Survey & Design

Index Of Sheets

(SEE SHEET 1A)

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF PLANNING AND DEVELOPMENT

TENN. 1996 1

FED. AID PROJ. NO. 33003-4154-04

HAMILTON COUNTY

I-24

FROM EAST OF S.R. 8 TO 1-75 (INCL. MEDIAN BARRIER)

PARTIAL PAVING, MEDIAN MODIFICATION, GUARDRAIL

INTERSTATE HIGHWAY NO. 1-24

END PROJ. NO. 33003-4154-04 CONST. STA. 334+00.00 E.B.L.



BEG. PROJ. NO. 33003-4154-04 CONST. STA. 191+44.33 E.B.L.

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL THE PROPOSAL CONTRACT

TDOT ROAD C.E. MGR. 1 MICHAEL AGNEW

DESIGNER __JIMMY C. LEDBETTER _____ CHECKED BY ___ LARRY RAY

P.E. NO. 33003-1152-44

ROADWAY LENGTH BRIDGE LENGTH BOX BRIDGE LENGTH PROJECT LENGTH

SCALE: 1"= 5,000"

HATTANOOGA

2.675 MILES 0.031 MILES 0.000 MILES

2.706 MILES

HAMILTON COUNTY

33003-4154-04

NO EXCLUSIONS

TABLE OF EQUATION	NS	
EQUATIONS WEST BOUND	LANE ·	
STATIONS (BK.) = STATIONS (AHD.)	+	
204+02.94 + 203+13.80	89.14′	
EQUATIONS EAST BOUND	LANE	
203+48.66 + 203+13.80	34.86′	
EFFECT ON ENUMERATION	34.8	6′

NOTE : PROJECT LENGTH BASED ON E.B.L. LENGTH



6-25-96

OVED: Paul R. Morrison
DESIGN DIVISION

John Setto Sa

TRAFFIC DATA

ADT (1996) \$1,450

ADT (2016) 118,900

DHV (2016) 11,890

D 60 - 40

T (ADT) 15 %

T (DHV) 10 %

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

DATE

S-GR-29

. S-GR-30

S-GR-31

S-MB-1

S-MB-3

S-MB-4

T-L-1A

T-PBR-1

SBR-2-124

SBR-2-125

SBR-2-126 1-04-96

S-MB-3A

2-14-96

2-14-96

2-14-96

5-27-96

5-27-96

5-27-96

5-27-96

10-26-95

1-04-96

1-04-96

GUARDRAIL TERMINAL ANCHOR (TYPE 16) POST LAYOUT

INTERCONNECTED PORTABLE BARRIER RAIL
DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL
SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND
NEW 10'-2" ENDPOST - 1988

DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERALL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST - 1988

DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST - 1988

CONCRETE GLARE SCREEN MEDIAN BARRIER BRIDGE PIER PROTECTION

MELT GUARDRAIL ELEMENT ASSEMBLY DETAILS

MELT GUARDRAIL POST AND ASSEMBLY DETAILS

CONCRETE GLARE SCREEN MEDIAN BARRIER

CONCRETE GLARE SCREEN MEDIAN BARRIER

AND ERECTION DETAILS

AND ERECTION DETAILS

CONCRETE MEDIAN BARRIER

LIGHTING DETAILS-FOUNDATIONS

	U7I	Q1/12
C C C C C C C C C C C C C C C C C C C	CADD UNIT, 7	

					·		12-12-	
INDEX OF A	CHEFTE							TYPE YEAR PROJECT NO. SHEET NO.
INDEX OF	SHEE 15	(TO BE PRIN	TED WITH PLANS- CONT.)	\$1	TANDA	RD ROADWAY DRAWINGS	CONST. 1996 33003-4154-04 1A
SHT. NO.	DESCRIPTION	<u>`</u>	3 22 1111	THE STATE OF THE S				
1	. TITLE SHEET	DWG. NO.	CURRENT	DESCRIPTION	DWG. NO.	CURRENT	DESCRIPTION	
	. INDEX & STANDARD ROADWAY DRAWINGS	DWG. NO.	REVISION	DESCRIPTION	bio. No.	REVISION	DE SCHIFFI LON	
	. ESTIMATED ROADWAY QUANTITIES	600 0 107	1.04.00	DETAILS CHOWING DIED DOOTSON				REV. 7/17/96: ADDED SHEET
	TYPICAL SECTION WITH PROPOSED PAVING SCHEDULE	SBR-2-127	1-04-96	DETAILS SHOWING PIER PROTECTION WITH NEW CONCRETE BARRIER WALL - 1988			DOADHAY DESIGN STANDARDS	NO'S. 2M, 2N & 2P TO PLANS. DELETED STD. DWG. RP-J-23 & 24.
2C		SBR-2-128	1-04-96	DETAILS SHOWING PIER PROTECTION WITH NEW CONCRETE			ROADWAY DESIGN STANDARDS	REV. 7-25-96: ADDED SHEET NO. 2F(!)
	. TABULATED QUANTITIES			BARRIER WALL - 1988				TO PLANS. ADDED STD. DWG. NO. S-EA-I TO PLANS.
2F 8 2F(I)	DETAILS	SBR-2-129	1-04-96	DETAILS SHOWING PIER PROTECTION WITH NEW VERTICAL CONCRETE BARRIER - 1988	RD-A-1	9-05-94	STANDARD ABBREVIATIONS	S-EA-1 TO PLANS.
	LIGHTING DETAILS, NOTES, & ESTIMATED QUANTITIES	SBR-2-130	1-04-96	DETAILS SHOWING PIER PROTECTION WITH NEW VERTICAL	RD-L-1 RD-L-2	10-26-94 10-26-94	STANDARD LEGEND STANDARD LEGEND FOR UTILITY INSTALLATIONS	
	. BRIDGE TABULATIONS AND ESTIMATED QUANTITIES	SBR-2-131	1-04-96	CONCRETE BARRIER - 1988	RD-L-3	10-26-94	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING	
	. BRIDGE REPAIR DETAILS . MEDIAN BARRIER DETAILS	3DK-2-131	1-04-96	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE SLOPE FACE ENDPOST - 1989	RD-S-11	10-26-93	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE	
	. JOINT SPACING DETAIL	SBR-2-132	1-04-96	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS	DD C 17	7 20 01	SLOPE DEVELOPEMENT	
	CONCRETE REPAIR DETAILS	RD-L-4	5-27-96	TO EXISTING CONCRETE SLOPE FACE ENDPOST ~ 1989	RD-S-17 RD-TS-5B	7-29-91 7-29-92	MEDIAN SECTIONS & MEDIAN BARRIER WARRANT CRITERIA DESIGN STANDARDS FREEWAYS WITH MEDIAN BARRIER	
	. PROPOSED LAYOUT SHEETS	RD-S-11A	1-29-96	STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION	RD-UD-3		UNDERDRAIN DETAILS	
	. TYPICAL SECTIONS OF TRAFFIC CONTROL	D-CB-31	1-19-95	PRECAST CIRCULAR NO. 31 CATCH BASIN	RD-UD-4		UNDERDRAIN DETAILS	· ·
	. PAVEMENT EDGE DROP-OFF NOTES	RP-D-14	5-27-96	DETAILS OF CONCRETE DRIVEWAYS	RD-UD-6	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 1:1 & 2:1 S	
	. TRAFFIC CONTROL DETAILS	RP-J-9	5-27-96	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAYEMENT	RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 S	LOPES
	. TRAFFIC CONTROL LAYOUT PHASE 1			PAVEMENT			,	
	. TRAFFIC CONTROL LAYOUT PHASE 2 & 4							
	TRAFFIC CONTROL LAYOUT PHASE 3 & 5						DRAINAGE - CULVERTS AND ENDWALLS	
16	. TRAFFIC CONTROL LAYOUT PHASE 3A & 5A							
. 17	. TYPICAL SIGNING PHASE 1 E.B.L. CLOSURE				D-PB-1	7-29-94	CLASS "B" BEDDING AND CULVERT EXCAVATION	
18	. TYPICAL SIGNING PHASE 1 W.B.L. CLOSURE & LANE SHIFT				D-PE-48 (1)	11-06-89	CONCRETE ENDWALL TYPE "U" WITH STEEL PIPE GRATE	
19	TYPICAL SIGNING PHASE 2 & 3 LANE SHIFTS E.B.L.				D-PE-48 (2)	3-20-86	(FOR 18" THRU 48" PIPES) 4:1 SLOPE) CONCRETE ENDWALL TYPE "U" WITH STEEL PIPE GRATE	. *
20	. TYPICAL SIGNING PHASE 4 LANE SHIFTS W.B.L.				D-FE-40 (2)	3-20-66	(FOR 18" THRU 48" PIPES) 4:1 SLOPE)	
	. TYPICAL SIGNING PHASE 5 LANE SHIFTS W.B.L.				D-PG-3	7-29-94	FERROUS AND ALUMINUM CORRUGATED METAL PIPE	1
	. TYPICAL SIGNING ONE LANE CLOSURE PHASE 3A E.B.L.							
	. TYPICAL SIGNING ONE LANE CLOSURE PHASE 5A W.B.L.							
	. PHASE 2 LANE SHIFT E.B.L PHASE 3 LANE SHIFT E.B.L.						DRAINAGE-CATCH BASINS AND MANHOLES	
	. PHASE 3A LANE SHIFT E.B.L.							
27-85	. ROADWAY CROSS-SECTIONS				D-CB-3	6-20-90	NO. 36 AND NO. 37 CATCH BASINS AND GRATE	
(TO BE DOIN	NTED WITH PLANS)				D-CB-31S		7' X 7' SQUARE CONCRETE NO.31 CATCH BASIN	
CTO BE FRII	NIED WITH FLANS				D-CBB-31		TYPE "B" CAST IRON FRAME, GRATE & INLET DETAILS FOR NO. 31 TYPE CATCH BASIN	
DWG. NO. CURRENT REVISION	DESCRIPTION							
							ROADWAY AND PAVEMENT APPURTENANCES	
ESC-STR-1 10-26-95 ESC-STR-3 5-27-95	TEMPORARY DEWATERING STRUCTURE, PAY ITEMS & GENERAL NOTES	5					4	
ESC-STR-5 12-18-94	TEMPORARY SILT FENCE & FILTER BARRIER STRAW OR HAY BALE OR FABRIC TEMPORARY SILT CHECKS				RP-J-1	12-18-94	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND	SPACING
ESC-STR-19 5-27-95	CATCHBASIN PROTECTION	. (INCLUDE IN	PLANS - TO BE REFILED WITH STRUCTURES)	RP-J-3	12-18-94	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND	
S-GR-11 6-10-96	W-BEAM & THRIE BEAM BARRIER RAIL AND RUB RAIL ALTERNATES	=			RP-J-11	12-18-94	%" AND 1-3/4" EXPANSION AND EDGE PAVEMENT JOINTS	
S-GR-12 6-10-96	BARRIER RAIL MOUNTING, POST BLOCK-OUTS		DWG. NO. CUF	RENT DESCRIPTION	RP-J-13	3-20-91	%" AND 1-3/4" ELASTOMERIC COMPRESSION JOINT SEALS	1.
S-GR-13 6-10-96	W-BEAM BARRIER POST DETAILS AND SPECIFICATIONS		C-0-01	1310N	RP-J-15	3-20-91	METAL LONGITUDINAL JOINTS	
S-GR-15 7-29-95 S-GR-18 5-27-96	W-BEAM BARRIER TERMINAL ELEMENT DETAILS GUARDRAIL TERMINAL ANCHOR (TYPE 11)			1-87 SOUTH MOORE ROAD OVERPASS-GENERAL DRAWING 1-60 SOUTH MOORE ROAD OVERPASS-BENTS AND COLUMNS	RP-J-17 RP-J-18	12-18-94 12-18-94	DOWEL ASSEMBLY DEVICES DOWEL ASSEMBLY DEVICES	
3 01 10 3 21 30	GUARDRAIL ANCHOR (TYPE IN-LINE)		G-9-95	-60 SOUTH MOORE ROAD OVERPASS-BENTS	RP-J-18	12-18-94	DOWEL ASSEMBLY DEVICES	
S-GR-18A 2-14-96	DETAILS FOR BREAKAWAY POST ANCHOR PLATE AND SWAGE FITTING			'-65 McBRIEN ROAD OVERPASS-GENERAL DRAWING '-60 McBRIEN ROAD OVERPASS-BENTS AND COLUMNS	71. 0 15	12 10 5	SOME ASSEMBLY SEVICES	
S-GR-19 5-27-96	TERMINAL ANCHORS, TYPE 12 AND TYPE 13		G-9-102	'-60 McBRIEN ROAD OVERPASS-BENTS				1
S-GR-20 7-29-95 S-GR-21 5-27-96	MEDIAN DIVIDER GUARDRAIL AND GUARDRAIL TERMINAL ANCHORS			BELVOIR AVENUE OVERPASS-GENERAL DRAWING 1-60 BELVOIR AVENUE OVERPASS-BENTS AND COLUMN				
S-GR-21 5-27-96 S-GR-23 12-18-95	LENGTH OF NEED AND TERMINAL REQUIREMENTS IN FILLS GUARDRAIL ATTACHMENT TO STRUCTURES AND PROTECTIVE			-60 BELVOIR AVENUE OVERPASS-BENTS				4
	GUARDRAIL AT BRIDGE ENDS DETAILS		K-19-1	MISSIONARY RIDGE, SO. SEMINOLE DR. OVERPASS- GENERAL DRAWING			SAFETY APPURTENANCES AND FENCE	
S-GR-24 5-27-96	MINIMUM INSTALLATION LENGTH FOR PROTECTIVE		K-19-4	MISSIONARY RIDGE, SO. SEMINOLE DR. OVERPASS-	S-EA-I	9-19-91	CONSTRUCTION ZONE GUARDRAIL ENERGY ABSORBING TERMINAL	*************
S-GR-25 5-27-96	GUARDRAIL AT BRIDGE ENDS GUARDRAIL TERMINAL ANCHOR (TYPE 20) POST LAYOUT		K-19-5	BENTS AND COLUMNS MISSIONARY RIDGE, SO, SEMINOLE DR. OVERPASS-	S-F-10		RIGHT-OF-WAY STOCK FENCE	MEL J. AGAMAN
	AND EDECTION DETAILS			DENTA	S-F-10B	7-17-91	BIGHT-OF-WAY CHAIN LINK FENCE	A CHERED ENGLY

S-F-10B

S-GR-17A

10-26-94

TRAFFIC CONTROL APPURTENANCES T-FAB-1 5-30-91 FLASHING YELLOW ARROW BOARD T-L-1 11-12-93 LIGHTING DETAILS-SUPPORTS MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS T-M-5 10-26-92 T-M-6 1-19-94 MARKING DETAIL FOR EXPRESSWAY AND FREEWAY GORE MARKING DETAILS FOR EXPRESSWAY AND FREEWAY T-M-7 12-18-92 INTERCHANGES MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS T-M-8 12-18-92 DETAIL FOR VERTICAL PANELS T-PBR-2 -----GORE MARKING DETAILS FOR EXPRESSWAY AND FREEWAY INTERCHANGES 12-18-92 T-M-7

7-17-81 RIGHT-OF-WAY CHAIN LINK FENCE

TABLES OF OFFSETS FOR STAKING OUT GUARDRAIL FLARE



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF PLANNING & DEVELOPMENT

> INDEX AND STANDARD ROADWAY DRAWINGS

DESIGN DIVISION

SCANA

WHEN BRIDGE DECK DRAINS ARE ENCOUNTERED. THE CONTRACTOR SHALL MAKE PROVISIONS FOR EXTENDING DRAINS TO TOP OF WEARING SURFACE. METHOD OF EXTENSION TO MEET WITH THE APPROVAL OF THE ENGINEER. COST TO BE INCLUDED IN BRIDGE DECK SEALANT ITEM ND. 617-01.

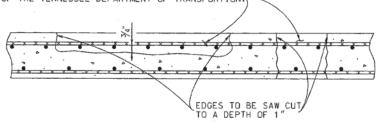
FOR EXPANSION JOINT REPAIR DETAILS, SEE STANDARD DRAWING NOS. BR-2-115 THRU BR-2-121. THE CONTRACTOR SHALL FIELD VARIFY ALL THE LENGTHS REQUIRED FOR INSTALLATION PRIOR TO JOINT FABRICATION. ALSO THE FOLLOWING SPECIAL PROVISIONS SHALL APPLY:

105A REGARDING APPROVAL OF SHOP DRAWINGS
604S REGARDING STRIP SEAL EXPANSION JOINTS

FOR DETAIL AND NOTES ON REINFORCED CONCRETE MEDIAN BARRIER (ITEM NO. 711-02.03), REFER TO SHEET NO.

100 mg/s	TABULAT	ION OF B	RIDGE	RELATE	ED WORK	AND	ESTIN	MATED	QUANTI	TIES	
LOCATION OF BRIDGE AND BRIDGE NUMBER	REFERENCE DRAWINGS TO BE PRINTED WITH CONTRACT DRAWINGS	TYPE OF WORK	604-10.30 BRIDGE DECK REPAIR (FULL DEPTH OF SLAB) S.Y.	604-10.50 BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB) S.Y.	617-01 BRIDGE DECK SEALANT S.Y.	407-02 REMOVAL & DISPOSAL OF EXISTING SURFACE (BITUMINOUS) C.Y.	705-10.29 CONCRETE BARRIER WALL FOR BRIDGE PIERS L.F.	711-02.03 REINFORCED CONCRETE MEDIAN BARRIER (BRIDGES)	604-03.09 CLASS "D" CONCRETE (BRIDGE DECK)	604-02.03 EPOXY COATED REINFORCING STEEL LB.	604-04.01 APPLIED TEXTURE FINISH (NEW STRUCTURES) S.Y.
33-4148-3.27/124-11.45 33I00240053	K-19-1.K-19-4.K-19-5	PIER PROTECTION					8.8				
33-124-12.08(EBL)/3577 33I00240055		BRIDGE DECK REPAIR BRIDGE DECK SEALANT	10	200	737			166	41	12,719	175
33-I24-12.08(WBL)/3577 33I00240055		BRIDGE DECK REPAIR BRIDGE DECK SEALANT	10	200	737						
33-3611-1.01/124-12.54 33I00240057	H-2-15.H-2-18.H-2-19	PIER PROTECTION					180				
33-3578-0.08/I24-13.34 33I00240059	G-9-91.G-9-94.G-9-95	. PIER PROTECTION				-	180				
33-3610-1.58/124-13.62 33I00240061	G-9-99,G-9-101,G-9-102	PIER PROTECTION					193				
	TOTAL		20	400	1474		641	166	41	12,719	175

CONCRETE FOR DECK REPAIR SHALL BE OUICK SETTING PATCHING MATERIAL MEETING ASTMC-928 AND APPROVED BY THE MATERIALS AND TEST DIVISION OF THE TENNESSEE DEPARTMENT OF TRANSPORTION.



SKETCH SHOWING DECK REPAIR

NOTE: REMOVE CONCRETE IN ALL DELAMINIATED AREAS TO A DEPTH OF 3/4" BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE BLAST CLEANED. BLASTING AND CLEANING SHALL BE DONE PRIOR TO PLACING NEW CONCRETE OR INSTALLING PATCHING MATERIAL. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE HEADQUARTERS, BRIDGE INSPECTION AND REPAIR OFFICE.

NOTE: ITEM NO. 604-10.50. BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), AND ITEM NO. 604-10.30. BRIDGE DECK REPAIR (FULL DEPTH OF SLAB). SHALL BE BID WITH THE CONTINGENCY THAT THIS MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

POWER DRIVEN HAND TOOLS:

POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL AND FULL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

(1) PARTIAL DEPTH REPAIRS: PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 LBS

CLASS SHALL NOT BE USED. ALSO TRAFFIC CONTROL SHALL BE SET UP DURING PARTIAL

DEPTH REPAIRS OVER TRAFFIC. (2) FULL DEPTH REPAIRS: PNEUMATIC HAMMERS

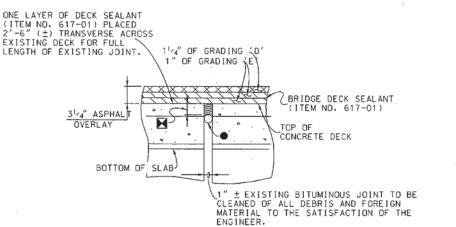
HEAVIER THAN NOMINAL 90 LBS CLASS SHALL NOT BE USED. ALSO ALL DECK REPAIR

OVER BEAMS WILL BE RESTRICTED TO 60 LBS PNEUMATIC HAMMERS. (3) CHIPPING HAMMERS

OF THE 15 LB CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

OPTIONAL BRIDGE DECK REPAIR MATERIAL

IF LANE CLOSURES ARE PROVIDED FOR THIS PROJECT AND THE LANE CLOSURES ARE SUCH THAT TRAFFIC WILL BE KEPT OFF OF THE BRIDGE DECK WHERE DECK REPAIRS WILL BE MADE. THEN HIGH EARLY STRENGTH CONCRETE. F'C = 24 MPQ @ 28 DAY STRENGTH MAY BE SUBSTITUTED FOR THE QUICK SET PATCHING MATERIALS SPECIFIED IN THE SKETCH TO THE RIGHT. ALSO SEE TENNESSEE STANDARD SPECIFICATIONS. IF EARLY STRENGTH CONCRETE IS USED. THEN TRAFFIC WILL NOT BE PERMITTED ON THE REPAIRED AREAS UNTIL A MINIMUM OF TEN (10) DAYS HAVE ELASPED FROM THE DATE OF POUR AND REPRESENTIVE TEST SPECIMENS HAVE ATTAINED A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 psi. ALSO AN APPROVED EPOXY BONDING AGENT SHALL BE USED BETWEEN THE OLD AND THE NEW CONCRETE POURS.



SECTION THRU EXISTING BRIDGE SLAB JOINT

(TYPICAL AT ALL EXISTING BITUMINOUS JOINTS WHEN NO JOINT REPAIR DETAIL IS SPECIFIED IN THE TABLE ABOVE)

● NOTE: THE EXISTING JOINT OPENING SHALL BE CAULKED WITH A BACKER ROD OF SUITABLE DIAMETER. THE ROD SHALL BE PLACED AT A DEPTH TO ENSURE THE CORRECT WIDTH/DEPTH RATIO OF THE NEW JOINT SEALANT MATERIAL. BACKER ROD SHALL BE AS PER JOINT MANUFACTURERS RECOMMENDATION.

DENOTES: TOP 2" OF ALL EXISTING BITUMINOUS JOINTS IN THE BRIDGE SLAB
TO BE CLEANED AND RESEALED WITH NEW JOINT SEALER. CONTRACTOR HAS
THE OPTION OF USING EITHER: (1) A TYPE K HOT-POURED ELASTIC TYPE CONCRETE
JOINT SEALER. SEE STANDARD SPECIFICATIONS SECTION 905.05. JOINT SEALER.
(2) A COLD POUR SINGLE COMPONENT JOINT SEALER AS APPROVED BY THE
DIVISION OF MATERIALS AND TEST. COST OF JOINT CLEANING AND SEALING
TO BE INCLUDED UNDER ITEM NO.617-01 (BRIDGE DECK SEALANT). THE SEALER
SHALL EXTEND UP AND ACROSS THE CURB OR SIDEWALK AREA TO THE OUTER
EDGE OF THE BRIDGE SLAB.

				1996	2 H
				REVISIONS	
	NO.	DATE	BY	BRIEF	DESCRIPTION
FOR DETAIL AND NOTES ON CONCRETE PARAPET (BRIDGERAIL REPLACEMENT) (ITEM NO. 520-10.01), REFER TO STD.DWG. NO. BR-2-124, BR-2-125 & BR-2-126.					
	\vdash				

CONST. NO.

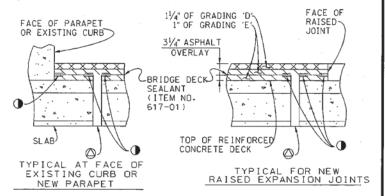
PROJECT NO.

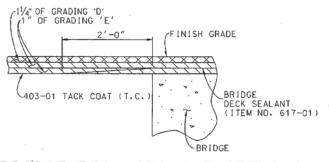
33003-4154-04

YEAR

MASTIC AS RECOMMENDED BY MANUFACTURER OF MEMBRANE. SEE STD. SPEC. ART. 906.04.

∅1½° Ø HOLE TO BE DRILLED BY THE CONTRACTOR NEAR FACE OF NEW PARAPETS OR EXISTING CURBS AT LOW POINTS.





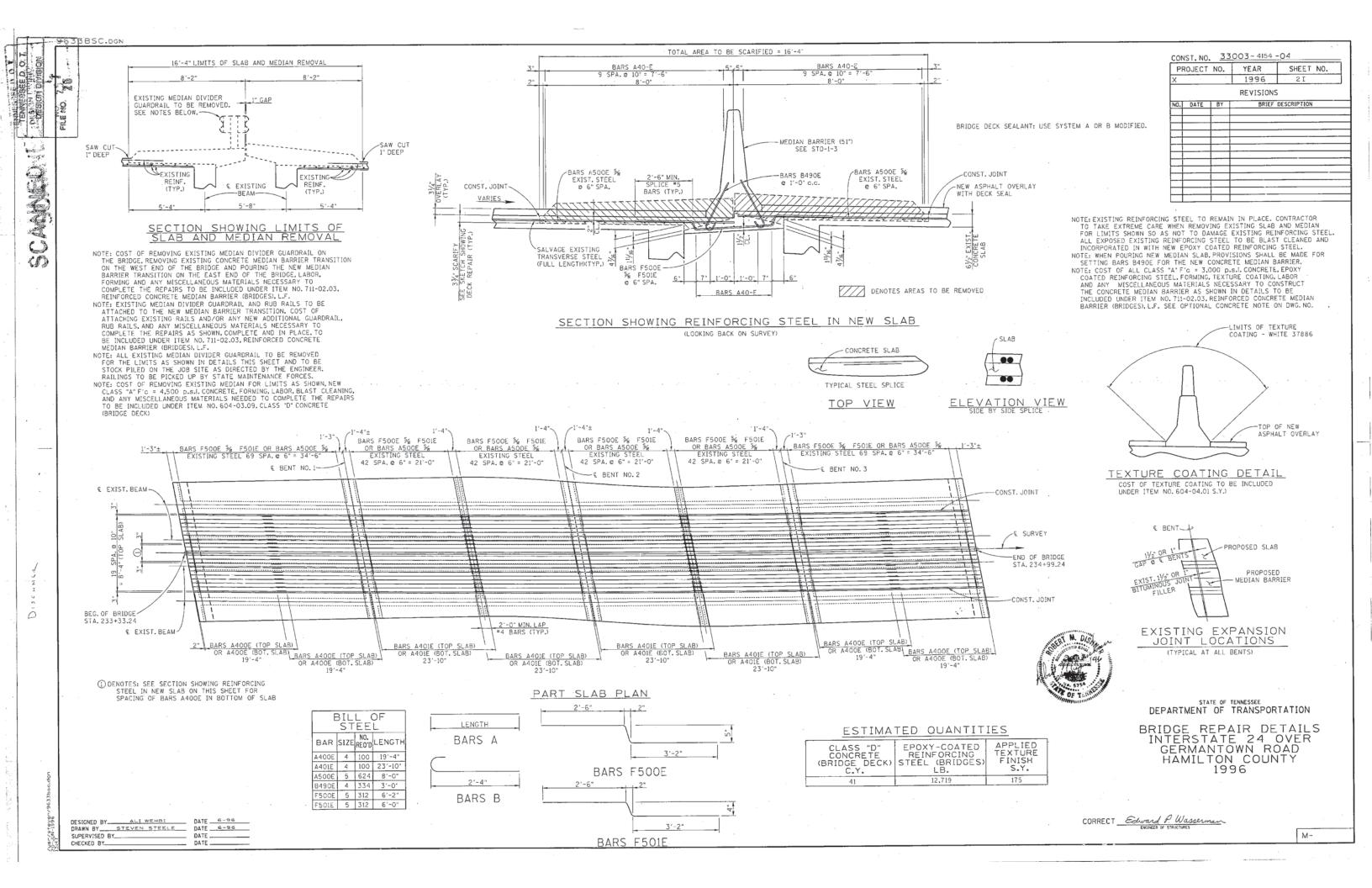
BRIDGE DECK SEALANT DETAILS

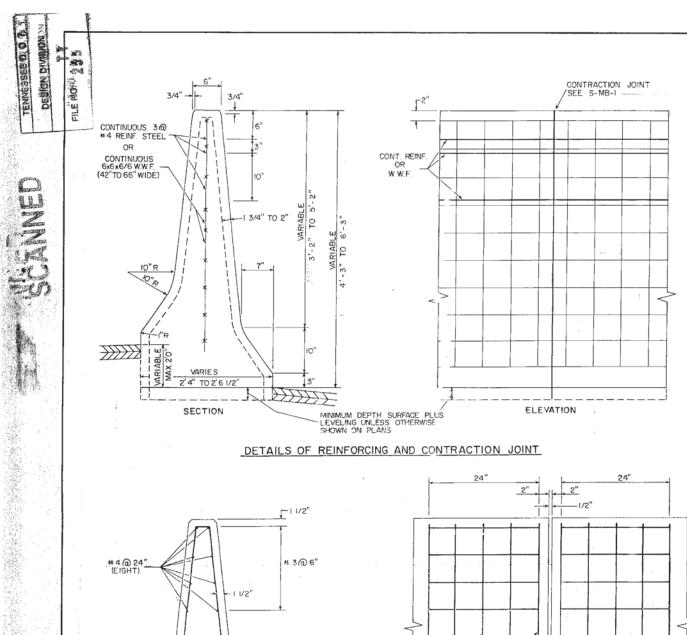
E: ON BRIDGE DECK WHERE THERE IS A BITUMINOUS JOINT OR WITH NO EXPANSION JOINT. MEMBRANE SHALL EXTEND 2'-0" OVER THE END OF THE BROOK JECK. IF THE DECK HAS A STEEL EXPANSION JOINT. THE MEMBRANE SHALL STOP AT THE STEEL EXPANSION JOINT.

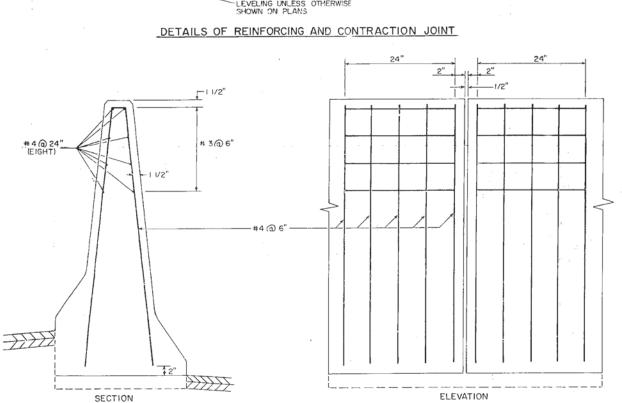
DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS

BRIDGE TABULATIONS AND
ESTIMATED QUANTITIES
INTERSTATE 24
FROM (L.M. 10.50) TO (L.M. 14.70)
HAMILTON COUNTY

1996



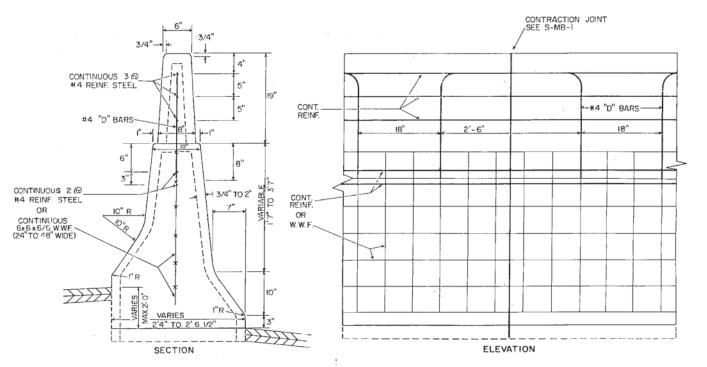




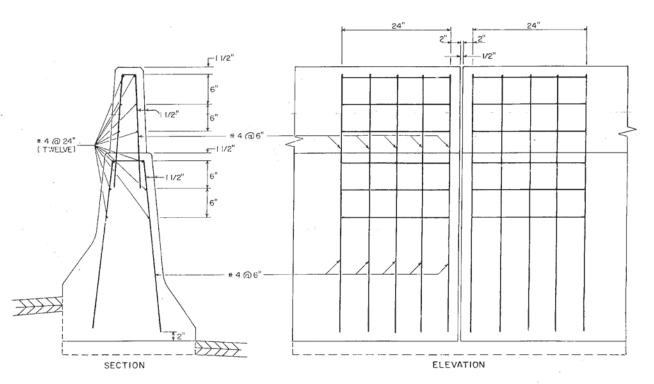
DETAILS OF REINFORCING AT EXPANSION JOINT

MONOLITHIC BARRIER

- SEE STANDORD DRAWING S-MB-I FOR NOTES AND ADDITIONAL DETAILS.
- PAYMENT WILL BE MADE UNDER ITEM NO.711-04, CONCRETE GLARE SCREEN MEDIAN BARRIER _____LIN. FT.
- THE COST OF FURNISHING AND INSTALLING MEDIAN BARRIER DELINEATORS, INCLUDING ALL MATERIALS, LABOR AND NCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION, SHALL BE INCLUDED IN BID PRICE FOR CONCRETE GLARE SCREEN MEDIAN BARRIER.
- 4 VERTICAL BARS MAY BE "D" BARS AT 18" MAXIMUM SPACING OR STRAIGHT DOWELS AT 24" MAXIMUM SPACING.



DETAILS OF REINFORCING AND CONTRACTION JOINT



DETAILS OF REINFORCING AT EXPANSION JOINT ALTERNATE BARRIER



YEAR

PROJECT ND. 1996 33003-4154-04

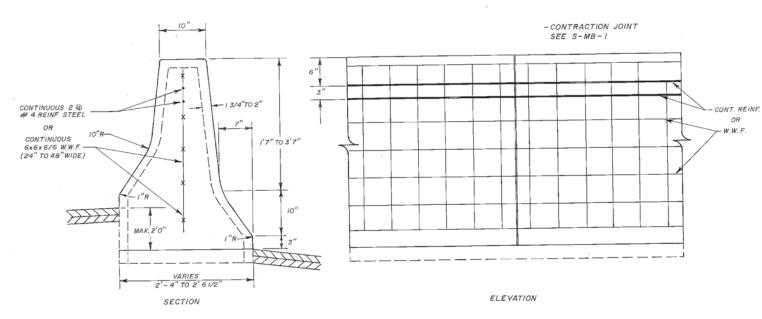
6-25-96

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF PLANNING & DEVELOPMENT

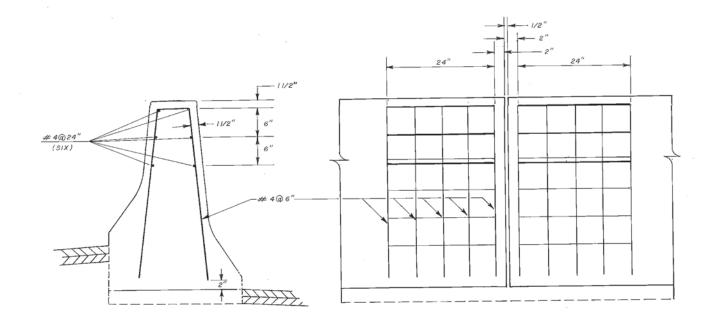
> MEDIAN BARRIER **DETAILS**



7	TYPE .	YEAR	PROJECT NO.	SHEET NO.
	CONST.	1996	33003-4154-04	2 K
]				
				<u></u>
- 1				



DETAILS OF RENFORCING AND CONTRACTION JOINT



SECTION

ELEVATION

DETAILS OF REINFORCING AT EXPANSION JOINT



6-25-96

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

MEDIAN BARRIER DETAILS

N.T.S.

ED. ROAD	STATE	PROJ. NO.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL
		F24-3(II)			83	204

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

Tennessee Department of Highways and Public Works Standard Specifications for Road and Bridge Con-

DESIGN SPECIFICATIONS

Live Load. Also, Alternate Loading as per Sect. 4c of PPM 20-4 for Germantown Road Underpass only.

MATERIALS

Concrete

All concrete except precast concrete piling and prestressed concrete beams shall be Class "A". Concrete for precast concrete piling shall be Class "S" with Class "A" aggregates. For concrete in prestressed heams see Special Provisions. For materials, forms, and finish, see Construction Specifications.

Reinforcing Steel

See Construction Specifications and Reinforcing Steel Schedules.

Prestressing Steel Cables

See Special Provisions.

Structural Steel

Except as noted below or shown elsewhere, all materials shall be carbon structural steel, ASTM-A7-56T. Bolts, nuts, and washers shall be ASTM-A7-56T or A307-55T. Nuts shall be self-locking "Stover", or approved equal. Painting: Shop paint - one coat of red lead.

Field paint - one coat of red lead paint-tinted-and two coats of aluminum paint with first coat tinted. See Construction Specifications.

Bronze Alloy

See Special Provisions and H-2-11.

Piling

See Construction Specifications and H-5-III

Prefabricated Masonry Pad

See Special Provisions and F-10-84.

Sheet Packing

Two layers of Johns-Mansville Service Sheet Packing No. 60, 1/16" thick, or approved equal. Graphite surfaces to be in contact with each other.

Premolded Joint Filler

See Construction Specifications.

WELDING

All welding shall conform to the current "Standard Specifications for Welded Highway and Railway Bridges" of the American Welding Society.

HANDRAILING

SEE H-5-110 G-9-97, G-9-104 H-2-12 AND H-2-21.

ELECTRICAL LIGHTING

See G-9-97, G-9-104, H-2-12, H-2-21

BITUMINOUS SURFACING

See Construction Specifications.

CAMBER

Concrete T-Beams shall be cambered for the dead load deflection as follows:

Camber for DL Deflection of Center of Span

46*-----51811

Sufficient camber shall be provided in the falsework and forms for each span to allow the closing up of joints in the forms

							EST	1 M	AIE	D	Q	UA	N /	171	ES									
ITEM NO.	17-2	17-4	104-1	104-2	104-3	105-1	105-2	105-3	132-1	135-4	135-12	137-3	139-1	139-3	154-1	154-1A	154-18	154-1C	154-10	154-1E	154-1F	704	702	501
ITEM	Dry	Rock		A.C. S. C.		S. A. o	r S.A.S.	C. # #	Struct.	Class "A"	Paint	10BP 42		Concrete					te Bean		,		2-Rail	Lighting
	Excav.	Excar		Asphalt	Tack		Asphalf	Tack	Steel	Concrete	Steel	Steel H-Piling		t t	33"x3'-0"	27"x 3'-0"	27"x 3'-0"	21" 3'-0"	17"x 3'-0" 33'-112"	17"x 3'-0"	17" 13'-0"	CONCRETE	Stee!	-3
******	*		199	Cement	Coaf	A99.	Cement	Coat	* * *	,		† †	Test	Size /	59:11"	55-2"	46:112"	37:1/2"	33'-112"	31'-112"	35-115"	⊕ ⊕	₽ ⊕	
STRUCTURE	C.Y.	C. Y.	Tons	Tons	Tons	Tons	Tons	Tons	Lbs.	C. Y.	165.	L.F.	L.F.	L.F.	Each	Each	Each	Each	Each	Each	Each	L.F.	4.F.	Lump Sur
GERMANTOWN ROAD UNDERPASS	439			100 171					6,860	1,300.9	292,307		400	4,900								332	392	Lump Sun
BELVOIR AVENUE OVERPASS	68/	4	134.6	9.3	0.7	134.6	9.3	0.7		526.2	86,952		320	5,155		52	26				26	381	I V	Lump Sun
SOUTH MOORE ROAD OVERPASS	597	9	122.8	8.6	0.6	122.8	8.6	0.6		486./	83,842	1,891				52				52		349	Λ	Lump Sun
MCBRIEN ROAD OVERPASS	294	2	135.2	9.4	0.6	135.2	9.4	0.6		562.7	89,816	2,302			52			26	26			384		Lump Sun
TOTALS	2,011	15	392.6	27.3	1.9	392.6	27.3	/. 9	6 860	2 975 9	552,917	4/92	720	10,055	52	104	26	26	26	52	26	1.446	332	Lump Sun

All earth excavation shall be measured and paid for as dry excavation only.

All earth excavation shall be measured and paid for as dry excavation only.

S.A. or S.A.S.C. may be used as alternates for A.C.S.C. bituminous surface materials. Includes bronze alloy plates in bearings and anchor bolts for bearings.

Cost of all embedded material such as joint fillers, drains, sheet packing, etc. shall be included in the unit price of Class "A" concrete. *Unless otherwise provided for in the Special Provisions.

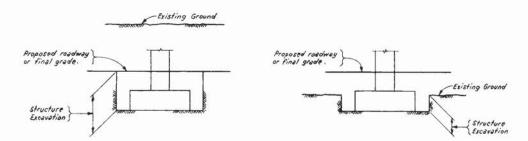
No alternates may be used for the steel H-piling in the S. Moore Road and McBrien Rd. Overpasses.

No alternates may be used for the precast concrete piling in the Germantown Rd. Underpass, but may be used in the bents only on the Belvoir Ave. Overpass. If it becomes necessary to use Size 2 piles, the Contractor will be

allowed an increase of 25% in his Size I bid price.

Prestressed concrete members complete in place with tie-rods, dowels (and drilling for dowels), bearing pads, etc.; but not including concrete sidewalks. Quantities for the sidewalks on the prestressed beam bridges are included in Item Nos. 135-4 and 135-12.

♦♦♦ Lump sum for lighting complete shall include furnishing and placing all conduits, junction boxes, on hor boths for light standards, and all other accessories necessary to complete this item.



EXCAVATION DETAILS NO SCALE

LIST OF DRAWINGS

DRAWING NO.

G-9-90----- General Notes and Specifications ----- Standard Pile Details G-9-91 to G-9-98-----South Moore Road Overpass H-2-15 to H-2-22------Belvoir Avenue Overpass

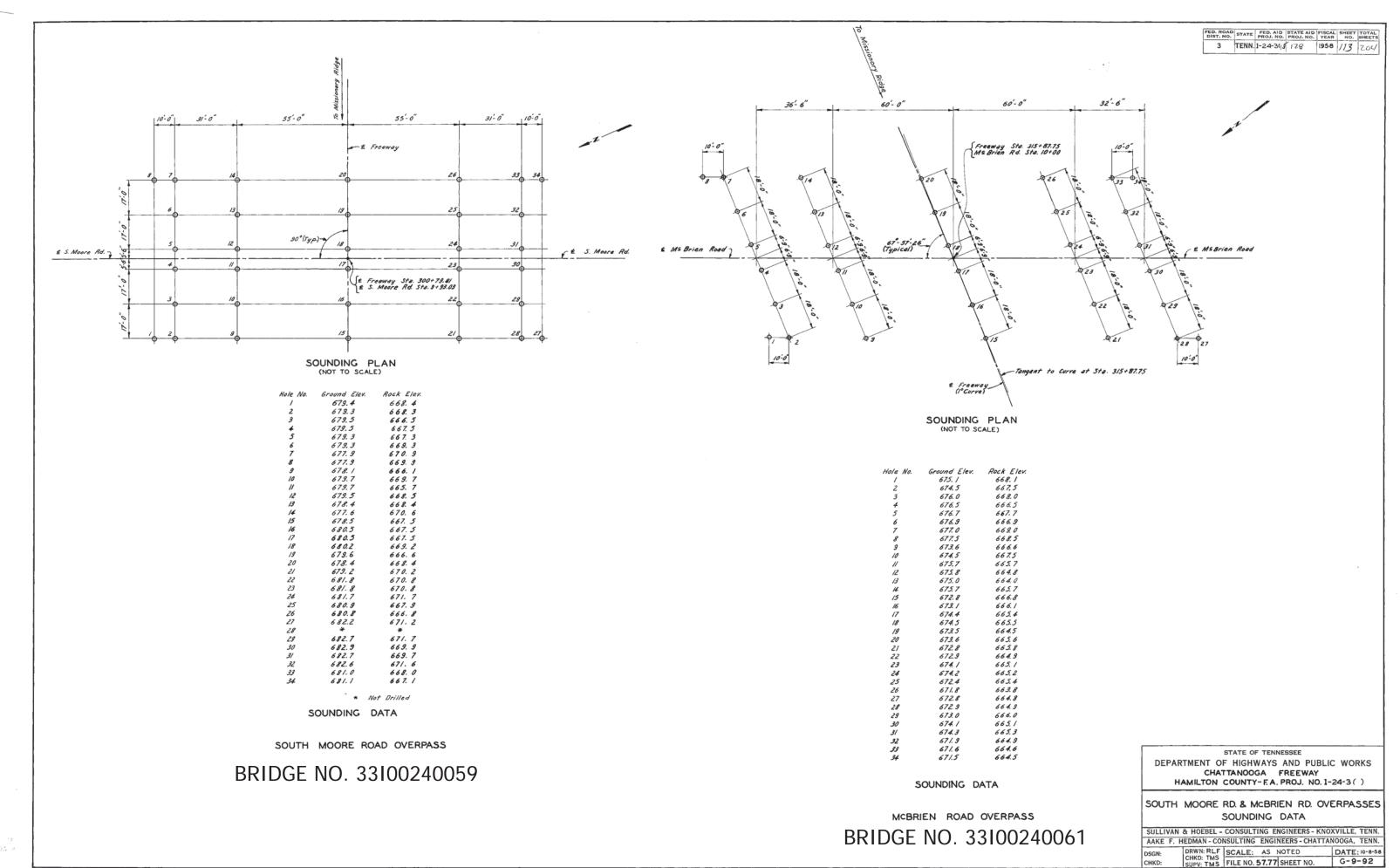
STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS CHATTANOOGA FREEWAY HAMILTON COUNTY-F.A. PROJ. NO.I-24-3()

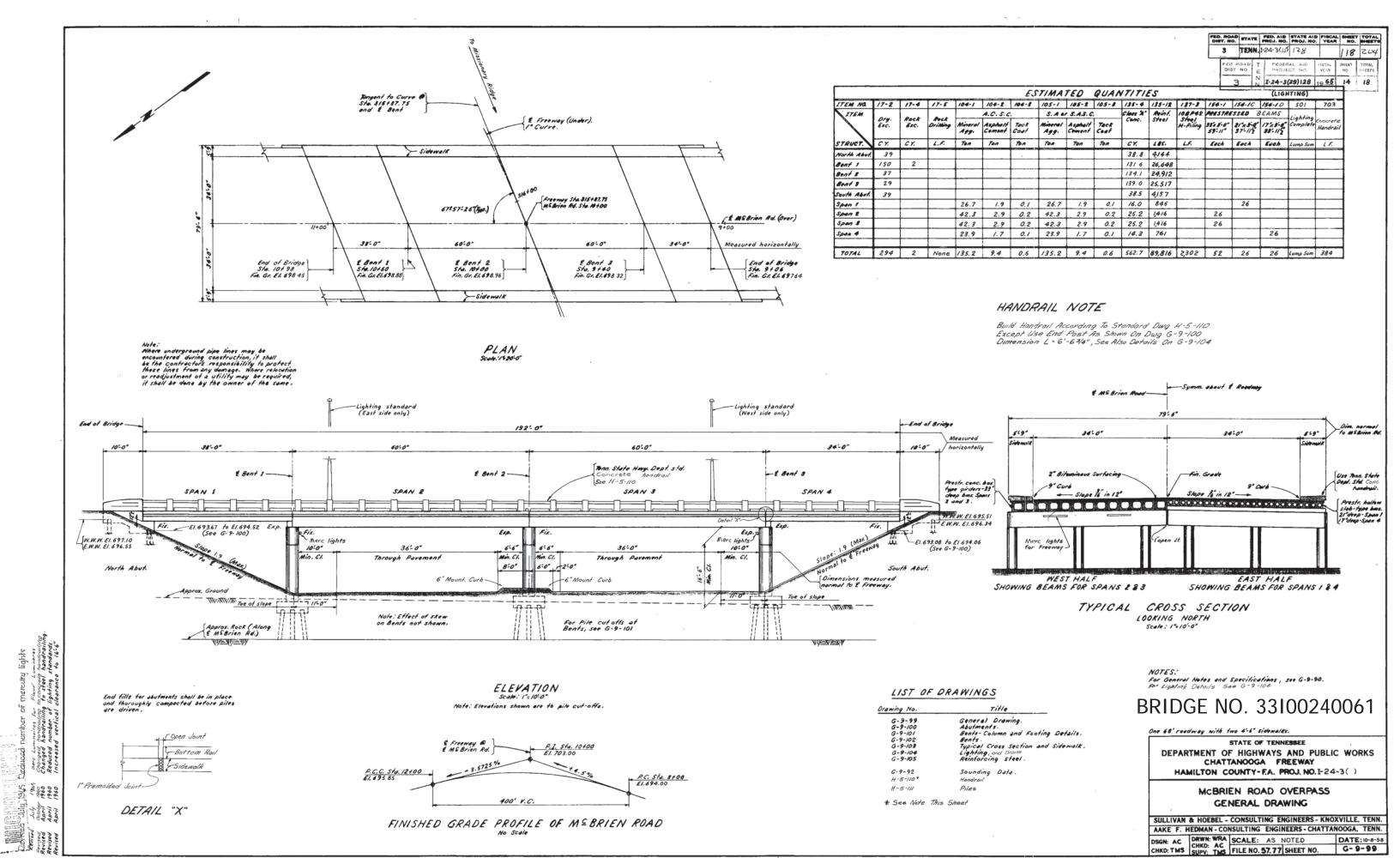
GENERAL NOTES AND SPECIFICATIONS

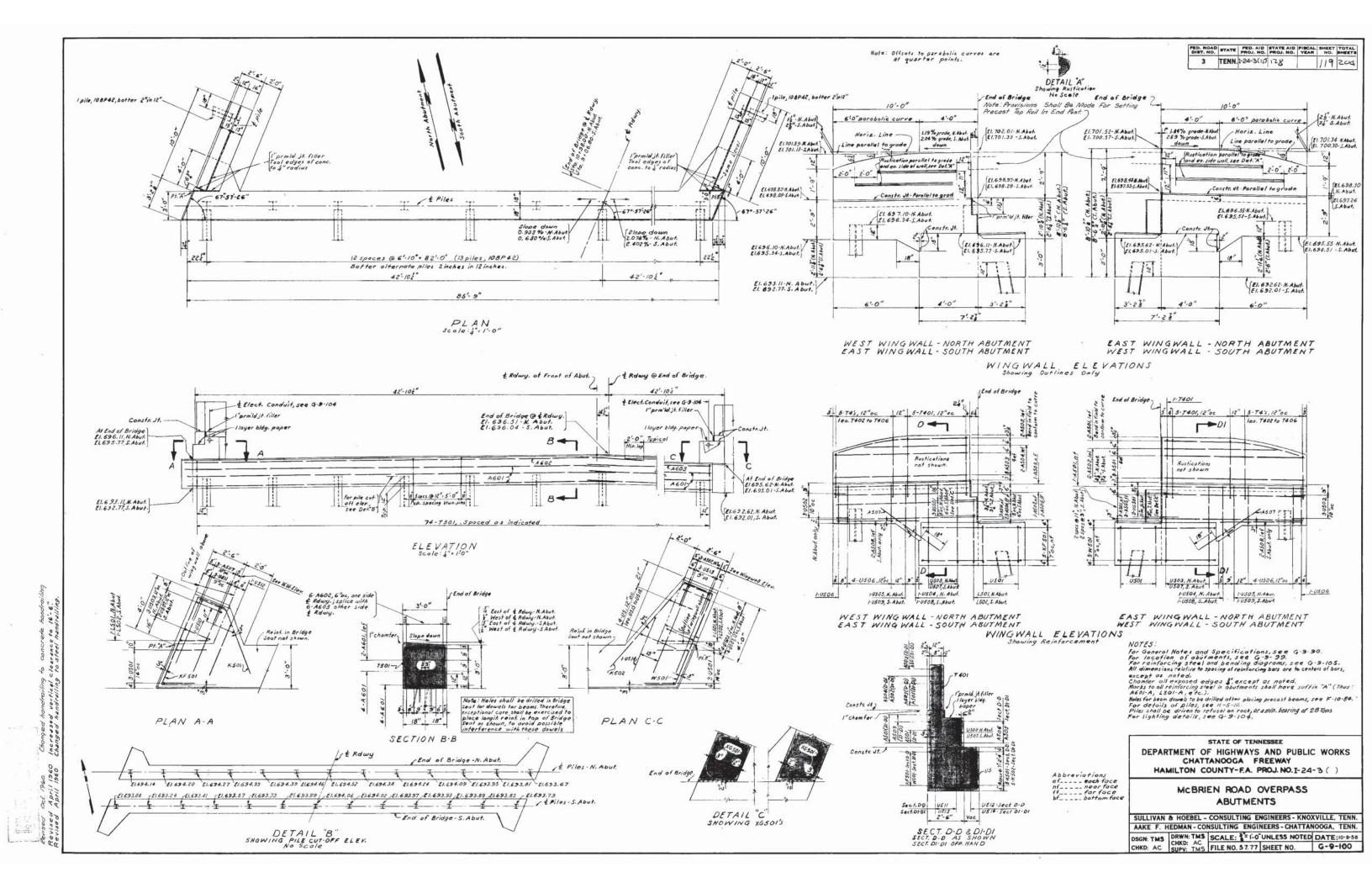
SULLIVAN & HOEBEL - CONSULTING ENGINEERS - KNOXVILLE, TENN. AAKE F. HEDMAN - CONSULTING ENGINEERS - CHATTANOOGA, TENN. DRWN:ABJP SCALE: NONE DATE:4-2-59

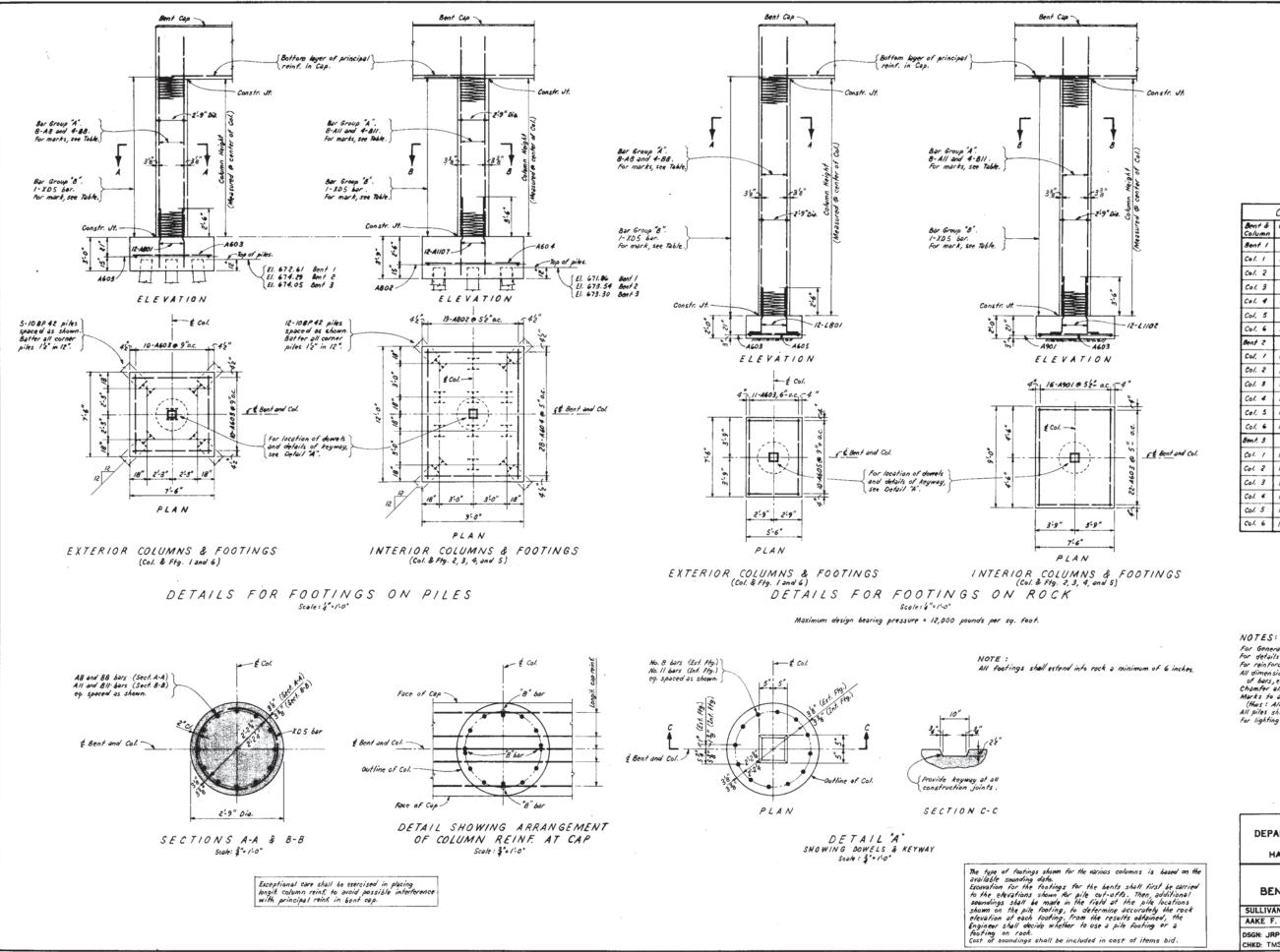
CHKD: AC SUPV: TMS FILE NO.57.77 SHEET NO. G-9-90



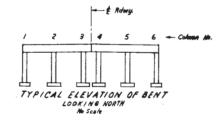
3.5







PED. ROAD DIST. NO. STATE PROJ. NO. PROJ. NO. PROJ. NO. YEAR NO. SHEETS 3 TENN. 1-24-3(15) 178



Bent & Column	Column Height	Elev. Top Ftg.	Type Ffg.	Reinf. Grou	Steel	Beinf. Steel
Bent /						
Co /. /	16'-0'2"	674.6/	Piles	A803	8801	X0501
Co1. 2	21'-11"	668.96	Rock	A1108	81101	10502
Col. 3	16'-6"	674.61	Piles	A1109	81102	10503
Col. 4	16-58"	674.61	Piles	A1109	81102	X0503
Col. 5	16'-12"	674.61	Piles	A1110	81103	X0501
Col. 6	15'-9'2"	674.6/	Piles	1804	8802	X0504
Bent Z						
Col. /	14'-278"	676.29	Piles	1805	8 80 3	XD505
Col. 2	14'-63"	676.29	Piles	A////	8/104	X0506
Col. 3	14'-102"	676.29	Piles	A1112	81105	X0507
Col. 4	14'-105"	676.29	Piles	A1112	81105	X0507
Col. 5	14'-758"	676.29	Piles	A///3	81106	X0506
Col. 6	14'-48"	676.29	Pi/es	A806	8804	X0508
Bent. 3					-	
Co1. 1	13'-74"	676.05	Piles	1807	8805	X0509
Col. 2	14'-08"	676.05	Pi/es	AH14	81107	X0510
Col. 3	14'-5'2"	676.05	Piles	AIIII	8/104	X0511
Col. 4	14'-64"	676.05	Piles	AIIII	81104	X05/1
Col. 5	14'-44"	676.05	Piles	AIIII	8/104	X0508
Co1. 6	14'-2'8"	676.05	Piles	A805	8803	X0505

For General Motes and Specifications, see G-9-90.

For details of piles, see H-5-III.

For reinforcing steel and banding diagrams, see G-9-105.

All dimensions relative to spacing of reinforcing steel are to centers of bars, except as noted.

Chamfer all exposed edges \$\frac{3}{2}\], except as noted.

Marks to all reinforcing steel in Bents shall have suffix "8",

(Hus: Allot-8, 1501-8, atc.).

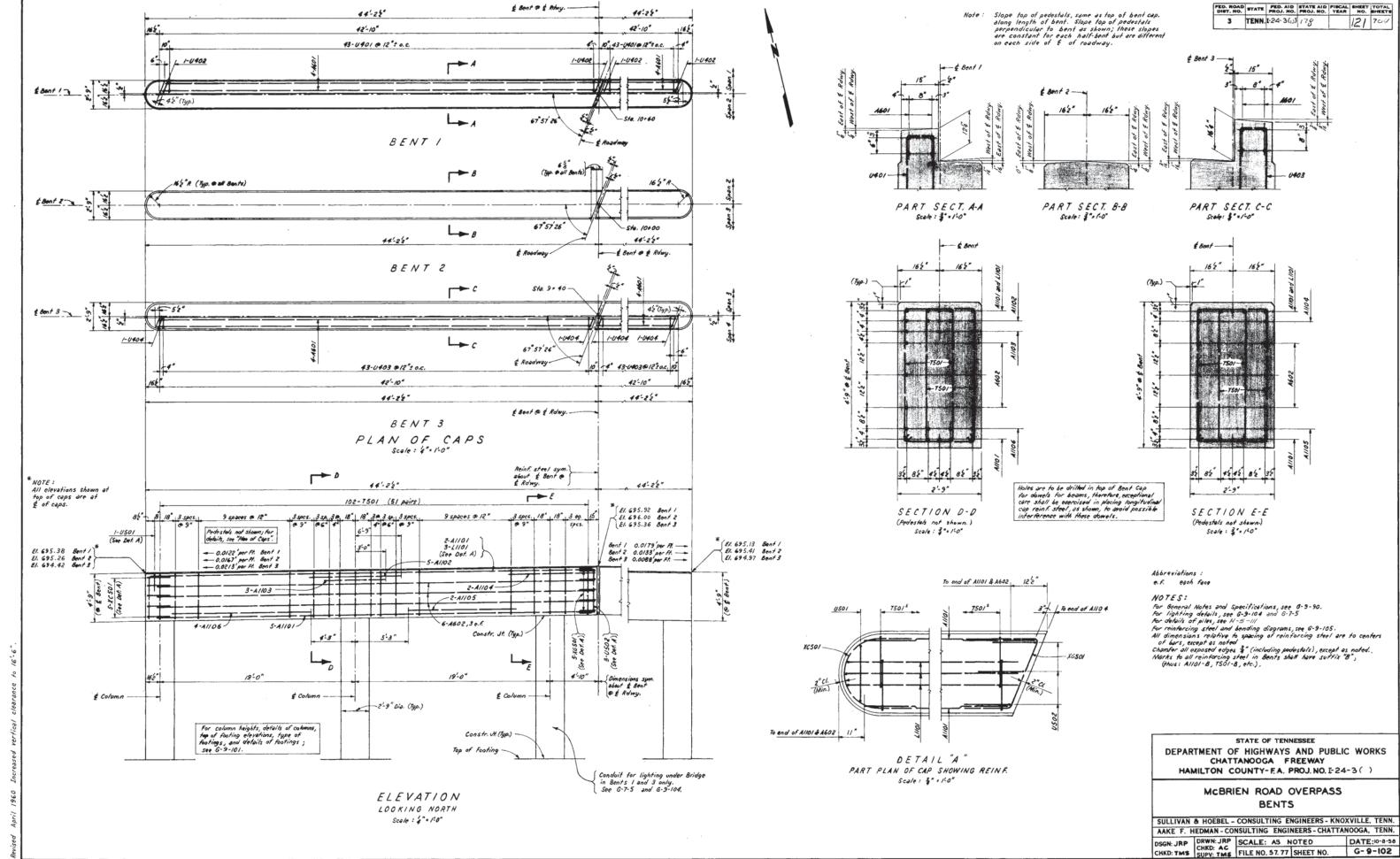
All piles shall be driven to refusal on rock, or a min. brating of 28 Tans for lighting details, see G-9-104.

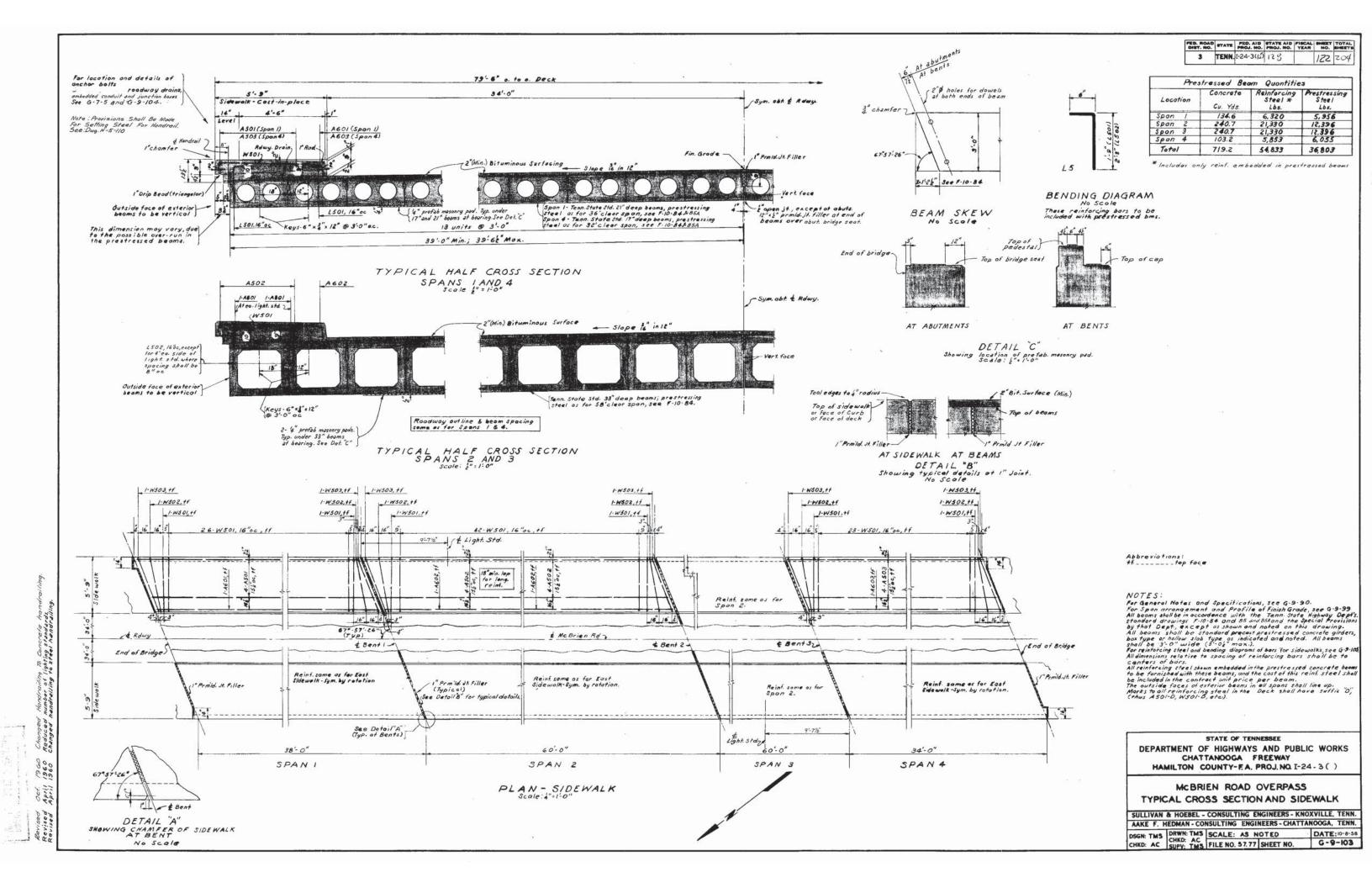
STATE OF TENNESSEE

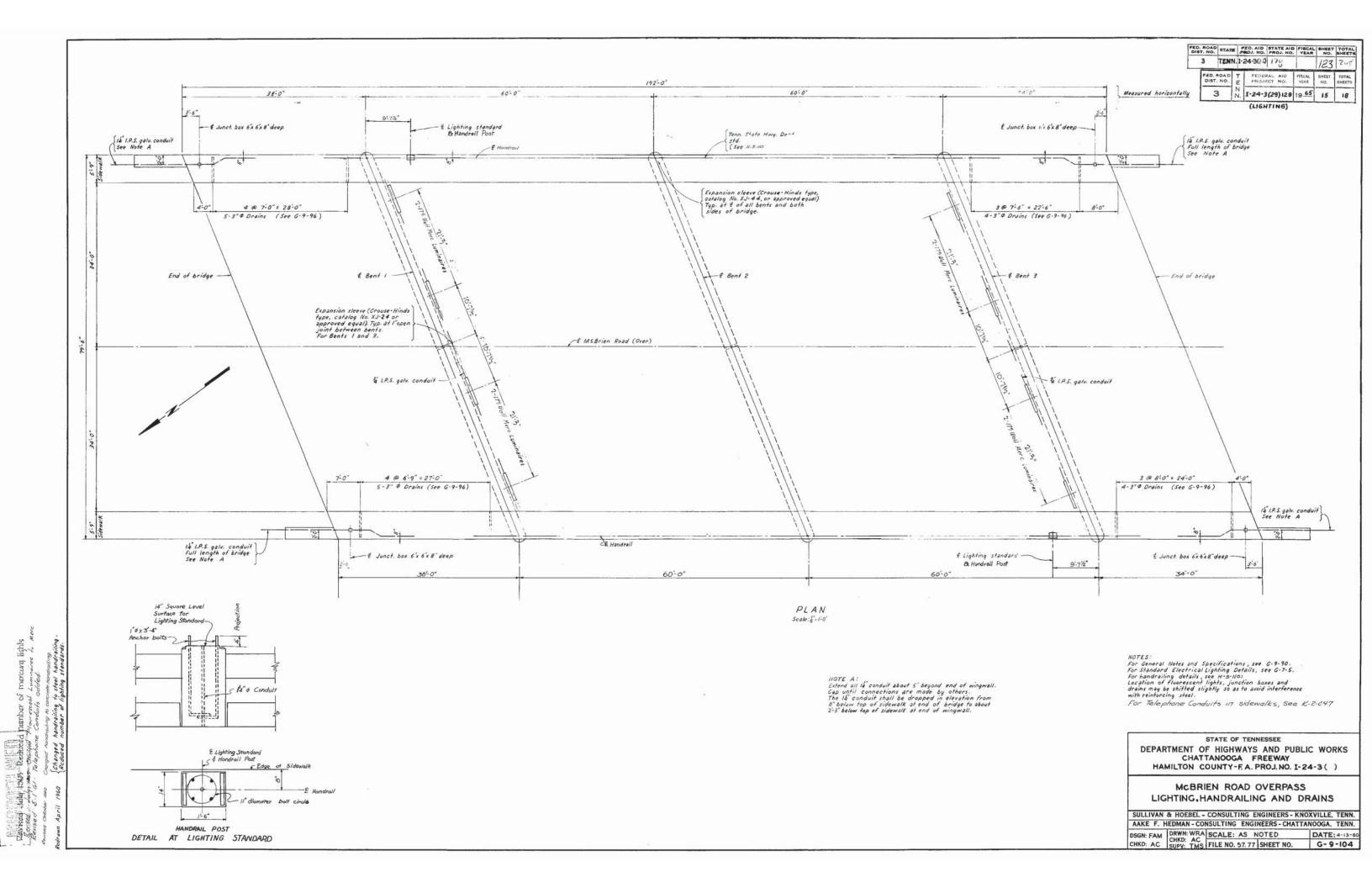
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS CHATTANOOGA FREEWAY HAMILTON COUNTY-F.A. PROJ NO.I-24-3()

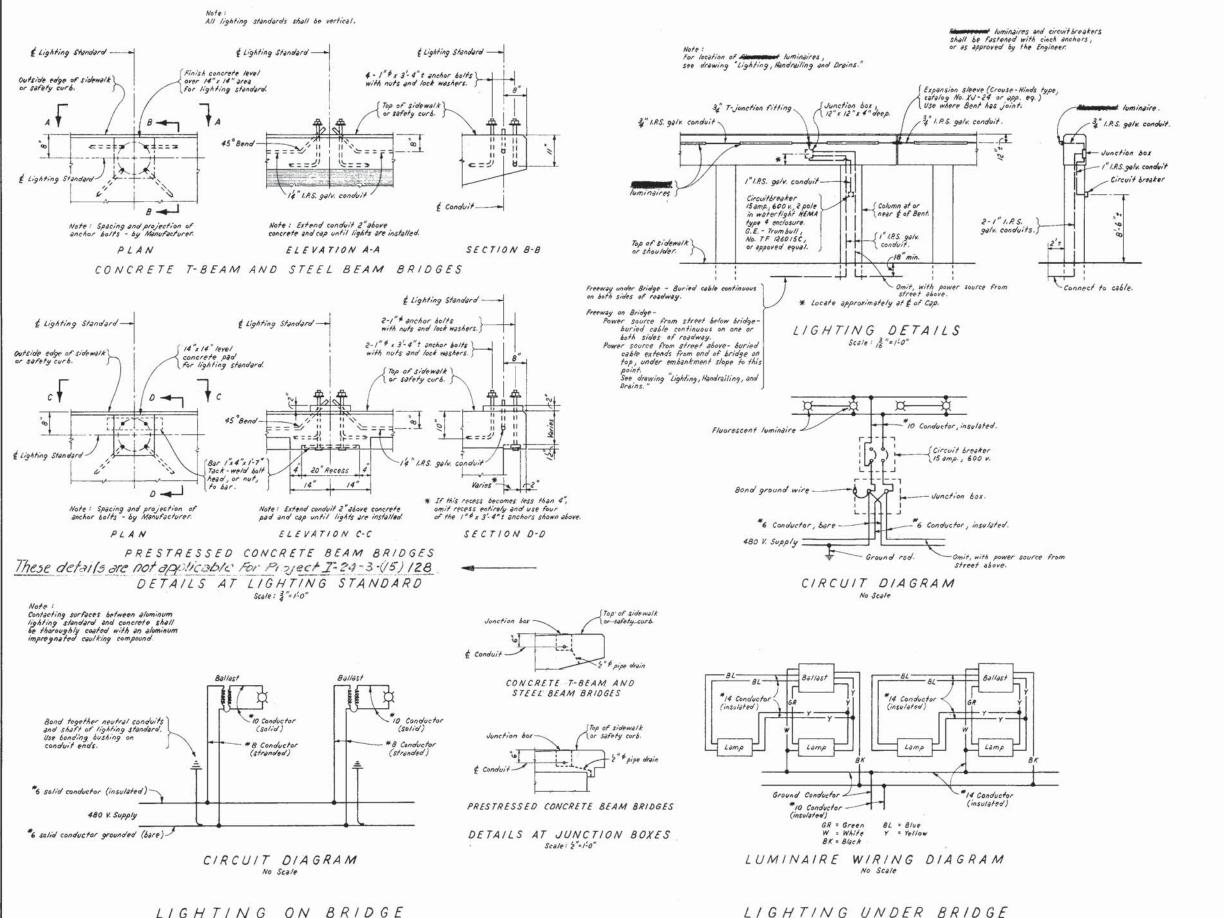
MCBRIEN ROAD OVERPASS BENTS-COLUMN AND FOOTING DETAILS

		CONSULTING ENGINEER	
		NSULTING ENGINEERS - C	
DSGN: JRP	DRWN: JRP	SCALE: AS NOTED FILE NO. 57. 77 SHEET N	DATE:10-8-58
CHKD: TMS	SUPV: TMS	FILE NO. 57. 77 SHEET I	10. G-9-101









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0-027-2691

ELECTRICAL LIGHTING SPECIFICATIONS

LIGHTING ON BRIDGE:

Lighting Standards: See Special Provisions.

All lighting standards shall have hand hole (approx. 4" x 6 1/2") with cover near base of pole, located 90° off bracket center line. Where required, drill in field suitable openings in base of lighting standards for conduits.

Luminaires to be Westinghouse type OV-20, catalog No. 1568, 517, having 1 1/4" adjustable slipfitter and IES type III distribution for E-H1 mercury vapor lamp; or approved equal.

Lamp bulbs to be 400 watt, 20,000 lumen, E-H1 mercury vapor.

Ballast to be 480 volt primary for 400 watt, 20,000 lumen, E-H1 mercury vapor lamp, ballast to be similar to G.E. Co. type ILH, catalog No. 9SA20H5AB, except omit aerial mounting bracket and substitute pole top adapter similar to G.E. Co. No. 108A3006G3. Finish assembly with aluminum paint.

LIGHTING UNDER BRIDGE: See Sheet 7, Proj. I - 24-3(29)/28

without ballast) and G. E. catalog No. 2F106UB1

(without ballast) and G. E. catalog No. 2F106UB5AB (with 480-volt

internal 2-lamp ballast) connected in pairs; or approved equal.

GENERAL:

Conduits to be rigid hot dip galvanized steel, sizes as shown on drawings. Provide standard watertight expansion sleeve, suitably grounded, at all expansion joints in bridge deck and as otherwise called for on plans. Expansion sleeves to be Crouse-Hinds type, catalog No. XJ-44 for 1 1/4" conduit, catalog No. XJ-34 for 1" conduit, catalog No. XJ-24 for 3/4" conduit, or approved equal.

Junction boxes - Sizes shall be as shown on drawings. Boxes shall be drilled to provide the connections shown and shall be of cast iron watertight construction, with removable cover (checkered on top) fastened with brass screws. Provide galvanized bushings and lock nuts at connections of conduits to junction boxes.

Conductors - All wiring inside the conduits and light poles shall be 600 volt, rubber insulated, General Electric Co. Versatol-Geoprene; or approved equal.

National Electric Code - Where not covered by these specifications, all other material and workmanship to be incorporated in this project shall be in strict conformance with requirements of the National Electric Code, current edition.

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
CHATTANOOGA FREEWAY
HAMILTON GOUNTY-F.A. PROJ. NO. 1-24-3()

STANDARD ELECTRICAL LIGHTING DETAILS

SULLIVAN & HOEBEL - CONSULTING ENGINEERS - KNOXVILLE, TENN.

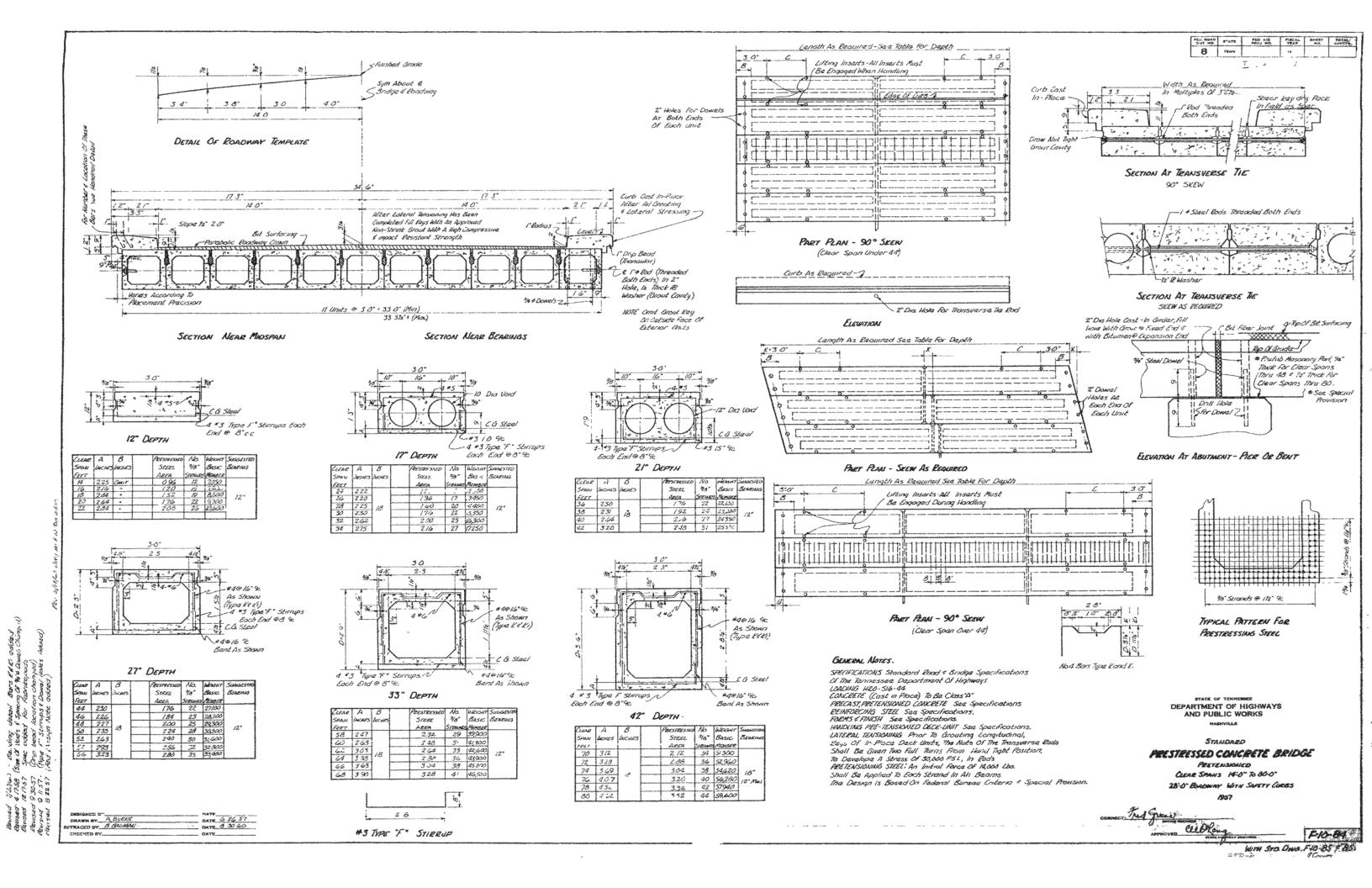
AAKE F. HEDMAN - CONSULTING ENGINEERS - CHATTANOOGA, TENN.

DSGN: DRWN: JRP CHKD: AC CHKD: AC SUPY: AC FILE NO. 57.77 SHEET NO. G-7-5

oca der raco commission of Lygni Jenker, S, willing its or under oudge righting and milling and milling and milling and milling its familiar descriptions."

ed Feb 1960 Changed handralling to steel handralling (affecting location of conduit).

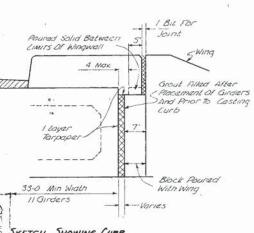
LOCATION	MARK	HO. PER TOTAL BENDING DIMENSIONS - FEET & INCHES DAR WEK NO. A B C D E F O DETA LE	LOCATION MARK NO. PER TORAL BENDING DIMENSIONS - FEET & INCHES BAR WEIGHT NO. LINES UNT RES'S. A B C D E F O PET & DICKERS WEIGHT LBS.	LOCATION MARK NO. PER TOWN SENDING DIMENSIONS - FEET & INCHES DAIR WEIGHT LINE HOLD THE ALL BY THE PROJ. NO. PEAR INC. HIGHET TOTAL HIGH PROJ. NO. PEAR INC. HIGHET HOLD HIGH HIGHET HOLD HIGHET HOLD HIGHET HOLD HIGHET HOLD HIGH HIGH HIGH HIGH HIGH HIGH HIGH HIG
Bridge Seat	A601	NORTH	SOUTH ABUTMENT (Cont.) East Wingmull(cont) U502 / 3 3 2-1 2-12 2-12 6-0 19	BENT 2 (Conf.) Column A805 8 8 17-6 374
	A602 A603 A507	1 6 6 47-0 42 1 6 6 40-3 36 1 6 6 5-0 31	U506 5 5 2-5 2-02 1-102 6-0 31 U508	8803 4 4 13-3 1-02 3-3 1-0 0-22 17-6 17-6 187
	7501	1 74 74 2-8 2-8	7401 / 5 5 3-// 0-7½ 9-6 32 7402 / / / 2-// 0-7½ 7-6 5	8/104 / 4 4 13-6 1-02 3-3 1-0 0-3 17-9 17-9 377 X/05/06 / / 0-32 2-5 14-11 402:0 419 B BAR HBAR L'ONN L'ON
	U503 U511	7 7 5-5 2-0'2 4-10'2	7403 3-3 0-7½ 8-3 6 1404 3-6 0-7½ 8-9 6	Column 3 A11/2 8 8 1-0 1-0/2 3-3 1-0 0-3 18-3 776 81/05 1 4 4 14-0 1-0/2 3-3 1-0 0-3 18-3 388
	U512 U513	1 1 1 3-4 2-5 \(\) 2-3 \(\) 2 8-9 9 1 3 3 6-1 2-5 \(\) 6-0 \(\) 2 14-3 45	7405 / / / 3-8 0-72 9-0 6 7406 / / / 3-10 0-72 9-3 6	XD507 0-3½ 2-5 15-2 408-3 426
	U514 L501 U510		Wes+ Wingwall A501 14 14 9-6 139 A502 2 7-6 16 A505 3 3 1/-3 35	8/105 / 4 4 14-0 1-02 3-3 1-0 0-3 18-3 18-3 388 XD507 / / / 0-32 2-5 15-2 408-3 426 K BAR LBAR Column 5 A/1/3 / 8 8
	U515 U516	/ / / 2.7½ 2.7 2.7½ 7-6 8	A508 / 2 2 5-6 1/1 X650 / 3 3 2-0'2 2-3'2 2-0'2 0-9 0-9 6-3 20	8/106 / 4 4 /3-9 /-0'2 3-3 /-0 0-3 /8-0 /8-0 383 X/0506 / / / / 0-3'5 2-5 /4-1/ 402.0 419
	U517 U518	1 1 1 1-10'2 2-7 1-10'2 6-0 G 1 1 1 1-7'2 2-7 1-7'2 5-6 G	U507 3 3 2-1 2-1/2 2-1/2 6-0 19 U506 1 5 5 2-5 2-02 1-102 6-0 31	Column 6 A806 1 8 8 17-9 379 379 3804 1 4 4 13-6 1-02 3-3 1-0 0-22 17-9 17-9 190
	K501 K502	1 5 5 1-6 4-5 1-0 1-1/2 5-5 5-9 30 1 5 5 1-6 7-5 0-6 1-5 7-11 8-9 40	U508 3-0 2-0'2 2-6'2 7-3 8	XD508
East Wingwall	W 501 XF501 A501	1 5 5 2-0 6-9½ 2-0½ 0-9 1-10½ 10-6 55 5 5 2-0 6-9½ 2-0½ 0-9 1-10½ 10-6 55 1 14 14 9-6 13	7401	Cap (Same as for Bent 1) 10,257 107AL WEIGHT - BENT 2 24,912
East Wingwall	A502 A505		7404 / 1 / 3-6 0-72 8-9 6 7405 / 1 / 3-8 0-72 9-0 6	BENT 3 Figs. / and 6 (Same as for Bent 2) 757
	XG501 U502	1 3 3 2-0'2 2-3'2 2-0'2 0-9 0-9 6-3 20 1 3 3 2-1 2-1'2 2-1'2 6-0 19	T406 3-10 0-72 9-3 6 TOTAL WEIGHT - SOUTH ABUTMENT 4,157	Figs. 2,3,4,85 (Some as for Bent 2) Column / A807 8 8 17-0 363 TBAR UBAR WBAR
	U504 U505		BENT /	8805 / 4 4 12-9 1-0'2 3-3 1-0 0-2'2 17-0 17-0 182 X0509 / / / 0-3½ 2-5 /3-1/ 376-6 393
	1401 7402	1 5 5 2-5 2-0'2 1-10'2 6-0 31 1 6 6 3-11 0-7'2 9-6 38 1 1 1 2-11 0-7'2 7-6 5	Ffgs. I and 6 A801 2 12 24 5-3 336 A603 2 20 40 7-0 421 Footing 2 LI/02 I 12 I2 I-0 5-1 5-9 367	Calumn 2 AIII 4 8 8 17-3 733 81107 4 4 13-0 1-0 2 3-3 1-0 C-3 17-3 367 XD5/10 1 1 0-32 2-5 14-4 387-0 404
	T403		A901 / 16 16 8-6 462 A603 / 22 22 7-0 231	Column 3 A1111 1 8 8 1 17-9 754 4d PIN 4 13-6 1-02 3-3 1-0 0-3 17-9 17-9 377
	T405 T406		Ftgs.3,4,85 A1107 3 12 36 7-0 1339 A802 3 19 57 11-6 1750	XD51/
West Wingwall	A501 A503		A604 3 28 84 8-6 1072 Column 1 A803 1 8 8 19-3 411	
	A504 A506 XG 501	/ 2 2 7-0 /5 / 4 4 7 7-9 32 / 3 3 2-02 2-32 2-02 0-9 0-9 6-3 20		Column 5 A1/1/ 1 8 8 17-9 754 81/04 1 4 4 13-6 1-0'2 3-3 1-0 0-3 17-9 17-9 377 X0508 1 1 1 0-35 2-5 14-8 395-6 413
	U502 U504	1 3 3 2-1 2-12 2-12 6-0 19	8	Column 6 A805 / 8 8 17-6 374 8803 / 4 4 13-2 1-02 2-3 1-0 0-22 17-6 17-6 187 Note: Where ber lengths
	U505 U506	1 1 1 2-11 2-0½ 2-4½ 7-0 7 1 5 5 2-5 2-0½ 1-10½ 6-0 31	Column 3 A1109 1 8 8 19-9 839 81102 1 4 4 15-6 1-02 3-3 1-0 0-3 19-9 19-9 420	No. 3 spacer bars for spirals (3 bars per spiral) No. 3 spacer bars for spirals (3 bars per spiral) No. 3 spacer bars for spirals (3 bars per spiral) No. 3 spacer bars for spirals (3 bars per spiral)
	T401 T402	1 5 5 3-1/ 0-7½ 9-6 32 1 1 2-1/ 0-7½ 7-6 5	XD503 0-3½ 2-5 16-9 448-6 468 Column 4 A109 8 8 19-9 839	Cap (Same as for Bent 1) 10,257 V V V V
				U403 2 43 86 2-2½ 0-10 2-2½ 5-0 2-87 U404 2 2 4 2-3½ 0-11 2-3½ 5-3 14 GAIN*K*IN LENGTH FOR 1-90*BEND 8d HOOKS AND H & J BARS 107AL WEIGHT - BENT 3 25,517
	T406		8/103 4 4 15-3 -0'2 3-3 1-0 0-3 -9-6 -9-6 414 1/2050 / / / 0-3½ 2-5 16-5 440-0 459	BARNOI 3 4 5 6 7 8 9 10 11 BARNOI 3 4 5 6 7 8 9 10 11
		SOUTH ABUTMENT	Column 6 A804 1 8 8 19-0 406 8802 1 4 4 14-9 1-02 3-3 1-0 0-22 19-0 19-0 203	SPANS 2 AND 3 8d PIN 1 12 2 2 2 2 3 3 3 4 1 1 1 1 2 2 2 2 3 3 3 4 1 1 1 2 2 2 2 2 3 3 3 3 4 1 1 1 2 2 2 2 2 2 3 3 3 3
Bridge Seat	A602		XD504 0-32 2-5 16-1 431-6 450 No. 3 spacer bars far spirals (3 bars per spiral) 314-0 118	## ## ## ## ## ## ## ## ## ## ## ## ##
	A507 T501	1 4 6 40-3 34 1 6 6 5-0 3 1 74 74 2-8 2-8 11-3 84	Cap A1101 2 7 14 42-9 3180 A1102 2 5 10 13-6 717 A1103 2 3 6 6-0 191	W502 4 2 8 0-7 5-62 0-52 0-7 0-7 5-7 6-3 52 FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS, EXCEPT THAT STRUCTURAL GRADE IS NOT PERMITTED. SPRAIS TO BE PLAIN BUT TO SAME SPECIFICATIONS. W503 4 2 8 0-7 5-10 0-52 0-1 0-7 5-1/ 6-9 56 TOTAL WEIGHT - SPANS 2 AND 3 2832 CUTTING LENGTH. THE NORMAL DIAMETER OF A THAT HOOKS MAY HAVE A GREATER OVERRUN, TO ABSORDE CUTTING LENGTH. THE NORMAL DIAMETER OF A SSSUMED TO BE BE AND WORKER OF A SSSUMED TO BE BE AND THE BAR NUMBER X & LENGTHS.
9,9/	U501 U507		A1104 2 2 4 8-9 186 A1105 2 2 4 10-6 223	TOTAL WEIGHT - SPAN 2 /AIG GENERAL: BENDING DIAGRAMS SHOWN WITH SYMBOLS FOR VARIABLE DIMENSIONS ARE STANDARD TYPES TOTAL WEIGHT - SPAN 3 /4/6 OF BARS, SOME TYPES SHOWN MAY NOT BE BILLED IN THE SCHEDULES, ALL BARS MARK A" ARE STRAIGHT
to to	U510 U511	1 1 1 2-42 2-7 2-42 7-0 7 1 3 3 5-1 2-52 5-02 12-3 36	A106 2 4 8 13-9 584 L1101 2 3 6 4-4 43-6 47-6 1514	BARS ARE SYMMETRICAL, JUNLESS OTHERWISE SHOWN. ON SLOPING BERDS, THE "F"DIMENSION IS OMITTED EXCEPT WHERE CLEARANCES ARE LIMITED. ALL BARS ARE SPECIFIED BY NUMBERS, INSTEAD OF SIZE, AND THE BAR MARKS ARE MADE UP FROM THE FOLLOWING CODE: (1) THE LETTER REPRESENTS THE TYPE OF BAR-A,B,L,ETCSPECIAL TYPE BARS ARE DESIGNATED BY LETTERS, XX, XB, ETC.
cleara	U5/2 U5/3 U5/4		A602 2 6 12 42-9 77	Sidewalk A603 2 1 2 33.6 70 12 14 15 16 17 17 18 18 18 18 18 18
fical	U515 U516		U502 2 3 6 1-2 4-2½ 1-2½	WSO2 2 4 0-7 5-62 0-52 0-7 0-7 5-7 6-3 26 MARKED 01, THE NEXT 02, ON THROUGH 03, 10,1, AND SO ON A butments, Bents, and Deck with WSO3 2 2 4 0-7 5-62 0-52 0-7 0-7 5-7 6-3 26 Fabricator shall suffix bar marks to all reinforcing steel in Abutments, Bents, and Deck with WSO3 2 2 4 0-7 5-10 0-52 0-7 5-7 6-9 28 letters ""." B", and "D" respectively. (Thus: A501-A, etc., for Abutments; A501-B, etc., for
D 201	U517 U518		XC501 2 5 10 2-3 1-6 1-1/2 6-6 68 (10,257)	TOTAL WEIGHT - SPAN 4 761 Bents; and ASOI- D, etc., for Deck.) STATE OF TENNESSEE
0.000	L502 K501	1 2 2 2-4 4-8 6-9 14 1 5 5 1-6 4-5 1-0 1-1/2 5-5 5-9 30	Pedestal A60 2 4 8 423 508	SPAN / DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS Sidewalk Abol 2 / 2
09	K502 W501 XF501	1 5 5 1-6 7-5 0-6 1-5 7-11 8-9 46 1 5 5 2-0 6-9½ 2-0½ 0-9 1-10½ 10-6 55 1 5 5 2-0 6-9½ 2-0½ 0-9 1-10½ 10-6 55	U402 2 2 4 2-02 0-1/ 2-02 4-9 13 TOTAL WEIGHT-BENT 1 26,648	A501 2 4 8
East Wingwall	A501	1 3 3 9-6 31 9-6 31 1 1 2 12 9-0 1	8 E N T 2 Ftgs. / and 6	W503 2 2 4 0-7 5-10 0-52 0-1 0-7 5-11 6-9 28 TOTAL WEIGHT - SPAN 1 845
4 49	A504 A506	1 2 2 7-0 15 1 4 4 7-9 3	A603 2 20 40 7-0 421 Ffgs. 23, 4,85 A1107 4 12 48 7-0 1785	SULLIVAN & HOEBEL - CONSULTING ENGINEERS - KNOXVILLE, TENN. AAKE F. HEDMAN - CONSULTING ENGINEERS - CHATTANOOGA, TENN.
Revis			A802 4 19 76 11-6 2334 A604 4 28 112 8-6 1430	DSGN:TS,JP CHKD: AC CHKD: AC CHKD: AC SUPV: AC FILE NO. 57.77 SHEET NO. G-9-105



	,		No	No	No
clear	Conceate	Reinf Staal	OF	OF	OF
Span	Cuirds	665	Bars	Bars	Bors
3	1		Di	62	CI
14	36	200	24	22	15
16	40	235	28	26	12
18	45	265	30	28	2
20	49	294	34	32	12
22	54	324	36	34	12
24	58	353	40	38	12
26	63	362	42	40	15
28	67	412	46	44	15
30	7/	441	48	46	18
32	76	470	52	50	12
34	80	500	54	52	18
36	85	524	58	56	12
38	89 "	564	60	58	TH.
40	94	588.	62	60	1,
42	98	617	66	64	A.
44	100	47	68	66	18
46	107	676	72	70	12
48	112	7010	74	72	:2
50	116	7.35	78	76	15
52	121	764	80	7.3	15
54	12.5	794	84	.92	12
56	130	573	86	34	12
58	134	554	90	88	24
60	138	· 88.2	92	90	24
62	143	.911	96	94	24
64	147	941	98	96	24
66	152	970	102	100	24
68	156	LOC	106	14	24
70	163	्रका देख	110	108	24
72	167	10%E	112	110	24
74	172	1088	116	114	24
76	176	1417	118	116	24
78	181	1147	122	120	24
80	185	.174	124	122	34

NOTE Above Quantities Apply To All Stews

* For Stewed Bridge Less Than 90° Curb
Bars To Be Flored At Each End Of Span
NOTE Bars Di To Be Included in Unit
Price Bid For Gridlers

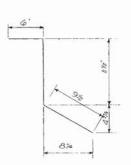


SKETCH SHOWING CUEB DETAIL AT ABUTMENT END

DESIGNED BY A BURKS DATE 52857

DRAWN BY BERNMAN & Q. PROLES DATE 530 60

CHECKED BY DATE

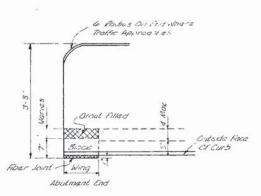


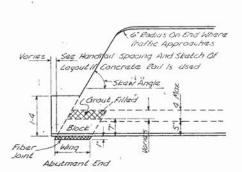
BARS DI (TO Ba 12'9)
Total Langth = 23

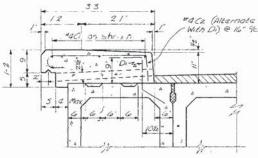


BARS C2 Total Langth: 4

NOTE Length Of Congitudinal Bors Ci to Be Total Span Lungth Minus 6 Also Lap Sars Ci lo' When Splice Is Redured

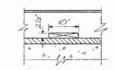






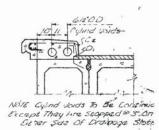
TYPICAL SECTION FOR CURB AND EXTERIOR BOX

NOTE Curb To Ba Cost In Place Provisions May Be Made In The Fascia Of Ext Units For Approved Inserts To Facilitate Forming Of Curbs

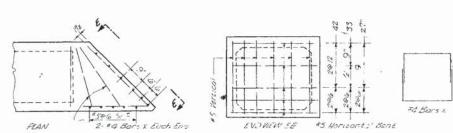


Locate Drain Slots @ Canter Of Every Other Poining Ponel

> DRAINAGE SLOT DETAIL



ALTERNATE CURB



SKETCH SHOWING ADDITIONAL REINFORCEMENT TO BE PLACED IN ACUTE CORNERS OF PRESTRESSED BOX BEAM

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE

\$\int TANDARD\$

FEQ ROAD STATE FED AID FIRCAL SHEET NO. 3 TENN 19

PRESTRESSED CONCRETE BRIDGE

PRETENSIONED | CLEAR SPANS 14:0" 80:0"

280" ROADWAK: WITH SAFET CUESS

CORRECT Train Survey Survey Col Plake

What Sto Due F10-84 F10-85

