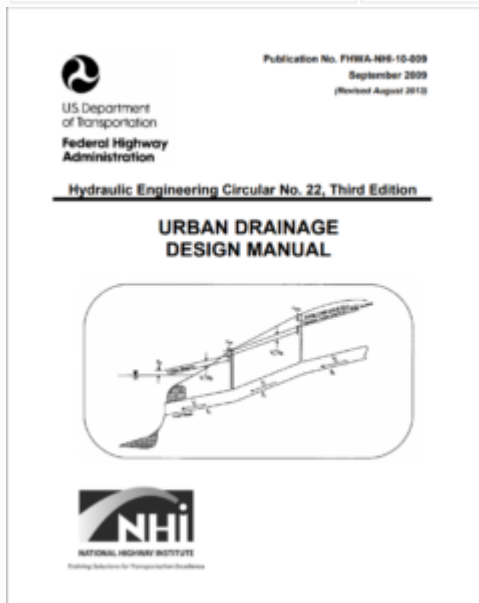


HEC-22 Urban Drainage Design Manual, 3rd Ed

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Publisher:	FHWA
Year:	2009
Links:	PDF
Subjects:	Storm Drains, Inlets, Storm Water Management, Water Quality, Best Management Practices, Pumps, Drainage Design



This circular 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 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 access holes.