Date: February 18, 2004

Hydrology Data for Bridge

Memorandum to: Road Design Squad Leader

From: Randall Mungo / Gary Guhl, PBS&J

Subject: Hydrology Data for Bridge Over Cedar Creek
Rd./Rte.: SC 4/302 (Relocation) County: Aiken Const. Pin: 26432

Bridge Length: 120 Ft. Bridge Roadway Width: 44 Ft.
Beg. Station: 541+40 End Station: 542+60 Skew Angle: 25°
Bridge Span Configuration: 3 spans at 30 - 60 - 30

Minimum F. G. Elev.: 270.00 Minimum Low Steel: 263.07 Based on: 50 Year H.W. Elev + 2'
End Fill Slope: 2:1
Riprap Req'd: Yes To Elevation: 263.07
Comments: FEMA approximate flood hazard area (Zone A). Three spans 30 - 60 - 30. Minimum low chord elevation shall be greater than or equal to 263.07. All elevations referenced to NGVD 1929.

HIGH WATER DATA:

50 Year H. W. Elev. = 261.07 including 0.06 Ft. Backwater
100 Year H. W. Elev. = 261.31 including 0.07 Ft. Backwater
Highwater Elevation = _____
Highwater Elevation = _____

HYDROLOGY DATA:

D. A. = 16.70 sq. mi. = 10,687.96 ac.
Q_{50} = 504 cfs
Vel. = 2.39 ft/sec
50 Year H.W. Elev = 261.07 ft.
Q_{100} = 582 cfs
Vel = 2.59 ft/sec
100 Year H.W. Elev = 261.31 ft.

NOTE: Data from Bridge Section

OVERTOPPING FLOOD:

Q => 785 cfs
Probability =< 0.002

Randall Mungo / Gary Guhl, PBS&J
Hydraulic Design Engineer

cc: Bridge Design Squad Leader _____