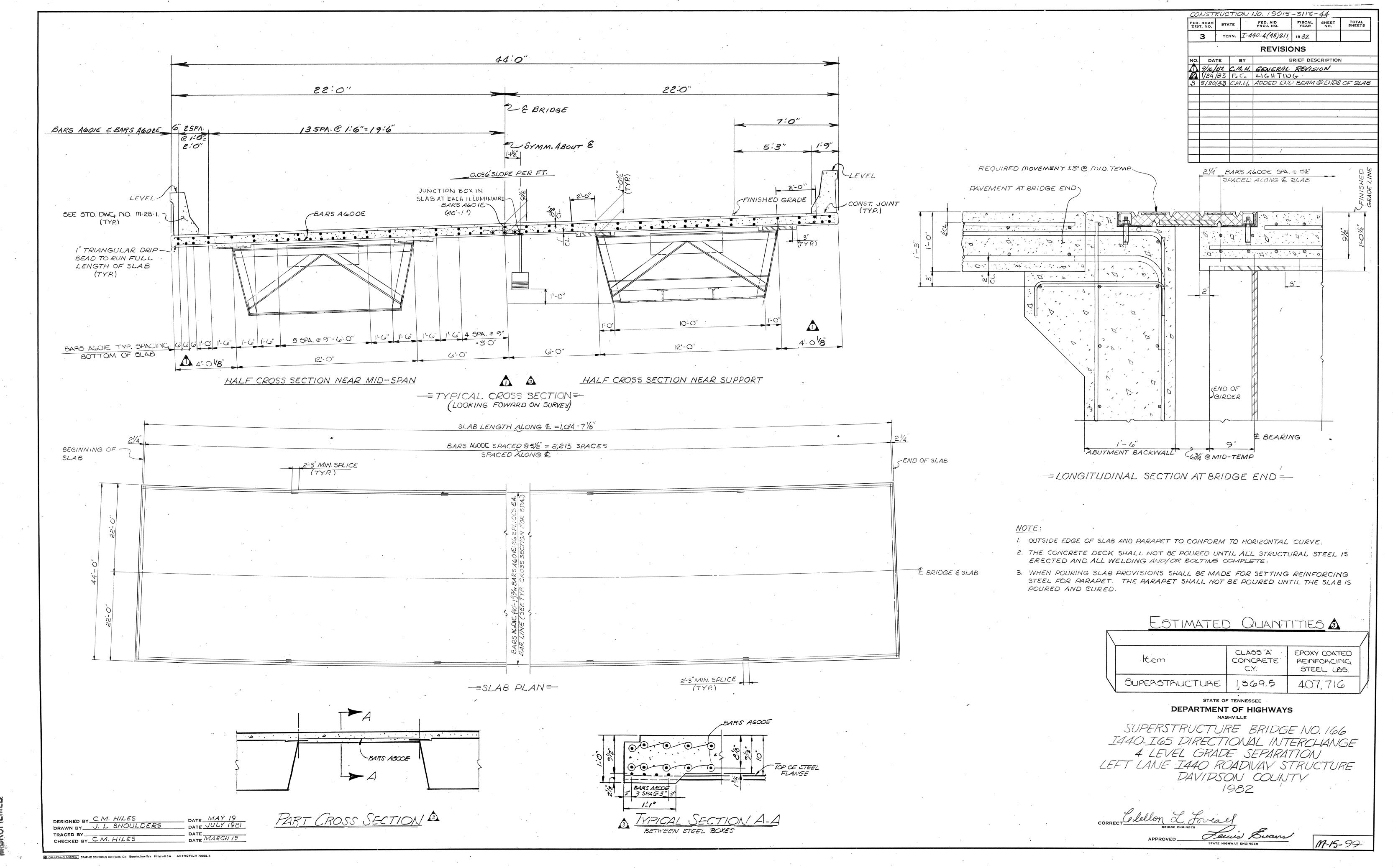
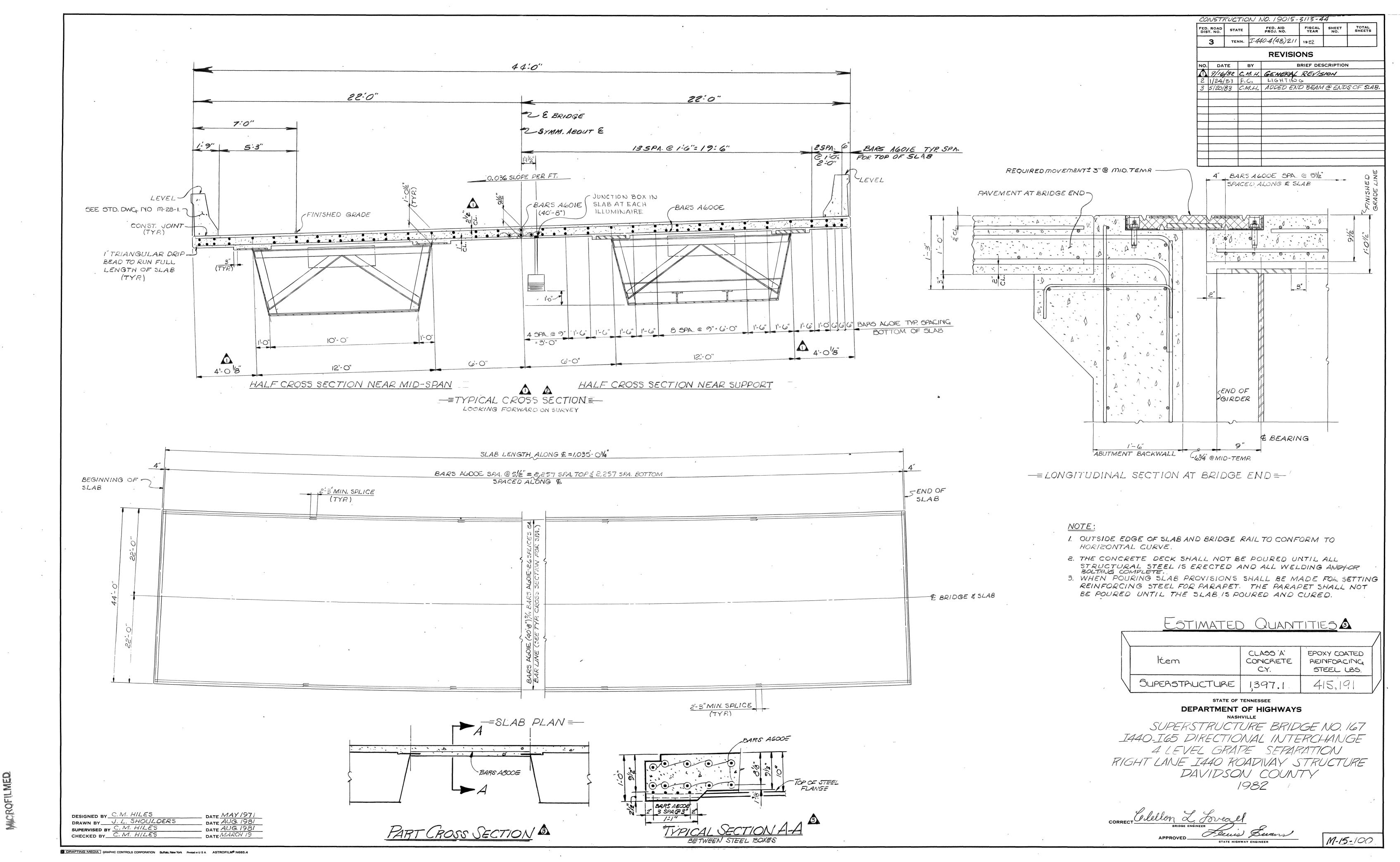


G DRAFTING MEDIA GRAPHIC CONTROLS CORPORATION Brooklyn, New York Printed in U.S.A ASTROFILM N685.4

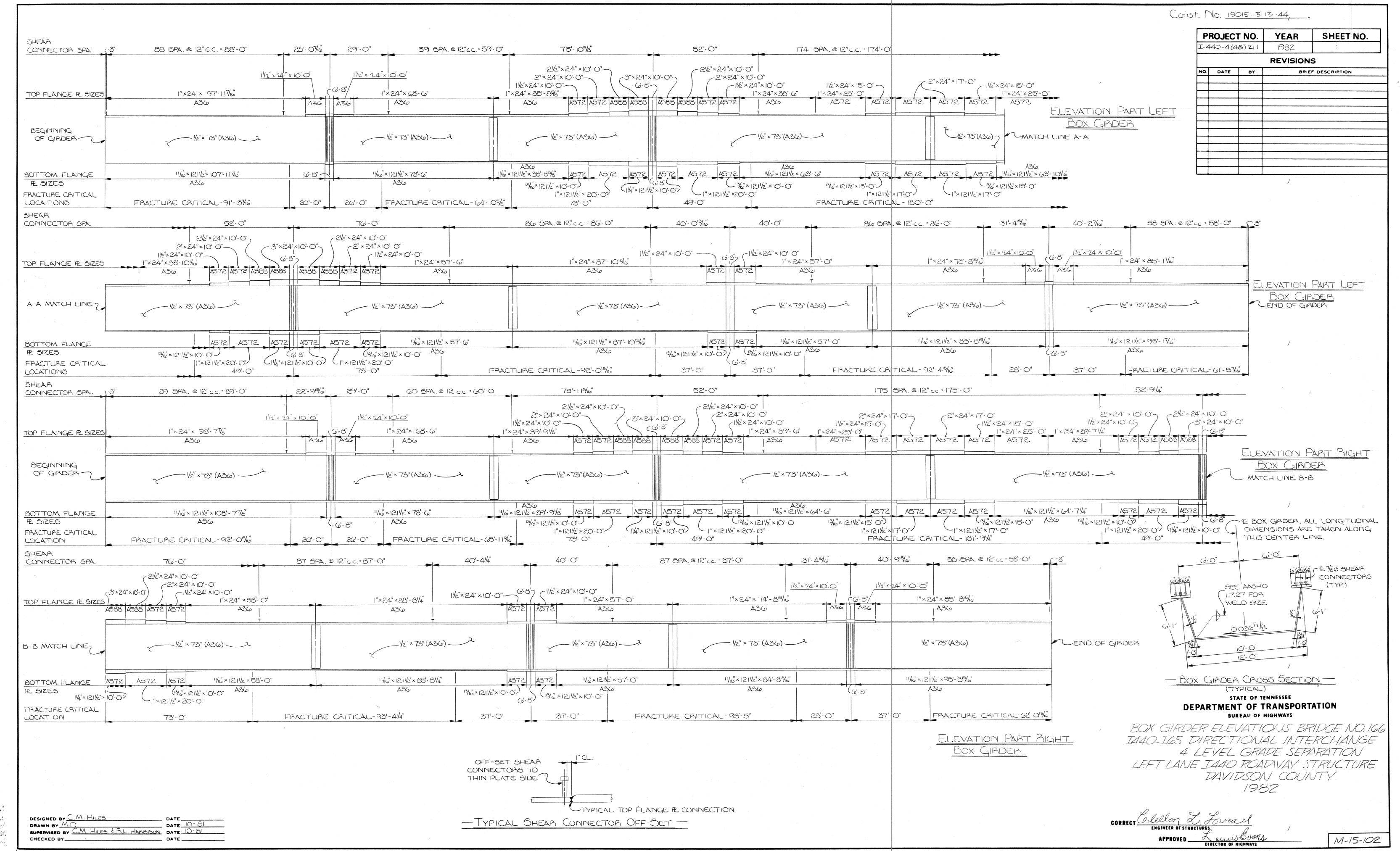


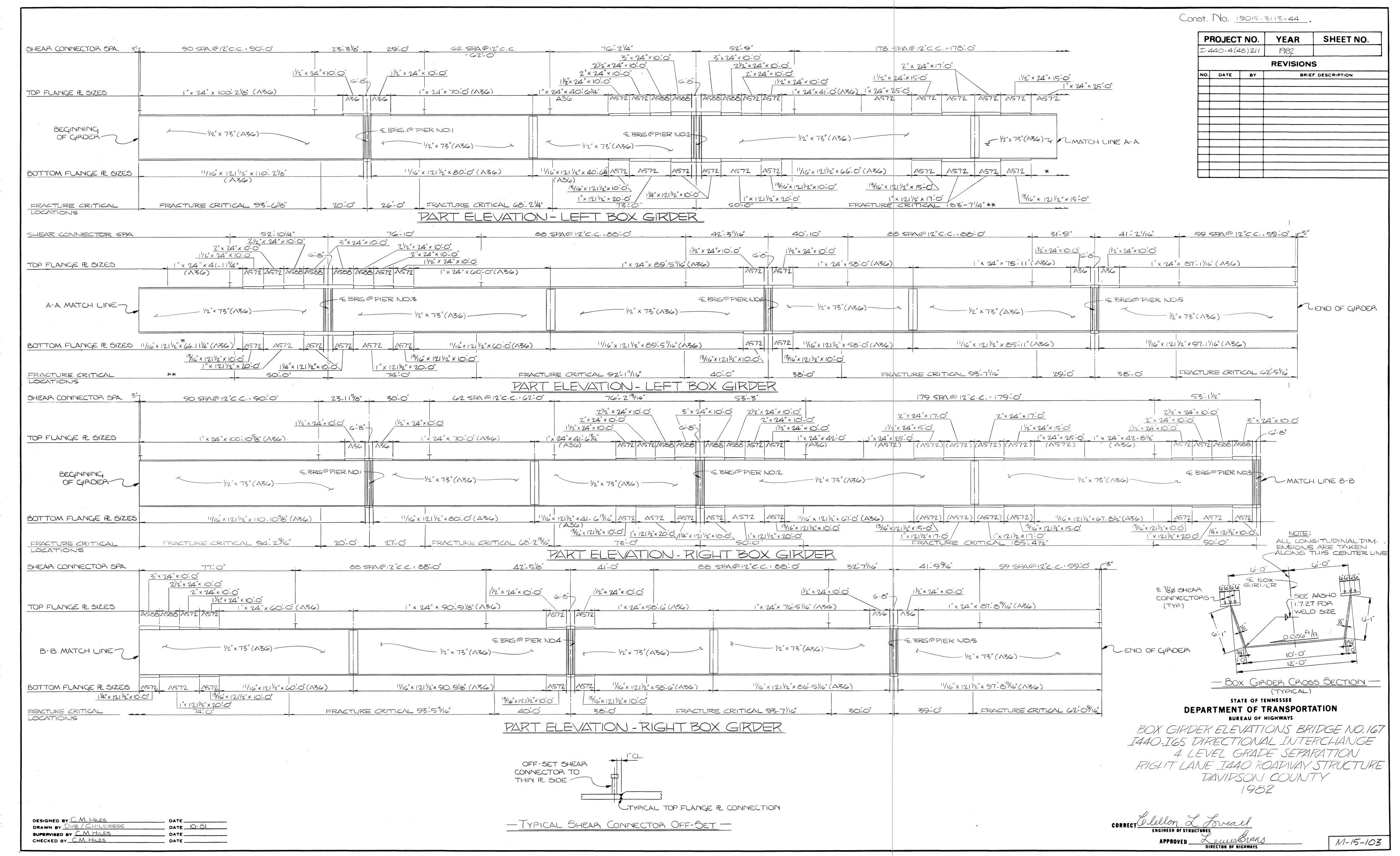


Const. No. 19015-3113-44 PROJECT NO. SHEET NO. YEAR NOTE: ALL LONGITUDINAL SPACING DIMENSIONS I-440-4(48)21 1982 NOTE: 2" O WEEP HOLES WITH SCREEN WIRE NOTE: OMIT SHEAR CONNECTORS ON SPLICE PLATES. ARE ALONG & BOX UNLESS OTHERWISE NOTED. **REVISIONS** COVER REQUIRED AT LOW POINT OF EACH SPAN. BRIEF DESCRIPTION 1 9/16/82 C.M.H. GENERAL REVISION WT8×25 19'6") 25'-6" WT8×25 WT8×28,5 37'-6" WT8 × 25 WT8 × 25 28'-6" H 1,031.474 ARC LENGTH ALONG & LEFT BOX 73'-6" WT8 × 28.5 WT8 × 25 37'-6" 49'-6" __WT8×28.5 WT8×28.5 49'-6" (4'-0" 73'-6" 110'-21/8" TREBRG. @ PIER NO. 5 E BRG. @ PIER NO. 1 206.143 9" 19-51/8" 5 5PA. @ 18-0"= 90-0" 4 5PA. @ 18-0"= 72-0" 16-61/4" 4 5PA. @ 18-0"= 72-0" 3'-4" (3'-4" REBRG. & PIER NO.4 100'-0" 138-114 PRE BRG. @ PIER NO. 2 1 LE BEARING @ ABUTMENT NO. 2 TE BRG. @ PIER NO. 3 55PA. @ 18'-0"=90'-0" P'-5"/4" 55PA. @ 18'-0"=90'-0" 75PA. @ 18'-0"=126'-0" 24'1114" 7 5PA. @ 18'-0"=126'-0" TE LEFT BOX GIRDER 26 SPA @ 3'-0"= 78'-0" 44 SPA. @ 3'-0"= 132'-0" 32 5PA @ 3'-0"=96'-0" 32 5PA @ 3'-0" = 96'-0" 44 6PA. @ 3'-0": 132'-0" - RBRIDGE - ERIGHT BOX GIRDER STIFFENER SPACING 25PA.@1-113/4=3-11/2"-EBEARING @ ABUTMENT NO. 1 31 5PA. @ 3'-0"= 93'-0" 36 5PA. @ 3'-0"= 108'-0" | 26 5PA. @ 3'-0"= 78'-0" | CROSS FRAMING SPA. 9" 20-13" 5 5PA. @ 18'-0"=90'-0" 4 5PA. @ 18'-0"=72'-0" 17-63/16 4 6PA. @ 18'-0"=72'-0" FIELD SPLICES 44 SPA. @ 3'-0"=132'-0" 44 SPA. @ 3'-0"=132'-0" 7 5PA. @ 18'-0"= 126'-0" LONGITUDINAL STIFFENERS 75PA. @ 18'-0"=126'-0" 3'-4" 114.216 100'-91/8" WT8×25 37'-6" WT8×25 WT8×25 28'-6" 37'-6" WT8×25 WT8×25 19'-6" 25'-6" WT8×25 WT8×285 100'-0" 3'-4" 3'-4" 3'-4" 285.377 73'-6" 49'-6" JWT8×28.5 WT8×28.5 1,037,911 ARC LENGTH ALONG & RIGHT BOX LONGITUDINAL STIFFENERS - RIGHT LANE FRAMING PLAN -WT8×28.5 49'-6" (4'-0" 73'-6" WT8×25 WT8×25 37'-6" WT8×25 WT8×25 NT8×25 WT8×25 19'-6") 25'-6" WT8×25 WT8×285 FIELD SPLICES 1,011.089 ARC LENGTH ALONG & LEFT BOX 73'-6" 222 107-117/6 "35PA@18'-0" = 45PA@18'-0"=72'-0" 22'-47/16" CROSS FRAMING SPA. 5 5PA.@18'-0"=90'-0" 4 5PA.@18'-0"=72'0" 3-256" 4 5PA.@18'-0"=72'0" 7 5PA @18'-0"=126'-0" -4"- (3'-4" 1-0"=81-0" 30 5PA. @ 3-0"=90'-0" 119" STIFFENERS SPACING 3'-4"7 (3'-4" 97'-6" 135'-101/6 25PA @ 2'-21/4": 4'-41/2") REARING @ ABUTMENT NO. 2 35 SPA. @ 3'-0" = 105'-0" 25 SPA. @ 3'-0" = 75'-0" 25 SPA. @ 3'-0" = 75'-0" 7 SPA. @ 18'-0"= 126'-0" 32 5PA. @ 3'-0"= 96'-0" 21 5PA.@ 3'-0'- 63'-44 5PA @ 3'-0"= 132'-0" 7-4/1/27 32 5PA. @ 3'-0" = 96'-0" 44 SPA. @ 3'-0" = 132'-0" E RIGHT BOX GIRDER 11 4-0/4 32 5PA. @ 3'-0"=96'-0" 2 5PA. @ 3'-0":60'-0" 27 5PA @ 3'-0"=81'-0" 30 5PA. @ 3'-0"=90'-0" 9" 5TIFFENER 5PACING E BEARING @
ABUTMENT NO. 1 19" 35 5PA. @ 3'-0" = 105'-0" 755PA @ 18'-0"=90'-0" 45PA @ 18'-0"=72'-0" 14'-31'' 45PA @ 18'-0"=72'-0" 75PA @ 18'-0"=126'-0"

108'-77'/2" 75PA @ 18'-0"=126'-0"

REBRG. @ PIER NO. | 25 5PA. @ 3'-0"= 75'-0" 44 5PA.@ 3'-0" = 132'-0" FIELD SPLICES 44 5PA. @ 3'-0"= 132'-0" LONGITUDINAL STIFFENERS 75PA. @ 18-0":126-0" EBRG. @ PIER NO. 4 3'-4" 3'-4" TE BRG. @ PIER NO 3 WT8×28.5 WT8×25 37'-6" WT8×25 WT8×25 28'-6" WT8×25 3'-4" 98'-0" 136-71/4" WT8×25 19'-6" 25'-6" WT8×25 WT8×28.5 73'-6" 3'-4" 279.773 49'-6" WT8×28.5 STATE OF TENNESSEE WT8 × 28.5 49'-6" 73'-6" DEPARTMENT OF TRANSPORTATION 1,017.526 ARC LENGTH ALONG & RIGHT BOX FRAMING PLAN BRIDGES NO. 166 \$167 I440-I65 DIRECTIONAL INTERCHANGE - LEFT LANE FRAMING PLAN-4 LEVEL GRADE SEPARATION RIGHT AND LEFT LANES I440 ROADIVAY STRUCTURE DAVIDSON COUNTY 1982 1 CORRECT Colellon L Foreaux DESIGNED BY C.M. HILES DATE 10-81 DRAWN BY M SUPERVISED BY C.M. HILES M-15-101 CHECKED BY__



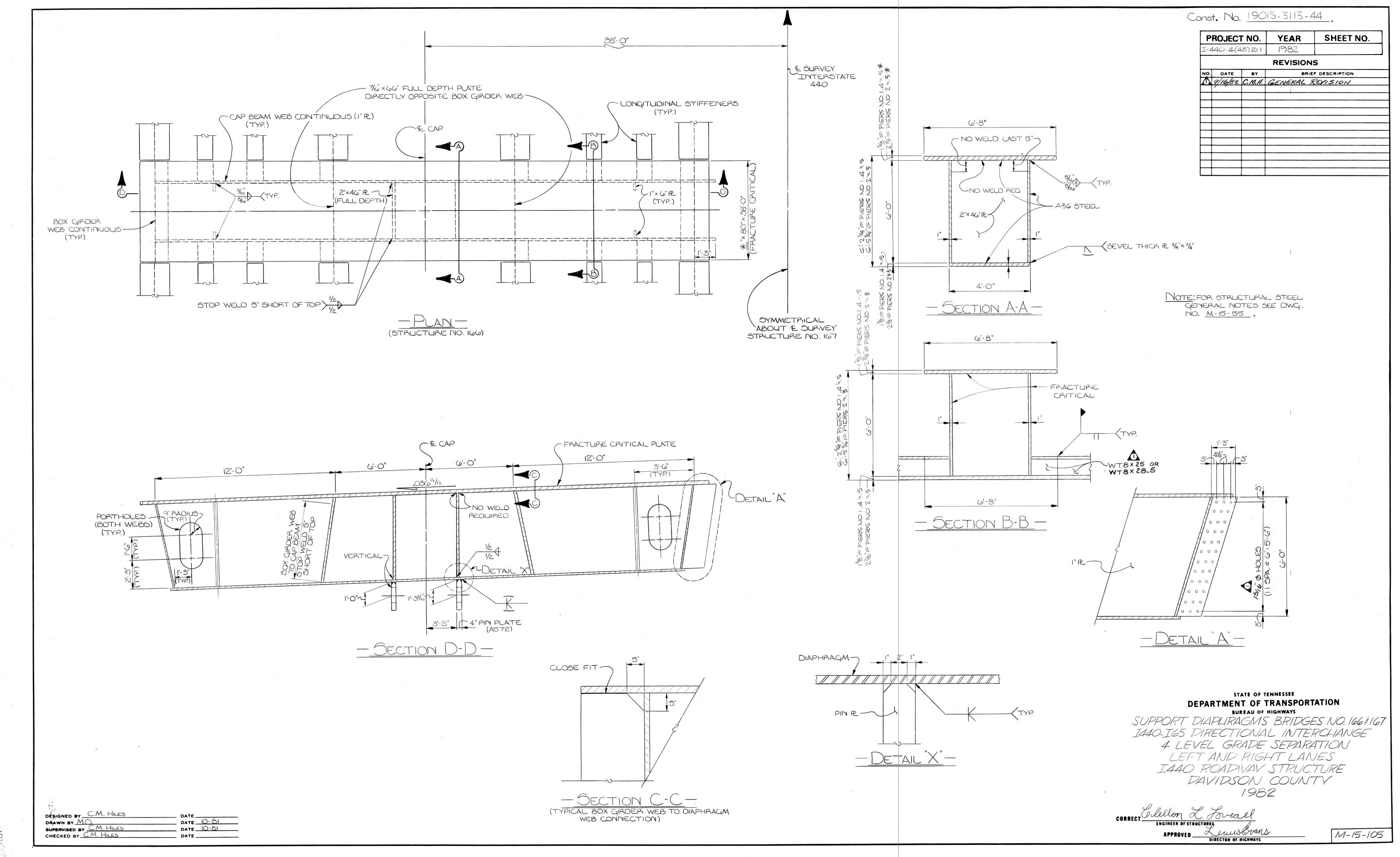


Const. No. 19015-3113-44 PROJECT NO. YEAR SHEET NO. -440-4(48)211 1982 REVISIONS NO. DATE BY BRIEF DESCRIPTION 1 9/16/86 C.M.H. GENERAL REVISION E BEARING @ ABUTMENT NO. 17 ABUTMENT NO. 2 5LAB POURING SEQUENCE POUR NO. 1 = 92:03/6 POUR NO. 4 = 63:-8/6"

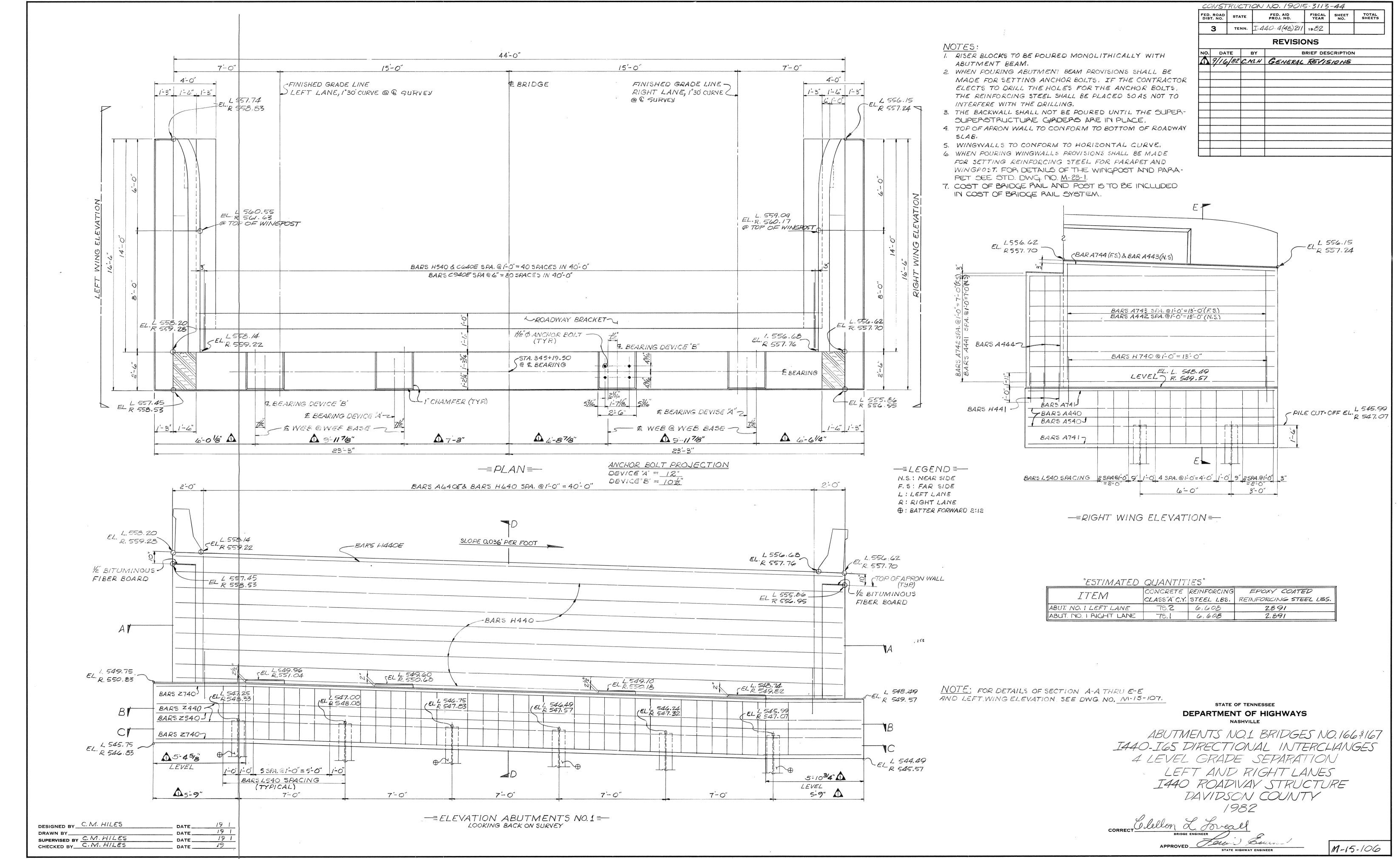
ORDINATES SPACING 9 EQ. 5PA. = 9/10L 47'-0" 9 EQ. 5PA = 6 POUR NO. 2 = 91'-91/2" POUR NO. 4 = 76'-0" POUR NO. 3 = 174'-57%" 9 EQ. 5PA. = 9/10L 9 EQ. SPA = 9/10L 9 EQ. 5PA = 9/10L 9 EQ. 5PA = %OL 9 EQ. 5PA = %OL E BEARING @ PIER NO. 3 4/20 - E BEARING @ PIER NO. 4 4/20 & BEARING @ PIER NO. 1 40 E BEARING @ PIER NO. 2 E BEARING @ PIER NO. 5 A RIGHT LANE DEAD LOAD CORRECTION CURVE—
(TYPICAL EACH GIRDER) E BEARING @ ABUTMENT NO. 1 ABUTMENT NO. 2 SLAB POURING SEQUENCE POUR NO. 1 = 89'- 95/8" POUR NO. 4 = POUR NO. 2 - 60:4/8"

ORDINATES SPACING 9 EQ. SPA. = 9/10L 9 EQ. SPA. = 9/10L POUR NO. 4 = 67'0" POUR NO. 1=60 11/8"

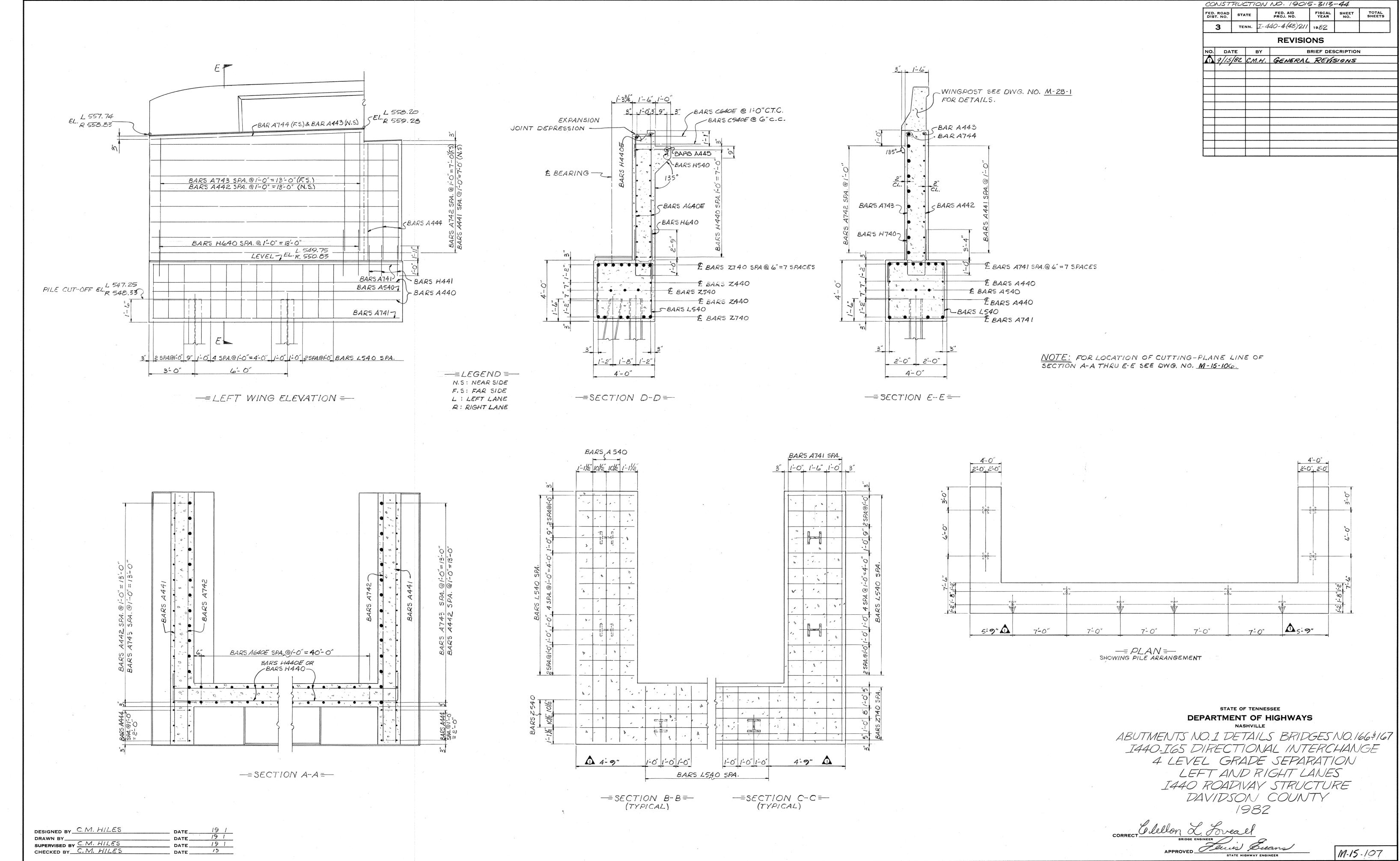
9 EQ. 5PA = 9/10L 1/20 POUR NO. 3 = 168-105/8" 9 EQ. 5PA. = 9/10L 1/20 E BEARING @ PIER NO. 2 E BEARING @ PIER NO. 4 E BEARING @ PIER NO. 3 BEARING @ PIER NO. 1 E BEARING @ PIER NO. 5 ↑ LEFT LANE DEAD LOAD CORRECTION CURVE—
(TYPICAL EACH GIRDER) STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION DEAD CORRECTION CURVES BRIDGES NO. 1663167 I440-I65 DIRECTIONAL INTERCHANGE 4 LEVEL GRADE SEPARATION RIGHT AND LEFT LANES I440 ROADIVAY STRUCTURE DAVIDSON COUNTY SUPERVISED BY C.M. Hiles M-15-104



BOFILMED

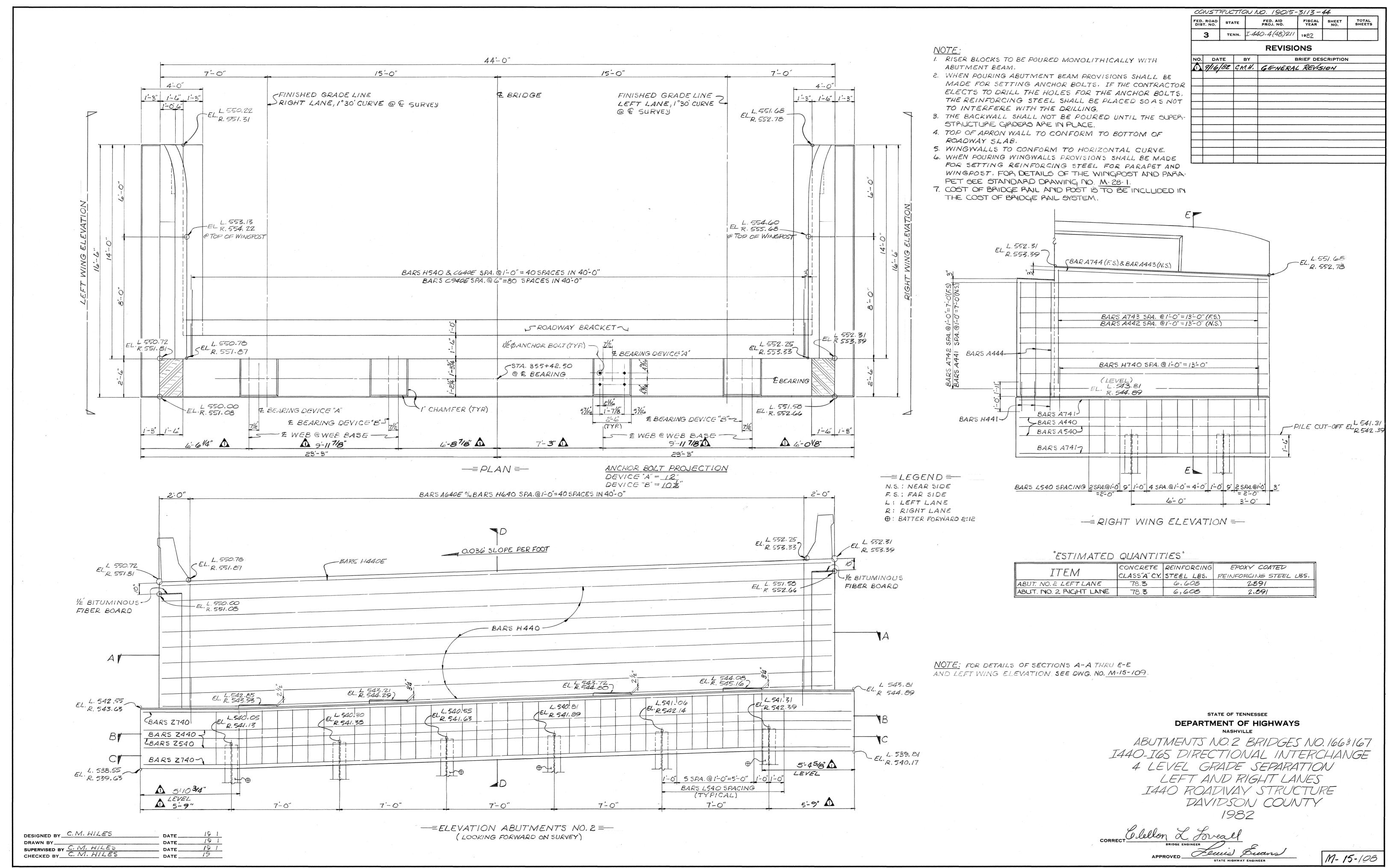


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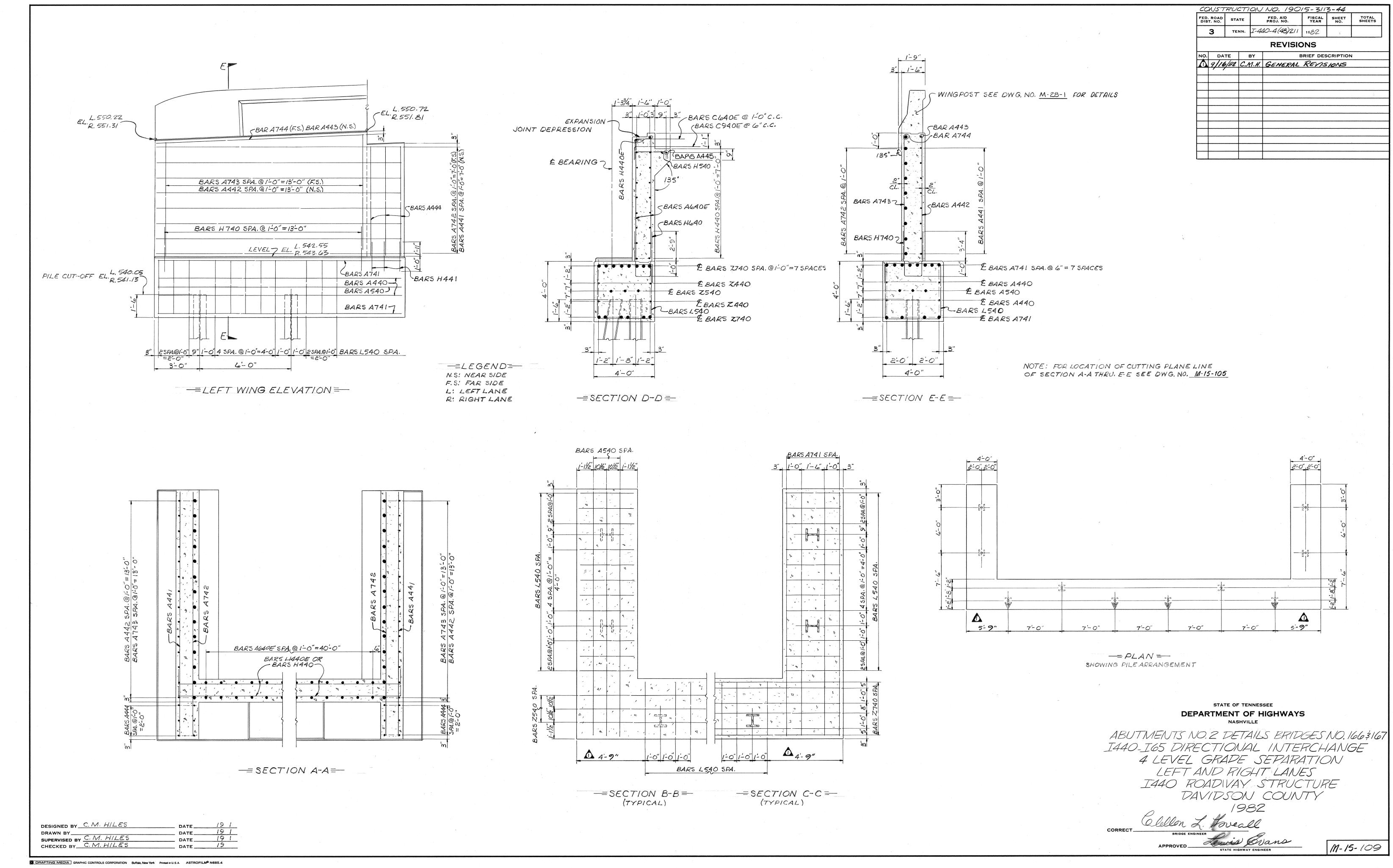


MICROFILMED

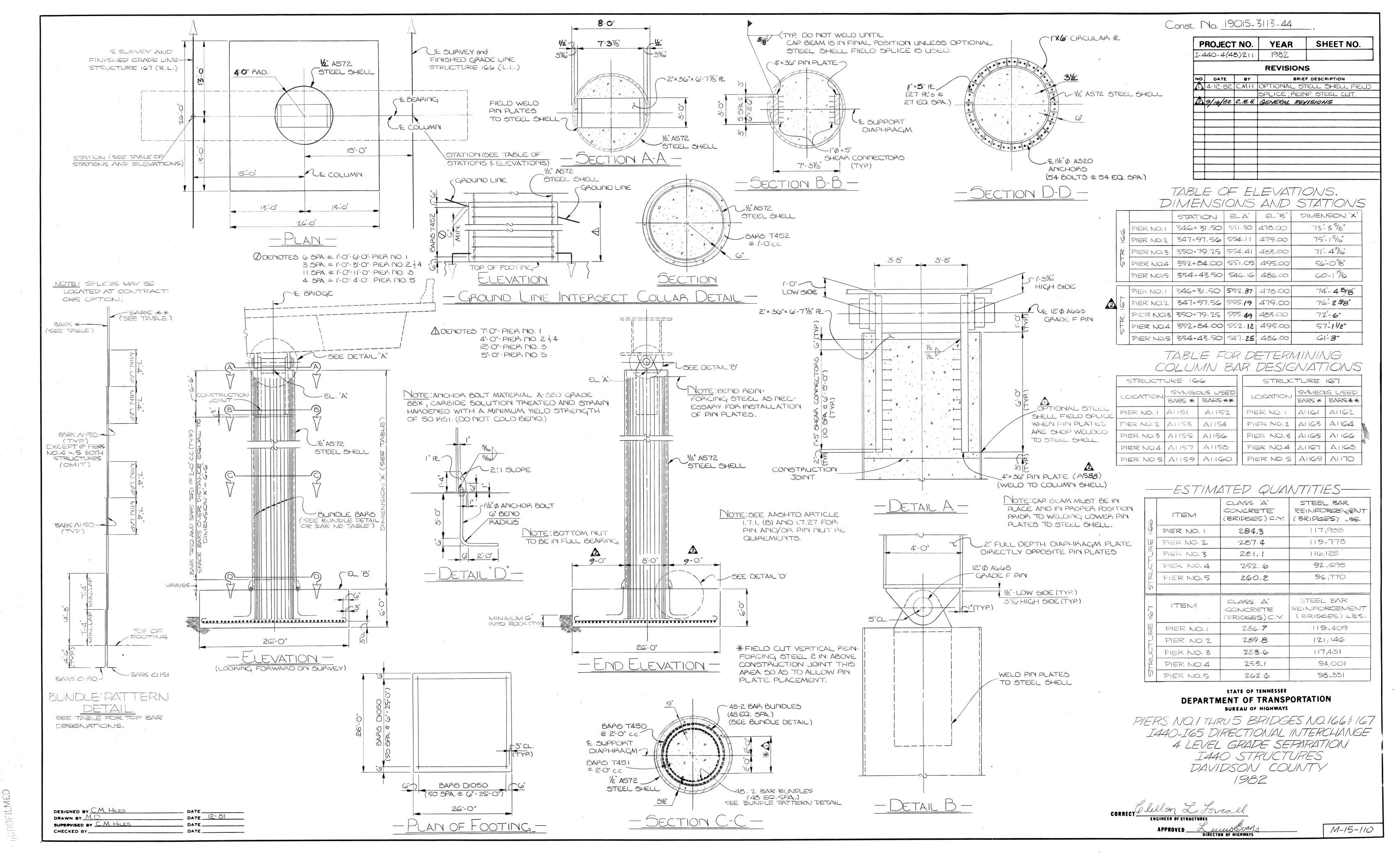
G DRAFTING MEDIA GRAPHIC CONTROLS CORPORATION Buffelo, New York Printed in U.S.A. ASTROFILM® N685.4

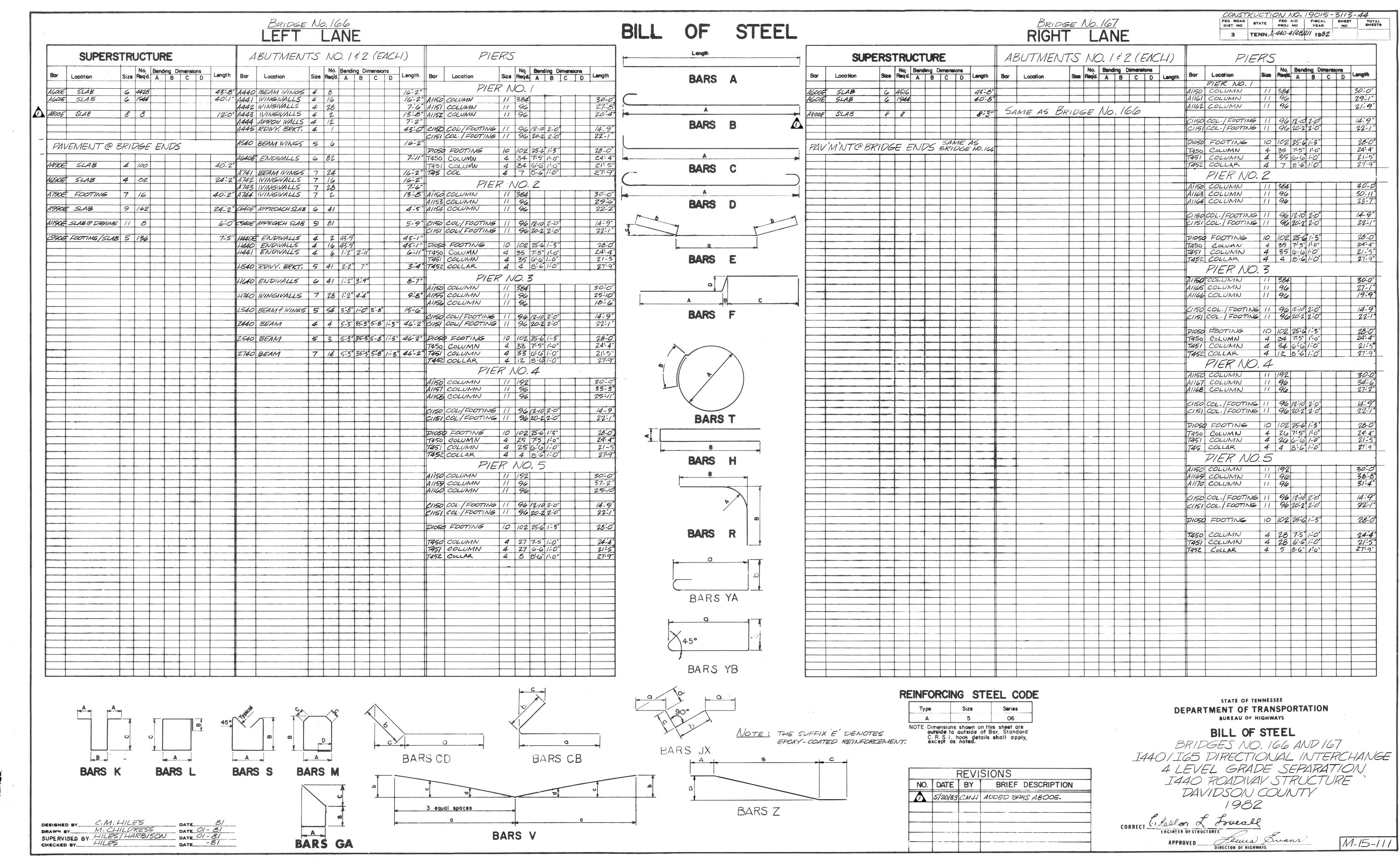


G DRAFTING MEDIA GRAPHIC CONTROLS CORPORATION Buffelo, New York Printed in U.S.A. ASTROFILM® N685.4

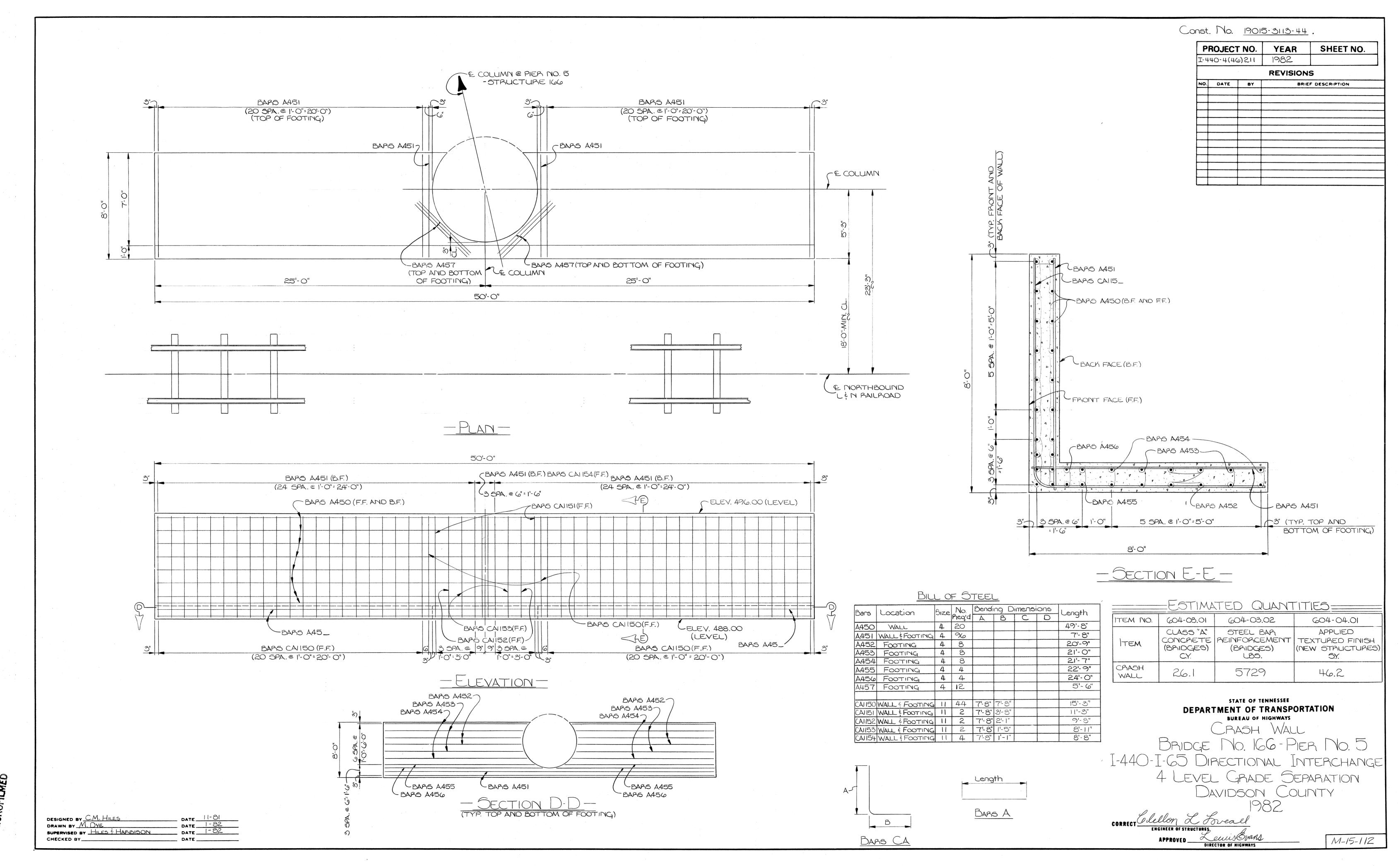


GRAFTING MEDIA GRAPHIC CONTROLS CORPORATION Buffalo, New York Printed in U.S.A ASTROFILM® N685.4





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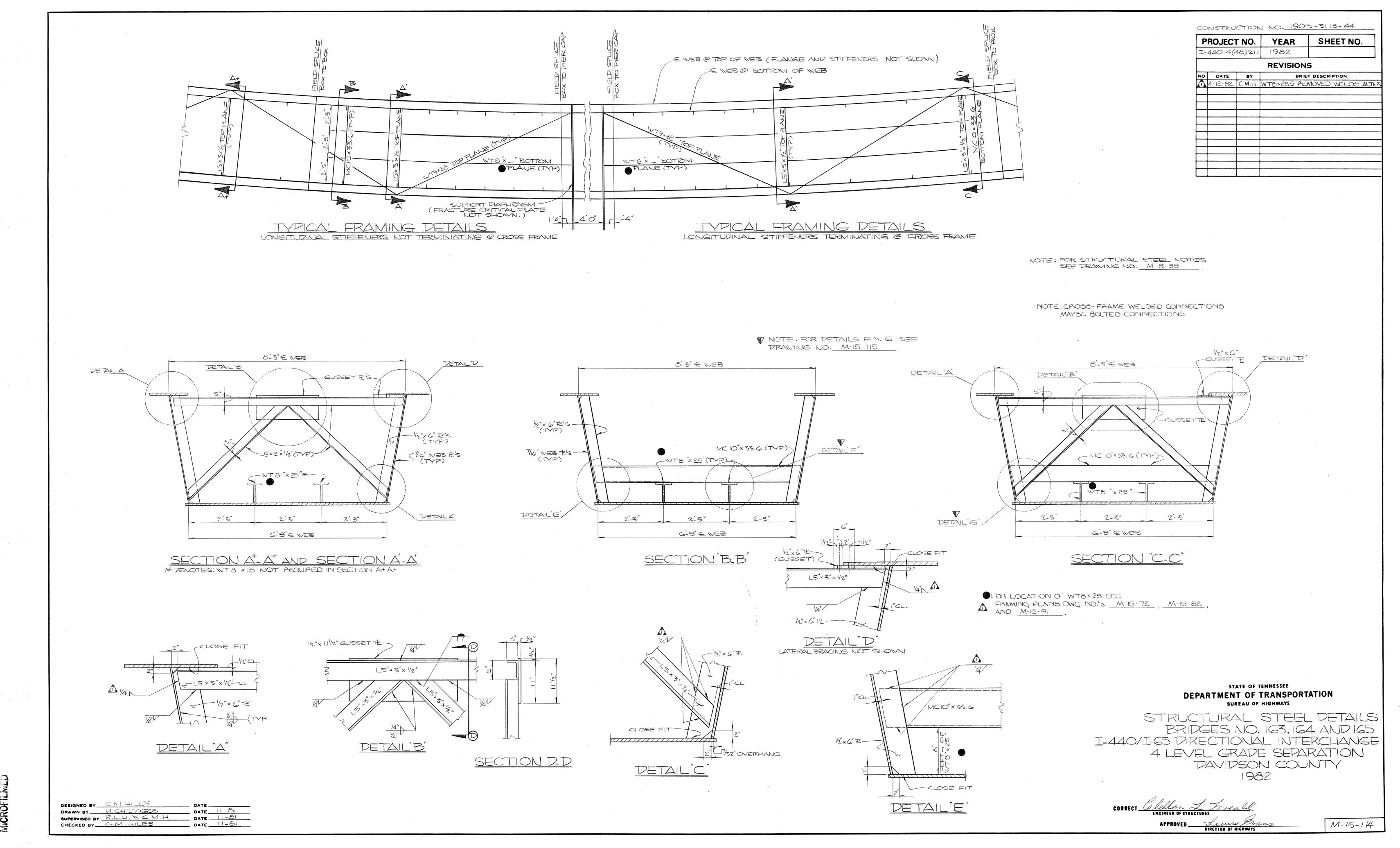


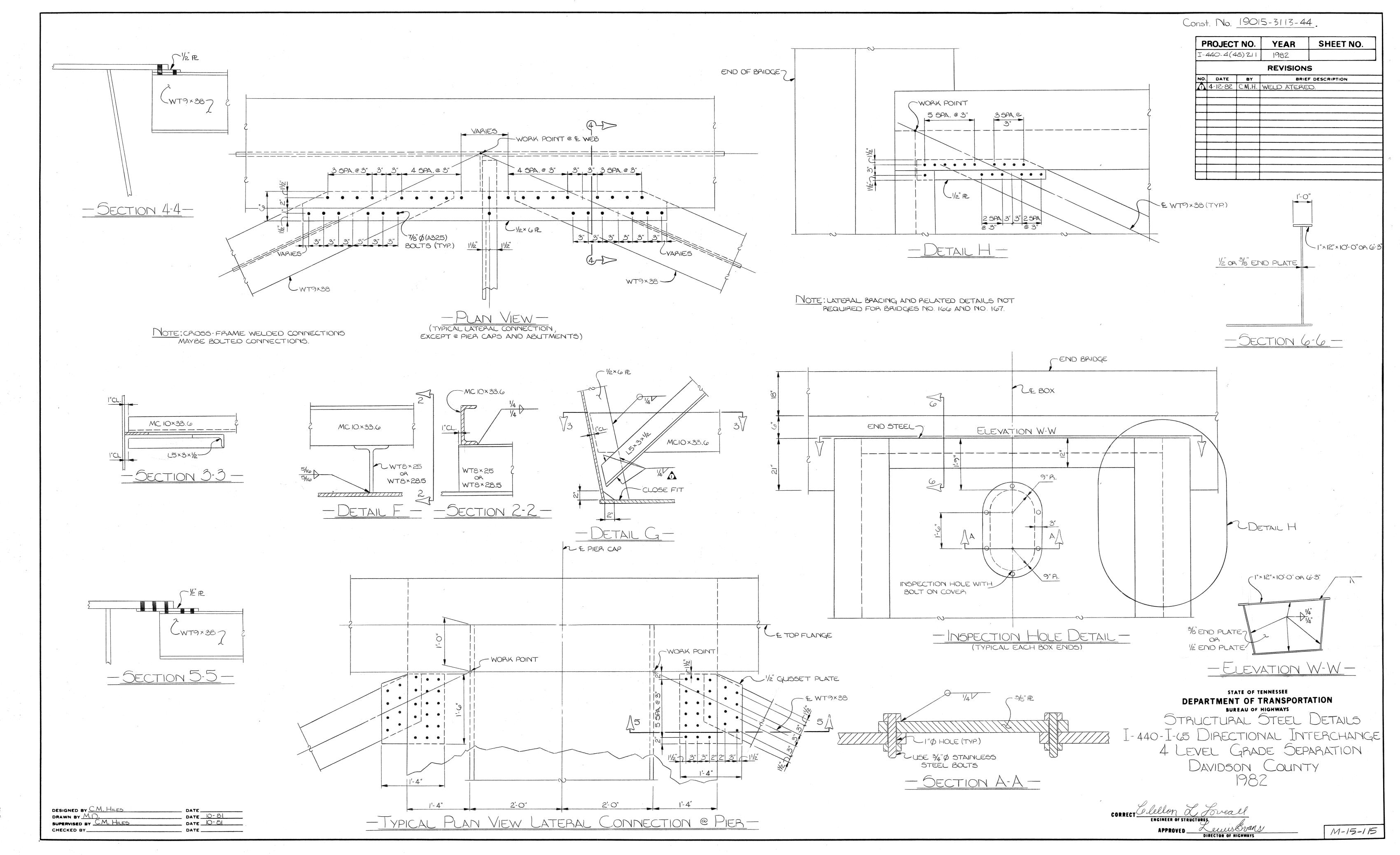
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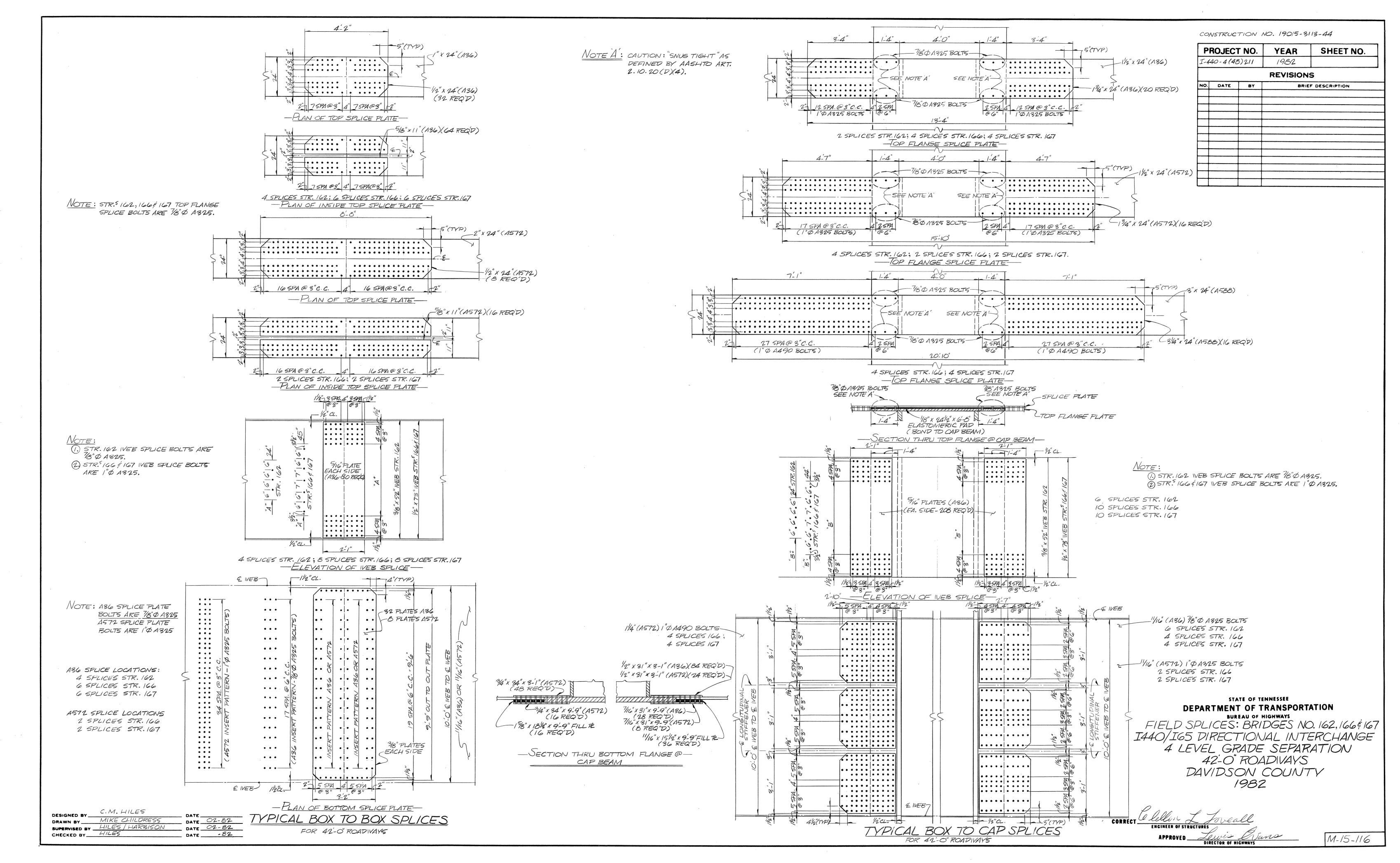
Const. No. 19015-3113-44 PROJECT NO. SHEET NO. YEAR I-440-4(48)211 1982 REVISIONS STAT ~ E WEB AT TOP OF WEB, (FLANGE AND STIFFENERS NOT SHOWN) NO. DATE BY BRIEF DESCRIPT BRIEF DESCRIPTION B4> & WEB AT BOTTOM OF WEB WT8x_ BOTTOM PLANE (TYP.) WT8×_ BOTTOM () PLANE (TYP.) VA) (A)-- SUPPORT DIAPHRAGM 1'-4" (FRACTURE CRITICAL PLATE FOR LOCATION OF WT8 × 25 AND WT8 × 28.5 SEE NOT SHOWN) FRAMING PLANS DWG. NO. M-15-101. LONGITUDINAL STIFFENERS NOT TERMINATING LONGITUDINAL STIFFENERS TERMINATING AT CROSS FRAME AT CROSS FRAME - TYPICAL FRAMING DETAILS -NOTE: FOR STRUCTURAL STEEL NOTES NOTE: CROSS-FRAME WELDED CONNECTIONS NOTE: LATERAL BRACING AND RELATED DETAILS NOT SEE DRAWING NO. M-15-55 MAYBE BOLTED CONNECTIONS. REQUIRED FOR BRIDGES NO. 166 AND NO. 167. DETAIL B DETAIL B DETAIL D DETAIL A 12'-0" E WEB 12-0" & WEB DETAIL D DETAIL A 12'-0" & WEB -GUSSET R'S-GUSSET R 1/2×6"A(TYP) 3/8" WEB R (TYP.) DETAIL F MC 10"x 33.6 (TYP.)-1/2×6"#E(TVP) ₩T8×28.5 WT8×25 3/8" WEB PL (TYP.) - MC10"×33.6 (TYP)-し5×3×1/2 (TYP.)~ WT8 × 25 DETAIL G 3'-4" 3'-4" 3'-4" DETAIL E DETAIL C 10'-0" & WEB 10'-0" E WEB 10'-0" & WEB - SECTION B-B-- SECTION A' A' and SECTION A+A+ - SECTION C-C-▲ DENOTES WT8×25 OR WT8×28.5 NOT REQUIRED IN SECTION A+A+ Note: FOR DETAILS FAND G SEE DRAWING INO. ____. -1/2×11/2 GUSSET PZ / 17 MC 10"×33.6 -CLOSE FIT ~1/2×6"12 1/2×6 GUSSET PE ~15×3×1/2-5 ~ L5×3×1/2~ STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION WT8×255 OR WT8×25 L5×3×1/2-SUREAU OF HIGHWAYS

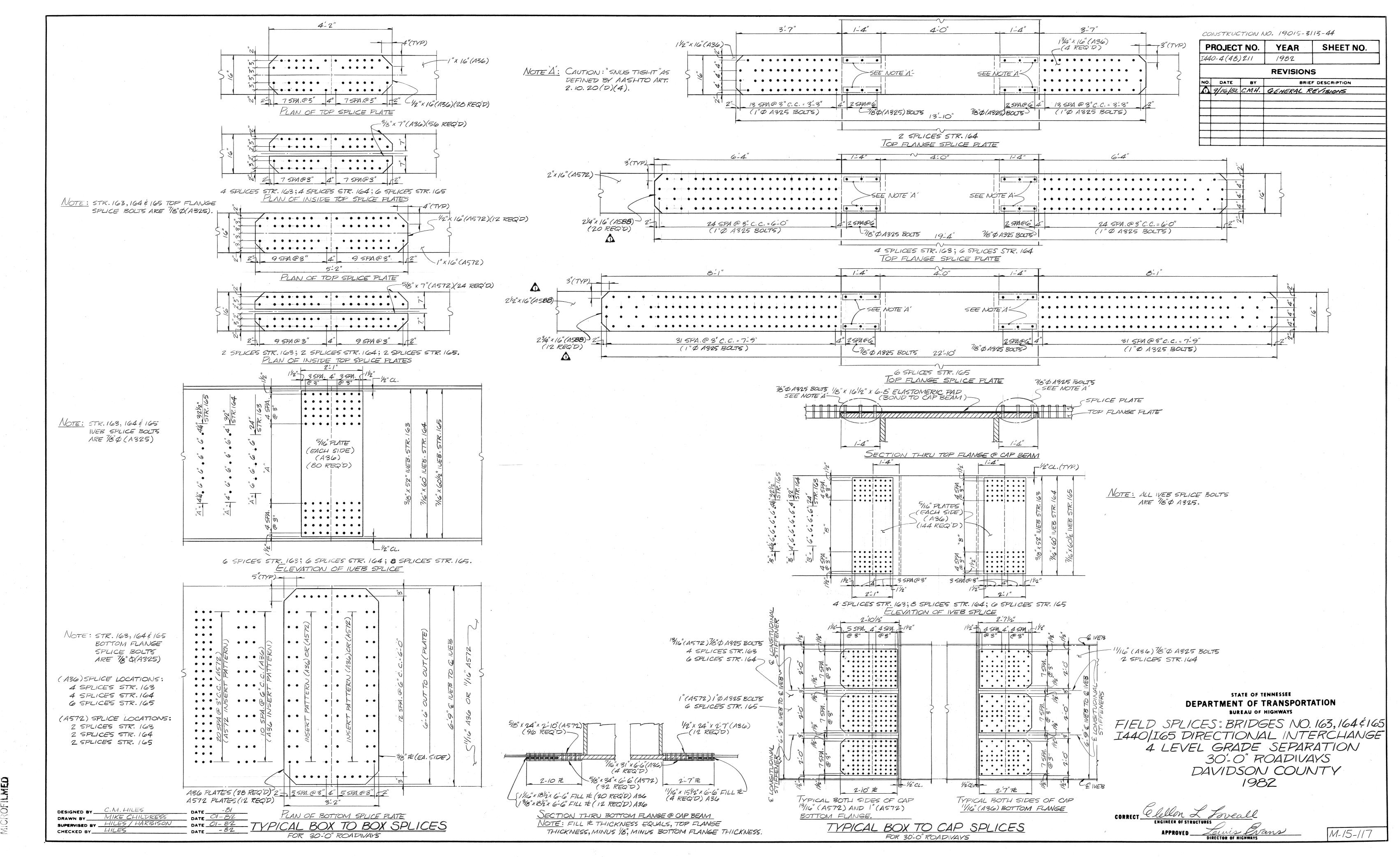
OTRUCTURAL OTEEL DETAILS - 17/32 OVERHANG -close FIT BRIDGES No. 162, No. 166 AND No. 167 CLOSE FIT - DETAIL E - I-440-I-65 DIRECTIONAL INTERCHANGE -Section D-D-4 LEVEL GRADE SEPARATION DAVIDSON COUNTY DESIGNED BY C.M. HILES
DRAWN BY M.D.
SUPERVISED BY C.M. HILES
CHECKED BY C.M. HILES M-15-113

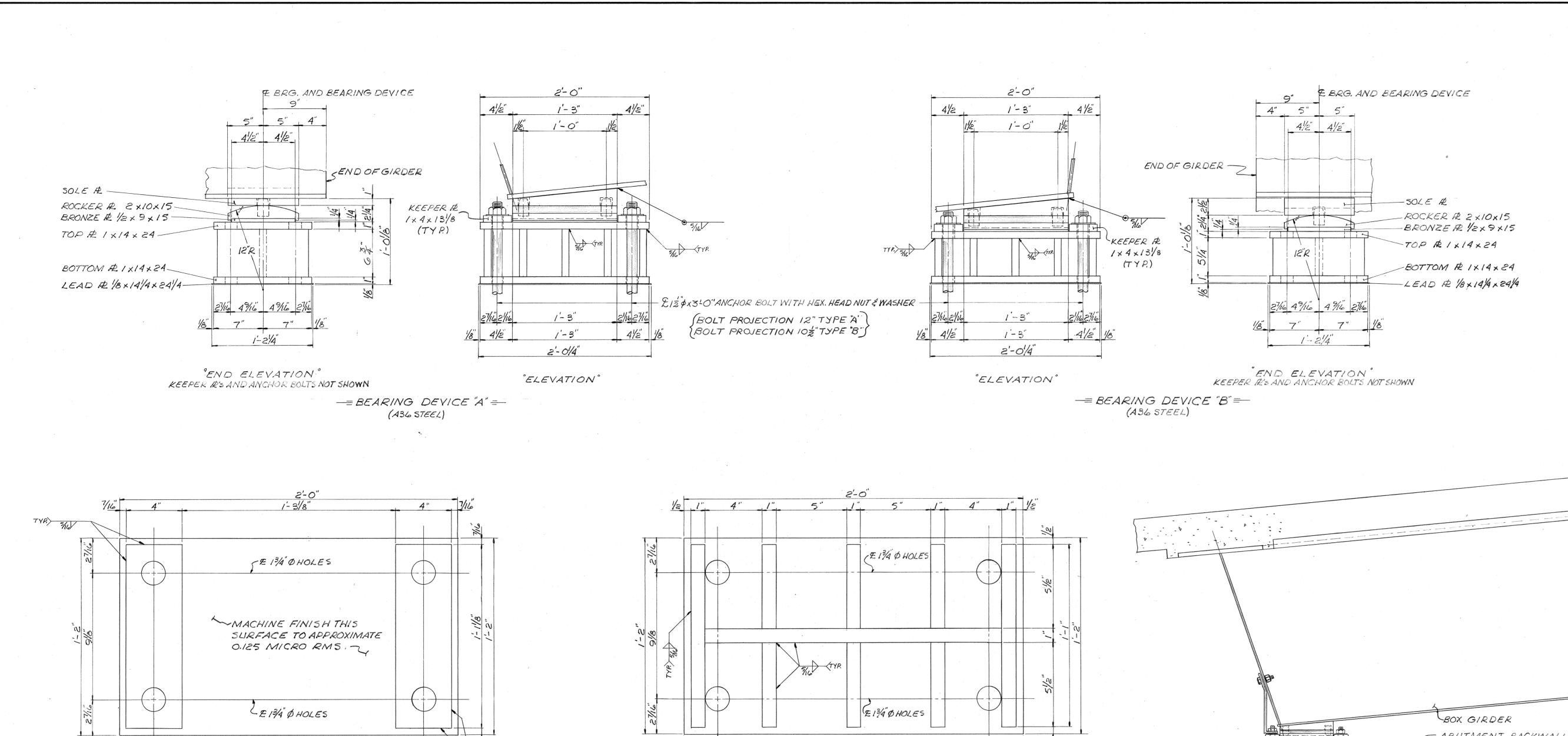
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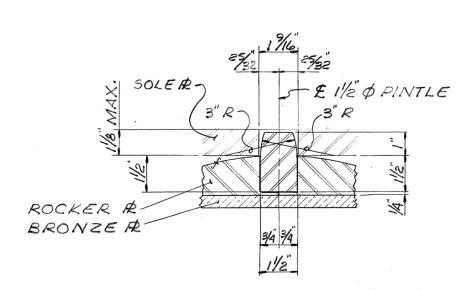




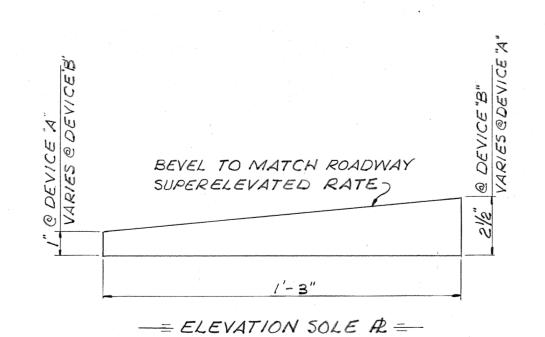


-= PLAN TOP PLATES =-SHOWN WITH 1x 4x131/8 KEEPER PLATES

1-7/8



-=TYPICAL CROSS SECTION @ PINTLE =-

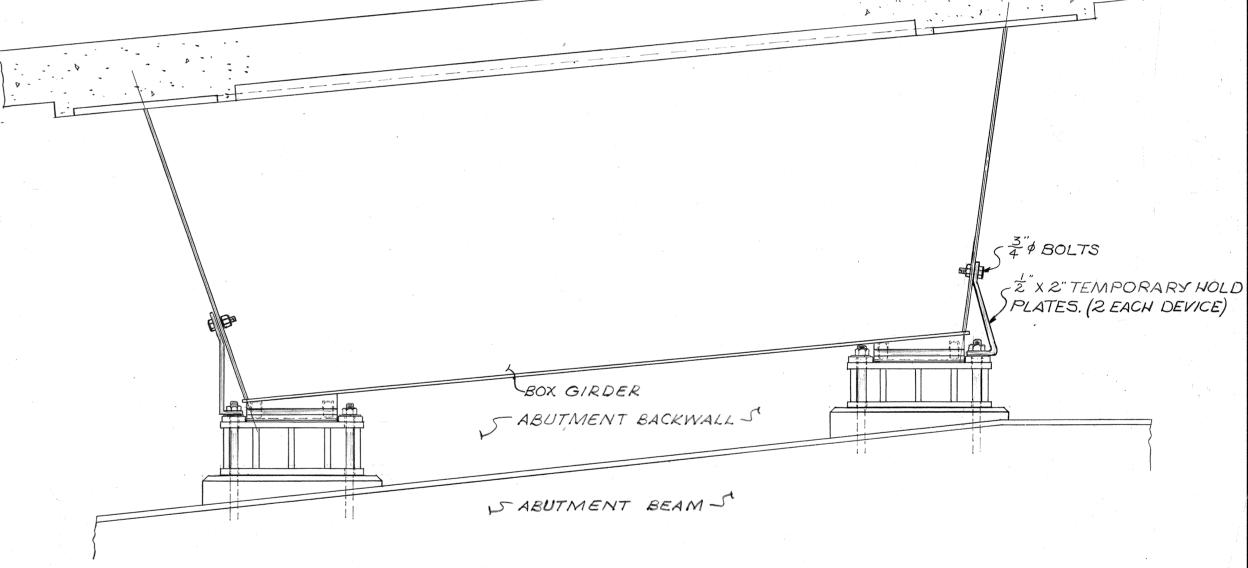


1-7/8"

- PLAN BOTTOM PLATES -

SUPERELEVATION RATES

SOUTH WEST ROADWAY = 0.05/ NORTH EAST ROADWAY = 0.06' EAST SOUTH ROADWAY = 0.059' WEST NORTH ROADWAY = 0.05/ 1440 ROADWAY 5 = 0.036'



LOCATION BEARING DEVICE A"

LOCATION BEARING DEVICE"B"

-= PARTIAL CROSS SECTION NEAR ABUTMENTS =-

NOTE: TEMPORARY HOLD DOWN PLATES SHALL REMAIN IN PLACE UNTIL THE END SPAN POSITIVE MOMENT CONCRETE DECK POUR IS COMPLETED. TEMPORARY HOLD DOWN PLATES ARE TO BE REMOVED AND ANCHOR BOLTS RE-TOURGED PRIOR TO PLACING CONCRETE IN ANY ADDITIONAL POURING SEHEDULES.

FINISH NOTE: SURFACES OF THE STEEL PLATES OPPOSING MOVEMENT OF SELF LUBRICATED BRONZE PLATES TO BE GIVEN A PLAIN MACHINE FINISH OF APPROXIMATELY 125 MICRO INCH RMS. NO PAINT OR GREESE SHALL BE ON THESE SURFACES OR ON THE SURFACES OF THE EXPANSION PLATE AT THE TIME OF ASSEMBLY. THESE SURFACES OF THE STEEL PLATE SHALL BE COATED WITH A LUBRICANT FURNISHED BY THE MANUFACTURER OF THE EXPANSION PLATE. SELF LUBRICATED BRONZE PLATES TO BE A STM B 22 ALLOY "A" OR A STM B 100 ALLOY 1.

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS

BEARING DEVICES

1440-165 DIRECTIONAL INTERCHANGE
4 LEVEL GRADE SEPARATION

DAVIDSON COUNTY

1972

CORRECT AM Much

BRIDGE ENGINEER

APPROVED SOUTH MEMORY ENGINEER

SHWAY ENGINEER M-15-118

FISCAL SHEET YEAR NO.

BRIEF DESCRIPTION

REVISIONS

NO. DATE BY

 DESIGNED BY
 C. M. HILES
 DATE
 JAN. 1972

 DRAWN BY
 J. L. SHOULDERS
 DATE FEB. 1972

 SUPERVISED BY
 C. M. HILES
 DATE FEB. 1972

 CHECKED BY
 C. M. HILES
 DATE

Index Of Sheets

SEE SHEET IA

TRAFFIC DATA (BR. NO. 19-I065-5.97) ADT (2014) 20,160 ADT (2034) 22,180 2,440 DHV (2034) 55 - 45 T (ADT)

I (AUI)	10 %	I (AUI)
T (DHV)	7 %	T (DHV)
V	55 MPH	V
ROADWAY LENGTH BRIDGE LENGTH PROJECT LENGTH	0.0379 MILES 0.0973 MILES 0.1352 MILES	ROADWAY LENGTH BRIDGE LENGTH PROJECT LENGTH

TRAFFIC (BR. NO. 19-I4	_
ADT (2014)	17,920
ADT (2034)	19,710
DHV (2034)	2,168
D	50 - 50
T (ADT)	10 %
T (DHV)	7 %
٧	55 MPH

·	
ROADWAY LENGTH	0.0379 MILES
BRIDGE LENGTH	0.1320 MILES
PROJECT LENGTH	0.1699 MILES

TRAFFIC (BR. NO. 19-I4	_
ADT (2014)	31,220
ADT (2034)	34,340
DHV (2034)	3,434
D	60 - 40
T (ADT)	10 %
T (DHV)	7 %
٧	55 MPH

ROADWAY LENGTH	0.0379	MILES
BRIDGE LENGTH	0.1928	MILES
PROJECT LENGTH	0.2307	MILES

	TRAFFIC (BR. NO. 19-1	-
Ī	ADT (2014)	5,260
	ADT (2034)	5,790
	DHV (2034)	868
	D	75 - 25
	T (ADT)	11 %
	T (DHV)	7 %
[٧	55 MPH
R	DADWAY LENGTH	0.0379 MILE

TRAFFIC (BR. NO. 19-14)	_
101. NO. 19-14	10 1,001(1)
ADT (2014)	3,860
ADT (2034)	4,250
DHV (2034)	404
D	53 - 47
T (ADT)	11 %
T (DHV)	7 %
V	55 MPH

0.0875 MILES

0.1254 MILES

TRAFFIC	DATA
(BR. NO. 19-I4	_
ADT (2014)	29,270
ADT (2034)	32,200
DHV (2034)	3,220
D	60 - 40
T (ADT)	10 %
T (DHV)	7 %
<u> </u>	55 MPH

ROADWAY LENGTH	0.0379 MILES
BRIDGE LENGTH	0.1962 MILES
PROJECT LENGTH	0.2341 MILES

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 JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 1 OR TDOT DESIGN MANAGER 1 BRIAN EGLI TDOT PROJECT MANAGER __TERRY MACKIE DESIGNED BY JAMES + ASSOCIATES, INC.

DESIGNER DAVID THOMPSON, P.E.

CHECKED BY JAMIE GILLESPIE, P.E.

P.E. NO. 19009-4184-04 PIN NO. 119954.00

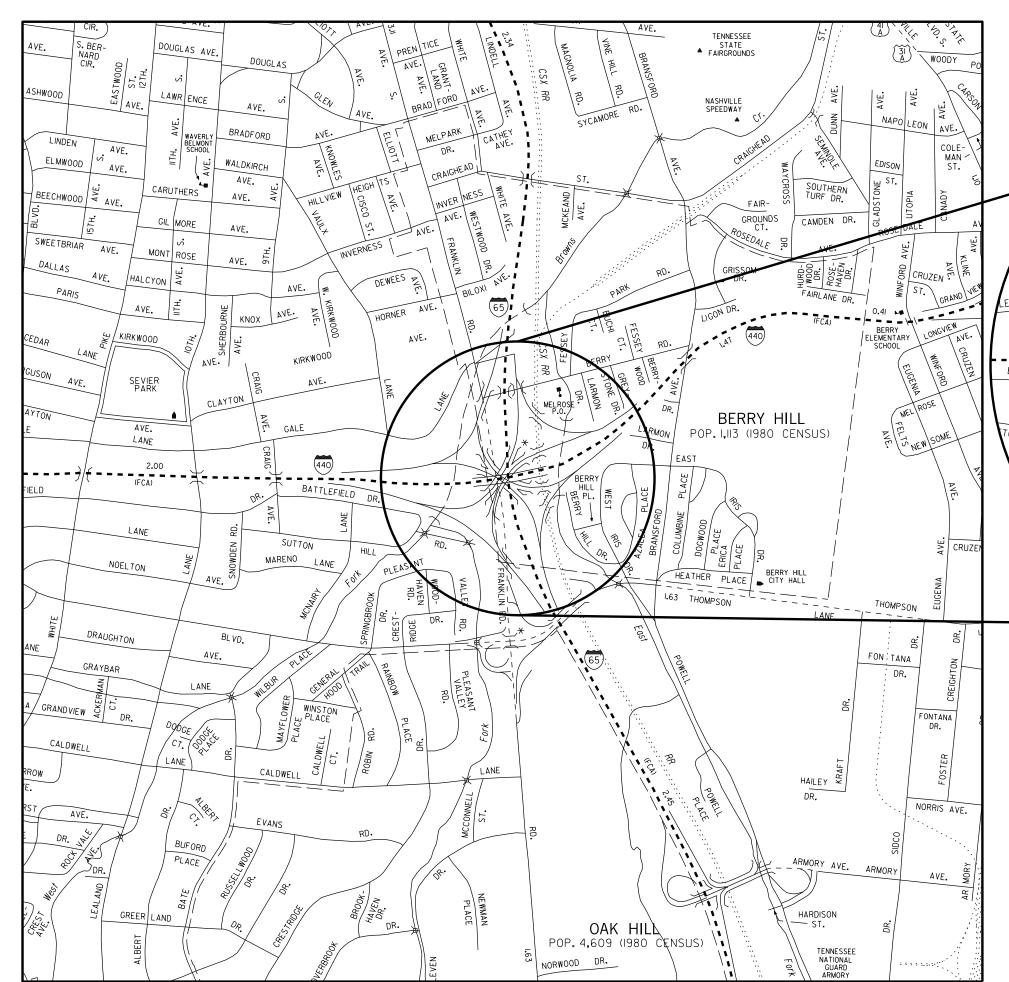
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

DAVIDSON COUNTY

INTERSTATE 440/INTERSTATE 65 DIRECTIONAL INTERCHANGE

STRUCTURE NO. 162 (BRIDGE NO. 19-I065-5.97) STRUCTURE NO. 163 (BRIDGE NO. 19-I065-5.98) STRUCTURE NO. 164 (BRIDGE NO. 19-I440-4.90(LT)) STRUCTURE NO. 165 (BRIDGE NO. 19-I440-4.88(RT)) STRUCTURE NO. 166 (BRIDGE NO. 19-I440-4.85(LT)) STRUCTURE NO.167 (BRIDGE NO.19-I440-4.85(RT))

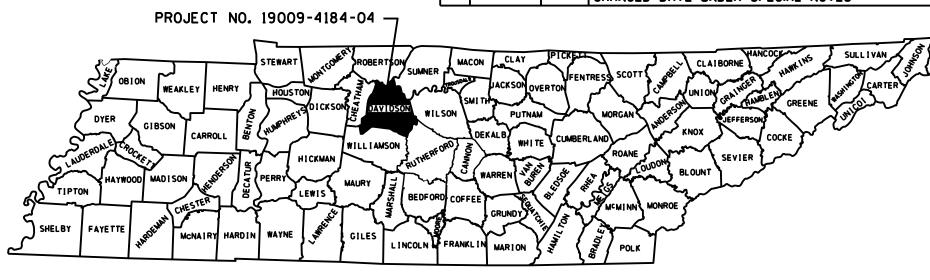
BRIDGE REPAIR

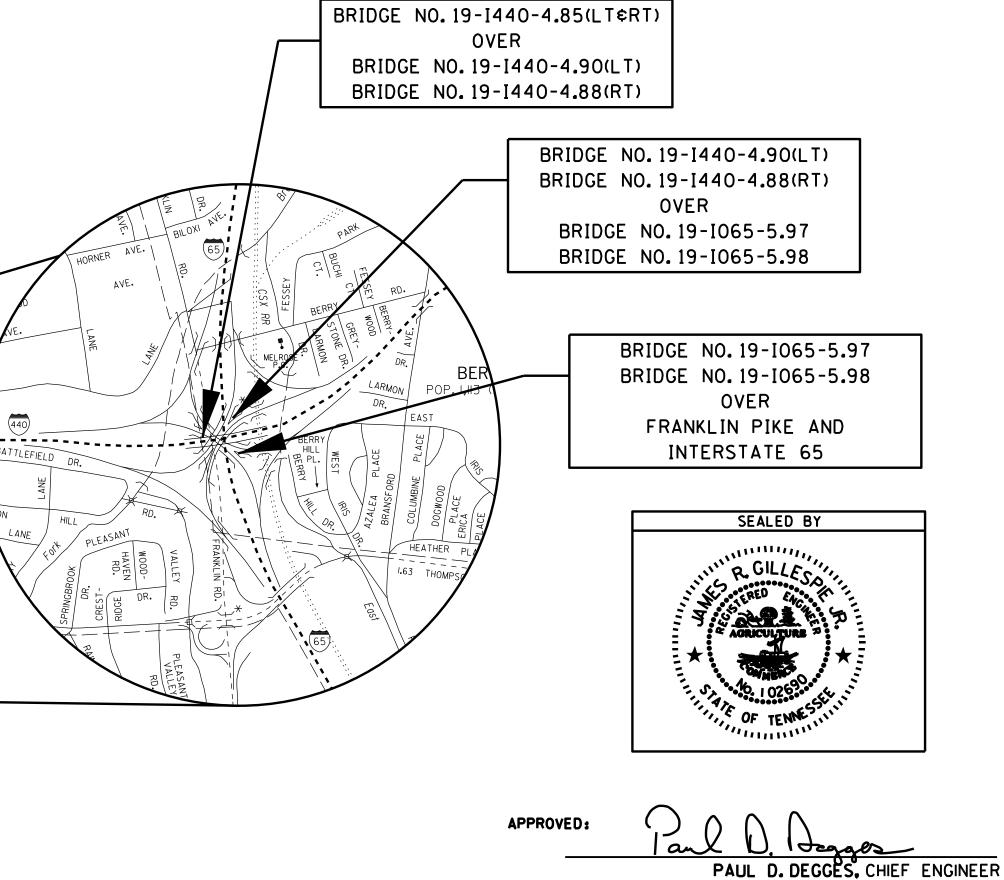


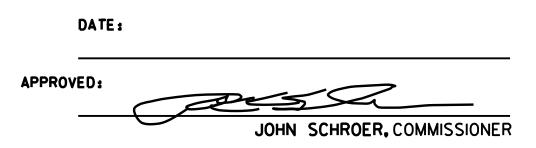
SCALE: 1" = 5,280'

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	19009-4184-04	

REV:			REVISIONS
NO.	DATE	BY	BRIEF DESCRIPTION
3	02-04-15	JG	REVISED YEAR 2014 TO 2015 - ALL SHEETS
			CHANGED DATE UNDER SPECIAL NOTES







U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION **APPROVED:**

DIVISION ADMINISTRATOR

DATE

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ESTIMATED ROADWAY QUANTITIES	2B
ROADWAY GENERAL NOTES	2C
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CONCRETE REPAIR DETAILS	
STRUCTURAL STEEL TESTING AND REPAIR DETAILS	BR-117-100
STRUCTURAL STEEL TESTING AND REPAIR DETAILS	

LIST	OF	REFERENCE	DRAWINGS
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DWG. NO.

ROADWAY DESIGN STANDARDS

DWG. NO.	REVISION DATE	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION
		AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION
		AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION
		AND SEDIMENT CONTROL
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR
		ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN
		AND CONSTRUCTION
RD01-TS-1	10-15-02	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS

CULVERTS AND ENDWALLS

D-FLU-1 FLUME DETAILS

ROADWAY AND PAVEMENT APPURTENANCES

RP-J-9	02-02-12	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT
RP-J-11	07-29-96	3/4" AND 1-3/4" EXPANSION AND EDGE PAVEMENT JOINTS
RP-J-13	03-20-91	3/4" AND 1-3/4" ELASTOMERIC COMPRESSION JOINT SEALS
RP-J-17	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-18	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-19	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-23	07-25-12	CONCRETE PAVEMENT REPAIR DETAILS
RP-J-25	05-27-01	CONCRETE PAVEMENT JOINT REPAIR DETAILS

SAFETY APPURTENANCES AND FENCE 3

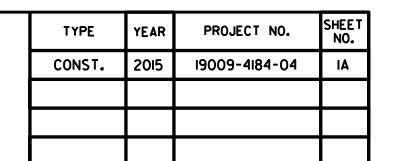
S-GR31-1 S-GRC-1	12-01-14	W-BEAM GUARDRAIL GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER
S-GRT-4 S-GRA-3	11-06-14	WALL TYPE 13 GUARDRAIL TERMINAL (TRAILING END) GUARDRAIL ANCHOR FOR TYPE 21,13, AND IN-LINE TERMINALS

TRAFFIC CONTROL APPURTENANCES 3

T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-15		ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND ACCESS CONTROLLED ROUTES
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-S-11	06-06-11	DELINEATOR AND MILEPOST DETAILS
T-S-16	06-05-14	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-16A	11-01-11	GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-13-09	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-13-09	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-15	04-02-12	INTERIOR LANE CLOSURE ON FREEWAYS OR EXPRESSWAYS
T-WZ-16	03-13-09	LANE SHIFT ON DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-18	03-13-09	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE
		INSTALLATION



(3) 02-04-15 JG CHANGED REVISION DATES AND ADDED STD. SBR-2-115

BRIDGE APPURTENANCES

STD-1-5	03-26-14	REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS - 1995
STD-1-7	08-24-11	BRIDGE END DRAINS W/PAVEMENT AT BRIDGE ENDS - 1993
STD-1-9	05-01-95	BRIDGE END DRAIN 4'X 8'-7" W/PABE - 1993
STD-9-1	10-07-08	REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
SBR-2-115	01-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT
		REPLACEMENT CONSTRUCTION TYPES "A" THRU "J" - 1991

STRUCTURE NO.162
STRUCTURE NO.163
STRUCTURE NO.164
STRUCTURE NO.165
STRUCTURE NOS.166 \$ 167
INTERSTATE 440/INTERSTATE 65
DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY
2015



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

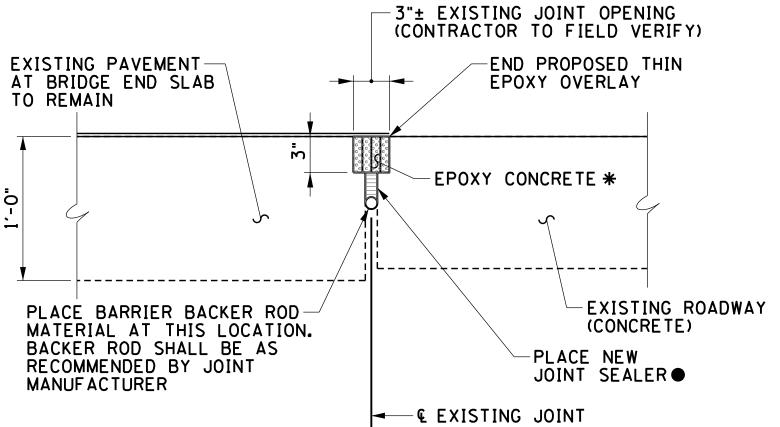
> INDEX AND STANDARD DRAWINGS

		ESTIMATED BR	RIDGE	QUANT	ITIES 1				
	ITEM NO.	DESCRIPTION	UNIT	STRUCTURE NO. 162	STRUCTURE NO. 163	STRUCTURE NO. 164	STRUCTURE NO. 165	STRUCTURE NOS.166 & 167	TOTAL QUANTITY
17	201-07.01	REMOVAL AND DISPOSAL OF BRUSH AND TREES	LS	0.2	0.2	0.2	0.2	0.2	1
	602-10.05	BRACING REPAIRS	LS	0.2	0.2	0.2	0.2	0.2	1
	602-10.12	BEARING DEVICE (REPAIR)	LS	0	0	0.5	0	0.5	1
2	602-10.19	JACKING STEEL SPANS	LS	0	0.33	0.33	0	0.33	1
53	602-10.22	STRUCTURAL STEEL WELD REPAIR	EACH	0	0	0	13	13	26
54	602-10.32	STRUCTURAL STEEL (REPAIRS)	LB	2,000	1,910	2,690	2,870	8,340	17,810
6	602-10.33	STRUCTURAL STEEL TEST FOR CRACKS	LS	0.2	0.2	0.2	0.2	0.2	1
57	603-02.20	SPOT PAINTING EXISTING STEEL STRUCTURES	SF	8,700	500	700	700	10,000	20,600
8	603-05.20	CONTAINMENT AND DISPOSAL OF WASTE (STRUCTURE NOS. 162-167)	LS	0.2	0.2	0.2	0.2	0.2	1
9	604-03.04	PAVEMENT AT BRIDGE ENDS	SY	120	85	0	85	490	780
	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	SY	420	380	570	570	1,660	3,600
[5]	604-10.05	CONCRETE	SF	5	10	5	5	10	35
	604-10.17	NON-PENETRATING CONCRETE SEAL	SY	35	25	25	25	70	180
512	604-10.44	EXPANSION JOINT REPAIRS	LF	84	0	0	30	0	114
[5	604-10.50	BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	SY	10	10	10	10	20	60
51314	604-10.54	CONCRETE REPAIRS	SF	30	50	10	20	30	140
[5]	604-10.60	EXPANSION JOINT REPAIRS (MODULAR TYPE)	LF	0	0	0	0	176	176
18	604-10.70	EXPANSION JOINT REPAIRS	LF	24	0	32	16	0	72
	604-10.78	RISER BLOCK REPAIR	EACH	0	4	0	0	0	4
_	611-06.13	BRIDGE END DRAIN (2'×8'-7")	EACH	1	0	0	2	4	7
1 6	617-04.01	TYPE 1 THIN EPOXY OVERLAY (EPOXY URETHANE)	SY	2,515	1,625	2,495	2,435	10,305	19,375
	709-02.01	RUBBLE STONE RIP-RAP (GROUTED)	CY	0	0	1	0	1	2

FOOTNOTES: 1 2 3

- 1 INCLUDES ALL NECESSARY TEMPORARY SUPPORT OF THE STRUCTURE FOR THE DURATION OF THE PROJECT. ALSO INCLUDES FORMWORK OVER TRAFFIC TO STOP DEBRIS FROM FALLING ONTO ROADWAYS AND RAILWAYS BELOW. BRACING PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 2 SEE JACKING NOTES ON SHEET BR-117-70. INCLUDES THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO JACK AND SUPPORT THE STEEL SPANS AS REQUIRED TO PERFORM REPAIRS.
- (3) INCLUDES LABOR, EQUIPMENT AND MATERIALS TO REPAIR WELDS IN ACCORDANCE WITH INFORMATION PROVIDED ON BR-117-100. REPAIRS WILL BE PERFORMED FOR STRUCTURAL CRACKS NOTED IN TDOT BRIDGE INSPECTION REPORTS AND DISCOVERED WHILE PERFORMING "STRUCTURAL STEEL TEST FOR CRACKS", ITEM NO. 602-10.33. SEE CRACK LOCATION TABLE ON BR-117-73, BR-117-78, BR-117-83, BR-117-88 AND BR-117-93.
- 4 INCLUDES THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO ADD NEW ANGLES TO THE UPPER DIAPHRAGM/WEB/STIFFENER CONNECTIONS AND ANY OTHER STEEL REPAIRS REQUIRED BY ENGINEER. INCLUDES THE COST OF NEW BOLTS. ANY BOLTS REMOVED SHALL BE REPLACED WITH NEW BOLTS. SEE DETAILS ON SHEET BR-117-101.
- (5) ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.
- STRUCTURAL STEEL TESTING PERFORMED INSIDE BOX GIRDERS SHALL BE DYE PENETRANT TESTING AND/OR FLASH MAGNETIC PARTICLE TESTING TO DETERMINE THE EXTENT OF CRACKS IN WELDS AT BEARING STIFFENER TO WEB CONNECTIONS AT CROSS FRAME LOCATIONS AND AT SUPPORT DIAPHRAGM TO WEB CONNECTIONS FOR A TOTAL OF 2,088 LOCATIONS. PRIOR TO TESTING, ALL PARTS OR AREAS OF PARTS TO BE EXAMINED MUST BE FREE OF ALL RUST, SCALE, WELDING FLUX, WELD SPATTER, GREASE, PAINT, OILY FILMS, DIRT, AND SO FORTH, THAT MAY INCREASE WITH TESTING. REMOVAL OF PAINT BY GRINDING SHALL NOT BE ALLOWED IN AREAS WHERE TESTS ARE TO BE PERFORMED. CONTRACTOR SHALL COORDINATE ALL TESTING WITH TDOT BRIDGE INSPECTION OFFICE. INCLUDES ALL PAINT REMOVAL, CLEANING, LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM TESTS AND TO PROVIDE DOCUMENTATION OF TEST RESULTS TO TDOT BRIDGE INSPECTION OFFICE.
- 7 HAND TOOL AND/OR MEDIA BLAST CLEAN AND SPOT PAINT AREAS OF RUST INSIDE STEEL GIRDERS AND PIER SUPPORT DIAPHRAGMS AND INCLUDES PAINTING NEW BOLT HEADS AND NUTS AFTER INSTALLATION. SEE "APPLIED TEXTURE FINISH AND SPOT PAINT SKETCH" ON THIS SHEET.
- (8) CONTAINMENT AND DISPOSAL OF WASTE RESULTING FROM WORK PERFORMED IN ITEM NO. 603-02.20 WILL BE PAID FOR AT THE CONTRACT UNIT PRICE (LUMP SUM) COMPLETE IN PLACE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, FEES AND ANY OTHER COSTS ASSOCIATED WITH OBTAINING PERMITS AND APPROVALS, FURNISHING AND MAINTAINING CONTAINERS, CONTAINING WASTE FROM SURFACE PREPARATION OPERATIONS, PLACING WASTE IN CONTAINERS, TESTING, TRANSPORTING AND DISPOSAL OF ALL WASTE MATERIALS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH T.D.O.T. SPECIFICATIONS.
- 9 SOUARE YARD FOR PAVEMENT AT BRIDGE ENDS SHALL BE MEASURED AT ROAD SURFACE AREA AND SHALL INCLUDE REMOVING SCUPPERS, ALL CONCRETE, REINFORCING STEEL, JOINT MATERIAL, MECHANICAL COUPLERS, SURFACE FINISH AS PER SP604, DEMOLITION AND REMOVAL OF EXISTING PAVEMENT AT BRIDGE ENDS AND ANY OTHER INCIDENTALS NECESSARY FOR COMPLETE PHASED CONSTRUCTION. PRIOR TO CONSTRUCTION OF THE PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER FOR APPROVAL.

- (10) INCLUDES THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT TO CLEAN CONCRETE AND APPLY TEXTURE FINISH TO PARAPETS AND WINGPOSTS AS INDICATED IN "APPLIED TEXTURE FINISH" SKETCH ON THIS SHEET.
- 11) TOP OF ABUTMENT BEAM AND EXPOSED VERTICAL FACE OF ABUTMENT BEAM AND BACKWALL SHALL RECEIVE NON-PENETRATING CONCRETE SEAL.
- (12) INCLUDES ALL LABOR AND MATERIALS NECESSARY TO PERFORM PHASED REPLACEMENT OF STRIP SEAL EXPANSION JOINT MEMBRANE. ABUTMENT NOS. 1 AND 2 STRUCTURE NO. 162 AND ABUTMENT NO. 1 STRUCTURE NO. 165. ALL OTHER STRIP SEAL MEMBRANES SHALL BE CLEANED, INSPECTED, AND REPLACED AT DISCRETION OF PROJECT ENGINEER. TOTAL JOINT MOVEMENT REQUIRED = 4". MATERIALS AND WORKMANSHIP SHALL COMPLY WITH SECTION 623.03 OF THE STANDARD SPECIFICATIONS.
- (13) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO REPAIR DETERIORATED CONCRETE AREAS WITH QUICK-SET PATCHING MATERIALS.
- 14 INCLUDES THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM PARTIAL DEPTH DECK REPAIRS IN ACCORDANCE WITH NOTES AND DETAILS ON BR-117-98 AND T.D.O.T. SPECIFICATIONS.
- INCLUDES ALL LABOR AND MATERIALS NECESSARY TO REPAIR MODULAR EXPANSION JOINTS AT ABUTMENT NO.1 AND ABUTMENT NO.2 FOR STRUCTURE NOS.166 AND 167. WORK SHALL BE IN ACCORDANCE WITH BR-117-98, MODULAR EXPANSION JOINT REPAIR. TOTAL JOINT MOVEMENT REQUIRED = 5". FOR SHOP DRAWINGS OF EXISTING MODULAR EXPANSION JOINT, CONTACT TERRY MACKIE (TDOT BRIDGE REPAIR) AT (615)741-6048.
- (6) SEE TYPE 1 THIN EPOXY OVERLAY (EPOXY-URETHANE) NOTES ON BR-117-98. COST SHALL ALSO INCLUDE THE REMOVAL BY DIAMOND GRINDING OF THE EXISTING EPOXY OVERLAY ON STRUCTURE NO. 164. SEE SHEET BR-117-81.
- 17 INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO REMOVE VEGETATION FROM BRIDGE COMPONENTS IN ACCORDANCE WITH NOTE (34) ON BR-117-70.
- (18) INCLUDES ALL LABOR AND MATERIALS REQUIRED TO REPAIR JOINT BETWEEN EXISTING PAVEMENT AT BRIDGE ENDS AND EXISTING ROADWAY CONCRETE PER "JOINT REPAIR DETAIL AT APPROACH SLABS TO REMAIN" SKETCH ON THIS SHEET.



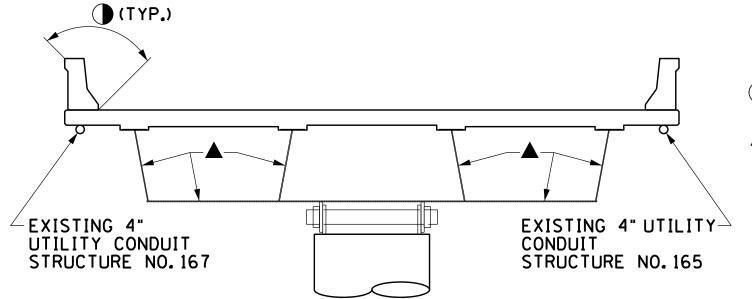
Р	ROJECT	NO.	YEAR	SHEET NO.	
190	009-418	4-04	2015	2	
			REVISIONS	•	
NO.	DATE	BY	BRIEF	DESCRIPTION	
1	06-27-14	DT	EDITED ITEM DE	SCRIPTION AND	
			FOOTNOTE 7		
2	07-24-14	DT	EDITED FOOTNOTE 5		
3	02-04-15	DT	EDITED FOOTNOTES 7, 15 AND 16 AND		
			REMOVED DENOT	E USING PLYWOOD/ME	
			STRIP IN JOINT	REPAIR DETAIL	

JOINT REPAIR DETAIL AT APPROACH 3 SLABS TO REMAIN (ITEM NO. 604-10.70)

(SHOWS SECTION THRU SLABS)

- * DENOTES: THE BINDER MIX. SAND AGGREGATE BATCH, PLACING METHOD, TEMPERATURE AND HUMIDITY LIMITATION AND CURING TIMES SHALL BE AS RECOMMENDED BY THE EPOXY CONCRETE MANUFACTURER.
- DENOTES: NEW JOINT SEALER SHALL BE A COLD POUR ONE (1) COMPONENT JOINT SEALER AS APPROVED BY THE DIVISION OF MATERIALS AND TESTS.
 - NOTE: COST INCLUDES LABOR, EQUIPMENT, CLEANING THE EXISTING JOINT, SAW CUTTING, BACKER ROD, GALVANIZED METAL OR PLYWOOD STRIP, COLD POUR JOINT SEALER, EPOXY CONCRETE, AND ANY MISCELLANEOUS MATERIALS OR INCIDENTALS NECESSARY TO CONSTRUCT THE NEW JOINTS.
 - NOTE: JOINT REPAIR SHALL BE COMPLETE PRIOR TO PLACING THIN EPOXY OVERLAY ON PAVEMENT AT BRIDGE END SLAB.

 NOTE: REMOVE EXISTING JOINT MATERIAL BEFORE FILLING WITH NEW EPOXY CONCRETE. THE CONTRACTOR MAY OBTAIN A
 LIST OF ACCEPTABLE BRANDS OF EPOXY CONCRETE FROM THE TENNESSEE MATERIALS AND TESTS.
 - NOTE: THE DEPTH OF THE JOINT POURED SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR PROPER INSTALLATION. THE PAVEMENT AND AIR TEMPERATURE SHALL BE 40°F AND RISING AND SHALL NOT FALL BELOW 40°F PRIOR TO COMPLETE CURE OF THE SEALANT.
 - NOTE: THE SEALANT THICKNESS PLACED SHALL BE CHECKED, PRIOR TO CURING, AT A MINIMUM OF THREE (3) LOCATIONS ACROSS A TWELVE (12) FOOT LENGTH OF JOINT TO ASSURE PROPER THICKNESS.
 - NOTE: TOP 3" OF JOINT SHALL BE BLAST CLEANED TO REMOVE LAITANCE AND OTHER DELETERIOUS MATERIAL BEFORE INSTALLATION OF BACKER ROD OR SEALANT.
 - NOTE: ALL DEBRIS AND EXISTING JOINT MATERIAL SHALL BE REMOVED FOR THE FULL DEPTH OF THE EXISTING JOINT OPENING.
 - NOTE: THE SELF-LEVELING SILICONE JOINT SEALANT MATERIAL SHALL BE ON THE TDOT QUALIFIED PRODUCTS LIST NO. 5, SECTION B.



APPLIED TEXTURE FINISH AND SPOT PAINT SKETCH

(NOT TO SCALE)
STRUCTURE NO. 162
STRUCTURE NO. 163
STRUCTURE NO. 164
STRUCTURE NO. 165
STRUCTURE NOS. 166 AND 167



DENOTES: HAND TOOL AND/OR MEDIA BLAST CLEAN AND SPOT PAINT AREAS OF RUST INSIDE STEEL GIRDERS AND PIER SUPPORT DIAPHRAGMS AND SHALL BE INCLUDED IN ITEM NO. 603-02.20.

NOTE: COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 604-04.02 AND CONSIST OF TOP AND TRAFFIC FACE OF CONCRETE BRIDGE PARAPETS AND WINGPOSTS.

NOTE: BEFORE APPLYING ANY TEXTURE FINISH, ALL SURFACES SHALL BE COMPLETELY CLEANED OF ALL DEBRIS AND FOREIGN MATERIALS.

NOTE: THE CONTRACTOR SHALL USE CONTAINMENT SCREENS OR OTHER MEASURES AS NECESSARY TO PREVENT ANY TEXTURE COATING FROM ENTERING THE ENVIRONMENT. CONTAINMENT MEASURES SHALL BE APPROVED BY THE ENGINEER AND COST SHALL BE INCLUDED IN ITEMS BID ON.



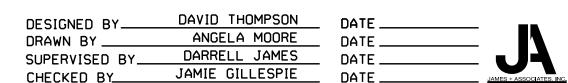
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION ESTIMATED BRIDGE QUANTITIES AND MISC. DETAILS

AND MISC. DETAILS
STRUCTURE NO. 162
STRUCTURE NO. 163
STRUCTURE NO. 164
STRUCTURE NO. 165
STRUCTURE NO. 166
STRUCTURE NO. 167

I-440/I-65 DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY

2015

BR-117-69



GENERAL NOTES 3

- (1) SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (JANUARY 1. 2015 EDITION)
- (2) DESIGN SPECIFICATIONS: AASHTO LRFD SEVENTH EDITION, 2014.
- (3) LOADING: HS20-44 WITH ALTERNATE MILITARY
- (4) DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE. FOR FULL DEPTH OF CONCRETE SLAB REMOVAL EXCEPT OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS. FOR PARTIAL DEPTH OF CONCRETE SLAB REMOVAL AND ANY WORK OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.
- (5) FORMS AND FALSEWORK: ALL CONCRETE FORM WORK AND FALSEWORK SHALL BE REMOVED AFTER REPAIRS ARE COMPLETED. COST OF FORMS, FALSEWORK, AND TEMPORARY SUPPORT REMOVAL SHALL BE INCLUDED IN ITEMS BID ON. THIS WORK SHALL BE COMPLETED BEFORE FINAL PAYMENT IS APPROVED.
- (6) BRIDGE DECK CONCRETE: CLASS "D" CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS.
- (7) BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE "C" IN SUBSECTION 604.23 OF THE STANDARD SPECIFICATION.
- (8) FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. AVOID APPLYING TEXTURE FINISH TO ALL UTILITY CONDUITS.
- (9) QUICK SET PATCHING MATERIAL: QUICK SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13, SECTION B.6, FOR ACCEPTABLE PATCHING MATERIAL.
- (10) CRACK SEALING WITH METHACRYLATE: APPLY HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) CRACK SEAL IN TRANSVERSE AND LONGITUDINAL CONSTRUCTION JOINTS. SEALER SHALL BE APPLIED AFTER ALL CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS.
- (11) WELDING: CURRENT AASHTO/AWS D1.5M/D1.5 2002 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS. ALL WELDING TO BE COMPLETED BY AWS CERTIFIED WELDERS. SEE SECTION 602 OF THE STANDARD SPECIFICATIONS.
- (12) REINFORCING STEEL: SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE.
- (13) SLAB CONSTRUCTION JOINTS: TRANSVERSE SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION SUBJECT TO THE FOLLOWING: 1) NO CONSTRUCTION JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT, 2) THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED TO WITHIN AT LEAST 15 FEET OR THE SUPPORT EITHER PRIOR TO OR CONCURRENTLY WITH THE SLAB OVER AN INTERIOR SUPPORT.
- (14) MECHANICAL BAR SPLICERS: MUST BE ON THE APPROVED LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE BAR SPLICER SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO SPECIAL PROVISION 907A. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATIONS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604-03.04. PAVEMENT AT BRIDGE ENDS. SY.
- (15) GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMATER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR ROTATED (NOT DRIVEN) INTO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIALS SHALL BE APPROVED BY TOOT MATERIALS AND TESTS.
- (16) ANY DAMAGE TO EXISTING STRUCTURES TO BE LEFT IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- (17) SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO THE STANDARD SPECIFICATIONS. SHOP DRAWINGS SHALL BE
- SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES.
- (18) THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS ABOVE 15 FEET.
- (19) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. DESIGN CALCULATIONS AND DETAILS OF TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY DEMOLITION IS BEGUN. COST OF STABILIZING THE STRUCTURE SHALL BE INCLUDED IN ITEM NO. 602-10.05. BRACING REPAIRS. LS.
- (20) CONCRETE: TO BE CLASS "A" f'c = 3000 PSI EXCEPT AS NOTED OTHERWISE.
- (21) NO PNEUMATIC CONCRETE ALLOWED.
- (22) STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36) UNLESS OTHERWISE NOTED.
- (23) BOLTS: SHALL BE HIGH TENSILE STRENGTH BOLTS (ASTM-A325), UNLESS OTHERWISE NOTED. SIZE TO BE AS NOTED ON PLANS. SEE AASHTO SPECIFICATIONS; ARTICLE 11.5.6 DIVISION II. EXISTING CONTACT SURFACES SHALL BE CLEANED TO SSPC-10 SPECIFICATIONS PRIOR TO ATTACHMENT OF NEW MEMBERS.

DESIGNED BY	DAVID THOMPSON	DATE
DRAWN BY	ANGELA MOORE	DATE
SUPERVISED BY	DARRELL JAMES	DATE
CHECKED BY	JAMIE GILLESPIE	DATE JAMES + ASSOCIATES

CONCRETE STRENGTH AND CURE TIMES NOTES

- (24) HIGH EARLY STRENGTH CONCRETE (PARTIAL DEPTH DECK REPAIRS AND PAVEMENT AT BRIDGE ENDS): THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS. THE WATER CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,000 PSI. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 PSI. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF EIGHTEEN (18) HOURS.
- (25) CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

SURFACE PREPARATION AND PAINTING NOTES

- (26) <u>CLEANING AND PAINTING</u>: ALL AREAS OF RUST INSIDE STEEL GIRDERS AND PIER SUPPORT DIAPHRAGMS SHALL BE HAND TOOL AND/OR MEDIA BLAST CLEANED AND PAINTED. BLAST CLEANING SHALL BE IN ACCORDANCE WITH SECTION 603.05 (2B). PAINT SHALL BE SYSTEM "B" IN ACCORDANCE WITH SUB SECTION 603.06. SEE SECTIONS 603 AND 910 OF THE STANDARD SPECIFICATIONS.
- (27) ALL PRODUCTS USED IN THIS COATING SYSTEM, INCLUDING THINNERS, MUST BE SUPPLIED BY THE SAME MANUFACTURER.
- (28) SELECT PAINT SYSTEM FROM QUALIFIED PRODUCTS LIST NO. 3.
- (29) ALL NEW STEEL SHALL RECEIVE SHOP COAT OF EPOXY MASTIC ACCORDING TO STANDARD SPECIFICATION 603.06(B).
- (30) <u>SPECIAL NOTE SURFACE PREPARATION FOR PAINT:</u> EXISTING RECORDS SHOW THAT THE EXISTING PAINT SYSTEM IS INORGANIC ZINC AND VINYL.

SPECIAL NOTES 🐧

- (31) SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES SHOULD BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR.
- (32) NO DECK REPAIRS SHALL BE DONE UNTIL ALL STRUCTURAL STEEL REPAIRS AND JACKING OPERATIONS ARE COMPLETE.
- (33) <u>CLIFF AND BARN SWALLOW</u>: NO DISTURBANCE OF CLIFF AND BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG OR ADULTS) IS PERMITTED DURING APRIL 15 THROUGH JULY 31. NEST REMOVAL OR DESTRUCTION AND THE IMPLEMENTATION OF MEASURES PREVENTING FUTURE NEST BUILDING (E.G., OBSTRUCTING A STRUCTURE USING NETTING) ARE PERMITTED DURING AUGUST 1 THROUGH APRIL 14. EXCEPTIONS ARE AS FOLLOWS:
 - 1) TDOT MAY REMOVE OR DESTROY NESTS AND PREVENT NEST BUILDING PROVIDED NO EGGS ARE PRESENT PRIOR TO APRIL 15. ABSENCE OF EGGS MUST BE DOCUMENTED USING APPROPRIATE MEANS FOR DETERMINATION, INCLUDING SITE VISITS AND PHOTOGRAPHS.
 - 2) TDOT MAY REMOVE OR DESTROY NESTS PROVIDED NO BIRDS (YOUNG OR ADULTS) ARE PRESENT IN ANY NESTS PRIOR TO JULY 31. ABSENCE OF BIRDS MUST BE DOCUMENTED USING APPROPRIATE MEANS FOR DETERMINATION, INCLUDING SITE VISITS, PHOTOGRAPHS, AND OBSERVATIONS OF NO BIRDS USING NESTS.
- (34) SPECIAL NOTE CONCERNING VEGETATION REMOVAL: THE CONTRACTOR SHALL REMOVE ANY VEGETATION DIRECTLY ATTACHED TO THE SUBSTRUCTURE OR SLOPE PAVING. THE CONTRACTOR SHALL ALSO CLEAR ANY VEGETATION NOT ATTACHED BUT AFFECTING THE SUBSTRUCTURE OR SLOPE PAVING OR WHICH WILL AFFECT THE SUBSTRUCTURE OR SLOPE PAVING IN THE FUTURE. ANY COST FOR VEGETATION REMOVAL WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 201-07.01, REMOVAL AND DISPOSAL OF BRUSH AND TREES, L.S. WORK RELATED TO THIS BRIDGE REPAIR PROJECT WILL NOT INVOLVE THE REMOVAL OF TREES THREE INCHES IN DIAMETER OR LARGER.

NOTES CONCERNING JACKING OPERATION

- (35) THE CONTRACTOR SHALL FURNISH STRUCTURAL DESIGN PLANS OF PROPOSED JACKING AND TEMPORARY SUPPORTS TO THE ENGINEER IN THE BRIDGE INSPECTION AND REPAIR OFFICE FOR REVIEW. THE DESIGN AND PLANS FOR THE JACKING AND SUPPORT SEQUENCE AND SYSTEM SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TENNESSEE. JACKING OF THE STRUCTURE WILL NOT BE ALLOWED UNTIL JACKING PLAN HAS BEEN APPROVED.
- (36) THE CONTRACTOR SHALL JACK THE EXISTING BRIDGES AT THE ABUTMENTS AND TEMPORARILY SUPPORT THE STRUCTURES WHILE REPAIRS ARE MADE AS NOTED BELOW. TEMPORARY SUPPORTS SHALL BE DESIGNED AND CONSTRUCTED TO SUPPORT THE COMBINED DEAD LOAD PLUS LIVE LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE TOP OF SLAB GRADE LINES AND CROSS SLOPE. IF NECESSARY, REJACKING AND USE OF STEEL SHIMS TO MAINTAIN GRADE LINES AND CROSS SLOPE SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL COST.
 - SCOPE OF JACKING OPERATIONS: STRUCTURE NO. 163 ABUTMENT NO. 2 - RISER BLOCK REPAIR.
 - STRUCTURE NO. 163 ABUTMENT NO. 2 RISER BLOCK REPAIR.

 STRUCTURE NO. 164 ABUTMENT NO. 1 INSERT PLATE AND FIELD WELD AT BEARING.

 STRUCTURE NOS. 166 AND 167 ABUTMENT NOS. 1 AND 2 RESET BEARING DEVICES.
- (37) CONTRACTOR IS NOT TO LEAVE BRIDGE SITTING ON JACKS OVER NIGHT.
- (38) STRUCTURE IS TO BE CAREFULLY MONITORED DURING JACKING OPERATIONS SO AS NOT TO DAMAGE ANY PORTION OF THE STRUCTURE.
- (39) ALL COST OF JACKING AND TEMPORARY SUPPORT IS TO BE INCLUDED IN ITEM NO. 602-10.19, JACKING STEEL SPANS, L.S.
- (40) JACKING OF THE STRUCTURE SHALL BE LIMITED TO THE MINIMUM DISTANCE REQUIRED TO RELEASE LOAD FROM EXISTING SUPPORTS ALLOWING FOR COMPLETION OF WORK. ALL STEEL BEAMS SHALL BE RAISED UNIFORMLY BY JACKING. AT NO TIME WILL JACKING OF ANY SINGLE BEAM BE PERMITTED. ANY DAMAGE TO THE STRUCTURE AS A RESULT OF OVERJACKING OR DIFFERENTIAL JACKING SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- (41) JACKING WILL ONLY BE CONDUCTED VERTICALLY. THE SPANS WILL NOT BE SHIFTED LATERALLY.
- (42) LOAD WILL NOT BE TRANSFERRED FROM TEMPORARY SUPPORT TO FINAL BEARING UNTIL ALL REPAIRS ARE COMPLETE.
- (43) PRIOR TO JACKING, CONTRACTOR SHALL NOTE ORIENTATION OF EXPANSION BEARING DEVICES AND RESET AS EXISTING OR AS DIRECTED BY THE ENGINEER BEFORE TRANSFERRING LOAD BACK TO BEARING DEVICES.

(44) SPECIAL CARE SHALL BE TAKEN DURING JACKING OPERATIONS IN ORDER TO NOT DAMAGE ANY UTILITIES. IF UTILITIES WILL BE DISTURBED, CONTRACTOR SHALL COORDINATE JACKING OPERATIONS WITH OWNER OF UTILITY.

RAILROAD NOTES

- (45) THE CONTRACTOR SHALL CONDUCT WORK TO PROTECT THE RAILROAD RIGHT-OF-WAY AND PROPERTY FROM DAMAGE AND TAKE ALL MEASURES NECESSARY TO PREVENT CONSTRUCTION MATERIAL AND DEBRIS FROM FALLING ONTO TRACKS AND PROPERTY, RESTRICTING CLEARANCES, AND/OR INTERRUPTING TRAFFIC. CERTAIN WORK SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS AND REGULATIONS STIPULATED BY CSXT OR THEIR ENGINEERING CONSULTANT.
- (46) CONTRACTOR(S) SHALL BE REQUIRED TO SUBMIT DETAILED AND COMPREHENSIVE PLANS AND PROCEDURES FOR REVIEW AND ACCEPTANCE BY THE CSXT REGIONAL DIRECTOR OF CONSTRUCTION ENGINEERING OR HIS ENGINEERING DESIGNATE FOR:
 - (A) PAINTING, PAINT CONTAINMENT, AND SPOT PAINTING OF BRIDGE STEEL MEMBERS AND COMPONENTS.
 - (B) CONCRETE SUPERSTRUCTURE REPAIRS IN THE RAILROAD
 - (C) OTHER SUPERSTRUCTURE REPAIRS IN THE RAILROAD SPAN WITH THE POTENTIAL TO FOUL TRACK OR OBSTRUCT TRAIN OPERATIONS.
 - (D) BRIDGE SCUPPER REPAIR OR REPLACEMENT IN RAILROAD OR ADJACENT SPANS.
 - (E) SUBSTRUCTURE CONCRETE REPAIRS AT PIER NO. 4 AND PIER NO. 5 ON STRUCTURE NO. 166 AND NO. 167.

CONST. NO.

PROJECT NO.

NO. DATE BY

19009-4184-04

1 | 06-27-14 | DT | EDITED NOTE 34

YEAR

2015

3 02-04-15 DT EDITED NOTES (1), (2) AND (30)

REVISIONS

BRIEF DESCRIPTION

SHEET NO.

- (F) TEXTURE COAT SEALING OF CONCRETE SUPERSTRUCTURE IN THE RAILROAD SPAN.
- (G) SUBMITTALS SHALL BE PREPARED IN ACCORDANCE WITH CSXT CONSTRUCTION SUBMISSION CRITERIA ISSUED APRIL 3, 2009 OR NEWER, AND CAN BE FOUND ON CSXT'S WEBSITE WWW.CSX.COM.
- (47) ANY TEMPORARY CONSTRUCTION CLEARANCES PROPOSED SHALL BE SUBJECT TO THE APPROVAL OF CSXT. TYPICALLY, REDUCTIONS IN CLEARANCE FOR CONSTRUCTION ARE NOT PERMITTED.
- (48) CONSTRUCTION MATERIAL OR DEMOLITION DEBRIS SHALL NOT BE PLACED, STAGED, OR STORED ON CSXT PROPERTY. CSXT RIGHT-OF-WAY AND SAFE WALKWAYS WILL BE MAINTAINED THROUGHOUT THE PROJECT TO THE SATISFACTION OF THE CSXT FLAGGER AND ENGINEERING DESIGNATE.
- (49) ANY DAMAGE TO CSXT RIGHT-OF-WAY DRAINAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE CSXT ENGINEERING DESIGNATE.



DEPARTMENT OF TRANSPORTATION

BRIDGE GENERAL AND SPECIAL NOTES

STRUCTURE NO. 162 STRUCTURE NO. 163 STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NO. 166 STRUCTURE NO. 167

I-440/I-65 DIRECTIONAL INTERCHANGE DAVIDSON COUNTY

2015

BR-117-70

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	NO.	1	105-01	CONS
	FILE		202-03	REM
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ENNESSEE	DESIGN DIVISION		502-04.01	SAW
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	ITEM NO.	DESCRIPTION	UNIT	STRUCTURE NO. 162	STRUCTURE NO. 163	STRUCTURE NO. 164	STRUCTURE NO. 165	STRUCTURE NOS.166 € 167	TOTAL QUANTITY	
1	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	0.2	0.2	0.2	0.2	0.2	1	1
	202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	S.Y.	-	-	-	36	110	146	1
(18)	203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	55	-	-	-	-	55	1
2	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	180	60	150	120	540	1,050	
3	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	3	3	3	6	-	15	1
	411-03.10	ACS MIX (PG76-22) GRADING D	TON	0.5	0.5	1	1	-	3](
	501-01	PORTLAND CEMENT CONCRETE PAVEMENT (REPLACEMENT)	S.Y.	-	-	-	36	110	146] (
	502-04.01	SAWING CONCRETE PAVEMENT (FULL DEPTH)	L.F.	-	-	-	60	130	190	1 >
	502-04.02	LOAD TRANSFER DOWELS	EACH	-	-	-	16	48	64	
754	610-07.03	18" PIPE DRAIN (BRIDGE DRAIN)	L.F.	36	-	-	20	40	96] (
	703-02	CEMENT CONCRETE DITCH PAVING (REINFORCED)	C.Y.	6	-	-	-	-	6	1
6	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	27	-	-	-	-	27	1
7	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350, TL-3	EACH	1	1	1	1	2	6	1
	706-01	GUARDRAIL REMOVED	L.F.	27	-	-	-	-	27	$\int c$
5	709-01.01	RUBBLE STONE RIP-RAP	C.Y.	3	-	-	-	-	3	1 >
8	712-01	TRAFFIC CONTROL	LS	0.2	0.2	0.2	0.2	0.2	1	1
(15)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	350	260	260	260	860	1,990	
(16)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	55	45	48	125	192	465	با (ب
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	37	28	28	28	116	237] (1
9	712-06	SIGNS (CONSTRUCTION)	S.F.	176	176	176	176	883	1,889] (
	712-08.03	ARROW BOARDS (TYPE C)	EACH	-	-	-	3	2	5	ا لا
10	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	8,220	7,620	8,570	11,770	22,105	58,285] (
	713-02.14	FLEXIBLE DELINEATOR (WHITE)	EACH	64	62	74	74	181	455] (
(1)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	1	1	1	1	2	6	1 6
	716-01.05	TEMPORARY RAISED PAVEMENT MARKER	EACH	-	-	-	-	185	185	
	716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR) (1 COLOR)	EACH	7	7	10	10	28	62	1
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	0.25	0.20	0.3	0.3	0.95	2] (
	717-01	MOBILIZATION	LS	0.2	0.2	0.2	0.2	0.2	1	1
(12)	801-01	SEEDING (WITH MULCH)	UNIT	2	-	-	-	-	2	
	801-02	SEEDING (WITHOUT MULCH)	UNIT	2	-	-	2	4	8	
(13)	801-03	WATER (SEEDING AND SODDING)	M.G.	0.8	-	-	0.4	0.8	2	
(14)		EROSION CONTROL BLANKET (TYPE I)	S.Y.	225	-	-	200	400	825	1

FOOTNOTES

ALL DIMENSIONAL DETAILS SHOWN ON PLANS, INCLUDING ELEVATIONS, SHALL BE CHECKED BY THE CONTRACTOR TO ASSURE ACCURACY OF THE LAYOUT PRIOR TO CONSTRUCTION. ALL BRIDGE SUBSTRUCTURES SHALL BE CHECKED AS TO LOCATION, DIMENSIONAL LAYOUTS AND ELEVATIONS, BY MEANS OF TWO INDEPENDENT LAYOUT METHODS. ANY ERRORS AND APPARENT DISCREPANCIES FOUND IN PREVIOUS SURVEYS, OR IN EITHER THE SPECIFICATIONS OR SPECIAL PROVISIONS, SHALL BE CALLED TO THE ENGINEER'S ATTENTION BY THE CONTRACTOR IMMEDIATELY AND PRIOR TO PROCEEDING WITH WORK.

- SEDIMENT REMOVAL SHALL BE INCLUDED IN THE COST OF THIS ITEM. SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE
- 3 ITEM INCLUDES STEEL PLATE AND FINES LEVELING COURSE TO BE USED IN BRIDGE DRAIN STABILIZATION.
- (4) COST OF CLASS "B" BEDDING MATERIAL TO BE INCLUDED IN UNIT PRICE.
- 5 STANDARD DRAWING STD-1-7 IS TO BE USED FOR BURIAL OF THE OUTLET PIPE AND FOR END TREATMENT DETAILS FOR STRUCTURE NO. 162.
- 6 ITEM SHALL INCLUDE ROUNDED END ELEMENT SHOWN ON STANDARD DRAWING S-GRT-4.
- 7 THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.
- INCLUDES COST FOR REMOVAL OF EXISTING OR CONFLICTING MARKINGS.
- INCLUDES THE INSTALLATION AND MAINTENANCE OF A NEW SIGN PANEL, SHEETING AND SUPPORTS.
- 8" TEMPORARY SOLID LINES PER TRAFFIC CONTROL STANDARDS.
- COORDINATE WITH T.D.O.T. CONSTRUCTION DIVISION FOR LOCATION AND MESSAGE FOR CHANGEABLE MESSAGE SIGN.
- (12) SEEDING (WITH MULCH) SHALL BE PLACED ON ALL FILL AREAS AND ALL AREAS OF DISTURBED GROUND.
- INCLUDES 1 THOUSAND GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.
- 14) ITEM SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF EROSION CONTROL BLANKETS.
- PORTABLE BARRIER RAIL TO BE USED ONLY IN APPROACH TAPER
- FLEXIBLE DRUMS TO BE USED IN BRIDGE AREA
- COST TO INCLUDE REDUCER FOR PROPOSED 18" PIPE DRAIN (BRIDGE DRAIN) TO EXISTING 12" PIPE OUTLET FROM SCUPPERS.
- COST TO INCLUDE GRADING AREA OF EROSION FOR STRUCTURE NO.162.

TYPE	YEAR	PROJECT NO.	SHEET NO.	
CONST.	2015	19009-4184-04	2B	

(1) 06-27-14 JRG EDITED ITEM NO. DESCRIPTIONS

(3) 02-04-15 JRG REVISED QUANTITIES FOR ITEM NOS. 712-02.02 AND 712-04.01, DELETED ITEM NO. 712-04.50

(4) 03-09-15 JRG REVISED QUANTITY FOR ITEM NO. 411-03.10



STATE OF TENNESSEE

department of transportatioi

STRUCTURE NO. 162 STRUCTURE NO. 163 STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NOS. 166 \$ 167 INTERSTATE 440/INTERSTATE 65 DIRECTIONAL INTERCHANGE DAVIDSON COUNTY

2015

ESTIMATED ROADWAY QUANTITIES

ROADWAY GENERAL NOTES

GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOODWAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL. STATE OR LOCAL AGENCY.

SEEDING AND SODDING

(3) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

GUARDRAIL

- (4) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL. INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETELY IN PLACE.
- (5) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC. THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE "A" LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

UTILITIES

- (6) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111 AS REQUIRED BY TCA 65-61-106 WILL BE REQUIRED.
- (7) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO CO-OPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY. THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- (8) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (9) PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- (10) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

MISCELLANEOUS

(11) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

PAVEMENT MARKINGS

(12) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6 IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKING AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(13) BEFORE OPENING THE LANE SHIFT TO TRAFFIC. THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

PAVING

(14) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFICA

RESURFACING

(15) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION. THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

CONSTRUCTION WORK ZONE AND TRAFFIC CONTROL NOTES

- (16) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (17) IF THE CONTRACTOR MOVES OFF THE PROJECT. HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OR REMOVAL. COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (18) A LONG TERM BUT SPORADIC USE WARNING SIGN. SUCH AS A FLAGGER SIGN. MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (19) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (20) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL. BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

- (21) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF A OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK. THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCTIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (22) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

EROSION PREVENTION AND SEDIMENT CONTROL (3)

DISTURBED AREA

- (23) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED. REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS (10 CALENDAR DAYS FOR SITES WITH AN ACTIVE ARAP) PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED. SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- (24) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
- (25) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.

PROJECT NO. CONST. 2015 19009-4184-04

(3) 02-04-15 JG UPDATED NOTES



STRUCTURE NO. 162 STRUCTURE NO. 163 STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NOS. 166 \$ 167 INTERSTATE 440/INTERSTATE 65 DIRECTIONAL INTERCHANGE DAVIDSON COUNTY 2015

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

> ROADWAY GENERAL NOTES

ROADWAY GENERAL AND SPECIAL NOTES (CONT'D) 3

SEDIMENT CONTROL

- (26) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- (27) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE. OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (28) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

INSPECTION, MAINTENANCE, REPAIR

- (29) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- (30) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE EVERY LINEAR MILE AT ALL SITES WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS BEING ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED. IF THE PROJECT LENGTH IS LESS THAN ONE LINEAR MILE, ONE RAIN GAUGE SHALL BE INSTALLED AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE TDOT EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. TDOT AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.
- (31) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY.

 OUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.
- (32) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- (33) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIME FRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

MATERIALS AND STAGING

(34) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

PERMITS, PLANS, RECORDS

(35) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.

- (36) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (37) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS AND PRECIPITATION RECORDS.
- (38) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE
- (39) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- (40) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE OR EQUIVALENT COURSE. A COPY OF CERTIFICATION RECORDS FOR THIS COURSE SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

- (41) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
- (42) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

SPECIAL NOTES

- (43) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF LANES, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) METRO NASHVILLE POLICE DEPARTMENT, (2) METRO NASHVILLE FIRE DEPARTMENT, (3) LOCAL AMBULANCE SERVICE, (4) DAVIDSON COUNTY SCHOOL SUPERINTENDENT, (5) LOCAL POSTAL SERVICE, (6) TDOT REGION 3 TRAFFIC ENGINEERING OFFICE, (7) METRO PUBLIC WORKS, (8) METRO TRANSIT AUTHORITY, AND (9) CITY OF BERRY HILL PUBLIC WORKS.
- (44) ALL CONCRETE ROADWAY RECONSTRUCTION, INCLUDING PAVEMENT AT BRIDGE END SLABS, SHALL BE POURED BACK TO ORIGINAL CROSS SLOPE AND FINISH GRADE LINE ELEVATIONS.

VEGETATION REMOVAL

(45) IF NOTICED THAT DURING VEGETATION REMOVAL, ANY TREES GREATER THAN 5 INCHES IN DIAMETER ARE REQUIRED TO BE REMOVED, CONTACT THE TDOT ENVIRONMENTAL DIVISION ECOLOGY SECTION IMMEDIATELY. DUE TO THE RECENT MODIFICATION OF THE USFWS STANCE REGARDING THE INDIANA BAT NO TREES > 5" DBH SHOULD BE CUT WITHOUT CLEARANCE FROM THE TDOT ENVIRONMENTAL DIVISION ECOLOGY SECTION.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(46) THE PAVEMENT MARKING ON THE LANE SHIFT FOR CENTERLINE, EDGELINES AND LANE LINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARD AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.01, REMOVABLE PAVEMENT MARKING LINE, L.F.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	19009-4184-04	2D

(3) 02-04-15 JG UPDATED NOTES AND ADDED RAILROAD NOTES

RAILROAD NOTES

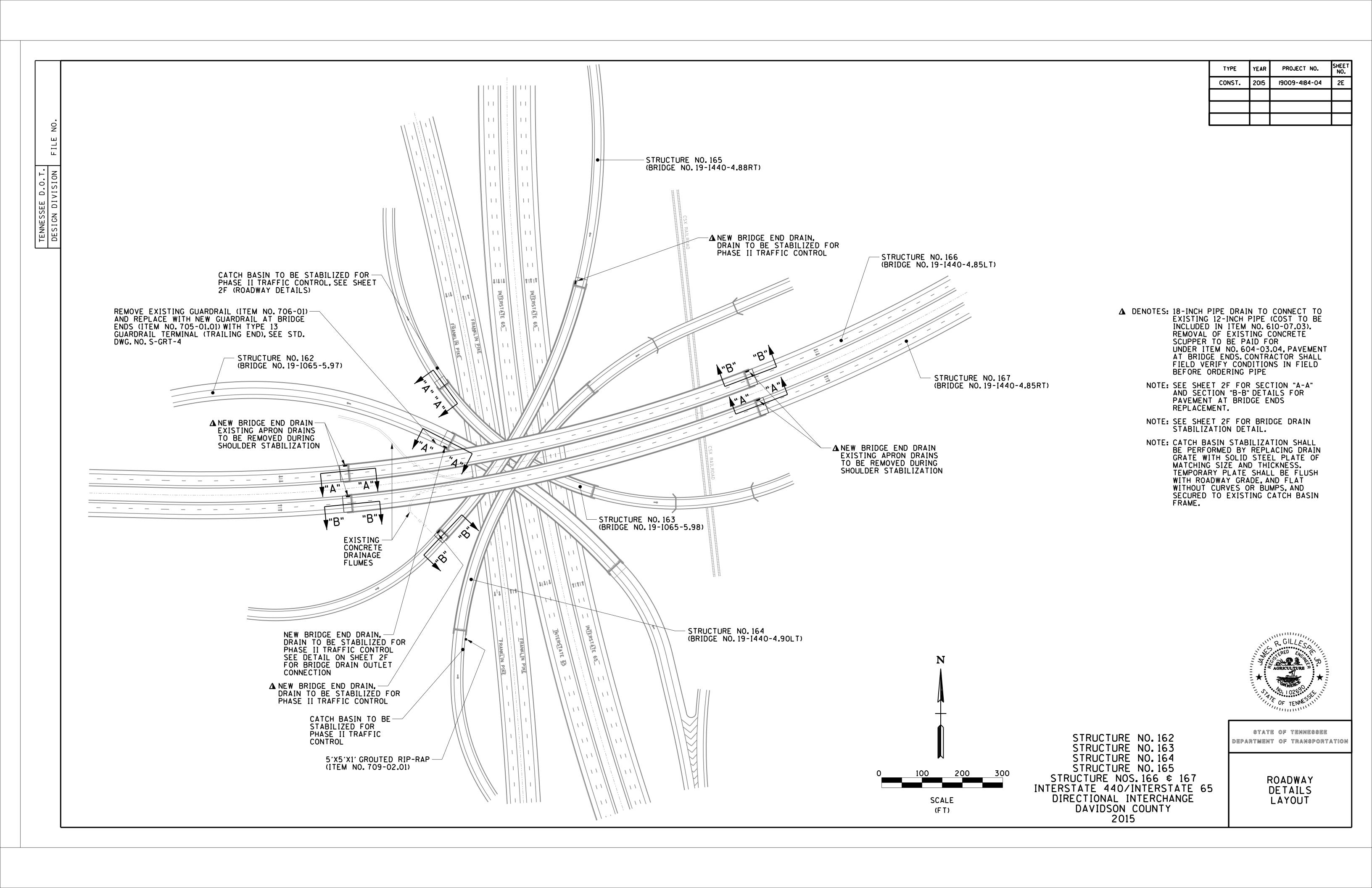
- (47) THE CONTRACTOR SHALL CONDUCT WORK TO PROTECT THE RAILROAD RIGHT-OF-WAY AND PROPERTY FROM DAMAGE AND TAKE ALL MEASURES NECESSARY TO PREVENT CONSTRUCTION MATERIAL AND DEBRIS FROM FALLING ONTO TRACKS AND PROPERTY, RESTRICTING CLEARANCES, AND/OR INTERRUPTING TRAFFIC. CERTAIN WORK SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS AND REGULATIONS STIPULATED BY CSXT OR THEIR ENGINEERING CONSULTANT.
- (48) CONTRACTOR(S) SHALL BE REQUIRED TO SUBMIT DETAILED AND COMPREHENSIVE PLANS AND PROCEDURES FOR REVIEW AND ACCEPTANCE BY THE CSXT REGIONAL DIRECTOR OF CONSTRUCTION ENGINEERING OR HIS ENGINEERING DESIGNATE FOR:
 - (A) PAINTING, PAINT CONTAINMENT, AND SPOT PAINTING OF BRIDGE STEEL MEMBERS AND COMPONENTS.
 - (B) CONCRETE SUPERSTRUCTURE REPAIRS IN THE RAILROAD
 - (C) OTHER SUPERSTRUCTURE REPAIRS IN THE RAILROAD SPAN WITH THE POTENTIAL TO FOUL TRACK OR OBSTRUCT TRAIN OPERATIONS.
 - (D) BRIDGE SCUPPER REPAIR OR REPLACEMENT IN RAILROAD OR ADJACENT SPANS.
 - (E) SUBSTRUCTURE CONCRETE REPAIRS AT PIER NO. 4 AND PIER NO. 5 ON STRUCTURE NO. 166 AND NO. 167.
 - (F) TEXTURE COAT SEALING OF CONCRETE SUPERSTRUCTURE IN THE RAILROAD SPAN.
 - (G) SUBMITTALS SHALL BE PREPARED IN ACCORDANCE WITH CSXT CONSTRUCTION SUBMISSION CRITERIA ISSUED APRIL 3, 2009 OR NEWER, AND CAN BE FOUND ON CSXT'S WEBSITE WWW.CSX.COM.
- (49) ANY TEMPORARY CONSTRUCTION CLEARANCES PROPOSED SHALL BE SUBJECT TO THE APPROVAL OF CSXT. TYPICALLY, REDUCTIONS IN CLEARANCE FOR CONSTRUCTION ARE NOT PERMITTED.
- (50) CONSTRUCTION MATERIAL OR DEMOLITION DEBRIS SHALL NOT BE PLACED, STAGED, OR STORED ON CSXT PROPERTY. CSXT RIGHT-OF-WAY AND SAFE WALKWAYS WILL BE MAINTAINED THROUGHOUT THE PROJECT TO THE SATISFACTION OF THE CSXT FLAGGER AND ENGINEERING DESIGNATE.
- (51) ANY DAMAGE TO CSXT RIGHT-OF-WAY DRAINAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE CSXT ENGINEERING DESIGNATE.

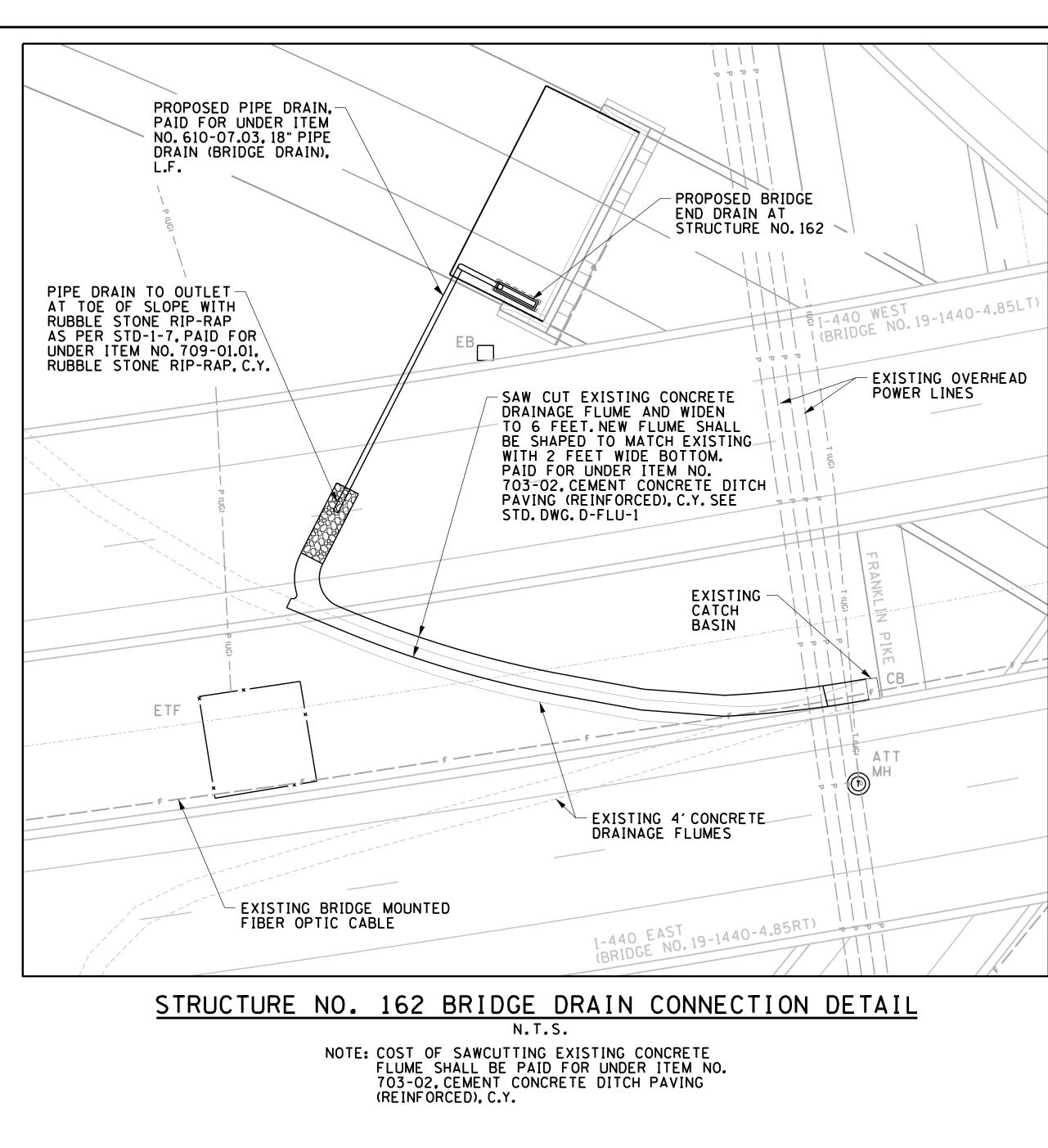


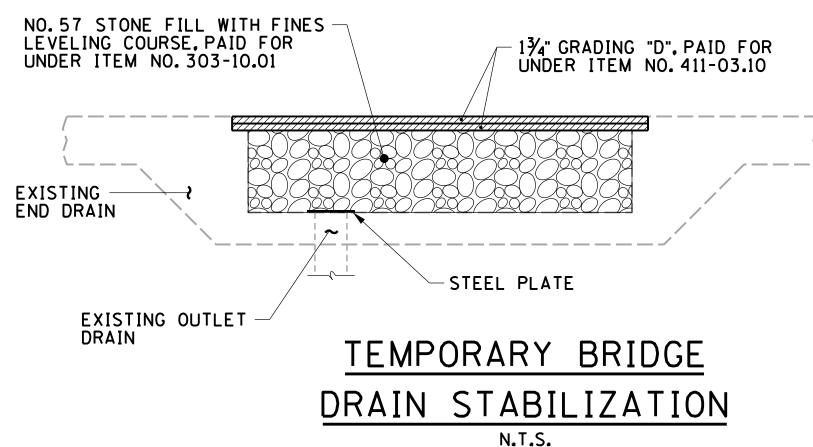
STRUCTURE NO.162
STRUCTURE NO.163
STRUCTURE NO.164
STRUCTURE NO.165
STRUCTURE NOS.166 \$ 167
INTERSTATE 440/INTERSTATE 65
DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY
2015

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

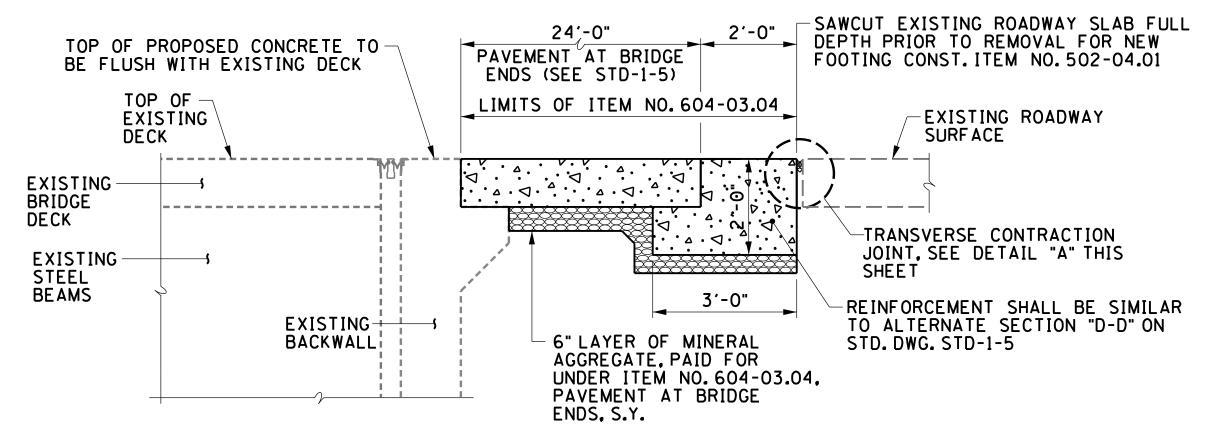
ROADWAY GENERAL AND SPECIAL NOTES



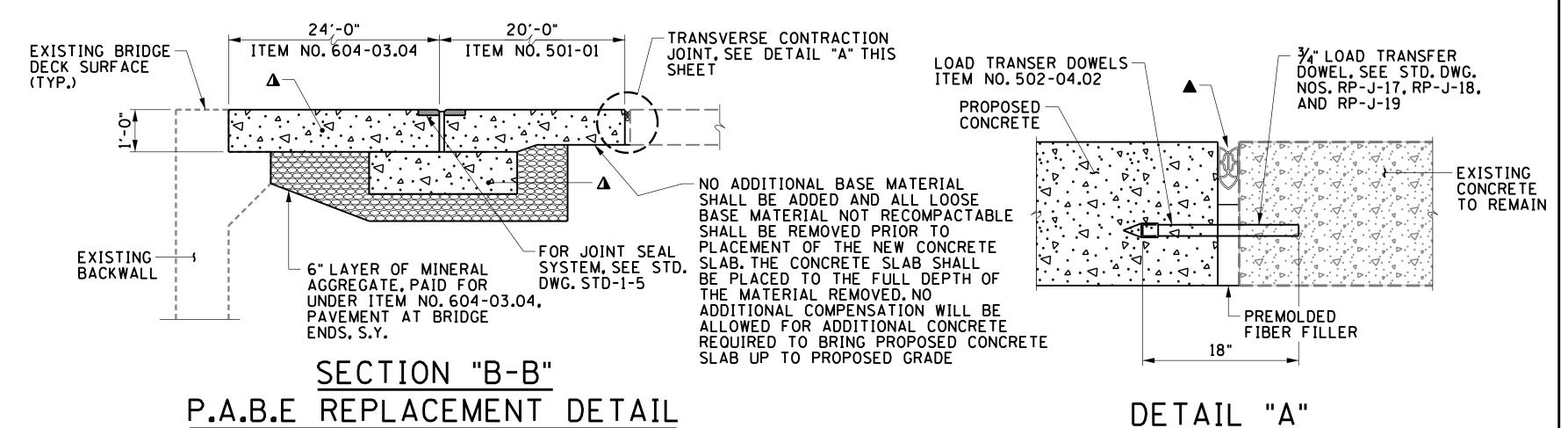




- NOTE: BRIDGE DRAIN STABILIZATION SHALL BE PERFORMED PRIOR TO TRAFFIC BEING ALLOWED TO DRIVE ON BRIDGE DRAINS.
- NOTE: FINES LEVELING COURSE AND STEEL PLATE SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE COST OF STONE AND BE PAID FOR UNDER ITEM NO. 303-10.01 MINERAL AGGREGATE (SIZE 57), TON.
- NOTE: GRATE INLET SHALL BE REMOVED PRIOR TO STABILIZATION. AFTER TRAFFIC IS REMOVED FROM DRAIN AREA, ALL MATERIALS NOT PART OF THE EXISTING DRAINAGE STRUCTURE SHALL BE REMOVED AND THE GRATE INLET REPLACED. COST OF REMOVAL AND DISPOSAL OF MATERIAL SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN UNIT PRICE BID.

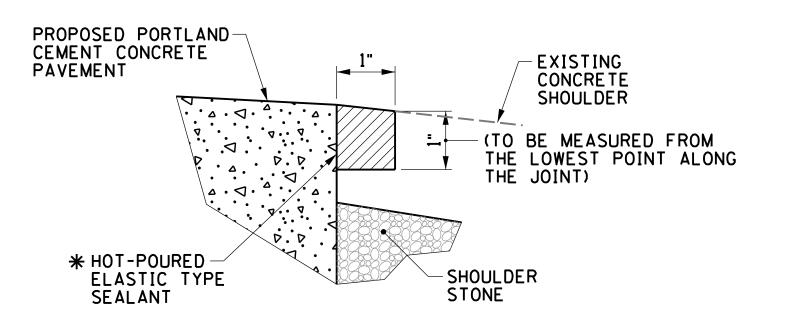


SECTION "A-A" P.A.B.E REPLACEMENT DETAIL N.T.S



P.A.B.E REPLACEMENT DETAIL

△ DENOTES: CONCRETE SHALL BE HIGH EARLY STRENGTH CONCRETE, F'C = 3,000 P.S.I. € 18 HOUR STRENGTH. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPEICMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 P.S.I. MINIMUM. THE CONTRACTOR SHALL PROVIDE PROOF PRIOR TO BEGINNING WORK THAT THE PROPOSED CONCRETE MIX WILL OBTAIN THE REQUIRED PROPERTIES, PROOF SHALL BE PROVIDED BY AN INDEPENDENT TESTING COMPANY AND SUBMITTED TO THE MATERIALS AND TEST DIVISION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION FOR APPROVAL. FOR DETAILS AND SPECIFICATIONS REGARDING INSTALLATION OF REINFORCED CONCRETE SLAB AT BRIDGE ENDS, SEE STANDARD DRAWING NO. STD-1-5. (TYP.) ITEM NO. 604-03.04



SHOULDER JOINT DETAIL N.T.S.

* DENOTES: SEALANT SHALL BE USED AS SHOWN ON THIS DETAIL BETWEEN PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT AND SHOULDERS. COST TO BE INCLUDED IN ITEMS BID ON. SEE STD. DWGS. RP-J-9, RP-J-11, AND RP-J-13

STRUCTURE NO. 162

N.T.S.

JOINT SEALS, SEE STD. DWG. NO. RP-J-13

INSTALLATION OF TYPE I PREFORMED ELASTOMERIC

NOTE: GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED 1/2" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND

THE BARS ROTATED (NOT DRIVEN) INTO ITS SEAT. ALL

GROUTING MATERIALS SHALL BE APPROVED BY TDOT

MATERIALS AND TESTS. ITEM NO. 502-04.02.

▲ DENOTES: FOR DETAILS AND SPECIFICATIONS REGARDING

STRUCTURE NO. 163 STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NOS. 166 \$ 167 INTERSTATE 440/INTERSTATE 65 DIRECTIONAL INTERCHANGE DAVIDSON COUNTY 2015

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

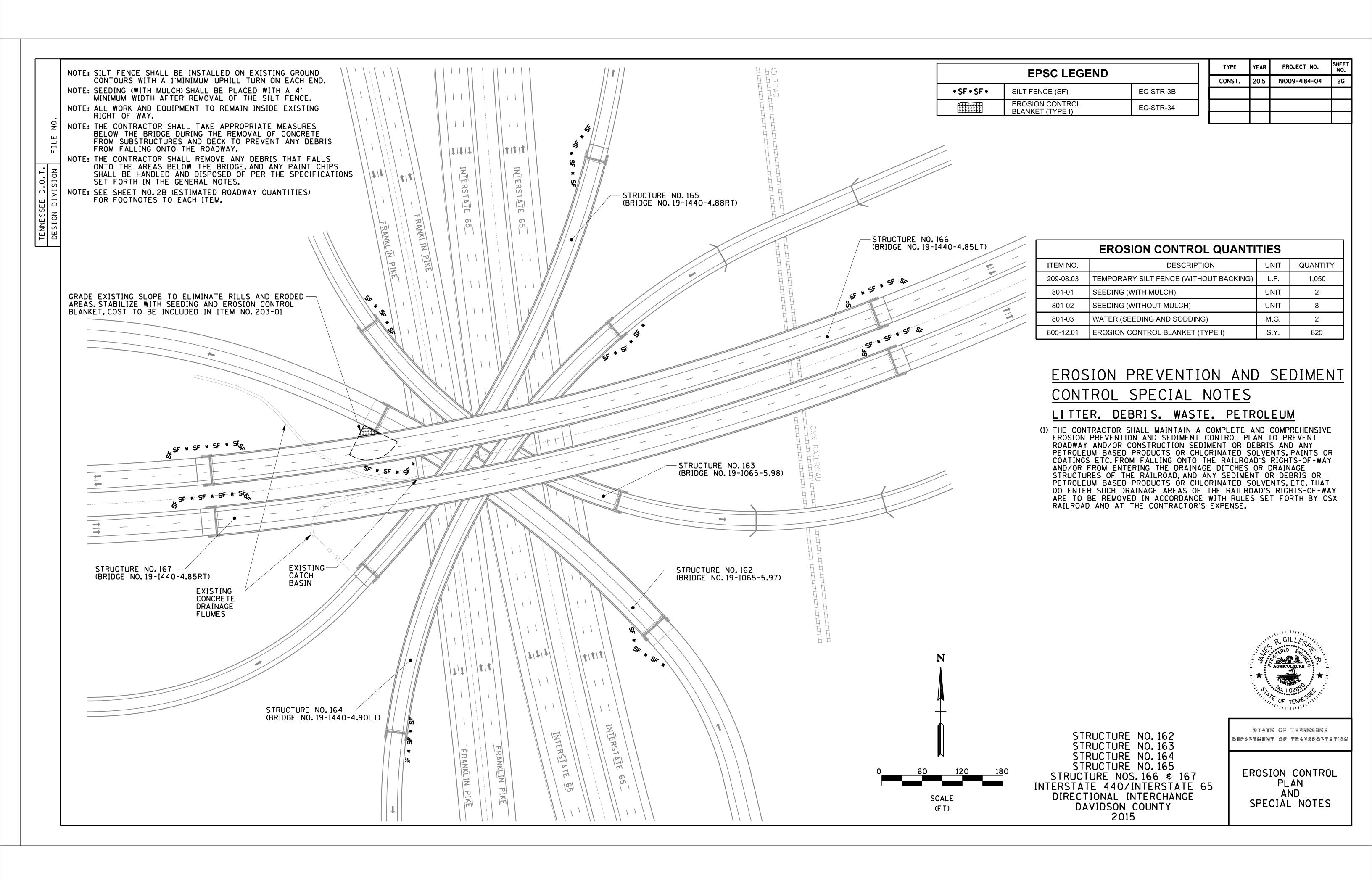
PROJECT NO.

19009-4184-04

CONST.

2015

ROADWAY DETAILS



TRAFFIC CONTROL SPECIAL NOTES

- (1) THESE TRAFFIC CONTROL PLANS DO NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."
- (2) EACH PHASE OF THE SUGGESTED SEQUENCE OF CONSTRUCTION FOR WHICH THESE TRAFFIC CONTROL PLANS WERE DESIGNED, REQUIRES THE TIMELY COMPLETION OF THE PRECEEDING PHASE. ANY VARIATIONS IN THE PROPOSED PHASING SHALL REQUIRE A REVIEW AND APPROVAL OF THE SIGNING AND TRAFFIC CONTROL DEVICES BY THE ENGINEER.
- (3) THE CONTRACTOR IS REQUIRED TO PROVIDE LANE SHIFTS WHERE NECESSARY TO ROUTE TRAFFIC AROUND CONSTRUCTION.
- (4) NO TRAFFIC SHALL BE DETOURED OR ROADWAY CLOSED, ABANDONED OR REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- (5) CONSTRUCTION SIGNING SHOWN IN THESE PLANS IS TO SERVE AS A GUIDE ONLY. OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
- (6) PERMANENT SIGNS AND PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE COMPLETED ROADWAYS ARE OPEN TO TRAFFIC.
- (7) THE CONTRACTOR SHALL MAINTAIN ALL TRAFFIC CONTROL DEVICES IN PROPER CONDITION THROUGHOUT THE DURATION OF THE PROJECT.
- (8) EXISTING SIGNS THAT CONFLICT WITH TEMPORARY TRAFFIC CONTROL SIGNING SHALL BE COVERED OR REMOVED AND STOCKPILED AS DIRECTED BY THE ENGINEER.
- (9) THE CONTRACTOR WILL BE REQUIRED TO HAVE A RESPONSIBLE PERSON ON CALL (WITHIN ONE HOUR), AT ALL TIMES, FOR TRAFFIC CONTROL DURING THE CONSTRUCTION OF THIS PROJECT.
- (10) FOR TRAFFIC CONTROL DETAILS, REFER TO STD. DWG. NOS. T-WZ-10, T-WZ-11, T-WZ-15, T-WZ-16, AND T-WZ-21 THROUGHOUT THE DURATION OF THE PROJECT.
- (11) IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE BID PRICE FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.
- (12) ALL LOCAL EMERGENCY AGENCIES AND RESIDENCES WITHIN THE IMMEDIATE AREA PROJECT AREA SHALL BE NOTIFIED NOT LESS THAN 48 HOURS IN ADVANCE OF BRIDGE CONSTRUCTION WHICH MAY AFFECT ACCESS TO THESE AREAS.
- (13) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF LANES, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) METRO NASHVILLE POLICE DEPARTMENT, (2) METRO NASHVILLE FIRE DEPARTMENT, (3) LOCAL AMBULANCE SERVICE, (4) DAVIDSON COUNTY SCHOOL SUPERINTENDENT, (5) LOCAL POSTAL SERVICE, (6) TDOT REGION 3 TRAFFIC ENGINEERING OFFICE, (7) METRO PUBLIC WORKS, (8) METRO TRANSIT AUTHORITY, AND (9) CITY OF BERRY HILL PUBLIC WORKS.
- (14) IF CONTRACTOR MOVES OFF THE PROJECT SITE, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AND TRAFFIC CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
- (17) TYPE "C" WARNING LIGHTS SHALL BE USED ON ALL CHANNELIZING DRUMS IN TAPERS ON THE INTERSTATE.
- (18) TRAFFIC CONTROL PHASING SHOWN ON SHEETS 2J AND 2K IS NOT MEANT TO BE PERFORMED CONCURRENTLY, NOR MUST ALL OF PHASE I BE COMPLETED PRIOR TO BEGINNING WORK ON PHASE II. PHASING IS MEANT ON A "PER BRIDGE" BASIS, AND PHASE I MUST BE COMPLETED ON A GIVEN BRIDGE BEFORE STARTING PHASE II ON THE SAME BRIDGE.
- (19) WORK SHALL NOT BE PERFORMED ON STRUCTURES 164 OR 165 DURING PHASE I WORK ON STRUCTURES 166 AND 167, RESPECTIVELY.
- (20) PHASE I CONSTRUCTION AND SIGNLE LANE CLOSURE ON STRUCTURES 166 AND 167 SHALL BE WEEKEND WORK ONLY. THE WEEKEND SHALL BE DEFINED AS BETWEEN 9:00 P.M. FRIDAY AND MONDAY AT 5:00 A.M. EXISTING LANE MARKINGS SHALL BE KEPT IN PLACE UNTIL PHASE II.
- (21) TRAFFIC CONTROL SHALL BE PERFORMED ON INTERSTATE 65 AND FRANKLIN PIKE TO ALLOW OVERHEAD WORK TO BE COMPLETED. LEFT AND RIGHT LANE CLOSURES ON FRANKLIN PIKE AND INTERSTATE 65 SHALL BE PERFORMED PER TDOT STD. DWG. NO. T-WZ-11. INTERIOR LANE CLOSURES ON INTERSTATE 65 SHALL BE PERFORMED PER TDOT STD. DWG. NO. T-WZ-15.
- (22) AT NO TIME SHALL MORE THAN ONE LANE IN EITHER DIRECTION ON INTERSTATE 65 OR FRANKLIN PIKE BE CLOSED.
- (23) CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DEBRIS OR OTHER ITEMS FROM FALLING ON THE ROADWAY BELOW.
- (24) SIGN W5-1 "ROAD NARROWS" IS TO BE USED 1,000 FEET PRIOR TO LANE SHIFT ON STRUCTURES 162-165 DURING BOTH PHASE I AND PHASE 2. SIGN IS TO BE USED ON BOTH SIDES OF THE ROADWAY ON STRUCTURES 166 AND 167 DURING PHASE 2 ONLY.
- (25) SIGN TN-55A "RECORD-A-COMMENT" IS TO BE USED ON BOTH SIDES OF THE ROADWAY 1,000 FEET BEYOND "END OF ROAD WORK" SIGNS. QUANTITY PROVIDED ALLOWS FOR SIGNS ON INTERSTATE 440 (EAST AND WEST) BEYOND THE INTERCHANGE AREA.

TRAFFIC CONTROL QUANTITIES 3								
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ITEM NO. 712-06 (S.F.)	SIZE	M.U.T.C.D. NO.	REMARKS	
705-08.51	PORTABLE IMPACT ATTENUATOR (NCHRP 350, TL-3)	EACH	6					
712-01	TRAFFIC CONTROL	LS	1					
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1,990					
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	465					
712-05.03	WARNING LIGHTS (TYPE C)	EACH	237					
712-06	SIGNS (CONSTRUCTION)	S.F.	1,889					
712-08.03	ARROW BOARDS (TYPE C)	EACH	5					
712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	58,285					
713-02.14	FLEXIBLE DELINEATOR	EACH	455					
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	6					
716-01.05	TEMPORARY RAISED PAVEMENT MARKER	EACH	185					
716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR) (1 COLOR)	EACH	62					
716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6 IN LINE)	L.M.	2					
717-01	MOBILIZATION	LS	1					

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	19009-4184-04	2Н

(3) 02-04-15 JRG REVISED QUANTITIES FOR ITEM NOS. 712-02.02 AND 712-04.01, DELETED ITEM NO. 712-04.50

ITEM NO. 712-06 SIGNS (CONSTRUCTION)							
	DESCRIPTION		QUANTITY	ITEM NO. 712-06 (S.F.)	SIZE	M.U.T.C.D. NO.	REMARKS
	END ROAD WORK		18	144	48" x 24"	G20-2A	
	DO NOT PASS IN RIGHT LANE		1	35	120" x 42"	R4-1 (MOD.)	
	TWO LANE SHIFT LEFT		4	64	48" x 48"	W1-4BL	
	TWO LANE SHIFT RIGHT		4	64	48" x 48"	W1-4BR	
	REVERSE CURVE LEFT		10	160	48" x 48"	W1-4L	
	REVERSE CURVE RIGHT		12	192	48" x 48"	W1-4R	
	MERGE LEFT		2	32	48" x 48"	W4-2L	
	MERGE RIGHT		8	128	48" x 48"	W4-2R	
	ROAD WORK 2 MILES		2	32	48" x 48"	W20-1	
	ROAD WORK 1 MILE		18	288	48" x 48"	W20-1	
	ROAD WORK 1/2 MILE		12	192	48" x 48"	W20-1	
	LANE SHIFT 1/2 MILE		12	192	48" x 48"	W20-5	
	LEFT LANE CLOSED 1/2 MILE		4	64	48" x 48"	W20-5L	
	LEFT LANE CLOSED 1500 FT		4	64	48" x 48"	W20-5L	
	RIGHT LANE CLOSED 1 MILE		2	32	48" x 48"	W20-5R	
	RIGHT LANE CLOSED 1/2 MILE		6	96	48" x 48"	W20-5R	
	RIGHT LANE CLOSED 1500 FT		6	96	48" x 48"	W20-5R	
	MERGE NOW		1	16	48" x 48"	SP-1	
	RECORD-A-COMMENT		4	128	96" x 48"	TN-55A	
TOTAL				1,889			

NOTE: SEE SHEET NO. 2B (ESTIMATED ROADWAY QUANTITIES) FOR FOOTNOTES TO EACH ITEM.

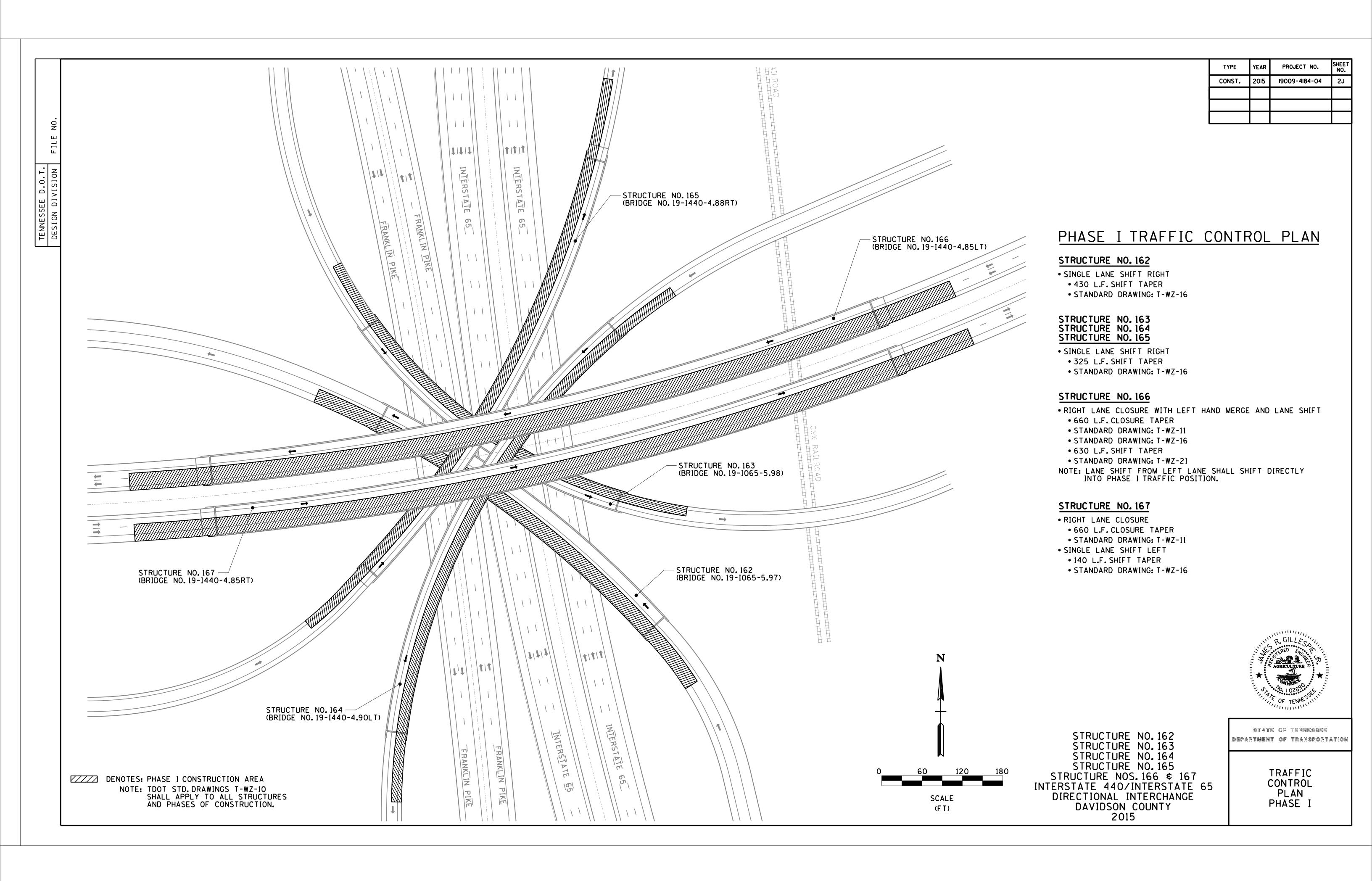
STRUCTURE NO.162
STRUCTURE NO.163
STRUCTURE NO.164
STRUCTURE NO.165
STRUCTURE NOS.166 \$ 167
INTERSTATE 440/INTERSTATE 65
DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY

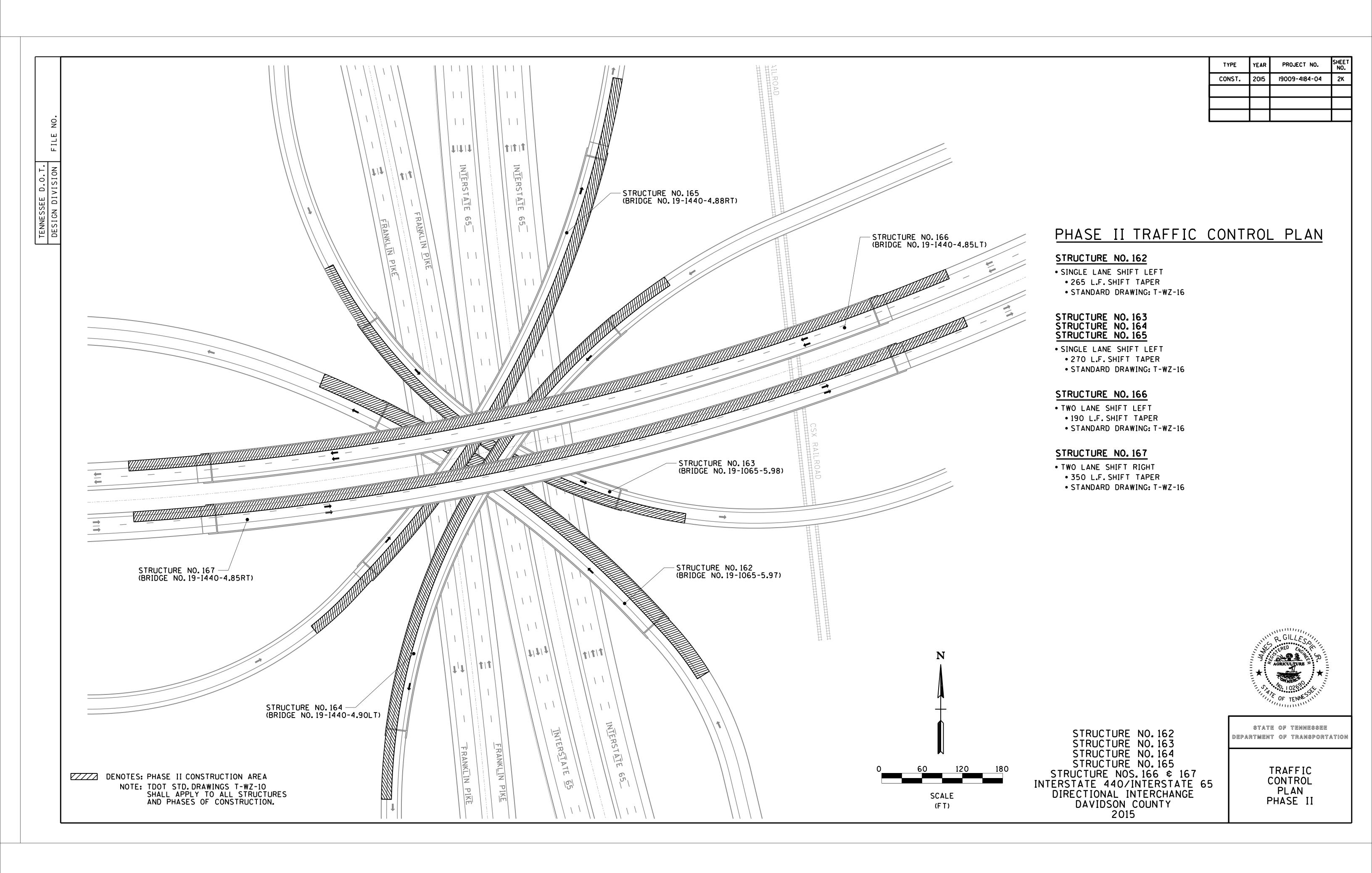
2015



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
SPECIAL NOTES
AND
QUANTITIES





UTILITY CONTACTS METRO WATER AND SEWER 1600 2ND AVE NORTH 333 COMMERCE ST 23C142 NASHVILLE, TN 37201 NASHVILLE, TN 37208 DAVID HUFFAKER STEVE NUNLEY 615-214-4871 615-566-3846 NASHVILLE ELECTRIC SERVICE COMCAST - DAVIDSON CO. 660 MAINSTREAM DRIVE 1214 CHURCH ST ROOM 353 NASHVILLE, TN 37228 NASHVILLE, TN 37203 HANK DUNNING 615-244-5900

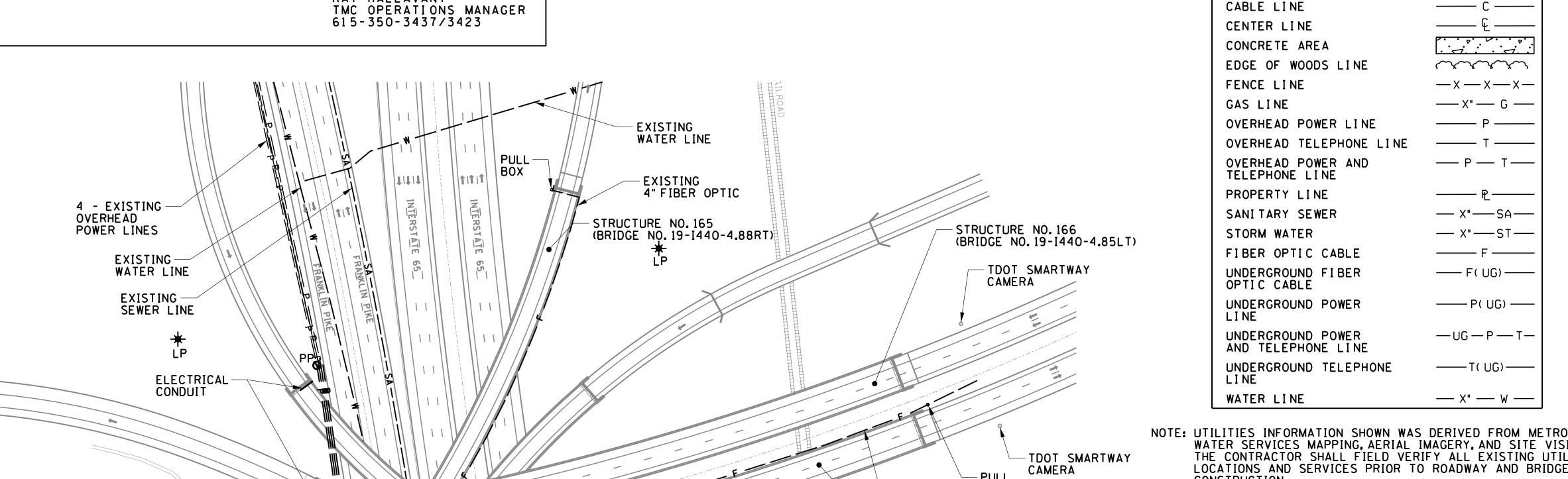
615-747-3530

PIEDMONT NATURAL GAS 83 CENTURY BLVD. NASHVILLE. TN 37214 JIM THWEATT 615-872-2389 OR DONNIE WHITTAKER 615-207-5830 (CELL)

TDOT-ITS DIVISION 6603 CENTENNIAL BLVD. NASHVILLE. TN 37243 RAY HALLAVANT 615-350-3437/3423

PROJECT NO. 19009-4184-04 CONST. 2015 PORTIONS OF THIS DRAWING DEPICTS EXISTING CONDITIONS. LIMITS OF PROPOSED BRIDGE CONSTRUCTION MAY VARY FROM EXISTING CONDITIONS.

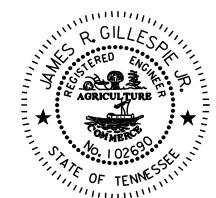
LINE STYLES



WATER SERVICES MAPPING, AERIAL IMAGERY, AND SITE VISIT THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND SERVICES PRIOR TO ROADWAY AND BRIDGE CONSTRUCTION.

NOTE: CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING IN ANY AREA WHERE UTILITIES ARE PRESENT AND AVOID WORKING IN THESE AREAS AS MUCH AS PRACTICALLY POSSIBLE. DAMAGES TO ANY UTILITIES ARE TO BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

NOTE: THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING POLES, GUY WIRES AND ROADWAY SIGNS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE MOVEMENT OF SUCH SIGNS, POLES AND GUY WIRES WITH THEIR RESPECTIVE OWNERS. THE CONTRACTOR SHALL RE-SET EXISTING SIGNAGE IN ITS ORIGINAL LOCATION. THE COST OF RE-SETTING SIGNAGE WILL NOT BE PAID FOR DIRECTLY BUT WILL BE INCLUDED IN OTHER ITEMS OF CONSTRUCTION.



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

UTILITIES

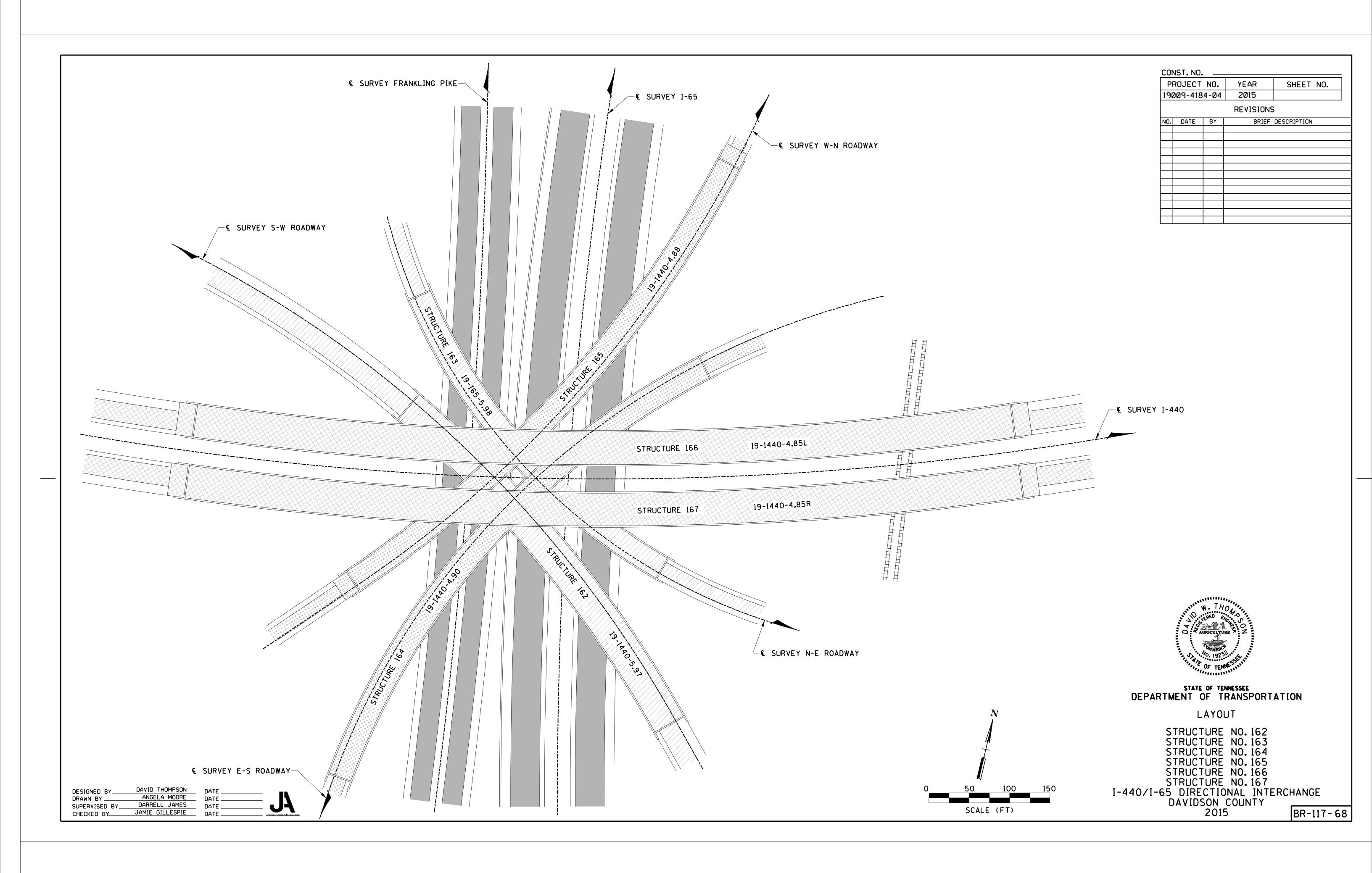
EXISTING 4" FIBER OPTIC ELECTRICAL CONDUIT STRUCTURE NO. 167 STRUCTURE NO. 163 (BRIDGE NO. 19-I440-4.85RT) (BRIDGE NO. 19-1065-5.98) .-E-TF√ ELECTRICAL CONDUIT STRUCTURE NO. 162 TDOT ITS -CABINET (BRIDGE NO. 19-I065-5.97) TDOT ITS -CABINET POLE MOUNTED ELECTRIC CONTROL CABINET TDOT SMARTWAY -CAMERA UTILITY PPO 11111 ELECTRIC SERVICE DROP W/METER CONTRACTOR SHALL USE EXTREME ABOVE GRADE CAUTION WHEN WORKING ON UTILITY CABINET STRUCTURE NO. 164. COORDINATE WITH NES PRIOR TO BEGINNING ANTENNA IN FENCE -CONSTRUCTION **ENCLOSURE** STRUCTURE NO. 164 EB, / (BRIDGE NO. 19-I440-4.90LT) A **ELECTRICAL** CONDUIT 12/ EXISTING SEWER LINE SCALE PLAN

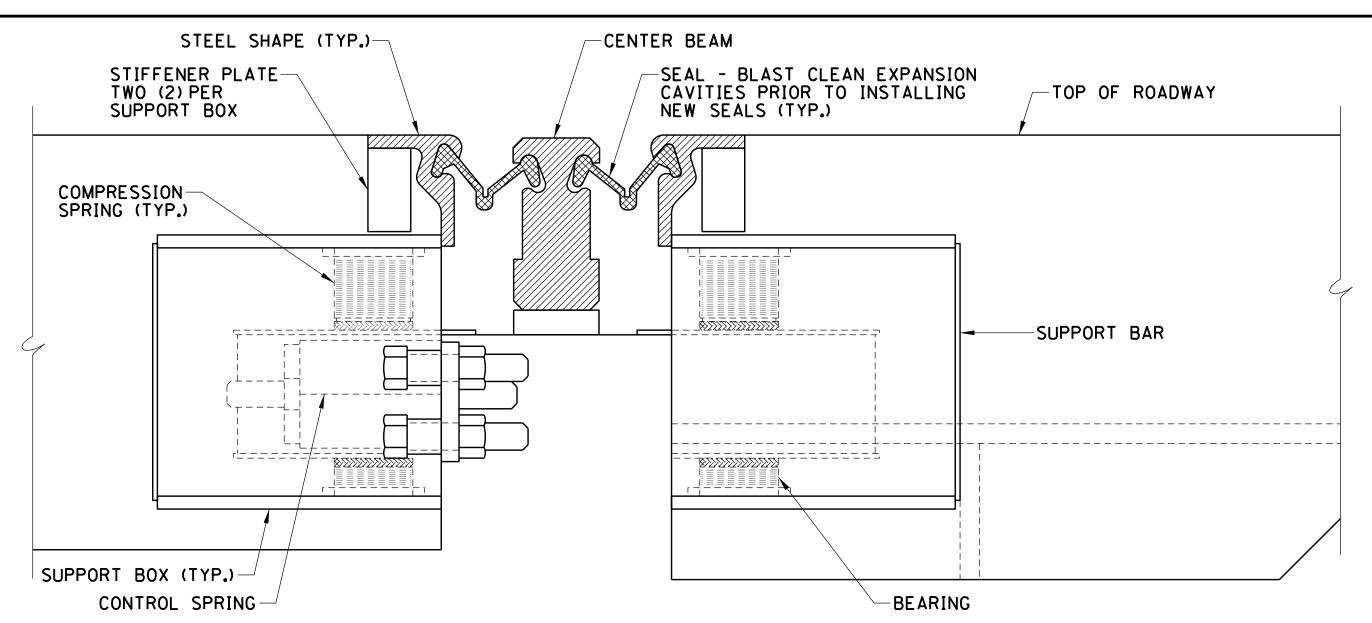
STRUCTURE NO. 162 STRUCTURE NO. 163 STRUCTURE NO. 164

STRUCTURE NO. 165 STRUCTURE NOS. 166 \$ 167 INTERSTATE 440/INTERSTATE 65 DIRECTIONAL INTERCHANGE DAVIDSON COUNTY

2015

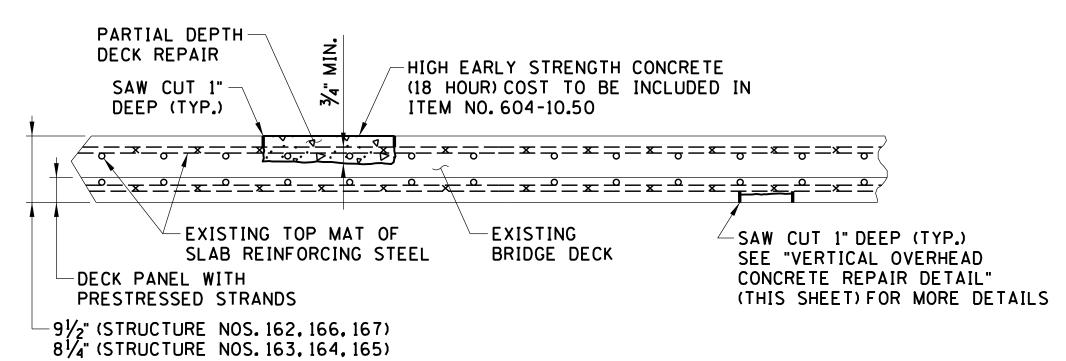
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SECTION THRU MODULAR EXPANSION JOINT

STRUCTURE NOS. 166 AND 167, ABUTMENT NO. 1 AND ABUTMENT NO. 2
(CONTRACTOR SHALL FIELD VERIFY ALL COMPONENTS
OF EXISTING MODULAR EXPANSION JOINT)
(NOT TO SCALE)



DETAIL SHOWING PARTIAL DEPTH AND PRECAST PRESTRESSED DECK SPALL REPAIR

NOTES: (2)

(NOT TO SCALE)

- (1) REMOVE CONCRETE IN ALL DELAMINATED 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 COMPLETELY CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE BRIDGE REPAIR OFFICE. INSPECTIONS, TO DETERMINE AREAS OF DECK REPAIR, WERE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AND ARE SHOWN BELOW FOR REFERENCE. POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: 1) (PARTIAL DEPTH REPAIRS) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 POUND CLASS SHALL NOT BE USED. 2) (ALSO ALL DECK REPAIR OVER BEAMS WILL BE RESTRICTED TO 60 POUND PNEUMATIC HAMMERS. 3) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.
- (2) ITEM NO. 604-10.50 MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.
- (3) DETAILS OF ANY TEMPORARY SUPPORT SYSTEM AND DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY PARTIAL DECK REPAIR IS BEGUN. COST TO BE INCLUDED IN ITEM NO. 602-10.05 BRACING REPAIRS, LUMP SUM.
- (4) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD ALL EXISTING UTILITIES FROM DAMAGE DURING CONTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE OF ITEMS BID ON.
- (5) COST OF FRAMING, CONCRETE, ABRASIVE BLASTING, LABOR AND CONCRETE REMOVAL BY PNEUMATIC HAMMERS AND ANY MISCELLANEOUS MATERIALS TO COMPLETE THE PARTIAL DEPTH REPAIRS SHALL BE INCLUDED IN ITEM NO. 604-10.50.
- (6) IF ANY EXISTING REINFORCING STEEL IS DAMAGED AFTER THE REMOVAL PROCESS, IT SHALL BE REPLACED AND INCLUDED IN ITEM NO. 604-03.01.

DESIGNED BY	DAVID THOMPSON	DATE	
DRAWN BY	ANGELA MOORE	DATE	
SUPERVISED BY	DARRELL JAMES	DATE	_ 14
CHECKED BY	JAMIE GILLESPIE	DATE	JAMES + ASSOCIATES, INC.
		- · · ·	

MODULAR EXPANSION JOINT REPAIR NOTES:

- (1) THE FOLLOWING PARTS ARE TO BE REMOVED FROM THE EXISTING EXPANSION JOINTS AT ABUTMENT NO.1 AND ABUTMENT NO.2 FOR STRUCTURE NOS.166 AND 167 AND REPLACED WITH IDENTICAL PARTS FROM THE MANUFACTURER OF THE EXISTING JOINTS: SEALS, CONTROL SPRINGS, UPPER AND LOWER BEARINGS.
- (2) WORK SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND TDOT SPECIFICATIONS.
- (3) EXPANSION JOINT REPAIR SHALL BE CONSTRUCTED IN PHASES AS SHOWN ON SHEET BR-117-92. WHEN REPAIRS ARE COMPLETE, THE STEEL PORTIONS OF EXPANSION DEVICE SHALL BE CONTINUOUS. IF STEEL PORTION OF EXPANSION DEVICE IS CUT IN ORDER TO PERFORM PHASED CONSTRUCTION, THE STEEL PORTION SHALL BE RE-CONNECTED WITH A FULL PENETRATION BUTT WELD.
- (4) COST OF FURNISHING AND INSTALLING THE MODULAR EXPANSION JOINT REPAIR PARTS COMPLETE AND IN PLACE INCLUDING ALL LABOR, EQUIPMENT AND OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS SHALL BE INCLUDED IN BID ITEM NO. 604-10.60, EXPANSION JOINT REPAIRS (MODULAR TYPE), L.F.
- (5) CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS RELATING TO THE PHASED REPAIR OF THE MODULAR EXPANSION DEVICES. SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES PRIOR TO BEGINNING REPAIR.

THIN EPOXY OVERLAY NOTES: 3

- (1) TYPE 1 THIN EPOXY OVERLAY SYSTEM USE DECK PRETREATMENT/PRIMER PER MANUFACTURER'S RECOMMENDATION, AND 2 LIFTS OF AN EPOXY-URETHANE COPOLYMER AND AGGREGATE. TYPE 1 OVERLAY SHALL BE APPLIED MECHANICALLY USING METERED EQUIPMENT: HAND MIXING OF MATERIAL IS NOT PERMITTED. THIN OVERLAY SYSTEM SHALL BE FROM THE QUALIFIED PRODUCTS LIST 23. SECTION D2. MINIMUM OVERLAY THICKNESS SHALL BE 3/8 INCH.
- (2) APPLICATION EQUIPMENT SHOULD:
 - A) BE CAPABLE OF METERING, MIXING AND DISTRIBUTING THE POLYMER AND PRETREATMENT TO MANUFACTURER'S RECOMMENDATION.
 - B) USE AN APPLICATION MACHINE THAT FEATURES POSITIVE DISPLACEMENT VOLUMETRIC METERING PUMPS CONTROLLED BY A HYDRAULIC POWER UNIT.
 - C) STORE COMPONENTS IN TEMPERATURE CONTROLLED RESERVOIRS CAPABLE OF MAINTAINING 100 DEGREES FAHRENHEIT (PLUS OR MINUS 10 DEGREES) TO INSURE OPTIMAL MIXING.
 - D) CHECK MIXING RATIO AT THE PUMP OUTLETS AS WELL AS CYCLE COUNTING CAPABILITIES TO MONITOR OUTPUT ON STANDARD FEATURES.
 - E) USE MOTIONLESS IN-LINE MIXING SO AS TO NOT OVERLY SHEAR THE MATERIAL TO ENTRAP AIR IN THE MIX.
 - F) MAXIMIZE MATERIAL WORKING TIME BY MIXING IT IMMEDIATELY BEFORE DISPENSING.
- (3) AGGREGATE SHALL BE ANGULAR, HAVING LESS THAN 0.2% MOISTURE AND FREE OF DIRT, CLAY, ASPHALT AND OTHER FOREIGN OR ORGANIC MATERIALS. AGGREGATE FOR ALL LAYERS SHALL BE BAUXITE AND MEET THE FOLLOWING GRADATION:

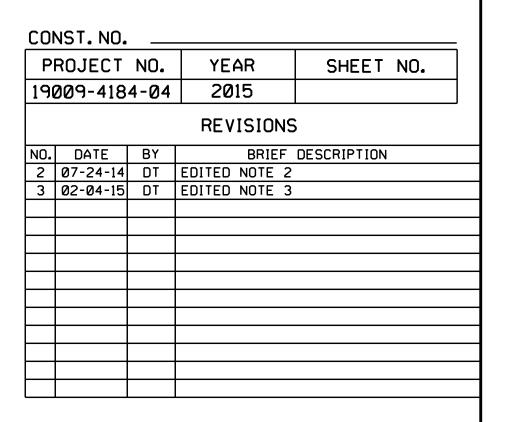
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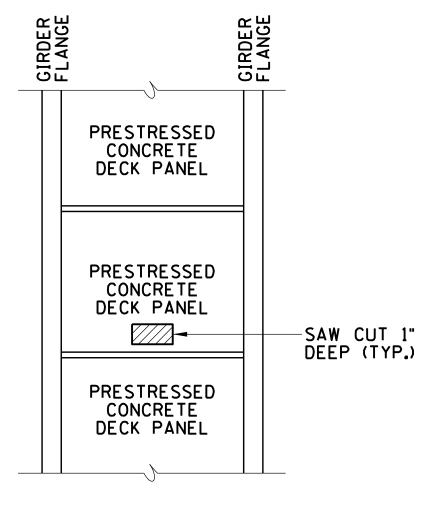
 NO. 6
 95-100

 NO. 10
 10-35

 NO. 20
 0-3

- (4) PARTIAL DEPTH DECK REPAIR SHALL CURE A MINIMUM OF 28 DAYS BEFORE THE OVERLAY IS PLACED. TRAFFIC SHALL BE ALLOWED TO USE THE BRIDGE DURING THE CURING PERIOD OF THE PATCHES BUT NOT AFTER SHOTBLASTING. MAGNESIUM PHOSPHATE BASED MATERIALS WILL NOT BE ALLOWED.
- (5) THE CONCRETE DECK SURFACE SHALL BE CLEANED BY SHOTBLASTING TO REMOVE ANY OIL, DIRT, RUBBER, TRAFFIC STRIPING, OR ANY OTHER POTENTIAL DETRIMENTAL MATERIAL SUCH AS CURING COMPOUND AND LAITANCES, WHICH THE MANUFACTURER AND ENGINEER'S OPINION WOULD PREVENT PROPER BONDING AND CURING OF THE MATERIAL. IN AREAS WHERE SHOTBLASTING EQUIPMENT CAN NOT REACH (I.E., ALONG CURBS AND BRIDGE RAILS) SANDBLASTING IS PERMITTED TO AN EXTENT TO THE ENGINEER'S AND MANUFACTURER'S APPROVAL. IMMEDIATELY BEFORE APPLICATION, ALL PREPARED SURFACES SHALL BE CLEANED WITH COMPRESSED AIR OR VACUUMED TO REMOVE DUST AND DEBRIS.
- (6) ALL SURFACES THAT ARE TREATED SHALL BE DRY AT THE TIME OF APPLICATION. THE OVERLAY SHALL NOT BE APPLIED WHEN IT HAS RAINED 24 HOURS PRIOR TO, OR RAIN IS FORECAST WITHIN 8 HOURS AFTER, APPLICATION. THE MOISTURE CONTENT IN THE DECK SUBSTRATE SHALL BE TESTED. MOISTURE IS NOT TO EXCEED 4.5 PERCENT WHEN MEASURED BY ELECTRONIC METER. IF THE TEST SHOWS EXCESS MOISTURE. THE DECK SHALL CONTINUE TO DRY BEFORE APPLICATION PROCEEDS.
- (7) BLUSHING (A WAXY SURFACE COATING ON THE EPOXY) IS CAUSED BY THE REACTION OF MOISTURE WITH THE HARDENING AGENT. BLUSHING CREATES A SURFACE THAT MAKES FUTURE LAYERS DIFFICULT TO ADHERE. LIFTS THAT SHOW SIGNS OF BLUSHING SHALL BE REMOVED AND REPLACED PRIOR TO APPLICATION OF THE NEXT. THE COST TO REMOVE AND REPLACE THESE AREAS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- (8) TRAFFIC, OTHER THAN APPLICATION EQUIPMENT, SHALL NOT BE ALLOWED ON ANY PORTION OF THE DECK THAT HAS BEEN SHOTBLASTED OR WHERE PART OF THE APPLICATION HAS BEEN PLACED.
- (9) SEE MANUFACTURER'S RECOMMENDATIONS FOR REQUIRED AMBIENT AND SURFACE TEMPERATURES AND HUMIDITY LIMITS FOR APPLICATION.
- (10) THE MANUFACTURER SHALL HAVE A REPRESENTATIVE ON THE JOB SITE AT ALL TIMES DURING APPLICATION AND CURE TIME. THE REPRESENTATIVE, ALONG WITH CONSULTATION WITH ENGINEER, MAY SUSPEND ANY ITEM OF WORK THAT IS SUSPECT AND DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS. WORK SHALL NOT RESUME UNTIL THE ENGINEER AND REPRESENTATIVE ARE SATISFIED THAT APPROPRIATE REMEDIAL ACTION HAS BEEN TAKEN BY THE CONTRACTOR.
- (11) ALL COSTS FOR AGGREGATE, EPOXY FOR MINIMUM OF TWO LIFTS, SURFACE PREPARATION, LABOR AND ANY OTHER MISCELLANEOUS MATERIALS REQUIRED TO PLACE THIN OVERLAY SHALL BE INCLUDED IN ITEM NO. 617-04.01, TYPE 1 THIN EPOXY OVERLAY (EPOXY URETHANE), SY, AS CALLED FOR ON THE QUANTITY SHEET.
- (12) THICKNESS VERIFICATION: THE PROJECT ENGINEER SHALL BE NOTIFIED OF THE NUMBER OF GALLONS USED ON THE PROJECT WITH NOTARIZED QUANTITY STATEMENTS FROM THE CONTRACTOR AND THE MANUFACTURER. THE CONTRACTOR SHALL VERIFY TO TDOT THAT THE OVERLAY IS AN AVERAGE OF AT LEAST 3/8 INCH THICK AT THREE RANDOM LOCATIONS AGREED UPON BY THE PROJECT ENGINEER AND THE MATERIAL MANUFACTURER REPRESENTATIVE. IF 3/8 INCH AVERAGE IN NOT ACHIEVED, A RETEST SHALL BE PERFORMED IN ADJOINING AREAS. THIN AREAS SHALL BE RE-COATED AS DESCRIBED ABOVE BY THE CONTRACTOR AND RE-VERIFIED AT NO ADDITIONAL COST TO TDOT. THIS VERIFICATION MAY CONSIST OF CORES, HOLES, ETC., BUT IN ALL CASES, ANY DESTRUCTIVELY TESTED AREAS SHALL BE REPAIRED BY THE CONTRACTOR BEFORE FINAL ACCEPTANCE BY THE PROJECT ENGINEER.





NOTE: SAW CUTS SHALL BE MADE AS DEEP AS 1".
EXTREME CAUTION SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING REINFORCING STRANDS.

NOTE: CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE THE CONCRETE TO A DEPTH OF 1/2" BEHIND EXPOSED PRESTRESSING STRANDS AFTER DETERIORATED CONCRETE HAS BEEN REMOVED.

VERTICAL OVERHEAD CONCRETE REPAIR DETAIL (VIEW FROM BELOW DECK)

(NOT TO SCALE)



DEPARTMENT OF TRANSPORTATION

MODULAR EXPANSION JOINT REPAIR

AND CONCRETE DECK REPAIR

STRUCTURE NO. 162

STRUCTURE NO. 163

STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NO. 166 STRUCTURE NO. 167

I-440/I-65 DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY

2015

BR-117-98

STRUCTURE NO. 162 ESTIMATED QUANTITIES ABUTMENT NO. 1 ITEM NO. 604-10.05 CONCRETE S.F. O O PARAPET ITEM NO. 604-10.05 CONCRETE S.F. 5 30 ABUTMENT NO. 2 ITEM NO. 604-10.05 CONCRETE REPAIRS S.F. 5 30 ABUTMENT NO. 2 ITEM NO. 604-10.05 CONCRETE S.F. O O O				
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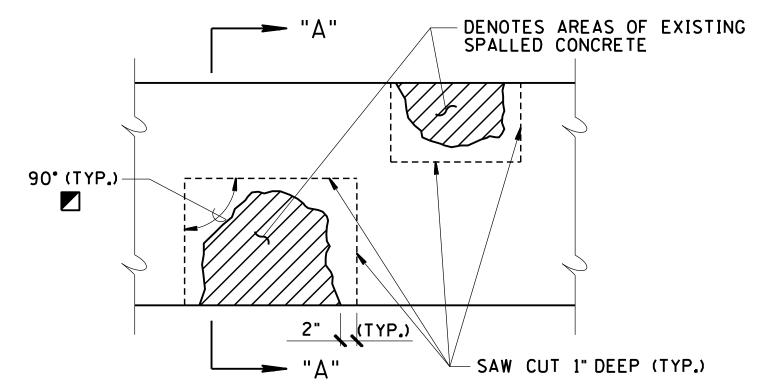
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ESTIMATED	QUANTITIES				
ABUTMEI	NT NO.1				
ITEM NO.604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.				
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PARA	APE T				
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.				
5	10				
ABUTMEN	ABUTMENT NO.2				
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.				
0	0				

STRUCTUR	RE NO. 166		
ESTIMATED	QUANTITIES		
ABUTMEI	NT NO.1		
ITEM NO.604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.		
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PARA	APE T		
ITEM NO.604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.		
5	5		
ABUTMENT NO. 2			
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.		
0	0		
	-		

STRUCTURE NO. 163				
ESTIMATED	QUANTITIES			
ABUTME	NT NO.1			
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO.604-10.54 CONCRETE REPAIRS S.F.			
0	5			
PARAPET				
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.			
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ABUTMENT NO. 2				
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.			
0	5			

STRUCTURE NO.165				
ESTIMATED	ESTIMATED QUANTITIES			
ABUTME	NT NO.1			
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO.604-10.54 CONCRETE REPAIRS S.F.			
0	5			
PARA	PARAPET			
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO.604-10.54 CONCRETE REPAIRS S.F.			
5	15			
ABUTME	ABUTMENT NO. 2			
ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO.604-10.54 CONCRETE REPAIRS S.F.			
0	0			

_						
	STRUCTURE NO.167					
	ESTIMATED	QUANTITIES				
	ABUTMEI	NT NO.1				
	ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO.604-10.54 CONCRETE REPAIRS S.F.				
	0	0				
	PARAPET					
	ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO. 604-10.54 CONCRETE REPAIRS S.F.				
	5	15				
	ABUTMENT NO. 2					
	ITEM NO. 604-10.05 CONCRETE S.F.	ITEM NO.604-10.54 CONCRETE REPAIRS S.F.				
	0	5				



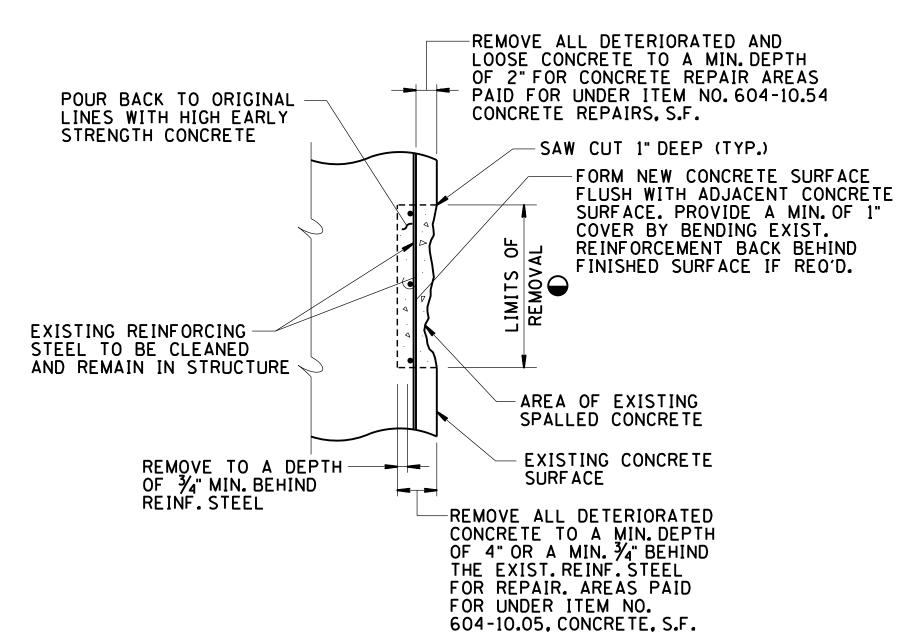
PROJECT NO. YEAR SHEET NO. 19009-4184-04 2015 REVISIONS NO. DATE BY BRIEF DESCRIPTION 2 07-24-14 DT EDITED NOTE 1

DETAIL SHOWING AREAS OF EXISTING SPALLED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

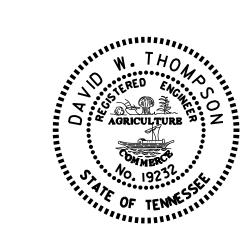
- DENOTES: LIMITS AND LOCATION OF REPAIRS DESIGNATED ON THE CONCRETE REPAIR SHEETS.
- DENOTES: SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS.

NOTE: THE COST OF REMOVING PORTIONS OF THE EXISTING CONCRETE WITHIN THE LIMITS SHOWN, SAW CUTTING, COMPLETELY CLEANING EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR AND ALL MISCELLANEOUS MATERIAL, INCLUDING REINFORCING STEEL, NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN PRICE BID FOR ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F.

- 1. THE ENGINEER SHALL DESIGNATE ALL CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. ITEM NO. 604-10.05 AND ITEM NO. 604-10.54 MAY BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER.
 - 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. DESIGN CALCULATION AND DETAILS OF TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY DEMOLITION IS BEGUN. COST OF STABILIZING THE STRUCTURE SHALL BE INCLUDED IN ITEM NO. 602-10.05, BRACING REPAIRS, L.S..
 - 3. THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALL AREA TO BE REPAIRED UNDER ITEM NO.604-10.05 OR ITEM NO.604-10.54. PATCHING MATERIAL FOR ITEM NO.604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR ITEM NO.604-10.54 SHALL BE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL. SEE QUALIFIED PRODUCTS LIST 13. SECTION B.6.
 - 4. EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.
 - 5. POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: A. PNEUMATIC HAMMERS HEAVIER THAN 35 LB. CLASS SHALL NOT BE USED.
 - B. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL AND BEAM END REPAIRS.



SECTION "A-A"



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

CONCRETE REPAIR DETAILS

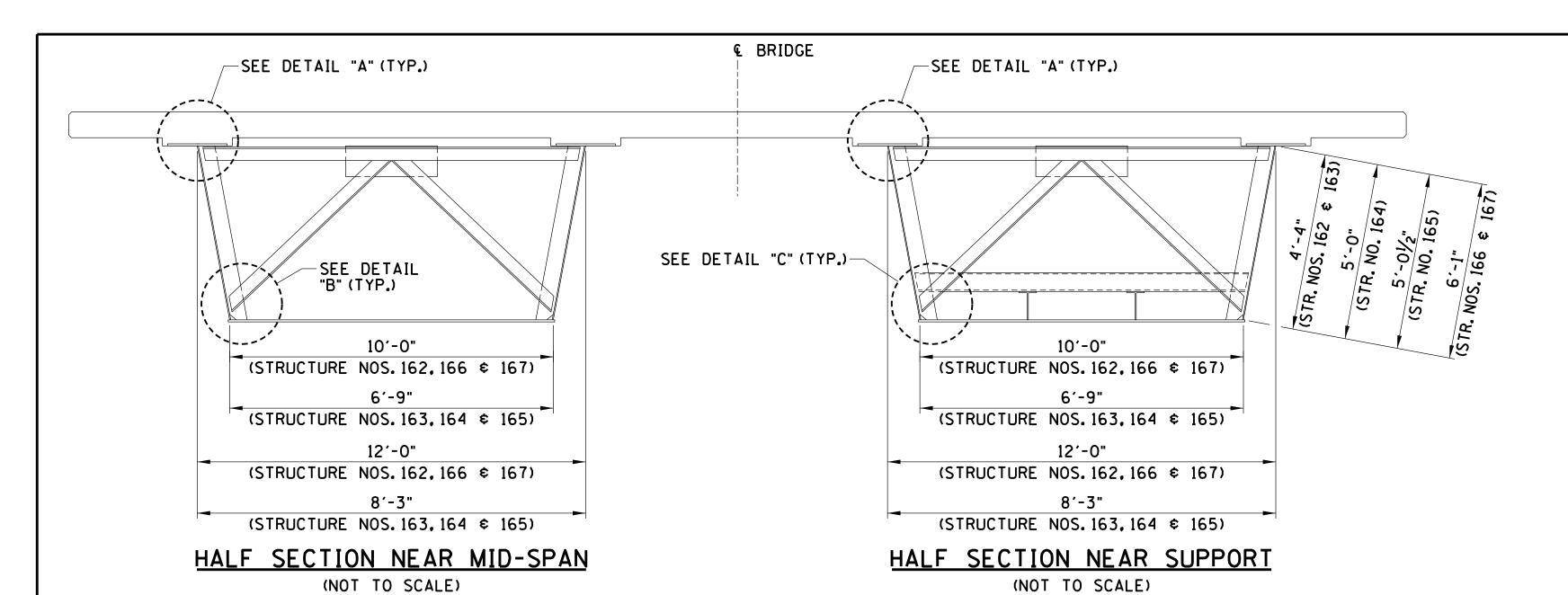
STRUCTURE NO. 162 STRUCTURE NO. 163 STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NO. 166 STRUCTURE NO. 167 440/I-65 DIRECTIONAL INT

I-440/I-65 DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY

2015 BR

BR-117-99





-EXISTING L5×3×1/2"

-EXISTING HIGH STRENGTH

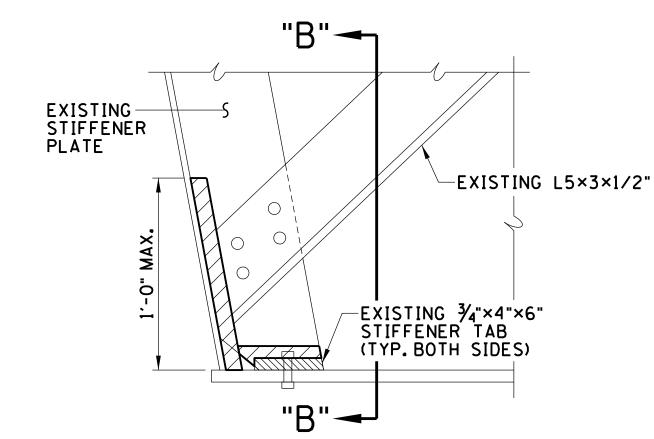
-EXISTING STIFFENER PLATE

EXISTING TOP FLANGE (THICKNESS VARIES

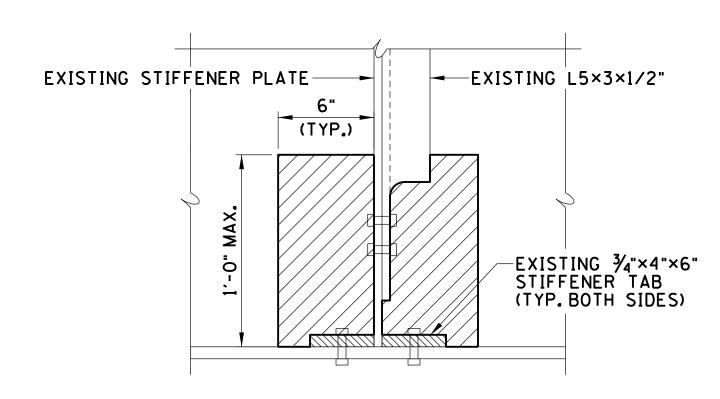
FROM 1" TO 3")

_EXISTING 1/2" | STIFFENER PLATE

STUDS TO REMAIN



DETAIL "B" SHOWING LIMITS OF DYE PENETRANT TESTING (NOT TO SCALE)



DETAIL "B-B" SHOWING LIMITS OF

DYE PENETRANT TESTING

(NOT TO SCALE)

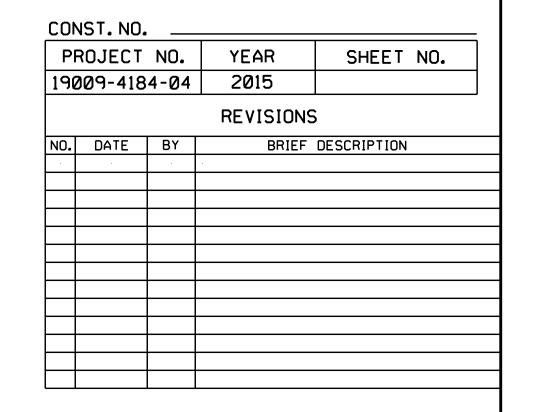
CRACK REPAIR PROCEDURE

NOTE: AFTER DYE PENETRANT TESTING OR FLASH MAGNETIC PARTICLE TESTING IS COMPLETE AND THE TEST RESULTS HAVE BEEN RECORDED IN THE "CRACK LOCATION TABLE" FOR EACH STRUCTURE, ALL CRACKS DENOTED IN THE TABLE SHALL BE REPAIRED BY UTILIZING EITHER METHOD NO. 1 OR METHOD NO. 2 AS FOLLOWS:

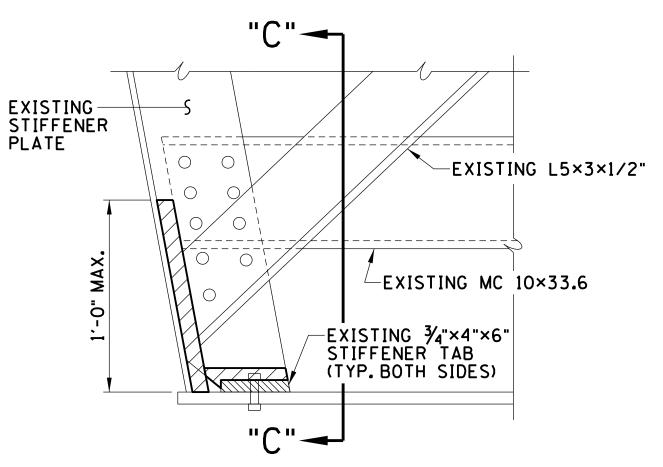
METHOD NO.1: WHEN THE CRACK IS IN THE FILLET WELD MATERIAL THAT CONNECTS THE GIRDER WEB TO THE STIFFENER PLATES. THE EXISTING WELD MATERIAL IS TO BE REMOVED IN THE AREA OF THE CRACK AND A NEW FILLET WELD MADE CONNECTING THE STIFFENER PLATE TO THE WEB.

METHOD NO. 2: WHEN THE CRACK EXTENDS INTO THE WEB METAL, THE EXISTING WELD MATERIAL IS TO BE REMOVED AND A NEW FILLET WELD MADE AND THE CRACK IN THE WEB METAL IS TO BE REPAIRED USING FULL PENETRATION WELDS. FULL PENETRATION WELDS TO BE GROUND FLUSH. ALL FULL PENETRATION WELDS SHALL BE 100% U.T. TESTED. U.T. TESTING OF FULL PENETRATION WELDS SHALL BE INCLUDED UNDER ITEM NO. 602-10.22, EACH.

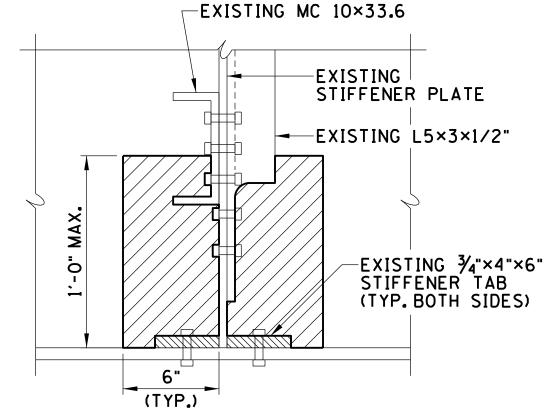
NOTE: ALL WELDS SHALL BE IN ACCORDANCE WITH ANSI-AASHTO-AWS D1.5-96 BRIDGE WELDING CODE AND SPECIAL PROVISION NO. 602. PREPARATION OF CRACKS FOR WELDING AND ALL CRACK REPAIR WELDING SHALL BE PAID FOR UNDER ITEM NO. 602-10.22, EACH.



DENOTES: LIMITS OF DYE PENETRANT TESTING AND/OR FLASH MAGNETIC PARTICLE TESTING.



DETAIL "C" SHOWING LIMITS OF DYE PENETRANT TESTING (NOT TO SCALE)



DETAIL "C-C" SHOWING LIMITS OF

DYE PENETRANT TESTING

(NOT TO SCALE)



DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL TESTING

AND REPAIR DETAILS

STRUCTURE NO. 162

STRUCTURE NO. 163

STRUCTURE NO.164 STRUCTURE NO.165 STRUCTURE NO.166 STRUCTURE NO.167

STRUCTURE NO. 167
I-440/I-65 DIRECTIONAL INTERCHANGE
DAVIDSON COUNTY

DETAIL "A-A" SHOWING LIMITS OF

DYE PENETRANT TESTING

(NOT TO SCALE)

DETAIL "A" SHOWING LIMITS OF

DYE PENETRANT TESTING

(NOT TO SCALE)

DESIGNED BY DAVID THOMPSON DATE

DRAWN BY ANGELA MOORE
SUPERVISED BY DARRELL JAMES
CHECKED BY JAMIE GILLESPIE DATE

DATE

DATE

DATE

DATE

DATE

DATE

EXISTING 1/2" FILLER-PLATE TO REMAIN

EXISTING TOP

FROM 1" TO 3")

(THICKNESS VARIES

1/2" EXISTING WEB_

EXISTING HIGH STRENGTH-

STUDS TO REMAIN

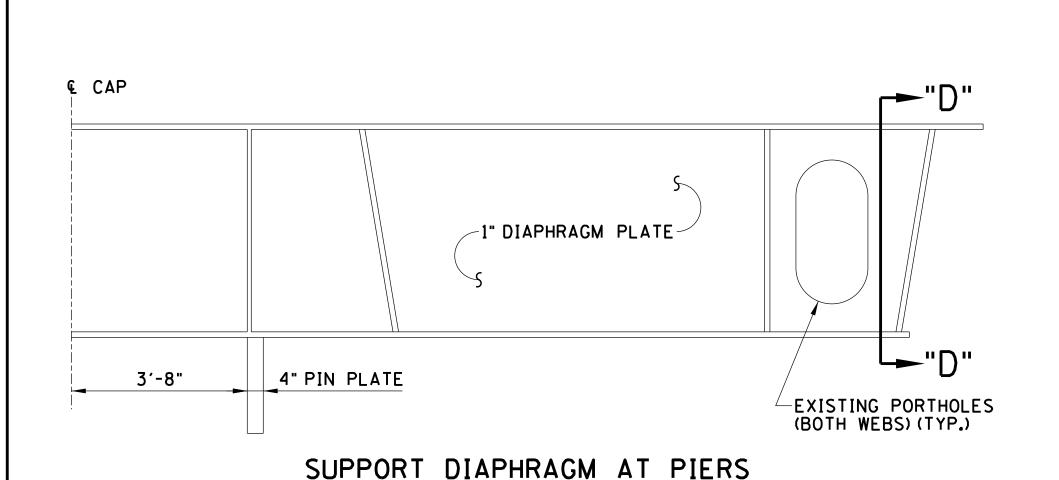
EXISTING 1/2" FILLER - PLATE TO REMAIN

EXISTING L5×3×1/2"-

FLANGE

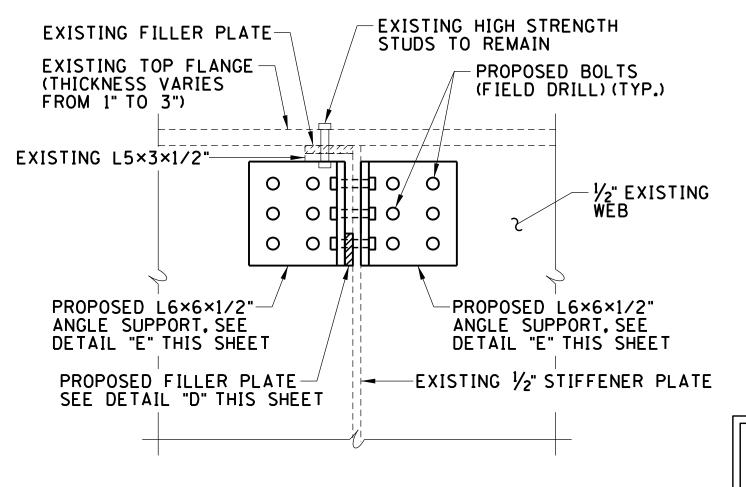
DAVIDSON COUNTY

2015
BR-117-100



(NOT TO SCALE)

EXISTING BOLTS TO BE REMOVED AND — REPLACED WITH NEW BOLTS (TYP.) PROPOSED L6×6×1/2" -EXISTING FILLER PLATE ANGLE SUPPORT, SEE DETAIL "E" THIS SHEET -EXISTING L5×3×1/2" EXISTING TOP FLANGE -(THICKNESS VARIES FROM 1" TO 3") PROPOSED BOLTS EXISTING HIGH STRENGTH (FIELD DRILL) STUDS TO REMAIN 3/8" EXISTING WEB
(STRUCTURE NOS. 162 AND 163)
7/6" EXISTING WEB -PROPOSED FILLER PLATE, SEE DETAIL "D" THIS SHEET -EXISTING 1/2" STIFFENER PLATE



YEAR PROJECT NO. SHEET NO. 2015 19009-4184-04 REVISIONS BRIEF DESCRIPTION NO. DATE BY

CONST. NO.

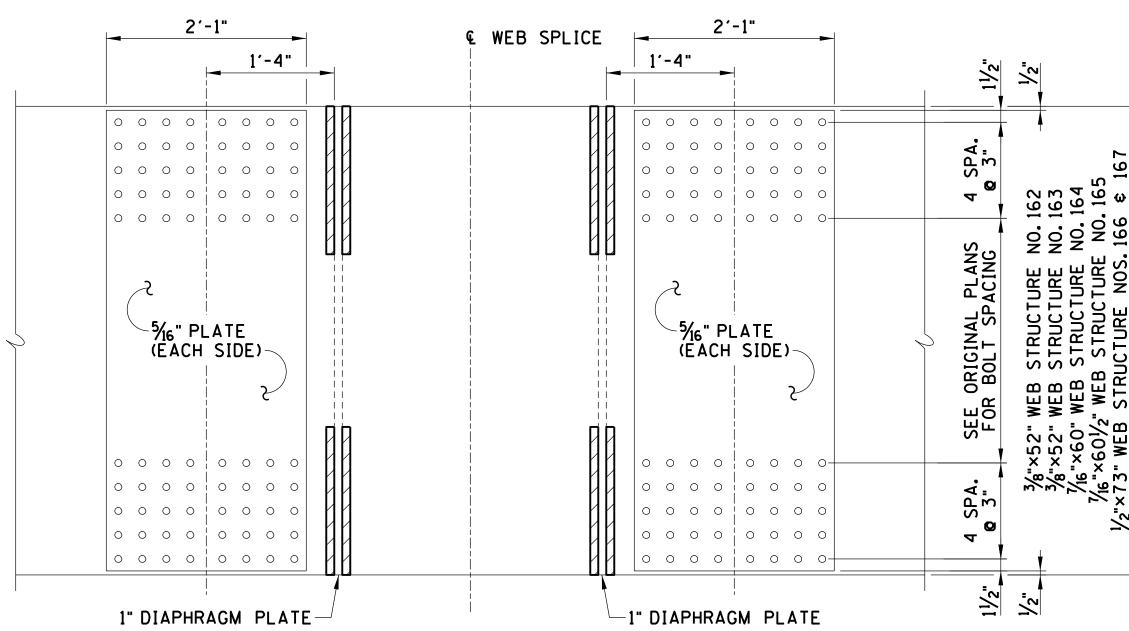
NOTE: CONTRACTOR SHALL FIELD VERIFY EXISTING STEEL PLATE DIMENSIONS AND BOLT SPACING.

ANGLE SUPPORT DETAIL FOR UPPER DIAPHRAGM/STIFFENER CONNECTION

(NOT TO SCALE) NOTE: BOLT SPACING = 3"±.

SECTION "E-E"

(NOT TO SCALE) NOTE: BOLT SPACING = 3"±.

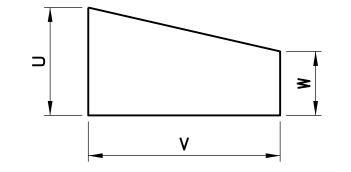


STRUCTURE STRUCTURE STRUCTURE 3 STRUCTURE UCTURE NOS. WEB S WEB S WEB S STRU

SECTION "D-D" SHOWING LIMITS OF DYE PENETRANT TESTING AT WEB SPLICE

(NOT TO SCALE)

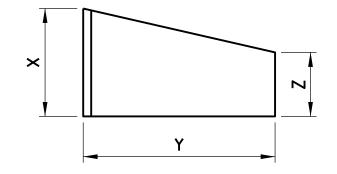
DENOTES: LIMITS OF DYE PENETRANT TESTING AND/OR FLASH MAGNETIC PARTICLE TESTING.



	STRUCTURE NO.					
	162	163	164	165	166	167
U	33/8"	31/2"	31/2"	31/2"	33/8"	33/8"
٧	6"	6"	6"	6"	6"	6"
W	2"	23/8"	21/2"	21/2"	23/8"	23/8"

DETAIL "D" 1/2" THICK PLATE

(NOT TO SCALE)



		STRUCTURE NO.				
	162	163	164	165	166	167
X	8"	8"	8"	8"	8"	8"
Y	6"	6"	6"	6"	6"	6"
Z	61/2"	7"	7"	7"	7"	7"

DETAIL "E" 6"×6"×1/2" ANGLE SUPPORT

(NOT TO SCALE)

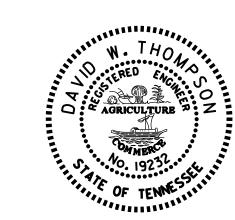
CRACK REPAIR PROCEDURE

NOTE: AFTER DYE PENETRANT TESTING OR FLASH MAGNETIC PARTICLE TESTING IS COMPLETE AND THE TEST RESULTS HAVE BEEN RECORDED IN THE "CRACK LOCATION TABLE" FOR EACH STRUCTURE, ALL CRACKS DENOTED IN THE TABLE SHALL BE REPAIRED BY UTILIZING EITHER METHOD NO. 1 OR METHOD NO. 2 AS FOLLOWS:

METHOD NO. 1: WHEN THE CRACK IS IN THE FILLET WELD MATERIAL THAT CONNECTS THE GIRDER WEB TO THE STIFFENER PLATES. THE EXISTING WELD MATERIAL IS TO BE REMOVED IN THE AREA OF THE CRACK AND A NEW FILLET WELD MADE CONNECTING THE STIFFENER PLATE TO THE WEB.

METHOD NO. 2: WHEN THE CRACK EXTENDS INTO THE WEB METAL, THE EXISTING WELD MATERIAL IS TO BE REMOVED AND A NEW FILLET WELD MADE AND THE CRACK IN THE WEB METAL IS TO BE REPAIRED USING FULL PENETRATION WELDS. FULL PENETRATION WELDS TO BE GROUND FLUSH. ALL FULL PENETRATION WELDS SHALL BE 100% U.T. TESTED. U.T. TESTING OF FULL PENETRATION WELDS SHALL BE INCLUDED UNDER ITEM NO. 602-10.22, EACH.

NOTE: ALL WELDS SHALL BE IN ACCORDANCE WITH ANSI-AASHTO-AWS D1.5-96 BRIDGE WELDING CODE AND SPECIAL PROVISION NO. 602. PREPARATION OF CRACKS FOR WELDING AND ALL CRACK REPAIR WELDING SHALL BE PAID FOR UNDER ITEM NO. 602-10.22, EACH.



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

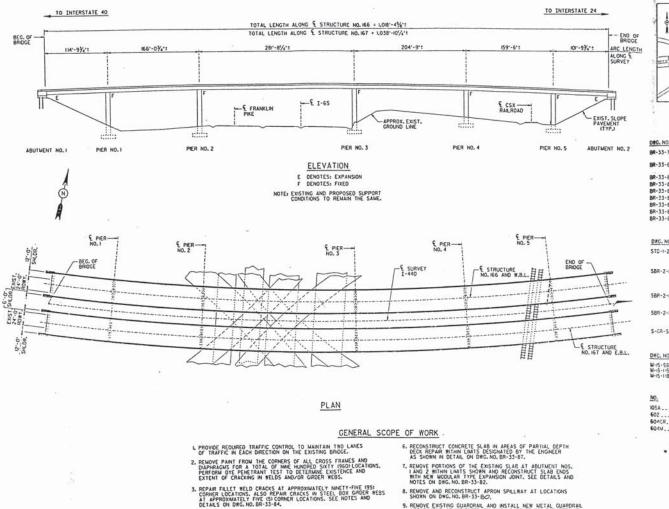
STRUCTURAL STEEL TESTING AND REPAIR DETAILS STRUCTURE NO. 162 STRUCTURE NO. 163 STRUCTURE NO. 164 STRUCTURE NO. 165 STRUCTURE NO. 166 STRUCTURE NO. 167

I-440/I-65 DIRECTIONAL INTERCHANGE DAVIDSON COUNTY

2015

BR-117-101

DAVID THOMPSON DESIGNED BY. ANGELA MOORE DRAWN BY DARRELL JAMES SUPERVISED BY___ JAMIE GILLESPIE CHECKED BY_



INSTALL STIFFENER TABS OR FILLER PLATE AT ALL CORNERS OF CROSS FRAMES FOR A TOTAL OF SEVEN HUNDRED SIXTY-DIGHT (168) LOCATIONS, SEE NOTES AND DETAILS ON DWG, NOS, BR-33-84 AMD BR-33-85.

REPART ALL LOCATIONS WHERE EXISTING PAINT WAS REMOVED OR NEW STEEL WAS INSTALLED. SEE NOTES ON DWG. NO. BR-33-87 REGARDING SURFACE PREPARATION AND PAINTING.

REMOVE EXISTING GUARDRAIL AND INSTALL NEW METAL GUARDRAIL ATTACHMENT AS NOICATED ON DWG, NO, BR-33-80, FOR DETAILS, STEED NO, 24, STANDARD DWG, NOS, SBR-2-13, SBR-2-132 AND STANDARD S-GR-SERES DRAWNGS.

IO. REPAIR SLOPE PAVING AND PLACE RIP-RAP AT EACH ABUTMENT WITHIN THE LIMITS SHOWN IN DETAILS ON DWG, NO. BR-33-83.



PROJECT NO.		YEAR	SHEET NO.	
19947-4110-04		1998		
			REVISIONS	5
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_	-		-	

A LIST OF DRAWINGS

DRG. NO.	LAST REV. DATE	DRAWING
BK-22-13	6-2-98	LAYOUT OF BRIDGE
00 37 63	market survival	TO BE REPAIRED
BK-22-PL	6 - 2 - 9&	GENERAL NOTES AND
00.33.00		ESTIMATED BRIDGE QUANTITIES
DU-33-00		SUPERSTRUCTURE
BK-22-91		FRAMING PLAN
BM-33-84		STRUCTURAL STEEL DETAILS
BK-33-85		STRUCTURAL STEEL DETAILS
BR-33-82		MODULAR EXPANSION JOINT DETAILS
BR-33-87		MISCELLANEOUS DETAILS
BR-33-83		REPAIR DETAILS

	LIST OF STANDA	RD DRAWINGS
DWG. NO.	LAST REV. DATE	DRAWING
		STEEL SLIDER PLATE ASSEVULES FOR CONCRETE PARAPET AND BROGE DECK DRAIN DETAILS - 1993
		GENERAL DETAILS FOR STRP SEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPES "A" THROUGH "J" - 1999
		AT BRIDGE ENDS TO EXISTING CONGRETE SLOPE FACE ENDPOST - 1989
		DETAILS SHOWING GUARDRAIL ATTACHMENT AT ERIOGE ENDS TO EXISTING CONCRETE SLOPE FACE ENOPOST - 1959
S-GR-SERIES	VARIES	SECRE FACE ENCROST - 1959

· LIST OF REFERENCE DRAWINGS

DRG. NO.	DRAWING		
M-15-98 THRU W-15-113	ExiSTING	SR:DGE	PLANS

LIST OF SPECIAL PROVISIONS

NO.	LAST REV. DATE REGARDING
105A	APPROVAL OF SHOP CHARNOS
	* * STEEL STRUCTURES
	REPAIR OF BRIDGE CECK CRACKS
	MOCULAR ROADWAY EXPANSION DEVICES

- . DENOTES: THESE DRAWINGS ARE TO BE PRINTED WITH PLANS.
- * * DENOTES: CURRENT REVISION DATE, AS PER CONTRACT DOCUMENTS.

STATE OF TENESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF HOMES'S



LAYOUT OF BRIDGES TO BE REPAIRED (STRUCTURE NOS, 166 AND 167) I-440/I-65 DIRECTIONAL INTERCHANGE BRIDGE NO. 19-1440-4.82 DAVIDSON COUNTY

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	STRUCTURE NO. 162	STRUCTURE NO. 163	STRUCTURE NO. 164	STRUCTURE NO. 165	STRUCTURE NOS. 166&167	UNIT	TOTAL
602-10.22	STRUCTURAL STEEL WELD REPAIR	(3) 44	(7) 17	(11) 10	(6) 4	(21) 100	EACH	175
602-10.32	STRUCTURAL STEEL (REPAIRS)	(4) 1,300	(8) 1,245	(2) 1,755	(1) 1,867	63 6,125	LBS.	12,292
602-10.33	STRUCTURAL STEEL TEST FOR CRACKS	(5) 0.20	(9) 0.20	(3) 0.20	(8) 0.20	0.20	L.S.	121212
604-10.02	CONCRETE REPAIRS				(9) 4	69 B	C.Y.	12
604-10.29	CONCRETE SLOPE PAVING REPAIRS		**			(5) 8 (6) 112	S.Y.	112
604-10.32	EXPANSION JOINT REPAIRS (TYPE A)	(6) 88	(0) 64	(4) 64	20 64	12	L.F.	280
604-10.50	BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)			(15) 12	**	60 14	5.Y.	26
604-10.60	EXPANSION JOINT REPAIRS (MODULAR TYPE)		**			60 176	L.F.	176
604-10.90	MISCELLANEOUS BRIDGE ITEMS			**		29 1	L.S.	110
617-02	BRIDGE DECK CRACK SEALING	(1) 176	(1) 128	(1) 200	(1) 128	(1) 436	L.F.	1,068
617-05	SEALANT (HMWM)	(2) 3	(5) 5	(2) 3	(2) 2	(2) 6	GAL.	16
709-07	RUBBLE-STONE RIP-RAP (PLAIN)					60 11	C×	10

FOOTNOTES: STRUCTURE NOS. 162 THRU 167

- O RELUDES ALL COST FOR INSTALLING THE BROCE DECK CRACK
 SCALER DARMH INCLIDION CPICK PREFABATION, CLEANING, LABOR, SAND
 ALL INSCELLANCOUS MATERIALS REQUIRED TO SEAL THE
 DECK REPAR AREAS AND EXPANSION JOINT REPARIS ACCORDING TO
 SPECIAL PROVISION SOICE AND MANUFACTURERS SPECIFICATIONS. THIS
 TIEU DOSS NOT INCLIDE THE COST OF TURNISMISM THE BROCE CRACK SEALANT ITSELF.
- (2) INCLUDES ALL COST FOR FURNISHING THE SEALER MATERIAL CHAMMAD FOR SEALING CRACKS. THE SEALER CHAMMAD SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION GOACR.

FOOTNOTES: STRUCTURE NO. 162

- 3) INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REPAIR OF CRACKS AT CROSS FRAME CORNER LOCATIONS, SEE DETAILS AND NOIES ON DWG, NOS. BR-33-69 AND BR-33-64.
- (HICLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF HEM STREEMER TABS AND FALER PLATE CONNECTIONS AT CROSS FRAME CORNER LOCATIONS, FOR LOCATIONS AND DETAILS SEE DWG. NOS. BR-33-69 AND BR-33-85.
- O MCCURES ALL LEBOR AND MATERIALS MECESSARY FOR THE REMOVAL OF MISSION AND THE PROPOSITION OF PENETRAL TESTING AND REPAIRING TO CHARLES THE TESTING AND REPAIRING CORRECT LOCATIONS, FOR LOCATIONS, AND DETAIS SEE DWG, MOS, RB-35-69 AND BB-35-84, SEE SWG, MOS, RB-35-69 AND RB-35-84. SEE SWG, MOS, RB-35-69 AND RB-35-84 AND RB-35-84
- (1) HACLUDES ALL LABOR AND MATERIALS MECESSARY TO INSTALL NEW STRIP SEAL EXPANSION JOINT (TYPE "A") AT ABUTMENT NOS.1 AND 2. SEE DETA'S AND NOTES ON DOW, NO, BR-33-86 AND STANDARD DWG, NOS. SBR-2-115, SBR-2-16 AND SBR-2-117.

FOOTNOTES: STRUCTURE NO. 163

- NOLIDES ALL LABOR AND MATERIALS NECESSARY FOR THE REPAIR OF CRACKS AT CROSS FRAME COMMER LOCATIONS, SEE DETAILS AND NOTES ON OTROS, OBS. 88-372 AND 08-375-84.

 NOLIDES ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF MER STIFFERE TABS AND FLEER FLATE CONNECTIONS AT CROSS FRAME CONNECTIONS AT CROSS F
- (3) INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REMOVAL OF EXISTING PAINT, PERFORMING OVER PENETRANT TESTING AND REPAINTING AT ONE HANDERS SIXTLE-CENT BOB TROOSS FRAME ON BANALOS CONCERNS OF THE CONTROL OF THE
- (B) NCLUDES ALL LABOR AND MATERIALS NECESSARY TO INSTALL NEW STRP SEAL EXPANSION JOHN 117PE 'A') AT ABUTMENT NOS. I AND 2. SEE DETAILS AND NOTES ON DYG. NO. BR-33-86 AND STANDARD DYG. NOS. SRR-2-15, SBR-2-16 AND SBR-2-117.

FOOTNOTES: STRUCTURE NO. 164

- MCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REPAIR
 OF CRACKS AT CROSS FRAME ON DIAM-RIGHT CORREST LOCATIONS.
 SEE DETAILS AND NOTES ON DION, MOS, BOT-33-75 M DGR-133-84.

 MICLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE MSTALLATION
 OF MES SIFFEMER TABS AND FELER PLATE CONNECTIONS AT CROSS FRAM
 CORNER LOCATIONS, FOR LOCATIONS AND DETAILS SEE DNG. MOS. 8R-33-15.
 AND BR-33-155.
- (B) BECLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REMOVAL OF EXISTING PART, PERFORMING DTF, PENETRANT IESTING AND REPARTIDES OF LOCATIONS, FOR LOCATIONS AND DETAILS, SEE DWE, MOS, BR-33-15 AND BR-33-164, SEE SURFACE PREPARATION AND PARTING NOTES ON DIREC. NO. BR-33-87.

FOOTNOTES: STRUCTURE NO. 164 (CONT.)

- (4) NCLUDES ALL LABOR AND MATERIALS NECESSARY TO INSTALL NEW STRP SEAL EXPANSION JOINT (TYPE "A") AT ABUTMENT NOS. I AND 2. SEE DETAILS AND NOTES ON DWG, NO. BR-33-86 AND STANDARD DWG, NOS. SBR-2-115, SBR-2-116 AND SBR-2-117.
- (5) INCLUDES ALL QUANTITIES FOR PARTIAL DEPTH DECK REPAIRS AS SHOWN IN DETAIL ON DWG. NO. BR-33-87,

FOOTNOTES: STRUCTURE NO. 165

- (B) MCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REPAIR OF CRACKS AT CROSS FRAME OR DIAPHRAGM CORNER LOCATIONS. SEE DETAILS AND NOTES ON DMG. NOS. BR-33-78 AND BR-33-84.
- NCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF NEW STEFENER TABS AND FILLER PLATE CONNECTIONS AT CROSS FRAME CORNER LOCATIONS. FOR LOCATIONS AND DETAILS SEE DWG, NOS. BR-33-78 AND BR-33-86.
- (B) NCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REMOVAL OF EXISTING PAINT, PERFORMING DIT PENETRAIN TESTING AND REPAINTING TO THE STATE OF THE
- (9) NICLUDES ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND RECONSTRUCT APRON SPILLWAY AS SHOWN IN DETAIL '8' ON DWG. NO. BR-33-83. SEE DWG. NO. BR-33-77 FOR LOCATIONS.
- NCLUDES ALL LABOR AND WATERIALS NECESSARY TO INSTALL NEW STRIP SEAL EXPANSION JOINT (TYPE "A" AT ABUTWENT NOS.1 AND 2. SEE DETAILS AND NOTES ON DOW, NO. BR-33-86 AND STANDARD DWG. NOS. SBR-2-115. SBR-2-116 AND SBR-2-117.

FOOTNOTES: STRUCTURE NOS. 166 AND 167

- NCLUDES ALL LABOR AND WATERIALS NECESSARY FOR THE REPAIR OF CRACKS AT CROSS FRAME OR DIAPHRAGM CONNER LOCATIONS. SEE DETAILS AND NOTES ON HOM, NOS, 88-33-38 AND SRS-33-84. ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF NET STEFEMENT TABS AND FILET PLATE CONNECTIONS AT CROSS FRAME CONNECTIONS AT CROSS FRAME CONNECTIONS AT CROSS FRAME CONNECTIONS AND DETAILS SEE DING, NOS, BR-33-BI AND BR-33-BI.
- MCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REMOVAL OF EXISTING PAINT PERFORMANG DYE PENETRANT ITSTING AND REPAIRTING LOCATIONS, FOR LOCATIONS, AND GET AMARE OF DUMPHICAL COPIES OF DISTRICT AND SET AND AND SET AN
- 1 NOTE DELETED
- (3) INCLUDES ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND RECONSTRUCT APRON SPILLWAY AS SHOWN IN DETAIL '8' ON DWG. NO. BR-33-83. SEE DWG. NO. BR-33-80 FOR LOCATIONS.
- MCLUDES ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND RECONSTRUCT CONCRETE SLOPE PAYING, FOR LOCATION AND DETAILS, SEE DWG. NOS. BR-33-80 AND BR-33-83.
- INCLUDES ALL QUANTITIES FOR PARTIAL DEPTH DECK REPAIRS AS SHORN IN DETAIL ON DWG. NO. BR-33-87.
- MCLUDES ALL LABOR AND MATERIALS NECESSARY TO INSTALL NEW EXPANSION JOINT (MODULAR TYPE) AT ABUTMENT NOS, TAND 2. SEE DETALS AND NOTES ON DWG, NG, BR-33-82.
- MCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF FOUR 41 STEEL CONNECTOR PLATES TO THE PORTABLE BARRIER RAILS. SEE DETAILS AND NOTES ON DNG, NO. BR-33-67.
- ONCLUDES ALL LABOR, MATERIAL AND EXCAVATION TO CONSTRUCT RIP-RAP ELAMET AS SHORN IN DETAL. "A" AND TO REPAR EROSION DAMAGE AS DESCREDE BY MOTE IN DETAL. "B" ON DRG, NO, BR-33-83, SEE DRG, NG, BR-33-80 FOR LOCATIONS.

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GENERAL NOTES

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, (MARCH 1, 1995 EDITION),

DESIGN SPECIFICATIONS: AASHTO 1996 EDITION WITH ADDENDA.

DESIGN SPECIFICATIONS: AASHTO 1995 EDITION WITH ADDENDA,
CONCRETE CURRIG ALL CORNECTE IN REPAIR AREAS TO BE CURED ACCORDING
TO THE STANDARD SPECIFICATIONS,
HOH EARLY STEENETH CONCRETE, THE MIX TO MEET THE REDUREMENTS OF THE
STANDARD SPECIFICATIONS, CLASS "A", EXCEPT THE COMMIT CONFENT SMALL
BE A MEMBRAUN OF THE HISS. THE MATER CUBBLING RATIO SMALL BE A MAXMUM
OF 0.40, NO FLY ASH REPLACEMENT WILL BE ADDITED AND THE MANUFUM
28 DAY COMPRESSIVE STEENEDH SMALL BE ADDITED. AND THE MANUFUM
BE PERMITTED ON ANY OF THE REPAIR AREAS ONE'S, TRAFFIC SMALL NOT
A COMPRESSIVE STEENEDH SMALL BE ADDITED. THEST SPECUMEN ATTAM
A COMPRESSIVE STEENEDH OF 3.000 DS MANUAUM AND THE CONCRETE MAS
BEEN IN PLACE A MANUAUM OF TEN DOD DAYS.
CONCRETE FRANCES SMALL REPAIR AND THE CONCRETE MAS

BEEN IN PLACE A LIMMAIN OF TEN OF DAYS.

CONCRETE PASSY SHALL BE ON ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

REMFORCING SIELLISEE THE STANDARD SPECIFICATIONS.

REMFORCING SIELLISEE THE STANDARD SPECIFICATIONS.

DEMOLITION. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE MEETING SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE MEETING TO SHALL THE STRUCTURE THE CONTRACTOR CALLED A HOE RAND OR OTHER SHALLARL HE MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAND OR OTHER SHALLARL HE MOUNTED ON A BACKHOE (COMMONLY FROMONLY PREUMANT HAMMERS MAY BE USED TO REMOVE LINSON CONCRETE FOR FULL DEPTH OF CONCRETE SLAB REMOVAL AND ANY ROOK OFF BEAMS, THE MAXIMUM HAMMER SIZE IS OPPOUND CLASS. FOR PARTIAL DEPTH OF CONCRETE SLAB REMOVAL AND ANY ROOK OVER BEAMS, THE MAXIMUM HAMMER SIZE IS OPPOUND CLASS. PRODUCCION OF THE ETH CONCRETE IS ACCEPTABLE SO LONG A SANY SPECIFIED PROJECTION OF THE ETH CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE ETH CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE ETH CONCRETE DEBOLITION SHALL BEEL IS MARNIANCE ALL DEVECTS.

PROJECTION OF THE STANDARD SPECIFICATIONS.

ALSO SEE SPECIAL PROVISION NO. SOAM.

EXPANSION JOINTS, SEE THE STANDARD SPECIFICATIONS.

EXPANSION JOINTS: FOR ADDITIONAL GENERAL NOTES APPLICABLE TO STRIP SEAL EXPANSION JOINTS, SEE STANDARD DRAWING NOS. SBR-2-115 AND SBR-2-116, ALSO SEE SPECIAL PROVISION NO. 6045.

SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO. 1054.
SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION
OF STRUCTURES.

STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM ATO9 GRADE 36) UNLESS OTHERWISE NOTED.

WELDING SHALL BE IN ACCORDANCE BITH ANSI/AASHTO/AWS DLS-96 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS.

AND THE STANDARD SPECFICATIONS.

BUTSS SHALL BE MOST ITEMS E STEMENT BOLTS (ASTW-A220, UMLESS DIPERRISE NOTED, SUZE TO BE AS NOTED ON PLANS, SEE ALSHO SPECFICATIONS, AFTICIE 11.5.6 DUNISON ILLEMSTRING CONTACT SURFACES SHALL BE CLEANED TO SSECTIO SPECFICATIONS PROR TO ATTACHENT OF NEW NEUBERS.

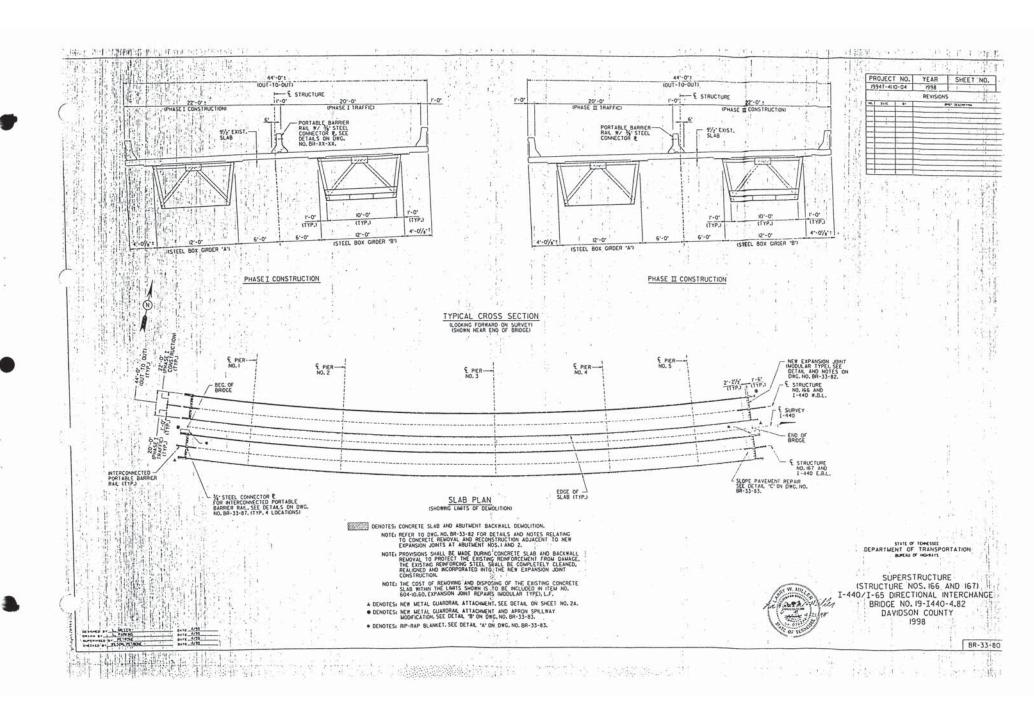
BUTCHANCEL BAR SPLUCES, MUST EE ON THE APPROVED LIST MAINTAINED BY THE DIVISON OF MATERIALS, AND TESTS, THE BAR SPLUCES SHALL BEET ASSHO STANDARD SPECFICATIONS FOR MECHANCAL CONSECUENCY OF MATERIALS AND TESTS, THE BAR SPLUCES SHALL BEET ASSHO STANDARD SPECFICATIONS, ESCENIO 90.1 THE EXPOSED THEADS SHALL BE REPARED, ATTER PROSPECTIVE OF BUTCHES, MAINTAINED SPECFICATIONS, ESCENIO 90.1 THE COST OF TRUNSHORD THE BUTCHES, LAND EPOXY COATING WHEN REQUIRED INCLUDING ALL LARGH AND MATERIALS, SHALL BE MADERIAL SHALL BEEN S

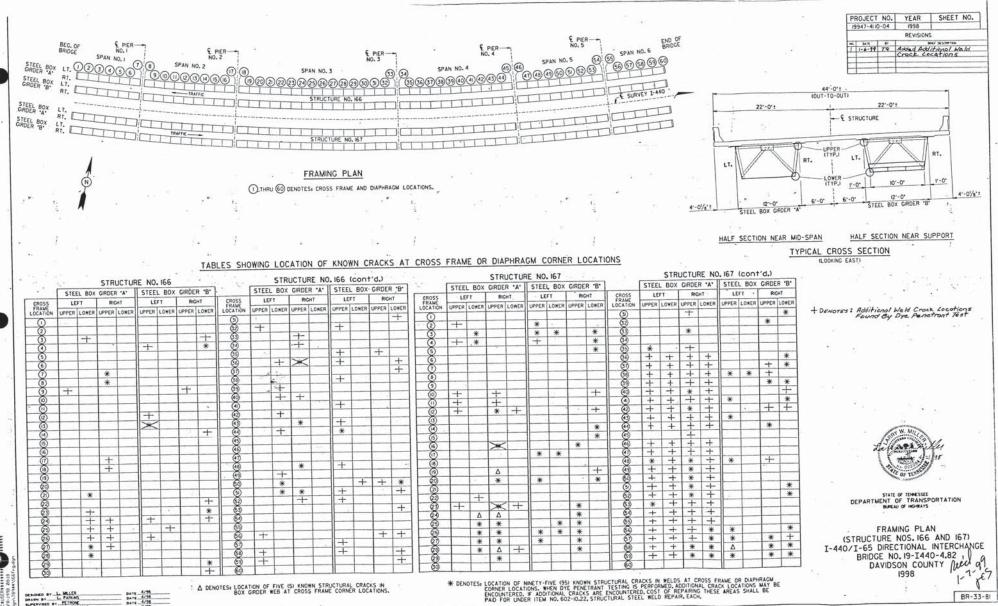
RP-RAP, RUBLE STONE RP-RAP SHALL BE HAND-FLACED IN ACCORDANCE MIN SUBSECTION TO 9-06 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND FAO FOR

STATE OF TENESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HOMESTS

GENERAL NOTES AND ESTIMATED BRIDGE QUANTITIES I-440/I-65 DIRECTIONAL INTERCHANGE STRUCTURE NO. 162 (BR. NO. 19-165-5.97) STRUCTURE NO. 163 (BR. NO. 19-165-5.98) STRUCTURE NO. 164 (BR. NO. 19-1440-4.87) 2001

STRUCTURE NO. 165 (BR. NO. 19-1440-4.85) STRUCTURE NOS. 166 AND 167 (BRIDGE NO. 19-1440-4.82) DAVIDSON COUNTY





NOTES:

- THE MODICAR EXPANSION JOINT SYSTEM DETAILS ARE INCOMPLETE AS SHOWN THIS SHEET, OUE TO DEFERRED WARMAGATURERS'S MODILAR EXPANSION JOINT STREET, OUT TO THE PROPERTY OF THE ANGULAR EXPANSION JOINT STREET, OUT THE ANGULAR EXP
- SUPPORT STSTEM SHALL BE AS PER SPECIAL PROVISION AND GOALA.

 PRINCEON TONT REPLACEMENT SHALL BE.

 PRINCEON TON THE STEEL PORTIONS OF THE FRANCH OF PRINCES AND THE STEEL PROTIONS OF THE FRANCH OF THE STEEL PROTIONS OF THE FRANCH OF THE STEEL PROTIONS OF THE STREAM OF THE STEEL PROTIONS OF THE STREAM OF THE STEEL PROTIONS OF THE STREAM OF THE STEEL PROTIONS OF THE STREAM OF THE STEEL PROTIONS OF THE STREAM OF THE S

- PLACE A MMINUM OF TEN GOLDATS.

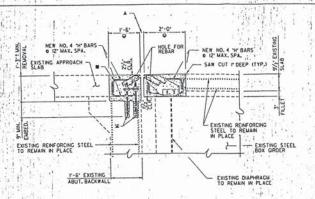
 COST OF TRESHING AND RESTALLING THE WOODLAR EXPANSION JONNIS, COMPLETE AND H-PLACE, DAILUDING ALL EPOXY-COATED RESTORING STEEL, MR. ISLEER PLATED TO THE MEDITAL SECRETARY OF THE MEDITAL SECRETARY OF THE MEDITAL SECRETARY OF THE WORK IN ACCORDANCE WITH PLANS, SPECERATIONS AND SECULA PROVISIONS.
 SHALL SE NICLION BE HELD SECULAL PROVISIONS OF TRANSPORT AND TEPANS MODULAR TYPELLE.
- 8. ALL TRANSVERSE RENFORCING STEEL SHALL BE SPLICED WITH MECHANICAL THREADED COUPLERS. COST OF MECHANICAL COUPLERS SHALL BE INCLUDED LIDER TIEN! NO. 604-10.60. SEE DETAR, 'A' ON THIS DRAWING.
- 9. MODULAR EXPANSION JOINT RETAINERS SHALL EXTEND TWO INCHES 12" BEYOND THE EDGE OF THE CONCRETE DECK. (SEE STO-1-2 FOR DETAILS.)
- IO. CONTRACTOR SHALL FIELD YERFY ALL DIMENSIONS AND DEASUREMENTS IN ORDER TO FABRICATE THE EXPANSION DEVICES. SHOP DRAWNINGS SHALL BE SLEWATTED TO THE BRIDGE REPAIR OFFICE OF THE OWNSION OF STRUCTURES FOR APPROVAL BEFORE AMY FABRICATION IS BECUN.
- ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED BEHIND AND AROUND THE EXPANSION JOINT STEEL RETAINER.
- 2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING MODULAR EXPANSION JOINT SYSTEM DETAILS NECESSAY ANCHORAGE AND SUPPORT SYSTEM AND NEW REINFORCING STEEL DETAILS FOR APPROPAYL BEFORE ANY FABRICATION IS
- 13. COST OF ANY MODIFICATIONS NECESSARY TO PROPERLY INSTALL THE EXPANSION JOINTS SHALL BE INCLUDED IN ITEMS BID ON.

SPECIAL NOTE:

SUPERING BY LANGE

CONTRACTOR SHALL NSTALL NEW SIEEL SLOER FLATE ASSEMBLES IN CONCRETE PARAPETS AS FER SIMOLHOU DERROW SID-2-7. THE CONTINCTOR SHALL MEASURE ACTUAL DEACH SECURED. INO COPMANDET SLOER PLATE ASSEMBLES REQUIRED. PER JOHN TAPP. ACCEMENT LOCATION. SHOP DRAWNGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES FOR

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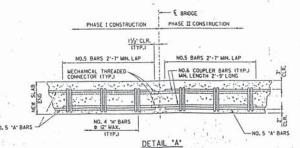


NOTE: APPLY HIGH MOLECULAR WEIGHT METHACRYLATE HAMBHO CRACK SEAL IN THE PRIMETER OF CONCRETE JOINT HEADER, SEALER SHALL BE APPLIED AFTER ALL CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN DATS.

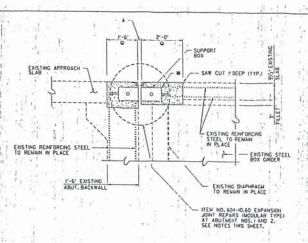
TYPICAL SECTION 'A-A'

- O DENDIES LIMITS OF EXISTING CONCRETE REMOVAL

 AND RECONSTRUCTION, THE CONTRACTOR
 OR FABRICATOR TO SUPPLY SHOP DRAWNOS
 SHOWNER REMOGREMO PATTERN N BUCCHOUT
 REMOGREMO CON EPPATTERN BUCCHOUT
 REMOGREMO CON EPPATTERN BUCCHO
- A DENOTES; MID TEMPERATURE SETTING 0 60°F (ACTUAL SETTING AS PER TEMPERATURE CHART ON EXPANSION JOINT SHOP DRAWNOS, TOTAL JOINT MOVEMENT REQUIRED = 5° UTEM NO. 604-10.601.
- M DENOTES: NEW NO.5 "A" BARS, SPLICE AT CONSTRUCTION JOINT WYMECH. THREADED CONNECTORS (TYP.). SEE DETAIL "A" THIS DRAWING.
- DENOTES EXPANSION JONT LEVELING ASSEMBLIES-TWO 021 %: 8 THREADED ROOS, ASTM A36, 2 MEX. MUTS AND 2 3/y'-3/y'-' /'. "SOURCE MASHERS PER BOLTI LOCATED AT 10'-0' C/C MAX, DRILL AND EMOY GOOUT THEADED ROOS Y NTO EXISTING ABUTWENT BAXEMALL FOR ADDITIONAL DELAIS, SEE 510. DRIC MO, SHEVE-116.

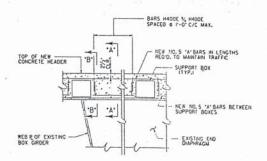


NOTE: THE COST OF MECHANICAL THREADED CONNECTORS MITH NO. 6 COUPLER BARS SHALL BE NICLUDED IN THE PRICE BID FOR ITEM NO. 604-016.0, EXPANSION JOINT REPAIRS MODULAR TYPELLF.



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TYPICAL SECTION 'B-B'

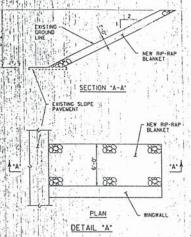


PARTIAL CROSS SECTION OF SLAB

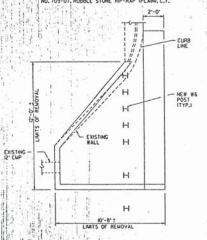
DEPARTMENT OF TRANSPORTATION BUREAU OF HOMETS



MODULAR EXPANSION JOINT DETAILS (STRUCTURE NOS. 166 AND 167) I-440/I-65 DIRECTIONAL INTERCHANGE BRIDGE NO. 19-1440-4.82 DAVIDSON COUNTY 1998



NOTE: RIP-RAP SHALL BE HAND PLACED RUBBLE-STONE (PLAIN), ALL LABOR, MATERIAL AND EXCAYATION SHALL BE PAID FOR UNDER ITEM NO. 709-07, RUBBLE STONE RIP-RAP (PLAIN), C.Y.



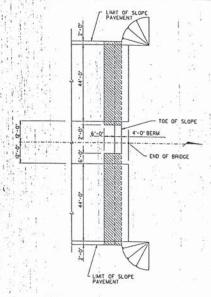
DETAIL 'B': MODIFICATION OF APRON SPILLWAY

NOTE: AT STREES, WORK SMALL SCLUDE MAND PLACEMENT OF 2.0 C.Y. OF PUBBLE STONE RR-RAP IPLANT TO REPEAR ERGISINO NAMED INJURIES TO THE BROCE END DRAIK COST OF MATERIAL AND LABOR FOR RR-RAP SMALL BE; PAD'OR NINGER ITEM NO, 709-07, RUBBLE STONE RR-RAP IPLANT, C.Y.

DESCRIPTION TO THE CONTRACT OF THE CONTRACT OF

0475 6/74 0475 6/74 0475 6/74 0475 6/74 NOTE: ALL COSTS TO REMOVE AND RECONSTRUCT THE BROCE END DRAIN WITHIN THE LIAITS SHOWN SHALL BE PAID FOR UNDER ITEM NO. 604-10.02, CONCRETE REPAIRS, C.Y.

NOTE: SEE REFERENCE DWG. NO. D-CB-9, FOR ADDITIONAL INFORMATION NOT SHOWN W DETAIL "B".

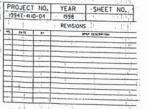


DETAIL 'C': SLOPE PAVEMENT REPAIR

William.

DENOTES: AREAS OF SLOPE PAYNO HAVING VOIDS BENEATH AND/OR SIGNEFICANT CRACKING, THESE AREAS SHALL BE REMOVED AND REPLACED ACCORDING TO THE NOTE BELOW, REMOVAL SHALL BE TERMANED AT EXISTING CONTRACTION JOINTS. SURFACE OF THE NEW PAYEMENT SHALL BE STRAIGHT AND TLUSH WITH ADJACKENT EXISTING PAYEMENT, SLOPE PAYEMENT REPAIR SHALL BE PAID FOR UNDER ITEM NO. 604-10.29, CONCRETE SLOPE PAYNOR REPRAIRS, ST.

NOTE: REPLACE DAMACED SLOPE PAVENETIT WITH 4" THICK CEMENT CONCRETE SLAB PERIFORCED WITH NO.4 GAGE WIRE FABRIC & 6" CENTERS AND 58 ID. PER OO S.F. THE WIRE FABRIC REPORTED WITH NO.4 GAGE WIRE FABRIC & 6" CENTERS AND 58 ID. PER OOS.F. THE WIRE FABRIC REPORTED WITH MENT OF THEM 3" OF THE SLAB AND EXTEND TO WITHIN 3" OF THE SLAB AND EXTEND TO WITHIN 3" OF THE WIRE FABRIC WITH PRICE DOS FOR THE SOA-10.29, CONCRETE SLOPE FAWRIC REPAIRS, WITH PRICE DOS FOR THEM SOA-10.29, CONCRETE SLOPE FAWRIC REPAIRS, WITH PRICE DOS FOR THE SLAB AND EXPANSION JOINT SHIPPOUT LOST TRANSFERS SHALL BE FORMED ABOUT ALL STRUCTURES AND FEATURES PROJECTING THROUGH, IN OR ACAUST THE SLAB. THE SLAB SHALL BE REPORTED PRICE SHALLE WITH AND AT RIGHT MACLES TO THE LINGE AT BY CENTERS THAN 1".



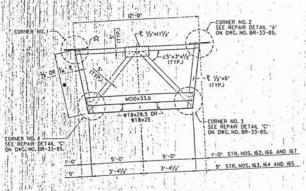
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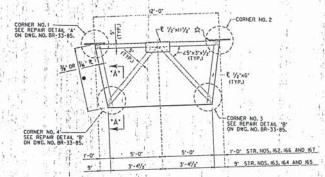
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DEPARTMENT OF TRANSPORTATION



REPAIR DETAILS
(STRUCTURE NOS.166 AND 167)
1-440/I-65 DIRECTIONAL INTERCHANGE
BRIDGE NO.19-1440-4.82
DAVIDSON COUNTY
1998



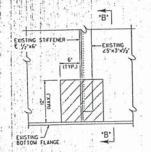


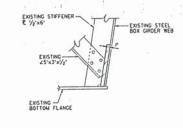
TYPICAL CROSS FRAME SECTION NEAR SUPPORT (LOOKING FORWARD ON SURVEY)

TYPICAL CROSS FRAME SECTION NEAR MID-SPAN ILOOKING FORWARD ON SURVEYS

TO DENOTES! LOCATION OF EXISTING CONNECTOR PLATE FOR EXISTING LATERAL BRACING. IN STRUCTURE NOS. IGS. IGS. IGS. HOS. NO. REPAIR WILL BE REQUIRED AT THESE LOCATIONS. THE REVAIRMING THREE SI, CORNERS AT EACH CROSS FRAME WILL REQUIRE REPAIR WITH NEW STIFFENER TABS OR FALER PLATE. SEE DETAILS ON DOWN, NO. BR-32-85.

● DENOTES: 4'-4' STRUCTURE NO. 162 AND NO. 163 5'-0' STRUCTURE NO. 164 5'-0'/2' STRUCTURE NO. 165 6'-1' STRUCTURE NO. 165 AND NO. 167



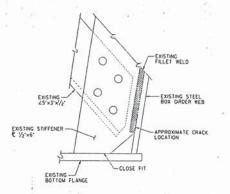


SECTION 'A-A'

SECTION 'B-B'

DETAILS SHOWING LIMITS OF DYE PENETRANT TESTING

DENOTES: LIMITS OF DYE PENETRANT TESTING. NOTE: DETAILS SHOWN ARE FOR BOTTOM CORNERS.



DETAIL SHOWING TYPICAL CRACK AT CROSS FRAME LOCATION



NOTE: AFTER THE EXTENT OF THE CRACKS IS DETERMINED BY DYE PENETRANT TESTING THE EXISTING CRACKS SHALL BE REPAIRED BY EITHER METHOD NO. ONE (1) OR METHOD NO. TWO (2) AS CALLED FOR BELOW.

NO. ONE UP OR METHOD NO. TWO 12) AS CALLED FOR SELON.

METHOD NO. I WHEN THE CRACKS ARE IN THE FILLE WELD THAT
CONNECTS THE GROER WEB TO THE STRFENCR PLAIS.
THE EXISTING MELD IS TO BE REMOYED IN THE AREA OF
THE CRACK, AND A NEW FILLET WELD MADE CONNECTING.
THE STRFENCR PLAIT OIL THE WEB.

METHOD NO. 2: WHEN THE CRACKS EXTEND DITO THE WEB WETAL THE
CRACKS ARE TO BE REPARED USING FULL PREFERATION
RELDS. FULL POLETARION MELDS TO BE CROUND FLUSH
APPROXIMATELY FIVE (S) LOCATIONS MAYE CRACKS MECH
PERFERATION WELDS SHALL BE SHETAL, ALL FULL
LIT. TESTING OF FULL PERFERATION MELDS. SHOUL
LIT. TESTING OF FULL PERFERATION STEDS.

NOTE: ALL MELOS SHALL BE IN ACCORDANCE MITH ANSI-AASHTO-AMS 01.5-96
BRIDGE MELONG CODE AND SPECIAL PROVISION NO. 602.
PREPARATION OF CRACYS FOR MELONIC AND ALL CRACK PEPAIR MELONIC
SHALL BE PAID FOR UNDER ITEM NO. 602-10.22; EACH.

NOTE: REMOVAL OF PAINT BY CRINDING SHALL NOT BE ALLOADD IN AREAS WHERE.

DYE PENETRAINT TEST IS TO BE PERFORMED, REMOVAL OF PAINT AND DYE
PENETRAINT TESTING SHALL BE PAID FOR UNDER ITEM NO. 602-10.33. L.S.

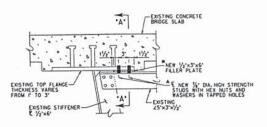


STATE OF TENESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF HONEATS

STRUCTURAL STEEL DETAILS I-440/I-65 DIRECTIONAL INTERCHANGE STRUCTURE NO. 162 (BR. NO. 19-165-5.97) STRUCTURE NO. 163 (BR. NO. 19-165-5,98) STRUCTURE NO. 164 (BR. NO. 19-1440-4.87) STRUCTURE NO. 165 (BR. NO. 19-1440-4.85) STRUCTURE NOS. 166 AND 167

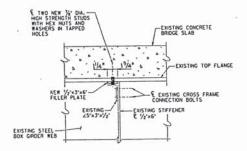
(BRIDGE NO. 19-1440-4.82) DAVIDSON COUNTY

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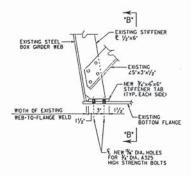


DETAIL "A" : FILLER PLATE

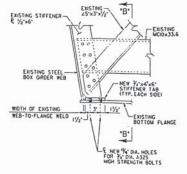
- * DENOTES: NEW FILER PLATE THICKNESS SHALL BE FIELD VERIFIED TO ENSURE TIGHT FIT.
- A DENOTES: ALL HOLES INTO THE EXISTING STEEL BOX GRODER FLANGES SHALL BE FELD DRILLED HOD FLAME CUTTING FOR HOLESS. DRILLED HOLES SHALL EXTEND HOLE EXISTING COMPRETE SLAB TO ENSURE THREADING OF THE FULL THEAMS OF THE FULL



SECTION 'A-A' A



DETAIL 'B': STIFFENER TAB A

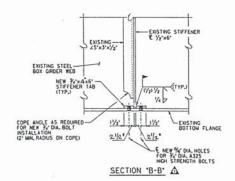


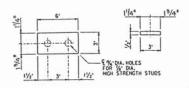
DETAIL	·C· •	STIFFENER	TAR	٨
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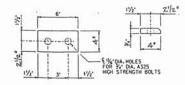
NOTES:

- L COST OF INSTALLING NEW STIFFENER TABS AND FILER PLATES, BOLTS, WELDING, FELO DRALING, LABOR AND ALL MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SMALL BE PAOFOR UNDER ITEM NO. 602-10.32, STRUCTURAL STEEL (REPAIRS), L9S.
- CONTRACTOR SMALL SUBMIT SHOP DRAWINGS ON ALL STRUCTURAL STEEL REPAIRS, SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THE BRUGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES.
- 3. SIFFENER TABS SHALL BE FASTENED TO THE EXISTING BOTTOM FLANGE BEFORE BEING WELDED TO THE EXISTING STIFFENER.
- ALL DIMENSIONS FOR STRUCTURAL STEEL REPAIRS SMALL BE FIELD VERIFIED BY CONTRACTOR BEFORE ANY STEEL FABRICATION IS BEOUN.
- 5. ALL HOLES INTO THE EXISTING STEEL BOX GROER FLANGES SHALL BE FIELD DRILLED IND FLANE CUTTING FOR HOLES!
- 6. ALL BOLTS TO BE 1 DIA. A325 HIGH STRENGTH BOLTS. THE HCLES SHALL BE 14 DIA. DRILLED HOLES.
- THE THE PROPERTY OF THE STATE O





1/2" THICK FILLER PLATE DETAILS A (602 REO'D.)

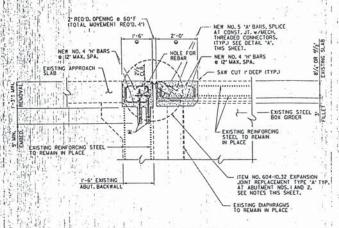


14 THICK STIFFENER TAB DETAILS A



STATE OF TENESKE
DEPARTMENT OF TRANSPORTATION STRUCTURAL STEEL DETAILS I-440/I-65 DIRECTIONAL INTERCHANCE STRUCTURE NO. 162 (BR. NO. 19-165-5.97) STRUCTURE NO. 163 (BR. NO. 19-165-5.98) STRUCTURE NO. 164 (BR. NO. 19-1440-4.87) STRUCTURE NO. 165 (BR. NO. 19-1440-4.85) STRUCTURE NOS. 166 AND 167 (BRIDGE NO. 19-1440-4,82)

DAVIDSON COUNTY 1998



TYPICAL SECTION AT ABUTMENT NOS. I AND 2

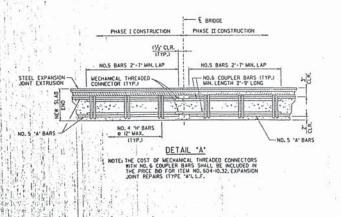
NOTE APPLY HICH MOLECULAR WEIGHT METHACRYLATE GHAMMO CRACK SEAL IN THE PERMITER OF CONCRETE JOHN HEADER, SEALER SHALL BE APPLIED AFTER ALL CONCRETE MAS BEEN IN PLACE A MINIMUM OF TEN DATS.

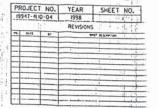
© DENOTES: LIMITS OF EXISTING CONCRETE REMOVAL
AND RECONSTRUCTION.

AND RECONSTRUCTION.

DEMOTES EXPANSION JOHN LEVELING ASSEMBLIESTHO (2) W B THREADED ROOS, ASTM A36,

(2) HEX MITS AND (2 - 3/y'-3/y'' 'A'') SOURCE
WASHERS PER BOLTH LOCALED AT 10'-0' C/C MAY,
DRIL AND FROYY GOUT THREADED ROOS 9' MITO
EXISTING ABUTWANT BACKFALL, FOR ADUTIONAL
DETAILS, SEE STIO, DING IN OS BRE-2 IS.





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NOTES:

- THE SHEET IS FOR GENERAL INFORMATION ONLY.
 FOR COMPLETE DETAILS AND NOTES, SEE \$10. DNG.
 NOS. SBR-2-115, SBR-2-116 AND SBR-2-117,
 ALSO SEE SPECIAL PROVISION 6045.
- 2. EPPAMSON JOHT REPLACEMENT SHALL BE CONSTRUCTED IN PHASES AS SHORN ON DIR. ON S. BR-32-BB. T. H. AUD JT. THE STEEL PORTIONS OF SHALL BE CONSTRUCTED IN PHASES AS SHORN ON DIR. ON SECTIONS BR. OF THE SHALL BE STABBOARD ON SECTIONS BR. OF THE SHALL BE SHORN SHOWN OF THE SHALL BE SHOWN AFT OF BE CONNECTED WITH A PULL PRICE TRAINOR BUT THE SHALL THE LEST OWERS CEAL SHALL BE ONE BROWN OF THE SHALL BE SHALL BE
- 3. EXPANSION JOINT OPENING SHALL BE SET ACCORDING TO TEMPERATURE CHART SHOWN ON APPROVED EXPANSION JOINT SHOP DRAWINGS.
- 4. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO ENSURE THE VERTICAL ALICAMENT OF THE NEW STEEL EXTRUSION AND CONCRETE HEADER SURFACES CONFORM TO THE EXISTING ROADWAY PROFAE.
- 5. PROVISIONS SHALL BE MADE DURING SLAB BEDGYAL TO PROTECT THE EXISTING LONGITUDINAL AND VERTICAL REPROPORCING STEEL FROM DAMAGE. THE EXISTING REPROPORCING STEEL SHALL BE COMPLETELY CLEANED, REALIGNED AND INCORPORATED INTO THE NEW CONSTRUCTION.
- 6. THE COST OF REMOVING PORTIONS OF THE EXISTING SLAB, PARAPET AND BACKHALL MITINS THE LIMITS SHOWN, SAW CULTING, COMPLETELY CLEANING EXISTING REMOVACING, COMPLETELY CLEANING EXISTING REMOVACING STEEL, FORWING AND ALL MISCELLANEOUS MATERIAL NECESSARY FOR CONSTRUCTING HE REM SECTIONS AS SHOWN SHALL ER MECLUSION HERE REMOVED OF THE PART SECTIONS AS SHOWN SHALL BE RECUEDED IN REPARS LITTLE AND, SOME HOUSE SHOWN SHOWN SHALL BE ARECUSED IN REPARS LITTLE AND, SOME HOUSE SHOWN SHOWN SHALL BE ARECUSED IN TRANSPORTED THE PARTS LITTLE AND, SOME HOUSE SHOWN JOINT REPARS LITTLE AND, LITTLE AND SOME HOUSE SHOWN JOINT REPARS LITTLE AND, LITTLE AND SOME HOUSE SHOWN JOINT REPARS LITTLE AND, LITTLE AND SOME HOUSE SHOWN JOINT REPARS LITTLE AND, LITTLE AND SOME HOUSE SHOWN JOINT REPARS LITTLE AND LITTLE AND SOME HOUSE SHOWN JOINT REPARS LITTLE AND LITTLE AND SOME HOUSE SHOWN JOINT REPARS LITTLE AND LITTLE AN
- 7. TRAFFIC SHALL NOT BE PERMITED ON ANY OF THE REPAIRED AREAS UNITA TEST SPECIMENS ATTAIN A MANAMUM COMPRESSIVE STPEMSTH OF 3,000 PSI AND THE CONCRETE HAS BEEN HI PLACE A WINMUM OF TEN GOID DATS.

DEPAR MENT OF TRANSPORTATION



STRIP SEAL EXPANSION JOINT DETAILS I-440/I-65 DIRECTIONAL INTERCHANGE STRUCTURE NO. 162 (BR. NO. 19-165-5.97) STRUCTURE NO. 163 (BR. NO. 19-165-5.98) STRUCTURE NO. 164 (BR. NO. 19-1 440-4.87) STRUCTURE NO. 165 (BR. NO. 19-I 440-4.85) DAVIDSON COUNTY 1998

7'-6'IMAX.) LENGTH OF STEEL BARRIER CONNECTOR PLATE 16 THICK TOP OF PORTABLE BARRER RAIL ISEE ROADWAY PLANS FOR LIMITS. MAXIMUM SPAN = 4'-0" MIN. .B. OVERLAR EDGE OF PORTABLE 3. 1.-0. 6. *B*

ELEVATION SHOWING PORTABLE STEEL BARRIER CONNECTOR PLATE

NOTE COST OF THE X THEK STEEL CONNECTOR PLATERY ANCHORS, DRILLING, LABOR, AND WASHERS, MASORY AND FRANCELLANGOUS MATERIALS NECESSARY FOR THE MISTALLATION OF THE STEEL BAPPIER CONNECTOR PLATE TO BE MILLION THE MOST ON THE STEEL BAPPIER CONNECTOR PLATE TO BE MILLION TO SOME OF THE STEEL AND COST OF THE SHOP OF THE STEEL AND COST O

NOTE: CONTRACTOR SHALL INSTALL A 3/ THICK STEEL CONNECTOR PLATE TO THE PORTABLE CONCRETE BARRERS IN AREAS WHERE THE SLAB DONY IS TO BE HEF AMED IN PHASE II AND PHASE II CONSTRUCTION. THE CONNECTOR PLATE SHASES I CONSTRUCTION. THE CONNECTOR PLATE SHASES I CONSTRUCTION. THE CONNECTOR PLATE TO CONSTRUCTION. TO ALL HOLES MAY BE REVISED FOR PHASE II CONSTRUCTION. TO ALL HOLES MAY BE REVISED FOR PHASE III CONSTRUCTION MASOINT ANCHORS.

CONCRETE FOR DECK REPAIR SHALL BE HIGH EARLY STRENGTH CONCRETE.

"PC-3 1,500 PSI-0 28 DAY STRENGTH, TRAFFIC WALL NOT BE PERMITTED AND ANY OF THE REPAIRED AREAS UNITH, TEST SPECIARIES ATTIMA COUPPRESSIVE STRENGTH OF 3,000 PSI MANIAMA AND THE CONCRETE HAS BEEN IN PLACE
A MANIAMAN OF TEN 1001 DAYS.—7



DETAIL SHOWING PARTIAL DEPTH DECK REPAIR

NOTE: REMOVE CONCRETE IN ALL DELAMNATED AREAS TO A DEPTH OF 74' BELOW THE TOP BAR OF THE TOP MAY OF RENFORCING STEEL ALL RENFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE COUNTETELY CLARMED, AREAS OF CONCRETE IN REMOVEL, SHALL BE DESIGNATED BY PERSONNEL FROM THE BRODE REPAIR OFFICE. THE RENOVEL SHALL BE DESIGNATED BY PERSONNEL FROM THE BRODE REPAIR OFFICE AT LEAST THERE (3) DAIL AND AND A STANDARD OFFICE AT LEAST THERE (3) DAIL AND AND A STANDARD OFFICE AT LEAST THERE (3) DAIL AND AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (3) DAIL AND A STANDARD OFFICE AT LEAST NEED (4) DAIL AND A STANDARD OFFICE AT LEAST NEED (4) DAIL AND A STANDARD OFFICE AT LEAST NEED (4) DAIL AND A STANDARD OFFICE AT LEAST NEED (4) DAIL AND A STANDARD OFFICE AT LEAST NEED (4) DAIL AND A STANDARD OFFICE AT LEAST NEED (4) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (5) DAIL AND A STANDARD OFFICE AT LEAST NEED (6) DAIL AND A STANDARD OFFICE AT LEAST NEED (6) DAIL AND A STANDARD OFFICE AT LEAST NEED (6) DAIL AND A STANDARD OFFICE AT LEAST NEED (6) DAIL AND A STANDARD OFFICE AT LEAST

MOTE: ITEM NO. 604-10.50 SHALL BE BIO WITH THE CONTINGENCY THAT THIS ITEM MAY BE HICREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

NOTE: CONTRACTOR MAY AT HS OPTION REMOVE UNSOUND CONCRETE BY HYDRODEMOLITION IN LIEU OF CONVENTIONAL REMOVAL METHODS.

NOTE AFTER CONCRETE IN PATCHED AREAS MAS CURED A MINIMUM OF 5 DAYS, PERMETER OF ALL DECK REPAIR AREAS SHALL BE SEALED WITH A MICH MULECULAR WEIGHT METHALERIATE DAWNING SEALER IN ACCORDANCE WITH SPECIAL PROVISION SOACR, SEALING, SHALL BE PAO FOR UNDER ITEM NOS. 617-02 AND 617-05.

	E BRIDGE	
		PHASE I CONSTRUCTION NORTH SIDE OF BRIDGE
2	STEEL BARRIER -	SEE NOTE THIS SHEET.
	TRAFFIC SIDE &	MUT AND 4' SOUARE WASHER (A307)
% ·	DIA. HOLE	CONSTRUCTION SIDE
	RETE SLAB	

SECTION 'B-B'

** DENOTES; I' DIA. HOLES FOR THE . 1/4 DIA. MASONRY ANCHORS AND I' DIA. HOLES FOR 1/4 DIA. BOLTS SHALL BE DRILLED THIN A MICH SPEED ORALL THE DRILL BIT SHALL BE CAPABLE OF DRILLING THROUGH EXISTING RENFORCING BARS AND CONCERNED.

PROJECT NO. YEAR SHEET NO. 19947-4110-04 1998 REVISIONS

SURFACE PREPARATION AND PAINTING NOTES

STEEL SURFACE PREPARATION NOTE

THE CONTRACTOR HAS THE OPTION OF BLASTCLEANING OR POWER TOOL CLEANING THE SURFACE AREAS WHERE THE EXISTING CROSS FRAME WILL BE REPAIRED AND THE WESS OF THE STATE OF GROCES HERE EXISTING CRACK AREAS ARE TO BE RELOCD. BLASTCLEANING THE EXISTING CRACK AREAS ARE TO BE WELLOCD. BLASTCLEANING SECTION OF THE FEMALE BE WILL BE SHALL BE RESPONSIBLE FOR REMOVING ALL BLASTER WEDOWN FROM WISDE THE STEEL BOX GROEES.

PAINTING SYSTEM

PANT SHALL BE SYSTEM B IN ACCORDANCE WITH SUB-SECTION 503.05.
COLOR OF THE URETHAME FINASH COAT SHALL COUPLY WITH FECTRAL
STANDARD NO. 9550, 3148 GOOD. SEE SECTION 3040 90 OF THE
STANDARD SPECIFICATIONS FOR ROAD AND BROCK CONSTRUCTION OF
THE LEMESSEE DEPARTMENT OF TRAINSPORTATION. THE FINASH COAT WILL
NOT BE REQUIRED ON INTERIOR REPAIR AREAS.

ALL PRODUCTS USED IN THIS COATING SYSTEM, INCLUDING THINNERS, MUST BE SUPPLIED BY THE SAVE MANUFACTURER,

APPLICATION

THE COATING APPLICATOR SHALL FOLLOW THE MANUFACTURER'S PRINTED INSTRUCTIONS AND STANDARD SPECIFICATIONS AND SHALL HAVE THESE INSTRUCTIONS ON SITE DURING THE COURSE OF THE WORK.

PROTECTION OF PROPERTY

EXTREME CARE SHALL BE TAXEN WHEN PAINTING THIS STRUCTURE TO PROJECT THE GENERAL PUBLIC AND THE SURROUNDING ENVIRONMENT.

CONTAINMENT OF EXISTING PAINT SYSTEM

ACCORDING TO OUR RECORDS THE EXISTING PAINT SYSTEM CONTAINS AN INORGAINC ZNIC PRIMER AND VANTE TOP COAT. THE CONTRACTOR SHALL WITH SECTION 603J3.

NOTE: COST OF ALL SURFACE PREPARATION AND PAINTING AS CALLED FOR IN MOTES ABOVE SHALL BE BICLUDED IN ITEM NO. 602-10.33, STRUCTURAL STEEL TEST FOR CRACKS, L.S..

DEPARTMENT OF TRANSPORTATION



A. 74 3

MISCELLANEOUS DETAILS I-440/I-65 DIRECTIONAL INTERCHANGE STRUCTURE NO. 162 (BR. NO. 19-165-5.97) STRUCTURE NO. 163 (BR. NO. 19-165-5.98) STRUCTURE NO. 164 (BR. NO. 19-1440-4.87) STRUCTURE NO. 165 (BR. NO. 19-1440-4.85) STRUCTURE NOS. 166 AND 167

(BRIDGE NO. 19-1440-4.82) DAVIDSON COUNTY

1998