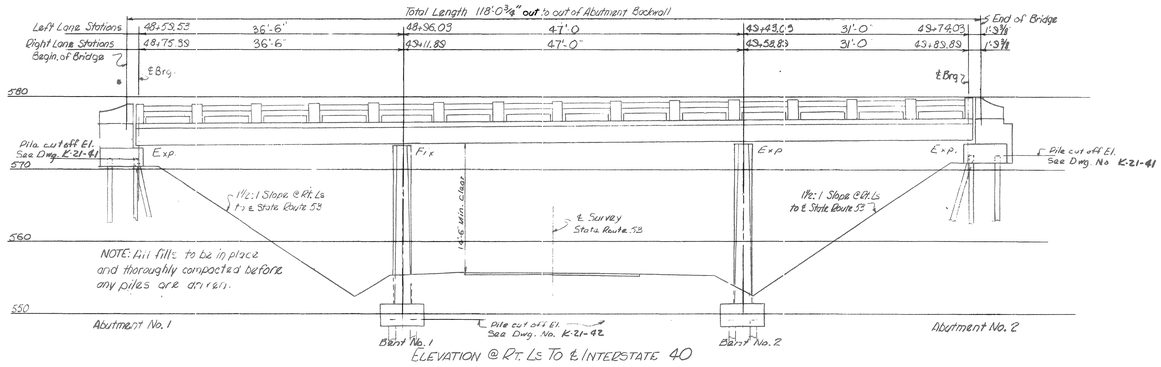
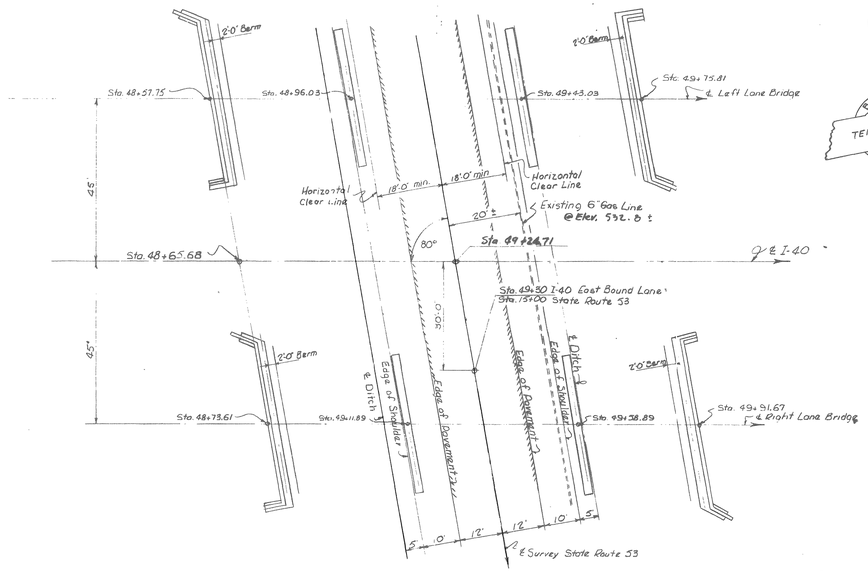
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.			30	531

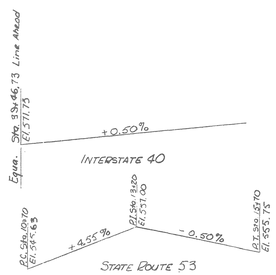
I-40-5(18)250



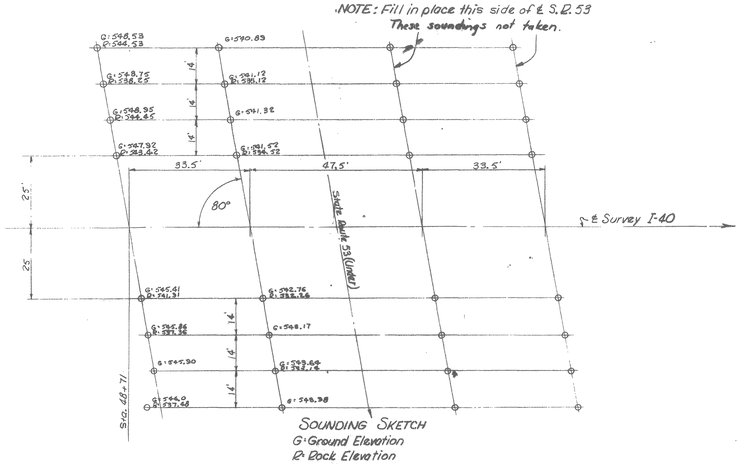
ELEVATION @ Rt. Ls TO ℄ INTERSTATE 40



PLAN



SKETCH SHOWING GRADES
NOTE: Elevations shown based on Finished Grade



SOUNDING SKETCH
G: Ground Elevation
R: Rock Elevation

GENERAL NOTES

SPECIFICATIONS: Standard Road & Bridge Specifications of the Tennessee Department of Highways.
LOADING: H20-S16-44 **and Alternate Military Loading.**
CONCRETE: To be Class "A".
REINFORCING STEEL: To be intermediate or hard grade. See Specifications. Standard Hook details as recommended by C.R.S.I. shall apply.
STRUCTURAL STEEL: See notes on Dwg. No. K-21-40
PILES: To be 10" B.P. @ 42#.
HIGH TENSILE BOLTS: See notes on Dwg. No. K-21-40.
STUD WELDING: See Special Provision.
PAINT: Basic Lead Silico Chromate. See Special Provision regarding Section 132 Steel Structures (Painting).
SELF-LUBRICATING PLATES: See Special Provisions.
JOINT SEALER: See Special Provisions. Class A or B.
DESIGN SPECIFICATIONS: 1961 Edition of AASHO Standard Specifications for Highway Bridges.

FOUNDATION NOTE

Foundation for Bents shall be excavated to the pile cut-off elevations shown; rod soundings shall then be made as directed by the Engineer. From the results obtained the Engineer will decide if piles will be used or the footings carried to rock. No reinforcement for Bent columns shall be ordered until final footing elevations have been established. All piles shall be driven to rock or a minimum bearing of 36 tons for bents and abutments. The cost of rod soundings shall be included in the cost of items bid on.

HANDRAIL NOTE

Build Handrail according to Standard Drawing H-5-110 with Q: 115'-8½" and 14 spaces @ 2'-6-7/8". **See Dwg. No. K-21-41** for End Post details.

LIST OF DRAWINGS

	DWG. NO.
Handrail - See note this sheet **and**	H-5-110
Layout	K-21-39
Superstructure	K-21-40
Abutments No. 1 & 2	K-21-41
Bents No. 1 & 2	K-21-42
Pile Splice Detail & Bearing Devices	H-5-146

ESTIMATED QUANTITIES

	ITEM	Excavation ① Dry	Excavation ① Rock	Concrete Class "A" Cu. Yds.	Steel - Lbs. Reinforcing	Steel - Lbs. Structural	Concrete Handrail Lin. Ft.	10"ø42"#BP Steel Piles Lin. Ft.
Right Lane	Superstructure			114.7	29459	Lump Sum		
	Abutment No. 1			25.5	2,878			320
	Bent No. 1	70	5	32.9	5,594			240
	Bent No. 2	50	5	33.1	5,614			240
	Abutment No. 2			25.5	2,878			320
	Total	120	10	231.3	46,423			1,120
Left Lane	Superstructure			114.7	29,459	Lump Sum		
	Abutment No. 1			25.3	2878			320
	Bent No. 1	70	5	33.2	5,634			240
	Bent No. 2	50	5	33.4	5,655			240
	Abutment No. 2			25.3	2,878			320
	Total	120	10	231.9	46,504			1,120
Total Both Bridges		240	20	463.2	92,927	Lump Sum	463	2,240

① Total Estimated weight Structural Steel 148,980 Lbs (Both Bridges) includes Bearing Devices and Shear Connectors.
All Joint Material shall be included in the unit price bid for Class "A" Concrete.
② Excavation based on lower road profile.

DESIGNED BY B. Burke — DATE
DRAWN BY G.P. Mullican — DATE 5-23-62
TRACED BY — DATE
CHECKED BY ARE — DATE

Revised 9-21-62

2- 38'-0" ROADWAYS WITH SAFETY CURBS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

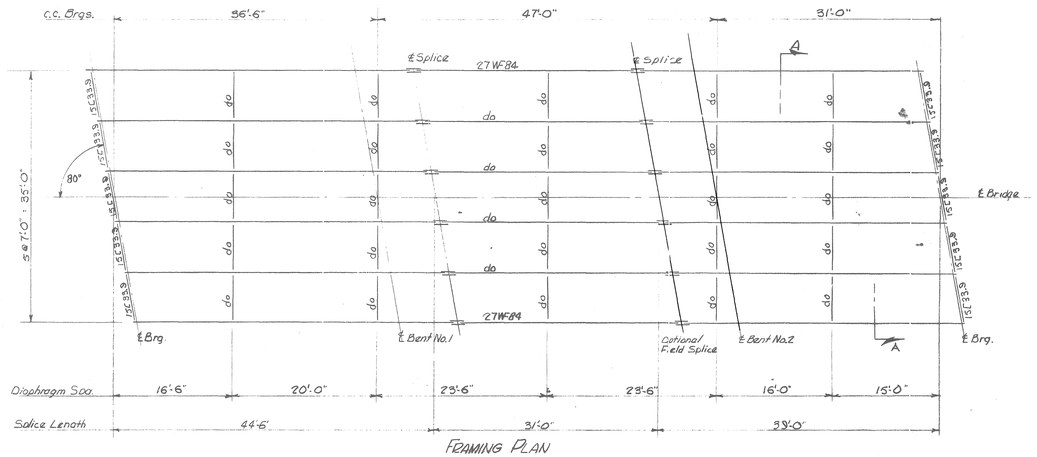
LAYOUT OF BRIDGE

INTERSTATE 40 OVER STATE ROUTE 53
LEFT & RIGHT LANE BRIDGES
STA. 48+65.68
SMITH COUNTY
1962

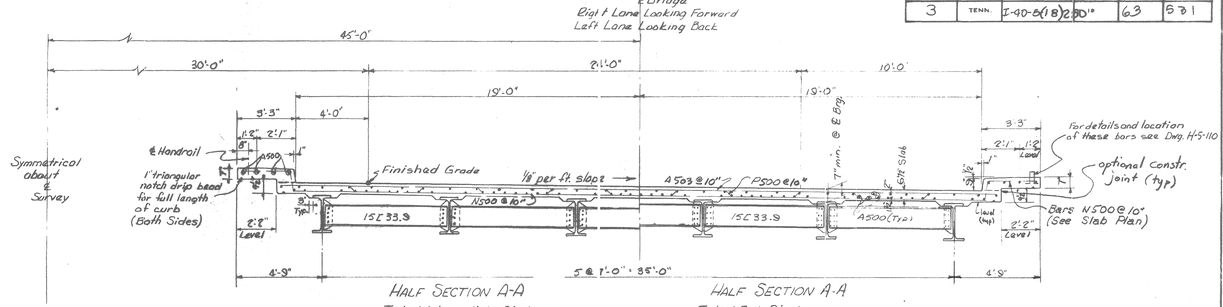
CORRECT Fred Grewe
BRIDGE ENGINEER
APPROVED
STATE HIGHWAY ENGINEER

K-21-39

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-40-6(18)270	19	63	681

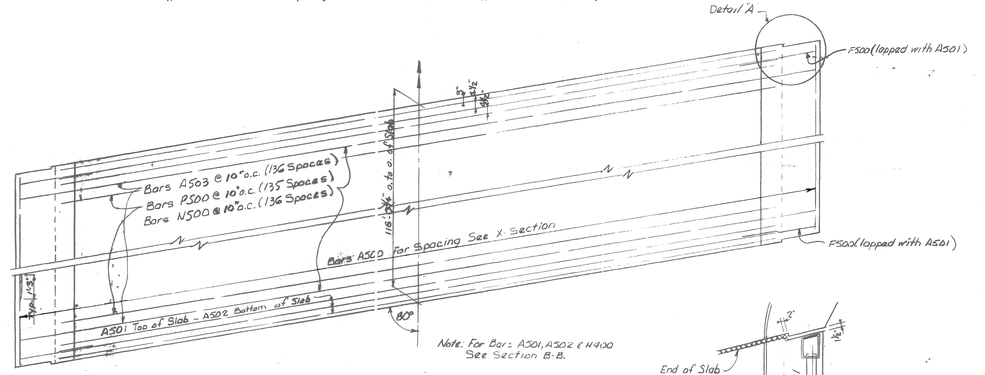


FRAMING PLAN
Typical for Right & Left Lanes



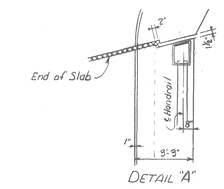
HALF SECTION A-A
Typical Intermediate Diaphragms

HALF SECTION A-A
Typical End Diaphragms

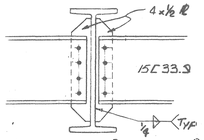


Note: For Bars A501, A502 & H400 See Section B-B.

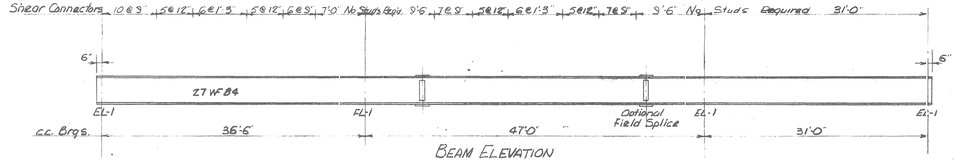
SLAB PLAN
Typical for Right & Left Lanes



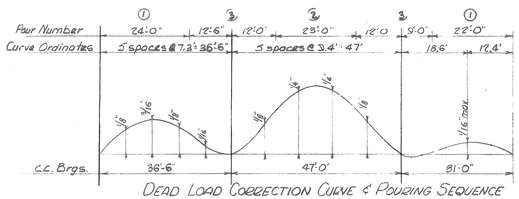
DETAIL "A"



INTERMEDIATE DIAPHRAGM CONNECTION

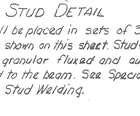


BEAM ELEVATION
EL-1 - Expansion Shoe
FL-1 Fixed Shoe



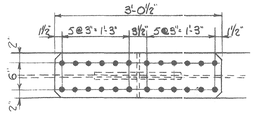
DEAD LOAD CORRECTION CURVE & POURING SEQUENCE

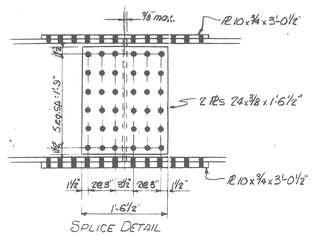
Dead load correction same for all beams.
All pours to be made in numerical sequence. All pours with the same number designation may be simultaneously.



STUD DETAIL

Studs: shall be placed in sets of 3 and spaced as shown on this sheet. Studs shall be solid or granular fluxed and automatically end welded to the beam. See Special Provision regarding Stud Welding.

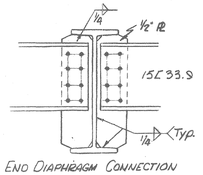




SPLICE DETAIL

Splices to be sub punched or sub-drilled ¼" smaller, reamed to size and match marked while assembled in the shop.

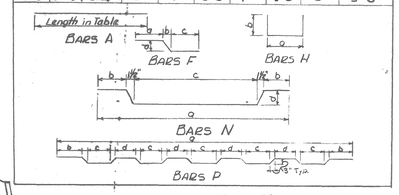
Use fills as required.



END DIAPHRAGM CONNECTION

BILL OF STEEL - EACH LANE

Bar	Location	Size	No.	Bending Dimensions a	b	c	d	Length
A500	Slab	5	348					29'-9"
A501	Slab	5	6					40'-3"
A502	Slab	5	30					6'-3"
A503	Slab	5	137					40'-3"
H400	Slab	4	30	10"	7"			2'-0"
N500	Slab	5	137	44'-7"	2'-5"	38'-11"	1'-0"	46'-5"
P500	Slab	5	136	40'-3"	3'-11"	3'-7"	3'-0"	41'-3"
F500	Curb & Slab	5	4	2'-5"	1"	2'-0"	5"	5'-6"



PLAN END DIAPHRAGM

SECTION B-B

NOTES:

STRUCTURAL STEEL for Beams and splice material shall conform to ASTM-A36, Structural Steel for Bearings shall be ASTM-A373. All other material shall conform to ASTM-A7 unless otherwise noted.

FIELD CONNECTIONS to be made with ⅞" ϕ High Strength Bolts. See AASHO Specifications Article 2.10.20. All connections are friction type.

PAINT: Basic Lead Silico Chromate. See Special Provision regarding Section 132 Steel Structures (Painting). No paint shall be applied to the top surfaces of the top flanges. Splices and other field connections shall be cleaned and primed before forming slab.

WELDING shall be in accordance with the current edition of the AWS Specifications for Welded Highway & Railway Bridges.

CAMBER: Riser strips shall be built on top of the beams to compensate for dead load deflection. These strips shall be in addition to the slab thickness shown on the beams. See this sheet for dead load correction.

BEARINGS: See Drawing No. H-S-146. Use EL-1 (Expansion) & FL-1 (Fixed).

ESTIMATED QUANTITIES

ITEM	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.
Left Lane	114.7	29,459
Right Lane	114.7	29,459

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STRUCTURAL STEEL DETAILS
LEFT AND RIGHT LANES
I-40 OVER STATE ROUTE 53
STA. 48+65.68
SMITH COUNTY
1962

DESIGNED BY Billy Burke DATE April 1962
DRAWN BY G.P. Mullican DATE 6-8-62
TRACED BY _____ DATE _____
CHECKED BY ARB DATE _____

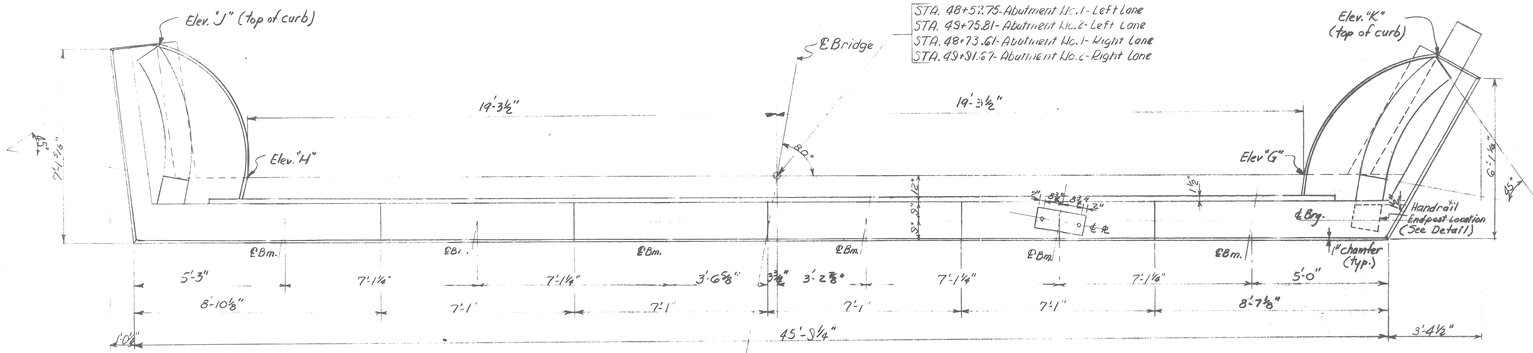
CORRECT Fred Grave
BRIDGE ENGINEER
APPROVED _____
STATE HIGHWAY ENGINEER

K-21-40

Revised: 9-21-62

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-40-5(18)250	19	64	531

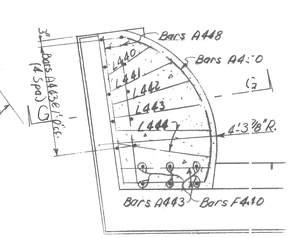
STA. 48+52.75-Abutment No.1-Left Lane
STA. 49+75.81-Abutment No.2-Left Lane
STA. 48+73.61-Abutment No.1-Right Lane
STA. 49+51.67-Abutment No.2-Right Lane



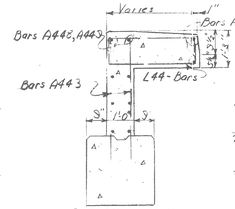
Note: When pouring Abutment Beam, provisions shall be made for setting Anchor Bolts for Bearing Plates. See also note on Dwg. No. K-21-42

ABUTMENT NO. 1 - LEFT LANE LOOKING BACK ON SURVEY.
RIGHT LANE LOOKING BACK EXCEPT FOR STEP ELEVATIONS.
ABUTMENT NO. 2 - LEFT LANE LOOKING FORWARD EXCEPT FOR STEP ELEVATIONS.
RIGHT LANE LOOKING FORWARD ON SURVEY.

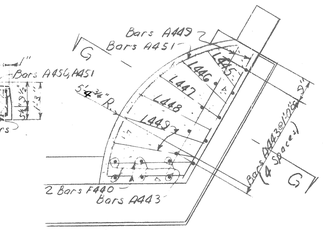
⊗ Batter this pile forward 2:12



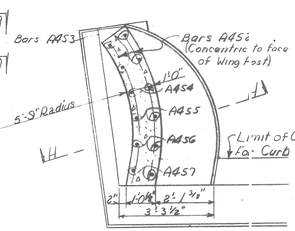
PART SECTION C-C
Showing Curb Reinforcement



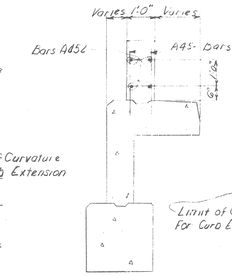
SECTION G-G



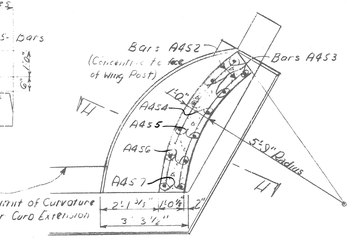
PART SECTION C-C
Showing Curb Reinforcement



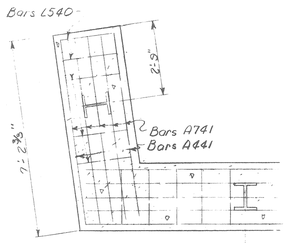
PART SECTION D-D
Showing Wing Post Reinforcement



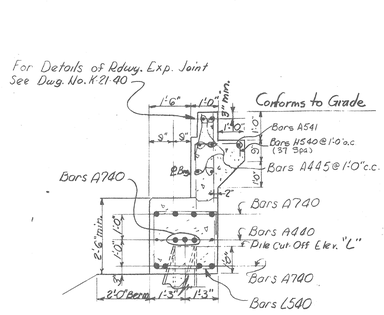
SECTION H-H



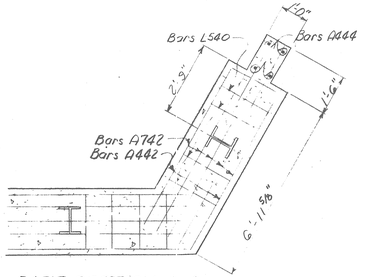
PART SECTION D-D
Showing Wing Post Reinforcement



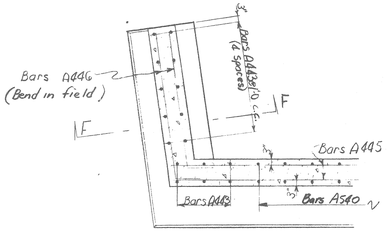
PART SECTION A-A
Showing Abutment Beam Reinforcement



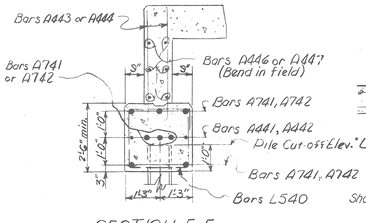
SECTION E-E
Note: Roadway Bracket to extend full width of Roadway.



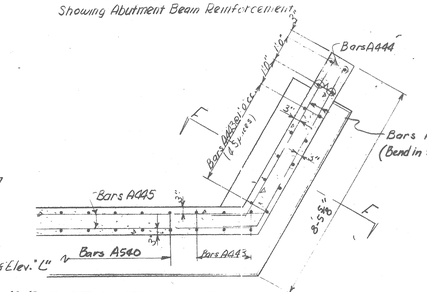
PART SECTION A-A
Showing Abutment Beam Reinforcement



PART SECTION B-B
Showing Wingwall Reinforcement



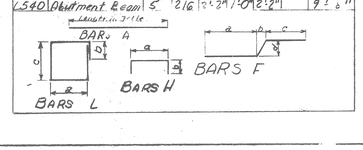
SECTION F-F

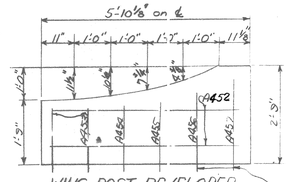


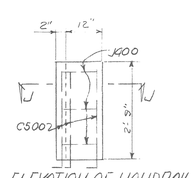
PART SECTION B-B
Showing Wingwall Reinforcement

BILL OF STEEL (TOTAL)
LEFT AND RIGHT LANES

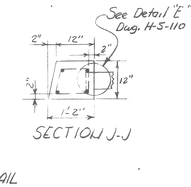
Bar	Location	Size	No. Reqd.	Bending Dimensions A	B	C	D	Length
A440	Abutment Beam	4	8					45'-3"
A441	"	4	8					6'-9"
A442	Abutment Beam	4	8					6'-6"
A443	Wingwalls	4	128					4'-9"
A444	Wingwalls	4	16					5'-0"
A445	Backwall	4	24					44'-6"
A446	Wingwalls	4	24					6'-5"
A447	Wingwalls	4	24					7'-9"
A448	Curbs	4	8					5'-3"
A449	"	4	8					5'-0"
A450	"	4	8					7'-0"
A451	Curbs	4	8					7'-2"
A452	Wing Post	4	32					5'-5"
A453	"	4	32					3'-10"
A454	"	4	16					2'-3"
A455	"	4	16					2'-6"
A456	"	4	16					2'-9"
A457	Wing Post	4	16					3'-0"
A540	Backwall	5	312					4'-8"
A541	Roadway Bracket	5	4					38'-0"
H540	Roadway Bracket	5	152	1'-8"	6"			2'-8"
A740	Abutment Beam	7	64					45'-3"
A741	"	7	32					6'-9"
A742	Abutment Beam	7	32					6'-6"
A840	Backwall, Curbs	4	16	2'-0"	1"	2'-9"	9"	5'-6"
L440	Curbs	4	4	1'-10"	6"	11"		6'-6"
L441	"	4	4	2'-6"	6"	11"		7'-4"
L442	"	4	4	3'-0"	6"	11"		8'-4"
L443	"	4	4	3'-3"	6"	11"		8'-10"
L444	"	4	8	3'-5"	6"	11"		9'-2"
L445	"	4	4	1'-8"	6"	11"		5'-8"
L446	"	4	4	2'-3"	6"	11"		6'-10"
L447	"	4	4	2'-7"	6"	11"		7'-6"
L448	"	4	4	2'-11"	6"	11"		8'-2"
L449	Curbs	4	8	3'-1"	6"	11"		8'-6"
L540	Abutment Beam	5	216	2'-2"	0'-0"	2'-2"		9'-6"







ELEVATION OF HANDRAIL END POST



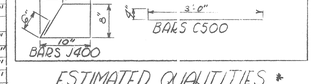
SECTION J-J

TABLE OF ELEVATIONS

	ITEM	ELEVATION A	B	C	D	E	F	G	H	J	K	L
Left Lane	Abutment No. 1	572.81	572.89	572.97	573.05	573.12	573.20	576.92	576.34	577.11	576.68	571.81
	Abutment No. 2	573.78	573.70	573.62	573.54	573.46	573.38	576.93	576.51	577.32	577.75	571.88
Right Lane	Abutment No. 1	573.25	573.19	573.12	573.05	572.99	572.92	576.39	576.03	576.79	577.15	571.42
	Abutment No. 2	573.49	573.56	573.62	573.69	573.76	573.82	576.62	576.98	577.79	577.44	571.99

END POST - LIST OF MATERIALS - EACH

Bar	Size	No.	Length	Quantities Concrete Cu. Yds.	Steel Lbs.
C500	5	4	3'-4"	0.11	20
J400	4	3	3'-4"		



ESTIMATED QUANTITIES *

ITEM	Conc. Class "A" Cu. Yds.	Reinf. Steel Lbs.
LEFT LANE		
Abutment No. 1	25.3	2878
Abutment No. 2	25.3	2878
RIGHT LANE		
Abutment No. 1	25.3	2878
Abutment No. 2	25.3	2878

* includes end post

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ABUTMENTS NO. 1 & 2
LEFT & RIGHT LANE BRIDGES
INTERSTATE 40 OVER STATE ROUTE NO. 53
STATION 48+65.68
SMITH COUNTY
1962

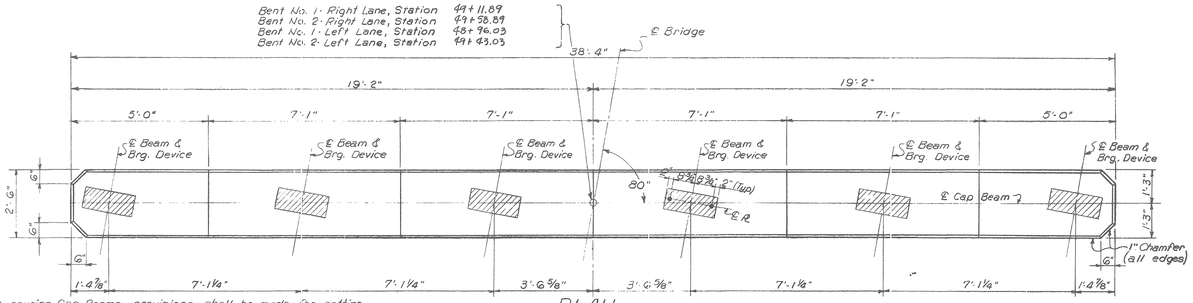
DESIGNED BY B. R. Burke DATE May 21, 1962
DRAWN BY J. B. Crockett DATE May 22, 1962
TRACED BY _____ DATE _____
CHECKED BY _____ DATE _____

CORRECT Fred Greve
DIRECTOR OF ENGINEERING
APPROVED _____
STATE HIGHWAY ENGINEER

K-21-41

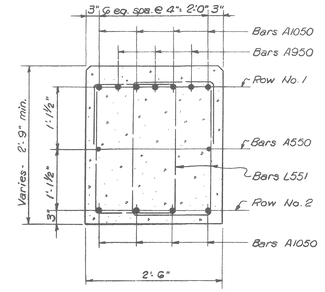
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-40-5(18)250	19	G5	591

Bent No. 1 - Right Lane, Station 49+11.89
Bent No. 2 - Right Lane, Station 49+58.89
Bent No. 1 - Left Lane, Station 48+96.03
Bent No. 2 - Left Lane, Station 49+43.03

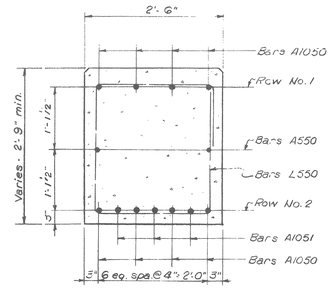


PLAN

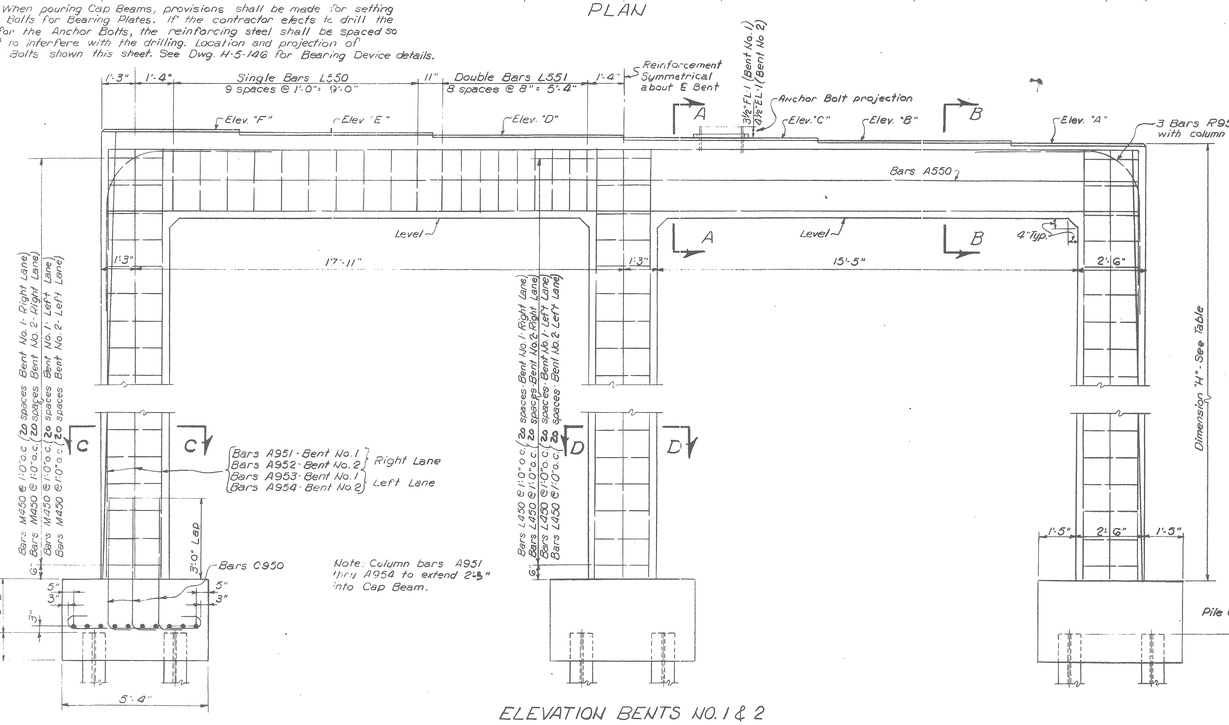
Note: When pouring Cap Beams, provisions shall be made for setting Anchor Bolts for Bearing Plates. If the contractor elects to drill the holes for the Anchor Bolts, the reinforcing steel shall be spaced so as not to interfere with the drilling. Location and projection of Anchor Bolts shown this sheet. See Dwg. H-5-146 for Bearing Device details.



SECTION A-A



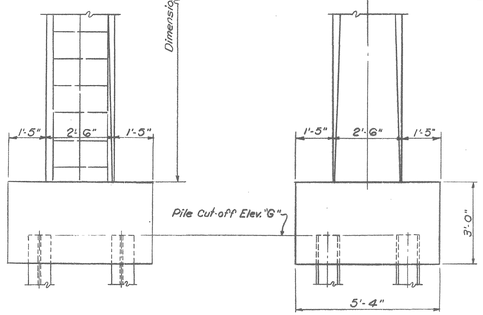
SECTION B-B



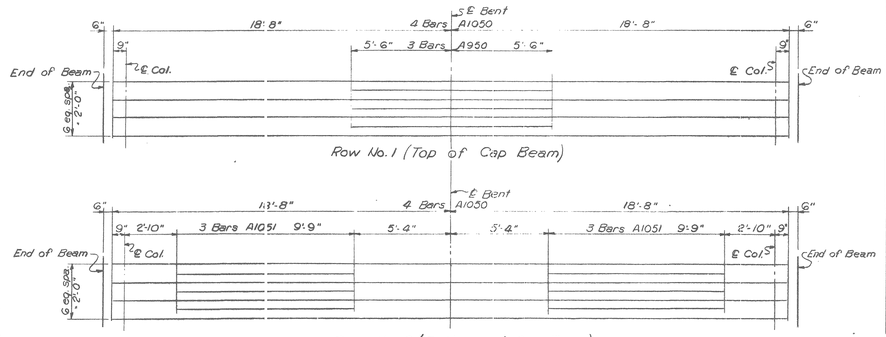
Note: Column bars A951 thru A954 to extend 2'-3" into Cap Beam.

ELEVATION BENTS NO. 1 & 2

Right Lane - Looking Forward on survey
Left Lane - Looking Back on survey

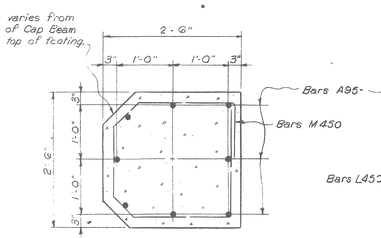


END ELEVATION

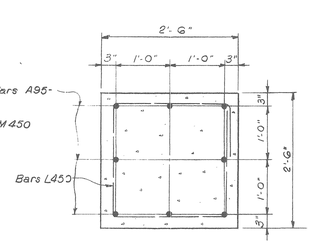


PLAN OF MAIN REINFORCING - CAP BEAM

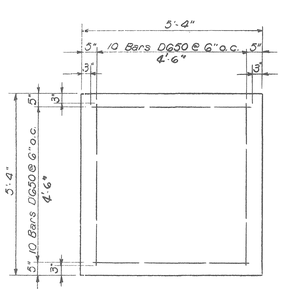
Chamfer varies from 6" @ top of Cap Beam to 3/4" @ top of footing.



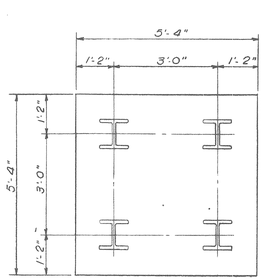
SECTION C-C



SECTION D-D



PLAN SHOWING FOOTING REINFORCEMENT



PLAN SHOWING PILE ARRANGEMENT

BILL OF STEEL - BOTH LANES

Bar	Location	Size	No. Req'd.	Bending Dimensions a	b	c	d	Length
A550	Cap Beams	5	8					37'-4"
A950	Cap Beams	9	12					11'-0"
A951	Col. Bent No. 1 - Rt. Lane	9	24					20'-9"
A952	Col. Bent No. 2 - Rt. Lane	9	24					21'-0"
A953	Col. Bent No. 1 - Lt. Lane	9	24					21'-3"
A954	Col. Bent No. 2 - Lt. Lane	9	24					21'-6"
A1050	Cap Beams	10	32					37'-4"
A1051	Cap Beams	10	24					9'-9"
C950	Columns, Footings	9	96	4'-9"				5'-4"
DG50	Footings	6	240	4'-10"				6'-2"
L450	Columns	4	84	2'-2"	2'-2"	1'-0"		9'-8"
L550	Cap Beams	5	80	2'-2"	2'-5"	1'-0"		10'-2"
L551	Cap Beams	5	192	1'-6"	2'-5"	1'-0"		8'-10"
M450	Columns	4	168	2'-2"	2'-2"	7"	1'-0"	9'-2"
R950	Cap Beams, Columns	9	24	2'-0"	6'-0"			11'-2"

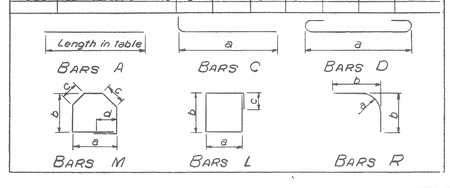


TABLE OF ELEVATIONS & DIMENSIONS

	ITEM	ELEVATION A	B	C	D	E	F	G	DIMENSION "H"
Right Lane	Bent No. 1	573.12	573.19	573.26	573.32	573.38	573.46	589.87	21'-3"
	Bent No. 2	573.34	573.40	573.47	573.54	573.60	573.67	589.84	21'-6"
Left Lane	Bent No. 1	573.01	573.09	573.17	573.25	573.33	573.41	589.26	21'-9"
	Bent No. 2	573.23	573.30	573.38	573.46	573.54	573.62	589.23	22'-0"

ESTIMATED QUANTITIES

	ITEM	Concrete - Class "A" Cu. Yds.	Reinforcing Steel Lbs.
Right Lane	Bent No. 1	32.9	5,594
	Bent No. 2	33.1	5,614
Left Lane	Bent No. 1	33.2	5,634
	Bent No. 2	33.4	5,655

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BENTS NO. 1 & 2
INTERSTATE 40 OVER STATE ROUTE 53
LEFT & RIGHT LANE BRIDGES
STATION 48+65.68
SMITH COUNTY
1962

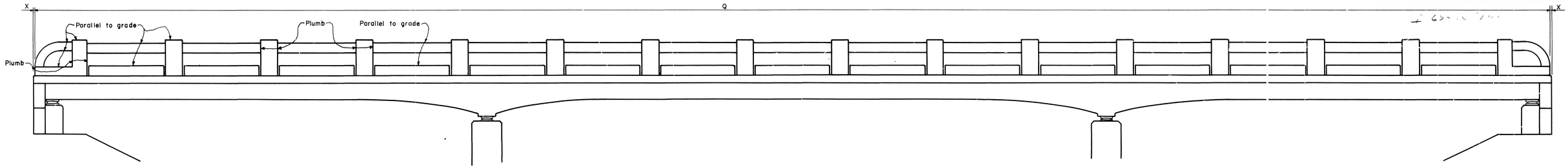
DESIGNED BY Burke — DATE 6-62
DRAWN BY P.B. Gentry — DATE 6-62
TRACED BY — DATE
CHECKED BY ARB — DATE

CORRECT Fred Grave
BRIDGE ENGINEER
APPROVED
STATE HIGHWAY ENGINEER

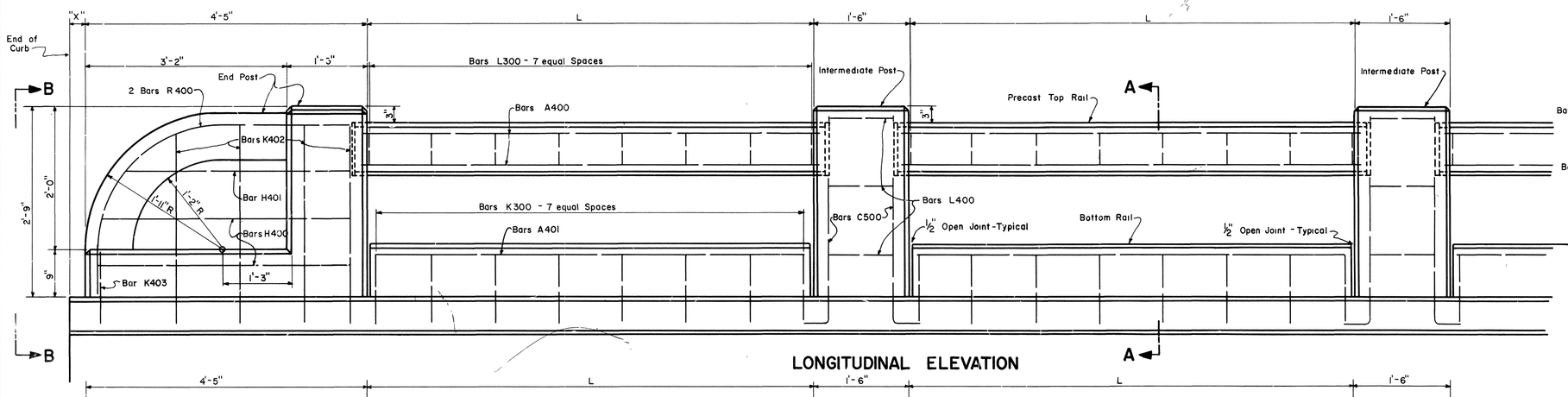
K-21-42

Revised 12-21-62

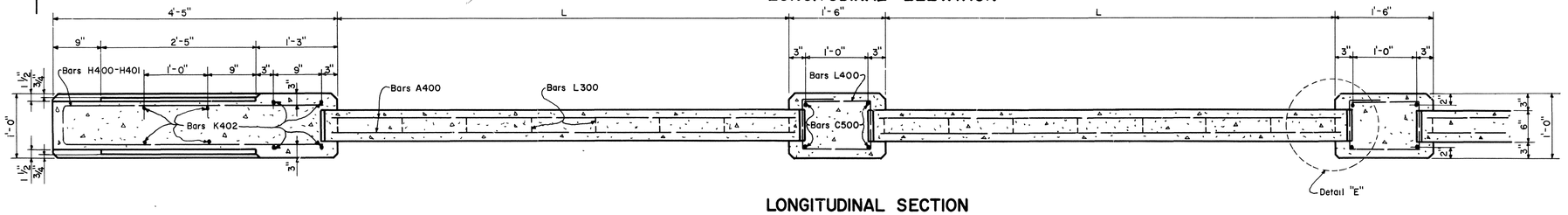
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
3	TENN		19		



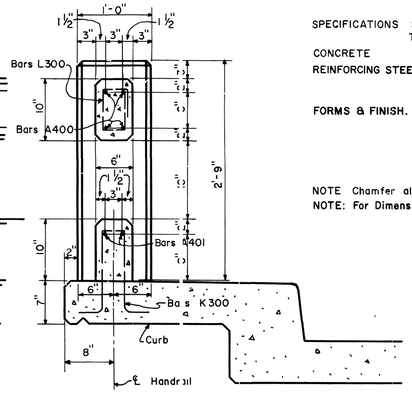
TYPICAL ELEVATION



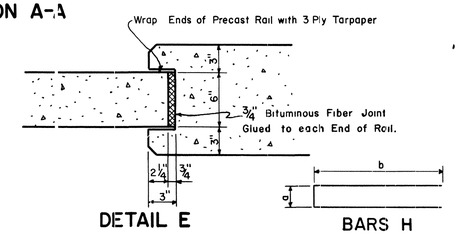
LONGITUDINAL ELEVATION



LONGITUDINAL SECTION

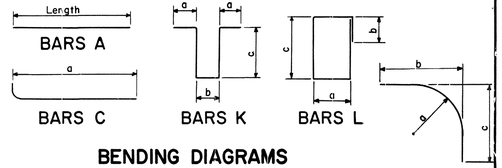


SECTION A-A



DETAIL E

BARS H



GENERAL NOTES

SPECIFICATIONS Standard Road & Bridge Specifications of the Tennessee Department of Highways.

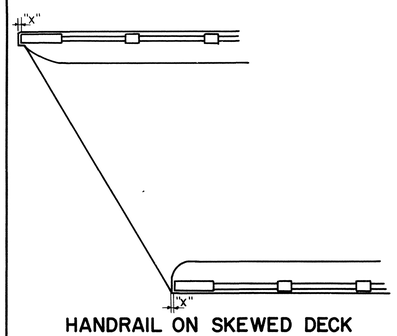
CONCRETE To be Class "A".

REINFORCING STEEL See Specifications. To be intermediate or hard grade with Standard Hook Details as recommended by C R S I.

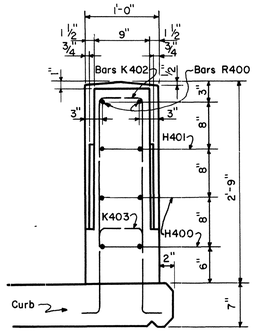
FORMS & FINISH. See Specifications

NOTE Chamfer all edges on Handrail Posts and Rails ½".

NOTE: For Dimensions X, Q, & L See Bridge Layout Sheet.



HANDRAIL ON SKEWED DECK



ELEV. B-B

END POST-LIST OF MATERIALS-EACH

Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs	Conc Cu Yd
H400	4	2	0'-6"	4'-0"			8'-6"	45.0	0.37
H401	4	1	0'-6"	3'-7"			7'-8"		
K402	4	4	0'-3"	0'-7"	2'-11"		6'-11"		
K403	4	1	0'-3"	0'-7"	1'-2"		3'-5"		
R400	4	2	1'-9"	4'-0"	2'-6"		5'-9"		

INTERMEDIATE POST LIST OF MATERIALS - EACH

Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs	Conc Cu Yd
C500	5	4	3'-0"				3'-4"	22.6	0.15
L400	4	3	0'-9"	0'-6"	1'-2"		4'-4"		

TOP RAIL-LIST OF MATERIALS-EACH

L	Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs	Conc Cu Yd
6'-0" to 6'-1"	A400	4	4					6'-2"	23.6	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-1" to 6'-2"	A400	4	4					6'-3"	23.8	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-2" to 6'-3"	A400	4	4					6'-4"	24.1	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-3" to 6'-4"	A400	4	4					6'-5"	24.3	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-4" to 6'-5"	A400	4	4					6'-6"	24.5	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-5" to 6'-6"	A400	4	4					6'-7"	24.7	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-6" to 6'-7"	A400	4	4					6'-8"	25.0	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-7" to 6'-8"	A400	4	4					6'-9"	25.2	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-8" to 6'-9"	A400	4	4					6'-10"	25.4	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-9" to 6'-10"	A400	4	4					6'-11"	25.6	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-10" to 6'-11"	A400	4	4					7'-0"	25.9	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-11" to 7'-0"	A400	4	4					7'-1"	26.1	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		

BOTTOM RAIL-LIST OF MATERIALS-EACH

L	Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs	Conc Cu Yd
6'-0" to 6'-1"	A401	4	2					5'-8"	17.7	0.09
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-1" to 6'-2"	A401	4	2					5'-9"	17.8	0.09
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-2" to 6'-3"	A401	4	2					5'-10"	17.9	0.09
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-3" to 6'-4"	A401	4	2					5'-11"	18.1	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-4" to 6'-5"	A401	4	2					6'-0"	18.2	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-5" to 6'-6"	A401	4	2					6'-1"	18.3	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-6" to 6'-7"	A401	4	2					6'-2"	18.4	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-7" to 6'-8"	A401	4	2					6'-3"	18.5	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-8" to 6'-9"	A401	4	2					6'-4"	18.6	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-9" to 6'-10"	A401	4	2					6'-5"	18.7	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-10" to 6'-11"	A401	4	2					6'-6"	18.8	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-11" to 7'-0"	A401	4	2					6'-7"	19.0	0.11
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		

BENDING DIAGRAMS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD CONCRETE HANDRAIL 1960

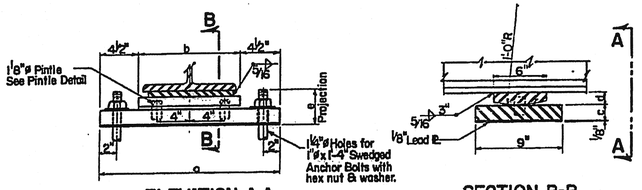
DESIGNED BY ____ DATE ____
DRAWN BY J.L. Parkes DATE ____
RETRACED BY R. Reagan DATE 4-4-63
CHECKED BY ____ DATE ____

CORRECT Thad Greene
BRIDGE ENGINEER
APPROVED Cecil Young
STATE HIGHWAY ENGINEER

H-5-110

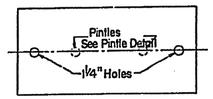
2 Copies

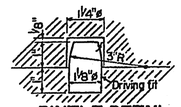
Revised: 1" - June - 1962
Revised: 8" - September - 1960



ELEVATION A-A

SECTION B-B



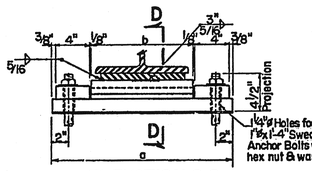


PINTLE DETAIL

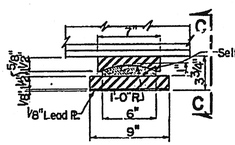
STANDARD FIXED BEARING

TABLE OF DIMENSIONS & ESTIMATED QUANTITIES

Type	Dimensions					Structural Steel
	a	b	c	d	e	Lbs.
FL1	1'-9½"	1'-0½"	1¾"	1¾"	3½"	150
FL2	1'-11½"	1'-2½"	1¾"	1¾"	3½"	167

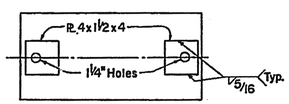


ELEVATION C-C



SECTION D-D

NOTE: Surfaces of the Steel ℄s opposing Self Lubricating ℄s to be given a plain machined finish, approx. 125 Microinch RMS. No paint or grease shall be on these surfaces or on the surfaces of the Expansion ℄. At the time of assembly these surfaces of the Steel ℄s shall be coated with a Lubricant furnished by the manufacturer of the Expansion ℄.



STANDARD EXPANSION BEARING

TABLE OF DIMENSIONS & ESTIMATED QUANTITIES

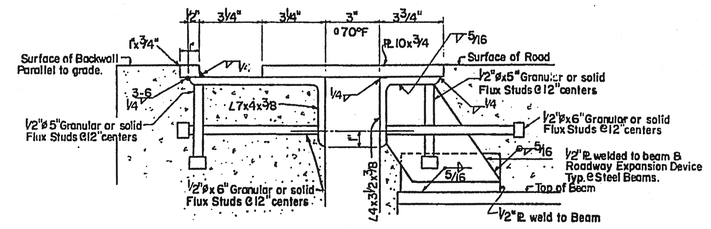
Type	Dimension		Structural Steel	Bronze*
	a	b	Lbs.	Lbs.
EL1	1'-9½"	1'-0½"	148	19
EL2	1'-11½"	1'-2½"	164	22

*See Special Provisions Regarding Self Lubricating Bronze Bearing Plates.

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY Mullen DATE 6-9-61
CHECKED BY _____ DATE _____

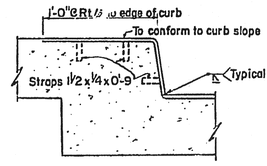
Revised 9-6-61

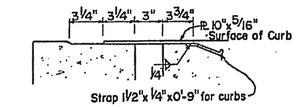
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		



ROADWAY EXPANSION DEVICE TYPE A
SECTION AT RT. ANGLE TO JOINT

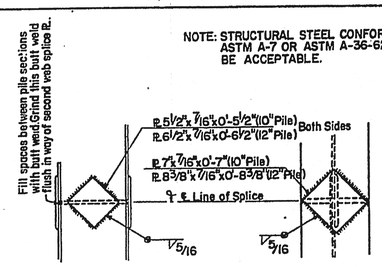
NOTE: Fabricate to fit slope of Roadway and skew of Bridge as required.
NOTE: See also Abutment drawings.





DETAIL OF CURB EXPANSION DEVICES
Required one at each end of roadway expansion device.

NOTE: STRUCTURAL STEEL CONFORMING TO ASTM A-7 OR ASTM A-36-62T WILL BE ACCEPTABLE.



STANDARD PILE SPLICE DETAIL

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD STEEL BRIDGE DETAILS
BEARING DEVICES
ROADWAY EXPANSION DEVICE
PILE SPLICE
1961

CORRECT Fred Groves BRIDGE ENGINEER
APPROVED [signature] STATE HIGHWAY ENGINEER

H-5-146

2 copies.