

GENERAL NOTE

Floor Drains
Exp. It Material
Copper Strips
Tar Paper

The cost of these items to be included in the unit price bid for Class "A" concrete. The quantities shown in the "BILL OF INCIDENTAL MATERIALS"

this sheet are approximate only, & the Contractor is responsible for furnishing enough material to complete the work.

Beveled Edges: All exposed edges shall be beveled $\frac{7}{8}$ " unless otherwise noted.

Piling: Piles to be driven to refusal or to sustain a minimum load of 50 tons per pile. Test pile to determine length of piles required shall be driven at location shown on this sheet. Test piles shall be accurately located so as to be used in the finished structure. Piles in intermediate bents to be driven to a minimum of 20 feet below Elevation 40.0. Jetting may be used if necessary.

Air Entrained Concrete: Class 'A' & Class 'D' concrete on the bridge superstructure, above construction joint of beams with underside of floor slab, shall be made with normal Portland Cement to which has been added at the mixer, an approved air entrained admixture as specified by amendment G-2, Article 4-1.9. of the Department's 1945 Specifications.

Tar Paper: Tar paper to be commercial grade
or roofing felt approximately 1/8" thick.

Slope Protection: Stone for slope protection shall conform to the requirements for Cyclopean Concrete stone in accordance with Section 7.6.1 of the specifications, except that mortar shall not be required. Stone to be dumped in place to a 2 ft minimum depth.

Removal of Existing Structure: This contract includes removal of the existing structure (A 1" steel box string span bridge) in accordance with plans and specifications. The bridge is to be kept open for traffic until the new bridge is complete. Match marking is not required. The steel stringers should be carefully removed without damage to the contractor remove trusses & floor beams in any manner he so desires. However, all truss steel shall be taken apart or cut into lengths which may be readily transported & stored or piled in a location convenient for loading.

ELEVATION

BILL OF INCIDENTAL MATERIAL

Prem. Exp. Ht Mat'l	No of Pieces	Size & Description	Location
" " " "	4	$\frac{1}{2} \times 1-6 \times 3-10"$	Wings
" " " "	2	$\frac{1}{4} \times 1-3 \frac{1}{2} \times 3-10"$	Top Bent #2
" " " "	1	$\frac{1}{4} \times 1-3 \frac{1}{2} \times 3-10"$	" #3
" " " "	2	$\frac{1}{4} \times 1-4 \times 2-7-5"$	Between Spans
" " " "	4	$\frac{3}{4} \times 1-5 \times 2-2 \frac{1}{2}"$	
Floor Drains	10	See Dwg 254-8	All Spans
Copper Strip	2	See Dwg 351-2 1/2" x 1/2" x 1/2"	Between Spans

PLAN

(Superstructure Removed)
2~25'-0" & 1~40'-0" R.C.D. Girder Spans-30'Sk.Rt
24'-0" Roadway ~ 1 1/2:1 Slopes
32'-0" Shoulders

PILE RECORD																			
BENT NO. 1					BENT NO. 2					BENT NO. 3					BENT NO. 4				
PILE NUMBER	CUT OFF ELEVATION AS SHOWN ON PLANS	TIP PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE LIN. FT.	CALCULATED BEARING CAPACITY TONS	PILE NUMBER	CUT OFF ELEVATION AS SHOWN ON PLANS	TIP PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE LIN. FT.	CALCULATED BEARING CAPACITY TONS	PILE NUMBER	CUT OFF ELEVATION AS SHOWN ON PLANS	TIP PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE LIN. FT.	CALCULATED BEARING CAPACITY TONS	PILE NUMBER	CUT OFF ELEVATION AS SHOWN ON PLANS	TIP PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE LIN. FT.	CALCULATED BEARING CAPACITY TONS
1	412.64				5	411.63				11	411.63				17	412.64			
2	412.64				6	411.63				12	411.63				18	412.64			
3	412.64				7	411.63				13	411.63				19	412.64			
4	412.64				8	411.63				14	411.63				20	412.64			
					9	411.63				15	411.63								
					10	411.63				16	411.63								

Note: The above listed data does not replace other records on piles required to be kept and submitted by the Resident Engineer. After all piles have been driven the Resident Engineer shall record the Tip of Pile Elevation as driven, Length of Pile in place, & calculated Bearing Capacity of each pile & return one Blue Print copy of this Sheet with this information to the Bridge Engineer so that the record can be placed on the original plans. Length of Pile in Place shown hereon is the actual length of Pile in the finished structure below Cutoff Elevation & is not necessarily the pay item.

G 524-B (2 Sheets)
G 351
H 71 & H 74
P 2

Bridge Over Massac Creek Sheet 1 of 5

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF
CRAC

MC CRACKEN

LONE OAK—LOVELACEVILLE—

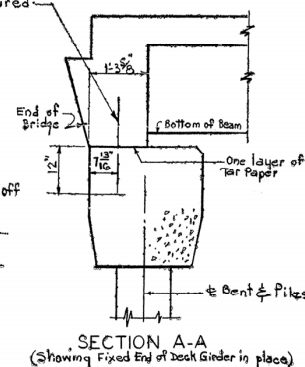
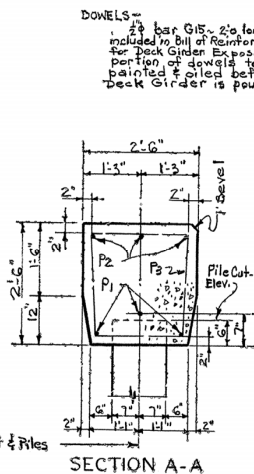
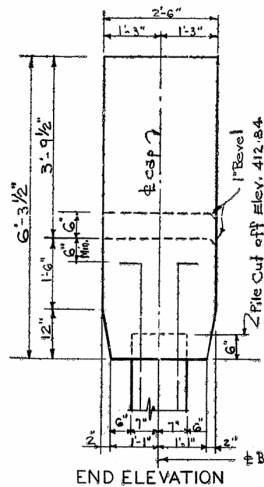
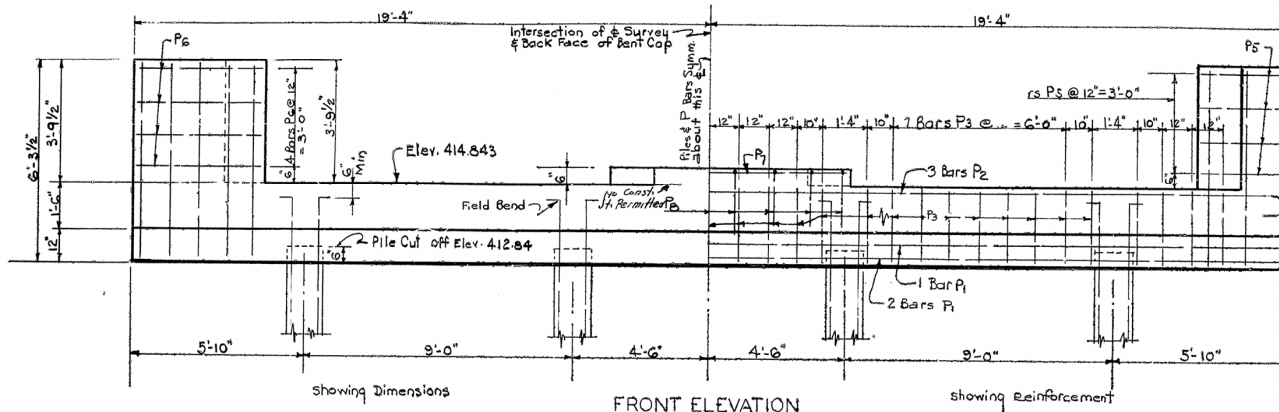
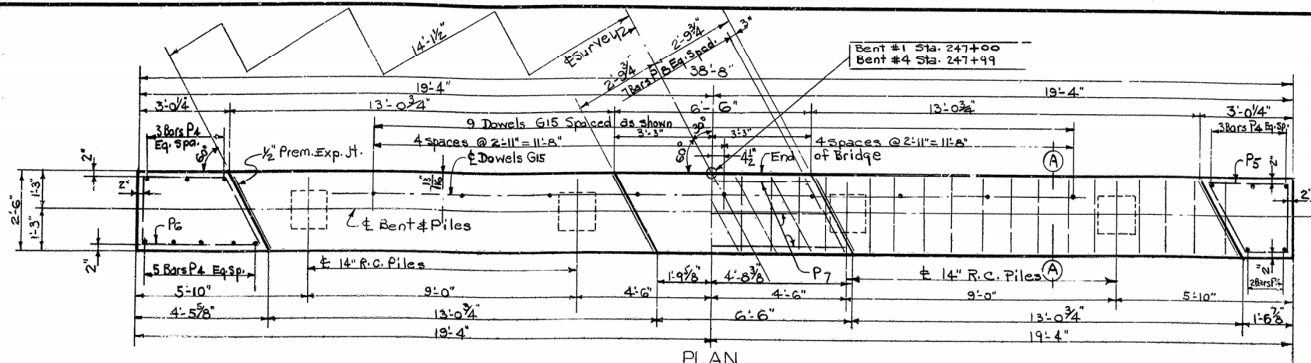
STATION 247+49.5

PROJECT NO.

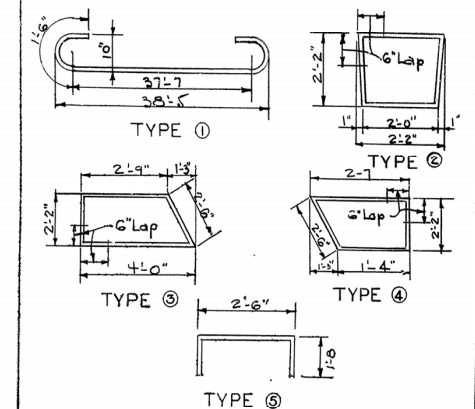
BRIDGE
NUMBER

DRAWN

NO. 1



BILL AND TYPES OF REINFORCEMENT									
Bar	Qty	Bar	Qty	Bar	Qty	Bar	Qty	Bar	Qty
P1	3	P2	3	P3	3	P4	3	P5	3
P6	3	P7	3	P8	3	P9	3	P10	3
P11	3	P12	3	P13	3	P14	3	P15	3
P16	3	P17	3	P18	3	P19	3	P20	3
P21	3	P22	3	P23	3	P24	3	P25	3
P26	3	P27	3	P28	3	P29	3	P30	3
P31	3	P32	3	P33	3	P34	3	P35	3
P36	3	P37	3	P38	3	P39	3	P40	3
P41	3	P42	3	P43	3	P44	3	P45	3
P46	3	P47	3	P48	3	P49	3	P50	3
P51	3	P52	3	P53	3	P54	3	P55	3
P56	3	P57	3	P58	3	P59	3	P60	3
P61	3	P62	3	P63	3	P64	3	P65	3
P66	3	P67	3	P68	3	P69	3	P70	3
P71	3	P72	3	P73	3	P74	3	P75	3
P76	3	P77	3	P78	3	P79	3	P80	3
P81	3	P82	3	P83	3	P84	3	P85	3
P86	3	P87	3	P88	3	P89	3	P90	3
P91	3	P92	3	P93	3	P94	3	P95	3
P96	3	P97	3	P98	3	P99	3	P100	3

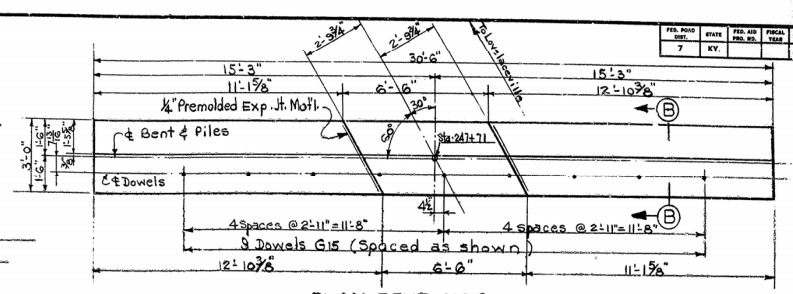
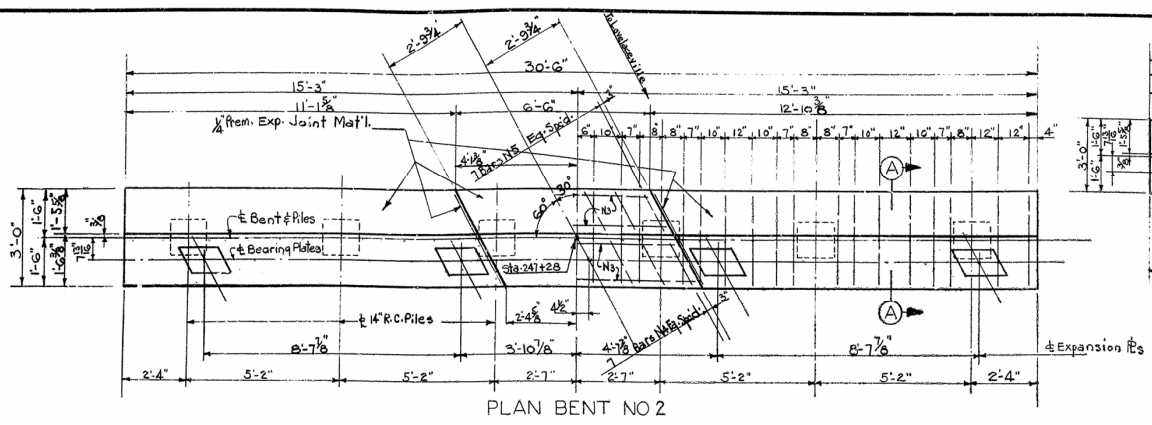


ESTIMATE OF QUANTITIES
FOR ONE END BENT CAP
Concrete, Class A 11.0 cu yds.
Reinforcement 1192 Lbs.

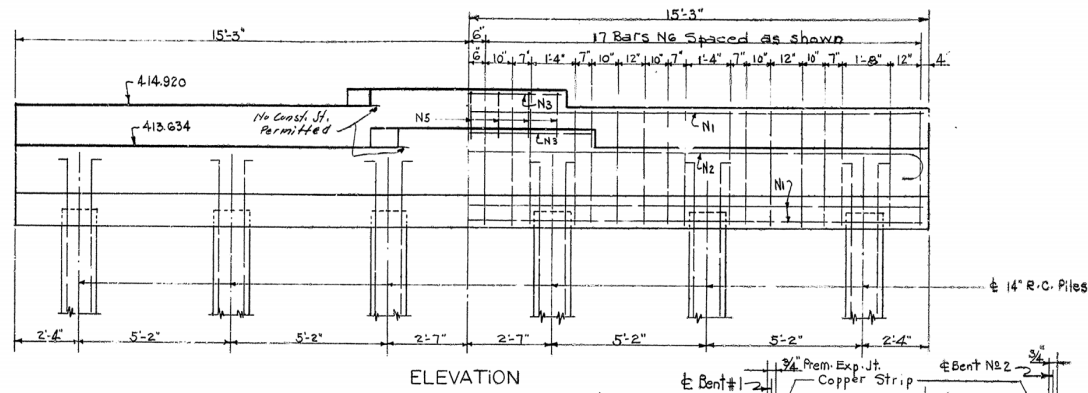
Bridge Over Massac Creek Sheet 2
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MC CRACKEN
LONE OAK LOVELACEVILLE
ROAD
STATION 247+49.5 PROJECT NO.
BRIDGE NUMBER DRAWING NO. 12431

DETAILS OF END BENT CAP NO1 AND NO4

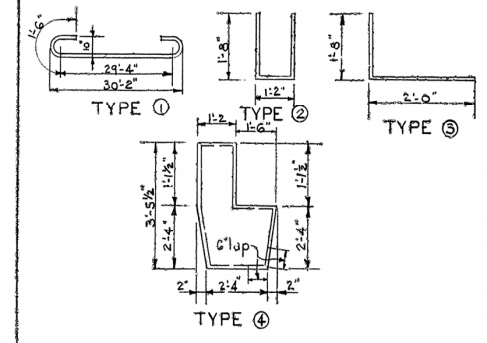
FED. PROJ. NO.	STATE	FED. AID	FED. DIST.	PROJECT	SHEET	TOTAL SHEETS
7	KY.					



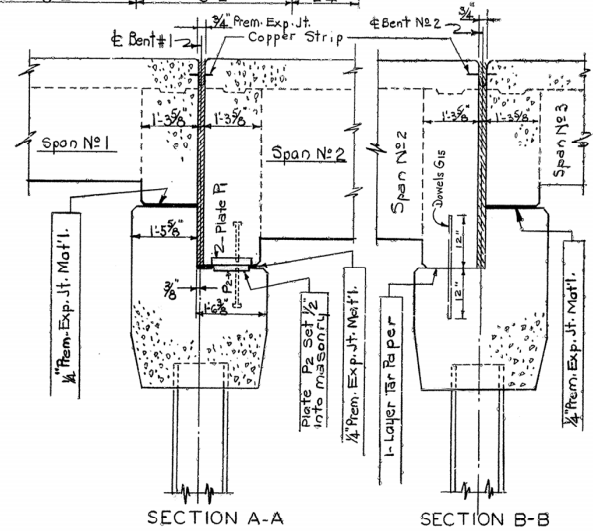
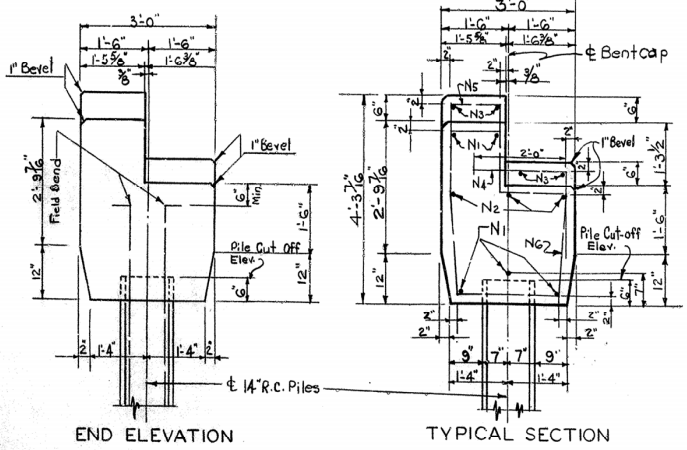
PLAN BENT NO 3
(Showing Dowels for fixed end & other construction details similar to Bent No 1)



BILL AND TYPES OF REINFORCEMENT									
Work	Qty	N ₁ Bent No 1	N ₂ Bent No 2	N ₃ Bent No 3	Length Ft.	In.	Location		
N1	5	5	5	5	30	2	Cap		
N2	3	3	3	3	32	4			
N3	4	4	4	4	6	3	Natch		
N4	7	7	7	7	5	7			
N5	7	7	7	7	5	4	Cap		
N6	34	34	34	34	12	5			



ESTIMATE OF QUANTITIES			
Item	Bent No 2	Bent No 3	
Concrete Class "A"	10.6	10.6	CuYds.
Reinforcement	1177	1177	Lbs.



Bridge Over Massac Creek Sheet 3

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MC CRACKEN
LONE OAK LOVE LACEVILLE
ROAD

STATION
BRIDGE NUMBER

PROJECT NO.
DRAWING NO. 2431

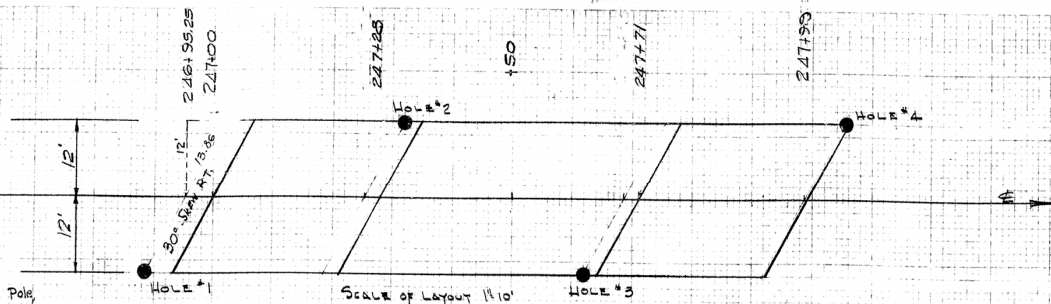
BENTS NO 2 & 3

SOUNDING FOR BRIDGE AT
STA. 247+49.5
30° SKIN RIGHT

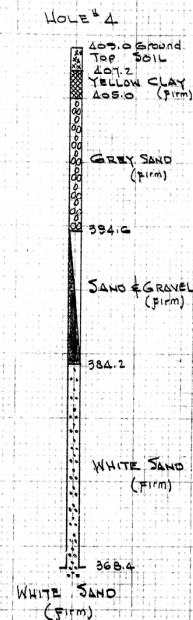
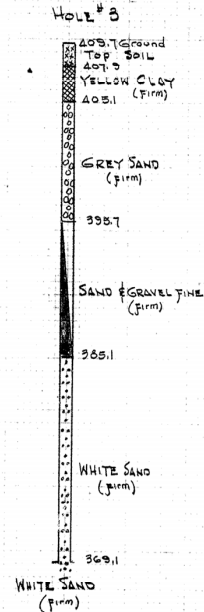
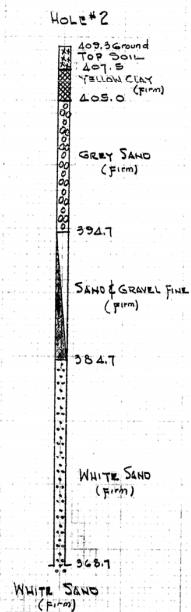
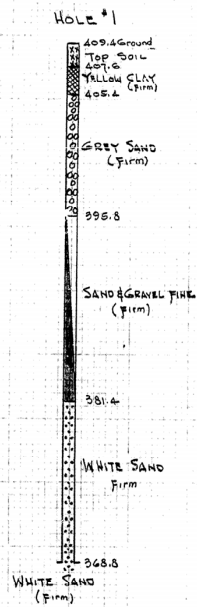
RECOMMENDATION -
25-40'-25' A.C.D.G. SPANS
30° SKIN RIGHT

T.B.M. #3
Railroad Spike in Side of Telephone Pole,
125' RT. STA. 251+50 Elev. 410.39

B.M. #12
Bolt in East root of 30' Walnut,
50' RT. STA. 235+50 Elev. 412.52



405
400
395
390
385
380
375
370
365



LEGEND FOR PLOTTING SOUNDINGS

- Top Soil
- YELLOW CLAY
- GREY SAND
- SAND & GRAVEL FINE
- WHITE SAND

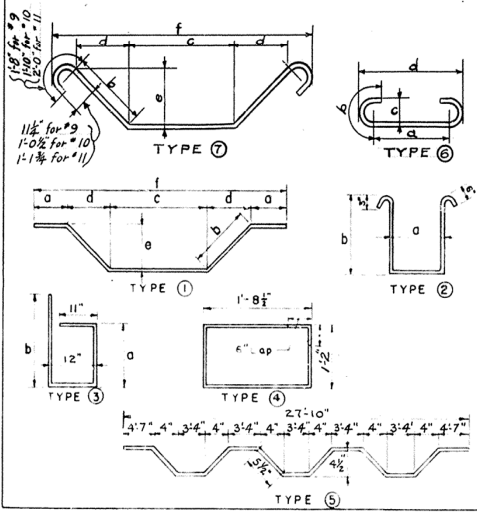
= SOUNDINGS =

Bridge Over Maabac Creek Sheet 5
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MADISON
LONE OAK, LOVELACEVILLE
ROAD

STATION 247+49.5 PROJECT 10
BRIDGE NUMBER DRAWN BY
NUMBER

BILL AND TYPES OF REINFORCEMENT (FOR ONE SPAN)

SPAN	MARK	TYPE	NUMBER	LENGTH	LOCATION	d	b	c	d	e	f
20 FT.						FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
G1	16	16	16	10	Beams	21 5	1 10	1 0	22 5		
G2	8	8	8	9	"	2 0	2 0	15 1 1/2	1 5 1/2	1 6 3/4	22 0 1/2
G3	8	8	8	24 8	"	1 10	17 7 1/2	1 3 1/2	1 4 3/4	21 10 1/2	
G4	108	108	108	4	"	1 1	2 0				
G5	32	20	26	5	End wall	1 7 1/2	2 5 1/2				
G6	10	10	10	4	"	1 1 1/2	1 1 1/2				
G7	24	12	3	5	"						
G8	8	8	8	10	"						
G9	61	61	61	22 8	Slab						
35 FT.											
G1	16	16	16	10	Beams	26 5	1 10	1 0 1/2	27 5 1/2		
G2	8	8	8	9	"	2 0	2 5 1/2	19 0	1 8 3/4	1 10 26 5 3/4	
G3	8	8	8	30 2	"	2 3	3 22 0	1 7 1/2	1 9 1/2	26 11 3/4	
G4	116	116	116	4	"	1 1	2 3 1/2				
G5	32	20	26	6	End wall	1 11 2 9					
G6	10	10	10	5	"	1 5	2 3				
G7	32	16	3	5	"						
G8	8	8	8	10	"						
G9	61	61	61	27 8	Slab						
30 FT.											
G1	16	16	16	11	Beams	31 4	2 0	1 1 1/2	32 5 1/2		
G2	8	8	8	11	"	2 0	2 7 1/2	23 7 1/2	1 10 1/2	1 11 31 3 3/4	
G3	8	8	8	35 6	"	2 3	2 26 9 1/2	1 8 1/2	1 9 3/4	32 1	
G4	148	148	148	4	"	1 1	2 5				
G5	32	20	26	6	End wall	2 0 1/2	2 10 1/2				
G6	10	10	10	5	"	1 6 1/2	2 4 1/2				
G7	32	16	3	5	"						
G8	8	8	8	10	"						
G9	61	61	61	32 8	Slab						
35 FT.											
G1	16	16	16	11	Beams	36 4	2 0	1 1 1/2	37 5 1/2		
G2	8	8	8	11	"	2 0	3 4 1/2	26 9	2 4 1/2	2 6 35 6 1/4	
G3	8	8	8	41 0	"	3 1 1/2	30 9	2 2 1/2	2 4	37 1 1/2	
G4	128	128	128	4	"	1 1	2 11 1/2				
G5	32	20	26	7	End walls	2 7 3 5					
G6	10	10	10	6	"	2 1	2 11				
G7	40	20	3	5	"						
G8	8	8	8	10	"						
G9	61	61	61	37 8	Slab						
40 FT.											
G1	16	16	16	11	Beams	41 4	2 0	1 1 1/2	42 5 1/2		
G2	8	8	8	11	"	2 0	4 3 29 6	3 0 1/2	3 1 1/2	39 6	
G3	8	8	8	46 6	"	3 4	34 6	2 10 2	11 42 1 1/2		
G4	100	100	100	4	"	1 1	3 7				
G5	32	20	26	8	End walls	3 2 1/2	4 0 1/2				
G6	10	10	10	7	"	2 8 1/2	3 6 1/2				
G7	40	20	3	5	"						
G8	8	8	8	10	"						
G9	122	122	122	21 9	Slab						
45 FT.											
G1	20	20	20	11	Beams	46 4	2 0	1 1 1/2	47 5 1/2		
G2	4	4	4	42 0	"	2 0	4 3 29 4 1/2	3 0 1/2	3 2 39 5 3/4		
G3	8	8	8	47 0	"	2 0	4 3 34 4 1/2	3 0 1/2	3 2 44 8 3/4		
G4	8	8	8	51 6	"	4 0 1/2	39 4 1/2	2 10 3	0 47 1 1/2		
G5	100	100	100	4	"	1 5	3 7 1/2				
G6	32	20	26	9	End walls	3 3 4 1					
G7	10	10	10	8	"	2 9	3 7				
G8	40	20	3	5	"						
G9	8	8	8	10	"						
G10	122	122	122	24 3	Slab						
50 FT.											
G1	20	20	20	11	Beams	51 4	2 0	1 1 1/2	52 5 1/2		
G2	4	4	4	4	"	2 0	5 3 30 7 1/2	3 1 1/2	3 10 42 1 1/2		
G3	8	8	8	51 5	"	2 0	5 3 36 9 1/2	3 1 1/2	3 10 49 3 3/4		
G4	8	8	8	57 1	"	5 0 1/2	42 11 1/2	3 7 1/2	3 8 52 1 1/4		
G5	92	92	92	4	"	1 5	4 4				
G6	32	20	26	10 5	End walls	3 11 1/2	4 3 1/2				
G7	10	10	10	9 5	"	3 5 1/2	4 3 1/2				
G8	40	20	3	5	"						
G9	8	8	8	10	"						
G10	122	122	122	26 9	Slab						



SPECIFICATIONS:—Kentucky Department of Highways, Current Specifications with Amendments.

DESIGN LOAD:—Designed for H₂₀-44 loading with a minimum loading H₁₀-20 as specified in A.A.S.H.O.-1953.

DESIGN STRESSES: $f_c = 1000 \text{ psi}$; $f_s = 1000 \text{ psi}$; $n = 10$; $v = 180 \text{ psi}$.

CONCRETE:—Class "A" to be used thruout.

REINFORCEMENT:—Dimensions from face of concrete to bars are clear distances except as otherwise shown. Dimensions for bar spacing are distances center to center of bars. The deformations of all reinforcing steel bars shall conform to A.S.T.M.-A-305 current specifications.

FLOOR DRAINS:—The cost of these items to be included in the unit price bid for Class "A" concrete.

EXPANSION JOINT MATERIAL, COPPER STRIP AND TAR PAPER:—Floor drains may be either Cast Iron or Aluminum.

TAR PAPER:—To be commercial grade tar paper or roofing felt approximately $\frac{1}{8}$ thick.

BEVELED EDGES:—All exposed edges to be beveled $\frac{1}{4}$ unless otherwise noted.

FOUNDARY NOTE:—Cast iron drains to be gray iron castings A.S.T.M. A-48 current specifications except that tensile and transverse tests are not required. Form T-521 Report of Field Inspection of Castings is to be submitted to the laboratory.

Aluminum Alloy drains shall conform to A.S.T.M. B-26 Class CS-22 current specifications.

Aluminum Drains shall be given a corrosive resistant coating to prevent corrosion by concrete.

EXPANSION PLATES:—All plates to be A.S.T.M.-B-22 Class "C" or B-100 N1 or N2 2 current specifications with sliding surfaces finely polished. Machine Bolts to be furnished but are not included in the weight of Plates given.

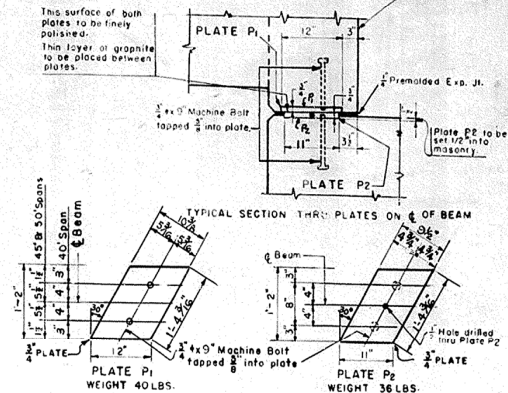
Cost of Bolts to be included in unit price bid for Plates.

ESTIMATE OF QUANTITIES

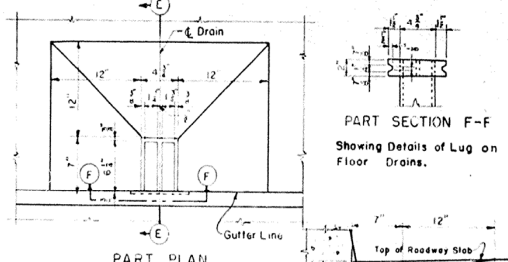
Span	Class "A" Concrete Cu. Yds.	Reinforcement Lbs.	Class "B" Bronze Lbs.
Single	31.1	7505	
Intermediate	29.1	7397	
End	30.2	7446	
Single	38.9	9478	
Intermediate	36.6	9350	
End	37.8	9409	
Single	45.7	12148	
Intermediate	43.3	12020	
End	44.5	12089	
Single	51.2	13878	
Intermediate	54.2	13730	
End	55.7	13799	
Single	70.7	15408	304
Intermediate	67.0	15240	304
End	68.9	15329	304
Single	85.4	19000	304
Intermediate	81.8	18832	304
End	83.6	18911	304
Single	104.5	20771	304
Intermediate	100.1	20592	304
End	102.3	20681	304

TABLE SHOWING NUMBER & SPACING OF DRAINS

Span	Number of Drains Per Span	Spacing of Drains (Each Gutter)
20	2	11'-6"
25	2	14'-0"
30	4	8'-6" 16'-0" 8'-6"
35	4	9'-0" 20'-0" 9'-0"
40	6	9'-0" 12'-6" 12'-6" 9'-0"
45	6	9'-0" 15'-0" 15'-0" 9'-0"
50	6	11'-6" 15'-0" 15'-0" 11'-6"



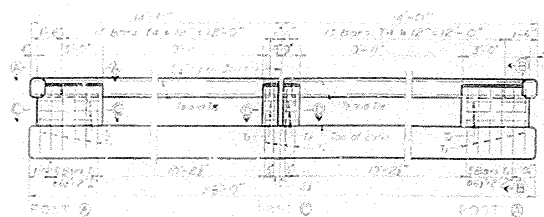
DETAILS OF EXPANSION PLATES
Plates P1 & P2 Required for each 40', 45' & 50' Span
(Details shown are for Right Skew) (Reverse for Left Skew)



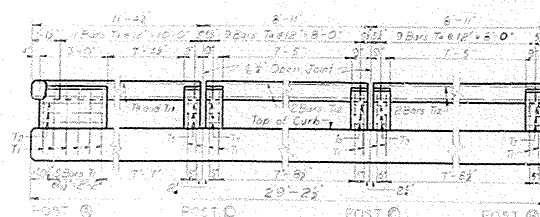
Spans	Cast Iron Lbs.	Aluminum Lbs.
20' to 40' Incl.	49	19
45' to 50' Incl.	56	23

DETAILS OF FLOOR DRAINS

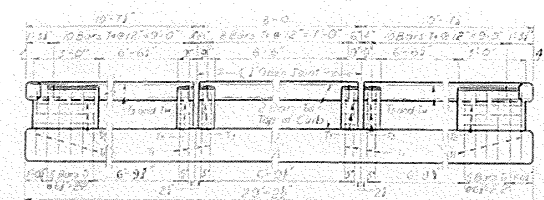
SHEET 2 OF 2
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
STANDARD CONCRETE BRIDGE DECK GIRDERS
30'SKEW 24FT. ROADWAY
SPANS 20' TO 50'
G.524 B



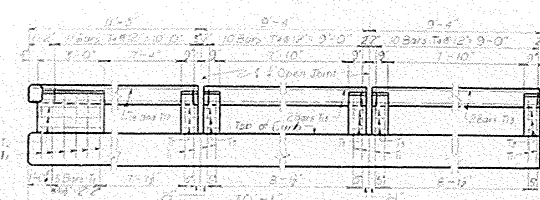
SINGLE SPAN — STRAIGHT



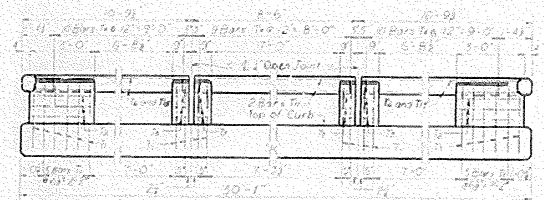
END SPAN — LONG RAIL — 30° SKEW



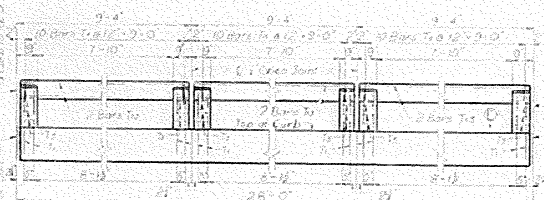
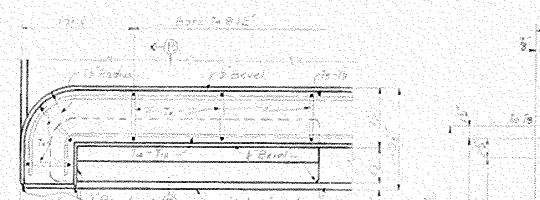
SINGLE SPAN — 30° SKEW



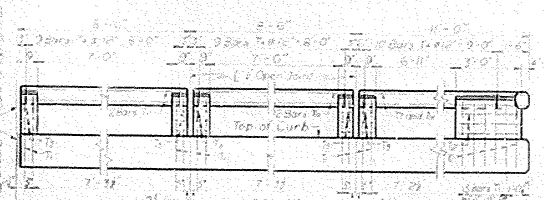
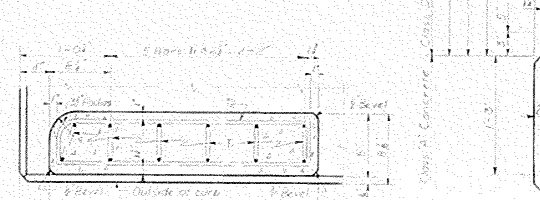
END SPAN — LONG RAIL — 45° SKEW



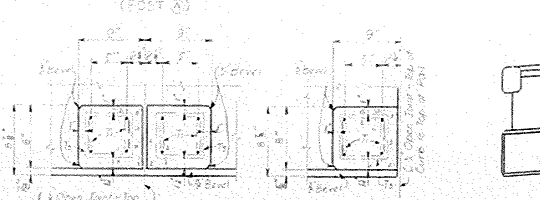
SINGLE SPAN — 45° SKEW



INTERMEDIATE SPAN



END SPAN — STRAIGHT, OR SHORT RAIL 30° OR 45° SKEW



SECTION D-D (POST C) SECTION E-E (POST D)

25' R.C.D.G. SPAN		NUMBER												CONCRETE CLASS 0 CU. YDS.	REINFORCEMENT LBS.	
		T ₁	T ₂	T ₃	T ₄	T ₅	T ₆	T ₇	T ₈	T ₉	T ₁₀	T ₁₁	T ₁₂			
STANDARD	SINGLE	TWO RAILS	22	12	60	-	-	-	-	-	-	-	-	8	1.7	558
	INTERMEDIATE	TWO RAILS	24	-	30	60	-	-	-	-	24	-	-	-	1.4	486
	END	TWO RAILS	32	6	30	60	-	-	-	-	-	-	4	-	1.6	554
	SINGLE	TWO RAILS	40	12	24	64	8	-	-	-	-	8	-	-	1.8	636
C.C.D.G. SPAN	INTERMEDIATE	TWO RAILS	24	-	36	60	-	-	-	-	-	24	-	-	1.4	486
	END	LONG RAIL	16	3	15	31	-	-	-	-	-	-	-	2	0.8	283
	END	SHORT RAIL	16	3	15	30	-	-	-	-	-	-	2	-	0.8	277
	SINGLE	TWO RAILS	40	12	24	66	-	-	-	-	-	8	-	-	1.9	645
C.C.D.G. SPAN	INTERMEDIATE	TWO RAILS	24	-	36	60	-	-	-	-	-	24	-	-	1.4	486
	END	LONG RAIL	16	3	15	32	-	-	-	-	-	8	-	2	0.8	289
	END	SHORT RAIL	16	3	15	30	-	-	-	-	-	-	8	-	0.8	277

NO.	TYPE	LENGTH	LOCATION		NO.	
			FT.	IN.	FT.	IN.
1	(1)	6	7	0	0	0
2	(2)	7	0	0	0	0
3	(3)	7	0	0	0	0
4	(4)	2	9	10	10	2 1/2
5	(5)	10	11	0	0	0
6	(6)	11	1	0	0	0
7	(7)	11	5	0	0	0
8	(8)	11	8	0	0	0
9	(9)	14	3	0	0	0
10	(10)	8	2	0	0	0
11	(11)	8	7	0	0	0
12	(12)	9	0	0	0	0
13	(13)	10	5	0	0	0
14	(14)	10	6	0	0	0
15	(15)	10	9	0	0	0
16	(16)	11	1	0	0	0
17	(17)	11	5	0	0	0
18	(18)	13	9	0	0	0

GENERAL NOTE

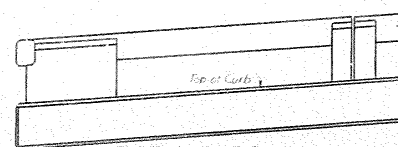
1. SPECIFICATIONS: Kentucky Department of Highways current Specifications and Amendments.

2. CONCRETE: Class B concrete to be used in Roadbed.

3. REINFORCEMENT: Dimensions from face of concrete to bars or wear surfaces unless otherwise shown. Dimensions for bar spacing are distances center to center of bars.

4. The dimensions of all reinforcing steel bars shall conform to A.S.T.M. designation: A 305 - current specifications.

5. BEVELED EDGES: All exposed edges to be beveled 5' unless otherwise noted.



PART ELEVATION

When bridge is on a plus or minus grade the top of all posts and rail shall be parallel to the grade line. Sides of all posts shall be vertical.

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS FRANKFORT

STANDARD HANDRAIL
DECK GIRDER 25 FT SPAN
ALL ROADWAY WIDTHS

DESIGNED BY: _____ BRIDGE ENGINEER
STATE HIGHWAY ENGINEER

BRIDGE

TABLE OF REINFORCEMENT AND ESTIMATE OF QUANTITIES		NUMBER																CONCRETE CLASS OF C.U. VOL.	REINFORCEMENT LBS.
40' R.C.G. SPAN		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
SINGLE	TWO RAILS	48	12	36	22	8												2.5	843
	INTERMEDIATE	32		48	98													2.1	701
	END	40	6	42	22	4												2.3	775
SINGLE	TWO RAILS	68	12	36	36	6												2.5	858
	INTERMEDIATE	32		48	80													2.1	701
	END	20	3	21	47													1.2	393
SINGLE	TWO RAILS	48	12	36	36													2.5	865
	INTERMEDIATE	32		48	88													2.1	701
	END	20	3	21	47													1.2	397
SINGLE	TWO RAILS	20	3	21	46	2												1.1	388
	INTERMEDIATE	32		48	88													2.1	701
	END	20	3	21	47													1.2	397
SINGLE	TWO RAILS	20	3	21	46	2												1.1	388
	INTERMEDIATE	32		48	88													2.1	701
	END	20	3	21	47													1.2	397

BILL AND TYPES OF REINFORCEMENT									
NO.	TYPE	NO.	TYPE	NO.	TYPE	NO.	TYPE	NO.	TYPE
1	1/2"	1	1/2"	1	1/2"	1	1/2"	1	1/2"
2	3/4"	2	3/4"	2	3/4"	2	3/4"	2	3/4"
3	1"	3	1"	3	1"	3	1"	3	1"
4	1 1/4"	4	1 1/4"	4	1 1/4"	4	1 1/4"	4	1 1/4"
5	1 1/2"	5	1 1/2"	5	1 1/2"	5	1 1/2"	5	1 1/2"
6	2"	6	2"	6	2"	6	2"	6	2"
7	2 1/2"	7	2 1/2"	7	2 1/2"	7	2 1/2"	7	2 1/2"
8	3"	8	3"	8	3"	8	3"	8	3"
9	3 1/2"	9	3 1/2"	9	3 1/2"	9	3 1/2"	9	3 1/2"
10	4"	10	4"	10	4"	10	4"	10	4"
11	4 1/2"	11	4 1/2"	11	4 1/2"	11	4 1/2"	11	4 1/2"
12	5"	12	5"	12	5"	12	5"	12	5"
13	5 1/2"	13	5 1/2"	13	5 1/2"	13	5 1/2"	13	5 1/2"
14	6"	14	6"	14	6"	14	6"	14	6"
15	6 1/2"	15	6 1/2"	15	6 1/2"	15	6 1/2"	15	6 1/2"
16	7"	16	7"	16	7"	16	7"	16	7"
17	7 1/2"	17	7 1/2"	17	7 1/2"	17	7 1/2"	17	7 1/2"
18	8"	18	8"	18	8"	18	8"	18	8"
19	8 1/2"	19	8 1/2"	19	8 1/2"	19	8 1/2"	19	8 1/2"
20	9"	20	9"	20	9"	20	9"	20	9"
21	9 1/2"	21	9 1/2"	21	9 1/2"	21	9 1/2"	21	9 1/2"
22	10"	22	10"	22	10"	22	10"	22	10"
23	10 1/2"	23	10 1/2"	23	10 1/2"	23	10 1/2"	23	10 1/2"
24	11"	24	11"	24	11"	24	11"	24	11"
25	11 1/2"	25	11 1/2"	25	11 1/2"	25	11 1/2"	25	11 1/2"
26	12"	26	12"	26	12"	26	12"	26	12"
27	12 1/2"	27	12 1/2"	27	12 1/2"	27	12 1/2"	27	12 1/2"
28	13"	28	13"	28	13"	28	13"	28	13"
29	13 1/2"	29	13 1/2"	29	13 1/2"	29	13 1/2"	29	13 1/2"
30	14"	30	14"	30	14"	30	14"	30	14"
31	14 1/2"	31	14 1/2"	31	14 1/2"	31	14 1/2"	31	14 1/2"
32	15"	32	15"	32	15"	32	15"	32	15"
33	15 1/2"	33	15 1/2"	33	15 1/2"	33	15 1/2"	33	15 1/2"
34	16"	34	16"	34	16"	34	16"	34	16"
35	16 1/2"	35	16 1/2"	35	16 1/2"	35	16 1/2"	35	16 1/2"
36	17"	36	17"	36	17"	36	17"	36	17"
37	17 1/2"	37	17 1/2"	37	17 1/2"	37	17 1/2"	37	17 1/2"
38	18"	38	18"	38	18"	38	18"	38	18"
39	18 1/2"	39	18 1/2"	39	18 1/2"	39	18 1/2"	39	18 1/2"
40	19"	40	19"	40	19"	40	19"	40	19"
41	19 1/2"	41	19 1/2"	41	19 1/2"	41	19 1/2"	41	19 1/2"
42	20"	42	20"	42	20"	42	20"	42	20"
43	20 1/2"	43	20 1/2"	43	20 1/2"	43	20 1/2"	43	20 1/2"
44	21"	44	21"	44	21"	44	21"	44	21"
45	21 1/2"	45	21 1/2"	45	21 1/2"	45	21 1/2"	45	21 1/2"
46	22"	46	22"	46	22"	46	22"	46	22"
47	22 1/2"	47	22 1/2"	47	22 1/2"	47	22 1/2"	47	22 1/2"
48	23"	48	23"	48	23"	48	23"	48	23"
49	23 1/2"	49	23 1/2"	49	23 1/2"	49	23 1/2"	49	23 1/2"
50	24"	50	24"	50	24"	50	24"	50	24"
51	24 1/2"	51	24 1/2"	51	24 1/2"	51	24 1/2"	51	24 1/2"
52	25"	52	25"	52	25"	52	25"	52	25"
53	25 1/2"	53	25 1/2"	53	25 1/2"	53	25 1/2"	53	25 1/2"
54	26"	54	26"	54	26"	54	26"	54	26"
55	26 1/2"	55	26 1/2"	55	26 1/2"	55	26 1/2"	55	26 1/2"
56	27"	56	27"	56	27"	56	27"	56	27"
57	27 1/2"	57	27 1/2"	57	27 1/2"	57	27 1/2"	57	27 1/2"
58	28"	58	28"	58	28"	58	28"	58	28"
59	28 1/2"	59	28 1/2"	59	28 1/2"	59	28 1/2"	59	28 1/2"
60	29"	60	29"	60	29"	60	29"	60	29"
61	29 1/2"	61	29 1/2"	61	29 1/2"	61	29 1/2"	61	29 1/2"
62	30"	62	30"	62	30"	62	30"	62	30"
63	30 1/2"	63	30 1/2"	63	30 1/2"	63	30 1/2"	63	30 1/2"
64	31"	64	31"	64	31"	64	31"	64	31"
65	31 1/2"	65	31 1/2"	65	31 1/2"	65	31 1/2"	65	31 1/2"
66	32"	66	32"	66	32"	66	32"	66	32"
67	32 1/2"	67	32 1/2"	67	32 1/2"	67	32 1/2"	67	32 1/2"
68	33"	68	33"	68	33"	68	33"	68	33"
69	33 1/2"	69	33 1/2"	69	33 1/2"	69	33 1/2"	69	33 1/2"
70	34"	70	34"	70	34"	70	34"	70	34"
71	34 1/2"	71	34 1/2"	71	34 1/2"	71	34 1/2"	71	34 1/2"
72	35"	72	35"	72	35"	72	35"	72	35"
73	35 1/2"	73	35 1/2"	73	35 1/2"	73	35 1/2"	73	35 1/2"
74	36"	74	36"	74	36"	74	36"	74	36"
75	36 1/2"	75	36 1/2"	75	36 1/2"	75	36 1/2"	75	36 1/2"
76	37"	76	37"	76	37"	76	37"	76	37"
77	37 1/2"	77	37 1/2"	77	37 1/2"	77	37 1/2"	77	37 1/2"
78	38"	78	38"	78	38"	78	38"	78	38"
79	38 1/2"	79	38 1/2"	79	38 1/2"	79	38 1/2"	79	38 1/2"
80	39"	80	39"	80	39"	80	39"	80	39"
81	39 1/2"	81	39 1/2"	81	39 1/2"	81	39 1/2"	81	39 1/2"
82	40"	82	40"	82	40"	82	40"	82	40"
83	40 1/2"	83	40 1/2"	83	40 1/2"	83	40 1/2"	83	40 1/2"
84	41"	84	41"	84	41"	84	41"	84	41"
85	41 1/2"	85	41 1/2"	85	41 1/2"	85	41 1/2"	85	41 1/2"
86	42"	86	42"	86	42"	86	42"	86	42"
87	42 1/2"	87	42 1/2"	87	42 1/2"	87	42 1/2"	87	42 1/2"
88	43"	88	43"	88	43"	88	43"	88	43"
89	43 1/2"	89	43 1/2"	89	43 1/2"	89	43 1/2"	89	43 1/2"
90	44"	90	44"	90	44"	90	44"	90	44"
91	44 1/2"	91	44 1/2"	91	44 1/2"	91	44 1/2"	91	44 1/2"
92	45"	92	45"	92	45"	92	45"	92	45"
93	45 1/2"	93	45 1/2"	93	45 1/2"	93	45 1/2"	93	45 1/2"
94	46"	94	46"	94	46"	94	46"	94	46"
95	46 1/2"	95	46 1/2"	95	46 1/2"	95	46 1/2"	95	46 1/2"
96	47"	96	47"	96	47"	96	47"	96	47"
97	47 1/2"	97	47 1/2"	97	47 1/2"	97	47 1/2"	97	47 1/2"
98	48"	98	48"	98	48"	98	48"	98	48"
99	48 1/2"	99	48 1/2"	99	48 1/2"	99	48 1/2"	99	48 1/2"
100	49"	100	49"	100	49"	100	49"	100	49"
101	49 1/2"	101	49 1/2"	101	49 1/2"	101	49 1/2"	101	49 1/2"
102	50"	102	50"	102	50"	102	50"	102	50"
103	50 1/2"	103	50 1/2"	103	50 1/2"	103	50 1/2"	103	50 1/2"
104	51"	104	51"	104	51"	104	51"	104	51"
105	51 1/2"	105	51 1/2"	105	51 1/2"	105	51 1/2"	105	51 1/2"
106	52"	106	52"	106	52"	106	52"	106	52"
107	52 1/2"	107	52 1/2"	107	52 1/2"	107	52 1/2"	107	52 1/2"
108	53"	108	53"	108	53"	108	53"	108	53"
109	53 1/2"	109	53 1/2"	109	53 1/2"	109	53 1/2"	109	53 1/2"
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111	54 1/2"	111	54 1/2"	111	54 1/2"	111	54 1/2"	111	54 1/2"
112	55"	112	55"	112	55"	112	55"	112	55"
113	55 1/2"	113	55 1/2"	113	55 1/2"	113	55 1/2"	113	55 1/2"
114	56"	114	56"	114	56"	114	56"	114	56"
115	56 1/2"	115	56 1/2"	115	56 1/2"	115	56 1/2"	115	56 1/2"
116	57"	116	57"	116	57"	116	57"	116	57"
117	57 1/2"	117	57 1/2"	117	57 1/2"	117	57 1/2"	117	57 1/2"
118	58"	118							