



FLORIDA DEPARTMENT OF TRANSPORTATION
REPOSED SPECIFICATIONS
SECTION 410
PRECAST CONCRETE BOX CULVERTS

410-1 Entrance

The work specified in this Section consists of the construction of precast concrete box culverts. The work shall be done in accordance with these specifications and in conformity with the laws, general orders, rules, and other orders in the state. Details of special work, modifications and required devices shall be submitted for approval to the Engineer of Drainage prior to manufacturing.

410-2 Materials

Precast concrete box culverts shall conform to the material and manufacturer requirements as outlined by AASHTO-M-297-771 subject to the exceptions contained herein.

410-3 Layout, Foundation, Erection and Backfill

The method of construction of trench and foundation and for laying and backfilling shall conform to the requirements specified in Section 420, with the following additional requirements: The bedding shall consist of a minimum 4" depth of coarse concrete sand or other suitable granular material placed below the culvert to a minimum width of one foot outside the exterior walls of the culvert between grades from set out (1) four inches each exterior wall of the box culvert. This material shall be uniformly compacted and then graded off along the line. The form shall be removed after placement of the precast box culvert sections. When required by the plans, special bedding shall be provided. Holes provided for lifting or jacking material shall be sealed by plugging with a non-shrink mortar in accordance with Section 420-11.2, and properly cured so as to insure a sound and waterproof plug.

410-4 Joints

Joints for precast concrete box culverts shall be made with a 1/2" rubber lined gasketed plastic gasket material or as detailed in the plans. Culverts to be laid with joints made from preformed plastic gasket material shall be subject to the requirements as outlined in subarticle 420-2.2, with the following additional requirements: The culvert producer shall furnish to the Engineer a written recommendation of the size (temperature) level of gasket material which will create a watertight seal. This recommendation shall be the minimum quantity of gasket material permitted. In addition, the outside of each joint shall be completely impregnated with a sealer or non-shrink filter fabric. The fabric shall be a minimum of two feet in width and secured tightly against the box culvert to form by metal strapping. When specified in the plans, the joint shall be secured by a suitable device capable of holding the sections in line and grade as well as fully home. These devices shall be removed after the culvert backfill has been placed and compacted to secure the sections.

PRECAST CONCRETE BOX CULVERT shall be 10'-0" wide x 8'-0" high meeting the requirements of ASTM C1377-77 "Standard Specification for Precast Reinforced Concrete Box Sections for Culverts, Storm Drainage, and Sewers". The culvert shall meet the requirements of Table 1 of the said standard for B20 concrete, and the cover shown by the plans. The installation shall be in accordance with Florida DOT proposed specifications Section 410 with the following modifications: (1) Field joints shall be "BAR JOINT" bituminous gasket material; (2) Sections shall be tied with one 1" steel bar each side; (3) Filter fabric wrapping for all joints shall be "Polyfester 1" or Nital 700". The culvert shall be as manufactured by SOUTHERN CULVERT, Pinellas Park, Florida or approved equal. The manufacturer shall furnish the Engineer with shop drawings prior to installation including detailing of all special openings or extended exposed reinforcement required by the plans.

WINGWALLS

CONCRETE SHALL BE CLASS A (3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS)

SEE THE SPECIFICATIONS FOR THESE AND ADDITIONAL REQUIREMENTS.

