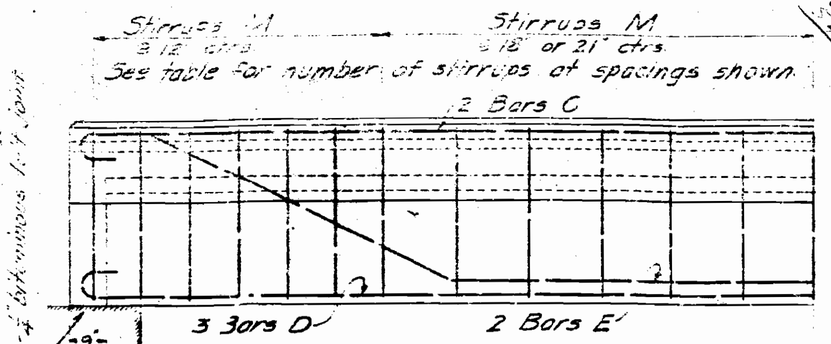
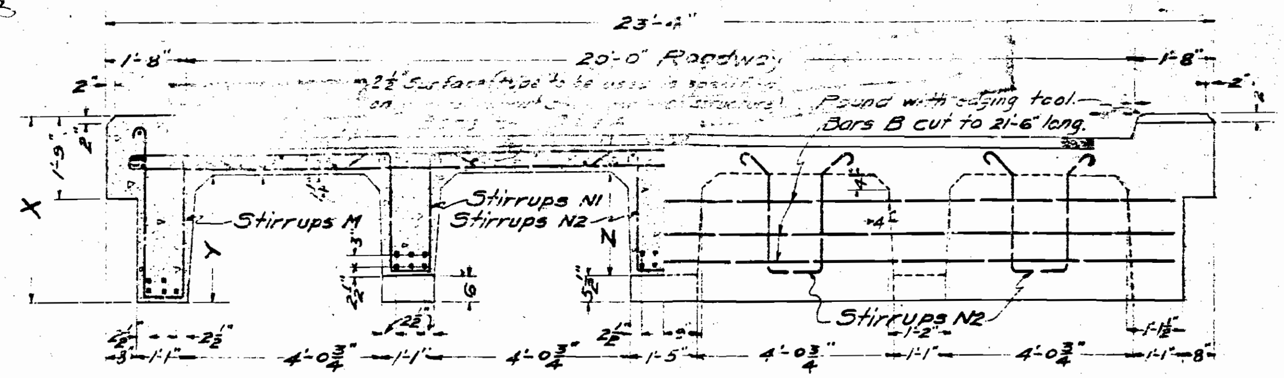
Dist. No.	State		Year	
8	TENN.		19	



HALF SIDE ELEVATION



HALF SECTION A-A

HALF END ELEVATION

NOTE: Line and grade of top of curb shall be checked immediately after the pouring of the curb has been completed and any irregularities adjusted at once.

Before the concrete receives its permanent set the top of the curb shall be struck to a true plane and all excess material removed. The curb adjacent to bevels shall be carefully troweled so as to secure true lines and sharp edges.

NOTE: The top of the driveway slab shall always be struck to template and when the wearing surface is of concrete such surface shall be poured of a 1:2:4 mixture integral with the supporting slab and to the thickness indicated. In addition to being struck to template this surface shall be finished with a wooden float and before completion shall be straight-edged. A 10 foot straight-edge so placed upon any portion of the surface so as to bridge a depression, shall not show the depression in excess of ¼".

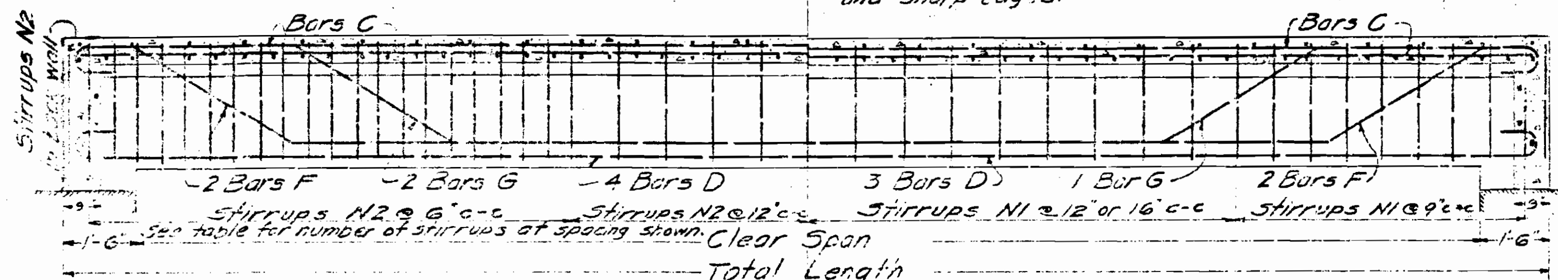
CONCRETE IN 4 BLOCKS FOR END SPANS.

Clear Span Feet	Cu. Yds. 1:2:4
28	0.27
30	0.31
32	0.35
34	0.35
36	0.38
38	0.42
40	0.46

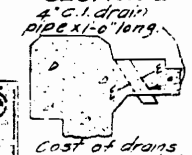
DIMENSIONS & QUANTITIES

Clear Span Feet	Total Length Ft. In.	Dimensions X	Dimensions Y	Dimensions Z	Stirrup Spacing: Exterior Beam Stirrups M	Stirrup Spacing: Interior Beam Stirrups N1	Stirrup Spacing: Interior Beam Stirrups N2	Quantities: Concrete Cu. Yds.	Quantities: Steel Lbs.
28	31'-0"	3'-7"	2'-4½"	2'-0"	6 Spcs. @ 12" 12 " " 18" 6 " " 12"	8 Spcs. @ 9" 18 " " 12" 8 " " 9"	20 Spcs. @ 6" 10 " " 12" 20 " " 6"	*34.57	7461
30	33'-0"	3'-10"	2'-7½"	2'-3"	6 " " 12" 13 " " 18" 6 " " 12"	8 " " 9" 20 " " 12" 8 " " 9"	20 " " 6" 12 " " 12" 20 " " 6"	*38.67	8,003
32	35'-0"	4'-1"	2'-10½"	2'-6"	6 " " 12" 14 " " 18" 6 " " 12"	8 " " 9" 22 " " 12" 8 " " 9"	20 " " 6" 14 " " 12" 20 " " 6"	*43.00	8524
34	37'-0"	4'-1"	2'-10½"	2'-6"	10 " " 12" 9 " " 21" 10 " " 12"	14 " " 9" 11 " " 16" 14 " " 9"	20 " " 6" 16 " " 12" 20 " " 6"	*45.30	10205
36	39'-0"	4'-4"	3'-1½"	2'-9"	10 " " 12" 10 " " 21" 10 " " 12"	14 " " 9" 12 " " 16" 14 " " 9"	20 " " 6" 18 " " 12" 20 " " 6"	*49.96	10796
38	41'-0"	4'-7"	3'-4½"	3'-0"	11 " " 12" 10 " " 21" 11 " " 12"	14 " " 9" 14 " " 16" 14 " " 9"	21 " " 6" 19 " " 12" 21 " " 6"	*54.83	11447
40	43'-0"	4'-10"	3'-7½"	3'-3"	11 " " 12" 11 " " 21" 11 " " 12"	15 " " 9" 14 " " 16" 15 " " 9"	22 " " 6" 20 " " 12" 22 " " 6"	*59.93	12,059

*These quantities do not include concrete for blocks at abutments.



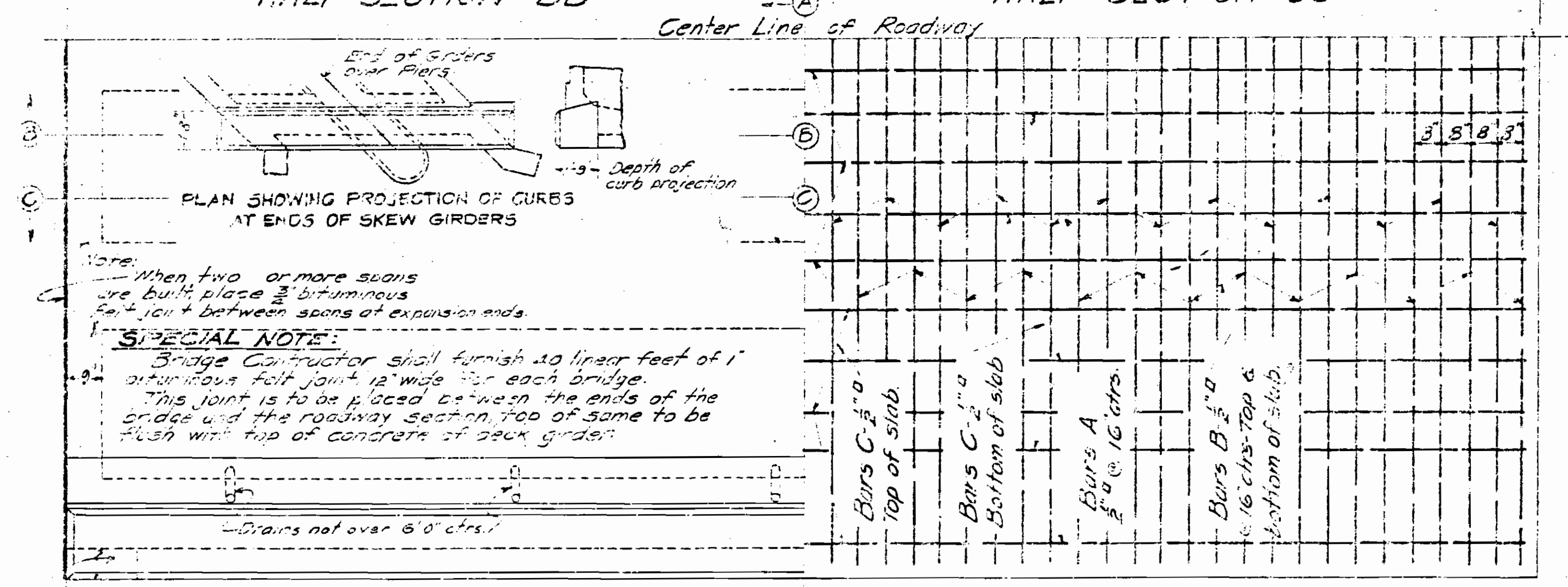
HALF SECTION BB



Cost of drains to be included in unit price of concrete.

DETAIL OF ROADWAY DRAIN

HALF SECTION CC



Note: When two or more spans are built place ¾" bituminous felt joint between spans at expansion ends.

SPECIAL NOTE: Bridge Contractor shall furnish 40 linear feet of 1" bituminous felt joint 12" wide for each bridge. This joint is to be placed between the ends of the bridge and the roadway section, top of same to be flush with top of concrete of deck girder.

Note: At abutment add block 3' x (X-1'-6"). Over piers no block required.

QUARTER PLAN

QUARTER PLAN

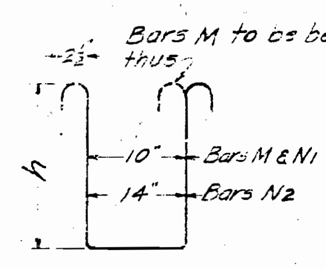
Showing Slab Reinforcement.

BILL OF STEEL

Clear Span Feet	Bars A-½" Slab Reinf. No.	Bars A L'gth.	Bars B-½" Slab Reinf. No.	Bars B L'gth.	Bars C-½" Spacing Bar No.	Bars C L'gth.	Bars D Ext. & Int. Bm. Reinf. No.	Bars D Size	Bars D L'gth.	Bars E Exterior Bm. Reinf. No.	Bars E Size	Bars E L'gth.	Bars F Interior Bm. Reinf. No.	Bars F Size	Bars F L'gth.	Bars G Interior Bm. Reinf. No.	Bars G Size	Bars G L'gth.	Bars M-½" Stirrup-Ext. Bm. No.	Bars M L'gth.	Bars N-½" Stirrup-Int. Bm. No.	Bars N L'gth.
28	23	24'-4"	52	23'-8"	26	30'-6"	16	1⅛"	32'-4"	4	1⅛"	33'-6"	6	1⅛"	33'-3"	4	1⅛"	33'-3"	50	8'-2"	[illegible] 59	6'-[illegible] 6'-[illegible]
30	24	24'-4"	56	23'-8"	26	32'-6"	16	1⅛"	34'-4"	4	1⅛"	35'-8"	6	1⅛"	35'-6"	4	1⅛"	35'-6"	52	8'-8"	74 61	6'-6" 7'-0"
32	26	24'-4"	58	23'-8"	26	34'-6"	16	1⅛"	36'-4"	4	1⅛"	37'-9"	6	1⅛"	37'-8"	4	1⅛"	37'-8"	54	9'-2"	78 63	7'-0" 7'-6"
34	27	24'-4"	62	23'-8"	26	36'-6"	16	1¼"	38'-6"	4	1¼"	40'-0"	6	1¼"	39'-9"	4	1¼"	39'-9"	60	9'-2"	80 65	7'-0" 7'-6"
36	29	24'-4"	64	23'-8"	26	38'-6"	16	1¼"	40'-6"	4	1¼"	42'-0"	6	1¼"	42'-0"	4	1¼"	42'-0"	62	9'-8"	82 67	7'-6" 8'-0"
38	30	24'-4"	68	23'-8"	26	40'-6"	16	1¼"	42'-6"	4	1¼"	44'-2"	6	1¼"	44'-2"	4	1¼"	44'-2"	66	10'-2"	86 70	8'-[illegible] [illegible]
40	32	24'-4"	70	23'-8"	26	42'-6"	16	1¼"	44'-6"	4	1¼"	46'-3"	6	1¼"	46'-4"	4	1¼"	46'-4"	68	10'-8"	90 73	8'-[illegible] 9'-0"

STEEL BENDING TABLE

Clear Span Feet	Bars D f	Bars E a	Bars E b	Bars E c	Bars E d	Bars E e	Bars F a	Bars F b	Bars F c	Bars F d	Bars F e	Bars G a	Bars G b	Bars G c	Bars G d	Bars G e	Bars M h	Bars N1 h	Bars N2 h
28	30'-6"	1'-3"	6'-6"	15'-0"	2'-10"	7'-1⅛"	1'-3"	3'-3"	21'-6"	1'-9"	3'-8¼"	4'-6"	3'-3"	15'-0"	1'-9"	3'-8¼"	3'-3"	2'-2"	2'-3"
30	32'-6"	1'-3"	7'-0"	16'-0"	3'-1"	7'-7¾"	1'-3"	3'-6"	23'-0"	2'-0"	4'-0⅜"	4'-9"	3'-6"	16'-0"	2'-0"	4'-0⅜"	3'-6"	2'-5"	2'-6"
32	34'-6"	1'-3"	7'-6"	17'-0"	3'-4"	8'-2½"	1'-3"	3'-9"	24'-6"	2'-3"	4'-4½"	5'-0"	3'-9"	17'-0"	2'-3"	4'-4½"	3'-9"	2'-8"	2'-9"
34	36'-6"	1'-3"	8'-0"	18'-0"	3'-4"	8'-8"	1'-3"	4'-0"	26'-0"	2'-3"	4'-7⅛"	5'-3"	4'-0"	18'-0"	2'-3"	4'-7⅛"	3'-9"	2'-8"	2'-9"
36	38'-6"	1'-3"	8'-6"	19'-0"	3'-7"	9'-2⅝"	1'-3"	4'-3"	27'-6"	2'-6"	4'-11⅛"	5'-6"	4'-3"	19'-0"	2'-6"	4'-11⅛"	4'-0"	2'-11"	3'-0"
38	40'-6"	1'-3"	9'-0"	20'-0"	3'-10"	9'-9⅜"	1'-3"	4'-6"	29'-0"	2'-9"	5'-3¼"	5'-9"	4'-6"	20'-0"	2'-9"	5'-3¼"	4'-3"	3'-2"	3'-3"
40	42'-6"	1'-3"	9'-6"	21'-0"	4'-1"	10'-4⅛"	1'-3"	4'-9"	30'-6"	3'-0"	5'-7⅜"	6'-0"	4'-9"	21'-0"	3'-0"	5'-7⅜"	4'-6"	3'-5"	3'-6"

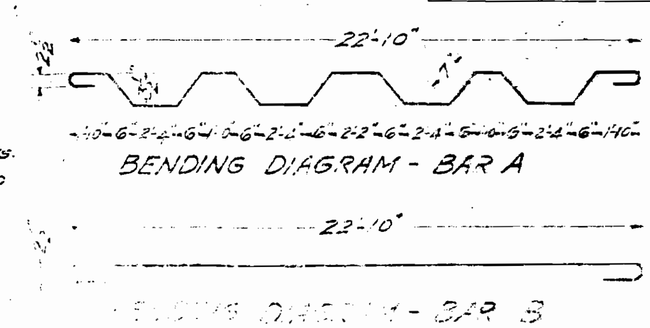


BENDING DIAGRAM BARS M & N

GENERAL NOTES & DESIGN DATA

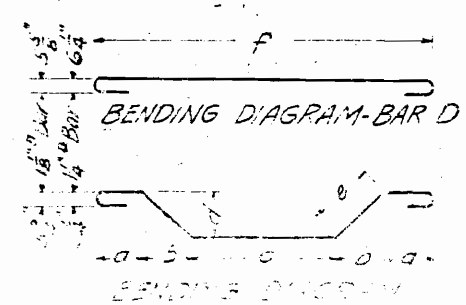
Specifications: Tennessee Highway Department
Concentrated load ——— Typical 15 ton truck.
Impact allowance ——————— 30 per cent.
Paving or ballast — Not to exceed 80 lbs. per sq. ft.
Steel in tension ——————— 16000 " " sq. in.
Concrete in compression ——— 650 " "
Reinforced concrete in shear ——— 110 " "
The table is based on the net area of bars as follows
½" □ = 0.25 sq. in. 1⅛" □ = 1.2656 sq. in. 1¼" □ = 1.5625 sq. in.

Concrete to be a 1:2:4 mixture.
Maximum size of aggregate – 1¼".
All reinforcing steel shall be deformed bars
(Square twisted bars not to be considered as deformed)
All dimensions relating to reinforcement are to centers of bars.
Where splicing of reinforcement is necessary, bars are to be lapped 40 diameters
All exposed corners except as indicated, to be chamfered thus:
Railings des[illegible] curbs [illegible]



BENDING DIAGRAM - BAR A

BENDING DIAGRAM - BAR B



BENDING DIAGRAM - BAR D

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD

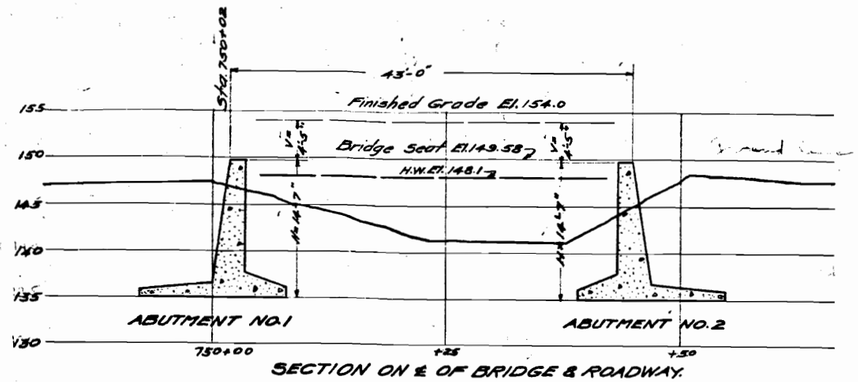
CONCRETE DECK GIRDER BRIDGE

SPANS 28 TO 40'

D-0-180

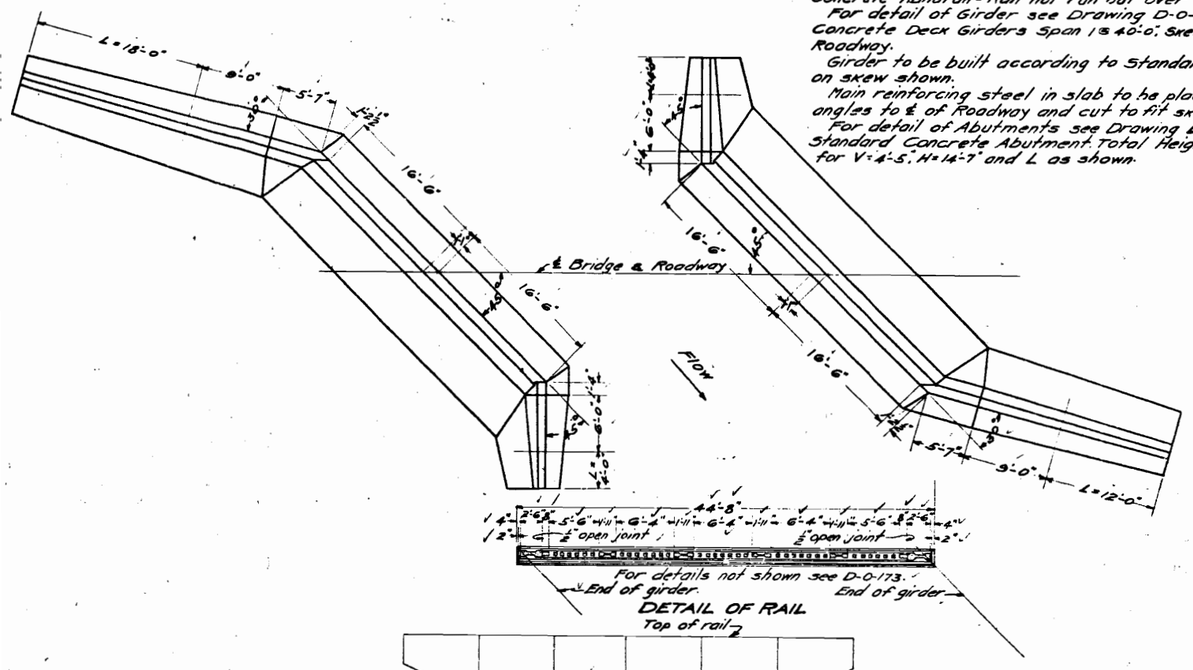
D-0-18

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.	100	1923	63	198

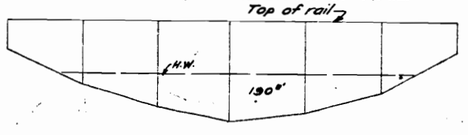


SECTION ON ℄ OF BRIDGE & ROADWAY.

For detail of Rail see Drawing D-0-173 Standard Concrete Handrail. Rail not run out over wings.
For detail of Girder see Drawing D-0-180 Standard Concrete Deck Girders Span 1 @ 40'-0". Skew 45° R, 20'-0" Roadway.
Girder to be built according to Standard Plan but on skew shown.
Main reinforcing steel in slab to be placed at right angles to ℄ of Roadway and cut to fit skew shown.
For detail of Abutments see Drawing D-0-231. Standard Concrete Abutment. Total Height 19'-0" for V=4'-5", H=14'-7" and L as shown.



DETAIL OF RAIL

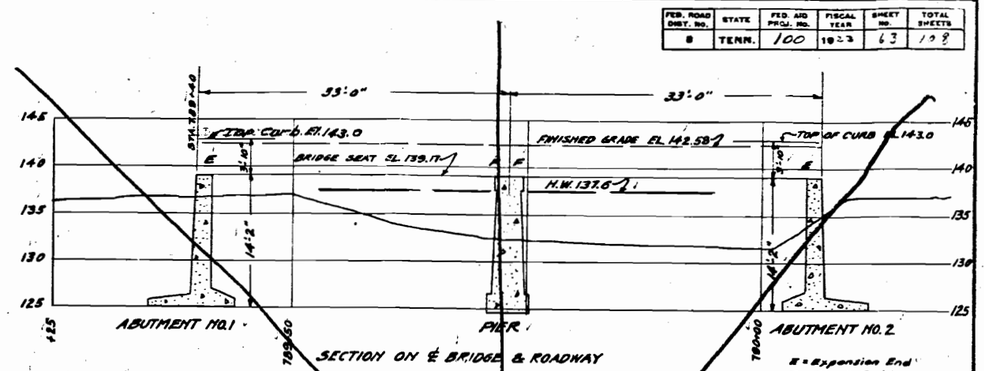


CROSS SECTION UNDER L&N R.R. BRIDGE, 300' LEFT
SCALE: 1"=10'

ESTIMATED QUANTITIES

ITEM	EXCAVATION CU. YDS.		CONCRETE CU. YDS.		STEEL REINF
	DRY	WET	1:2:3	1:2:4	LBS.
SUPERSTRUCTURE			6.36	62.12	12651
ABUTMENT NO.1	237	190		100.30	7032
ABUTMENT NO.2	189	180		95.09	6690
TOTAL	426	370	6.36	257.51	26373

General Notes.
Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways.
Concrete shall be 1:2½:5 mixture; coarse aggregate ¼" to 2½" - piers only.
Reinforcing steel shall be deformed bars of structural steel grade made by the O.H. process.
Forms: See Specifications.
Finish: See Specifications.
Channel change to be made by roadway contractor.

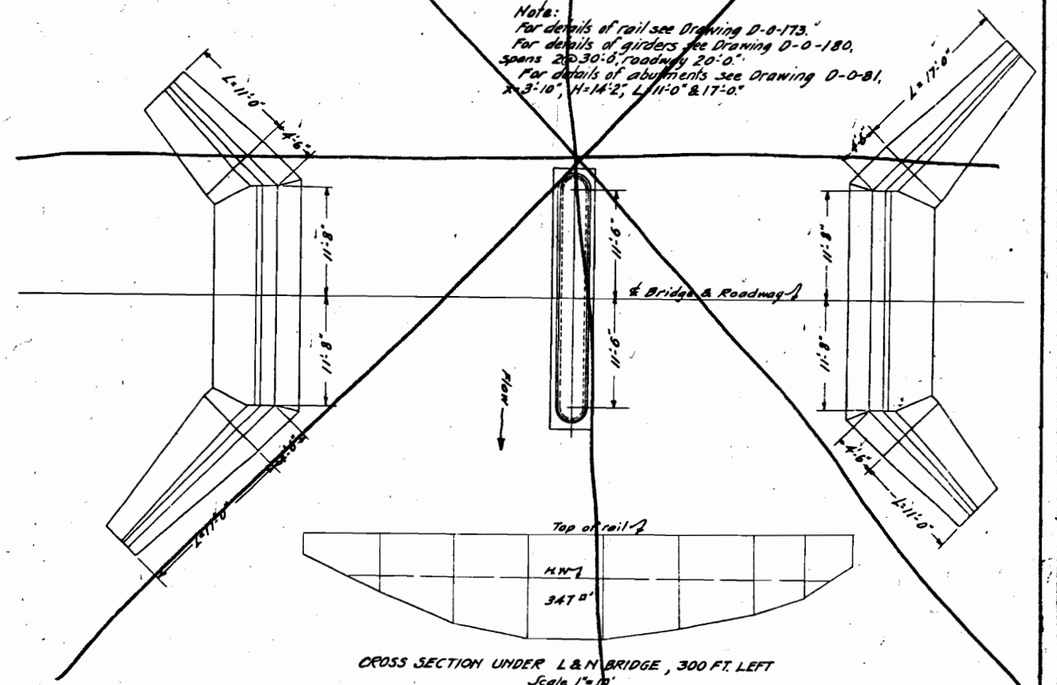


SECTION ON ℄ BRIDGE & ROADWAY

E = Expansion End
F = Fixed End

Note: Channel change to be made by roadway contractor.

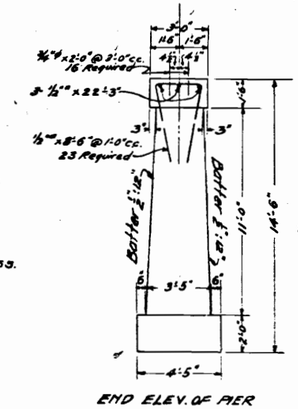
Note:
For details of rail see Drawing D-0-173.
For details of girders see Drawing D-0-180, spans 2 @ 30'-0", roadway 20'-0".
For details of abutments see Drawing D-0-81, X=3'-10", H=14'-2", L 11'-0" & 17'-0".



CROSS SECTION UNDER L&N BRIDGE, 300 FT. LEFT
Scale 1"=10'

ESTIMATED QUANTITIES

ITEM	EXCAVATION CU. YDS.		CONCRETE CU. YDS.			STEEL REINF
	DRY	WET	1:2:3	1:2:4	1:2½:5	LBS.
SUPERSTRUCTURE			10.49	77.65		16951
ABUTMENT NO.1	150	170		62.32		4089
PIER	7	48			43.49	271
ABUTMENT NO.2	77	170		62.32		4089
TOTALS	234	388	10.49	202.29	43.49	25400



END ELEV. OF PIER

Bridge Widened by Main Forces - therefore no plans
JCS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

LAYOUT OF BRIDGES

AT
STA. 750+02 AND 789+40
ON
STATE HIGHWAY NO. 1
HAYWOOD CO
1923

DESIGNED BY L.W. Erickson DATE 8-10-23
DRAWN BY L.W. Erickson DATE 8-10-23
TRACED BY G.A. Farr, H.G. Davis DATE 8-15-23
CHECKED BY T. Grace DATE 9-13-23

CORRECT L.W. Erickson BRIDGE ENGINEER
APPROVED ASST. STATE HIGHWAY ENGINEER

D-2-121

D-2-121