

BOX CULVERTS

Application

Precast box sections are recommended for installations where circular concrete pipe cannot provide adequate flow capacity, and as a superior substitute for cast-in-place box culverts, long span metal arches, short bridges, and multi-barrel circular culverts or drains.

Precast box sections can be used for the following:

- highway culverts
- railroad culverts
- short span highway bridges
- storm drains
- livestock, pedestrian or golf cart undercrossings
- utility tunnels
- underground stormwater retention structures
- groundwater recharge systems
- to replace existing open channels or ditches, and enable land to be used productively
- jacked or tunneled installations.



Sizes

Precast box sections are normally available in spans of 6 feet through 12 feet, and rises of 3 through 12 feet.

Joints

Precast box sections are produced with tongue and groove joints for packing with mastic joint compound, pre-formed mastic or butyl gaskets, or mortar.

Linings/Coatings

A variety of linings and coatings is available where project conditions dictate their use.

Applicable Specifications

The following specifications apply to precast concrete box sections:

- ASTM C789 / AASHTO M259 - Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers
- ASTM C850 / AASHTO M273 - Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers with Less Than 2 Feet of Cover Subjected to Highway Loadings
- ASTM C1433 - Standard Specification for Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers (replaces ASTM C789 and C850)
- State Department of Transportation Specifications.

The Pacific Northwest Precast Concrete Association is comprised of regional companies and individuals engaged in the manufacture of precast concrete and related products. Our members are based in a three-state and Canadian province region encompassing Oregon, Washington, Idaho and British Columbia. PNPCCA exists to exchange industry knowledge and information, secure efficient cooperation between the concrete products industry and engineers, developers and governmental agencies, and to advocate and encourage constant improvements of practices for the purpose of developing high product quality.

Log on to our website at www.pnpcca.net and click on “Free Design Information” for tools and to register for receiving product and technical updates.

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