



U.S. Department  
of Transportation  
Federal Highway  
Administration

# Memorandum

Subject: **ACTION:** Distribution of FHWA  
Hydraulic Engineering Circular 22,  
“Urban Drainage Design Manual,  
3<sup>rd</sup> Edition”

Date: December 15, 2009

In Reply Refer To:  
HIBT-20

*/s/ Original Signed by*  
From: M. Myint Lwin, P.E., S.E.  
Director, Office of Bridge Technology

To: Directors of Field Services  
Federal Lands Highway Division Engineers  
Division Administrators

The FHWA offices of Bridge Technology and Technical Services, utilizing the contract services of Ayres Associates, have recently completed a joint effort to revise and update FHWA Hydraulic Engineering Circular (HEC) 22, “Urban Drainage Design Manual, 3<sup>rd</sup> Edition”.

HEC-22 provides a comprehensive and practical guide for the design of storm drainage systems associated with transportation facilities. Design guidance is provided for the design of storm drainage systems which collect, convey, and discharge stormwater flowing within and along the highway right-of-way.

Methods and procedures are given for the hydraulic design of storm drainage systems. Design methods are presented for evaluating rainfall and runoff magnitude, pavement drainage, gutter flow, inlet design, median and roadside ditch flow, structure design, and storm drain piping. Procedures for the design of detention facilities are also presented, along with an overview of storm water pumping stations and urban water quality practices. This 3<sup>rd</sup> edition presents a major change in the methodology discussed in Chapter 5 for designing channels and in Chapter 7 for calculating energy losses in storm drain junctions and access holes.

This edition of HEC-22 is posted in the Office of Bridge Technology’s Website and is now available for downloading at

<http://www.fhwa.dot.gov/engineering/hydraulics/pubs/10009/index.cfm>.



HEC-22 is the primary reference material for NHI course 135027, “Urban Drainage Design” which has been updated to reflect the HEC-22 enhancements. A description of the course, information on scheduling, and information on how to obtain hard copies of HEC-22 from the NHI store can be found on the following Web site:  
[www.nhi.fhwa.dot.gov](http://www.nhi.fhwa.dot.gov).

If you have any questions, please contact Mr. Dan Ghere at the FHWA Resource Center at (708) 283-3557 or Mr. Joe Krolak at the Office of Bridge Technology at (202) 366-4611.

cc:

Dan Ghere-RCM-MATT