

## Precast Reinforced Concrete Box Culvert

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### Forterra Pipe and Precast

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| Cedar Hill TX    | ACPA certified  |
| Como MS          | ARCPA certified |
| Grand Prairie TX | ACPA certified  |
| West Memphis AR  | ARCPA certified |
| Oklahoma City OK | ARCPA certified |
| Prentiss MS      | ACPA certified  |

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### Rinker Materials - Louisiana

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| Alexandria LA | ACPA certified |
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### Scurlock Industries

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| Fayetteville AR | ARCPA certified |
| Jonesboro AR    | ARCPA certified |
| Springfield MO  | ACPA certified  |
| Miami OK        | ARCPA certified |

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The above manufacturers currently have on file a letter of agreement with the Arkansas Department of Transportation to furnish precast reinforced concrete box culverts in accordance with the ARDOT Standard Specifications and referenced AASHTO Specifications.

### Method of Documentation of Acceptance:

Precast reinforced concrete box culverts shall be accepted for use on Department projects based a Certificate of Delivery furnished by the manufacturer to the Resident Engineer. Each piece shall bear an Arkansas Concrete Pipe Association (ARCPA) certified seal (stamp), a National Precast Concrete Association (NPCA) certified seal or an American Concrete Pipe Association (ACPA) stamp, cast date, and manufacturer's identification. The project Engineer shall check the condition of the products delivered and also verify the products delivered.

### Method of Approval:

#### CERTIFICATION ACCEPTANCE PROCEDURE AGREEMENT FOR PRECAST REINFORCED CONCRETE BOX CULVERTS

Precast reinforced box culverts will be accepted by the Arkansas Department of Transportation based on the following requirements for certification and inspection:

- The manufacturing plant shall be certified for the specific products to be furnished under this agreement by the Arkansas Concrete Pipe Association (ARCPA) in accordance with the Reinforced Concrete Pipe (RCP) Plant Certification procedure, the National Precast Concrete Association (NPCA) Plant Certification Program or by the American Concrete Pipe Association's (ACPA) "Quality Cast" Plant Certification Program.
- The following will also apply for products containing iron or steel:  
All iron and steel material used on Department projects must be in compliance with the "Buy

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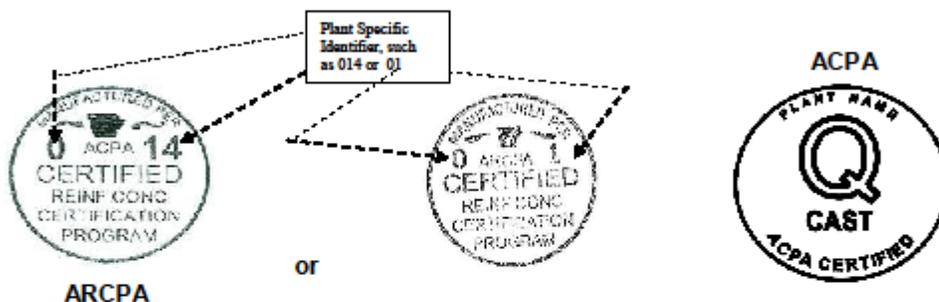
America" requirements and the Department's "Standard Specifications for Highway Construction", Subsection 106.01. This means all manufacturing processes of iron and steel in a product (i.e., smelting/remelting and any subsequent process which alters the steel material's physical form or shape or changes its chemical composition) must occur within the United States to be considered of domestic origin. This includes processes such as rolling, extruding, machining, bending, grinding, drilling and applying coatings. The use of pig iron or processed, pelletized and reduced iron ore manufactured outside of the United States is permitted in the domestic manufacturing process for steel and/or iron materials. All steel and iron mill test reports must include a certified statement that all manufacturing processes for the iron or steel product occurred in the United States. Each supplier/fabricator of an intermediate product will also certify that the product complies with the "Buy America" requirements.

- The manufacturer shall furnish a Certificate of Delivery for each Shipment, stating that the listed materials have been tested, inspected, approved and stamped in accordance with the Reinforced Concrete Pipe (RCP) Plant Certification procedure, the NPCA Plant Certification Program or the ACPA "Quality Cast" Plant Certification Program and that the products conform to ARDOT Specifications. The information on the Certificate of Delivery shall include the state job number (or purchase order number), consignee, destination, sizes, class, lengths, number of pieces and plant of origin. The Certificate of Delivery may be the proper certifying statement on Company letterhead or on shipping papers.
- One copy of the Certificate of Delivery and shipping papers shall be furnished to the Resident Engineer at the time of delivery.
- Product approval of precast concrete box culverts is determined by visual inspection and quality control tests conducted at a certified plant or as allowed by the Plant Certification procedures. These tests may include, but are not limited to, three edge bearing tests, absorption, compressive strength tests or other concrete quality control tests.
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- Precast reinforced box culverts are to be in accordance with Section 607 of the Standard Specifications, Design Drawings and referenced AASHTO Specifications. Design of the precast box culverts may also be according to the current BOXCAR design program or other design programs approved by the Department. Alternate designs must meet the current Edition of AASHTO Standard Specifications for Highway Bridges, with interims, and be certified and sealed by a Registered Professional Engineer. Wall thickness, haunch size, reinforcing steel area, and steel cover may be according to the approved design method; however, other criteria shall be according to ARDOT and referenced specifications. The manufacturer shall submit the design and reinforcing steel configuration to the Engineer for review and comment.
- Products in compliance with specifications shall be marked with a ARCPA certified seal (stamp), a NPCA certified seal or an ACPA stamp prior to shipment. Each piece shall bear the stamp, a cast date and the manufacturer's identification (name or logo). The manufacturer's identification shall be sufficient to clearly indicate the plant of origin.
- Only products specifically manufactured by and shipped by a certified plant can be furnished to an ARDOT project in accordance with this agreement. When products covered by this agreement are shipped to a certified intermediate party and then to a Contractor for a Department project, a copy of the certified manufacturer's Certificate of Delivery shall be furnished to the Resident Engineer.
- If the Department determines that products furnished under this agreement are not in compliance with the ARDOT and other referenced specifications, either by inspection upon delivery or by inspection at the plant, the specific, individual, non-compliant units may be rejected. The Arkansas Department of Transportation reserves the right to conduct a random plant inspection to determine a manufacturer's capability to produce a uniform product in compliance with referenced specifications or to determine the manufacturer's compliance with

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either the ARCPA Reinforced Concrete Pipe Plant Certification procedure, the NPCA Plant Certification Program or the ACPA Plant Certification Program.

Acceptance of precast reinforced concrete box culverts by this procedure is subject to withdrawal for failure to comply with the above requirements regardless of whether the plant is still considered certified by the ARCPA, NPCA or ACPA. Upon de-certification by the ARCPA, the NPCA, the ACPA, or the removal of the plant from the Department's QPL, the manufacturer shall immediately discontinue shipping these products to ARDOT projects under this agreement. Please acknowledge agreement to the above requirements by signing and returning a copy of the letter for our files.



Arkansas Concrete Pipe Association (formerly Concrete Pipe Association of Arkansas) uses three (3) different stamps for the plants certified under the certification program. The stamp will have ARCPA, ACPA, or CPAA on the stamp. As old stamps wear out, they would be replaced by stamps showing ARCPA.



The Q-Cast stamp signifies the plant has been certified by the American Concrete Pipe Association.