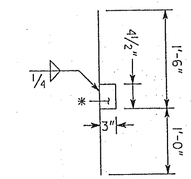
MARK	CHASE TYPE BK	CHASE TYPE AH	"CL"	DIST. TO ℄ BK CHASE	DIST. TO ℄ AH CHASE	DIST. FROM ℄ BRNG TO ℄ BRNG	CLIP SPACING *	45° BRACKET SPACING **	551 SPACING D	STIRRUP SPACING - 550 G	STIRRUP SPACING - 550 J	X	350 SPACING H	BAR REINFORCEMENT PER BEAM 350	450	451	452	550	551	MISC. HARDWARE PER BEAM OHB	CLIP	EBC	FBC	LL	SB	MAT'L QUANTITIES PER BEAM CONC(CY)	REINF(LBS)	STRANDS
1-1 & 1-5	EXP	EXP	38'-7 7/8"	6 3/8"	6 3/8"	37'-7 7/8"	1'-0"	2'-0"	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	3 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	21	40	2	-	2	4	3.32	547	16
1-2 THRU 1-4	EXP	EXP	38'-7 7/8"	6 3/8"	6 3/8"	37'-7 7/8"	1'-0"	-	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	3 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	-	80	2	-	2	4	3.32	547	16
2-1 & 2-5	EXP	EXP	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	2'-0"	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	21	40	2	-	2	4	3.35	547	16
2-2 THRU 2-4	EXP	EXP	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	-	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	-	80	2	-	2	4	3.35	547	16
3-1 & 3-5	EXP	FIX	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	2'-0"	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	21	40	1	1	2	4	3.35	547	16
3-2 THRU 3-4	EXP	FIX	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	-	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	-	80	1	1	2	4	3.35	547	16
4-1 & 4-5	FIX	EXP	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	2'-0"	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	21	40	1	1	2	4	3.35	547	16
4-2 THRU 4-4	FIX	EXP	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	-	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	-	80	1	1	2	4	3.35	547	16
5-1 & 5-5	EXP	EXP	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	2'-0"	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	21	40	2	-	2	4	3.35	547	16
5-2 THRU 5-4	EXP	EXP	39'-2 7/8"	6 3/8"	6 3/8"	38'-2 1/8"	1'-0"	-	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	8 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	-	80	2	-	2	4	3.35	547	16
6-1 & 6-5	EXP	EXP	38'-7 7/8"	6 3/8"	6 3/8"	37'-7 7/8"	1'-0"	2'-0"	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	3 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	21	40	2	-	2	4	3.32	547	16
6-2 THRU 6-4	EXP	EXP	38'-7 7/8"	6 3/8"	6 3/8"	37'-7 7/8"	1'-0"	-	5 SP @ 3"	5 SP @ 8"	9 SP @ 18"	3 7/16"	5 SP @ 1'-0"	24	4	12	4	60	24	-	80	2	-	2	4	3.32	547	16

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	BRST-2025(5)	58G	124



* 4 1/2" X 3" X 1/2" A36 PLATE SHALL BE WELDED PRIOR TO SAFETY BAR BEING PLACED IN TOP OF BEAM. MAY BE OMITTED AT CONTRACTORS OPTION.

1050A SAFETY BAR DETAIL

CHART NOTES AND ABBREVIATIONS

BK = BACK END OF BEAM
AH = AHEAD END OF BEAM
EXP = EXPANSION BEARING CHASE ASSEMBLY
FIX = FIXED BEARING CHASE ASSEMBLY
OHB = 45° OVERHANG BRACKET
CLIP = CLIP INSERT FOR METAL DECK FORMS
EBC = EXPANSION BEARING CHASE ASSEMBLY
FBC = FIXED BEARING CHASE ASSEMBLY
LL = LIFT LOOP
SB = SAFETY BAR (REBAR MARK 1050A OR 1050B)
* = START METAL DECK FORM CLIPS AT 1'-0" FROM BACK END OF BEAM AND CONTINUE AT THE CENTER TO CENTER SPACING SHOWN.
** = START OVERHANG BRACKETS AT 4" FROM BACK END OF BEAM AND CONTINUE AT THE CENTER TO CENTER SPACING SHOWN.

ELONGATION CALCULATIONS

STRAIGHT STRANDS

$$\frac{\text{BED LENGTH X (LOAD - PRELOAD)}}{\text{(MODULUS OF ELASTICITY) X AREA}} = \text{STRAIGHT STRAND PULL}$$

$$\frac{1960'' \text{ X } (33817.5 \text{ LBS.} - 1500 \text{ LBS.})}{(2.87 \text{ X } 10^7 \text{ PSI}) \text{ X } 0.167 \text{ SQ. IN.}} = 13.2''$$

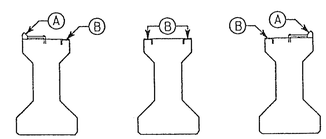
(+5% = 13.9")
(-5% = 12.6")
(1/2" CHUCK SLIP NOT INCLUDED)

STRAIGHT STRAND JACKING LOAD = 35040.2 LBS. (1/2" CHUCK SLIP INCLUDED)

CASTING LENGTH CALCULATION

CASTING LENGTH "CL" = IN PLACE LENGTH - 1/8"

-1/8" = BEAM SHORTENING - EPOXY
= 1/8" - 1/4"

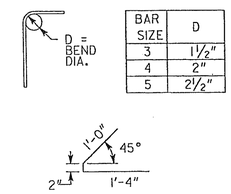


INSERT PLACEMENT DETAIL
LOOKING AHEAD

(A) MEDCO HF-31 HEAVY DUTY 45° (OR EQUAL) OVERHANG BRACKET HANGERS AT THE SPACING SHOWN ON THE BEAM DETAIL SHEET. ALL OVERHANG BRACKETS TO BE GALVANIZED. VERTICAL EDGE OF HANGER MUST BE FLUSH WITH THE EDGE OF THE TOP FLANGE.

(B) TOPIKAL 12 GUAGE METAL DECK CLIPS (OR EQUAL) AT THE SPACING SHOWN ON THE BEAM DETAIL SHEET. EDGE OF CLIPS MUST BE TIGHT AGAINT EDGES OF BEAMS.

NOTE: INSERTS TO BE FURNISHED BY OTHERS AND CAST IN BEAMS BY SOUTHERN CONCRETE CONSTRUCTION CO., INC.

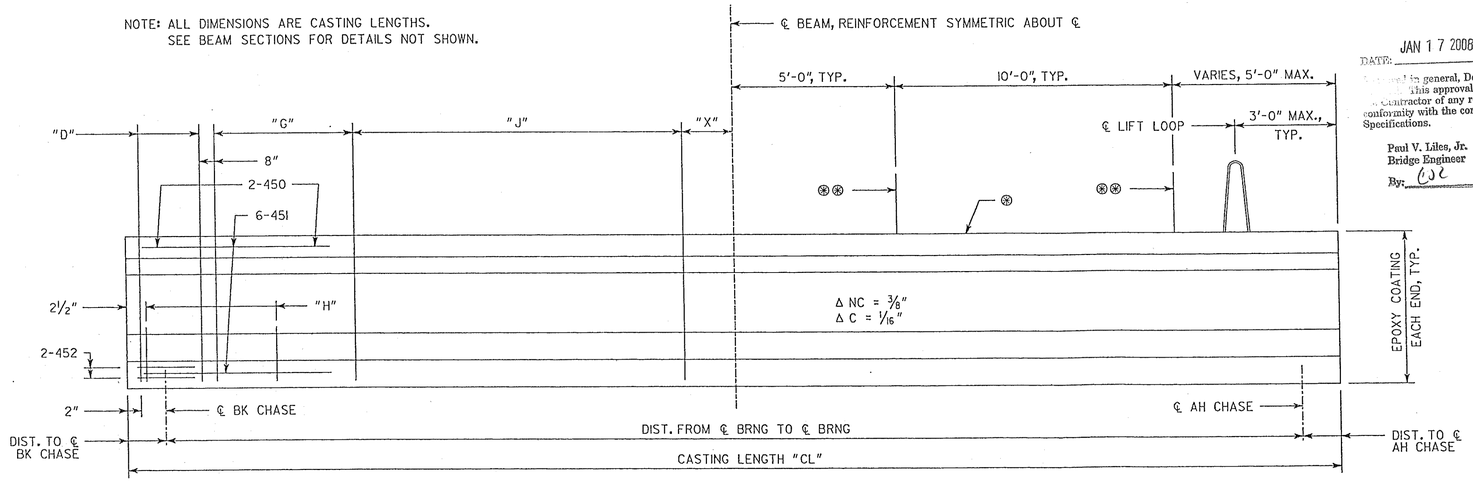


BAR SIZE	D
3	1 1/2"
4	2"
5	2 1/2"

REINFORCING NOTES

1. ALL REINFORCING SHALL BE GRADE 60.
2. CUT LENGTH OF BARS CAN BE ADJUSTED TO ALLOW FOR BENDING RADIUS AND REBAR STRETCH DURING BENDING.
3. ALL BENDS MUST BE MADE USING THE PIN DIAMETERS SHOWN. USE OF A LARGER PIN WOULD NOT ALLOW PROPER PLACEMENT OF THE BARS AND COULD RESULT IN LESS THAN REQUIRED MINIMUM CLEARANCE OR CONCRETE COVER, AND POSSIBLE CONFLICT WITH THE STRANDS.
4. ALL BAR DIMENSIONS ARE OUT TO OUT.
5. AT THE TOP OF THE BEAM, BARS 550 AND 551 SHALL BE FIELD BENT AT 90°, SUCH THAT THE HORIZONTAL LEG EXTENDS BETWEEN THE TOP AND BOTTOM MAT OF SLAB REINFORCEMENT.
6. HORIZONTAL SECTIONS OF 350 BARS SHALL OVERLAP BY 1'-0" MINIMUM.
7. PLACE BARS 452 WITH THE OPEN ENDS AWAY FROM BEAM ENDS.
8. EXTERIOR SAFETY BAR DETAILS SHOWN ABOVE.
9. 1050B MAY BE USED IN PLACE OF 1050A ON EXTERIOR BEAMS AT CONTRACTORS OPTION.

NOTE: ALL DIMENSIONS ARE CASTING LENGTHS.
SEE BEAM SECTIONS FOR DETAILS NOT SHOWN.



⊗ DECK CLIP AND OVERHANG BRACKET SPACING IS GIVEN IN THE CHART ABOVE. SEE INSERT PLACEMENT DETAIL ON THIS SHEET FOR PLACEMENT INFORMATION.

⊗⊗ SAFETY BAR PLACEMENT DETAILS ARE SHOWN ON SHEET 8 OF 8.

BEAM ELEVATION

DATE: JAN 17 2008
Approved in general. Details not checked. This approval shall not relieve the contractor of any responsibility for conformity with the contract Plans and Specifications.
Paul V. Liles, Jr.
Bridge Engineer
By: CJC

BRIDGE NO. 1

SOUTHERN CONCRETE CONSTRUCTION CO., INC.
P. O. BOX 711
ALBANY, GA 31702
TEL: (229) 435-0786
FAX: (229) 434-4755

TYPE-I MOD PSC BEAM DETAILS
SR 329 OVER HOGCRAWL CREEK
MACON COUNTY — BRST-2025(5)

JOB NO. 200730 — NOVEMBER 2007

DESIGNED BROWDER + LEGUIZAMON / BHB — SCALE NO SCALE
DRAWN BHB — CHECKED BHB

REVISIONS — DATE — BY

SHEET 7 OF 8

M200730BRI.DGN