

# GENERAL NOTES

Specifications: St. Louis County Standard Construction Specifications with Special Provisions.

Design Specifications: A.A.S.H.O. - 1957

Loading: H20-S16-44 or an alternate load of 2-24,000 lb. axles spaced at 4 foot centers.

Design Unit Stresses: Concrete ----- 1,200 p.s.i.  
Reinforcing Steel ----- 20,000 p.s.i.

All concrete shall be Class A.

All exposed edges of concrete shall be beveled 3/4" unless otherwise shown or noted.

All dimensions to reinforcing steel on the detail drawings are to centerline of bar except where the clear distance is noted from the face of concrete.

All reinforcing steel shall be lapped a minimum of 32 diameters unless otherwise shown or noted.

For Utilities see Special Provisions.

Construction joints shall be made only where shown on the plans, or as otherwise directed by the Engineer.

Provide keys at all construction joints.

Where filled joints are specified on the plans, the joint filler shall conform to the requirements for "Gray Rubber Compound Joints," see Special Provisions. Payment for furnishing and placing this item shall be included in the unit contract price bid for concrete.

Note: The channel bottom and sloping banks will be lined with riprap at the upstream and downstream ends of the culvert. (See Roadway Plans).

## PLAN

# INDEX OF DRAWINGS

- 1 GENERAL PLAN
- 2 LOG OF BORINGS AND TABLE OF ESTIMATED QUANTITIES
- 3 CULVERT DETAILS
- 4 CULVERT DETAILS
- 5 TYPICAL BAR TYPES AND HOOK DIMENSIONS
- 6 BAR LIST AND SPECIAL BENDING DETAILS

## SECTION A-A

# BENCH MARK (U.S.G.S. DATUM)

B.M. 35 is on NW abutment of bridge over creek on Woodson Rd. Elev. 551.80.

## LOCATION SKETCH

ST. LOUIS COUNTY  
BOARD OF PUBLIC WORKS  
DIVISION OF HIGHWAYS  
**INNER BELT EXPRESSWAY**  
CULVERT AT RIVER DES PERES

GENERAL PLAN

DATE: May 23, 1962

SVERDRUP & PARCEL ENGINEERING CO.  
ST. LOUIS, MO.

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Division of Bridges

RTE-725

SHEET 53 of 105  
A-2806

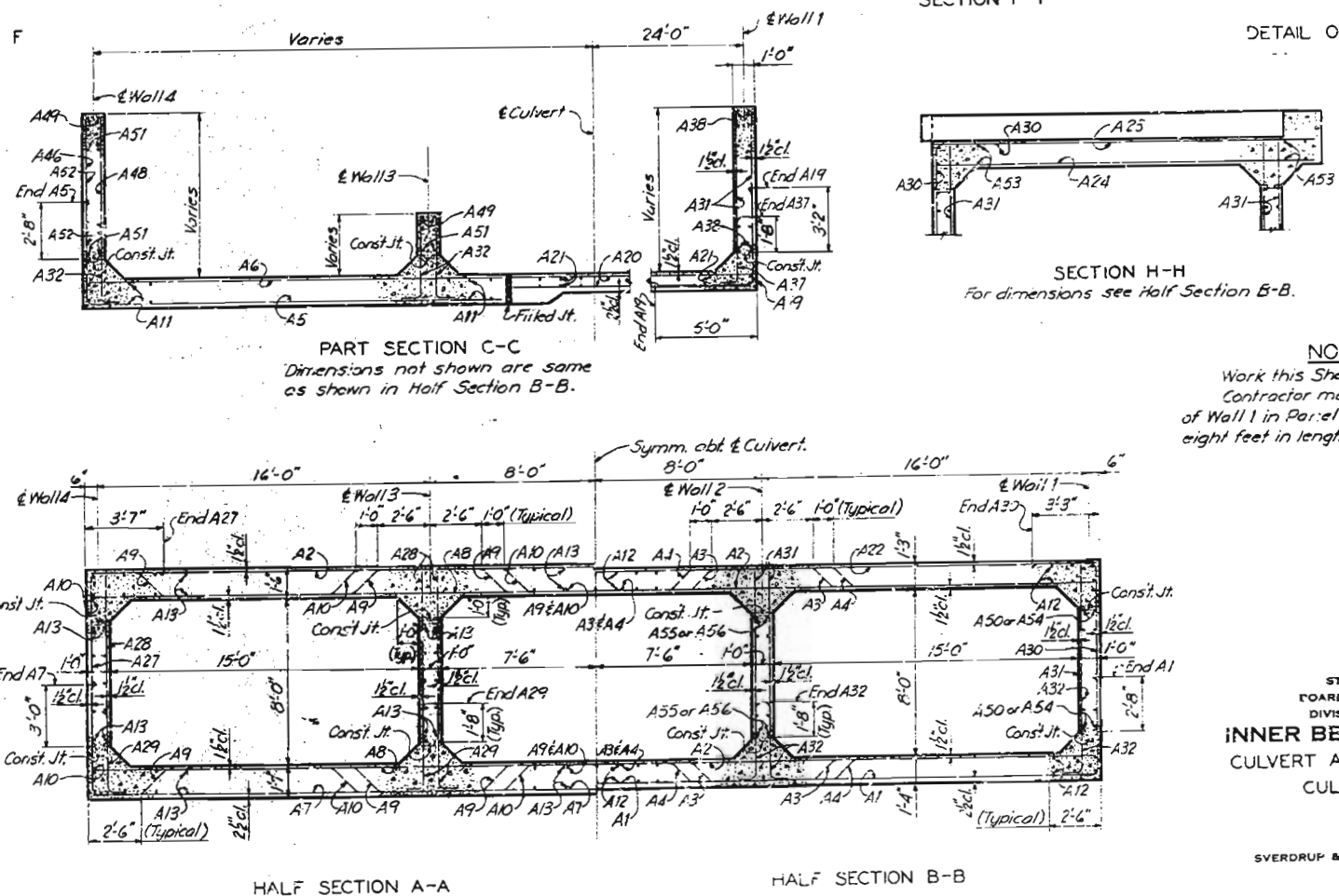
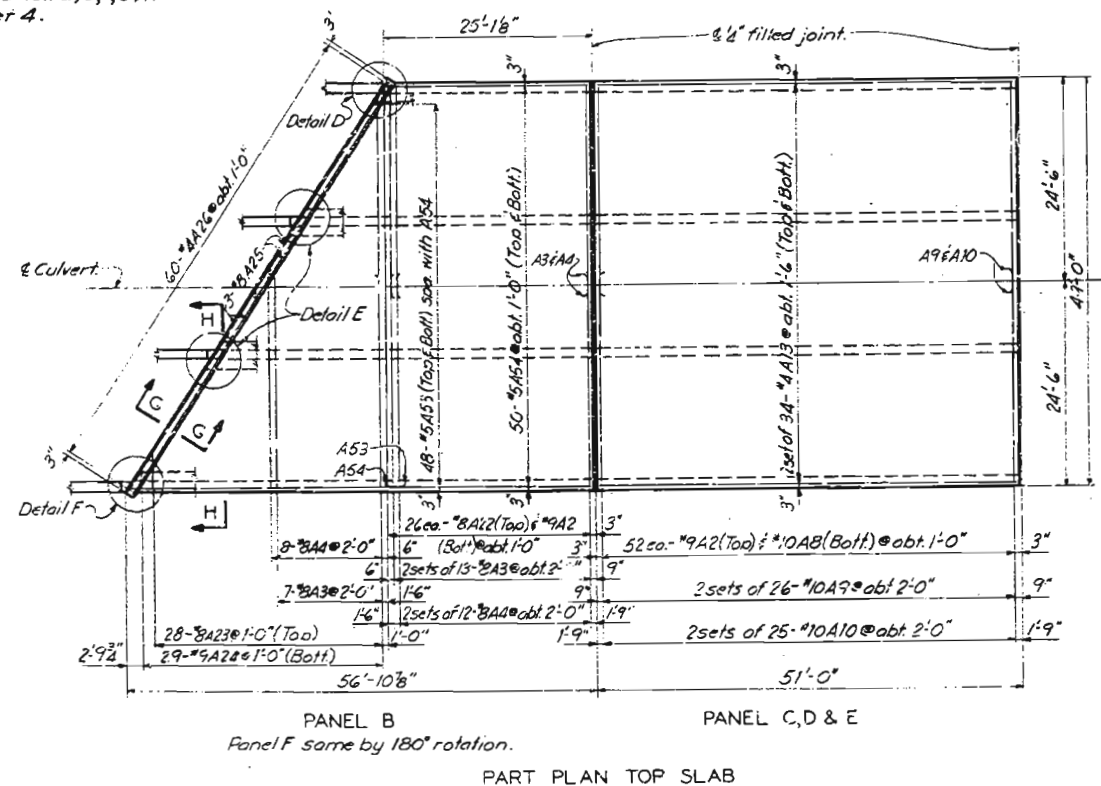
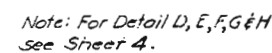
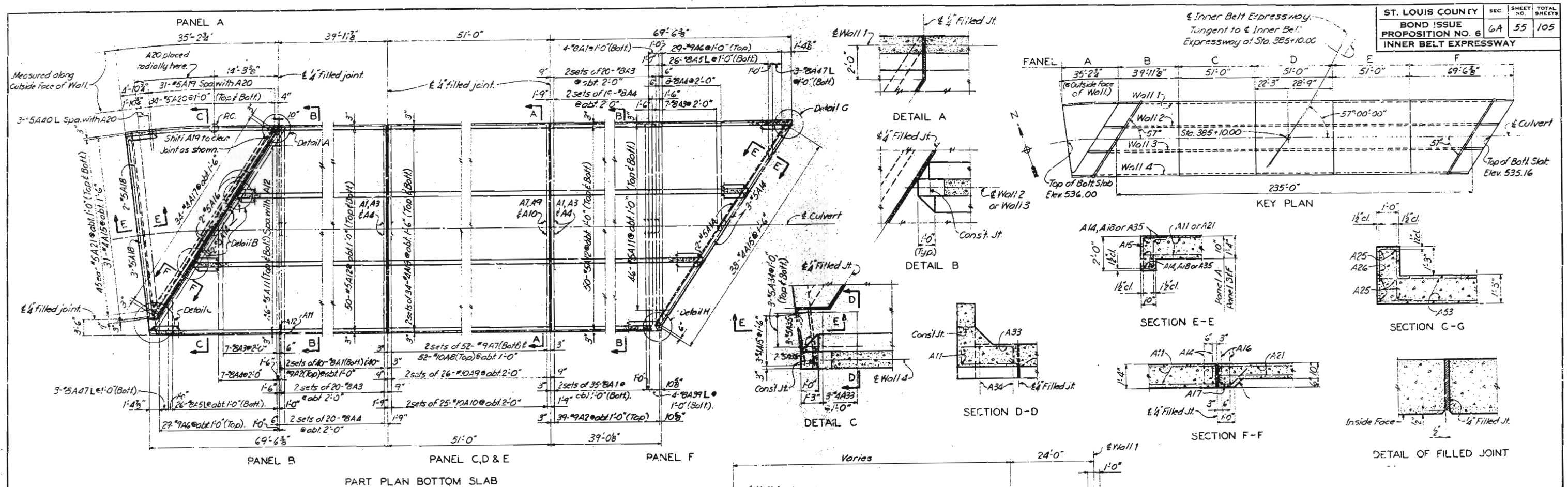
Note: Do not scale this drawing. Follow dimensions.

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REVISIONS: B11165 (6-1-62) DATE: Oct. 1961

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SHEET 2 OF 3 **A-288**



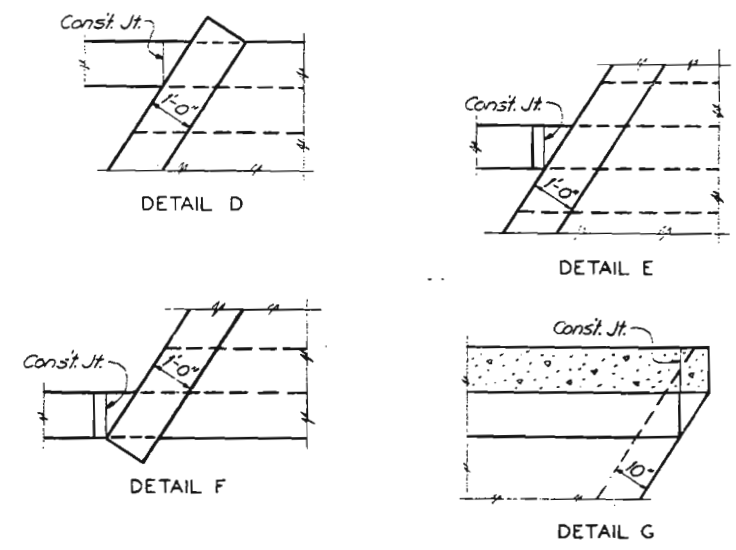
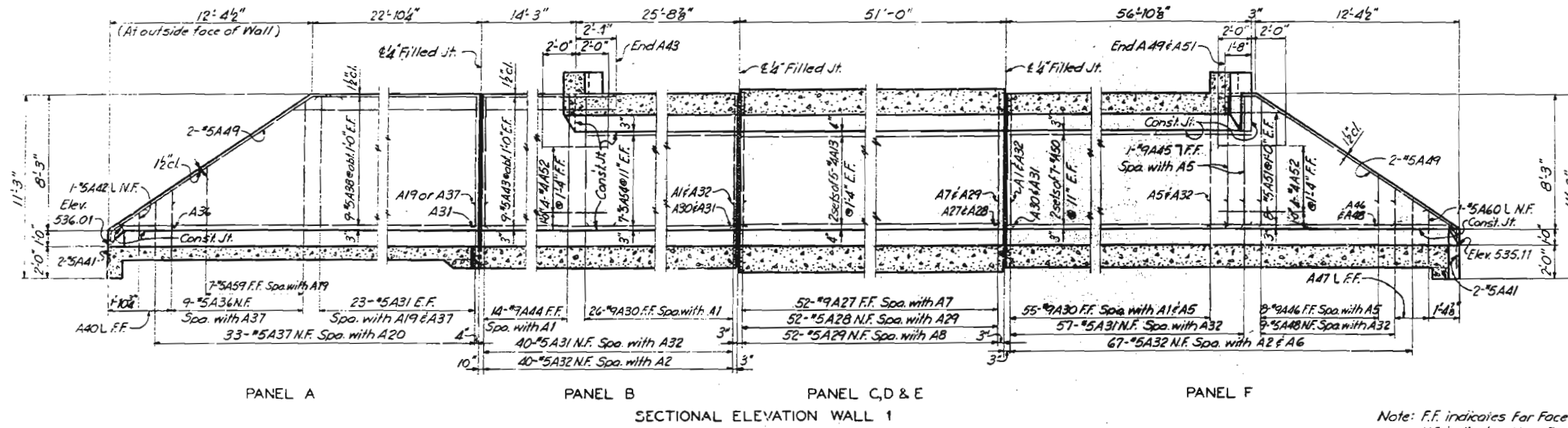
NOTES  
 Mark this Sheet with Sheet 4  
 Contractor may construct curved portion  
 in Panel A on chords not to exceed  
 feet in length.

ST. LOUIS COUNTY  
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**INNER BELT EXPRESSWAY**  
CULVERT AT RIVER DES PERES  
CULVERT DETAILS

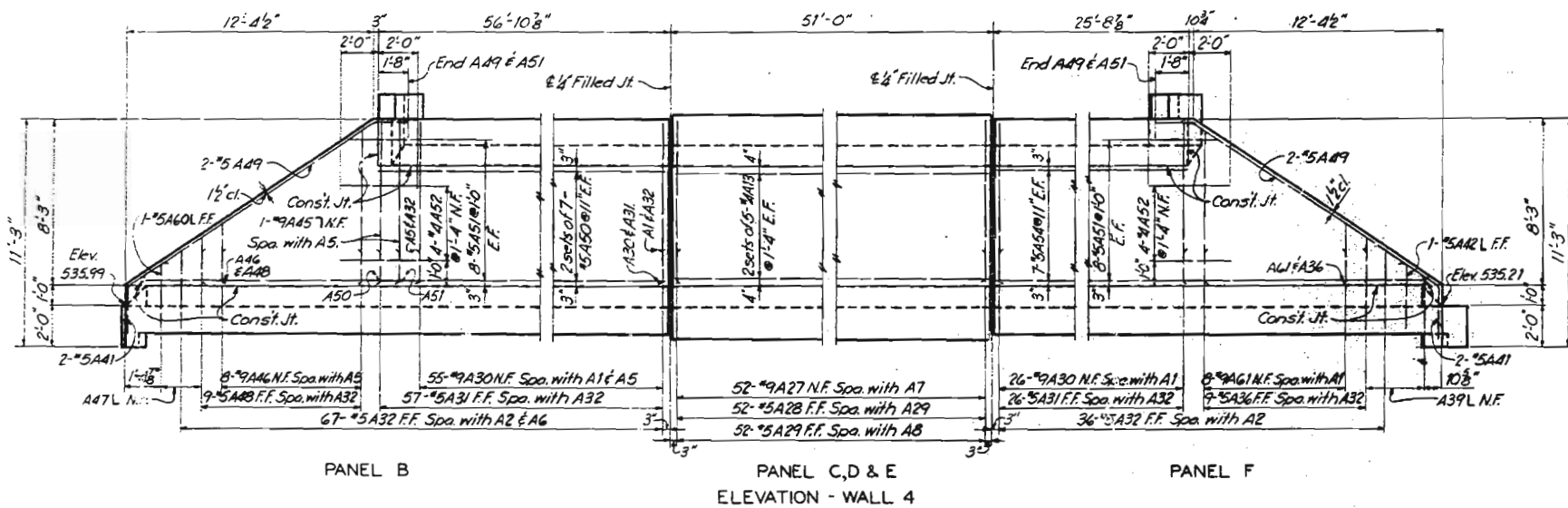
DATE: May 23, 1962

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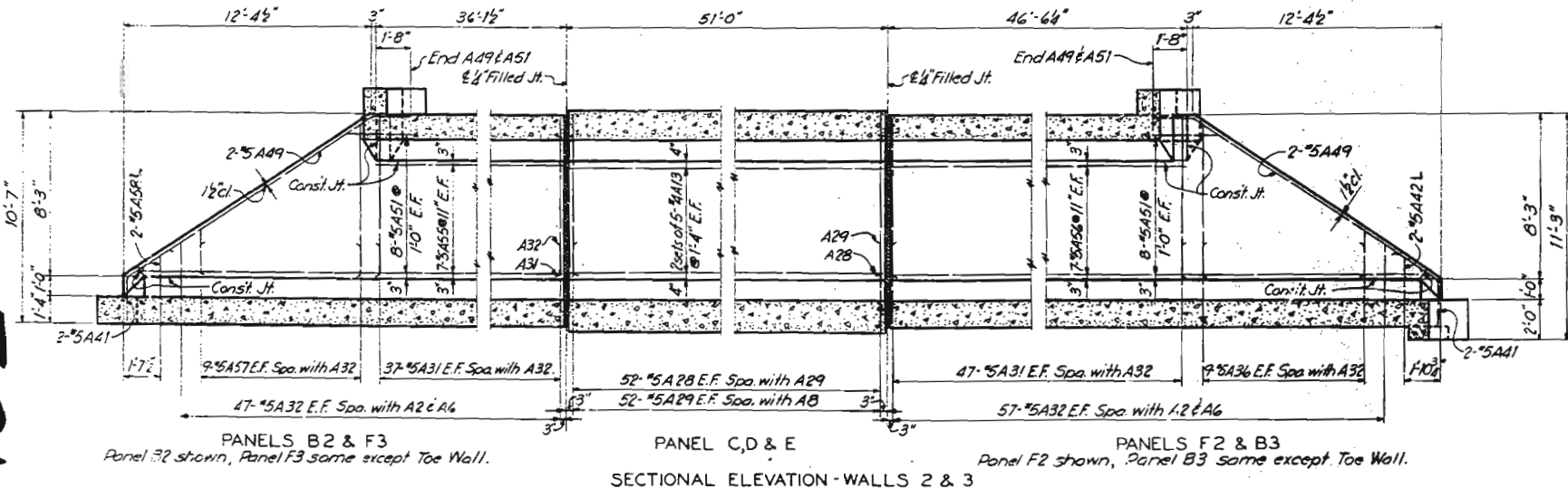
SHEET 3 OF 5 *A-2808*  
*9-7807*



Note: F.F. indicates Far Face.  
N.F. indicates Near Face.  
E.F. indicates Each Face.



NOTES  
Work this Sheet with Sheet 3.

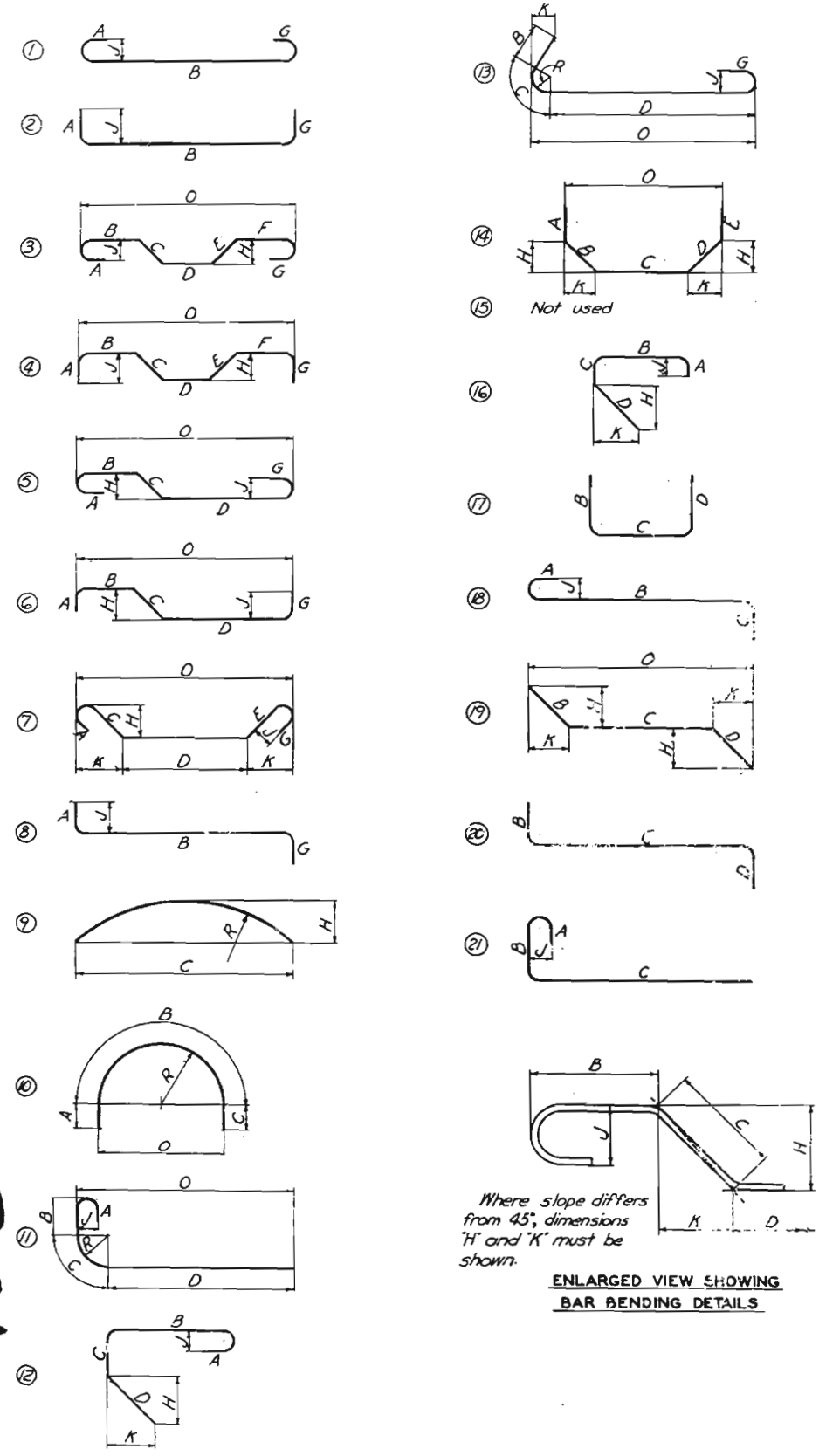


Note: Do not scale this drawing. Follow dimensions.

ST. LOUIS COUNTY  
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INNER BELT EXPRESSWAY  
CULVERT AT RIVER DES PERES  
CULVERT DETAILS  
DATE: May 23, 1962  
SVERDRUP & PARCEL ENGINEERING CO.  
ST. LOUIS, MO.

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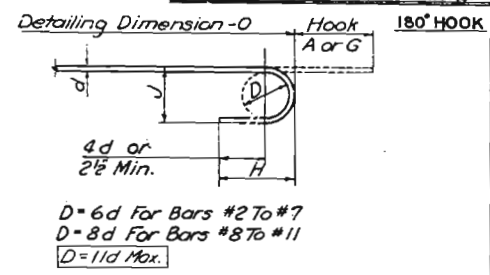
### TYPICAL BAR TYPES



Where slope differs from 45°, dimensions "H" and "K" must be shown.

ENLARGED VIEW SHOWING BAR BENDING DETAILS

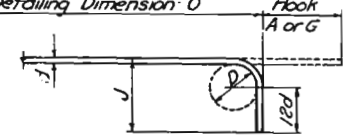
### STANDARD HOOK DIMENSIONS



Bar Size	Hook A or G	J	Approx. H
#2	4"	2"	3 1/2"
#3	5"	3"	4"
#4	6"	4"	4 1/2"
#5	7"	5"	5"
#6	8"	6"	6"
#7	10"	7"	7"
#8	11"	10"	9"
#9	13"	11"	10 1/2"
#10	15"	13"	11 1/2"
#11	17"	15"	13 1/2"

D = 6d For Bars #2 To #7  
D = 8d For Bars #8 To #11  
D = 11d Max.

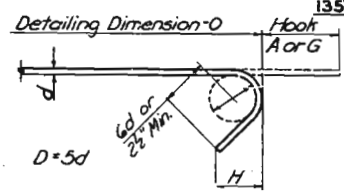
### 90° HOOK



Bar Size	Hook A or G	J	Approx. H
#2	3 1/2"	4"	4"
#3	5 1/2"	6"	6"
#4	7 1/2"	8 1/2"	8 1/2"
#5	9"	10 1/2"	10 1/2"
#6	10 1/2"	11 1/2"	11 1/2"
#7	12 1/2"	13 1/2"	13 1/2"
#8	14 1/2"	15 1/2"	15 1/2"
#9	16 1/2"	17 1/2"	17 1/2"
#10	18 1/2"	19 1/2"	19 1/2"
#11	20 1/2"	21 1/2"	21 1/2"

D = 7d For Bars #2 To #7  
D = 8d For Bars #8 To #11

### 135° STIRRUP HOOK



Bar Size	Hook A or G	H
#2	3 1/2"	2 1/2"
#3	4"	2 1/2"
#4	5"	3"
#5	6"	3 1/2"
#6	7"	4 1/2"

### BAR SIZE EQUIVALENTS

#2	4"	#7	7"
#3	5"	#8	11"
#4	6"	#9	13"
#5	7"	#10	15"
#6	8"	#11	17"

### NOTES

- All dimensions are out to out, except "R" which is to inside of bend.
- "J" Dimension on 180° hooks to be shown in Bar List only where necessary to restrict hook size, otherwise standard hooks are to be used.
- Where "J" is not shown, "J" will be kept equal to or less than "H". Where "J" can exceed "H", it should be shown in Bar List.
- "H" Dimension on stirrups to be shown on Bar List where necessary to restrict hooks.
- Corrections in length, due to bending around a mandrel, will be made only when the radius "R" (as in types 11 and 13) exceeds the standard radii indicated in standard hook dimensions. However, the dimensions "A" or "G" shown for standard hooks, have been corrected for curvature.
- All bends shown are bent around a standard mandrel, except where radius "R" is indicated.
- Figures in circles show bar types.
- Where "R" is shown on bar types 9, 10, 11 and 13, the length of bend shall be measured along outside of bend. The length of bar type T3 shall also be measured along outside of bar.

1873-1875  
DRAWN BY J. J. Campbell  
CHECKED BY W. J. Campbell  
DATE: Feb. 1962

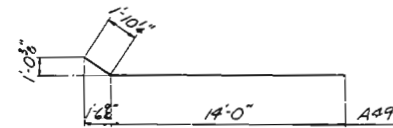
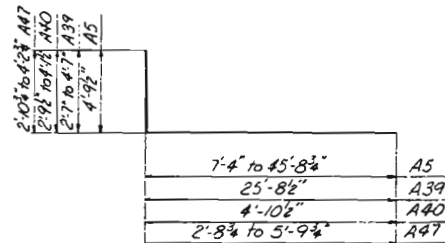
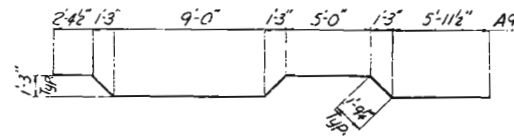
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ST. LOUIS COUNTY  
BOARD OF PUBLIC WORKS  
DIVISION OF HIGHWAYS  
INNER BELT EXPRESSWAY  
CULVERT AT RIVER DES PERES  
TYPICAL BAR TYPES  
AND HOOK DIMENSIONS  
DATE: May 23, 1962  
SVERDRUP & PARCEL ENGINEERING CO.  
ST. LOUIS, MO.



NO.	SIZE NO.	LENGTH	MARK	TYPE	LOCATION	DIMENSIONS FOR BENDING												
						A	B	C	D	E	F	G	H	J	K	R	O	
CULVERT																		
154	8	30'-6"	A1	20	2: Horn Slab	14'-4 1/2"	25'-8"											
287	9	48'-9"	A2	Str.	Slabs													
160	6	26'-7"	A3	3	do	5'-10"	1'-5"	5'-0"	1'-5"	12'-10 1/2"				1'-0"			25'-8"	
157	8	26'-7"	A4	3	do	4'-10"	1'-5"	7'-0"	1'-5"	11'-10 1/2"				1'-0"			25'-8"	
52	8	Varies	A5	Spcl.	Bottom Slab	2 Series of 26 Bars	(12'-2" to 50'-6")											
58	9	Varies	A6	Str.	do	2 Series of 29 Bars	(2'-9" to 43'-9")											
312	9	31'-3"	A7	20	do	5'-4 1/2"	25'-10 1/2"											
312	10	48'-9"	A8	Str.	Slabs													
312	10	27'-8"	A9	Spcl.	do													
300	10	27'-6"	A10	3	do	11'-7 1/2"	1'-9 1/2"	7'-0"	1'-9 1/2"	4'-11 1/2"				1'-3"			26'-1"	
184	5	Varies	A11	Str.	Bottom Slab	4 Series of 46 Bars	(3'-9" to 32'-2")											
100	5	38'-8"	A12	Str.	do													
1036	4	26'-0"	A13	Str.	Slabs & Walls													
18	5	29'-11"	A14	Str.	Bottom Slab													
72	4	5'-0"	A15	55	do	7 1/2"	1'-7 1/4"	7"	1'-6 1/4"				7 1/2"					
8	5	27'-10"	A16	55	do													
34	4	3'-7"	A17	16	do	7 1/2"	11 1/2"	9 1/2"	1'-2 1/2"				10 1/2"			10 1/2"		
5	5	4'-4"	A18	Str.	do													
31	5	9'-9"	A19	17	do	4'-10 1/2"	4'-10"											
63	5	Varies	A20	Str.	do	2 Series of 34 Bars	(2'-7" to 45'-0")											
90	5	Varies	A21	Str.	do	2 Series of 45 Bars	(2'-4" to 34'-11")											
52	8	48'-9"	A22	Str.	Top Slab													
56	8	Varies	A23	Str.	do	2 Series of 28 Bars	(5'-5" to 44'-11")											
58	9	Varies	A24	Str.	do	2 Series of 29 Bars	(3'-11" to 46'-11")											
24	8	31'-0"	A25	Str.	do													
120	4	6'-3"	A26	55	do	7 1/2"	2'-1 1/4"	9"	2'-1 1/4"				7 1/2"					
312	9	11'-10"	A27	20	Walls 1&4	3'-5 1/2"	8'-4 1/2"											
936	5	8'-4"	A28	Str.	Walls 1,2,3&4													
936	5	4'-8"	A29	2	do	9"	3'-11"											
162	9	11'-3"	A30	20	Walls 1&4	3'-1 1/2"	8'-1 1/2"											
562	5	8'-0"	A31	Str.	Walls 1,2,3&4													
626	5	4'-5"	A32	2	do	9"	3'-8"											
3	4	9'-3"	A33	17	Bottom Slab	5"	1'-0"	3'-2 1/2"	1'-0"	3'-2 1/2"				5"				
6	5	3'-7"	A34	Str.	do													
5	5	3'-3"	A35	Str.	do													
54	5	Varies	A36	Str.	Walls 1,2,3&4	4 Series of 9 Bars	(2'-5" to 7'-9")											
33	5	3'-11"	A37	2	Wall 1	9"	3'-2"											
9	5	Varies	A38	Str.	do	1 Series of 9 Bars	(28'-8" to 34'-2")											
4	8	Varies	A39	Spcl.	Bottom Slab	1 Series of 4 Bars	(28'-4" to 30'-4")											
3	5	Varies	A40	Spcl.	do	1 Series of 3 Bars	(7'-8" to 9'-0")											
16	5	4'-1"	A41	19	Walls 1,2,3&4	1'-8"	2'-5"							1'-4 3/4"		11"	3'-4"	
6	5	3'-5"	A42	2	do	9"	2'-8 1/4"											
13	5	16'-6"	A43	Str.	Wall 1													
14	9	8'-7"	A44	Str.	do													
4	9	9'-6"	A45	2	Walls 1&4	1'-4 1/2"	8'-1 1/2"											
16	9	Varies	A46	Str.	do	2 Series of 8 Bars	(2'-10" to 7'-6")											
6	8	Varies	A47	Spcl.	do	2 Series of 3 Bars	(3'-8" to 10'-1")											
18	5	Varies	A48	Str.	do	2 Series of 9 Bars	(2'-1" to 7'-4")											
16	5	15'-10"	A49	Spcl.	Walls 1,2,3&4													
56	5	29'-3"	A50	Str.	Walls 1&4													
112	5	Varies	A51	Str.	Walls 1,2,3&4	14 Series of 8 Bars	(2'-11" to 13'-4")											
16	4	4'-0"	A52	Str.	Walls 1&4													
192	5	Varies	A53	Str.	Top Slab	4 Series of 48 Bars	(2'-7" to 33'-2")											
228	5	24'-11"	A54	Str.	Top Slab, Walls 1&4													
22	5	36'-0"	A55	Str.	Walls 2&3													
23	5	46'-4"	A56	Str.	do													
36	5	Varies	A57	Str.	do	4 Series of 9 Bars	(2'-3" to 7'-7")											
4	5	3'-8"	A58	2	do	9"	2'-11"											
7	5	Varies	A59	Str.	Wall 1	1 Series of 7 Bars	(8'-9" to 7'-9")											
2	5	3'-7"	A60	2	Walls 1&4	9"	2'-9 1/2"											
8	9	Varies	A61	Str.	Wall 4	1 Series of 8 Bars	(3'-1" to 7'-9")											
100	5	39'-8"	A62	Str.	Bottom Slab													

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# NOTES

A dash is used in the appropriate dimension column to indicate that a hook, bend or portion of the standard bar type is to be omitted.  
See Sheet 5 for Typical Bar Types and Hook Dimensions.  
Dimensioning, bending and hooks for Special Bending Details shall conform to the standards as noted or shown on Sheet 5.  
Bars listed as Spcl. in Type column require special bending. see details.

ST. LOUIS COUNTY  
BOARD OF PUBLIC WORKS  
DIVISION OF HIGHWAYS  
INNER BELT EXPRESSWAY  
CULVERT AT RIVER DES PERES  
BAR LIST AND  
SPECIAL BENDING DETAILS  
DATE: 1/4/71, 23, 1962  
SVERDRUP & PARCEL ENGINEERING CO.  
ST. LOUIS, MO.