

Section 02632

CAST-IN-PLACE INLETS, HEADWALLS, AND WINGWALLS

PART 1 GENERAL

1.01 SUMMARY

- A. Cast-in-place inlets for storm or sanitary sewers, including cast iron frame and plate or grate.
- B. Cast-in-place headwalls including wingwalls for storm sewers.
- C. Cast-in-place junction box with lid or grate top.

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices

- 1. Payment for inlets is on unit price basis for each inlet installed.
- 2. Payment for headwalls including wingwalls is on unit price basis for each headwall including wingwall installed.
- 3. Payment for junction box with lid or grate top is on unit price basis for each junction box installed.
- 4. Payment for inlets and for culvert headwalls including wingwalls and junction boxes includes connection of lines and furnishing and installing frames, grates, rings, and covers.
- 5. Refer to Section 01270 – “Measurement and Payment” for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this section is included in total Stipulated Price.

1.03 REFERENCES (NOT USED)

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 – “Submittal Procedures”.
- B. Submit shop drawings for approval of design and construction details for cast-in-place units which differ from units shown on Plans.
- C. Submit manufacturers' data and details for frames, grates, rings, and covers.

1.05 RELATED REQUIREMENTS

- A. Section 01270 – “Measurement and Payment”
- B. Section 01330 – “Submittal Procedures”
- C. Section 02084 – “Frames, Grates, Rings and Covers”
- D. Section 02317 – “Excavation and Backfill for Utilities”
- E. Section 03315 – “Concrete for Utility Construction”
- F. Section 04061 – “Mortar”
- G. Section 04210 – “Brick Masonry for Utility Construction”

1.05 – 1.13 NOT USED

PART 2 PRODUCTS

2.01 MANUFACTURER(S) (NOT USED)

2.02 MATERIALS AND/OR EQUIPMENT

- A. Concrete: Class A concrete with minimum compressive strength of 4000 psi conforming to requirements of Section 03315 – “Concrete for Utility Construction”, unless otherwise indicated on Drawings.
- B. Reinforcing Steel: Conform to requirements of Section 03315 – “Concrete for Utility Construction”.
- C. Concrete Bricks - Conform to requirements of Section 04210 – “Brick Masonry for Utility Construction”. Use manhole bricks.
- D. Mortar and Hydraulic Cement - Conform to requirements of Section 04061 – “Mortar”.
- E. Miscellaneous metals: Cast-iron frames, grates, rings, and covers conforming to requirements of Section 02084 – “Frames, Grates, Rings and Covers”.

2.03 – 2.04 NOT USED

PART 3 EXECUTION

3.01 GENERAL / MANUFACTURER(S) (NOT USED)

3.02 PREPARATION

- A. Verify lines and grades are correct.

- B. Verify compacted subgrade will support loads imposed by inlets.

3.03 ERECTION/INSTALLATION APPLICATION AND/OR CONSTRUCTION

- A. Construct units complete in place to dimensions, lines and grades as shown on Drawings.
- B. Excavate in accordance with requirements of Section 02317 – “Excavation and Backfill for Utilities”.
- C. Construct box section of inlet of Class A concrete or brick.
- D. Plaster brick inlets with ½ inch mortar on inside. Use walls for brick inlets minimum of 8 inches thick. Conform to the requirements of Section 04210 – “Brick Masonry for Utility Construction”.
- E. Forms required for both outside and inside faces of concrete inlet walls, however, when nature of material excavated for inlet can be hand trimmed to smooth vertical face, outside forms may be omitted with approval of Project Manager.
- F. Place reinforcing steel to conform to details shown on Drawings. Provide positive means for holding steel cages in place during concrete placement. Welding of reinforcing steel is not permitted unless noted on Drawings. Maximum variation in reinforcement position is plus or minus 10 percent of wall thickness or plus or minus ½ inch, whichever is less. Regardless of variation, maintain minimum cover of concrete over reinforcement as shown on Drawings.
- G. Chamfer exposed edges unless otherwise indicated on Drawings.
- H. Finishes
 - 1. Cut off inlet leads neatly at inside face of inlet wall. Point up with mortar.
 - 2. When box section of inlet complete, shape floor of inlet with mortar to conform to detailed Plans.
 - 3. Finish concrete surfaces in accordance with requirements of Section 03315 – “Concrete for Utility Construction”.
- I. Connections
 - 1. Connect inlet leads to inlets.
 - 2. Seal leads inside and outside with hydraulic cement.

J. Backfill

1. Backfill area of excavation surrounding each completed inlet according to requirements of Section 02317 – “Excavation and Backfill for Utilities”.

3.04 REPAIR/RESTORATION (NOT USED)

3.05 FIELD QUALITY CONTROL

Verify that inlets are free of leaks. Repair leaks in manner approved by Project Manager.

3.06 – 3.10 NOT USED

END OF SECTION