



Rev. 11-05-2020

ARKANSAS DEPARTMENT OF TRANSPORTATION  
BRIDGE DIVISION

**PERMITS FOR NEW UTILITIES ON OR ADJACENT TO BRIDGES**  
**GENERAL SUBMITTAL PROCEDURES FOR CONSULTANTS OR UTILITY COMPANIES**

- A. Requesting party contacts Right-of-Way/Utilities Section for a guide in preparing a proposal for attaching utilities to state-owned bridges. See attached “GENERAL GUIDELINES FOR NEW UTILITIES ON OR ADJACENT TO BRIDGES”. **Compliance with these guidelines will expedite processing the permit. Failure to provide adequate and necessary information can greatly delay Bridge Division’s review.**
- B. Requesting party contacts the District Permit Officer regarding how to prepare the Permit.
- C. Requesting party submits the permit application to the District Permit Officer for processing.
- D. District Permit Officer forwards application to Utilities Section for review and coordination.
- E. Utilities Section forwards details to Bridge Division for review and approval.
- F. Bridge Division returns approved details to Utilities Section for issuance of permit.
- G. **Bridge Division will only review details for state-owned bridges. City & County bridges and certain bridges on US Army Corps of Engineers Dams are examples of non-state ownership. In the case of non-ARDOT bridges, although the Department may issue a permit for the portion of work along a state highway, the requesting party must obtain separate permission from the bridge owner as well.**

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**GENERAL GUIDELINES FOR NEW UTILITIES ON OR ADJACENT TO BRIDGES**

1. Provide a locator map showing the County name, Route number, and feature(s) under the bridge (e.g., name of stream, railroad, or highway).
2. Indicate the type and location of utilities already attached to the bridge.
3. Show the location and spacing of the proposed attachment(s) to the existing bridge.
4. When possible, install the utility line(s) on the downstream side of a bridge over a waterway to minimize the likelihood of snagging drift.
5. The proposed utility shall not hang below the lowest element of the bridge superstructure (i.e., bottom flange of beam).
6. Placing utilities transporting fluid inside of box or tub girders will be prohibited.
7. Attachments to the top of deck or the parapet/rail/curb are not allowed. When possible, attach the utility to the bridge inspection walkway or the bottom of bridge deck. Attachments to the primary structural steel (e.g., beam flanges, web, stiffeners) shall be avoided or minimized.
8. Field welding to the existing bridge is not allowed.
9. Holes drilled in bridge concrete shall not cause damage to the primary reinforcing steel. Generally, holes should not be more than 2½" deep.
10. Provide 3" minimum distance from the edge of the drilled hole to the edge of concrete.
11. Provide technical information on the capacity of proposed concrete anchor inserts. The minimum distance between centers of adjacent fasteners embedded in concrete shall meet the requirements of the fastener manufacturer, but shall in no case be less than 3" center to center.  
  
Where post-installed adhesive anchors are deemed a necessity, they should be designed using ACI 318-14 or later editions for the given loading condition (vertical, horizontal, or overhead) and use only adhesive anchor systems qualified per ACI 355.4-11 or later editions for the same loading condition. Certification from an applicable certification program shall be provided for personnel installing the adhesive anchors. Refer to FHWA Technical Advisory T 5140.34 for additional information.
12. Steel embedded in the bridge concrete shall be stainless steel or galvanized steel.
13. Show and identify the type and location of planned expansion joints for the proposed utility. Provide the allowable movement rating for expansion devices.
14. Any longitudinal thrust transmitted by the utility (i.e., water hammer) must not be transmitted to the existing bridge. Provide details of any thrust blocks and joint restraints used.
15. Submit detailed engineering calculations showing the utility dead and live loads transmitted through the attachments to the bridge and, when requested, the structural adequacy of the

affected bridge elements to support their design loads, any load(s) added to the structure since its construction, and these additional loadings from the proposed utility.

16. Any directional boring shall be indicated and maintain a minimum sixty inches (60) of horizontal and vertical clear distance to any foundation element. Foundation elements shall be clearly shown on the details.
17. All open trenching shall be detailed in the submittal including but not limited to: depth, width, and clear distance to any foundation element. Foundation elements shall be clearly shown on the details.
18. Pressurized water and sanitary sewer line crossings adjacent to any foundation element shall be encased. The definition of “adjacent” will be determined on a case-by-case basis. When considered adjacent, encasement shall extend 30' in both directions beyond the footprint of the bridge.
19. Utility crossings under a bridge shall have a minimum depth of cover of thirty (30) inches measured vertically over the utility line, including any encasement. Additional cover may be required on a case-by-case basis depending on site conditions.