MARK	SIZE	LENGTH	NO. PIECES	TYPE OF BEND	A	B	C	D	E	F	G	H	J	K	R	O
SOUTH FOOTING (BRIDGE SHEET 7 OF 23)																
FA1	#5	4'-11"	117	-												
FA2	#9	17'-8"	62	M		5'-6"	8'-11"	3'-3"						7.38#	#"	
FA3	#9	15'-8"	80	M		5'-6"	8'-11"	6'-3"						6.38#	#"	
FA4	#5	5'-3"	42	-												
FA5	#7	5'-3"	42	-												
FA6	#5	10'-2"	1	-												
FA7	#5	10'-3"	1	-												
FA8	#5	10'-4"	1	-												
FA9	#5	10'-5"	1	-												
FA10	#5	10'-6"	1	-												
FA11	#5	10'-7"	1	-												
FA12	#5	10'-8"	1	-												
FA13	#7	10'-2"	1	-												
FA14	#7	10'-3"	1	-												
FA15	#7	10'-4"	1	-												
FA16	#7	10'-5"	1	-												
FA17	#7	10'-6"	1	-												
FA18	#7	10'-7"	1	-												
FA19	#7	10'-8"	1	-												
FA20	#5	10'-9"	1	-												
FA21	#5	10'-4"	1	-												
FA22	#5	10'-5"	1	-												
FA23	#5	10'-2"	1	-												
FA24	#5	10'-6"	1	-												
FA25	#5	10'-9"	1	-												
FA26	#5	10'-11"	1	-												
FA27	#7	10'-9"	1	-												
FA28	#7	10'-4"	1	-												
FA29	#7	10'-5"	1	-												
FA30	#7	10'-7"	1	-												
FA31	#7	10'-8"	1	-												
FA32	#7	10'-9"	1	-												
FA33	#7	10'-10"	1	-												
FA34	#5	27'-0"	24	-												
FA35	#5	5'-0"	24	-												
FA36	#5	8'-9"	14	20		2'-0"	3'-11"	2'-6"								
FA37	#5	7'-9"	14	20		2'-0"	2'-11"	2'-6"								
FA38	#5	13'-0"	84	-												
FA39	#7	13'-0"	127	-												
FA40	#5	31'-11"	28	-												
FA41	#5	29'-11"	28	-												

SECTION SUMMARY-TOTAL WEIGHT (LBS.)													SECTION TOTAL
ITEM NO.	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18		
544	0	0	4702.4	0	4082.0	0	5217.6	0	0	0	0		14152.0
544.2	0	0	0	0	0	0	0	0	0	0	0		0
544.21	0	0	0	0	0	0	0	0	0	0	0		0

MARK	SIZE	LENGTH	NO. PIECES	TYPE OF BEND	A	B	C	D	E	F	G	H	J	K	R	O
NORTH FOOTING (BRIDGE SHEET 8 OF 23)																
FB1	#5	4'-11"	191	-												
FB2	#9	12'-11"	138	M		5'-6"	1'-9"	6'-0"						4.38#	#"	
FB3	#9	11'-11"	133	M		5'-6"	1'-9"	5'-0"						3.38#	#"	
FB4	#5	3'-0"	48	-												
FB5	#7	3'-0"	48	-												
FB6	#5	10'-0"	1	-												
FB7	#5	10'-3"	1	-												
FB8	#5	10'-6"	1	-												
FB9	#5	10'-9"	1	-												
FB10	#5	11'-0"	1	-												
FB11	#5	11'-3"	1	-												
FB12	#5	11'-6"	1	-												
FB13	#7	9'-11"	1	-												
FB14	#7	10'-2"	1	-												
FB15	#7	10'-6"	1	-												
FB16	#7	10'-7"	1	-												
FB17	#7	10'-10"	1	-												
FB18	#7	11'-1"	1	-												
FB19	#7	11'-5"	1	-												
FB20	#5	8'-9"	1	-												
FB21	#5	9'-11"	1	-												
FB22	#5	10'-2"	1	-												
FB23	#5	10'-6"	1	-												
FB24	#5	10'-8"	1	-												
FB25	#5	10'-11"	1	-												
FB26	#5	11'-2"	1	-												
FB27	#7	9'-7"	1	-												
FB28	#7	9'-10"	1	-												
FB29	#7	10'-0"	1	-												
FB30	#7	10'-3"	1	-												
FB31	#7	10'-10"	1	-												
FB32	#7	11'-0"	1	-												
FB33	#7	11'-10"	1	-												
FB34	#9	27'-8"	24	-												
FB35	#5	8'-0"	70	-												
FB36	#5	7'-10"	28	20		2'-0"	3'-11"	2'-6"								
FB37	#8	11'-0"	137	-												
FB38	#5	11'-0"	137	-												
FB39	#5	36'-9"	46	-												
FB40	#5	33'-10"	46	-												

SECTION SUMMARY-TOTAL WEIGHT (LBS.)													SECTION TOTAL
ITEM NO.	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18		
544	0	0	7484.7	0	706.7	8255.4	5973.7	0	0	0	0		22420.5
544.2	0	0	0	0	0	0	0	0	0	0	0		0
544.21	0	0	0	0	0	0	0	0	0	0	0		0

MARK	SIZE	LENGTH	NO. PIECES	TYPE OF BEND	A	B	C	D	E	F	G	H	J	K	R	O
DECK (BRIDGE SHEET 12 OF 23)																
D1	#6	141'-2"	45	-												
D2	#9	111'-3"	49	-												
D3	#9	101'-3"	44	-												
D4	#7	131'-3"	90	M		0	8	13'-3"	7'-6"				8.37#		8.37#	
D5	#5	24'-10"	35	-												
D6	#5	23'-2"	84	-												
D7	#7	121'-3"	70	-												
D8	#5	4'-11"	82	17		2'-9"	1'-3"	3'-10"								
D9	#7	9'-3"	82	15	9	9	3'-6"	3'-11"								
D10	#5	10'-1"	82	20		4'-4"	3'-9"	0								
D11	#5	30'-11"	22	-												
D12	#5	9'-10"	22	-												
D13	#5	0'-7"	22	20		2'-4"	6'-8"	3'-3"								
D14	#5	3'-1"	32	TR	8.36	2'-7"						K				
D15	#5	2'-8"	32	TR	9'-8"	7'-8"						K				
D16	#5	2'-5"	32	TR	9'-8"	7'-5"						K				
D17	#5	2'-2"	32	TR	9'-8"	7'-2"						K				
D18	#5	2'-1"	32	TR	9'-8"	7'-1"						K				
D19	#5	4'-4"	24	17		7'-9"	5'-10"	11'-9"								
D20	#5	3'-2"	82	15	3	3	5'-8"	3'-8"					2.8.38#		10.38#	

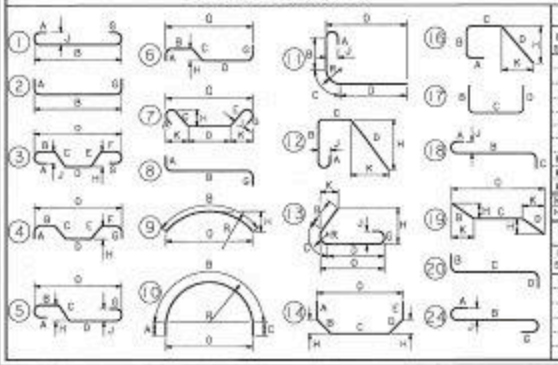
SECTION SUMMARY-TOTAL WEIGHT (LBS.)													SECTION TOTAL
ITEM NO.	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18		
544	149.4	0	4648.1	945.3	5578.4	0	4715.0	0	0	0	0		15837.2
544.2	0	0	0	0	0	0	0	0	0	0	0		0
544.21	0	0	0	0	0	0	0	0	0	0	0		0

SHEET SUMMARY-TOTAL WEIGHT (LBS.)													SHEET TOTAL
ITEM NO.	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18		
544	149.4	0	16840.1	945.3	10188.7	8255.4	15035.2	0	0	0	0		52370.2
544.2	0	0	0	0	0	0	0	0	0	0	0		0
544.21	0	0	0	0	0	0	0	0	0	0	0		0

GRAND SUMMARY-TOTAL WEIGHT (LBS.)													GRAND TOTAL
ITEM NO.	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18		
544	465.3	0	39217.1	1663.3	15588.1	8255.4	31935.6	0	0	0	0		97925.0
544.2	0	0	0	0	0	0	0	0	0	0	0		0
544.21	0	0	0	0	0	0	0	0	0	0	0		0

TYPICAL BAR BENDS

STANDARD INDUSTRY BENDS



RECOMMENDED END HOOKS ALL GRADES

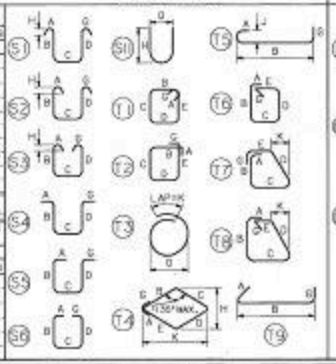
BAR SIZE	180° HOOKS D	180° HOOKS A or G	180° HOOKS J	90° HOOKS A or G
#3	2½"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3¾"	7"	5"	10"
#6	4½"	8"	6"	1'-0"
#7	5¼"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"
#9	9½"	1'-5"	11"	1'-7"
#10	10¾"	1'-7"	1'-1"	1'-10"
#11	12"	1'-9"	1'-3"	2'-0"
#14	18½"	2'-3"	1'-9"	2'-7"

NOTE: D=finished inside bend Ø of hook. See 1986 CRSI Manual pp-3&5.

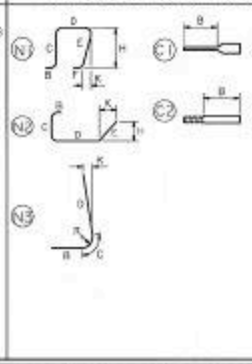
STIRRUP/TIE HOOK DIMENSIONS GRADES 40-50-60 ksi

BAR SIZE	D min.	90° HOOKS A or G	90° HOOKS Higgs	135° HOOKS A or G
#3	1½"	4"	4"	2½"
#4	2"	6"	6"	3"
#5	2½"	8"	8"	3½"
#6	4½"	1'-0"	7½"	4½"
#7	5¼"	1'-2"	9"	5¼"
#8	6"	1'-4"	10½"	6"

STIRRUPS & TIES



STANDARD N.H. & SPECIAL BENDS



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOM. DIMENSIONS ROUND DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES
#3	0.376	0.375	0.11
#4	0.668	0.500	0.20
#5	1.043	0.625	0.31
#6	1.502	0.750	0.44
#7	2.044	0.875	0.60
#8	2.670	1.000	0.79
#9	3.400	1.128	1.00
#10	4.303	1.270	1.27
#11	5.313	1.410	1.56
#14	7.650	1.693	2.25
#18	13.60	2.257	4.00

NOTES:

1. FIGURES IN CIRCLES SHOW TYPE OF BEND.
2. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-91).
3. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE SEE CURRENT (1980) CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", P.6-4.
4. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
5. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
6. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE; OTHERWISE STANDARD HOOKS ARE TO BE USED.
7. "M" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
8. WHERE BUSH DIFFERS FROM 45° DIMENSIONS "N" AND "R" MUST BE SHOWN.

▲ DENOTES BARS TO BE CUT IN FIELD.
△ DENOTES BARS TO BE BENT IN FIELD.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN DURHAM — BRIDGE NO. 114/111 — STATE PROJECT P-3816
LOCATION N.H. ROUTE 108 OVER OYSTER RIVER

REINFORCING SCHEDULE (SHEET 1 OF 2)

	BY	DATE		BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	DLP	5/88	CHECKED	JCA	9/88		
DRAWN	KJT	9/87	CHECKED	MWR	2/88		
TRACED			CHECKED				
CHECKED	JCA	2/90	CHECKED	PJP	5/90		

SHEET SCALE: NONE

FEDERAL PROJECT NO. BRS-2251(4) — SHEET NO. 32 — TOTAL SHEETS 87

BRIDGE SHEET 21 OF 23 — FILE NUMBER S-9-4-2