Notice of Revisions to the Roadway Drainage Manual
As of December 27, 2021

The Roadway Drainage Manual was published in 1982 and is no longer considered a current reference. There is a replacement document tentatively titled “Roadway Drainage Policy and Practices Manual.” This replacement document is still under development. Since 1982 there have been some changes to various procedures and methods commonly used in Hydrology and Hydraulics. Software is now the normal means of doing most hydraulic calculations. Websites provide the supporting data. Please refer to this notice and the Roadway Plan Development Guidelines Appendix D for design requirements. If further clarifications are needed please contact the Hydraulics Sections in Roadway Design.

Rainfall information for use in the Rational Method and TR-55 Method should come from the NOAA Atlas 14 dataset available at the NOAA website.

USGS Regional Regression Equations for 2016 results are available through the StreamStats website. If the 2016 flows do not provide water surfaces that calibrate to high water information, you may try the USGS 1995 Regression Equations.

For one-dimensional hydraulic modeling using the Standard Step Method please use HECRAS from the United States Army Corps of Engineers. Please site what version you are using since this application is in active development. Do not use any versions listed as beta or other testing versions that may be available.

For 2D modeling the Hydraulics Section uses the SRH-2D model through SMS which was developed by FHWA and published by Aquaveo. 2D modeling is not required on any projects at this time. Consultants may use 2D modeling at their discretion. Please contact the Hydraulics Section for review requirements before choosing this option. Zone AE floodplain projects may not be modeled in 2D at this time.

Modeling with the SRH-2D model is recommended (not required) in the following cases:
- Split channels and multiple structures are present in the existing conditions model.
- Channel and roadway geometry do not lend themselves to simple 1D cross sections.
- Where piers under the bridge are not well aligned with the flow direction and present unusual obstruction effects.

HECRAS 2D modeling is not currently being used in the Hydraulics Section. The Army Corps of Engineers have provided training materials for outside engineers. The National Highway Institute has not developed a course yet. As HECRAS is further developed and evaluated, the Hydraulic Section expects to establish requirements for reviewing HECRAS 2D models in the future. In cases where coordination with the Army Corps of Engineers is required and they provide a 2D model for evaluation we will allow it.

For guidance on hydraulic methods and processes, please refer to the AASHTO Model Drainage Manual 2014, FHWA’s published HEC/HDS/etc documents and other current published guidance from the source of the method being used. C-value, n-value and other parameters should come from the AASHTO Model Drainage Manual 2014.

This notice and Appendix D override all other documents.