|  |  |  |
| --- | --- | --- |
| Form BR 105 R | Bridge No. |  |
| Rev 10/12 | Job No. |  |
|  | Replaces Bridge No. |  |

# **Missouri Department of Transportation**

## **Bridge Survey Report**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bridge over | |  | | | | | | | | | | | | Route | | |  | | |
| County |  | | | Sec. |  | Twp. |  | | Rg. | |  | ; |  | | miles \*\*NESW of | | | |  |
| \*On road from | | |  | | | | | to | |  | | | | | | at Sta. | |  | |
|  | | | **West or North of site** | | | | |  | | **East or South of site** | | | | | |  | |  | |
| *\*Give adjacent towns each way, not terminal points of route. \*\* Delete all but one of N-E-S-W or circle appropriate direction.* | | | | | | | | | | | | | | | | | | | |
| Surveyed by | |  | | | | | | | | | | | | Date | | |  | | |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EXISTING MoDOT BRIDGE AT OR NEAR PROPOSED SITE | | | | | | | | | |
| Beginning Station |  | | | | (ft) Ending Station | |  | | (ft) |
| Beginning Deck Elevation | |  | | | (ft) Ending Deck Elevation | | |  | (ft) |
| Does the bridge back up water during flood? | | | |  | |
| Does drift pass satisfactorily? | | |  | | |

|  |  |  |
| --- | --- | --- |
| HIGH WATER ELEVATIONS AT PROPOSED BRIDGE SITE If high water elevations are not available at proposed bridge site, give elevations where found and note location. | | |
|  | Extreme High Water (Give date of occurrence) | Ordinary High Water (Give dates available) |
| Elevations and dates of same |  |  |
| Location |  |  |
| Source of information |  |  |
| Head (or backwater from      ) |  |  |
| Frequency (give dates) |  |  |
| \*\*\* Character of drift |  |  |

*\*\*\*Light – passes 12 ft opening; Medium – passes 24 ft opening; Heavy – requires over 24 ft opening*

|  |
| --- |
| IMPROVEMENTS WITHIN SURVEY AREA OF PROPOSED BRIDGE (WITHIN 1 FOOT ABOVE EXTREME HIGH WATER ELEVATION) |
| Note the location and type of any improvements in the vicinity of the proposed bridge, including residences, businesses, other buildings, crop fields, etc. |
|  |

|  |  |  |
| --- | --- | --- |
| OTHER BRIDGES ACROSS SAME STREAM | | |
| This information required for bridges within 1000 ft of the proposed bridge except where this data for structures beyond this distance will obviously be of value. Include valley sections showing entire waterway for these bridges with survey. Sketches of structure not required. | | |
|  | No. 1 | No. 2 |
| Distance from proposed structure, upstream or down (ft) |  |  |
| Railroad or highway bridge. |  |  |
| Number and length of spans |  |  |
| Does the bridge back up water during floods? |  |  |

|  |
| --- |
| **Additional Remarks:** |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **DATA FOR PROPOSED BRIDGE** | | | | | | | | | | |  | | | | | | | | | | | Are the banks caving at the site? |  | Does the stream appear to be cutting or filling? | | | | | | |  | | Elevation of extreme low water |  | | (ft) During what months is stream dry? | | | | |  | | | Type of surface material of streambed (gravel, sand, silt, etc.) | | | | |  | | | | | |  | | | | | | |  | | | | Is there a dam having a definite spillway within a reasonable distance from the bridge site? | | | | | | | | |  | | Does the spillway carry practically all the floodwater? | | | |  | | If so, location with respect to crossing: | | | | |  | | | | | | | | | | |  | | | | | | | | | | | If crossing is over drainage ditch, provide the corporate name of drainage district: | | | | | | | | | | |  | | | | | | | | | | |

|  |
| --- |
| **PHOTOGRAPHS OF SITE CONDITIONS** |
|  |
| Provide photographs documenting the site characteristics. Photos should be taken in an overlapping manner to provide a 360º panoramic view at or near the proposed stream crossing. Photos should also be taken to show the channel, banks and streambed both upstream and downstream of the proposed bridge, as well as the waterway through the existing bridge. If the existing roadway is overtopped at extreme high water, provide photographs showing the roadway on either side of the existing bridge. If the land use or stream characteristics are significantly different at upstream or downstream valley profiles, provide additional photographs to document these conditions. Additional photographs may also be necessary to provide information on other site-specific conditions. It is especially important to show any nearby improvements that may be affected by flooding or changes in stream velocity. Photos of other bridges near the proposed structure should also be included. These photos should show the bridge profile including details of the superstructure and substructure type. These photos should also show any bank or channel improvements or issues in the area. |
|  |
| **Brief Description of Photographs (directions and locations):** |
|  |

|  |
| --- |
| **GENERAL INSTRUCTIONS FOR BRIDGE SURVEYS** |
|  |
| **In order to provide the best possible structure design, it is important that this report be completed as fully and accurately as possible.** Consultation with bridge office to resolve questions or issues that require considerable judgment is encouraged.  The purpose of a bridge survey is to provide data needed to establish three important points: the general dimensions of the structure (length, height, skew, and arrangement of spans); the type, size and depth of foundation; and the cost of construction. These three points are very intimately related to the required waterway. A restricted waterway means serious scour, and footings must extend deep or be very substantially founded.    To compute the capacity of the natural channel, it is necessary to know the cross-sectional area and shape of the channel to the limits of extreme high water on each side.  Detailed instructions on completing the Bridge Survey Report and associated plan and profile sheets are contained in [Article 748.7 Bridge Reports and Layouts](http://epg.modot.org/index.php?title=748.7_Bridge_Reports_and_Layouts) of the *Engineering Policy Guide*. |