

DATE: November 30, 2004

Hydrology Data for Bridge

MEMORANDUM TO: ROAD DESIGN GROUP LEADER: Larry Price

FROM: HYDRAULIC DESIGN ENGINEER Randall Mungo

SUBJECT: Hydrologic Data for Bridge over South Fork Edisto River - Overflow Bridge

Rd./Rte.: S-22 County Aiken Construction PIN: 29621

Bridge Length 80 Bridge Roadway Width 34 ft.

Beg. Station 456+41 End Station 457+21 Skew Angle None

Bridge Span Configuration 40'-40' Spans

Minimum F.G. Elev. 228.20 Minimum Low Steel Elev. 225.70 Based on:

Riprap Req'd Yes X No To Elevation 225.70

COMMENTS: Minimum finished grade based on 25-year high water (223.70) + freeboard (2.0) + superstructure (2.50).
Place Class B riprap on geotextile for erosion control (Class 2, Type B) according to SCDOT Std. 804a.
Abutment riprap to have a 10-foot toe extension.

HIGH WATER DATA (N/A)

25 - Year H.W. Elev. = 223.70 including 1.10 ft. backwater

100 - Year H.W. Elev. = 224.70 including 1.50 ft. backwater

Highwater Elev. =

Highwater Elev. =

HYDROLOGY DATA:

D.A. = 439.2 sq. mi.

Q(25) = 1,205 cfs

Area furnished under

Elev. = 258 sq. ft.

Vel. = 4.67 ft./sec.

Q100 = 1,715 cfs

Area furnished under

Elev. = 321 sq. ft.

Vel. = 5.34 ft./sec.

OVERTOPPING FLOOD:

Q = 2,567 cfs

Probability < 0.002 (500-year)

Hydraulic Design Engineer URS for Randall Mungo

cc: Bridge Design Squad Leader Glenn Patterson

Program Manager Michelle Sheperd