

DATE: 2-5-02

MEMORANDUM TO ROAD DESIGN SQUAD LEADER _____
FROM HYDRAULIC DESIGN ENGINEER Len Givens via Jeff Cloud of PBS&J
SUBJECT: Hydrology Data for Bridge Over South Edisto River

Rt/Rd SC-4/302 Aiken Construction PIN 26432

Bridge Length 600.00 ft. Bridge Roadway Width Match Roadway Plans

Beg. Station 517+12 End Station 523+12 Skew Angle 90 Degrees

Minimum F. G. Elev. 269.60 End Fill Slope 2:1 (minimum)

Riprap Req'd Yes X No To Elevation 260.71 ft.

COMMENTS: Bridge shall be flat (grade = 0.00%). This bridge is in a FEMA regulated floodway. We assumed "cored slabs", 30' spans, with 1.81' from centerline finished grade to bottom of low chord. We also assumed a 60' span over the main channel (bents at 519+52 and 520+12) with type III prestressed girders.

HIGH WATER DATA:

50 Year H. W. Elev. = 260.41 ft. including 0.10 ft. Backwater

100 Year H. W. Elev. = 260.71 ft. including 0.12 ft. Backwater

Highwater Elevation = _____

Highwater Elevation = _____

HYDROLOGY DATA:

D. A. = 198 sq. mi.
Q₅₀ = 4100 cfs
Area furnished under
Elev. 260.41 = 2538 sq. ft.
Vel. = 1.62 ft/sec
Q₁₀₀ = 4640 cfs
Area furnished under
Elev. 260.71 = 2694 sq. ft.
Vel = 1.72 ft/sec

OVERTOPPING FLOOD:

Q = > 6110 cfs
Probability = < 0.002

Len Givens via Jeff Cloud of PBS&J
Hydraulic Design Engineer

cc: Bridge Design Squad Leader _____