

STANDARD SPECIFICATIONS

SECTION 03462

PRECAST CONCRETE VAULTS

PART 1 - GENERAL

A. Description

This section includes the materials, manufacture, and installation of precast concrete vaults.

B. Related Work Specified Elsewhere

All related work specified elsewhere, or in other codes or standards, will be as last revised, unless a specific date of issuance is called out in opposition to later revision date(s).

Other sections of the technical specifications, not referenced below, shall also apply to the extent required for proper performance of this work.

- 1. Structure Earthwork: 02200
- 2. Concrete: 03300

C. Approved Manufacturers

1. Precast Vaults

- Utility Vault
- J & R Products
- Jensen Precast

2. Meter Boxes

- Eisel Enterprises, Inc.
- J & R Products

3. Joint Sealing Compound

- Quikseal manufactured by Utility Vault

4. Waterproofing

- Grace Dehydratine 4

D. Frames and Covers

All precast sections shall be provided with fabricated aluminum or steel frames and covers as specified or shown on the drawings and shall be built up so that the cover is flush with the surrounding surface unless otherwise specified on the drawings or by the District representative in the field.

E. Meter Boxes

1. Precast concrete meter boxes for meters 2-inch and smaller shall be purchased from District and installed by the contractor unless noted otherwise.
2. Sizes shall be as specified on the standard drawings for the various sizes and types of services.

F. Purchase of Vaults

The contractor shall purchase precast concrete vaults for meter installations 3-inch and larger and other applications.

PART 2 - MATERIALS

A. Precast Concrete Vault

1. Precast concrete vaults and covers shall be manufactured in a plant especially designed for that purpose and shall conform to the shapes and dimensions indicated on the plans.
2. Design loads shall consist of dead load, live load, impact, and in addition, loads due to water table and any other loads which may be imposed upon the structure. Live loads shall be for H-20 per AASHTO standard specifications for highway bridges. Design wheel load shall be 16 kips. The live load shall be that which produces the maximum shears and bending moments in the structure.
3. Concrete shall be Class A conforming to Section 03300.

B. Meter Box Covers

1. All meter box covers shall be furnished with rectangular reading lids.
2. Concrete meter box covers shall be installed only in non-traffic locations.

C. Vault Frames and Covers

1. Vault frames and covers shall be fabricated aluminum.
2. Covers shall be fabricated with supports to resist deflection.
3. All covers shall be hinged. Covers shall have hydraulic assists.
4. All covers shall be equipped with a hold-open mechanism.
5. All covers shall be equipped with a flush locking devices.
6. All vaults that may be subject to equipment or vehicle loading shall have traffic covers. Vaults in all other locations shall have parkway covers unless specified otherwise by the District representative.

D. Joint Sealing Compound

The joint sealing compound shall be a permanently flexible plastic material complying in every detail to Federal Specification SS S-00210 (GSA-FSS) dated July 26, 1965. "Quickseal", or approved equal.

E. Waterproofing

Waterproofing shall be formulated to comply with Federal Specification SS-A-701.

PART 3 - EXECUTION

A. Earthwork

1. Excavation and backfill for precast concrete vaults shall be in accordance with Section 02200 and the requirements herein.
2. The contractor shall prepare an excavation large enough to accommodate the structure and permit grouting of openings and backfilling operations.
3. The bottom of the structure shall be placed on 12 inches of compacted, crushed rock sub-base, graded level and to the proper elevation as shown on the plans.

B. Installation

1. Openings or "knockouts" in precast concrete vaults shall be located as shown on the drawings and shall be sized sufficiently to permit passage of the largest dimension of pipe and/or coupling flange. Upon completion of installation, all voids or openings in the vault walls around pipes shall be filled with 3,000-psi concrete or mortar, using an approved epoxy for bonding concrete surfaces.
2. After the structure and all appurtenances are in place and approved, backfill shall be placed to the original ground line or to the limits designated on the plans.
3. All joints between precast concrete vault sections shall be made watertight using preformed mastic material. The sealing compound shall be installed according to the manufacturer's recommendations to provide a watertight joint which remains impermeable throughout the design life of the structure. All joints shall be filled with dry-pack non-shrink grout.
4. Frames and covers shall be built up so that the cover is flush with the surrounding surface unless otherwise specified on the drawings or by the District representative in the field. The contractor is responsible for placing the cover at the proper elevation where paving is to be installed and shall make all necessary adjustments so that the cover meets these requirements.
5. Waterproofing shall be applied to the exterior walls of all buried vaults in accordance with the manufacturer's instructions. Protection shall be placed over the waterproofing to prevent damage.

C. Meter Boxes

1. Boxes shall be set true to line and to the grade of the top of the curb, sidewalk, or surrounding graded area.
2. Meter boxes are not to be set until fine grading for landscape grading has been completed by the developer.
3. Retaining walls may be required around meter boxes installed on slopes as determined by the District representative.

END OF SECTION