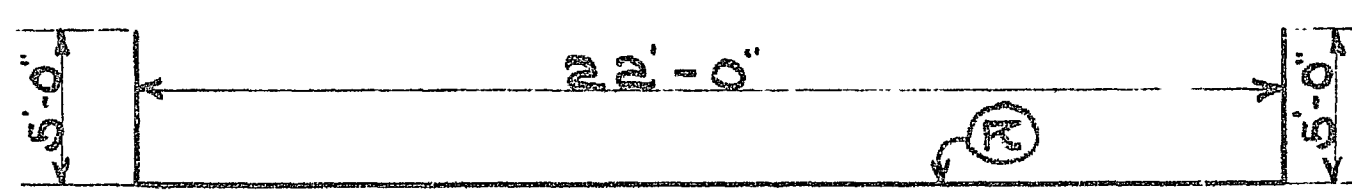


Steel List.

Letter	Size	Length	Bent or Str't	Location	Nº
A	1/2"	21'-0"	str't.	Top of slab	50
B ₁	"	16'-0"	"	Bot. " "	25
B ₂	"	38'-0"	"	" " "	25
C ₁	"	25'-0"	Bent from top to bottom of slab.	" " "	24
C ₂	"	32'-6"		" " "	17
T ₁	"	23'-6"	str't.	in slab and slab rest.	17
S ₁	"	12'-6"	Bent	in girders	4
S ₂	"	12'-10"	"	"	4
S ₃	"	13'-2"	"	"	4
S ₄	"	13'-6"	"	"	4
S ₅	"	13'-10"	"	"	4
S ₆	"	14'-2"	"	"	4
S ₇	"	14'-6"	"	"	4
S ₈	"	14'-10"	"	"	4
S ₉	"	15'-2"	"	"	2
Total Wt. of 1/2" bars = 4210#					
S ₁₀	3/8"	4'-8"	Bent	in beams	174
Total Wt. of 3/8" bars = 400#					
Q ₁	1"	24'-6"	Bent	in beams	6
Q ₂	"	24'-6"	"	"	6
Q ₃	"	24'-6"	"	"	6
R	"	32'-0"	"	"	24
Total Wt. of 1" bars = 4110#					
M ₁	1/8"	19'-0"	str't.	Girders	2
M ₂	"	40'-0"	Bent	"	2
M ₃	"	39'-6"	"	"	2
M ₄	"	40'-0"	"	"	2
M ₅	"	40'-0"	"	"	2
M ₆	"	40'-0"	str't.	"	2
N ₁	"	40'-0"	"	"	2
N ₂	"	40'-0"	"	"	2
N ₃	"	40'-0"	"	"	2
N ₄	"	40'-0"	Bent	"	2
N ₅	"	40'-0"	"	"	2
N ₆	"	40'-0"	str't.	"	2
Total Wt. of 1/8" bars = 5500#					
" " All " = 14220#					



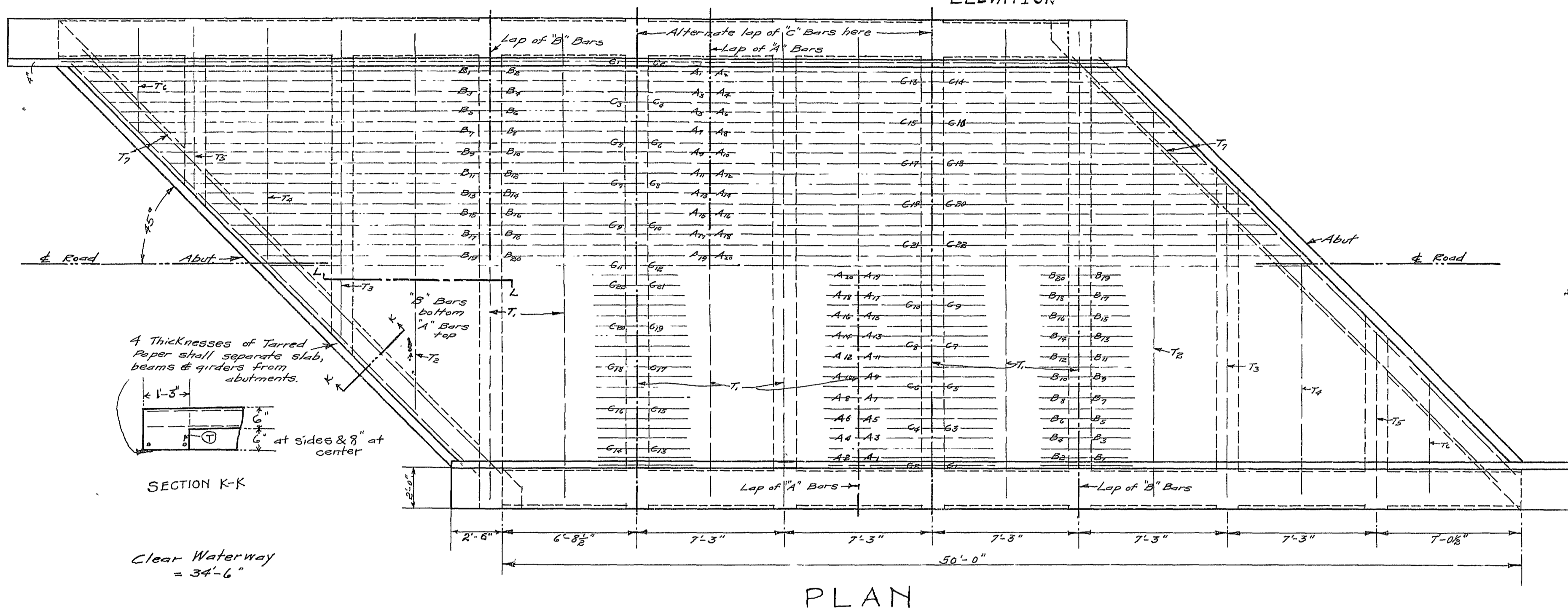
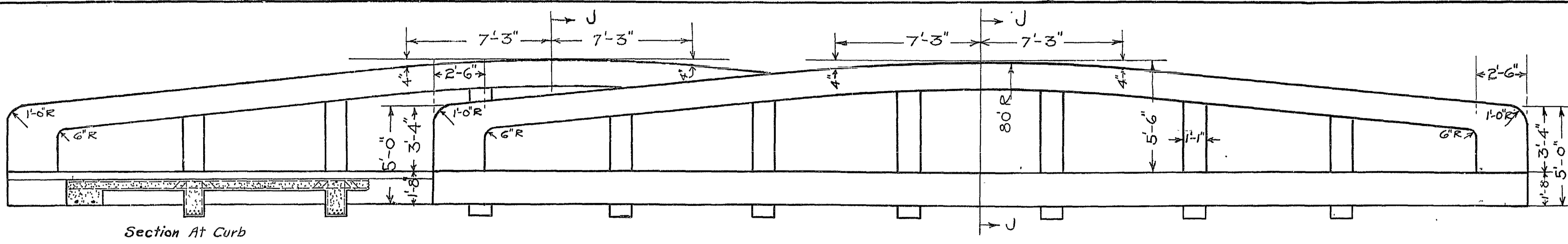
ESTIMATED QUANTITIES.
SUPERSTRUCTURE
Concrete 1:2:4 73 1/2 Cu yd.
Reinforcing Steel 14220 Lbs

Approved:
W. H. ...
Deputy Highway Commissioner
William ...
State Highway Commissioner.

STANDARD CONCRETE GIRDER
SPAN 50 FT ROADWAY 20 FT
T-15 LOADING
STATE HIGHWAY DEPARTMENT.
COLUMBUS, OHIO.
APRIL 1918. BUREAU OF BRIDGES.

71
11
1.5"
1"
17"

71
11
8.1
11
17



STEEL LIST

SLAB BARS				GIRDER BARS							
Mark	Size	Length	Shape	Location	No.	Mark	Size	Length	Shape	Location	No.
A1	5/8"	32'-8"	Straight	Top Slab	2	M1	1 1/2"	24'-6"	Straight	Girders	2
A2	5/8"	21'-3"	"	"	2	M2	1 1/2"	24'-6"	Bent	"	2
A3	5/8"	31'-8"	"	"	2	M3	1 1/2"	24'-6"	"	"	2
A4	5/8"	22'-3"	"	"	2	M4	1 1/2"	24'-6"	"	"	2
A5	5/8"	30'-8"	"	"	2	M5	1 1/2"	24'-6"	"	"	2
A6	5/8"	23'-3"	"	"	2	M6	1 1/2"	24'-6"	Straight	"	2
A7	5/8"	29'-8"	"	"	2	N1	1 1/2"	24'-6"	"	"	2
A8	5/8"	24'-3"	"	"	2	N2	1 1/2"	24'-6"	"	"	2
A9	5/8"	28'-8"	"	"	2	N3	1 1/2"	24'-6"	Bent	"	2
A10	5/8"	25'-3"	"	"	2	N4	1 1/2"	24'-6"	"	"	2
A11	5/8"	27'-8"	"	"	2	N5	1 1/2"	24'-6"	Straight	"	2
A12	5/8"	24'-3"	"	"	2	N6	1 1/2"	24'-6"	"	"	2
A13	5/8"	26'-8"	"	"	2	N7	1 1/2"	24'-6"	"	"	2
A14	5/8"	27'-3"	"	"	2	N8	1 1/2"	24'-6"	"	"	2
A15	5/8"	25'-8"	"	"	2	N9	1 1/2"	24'-6"	"	"	2
A16	5/8"	28'-3"	"	"	2	N10	1 1/2"	24'-6"	"	"	2
A17	5/8"	26'-8"	"	"	2	N11	1 1/2"	24'-6"	"	"	2
A18	5/8"	29'-3"	"	"	2	N12	1 1/2"	24'-6"	"	"	2
A19	5/8"	27'-8"	"	"	2	N13	1 1/2"	24'-6"	"	"	2
A20	5/8"	25'-3"	"	"	2	N14	1 1/2"	24'-6"	"	"	2
B1	1"	21'-9"	"	"	2	O1	1"	24'-6"	Bent	Long Beams	5
B2	1"	32'-2"	"	"	2	O2	1"	24'-6"	"	"	5
B3	1"	20'-9"	"	"	2	O3	1"	24'-6"	"	"	5
B4	1"	33'-2"	"	"	2	O4	1"	24'-6"	"	"	5
B5	1"	19'-9"	"	"	2	O5	1"	24'-6"	"	"	5
B6	1"	34'-2"	"	"	2	O6	1"	24'-6"	"	"	5
B7	1"	18'-9"	"	"	2	O7	1"	24'-6"	"	"	5
B8	1"	35'-2"	"	"	2	O8	1"	24'-6"	"	"	5
B9	1"	17'-9"	"	"	2	O9	1"	24'-6"	"	"	5
B10	1"	36'-2"	"	"	2	O10	1"	24'-6"	"	"	5
B11	1"	16'-9"	"	"	2	O11	1"	24'-6"	"	"	5
B12	1"	37'-2"	"	"	2	O12	1"	24'-6"	"	"	5
B13	1"	15'-9"	"	"	2	O13	1"	24'-6"	"	"	5
B14	1"	38'-2"	"	"	2	O14	1"	24'-6"	"	"	5
C1	1/2"	23'-6"	Straight	Bottom Slab	2	S1	5/8"	48'-0"	"	All Beams	200
C2	1/2"	25'-6"	"	"	2	S2	5/8"	48'-0"	"	"	200
C3	1/2"	27'-6"	"	"	2	S3	5/8"	48'-0"	"	"	200
C4	1/2"	29'-6"	"	"	2	S4	5/8"	48'-0"	"	"	200
C5	1/2"	31'-6"	"	"	2	S5	5/8"	48'-0"	"	"	200
C6	1/2"	33'-6"	"	"	2	S6	5/8"	48'-0"	"	"	200
C7	1/2"	35'-6"	"	"	2	S7	5/8"	48'-0"	"	"	200
C8	1/2"	37'-6"	"	"	2	S8	5/8"	48'-0"	"	"	200
C9	1/2"	39'-6"	"	"	2	S9	5/8"	48'-0"	"	"	200
C10	1/2"	41'-6"	"	"	2	S10	5/8"	48'-0"	"	"	200
C11	1/2"	43'-6"	"	"	2	S11	5/8"	48'-0"	"	"	200
C12	1/2"	45'-6"	"	"	2	S12	5/8"	48'-0"	"	"	200
C13	1/2"	47'-6"	"	"	2	S13	5/8"	48'-0"	"	"	200
C14	1/2"	49'-6"	"	"	2	S14	5/8"	48'-0"	"	"	200
C15	1/2"	51'-6"	"	"	2	S15	5/8"	48'-0"	"	"	200
C16	1/2"	53'-6"	"	"	2	S16	5/8"	48'-0"	"	"	200
C17	1/2"	55'-6"	"	"	2	S17	5/8"	48'-0"	"	"	200
C18	1/2"	57'-6"	"	"	2	S18	5/8"	48'-0"	"	"	200
C19	1/2"	59'-6"	"	"	2	S19	5/8"	48'-0"	"	"	200
C20	1/2"	61'-6"	"	"	2	S20	5/8"	48'-0"	"	"	200
C21	1/2"	63'-6"	"	"	2	S21	5/8"	48'-0"	"	"	200
C22	1/2"	65'-6"	"	"	2	S22	5/8"	48'-0"	"	"	200
C23	1/2"	67'-6"	"	"	2	S23	5/8"	48'-0"	"	"	200
C24	1/2"	69'-6"	"	"	2	S24	5/8"	48'-0"	"	"	200
C25	1/2"	71'-6"	"	"	2	S25	5/8"	48'-0"	"	"	200
C26	1/2"	73'-6"	"	"	2	S26	5/8"	48'-0"	"	"	200
C27	1/2"	75'-6"	"	"	2	S27	5/8"	48'-0"	"	"	200
C28	1/2"	77'-6"	"	"	2	S28	5/8"	48'-0"	"	"	200
C29	1/2"	79'-6"	"	"	2	S29	5/8"	48'-0"	"	"	200
C30	1/2"	81'-6"	"	"	2	S30	5/8"	48'-0"	"	"	200
C31	1/2"	83'-6"	"	"	2	S31	5/8"	48'-0"	"	"	200
C32	1/2"	85'-6"	"	"	2	S32	5/8"	48'-0"	"	"	200
C33	1/2"	87'-6"	"	"	2	S33	5/8"	48'-0"	"	"	200
C34	1/2"	89'-6"	"	"	2	S34	5/8"	48'-0"	"	"	200
C35	1/2"	91'-6"	"	"	2	S35	5/8"	48'-0"	"	"	200
C36	1/2"	93'-6"	"	"	2	S36	5/8"	48'-0"	"	"	200
C37	1/2"	95'-6"	"	"	2	S37	5/8"	48'-0"	"	"	200
C38	1/2"	97'-6"	"	"	2	S38	5/8"	48'-0"	"	"	200
C39	1/2"	99'-6"	"	"	2	S39	5/8"	48'-0"	"	"	200
C40	1/2"	101'-6"	"	"	2	S40	5/8"	48'-0"	"	"	200
C41	1/2"	103'-6"	"	"	2	S41	5/8"	48'-0"	"	"	200
C42	1/2"	105'-6"	"	"	2	S42	5/8"	48'-0"	"	"	200
C43	1/2"	107'-6"	"	"	2	S43	5/8"	48'-0"	"	"	200
C44	1/2"	109'-6"	"	"	2	S44	5/8"	48'-0"	"	"	200
C45	1/2"	111'-6"	"	"	2	S45	5/8"	48'-0"	"	"	200
C46	1/2"	113'-6"	"	"	2	S46	5/8"	48'-0"	"	"	200
C47	1/2"	115'-6"	"	"	2	S47	5/8"	48'-0"	"	"	200
C48	1/2"	117'-6"	"	"	2	S48	5/8"	48'-0"	"	"	200
C49	1/2"	119'-6"	"	"	2	S49	5/8"	48'-0"	"	"	200
C50	1/2"	121'-6"	"	"	2	S50	5/8"	48'-0"	"	"	200
C51	1/2"	123'-6"	"	"	2	S51	5/8"	48'-0"	"	"	200
C52	1/2"	125'-6"	"	"	2	S52	5/8"	48'-0"	"	"	200
C53	1/2"	127'-6"	"	"	2	S53	5/8"	48'-0"	"	"	200
C54	1/2"	129'-6"	"	"	2	S54	5/8"	48'-0"	"	"	200
C55	1/2"	131'-6"	"	"	2	S55	5/8"	48'-0"	"	"	200
C56	1/2"	133'-6"	"	"	2	S56	5/8"	48'-0"	"	"	200
C57	1/2"	135'-6"	"	"	2	S57	5/8"	48'-0"	"	"	200
C58	1/2"	137'-6"	"	"	2	S58	5/8"	48'-0"	"	"	200
C59	1/2"	139'-6"	"	"	2	S59	5/8"	48'-0"	"	"	200
C60	1/2"	141'-6"	"	"	2	S60	5/8"	48'-0"	"	"	200
C61	1/2"	143'-6"	"	"	2	S61	5/8"	48'-0"	"	"	200
C62	1/2"	145'-6"	"	"	2	S62	5/8"	48'-0"	"	"	200
C63	1/2"	147'-6"	"	"	2	S63	5/8"	48'-0"	"	"	200
C64	1/2"	149'-6"	"	"	2	S64	5/8"	48'-0"	"	"	200
C65	1/2"	151'-6"	"	"	2	S65	5/8"	48'-0"	"	"	200
C66	1/2"	153'-6"	"	"	2	S66	5/8"	48'-0"	"	"	200
C67	1/2"	155'-6"	"	"	2	S67	5/8"	48'-0"	"	"	200
C68	1/2"	157'-6"	"	"	2	S68	5/8"	48'-0"	"	"	200
C69	1/2"	159'-6"	"	"	2	S69	5/8"	48'-0"	"	"	200
C70	1/2"	161'-6"	"	"	2	S70	5/8"	48'-0"	"	"	200
C71	1/2"	163'-6"	"	"	2	S71	5/8"	48'-0"	"	"	200
C72	1/2"	165'-6"	"	"	2	S72	5/8"	48'-0"	"	"	200
C73	1/2"	167'-6"	"	"	2	S73	5/8"	48'-0"	"	"	200
C74	1/2"	169'-6"	"	"	2	S74	5/8"	48'-0"	"	"	200
C75	1/2"	171'-6"	"	"	2	S75	5/8"	48'-0"	"	"	200
C76	1/2"	173'-6"	"	"	2	S76	5/8"	48'-0"	"	"	200
C77	1/2"	175'-6"	"	"	2	S77	5/8"	48'-0"	"	"	200
C78	1/2"	177'-6"	"	"	2	S78	5/8"	48'-0"	"	"	200
C79	1/2"	179'-6"	"	"	2	S79	5/8"	48'-0"	"	"	200
C80	1/2"	181'-6"	"	"	2	S80	5/8"	48'-0"	"	"	200
C81	1/2"	183'-6"	"	"	2	S81	5/8"	48'-0"	"	"	200
C82	1/2"	185'-6"	"	"	2	S82	5/8"	48'-0"	"	"	200
C83	1/2"	187'-6"	"	"	2	S83	5/8"	48'-0"	"	"	200
C84	1/2"	189'-6"	"	"	2	S84	5/8"	48'-0"	"	"	200
C85	1/2"	191'-6"	"	"	2	S85	5/8"	48'-0"	"	"	200
C86	1/2"	193'-6"	"	"	2</						

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Note:-
Special care must be used to
secure good bond between
the side girders and the slab.

Side Girder Reinforcement
4 Bars $\frac{7}{8}$ " sq. twisted
bent as shown.
Stirrups $\frac{3}{8}$ " sq. twisted.

Beam Reinforcement
7 Bars $1\frac{1}{8}$ " sq. twisted
bent as shown

The top of one abutment is to be
covered with two thicknesses of
tar paper before the concrete
superstructure is placed.

All concrete work must conform to
the "General Specifications for
Concrete and Reinforced Concrete
Structures" of the State Highway
Department.

Concrete to be mixed in the propor-
tions of 1 part cement 2 parts sand
and 4 parts broken stone.

Estimate of Quantities

Concrete 1-2-4 $27\frac{3}{10}$ cu. yd.

Steel reinforcing 4220 lbs.

Cement Req'd. 40 bbls.

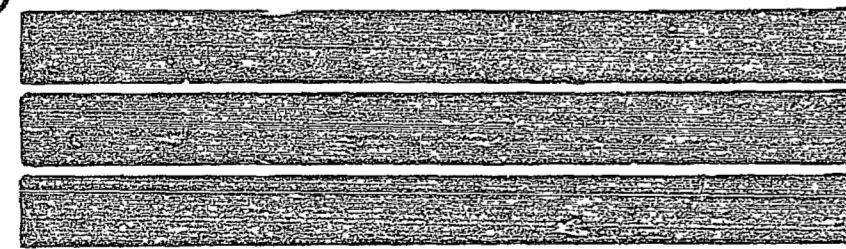
Road metal not included in this estimate

STEEL LIST

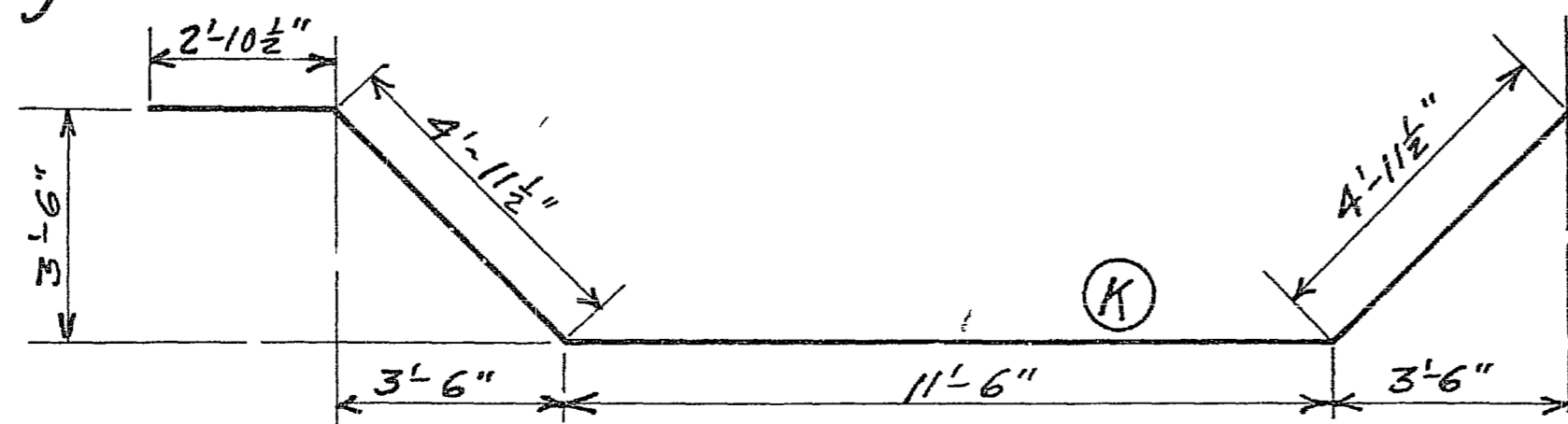
Bar	Size	Length	Number
A	$\frac{1}{2}$ "	23'-0"	29
B	$\frac{1}{2}$ "	21'-8"	30
C	$\frac{3}{8}$ "	25'-2"	18
D	$\frac{3}{8}$ "	8'-3"	20
F	$1\frac{1}{8}$ "	25'-2"	3
G	$1\frac{1}{8}$ "	25'-2"	6
H	$1\frac{1}{8}$ "	25'-2"	6
I	$1\frac{1}{8}$ "	25'-2"	6
K	$\frac{7}{8}$ "	27'-2"	4
L	$\frac{7}{8}$ "	25'-2"	4

All reinforcing bars to be square twisted
or equivalent deformed bars except stirrup.
"D" bars which may be plain squares.

Adopted by

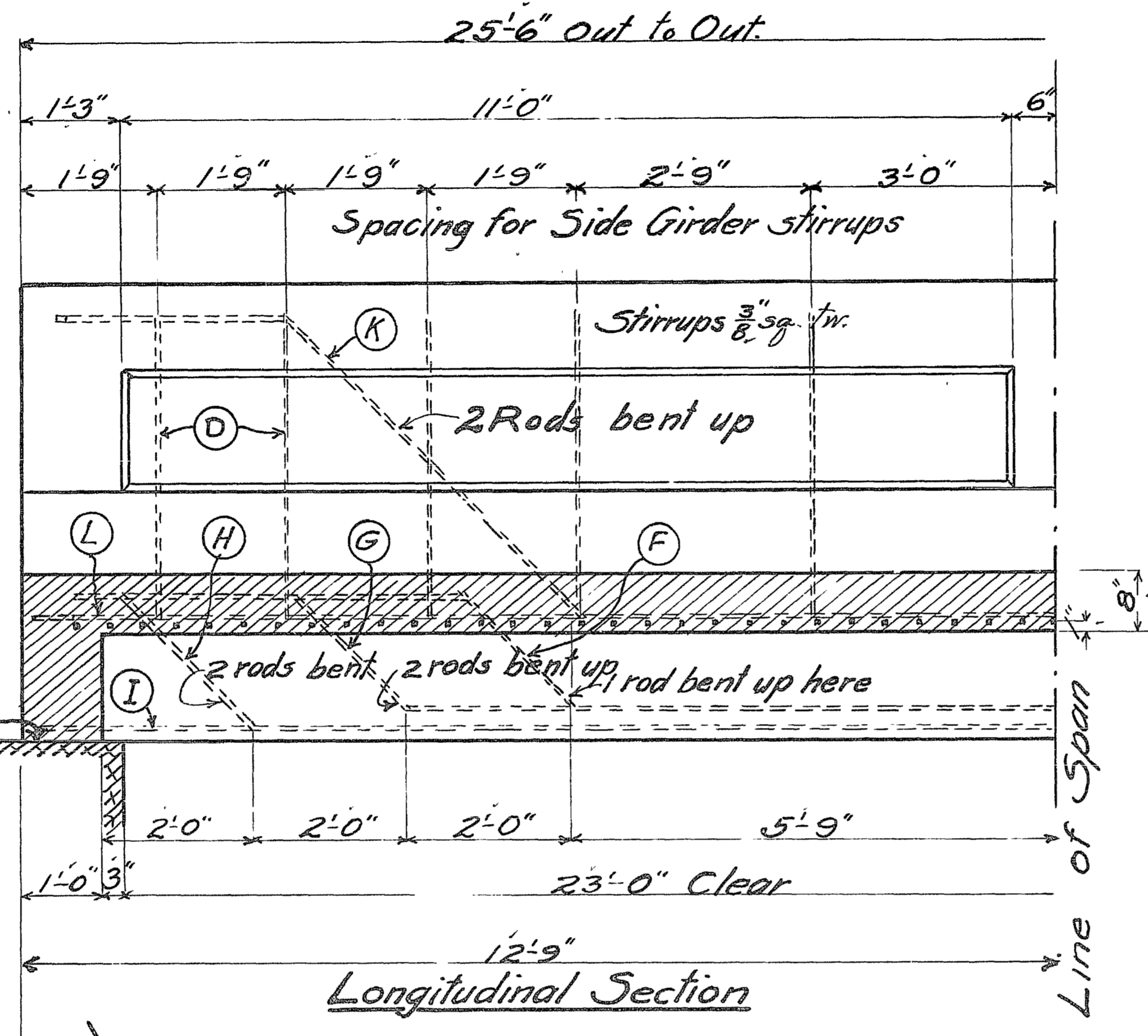


County Commissioners

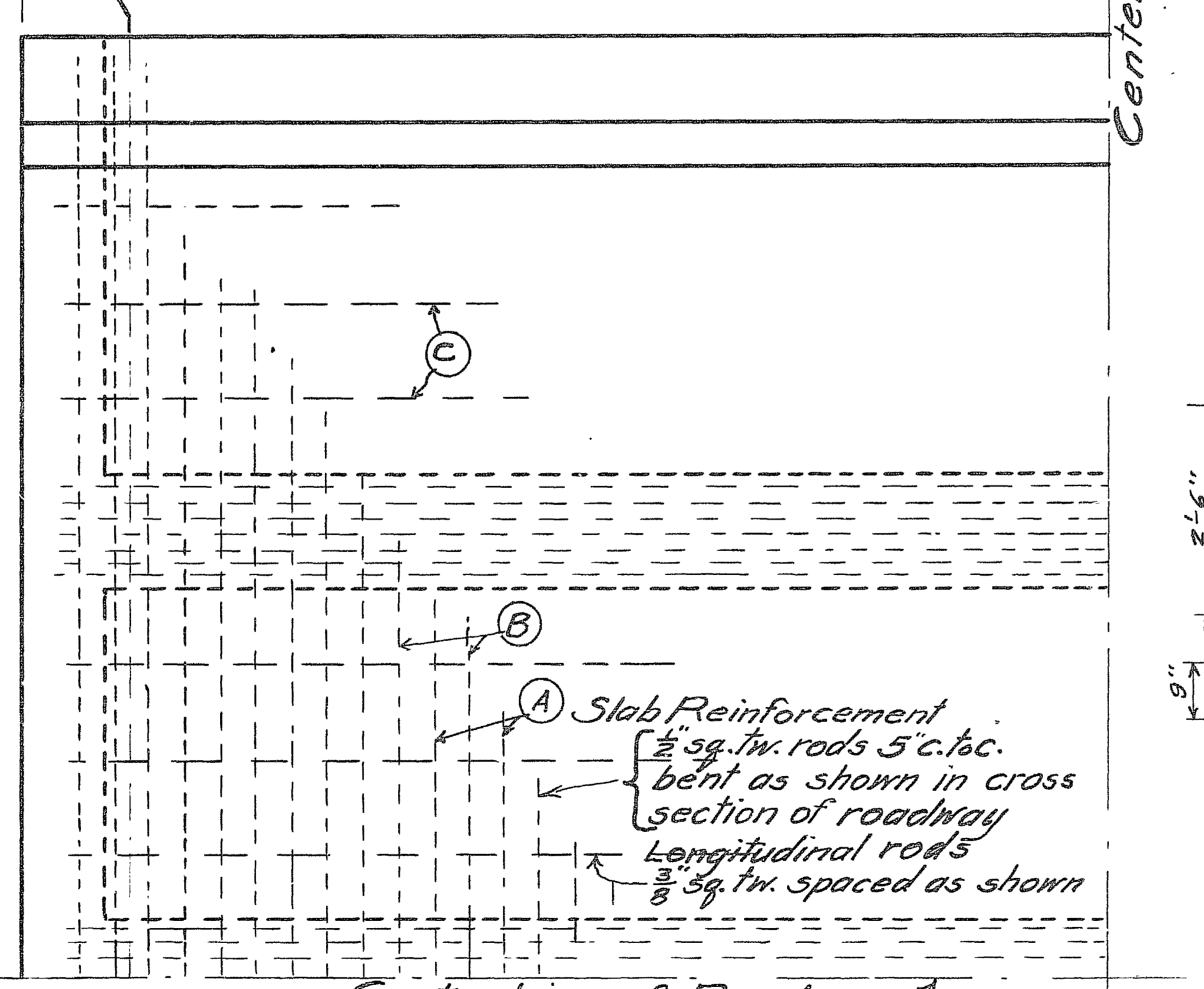


Approved

James R. Markov
State Highway Commissioner.

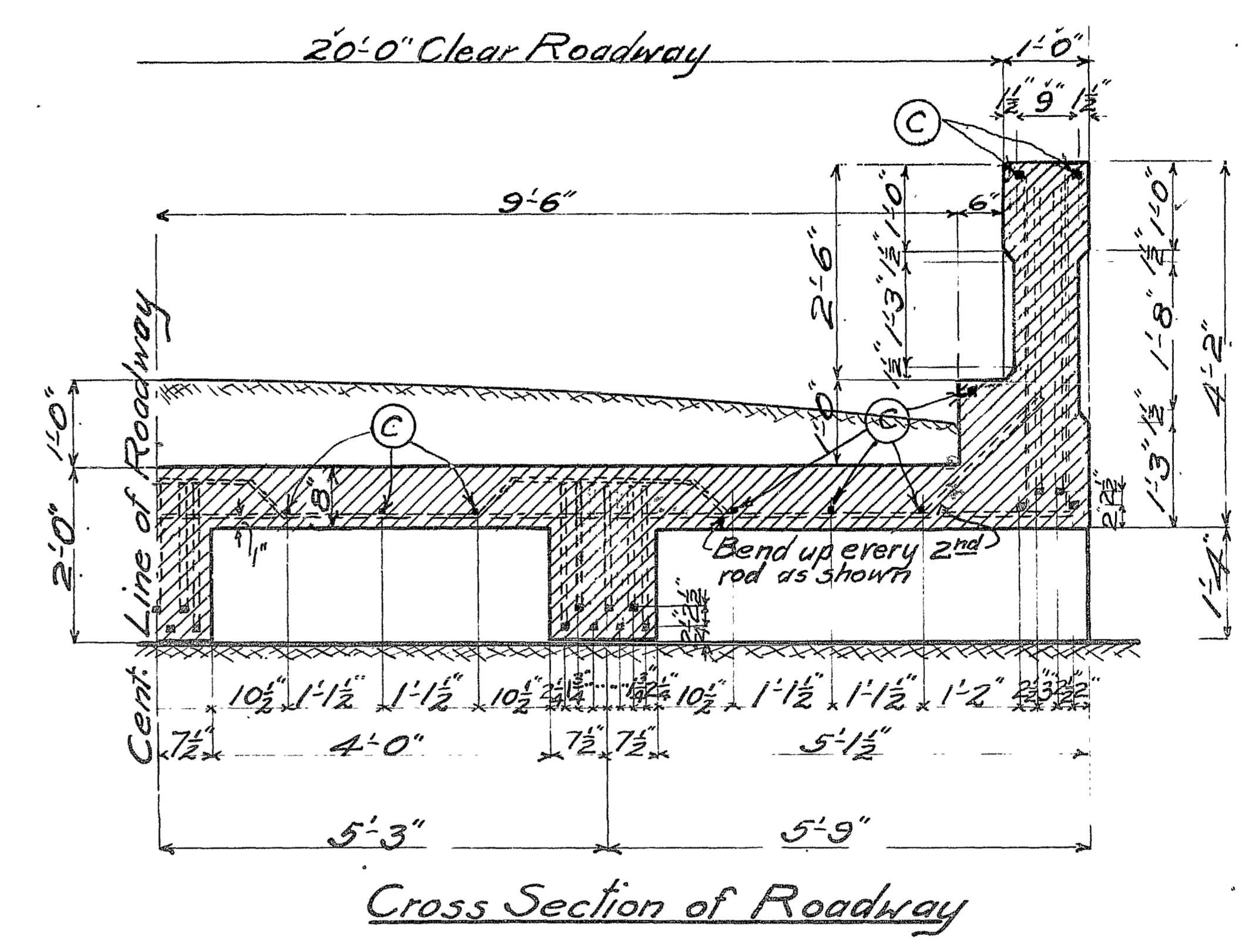


Longitudinal Section



Center Line of Roadway

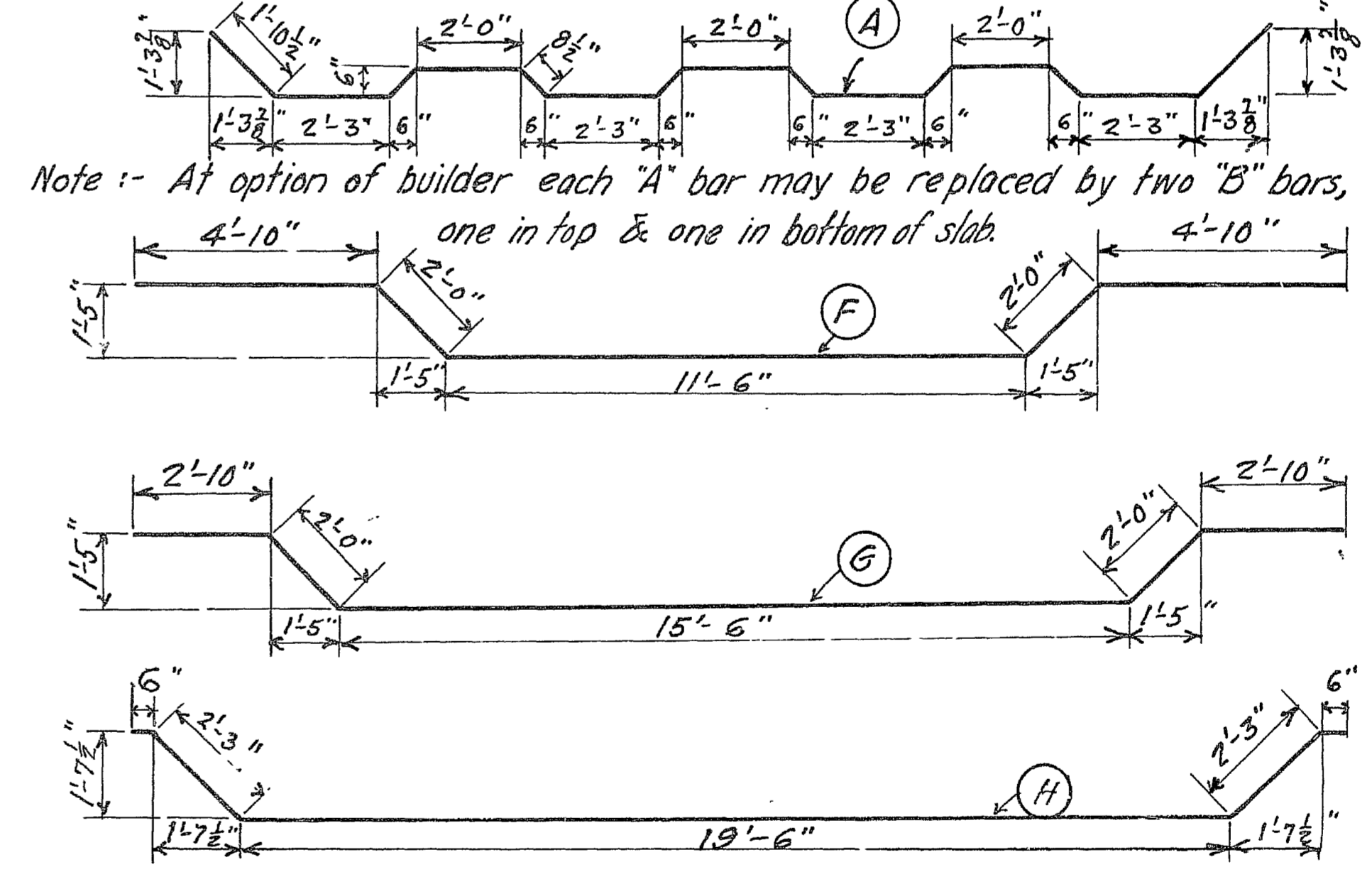
Quarter Plan



Cross Section of Roadway

Note.
Some form of unit frame is recommended
for steel reinforcement in the concrete girders.

Steel reinforcing bars "B", "C", "I", and "L" are straight.



STANDARD PLAN
23FT. x 20FT.
REINFORCED CONCRETE BRIDGE.
STATE HIGHWAY DEPARTMENT
COLUMBUS, O.
JUNE 1912
C.T. MORRIS
ENGR. OF BRIDGES

Steel list added, and N.W. corner of slab reinforced.

11

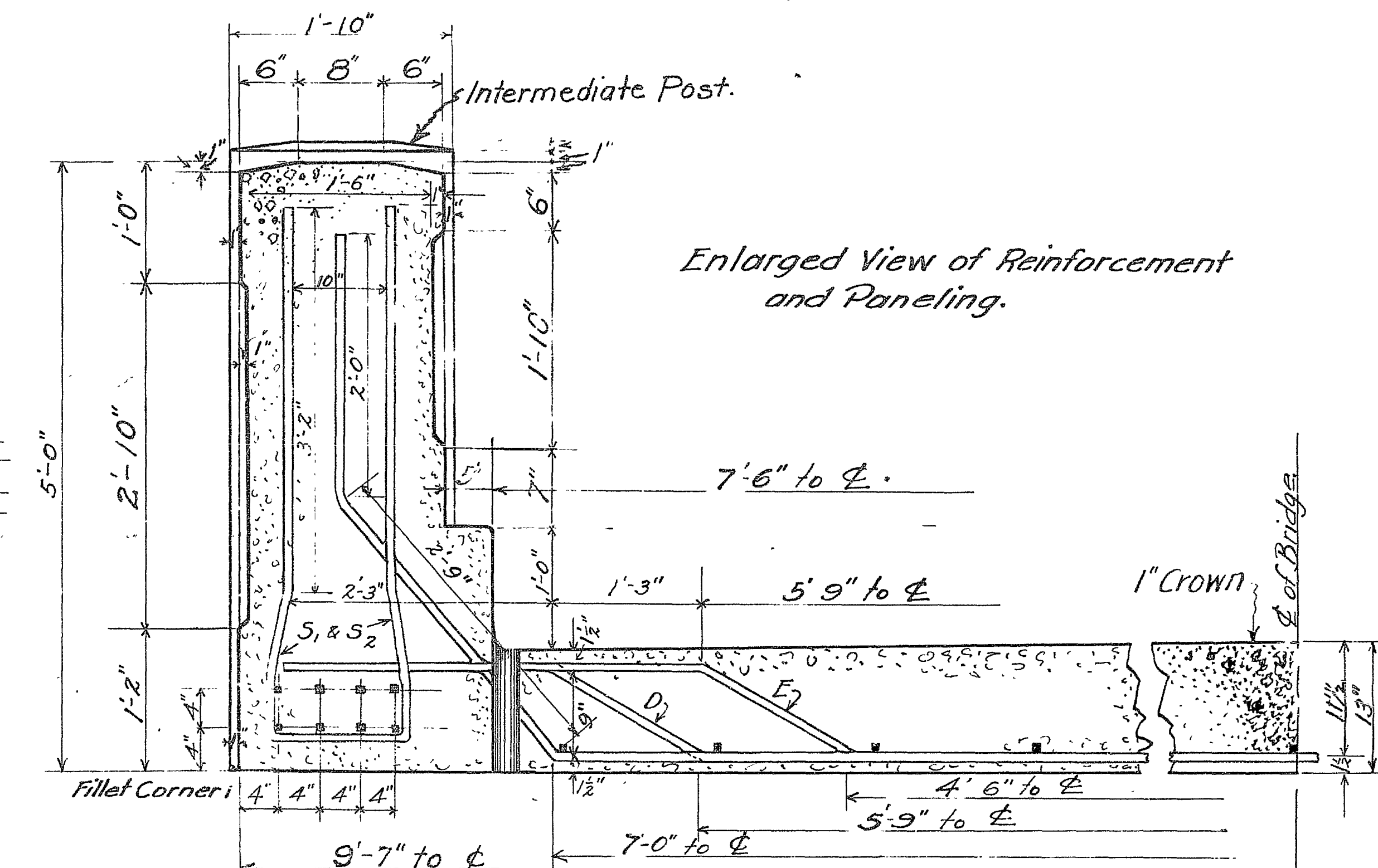
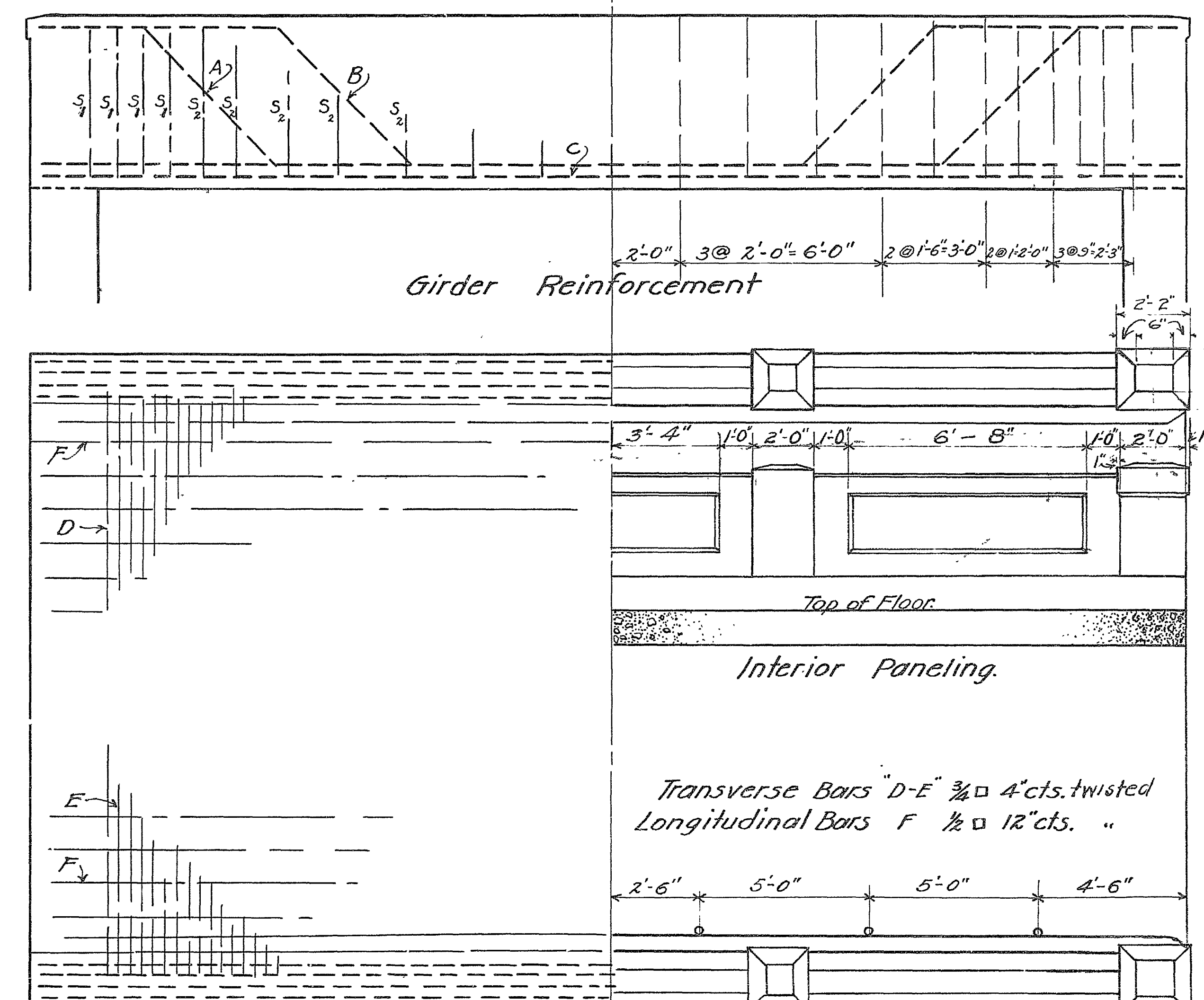
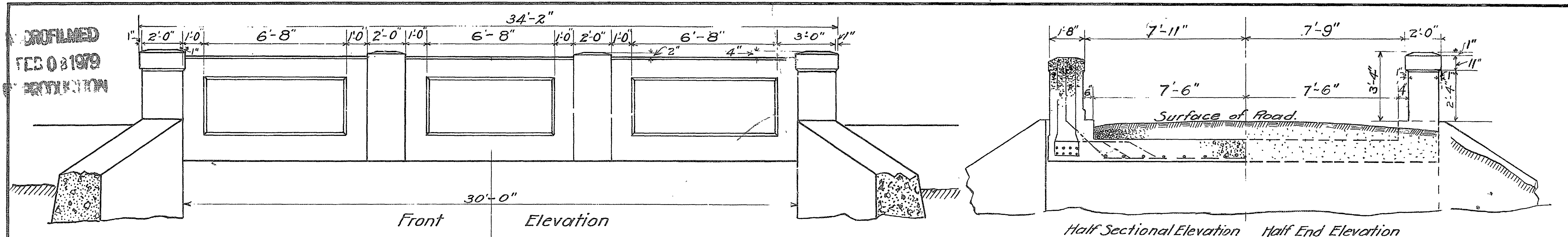
11

11

8.5

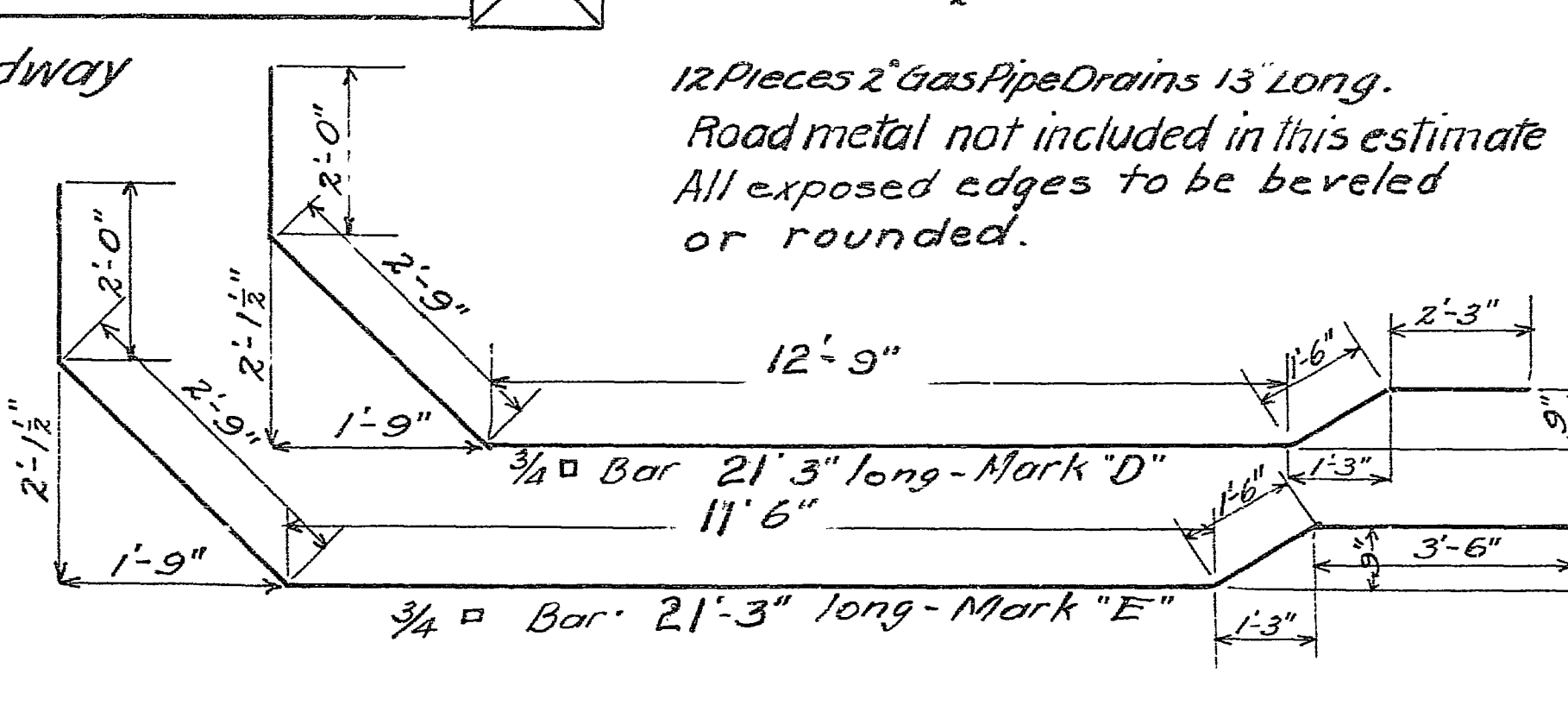
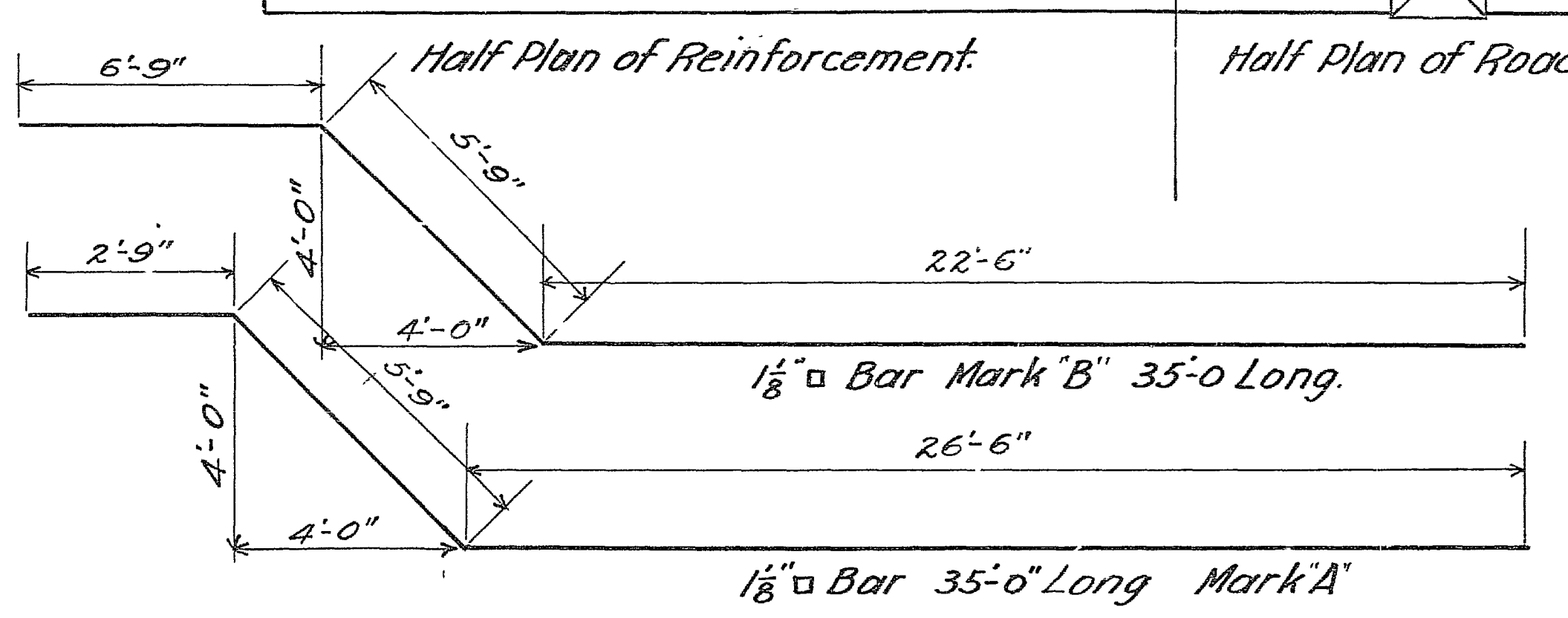
11

17



BILL OF MATERIAL

STEEL REINFORCING			CONCRETE 1-2-4	
GIRDER	A - 4-1/8" #11 Bars 35' Long	602.0	Cement	60 Bbls.
	B - 4-1/8" #11 " 35' "	602.0	Sand	19 cu yds.
	C - 8-1/8" #11 " 33' "	1136.0	Stone or	38 "
FLOOR	D - 45-3/8" #11 " 21'-3"	1829.5	Screened Gravel.	
	E - 45-3/8" #11 " 21'-3"	1829.5		
	F - 30-1/2" #11 " 18' "	459.0		
GIRDER STIRRUP	S1 - 16-3/8" #11 " 10' Long.	306		
	S2 - 28-1/2" #11 " 10' "	228		
			Total Steel.	7000 lbs.

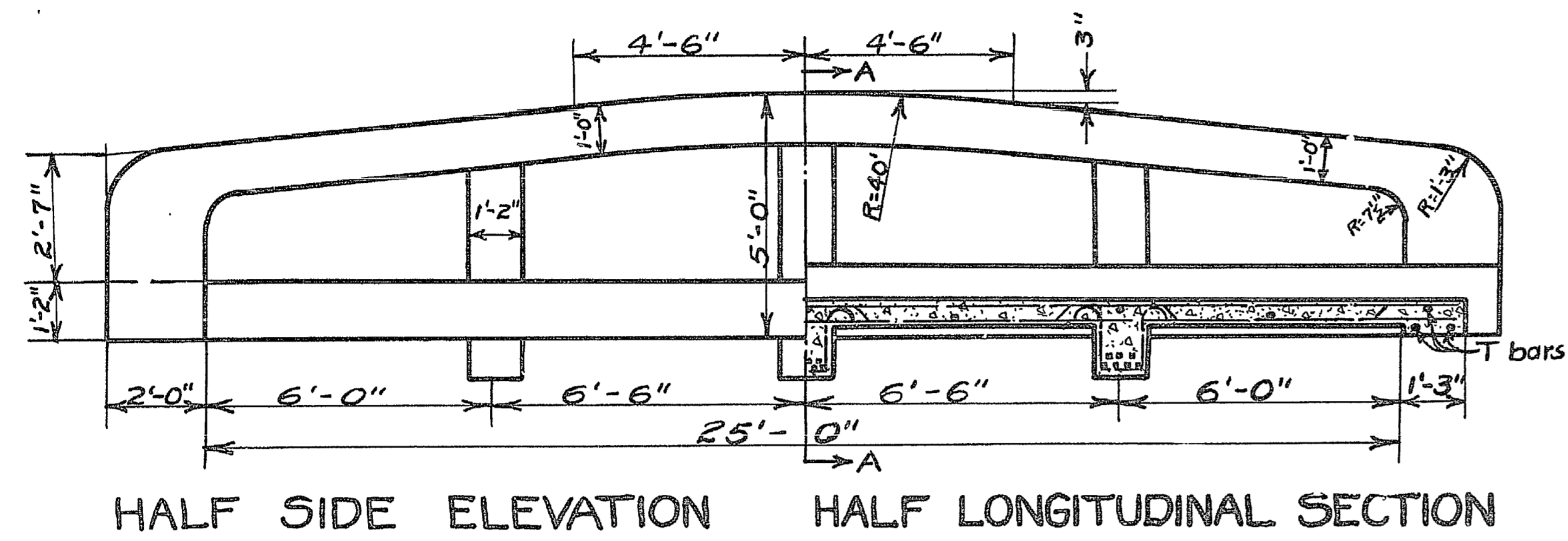


REINFORCED CONCRETE BRIDGE
 30" GIRDER SPAN - 16' ROADWAY
 STATE HIGHWAY DEPARTMENT
 COLUMBUS, O.
 OCT 1914 BUREAU OF BRIDGES.

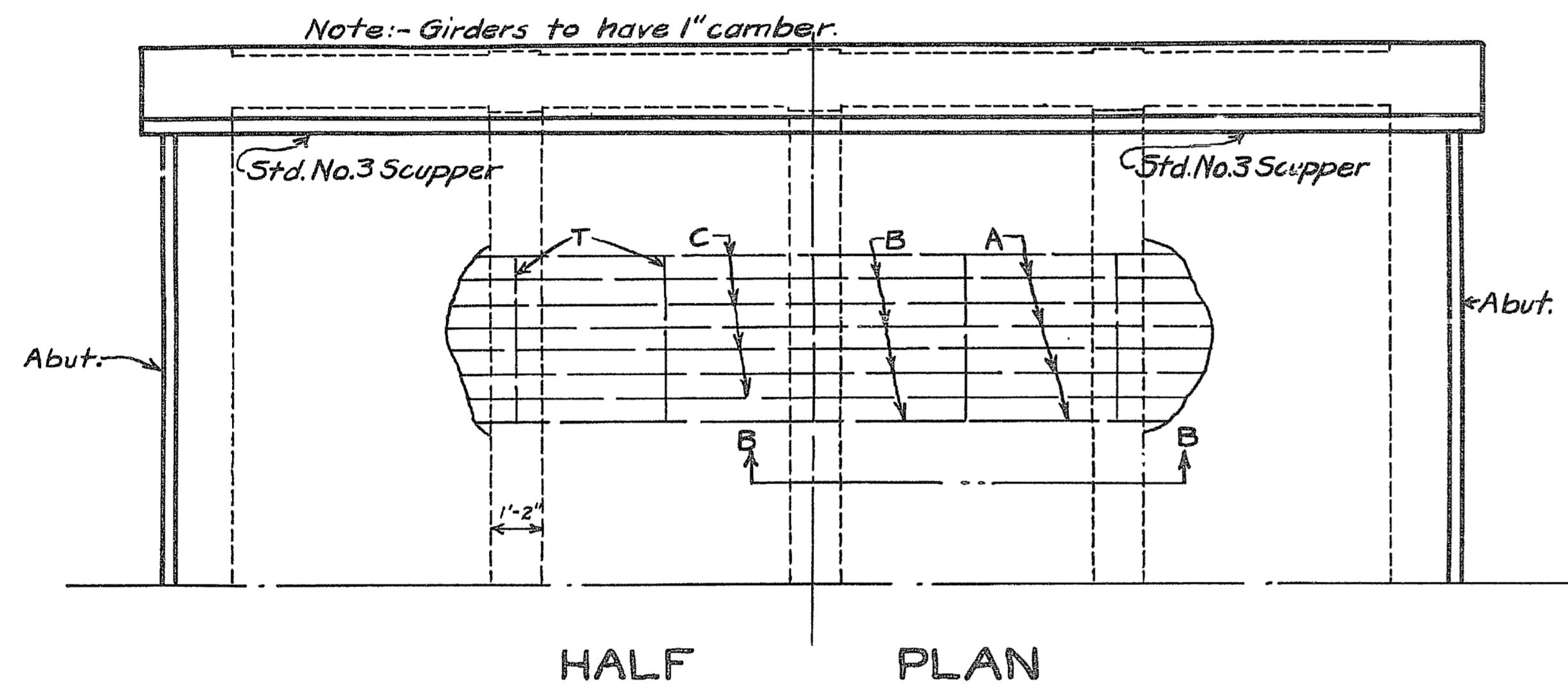
DRAWN
 FEB 28 1919
 REVISION

12 Pieces 2" Gas Pipe Drains 13' Long.
 Road metal not included in this estimate
 All exposed edges to be beveled
 or rounded.

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FEB 06 1979
REPRODUCTION

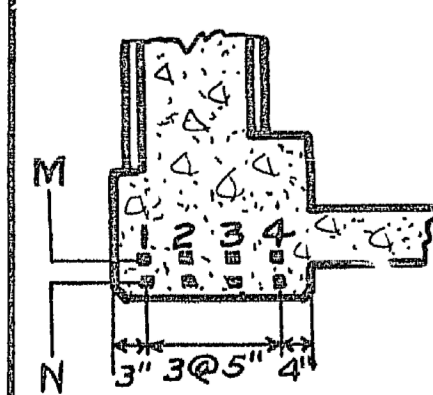
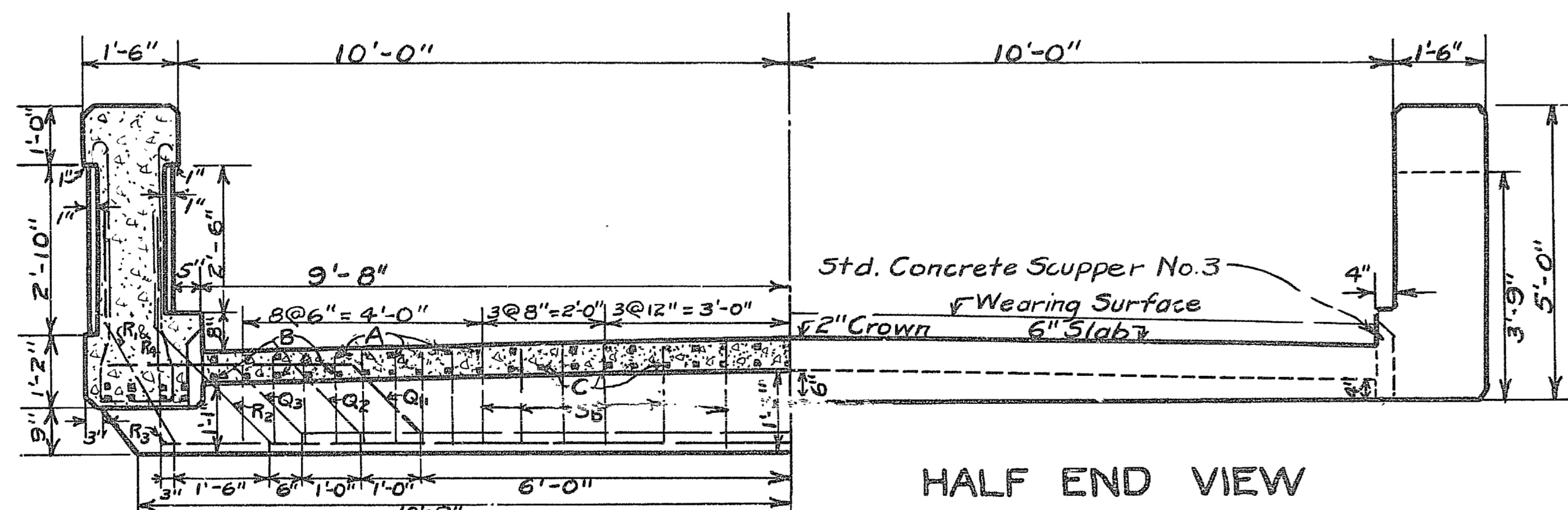
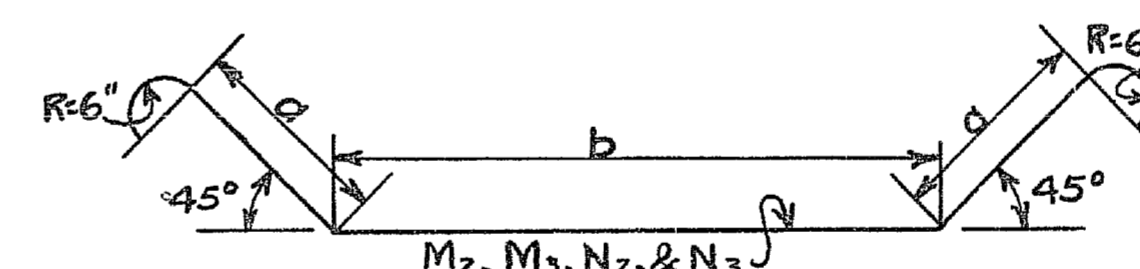
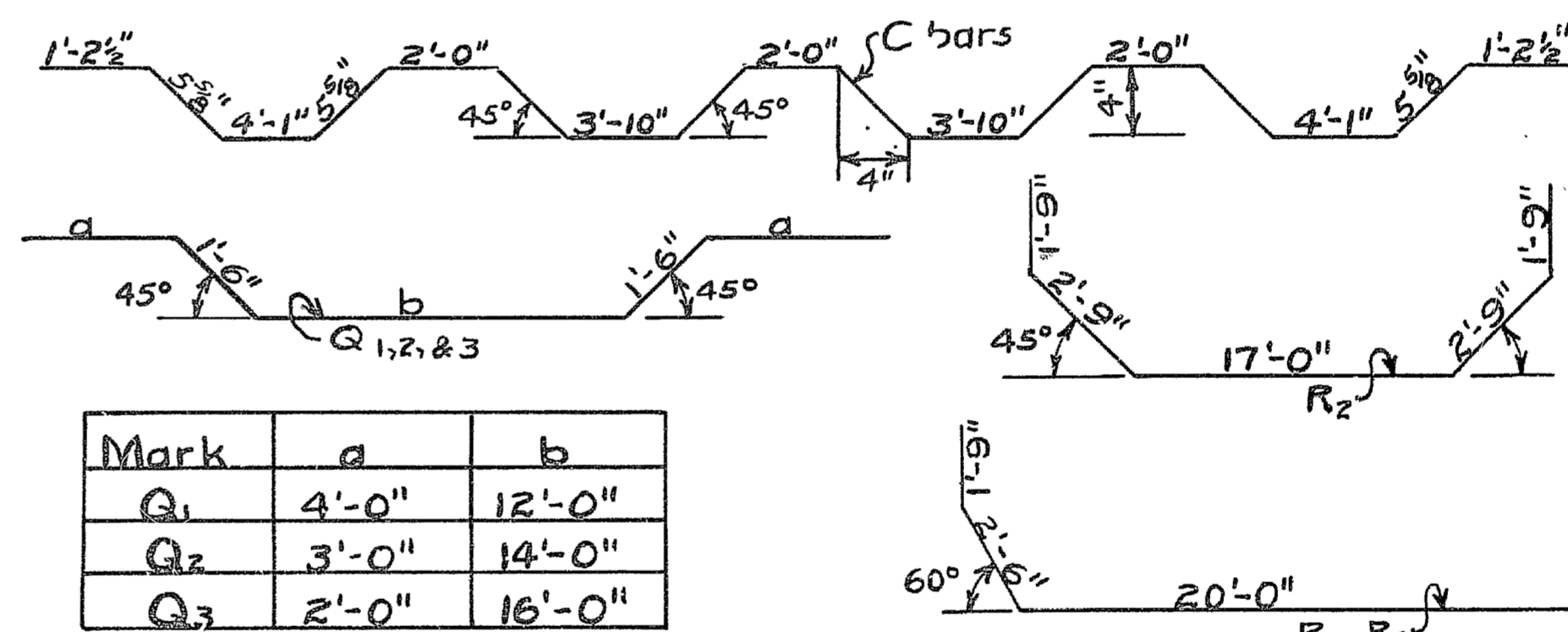
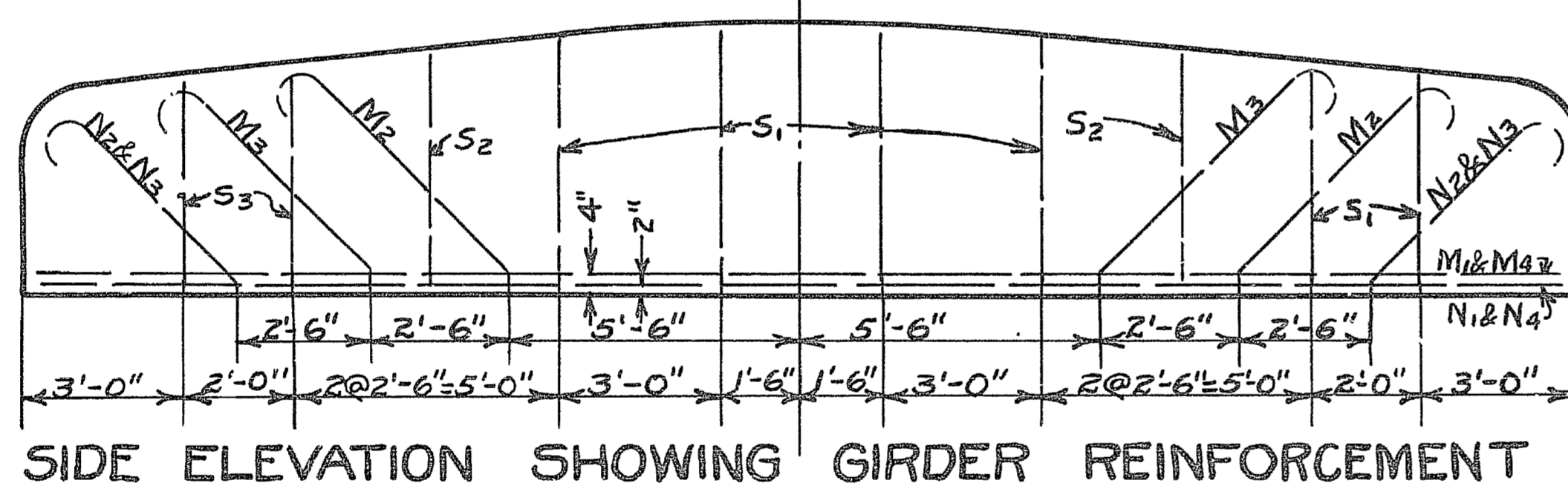


Note:- Four layers of tarred paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from one abutment and wings; and girders from wings on the other abutment.

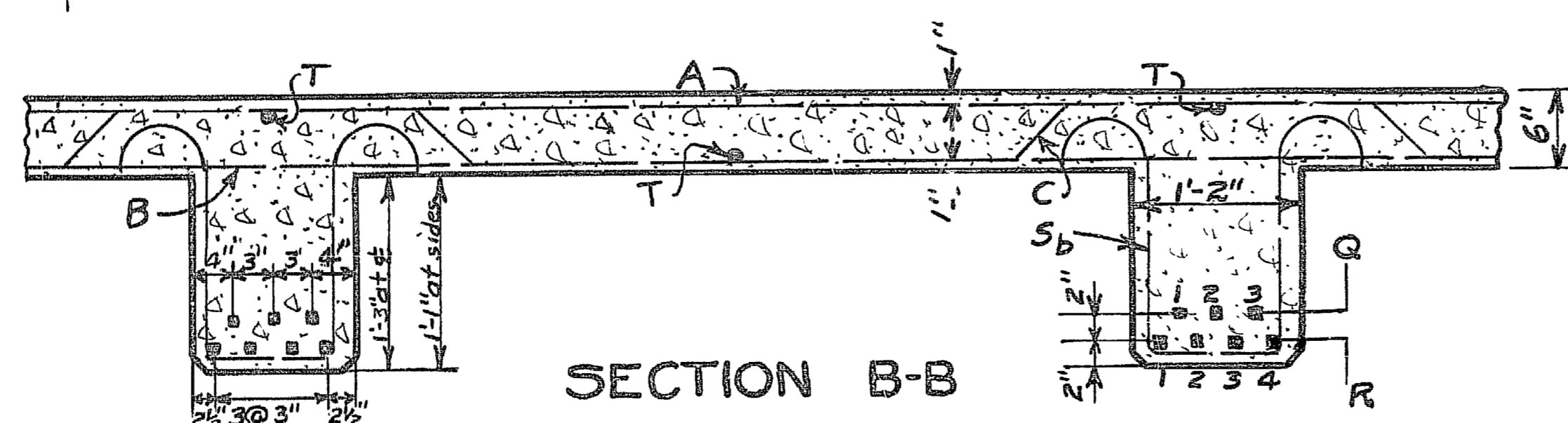


Note:- A bars are to be placed in top of slab over B bars. B and C bars are to be placed in bottom of slab and are to alternate at 6" ctrs.

MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars				
T	1/2" φ	13	22'-0"	191#
A	1/2" □	20	27'-0"	459
B	"	20	27'-0"	459
C	"	19	28'-0"	452
Beam Bars				
Q ₁	1" □	3	23'-0"	235
Q ₂	"	3	23'-0"	235
Q ₃	"	3	23'-0"	235
R ₁	"	3	28'-6"	291
R ₂	"	3	26'-0"	265
R ₃	"	3	27'-6"	281
R ₄	"	3	28'-6"	291
S _b	1/2" φ	87	5'-3"	304
Girder Bars				
M ₁	1" □	2	28'-6"	194
M ₂	"	2	25'-6"	173
M ₃	"	2	25'-6"	173
M ₄	"	2	28'-6"	194
N ₁	"	2	28'-6"	194
N ₂	"	2	32'-0"	218
N ₃	"	2	32'-0"	218
N ₄	"	2	28'-6"	194
S ₁	1/2" □	8	10'-9"	73
S ₂	"	4	9'-9"	33
S ₃	"	8	9'-3"	63
				Total Weight- 5425#



Estimated Quantities
1:2:4 Concrete - 28.1 Cu yds.
Reinforcing Steel - 5425 Lbs.
Wearing Surface - 59.1 Sq yds.

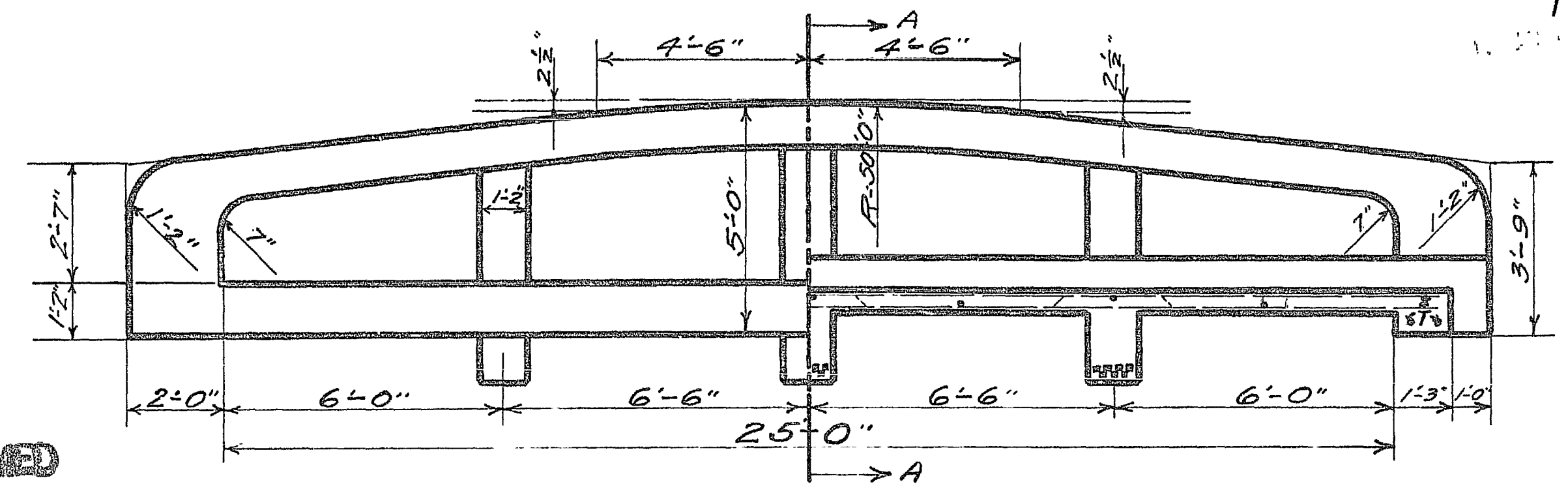


STANDARD CONCRETE GIRDER
SPAN 25'^{ET} ROADWAY 20'^{ET}
LOADING T-15
STATE OF OHIO
DEPT. OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
DECEMBER 1921 BUREAU OF BRIDGES

G-25-20.

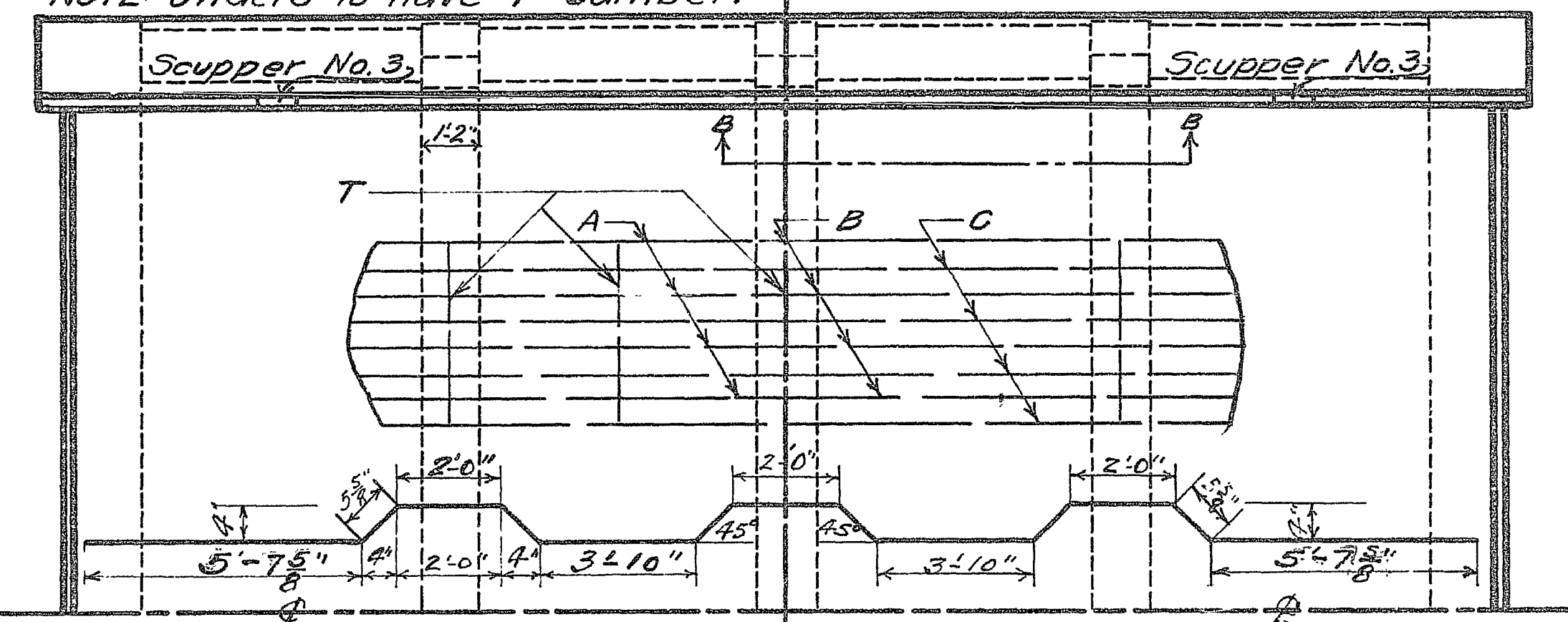
Des. by -
Dk. by - W.
Ck. by - A.M.
App. by - R.L.

NOTE: Corners on curbs shall be rounded to conform to a 1" radius.
All exposed edges shall be chamfered as shown on detail.



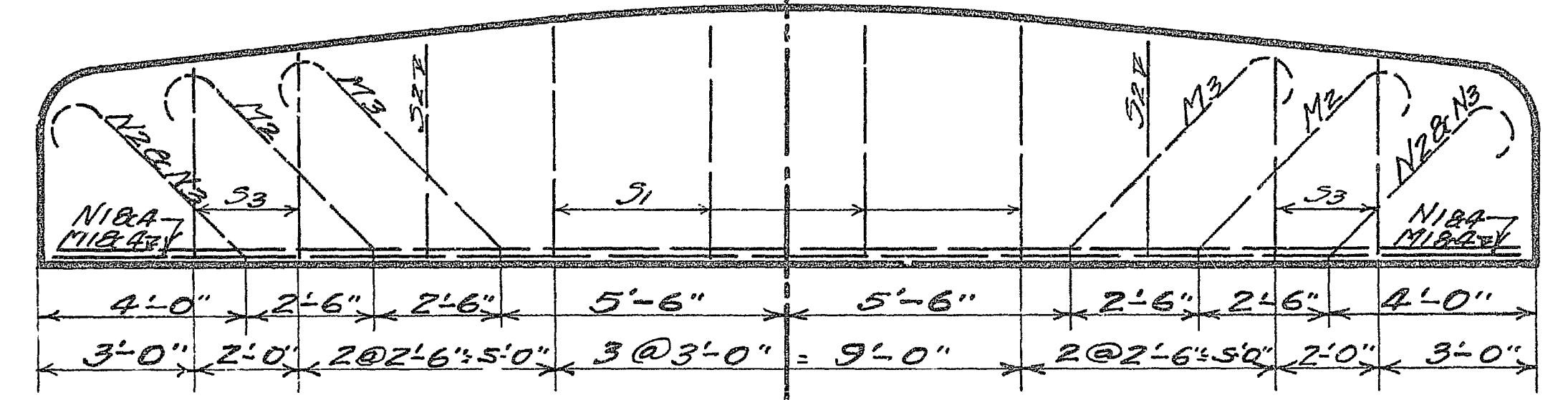
HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

NOTE: Girders to have 1" camber.

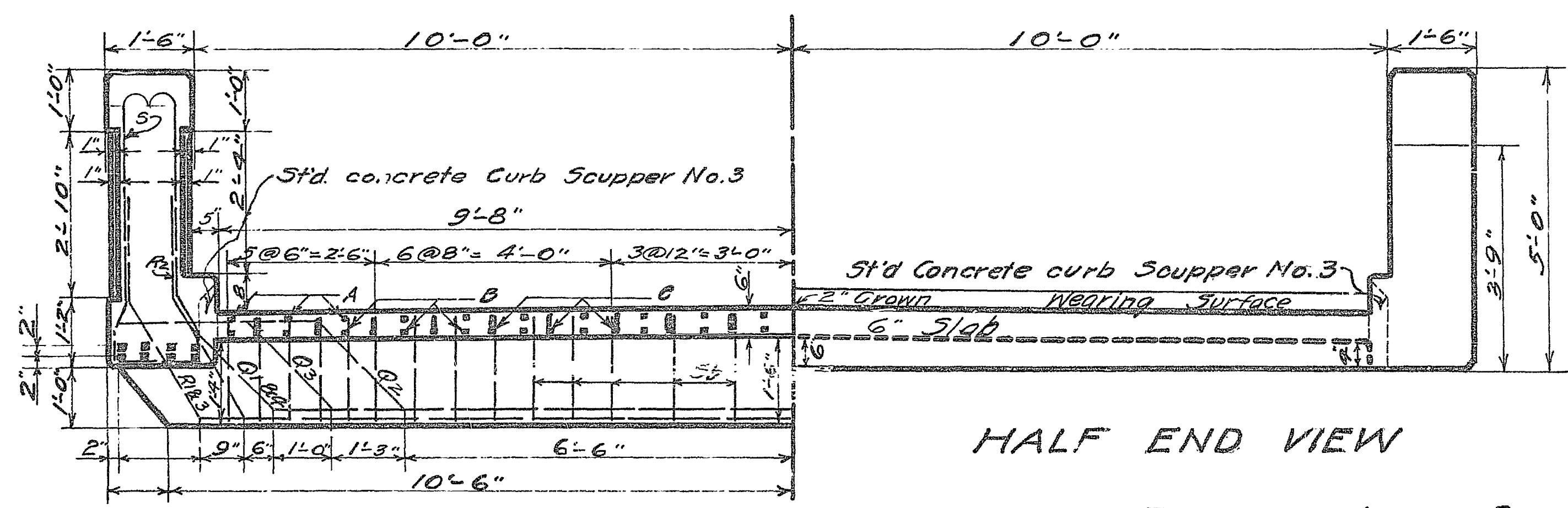


NOTE: If unable to pour superstructure continuously, make construction joint along center line of roadway and pour one-half continuously including slab, beams & girders.

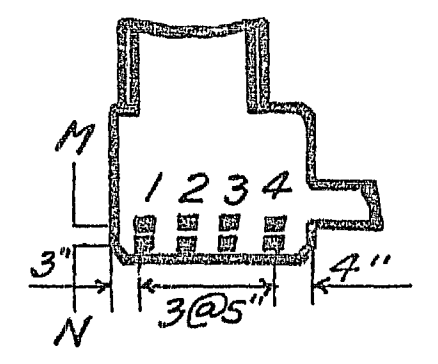
HALF PLAN



SIDE ELEVATION SHOWING GIRDER REINFORCEMENT



HALF END VIEW



HALF SECTION A-A

ESTIMATED QUANTITIES
1:2.4 Concrete 29.2 cu. yds.
Reinforcing steel 5390 lbs.
Wearing surface 59.1 sq. yds.

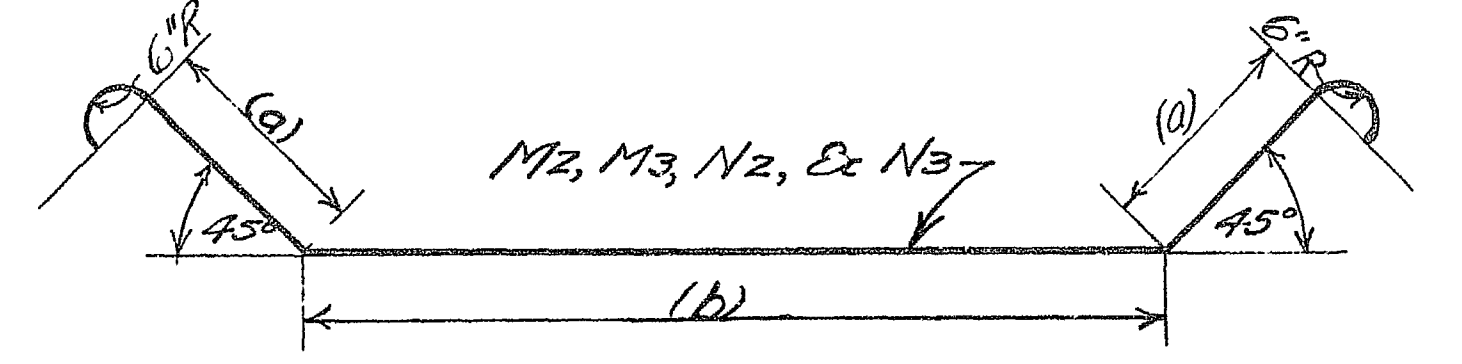
NOTE: 4 layers of tarred paper shall separate the girders & slab from one abutment & wings, & girders from wings on the other abutment.

NOTE: Bridge is designed for maximum weight of wearing surface on slab to be 65 lbs. per sq. ft.

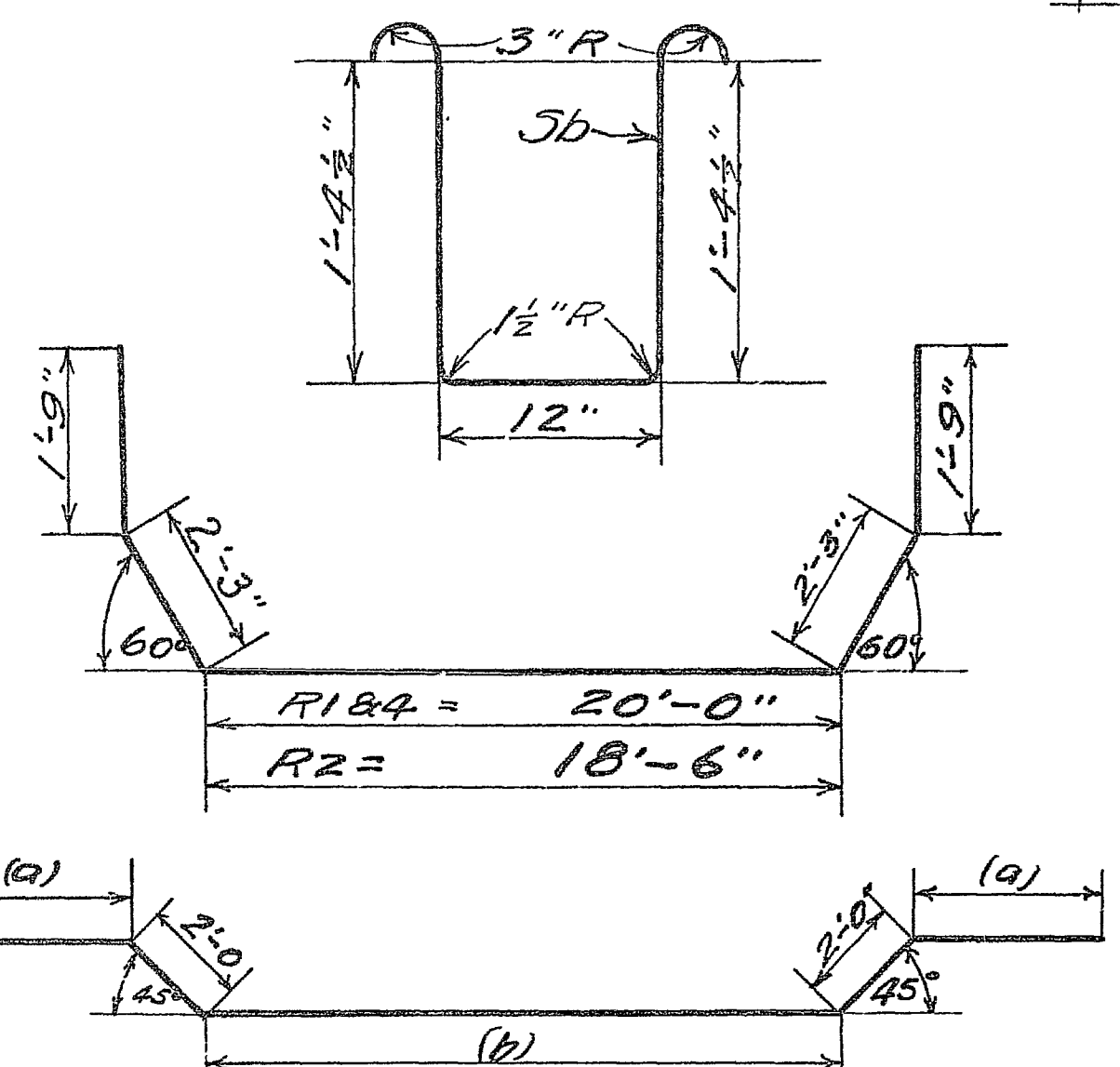
Wearing surface shall be full width between curbs and entire length of slab, 19'-4" by 27'-6"

NOTE: Place A bars in top of slab over B bars. B & C bars shall be placed alternately in bottom of slab at 6" ctrs

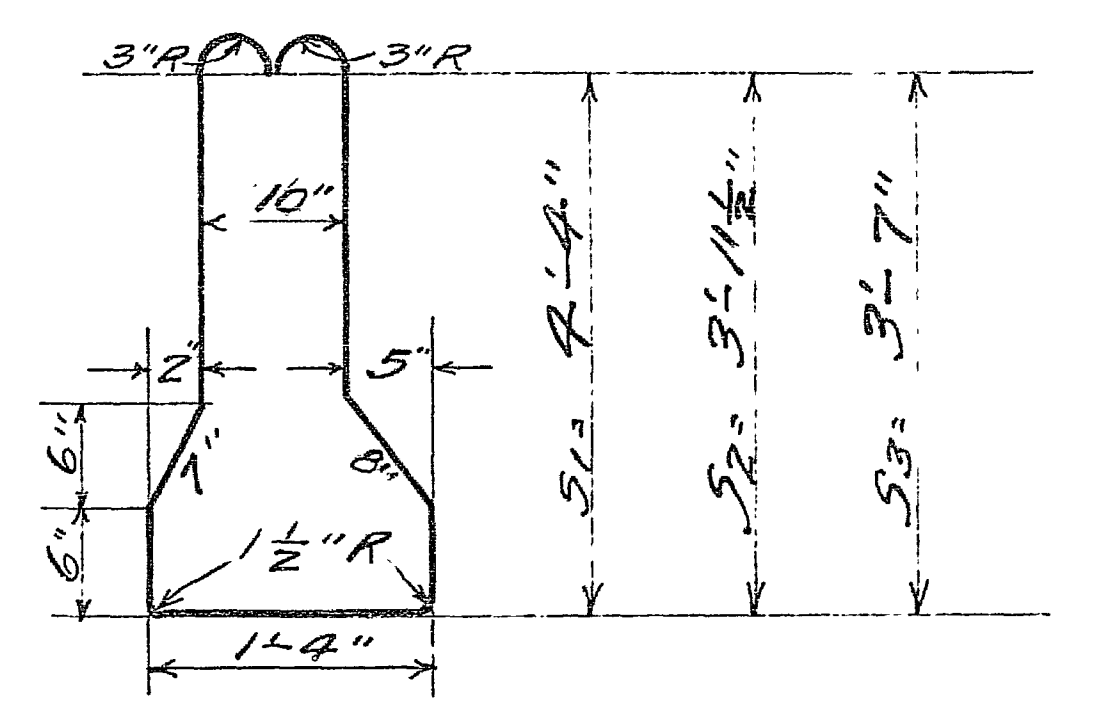
MARK	SIZE	NUMBER	LENGTH	WEIGHT
SLAB BARS				
T	1/2" φ	13	22'-0"	191
A	1/2" □	20	27'-0"	459
B	"	20	27'-0"	459
C	"	19	27'-9"	449
BEAM BARS				
Q1	1" □	3	23'-6"	240
Q2	"	3	23'-6"	240
Q3	"	3	23'-6"	240
Q4	"	3	23'-6"	240
R1	"	3	28'-0"	286
R2	"	3	24'-6"	250
R3	"	3	28'-0"	286
Sb	"	87	5'-3"	304
GIRDER BARS				
M1	1" □	2	28'-6"	194
M2	"	2	25'-6"	173
M3	"	2	25'-6"	173
M4	"	2	28'-6"	194
N1	"	2	28'-6"	194
N2	"	2	32'-0"	218
N3	"	2	32'-0"	218
N4	"	2	28'-6"	194
S1	1/2" □	8	11'-9"	80
S2	"	4	11'-0"	38
S3	"	8	10'-3"	70
Total Weight				5390



MARK	(a)	(b)
M2, M3, N2, & N3	4'-6"	13'-6"
N2 & 3	4'-0"	21'-0"



Mark	(a)	(b)
Q1 & 4	1'-0"	17'-6"
Q2	3'-3"	13'-0"
Q3	2'-0"	15'-6"

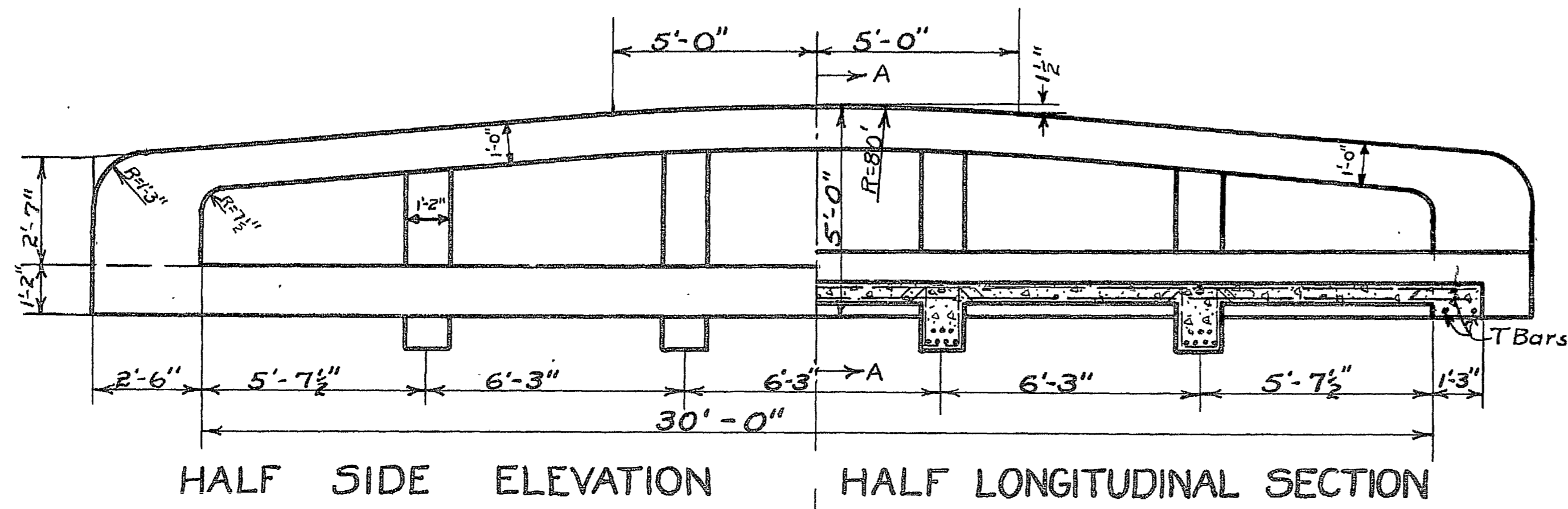


STANDARD CONCRETE GIRDER
SPAN 25 FT - ROADWAY 20 FT
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
SEPTEMBER 1923 - BUREAU OF BRIDGES

625-20-1
Designed by W.F. Drawn & Trsd by E.H.B. Checked by

Approved by

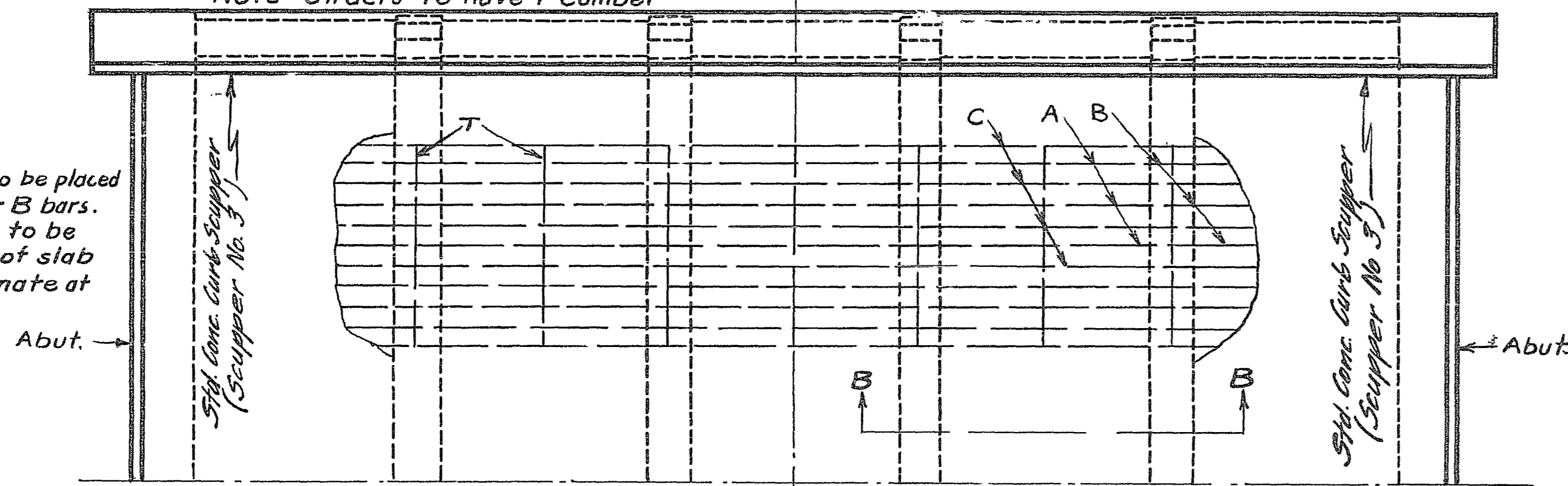
MICROFILMED
FEB 06 1979
REPRODUCTION



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

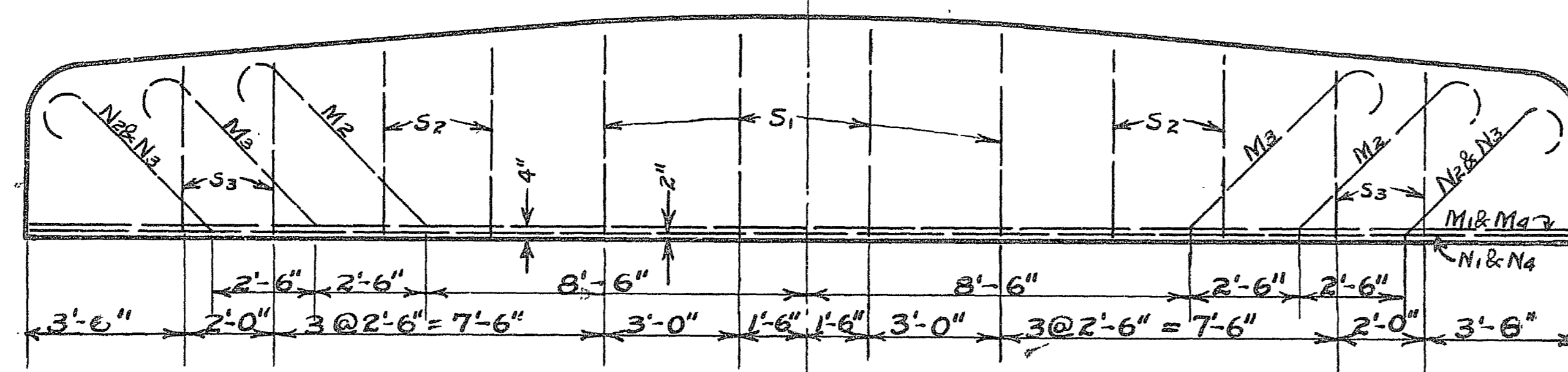
Note - Girders to have 1" camber

Note - A bars are to be placed in top of slab over B bars. B and C bars are to be placed in bottom of slab and are to alternate at 6" centers.

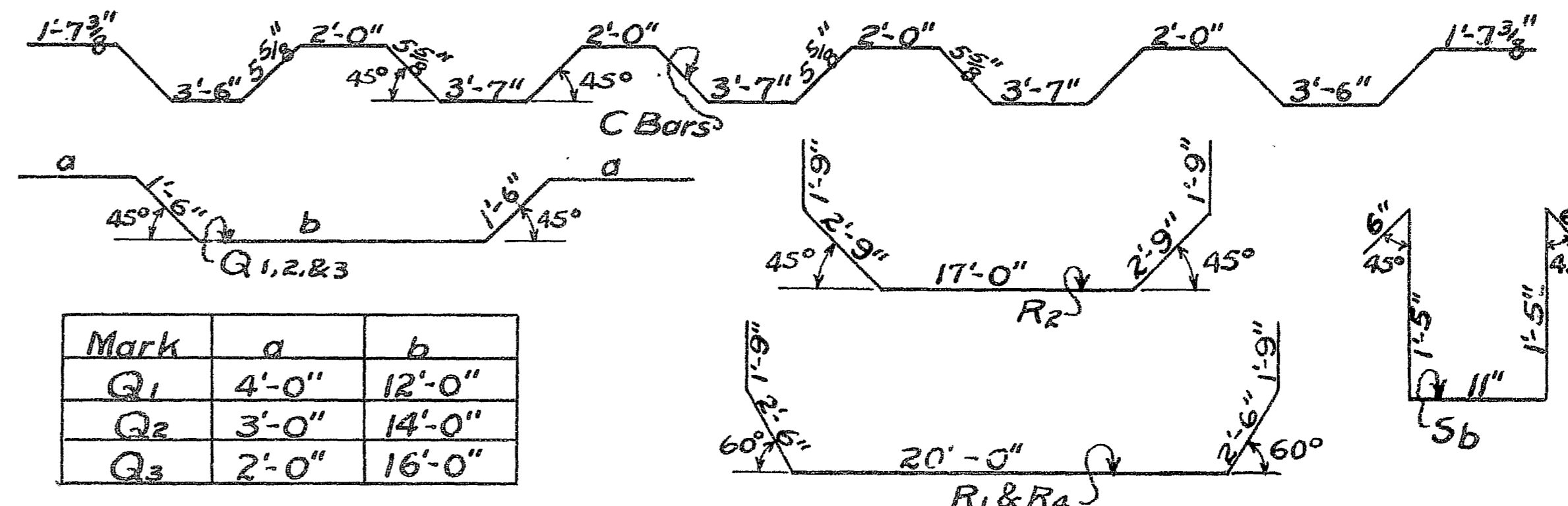


HALF PLAN

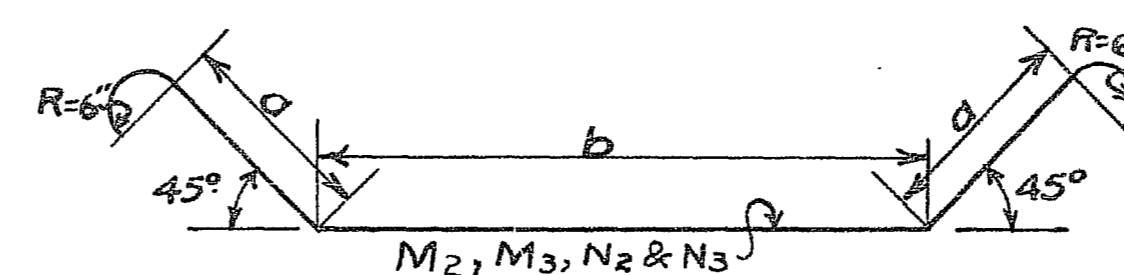
Note: - Four layers of tarred paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from one abutment & wings, and girders from wings on the other abutment.



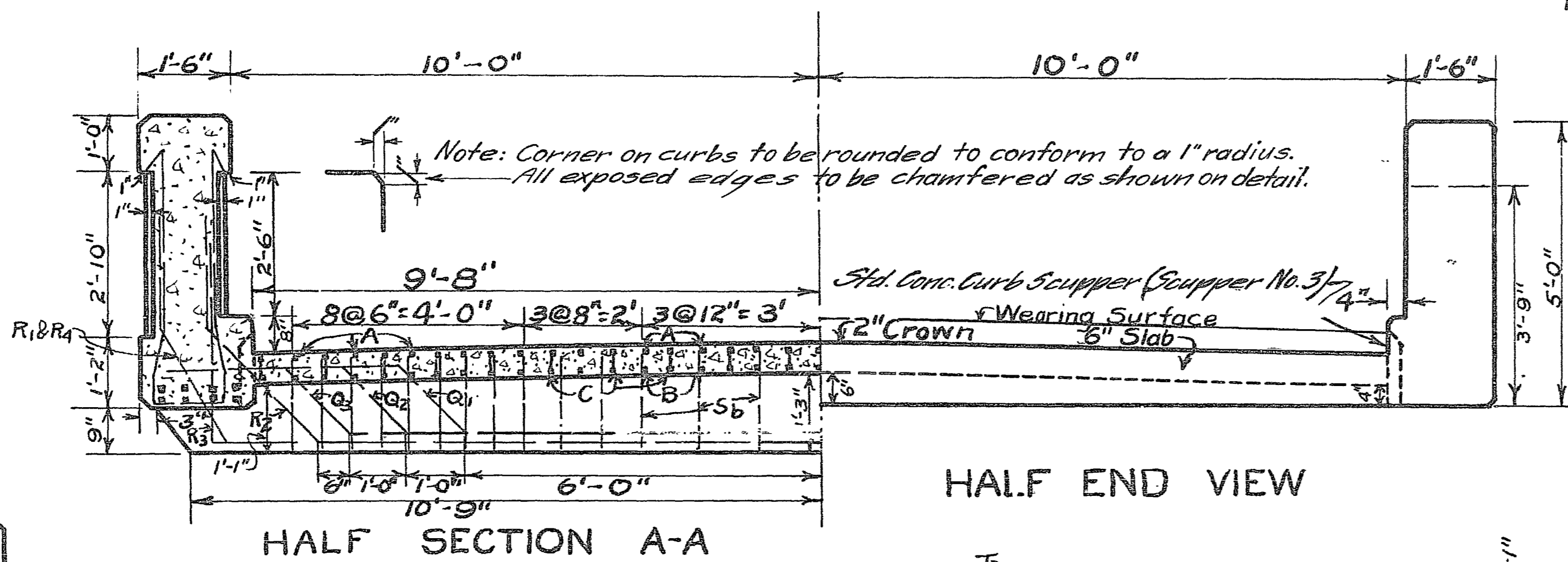
SIDE ELEVATION SHOWING GIRDER STEEL



Mark	a	b
Q1	4'-0"	12'-0"
Q2	3'-0"	14'-0"
Q3	2'-0"	16'-0"



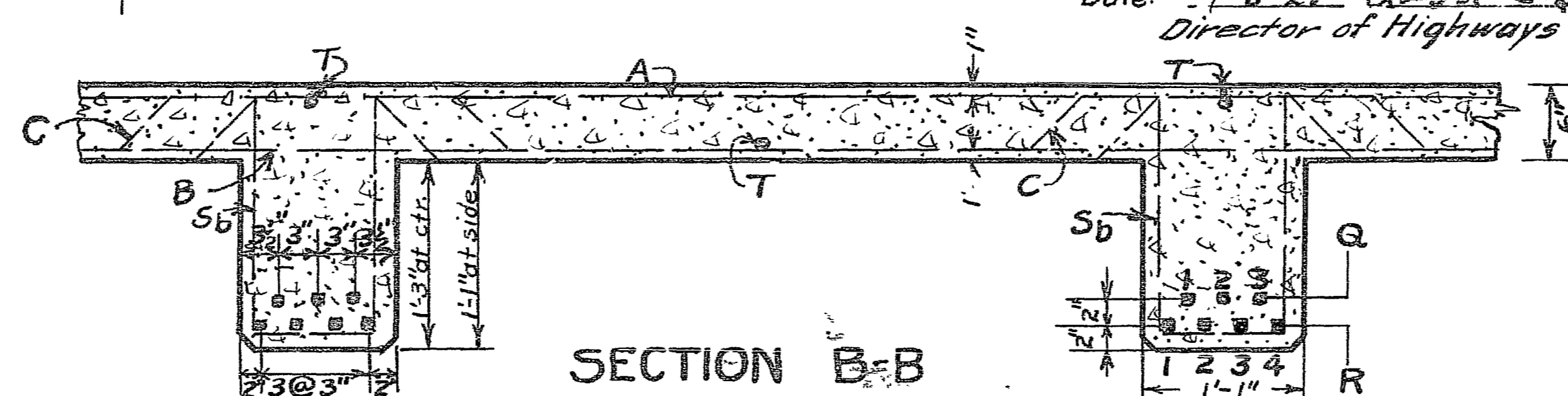
Mark	a	b
M2 & M3	4'-6"	19'-6"
N2 & N3	4'-0"	27'-0"



HALF END VIEW

HALF SECTION A-A

Estimated Quantities
1:2:4 Concrete 34.5 Cu yds.
Reinforcing Steel 6750 Lbs.



SECTION B-B

MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars				
T	1/2" φ	15	22'-0"	220#
A	1/2" □	20	32'-3"	548
B	"	20	32'-3"	548
C	"	19	33'-8"	543
Beam Bars				
Q1	1" □	4	23'-0"	313
Q2	"	4	23'-0"	313
Q3	"	4	23'-0"	313
R1	"	4	28'-6"	388
R2	"	4	26'-0"	354
R3	"	4	27'-6"	374
R4	"	4	28'-6"	386
Sb	1/2" φ	116	4'-9"	368
Girder Bars				
M1	1" □	2	34'-6"	235
M2	"	2	31'-6"	214
M3	"	2	31'-6"	214
M4	"	2	34'-6"	235
N1	"	2	34'-6"	235
N2	"	2	38'-0"	258
N3	"	2	38'-0"	258
N4	"	2	34'-6"	235
S1	1/2" □	8	10'-6"	72
S2	"	8	9'-6"	65
S3	"	8	9'-0"	61
Total Weight				6750#

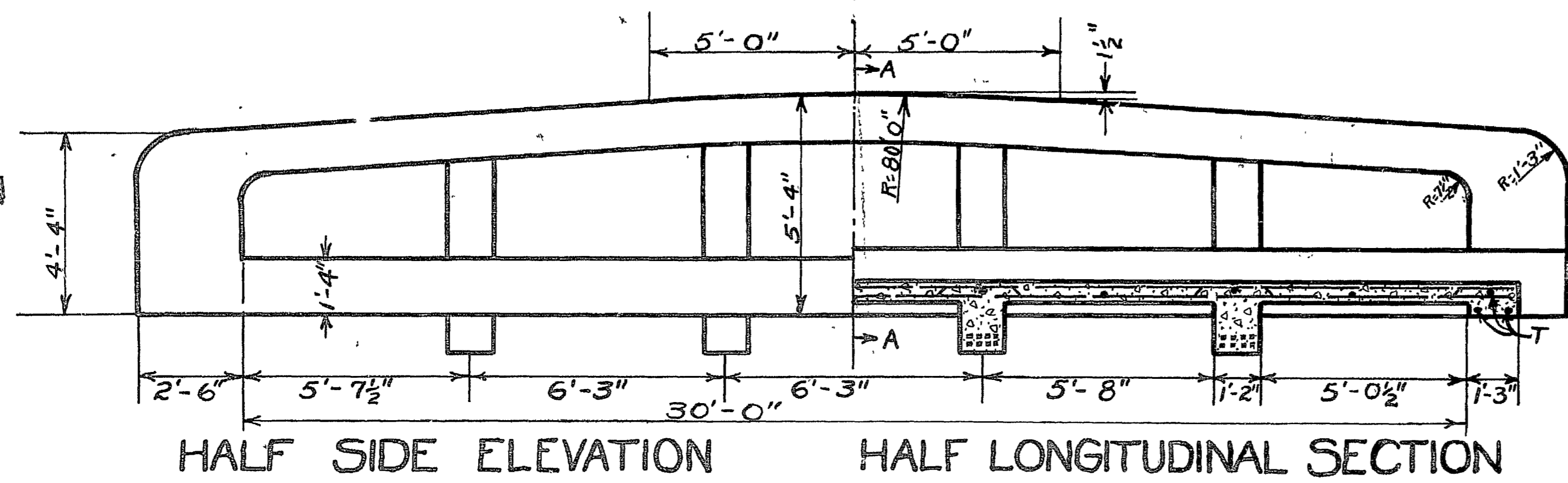
Recommended for Approval:-
Date: 7-8-21. *John C. Herlihy*
Acting Chief Engineer of Bridges
Approved:-
Date: 7-8-21. *John C. Herlihy*
Director of Highways & Public Works

STANDARD CONCRETE GIRDER
SPAN 30' ROADWAY 20'
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JULY 1921 BUREAU OF BRIDGES

6 30 20

Des. by Tr. W. C. H. by M. H. G.

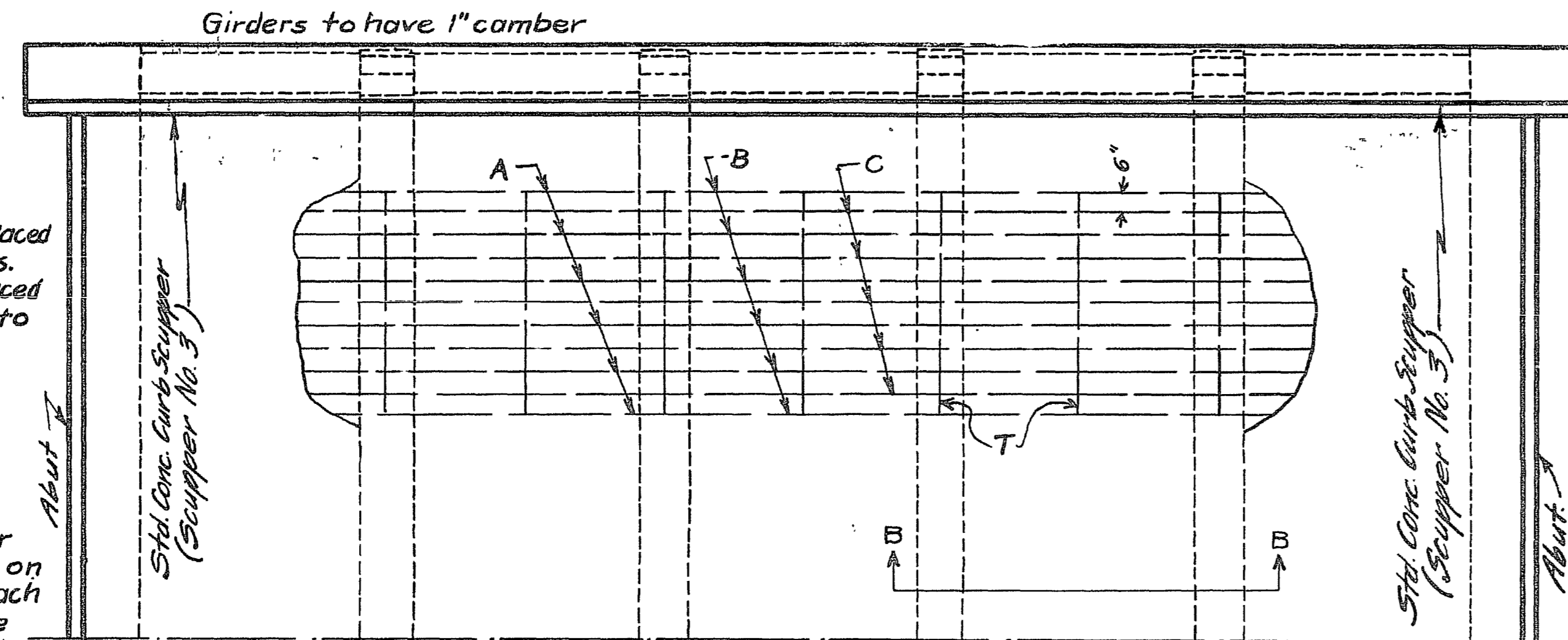
MICROFILMED
FEB 07 1979
REPRODUCTION



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

Note - A bars are to be placed in top of slab over B bars. B and C bars are to be placed in bottom of slab and are to alternate at 6" centers.

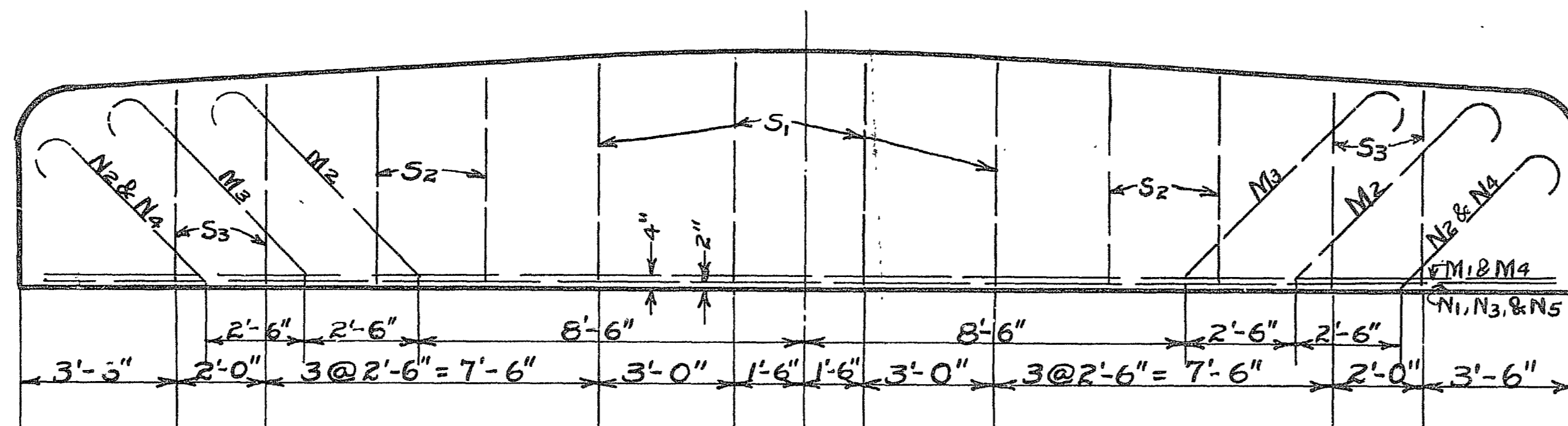
Note - Four layers of tar paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from one abutment & wings, and girders from wings on the other abut.



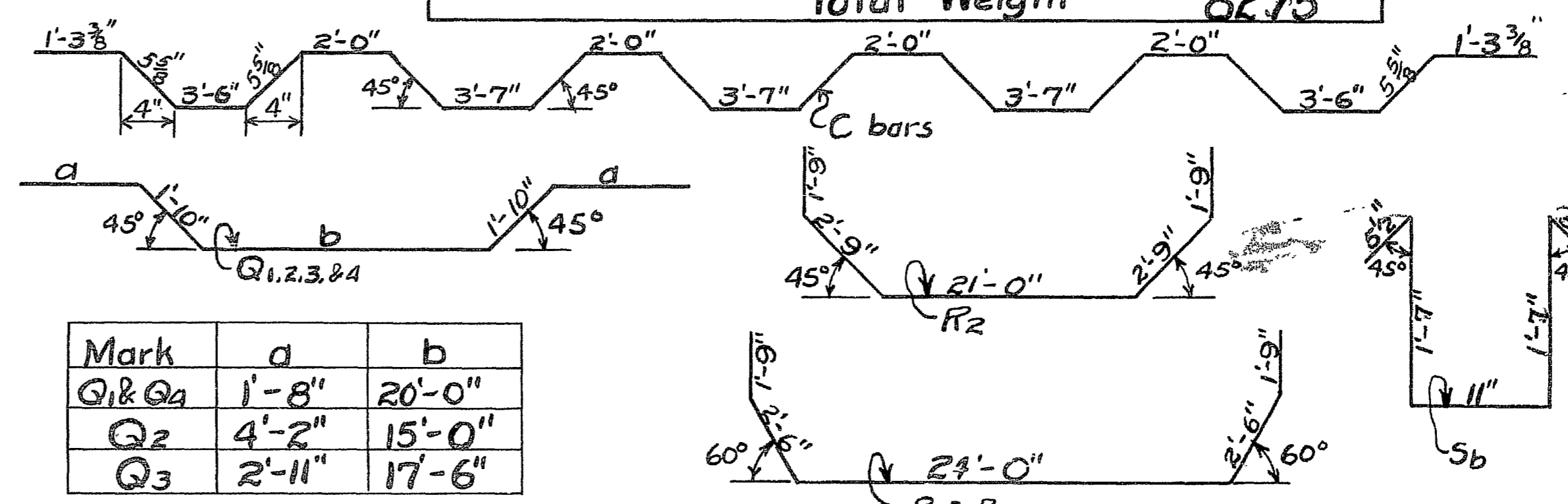
HALF PLAN

Estimate of Quantities
1:2:4 Concrete - 39.8 Cu yds.
Reinforcing Steel - 8275 Lbs.
Wearing Surface

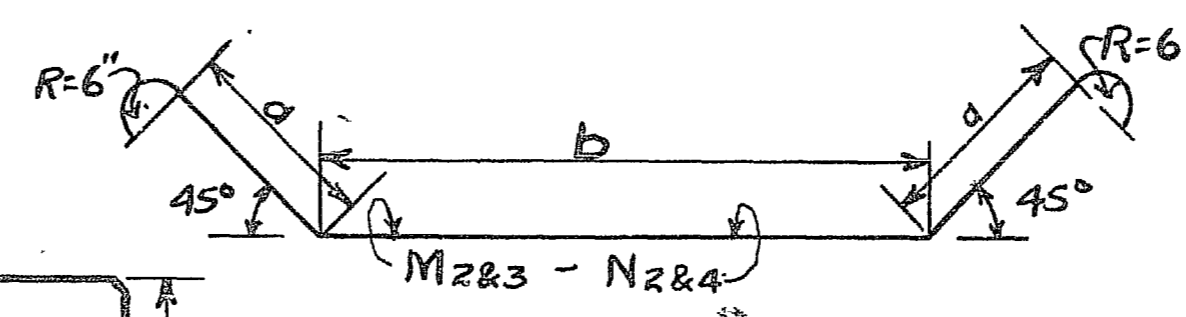
Mark	Size	Number	Length	Weight
Slab Bars				
T	1/2" φ	15	26'-0"	261
A	1/2" □	24	32'-0"	653
B	"	24	32'-0"	653
C	"	23	33'-0"	645
Beam Bars				
Q ₁	1" □	4	27'-0"	367
Q ₂	"	4	27'-0"	367
Q ₃	"	4	27'-0"	367
Q ₄	"	4	27'-0"	367
R ₁	"	4	32'-6"	442
R ₂	"	4	30'-0"	408
R ₃	"	4	31'-6"	428
R ₄	"	4	32'-6"	442
S _b	1/2" φ	152	5'-0"	508
Girder Bars				
M ₁	1" □	2	34'-6"	235
M ₂	"	2	33'-0"	224
M ₃	"	2	33'-0"	224
M ₄	"	2	34'-6"	235
N ₁	"	2	34'-6"	235
N ₂	"	2	38'-0"	258
N ₃	"	2	34'-6"	235
N ₄	"	2	38'-0"	258
N ₅	"	2	34'-6"	235
S ₁	1/2" □	8	12'-0"	82
S ₂	"	8	11'-0"	75
S ₃	"	8	10'-6"	71
			Total Weight	8275



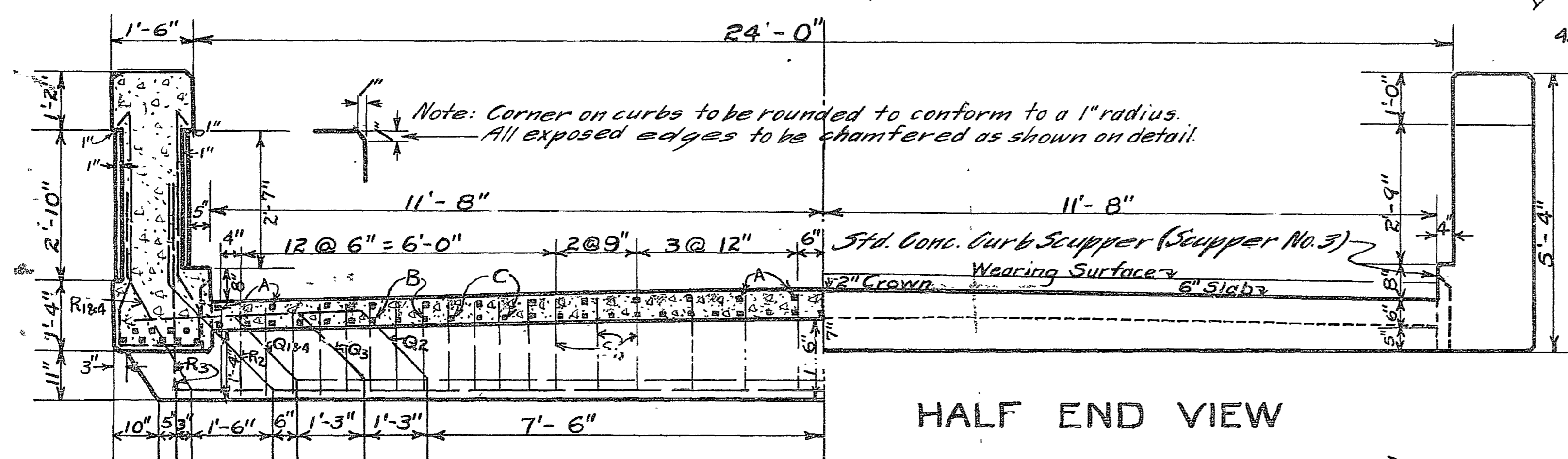
ELEVATION SHOWING GIRDER REINFORCEMENT



Mark	a	b
Q ₁ & Q ₂	1'-8"	20'-0"
Q ₃	4'-2"	15'-0"
Q ₃	2'-11"	17'-6"



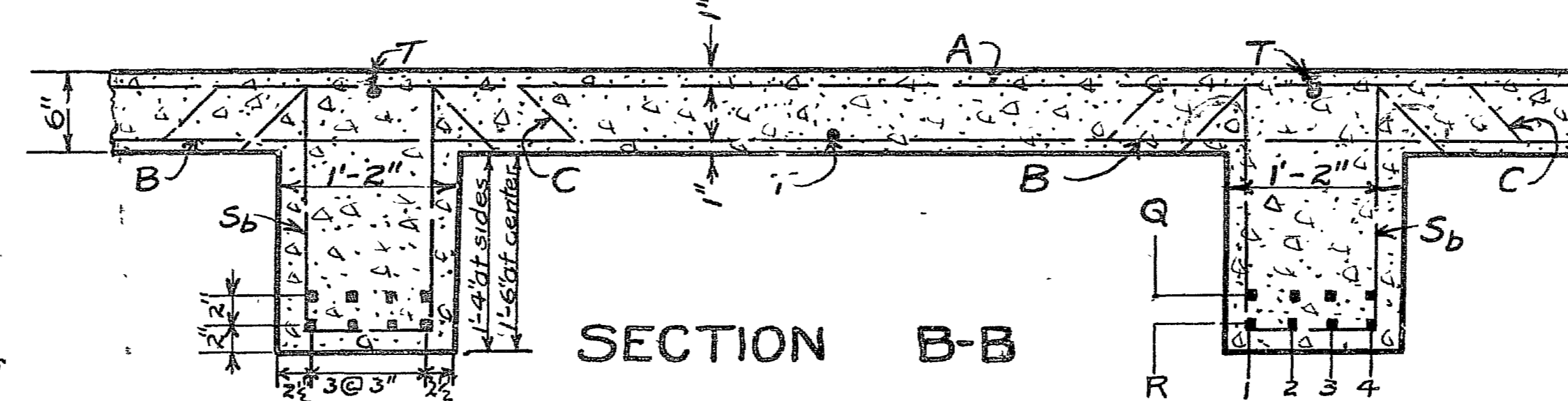
Mark	a	b
M ₂ & M ₃	5'-3"	19'-6"
N ₂ & N ₄	4'-0"	27'-0"



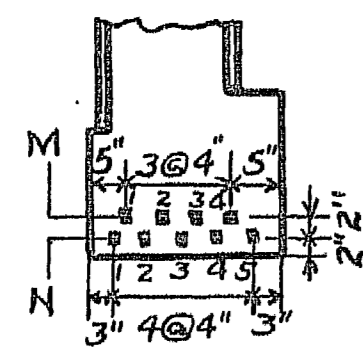
HALF SECTION A-A

Note: Corner on curbs to be rounded to conform to a 1" radius. All exposed edges to be chamfered as shown on detail.

HALF END VIEW



SECTION B-B



Recommended for Approval:-
Date:- 7-10-21
John C. Herrick
Acting Chief Engineer of Bridges

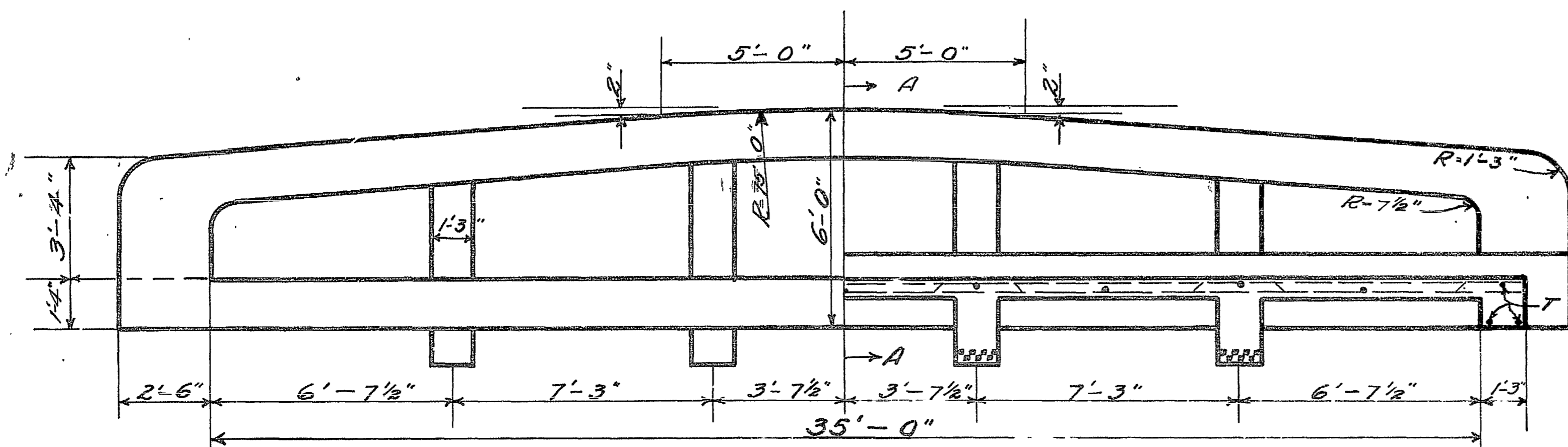
Approved:-
Date:- 7-10-1921
Leon C. Herrick
Director of Highways & Public Works

STANDARD CONCRETE GIRDER
SPAN 30' ROADWAY 24'
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JULY 1921 BUREAU OF BRIDGES

G 30 24

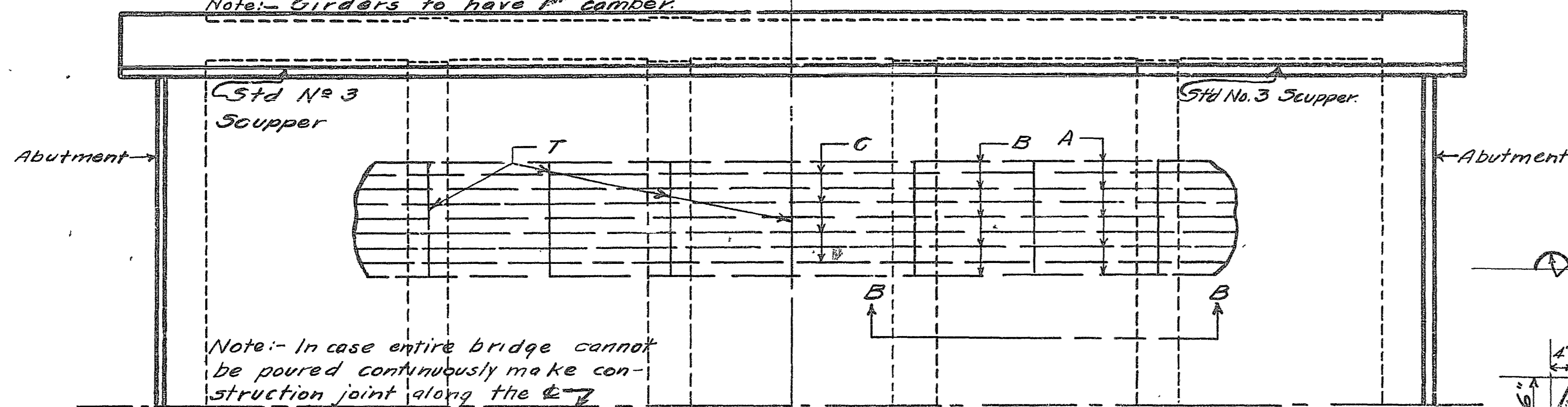
Des. by H-402
Dr. & Ck. by W.

MICROFILMED
FEB 07 1979
REPRODUCTION



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

Note: Girders to have 1" camber



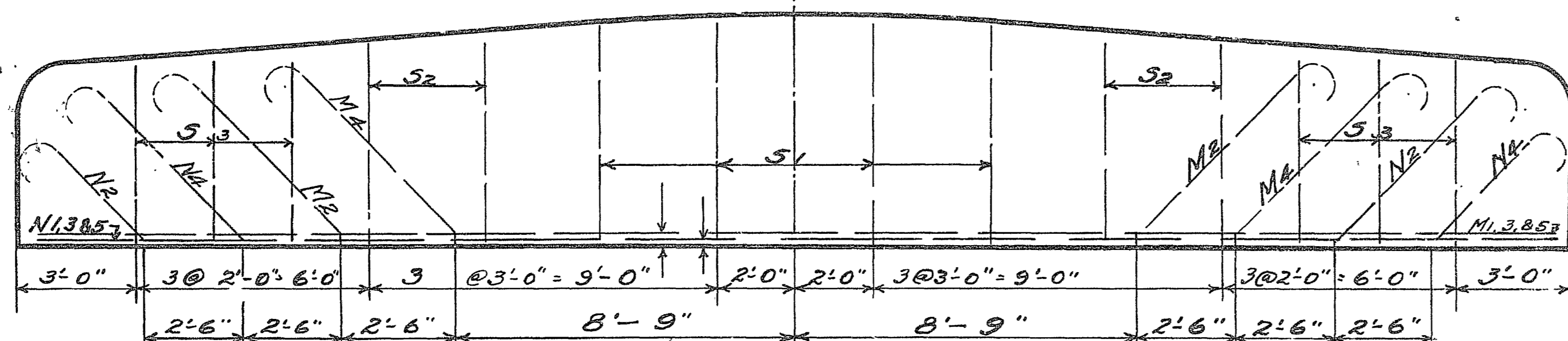
HALF PLAN

Note: In case entire bridge cannot be poured continuously make construction joint along the & 7

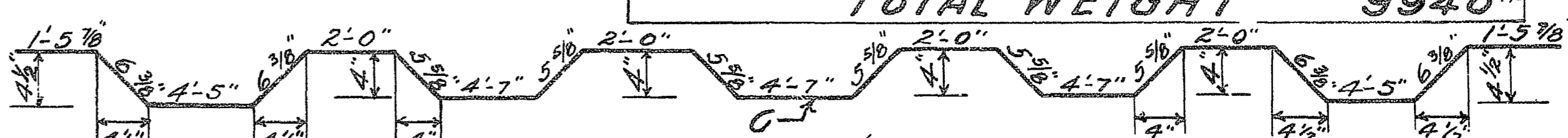
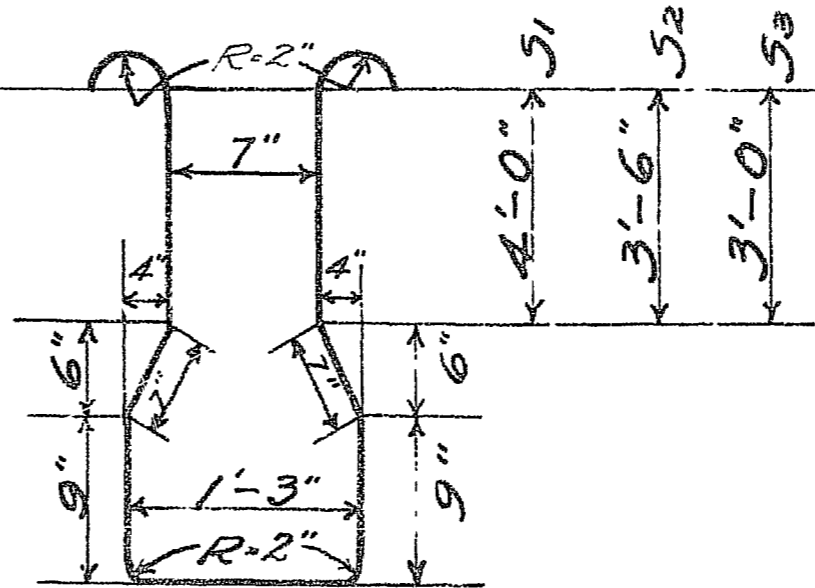
Note: Bridge is designed for wearing surface on slab to weigh 65 pounds per sq. ft. Wearing surface is figured: 19'4" wide and 37'6" long. Four layers of tarred paper are to be placed on one abutment & at each wing of the sub-structure so as to entirely separate the girders & slab from one abutment & wings on the other abutment. "A" bars are to be placed in top of slab over "B" bars, "B" & "C" bars are to be placed in bottom of slab and are to alternate at 5" centers.

MARK	SIZE	NUMBER	LENGTH	WEIGHT
SLAB BARS				
T	1/2" φ	15	26'-0"	261
A	1/2" □	28	37'-0"	881
B	"	28	37'-0"	881
C	"	28	38'-6"	916
BEAM BARS				
Q1	1 1/8" □	4	27'-9"	478
Q2	"	4	27'-9"	478
Q3	"	4	27'-9"	478
Q4	"	4	27'-9"	478
R1	"	4	31'-0"	536
R2	"	4	31'-3"	538
R3	"	4	33'-0"	568
Sb	1/2" φ	140	6'-0"	560
GIRDER BARS				
M1	1" □	2	39'-6"	269
M2	"	2	34'-3"	233
M3	"	2	39'-6"	269
Ma	"	2	34'-3"	233
M5	"	2	39'-6"	269
N1	"	2	39'-6"	269
N2	"	2	42'-6"	289
N3	"	2	39'-6"	269
N4	"	2	42'-6"	289
N5	"	2	39'-6"	269
S1	1/2" □	8	12'-3"	83
S2	"	8	11'-3"	77
S3	"	12	10'-3"	69

TOTAL WEIGHT 9940#

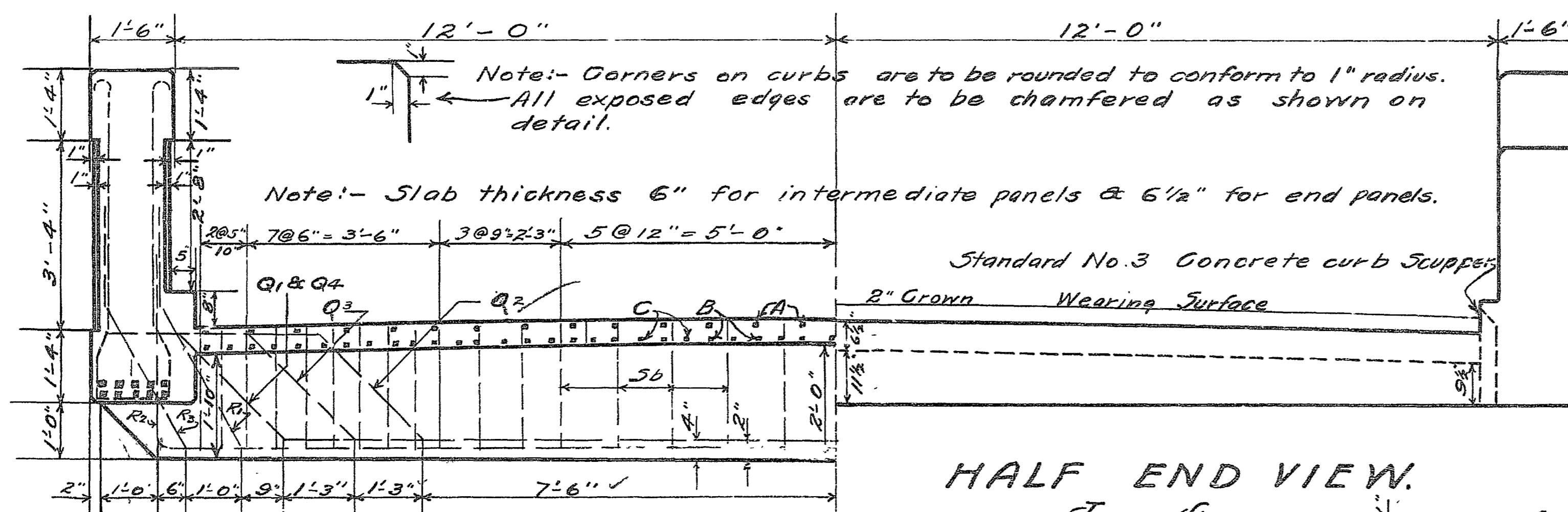


SIDE ELEVATION SHOWING GIRDER REINFORCEMENT.



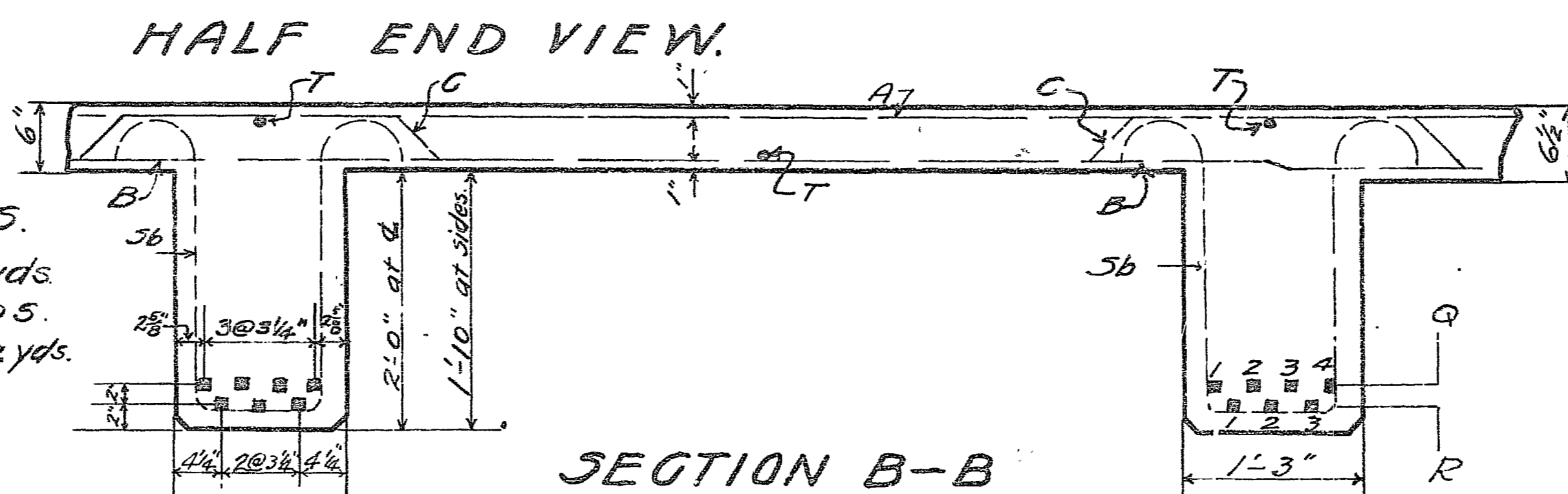
MARK	a	b
Q2	3'-9"	15'-0"
Q3	2'-6"	17'-6"
O1 & Q4	1'-3"	20'-0"

Mark	a	b	c
M2 & Ma	5'-6"	5'-6"	20'-0"
N2 & N4	5'-6"	3'-9"	30'-0"



HALF SECTION A-A

ESTIMATED QUANTITIES.
1:2:4 Concrete 488 cu. yds.
Reinforcing Steel 9940 lbs.
Wearing surface 97.2 sq. yds.



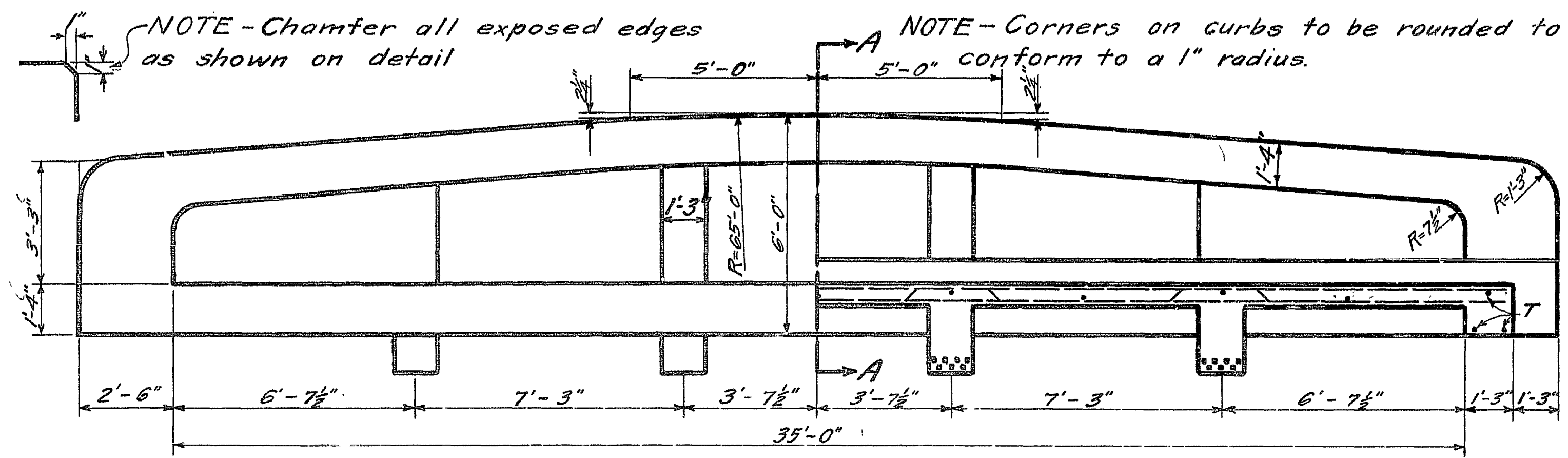
SECTION B-B

STANDARD CONCRETE GIRDER.
SPAN 35 FT. ROADWAY 24 FT.
T-15 LOADING
STATE OF OHIO
DEPT OF HIGHWAYS & PUBLIC WORKS
DIVISION OF HIGHWAYS
JUNE 1923. BUREAU OF BRIDGES.

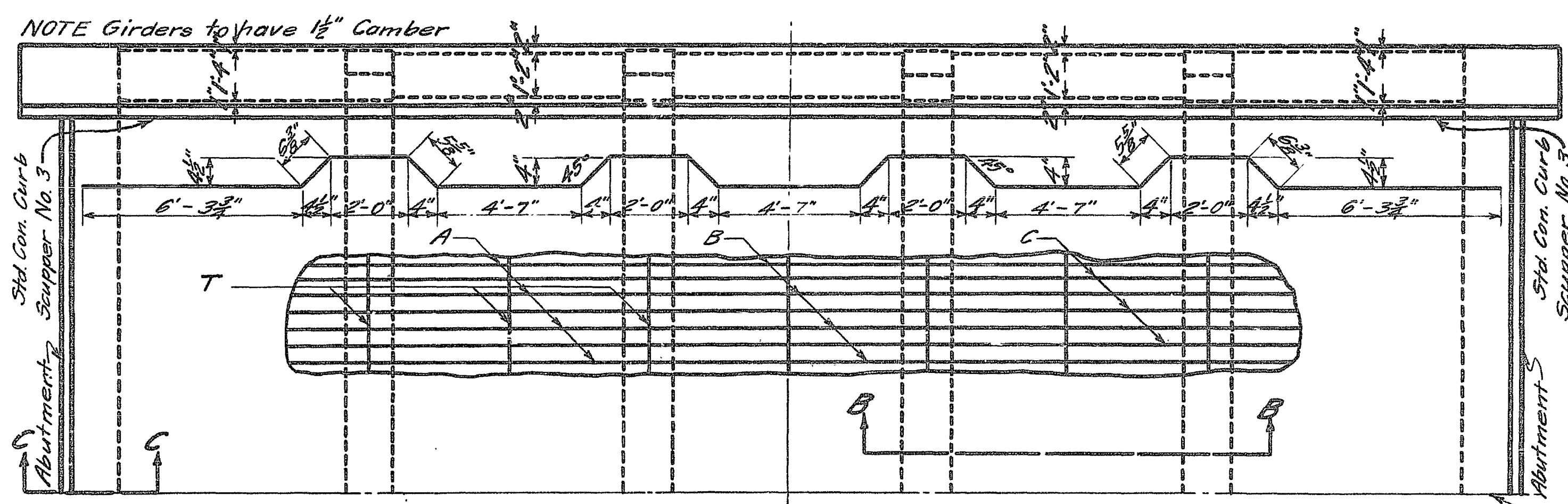
G35-241 Appr. by

Des. by W.F.
Ch. by E.H.B.
Ch. by

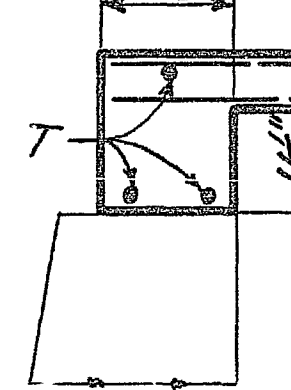
NOTE - Separate the girders and slab from one abutment and wings and girders from wings on the other abutment by using 4 layers of 3-ply tarred paper.



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

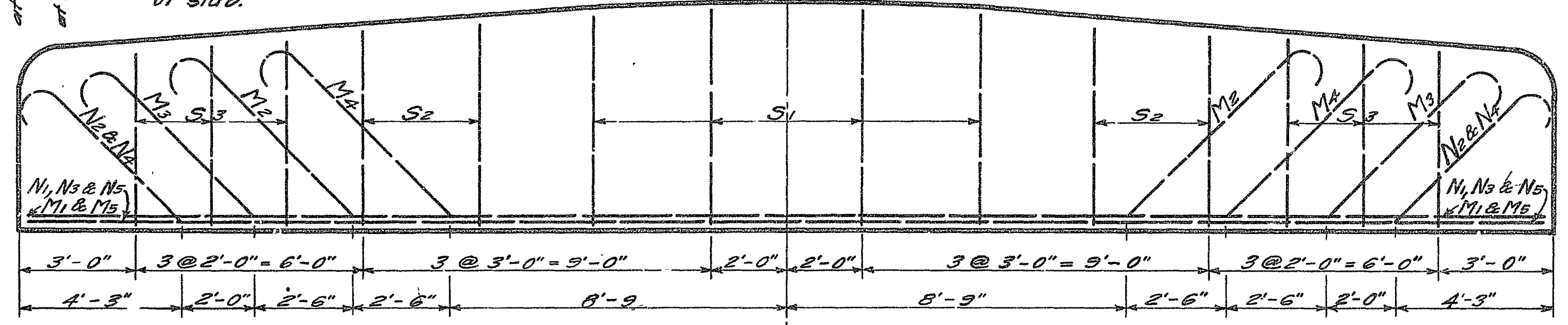


HALF PLAN

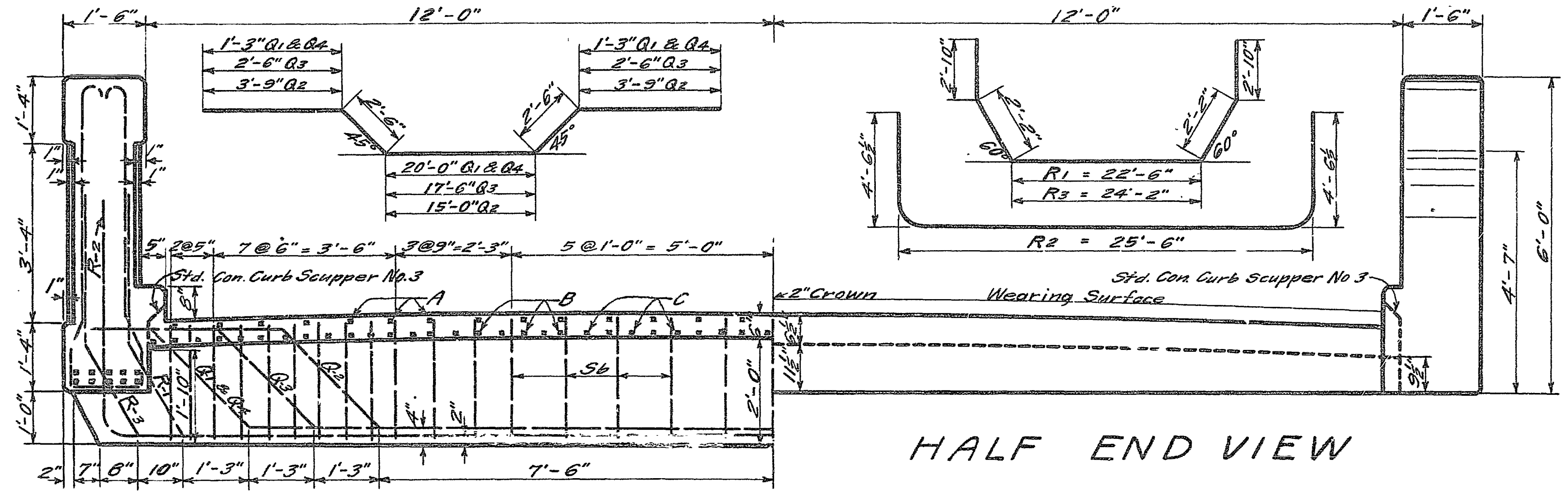


SEC. C-C

MICROFILMED
FEB 07 1979
REPRODUCTION

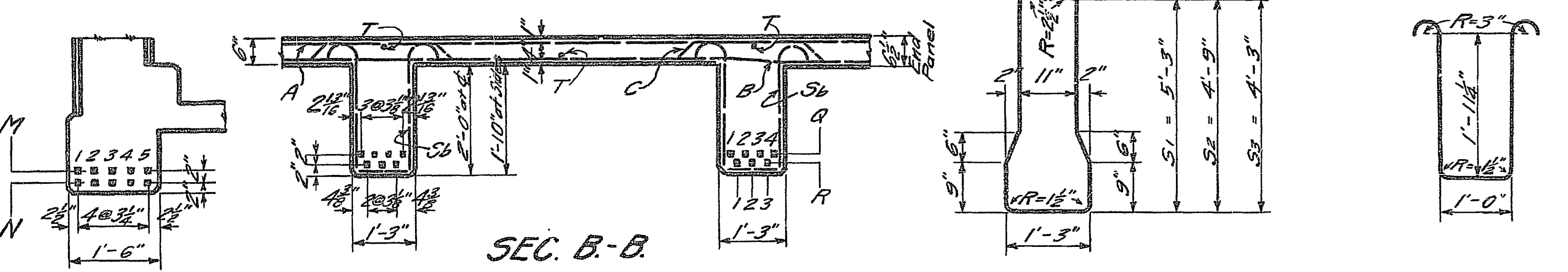


SIDE ELEVATION SHOWING GIRDER REINFORCEMENT



HALF END VIEW

HALF SECTION A-A



SEC. B-B

NOTE - If unable to pour superstructure continuously, make a construction joint along the center line of roadway and pour one-half continuously including slab beams and girder.

MARK	SIZE	NUMBER	LENGTH	WEIGHT
SLAB BARS				
T	1/2" φ	15	26'-0"	261
A	1/2" □	28	37'-0"	881
B	"	28	37'-0"	881
C	"	29	38'-3"	943
BEAM BARS				
Q1	1/2" □	4	27'-6"	474
Q2	"	4	27'-6"	474
Q3	"	4	27'-6"	474
Q4	"	4	27'-6"	474
R1	"	4	32'-6"	559
R2	"	4	34'-3"	590
R3	"	4	34'-3"	590
Sb	1/2" φ	140	6'-4"	592
GIRDER BARS				
M1	1" □	2	39'-6"	269
M2	"	2	34'-3"	233
M3	"	2	40'-6"	276
MA	"	2	34'-3"	233
M5	"	2	39'-6"	269
N1	1/2" □	2	39'-6"	340
N2	"	2	43'-0"	370
N3	"	2	39'-6"	340
N4	"	2	43'-0"	370
N5	"	2	39'-6"	339
S1	1/2" □	8	13'-3"	90
S2	"	8	12'-3"	83
S3	"	12	11'-3"	115
TOTAL WEIGHT			10520#	

Mark	a	b	c
M2 & M4	5'-11"	5'-8"	20'-0"
N2 & N4	4'-5"	4'-5"	31'-6"
M3	5'-2"	5'-2"	27'-6"

NOTE - Bridge is designed for maximum weight of wearing surface on slab to be 65 pounds per sq. foot.

Wearing Surface shall be full width between curbs and entire length of slab

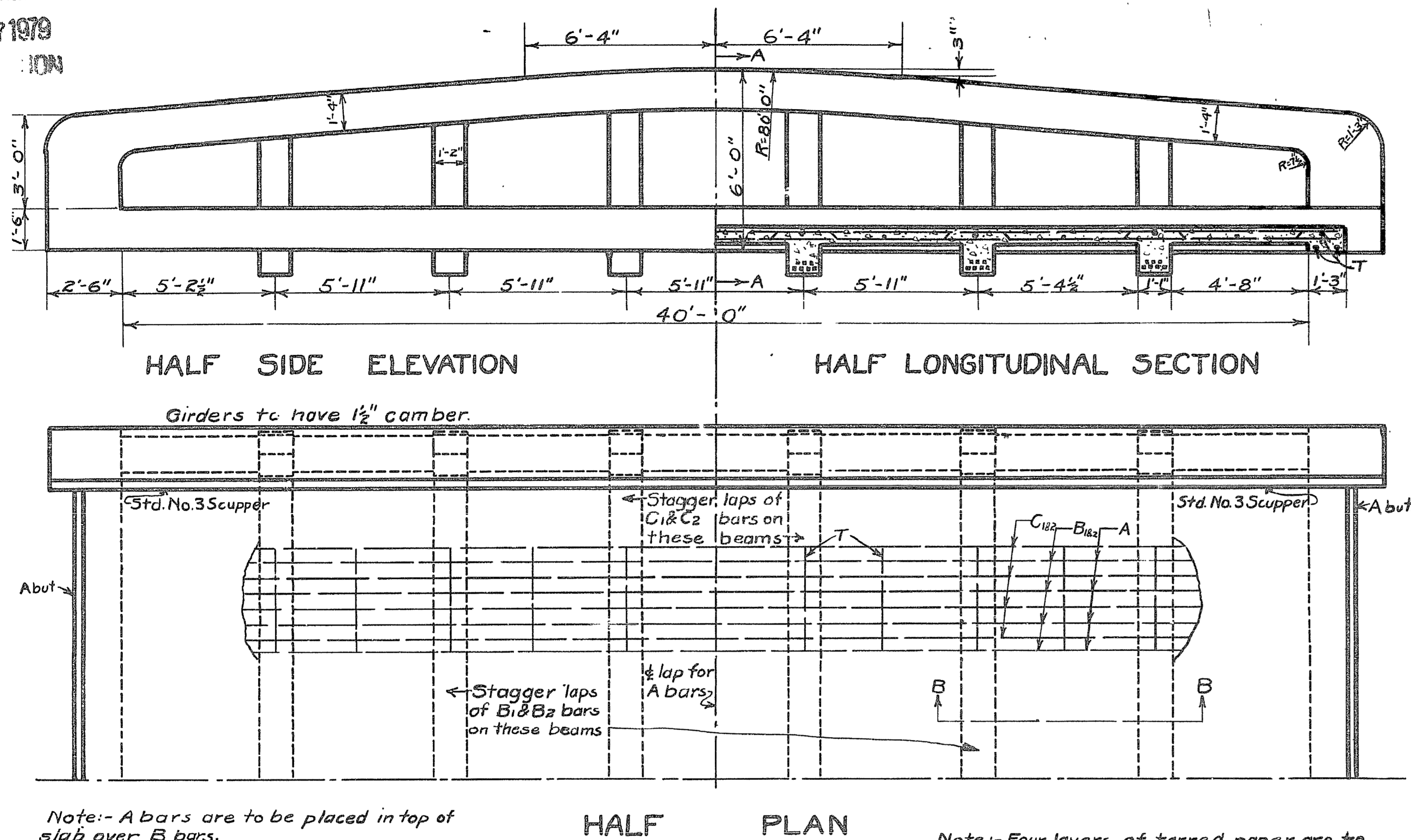
ESTIMATED QUANTITIES

1:2:4 Concrete	53.0 Cu. Yds.
Reinforcing steel	10520 Lbs.
Wearing surface	97.2 Sq. Yds.

STANDARD CONCRETE GIRDER
SPAN 35 FT ROADWAY 24 FT
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JANUARY 1924 BUREAU OF BRIDGES

G35-24-1
Designed by W.F. Drain & Trissler
Approved by R. H. Frangis Rev. & Chd. by W. H. R.

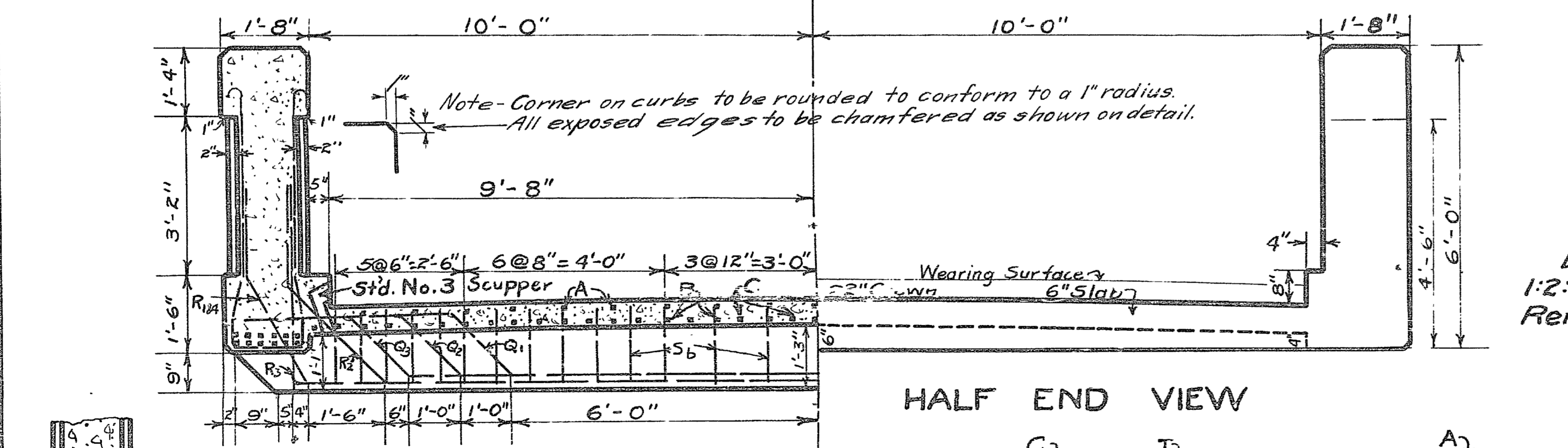
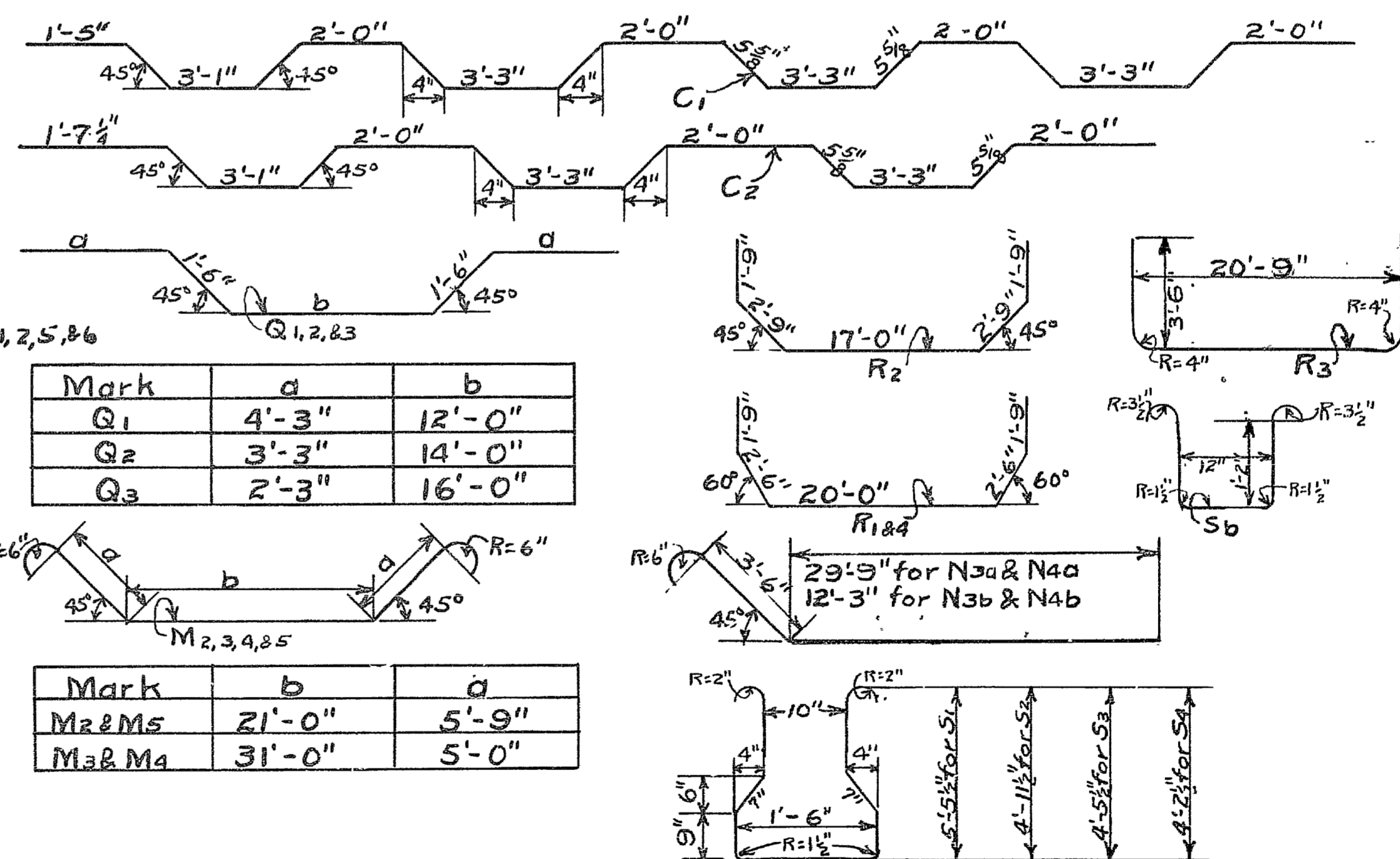
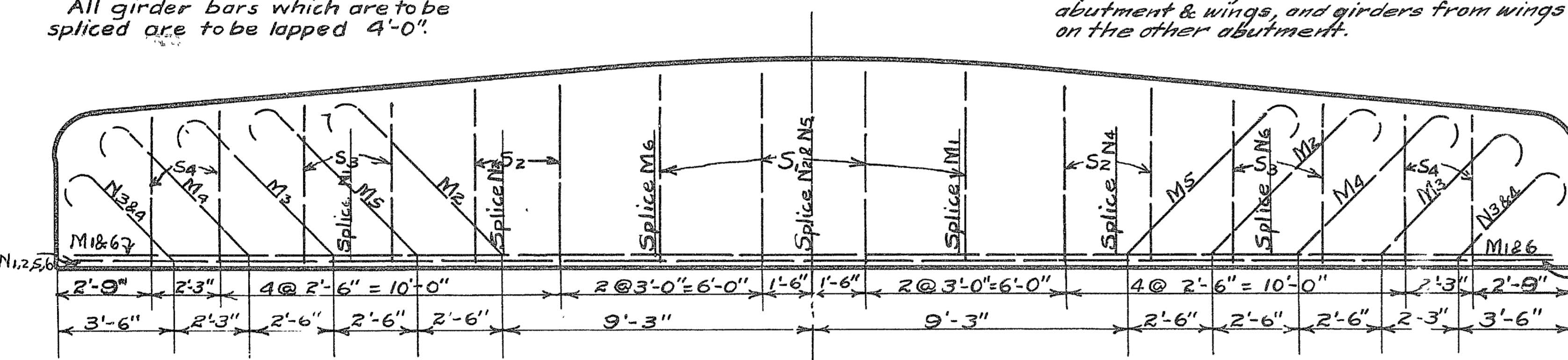
MICROFILMED
FEB 07 1979
REPRODUCTION



Note: - A bars are to be placed in top of slab over B bars.
B and C bars are to be placed in bottom of slab and are to alternate at 6" ctrs.
All girder bars which are to be spliced are to be lapped 4'-0".

Note: - Four layers of tarred paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from one abutment & wings, and girders from wings on the other abutment.

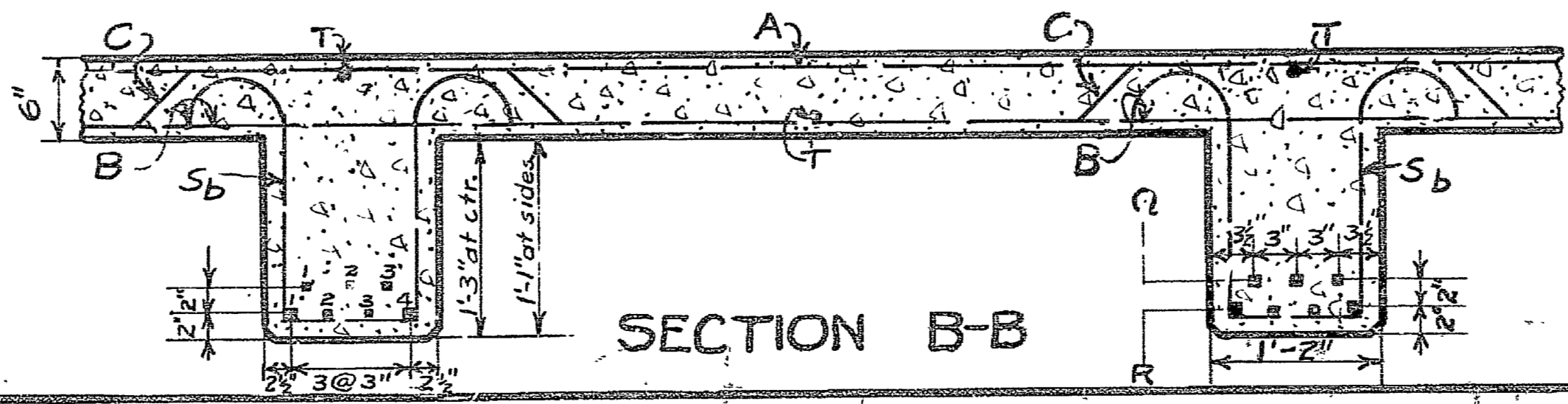
MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars				
T	1/2" φ	19	22'-0"	278#
A	1/2" φ	38	22'-0"	711
B1	"	21	13'-0"	232
B2	"	21	31'-0"	553
C1	"	20	26'-0"	442
C2	"	20	20'-0"	340
Beam Bars				
Q1	1" φ	6	23'-6"	479
Q2	"	6	23'-6"	479
Q3	"	6	23'-6"	479
R1	"	6	28'-6"	581
R2	"	6	26'-0"	530
R3	"	6	27'-6"	561
R4	"	6	28'-6"	581
Sb	1/2" φ	174	5'-0"	582
Girder Bars				
M1a	1" φ	2	20'-0"	136
M1b	"	2	28'-6"	194
M2	"	2	35'-6"	241
M3	"	2	44'-0"	299
M4	"	2	44'-0"	299
M5	"	2	35'-6"	241
M6a	"	2	20'-0"	136
M6b	"	2	28'-6"	194
N1a	"	2	11'-0"	75
N1b	"	2	37'-6"	255
N2	"	4	24'-3"	331
N3a	"	2	34'-9"	236
N3b	"	2	17'-3"	120
N4a	"	2	34'-9"	236
N4b	"	2	17'-3"	120
N5	"	4	24'-3"	331
N6a	"	2	11'-0"	75
N6b	"	2	37'-6"	255
S1	1/2" φ	8	13'-3"	90
S2	"	8	12'-3"	83
S3	"	8	11'-3"	77
S4	"	8	10'-9"	73
			Total Weight	10925#



HALF SECTION A-A

Recommended for Approval
Date: 7-25-21
Acting Chief Engineer of Bridges.

Approved:
Date: 7-25-21
Leon J. Herrick
Director of Highways and Public Works.



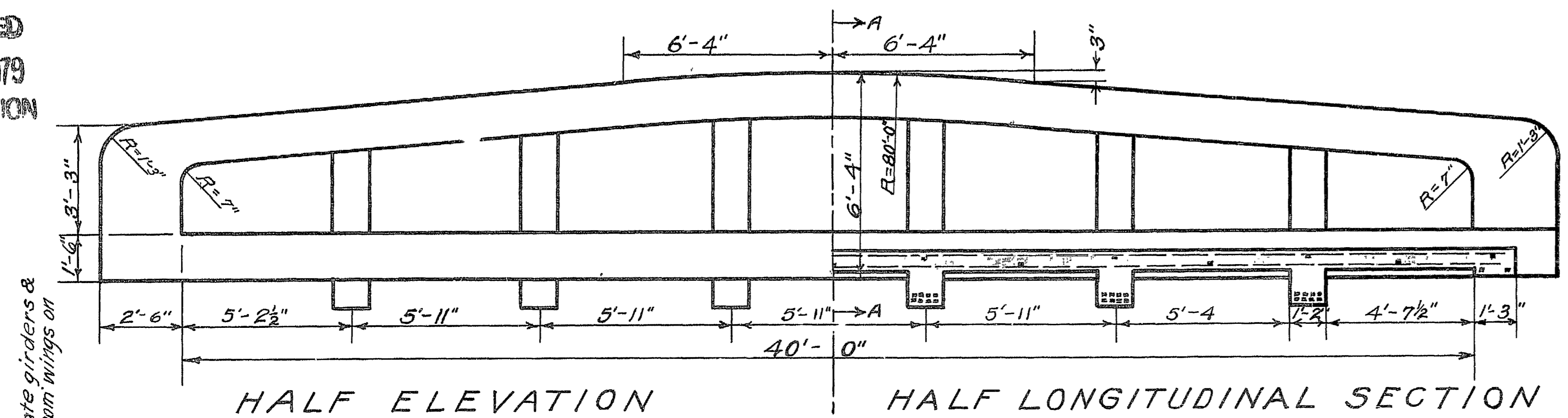
Estimated Quantities
1:2:4 Concrete - 50.9 Cu yds.
Reinforcing Steel - 10925 Lbs.

STANDARD CONCRETE GIRDER
SPAN 40' ROADWAY 20'
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JULY 1921 BUREAU OF BRIDGES

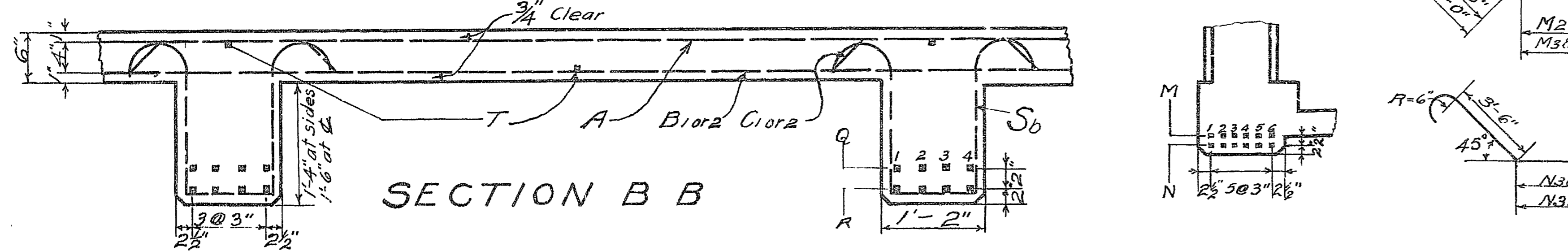
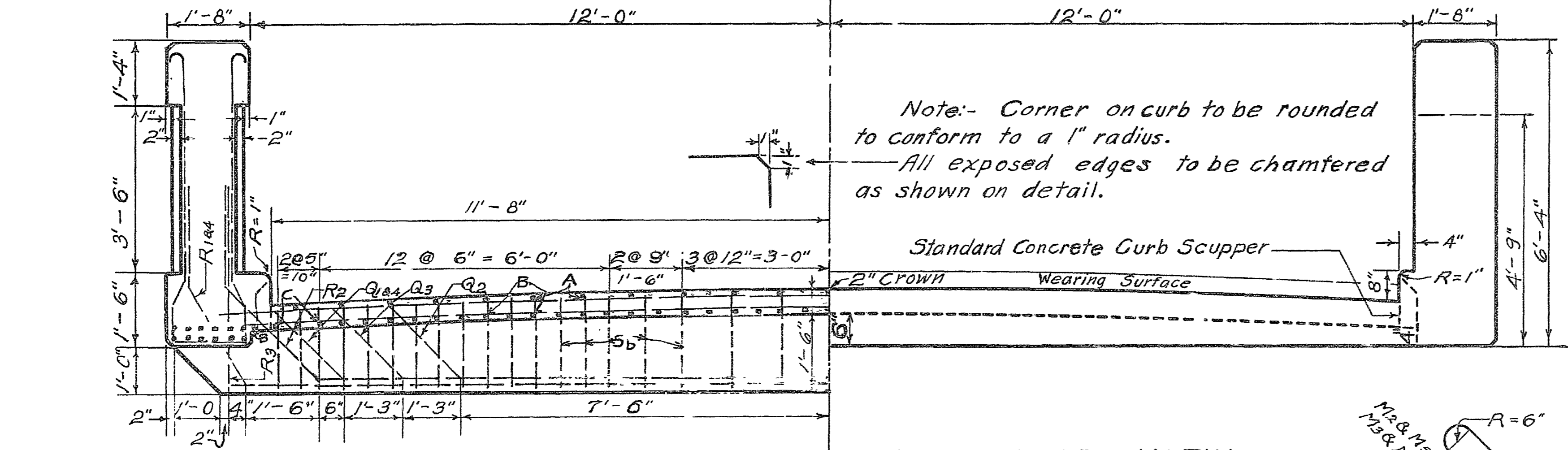
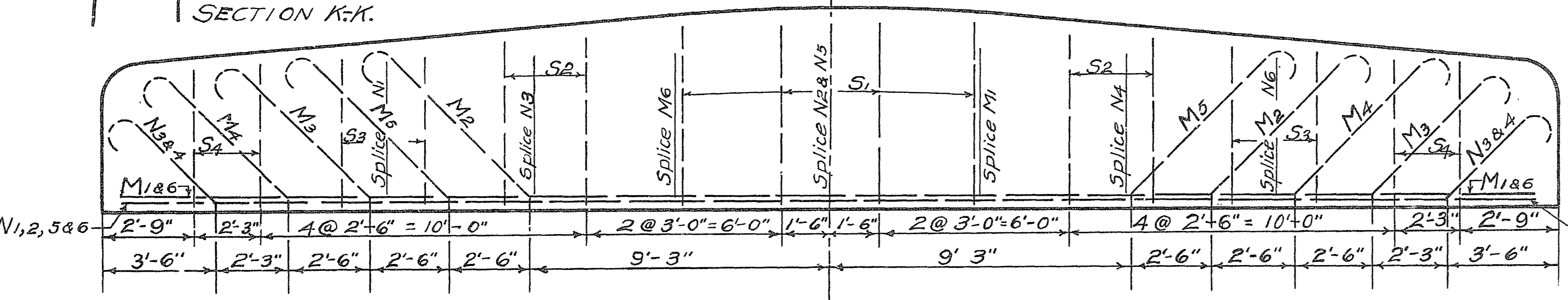
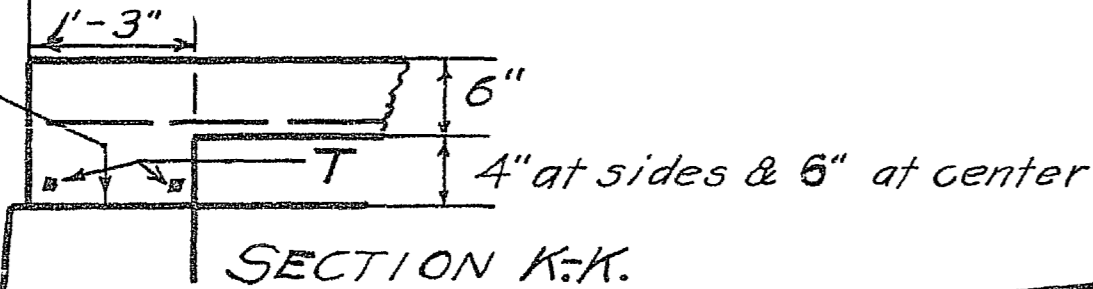
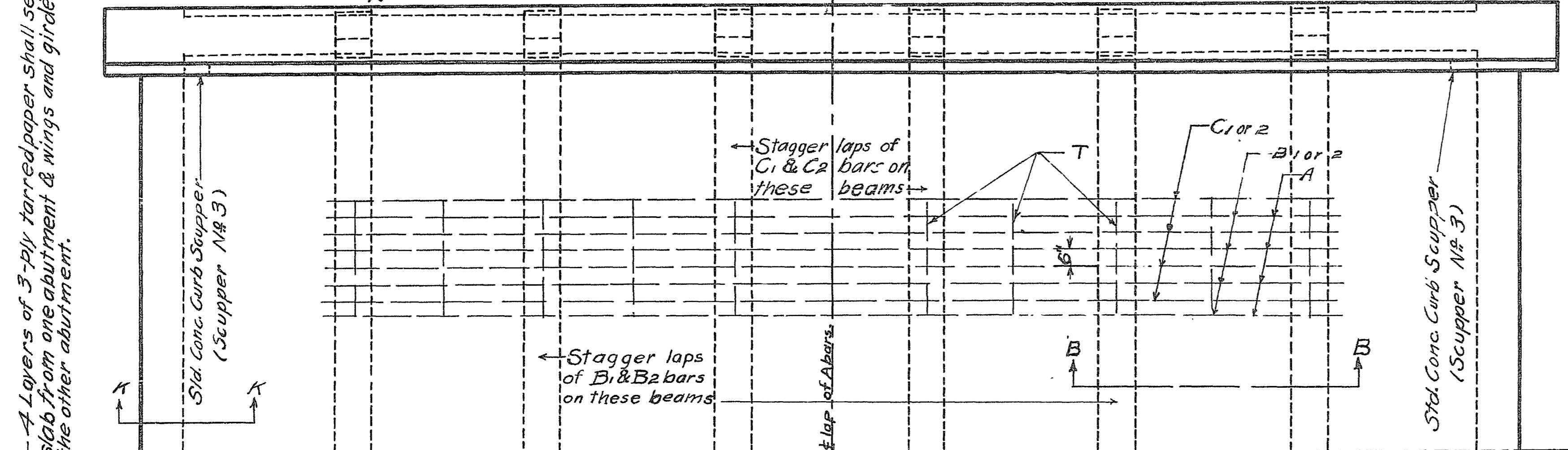
G 40-20

Des by H.M.C.
D. & R. by W.

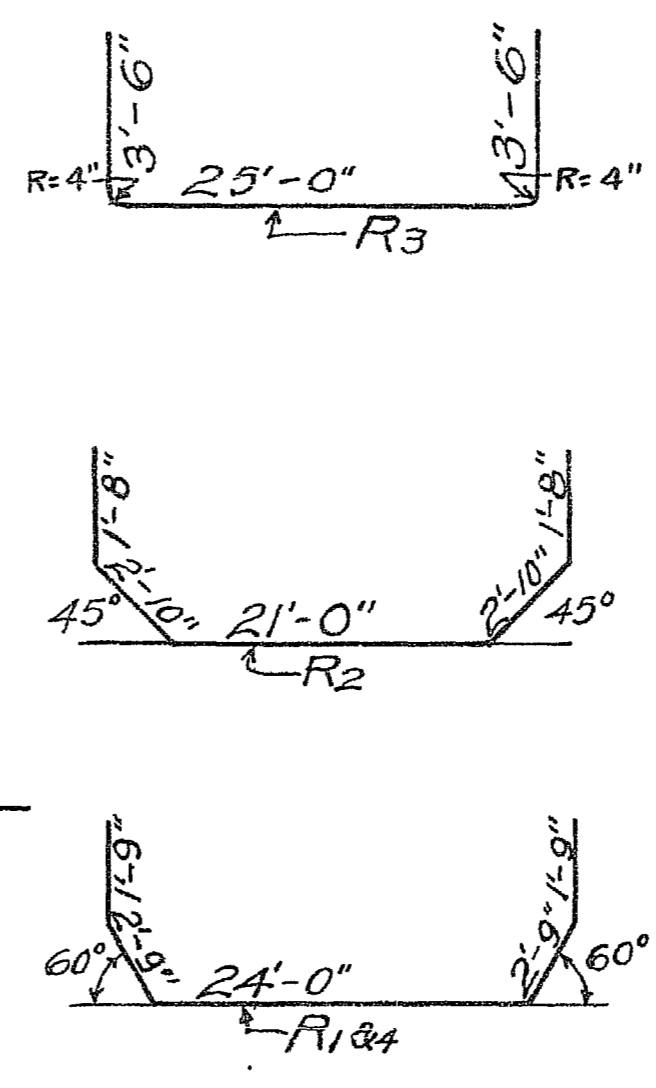
MICROFILMED
FEB 07 1979
REF ID: A11111



Note: Girders to have 1/8" camber



Note: All girder bars which are to be spliced are to be lapped 4'-0"



MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars				
T	1/2" φ	19	26'-0"	330 #
A	1/2" φ	46	22'-0"	860
B1	"	25	13'-0"	276
B2	"	25	31'-0"	658
C1	"	24	26'-0"	530
C2	"	24	20'-0"	408
Beam Bars				
Q1	1" φ	6	27'-6"	561
Q2	"	6	27'-6"	561
Q3	"	6	27'-6"	561
Q4	"	6	27'-6"	561
R1	"	6	33'-0"	673
R3	"	6	32'-0"	653
R2	"	6	30'-0"	612
R4	"	6	33'-0"	673
Sb	1/2" φ	234	5'-9"	898
Girder Bars				
M1a	1" φ	2	20'-0"	136
M1b	"	2	28'-6"	194
M2	"	2	35'-6"	241
M3	"	2	44'-7"	299
M4	"	2	44'-0"	299
M5	"	2	35'-6"	241
M6a	"	2	20'-0"	136
M6b	"	2	28'-6"	194
N1a	"	2	11'-0"	75
N1b	"	2	37'-6"	255
N2	"	4	24'-3"	330
N3a	"	2	34'-9"	236
N3b	"	2	17'-3"	117
N4a	"	2	34'-9"	236
N4b	"	2	17'-3"	117
N5	"	4	24'-3"	330
N6a	"	2	11'-0"	75
N6b	"	2	37'-6"	255
S1	1/2" φ	8	13'-9"	94
S2	"	8	12'-9"	87
S3	"	8	11'-9"	80
S4	"	8	10'-9"	73

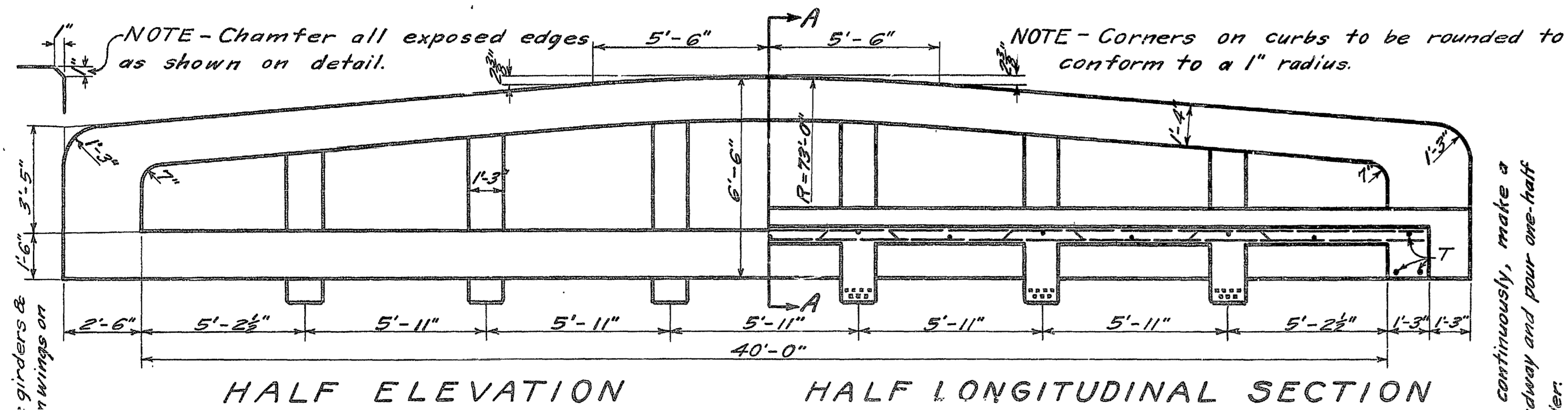
ESTIMATED QUANTITIES
Concrete 12.4 57.4 Cu.Yds.
Steel Reinforcing 12915 Lbs.
Wearing Surface 110.2 Sq.Yds.

STANDARD
CONCRETE GIRDER BRIDGE
SPAN 40 FT ROADWAY 24 FT
T-15 LOADING
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
AUG 1921
BUREAU OF BRIDGES

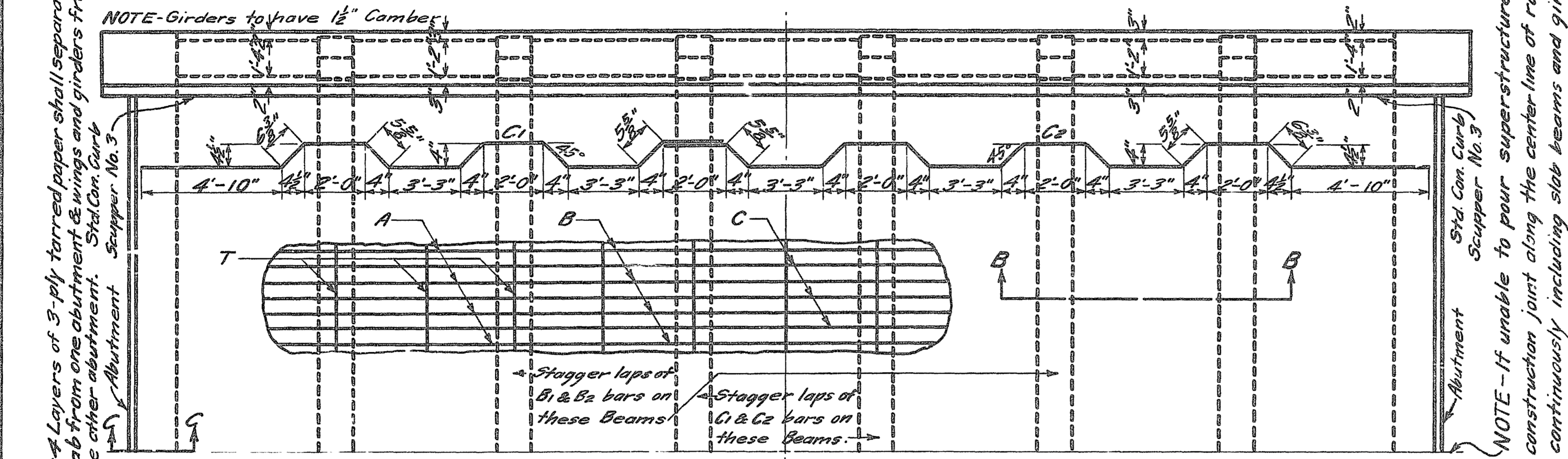
G-40-24

Des. & Trcd by C.U.K.
Checked by G.S.
Approved by G.S.

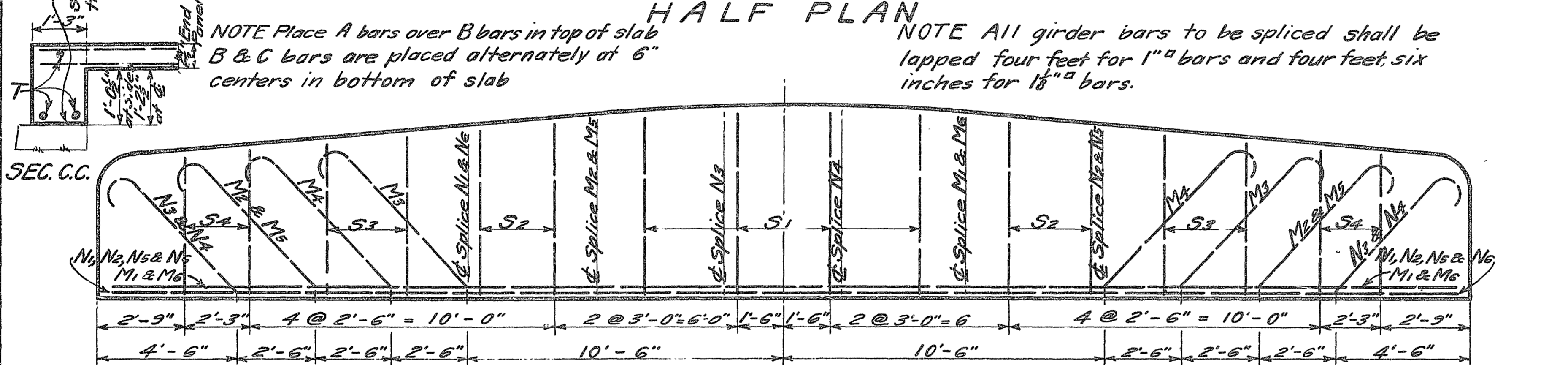
MICROFILMED
FEC 071979
REPRODUCTION



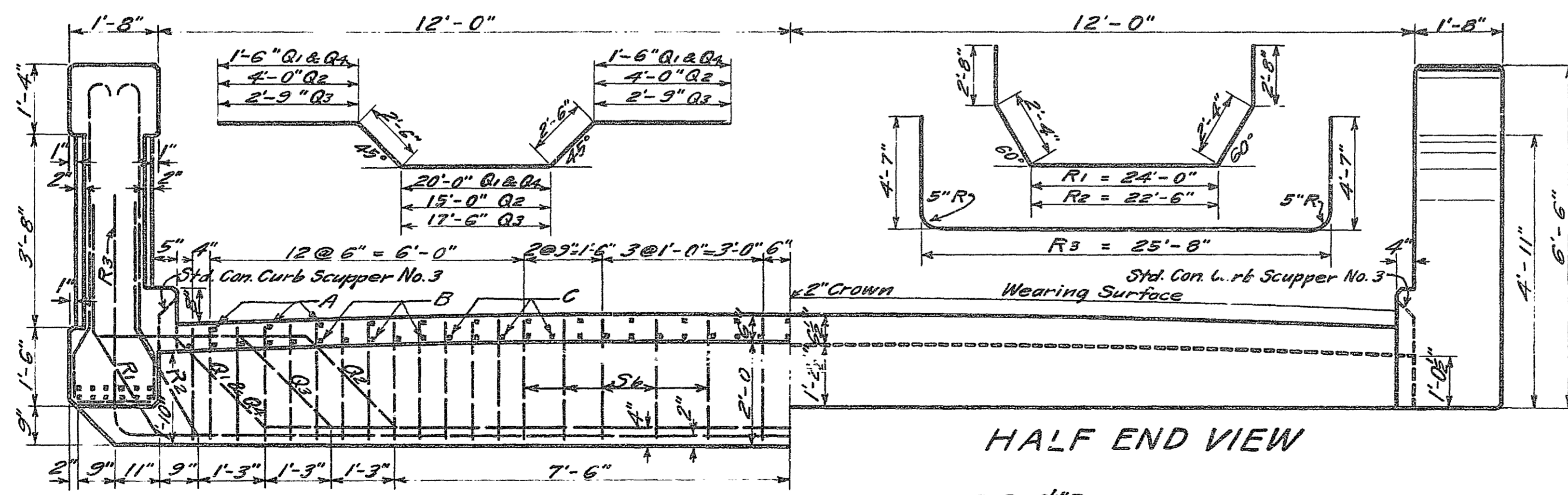
HALF ELEVATION HALF LONGITUDINAL SECTION



HALF PLAN



ELEVATION SHOWING GIRDER REINFORCEMENT



HALF END VIEW

HALF SECTION A-A

SEC. B-R

MARK	SIZE	NUMBER	LENGTH	WEIGHT
SLAB BARS				
T	1/2" φ	19	26'-0"	330
A	1/2" φ	46	22'-0"	860
B1	"	25	13'-0"	276
B2	"	25	31'-0"	658
C1	"	24	19'-9"	403
C2	"	24	25'-11"	529
BEAM BARS				
Q1	1 1/8" φ	6	28'-0"	723
Q2	"	6	28'-0"	723
Q3	"	6	28'-0"	723
Q4	"	6	28'-0"	723
R1	"	6	34'-0"	877
R2	"	6	32'-6"	839
R3	"	6	34'-6"	890
S6	1/2" φ	228	6'-4"	366
GIRDER BARS				
M1a	1 1/8" φ	2	18'-6"	159
M1b	"	2	30'-6"	262
M2a	1" φ	2	30'-6"	207
M2b	"	2	18'-6"	126
M3	"	2	38'-3"	260
M4	"	2	38'-3"	260
M5a	"	2	30'-6"	207
M5b	"	2	18'-6"	126
M6a	1 1/8" φ	2	18'-6"	159
M6b	"	2	30'-6"	262
N1a	"	2	14'-6"	125
N1b	"	2	34'-6"	297
N2a	"	2	14'-6"	125
N2b	"	2	34'-6"	297
N3a	"	2	27'-9"	239
N3b	"	2	23'-9"	204
N4a	"	2	27'-9"	239
N4b	"	2	23'-9"	204
N5a	"	2	14'-6"	125
N5b	"	2	34'-6"	296
N6a	"	2	14'-6"	125
N6b	"	2	34'-6"	296
S1	1/2" φ	8	14'-9"	100
S2	"	8	13'-9"	94
S3	"	8	12'-9"	86
S4	"	8	11'-9"	80
TOTAL WEIGHT				14480

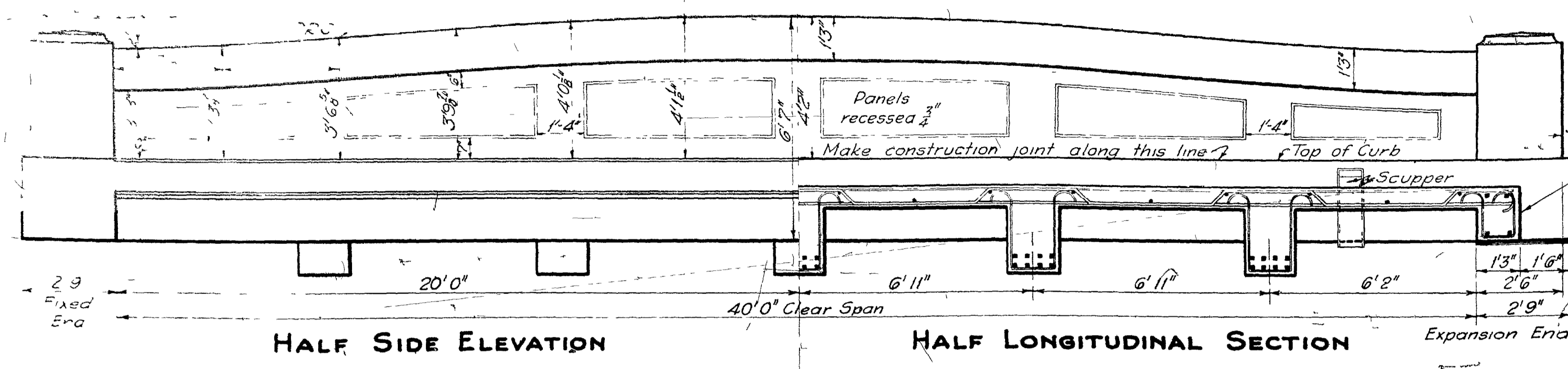
NOTE - Bridge is designed for maximum weight of wearing surface on slab to be 65 pounds per sq. foot.

Wearing Surface shall be full width between curbs and entire length of slab

ESTIMATED QUANTITIES
1.24 Concrete 65.5 Cu. Yds.
Reinforcing Steel 14480 Lbs.
Wearing Surface 110.2 Sq. Yds.

STANDARD CONCRETE GIRDER
SPAN 40 FT ROADWAY 24 FT
T-15 LOADING
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
FEBRUARY 1924 BUREAU OF BRIDGES

640-24-1 Designed by C. J. R. & W. F. Brown & T. S. G. Rev. & Chg. by W. H. R.
Approved by D. H. J. & G. & G.



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

NOTE
All exposed edges not otherwise shown shall be chamfered thus.

CAMBER This bridge shall be provided with a permanent camber under full dead load amounting to approximately 3/8" at the center and following a true parabolic curve.

APPROACH SLABS Approach slabs shall be provided at both ends of superstructure in case of paved approaches. For details see Dr No AG-2430 1 Prem Exp J- Filler between ends of bridge slab and approach slab at expansion end only Payment included with Approach Slab.

BENDING DIAGRAM NOTE
All steel dimensions are measured along center-line of bar.

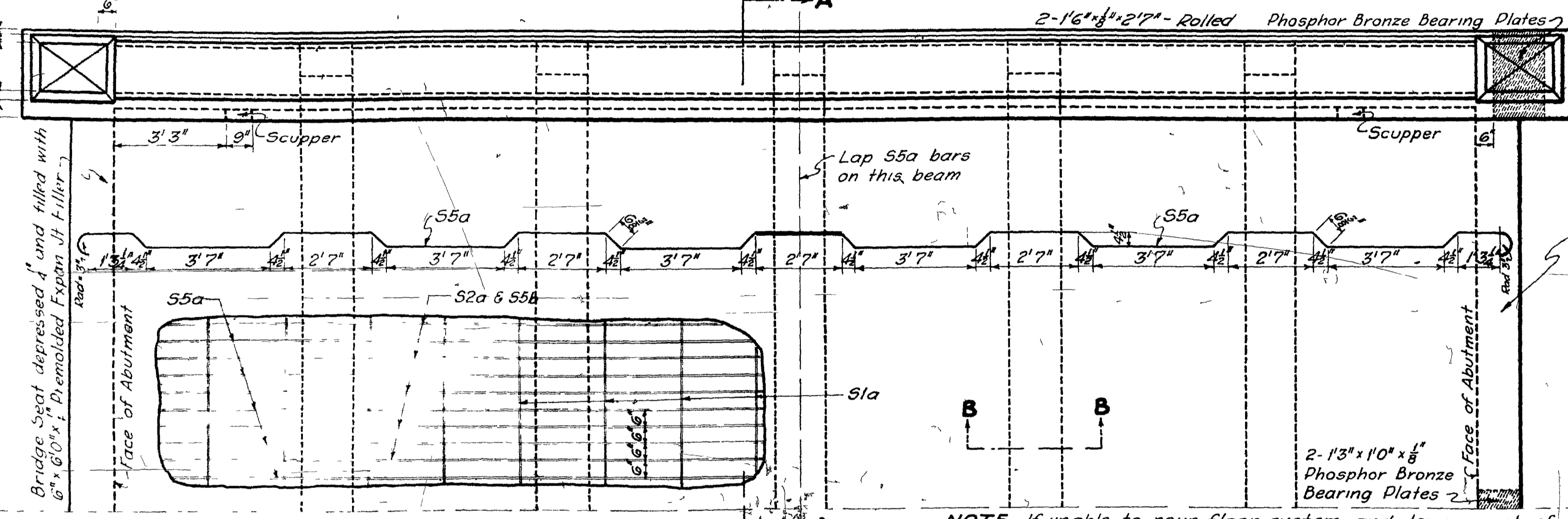
BENDS All bends not otherwise shown shall have a minimum radius of 4 1/2".

BAR LEGEND

Mark	Size
1	1"
2	2"
3	3"
4	4"
5	5"
6	6"
7	7"
8	8"
9	9"
10	10"

STEEL LIST

Mark	Size	Shape	No	Reqd Length	Wt
55a	1/2"	Bent	46	23' 9"	1636
55b	1/2"	Strt	24	42' 0"	1515
55a	1/2"	Strt	24	42' 0"	873
51a	1/2"	Strt	18	26' 0"	176
80a	1/2"	Bent	5	30' 9"	815
80b	1/2"	Bent	5	34' 9"	921
80c	1/2"	Bent	5	34' 9"	921
80d	1/2"	Bent	5	30' 9"	815
80e	1/2"	Bent	5	36' 0"	952
80f	1/2"	Bent	5	37' 9"	996
80g	1/2"	Bent	5	37' 9"	996
80h	1/2"	Bent	5	36' 0"	952
80i	1/2"	Bent	8	29' 6"	1262
82a	1/2"	Bent	200	6' 7"	880
83a	1/2"	Bent	88	4' 4"	324
60a	1/2"	Bent	2	47' 6"	505
60b	1/2"	Bent	2	47' 6"	505
60c	1/2"	Bent	2	47' 6"	505
60d	1/2"	Bent	2	47' 6"	505
69a	1/2"	Bent	2	42' 6"	367
69b	1/2"	Bent	2	48' 0"	413
69c	1/2"	Bent	2	37' 3"	321
69d	1/2"	Bent	2	48' 0"	413
69e	1/2"	Bent	2	50' 9"	436
69f	1/2"	Bent	2	50' 9"	436
69g	1/2"	Bent	2	50' 9"	436
69h	1/2"	Bent	2	47' 6"	409
64a	1/2"	Bent	20	13' 6"	285
64b	1/2"	Bent	8	14' 0"	117
64c	1/2"	Bent	8	14' 3"	120
64d	1/2"	Bent	20	15' 0"	313
TOTAL					19920



HALF PLAN

SCUPPER DETAIL
Cast Iron 1/2" thick

NOTE Wearing surface at, and adjacent to, scupper shall be depressed a maximum of 1/4".

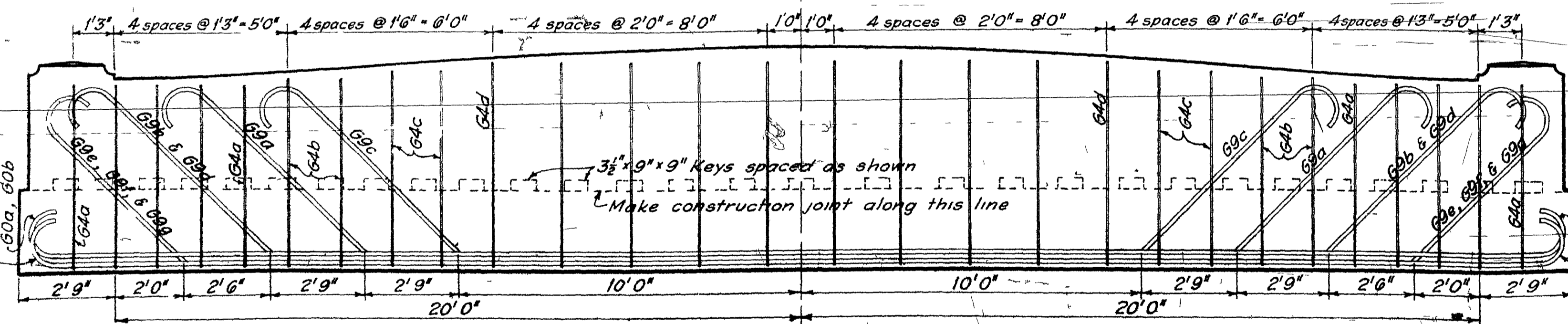
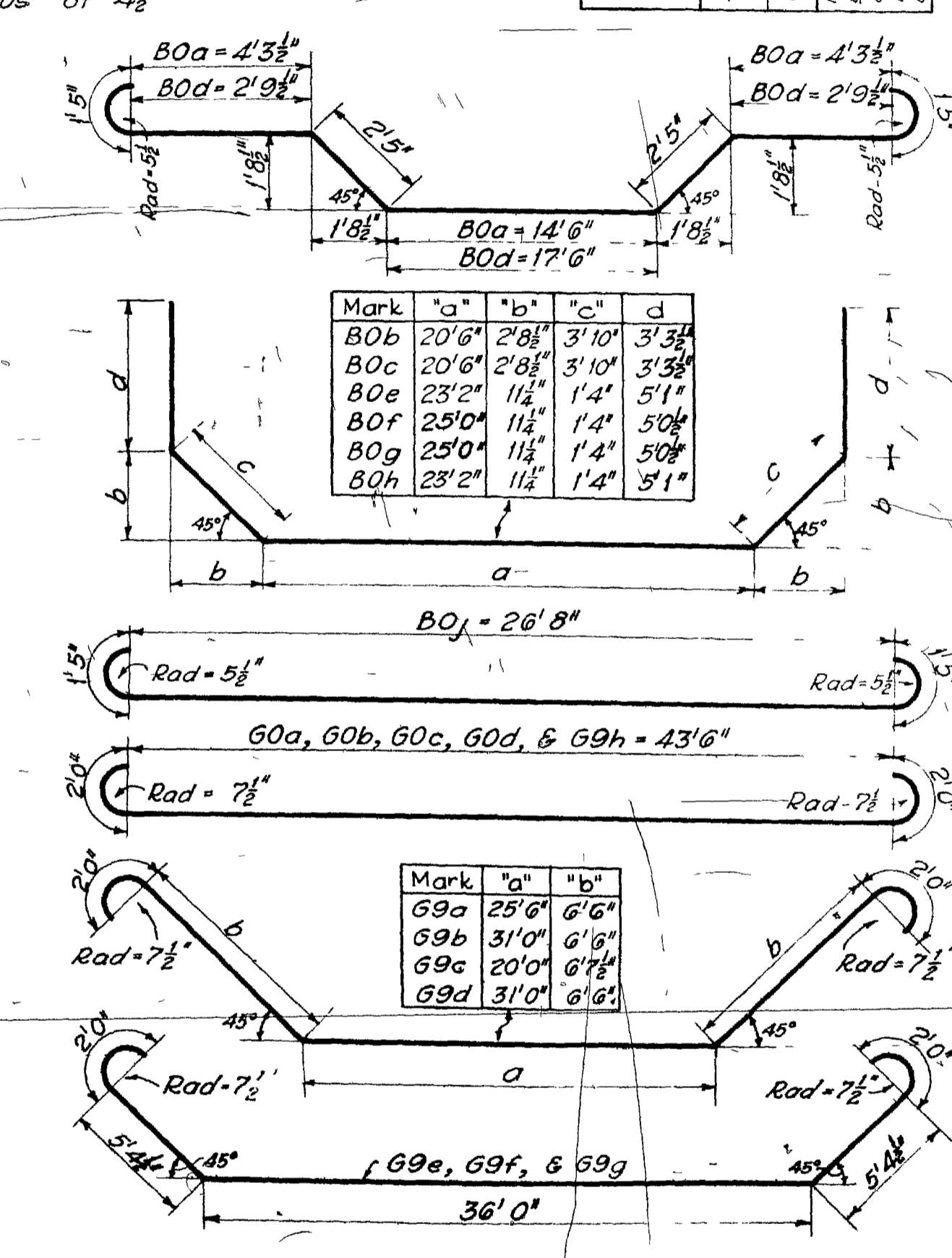
1" Premolded Expansion Joint Filler (two layers)

NOTE Top of abutment at expansion end to be finished perfectly smooth. Place two layers of 1/2" premolded expansion joint filler between abutment and superstructure over area unoccupied by bearing plates, as shown.

NOTE If unable to pour floor system and lower part of girder continuously make construction joint along this line. If any concrete runs out under beam bulkheads it shall be removed before concrete hardens.

CONSTRUCTION JOINT
The surface of girder construction joint shall be left rough and free from all laitance and debris.

CURING Special care shall be exercised in the curing of concrete, and all concrete from which forms have been removed shall be kept wet as per construction specifications.



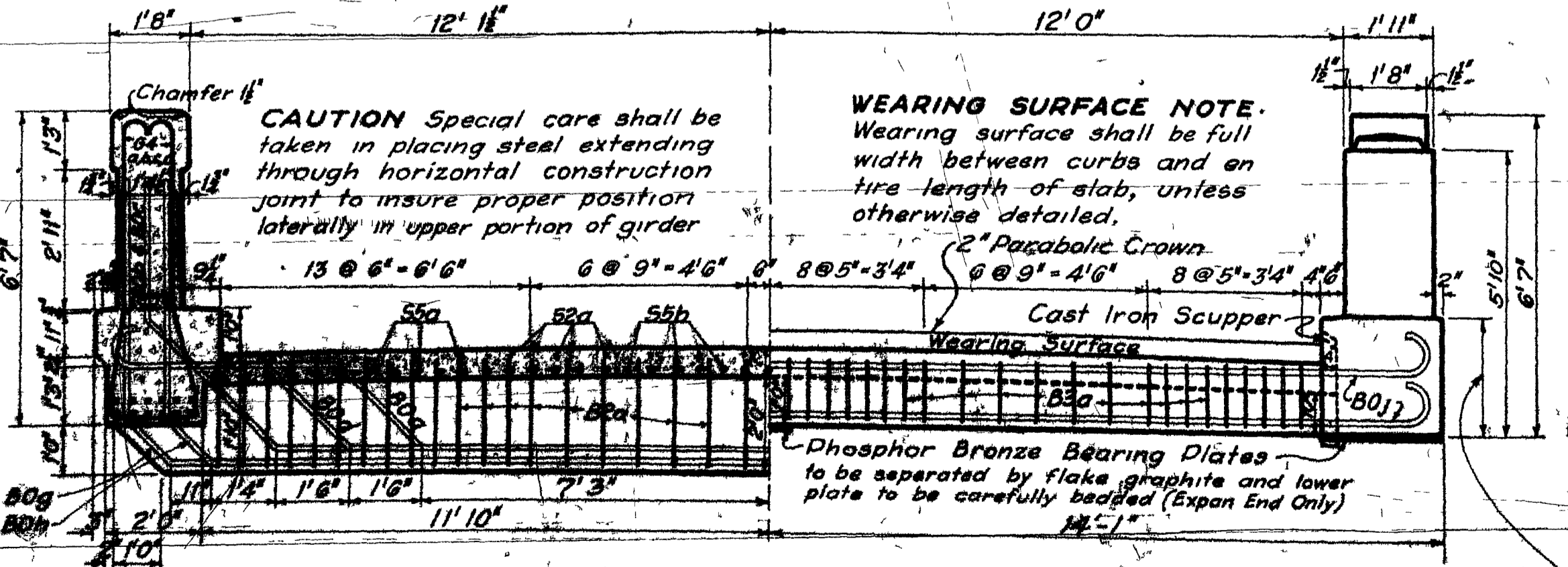
SIDE ELEVATION SHOWING GIRDER REINFORCEMENT

SURFACE FINISH The tops, inside faces, and ends of girders shall be given special rubbed surface finish, and the complete outside faces of girders and the tops and sides of curbs ordinary surface finish as per construction specifications. The payment for this is included in the price per cubic yard of concrete.

SPECIFICATIONS
Construction specifications in force on date of contract shall govern.

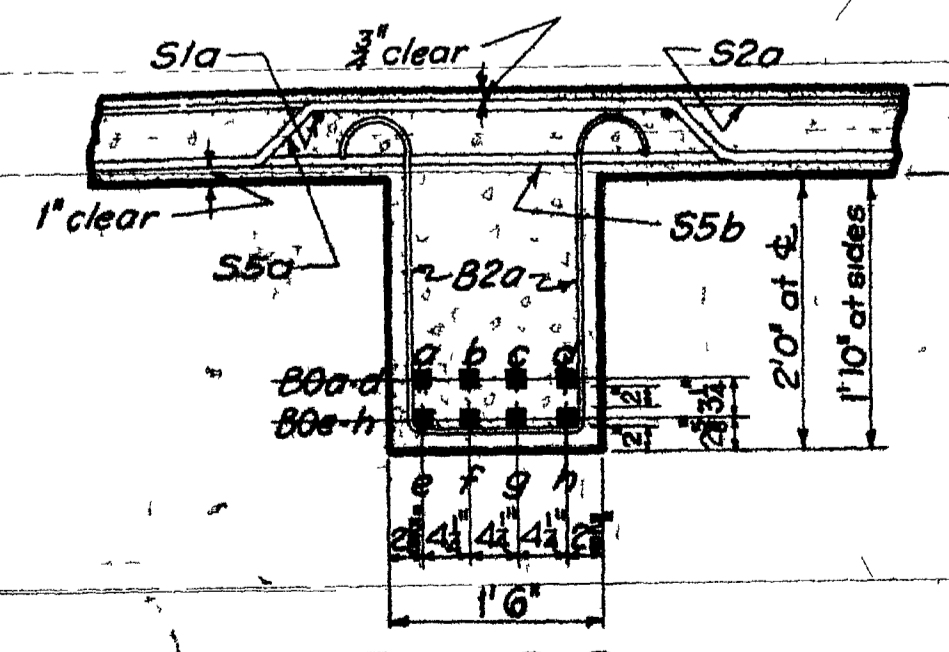
ESTIMATED QUANTITIES

Concrete 1:5 mix	74.3 Cu Yds
Reinforcing Steel	19920 Lbs
1 Prem Exp J- Filler	127.0 Sq Ft
Wearing Surface	109.5 Sq Yds
Phosphor Bronze Plates	1000 Lbs
Cast Iron Scuppers	4 Pcs



HALF SECTION A-A

HALF END VIEW



SEC. B-B

Concrete Mix 1:5

SCALE OF FEET

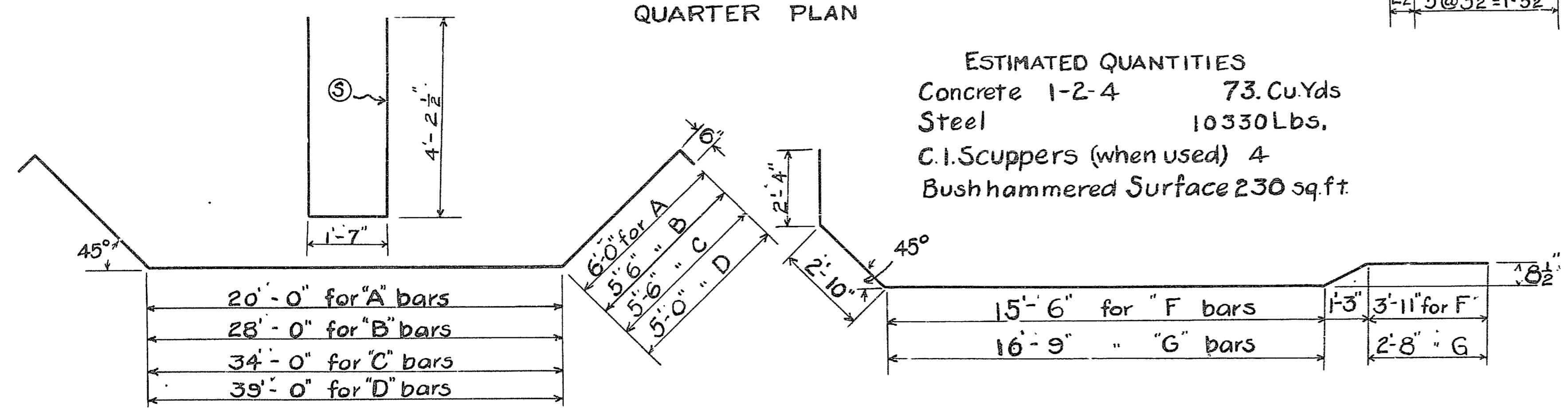
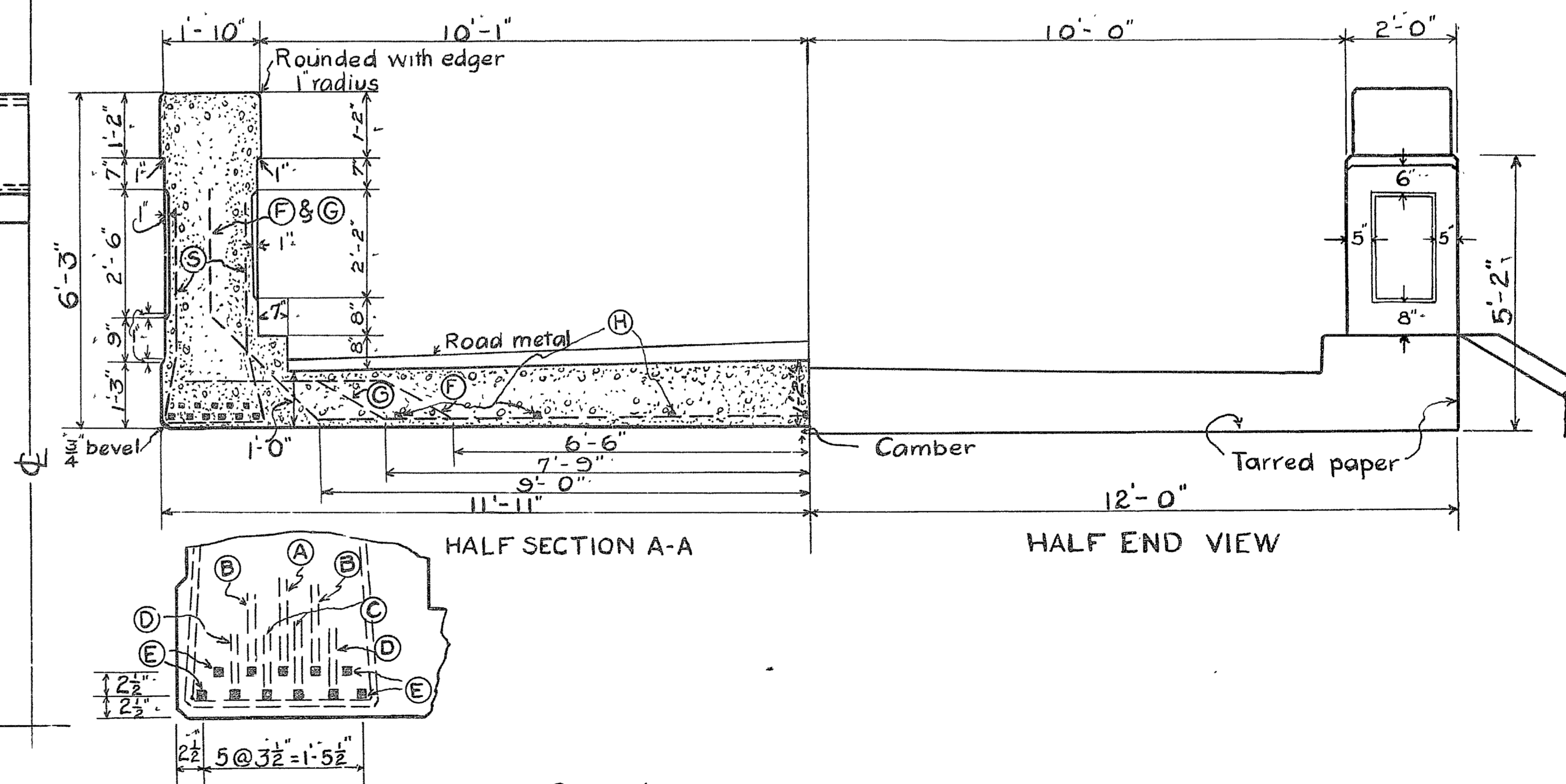
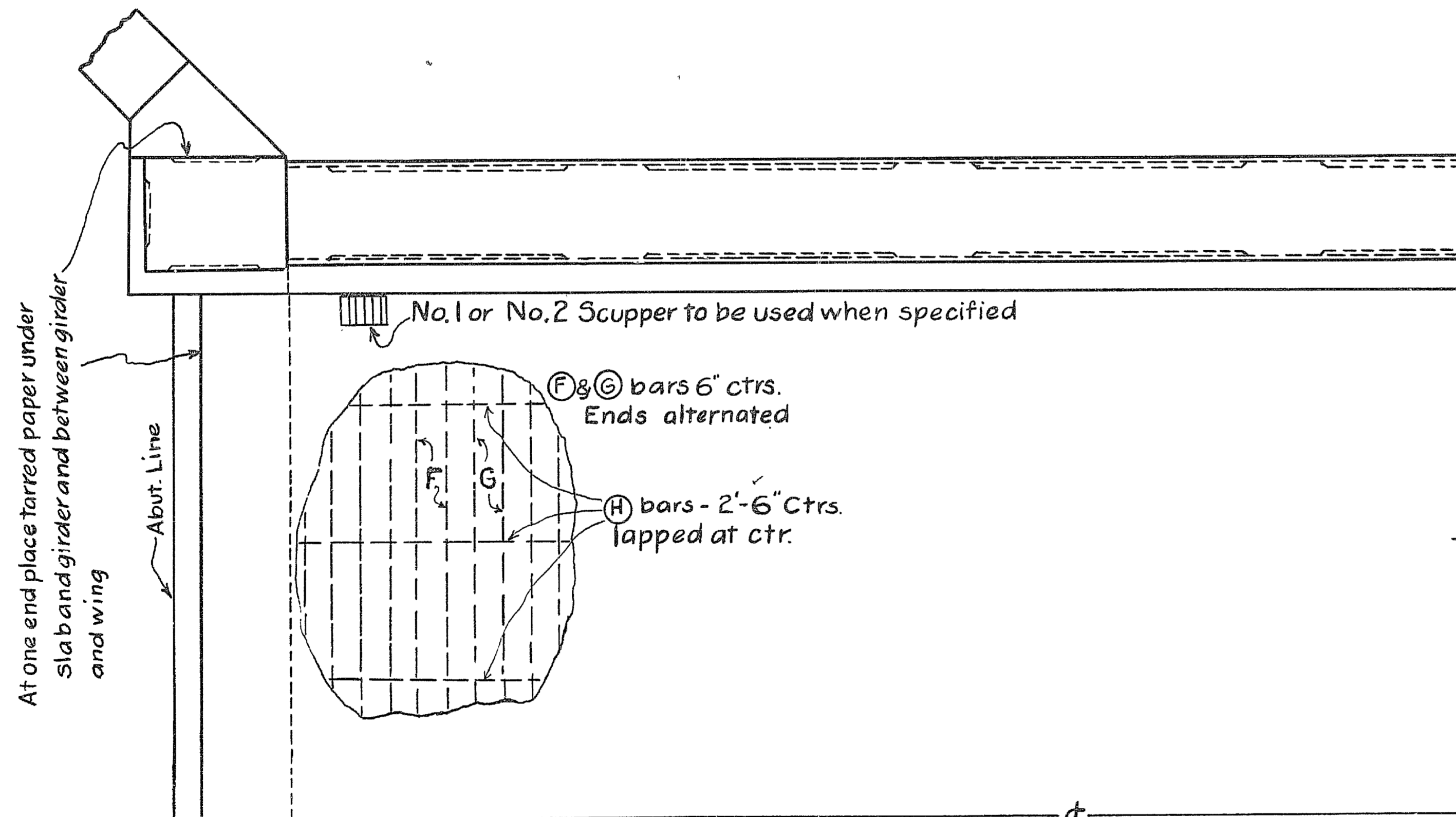
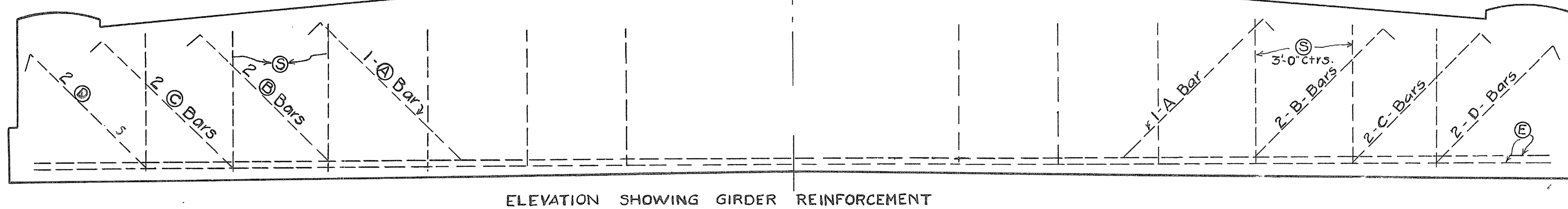
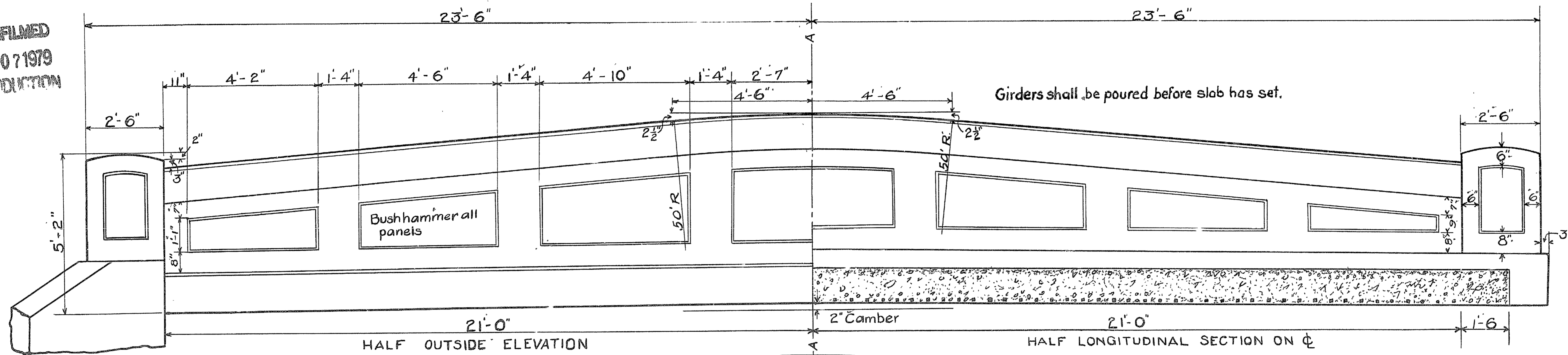
REVISIONS
Date: January 4, 1927
by: WHR
Date: Feb 8, 1929

STANDARD CONCRETE THROUGH GIRDER
SPAN 40 FT. ROADWAY
H-15 LEANING
DIVISION OF HIGHWAYS
STATE OF OHIO

G-40-24-2

Feb 8, 1929 Revisions: 1. Exp. J- Filler on bridge slab and approach slab. Note: Camber Reduced.

MICROFILMED
FEB 07 1979
REPRODUCTION

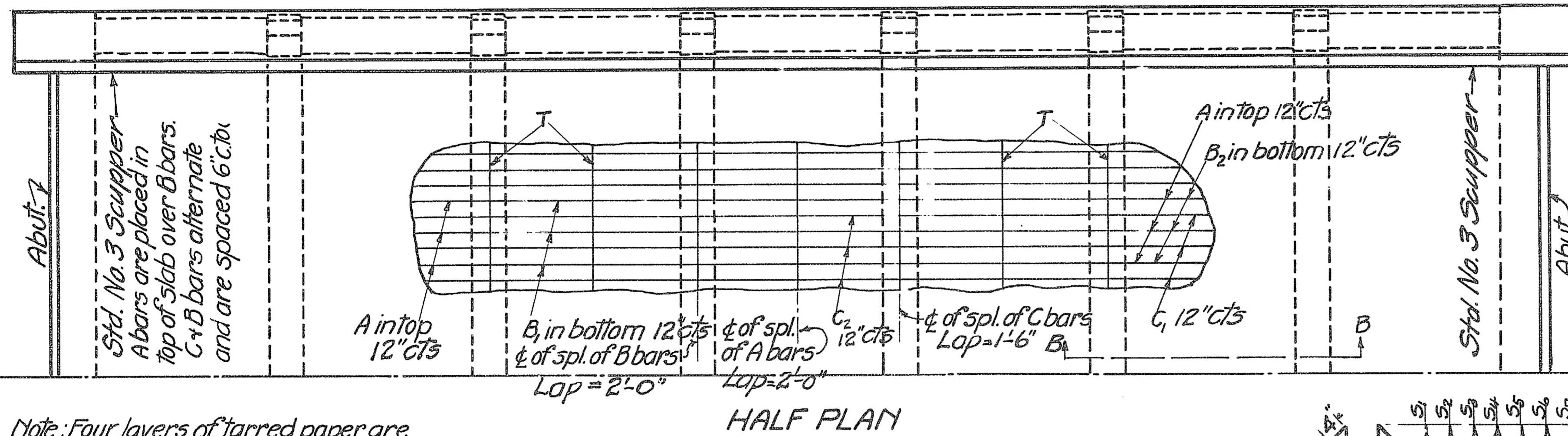
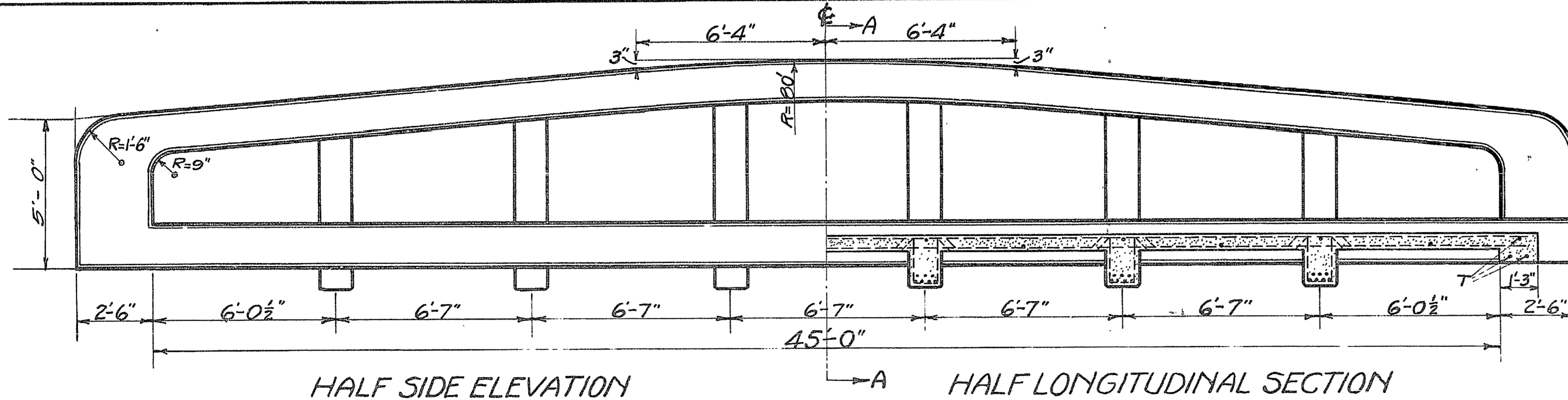


ESTIMATED QUANTITIES
Concrete 1-2-4 73 Cu.Yds
Steel 10330 Lbs.
C.I. Scuppers (when used) 4
Bushhammered Surface 230 sq.ft.

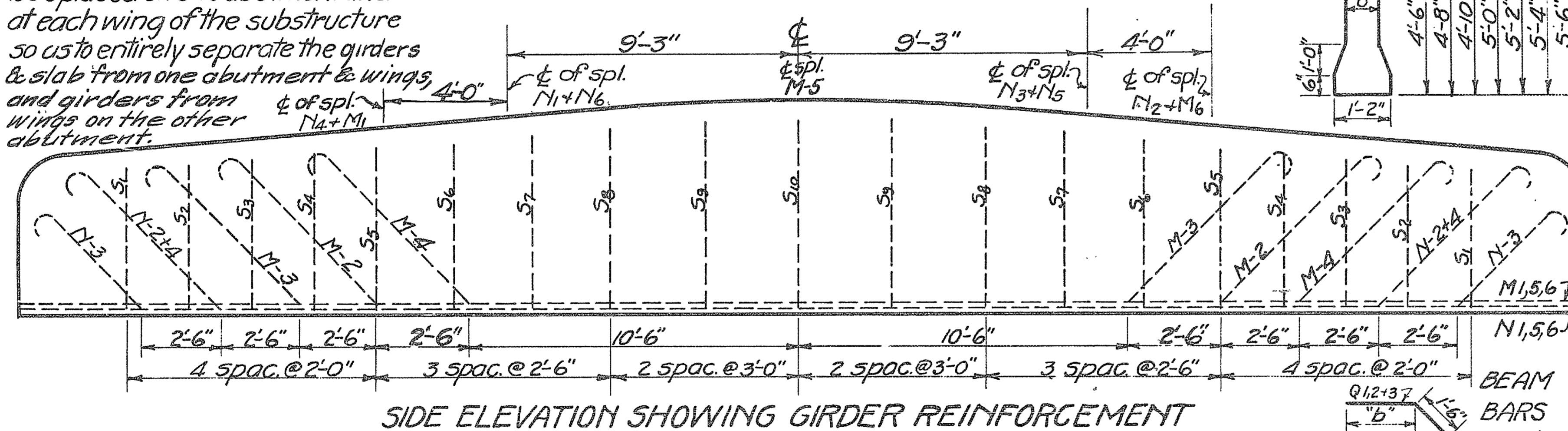
STEEL LIST
All bars Sq. twist or equiv.

Bar	Diam	Length	N ^o	WT.
A	1 1/8"	33'-0"	2	284
B	1 1/8"	40'-0"	4	687
C	1 1/8"	46'-0"	4	790
D	1 1/8"	50'-0"	4	860
E	1 1/8"	46'-0"	3	1580
F	7/8"	26'-0"	41	2775
G	7/8"	26'-0"	42	2842
H	1/2"	23'-0"	14	274
I	1/2"	10'-0"	24	204

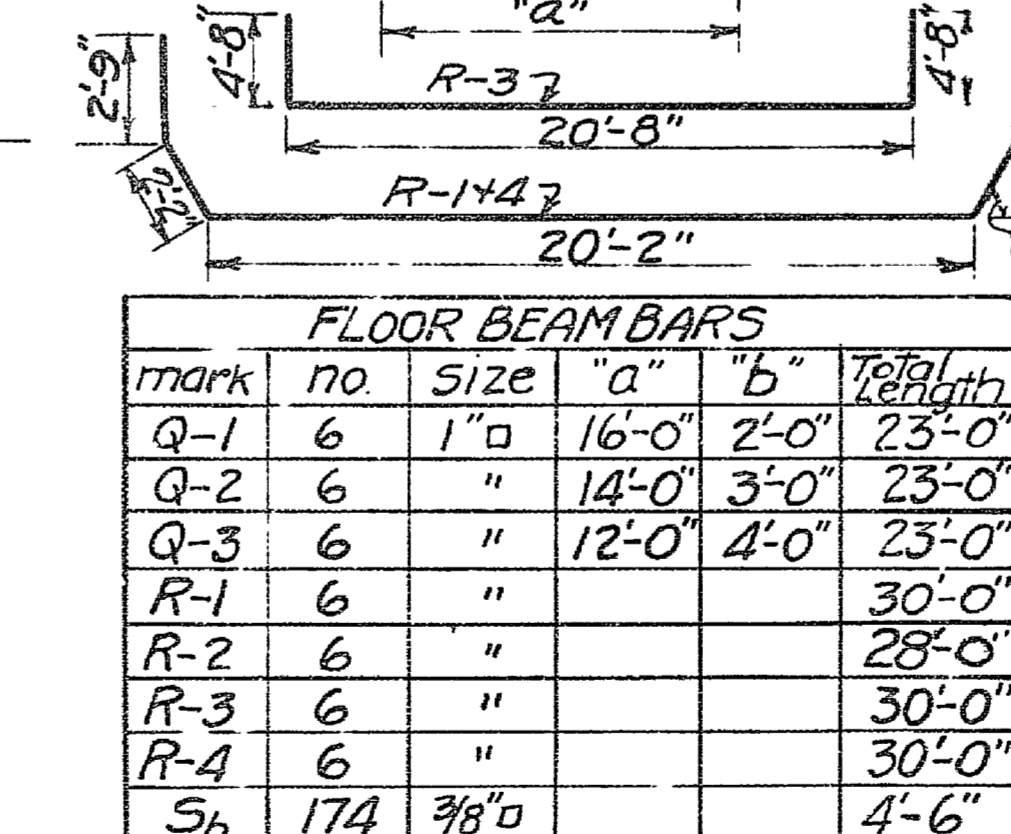
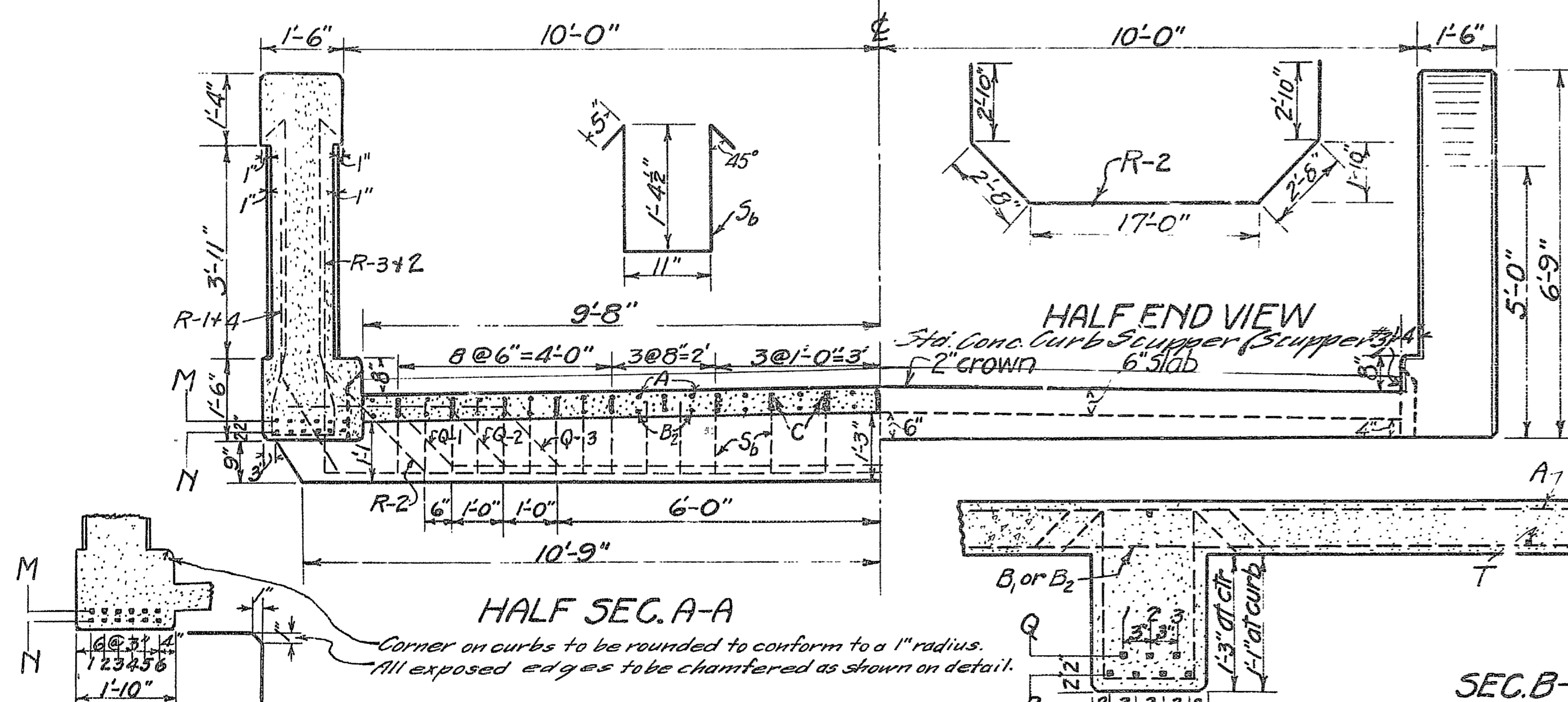
STANDARD CONCRETE GIRDER
SPAN 42 FT. ROADWAY 20 FT.
CLASS "C" LOADING
STATE HIGHWAY DEPARTMENT
COLUMBUS OHIO
NO. 64220 BUREAU OF BRIDGES



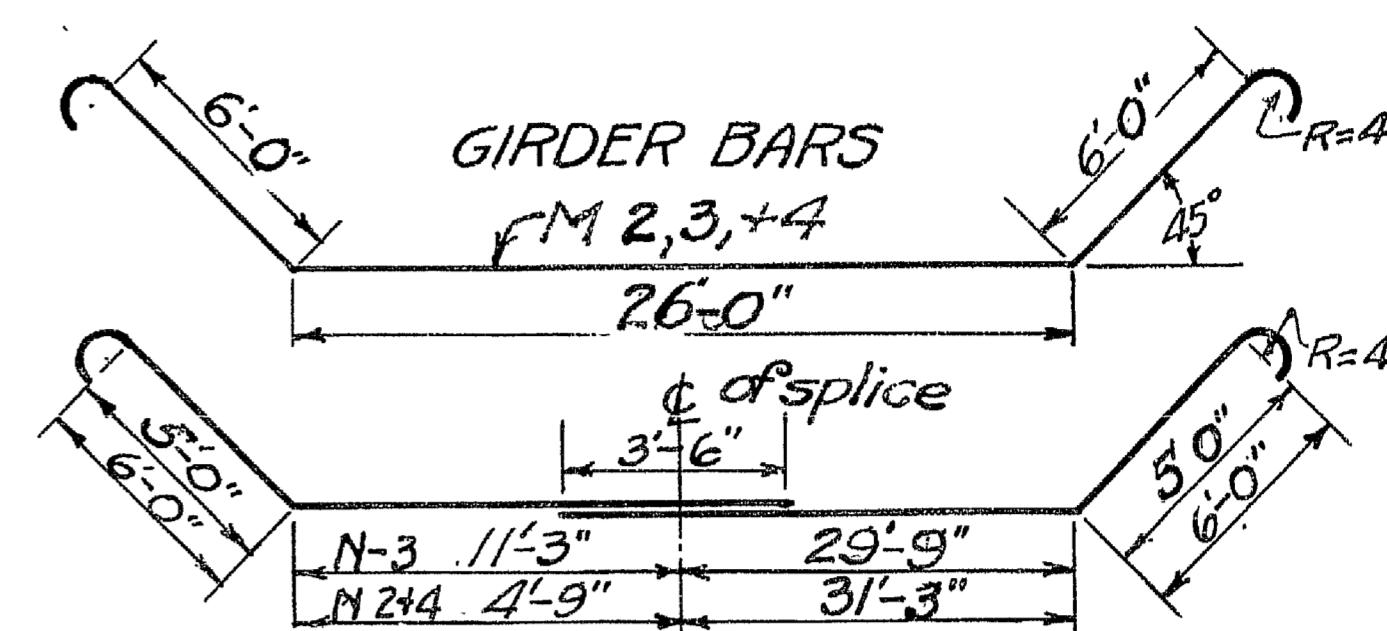
Note: Four layers of tarred paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from one abutment & wings, and girders from wings on the other abutment.



SIDE ELEVATION SHOWING GIRDER REINFORCEMENT

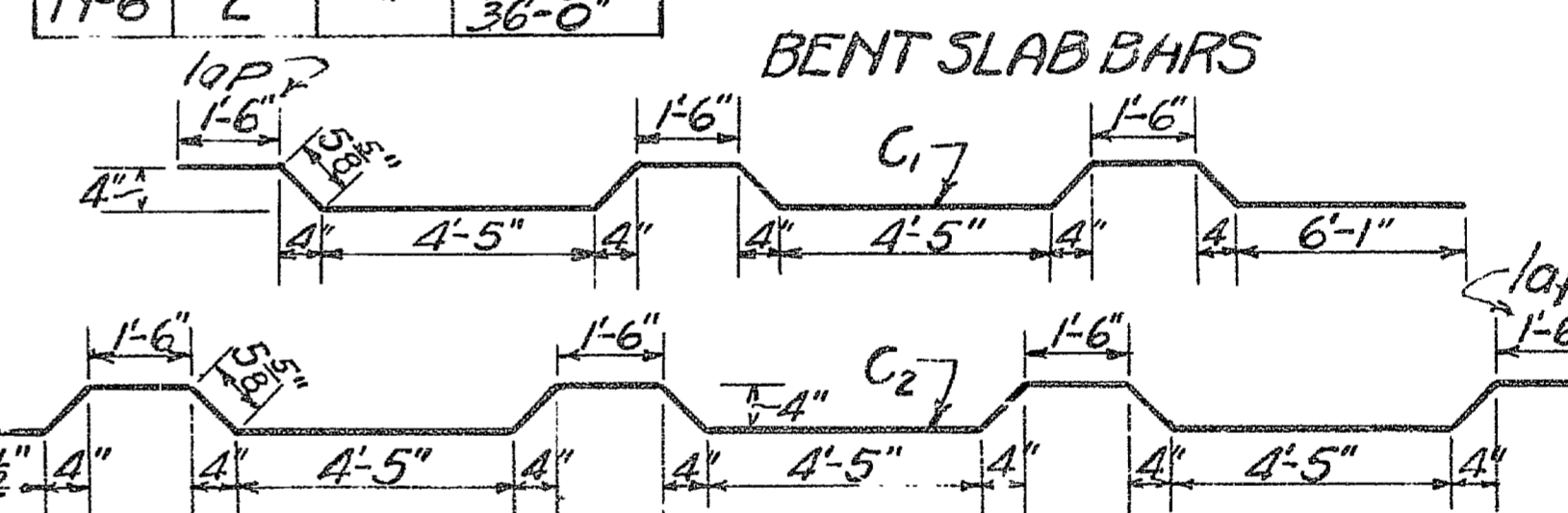


mark	no.	size	"a"	"b"	Total Length
Q-1	6	1"Ø	16'-0"	2'-0"	23'-0"
Q-2	6	"	14'-0"	3'-0"	23'-0"
Q-3	6	"	12'-0"	4'-0"	23'-0"
R-1	6	"	"	"	30'-0"
R-2	6	"	"	"	28'-0"
R-3	6	"	"	"	30'-0"
R-4	6	"	"	"	30'-0"
S ₆	174	3/8"Ø	"	"	4'-6"



mark	no.	size	Total Length
M-1	38'-3"	11'-9"	
M-5	25'-0"	25'-0"	
M-6	38'-3"	11'-9"	
N-1	15'-9"	34'-3"	
N-5	34'-3"	15'-9"	
N-6	15'-9"	34'-3"	

mark	no.	size	Total Length
M-1	2	1"Ø	13'-6"
M-2	2	"	40'-0"
M-3	2	"	40'-0"
M-4	2	"	40'-0"
M-5	2	"	26'-9"
M-6	2	"	26'-9"
N-1	2	"	17'-6"
N-2	2	"	33'-6"
N-3	2	"	40'-0"
N-4	2	"	13'-6"
N-5	2	"	17'-6"
N-6	2	"	17'-6"



ESTIMATED QUANTITIES
 1:2:4 conc. 57^{cu}cyds.
 Reinf. Steel 11525lb.

mark	no.	size	Total Length
A	40	1/2"Ø	24'-6"
B ₁	20	"	21'-0"
B ₂	20	"	28'-0"
C ₁	19	"	21'-9"
C ₂	19	"	28'-6"
T	19	"	22'-0"

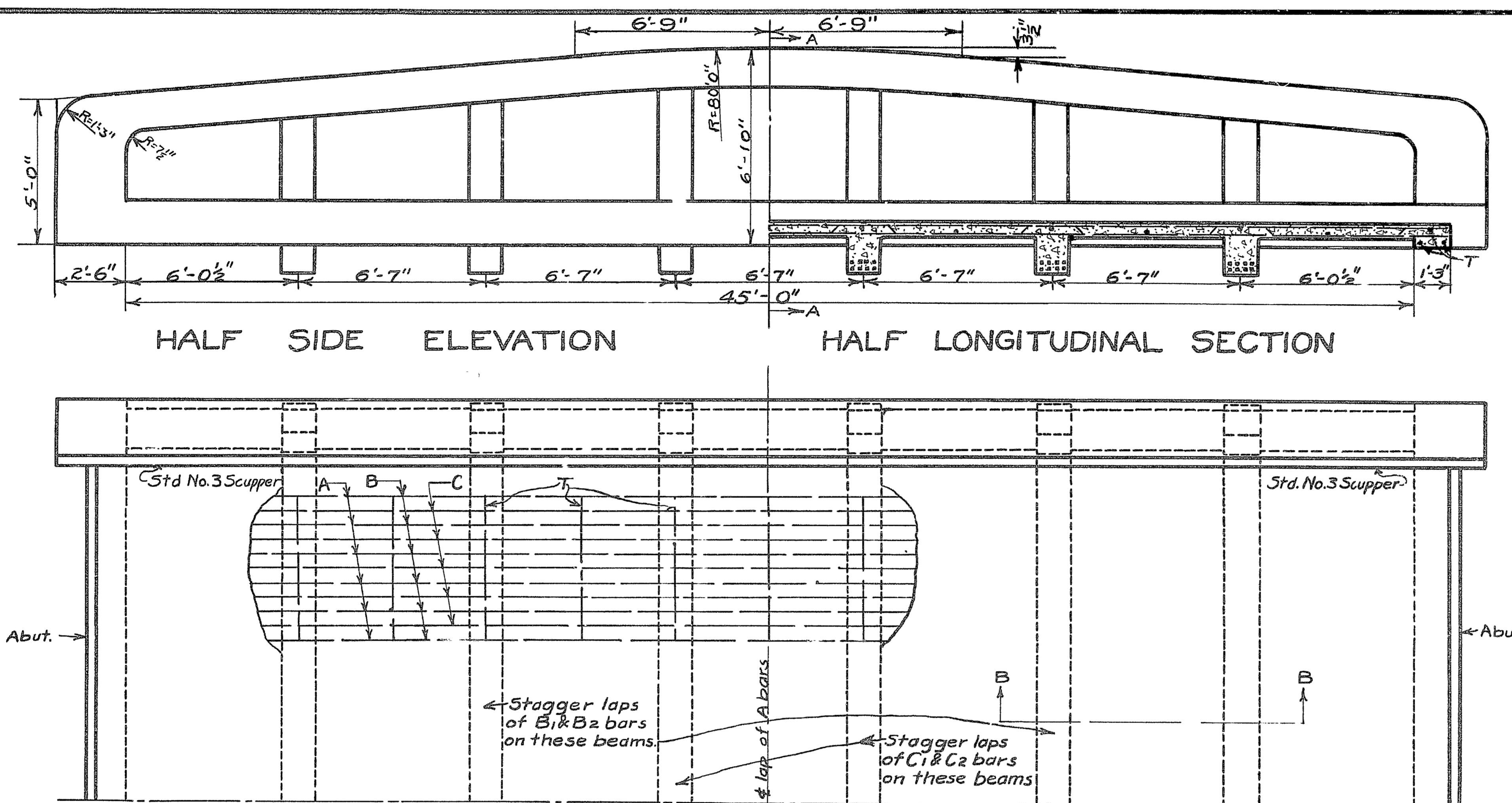
Recommended for approval:

Acting Chief Engineer of Bridges
 Approved: 4/24 1921

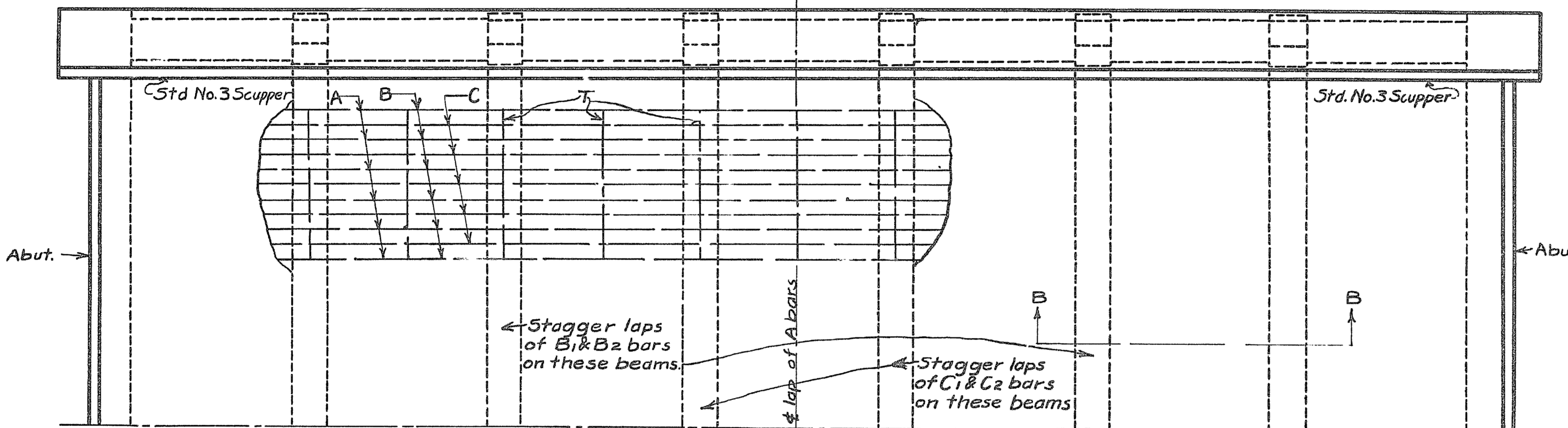
Leon C. Herrick
 Director of Highways & Public Works

STANDARD CONCRETE GIRDER
 SPAN 45^{ET} ROADWAY 20^{ET}
 LOADING T-15
 STATE OF OHIO
 DEPT OF HIGHWAYS AND PUBLIC WORKS
 DIVISION OF HIGHWAYS
 JULY, 1921 BUREAU OF BRIDGES.

MICROFILMED
FEB 07 1979
REF ID: A6100



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

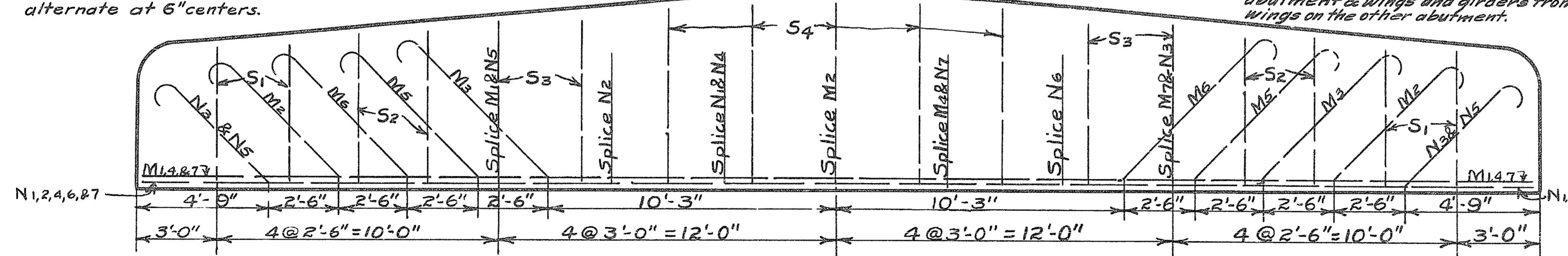


HALF PLAN

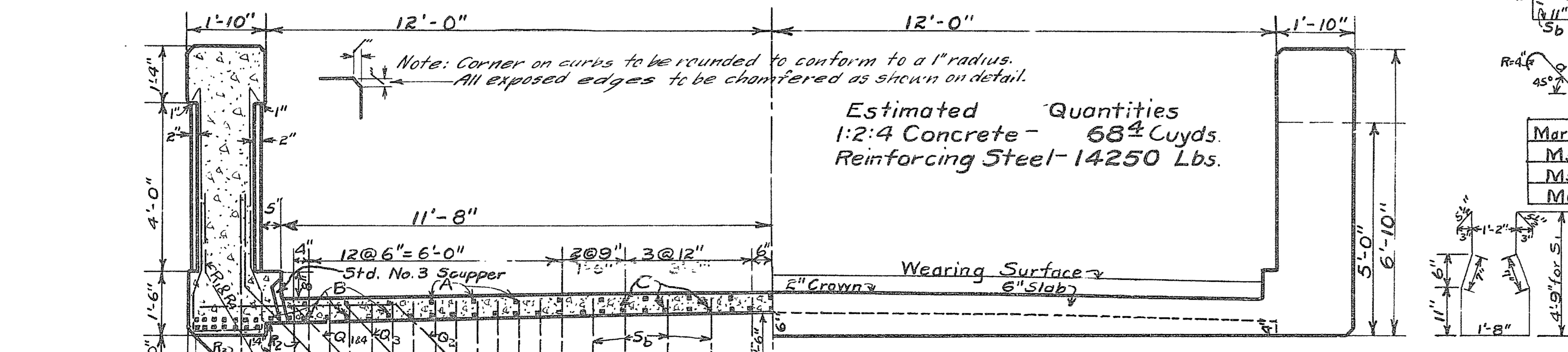
Note:- A bars are to be placed in top of slab over B bars.
B and C bars are to be placed in bottom of slab and are to alternate at 6" centers.

Note:- All girder bars which are to be spliced are to be lapped 4'-0".

Note:- Four layers of tar paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from abutment & wings and girders from wings on the other abutment.



SIDE ELEVATION SHOWING GIRDER REINFORCEMENT



HALF SECTION A-A

HALF END VIEW

SECTION B-B

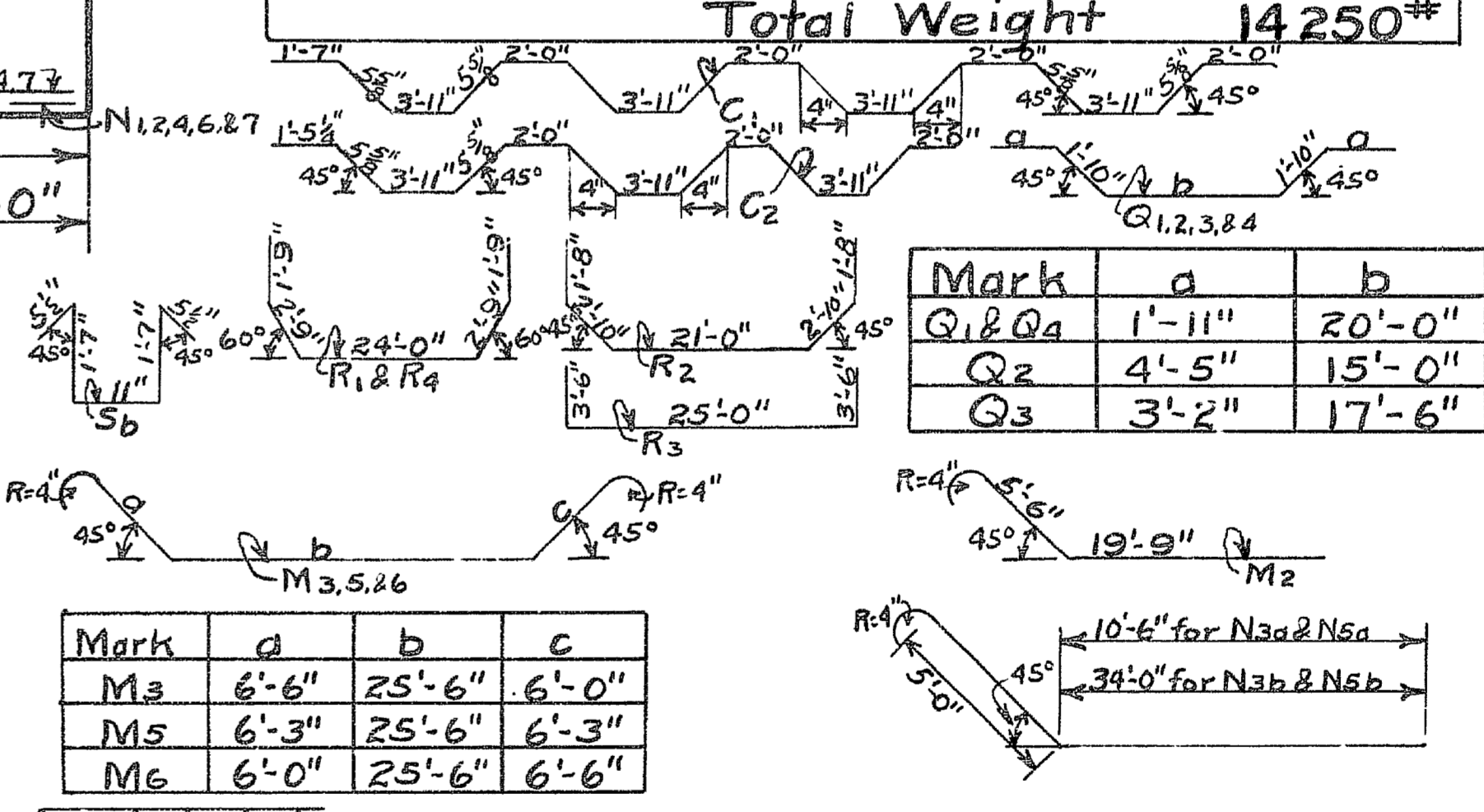
Recommended for Approval:-
Date:- 7-25-21
Approved:-
Date:- 7-25-21

Acting Chief Engineer of Bridges.

Director of Highways and Public Works.

Estimated Quantities
1:2:4 Concrete - 68 1/2 Cuyds.
Reinforcing Steel - 14250 Lbs.

Mark	Size	Number	Length	Weight
Slab Bars				
T	1/2" φ	19	26'-0"	330#
A	1/2" φ	46	24'-6"	960
B1	"	25	14'-9"	314
B2	"	25	34'-6"	733
C1	"	24	29'-0"	592
C2	"	24	22'-0"	450
Beam Bars				
Q1	1" φ	6	27'-6"	561
Q2	"	6	27'-6"	561
Q3	"	6	27'-6"	561
Q4	"	6	27'-6"	561
R1	"	6	33'-0"	674
R2	"	6	30'-0"	612
R3	"	6	32'-0"	653
R4	"	6	33'-0"	674
Sb	1/2" φ	228	5'-0"	761
Girder Bars				
M1a	1" φ	2	14'-9"	100
M1b	"	2	38'-9"	264
M2	"	4	26'-3"	357
M3	"	2	40'-0"	272
M4a	"	2	22'-9"	155
M4b	"	2	30'-9"	209
M5	"	2	40'-0"	272
M6	"	2	40'-0"	272
M7a	"	2	14'-9"	100
M7b	"	2	38'-9"	264
N1a	"	2	22'-9"	155
N1b	"	2	30'-9"	209
N2a	"	2	18'-9"	128
N2b	"	2	34'-9"	236
N3a	"	2	16'-6"	112
N3b	"	2	40'-0"	272
N4a	"	2	22'-9"	155
N4b	"	2	30'-9"	209
N5a	"	2	16'-6"	112
N5b	"	2	40'-0"	272
N6a	"	2	18'-9"	128
N6b	"	2	34'-9"	236
N7a	"	2	22'-9"	155
N7b	"	2	30'-9"	209
S1	1/2" φ	8	12'-3"	83
S2	"	8	13'-3"	30
S3	"	8	14'-3"	97
S4	"	10	15'-3"	130
Total Weight				14250#



Mark	a	b	c
M3	6'-6"	25'-6"	6'-0"
M5	6'-3"	25'-6"	6'-3"
M6	6'-0"	25'-6"	6'-6"

STANDARD CONCRETE GIRDER

SPAN 45 FT ROADWAY 24 FT

LOADING T-15

STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS

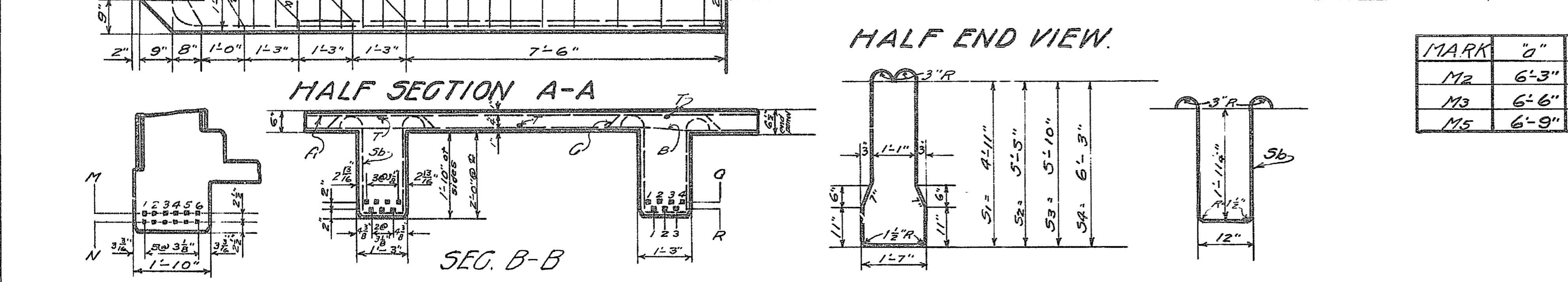
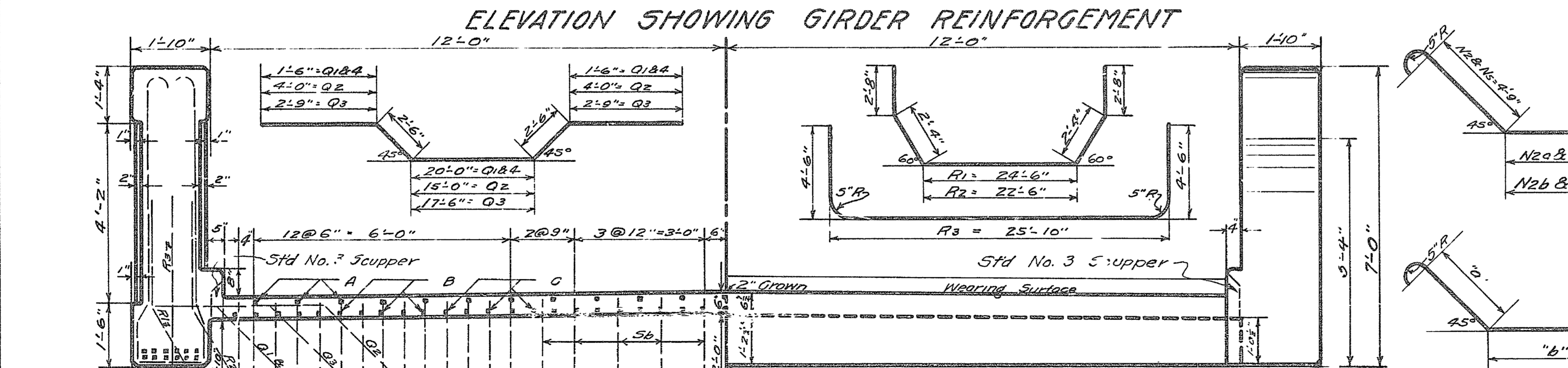
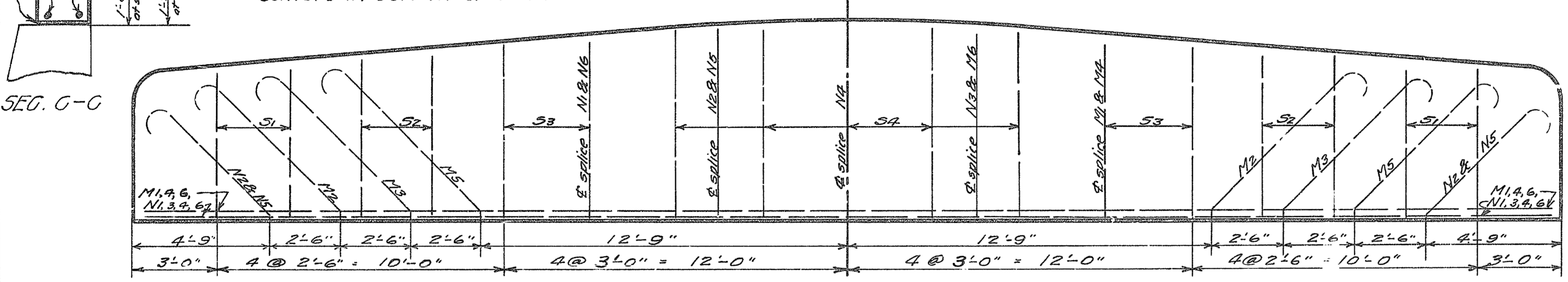
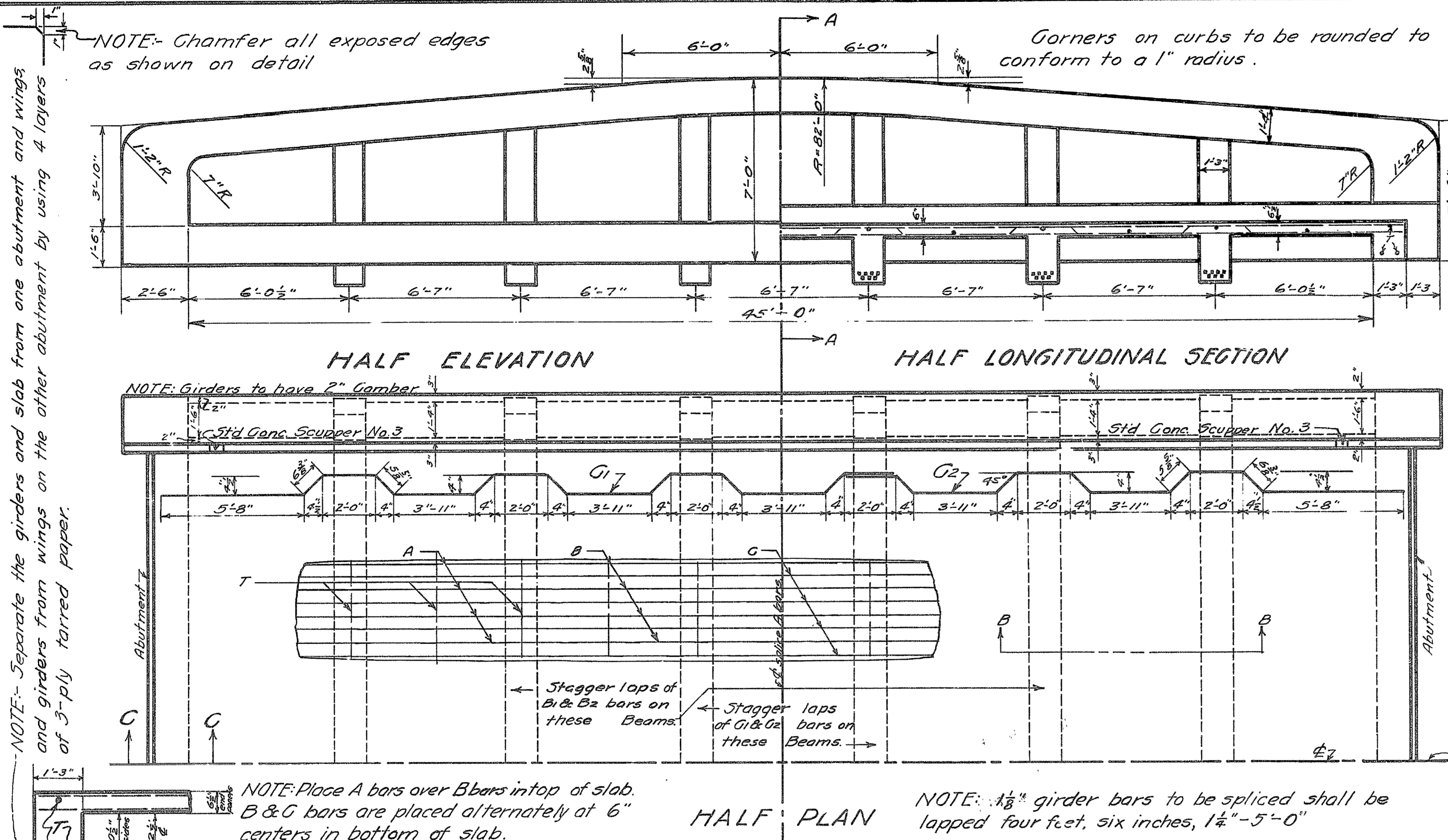
JULY 1921

BUREAU OF BRIDGES

G 45 24

Des. & Dr. by W.F.
CK by H.H.C.

MICROFILMED
FEB 07 1979
REPRODUCTION



NOTE: If unable to pour superstructure continuously, make a construction joint along the centerline of roadway and pour one-half continuously including slab, beams and girder.

MARK	SIZE	NUMBER	LENGTH	WEIGHT
SLAB BARS				
T	1/2" φ	19	26'-0"	330
A	1/2" φ	46	24'-6"	960
B1	"	25	14'-9"	314
B2	"	25	34'-6"	733
C1	"	24	28'-9"	587
C2	"	24	22'-0"	450
BEAM BARS				
Q1	1 1/8" φ	6	28'-0"	722
Q2	"	6	28'-0"	722
Q3	"	6	28'-0"	722
Q4	"	6	28'-0"	722
R1	"	6	34'-6"	890
R2	"	6	32'-6"	890
R3	"	6	34'-6"	890
Sb	1/2" φ	228	6'-4"	966
GIRDER BARS				
M1a	1 1/8" φ	2	36'-0"	310
M1b	"	2	18'-0"	155
M2	"	2	46'-0"	395
M3	"	2	46'-0"	395
M4a	"	2	36'-0"	310
M4b	"	2	18'-0"	155
M5	"	2	46'-0"	395
M6a	"	2	31'-6"	271
M6b	"	2	22'-6"	194
N1a	1 1/8" φ	2	36'-3"	385
N1b	"	2	18'-3"	195
N2a	"	2	24'-3"	257
N2b	"	2	33'-3"	352
N3a	"	2	31'-9"	336
N3b	"	2	22'-9"	241
N4a	"	2	27'-3"	289
N4b	"	2	27'-3"	289
N5a	"	2	24'-3"	257
N5b	"	2	33'-3"	352
N6a	"	2	36'-3"	385
N6b	"	2	18'-3"	195
S1	1/2" φ	8	13'-0"	89
S2	"	8	14'-0"	95
S3	"	8	15'-0"	102
S4	"	10	15'-8"	132
TOTAL WEIGHT				16380#

NOTE: Bridge is designed for maximum weight of wearing surface on slab to be 65 pounds per sq. foot.

Wearing Surface shall be full width between curbs and entire length of slab.

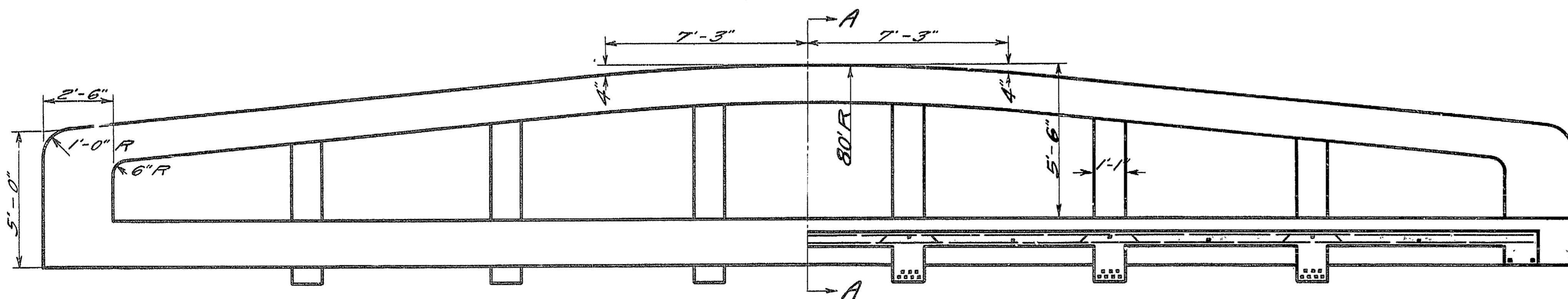
ESTIMATED QUANTITIES
1:2:4 Concrete 77.0 cu yds.
Reinforcing steel 16380 lbs.
Wearing surface 123.1 sq. yds.

STANDARD CONCRETE GIRDER.
SPAN 45 FT. ROADWAY 24 FT.
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JANUARY 1924 BUREAU OF BRIDGES.

MARK	"a"	"b"	"c"
M2	6'-3"	30'-6"	6'-9"
M3	6'-6"	30'-6"	6'-6"
M5	6'-9"	30'-6"	6'-3"

G45-24-1
Designed by W.F. Brown & Trust, E.H.B.
Rev. & ckd by W.H.R.
Approved by A.F. Geigley

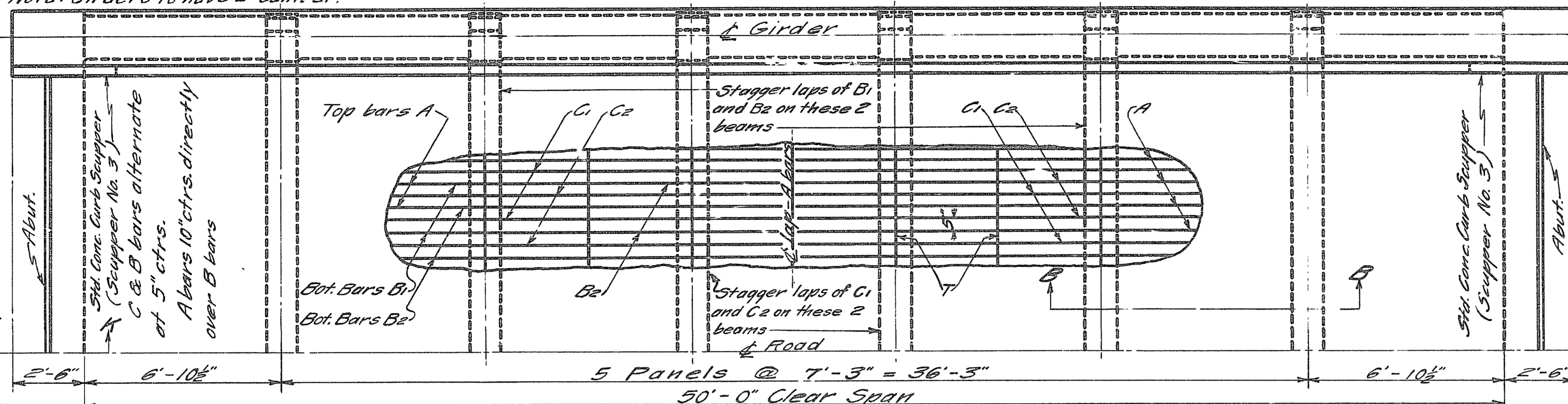
MICROFILM D
 FEB 07 19
 REPRODUCTION



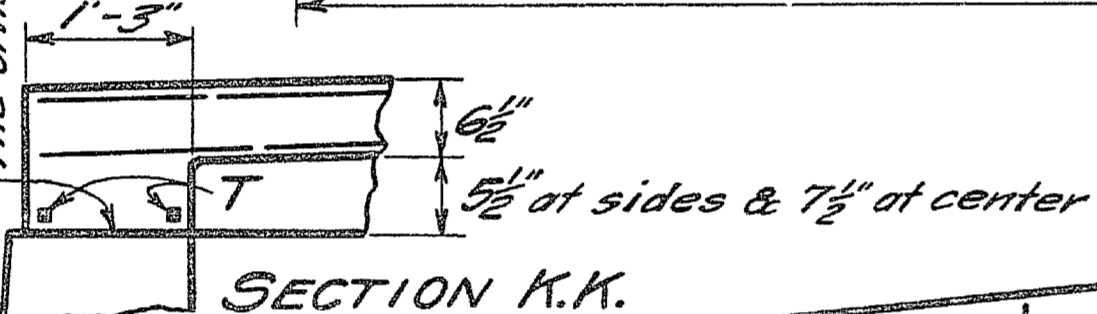
HALF ELEVATION

HALF LONGITUDINAL SECTION

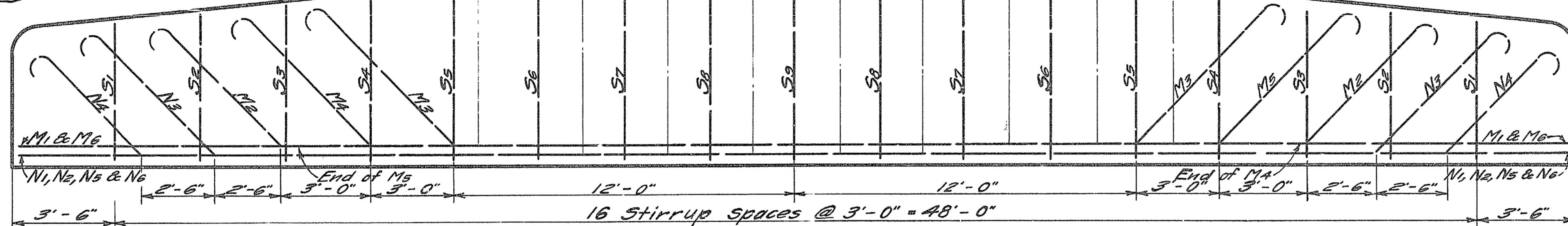
Note: Girders to have 2" camber.



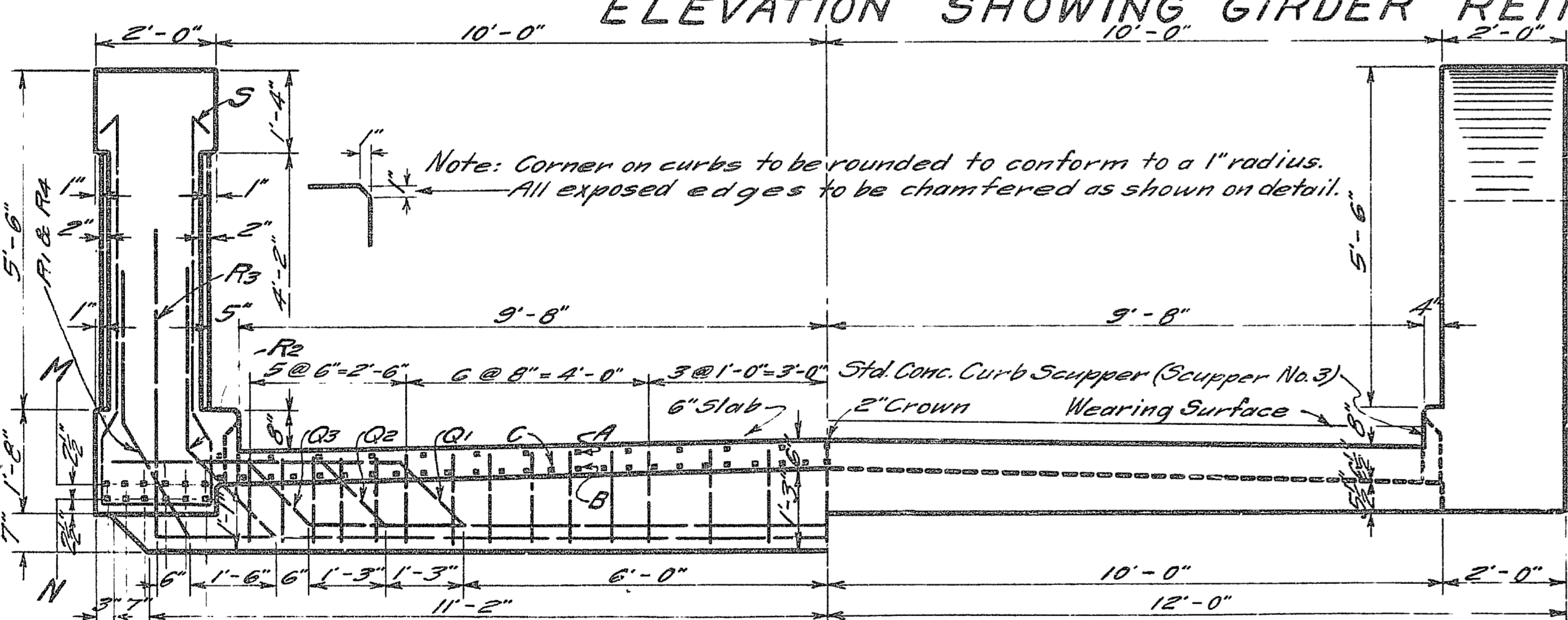
HALF PLAN



SECTION K-K.

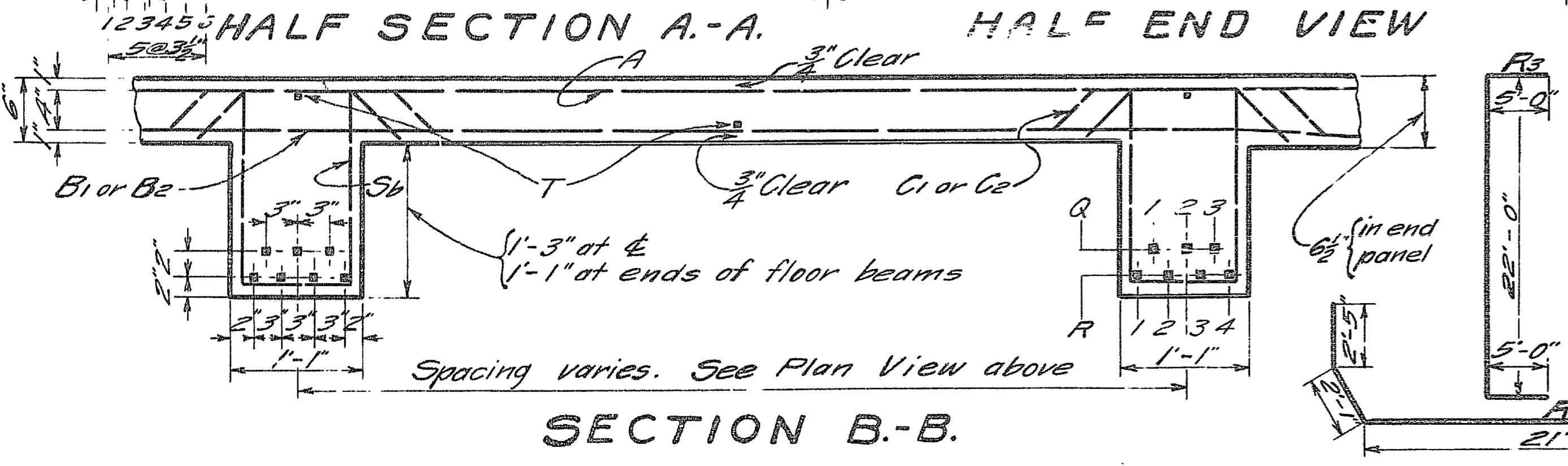


ELEVATION SHOWING GIRDER REINFORCEMENT



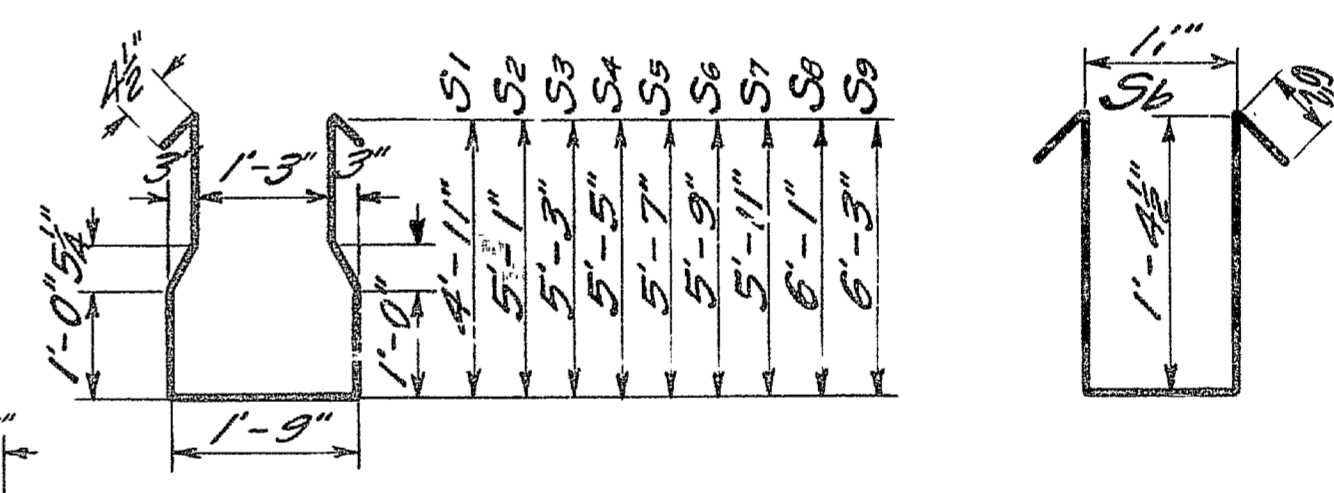
HALF SECTION A-A.

HALF END VIEW



SECTION B-B.

STEEL LIST						
MARK	NO	SIZE	LENGTH	REMARKS	LOCATION	WEIGHT
T	17	1/2"	23'-6"	Straight	Slab & slab rests	266.9
Sb	17A	"	4'-9"	Bent	Beams	552.1
Weight of 1/2" bars						819.0
A	50	1/2"	27'-0"	Straight	Top of slab	1147.9
B1	25	"	16'-0"	"	Bottom of slab	340.0
B2	25	"	38'-0"	"	"	807.5
C1	24	"	25'-0"	Bent from top	"	510.0
C2	24	"	32'-6"	to bottom of slab	"	663.0
S1	4	"	12'-6"	Bent	Girders	12.5
S2	4	"	12'-10"	"	"	43.6
S3	4	"	13'-2"	"	"	44.0
S4	4	"	13'-6"	"	"	45.9
S5	4	"	13'-10"	"	"	47.0
S6	4	"	14'-2"	"	"	48.2
S7	4	"	14'-6"	"	"	49.3
S8	4	"	14'-10"	"	"	50.4
S9	2	"	15'-2"	"	"	51.6
Weight of 1/2" bars						3891.3
Q1	6	1"	24'-6"	Bent	Beams	499.8
Q2	6	"	24'-6"	"	"	499.8
Q3	6	"	24'-6"	"	"	499.8
R1	6	"	30'-0"	"	"	612.0
R2	6	"	28'-0"	"	"	571.2
R3	6	"	32'-0"	"	"	652.8
R4	6	"	30'-0"	"	"	612.0
Weight of 1" bars						3647.4
M1	2	1 1/2"	17'-6"	Straight	Girders	732.5
M2	2	"	19'-0"	"	"	342.0
M3	2	"	13'-6"	Bent	"	116.1
M4	2	"	39'-6"	"	"	332.7
M5	2	"	40'-0"	"	"	344.0
M6	2	"	40'-0"	"	"	344.0
N1	2	"	38'-3"	Straight	"	311.8
N2	2	"	39'-3"	"	"	337.8
N3	2	"	18'-3"	"	"	157.0
N4	2	"	24'-3"	Bent	"	208.6
N5	2	"	39'-3"	"	"	286.0
N6	2	"	24'-3"	"	"	220.3
N7	2	"	24'-3"	"	"	212.9
N8	2	"	29'-3"	"	"	200.0
N9	2	"	38'-3"	"	"	329.0
N10	2	"	24'-3"	"	"	250.3
N11	2	"	24'-3"	"	"	234.7
N12	2	"	27'-3"	"	"	232.4
N13	2	"	30'-3"	"	"	260.2
Weight of 1 1/2" bars						5500.4
Total Weight of bars						14060.0



ESTIMATED QUANTITIES
 Concrete 1-2-4 72.5 Cu. Yd.
 Steel Reinforcing 14 060 Lbs.
 Wearing Surface 112.8 Sq. Yd.

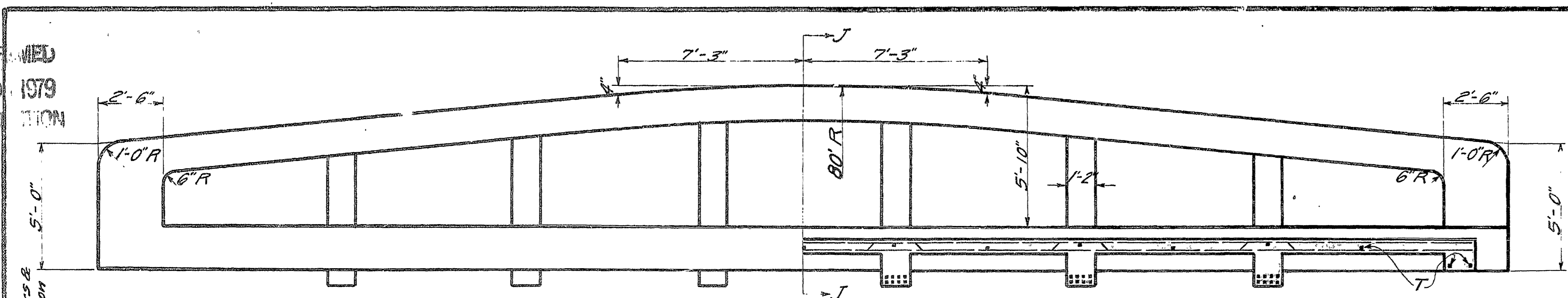
Recommended for Approval: 1921

Acting Chief Engineer of Bridges
 Approved: 7/12/21 1921
 Leon C. Herrick
 Director of Highways & Public Works

STANDARD
 CONCRETE GIRDER BRIDGE
 SPAN 50 FT ROADWAY 20 FT
 T-15 LOADING
 STATE OF OHIO
 DEPT OF HIGHWAYS AND PUBLIC WORKS
 DIVISION OF HIGHWAYS
 AUG 1921 BUREAU OF BRIDGES

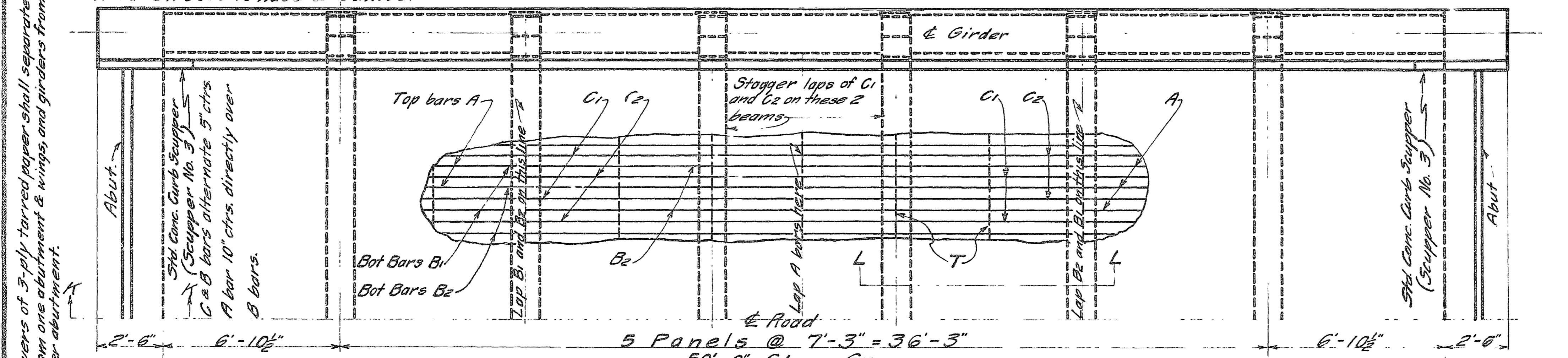
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FEB 0 1979
REF ID: A61111

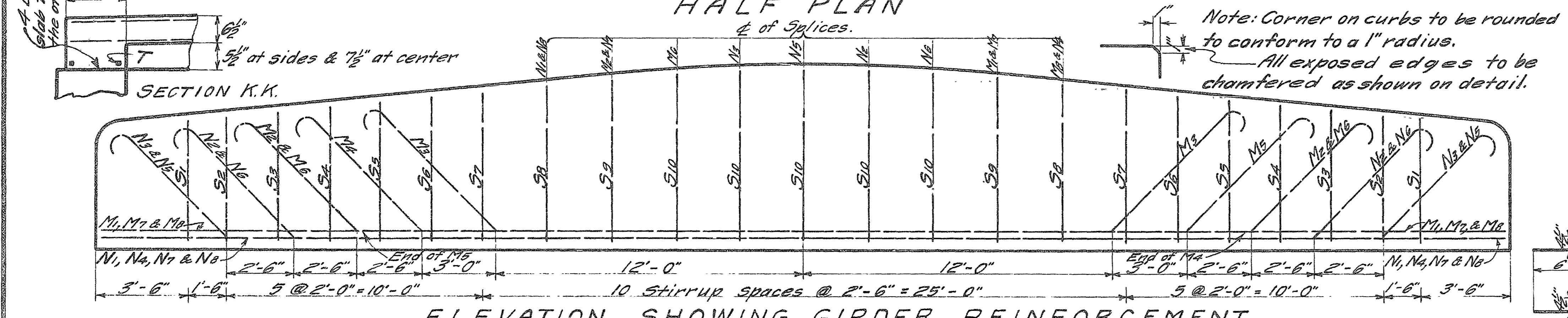


HALF ELEVATION HALF LONGITUDINAL SECTION

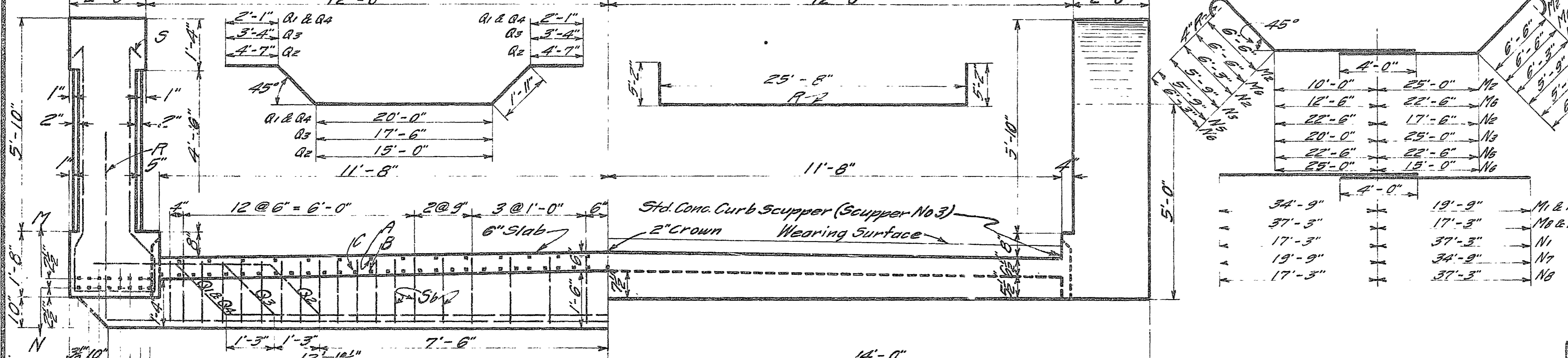
Note: Girders to have 2" camber



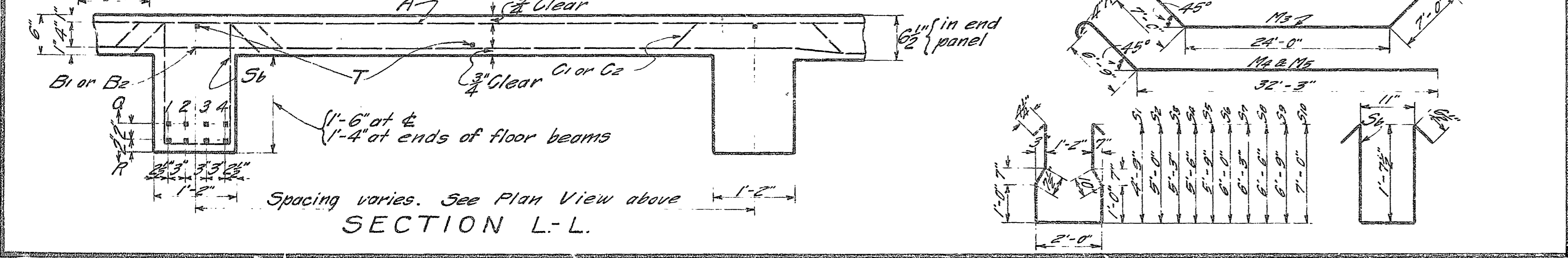
HALF PLAN



ELEVATION SHOWING GIRDER REINFORCEMENT



HALF SECTION J-J HALF END VIEW



SECTION L-L

MARK	NO	SIZE	LENGTH	REMARKS	LOCATION
A	56	2 1/2"	27'-0"	Straight	Top of slab
B1	28	"	18'-0"	"	Bottom of slab
B2	28	"	38'-0"	"	" " "
C1	29	"	25'-0"	Bent from top to bottom of slab	" " "
C2	29	"	32'-6"	"	" " "
T	17	"	27'-6"	Straight	In slab & slab rests
S1	4	"	12'-6"	Bent	In Girders
S2	4	"	13'-0"	"	" " "
S3	4	"	13'-6"	"	" " "
S4	4	"	14'-0"	"	" " "
S5	4	"	14'-6"	"	" " "
S6	4	"	15'-0"	"	" " "
S7	4	"	15'-6"	"	" " "
S8	4	"	16'-0"	"	" " "
S9	4	"	16'-6"	"	" " "
S10	12	"	17'-0"	"	" " "
S11	220	"	5'-3"	"	In Beams
Q1	6	1"	28'-3"	"	" " "
Q2	6	"	28'-0"	"	" " "
Q3	6	"	28'-0"	"	" " "
Q4	6	"	28'-0"	"	" " "
R	24	"	36'-0"	"	" " "
M1	2	"	36'-9"	Straight	In Girders
M2	2	"	40'-6"	Bent	" " "
M3	2	"	40'-0"	"	" " "
M4	2	"	40'-0"	"	" " "
M5	2	"	40'-0"	"	" " "
M6	2	"	40'-0"	"	" " "
M7	2	"	36'-9"	Straight	" " "
M8	2	"	39'-3"	"	" " "
N1	2	"	19'-3"	"	" " "
N2	2	"	31'-3"	Bent	" " "
N3	2	"	28'-9"	"	" " "
N4	2	"	39'-3"	Straight	" " "
N5	2	"	31'-3"	Bent	" " "
N6	2	"	31'-3"	"	" " "
N7	2	"	24'-3"	"	" " "
N8	2	"	21'-9"	Straight	" " "

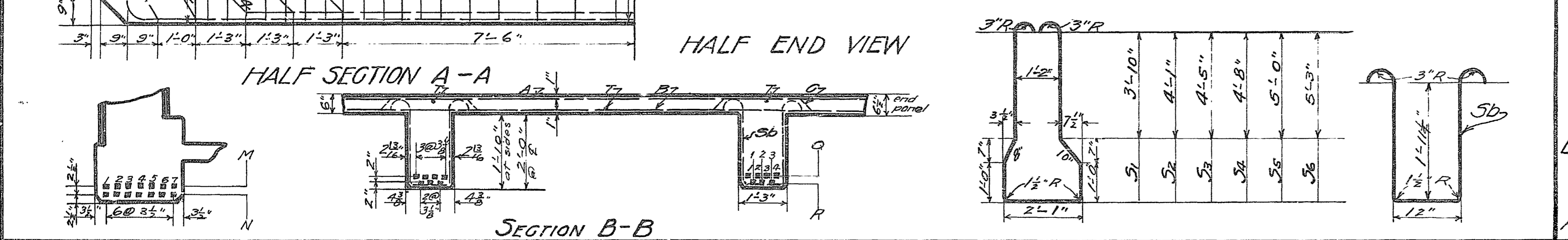
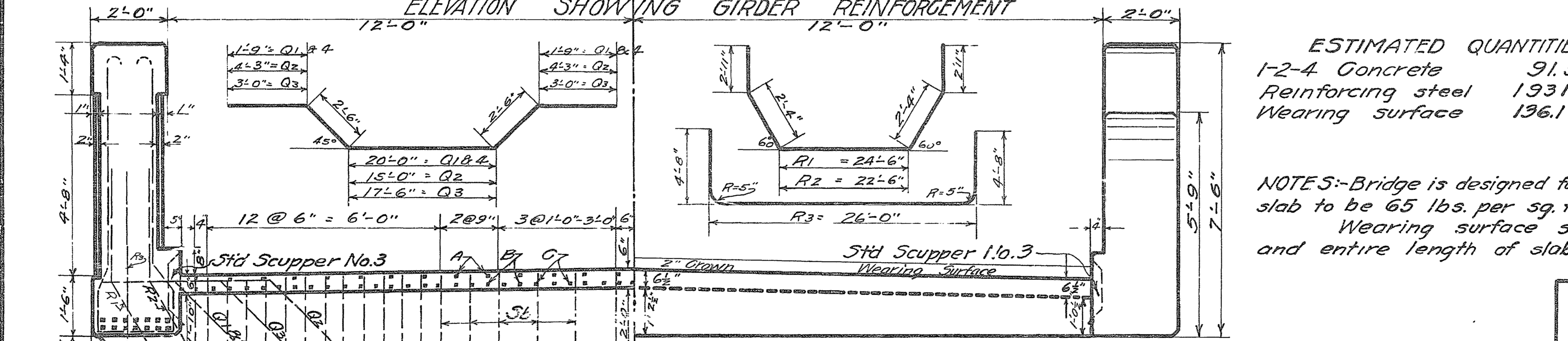
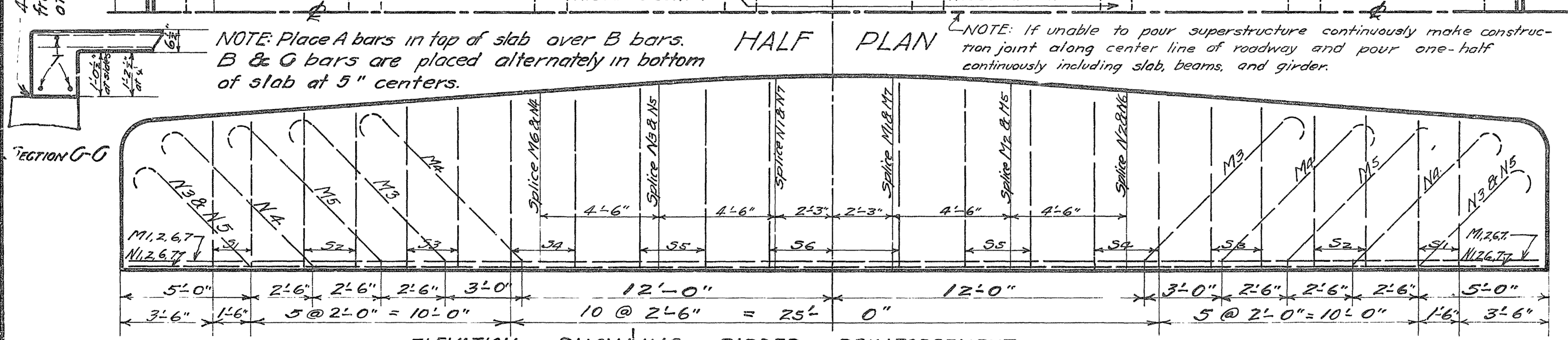
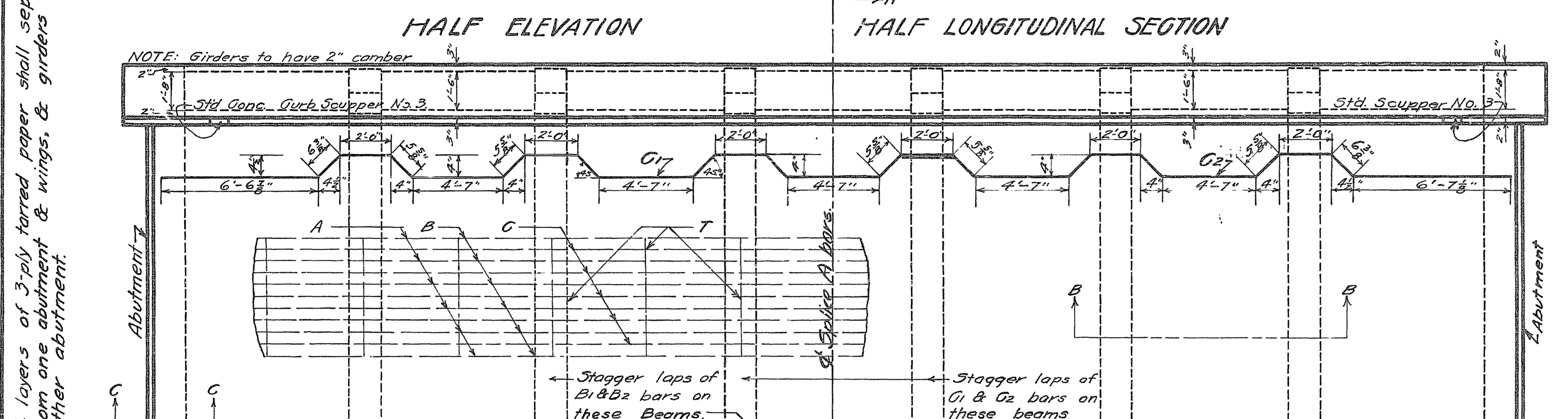
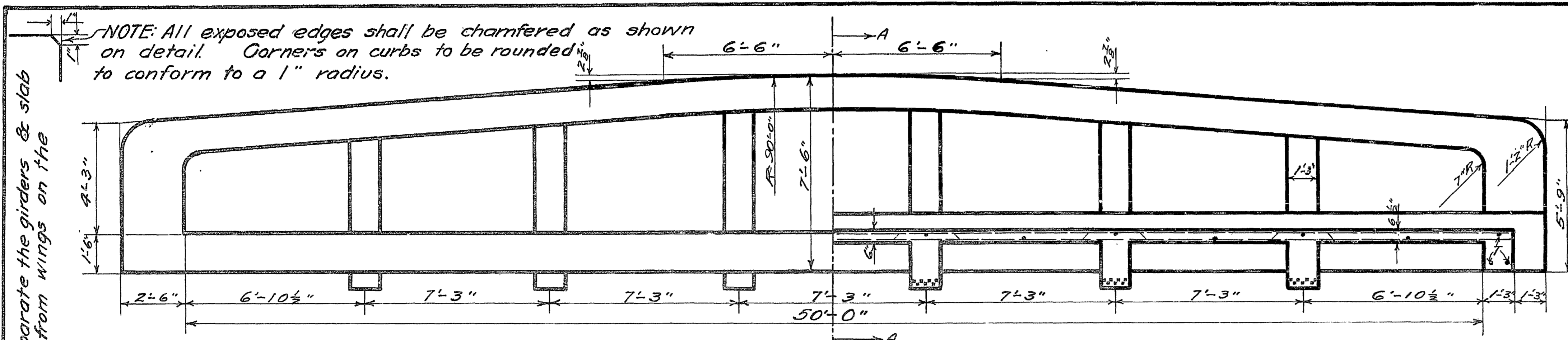
ESTIMATED QUANTITIES
Concrete 1-2-4 - 82.5 Cu. Yd.
Steel Reinforcing - 17220 Lb

Recommended for approval: _____ 1921
Acting Chief Engineer of Bridges
Approved: September 24 1921
Leon J. ...
Director of Highways & Public Works

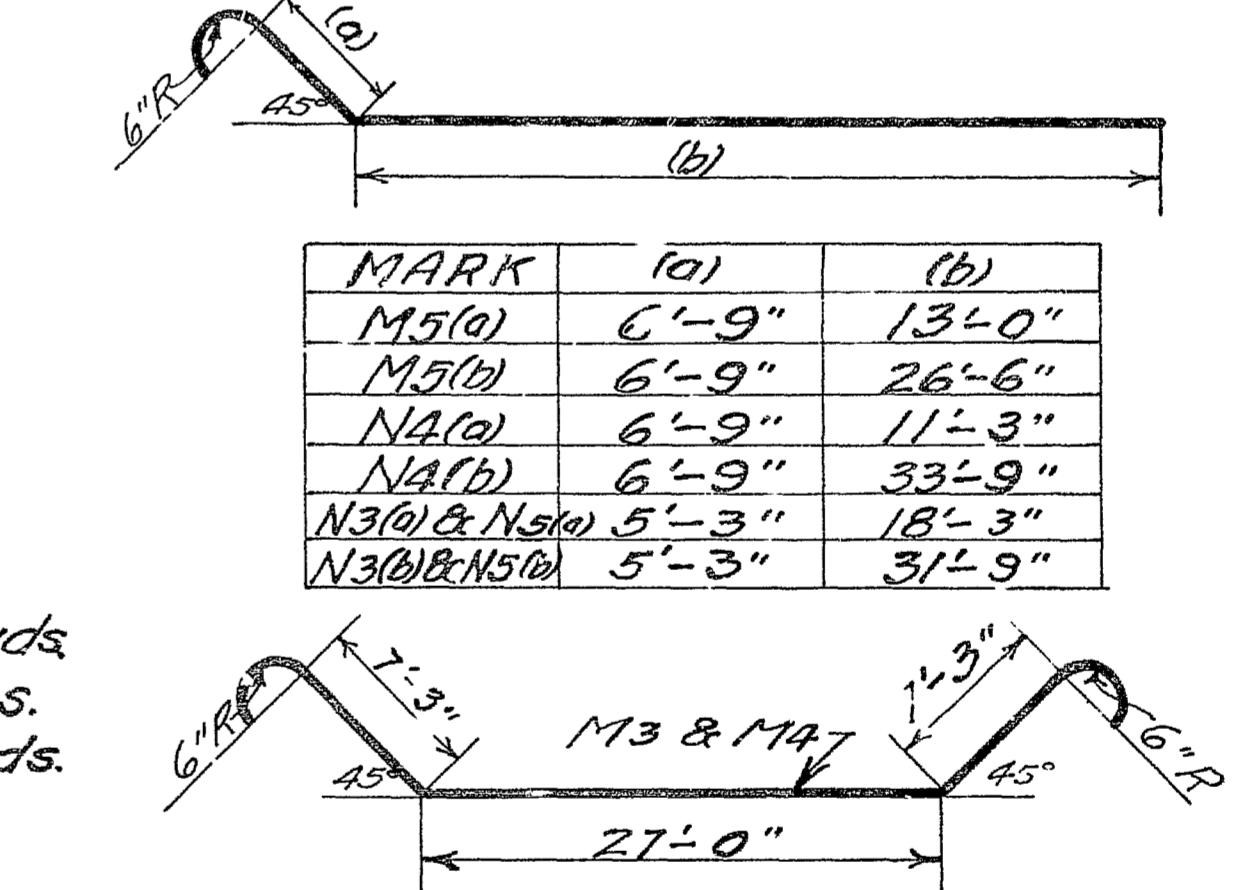
STANDARD
CONCRETE GIRDER BRIDGE
SPAN 50 FT ROADWAY 24 FT
T-15 LOADING
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JULY 1921
BUREAU OF BRIDGES

G5024

MICROFILMED
FEB 07 1979
REPRODUCTION



MARK	SIZE	NO	LENGTH	WEIGHT
SLAB BARS				
A	1/2" φ	56	27'-0"	1285
B1	"	20	16'-0"	360
B2	"	28	38'-0"	904
G1	"	29	31'-8"	781
G2	"	29	24'-2"	596
T	1/2" φ	19	27'-0"	342
BEAM BARS				
Q1	1 1/2" φ	6	28'-6"	735
Q2	"	6	28'-6"	735
Q3	"	6	28'-6"	735
Q4	"	6	28'-6"	735
R1	"	6	35'-0"	904
R2	"	6	33'-0"	852
R3	"	6	35'-0"	904
Sb	1/2" φ	278	6'-4"	962
GIRDER BARS				
M1(a)	1 1/2" φ	2	27'-3"	235
M1(b)	"	2	31'-9"	273
M2(a)	"	2	22'-9"	196
M2(b)	"	2	36'-3"	312
M3	"	2	44'-6"	383
M4	"	2	44'-6"	383
M5(a)	"	2	21'-3"	182
M5(b)	"	2	34'-9"	299
M6(a)	"	2	18'-3"	157
M6(b)	"	2	40'-9"	351
M7(a)	"	2	27'-3"	235
M7(b)	"	2	31'-9"	273
N1(a)	1 1/2" φ	2	32'-0"	339
N1(b)	"	2	27'-6"	292
N2(a)	"	2	41'-0"	435
N2(b)	"	2	18'-6"	196
N3(a)	"	2	25'-0"	265
N3(b)	"	2	38'-6"	408
N4(a)	"	2	19'-6"	207
N4(b)	"	2	42'-0"	445
N5(a)	"	2	25'-0"	265
N5(b)	"	2	38'-6"	408
N6(a)	"	2	41'-0"	435
N6(b)	"	2	18'-6"	196
N7(a)	"	2	32'-0"	339
N7(b)	"	2	27'-6"	291
S1	1/2" φ	8	14'-9"	100
S2	"	8	15'-3"	104
S3	"	8	15'-11"	108
S4	"	8	16'-5"	112
S5	"	8	17'-1"	116
S6	"	8	17'-7"	120
TOTAL WEIGHT				19310



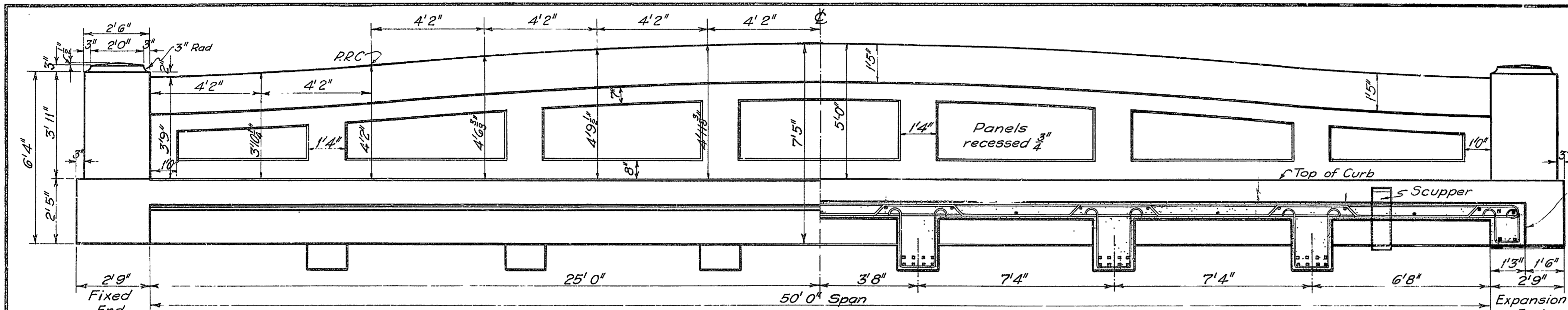
MARK	(a)	(b)
M5(a)	6'-9"	13'-0"
M5(b)	6'-9"	26'-6"
M4(a)	6'-9"	11'-3"
M4(b)	6'-9"	33'-9"
N3(a) & N3(b)	5'-3"	18'-3"
N3(b) & N5(a)	5'-3"	31'-9"

ESTIMATED QUANTITIES
 1-2-4 Concrete 91.5 cu yds
 Reinforcing steel 19310 lbs.
 Wearing surface 196.1 sq yds.

NOTES: Bridge is designed for maximum weight of wearing surface on slab to be 65 lbs. per sq. ft.
 Wearing surface shall be full width between curbs and entire length of slab.

STANDARD CONCRETE GIRDER
SPAN 50 FT. — ROADWAY 24 FT.
 LOADINGS T-15
 STATE OF OHIO
 DEPT OF HIGHWAYS AND PUBLIC WORKS
 DIVISION OF HIGHWAYS
 BUREAU OF BRIDGES.
 AUG. 1923.

G50-24-1
 Designed by A.E. Revised by W.F.
 Drawn & Traced by E.H.B.
 Checked by W.H.R.
 Approved by A.S. Designer



NOTE
All exposed edges not otherwise shown shall be chamfered thus.

CAMBER: This bridge shall be provided with a permanent camber under full dead load amounting to approximately $\frac{1}{8}$ " at the center and following a true parabolic curve.

APPROACH SLABS: Approach slabs shall be provided for at both ends of bridge in case of paved approaches. For details of approach slabs see Drawing No. AS-2430. 1@1" and 1@ $\frac{1}{2}$ " Prem. Exp. Jt. Fillers between ends of Bridge Slab and Approach Slab at Expansion End only. Payment included with Approach Slab.

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		

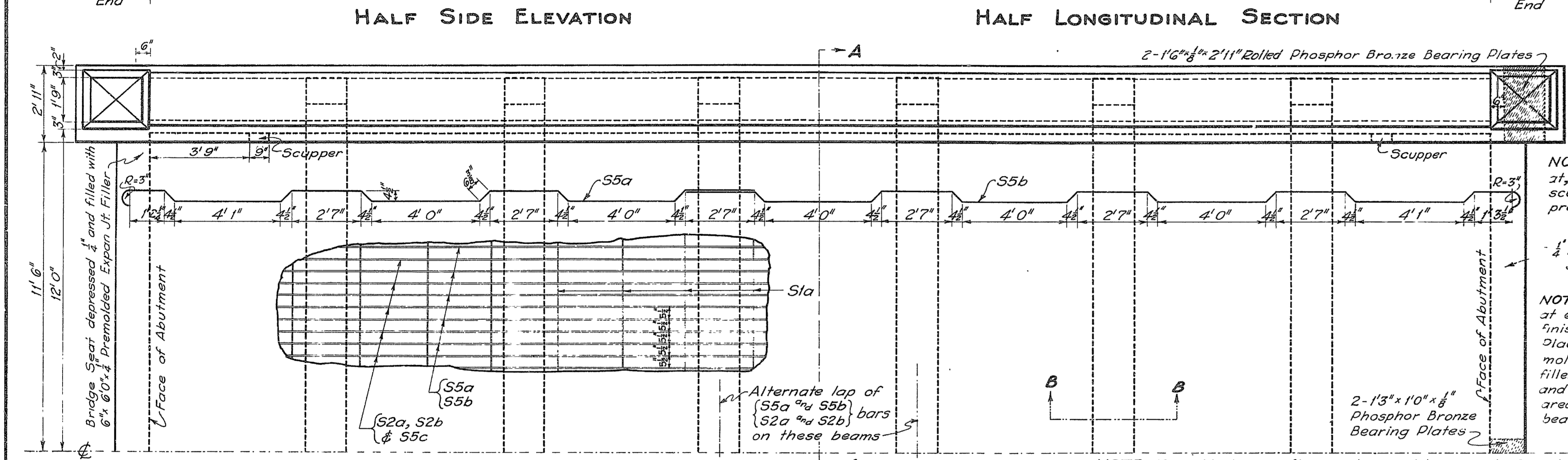
COUNTY S.H. SEC.

BAR LEGEND

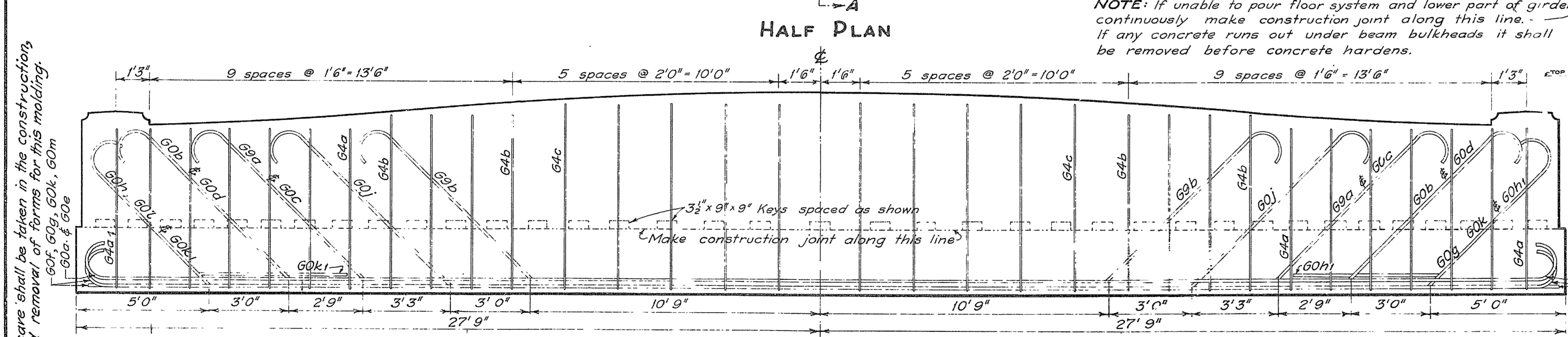
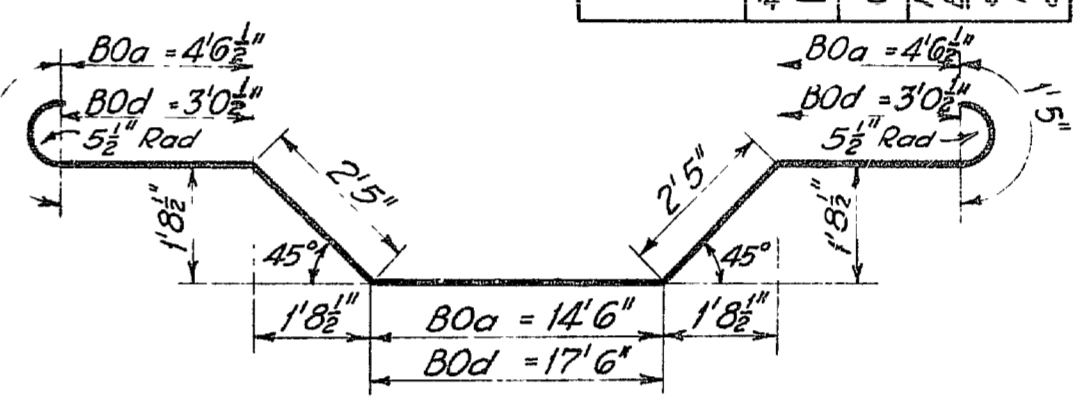
Mark	Location	Size	Shape
1	Top of Slab	1"	Strut
2	Bottom of Slab	1"	Strut
3	Bottom of Slab	1"	Bent
4	Bottom of Slab	1"	Bent
5	Bottom of Slab	1"	Bent
6	Bottom of Slab	1"	Bent
7	Bottom of Slab	1"	Bent
8	Bottom of Slab	1"	Bent
9	Bottom of Slab	1"	Bent
10	Bottom of Slab	1"	Bent

STEEL LIST

Mark	Size	Shape	No. Req'd	Length	Wt.
S1a	1"	Strut	21	26' 0"	208
S2a	1"	Strut	26	23' 6"	408
S2b	1"	Strut	26	31' 0"	539
S5a	1"	Bent	25	25' 0"	943
S5b	1"	Bent	25	32' 9"	1231
S5c	1"	Strut	26	52' 0"	2031
G0a	1"	Bent	6	31' 3"	994
B0b	1"	Bent	6	35' 3"	1121
B0c	1"	Bent	6	35' 3"	1121
B0d	1"	Bent	6	31' 3"	994
B0e	1"	Bent	6	36' 3"	1163
B0f	1"	Bent	6	38' 9"	1226
B0g	1"	Bent	6	38' 9"	1226
B0h	1"	Bent	6	36' 3"	1163
B0j	1"	Bent	8	29' 4"	1,261
B2a	1"	Bent	240	6' 7"	1060
B3a	1"	Bent	18	4' 4"	324
G0a	1"	Bent	2	56' 6"	601
G0b	1"	Bent	2	58' 6"	622
G0c	1"	Bent	2	53' 0"	456
G0d	1"	Bent	2	40' 6"	349
G0e	1"	Bent	2	53' 0"	564
G0f	1"	Bent	2	58' 6"	622
G0g	1"	Bent	2	56' 6"	601
G0h	1"	Bent	2	58' 0"	617
G0i	1"	Bent	2	58' 0"	617
G0j	1"	Bent	2	13' 3"	142
G0k	1"	Bent	2	47' 0"	501
G0l	1"	Bent	2	58' 0"	617
G0m	1"	Bent	2	13' 3"	142
G0n	1"	Bent	2	58' 0"	617
G0o	1"	Bent	2	56' 6"	601
G0p	1"	Bent	28	15' 0"	444
G0q	1"	Bent	16	16' 0"	270
G0r	1"	Bent	20	16' 9"	355
TOTAL					26,350



MICROFILMED
FEB 07 1979
REPRODUCTION



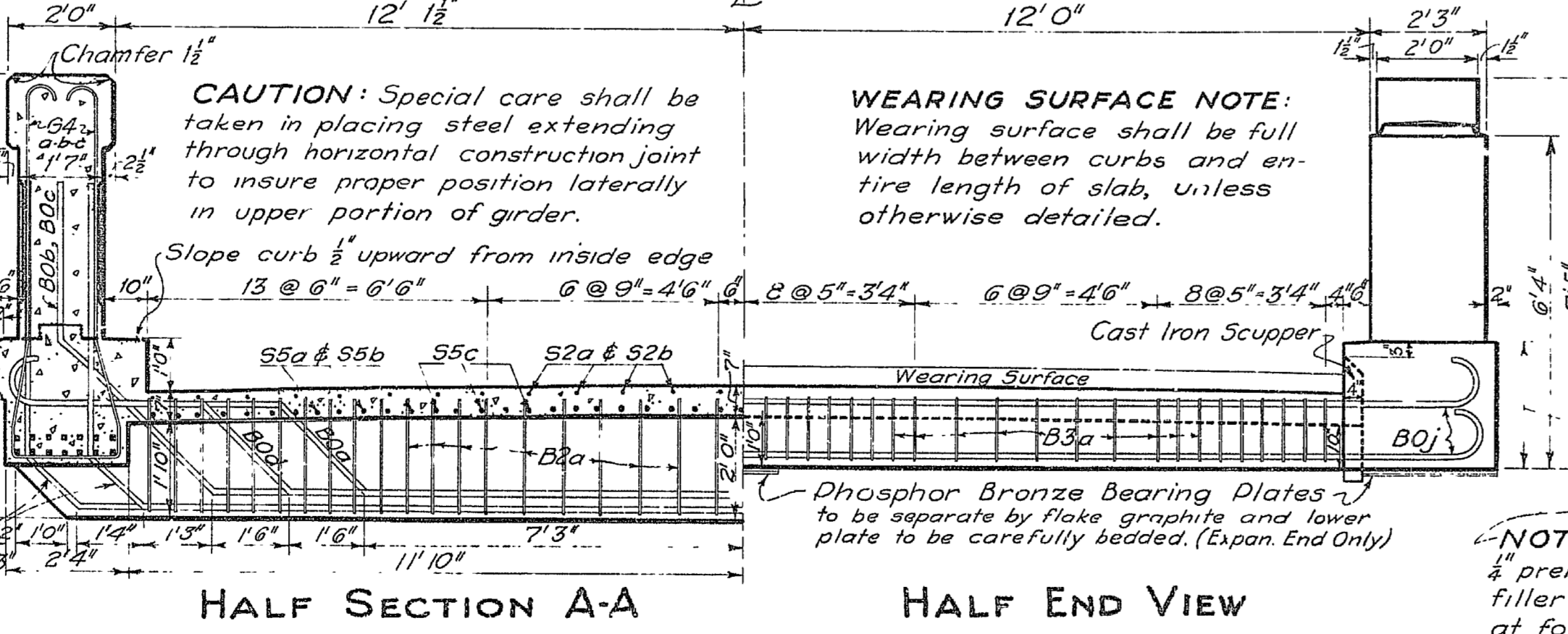
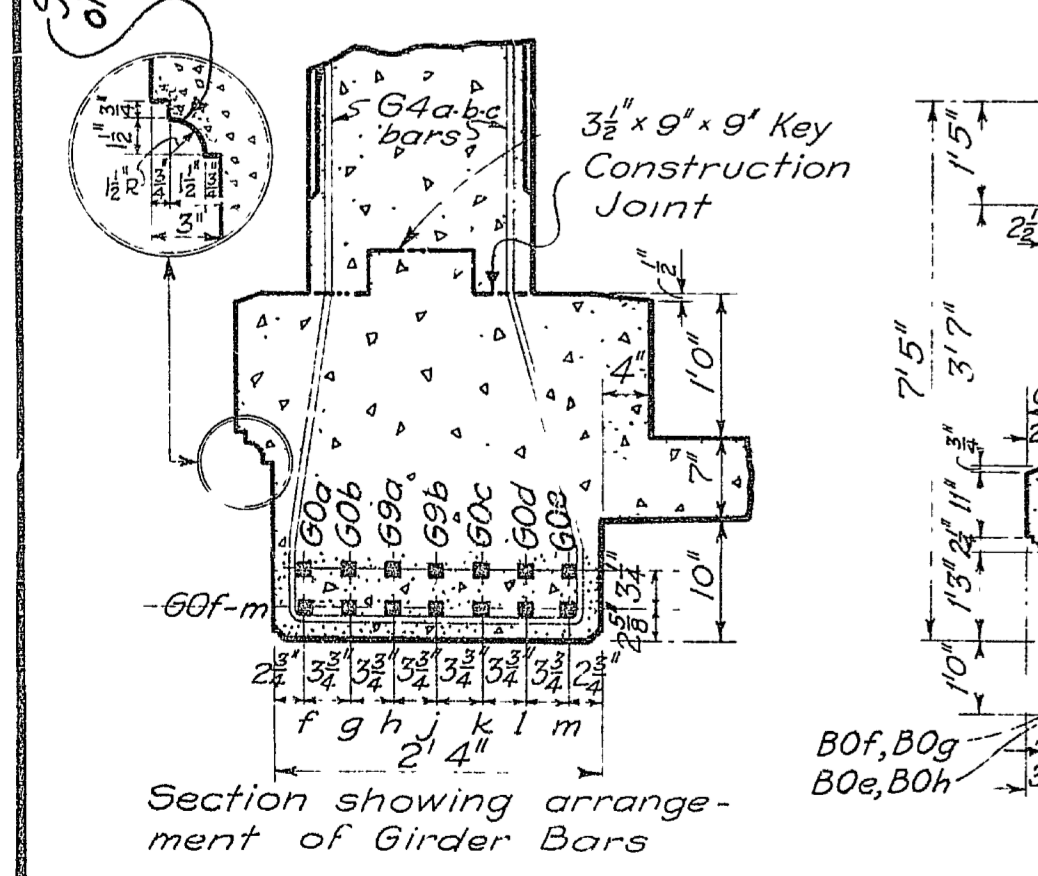
KEYS: Special care shall be taken to insure keys being monolithic with lower part of girder.

CONSTRUCTION JOINT: The surface of girder construction joint shall be left rough and free from all laitance and debris

SURFACE FINISH: The tops, inside faces, and ends of girders shall be given special rubbed surface finish, and the complete outside faces of girders and the tops and sides of curbs ordinary surface finish as per construction specifications. The payment for this is included in the price per cubic yard of concrete

ESTIMATED QUANTITIES

Concrete 1:5 mix	102.0 Cu. Yds.
Reinforcing Steel	26,350 Lbs.
1/4" Prem. Exp. Jt. Filler	129.0 Sq. Ft.
Wearing Surface	134.3 Sq. Yds.
1/8" Phosphor Bronze Plates	114.4 Lbs.
Cast Iron Scuppers	4 Pcs.



CURING: Special care shall be exercised in the curing of concrete, and all concrete from which forms have been removed shall be kept wet as per construction specifications.

SPECIFICATIONS: Construction specifications in force on date of contract shall govern.

REVISIONS

Date	By	Description
January 4, 1927	WHR	
February 8, 1929		

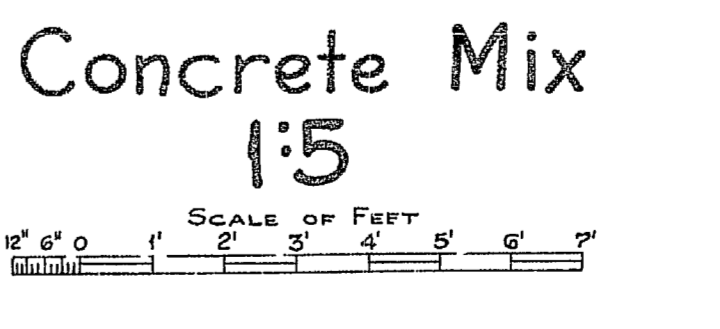
STANDARD CONCRETE THROUGH GIRDER
SPAN 50 FT. ROADWAY 24 FT.
H-15 LOADING

STATE OF OHIO
DIVISION OF HIGHWAYS
DEPARTMENT OF HIGHWAYS & PUBLIC WORKS
MARCH 1926 BUREAU OF BRIDGES

APPROVED BY: [Signature]

DESIGNED BY: [Signature]

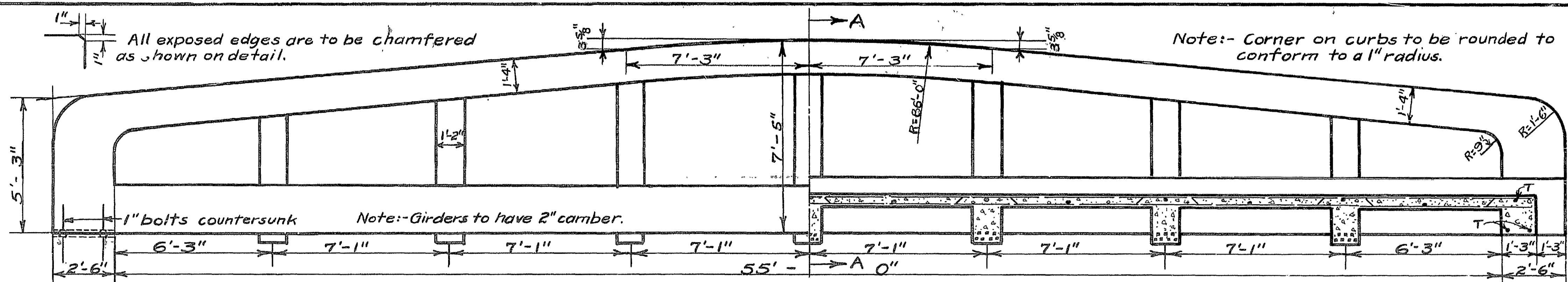
DRAWING NUMBER: **G-50-24-2**



Feb 8, 1929 Revisions. 1" Exp. Jt. between Bridge Slab and Approach Slab. Molding Note. Camber Reduced.

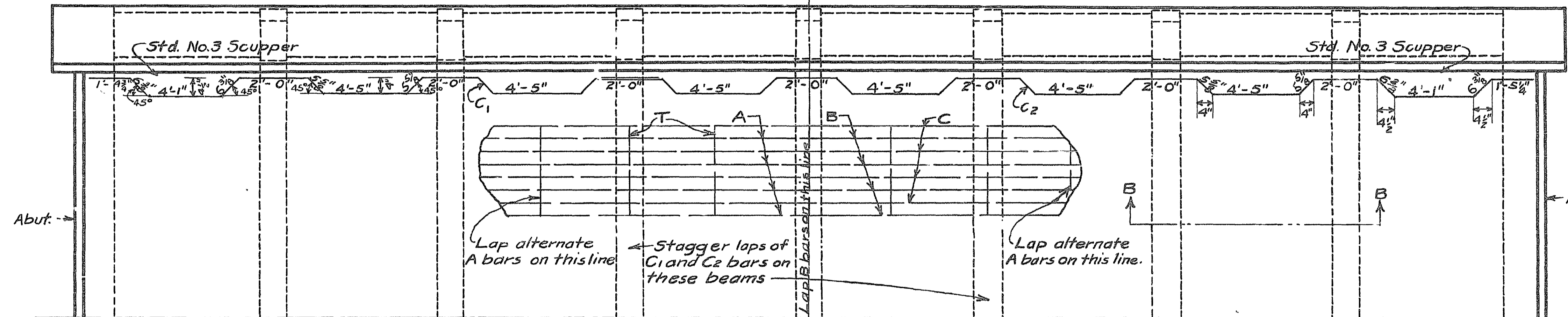
Jan 4, 1927 Revisions. 1/8" Exp. Jt. between Bridge Slab and Approach Slab. Molding Note. Camber Reduced.

Jan 4, 1927 Revisions. 1/8" Exp. Jt. between Bridge Slab and Approach Slab. Molding Note. Camber Reduced.



HALF SIDE ELEVATION

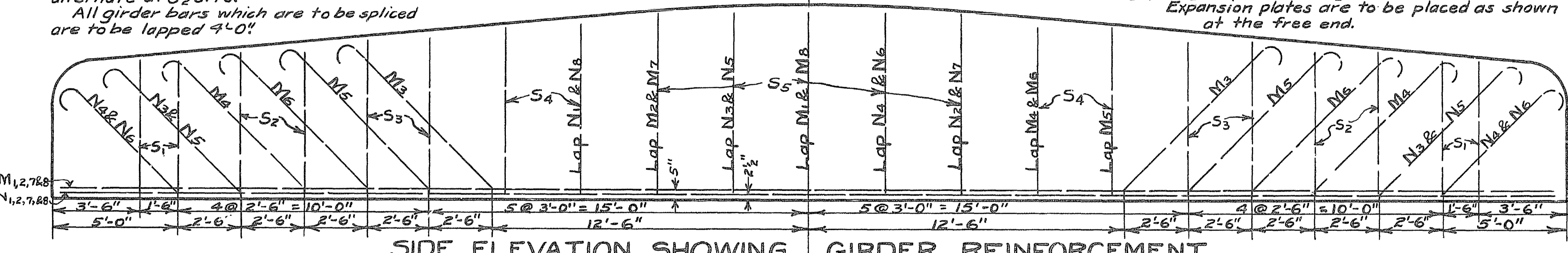
HALF LONGITUDINAL SECTION



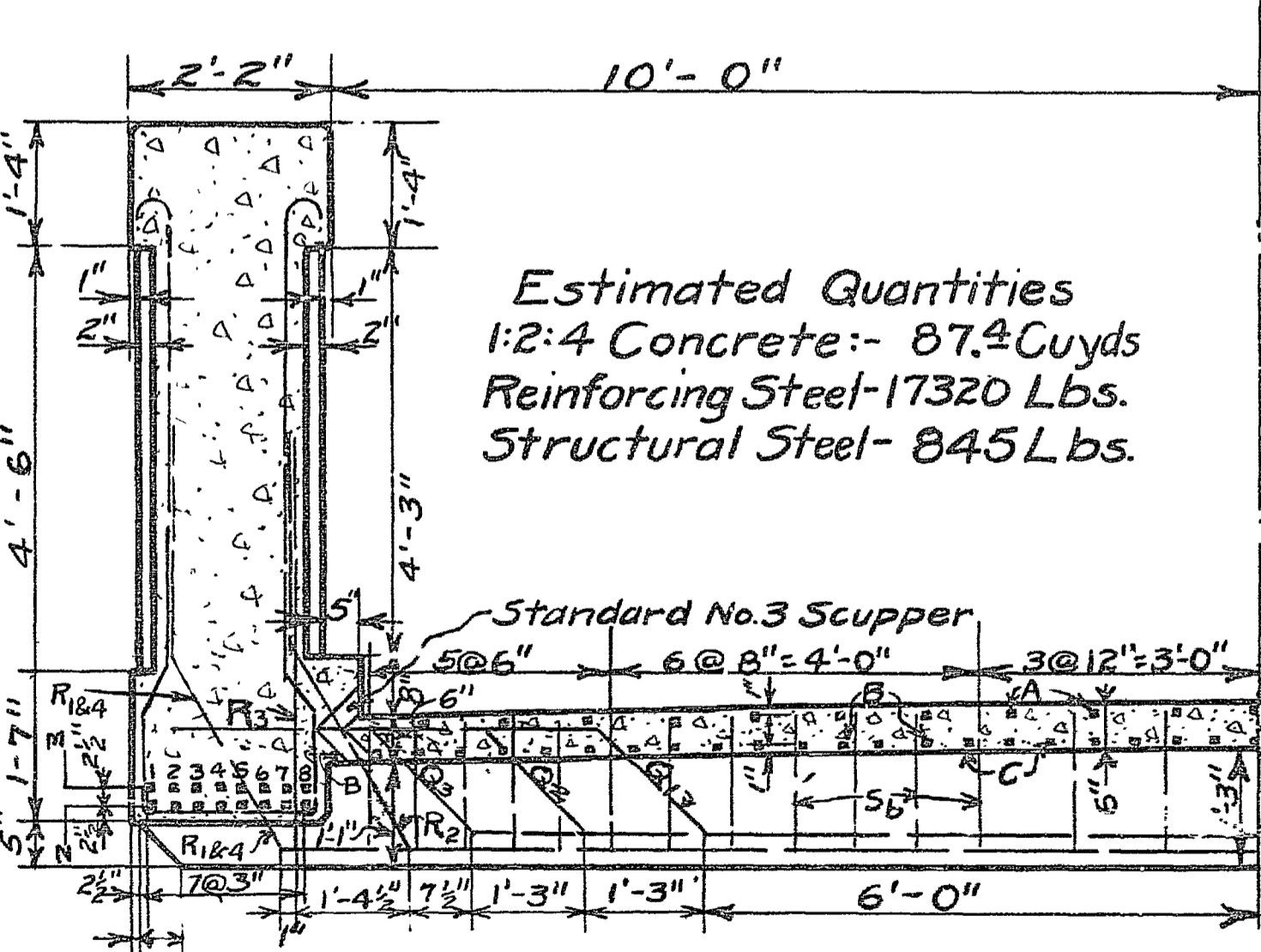
HALF PLAN

Note:- A bars are to be placed in top of slab over B bars. B and C bars are to be placed in bottom of slab and are to alternate at 5" ctrs.
All girder bars which are to be spliced are to be lapped 4'-0"

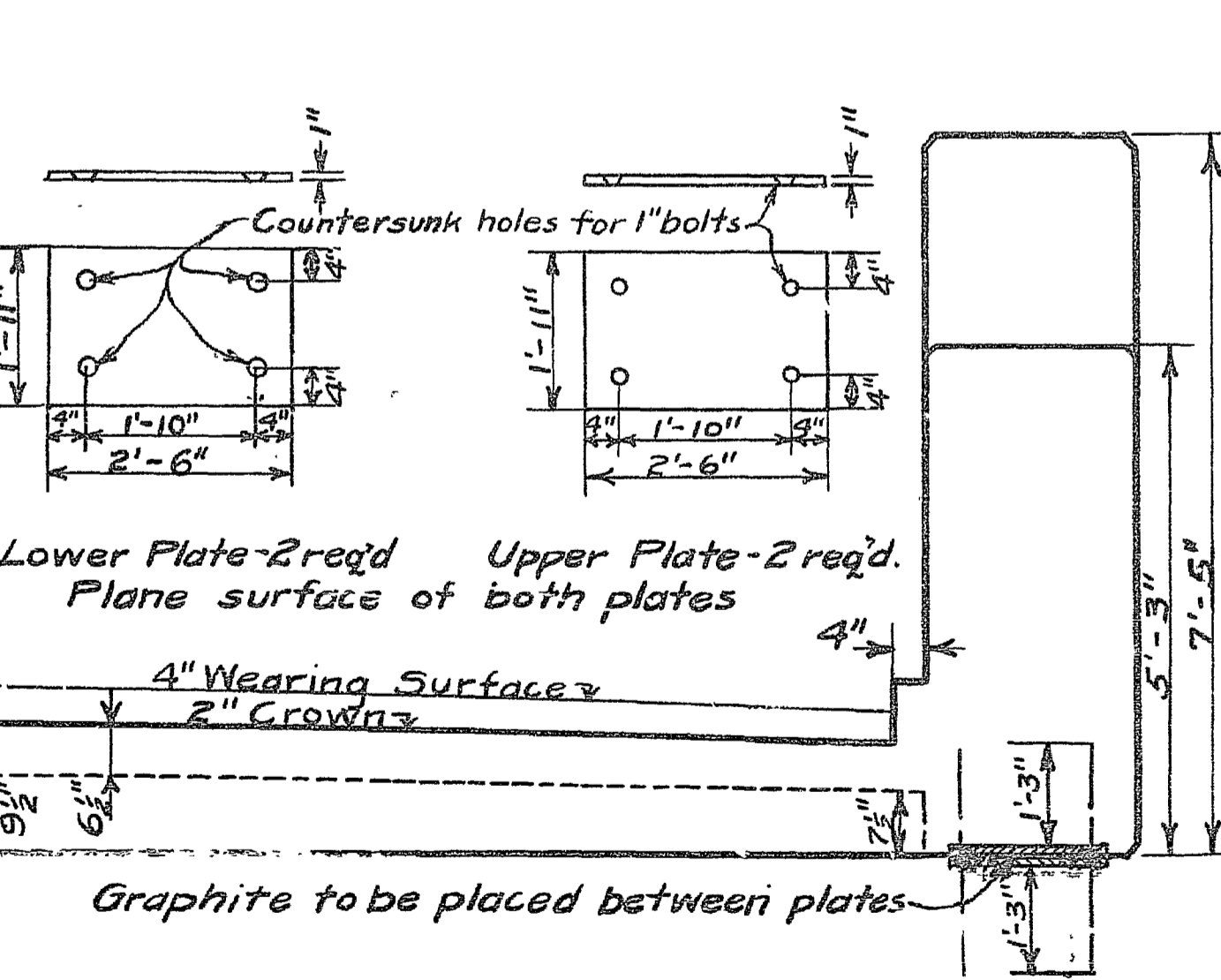
Note:- Four layers of tarred paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from abutment & wings; and girders from wings on other abutment.
Expansion plates are to be placed as shown at the free end.



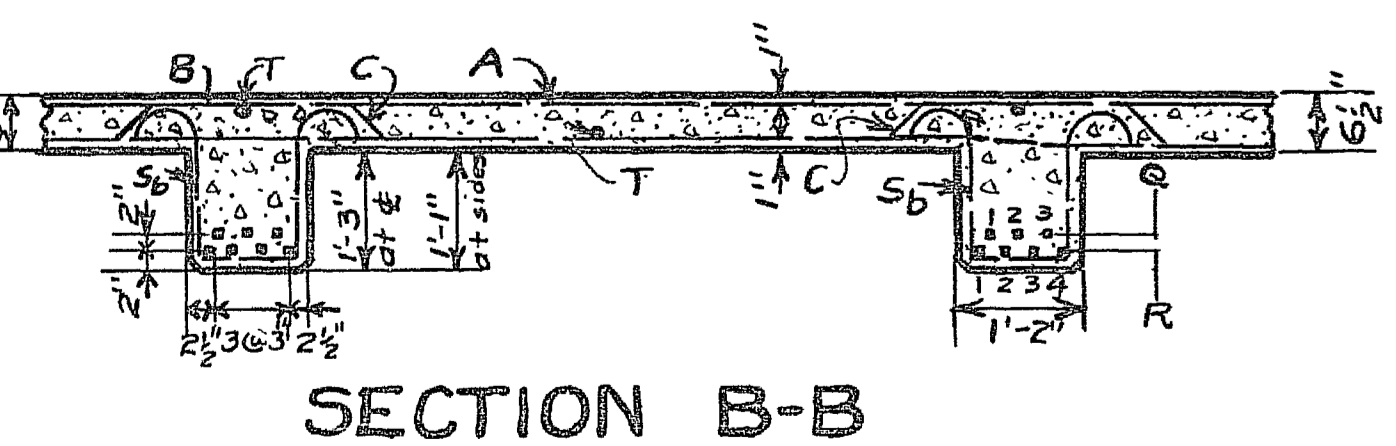
SIDE ELEVATION SHOWING GIRDER REINFORCEMENT



HALF SECTION A-A



HALF END VIEW

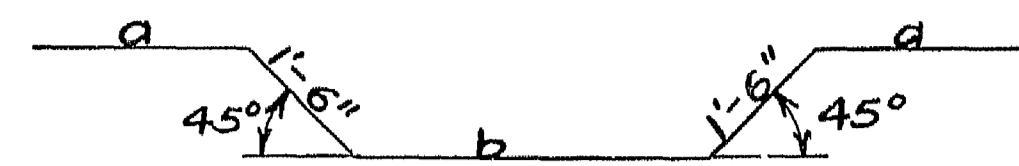


SECTION B-B

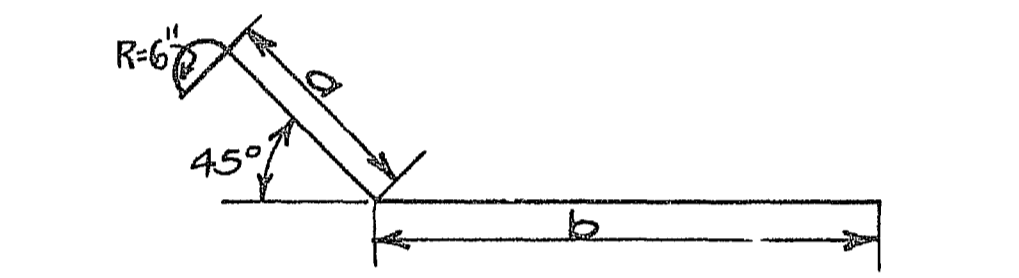
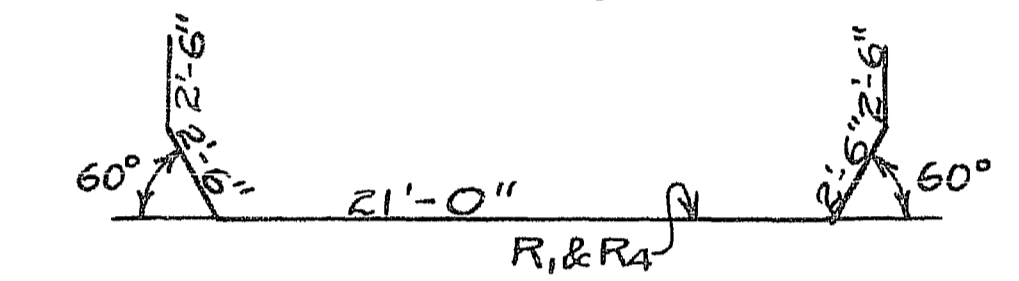
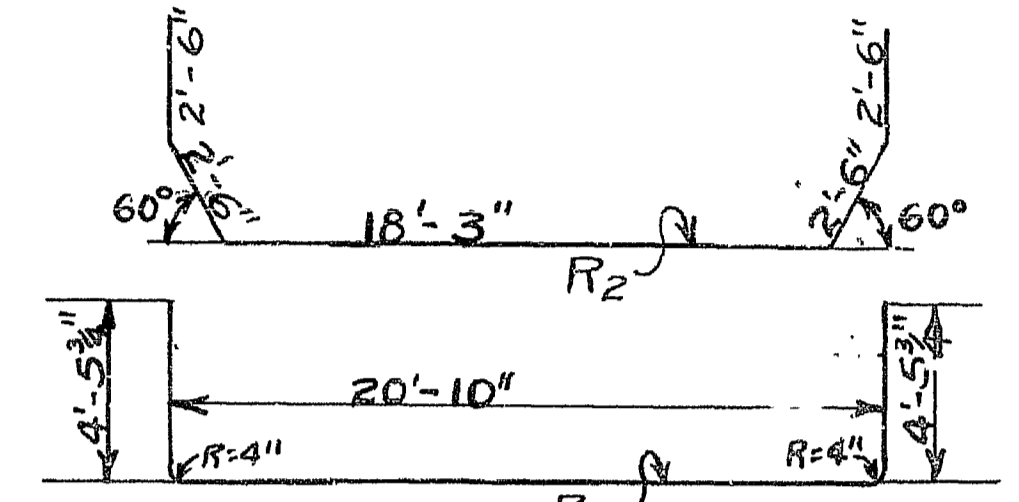
Estimated Quantities
1:2:4 Concrete:- 87.4 Cuyds
Reinforcing Steel-17320 Lbs.
Structural Steel- 845 Lbs.

Recommended for Approval
Date:- 12-24-21. *J.P. Roque*
Acting Chief Engineer of Bridges.

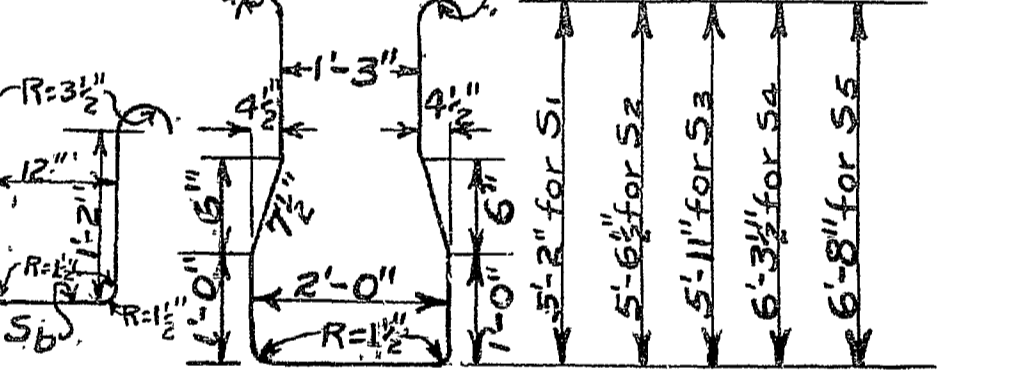
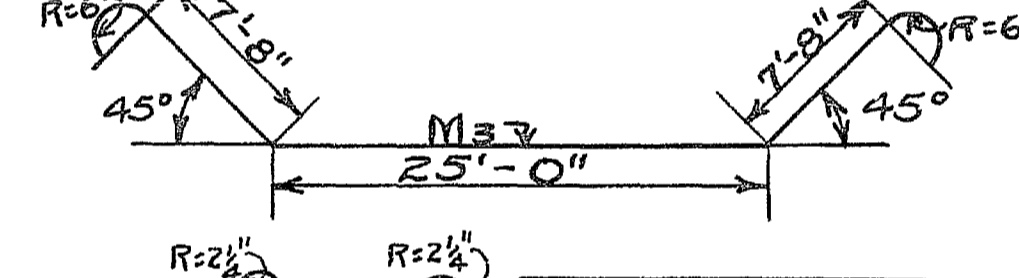
Approved
Date:- 12/30/21 *Leam C. Herriott*
Director of Highways and Public Works.



Mark	a	b
Q ₁	4'-6"	12'-0"
Q ₂	3'-8"	14'-6"
Q ₃	2'-0"	17'-0"



Mark	a	b
M ₄	6'-8"	13'-0"
M ₅	7'-5"	23'-0"
M ₆	7'-2"	10'-6"
N ₃ & N ₅	6'-8"	24'-6"
N ₄ & N ₆	5'-8"	24'-0"



MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars				
B	1/2" φ	46	29'-6"	1153#
A ₁	"	21	19'-0"	339
A ₂	"	21	39'-3"	701
C ₁	"	22	23'-3"	435
C ₂	"	22	38'-0"	711
T	1/2" φ	21	23'-6"	328

MARK	SIZE	NUMBER	LENGTH	WEIGHT
N ₆	1 1/2" φ	2	31'-3"	588
N ₇	"	2	23'-9"	546
N ₈	"	2	23'-9"	546
S ₁	1/2" φ	8	13'-3"	90
S ₂	"	8	14'-0"	95
S ₃	"	8	14'-9"	102
S ₄	"	8	15'-6"	105
S ₅	"	10	16'-3"	139

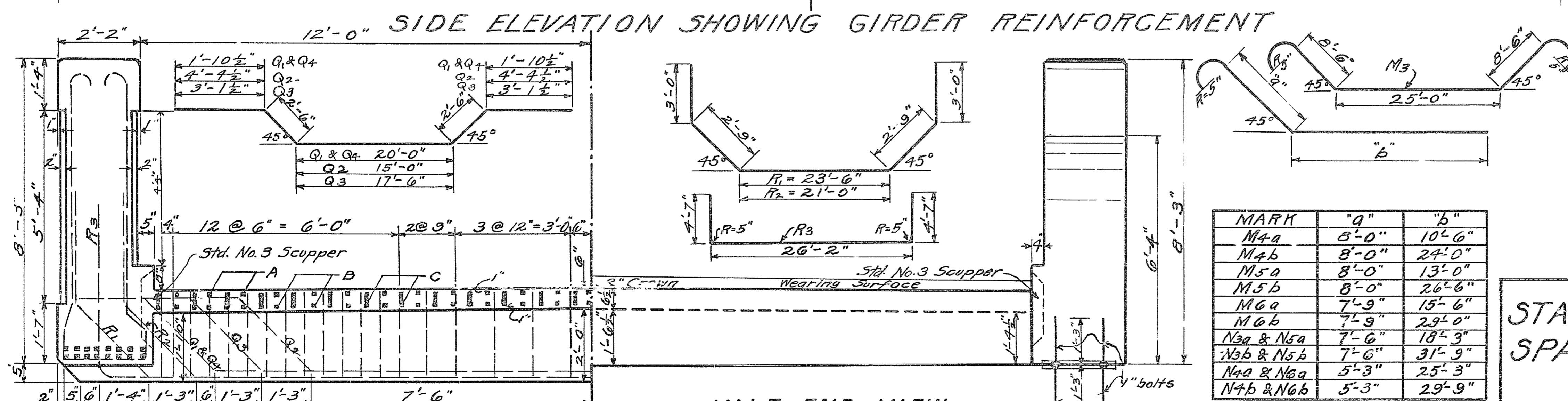
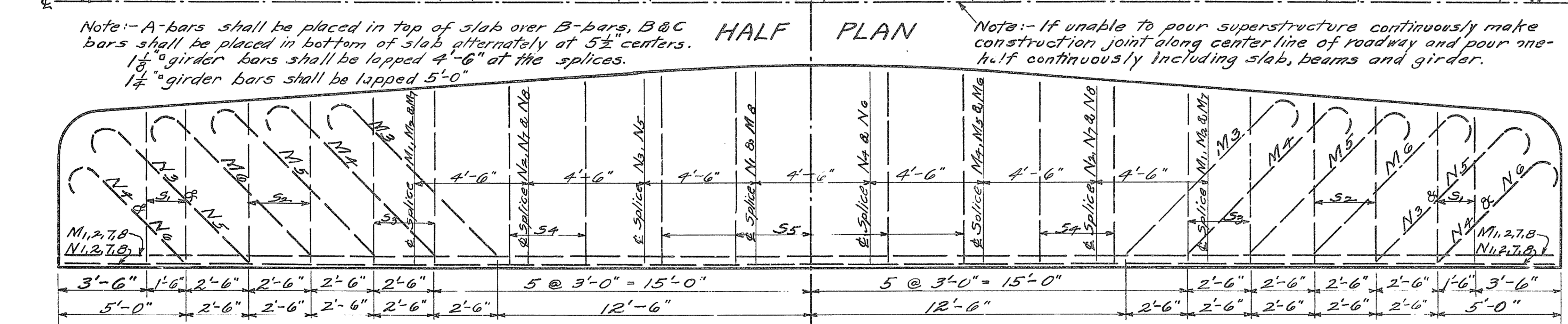
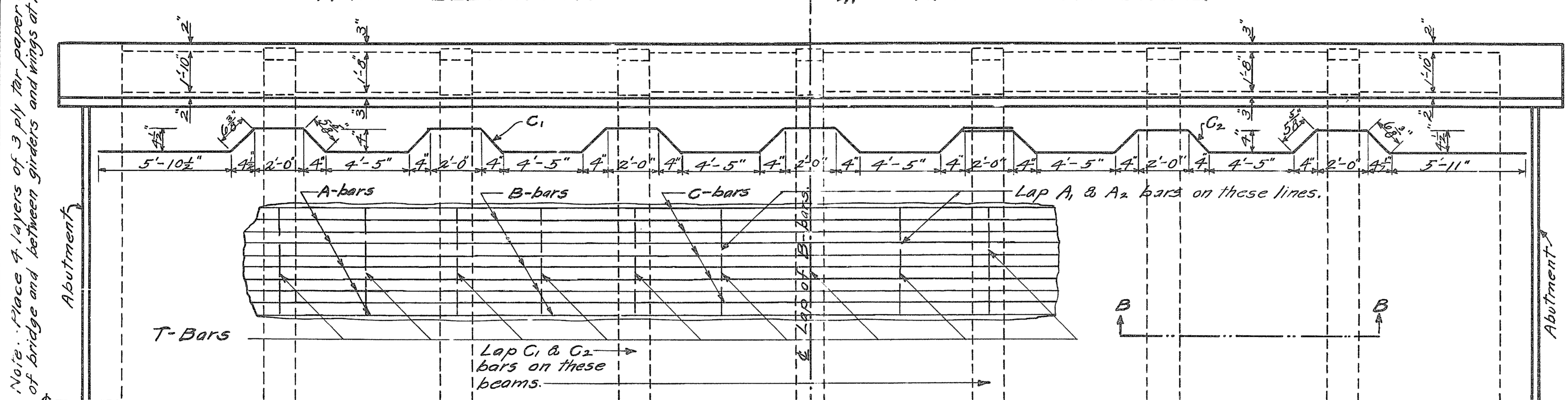
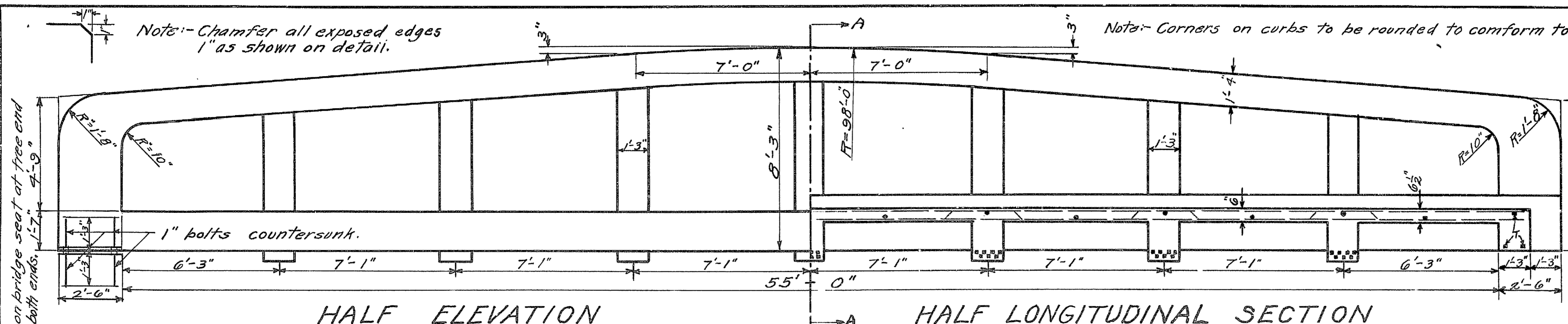
Total Weight - 17320#

MARK	SIZE	NUMBER	LENGTH	WEIGHT
Beam Bars				
Q ₁	1" φ	7	24'-0"	571
Q ₂	"	7	24'-0"	571
Q ₃	"	7	24'-0"	571
R ₁	"	7	31'-0"	738
R ₂	"	7	28'-3"	672
R ₃	"	7	29'-6"	700
R ₄	"	7	31'-0"	738
S _b	1/2" φ	203	5'-0"	679

MARK	SIZE	NUMBER	LENGTH	WEIGHT
Girder Bars				
M ₁	1 1/2" φ	2	31'-3"	546
M ₂	1" φ	2	25'-9"	431
M ₃	"	2	43'-6"	295
M ₄	"	2	29'-3"	411
M ₅	"	2	14'-0"	353
M ₇	"	2	37'-3"	383
M ₇	"	2	37'-3"	431
M ₈	1 1/2" φ	2	31'-9"	546
N ₁	"	2	42'-3"	546
N ₂	"	2	27'-9"	546
N ₃	"	2	29'-3"	563
N ₄	"	2	37'-3"	588
N ₅	"	2	32'-3"	563

STANDARD CONCRETE GIRDER
SPAN 55 FT ROADWAY 20 FT
LOADING T-15
STATE OF OHIO
DEPT. OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
NOVEMBER 1921 BUREAU OF BRIDGES

MICROFILMED
 REC. 071979
 REPRODUCTION



MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars				
A ₁	1/2" φ	25	26'-0"	552
A ₂	"	25	33'-0"	700
B	"	50	29'-6"	1256
C ₁	"	26	37'-10"	835
C ₂	"	26	23'-2"	511
T	1/2" φ	21	26'-6"	372
Beam Bars				
Q ₁	1 1/8" φ	7	28'-9"	266
Q ₂	"	7	28'-9"	266
Q ₃	"	7	28'-9"	266
Q ₄	"	7	28'-9"	266
R ₁	"	7	35'-0"	1055
R ₂	"	7	32'-6"	980
R ₃	"	7	35'-0"	1055
S _b	1/2" φ	266	6'-4"	1124
Girder Bars				
M _{1a}	1 1/8" φ	2	16'-3"	140
M _{1b}	"	2	36'-0"	310
M _{1c}	"	2	16'-3"	140
M _{2a}	"	2	16'-3"	140
M _{2b}	"	2	36'-0"	310
M _{2c}	"	2	16'-3"	140
M _{3a}	"	2	7'-6"	383
M _{3b}	"	2	19'-9"	170
M _{3c}	"	2	33'-3"	286
M _{4a}	"	2	22'-3"	192
M _{4b}	"	2	35'-9"	308
M _{4c}	"	2	24'-6"	211
M _{5a}	"	2	38'-0"	327
M _{5b}	"	2	16'-3"	140
M _{5c}	"	2	36'-0"	310
M _{6a}	"	2	16'-3"	140
M _{6b}	"	2	29'-9"	256
M _{6c}	"	2	37'-9"	295
N _{1a}	1 1/8" φ	2	30'-0"	319
N _{1b}	"	2	34'-6"	367
N _{2a}	"	2	21'-0"	223
N _{2b}	"	2	27'-6"	292
N _{2c}	"	2	21'-0"	223
N _{3a}	"	2	27'-0"	286
N _{3b}	"	2	40'-6"	430
N _{3c}	"	2	31'-5"	337
N _{4a}	"	2	26'-3"	385
N _{4b}	"	2	27'-0"	286
N _{5a}	"	2	40'-6"	430
N _{5b}	"	2	31'-9"	337
N _{6a}	"	2	36'-3"	385
N _{7a}	"	2	21'-0"	223
N _{7b}	"	2	27'-6"	292
N _{7c}	"	2	21'-0"	223
N _{8a}	"	2	21'-0"	223
N _{8b}	"	2	27'-6"	292
N _{8c}	"	2	21'-0"	223
S ₁	1/2" φ	8	15'-9"	108
S ₂	"	8	16'-6"	113
S ₃	"	8	17'-3"	118
S ₄	"	8	18'-0"	123
S ₅	"	10	17'-9"	160
Total Weight = 22500				

Note: - Wearing surface shall be full width between curbs and entire length of slab.
 Bridge is designed for maximum weight of wearing surface on slab to be 65 lbs. per sq. ft.

1-2-4 Concrete 111.0 Cu Yds.
 Reinforcing steel 22500 Lbs.
 Structural steel 880 Lbs.
 Wearing surface 149.1 Sq Yds.

MARK	"a"	"b"
M _{4a}	8'-0"	10'-6"
M _{4b}	8'-0"	24'-0"
M _{5a}	8'-0"	13'-0"
M _{5b}	8'-0"	26'-6"
M _{6a}	7'-9"	15'-6"
M _{6b}	7'-9"	29'-0"
N _{3a} & N _{5a}	7'-6"	18'-3"
N _{3b} & N _{5b}	7'-6"	31'-9"
N _{4a} & N _{6a}	5'-3"	25'-3"
N _{4b} & N _{6b}	5'-3"	29'-9"

STANDARD CONCRETE GIRDER
 SPAN 55 FT. ROADWAY 24 FT.
 LOADING T-15
 STATE OF OHIO
 DEPT OF HIGHWAYS AND PUBLIC WORKS
 DIVISION OF HIGHWAYS
 FEBRUARY 1924 BUREAU OF BRIDGES

G 55-24-1 Designed by W.F.
 Drawn & Trsd G.R.S.
 Approved By A.W. Ziesiger. Rev. & Ckd by W.H.E.

FED. RD. DIST. NO.	STATE	FED. AID DISTRICT	FISCAL YEAR
10	OHIO		

COUNTY I.C.H. SEC.

NOTE
All exposed edges not otherwise shown shall be chamfered thus

SKETCH For details of floor system for skewed girder bridge see Drawings Nos. and

CAMBER This bridge shall be provided with a permanent camber under full dead load amounting to approximately 1" at the center, and following a true parabolic curve

APPROACH SLABS Approach slabs shall be provided for at both ends of bridge, in case of paved approaches for details of approach slabs see Dr. No. AS-2430 2 @ 3" Prem Exp. Jt. Fillers between ends of Bridge Slab and Approach Slab at Expansion End only Payment incl with App. Sls.

NOTE Wearing surface of, and adjacent to scupper, shall be depressed a maximum of 1/4"

Two layers of Premade Expansion Joint Filler

NOTE Top of abutment of expansion end to be finished perfectly smooth Place two layers of 1/2" pre-molded expansion joint filler between abutment and superstructure over area unoccupied by bearing plates, as shown

BAR LEGEND

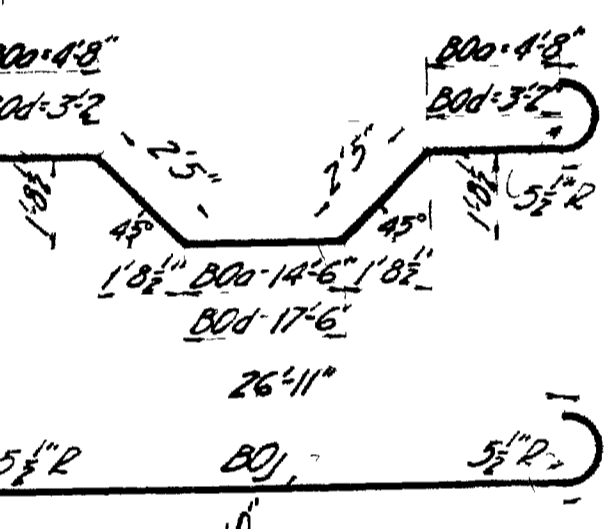
Mark	Sizes	Illustration of marking system
600	1" 8	
630	1" 10	
55c	1" 8	
1" 10	8	
1" 10	9	
1" 10	0	

STEEL LIST

Mark	Size	Shape	No.	Length	Wt.
51a	1" 8		28	26' 0"	231
52a	1" 8		52	27' 6"	210
52b	1" 8		26	16' 3"	224
55a	1" 8	Bent	50	31' 6"	112
55b	1" 8	Bent	26	57' 0"	122
60a	1" 10	Bent	7	31' 6"	112
60b	1" 10		7	35' 9"	122
60c	1" 10		7	35' 9"	122
60d	1" 10		7	31' 6"	112
60e	1" 10		7	37' 0"	122
60f	1" 10		7	35' 9"	122
60g	1" 10		7	35' 9"	122
60h	1" 10		7	37' 0"	122
60i	1" 10		7	37' 0"	122
60j	1" 10		7	37' 0"	122
60k	1" 10		7	37' 0"	122
60l	1" 10		7	37' 0"	122
60m	1" 10		7	37' 0"	122
60n	1" 10		7	37' 0"	122
60o	1" 10		7	37' 0"	122
60p	1" 10		7	37' 0"	122
60q	1" 10		7	37' 0"	122
60r	1" 10		7	37' 0"	122
60s	1" 10		7	37' 0"	122
60t	1" 10		7	37' 0"	122
60u	1" 10		7	37' 0"	122
60v	1" 10		7	37' 0"	122
60w	1" 10		7	37' 0"	122
60x	1" 10		7	37' 0"	122
60y	1" 10		7	37' 0"	122
60z	1" 10		7	37' 0"	122
61a	1" 10	Bent	2	57' 3"	122
61b	1" 10		2	44' 3"	122
61c	1" 10		2	51' 3"	122
61d	1" 10		2	57' 3"	122
61e	1" 10		2	57' 3"	122
61f	1" 10		2	60' 0"	122
61g	1" 10		2	60' 0"	122
61h	1" 10		2	60' 0"	122
61i	1" 10		2	60' 0"	122
61j	1" 10		2	60' 0"	122
61k	1" 10		2	60' 0"	122
61l	1" 10		2	60' 0"	122
61m	1" 10		2	60' 0"	122
61n	1" 10		2	60' 0"	122
61o	1" 10		2	60' 0"	122
61p	1" 10		2	60' 0"	122
61q	1" 10		2	60' 0"	122
61r	1" 10		2	60' 0"	122
61s	1" 10		2	60' 0"	122
61t	1" 10		2	60' 0"	122
61u	1" 10		2	60' 0"	122
61v	1" 10		2	60' 0"	122
61w	1" 10		2	60' 0"	122
61x	1" 10		2	60' 0"	122
61y	1" 10		2	60' 0"	122
61z	1" 10		2	60' 0"	122
62a	1" 10	Bent	4	13' 0"	224
62b	1" 10		4	13' 0"	224
62c	1" 10		4	13' 0"	224
62d	1" 10		4	13' 0"	224
62e	1" 10		4	13' 0"	224
62f	1" 10		4	13' 0"	224
62g	1" 10		4	13' 0"	224
62h	1" 10		4	13' 0"	224
62i	1" 10		4	13' 0"	224
62j	1" 10		4	13' 0"	224
62k	1" 10		4	13' 0"	224
62l	1" 10		4	13' 0"	224
62m	1" 10		4	13' 0"	224
62n	1" 10		4	13' 0"	224
62o	1" 10		4	13' 0"	224
62p	1" 10		4	13' 0"	224
62q	1" 10		4	13' 0"	224
62r	1" 10		4	13' 0"	224
62s	1" 10		4	13' 0"	224
62t	1" 10		4	13' 0"	224
62u	1" 10		4	13' 0"	224
62v	1" 10		4	13' 0"	224
62w	1" 10		4	13' 0"	224
62x	1" 10		4	13' 0"	224
62y	1" 10		4	13' 0"	224
62z	1" 10		4	13' 0"	224
63a	1" 10	Bent	4	13' 0"	224
63b	1" 10		4	13' 0"	224
63c	1" 10		4	13' 0"	224
63d	1" 10		4	13' 0"	224
63e	1" 10		4	13' 0"	224
63f	1" 10		4	13' 0"	224
63g	1" 10		4	13' 0"	224
63h	1" 10		4	13' 0"	224
63i	1" 10		4	13' 0"	224
63j	1" 10		4	13' 0"	224
63k	1" 10		4	13' 0"	224
63l	1" 10		4	13' 0"	224
63m	1" 10		4	13' 0"	224
63n	1" 10		4	13' 0"	224
63o	1" 10		4	13' 0"	224
63p	1" 10		4	13' 0"	224
63q	1" 10		4	13' 0"	224
63r	1" 10		4	13' 0"	224
63s	1" 10		4	13' 0"	224
63t	1" 10		4	13' 0"	224
63u	1" 10		4	13' 0"	224
63v	1" 10		4	13' 0"	224
63w	1" 10		4	13' 0"	224
63x	1" 10		4	13' 0"	224
63y	1" 10		4	13' 0"	224
63z	1" 10		4	13' 0"	224
64a	1" 10	Bent	32	15' 3"	512
64b	1" 10		16	16' 9"	281
64c	1" 10		24	17' 3"	445
TOTAL				31,020'	

Mark 1" 8 1" 10 2" 0

600	20' 6"	2' 10"	4' 1"	3' 6"
60c	20' 6"	2' 10"	4' 1"	3' 6"
60e	23' 4"	1' 11"	1' 4"	5' 6"
60f	25' 5"	1' 11"	1' 4"	5' 6"
60g	25' 5"	1' 11"	1' 4"	5' 6"
60h	23' 4"	1' 11"	1' 4"	5' 6"



Mark 2" 0 2" 4

69a	39' 0"	7' 4"
69b	32' 6"	7' 4"
69c	26' 0"	7' 4"
69d	32' 6"	7' 4"
69e	39' 0"	7' 4"

BENDS All bends not otherwise shown shall have a minimum radius of 4"

BENDING DIAGRAM NOTE All steel dimensions are measured along center-line of bar

SURFACE FINISH The tops, inside faces, and ends of girders shall be given a special rubbed surface finish, and the complete outside faces of girders and the tops and sides of curbs, ordinary surface finish as per construction specifications. The payment for this is included in the price per cubic yard of concrete.

SPECIFICATIONS Construction specifications in force at date of contract shall govern

Concrete Mix 1:5

Scale 1/2" = 1'-0"

ESTIMATED QUANTITIES

Concrete (1 5 Mix)	1620 Cu Yds
Reinforcing Steel	31,020 Lbs
Wearing Surface	146.3 Sq Yds
1/2" Prem Exp Jt Filler	1370 Sq Ft
1/2" Phosphor Bronze Plates	118 Lbs
Cast Iron Scuppers	4 Pcs

STANDARD CONCRETE THROUGH GIRDER

SPAN 35 FT

H-15 LOADING

STATE OF OHIO

DIVISION OF HIGHWAYS

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

NOVEMBER, 1922

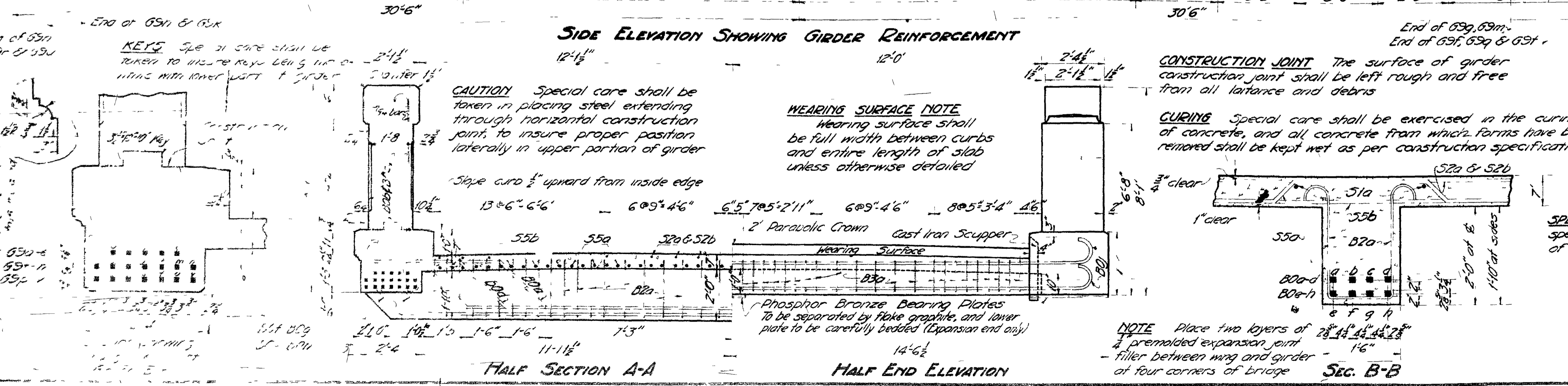
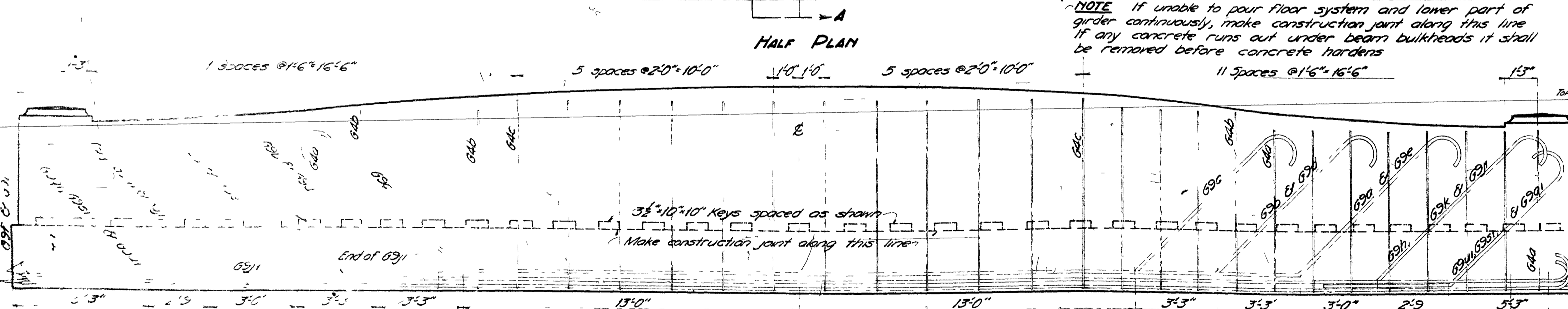
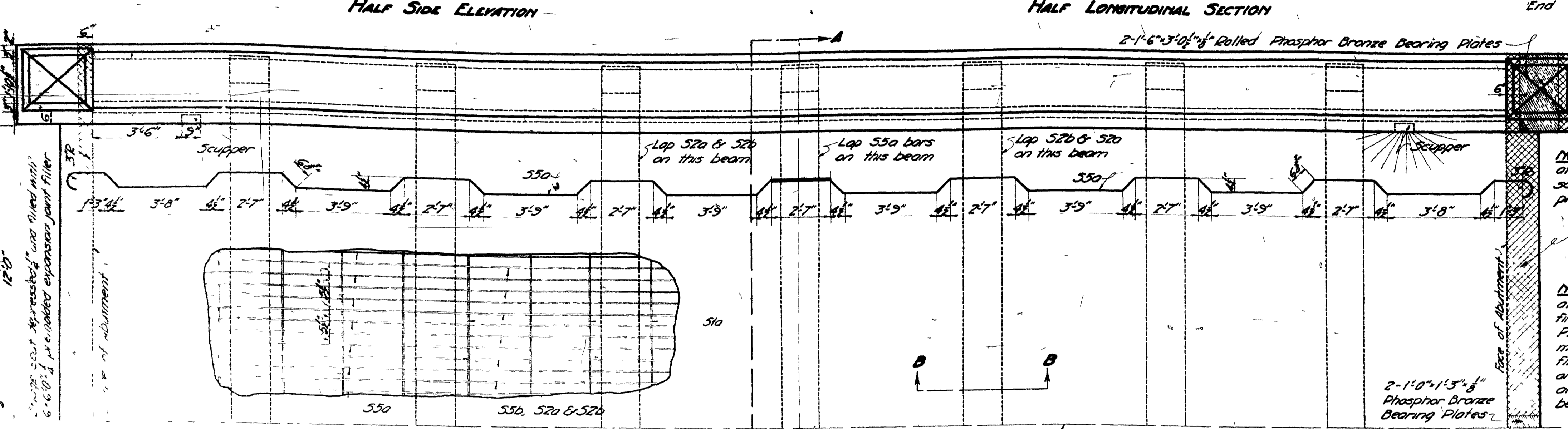
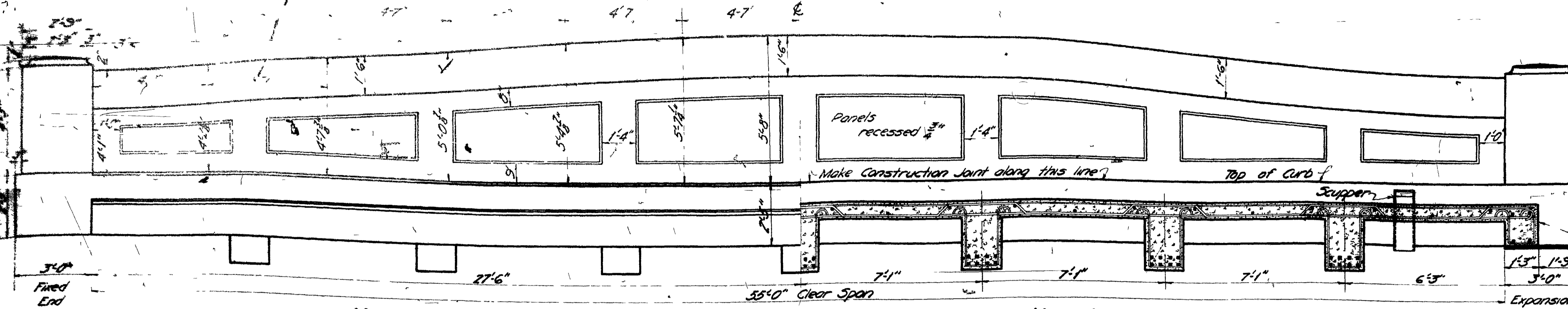
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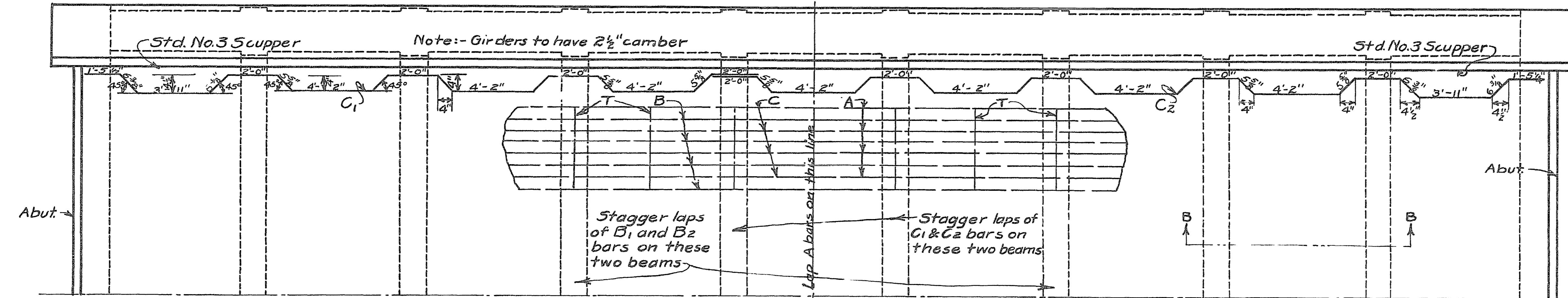
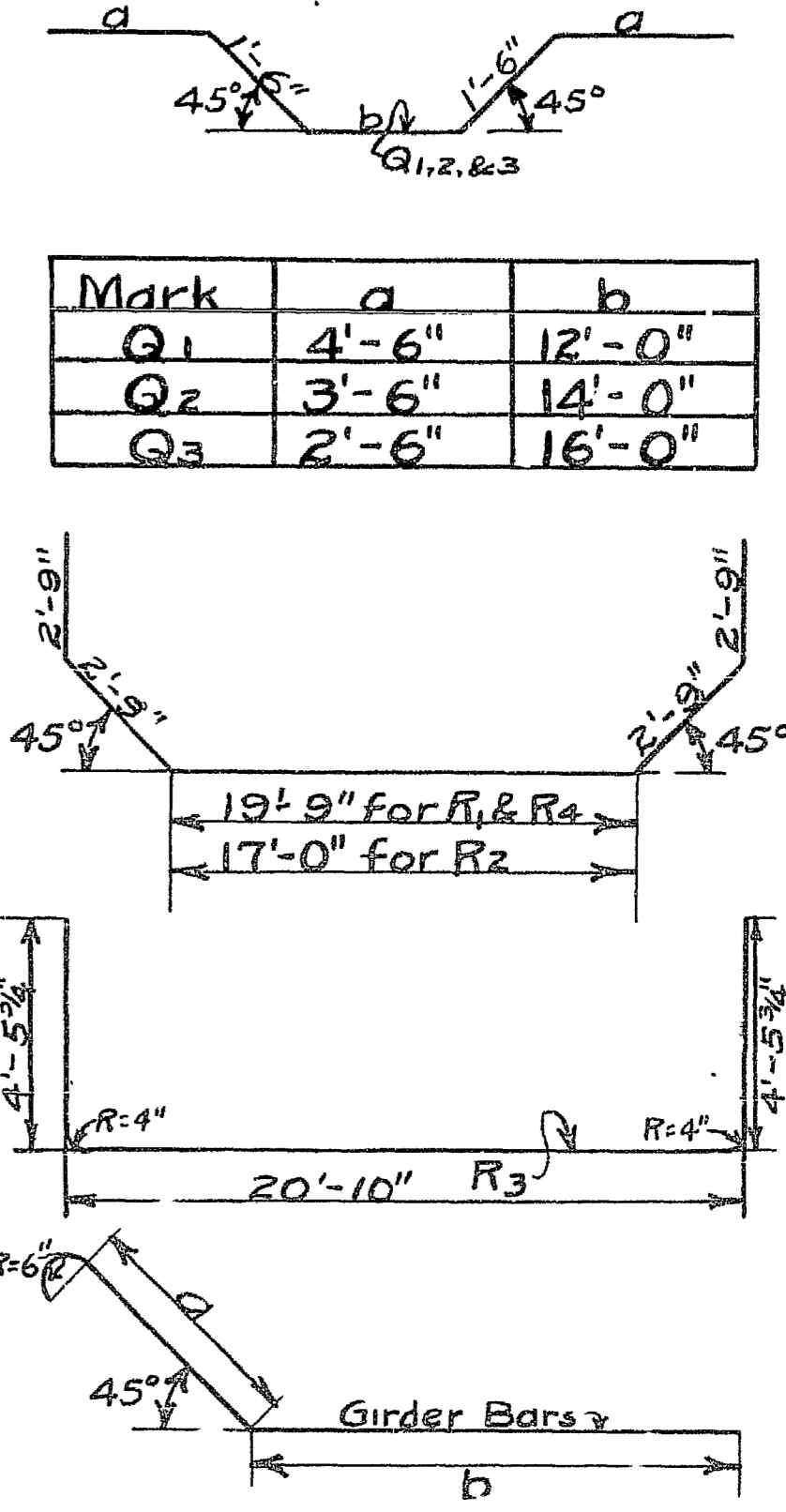
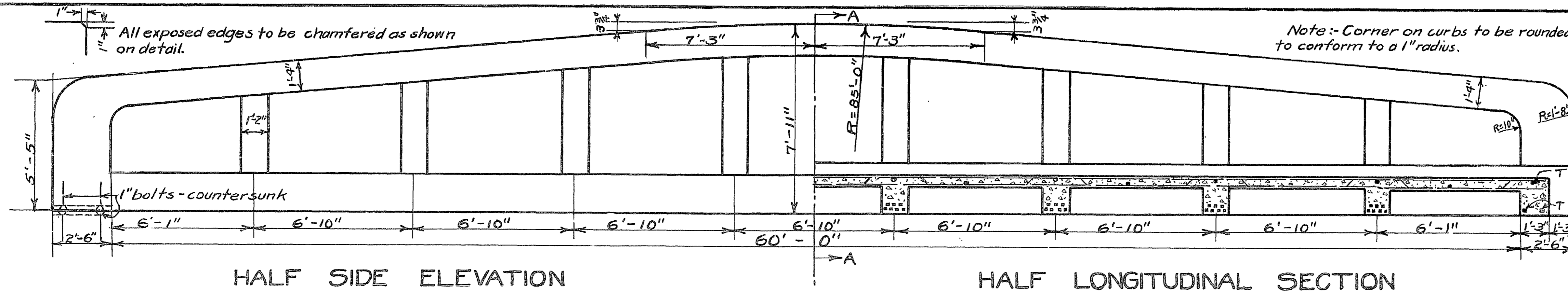
Date: 11/17/22

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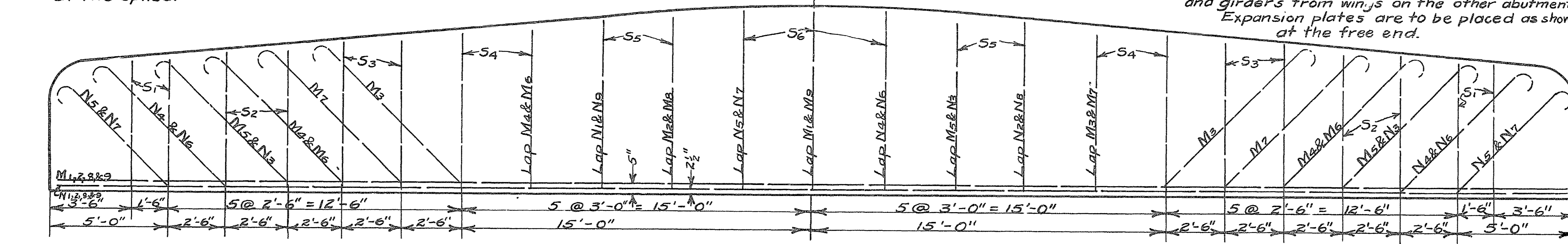
Checked by: [Signature]

Scale: 1/2" = 1'-0"



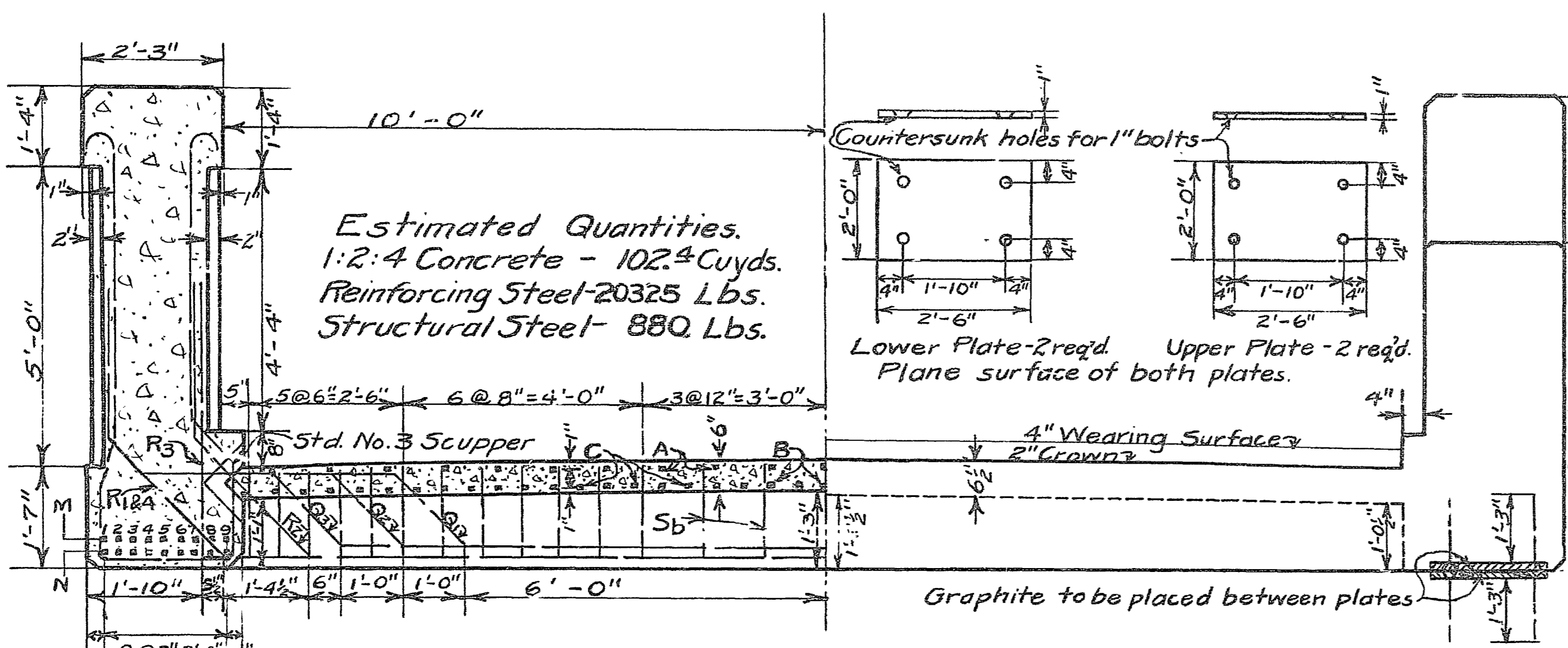


Note:- A bars are to be placed in top of slab over B bars. B and C bars are to be placed in bottom of slab and are to alternate at 5' ctrs. All girder bars are to be lapped 4'-0" at the splice.

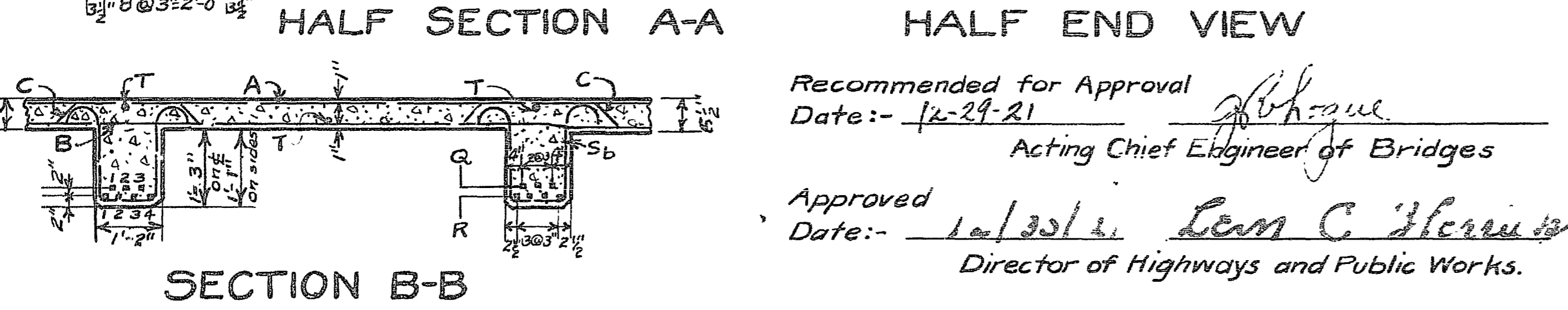


Mark	a	b
M3	8'-0"	28'-11"
M4 & M6	7'-6"	33'-11"
M5	7'-0"	38'-5"
M7	7'-9"	31'-5"
N3	7'-3"	30'-2"
N4 & N6	7'-0"	29'-11"
N5 & N7	6'-0"	32'-5"

SIDE ELEVATION SHOWING GIRDER REINFORCEMENT



MARK	SIZE	NUMBER	LENGTH	WEIGHT	MARK	SIZE	NUMBER	LENGTH	WEIGHT
Slab Bars									
A	1/2" φ	42	32'-0"	1142 #	N4	1 1/8"	2	38'-6"	611
B1	"	21	21'-9"	388	N5	"	2	33'-0"	637
B2	"	21	4'-3"	754	N6	"	2	38'-6"	611
C1	"	22	29'-9"	556	N7	"	2	24'-0"	637
C2	"	22	36'-10"	689	N8	"	2	24'-0"	590
T	1/2" φ	23	23'-6"	361	N9	"	2	43'-5"	590
Beam Bars									
Q1	1"	8	24'-0"	653	S2	"	8	14'-3"	97
Q2	"	8	24'-0"	653	S3	"	8	14'-9"	100
Q3	"	8	24'-0"	653	S4	"	8	15'-9"	107
R1	"	8	30'-9"	836	S5	"	8	16'-9"	114
R2	"	8	28'-0"	762	S6	"	6	17'-9"	120
R3	"	8	29'-6"	802	Total Weight - 20325 #				
R4	"	8	30'-9"	836					
Sb	1/2" φ	232	5'-0"	775					
Girder Bars									
M1	1 1/8"	2	34'-3"	590					
M2	"	2	40'-3"	590					
M3	1"	2	38'-6"	360					
M4	"	2	43'-0"	421					
M5	"	2	37'-3"	452					
M6	"	2	43'-0"	421					
M7	"	2	40'-9"	391					
M8	1 1/8"	2	40'-3"	590					
M9	"	2	34'-3"	590					
N1	"	2	25'-3"	590					
N2	"	2	43'-3"	590					
N3	"	2	39'-3"	572					

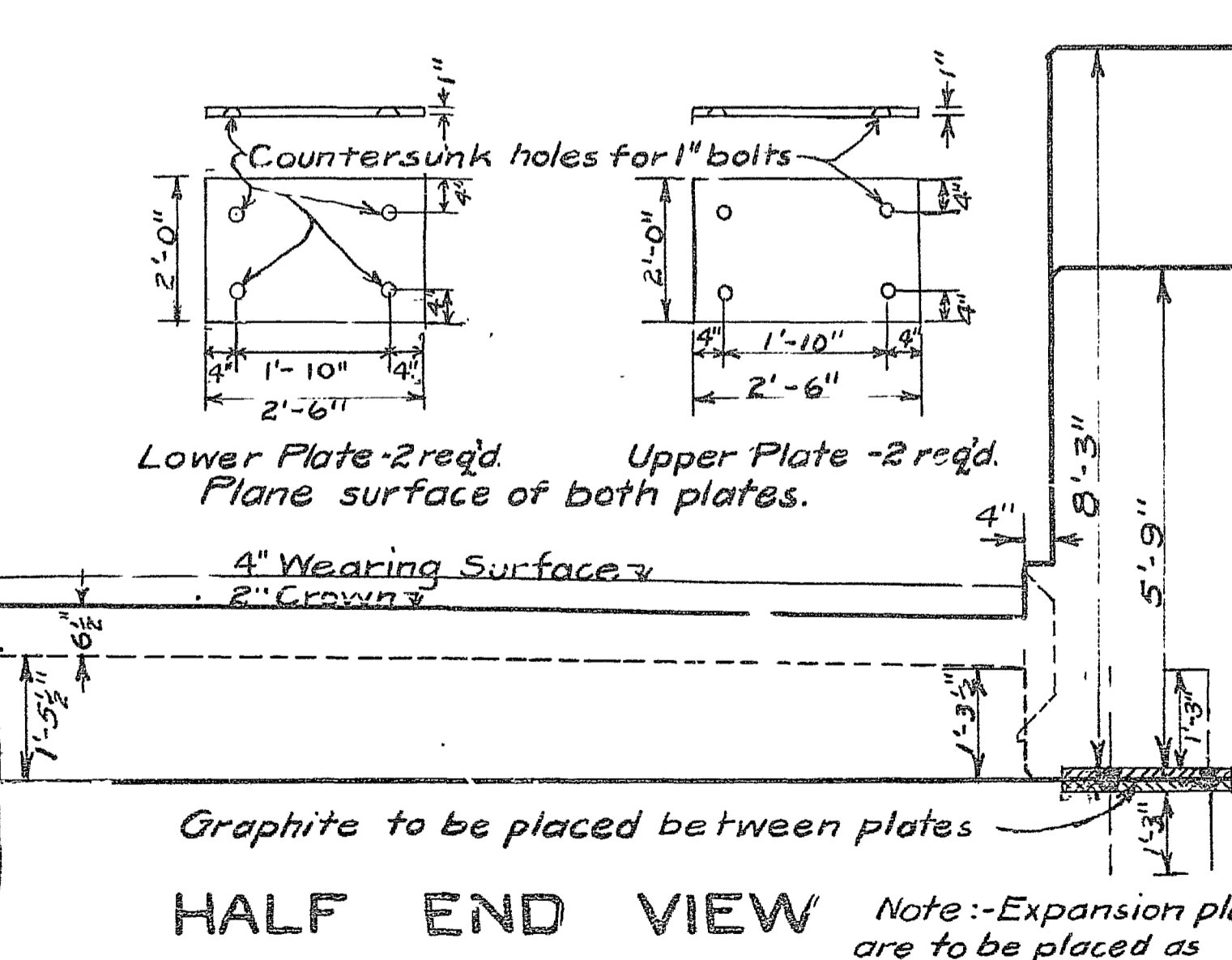
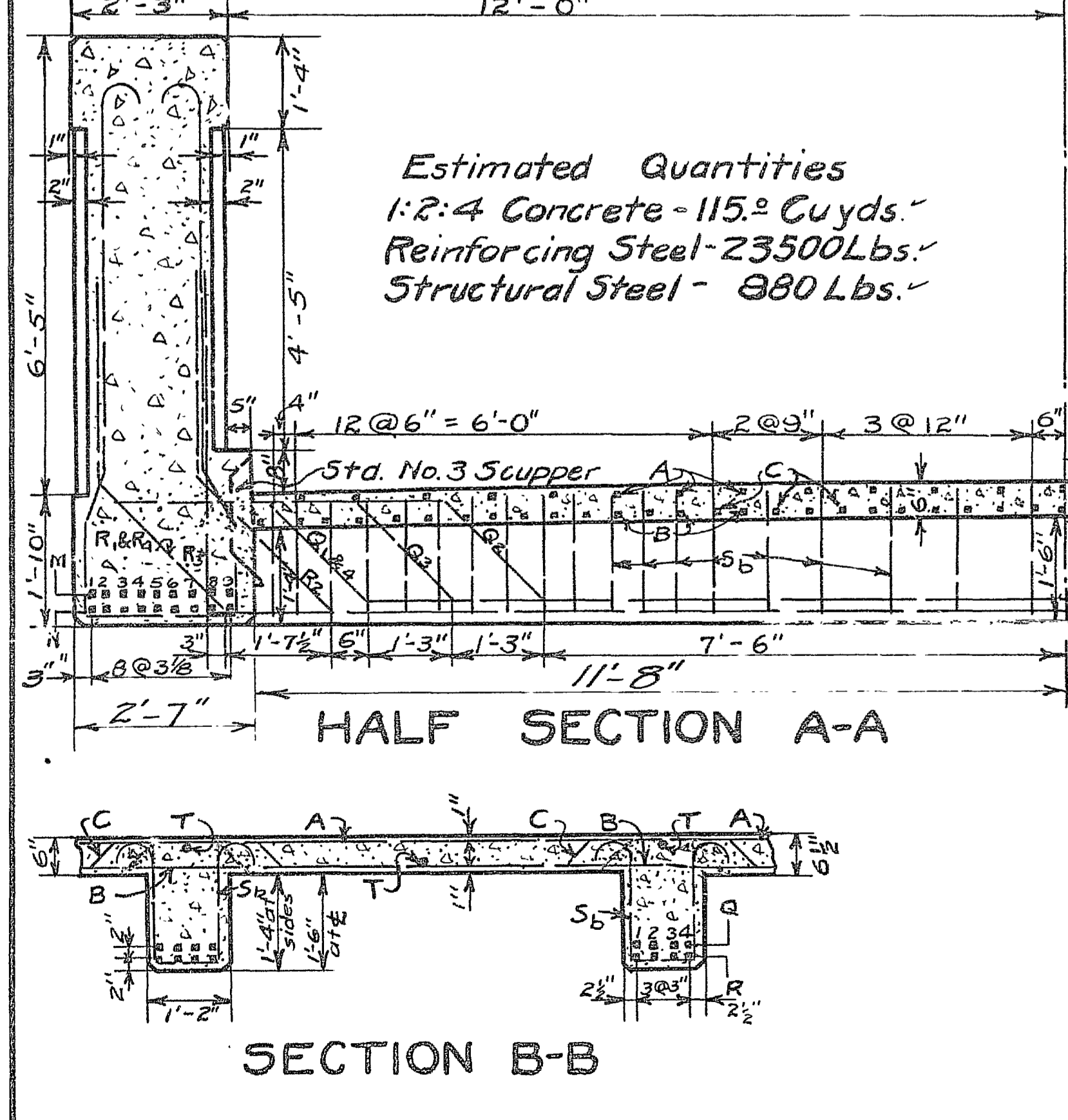
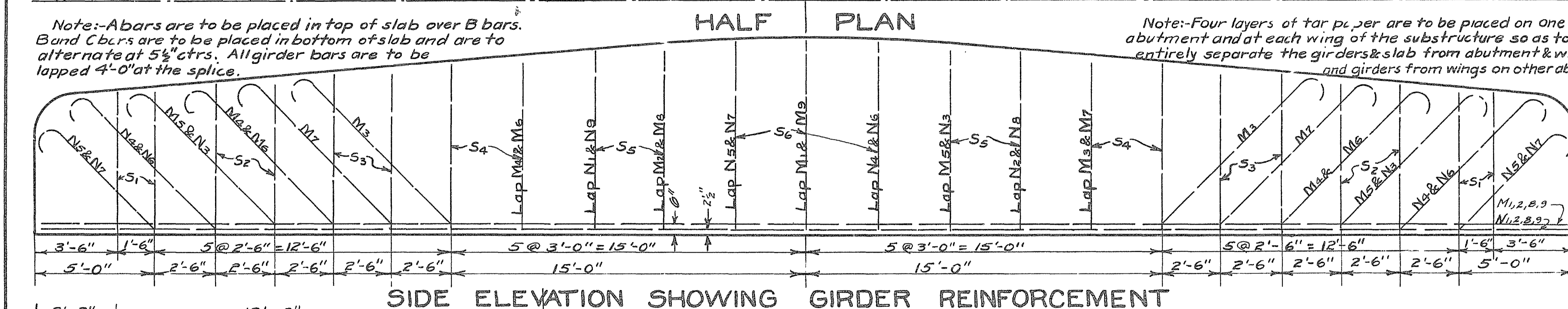
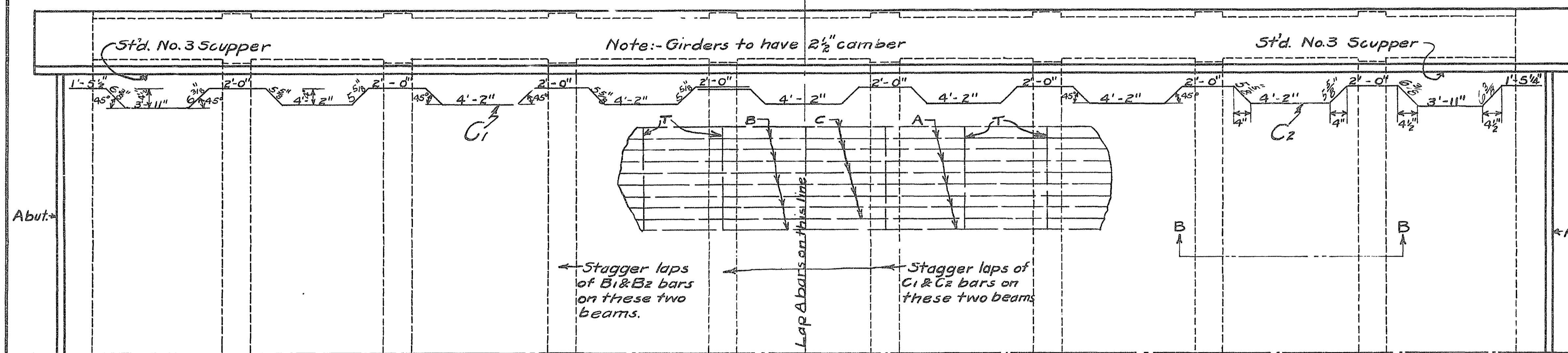
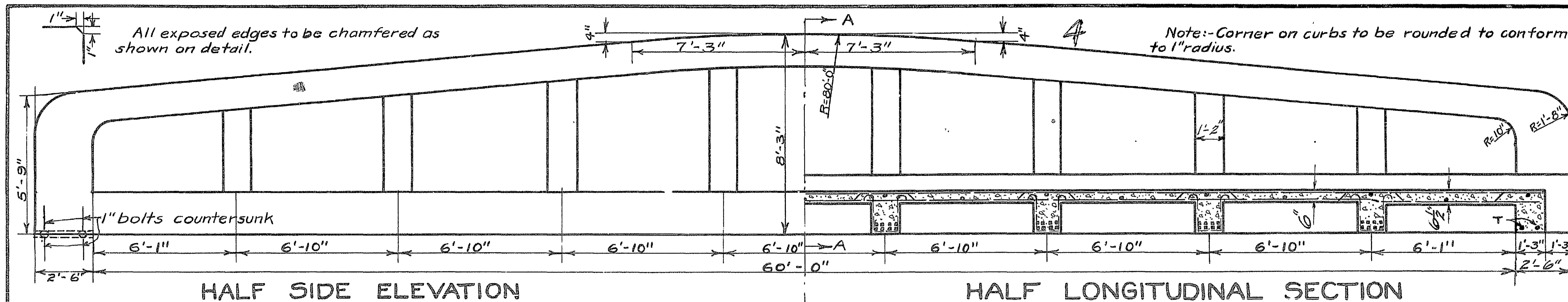


Recommended for Approval
 Date:- 12-24-21
 Acting Chief Engineer of Bridges

Approved
 Date:- 1-1-22
 Director of Highways and Public Works.

STANDARD CONCRETE GIRDER
 SPAN 60' EI ROADWAY 20' EI
 LOADING T-15
 STATE OF OHIO
 DEPT. OF HIGHWAYS AND PUBLIC WORKS
 DIVISION OF HIGHWAYS
 NOVEMBER 1921 BUREAU OF BRIDGES

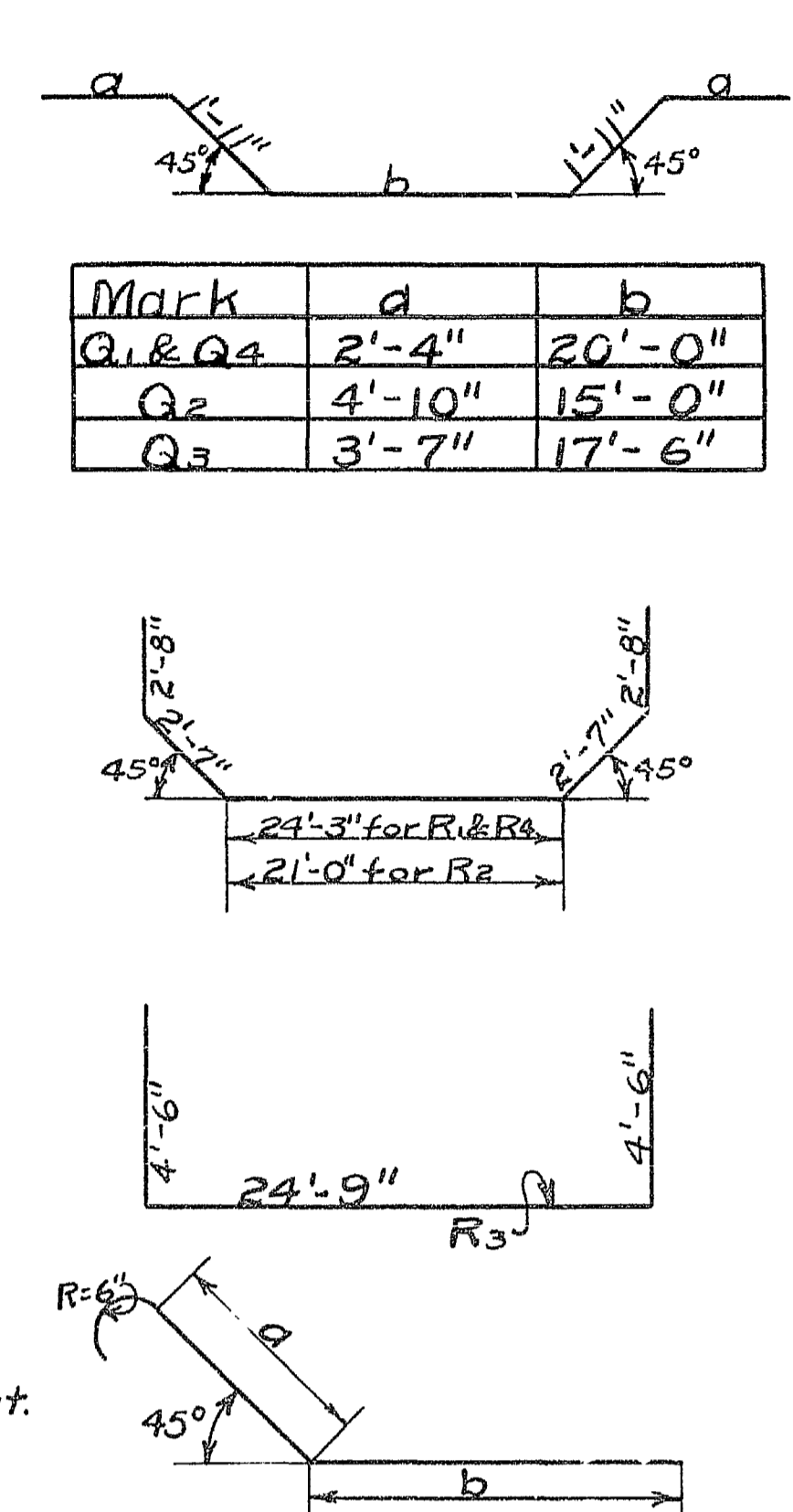
MICROFILMED
 FEB 07 1979
 PERIODICALS



Mark	Size	Number	Length	Weight
Slab Bars				
A	1/2" φ	50	32'-0"	1360
B1	"	25	21'-9"	462
B2	"	25	42'-3"	898
C1	"	26	29'-9"	657
C2	"	26	36'-10"	814
T	1/2" φ	23	27'-6"	423
Beam Bars				
Q1	1" φ	8	28'-6"	775
Q2	"	8	28'-6"	775
Q3	"	8	28'-6"	775
Q4	"	8	28'-6"	775
R1	"	8	34'-9"	945
R2	"	8	31'-6"	857
R3	"	8	33'-9"	918
R4	"	8	34'-9"	945
Sb	1/2" φ	304	5'-3"	1066
Girder Bars				
M1	1 1/8" φ	2	34'-3"	590
M2	"	2	28'-3"	590
M3	"	2	35'-9"	460
M4	"	2	43'-3"	537
M5	"	2	37'-6"	576
M6	"	2	43'-3"	538
M7	"	2	41'-0"	499
M8	"	2	28'-3"	590
M9	"	2	34'-3"	590
N1	"	2	25'-3"	590
N2	"	2	27'-8"	590
N3	"	2	39'-5"	590

Mark	Size	Number	Length	Weight
N4	1 1/8" φ	2	33'-0"	620
N5	"	2	33'-0"	628
N6	"	2	33'-0"	620
N7	"	2	33'-0"	628
N8	"	2	43'-3"	590
N9	"	2	43'-3"	590
S1	1/2" φ	8	14'-6"	93
S2	"	8	15'-6"	105
S3	"	8	16'-0"	109
S4	"	8	17'-0"	116
S5	"	8	18'-0"	122
S6	"	6	19'-0"	97
Total Weight -				23500

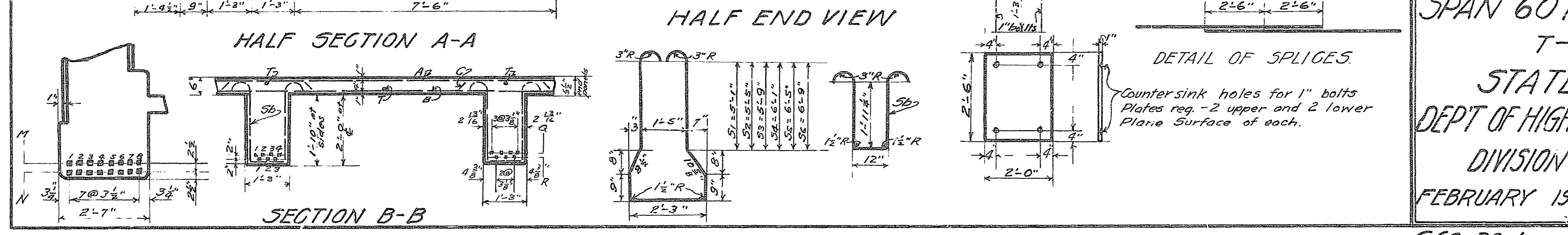
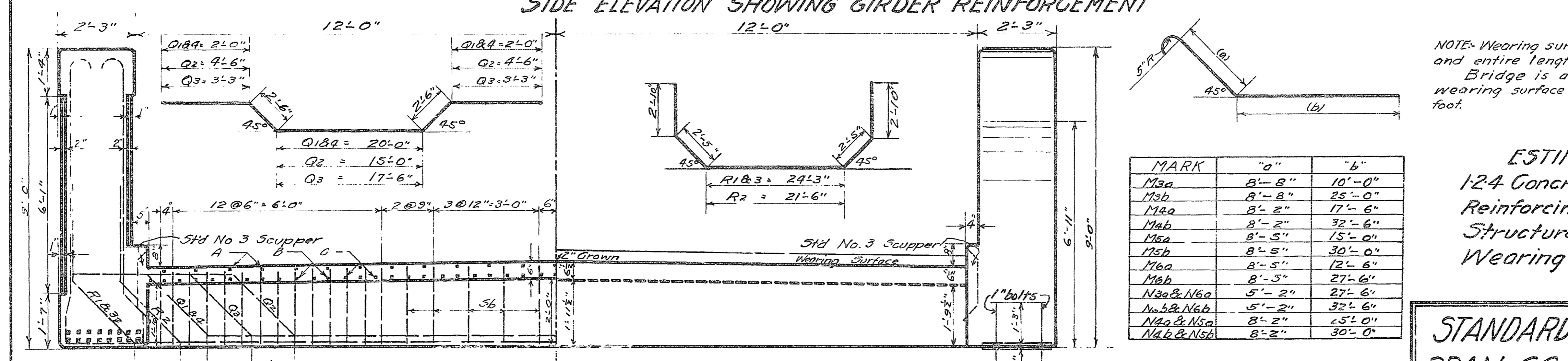
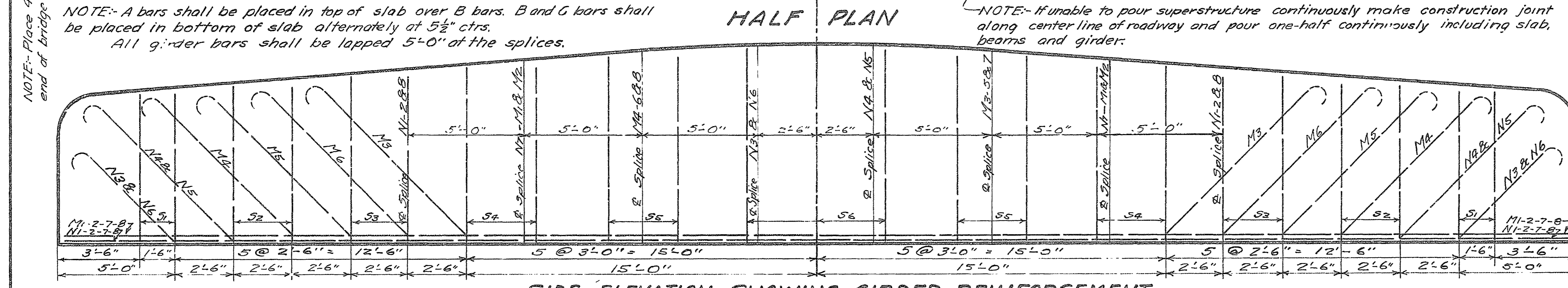
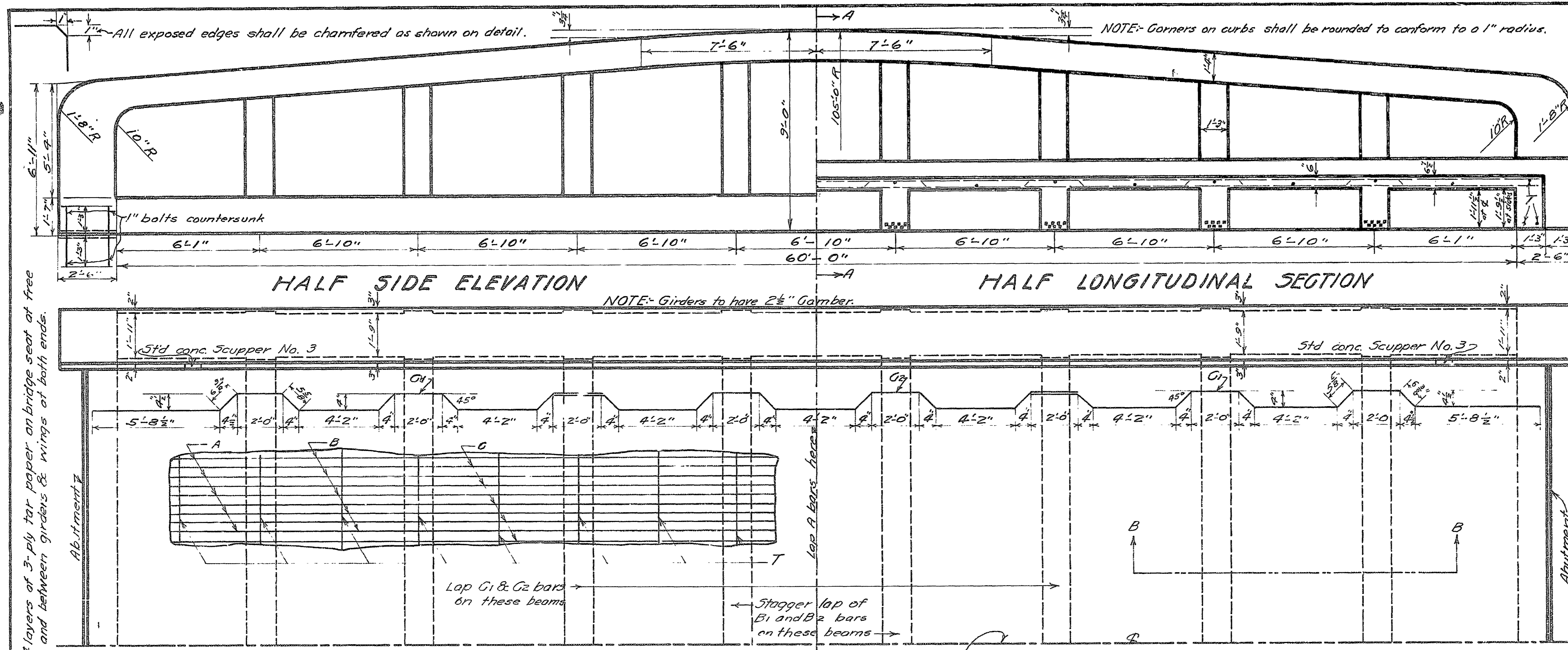
STANDARD CONCRETE GIRDER
 SPAN 60 FT ROADWAY 24 FT
 LOADING T-15
 STATE OF OHIO
 DEPT. OF HIGHWAYS AND PUBLIC WORKS
 DIVISION OF HIGHWAYS
 NOVEMBER 1921 BUREAU OF BRIDGES



Mark	a	b
M3	8'-2"	10'-0"
M4 & M6	7'-8"	10'-0"
M5	7'-5"	10'-0"
M7	7'-11"	10'-0"
N3	7'-8"	10'-0"
N4 & N6	7'-5"	10'-0"
N5 & N7	5'-5"	10'-0"

G-60-24
 Des. & Dr. by W.F. Ch. & J. G.L.M.
 Apprd. by G.R.L.

MICROFILMED
FEB 07 1979
REPRODUCTION



MARK	SIZE	NUMBER	LENGTH	WEIGHT	
SLAB BARS					
A	1/2" #	50	32'-0"	1360	
B1	" #	25	28'-6"	606	
B2	" #	25	35'-6"	754	
C1	" #	52	22'-6"	996	
C2	" #	26	23'-3"	514	
T	1/2" #	23	26'-6"	408	
BEAM BARS					
G1	1 1/2" #	8	29'-0"	998	
G2	" #	8	29'-0"	998	
G3	" #	8	29'-0"	998	
G4	" #	8	29'-0"	998	
R1	" #	8	34'-9"	1195	
R2	" #	8	32'-0"	1100	
R3	" #	8	34'-9"	1195	
Sb	1/2" #	304	6'-2"	1285	
GIRDER BARS					
M1a	1 1/2" #	2	22'-3"	236	
M1b	" #	2	30'-0"	320	
M1c	" #	2	22'-3"	236	
M2a	" #	2	22'-3"	236	
M2b	" #	2	30'-0"	320	
M2c	" #	2	22'-3"	236	
M3a	" #	2	20'-0"	212	
M3b	" #	2	35'-0"	371	
M3c	" #	2	27'-0"	286	
M4a	" #	2	42'-0"	445	
M4b	" #	2	24'-9"	262	
M4c	" #	2	39'-9"	422	
M5a	" #	2	22'-3"	236	
M5b	" #	2	37'-3"	393	
M5c	" #	2	42'-3"	449	
M6a	" #	2	27'-3"	290	
M6b	" #	2	42'-3"	449	
M6c	" #	2	27'-3"	290	
N1a	" #	2	17'-3"	183	
N1b	" #	2	40'-0"	426	
N1c	" #	2	17'-3"	183	
N2a	" #	2	17'-3"	183	
N2b	" #	2	40'-0"	426	
N2c	" #	2	17'-3"	183	
N3a	" #	2	34'-0"	362	
N3b	" #	2	39'-0"	414	
N3c	" #	2	34'-6"	365	
N4a	" #	2	39'-6"	418	
N4b	" #	2	34'-6"	365	
N4c	" #	2	39'-6"	418	
N5a	" #	2	34'-0"	362	
N5b	" #	2	39'-0"	414	
N5c	" #	2	22'-3"	236	
N6a	" #	2	30'-0"	320	
N6b	" #	2	22'-3"	236	
N6c	" #	2	17'-3"	183	
N7a	" #	2	40'-0"	426	
N7b	" #	2	17'-3"	183	
N7c	" #	2	17'-3"	183	
S1	1/2" #	8	17'-0"	116	
S2	" #	8	17'-8"	120	
S3	" #	8	18'-2"	125	
S4	" #	8	19'-0"	129	
S5	" #	8	19'-8"	134	
S6	" #	6	20'-4"	104	
				Total Weight	26110

MARK	"a"	"b"
M3a	8'-8"	10'-0"
M3b	8'-8"	25'-0"
M4a	8'-2"	17'-6"
M4b	8'-2"	32'-6"
M5a	8'-5"	15'-0"
M5b	8'-5"	30'-0"
M6a	8'-5"	12'-6"
M6b	8'-5"	27'-6"
N3a & N6a	5'-2"	27'-6"
N4a & N6b	5'-2"	32'-6"
N5a & N5b	8'-2"	25'-0"
N4b & N5c	8'-2"	30'-0"

ESTIMATED QUANTITIES

1:24 Concrete 131.5 cu yds.

Reinforcing Steel 26110 lbs.

Structural steel 880 lbs.

Wearing Surface 162 sq. yds.

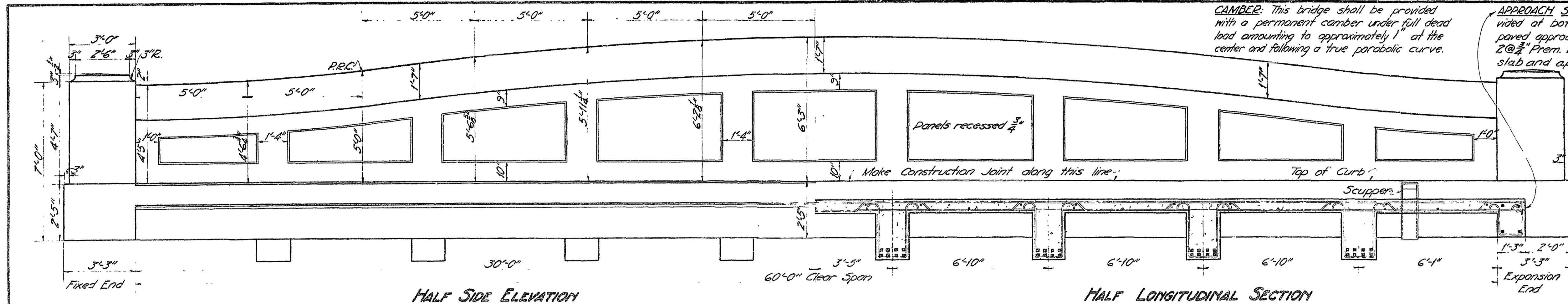
STANDARD CONCRETE GIRDER
SPAN 60 FT. - ROADWAY 24 FT.
T-15 LOADING
STATE OF OHIO.
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
FEBRUARY 1924 BUREAU OF BRIDGES

660-24-1
Approved A. J. Quinn
Designed W. E. Drawn & Traced E. H. B. Checked W. H. R.

MICROFILMED
FCS 071979
PRODUCTION

FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		

COUNTY I.C.H. SEC.



CAMBER: This bridge shall be provided with a permanent camber under full dead load amounting to approximately 1" at the center and following a true parabolic curve.

APPROACH SLABS: Approach slabs shall be provided of both ends of superstructure in case of paved approaches. For details see Dr. No. AS-2430. 2@ 1/2" Prem. Exp. Jt. filler between ends of bridge slab and approach slab at expansion and only. Payment included with Approach Slab.

NOTE: Top of abutment of expansion end to be finished perfectly smooth. Place two layers of 1/2" premolded expansion joint material between abutment and superstructure over area unoccupied by bearing plates, as shown.

Note: All exposed edges not otherwise shown shall be chamfered thus.

BAR LEGEND

Mark	Sizes
1	1/2"
2	3/8"
3	1/2"
4	3/8"
5	1/2"
6	3/8"
7	1/2"
8	1/2"
9	1/2"
10	1/2"

STEEL LIST

Mark	Size	Shape	No.	Length	Weight
S10	8"x8"	Str-I	27	26'-0"	267
S20	14"x8"	"	24	28'-0"	461
S28	14"x8"	"	24	35'-0"	569
S50	3"x8"	Bent	46	27'-0"	1624
S55	3"x8"	"	23	24'-0"	829
S5c	3"x8"	Str-I	24	28'-0"	1036
S5d	3"x8"	"	24	35'-0"	1280
B0a	1/2"x10"	Bent	8	31'-6"	1335
B0c	1/2"x10"	"	8	36'-0"	1530
B0e	1/2"x10"	"	8	36'-0"	1530
B0f	1/2"x10"	"	8	31'-6"	1335
B0g	1/2"x10"	"	8	37'-6"	1594
B0h	1/2"x10"	"	8	40'-0"	1700
B0i	1/2"x10"	"	8	40'-0"	1700
B30	3"x8"	"	8	37'-6"	1594
B31	3"x8"	"	8	30'-0"	1275
B32	3"x8"	"	320	6'-0"	1407
B33	3"x8"	"	80	4'-0"	324
B34	3"x8"	"	2	58'-3"	501
B35	3"x8"	"	4	15'-0"	258
B36	3"x8"	"	2	58'-3"	501
B37	3"x8"	"	4	15'-0"	258
B38	3"x8"	"	4	15'-0"	258
B39	3"x8"	"	2	58'-3"	501
B40	3"x8"	"	4	15'-0"	258
B41	3"x8"	"	2	60'-0"	516
B42	3"x8"	"	2	60'-0"	516
B43	3"x8"	"	2	60'-0"	516
B44	3"x8"	"	2	60'-0"	516
B45	3"x8"	"	2	60'-0"	516
B46	3"x8"	"	2	60'-0"	516
B47	3"x8"	"	2	60'-0"	516
B48	3"x8"	"	2	60'-0"	516
B49	3"x8"	"	2	60'-0"	516
B50	3"x8"	"	2	60'-0"	516
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B52	3"x8"	"	2	60'-0"	516
B53	3"x8"	"	2	60'-0"	516
B54	3"x8"	"	2	60'-0"	516
B55	3"x8"	"	2	60'-0"	516
B56	3"x8"	"	2	60'-0"	516
B57	3"x8"	"	2	60'-0"	516
B58	3"x8"	"	2	60'-0"	516
B59	3"x8"	"	2	60'-0"	516
B60	3"x8"	"	2	60'-0"	516
B61	3"x8"	"	2	60'-0"	516
B62	3"x8"	"	2	60'-0"	516
B63	3"x8"	"	2	60'-0"	516
B64	3"x8"	"	2	60'-0"	516
B65	3"x8"	"	2	60'-0"	516
B66	3"x8"	"	2	60'-0"	516
B67	3"x8"	"	2	60'-0"	516
B68	3"x8"	"	2	60'-0"	516
B69	3"x8"	"	2	60'-0"	516
B70	3"x8"	"	2	60'-0"	516
B71	3"x8"	"	2	60'-0"	516
B72	3"x8"	"	2	60'-0"	516
B73	3"x8"	"	2	60'-0"	516
B74	3"x8"	"	2	60'-0"	516
B75	3"x8"	"	2	60'-0"	516
B76	3"x8"	"	2	60'-0"	516
B77	3"x8"	"	2	60'-0"	516
B78	3"x8"	"	2	60'-0"	516
B79	3"x8"	"	2	60'-0"	516
B80	3"x8"	"	2	60'-0"	516
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B99	3"x8"	"	2	60'-0"	516
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