizes the largest of which shall not exceed that which will pass a ring 6.35 mm in diameter; and there shall be at least fifty (50) percent of such size of aggregate that will not pass a 3.18 mm ring. The various sizes shall be used in proportions to give maximum density, all measured by weight.

Cast stone shall have a compressive strength of not less than 207 MPa tested as cubes 50.80 mm x 50.80 mm x 50.80 mm at an age of not more than twenty-eight (28) days and shall have an absorption not to exceed seven (7) percent of the dry weight after being dried to constant weight at 65°C.

No chipped, broken or checked stone will be accepted. Checked stones are those showing fine hair cracks or checks on the surface.

Before starting work, the Contractor shall submit, for approval of the Engineer, finished samples of the cast stone the Contractor proposes to use to show the extreme range in color, finish, texture, and quality of the stone. Samples shall be marked with the name of the material, contract number, grade, finish and producer's name. All cast stone used in the work shall be equal to the approved sample.

Valve: Quick coupling valve shall be 25 mm diameter, Skinner Mfg. Co. No. 31, Buckner Mfg. Co. No. 14 LT, or approved equal.

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CONSTRUCTION DETAILS:

The Contractor shall furnish and install all cement lined pipe and fittings, valves, chambers and other sundries to complete the plumbing for the quick coupling. The Contractor shall connect the water lines as shown on the plan for a complete operating unit to the satisfaction of the Engineer.

The chamber shall be constructed of reinforced cast stone and set in place on the bench base as shown on the plans.

The No. 3 reinforcing bars shall protrude 76 mm beyond the bottom of the chamber. When the chamber is set in place, same shall be grouted to 25 mm holes which shall be provided in the bench base. Grout to base shall be 1:2 cement mortar.

METHOD OF MEASUREMENT:

The quantity to be paid for under this item will be the number of chambers and quick coupling valves installed in accordance with the plans, the specifications and the directions of the Engineer.

BASIS OF PAYMENT:

The unit price bid for quick coupling valves with chambers shall include the cost of all labor, materials, equipment and incidentals including excavation, backfill, cement, cast stone, reinforcement and all plumbing work and connections to water service within 1.5 meters from the face of the chamber all in accordance with the plans, the specifications and as directed by the Engineer.