

INFORMATION TO BE SHOWN ON PLANS
WS EL. Taken @ River Station 8

Design: Discharge N/A c.f.s. Frequency N/A yr. Elev. N/A ft.
Base Flood: Discharge 34.0 c.f.s. Frequency 100 yr. Elev. 2.63 ft.
Overtopping: Discharge N/A c.f.s. Frequency 500 yr. Elev. 17.14 ft. Sag 18+00' L

ADDITIONAL INFORMATION AND COMPUTATIONS
** HYDRAULIC MODELLING/SCOUR CALCULATIONS PROVIDED BY MOFFATT AND NICHOL

TOTAL SCOUR

BENT NUMBER / STATION	TOTAL SCOUR (FEET)	100 yr. 500 yr.
BENT 9 STA 31+00	0.00	0.89
BENT 10 STA 32+00	0.00	0.93
BENT 11 STA 33+00	0.15	0.94
BENT 12 STA 34+00	0.19	0.94
BENT 13 STA 35+00	0.20	0.94
BENT 14 STA 36+00	0.20	0.94
BENT 15 STA 37+00	0.21	0.95
BENT 16 STA 38+00	0.21	0.95
BENT 17 STA 39+00	0.21	0.95
BENT 18 STA 40+00	0.22	0.95
BENT 19 STA 41+00	0.22	0.95
BENT 20 STA 42+00	0.22	0.95
BENT 21 STA 43+00	0.22	0.95
BENT 22 STA 44+00	0.22	0.95
BENT 23 STA 45+00	0.22	0.95
BENT 24 STA 46+00	0.22	0.95
BENT 25 STA 47+00	0.22	0.95
BENT 26 STA 48+00	0.22	0.95
BENT 27 STA 49+00	0.22	0.95
BENT 28 STA 50+00	0.22	0.95
BENT 29 STA 51+00	0.22	0.95
BENT 30 STA 52+00	0.22	0.95

LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE FOR COMPARISON ONLY
 HYDRAULIC DATA UNITS: 100 YR 50 YR 10 YR
 DEPTH-AVE CURRENT SPEED: FT/SEC 2.4 1.8 0.0
 WIND SPEED: FT/MSL 5.7 5.5 0.8
 WATER SURFACE ELEVATION: FT NAVD 5.4 5.2 0.5
 WAVE CREST ELEVATION: FT MSL 6.1 6.0 0.7
 SIGNIFICANT WAVE HEIGHT: FT NAVD 5.8 5.7 0.4
 FT 0.3 0.3 0.0

SITE DATA

Drainage Area N/A (INDETERMINATE) Source USGS QUAD MAP
 River Basin PASQUOTANK Character COASTAL SWAMP
 Stream Classification (Such as Trout, High Quality Water, etc.) SW
 Data on Existing Structure N/A (NEW LOCATION)
 Total Waterway Opening N/A s.f.
 Waterway Opening Below 100yr. WS EL. N/A s.f.
 Debris Potential: Low Moderate High
 Data on Structures Up and Down Stream N/A (NOT COMPARABLE)
 Design Control Elev. N/A ft.
 Gage Station No. N/A Period of Records N/A yrs.
 Max. Discharge N/A c.f.s. Date N/A Frequency N/A
Historical Flood Information:
 Date Elev. ft. Est. Freq. yr. Source Period of Knowledge yrs.
 Date Elev. ft. Est. Freq. yr. Source Period of Knowledge yrs.
 Date Elev. ft. Est. Freq. yr. Source Period of Knowledge yrs.
 Historical Scour Info.: General N/A ft. Contraction N/A ft. Local N/A ft.
 Channel Slope N/A ft/ft Source N/A Normal Water Surface Elev. N/A ft.
 Manning's n: Left O.B. Channel Right O.B. Source
 Flood Study/Status FEMA ZONE AE (EL 4) (COASTAL STORM SURGE) Floodway Established? NO
 Flood Study 100yr. Discharge N/A c.f.s. WS Elev.: Floodway N/A ft. Without Floodway N/A ft.

DESIGN DATA

Hydrological Method N/A
 Hydraulic Design Method HEC-RAS BY MOFFATT AND NICHOL


Floods Evaluated:	Freq. (yr)	Q (cfs)	Elev. (ft)	Backwater (ft)	Bridge Opening Velocity (ft/s)
@ River Station 8	100	34.0	2.63	-0.06	0.01
	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A

Waterway Opening Provided Below Design W.S. Elev. N/A s.f., 100yr W.S. Elev. 4905 s.f., Total 382,393 f.
 Average Channel Velocity (Design) 0.01 f.p.s. Average Overbank Velocity (Design) N/A f.p.s.
 Computed Scour: General SEE BACK COVER ft. Contraction SEE BACK COVER ft. Local
 Is a Floodway Revision Required? NO

BRIDGE SURVEY & HYDRAULIC DESIGN REPORT
 N. C. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 HYDRAULICS UNIT
 RALEIGH, N. C.

REPORT 1 OF 2
 SHEET 2 OF 2

I.D. No. R-2576 Project No. 34470.I.TAI Proj. Station 61+67 -L-
 County CURRITUCK Bridge Over MAPLE SWAMP Bridge Inv. No.
 On Highway Between US 158 and NC 12
 Recommended Structure 10 88' SPAN 54' MBT, 30 89' SPAN 54' MBT, 72 100' SPANS 72' MBT,
 30 73' SPAN 54' MBT, 10 70' SPAN 54' MBT
 40' Cap. at End Bent 1, 2, 6' Cap. at End Bent 2 w/ Spill Through Abutments
 Recommended Width of Roadway 36' TO 118' CLEAR ROADWAY Skew 90°
 Recommended Location is (Up, At, Down) Stream from Existing Crossing, NEW LOCATION
 Latitude 36.32916 Longitude -75.92470
 Statewide Tier Regional Tier Sub-Regional Tier
 Bench Mark is BM 4 - RR SPIKE IN PP 12' RIGHT OF STATION 29+41 -L-
 Elev. 5.03 ft. Datum: NAVD 88
 Temporary Crossing NOT REQUIRED (NEW LOCATION)



Designed by: MAX PRICE, P.E.
 Assisted by:
 Project Engineer: J. L. LINDSEY, P.E.
 Reviewed by:

WITHERELL ENGINEERING
 NORTH CAROLINA PROFESSIONAL SEAL 034333
 NORTH CAROLINA PROFESSIONAL SEAL 15833
 J. L. LINDSEY
 MODELING AND SCOUR COMPS DRAFT & DECK DRAINAGE ONLY