

SECTION 03450

PRECAST CONCRETE MANHOLE

PART 1: GENERAL

1.01 SCOPE

Furnish all labor, materials, tools and equipment necessary to do all work required to install manholes as indicated on the Drawings and as specified in this Specification Section.

1.02 SUBMITTALS

Submit shop drawings or manufacturer's literature to the Engineer for approval.

PART 2: PRODUCTS

2.01 MANHOLE SECTIONS

Manhole riser sections shall be designed, manufactured, tested, finished and marked in accordance with the Drawings and ASTM C478, "Precast Reinforced Concrete Manhole Sections".

2.02 BRICK

Brick used to bring manhole to grade shall comply with ASTM C62, Grade SW.

2.03 LADDER

For heavy duty traffic manholes specified in section 2.04, ladder rungs shall be provided in accordance with OSHA regulations. Ladder up shall be installed to meet OSHA requirements. Rungs shall have a minimum diameter of 1-inch and 10-inch clear tread width and be of the drop front design. Rungs shall be polypropylene coated ½ inch grade 60 deformed rebar by Lane International Corporation, M.A. Industries, or approve equal.

2.04 FRAME AND COVER

For areas of heavy duty traffic or as noted on plans (flush mount), manhole frame with vented lid shall be Neenah Foundry Company's R-1752 Series Heavy Duty (36" round). For non traffic areas with limited traffic (flush mount) Bilco's J-4H2O Series Floor, Vault and Sidewalk Door shall be used (36"square). For areas of non traffic (mounted 8-12" above the surrounding surface). Bilco's J-4H2O Series Floor, Vault and Sidewalk Door shall be used (36" square).

PART 3: EXECUTION

3.01 HANDLING

Lift and move all precast manhole components using suitable lifting slings and plugs that will not damage the precast manhole lip.

Thoroughly repair all damage to precast sections in the presence of the Engineer. Repair and patch minor breaks by chipping and scarifying the defective area before applying grout. All sufficient curing time before the precast sections are put together. Form and key concrete cast-in-place bases specially to accommodate the bottom precast section.

3.02 INSTALLATION

Unless otherwise noted in the drawings, rest and support manhole bases uniformly on a 6-inch mat of compacted crushed stone or gravel placed over a base of sound, level, undisturbed earth.

Before placing concrete base, set the downstream and upstream pipes to proper grade so the pipe ends will be flush with the inside of the manhole.

Set the pipes securely in the opening of the precast sections of manholes and grout at the correct line and grade. There shall be at least a one-half inch clearance between the outside of the pipe and the manhole opening to insure proper grouting. Clean the pipe and base thoroughly before the grout is applied.

Bring the top of all precast manholes to proper grade for receiving manhole frames. If proposed grade is to be flush to existing grade, the top of the manhole ring and cover shall be within 1" of surrounding grade. If proposed grade is to be above existing grade, the top of the manhole ring and cover shall be between 8-12 inches of surrounding grade unless otherwise noted on the plans.

END OF SECTION