B. Moore

State of North Carolina DEPARTMENT OF TRANSPORTATION

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SECRETARY

MEMO TO:

Roadway Design Project Engineers

Roadway Design Project Design Engineers

Charlie Casey, Zigrida Smith

FROM:

Harry Thompson,

DATE:

September 5, 1995

SUBJECT:

Metric Structure Recommendations

In our efforts to utilize "hard" metric numbers where possible, we decided to use 1 meter as the hard metric number for the 3' offset on structures. This results in an offset approximately three inches greater than three feet. Since we were striving to use "hard" numbers, we believed this difference to be acceptable.

This works well on all bridge cross-sections except for one condition. This condition is the cored slab bridge with a 30' roadway clearance, 2-12' lanes and 3' offsets. In this case only, the one meter offset will not work. A 0.9 meter offset is needed for this condition so the same number of 3' slabs can be utilized. The total width available in english is 33.0 feet (10.058 m). The total width needed in metric is 7.2 m (2 lanes), 1.8 m (2 offsets), and 1 m (2 bridge rails), which is 10 meters. This leaves 58 mm for 2 shelves outside the bridge rails which is used during construction for slip forming the bridge rails (see attachment).

HMT

cc: Mr. Tom Shearin, PE

Mr. Len Hill, PE

Mr. Bob Pearson, PE

	1-(25mm)	COMST. IT.	-7/, 0:		
	CONCRETE RAIL	Max II		SENT & BENT	
	4.5m (150.) 3.6m / 2.0 f.t. / 3.0 f.t.	14777. SLOPE,	CORED SUJE DWITS - 33"-0-	HALE SECTION & END BE	
10,058m (33.5-)	ABOM	GANGE POINT	11 - 3-4" X 1-9" PHESTRESSED CONC. CURES	APHRAGM	
	4.5 m (15.0") SHEAR LEYS TO BE FILLED WITH GROUT AFTER ALL ERECTION HAS BEEN CONPLETED AND AFTER FINAL TERSIONING OF TRANSVERSE STRANDS SEE SPECIAL PROVISIONS FOR SACUT.	1/4"/FTS.DPE	STRAND IN 2" @ HOLE	LION & INTERMEDIATE DI	
25.1	CONCRETE BARRIER RAIL	COMST. JT.		HALF SECTION	