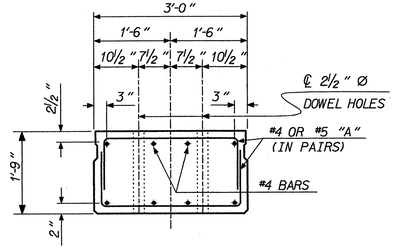


SLAB END ELEVATION

THE 2½" Ø DOWEL HOLES AT EXPANSION ENDS OF SLAB SECTIONS SHALL BE FILLED WITH LOW MODULUS SILICONE MATERIAL TO 1½" ABOVE TOP OF DOWELS AND THEN FILLED WITH GROUT.

THE 2½" DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT.

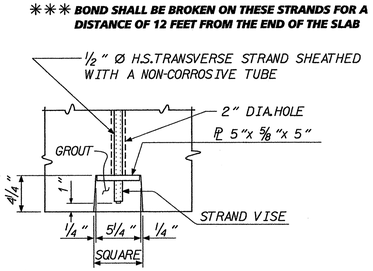
SHEATH CHART

SPAN LENGTH	NUMBER OF SHEATHED STRANDS PER EXTERIOR SLAB SECTIONS	NUMBER OF SHEATHED STRANDS PER INTERIOR SLAB SECTIONS
50′	✳ 6 @ 2"	✳ 4 @ 2"
55′	✳ 4 @ 2"	✳ 3 @ 2"
60′	✳ 1 @ 4"	✳✳ 4 @ 2"
60′	✳ 4 @ 2"	✳✳✳ 2 @ 2"
60′	✳✳ 2 @ 2"	------

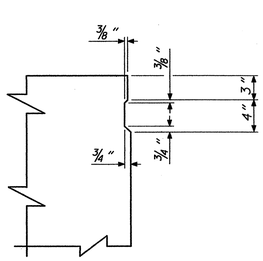
✳ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 4 FEET FROM THE END OF THE SLAB

✳✳ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6 FEET FROM THE END OF THE SLAB

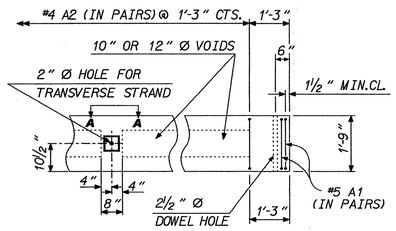
✳✳✳ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 12 FEET FROM THE END OF THE SLAB



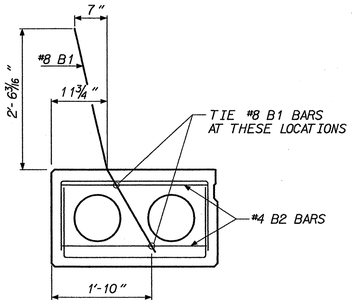
SECTION A-A



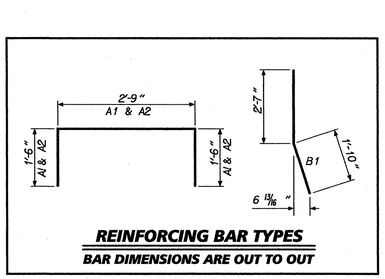
SHEAR KEY DETAIL



SLAB ELEVATION

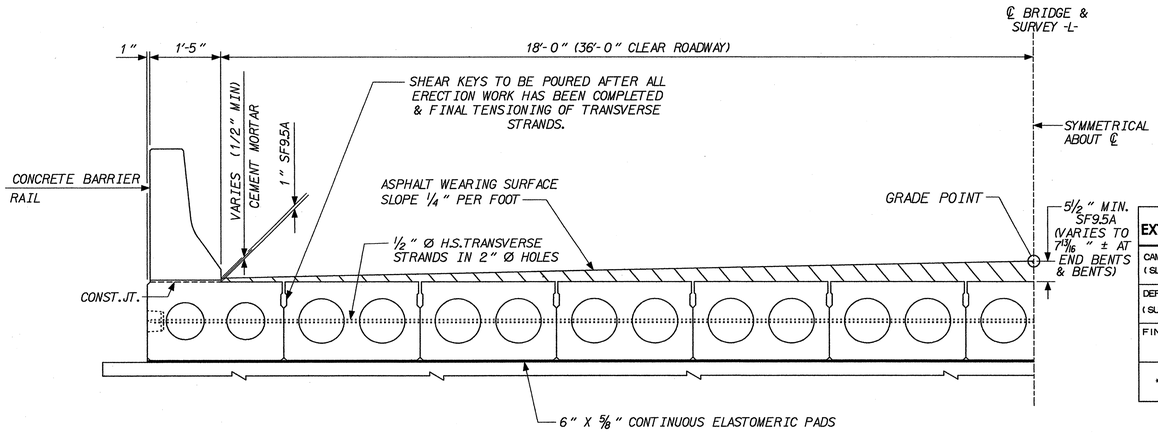


TIE LOCATION FOR #8 B1

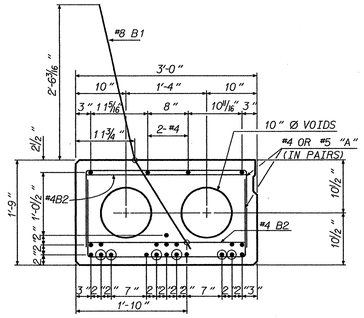


REINFORCING BAR TYPES

BAR DIMENSIONS ARE OUT TO OUT



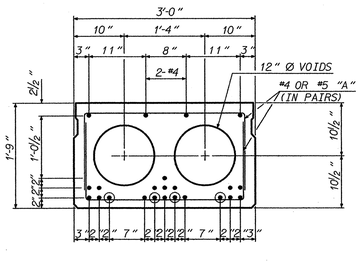
TYPICAL HALF SECTION



50′ SPAN

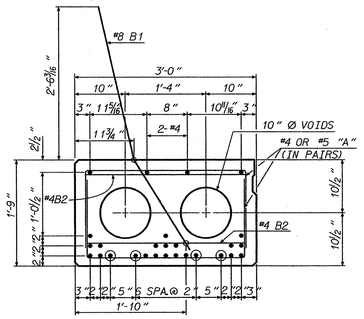
21 -½" Ø H.S.STRANDS
EXTERIOR SLAB SECTIONS

⊙ STRAND IS SHEATHED. SEE SHEATH CHART.



50′ SPAN

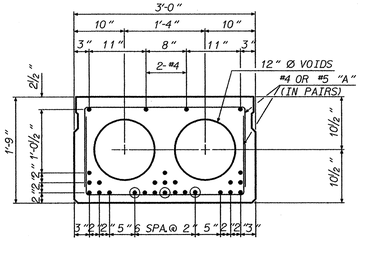
21 -½" Ø H.S.STRANDS
INTERIOR SLAB SECTIONS



55′ SPAN

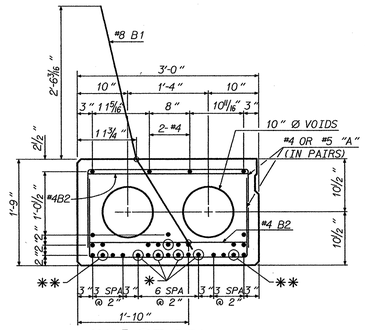
25 -½" Ø H.S.STRANDS
EXTERIOR SLAB SECTIONS

⊙ STRAND IS SHEATHED. SEE SHEATH CHART.



55′ SPAN

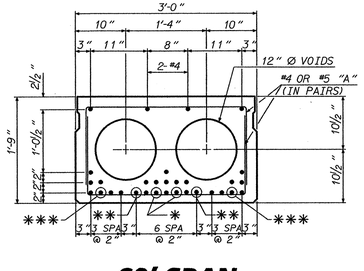
25 -½" Ø H.S.STRANDS
INTERIOR SLAB SECTIONS



60′ SPAN

29 -½" Ø H.S.STRANDS
EXTERIOR SLAB SECTIONS

⊙ STRAND IS SHEATHED. SEE SHEATH CHART.



60′ SPAN

29 -½" Ø H.S.STRANDS
INTERIOR SLAB SECTIONS

EXTERIOR SLAB UNIT	50′	55′	60′
CAMBER (SLAB UNIT ALONE IN PLACE)	1.614" (UP)	1.790" (UP)	2.488" (UP)
DEFLECTION (SUPERIMPOSED DEAD LOAD)	0.263" (DOWN)*	0.370" (DOWN)*	0.521" (DOWN)*
FINAL DEFLECTION	1.351" (UP)	1.420" (UP)	1.967" (UP)

* INCLUDES FUTURE WEARING SURFACE

INTERIOR SLAB UNIT	50′	55′	60′
CAMBER (SLAB UNIT ALONE IN PLACE)	1.867" (UP)	2.097" (UP)	2.806" (UP)
DEFLECTION (SUPERIMPOSED DEAD LOAD)	0.274" (DOWN)*	0.370" (DOWN)*	0.521" (DOWN)*
FINAL DEFLECTION	1.593" (UP)	1.727" (UP)	2.285" (UP)

* INCLUDES FUTURE WEARING SURFACE

GENERAL NOTES

ASSUMED LIVE LOAD - HS 20-44 OR ALTERNATE LOADING.

CONCRETE: f'_c - 5000 psi, 50′ SPAN ONLY
✳ CONCRETE: f'_{c_1} - 4000 psi, 50′ SPAN ONLY
CONCRETE: f'_c - 7000 psi, 55′ AND 60′ SPANS
✳ CONCRETE: f'_{c_1} - 4500 psi, 55′ AND 60′ SPANS
✳ (COMPRESSIVE STRENGTH @ TRANSFER OF STRESSING FORCE.)

ALL PRESTRESS STRANDS SHALL MEET THE REQUIREMENTS OF ASTM A416.

ALL PRESTRESS STRANDS SHALL BE 7 WIRE, LOW RELAXATION, HIGH STRENGTH CABLES IN ACCORDANCE WITH THE SPECIFICATIONS.

SIZE TYPE	AREA	ULTIMATE STR.
1/2" Ø HIGH STR.	0.153 □	41,300# PER CABLE

APPLIED FORCE 30,980# PER CABLE

EXP.JT.MAT'L.SHALL MEET THE REQUIREMENTS OF AASHTO SPECIFICATION M153 TYPE 1,TYPE II,OR TYPE III.

JOINT SEALER SHALL BE LOW MODULUS SILICONE SEALANT. SEE SECTION 1028-4 OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL ITEMS SHALL BE OF A GRADE CONFORMING TO EITHER ASTM A36 OR A373, EXCEPT HIGH STRENGTH BOLTS. HIGH STRENGTH BOLTS SHALL BE ASTM A325. ALL STRUCTURAL STEEL SHALL BE GALVANIZED AS PER THE SPECIFICATIONS.

ALL MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OF THE NC DEPARTMENT OF TRANSPORTATION DATED JANUARY 2002 AND WITH THE SPECIAL PROVISIONS.

THE ULTIMATE STRENGTH OF THE CORED SLAB UNIT MUST MEET THE REQUIREMENTS OF THE APPLICABLE AASHTO SPECIFICATIONS.

STRANDS SHALL BE CUT FLUSH WITH ENDS OF SLABS AND EPOXY COATED. SEE SPECIAL PROVISIONS.

A POSITIVE HOLD DOWN SYSTEM MUST BE EMPLOYED TO PREVENT VOIDS FROM RISING.

NOTE:
SPIRAL WIRE REINFORCEMENT MAY BE USED IN LEIU OF DEFORMED BARS FOR STIRRUPS. MIN.W3.5 X 6" PITCH.

UNLESS OTHERWISE NOTED ON THE PLANS. ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾".

PROJECT NO. 36971
COUNTY: UNION
STATION: 17+51.30
REPLACES BRIDGE NO. 33

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD PRESTRESSED CORED SLAB
50′, 55′ AND 60′ SPANS
36′ CLEAR ROADWAY – 90° SKEW

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	2
1			3			TOTAL SHEETS
2			4			24

Plans prepared by:
KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAUB DR., SUITE #202
RALEIGH, N.C. 27606
For Division of Highways

NOT TO SCALE

DRAWN BY: B.E. LANNING DATE: JULY 2004
CHECKED BY: J.E. MONDOLFI DATE: JULY 2004

PLOT: 10/19/2004 05:37:07 PM Ko & Associates, P.C.
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