

1.5.5 Hydrology Data Sheet for Bridge-Sized Culverts (≥ 20' Opening)

MEMORANDUM TO:		Submittal Date: _____
RPG ROAD DESIGN TEAM LEADER: _____		Supersedes Submittal Date: _____
RPG STRUCTURAL ENGINEER: _____		
From:	Hydraulic Design Squad / Engineer _____	
Subject:	Hydrology Data for Bridge Sized Culvert over _____	
County:	_____	Rd/Rte: _____
Structure No:	_____	Const. Pin: _____
Culvert Dimensions:	Span: _____ ft.	Rise: _____ ft.
Extension:	Right: _____ ft.	Left: _____ ft.
Estimated Length:	_____ ft.	
No. of Barrels:	_____	Material Type: _____
Centerline Station:	_____	Skew Angle: _____ °
Inlet Invert Elev:	_____ ft.	Outlet Invert Elev.: _____ ft.
Riprap Required (In Addition to Typical):	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Comments:	_____ _____ _____ _____ _____	
Historic High Water Information: (Show highwater on plans)		
Elevation of High Water:	_____ ft.	Discharge: (if available) _____ ft.
Date of occurrence:	____ / ____ / ____	Source of data: _____

Design High Water and Backwater Information: (Show high water elevations including backwater on plans)	
If 'Secondary Road' provide 25-yr high water elevation including backwater:	_____ ft.
If 'Primary Road' provide 50-yr high water elevation including backwater:	_____ ft.
For all roads provide 100-yr high water elevation including backwater:	_____ ft.
Hydrology Data for Tidal Culverts: (Only complete this sections if the culvert is tidally influenced) (show on plans)	
Mean Higher high tide elevation	= _____ ft.
Mean Lower low tide elevation	= _____ ft.
10-year tidal surge height	= _____ ft. (includes wave height)
100-year stillwater height	= _____ ft.
500-year stillwater height	= _____ ft.
Maximum vel. within culvert	= 100-yr. tidal surge velocity: _____ fps 500-yr. tidal surge velocity: _____ fps
Hydrology Data for Riverine Culverts: (Only complete this sections if the culvert is NOT tidally influenced) (show on plans)	
D.A.	= _____ sq. mi. (or acres)
Q _{Design}	= _____ cfs
Vel. _{Design}	= _____ ft. / sec.
Design Headwater Elevation	= _____ ft.
Q ₁₀₀	= _____ cfs
Vel ₁₀₀	= _____ ft. / sec.
100 Year Headwater Elev.	= _____ ft.
Overtopping Flood:	
Q = _____ cfs	Probability = _____ %
cc: Environmental Engineer _____	
<small>Note: Probability may be determined by plotting the 2-, 10-, 25-, 50-, 100-, and 500-year discharges on Gumble paper and reading the probability corresponding to the overtopping discharge. For discharges greater than 500-year, the probability should be stated as less than (<) 0.002. A plot of the 100- and 500-year scour lines on a bridge plan and profile sheet must be provided. Revised 3/16/09</small>	