TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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SEE SHEET 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2011	1
FED. AID PROJ. NO.	STP-I-440-4(78)	
STATE PROJ. NO.	19014-3155-44	

DAVIDSON COUNTY

I-440 EASTBOUND

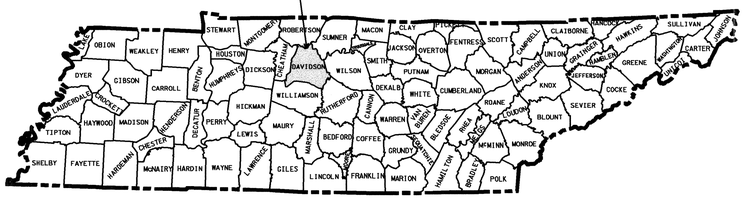
FROM EAST OF INTERSTATE 65 TO WEST OF
INTERSTATE 24 (EASTBOUND ONLY)

CONSTRUCTION

STATE HIGHWAY NO. F.A.H.S. NO.

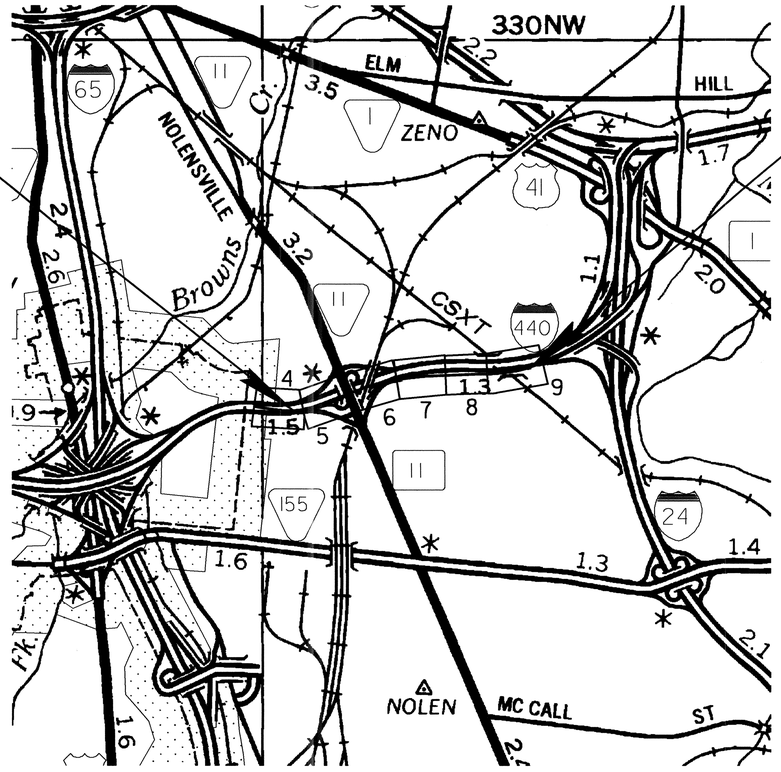
**GRADING, DRAINAGE, PAVING, BRIDGE
RETAINING WALL, SIGNING, AND STRIPING**

PROJECT LOCATION



BEGIN PROJ.
NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00

END PROJ.
NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 463+08.46



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SCALE: 1"= 2000'

NO EXCLUSIONS
NO EQUATIONS

TRAFFIC DATA	
ADT (2011)	47,504
ADT (2031)	52,252
DHV (2031)	6,026
D	100 - 0
T (ADT)	11 %
T (DHV)	7 %
V	60 MPH

ROADWAY LENGTH	0.933 MILES
BRIDGE LENGTH	0.066 MILES
**BOX BRIDGE LENGTH	0.000 MILES
PROJECT LENGTH	0.999 MILES

**NOT INCLUDED IN PROJECT LENGTH
(LENGTH MEASURED ALONG MAINLINE)

DATE OF SURVEY: MARCH 2010

SPECIAL NOTES

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

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 1 MOOSA POURALI

DESIGNED BY THY, Inc.

DESIGNER TECK TANG CHECKED BY KENNETH YOUNG

P.E. NO. 19014-1155-04

PIN NO. 113898.01

TECK MENG TANG — REGISTERED PROFESSIONAL ENGINEER — STATE OF TENNESSEE — NO. 101137

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	1A

INDEX

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"NOT USED"	2B
ESTIMATED LIGHTING QUANTITIES	2C
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UTILITIES INDEX, UTILITY OWNERS, AND UTILITY SHEETS	U1-1

STANDARD ROADWAY DRAWINGS TO BE PRINTED WITH PLANS

DWG. NO.	REV.	DESCRIPTION
RP-CS-2	09-29-10	CONCRETE SHOULDER RUMBLE STRIP DETAIL (FOR 6-LANE OR WIDER DIVIDED HIGHWAY)
RP-J-9	09-24-10	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT
S-SSMB-3	07-30-10	51" HALF SIZE SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-6	07-30-10	GUARDRAIL ATTACHMENT TO SINGLE SLOPE CONCRETE BARRIER WALL
RP-J-15	01-19-02	LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS
RP-J-17	10-26-00	DOWEL ASSEMBLY DEVICES
RP-J-19	10-21-05	DOWEL ASSEMBLY DEVICES

"NO PROJECT COMMITMENTS SHEET INCLUDED IN THIS SET OF PLANS"

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION
ROADWAY DESIGN STANDARDS		
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-3	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
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		STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	05-27-01	UNDERDRAIN LATERAL DETAILS
RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
RD-UD-9	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES
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-S-12	08-01-09	CLEAR ZONE CRITERIA
RD01-SE-2	10-15-02	URBAN SUPERELEVATION DETAILS
RD01-TS-4	10-15-02	DESIGN STANDARDS 1 AND 2 LANE RAMPS
DRAINAGE - CULVERTS AND ENDWALL		
D-FLU-1		FLUME DETAILS
D-PB-1	04-15-07	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
DRAINAGE-CATCH BASINS AND MANHOLES		
D-CB-10LPC	07-29-04	LOW PROFILE LOWERED CURB 32" X 26" RECTANGULAR CONCRETE NO. 10LPC CATCH BASIN
D-CB-10RA		STANDARD PRECAST 48" CIRCULAR NO. 10 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-10S	07-29-02	STANDARD RECTANGULAR CONCRETE N0. 10 CATCH BASIN
D-CB-10SB		STANDARD 4' X 4' SQUARE CONCRETE NO. 10 CATCH BASIN
D-CB-38S	07-29-02	STANDARD 32" X 32" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-41LP	07-29-04	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 41LP CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41P	07-29-02	STANDARD 4' X 3' PRECAST RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41RB	05-27-01	STANDARD PRECAST CIRCULAR NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41S	07-29-02	STANDARD 4' X 3' RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SB	07-29-02	STANDARD 4' X 4' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SC	09-11-02	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SD	09-11-02	STANDARD 7' X 7' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SE	05-05-05	STANDARD 9' X 9' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-JBS-1	07-29-02	STANDARD 32" X 32" SQUARE CONCRETE NO. 1 JUNCTION BOX
ROADWAY AND PAVEMENT APPURTENANCES		
RP-J-1	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-3	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-5	07-01-01	TYPICAL ACCELERATION AND DECELERATION LANE JOINT TYPES AND SPACING FOR CONCRETE RAMPS
RP-J-7	10-26-00	CONCRETE RAMP JOINT TYPES AND SPACING
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-15	01-19-02	LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS
RP-J-17	10-26-00	DOWEL ASSEMBLY DEVICES
RP-J-18	10-21-05	DOWEL ASSEMBLY DEVICES
RP-J-19	10-21-05	DOWEL ASSEMBLY DEVICES
RP-J-23	10-26-04	CONCRETE PAVEMENT REPAIR DETAILS
RP-J-24	05-27-01	CONCRETE PAVEMENT SPALL AND RANDOM CRACK REPAIR DETAILS
RP-J-25	05-27-01	CONCRETE PAVEMENT JOINT REPAIR DETAILS
SAFETY APPURTENANCES AND FENCE		
S-F-1		HIGH VISIBILITY FENCE
S-GR-11	11-26-07	W-BEAM & THRIE BEAM BARRIER RAIL AND RUB RAIL ALTERNATES
S-GR-12	05-27-03	W-BEAM BARRIER POST DETAILS AND SPECIFICATIONS
S-GR-13	05-27-03	BARRIER RAIL MOUNTING, POST BLOCK-OUTS WITH VERTICAL ADJUSTMENT HOLES
S-GR-13A		BARRIER RAIL MOUNTING POST FOR PLASTIC BLOCK-OUTS WITH HORIZONTAL ADJUSTMENT HOLES
S-GR-14	09-05-98	W-BEAM BARRIER FASTENING HARDWARE AND BRIDGE APPROACH DELINEATORS
S-GR-15	06-30-05	W-BEAM BARRIER TERMINAL ELEMENT DETAILS
S-GR-21	06-30-09	LENGTH OF NEED AND TERMINAL REQUIREMENTS IN FILLS
S-GR-23	09-11-02	GUARDRAIL ATTACHMENT TO STRUCTURES AND PROTECTIVE GUARDRAIL AT BRIDGE END DETAILS
S-GR-38	06-30-09	DETAILS FOR CONSTRUCTION OF EARTH PAD FOR TYPE 38 GUARDRAIL END TERMINAL
S-GR-43		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38 POST LAYOUT AND ERECTION DETAILS
S-GR-44		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38 (2 TUBE) GUARDRAIL ELEMENT POST AND ASSEMBLY DETAILS

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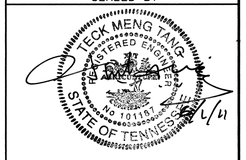

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	1B

S-SSMB-2		51" SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-5		SINGLE SLOPE MEDIAN BARRIER WALL CATCH BASIN DETAIL

TRAFFIC CONTROL APPURTENANCES

T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-L-1	02-15-07	STANDARD LIGHTING FOUNDATION DETAILS
T-L-3	04-15-96	STANDARD LIGHTING DETAILS PULL BOXES
T-L-4	07-29-04	STANDARD LIGHTING DETAILS CONDUIT, CABLE INSTALLATION
T-M-5	09-05-04	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-M-6	09-01-09	MARKING DETAIL FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-7	10-10-06	GORE MARKING DETAILS FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-8	10-10-06	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	10-10-06	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-S-6	02-12-91	STANDARD MOUNTING DETAILS - BOLTED EXTRUDED PANELS
T-S-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
T-S-9	05-27-03	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	05-27-03	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-11	05-27-01	DELINEATOR AND MILEPOST DETAILS
T-S-12	05-27-03	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, SQUARE TUBES
T-S-13	05-27-01	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, I-BEAMS
T-S-14	05-27-01	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, WF-BEAMS
T-WZ-10	01-19-01	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-16	03-13-09	LANE SHIFT ON DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-34	09-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-2	05-14-10	SEDIMENT FILTER BAG
EC-STR-3B	04-01-08	SILT FENCE
EC-STR-3C	04-01-08	SILT FENCE WITH WIRE BACKING
EC-STR-3D	04-01-08	ENHANCED SILT FENCE
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6A		ENHANCED ROCK CHECK DAM
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-25	04-01-08	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	04-01-08	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-29	04-01-08	PERMANENT SLOPE DRAIN PIPE
EC-STR-33A	04-01-08	SUSPENDED PIPE DIVERSION (UPSTREAM)
EC-STR-34	04-01-08	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	04-01-08	SEDIMENT TUBE
EC-STR-39	04-01-08	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-39A	06-24-10	CURB INLET PROTECTION TYPE 3 & 4
EC-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)
EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS
EC-STR-46		CATCH BASIN FILTER ASSEMBLY (TYPE 6)
EC-STR-46A		CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS
EL-P-10	05-27-96	TYPICAL ROADWAY LANDSCAPE PLANTING DETAILS
EL-P-11	05-27-96	TYPICAL MATURE PLANT SPREAD AND CRITERIA FOR PROXIMITY TO ROADWAY
EL-W-1	05-27-96	DETAILS OF TREE WALLS
EL-W-2	05-27-01	STANDARD GRAVITY-TYPE RETAINING WALLS

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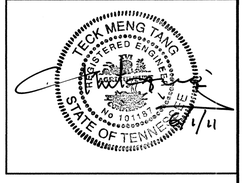

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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CONST. NO. 19014-3155-44

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2011	STP-I-440-4(78)	2

1 6-14-11 HMB GENERAL REVISIONS
2 8-2-11 SAS REV. SHAFT QUANTITIES

DAVIDSON COUNTY

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	X531 WIDENING OF RIGHT LANE INTERSTATE 440 OVER GLENROSE AVENUE AND CSX RAILROAD STATION 461+41.60 LOG MILE 7.04 CONTINUOUS STEEL ROLLED BEAM WITH COMPOSITE CONCRETE DECK SLAB 4 SPAN BRIDGE SPAN NO. 1 = 79'-8⅝" SPAN NO. 2 = 83'-7¾" SPAN NO. 3 = 107'-9" SPAN NO. 4 = 78'-4¾" TOTAL LENGTH = 349'-6⅛" EXISTING 42'-0" ROADWAY WIDENED TO 60'-4½" ROADWAY WITH STD-1-1SS PARAPET ON WIDENED SIDE SKEW VARIES TO LOCAL TANGENTS LAYOUT DWG. NO. U-32-80	RETAINING WALL NO. 1 ALONG RAMP 'A' STA. 17+92.64 TO STA. 18+75.00 LENGTH = 82'-4⅜" LAYOUT DWG. NO. U-50-47	RETAINING WALL NO. 2 ALONG INTESTATE 440 STA. 420+90.00 TO STA. 425+14.50 LENGTH = 424'-6" LAYOUT DWG. NO. U-50-50	RETAINING WALL NO. 3 ALONG INTERSTATE 440 STA. 425+62.50 TO STA. 426+80.00 LENGTH = 117'-6" LAYOUT DWG. NO. U-50-53	RETAINING WALL NO. 4 ALONG INTERSTATE 440 STA. 432+80.00 TO STA. 434+08.00 LENGTH = 128'-0" LAYOUT DWG. NO. U-50-56	RETAINING WALL NO. 5 ALONG INTERSTATE 440 STA. 439+34.00 TO STA. 442+66.00 LENGTH = 332'-0" LAYOUT DWG. NO. U-50-59	RETAINING WALL NO. 6 ALONG INTERSTATE 440 STA. 443+60.00 TO STA. 445+05.00 LENGTH = 145'-0" LAYOUT DWG. NO. U-50-62
202-04.01	REMOVAL OF STRUCTURES (EXIST. BR. NO. 19-I440-7.04)	L.S.	1	1						
203-03.10	SELECT GRANULAR BACKFILL	TON	1,587		225	944	91	82	157	88
203-10.16	GRADED SOLID ROCK (IN PLACE)	C.Y.	60		27		10	2	21	
204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	2,993	284	270	1,055	215	192	576	401
204-04.01	ROCK EXCAVATION (BRIDGES)	C.Y.	748		20	504	66	14	120	24
303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	9	9						
602-03	STEEL STRUCTURES	L.S.	1	1						
603-02.01	REPAINTING EXISTING STEEL STRUCTURES	L.S.	1	1						
603-05.20	CONTAINMENT AND DISPOSAL OF WASTE (EXISTING BEAMS)	L.S.	1	1						
604-02.03	EPOXY COATED REINFORCING STEEL	L.B.	233,921	97,069	17,404	86,710	10,117	2,709	12,164	7,748
604-03.01	CLASS 'A' CONCRETE (BRIDGES)	C.Y.	2,693	202	278	1,274	223	104	409	203
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	237,999	53,498	19,401	84,489	15,889	9,804	34,761	20,157
604-03.04	PAVEMENT AT BRIDGE ENDS	S.Y.	115	115						
604-03.09	CLASS 'D' CONCRETE (BRIDGE DECK)	C.Y.	194	194						
604-04.01	APPLIED TEXTURE FINSH (NEW STRUCTURES)	S.Y.	234		234					
604-04.02	APPLIED TEXTURE FINSH (EXISTING STRUCTURES)	S.Y.	307		307					
604-04.21	STAINING CONCRETE SURFACES	S.Y.	2,210			1,167	228	127	485	203
604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	862	862						
604-10.50	BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	S.Y.	20	20						
606-02.03	STEEL PILES (10 INCH)	L.F.	340	340						
606-02.06	PILE TIPS (STEEL PILES, 10 INCH)	EA.	8	8						
606-03.03	STEEL PILES (12 INCH)	L.F.	462	462						
617-02	BRIDGE DECK CRACK SEALING	L.F.	354	354						
617-04.01	TYPE 1 THIN EPOXY OVERLAY (EPOXY-URETHANE)	S.Y.	4,810	4,810						
620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	375	375						
2 625-02.01	DRILLED SHAFT (SOIL) (1'-6" DIA.)	L.F.	378	378						
2 625-02.13	DRILLED SHAFT (ROCK) (1'-6" DIA.)	L.F.	168	168						
707-07.01	CHAIN LINK FENCE (BRIDGES)	S.F.	1,185	1,185						
710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	1,313	82	83	425	118	128	332	145
710-09.02	6" PIPE UNDERDRAIN	L.F.	25	25						
711-01.07	CONCRETE HALF-BARRIER WALL	L.F.	83		83					
711-05.72	SINGLE SLOPE HALF CONCRETE BARRIER WALL	L.F.	1,234			425	118	128	332	145

LIST OF DRAWINGS

TITLE	DWG. NO.	LAST REV. DATE
LAYOUT OF BRIDGE	U-32-80	8-2-11
THRU		
BILL OF STEEL	U-32-107	
RETAINING WALL NO. 1	U-50-47	6-10-11
THRU		
RETAINING WALL NO. 1	U-50-49	6-10-11
RETAINING WALL NO. 2	U-50-50	6-10-11
THRU		
RETAINING WALL NO. 2	U-50-52	6-10-11
RETAINING WALL NO. 3	U-50-53	6-10-11
THRU		
RETAINING WALL NO. 3	U-50-55	6-10-11
RETAINING WALL NO. 4	U-50-56	6-10-11
THRU		
RETAINING WALL NO. 4	U-50-58	6-10-11
RETAINING WALL NO. 5	U-50-59	6-10-11
THRU		
RETAINING WALL NO. 5	U-50-61	6-10-11
RETAINING WALL NO. 6	U-50-62	6-10-11
THRU		
RETAINING WALL NO. 6	U-50-64	6-10-11
RETAINING WALL NO. 1 THRU 6 DETAILS	U-50-65	6-10-11
RETAINING WALL NO. 1 THRU 6 DETAILS	U-50-66	6-10-11
RETAINING WALL NO. 1 THRU 6 DETAILS	U-50-66A	8-2-11

LIST OF STANDARD DRAWINGS

TITLE	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-1SS	11-01-10
STEEL SLIDER PLATE ASSEMBLIES FOR SINGLE SLOPE CONCRETE PARAPET & BRIDGE DECK DRAIN DETAILS	STD-1-2SS	NO DATE
PAVEMENT AT BRIDGE ENDS	STD-1-5	08-08-08
BRIDGE END DRAIN DETAILS WITH PAVEMENT AT BRIDGE ENDS	STD-1-6	04-28-97
BRIDGE END DRAIN DETAILS WITH PAVEMENT AT BRIDGE ENDS	STD-1-7	07-31-00
BRIDGE END DRAIN DETAILS 2' x 8'-7" WITH PAVEMENT AT BRIDGE ENDS	STD-1-8	05-01-95
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-1	04-08-05
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	STD-4-2	04-08-05
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-3	03-02-02
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS	STD-4-4	06-10-96
STANDARD PILE DETAILS	STD-5-1	10-25-93
STANDARD PILE DETAILS	STD-5-2	04-08-05
REINF. BAR SUPPORT DETAILS FOR CONC. SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT & DRAINAGE DETAILS	STD-10-1	04-08-05

LIST OF SPECIAL PROVISIONS

	PROV. NO.	LATEST REV. DATE
REGARDING STEEL STRUCTURES	602	07-15-05
REGARDING BRIDGE DECK CRACK SEALING	604CR	02-19-96
REGARDING SURFACE FINISH FOR RETAINING WALLS	718SF	08-02-11

LIST OF EXISTING REFERENCE DRAWINGS

EXISTING BRIDGE DWG. NO. M-112-59 THRU M-112-73

1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE & RETAINING WALL QUANTITIES

BY: M. DYE

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	2A

REV. 09-19-11: REVISED QTY'S FOR ITEM NOS. 501-01.03, 501-01.04, 501-03.01, AND 502-03.20. REVISED FOOTNOTES NO. 16 AND 25.

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	L.S.	1
	201-01	CLEARING AND GRUBBING	L.S.	1
15	202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	S.Y.	9567
11,12	203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	16314
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	549
	203-06	WATER	M.G.	540
8	209-05	SEDIMENT REMOVAL	C.Y.	96
8	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	1144
8	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	5933
8	209-08.08	ENHANCED ROCK CHECK DAM	EACH	21
8	209-09.04	SEDIMENT FILTER BAG (15'X10')	EACH	4
8	209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	21
8	209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	31
8	209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	34
8	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	22
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	6708
	303-01.03	GRANULAR BACKFILL (RETAINING WALLS)	TON	4525
8	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	57
6	313-03	TREATED PERMEABLE BASE	S.Y.	18512
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	28
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	111
25	501-01	PORTLAND CEMENT CONCRETE PAVEMENT(REPLACEMENT)	S.Y.	1700
17	501-01.03	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"	S.Y.	2550
17	501-01.04	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 11"	S.Y.	8070
16	501-03.01	COLORED CONCRETE SHOULDERS	S.Y.	8270
13	501-03.10	CONCRETE SHOULDERS RUMBLE STRIPS	L.F.	2240
25	501-03.20	CONCRETE PAVEMENT GROOVING	S.Y.	60620
19,26	502-04.01	SAWING CONCRETE PAVEMENT (FULL DEPTH)	L.F.	11569
25	502-04.02	LOAD TRANSFER DOWELS	EACH	1100
25	502-04.03	TRANSVERSE TIE-BARS	EACH	1500
25	502-08.02	RESEALING JOINTS (SILICONE SEALANT)	L.F.	50000
25	503-01	GRINDING CONCRETE PAVEMENT	S.Y.	50000
	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	1654
	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	48
	611-02.10	JUNCTION BOX, TYPE 1	EACH	11
	611-09.01	ADJUSTMENT OF EXISTING CATCH BASIN	EACH	1
	611-09.03	CAPPING EXISTING CATCH BASIN	EACH	4
	611-10.01	CATCH BASINS, TYPE 10, 0'-4' DEPTH	EACH	6
	611-38.01	CATCH BASINS, TYPE 38, 0'-4' DEPTH	EACH	2
	611-38.02	CATCH BASINS, TYPE 38, > 4' - 8' DEPTH	EACH	1
	611-41.01	CATCH BASINS, TYPE 41, 0'-4' DEPTH	EACH	10
	611-41.02	CATCH BASINS, TYPE 41, 4'-8' DEPTH	EACH	3
23	703-01	CEMENT CONCRETE DITCH PAVING	EACH	91
24	703-02	CEMENT CONCRETE DITCH PAVING (REINFORCED)	EACH	28
	705-04.07	TAN ENERGY ABSORBING TERMINAL (NCHRP 350, TL 3)	EACH	2
	705-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	354
10	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	14
20	705-11.01	GUARDRAIL AT BRIDGE ENDS (POWDER COATED)	L.F.	81
20	705-11.03	SINGLE GUARDRAIL (TYPE 2) (POWDER COATED)	L.F.	1007
20	705-11.11	TAN ENERGY ABSORB TERMINAL (NCHRP 350, TL 3)(POWDER COATED)	EACH	2
8	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	400
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	7215
	710-05	LATERAL UNDERDRAIN	L.F.	30
	710-06.15	LATERAL UNDERDRAIN ENDWALL (6:1)	EACH	2
	710-09.08	8" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	1484
22,32	711-05.70	SINGLE SLOPE CONCRETE MEDIAN BARRIER WALL	L.F.	2656
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	7068
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	173
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	62
	712-06	SIGNS (CONSTRUCTION)	S.F.	536
	712-08.03	ARROW BOARD (TYPE C)	EACH	2
	713-01.01	CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS)	C.Y.	1
	713-01.02	STEEL BAR REINFORCEMENT(FOUNDATION FOR SIGN SUPPORTS)	L.B.	368
	713-02.14	FLEXIBLE DELINEATOR (WHITE)	EACH	13
	713-02.15	FLEXIBLE DELINEATOR (YELLOW)	EACH	17
	713-05	STEEL HOLLOW SQUARE POST (BREAKAWAY) SIGN SUPPORTS	L.B.	60
	713-06	STEEL I-BEAMS & WF-BEAMS(BREAKAWAY) SIGN SUPPORT	L.B.	923
1	713-09.01	STEEL OVERHEAD SIGN STRUCTURE (FOR DMS #25)	EACH	1
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	13
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	42
	713-14	EXTRUDED ALUMINUM PANEL SIGNS	S.F.	1362
21	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-16.03	CHANGEABLE MESSAGE SIGN	EACH	2
	716-01.06	TEMPORARY RAISED PAVEMENT MARKER,WHITE	EACH	202
	716-01.07	TEMPORARY RAISED PAVEMENT MARKER,YELLOW	EACH	340
29	716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR) (1 COLOR)	EACH	807
27	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	679
25	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	9
31	716-02.07	PLASTIC PAVEMENT MARKING (24" BARRIER LINE)	L.F.	2162
14	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	0.300

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	L.F.	10843
	716-05.50	PAINTED PAVEMENT MARKING (8" LINE)	L.F.	20074
28	716-08.04	REMOVAL OF PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	1155
18	716-08.20	REMOVAL OF PAVEMENT MARKING (LINE)	L.M.	10
30	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6 IN LINE)	L.M.	12
	716-12.03	ENHANCED FLATLINE THERMO PVMT MRKNG (8 IN BARRIER LINE)	L.F.	2036
	716-12.05	ENHANCED FLATLINE THERMO PVMT MRKNG (6 IN DOTTED LINE)	L.F.	1600
	717-01	MOBILIZATION	LS	1
2	725-07.18	CONDUIT BANK TYPE 1	L.F.	630
2,3	725-07.21	CONDUIT BANK TYPE 4	L.F.	1810
2	725-07.22	DMS CONDUIT BANK	L.F.	120
2	725-07.32	CONDUIT BANK TYPE 4 BORED	L.F.	1065
2	725-07.35	CABLE MARKER	EACH	17
2	725-07.36	PULL BOX (TYPE D)	EACH	7
2	725-07.37	PULL BOX (TYPE E)	EACH	6
2	725-07.40	FO CABLE, 72F	L.F.	6445
2	725-07.41	FO DROP CABLE, 4F	L.F.	985
2	725-07.42	FO CLOSURE, 12F	EACH	2
	725-07.43	FO CLOSURE, 72F	EACH	2
2	725-07.44	FO SPLICE, FUSION	EACH	162
2,4	725-07.76	CONDUIT BANK TYPE 4 (IN ROCK)	L.F.	1810
2,5	725-09.98	DYNAMIC MESSAGE SIGN RELOCATION	EACH	1
8	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	935
8	740-11.04	TEMPORARY SEDIMENT TUBE 20IN	L.F.	480
7	801-03	WATER (SEEDING AND SODDING)	M.G.	231
	803-01	SODDING (NEW SOD)	S.Y.	3294
9	806-02.03	PROJECT MOWING	CYCL.	4

NOTE: LIGHTING QUANTITIES SHOWN ON SHEET 2C.

FOOTNOTES

1 INCLUDES SIGN STRUCTURE, FOOTINGS, CATWALK AND ALL RELATED INCIDENTAL ITEMS INCLUDING PAVEMENT REPAIR FOR FOOTINGS IN MEDIAN.

2 REFER TO TECHNICAL SPECIAL PROVISION 725 OF THE NASHVILLE SMARTWAY FOR DESCRIPTION AND SPECIFICATION OF 725 ITEMS.

3 THIS PAY ITEM IS FOR CONDUIT INSTALLED IN AREAS THAT ARE NOT SOLID ROCK OR SOLID SHOT ROCK FILL. THIS INCLUDES AREAS WITH SOIL AND/OR INTERMITENT ROCK WHERE TRENCHING IS POSSIBLE USING TYPICAL TRENCHING EQUIPMENT.

4 THIS PAY ITEM IS FOR CONDUIT INSTALLED IN SOLID ROCK OR SOLID SHOT ROCK FILL LOCATIONS TO BE DETERMINED IN THE FIELD DURING CONSTRUCTION. SEE SECTION 2 OF TSP 725 FOR MORE DETAILS.

5 ITEM INCLUDES THE REMOVAL OF THE DYNAMIC MESSAGE SIGN AND EXISTING SIGN STRUCTURE. ITEM ALSO INCLUDES THE INSTALLATION OF THE EXISTING DMS SIGN ONTO THE NEW OVERHEAD SIGN STRUCTURE ONCE INSTALLED.

6 DOES NOT INCLUDE ADDITIONAL QUANTITY DUE TO VARIABLE THICKNESS ON THE HIGH SIDE OF THE PAVEMENT SECTION.

7 INCLUDES 198 M.G. FOR EROSION PREVENTION AND SEDIMENT CONTROL.

8 EPSC ITEMS. SEE SUBSECTION 209.02 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL EPSC QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.

9 ITEM INCLUDES LITTER AND TRASH REMOVAL, AND IS NOT ELIGIBLE FOR FEDERAL-AID PARTICIPATION. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO. 806-02.03, PROJECT MOWING, CYCL.

10 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.

11 INCLUDES 60 C.Y. FOR EROSION CONTROL.

12 REFER TO SPECIAL NOTES.

13 FOR NEW SHOULDERS ONLY.

14 FOR TRAFFIC CONTROL ON GLENROSE AVE.

15 FOR REMOVAL OF EXISTING CONCRETE SHOULDER.

16 COLOR TO MATCH THE COLOR OF EXISTING CONCRETE SHOULDER. QUANTITIES INCLUDE 6060 S.Y. FOR MAINLINE SHOULDER (11") AND 2210 S.Y. FOR RAMP SHOULDER (10").

17 INCLUDES THE COST FOR FURNISHING AND INSTALLING LOAD TRANSFER DOWELS AND TRAVERSE TIE BARS. SEE STANDARD DRAWING RP-J-19 FOR DOWEL BAR SIZE TABLE.

18 FOR REMOVAL OF PAVEMENT MARKING LINES IRRESPECTIVE OF WIDTH.

19 INCLUDES SAWING EXISTING TIE BARS.

20 COLOR FOR POWDER COATING SHALL BE DARK BROWN FEDERAL COLOR STANDARD 595 B, COLOR NO. 20059

21 REMOVE SIGN FACE ONLY ON SIGNS NO. 1A, 2A, 5A, & 9A. REMOVE SIGN FACE, SUPPORTS, AND FOOTINGS ON SIGNS NO. 3A, 4A, 6A, 7A, & 8A.

22 COLOR TO MATCH THE COLOR OF EXISTING BARRIER WALL.

23 FOR DITCH PAVING BEHIND BARRIER WALL.

24 FOR ROADSIDE CONCRETE DITCH PAVING.

25 INCLUDES 50000 S.Y. FOR CONCRETE PAVEMENT REPAIR AND 10620 S.Y. FOR NEW CONCRETE PAVEMENT.

26 INCLUDES 2686 L.F. FOR CONCRETE PAVEMENT REPAIR.

27 INCLUDES 500 EA. FOR CONCRETE PAVEMENT REPAIR.

28 INCLUDES 188 S.Y. FOR CONCRETE PAVEMENT REPAIR.

29 INCLUDES 500 EA. FOR CONCRETE PAVEMENT REPAIR.

30 INCLUDES 6.5 L.M. FOR CONCRETE PAVEMENT REPAIR.

31 INCLUDES 1695 L.F. FOR CONCRETE PAVEMENT REPAIR.

32 INCLUDES THE COST FOR INSTALLING WEEP HOLES ALONG BARRIER WALL FROM STA. 445+05 TO 447+00.

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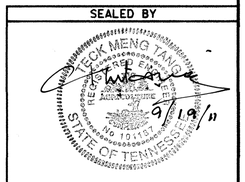

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-I-440-4(78)	2C

ESTIMATED LIGHTING QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	714-02.01	ENCASED CONDUIT (2" PVC, SCHEDULE 80)	L.F.	81
	714-03.01	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 40)	L.F.	1186
	714-04.03	CONDUIT (2" PVC, SCHEDULE 40, IN BARRIER WALL)	L.F.	3231
	714-05.02	PULL BOXES (TYPE A)	EACH	5
	714-05.03	PULL BOXES (TYPE B)	EACH	4
F	(1) 714-06.06	CABLE (1/C # 4 AWG)	L.F.	8490
F	(2) 714-08.09	LIGHT STANDARDS (GROUND MOUNTED)	EACH	3
F	(3) 714-08.10	LIGHT STANDARDS (BARRIER WALL MOUNTED)	EACH	16
	714-08.23	FOUNDATION (ONLY) FOR LIGHT STANDARDS	EACH	3
F	(4) 714-08.28	FOUNDATION FOR LIGHT STANDARDS (ROADWAY)	EACH	16
	714-08.34	REMOVAL OF LIGHT STANDARD	EACH	19
F	(5) 714-09.03	LUMINAIRES (250 WATT)	EACH	19
F	(6) 714-25.01	ELECTRICAL CONNECTION	LS	1

FOOTNOTES

F (1) SHALL BE NEMA LISTED. USE TYPE 2, STRANDED COPPER (7S), 600 VOLT, RATED FOR 90 DEG C, THWN INSULATION, WET AND DRY APPLICATION.

F (2) USE BREAKAWAY TAPERED SQUARE POLE (MILLERBERND POLE NUMBER TSTB7547320-ITS15-400, OR EQUIVALENT EQUAL), WITH A 15 FT ARM AND 40 FT M.H. TO BE POWDER COATED DARK BROWN, FEDERAL COLOR STANDARD 595 B, COLOR NO. 20059.

F (3) USE TAPERED SQUARE POLE (MILLERBERND POLE NUMBER TSAC7547320-ITS15-400, OR EQUIVALENT EQUAL), WITH A 15 FT ARM AND 40 FT M.H. ITEM TO INCLUDE ANCHOR BOLTS. TO BE POWDER COATED DARK BROWN, FEDERAL COLOR STANDARD 595 B, COLOR NO. 20059.

F (4) FOUNDATION AT BARRIER WALL MOUNTED LIGHT STANDARDS. SEE DETAIL ON SHEET 18E.

F (5) TO BE 250 WATT HPS, HOLOPHANE SOMERSET (OR EQUIVALENT EQUAL).

F (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE FOR THE LIGHTING. THESE CHARGES SHALL BE INCLUDED IN THE BID PRICE OF THIS ITEM FOR PAYMENT.

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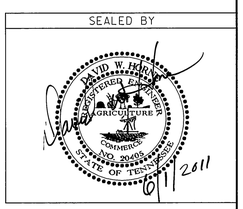

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED LIGHTING QUANTITIES

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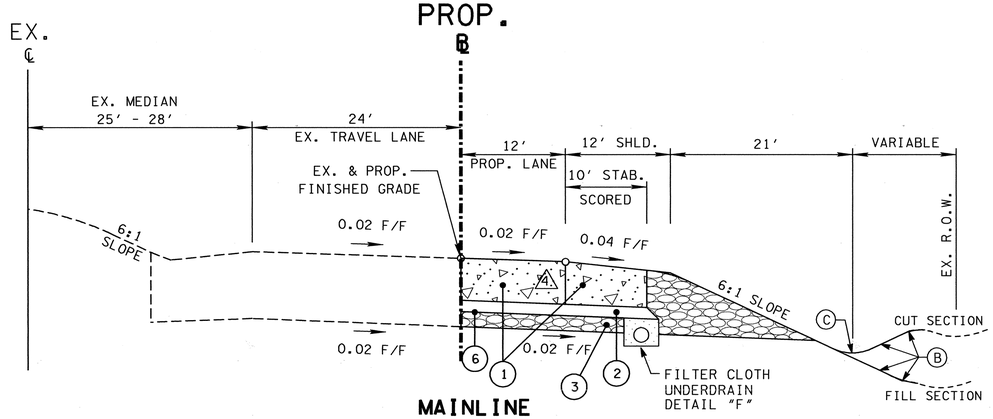
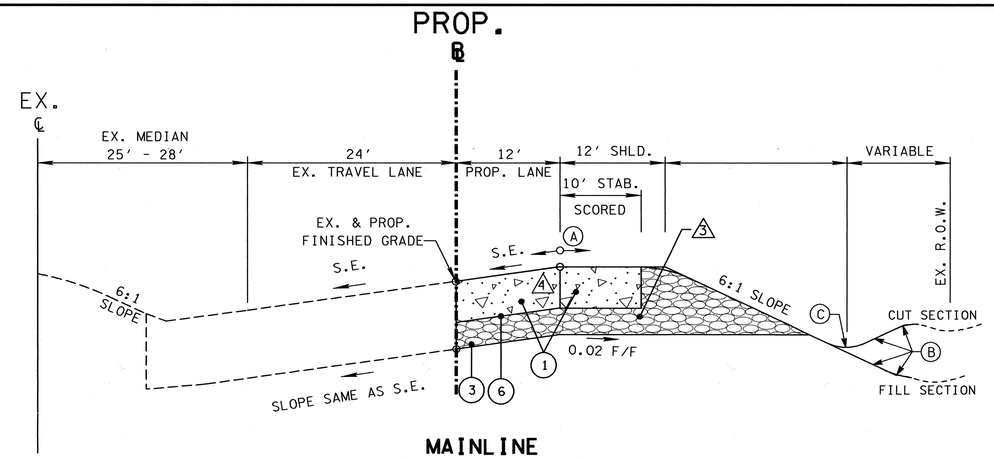
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

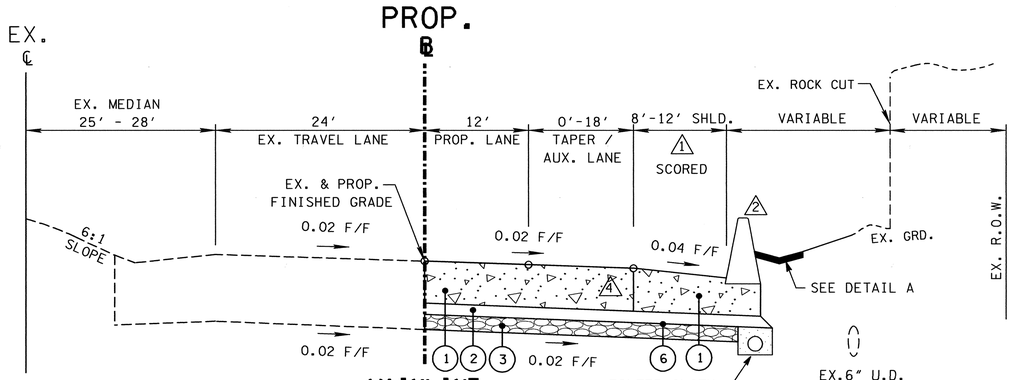
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	2
CONST	2011	STP-I-440-4(78)	2D



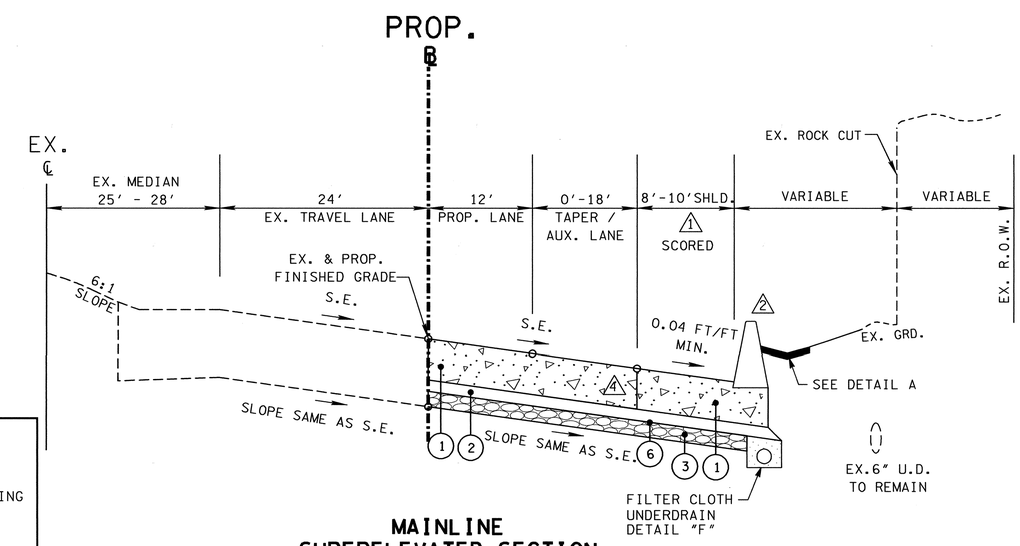
MAINLINE
TANGENT SECTION
413+07.69 TO 418+97.60



MAINLINE
SUPERELEVATED SECTION
411+90.48 TO 413+07.69



MAINLINE
TANGENT SECTION
420+39.97 TO 422+99.31
435+38.52 TO 437+53.39
443+77.66 TO 444+38.52



MAINLINE
SUPERELEVATED SECTION
422+99.31 TO 428+25.00
437+53.39 TO 443+77.66

Ⓐ THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07.

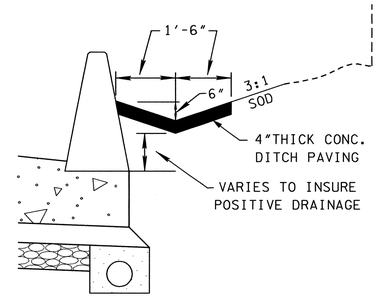
Ⓑ SEE STANDARD DRAWINGS RD01-S-11 AND RD01-S-11B FOR FILLS AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOP OF FILL SLOPES, AND SPECIAL ROCK CUT TREATMENT.

Ⓒ SEE STANDARD DRAWING RD01-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPE.

1. 8' SHOULDER IS ALLOWABLE IF FACE OF EXISTING ROCKWALL DOES NOT FACILITATE A 10' SHOULDER
2. 51" SINGLE SLOPE CONC. BARRIER WALL OR RETAINING WALL (SEE PROP. LAYOUT FOR LOCATIONS)
3. ON HIGH SIDE OF THE S.E. SECTION, OMIT THE TREATED PERMEABLE BASE, AND MAKE UP THE DIFFERENCE WITH MINERAL AGGREGATE BASE MATERIAL.
4. SEE STANDARD DRAWING RP-J-15 FOR LONGITUDINAL JOINT CONSTRUCTION AND TIE BAR PLACEMENT.

PROPOSED PAVEMENT SCHEDULE

(1) MAINLINE CONCRETE PAVEMENT - 11" THICK 501-01.04 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 11"	(4) RAMP CONCRETE PAVEMENT - 10" THICK 501-01.03 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"
(2) TREATED PERMEABLE BASE - 4" THICK 313-03 TREATED PERMEABLE BASE	(5) MINERAL AGGREGATE BASE - 4" THICK (RAMP) 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D
(3) MINERAL AGGREGATE BASE - 6" THICK (MAINLINE) 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(6) PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (0.30-0.35 GAL/SY) 402-02 AGGREGATE FOR COVER MATERIAL (PC) (8-12 LB/SY)



DETAIL A

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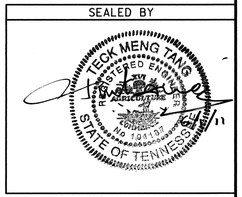

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE
N.T.S.

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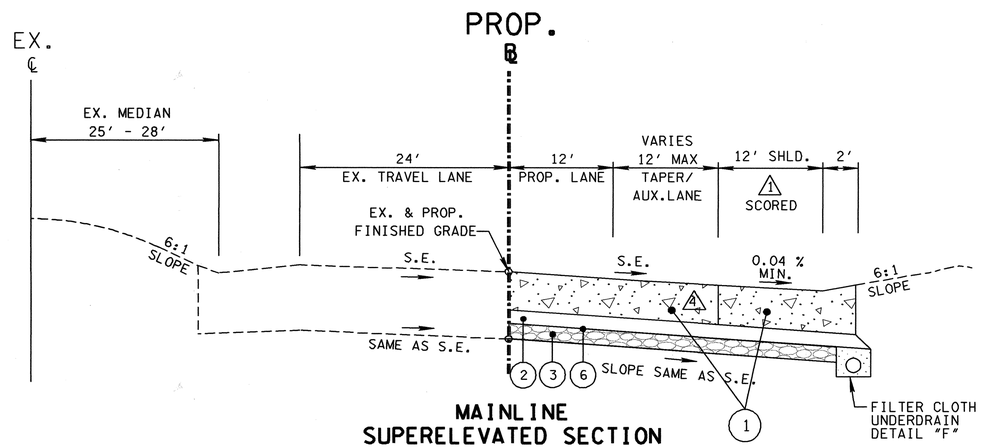
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	2A
CONST	2011	STP-I-440-4(78)	2E

REV. 09-19-11: REVISED MEDIAN SLOPE WHERE NEW GUARDRAIL IS INSTALLED TO 10:1.



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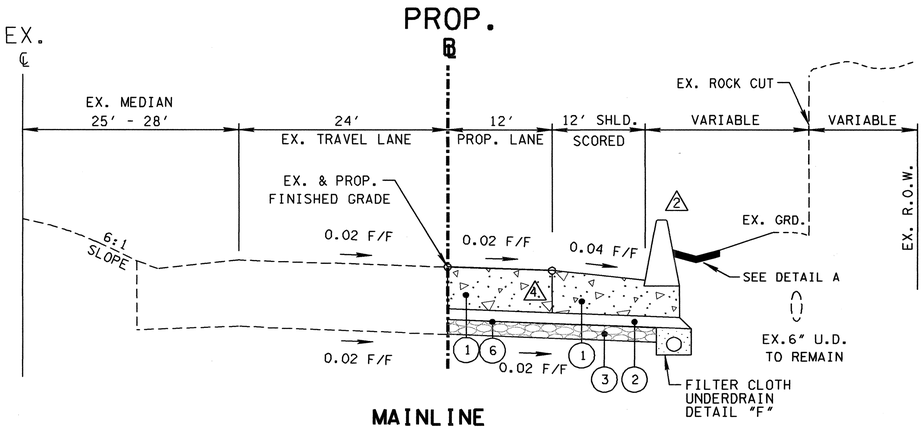

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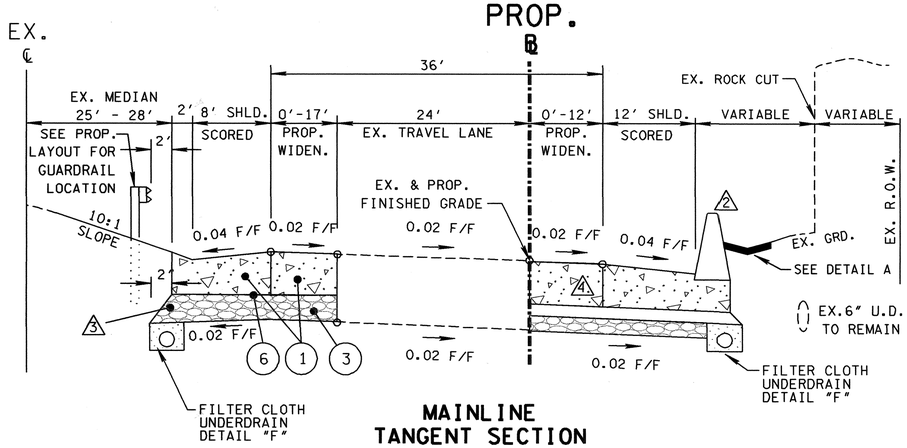

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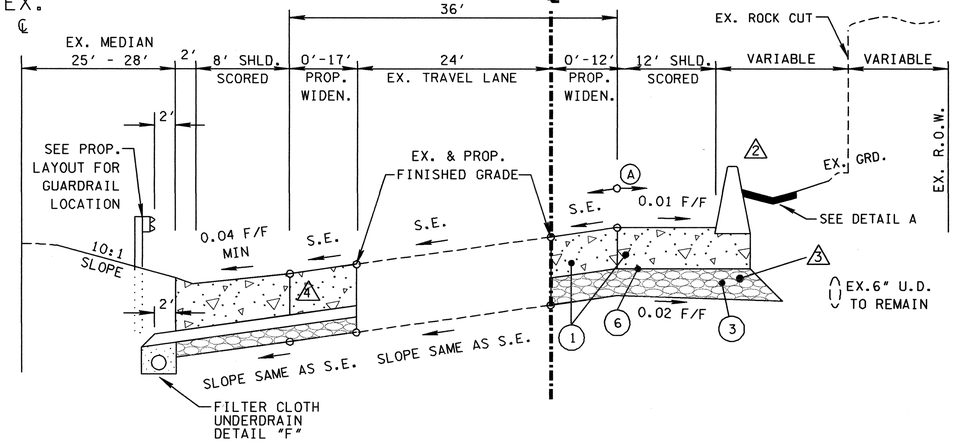

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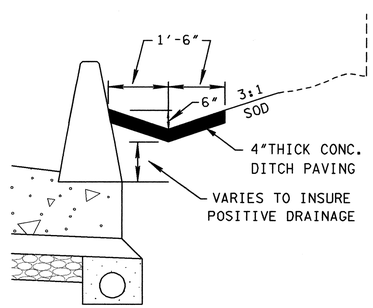

DETAIL A

2 51" SINGLE SLOPE CONC. BARRIER WALL OR RETAINING WALL (SEE PROP. LAYOUT FOR LOCATIONS)

3 ON HIGH SIDE OF THE S.E. SECTION, OMIT THE TREATED PERMEABLE BASE, AND MAKE UP THE DIFFERENCE WITH MINERAL AGGREGATE BASE MATERIAL.

4 SEE STANDARD DRAWING RP-J-15 FOR LONGITUDINAL JOINT CONSTRUCTION AND TIE BAR PLACEMENT.

(A) THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07.

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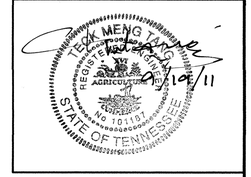

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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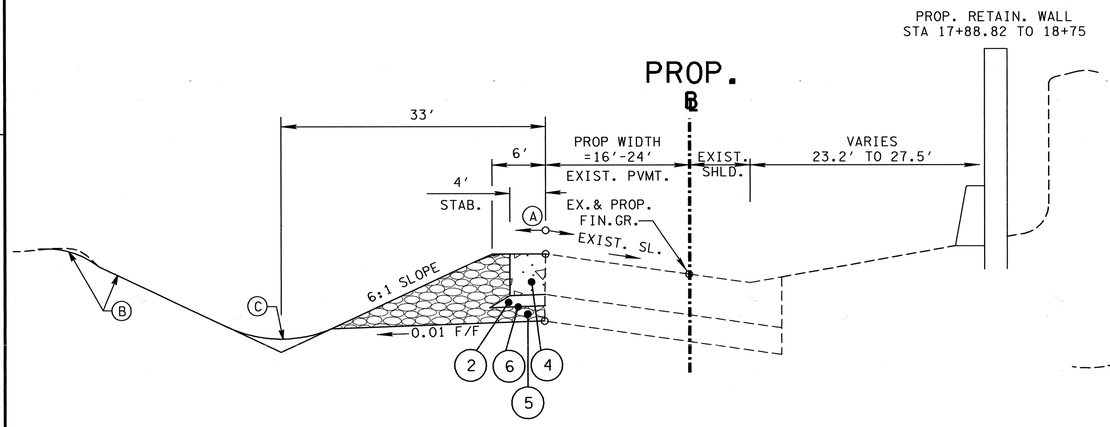
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	2B
CONST	2011	STP-I-440-4(78)	2F



RAMP A
TYPICAL SECTION
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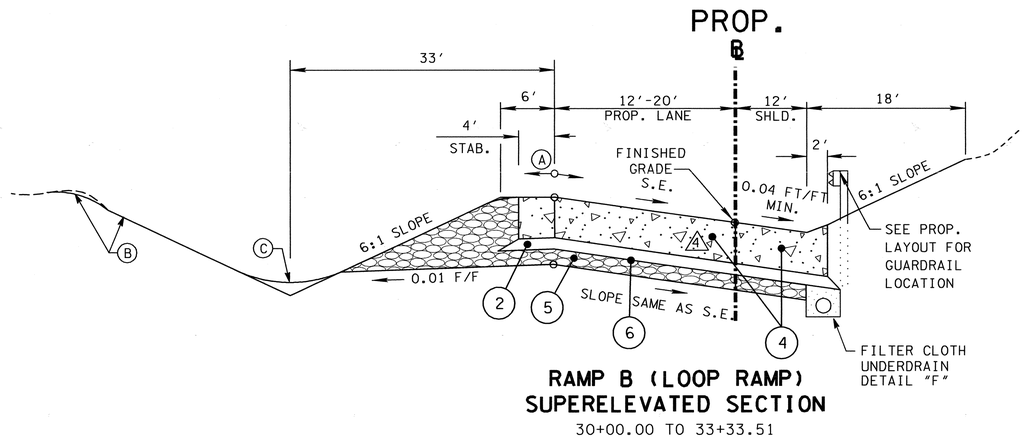

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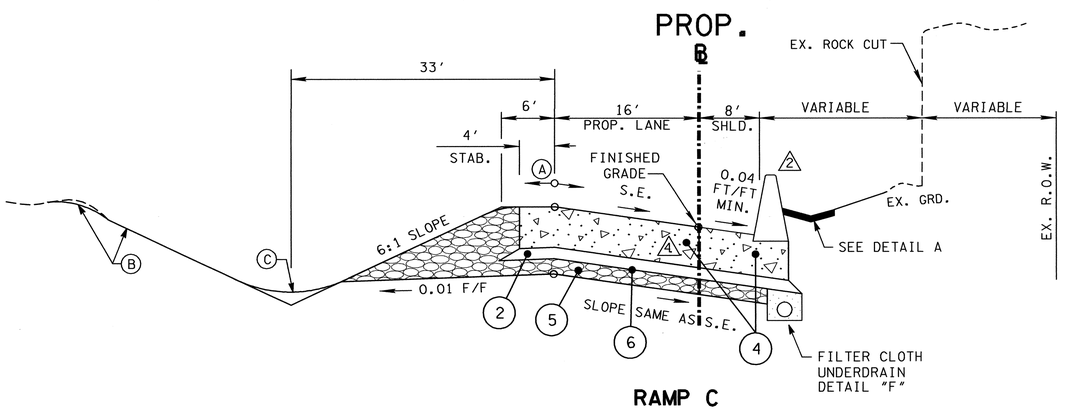

RAMP C
SUPERELEVATED SECTION
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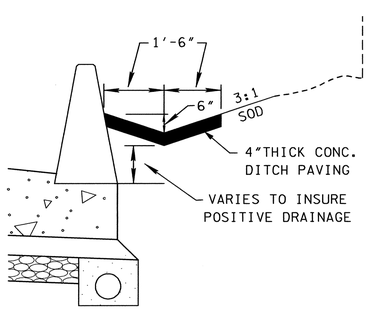
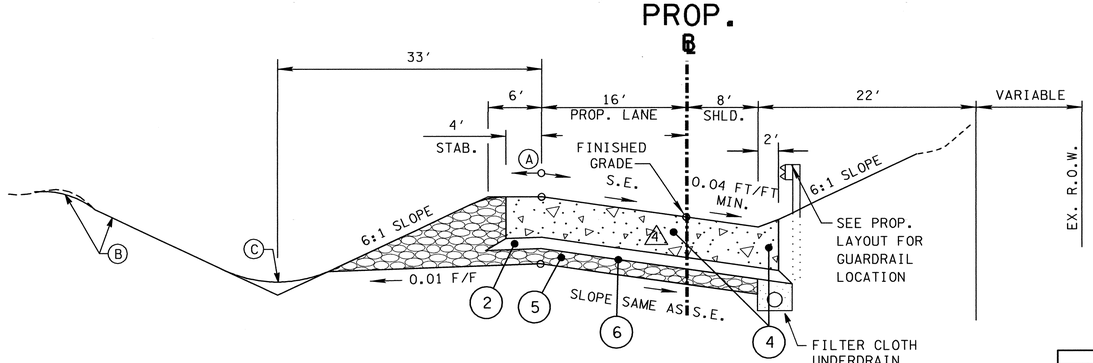


DETAIL A



RAMP C
SUPERELEVATED SECTION
50+70.00 TO 51+75

2 51" SINGLE SLOPE CONC. BARRIER WALL OR RETAINING WALL (SEE PROP. LAYOUT FOR LOCATIONS)

4 SEE STANDARD DRAWING RP-J-15 FOR LONGITUDINAL JOINT CONSTRUCTION AND TIE BAR PLACEMENT.

(A) THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07.

(B) SEE STANDARD DRAWINGS RD01-S-11 AND RD01-S-11B FOR FILLS AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOP OF FILL SLOPES, AND SPECIAL ROCK CUT TREATMENT.

(C) SEE STANDARD DRAWING RD01-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPE.

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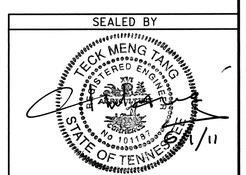

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	2G

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) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY 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

(1) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

GUARDRAIL

(1) 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 COMPLETE IN PLACE.

(2) 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.

DRAINAGE

(1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(2) EXCAVATION FOR PIPE CULVERTS, CATCH BASINS AND JUNCTION BOXES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).

(3) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.

(4) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

UTILITIES

(1) 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 65-31-106 WILL BE REQUIRED.

(2) 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 COOPERATE 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.

(3) 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.

(4) 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.

(5) 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

(1) 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

ROAD CLOSURE

(1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, 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) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(1) WIDE (8 INCH) TEMPORARY PAVEMENT MARKING LINE WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8" BARRIER LINE), LIN. FT.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(1) THE PAVEMENT MARKING ON THE LANE SHIFTS FOR EDGELINES AND LANELINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS 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. 716-05.02 PAINTED PAVEMENT MARKING (8 IN. BARRIER LINE), L.F.

(2) BEFORE OPENING THE LANE SHIFTS TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM 712-09.01 REMOVABLE PAVEMENT MARKING LINE, LIN. FT. 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.

PAVEMENT

PAVING

(1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

GRADED SOLID ROCK

(1) THE ROCK FILL (GRADED SOLID ROCK) MATERIAL SHALL CONSIST OF SOUND, NON-DEGRADABLE LIMESTONE OR SANDSTONE WITH A MAXIMUM SIZE OF 3'-0". AT LEAST 50% (BY WEIGHT) OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1'-0" AND 3'-0" IN DIAMETER, AND NO GREATER THAN 10% (BY WEIGHT) SHALL BE LESS THAN 2" IN DIAMETER. THE MATERIAL SHALL BE ROUGHLY EQUIDIMENSIONAL; THIN, SLABBY MATERIALS WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL BE REQUIRED TO PROCESS THE MATERIAL WITH AN ACCEPTABLE MECHANICAL MEANS (A SCREENING PROCESS CAPABLE OF PRODUCING THE REQUIRED GRADATION). THE ROCK SHALL BE APPROVED BY A REPRESENTATIVE OF THE DIVISION OF MATERIALS AND TESTS BEFORE USE.

(2) THIS GRADED SOLID ROCK MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING FIVE FEET IN DEPTH.

SIGNING

(1) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUTOUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND. THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL EXTRUDED PANEL SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE, AS OUTLINED IN THE STANDARD SPECIFICATIONS. ALL SHIELDS ON GUIDE SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE AS OUTLINED IN THE STANDARD SPECIFICATIONS.

(2) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.

(3) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.

(4) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. THE LAYOUT DRAWINGS SHALL BE SENT TO THE DESIGN DIVISION, SIGNING AND MARKING SECTION, SUITE 1000, J. K. POLK BUILDING, NASHVILLE, TN 37243-0350.

(5) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(6) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.

(7) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

TRAFFIC CONTROL DIRECTIONAL SIGNING

(1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.

(2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, "D" UPPER CASE LETTER. THE

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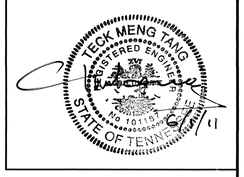

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	2H

GENERAL NOTES

TRAFFIC CONTROL DIRECTIONAL SIGNING CONT'D.

(3) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. 712-01 TRAFFIC CONTROL, L.S., AS DIRECTED BY THE ENGINEER.

(4) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR A STATE HIGHWAY SHIELD, A CARDINAL DIRECTION, AND A DIRECTION ARROW TO ACCOMPANY THE DIRECTIONAL SIGN. THESE SIGNS SHALL BE MOUNTED BELOW THE DIRECTIONAL SIGN.

(5) ALL EXISTING "EMERGENCY REFERENCE MARKERS" AND "HOSPITAL SIGNS" SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING AND TEMPORARY SUPPORTS SHALL BE PAID FOR UNDER ITEM NO. 712-01 TRAFFIC CONTROL, L.S.

(6) WHEN "LOGO" SIGNS ARE ON ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO THE DEPARTMENT FOR THE REIMBURSEMENT OF THE SIGN FACE IF IT IS DAMAGED. ALL WORK IN MOVING THESE "LOGO" SIGNS AND THE TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. 712-01 TRAFFIC CONTROL, L.S., AS DIRECTED BY THE ENGINEER. THE SUPPORTS FOR THE FINAL LOCATION OF THESE SIGNS WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

(7) WHEN EXISTING "TOURIST ORIENTED DIRECTIONAL SIGNS" (TODS) ARE ON NON-ACCESS CONTROLLED CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING THESE "TODS" AND TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. 712-01 TRAFFIC CONTROL, L.S., AS DIRECTED BY THE ENGINEER. NEW SUPPORTS AND SIGN FACE FOR FINAL LOCATION WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(1) 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.

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF 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.

(3) 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.

(4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(5) 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.

(6) 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 LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

LIGHTING

(1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED MARCH 1, 2006 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.

(2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.

(3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.

(4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.

(5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.

(6) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

(7) STANDARDS SHALL BE DESIGNED FOR 80-MPH WIND PRESSURE AND SHALL SUPPORT A 62-POUND LUMINAIRE ON A 15-FOOT ARM.

(8) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.

(9) BRACKET ARM UPSWEEP SHALL BE THE SAME FOR ALL LIGHT STANDARDS OF THE SAME TYPE.

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

(1) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.

(2) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

(3) 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.

(4) CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS AND SHALL BE PHASED FOR PROJECTS THAT HAVE OVER 50 ACRES OF SOIL DISTURBANCE. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION PROJECT, UNLESS APPROVED IN WRITING BY THE ENVIRONMENTAL DIVISION.

SEDIMENT CONTROL

(1) EPSC MEASURES SHALL BE INSTALLED CONCURRENTLY WITH CLEARING OPERATIONS, SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

(2) 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.

(3) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL-VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.

(4) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.

(5) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

(6) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

(7) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

(8) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

(1) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

(2) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.

(3) INSTREAM EPSC DEVICES ARE NOT APPROVED, UNLESS SPECIFIED IN WRITING BY THE ENVIRONMENTAL DIVISION.

(4) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR

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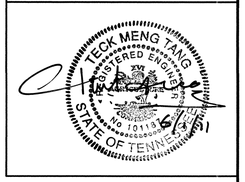

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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GENERAL NOTES

STREAM/WETLAND CONT'D.

AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TVA26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF TDOT ENVIRONMENTAL DIVISION.

(5) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.

(6) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. NO. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.

(7) HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED.

(8) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

(1) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

INSPECTION, MAINTENANCE, REPAIR

(1) 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.

(2) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.

(3) 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.

(4) 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.

(5) 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.

(6) 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 TIMEFRAME, 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

(1) 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.

SWPPP, PERMITS, PLANS, RECORDS

(1) 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 FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS.

(7) 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 I - 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

(1) 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.

(2) 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

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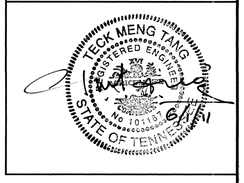

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	2J

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 14, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

ECOLOGY

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.

(2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED BRIDGE WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS WHICH MUST BE FOLLOWED.

(3) ALL BRIDGE PROJECTS WITH THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT IDENTIFIED MUST HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER THE STREAM.

SPECIAL RAILROAD NOTES

(1) THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD'S TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY EACH INDIVIDUAL RAILROAD BEING AFFECTED BY THIS PROJECT SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC IN ANY MANNER.

(2) THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A DETAILED AND COMPREHENSIVE PLAN AND PROCEDURE FOR REVIEW AND APPROVAL BY THE PUBLIC PROJECT ENGINEERS/MANAGERS FOR EACH INDIVIDUAL RAILROAD BEING AFFECTED BY THIS PROJECT FOR THE FOLLOWING TASKS IN THE RAILROADS RIGHT OF WAY.

A.) DEMOLITION OF EXISTING HIGHWAY BRIDGE STRUCTURES OVER THE RAILROAD RIGHT-OF-WAY.

B.) BRIDGE PIER & ABUTMENT FOUNDATION EXCAVATION INDLUDING SHEETING & SHORING.

C.) ERECTION AND INSTALLATION OF BRIDGE BEAMS OVER RAILROAD RIGHT-OF-WAY.

D.) PAINT PREPARATION AND PAINTING OF BRIDGE SUBSTRUCTURE AND/OR SUPERSTRUCTURE.

(3) THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO PREVENT DEBRIS FROM FALLING ON TO THE RAILROAD'S RIGHTS-OF-WAY. THIS SHALL BE ACCOMPLISHED BY USE OF BASKETS, NETTING, WRAPPING SHIELD, OR SIMILARLY EFFECTIVE MEANS THAT WILL NOT INFRINGE ON THE VERTICAL AND/OR HORIZONTAL CLEARANCES IN THESE PLANS. THE TEMPORARY MINIMUM VERTICAL AND HORIZONTAL CONSTRUCTION CLEARANCES THAT THE CONTRACTOR MUST MEET AT ALL TIMES ARE LISTED IN SECTION II OF THE CSXT CRITERIA FOR OVERHEAD BRIDGES, WHICH CRITERIA ARE INCLUDED IN THE RAILROAD SPECIFICATIONS SECTION OF THE STATE CONTRACT PROPOSAL. CSXT WILL NOT ALLOW TRACK OR TRACKS TO BE OBSTRUCTED WITH AT GRADE CRANE MAT PROTECTION. COMPLETE AND FULL ENCLOSURE OF STRUCTURE DEMOLITION WITHIN ALLOWABLE CLEARANCES WILL BE REQUIRED. THE COST OF REMOVING AND DISPOSING OF DEBRIS, AND THE COMPLETE AND FULL PROTECTION OF THE CONTRACTOR'S WORK AREA FOR DEMOLITION SHALL BE INCLUDED IN UNIT ITEMS BID ON.

(4) NO SCAFFOLDING OR TEMPORARY FRAMEWORK WILL BE ALLOWED THAT INFRINGE ON THE TEMPORARY MINIMUM HORIZONTAL AND/OR VERTICAL CONSTRUCTION CLEARANCES LISTED IN THE CSXT CRITERIA FOR OVERHEAD BRIDGES AS DESCRIBED ABOVE WITHOUT THE PRESENCE AND PERMISSION OF THE AUTHORIZED CSXT RAILROAD FLAGGER. IT IS ANTICIPATED THAT FULL TIME RAILROAD FLAGGING SERVICES WILL BE REQUIRED FOR ANY ASPECT OF THE CONTRACTOR'S WORK IN THE BRIDGE SPANS OVER THE RAILROAD'S RIGHTS-OF-WAY.

(5) SEE AGREEMENT/STATE CONTRACT SPECIAL PROVISION 105C FOR INSURANCE AND RAILROAD FLAGGING SERVICES REQUIREMENTS.

(6) THE CONTRACTOR SHALL MAINTAIN A PROACTIVE METHOD OR METHODS TO PREVENT CONSTRUCTION AREA RUNOFF, DEBRIS, PETROLEUM AND/OR CHLORINATED SOLVENT BASED MATERIALS, PAINTS, ETC. FROM MIGRATING OR OTHERWISE ENTERING INTO THE CSXT DRAINAGE DITCHES AND/OR OTHER RIGHTS-OF-WAY OF THE RAILROAD WITHIN OR NEAR THE LIMITS OF THIS PROJECT.

MISCELLANOUS

(1) THE COLOR OF PROPOSED GUARDRAILS, SIGN SUPPORTS, AND LIGHTING FIXTURES SHALL BE DARK BROWN FEDERAL COLOR STANDARD 595 B, COLOR NO. 20059.

(2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING THE UNDERGROUND UTILITY CONDUITS AND DEVICES FOR ALL LIGHTING, FIBER OPTIC, AND ITS UTILITIES.

(3) THE CONTRACTOR SHALL USE A STEEL PLATE OVER QWEST'S UNDERGROUND UTILITIES TO DISTRIBUTE THE LOAD AND PREVENT DAMAGE TO THEIR UTILITIES.

(4) THE COLOR OF CONCRETE BARRIER SHALL MATCH THE COLOR OF THE EXISTING CONCRETE BARRIER WALL AS FOUND IN THE WESTBOUND LANES.

(5) THE CONTRACTOR FOR THE I-440 WIDENING PROJECT (PIN NO. 113898.01) WILL NEED TO COORDINATE WITH THE CONTRACTOR WORKING ON THE I-440 BRIDGE REPAIR PROJECT FOR STRUCTURES CROSSING OVER I-440 (PIN NO. 115164.00) DURING THE LIFE OF THE PROJECT. WORK TO BE COMPLETED INCLUDES VARIOUS TYPES OF CONCRETE REPAIRS THAT WILL REQUIRE ACCESS TO THE UNDERSIDE OF THE BRIDGE STRUCTURES. COORDINATION OF TRAFFIC CONTROL, LANE AND SHOULDER CLOSURES AND WORK ZONE SAFETY WILL BE REQUIRED AT WINFORD AVENUE, NOLENSVILLE ROAD, FOSTER AVENUE AND S. LYLE / STIRTON ROAD. COST FOR COORDINATING TRAFFIC CONTROL ITEMS AND ACCESS SHALL BE INCLUDED IN THE RESPECTIVE PROJECTS.

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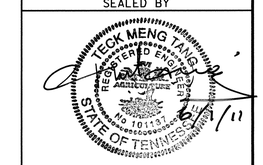

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

CATCH BASINS AND JUNCTION BOXES

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS (INCHES)	DEPTH (FT.)	STANDARD DRAWING	PAY ITEMS: TYPE 10 611-10.01 0' - 4'	TYPE 38 611-38.01 0' - 4'	TYPE 38 611-38.02 4' - 8'	TYPE 41 611-41.01 0' - 4'	TYPE 41 611-41.02 >4' - 8'	# 1 J.B. 611-02.10	ADJUST EX. CATCHBASIN 611-09.01	CAPPING EX. CATCHBASIN 611-09.03	TYPE 1 FILTER ASSEMB. 209-40.41
	MAINLINE	417+54.50	42.3' RT	CB 1	553.78	EX. CB	EX.	2.78	-									1
	RAMP "B"	32+00	12.0' RT	CB 2	552.75	#10 LPC	32" X 26"	3.53	D-CB-10LPC	1								
	RAMP "B"	32+27	12.0' RT	CB 3	551.97	#10 LPC	32" X 26"	3.72	D-CB-10LPC	1								
5A	RAMP "A"	18+27	8.2' RT	CB22	568.45	#10 LPC	32" X 26"	3.80	D-CB-10LPC	1								
	RAMP "A"	18+77	6.9' RT	CB22A	568.50	EX. CB	EX	5.19	-									1
	RAMP "B"	32+29	1.8' RT	JB 1	-	JCT. BOX	EX	-	D-JBS-1								1	
	MAINLINE	424+12.50	37.0' RT	CB 4	537.78	# 41 LP	32" X 32"	3.49	D-CB-41LP				1					1
	MAINLINE	426+90.00	36.3' RT	CB 5	531.32	# 41 LP	32" X 32"	3.42	D-CB-41LP				1					1
	MAINLINE	428+67.00	36.2' RT	CB 6	529.60	EX C.B.	-	3.59	-							1		1
	RAMP "C"	53+61	16.4' RT	CB 7	538.01	EX C.B.	-	2.13	-									1
	MAINLINE	430+50.00	29.3' RT	CB 8A	528.75	# 10 LPC	32" X 26"	3.40	D-CB-10LPC	1								
(1)	RAMP "C"	56+25	8.0' RT	CB 8	528.18	# 41 LP	32" X 32"	3.00	D-CB-41LP				1					1
	RAMP "C"	58+35	13.0' RT	CB 24	527.20	#38	32" X 32"	3.00	D-CB-38S		1							1
(1)	RAMP "C"	58+35	8.0' RT	CB 25	527.05	# 41 LP	32" X 32"	3.00	D-CB-41LP				1					1
6A	MAINLINE	426+91 +/-	23.4' RT	JB 2	-	JCT. BOX	-	-	D-JBS-1						1			
	MAINLINE	424+15.00	21.5' RT	JB 4	-	JCT. BOX	-	-	D-JBS-1								1	
	RAMP "C"	58+35	4.0' LT	JB 8	527.51	JCT. BOX	32" X 32"	3.51	D-JBS-1						1			
	MAINLINE	435+49.00	37.8' RT	CB 10	525.31	# 41 SB	4' X 4'	6.79	D-CB-41LP					1				1
	MAINLINE	439+00.00	30.8' RT	CB 11	523.25	# 41 LP	32" X 32"	4.00	D-CB-41LP				1					1
	MAINLINE	440+80.00	27.2' RT	CB 12	522.07	# 41 LP	32" X 32"	3.97	D-CB-41LP				1					1
	MAINLINE	442+76.00	23.2' RT	CB 13	521.01	# 41 P	4' X 3'	4.71	D-CB-41LP					1				1
	MAINLINE	443+85.00	22.0' RT	CB 14	520.52	# 41 P	4' X 3'	6.41	D-CB-41LP					1				1
	MAINLINE	439+00.00	35.7' RT	CB 26	523.60	# 38	32" X 32"	3.95	D-CB-38S		1							1
7A	MAINLINE	443+50.00	26.3' RT	CB 27	520.70	# 38	32" X 32"	4.10	D-CB-38S			1						1
	MAINLINE	443+50.00	21.0' RT	JB 6	519.31	JCT. BOX	32" X 32"	3.37	D-JBS-1						1			
	RAMP "C"	59+75	4.0' LT	JB 9	526.73	JCT. BOX	32" X 32"	3.38	D-JBS-1						1			
	MAINLINE	439+00.00	18.8' RT	JB 10	522.01	JCT. BOX	32" X 32"	3.41	D-JBS-1						1			
	MAINLINE	440+80.00	15.2' RT	JB 11	520.83	JCT. BOX	32" X 32"	3.28	D-JBS-1						1			
	MAINLINE	442+76.00	11.3' RT	JB 12	519.76	JCT. BOX	32" X 32"	3.31	D-JBS-1						1			
	MAINLINE	449+83.00	21.6' RT	CB 15	516.42	# 41 LP	32" X 32"	3.37	D-CB-41LP				1					1
	MAINLINE	450+10.00	24.9' LT	CB 16	517.24	EX C.B.	-	9.82	EX. C.B.									1
	MAINLINE	451+50.00	18.8' RT	CB 17	515.61	# 41 LP	32" X 32"	3.36	D-CB-41LP				1					1
	MAINLINE	452+47.00	29.0' RT	CB 18	513.03	EX C.B.	-	3.36	EX C.B.									1
	MAINLINE	452+48.00	38.8' LT	CB 19	516.48	# 10 LPC	32" X 26"	3.38	D-CB-10LPC	1								
8A	MAINLINE	453+50.00	15.5' RT	CB 20	515.67	# 41 LP	32" X 32"	3.32	D-CB-41LP				1					1
	MAINLINE	456+10.00	44.9' LT	CB 21	518.82	# 10 LPC	32" X 26"	3.32	D-CB-10LPC	1								
	MAINLINE	448+00.00	24.0' RT	CB 23	517.50	# 41 LP	32" X 32"	3.40	D-CB-41LP				1					1
	MAINLINE	456+11.40	30.3' LT	JB 3	-	JCT. BOX	-	-	D-JBS-1								1	
	MAINLINE	452+48.70	31.6' LT	JB 5	-	JCT. BOX	-	-	D-JBS-1								1	
TOTALS										6	2	1	10	3	7	1	4	22

(1) CB DEPTH DEVIATES FROM STANDARD MINIMUM TO AVOID CONFLICT WITH 10" SANITARY SEWER PIPE.

(1) CB DEPTH DEVIATES FROM STANDARD MINIMUM TO AVOID CONFLICT WITH 10" SANITARY SEWER PIPE.

STORM DRAINAGE PIPES

SHEET NO.	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.) 18"	24"	30"	36"	42"	BEDDING MATERIAL (C.Y.)	RIP-RAP 709-05.06 (TON)
	CB 2	549.22	CB 3	548.35	3.63	24					5.1	
	CB 3	548.25	JB 1	548.08	2.12	8					1.7	
5A	CB22	564.65	CB22A	563.41	2.58		48				12.8	
	CB22A	563.31	JB7	-	-	-					-	
	CB 4	534.29	JB 4	533.75	4.50	12					2.5	
	CB 5	527.90	JB 2	527.10	7.27	11					2.3	
	CB 8A	525.35	CB 8	525.18	0.53	32					6.8	
	CB 8	525.18	CB 25	524.15	0.50	206					43.7	
6A	CB 24	524.20	CB 25	524.15	1.25	4					0.8	
	CB 25	524.05	JB 8	524.00	0.50	10					2.1	
	JB 8	524.00	JB 9	523.45	0.40	139					29.5	
	JB 2	527.00	CB 6	526.20	0.46	175*					-	
	JB9	523.35	CB10	518.62	3.53	134					28.4	
	CB 11	519.25	JB 10	518.70	5.50	10					2.1	
	JB 10	518.60	JB 11	517.65	0.53	178					37.7	
	CB 12	518.10	JB 11	517.65	4.50	10					2.1	
	JB 11	517.55	JB 12	516.55	0.52	194					41.1	
7A	JB 12	516.45	CB 13	516.40	0.50	10					2.1	
	CB 13	516.30	JB 6	515.94	0.50	72					15.3	
	CB 26	519.65	CB 11	519.35	7.50	4					0.8	
	CB 27	516.60	JB 6	515.94	16.50	4					0.8	
	JB 6	515.94	CB 14	515.66	0.88	32					6.8	
	CB 15	513.05	CB 17	512.35	0.42	165					35.0	
	CB 17	512.25	CB 18	510.43	1.90	96					20.4	
	CB 19	513.10	JB 5	513.00	2.50	4					0.8	
8A	CB 20	512.35	CB 18	510.43	1.90	101					21.4	
	CB 21	515.50	JB 3	515.00	3.85	13					2.8	
	CB 23	514.10	CB 15	513.15	0.52	181					38.4	
TOTALS						1654	48	0	0	0	363	0

1) BEDDING MATERIAL WILL NOT BE PAID FOR AS A SEPARATE ITEM, BUT WILL BE INCLUDED IN THE COST OF THE PROPOSED PIPES.

* EXIST. 18" RCP (NOT INCLUDED IN QUANTITIES)

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	2K

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE LT	SIDE RT	STATION FROM	STATION TO	GUARDRAIL: BRIDGE ENDS 705-11.01 (L.F.)	GUARDRAIL: SINGLE TYPE 2 705-11.03 (L.F.)	TERMINAL ANCHORS: TYPE 21 705-11.13 (EACH)	TERMINAL ANCHORS: TYPE 38 705-11.11 (EACH)	REMARKS
5A	RAMP B		X	31+80	32+30	26.9			1	
6A	RAMP C		X	51+25	51+75	26.9			1	
8A	I-440 E.B.	X		449+56	459+90	26.9	1007			
TOTALS						80.7	1007	0	2	

PAVEMENT QUANTITIES

LOCATION	PAY ITEMS 303-01 (TON)	313-03 (S.Y.)	402-01 (TON)	402-02 (TON)	501-01.03 (S.Y.)	50101.04 (S.Y.)
MAINLINE	4744	(1)14020	21	84		14020
RAMPS	1964	4492	7	27	4492	
TOTALS	6708	4492	28	111	4492	14020

(1) DOES NOT INCLUDE ADDITIONAL QUANTITIES DUE TO VARIABLE THICKNESS NEEDED ON THE HIGH SIDE.

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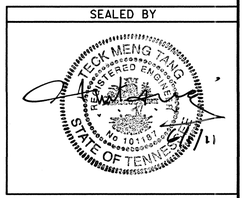

ESTIMATED GRADING QUANTITIES (20% SHRINKAGE)

STATION TO STATION	ROAD AND DRAINAGE EXC. (UNCL.) COMMON - C.Y.	ROAD AND DRAINAGE EXC. (UNCL.) S. ROCK - C.Y.	BORROW EXCAVATION UNCL. - C.Y.	BORROW EXCAVATION S. ROCK - C.Y.	CHANNEL EXC. C.Y.	EXCESS EXC. WASTE C.Y.	EMBANKMENT (COMP.-IN-PLACE) C.Y.
MAINLINE	14650					11302	156
RAMP B	569					373	0
RAMP C	940					581	48
TOTALS	16159	0	0	0	0	12256	204

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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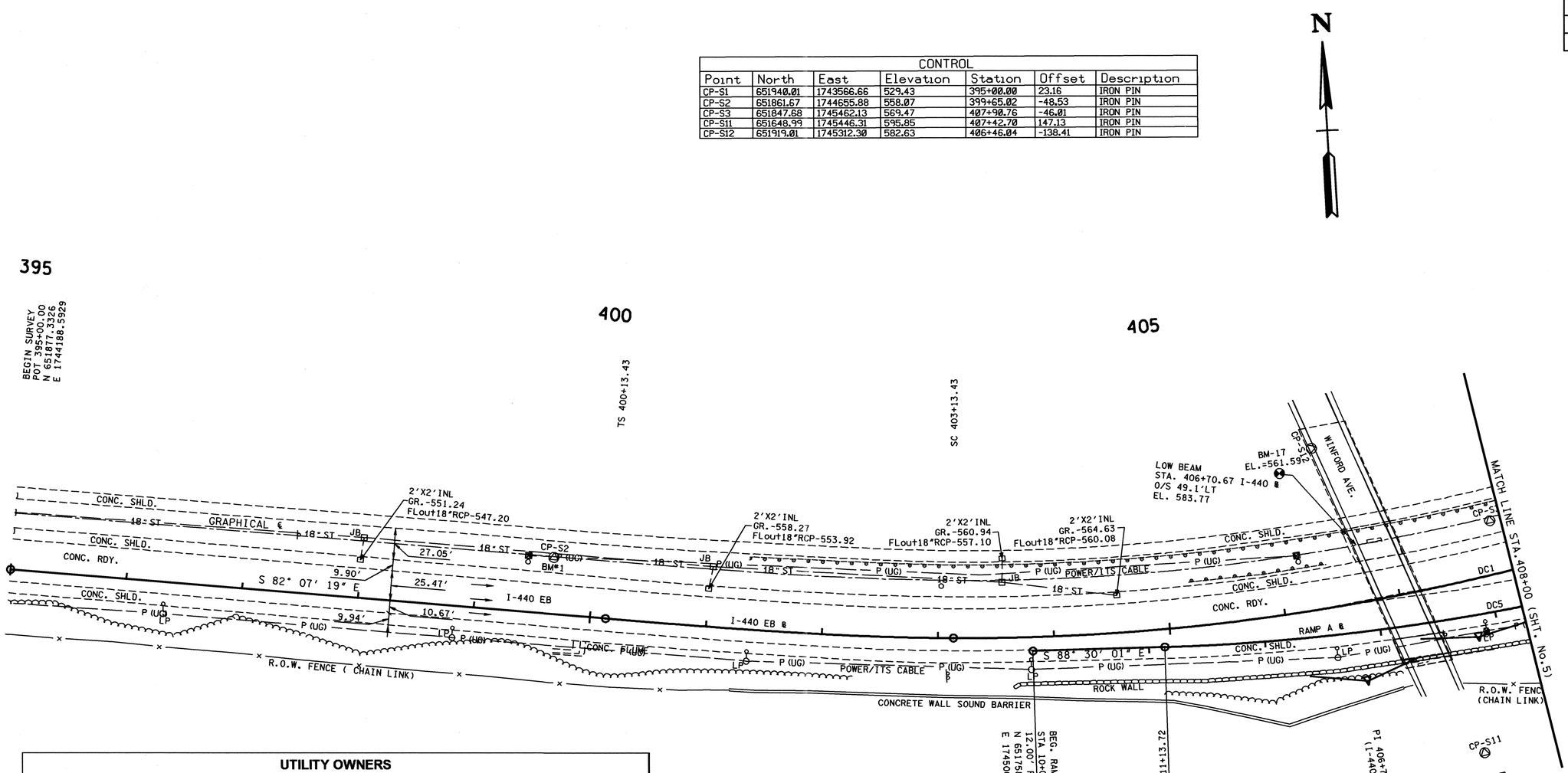
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	4
CONST.	2011	STP-I-440-4(78)	4

CONTROL						
Point	North	East	Elevation	Station	Offset	Description
CP-S1	651940.01	1743566.66	529.43	395+00.00	23.16	IRON PIN
CP-S2	651861.67	1744655.88	558.07	399+65.02	-48.53	IRON PIN
CP-S3	651847.68	1745462.13	569.47	407+90.76	-46.01	IRON PIN
CP-S11	651648.99	1745446.31	595.85	407+42.70	147.13	IRON PIN
CP-S12	651919.01	1745312.30	582.63	406+46.04	-138.41	IRON PIN



UTILITY OWNERS

UTILITY	OWNER	PHONE NO.	CONTACT	ADDRESS	CITY	STATE	ZIP CODE
TELEPHONE	AT&T	O: 615-214-4871 C: 615-945-4282	David Huffaker Dh8862@att.com	333 Commerce St., Rm. 23C142	Nashville	TN	37201
FIBER OPTIC	Qwest Communications	O: 303-299-0170 C: 720-260-2514	George McElvain George.mcelvain@qwest.com	1801 California St. Ste. 426	Denver	Co	80202
WATER & SEWER	Metro Water & Sewer	O: 615-862-4570 C: 615-566-3355	Mike Morris Mike.morris@nashville.gov	1600 2nd Ave. North	Nashville	TN	37208
	Metro Public Works	O: 615-862-8714	Billy Davis Billy.davis@nashville.gov	720 South Fifth St.	Nashville	TN	37206
GAS	Piedmont Natural Gas Co.	O: 615-872-2389 C: 615-533-3498	Roger Byrd roger.byrd@piedmontng.com	83 Century Blvd.	Nashville	TN	37214
POWER	Nashville Electric Service	O: 615-747-3530	Hank Dunning hdunning@nespower.com	1214 Church St. Rm. 353	Nashville	TN	37203
CABLE TV	Comcast	O: 615-244-7462 X 1115332	Steven Lencse Steve_lencse@cable.comcast.com	2501 McGavock Pk. Suite 1200	Nashville	TN	37214
RAILROAD	CSX Railroad	904-359-1177 FAX: 904-366-4042	Shelby Stevenson shelby_stevenson@csx.com	500 Water St. SC/J-301	Jacksonville	FL	32202
	URS Corporation	317-532-5481 FAX: 317-532-5498	Larry Shaw larry_shaw@urscorp.com	One Indiana Square Ste. 2100	Indianapolis	IN	46204

JUNCTION BOX SURVEY NOTE
JUNCTION BOXES, CONNECTIONS, AND SIZES FOR DRAINAGE ARE APPROXIMATE. THEY ARE NOT FIELD VERIFIED AND ARE SHOWN PER RECORDED PLANS.

I-440 EB ℄
CURVE DC1
PI 406+71.98
N 651,716.6972
E 1,745,349.5125
Δs 29° 04' 54" (LT)
θs 4° 23' 15"
Δc 20° 18' 25" (LT)
Dc 2° 55' 30"
Rc 1,958.86
Lc 694.26
Ts 658.55
Ls 300.00
SE 0.055 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 300'

RAMP A ℄
CURVE DC5
PI 13+84.21
N 651,748.4215
E 1,745,446.9809
Δs 15° 56' 07" (LT)
θs OUT 3° 00' 00"
Δc 12° 56' 07" (LT)
Dc 3° 00' 00"
Rc 1,909.86
Lc 431.17
Ts IN 270.49
Ts OUT 364.25
Ls OUT 200.00
SE EXIST. FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 200'

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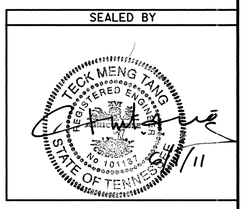

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 395+00 TO STA. 408+00

SCALE: 1"= 50'

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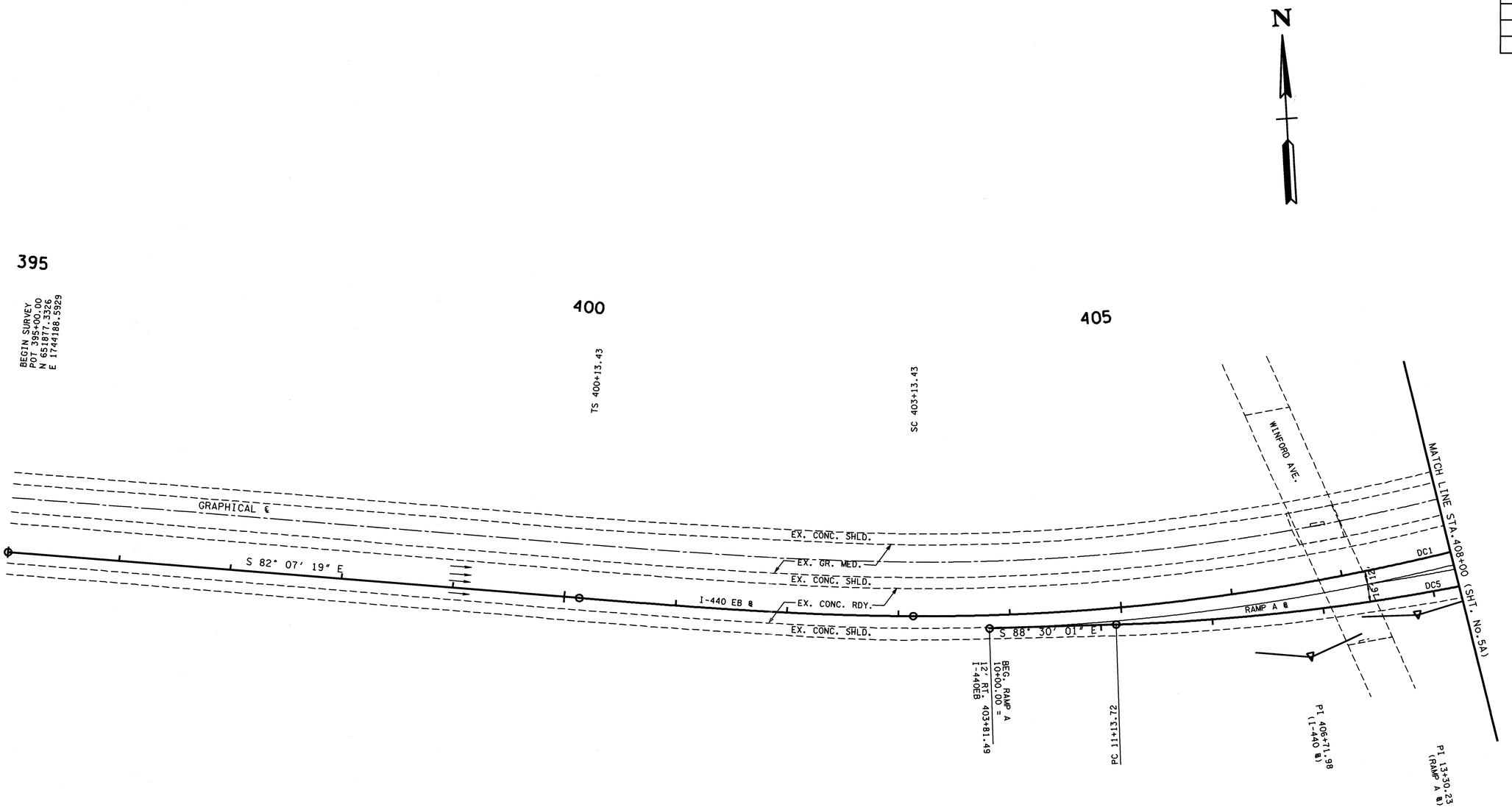
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	4A
CONST.	2011	STP-I-440-4(78)	4A



I-440 EB ℄	
CURVE	DC1
PI	406+71.98
N	651,716.6972
E	1,745,349.5125
Δs	29° 04′ 54″ (LT)
θs	4° 23′ 15″
Δc	20° 18′ 25″ (LT)
Dc	2° 55′ 30″
Rc	1,958.86
Lc	694.26
Ts	658.55
Ls	300.00
SE	0.055 FT/FT
	DESIGN SPEED 60 MPH
	TRANS. LENGTH 300′

RAMP A ℄	
CURVE	DC5
PI	13+84.21
N	651,748.4215
E	1,745,446.9809
Δs	15° 56′ 07″ (LT)
θs	OUT 3° 00′ 00″
Δc	12° 56′ 07″ (LT)
Dc	3° 00′ 00″
Rc	1,909.86
Lc	431.17
Ts	IN 270.49
	Ts OUT 364.25
Ls	OUT 200.00
SE	EXIST. FT/FT
	DESIGN SPEED 60 MPH
	TRANS. LENGTH 200′

SEALED BY

TECK MENG TANG
REGISTERED ENGINEER
AGRICULTURAL
No. 101187
STATE OF TENNESSEE
6/1/11

COORDINATE VALUES ARE NAD/83(1995), AND ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 395+00 TO STA. 408+00

SCALE: 1″= 50′

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	4B
CONST.	2011	STP-I-440-4(78)	4B

BM#1 / CP-S2
STA. 399+65.02, -48.53'(LT)
N 651861.6702
E 1744655.8800
ELEV. 558.07
IRON PIN W/ CAP LOCATED IN GRASS MEDIAN OF I-440.

BM#17
STA. 406+13.31, -121.19'(LT)
N 651898.7942
E 1745283.6094
ELEV 561.59
CHISEL MARK IN CONCRETE OF WEST BOUND SHOULDER

BM#2 / CP-S3
STA. 407+90.76, -46.01'(LT)
N 651847.6813
E 1745462.1290
ELEV 569.47
IRON PIN W/ CAP LOCATED IN GRASS MEDIAN OF I-440.

EARTHWORK CALCULATIONS

EXCAVATION (UNCL.) 16254 C.Y. (INCL. 2367 C.Y. TOPSOIL FROM EXC. AREAS AND 73 C.Y. FROM EMB. AREAS)

EXC.

EMB.

EMBANKMENT 210 C.Y. (INCL. 73 C.Y. TO REPLACE STRIPPED TOPSOIL IN EMB. AREAS)

16254 C.Y.
2367 C.Y.
73 C.Y.
13814 C.Y. AVAILABLE FOR BALANCE

13814 C.Y. vs. 210 C.Y. 20% SHR.

WASTE MATERIAL 11302 C.Y.

EX. WINFORD AVE. OVERPASS
LOW CHORD EL.-583.77

EXIST. & PROP. FIN. GR.

P (UG)
POWER/ITS CABLE
BM#1
BM#2
BM#17

400+13.43
e = -0.020 FT/FT

403+13.43
e = +0.055 FT/FT

RT. E.O.P.

S.E. DIAGRAM

SEALED BY

TECK MENG TANG
REGISTERED ENGINEER
AGRICULTURE
No. 101187
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 395+00 TO STA. 408+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	5
CONST.	2011	STP-I-440-4(78)	5

CONTROL						
Point	North	East	Elevation	Station	Offset	Description
CP-S4	652130.60	1746279.06	562.25	416+65.46	-49.67	IRON PIN

N

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00 I-440 EB
N 651861.6581
E 1745707.2763

410 415 420

CS 410+07.69
ST 413+07.69
BM-16 EL.=563.39
BM-15 EL.=548.52
DMH TOP-553.87
FLin18"RCP-546.79
FLin18"RCP-545.33
FLin24"RCP-544.86
FLout24"RCP-544.65
NOT FIELD VERIFIED
24" ST 9.43'
MATCH LINE STA. 408+00 (SHT. No.4)
MATCH LINE STA. 421+00 (SHT. No.6)
9.39'
30.65'
9.85'
23.99'
9.99'
CONC. SHLD.
EX. GR. MED.
CP-S4
J.B.
24" ST
18" ST
36.07'
9.86'
23.97'
DC1
DC5
I-440 EB
I-440 EB
CONC. RDY.
CONC. SHLD.
PI 31+81.10 N 68° 47' 47" E
P (UG)
LP
POWER/ITS CABLE
4" CONC. FLUME
24" ST
ROCK WALL
RAMP A
24.04'
N 75° 33' 52" E
CUT SLOPE
PI 22+06.11
2'X3' INL
GR.-553.78
FLin24"RCP-551.10
FLout24"RCP-551.00
2'X3' INL
GR.-553.22
FLin18"RCP-548.08
FLout18"RCP-547.99
N 652194.5686
E 1746855.9504
END RAMP B
ST 33+33.51 = 27.00' RT. - STA. 420+39.97 I-440 EB
RAMP B
DC7
20.06'
CS 30+83.51
BEGIN RAMP B
PC 30+00.00
N 651947.1661
E 1746513.1271
CURB INL
GR.-568.01
FLout12"RCP-584.96
CONCRETE WALL SOUND BARRIER
CS 15+44.90
ST 17+44.90
EX. CONC. RET. WALL
EX. JB
INLET
GR.-565.12
FLout24"RCP-561.67
2'X2' INL
GR.-568.50
FLout 24"RCP
-563.31
PC 19+72.79
CONC. RAMP
S 68° 20' 46" E
PT 24+23.91
END RAMP A
EOT 24+53.75
N 651851.0844
E 1746490.9797
15
20
30

JUNCTION BOX SURVEY NOTE
JUNCTION BOXES, CONNECTIONS, AND SIZES FOR DRAINAGE ARE APPROXIMATE. THEY ARE NOT FIELD VERIFIED AND ARE SHOWN PER RECORDED PLANS.

RAMP A ℄
CURVE DC6
PI 22+06.11
N 651,954.2022
E 1,746,246.3866
Δ 36° 05' 22" (RT)
D 8° 00' 00"
R 716.20
L 451.12
T 233.33
SE EXIST. FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 160'

RAMP B ℄
CURVE DC7
PI 31+81.10
N 652,104.0874
E 1,746,422.7211
Δs 98° 44' 37" (RT)
Θs OUT 28° 38' 53"
Δc 70° 05' 44" (RT)
Dc 38° 11' 50"
Rc 150.00
Lc 183.51
Ts IN 181.10
Ts OUT 250.17
Ls OUT 150.00
SE 0.058 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 150' (OUT)

SEALED BY
TECK MENG TANG
REGISTERED ENGINEER
No. 101187
STATE OF TENNESSEE
5/12

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 408+00 TO STA. 421+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

STORM SEWER PIPES

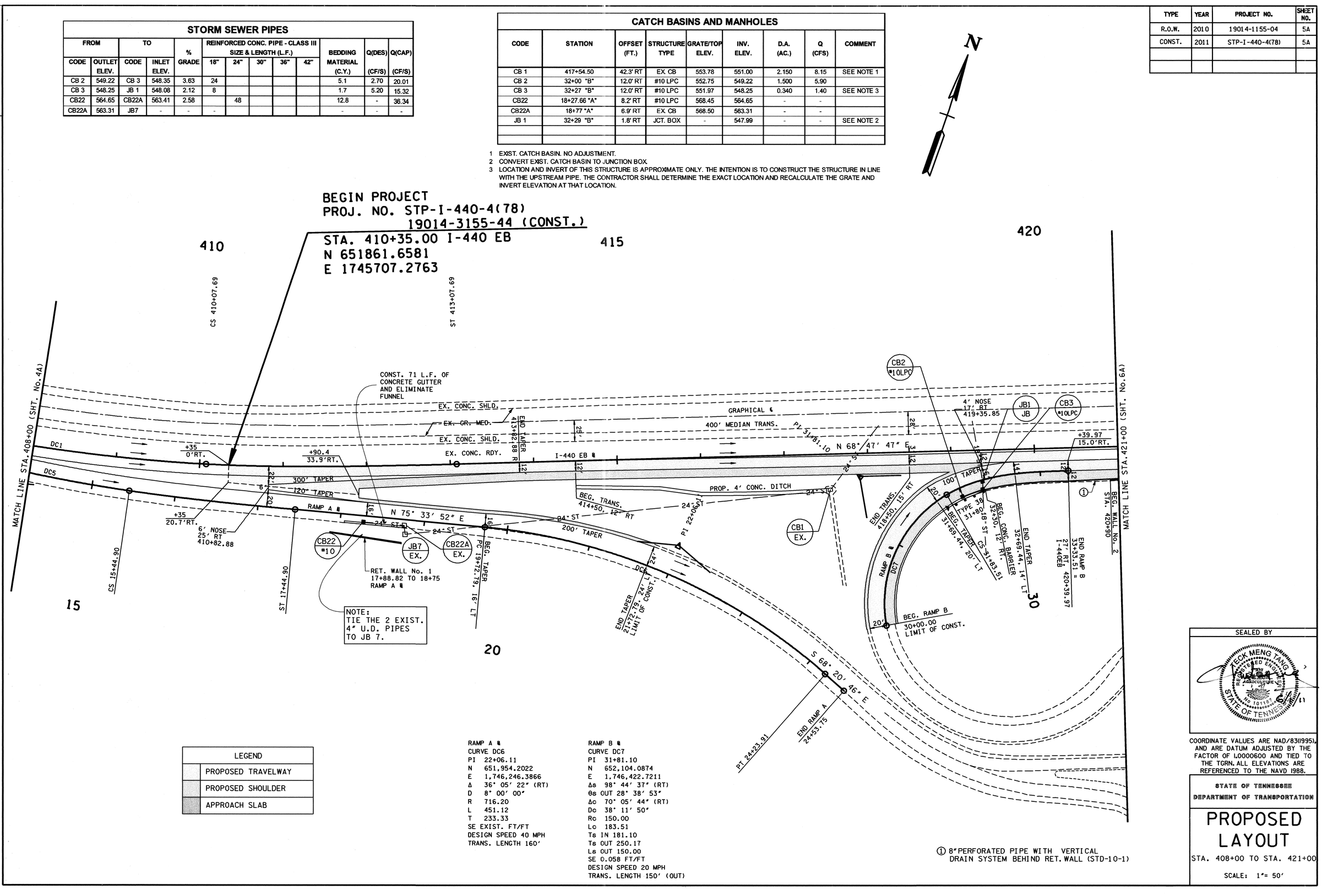
FROM		TO		%	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.)					BEDDING	Q(DES)	Q(CAP)
CODE	OUTLET ELEV.	CODE	INLET ELEV.	GRADE	18"	24"	30"	36"	42"	MATERIAL (C.Y.)	(CF/S)	(CF/S)
CB 2	549.22	CB 3	548.35	3.63	24					5.1	2.70	20.01
CB 3	548.25	JB 1	548.08	2.12	8					1.7	5.20	15.32
CB22	564.65	CB22A	563.41	2.58		48				12.8	-	36.34
CB22A	563.31	JB7	-	-	-					-	-	-

CATCH BASINS AND MANHOLES

CODE	STATION	OFFSET (FT.)	STRUCTURE TYPE	GRATE/TOP ELEV.	INV. ELEV.	D.A. (AC.)	Q (CFS)	COMMENT
CB 1	417+54.50	42.3' RT	EX CB	553.78	551.00	2.150	8.15	SEE NOTE 1
CB 2	32+00 "B"	12.0' RT	#10 LPC	552.75	549.22	1.500	5.90	
CB 3	32+27 "B"	12.0' RT	#10 LPC	551.97	548.25	0.340	1.40	SEE NOTE 3
CB22	18+27.66 "A"	8.2' RT	#10 LPC	568.45	564.65	-	-	
CB22A	18+77 "A"	6.9' RT	EX CB	568.50	563.31	-	-	
JB 1	32+29 "B"	1.8' RT	JCT. BOX	-	547.99	-	-	SEE NOTE 2

1 EXIST. CATCH BASIN. NO ADJUSTMENT.
2 CONVERT EXIST. CATCH BASIN TO JUNCTION BOX.
3 LOCATION AND INVERT OF THIS STRUCTURE IS APPROXIMATE ONLY. THE INTENTION IS TO CONSTRUCT THE STRUCTURE IN LINE WITH THE UPSTREAM PIPE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND RECALCULATE THE GRATE AND INVERT ELEVATION AT THAT LOCATION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	5A
CONST.	2011	STP-I-440-4(78)	5A



LEGEND	
	PROPOSED TRAVELWAY
	PROPOSED SHOULDER
	APPROACH SLAB

RAMP A ℄
CURVE DC6
PI 22+06.11
N 651,954.2022
E 1,746,246.3866
Δ 36° 05' 22" (RT)
D 8° 00' 00"
R 716.20
L 451.12
T 233.33
SE EXIST. FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 160'

RAMP B ℄
CURVE DC7
PI 31+81.10
N 652,104.0874
E 1,746,422.7211
Δs 98° 44' 37" (RT)
θs OUT 28° 38' 53"
Δc 70° 05' 44" (RT)
Dc 38° 11' 50"
Rc 150.00
Lc 183.51
Ts IN 181.10
Ts OUT 250.17
Ls OUT 150.00
SE 0.058 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 150' (OUT)

① 8"PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM BEHIND RET. WALL (STD-10-1)

SEALED BY
ZECK MENG TANG REGISTERED ENGINEER AGRICULTURE No. 101187 STATE OF TENNESSEE

COORDINATE VALUES ARE NAD/83(1995), AND ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 408+00 TO STA. 421+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	5B
CONST.	2011	STP-I-440-4(78)	5B

BM*16
STA. 412+20.27, -131.06'(LT)
ELEV 563.39
CHISEL MARK IN CONCRETE OF
WEST BOUND SHOULDER

BM*3 / CP-S4
STA. 416+65.46, -49.67'(LT)
N 652130.5982
E 1746279.0650
ELEV 562.25
IRON PIN W/ CAP LOCATED IN GRASS
MEDIAN OF I-440.

BM*15
STA. 420+87.12, -127.28'(LT)
N 652355.4622
E 1746644.1063
ELEV 548.52
CHISEL MARK IN CONCRETE OF
WEST BOUND SHOULDER

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
~~19014-3155-44 (CONST.)~~
STA. 410+35.00 I-440 EB

EXIST. & PROP.
FIN. GR.

P (UG)

BM*16

BM*3

POWER/ITS CABLE

CB1
EX.

VPI 420+90.00
EL. 552.48

BM*15

2' x 3' INLET
STA. 417+54.52
O/S 42.27'RT.
GR. 553.78
INV. 551.00

24"RCP
STA. 417+87.87
EL. N/A
SKEW 51°43'58" LT.
DF - RT. TO. LT.

18"RCP
STA. 419+31.67
EL. N/A
SKEW 82°09'13" RT.
DF - LT. TO. RT.

2' x 3' INLET
STA. 419+36.86
O/S 37.03' RT.
GR. 553.22
INV. 547.99

RT. E.O.P.

410+07.69
e = -0.055 FT/FT

413+07.69
e = -0.020 FT/FT

S.E. DIAGRAM

605 600 595 590 585 580 575 570 565 560 555 550 545 540 535 530 525 520 515 510

408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

SEALED BY

TECK MENG TANG
REGISTERED ENGINEER
No. 101151
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 408+00 TO STA. 421+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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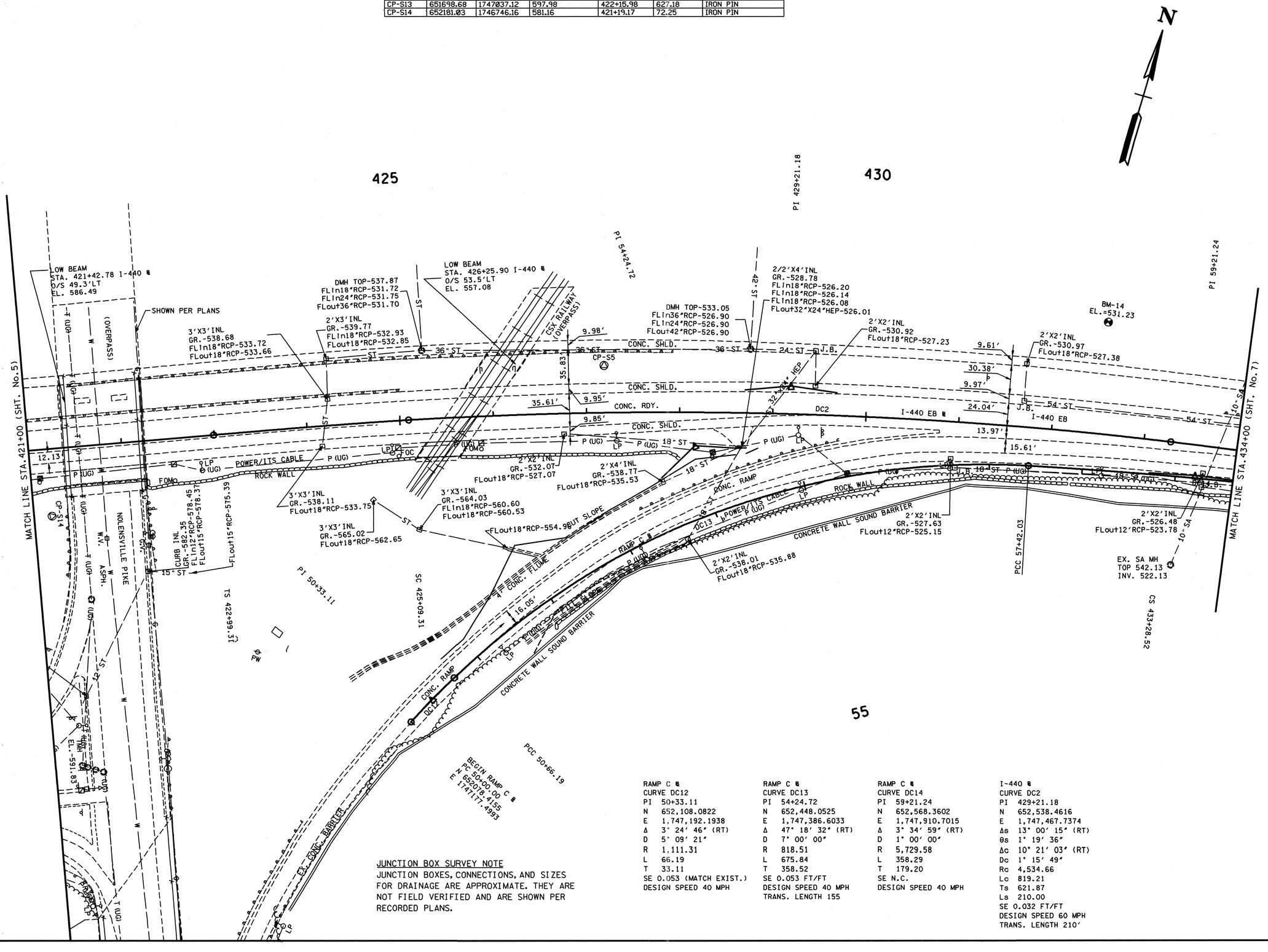
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	6
CONST.	2011	STP-I-440-4(78)	6

CONTROL

Point	North	East	Elevation	Station	Offset	Description
CP-S5	652502.41	1747269.04	536.79	427+19.69	-49.75	IRON PIN
CP-S13	651698.68	1747037.12	597.98	422+15.98	627.18	IRON PIN
CP-S14	652181.03	1746746.16	581.16	421+19.17	72.25	IRON PIN



JUNCTION BOX SURVEY NOTE
JUNCTION BOXES, CONNECTIONS, AND SIZES FOR DRAINAGE ARE APPROXIMATE. THEY ARE NOT FIELD VERIFIED AND ARE SHOWN PER RECORDED PLANS.

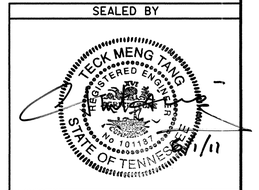
RAMP C ℄
CURVE DC12
PI 50+33.11
N 652,108.0822
E 1,747,192.1938
Δ 3° 24′ 46″ (RT)
D 5° 09′ 21″
R 1,111.31
L 66.19
T 33.11
SE 0.053 (MATCH EXIST.)
DESIGN SPEED 40 MPH

RAMP C ℄
CURVE DC13
PI 54+24.72
N 652,448.0525
E 1,747,386.6033
Δ 47° 18′ 32″ (RT)
D 7° 00′ 00″
R 818.51
L 675.84
T 358.52
SE 0.053 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 155

RAMP C ℄
CURVE DC14
PI 59+21.24
N 652,568.3602
E 1,747,910.7015
Δ 3° 34′ 59″ (RT)
D 1° 00′ 00″
R 5,729.58
L 358.29
T 179.20
SE N.C.
DESIGN SPEED 40 MPH

I-440 ℄
CURVE DC2
PI 429+21.18
N 652,538.4616
E 1,747,467.7374
Δs 13° 00′ 15″ (RT)
θs 1° 19′ 36″
Δc 10° 21′ 03″ (RT)
Dc 1° 15′ 49″
Rc 4,534.66
Lc 819.21
Ts 621.87
Ls 210.00
SE 0.032 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 210′

SEALED BY



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	6A
CONST.	2011	STP-I-440-4(78)	6A

CATCH BASINS AND MANHOLES

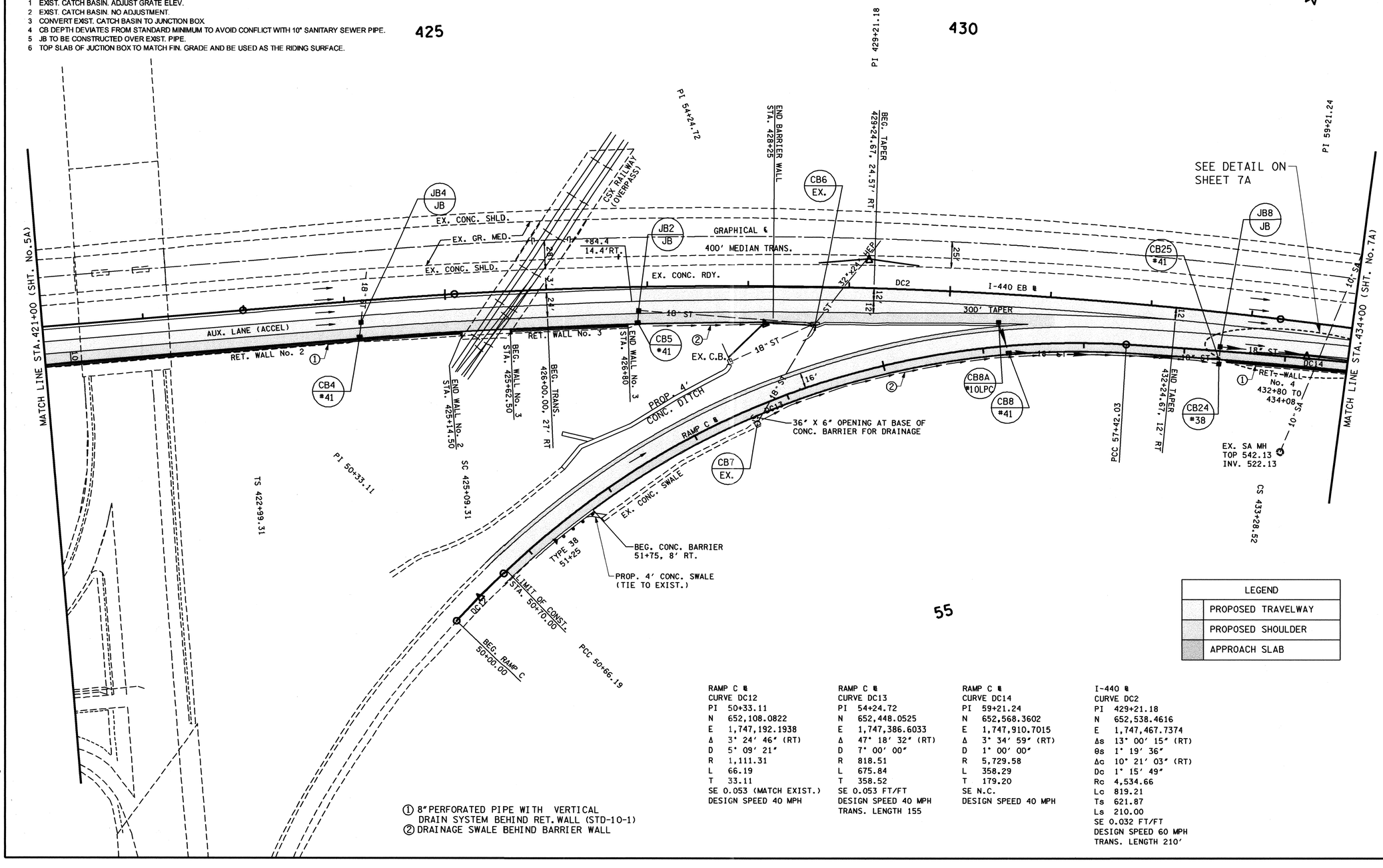
CODE	STATION	OFFSET (FT.)	STRUCTURE TYPE	GRATE/TOP ELEV.	INV. ELEV.	D.A. (AC.)	Q (CFS)	COMMENT
CB 4	424+12.50	37.0' RT	# 41 LP	537.78	534.29	0.650	4.10	
CB 5	426+90.00	36.3' RT	# 41 LP	531.32	527.90	0.387	4.50	
CB 6	428+67.00	36.2' RT	EX. C.B.	529.60	526.01	0.279	4.52	SEE NOTE 1
CB 7	53+61.00 "C"	16.4' RT	EX. C.B.	538.01	535.88	0.702	4.42	SEE NOTE 2
CB 8A	430+50.00	29.3' RT	# 10 LPC	528.75	525.35	0.327	1.93	
CB 8	56+25.00 "C"	8.0' RT	# 41 LP	528.18	525.18	0.180	1.13	SEE NOTE 4
CB 24	58+35.00 "C"	13.0' RT	#38	527.20	524.20	0.282	0.79	
CB 25	58+35.00 "C"	8.0' RT	# 41 LP	527.05	524.05	0.340	2.14	SEE NOTE 4
JB 2	426+91 +/-	23.4' RT	JCT. BOX	-	527.00	-	-	SEE NOTE 5
JB 4	424+15.00	21.5' RT	JCT. BOX	-	533.75	-	-	SEE NOTE 3
JB 8	58+35.00 "C"	4.0' LT	JCT. BOX	527.51	524.00	-	-	SEE NOTE 6

1 EXIST. CATCH BASIN. ADJUST GRATE ELEV.
2 EXIST. CATCH BASIN. NO ADJUSTMENT.
3 CONVERT EXIST. CATCH BASIN TO JUNCTION BOX.
4 CB DEPTH DEVIATES FROM STANDARD MINIMUM TO AVOID CONFLICT WITH 10" SANITARY SEWER PIPE.
5 JB TO BE CONSTRUCTED OVER EXIST. PIPE.
6 TOP SLAB OF JUCTION BOX TO MATCH FIN. GRADE AND BE USED AS THE RIDING SURFACE.

STORM SEWER PIPES

FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.) 18"	24"	30"	36"	42"	BEDDING MATERIAL (C.Y.)	Q(DES) (CF/S)	Q(CAP) (CF/S)
CB 4	534.29	JB 4	533.75	4.50	12					2.5	2.04	22.30
CB 5	527.90	JB 2	527.10	7.27	11					2.3	2.13	28.34
CB 8A	525.35	CB 8	525.18	0.53	32					6.8	1.93	7.66
CB 8	525.18	CB 25	524.15	0.50	206					43.7	3.12	7.43
CB 24	524.20	CB 25	524.15	1.25	4					0.8		11.75
CB 25	524.05	JB 8	524.00	0.50	10					2.1	6.05	7.43
JB 8	524.00	JB 9	523.45	0.40	139					29.5	6.05	6.61
JB 2	527.00	CB 6	526.20	0.46	175*					-	-	-

* EXIST. 18" RCP



LEGEND	
	PROPOSED TRAVELWAY
	PROPOSED SHOULDER
	APPROACH SLAB

① 8" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM BEHIND RET. WALL (STD-10-1)
② DRAINAGE SWALE BEHIND BARRIER WALL

RAMP C ℄
CURVE DC12
PI 50+33.11
N 652,108.0822
E 1,747,192.1938
Δ 3° 24' 46" (RT)
D 5° 09' 21"
R 1,111.31
L 66.19
T 33.11
SE 0.053 (MATCH EXIST.)
DESIGN SPEED 40 MPH

RAMP C ℄
CURVE DC13
PI 54+24.72
N 652,448.0525
E 1,747,386.6033
Δ 47° 18' 32" (RT)
D 7° 00' 00"
R 818.51
L 675.84
T 358.52
SE 0.053 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 155

RAMP C ℄
CURVE DC14
PI 59+21.24
N 652,568.3602
E 1,747,910.7015
Δ 3° 34' 59" (RT)
D 1° 00' 00"
R 5,729.58
L 358.29
T 179.20
SE N.C.
DESIGN SPEED 40 MPH

I-440 ℄
CURVE DC2
PI 429+21.18
N 652,538.4616
E 1,747,467.7374
Δs 13° 00' 15" (RT)
θs 1° 19' 36"
Δc 10° 21' 03" (RT)
Dc 1° 15' 49"
Rc 4,534.66
Lc 819.21
Ts 621.87
Ls 210.00
SE 0.032 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 210'

SEALED BY
TECK MENG TANG REGISTERED ENGINEER No. 101191 STATE OF TENNESSEE 5/11

COORDINATE VALUES ARE NAD/83(1995), AND ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50'

55

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	6B
CONST.	2011	STP-I-440-4(78)	6B

VPI 421+25.00
EL. 569.80
VPI 422+96.00
EL. 569.80
VPI 423+41.00
EL. 564.00
VPI 424+70.00
EL. 564.00
VPI 425+14.50
EL. 556.00
VPI 425+62.50
EL. 556.10
VPI 426+00.00
EL. 551.50
VPI 426+50.00
EL. 550.80
VPI 426+80.00
EL. 535.86

EX. NOLENSVILLE PIKE
OVERPASS
LOW CHORD EL.-568.49

TOP OF RAIL
STA. 425+64.58
EL. 568.78
TOP OF RAIL
STA. 425+58.33
EL. 568.84
TOP OF RAIL
STA. 425+76.63
EL. 568.68
TOP OF RAIL
STA. 425+82.74
EL. 568.70

TOP OF RET.
WALL NO. 2

EX. CSX RAILWAY
OVERPASS
LOW CHORD EL.-557.08

TOP OF RET.
WALL No. 3

BM#4 / CP-S5
STA. 427+19.69, -49.75'(LT)
N 652502.4126
E 1747269.0380
ELEV 536.79
IRON PIN W/ CAP LOCATED IN GRASS
MEDIAN OF I-440.

BM#14
STA. 432+49.18, -119.05'(LT)
N 652698.8286
E 1747775.7629
ELEV 531.23
CHISEL MARK IN CONCRETE OF
WEST BOUND SHOULDER

CB4
#41
JB4
JB
18"Ø
7.08%

CB5
#41
BM#4
JB2
JB
2' x 2' INLET
STA. 426+75.43
O/S 21.95' RT.
GR. 532.07
INV. 527.07
EX. 18"RCP @ 0.46%

CB6
EX.
EXIST. & PROP.
FIN. GR.

CB8A
#10 LPC
SEE SHEET 11
RAMP C PROFILE

P (UG)
POWER/TIS CABLE

32"x24" HEP
STA. N/A
EL. N/A
SKEW N/A
DF - RT. TO LT.

15"RCP
STA. 431+67.81
EL. N/A
SKEW 90° RT.
DF - LT. TO RT.

VPI 432+80.00
EL. 531.30
VPI 432+90.00
EL. 536.30
VPI 433+50.00
EL. 536.30
VPI 434+00.00
EL. 534.60

BM#14

TOP OF RET.
WALL No. 4

2' x 2' INLET
STA. 433+66.90
O/S 28.85' RT.
GR. 526.48
INV. 523.78
EX. 10"SA
STA. 433+80
EL. 521.44
DF - RT. TO LT.

RT. E.O.P.

S.E. DIAGRAM

422+99.31
e = -0.020 FT/FT
424+60.60
e = -0.020 FT/FT
425+09.31
e = -0.032 FT/FT
433+28.52
e = -0.032 FT/FT
433+76.91
e = -0.020 FT/FT

585 580 575 570 565 560 555 550 545 540 535 530 525 520 515 510 505 500 495 490

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00

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TECK MENG TANG
REGISTERED ENGINEER
AGRICULTURE
NO. 101187
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 421+00 TO STA. 434+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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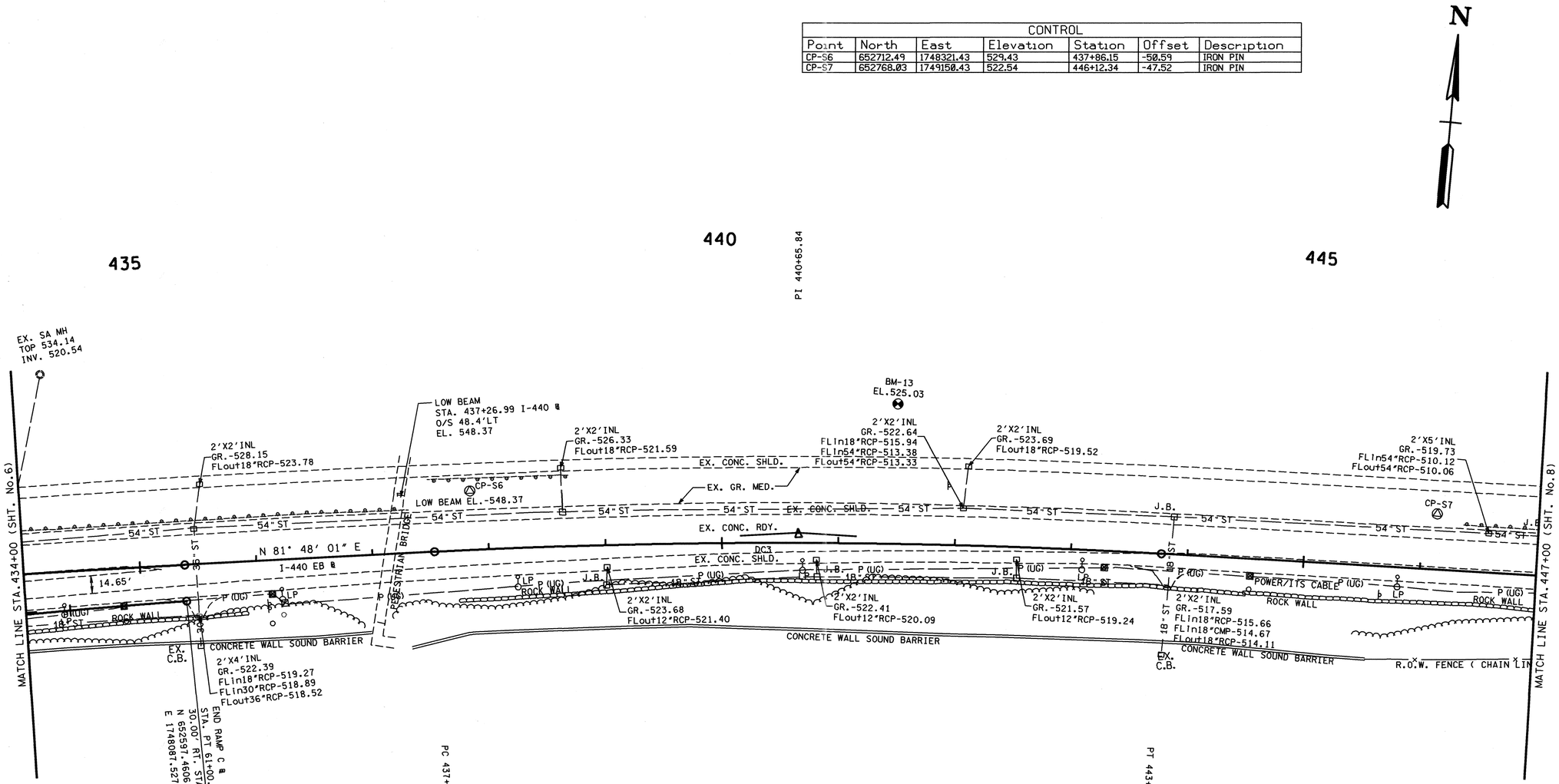
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	7
CONST.	2011	STP-I-440-4(78)	7

CONTROL						
Point	North	East	Elevation	Station	Offset	Description
CP-S6	652712.49	1748321.43	529.43	437+86.15	-50.59	IRON PIN
CP-S7	652768.03	1749150.43	522.54	446+12.34	-47.52	IRON PIN



CURVE DC3
PI 440+65.84
N 652,702.3621
E 1,748,605.1825
Δ 6° 17' 48" (RT)
D 1° 00' 31"
R 5,680.58
L 624.27
T 312.45
SE 0.027 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 190'

JUNCTION BOX SURVEY NOTE
JUNCTION BOXES, CONNECTIONS, AND SIZES FOR DRAINAGE ARE APPROXIMATE. THEY ARE NOT FIELD VERIFIED AND ARE SHOWN PER RECORDED PLANS.

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 434+00 TO STA. 447+00

SCALE: 1"= 50'

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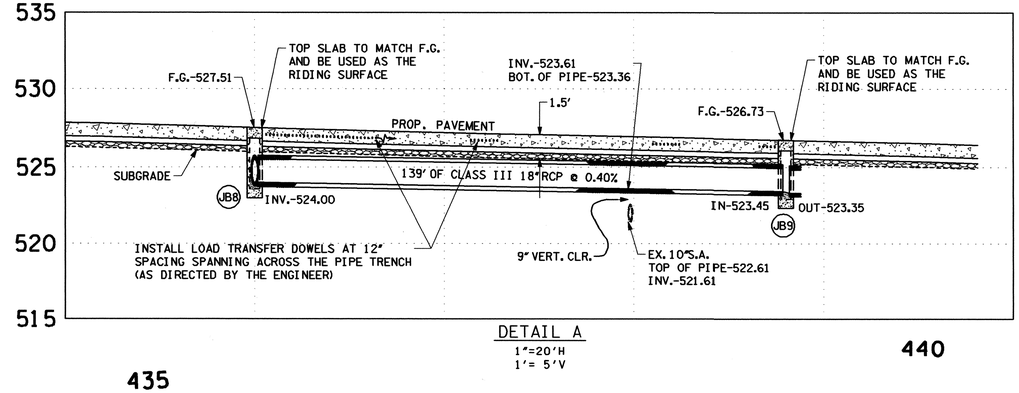
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	7A
CONST.	2011	STP-I-440-4(78)	7A



DETAIL A
1"=20'H
1'= 5'V

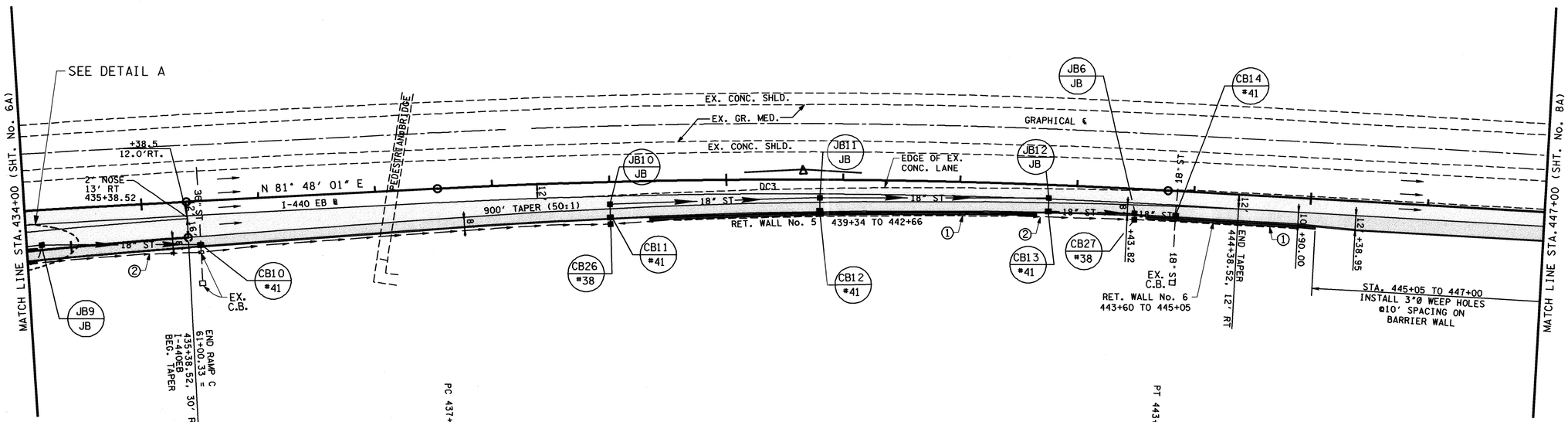
435

440

LEGEND	
	PROPOSED TRAVELWAY
	PROPOSED SHOULDER
	APPROACH SLAB

N

445



60

① 8"PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM BEHIND RET. WALL (STD-10-1)
② DRAINAGE SWALE BEHIND BARRIER WALL

CURVE DC3
PI 440+65.84
N 652,702.3621
E 1,748,605.1825
Δ 6° 17' 48" (RT)
D 1° 00' 31"
R 5,680.58
L 624.27
T 312.45
SE 0.027 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 190'

STORM SEWER PIPES

FROM		TO		%	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.)					BEDDING	Q(DES)	Q(CAP)
CODE	OUTLET ELEV.	CODE	INLET ELEV.	GRADE	18"	24"	30"	36"	42"	MATERIAL (C.Y.)	(CF/S)	(CF/S)
JB9	523.35	CB10	518.62	3.53	134					28.4	-	19.75
CB 11	519.25	JB 10	518.70	5.50	10					2.1	1.75	24.65
JB 10	518.60	JB 11	517.65	0.53	178					37.7	1.75	7.68
CB 12	518.10	JB 11	517.65	4.50	10					2.1	1.71	22.30
JB 11	517.55	JB 12	516.55	0.52	194					41.1	3.46	7.55
JB 12	516.45	CB 13	516.40	0.50	10					2.1	3.46	7.43
CB 13	516.30	JB 6	515.94	0.50	72					15.3	5.02	7.43
CB 26	519.65	CB 11	519.35	7.50	4					0.8	-	28.78
CB 27	516.60	JB 6	515.94	16.50	4					0.8	-	42.69
JB 6	515.94	CB 14	515.66	0.88	32					6.8	-	9.83

CATCH BASINS AND MANHOLES

CODE	STATION	OFFSET (FT.)	STRUCTURE TYPE	GRATE/TOP ELEV.	INV. ELEV.	D.A. (AC.)	Q (CFS)	COMMENT
CB 10	435+49.00	37.8' RT	# 41 SB	525.31	518.52	0.389	3.96	
CB 11	439+00.00	30.8' RT	# 41 LP	523.25	519.25	0.516	3.25	
CB 12	440+80.00	27.2' RT	# 41 LP	522.07	518.10	0.241	3.02	
CB 13	442+76.00	23.2' RT	# 41 P	521.01	516.30	0.212	2.64	
CB 14	443+85.00	22.0' RT	# 41 P	520.52	514.11	0.156	2.06	
CB 26	439+00.00	35.7' RT	# 38	523.60	519.65	0.516	3.25	
CB 27	443+50.00	26.3' RT	# 38	520.70	516.60	0.156	2.06	
JB 6	443+50.00	21.0' RT	JCT. BOX	519.31	515.94	-	-	
JB 9	59+75.00 "C"	4.0' LT	JCT. BOX	526.73	523.35	-	-	SEE NOTE 1
JB 10	439+00.00	18.8' RT	JCT. BOX	522.01	518.60	-	-	
JB 11	440+80.00	15.2' RT	JCT. BOX	520.83	517.55	-	-	
JB 12	442+76.00	11.3' RT	JCT. BOX	519.76	516.45	-	-	

1 TOP SLAB OF JUCTION BOX TO MATCH FIN. GRADE AND BE USED AS THE RIDING SURFACE.

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 434+00 TO STA. 447+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	7B
CONST.	2011	STP-I-440-4(78)	7B

BM#5 / CP-S6
STA. 437+86.15, -50.59'(LT)
N 652712.4925
E 1748321.4330
ELEV 529.43
IRON PIN W/ CAP LOCATED IN GRASS MEDIAN OF I-440.

BM#13
STA. 441+49.22, -120.83'(LT)
N 652821.0648
E 1748680.4967
ELEV 525.03
CHISEL MARK IN CONCRETE OF WEST BOUND SHOULDER

BM#6 / CP-S7
STA. 446+12.34, -47.52'(LT)
N 652768.0275
E 1749136.4340
ELEV 522.54
IRON PIN W/ CAP LOCATED IN GRASS MEDIAN OF I-440.

PEDESTRIAN BRIDGE

VPI 434+08.00 EL. 530.60
VPI 439+34.00 EL. 527.35
VPI 439+50.00 EL. 535.00
VPI 440+30.00 EL. 535.00
TOP OF RET. WALL No. 5
VPI 441+65.00 EL. 537.60
VPI 442+50.00 EL. 533.00
VPI 442+66.00 EL. 525.40
VPI 443+60.00 EL. 524.95
VPI 444+18.00 EL. 537.00
VPI 444+50.00 EL. 537.00
TOP OF RET. WALL No. 6
VPI 444+92.00 EL. 530.59
VPI 445+05.00 EL. 524.07

CB10 #41
BM#5
CB26 #38
CB12 #41
BM#13
JB12 JB
CB27 #38
BM#6

EXIST. & PROP. FIN. GR.

2' x 2' INLET
STA. 440+81.16
O/S 14.36' RT.
GR. 522.41
INV. 520.09

2' x 2' INLET
STA. 439+00.88
O/S 14.46' RT.
GR. 523.68
INV. 521.40

2' x 2' INLET
STA. 442+53.34
O/S 10.64' RT.
GR. 521.57
INV. 519.24

P (UG)
POWER/ITS CABLE

18"Ø 1.84%
EX. 36" RCP
INV. 518.52

18"Ø 0.53%
18"Ø 0.52%
18"Ø 0.50%
0.88%

CB11 #41
JB10 JB
JB11 JB
CB13 #41
JB6 JB
CB14 #41

8"RCP
STA. 443+86 ±
EL. N/A
SKEW 88°5'49" RT. ±
OF -LT. TO RT.

RT. E.O.P.

S.E. DIAGRAM

435+38.52 e = -0.020 FT/FT
436+58.39 e = -0.020 FT/FT
438+19.68 e = -0.020 FT/FT
438+48.39 e = -0.027 FT/FT
442+82.66 e = -0.027 FT/FT
443+10.88 e = -0.020 FT/FT
444+72.66 e = -0.020 FT/FT

570 565 560 555 550 545 540 535 530 525 520 515 510 505 500 495 490 485 480 475

434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00

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TECK MENG TANG
REGISTERED ENGINEER
LICENSE NO. 101181
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 434+00 TO STA. 447+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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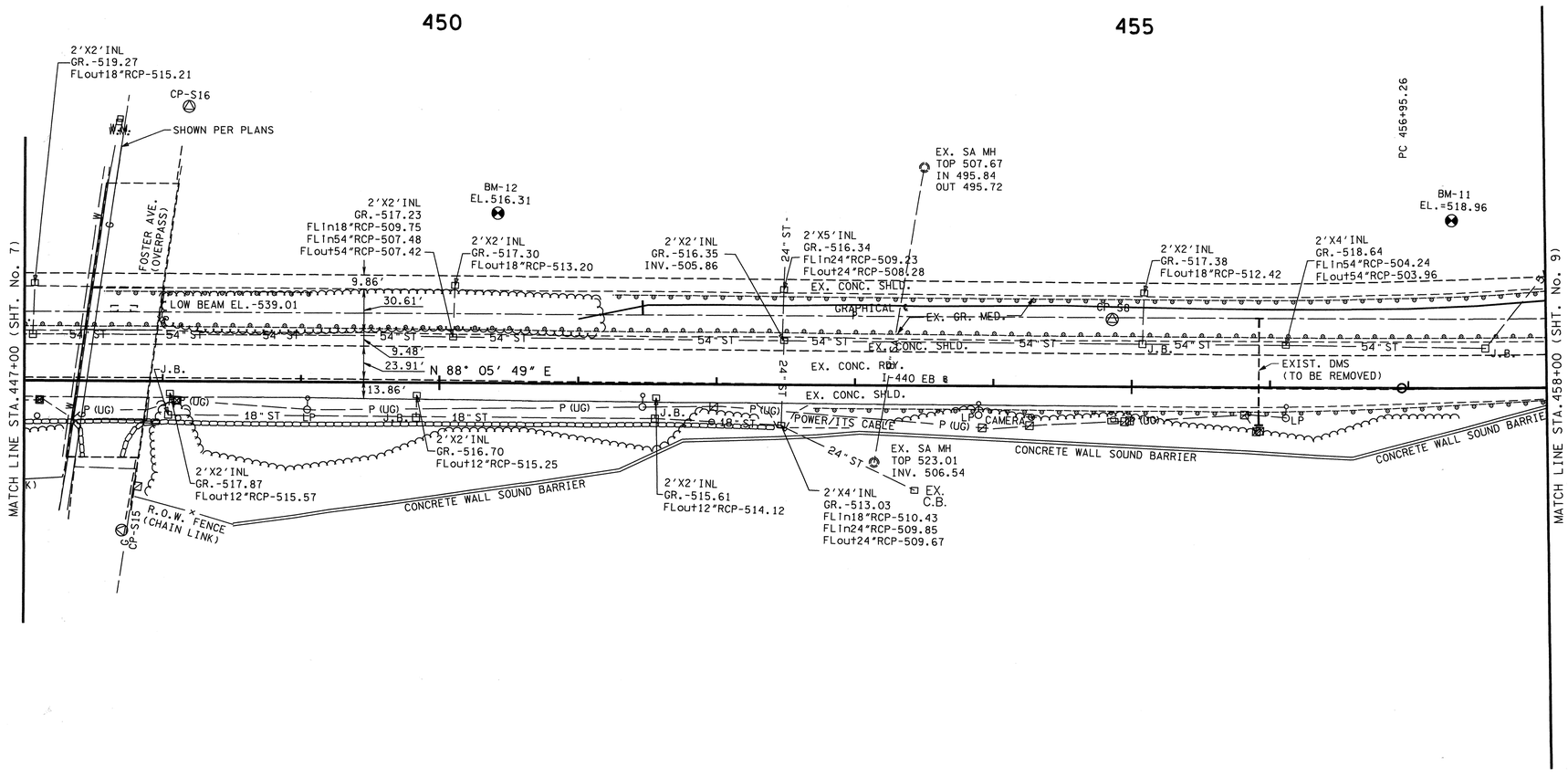
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	8
CONST.	2011	STP-I-440-4(78)	8

REV. 09-19-11: ADDED NOTE FOR THE EXIST. DMS TO BE REMOVED.

CONTROL						
Point	North	East	Elevation	Station	Offset	Description
CP-S8	652797.32	1750023.39	520.40	454+85.79	-47.81	IRON PIN
CP-S15	652618.23	1749314.08	554.81	447+70.93	107.62	IRON PIN
CP-S16	652925.26	1749351.44	533.86	448+18.46	-197.99	IRON PIN



JUNCTION BOX SURVEY NOTE

JUNCTION BOXES, CONNECTIONS, AND SIZES FOR DRAINAGE ARE APPROXIMATE. THEY ARE NOT FIELD VERIFIED AND ARE SHOWN PER RECORDED PLANS.

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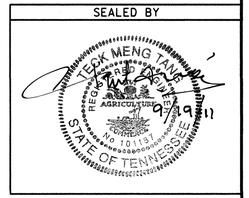

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 447+00 TO STA. 458+00

SCALE: 1"= 50'

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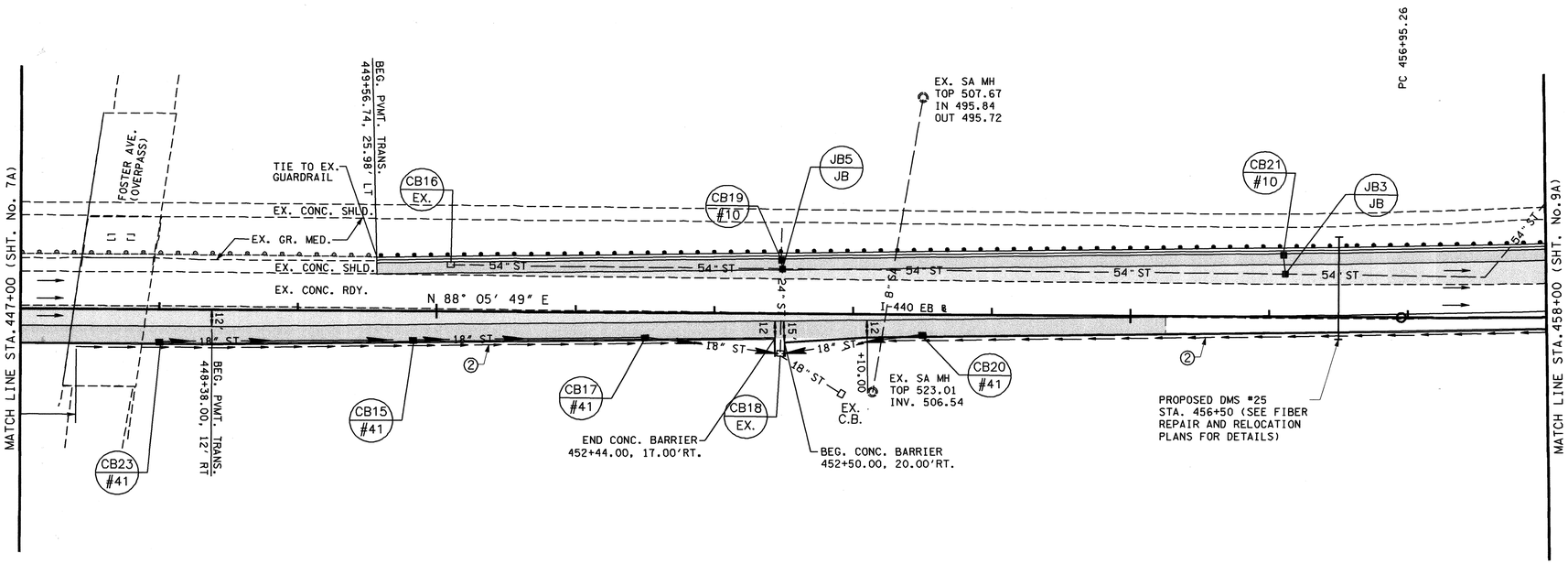
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	8A
CONST.	2011	STP-I-440-4(78)	8A

REV. 09-19-11: DELETED EXIST. DMS, CONC. BARRIER (455+85 TO 456+00, LEFT). ADDED PROPOSED DMS STRUCTURE AT STA. 456+50.

N

LEGEND	
	PROPOSED TRAVELWAY
	PROPOSED SHOULDER
	APPROACH SLAB



CATCH BASINS AND MANHOLES

CODE	STATION	OFFSET (FT.)	STRUCTURE TYPE	GRATE/TOP ELEV.	INV. ELEV.	D.A. (AC.)	Q (CFS)	COMMENT
CB 15	449+83.00	21.6' RT	# 41 LP	516.42	513.05	0.205	2.69	
CB 16	450+10.00	24.9' LT	EX. C.B.	517.24	507.42	-	-	SEE NOTE 2
CB 17	451+50.00	18.8' RT	# 41 LP	515.61	512.25	0.190	2.33	
CB 18	452+47.00	29.0' RT	EX. C.B.	513.03	509.67	0.298	3.26	SEE NOTE 2
CB 19	452+48.00	38.8' LT	# 10 LPC	516.48	513.10	0.513	1.90	
CB 20	453+50.00	15.5' RT	# 41 LP	515.67	512.35	0.720	2.47	
CB 21	456+10.00	44.9' LT	# 10 LPC	518.82	515.50	0.455	2.42	
CB 23	448+00.00	24.0' RT	# 41 LP	517.50	514.10	0.488	3.08	
JB 3	456+11.40	30.3' LT	JCT. BOX	-	-	-	-	SEE NOTE 3
JB 5	452+48.70	31.6' LT	JCT. BOX	-	-	-	-	SEE NOTE 3

2 EXIST. CATCH BASIN. NO ADJUSTMENT.
3 CONVERT EXIST. CATCH BASIN TO JUNCTION BOX.

STORM SEWER PIPES

FROM		TO		%	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.)					BEDDING	Q(DES)	Q(CAP)
CODE	OUTLET ELEV.	CODE	INLET ELEV.	GRADE	18"	24"	30"	36"	42"	MATERIAL (C.Y.)	(CF/S)	(CF/S)
CB 15	513.05	CB 17	512.35	0.42	165					35.0	3.24	6.85
CB 17	512.25	CB 18	510.43	1.90	96					20.4	4.70	14.47
CB 19	513.10	JB 5	513.00	2.50	4					0.8	1.90	16.62
CB 20	512.35	CB 18	510.43	1.90	101					21.4	1.68	14.49
CB 21	515.50	JB 3	515.00	3.85	13					2.8	1.20	20.61
CB 23	514.10	CB 15	513.15	0.52	181					38.4	1.68	7.61

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 447+00 TO STA. 458+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	8B
CONST.	2011	STP-I-440-4(78)	8B

BM#12
STA. 450+41.95, -121.04'(LT)
N 652855.7686
E 1749577.3594
ELEV 516.31
CHISEL MARK IN CONCRETE OF
WEST BOUND SHOULDER

BM#7 / CP-S8
STA. 454+85.79, -47.81'(LT)
N 652797.3193
E 1750023.3890
ELEV 520.40
IRON PIN W/ CAP LOCATED IN GRASS
MEDIAN OF I-440.

BM#11
STA. 457+31.46, -119.32'(LT)
N 652877.0305
E 1750265.8504
ELEV 518.96
CHISEL MARK IN CONCRETE OF
WEST BOUND SHOULDER

EX. FOSTER AVE.
OVERPASS
OW CHORD EL.-539.01

CB23 #41
CB15 #41
CB16 EX.
CB17 #41
CB19 #10
JB5 JB
CB18 EX.
CB20 #41
CB21 #10
JB3 JB

2' x 2' INLET
STA. 449+83.70
O/S 8.97' RT.
GR. 516.70
INV. 515.25

2' x 2' INLET
STA. 448+05.36
O/S 8.48' RT.
GR. 517.87
INV. 515.57

2' x 2' INLET
STA. 451+56.36
O/S 9.93' RT.
GR. 515.61
INV. 514.12

24"RCP
STA. 452+47.73
EL. N/A
SKEW 88°15'01" RT.
DF -RT. TO LT.

EX. 8"SA
STA. 453+23
EL. 503.72
DF - RT. TO LT.

P (UG)
POWER/ITS CABLE
18"Ø 0.52%
18"Ø 0.42%
18"Ø 1.90%
18"Ø 1.90%
18"Ø 3.85%
EX. 54" RCP
EX. 54" RCP
EX. & PROP. FIN. GR.
MATCH LINE STA.458+00 (SHT. No. 9B)

S.E. DIAGRAM

LT. E.O.P.
RT. E.O.P.
RT. E.O.P.
LT. E.O.P.

456+00.26 e = +0.020 FT/FT
457+90.26 e = +0.027 FT/FT
456+00.26 e = -0.020 FT/FT
457+61.55 e = -0.020 FT/FT
457+90.26 e = -0.027 FT/FT

565 560 555 550 545 540 535 530 525 520 515 510 505 500 495 490 485 480 475 470

447+00 448+00 449+00 450+00 451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00

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TECK MENG TANG
REGISTERED ENGINEER
No. 101181
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 447+00 TO STA. 458+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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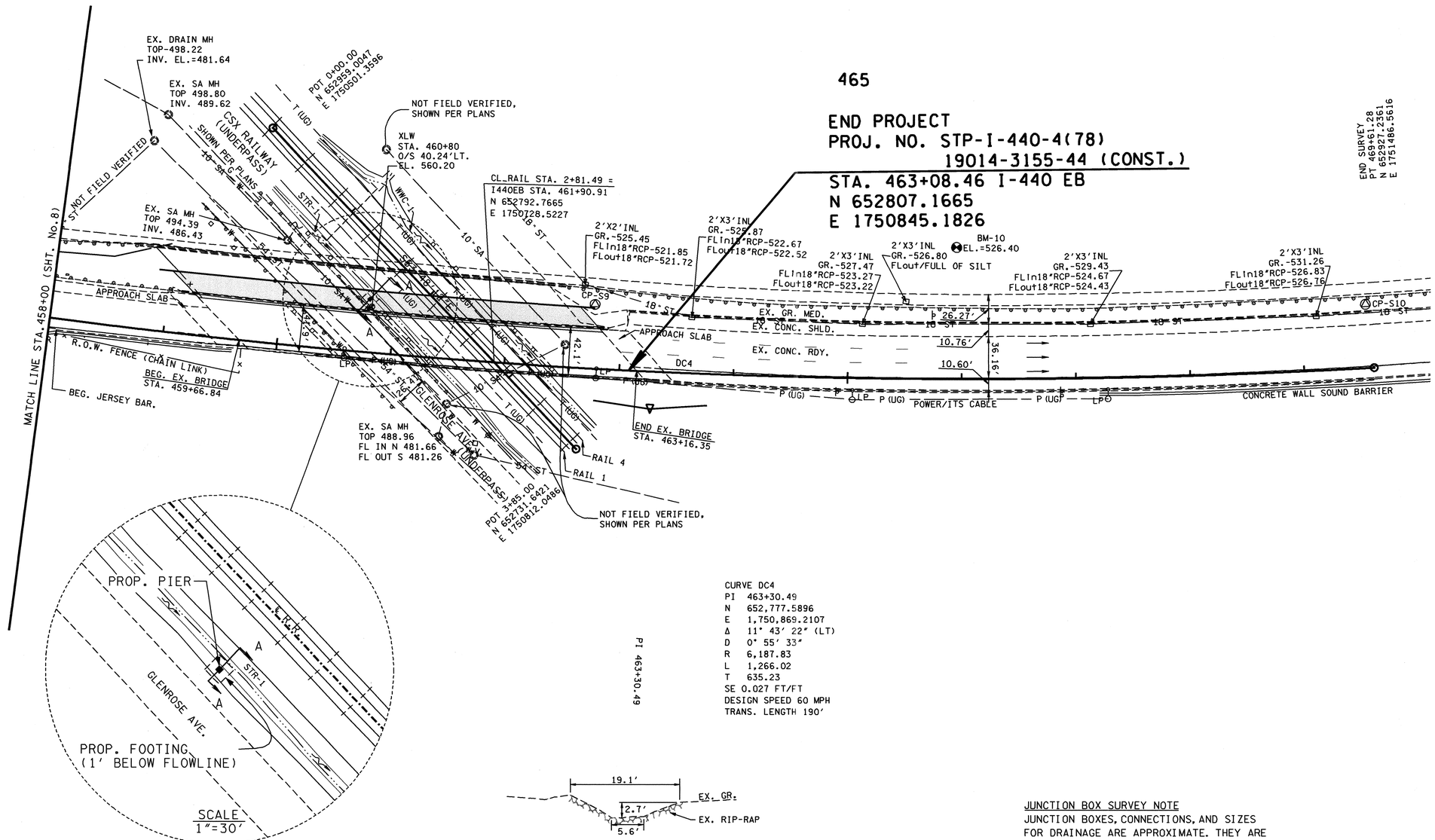
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	9
CONST.	2011	STP-I-440-4(78)	9

N

CONTROL						
Point	North	East	Elevation	Station	Offset	Description
CP-S9	652858.72	1750805.73	526.04	462+75.86	-56.22	IRON PIN
CP-S10	652980.33	1751468.97	532.14	469+56.65	-55.74	IRON PIN



JUNCTION BOX SURVEY NOTE
JUNCTION BOXES, CONNECTIONS, AND SIZES FOR DRAINAGE ARE APPROXIMATE. THEY ARE NOT FIELD VERIFIED AND ARE SHOWN PER RECORDED PLANS.

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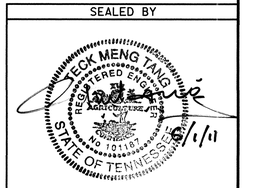

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 458+00 TO END PROJ.

SCALE: 1"= 50'

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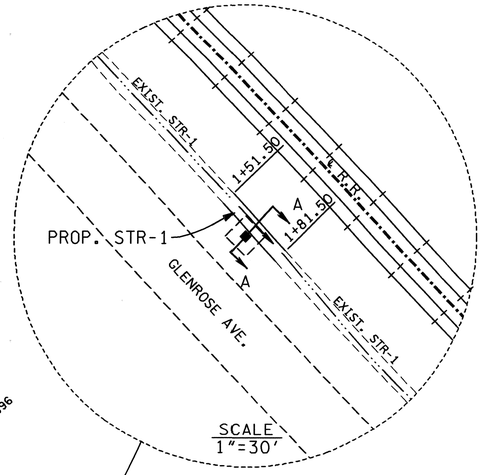
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	9A
CONST.	2011	STP-I-440-4(78)	9A



460

POT 0+00.00
N 652959.0047
E 1750501.3596

CSX RAILWAY (UNDERPASS)

STR-1

WMC-1

CL_RAIL STA. 2+81.49 =
I440EB STA. 461+90.91
N 652792.7665
E 1750728.5227

PROP BRIDGE WIDENING - 21.5'

TIE TO EX. BARRIER WALL STA. 463+05.75

36'

A

A

MATCH LINE STA.458+00 (SHT. No. 8A)

TIE TO EX. BARRIER WALL

END TRANS. 456+00.00, 5.70' LT

40.5' EX. SLAB TO REMAIN

GLENROSE AVE. (UNDERPASS)

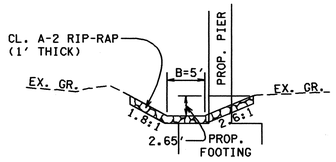
POT 3+85.00
N 652731.6421
E 1750812.0486

DC4

465

END PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 463+08.46 I-440 EB
N 652807.1665
E 1750845.1826

PT 469+61.28
N 652927.2361
E 1751486.5616



STR-1
SECTION "A-A"
LOOKING DOWNSTREAM (S.E.)
STA. 1+51.50 TO STA. 1+81.50
℄ CSX R.R.

NOTES:

1. NO CRAYFISH FOUND IN THE EXISTING STREAM STR-1.
2. THE STREAM STR-1 SHALL BE RESTORED TO EXISTING CONDITIONS AFTER CONSTRUCTION IS COMPLETE.
3. THE PROPOSED PIERS SHOULD NOT CAUSE IMPOUNDMENT OF THE STREAM.

PI 463+30.49

CURVE DC4
PI 463+30.49
N 652,777.5896
E 1,750,869.2107
Δ 11° 43' 22" (LT)
D 0° 55' 33"
R 6,187.83
L 1,266.02
T 635.23
SE 0.027 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 190'

LEGEND	
	PROPOSED TRAVELWAY
	PROPOSED SHOULDER
	APPROACH SLAB

SEALED BY

COORDINATE VALUES ARE NAD/83(1995), AND ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 458+00 TO END PROJ.

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	9B
CONST.	2011	STP-I-440-4(78)	9B

RT. E.O.P. e = +0.027 FT/FT

LT. E.O.P. e = -0.027 FT/FT

S.E. DIAGRAM

BM#8 / CP-S9
STA. 462+75.86, -56.22'(LT)
N 652858.7193
E 1750805.7280
ELEV 526.04
IRON PIN W/ CAP LOCATED IN GRASS MEDIAN OF I-440.

BM#10
STA. 465+95.47, -115.17'(LT)
N 652964.9504
E 1751108.2340
ELEV 526.40
CHISEL MARK IN CONCRETE OF WEST BOUND SHOULDER

OH WIRE
STA. 460+80
LOW WIRE EL. 560.20

END PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 463+08.46 I-440 EB

BEG. EX. BRIDGE
STA. 459+66.84
EL. 523.16

BRIDGE OVER GLENROSE AVE. AND CSX RAILWAY
LOW CHORD EL.-517.86

END EX. BRIDGE
STA. 463+16.35
EL. 526.66

BM#8

BM#10

POWER/ITS CABLE

P (UG)

TOP OF RAIL
STA. 461+84.30
EL. 493.37

TOP OF RAIL
STA. 461+76.96
EL. 493.45

TOP OF RAIL
STA. 461+97.05
EL. 493.47

TOP OF RAIL
STA. 462+04.33
EL. 493.40

UGW
STA. 460+59

UGT
STA. 461+66

UGT
STA. 462+18

UGW
STA. 461+17

54"RCP
STA. 460+82
EL. N/A
SKEW 39°31'02"RT.
DF -RT. TO LT.

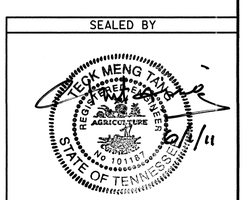
EX. 10"SA
STA. N/A
EL. N/A
DF - LT. TO RT.

EX. 10"SA
STA. N/A
EL. N/A
DF - LT. TO RT.

575 570 565 560 555 550 545 540 535 530 525 520 515 510 505 500 495 490 485 480

460+00 461+00 462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 458+00 TO END PROJ.
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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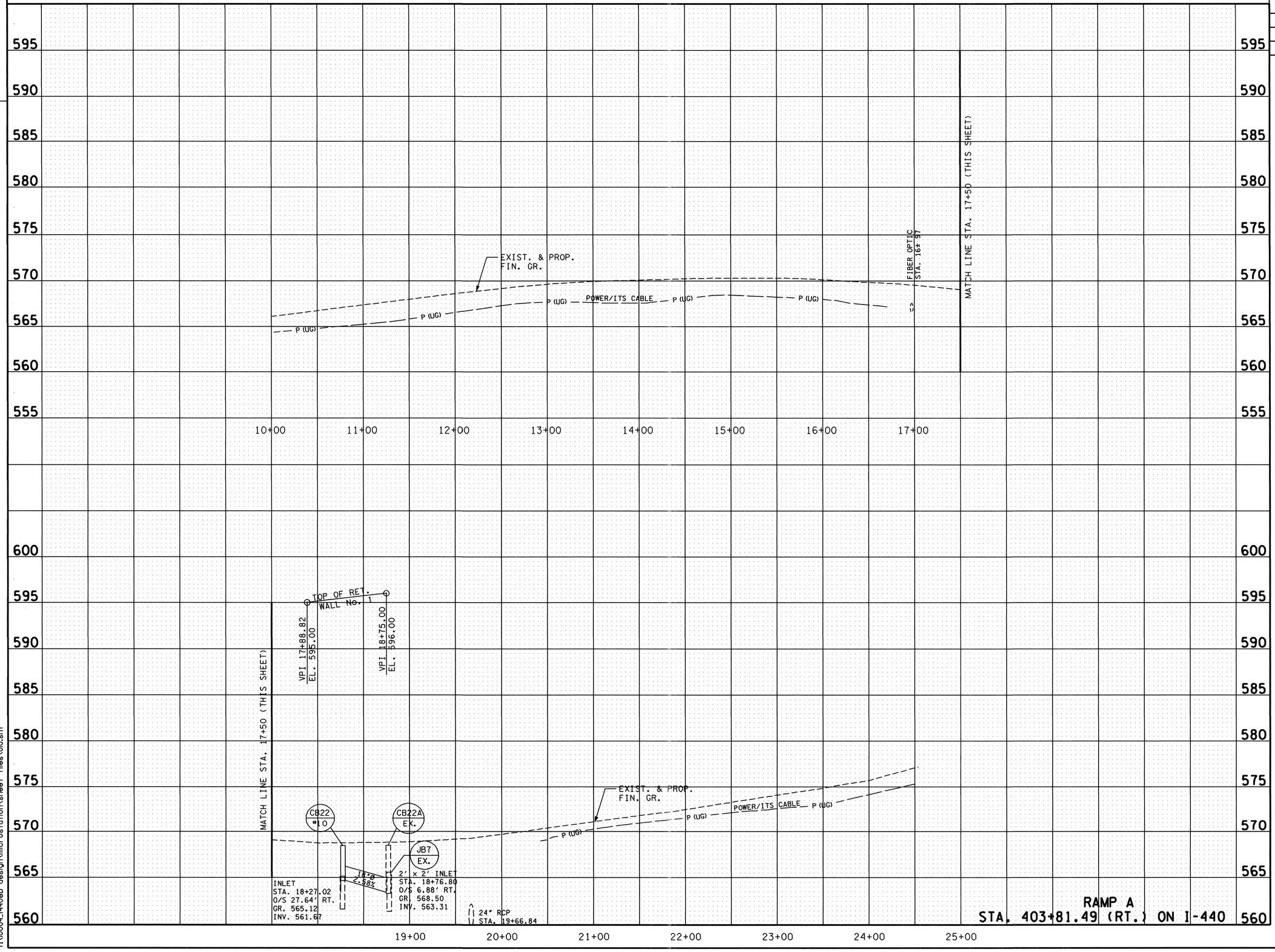
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	10
CONST.	2011	STP-I-440-4(78)	10



RAMP A
STA. 403+81.49 (RT.) ON I-440

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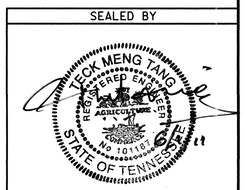

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RAMP PROFILE

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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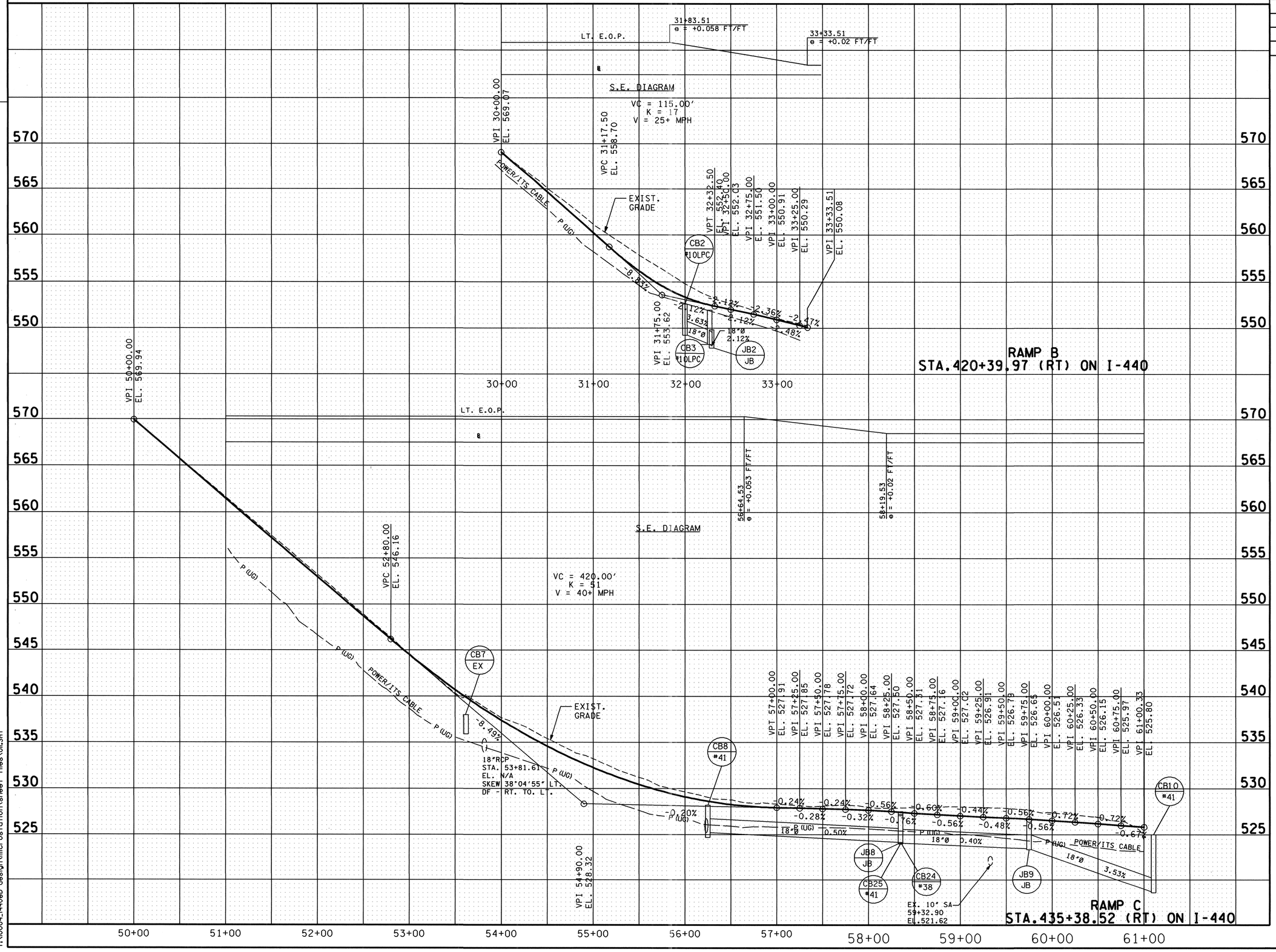
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	11
CONST.	2011	STP-I-440-4(78)	11



SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RAMP PROFILE

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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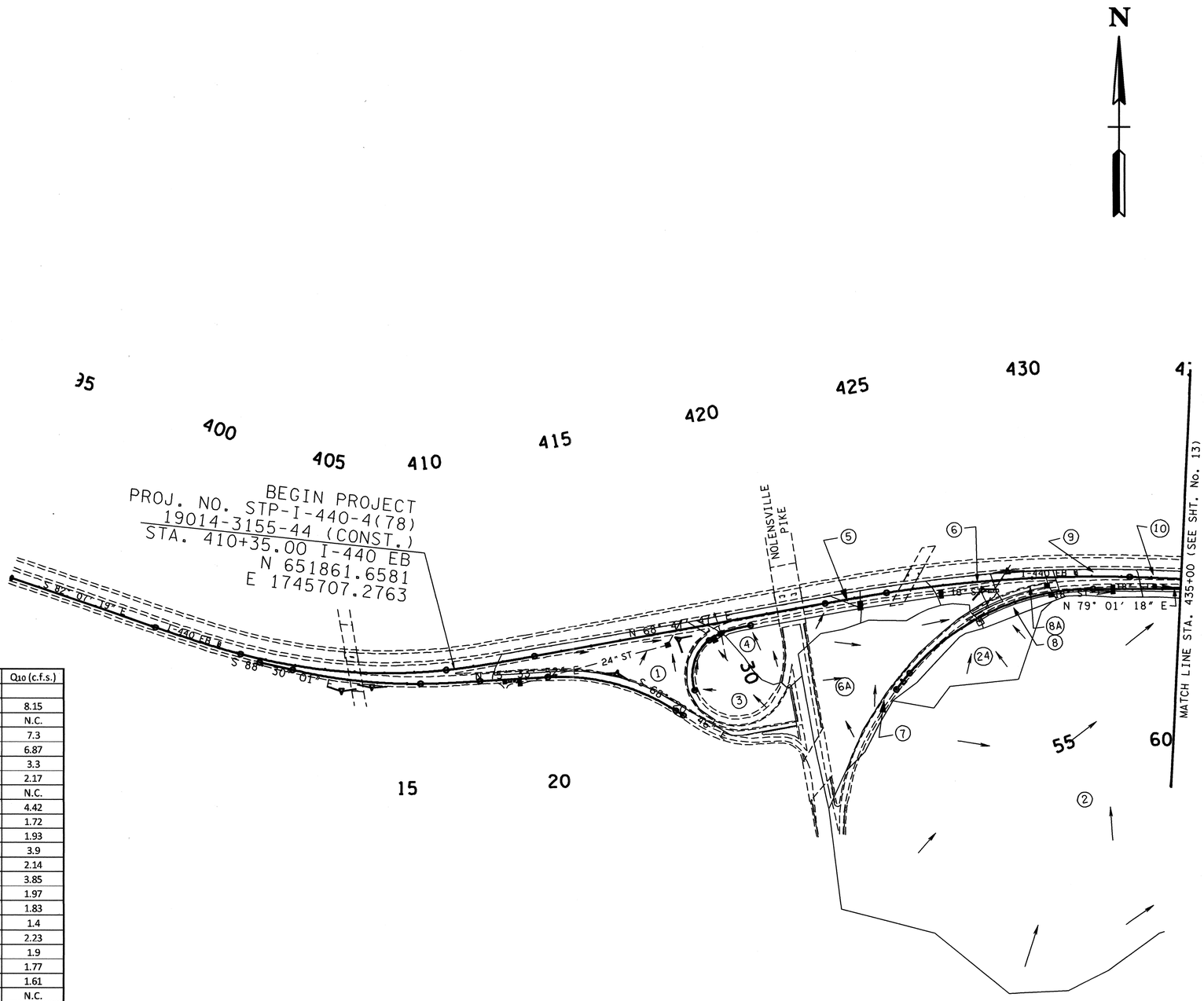
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	12
CONST.	2011	STP-I-440-4(78)	12



I.D.	Area (ac)	c	Q_{10} (c.f.s.)
1	2.151	0.57	8.15
2	38.73	N.C.	N.C.
3	1.843	0.6	7.3
4	1.788	0.58	6.87
5	0.694	0.68	3.3
6	0.428	0.73	2.17
6A	3.309	N.C.	N.C.
7	0.702	0.9	4.42
8	0.378	0.65	1.72
8A	0.327	0.84	1.93
9	0.648	0.86	3.9
10	0.389	0.79	2.14
11	0.731	0.75	3.85
12	0.401	0.7	1.97
13	0.388	0.67	1.83
14	0.306	0.65	1.4
15	0.541	0.59	2.23
16	0.513	0.53	1.9
17	0.396	0.64	1.77
18	0.298	0.77	1.61
19	5.259	N.C.	N.C.
20	0.72	0.67	3.39
21	8.076	N.C.	N.C.
22	0.455	0.76	2.42
23	1.358	0.58	5.2
24	1.564	N.C.	N.C.
25	3.668	N.C.	N.C.

N.C. = NOT CONTRIBUTING TO ANY CATCH BASINS IN THE PROJECT

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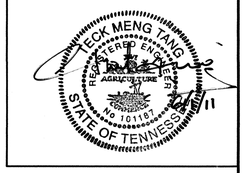

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 395+00 TO STA. 435+00
SCALE: 1"=200'

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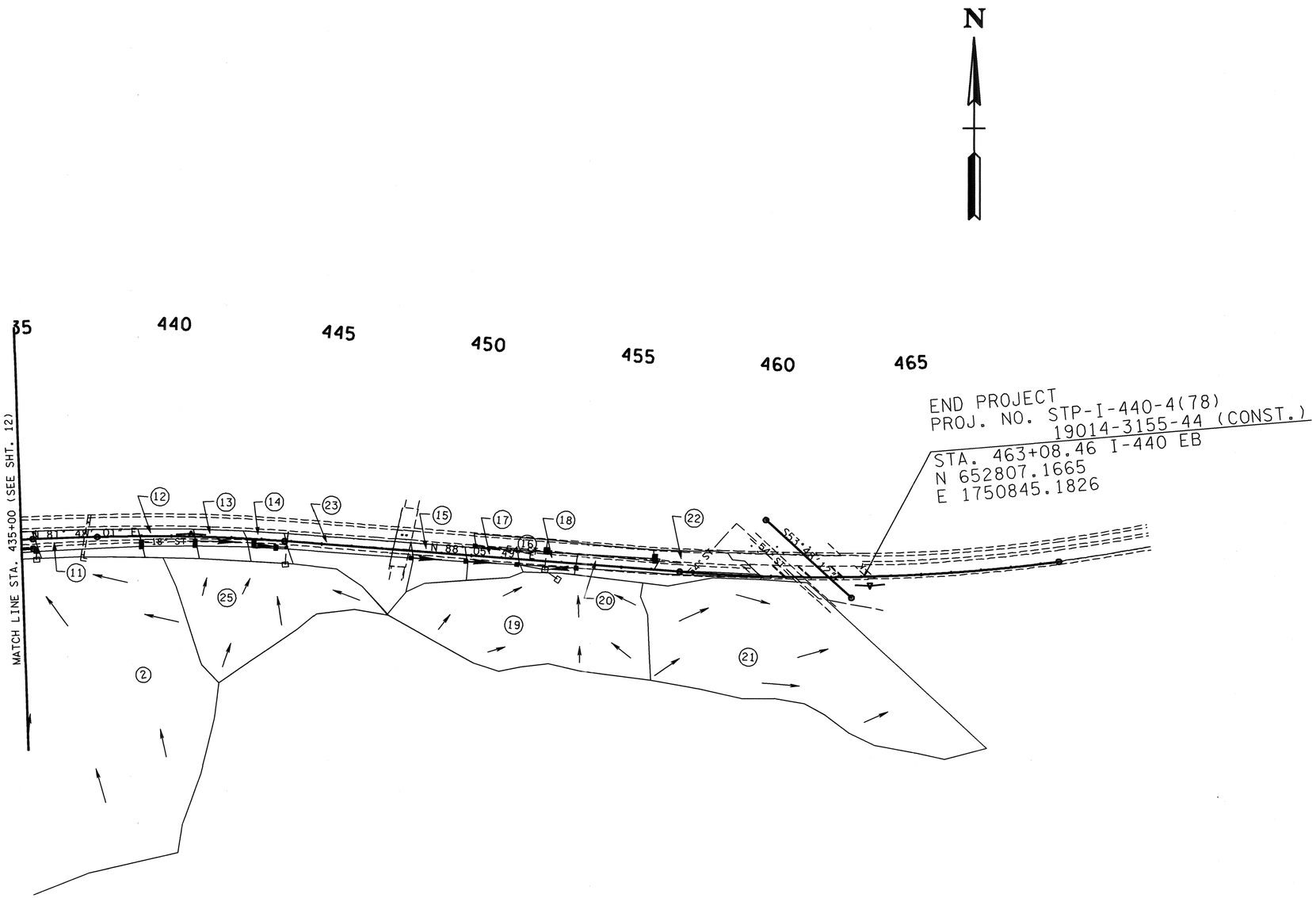
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	13
CONST.	2011	STP-I-440-4(78)	13



SEALED BY

TECK MENG TANG
REGISTERED ENGINEER
NO. 101857
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 435+00 TO END PROJ.

SCALE: 1"=200'

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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

NPDES

(1) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.

(2) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.

(3) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(4) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 15 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER RUNS WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

(5) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

UTILITY RELOCATION

(6) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.

(7) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.

(8) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).

(9) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

(10) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.

(11) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.

(12) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

(13) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.

(14) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).

(15) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT PROJECT ENGINEER BEFORE COMMENCING WORK.

LITTER, DEBRIS, WASTE, PETROLEUM

(SPECIAL RAILROAD EROSION CONTROL NOTE)

(19) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EROSION PREVENTION AND SEDIMENT CONTROL PLAN TO PREVENT ROADWAY AND/OR CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM FALLING ONTO THE RAILROAD'S RIGHTS-OF-WAY AND/OR FROM ENTERING THE DRAINAGE DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHTS-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY CSXT RAILROAD AND AT THE CONTRACTOR'S EXPENSE.

EPSC LEGEND

	SYMBOL	ITEM	STD. DWG.
	✱SF✱SF✱SF✱	SILT FENCE	EC-STR-3B
	✱SFB✱SFB✱SFB✱	SILT FENCE WITH BACKING	EC-STR-3C
2		ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	E	CATCH BASIN PROTECTION (TYPE E)	EC-STR-19
	D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
1	2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
	1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
3	✱✱ TUBE ✱✱ TUBE ✱✱	SEDIMENT TUBE	EC-STR-37
	SFB✱ ✱SFB ✱SFB✱SFB	SEDIMENT FILTER BAG	EC-STR-2
	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25

1 INSTALL CURB INLET PROTECTION (TYPE 2) AT THE DIRECTION OF THE TDOT ENGINEER, AFTER ROAD HAS BEEN CONSTRUCTED.

2 HEIGHT = 2'

3 20' TUBE

EPSC QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY		
			Phase 1	Phase 2	Total
203-01	ROAD AND DRAINAGE EXCAVATION (UNCL.)	C.Y.	30	30	60
209-05	SEDIMENT REMOVAL	C.Y.	64	32	96
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	446	698	1,144
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	5,348	585	5,933
209-08.08	ENHANCED ROCK CHECK DAM	EACH	7	14	21
209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	0	21	21
209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	24	7	31
209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	0	34	34
209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	0	22	22
303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	0	57	57
621-03.02	TEMPORARY DRAINAGE PIPE	L.F.	0	0	0
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	200	200	400
740-10.03	GEOTEXTILE (TYPE III) EROSION CONTROL	S.Y.	344	591	935
740-11.04	TEMPORARY SEDIMENT TUBE 20IN (DESCRIPTION)	L.F.	150	330	480
209-09.04	SEDIMENT FILTER BAG (15'X10')	EACH	0	4	4

NOTE: ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER

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TECK MENG TANG REGISTERED ENGINEER AGRICULTURE No. 101157 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14A

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00 I-440 EB
N 651861.6581
E 1745707.2763

410 415 420

N

I-440 EB

N 68° 47' 47" E

N 75° 33' 52" E

S 68° 28' 46" E

RAMP A

RAMP B

EX. GR. MED.

EX. CONC. RET. WALL

ROCK WALL

24" ST

MATCH LINE STA. 421+00 (SHT. No. 14C)

15 20 30

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TECK MENG TANG
REGISTERED ENGINEER
No. 101187
STATE OF TENNESSEE
5/23/11

PHASE 1 CLEARING AND GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC PLAN

BEG. PROJ. TO STA. 421+00

SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14B

N

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00 I-440 EB
N 651861.6581
E 1745707.2763

410 415 420

I-440 EB

N 68° 47' 47" E

N 75° 33' 52" E

S 68° 20' 46" E

RAMP A

OUT-1A OUT-1B

595 560 565 575 555 525 515 570

24" ST

MATCH LINE STA. 421+00 (SHT. No. 14D)

15 20 30

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TECK MENG TANG
REGISTERED ENGINEER
No. 101187
STATE OF TENNESSEE

1/11

PHASE 2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC PLAN

BEG. PROJ. TO STA. 421+00

SCALE: 1"= 50'

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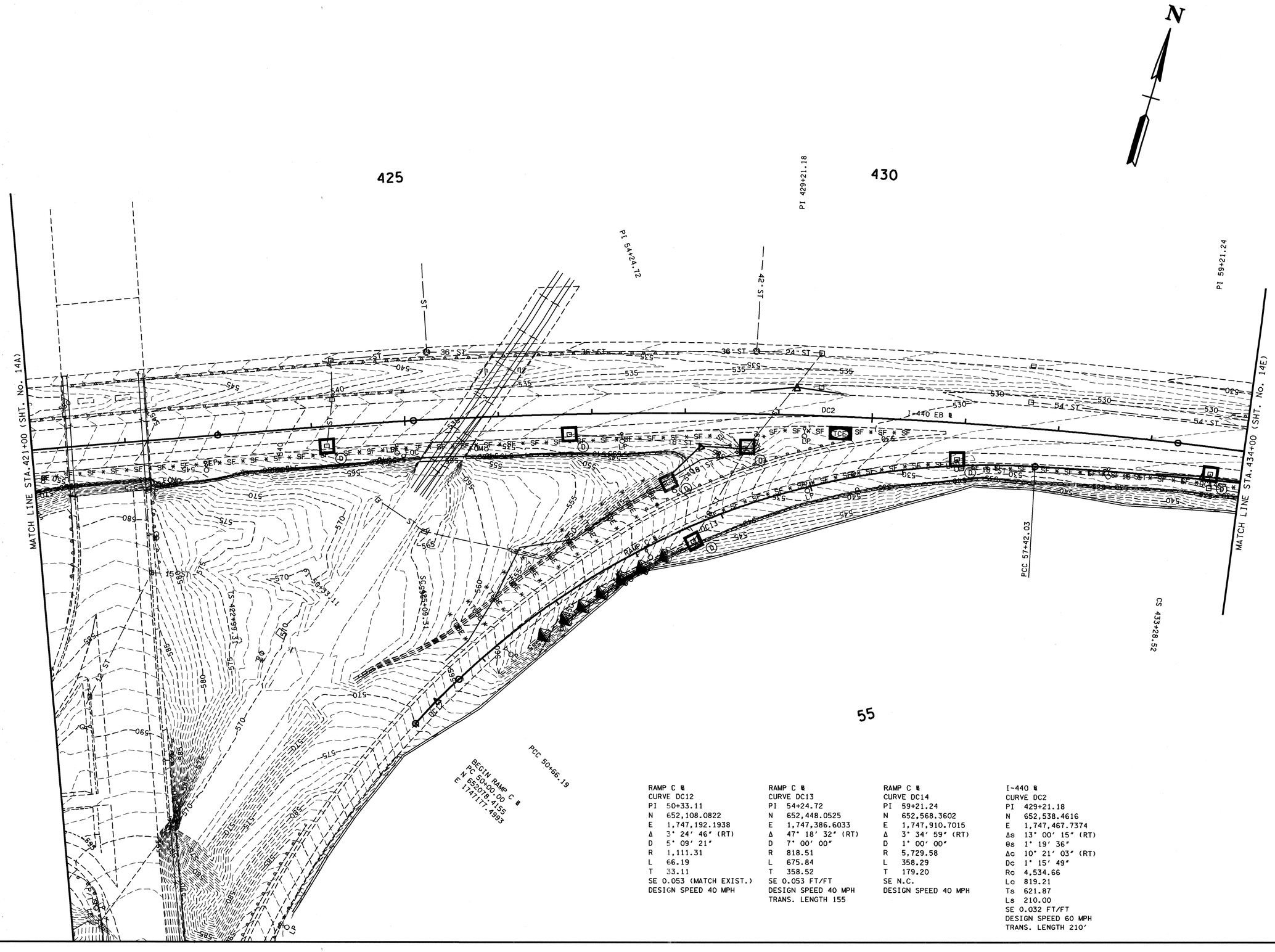
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14C



55

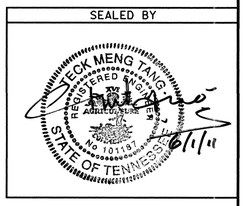
RAMP C
CURVE DC12
PI 50+33.11
N 652,108.0822
E 1,747,192.1938
Δ 3° 24′ 46″ (RT)
D 5° 09′ 21″
R 1,111.31
L 66.19
T 33.11
SE 0.053 (MATCH EXIST.)
DESIGN SPEED 40 MPH

RAMP C
CURVE DC13
PI 54+24.72
N 652,448.0525
E 1,747,386.6033
Δ 47° 18′ 32″ (RT)
D 7° 00′ 00″
R 818.51
L 675.84
T 358.52
SE 0.053 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 155

RAMP C
CURVE DC14
PI 59+21.24
N 652,568.3602
E 1,747,910.7015
Δ 3° 34′ 59″ (RT)
D 1° 00′ 00″
R 5,729.58
L 358.29
T 179.20
SE N.C.
DESIGN SPEED 40 MPH

I-440
CURVE DC2
PI 429+21.18
N 652,538.4616
E 1,747,467.7374
Δs 13° 00′ 15″ (RT)
θs 1° 19′ 36″
Δc 10° 21′ 03″ (RT)
Dc 1° 15′ 49″
Rc 4,534.66
Lc 819.21
Ts 621.87
Ls 210.00
SE 0.032 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 210′

SEALED BY



PHASE 1 CLEARING AND GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC PLAN

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50′

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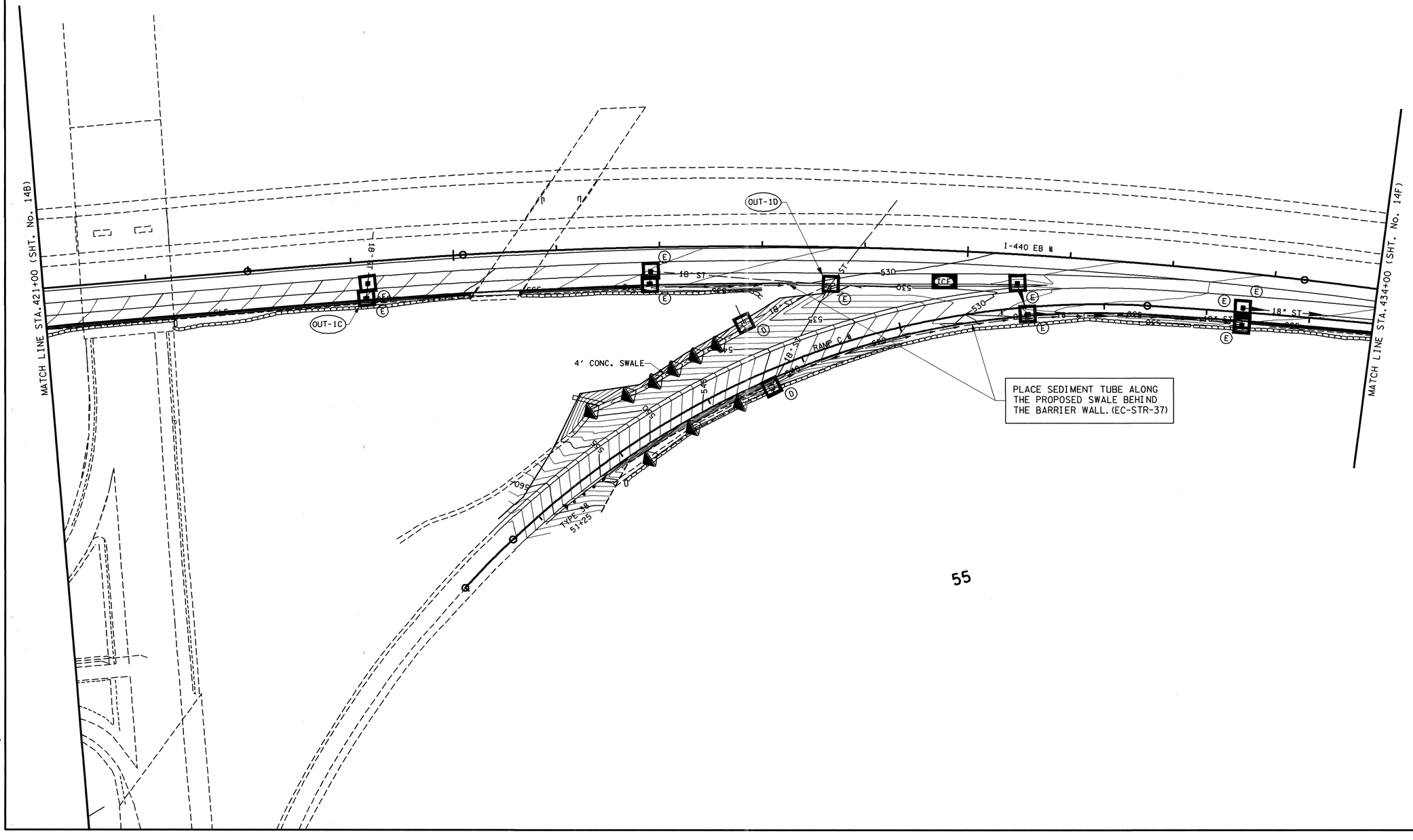
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14D

N

425

430



SEALED BY

TEOK MENG TANG
REGISTERED ENGINEER
No. 101191
STATE OF TENNESSEE
5/11

PHASE 2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC PLAN

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50'

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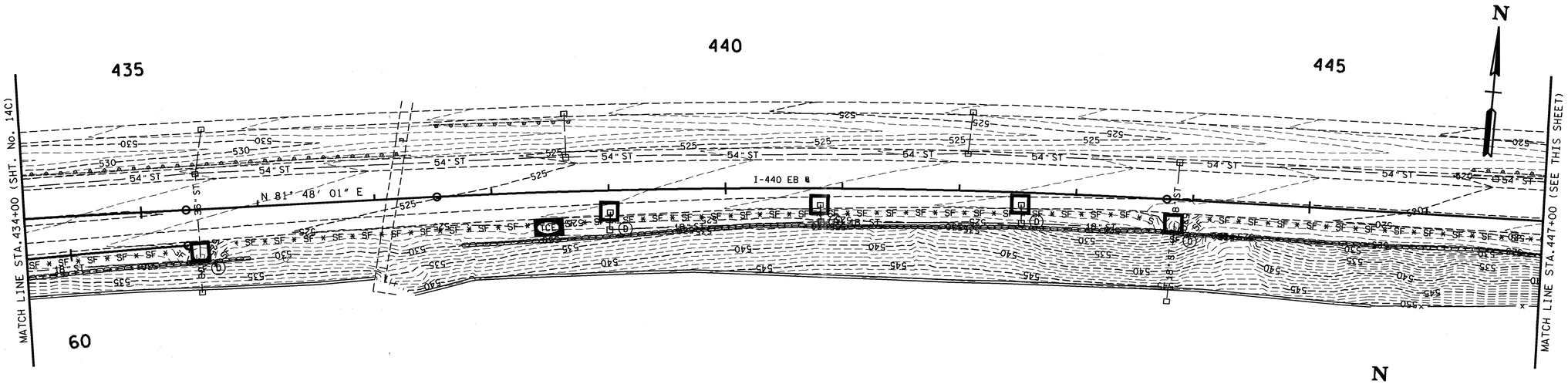
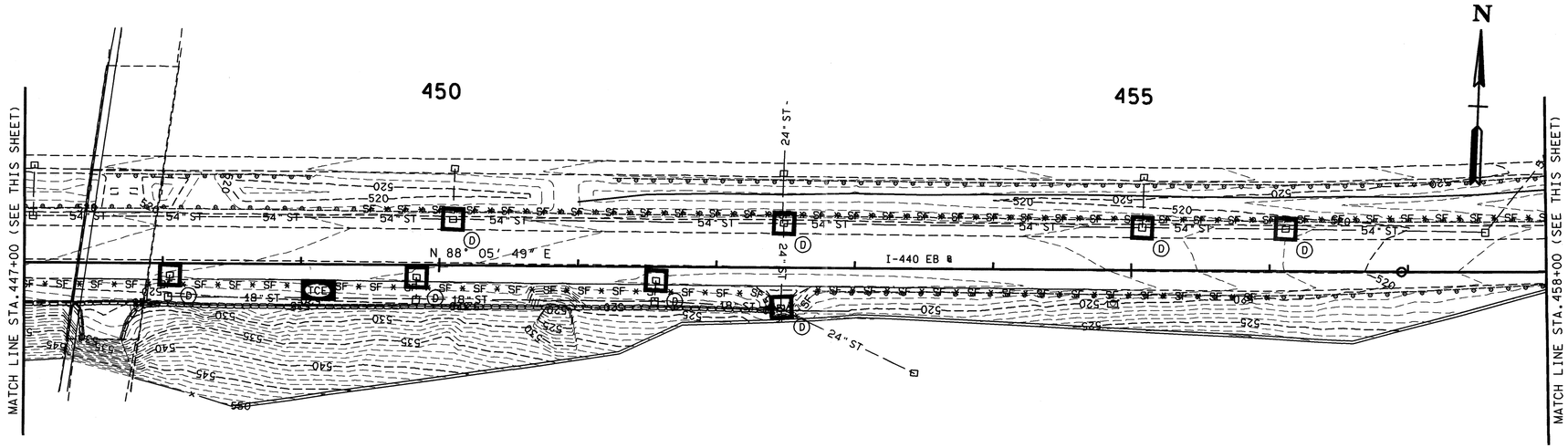
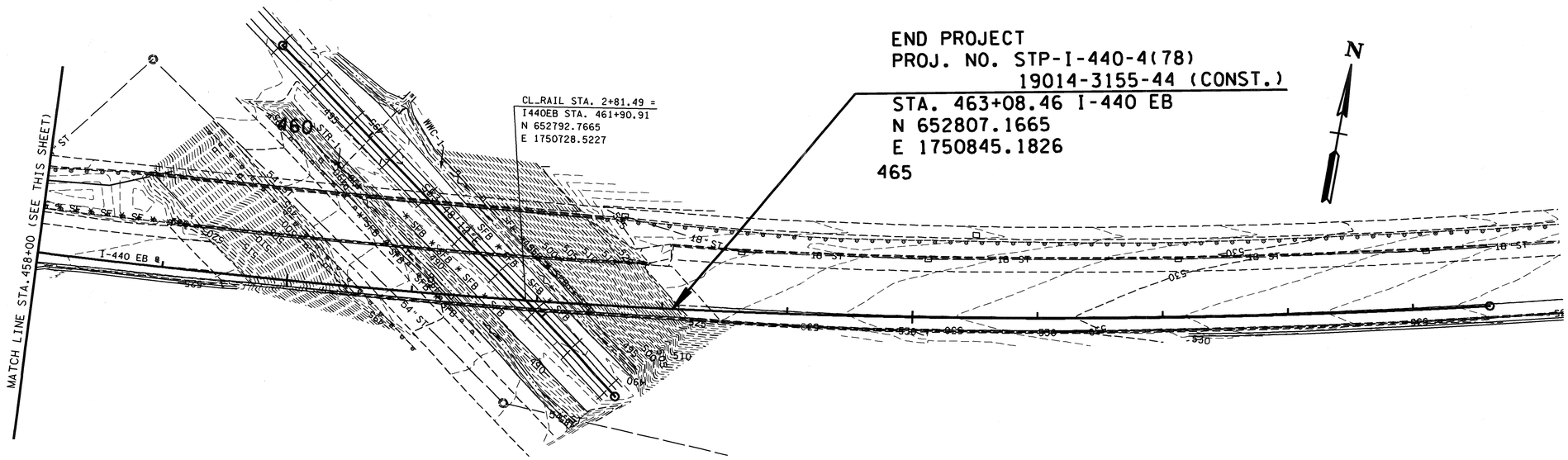
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14E







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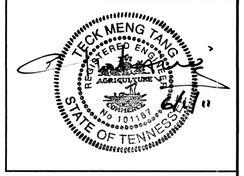

PHASE 1 CLEARING AND GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC PLAN

STA. 434+00 TO END PROJECT

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	14F

435

440

445

N

MATCH LINE STA. 434+00 (SHT. No.14D)

MATCH LINE STA. 447+00 (SEE THIS SHEET)

N 81° 48' 01" E

I-440 EB ℄

18" ST

OUT-1E

OUT-1F

PLACE SEDIMENT TUBE ALONG THE PROPOSED SWALE BEHIND THE BARRIER WALL. (EC-STR-37)

60

450

455

N

MATCH LINE STA. 447+00 (SEE THIS SHEET)

MATCH LINE STA. 458+00 (SEE THIS SHEET)

OUT-1G

OUT-1H

OUT-1I

54" ST

N 88° 05' 49" E

I-440 EB ℄

PLACE SEDIMENT TUBE ALONG THE PROPOSED SWALE BEHIND THE BARRIER WALL. (EC-STR-37)

EXIST. STR-1

U/S DAM STA. 1+51.50 ℄ R.R.

36" TEMP. PIPE

PROP. PIER AND FOOTING

D/S DAM STA. 1+81.50 ℄ R.R.

SCALE 1"=30'

460

MATCH LINE STA. 458+00 (SEE THIS SHEET)

54" ST

STR-1

WWC-1

CL RAIL STA. 2+81.49 = I440EB STA. 461+90.91
N 652792.7665
E 1750728.5227

SEDIMENT FILTER BAG ⚠2 (15'X10')

SF

SFB

I-440 EB ℄

SEDIMENT FILTER BAG ⚠2 (15'X10')

GLENROSE AVE. (UNDERPASS)

OUT-2

OUT-1

OUT-3

⚠1 USE FLEXIBLE PIPE DIVERSION w/ PUMP TO SUPPLEMENT A 36" DRAINAGE PIPE

⚠2 ONE SEDIMENT FILTER BAG IS REQUIRED FOR THE CONSTRUCTION OF EACH BRIDGE PIER. PLACEMENT OF THE FILTER BAGS ARE TO BE DETERMINED BY THE CONTRACTOR.

END PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 463+08.46 I-440 EB
N 652807.1665
E 1750845.1826

465

N

SEALED BY

TECK MENG TANG
REGISTERED ENGINEER
No. 101181
STATE OF TENNESSEE
5/11/11

PHASE 2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC PLAN

STA. 434+00 TO END PROJ.

SCALE: 1"= 50'

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15

TRAFFIC CONTROL NOTES

THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"

THIS CONSTRUCTION SIGNING IS TO SERVE AS A GUIDE ONLY, OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.

TRAFFIC CONTROL PHASING NOTES

PHASE 1

MAINLINE

1. FROM THE BEGINNING OF PROJECT TO STATION 446+00: UTILIZING THE PAVED INSIDE SHOULDER, SHIFT LANES OVER TO THE LEFT 8'. TRAFFIC CONTROL LANES ON MAINLINE SHALL BE 12'.

   FROM STATION 446+00 TO END OF PROJECT: TRANSITION THE LANE SHIFT OVER TO THE RIGHT, UTILIZING THE PAVED OUTSIDE SHOULDER.

RAMP B

2. UTILIZING THE PAVED INSIDE SHOULDER, SHIFT TRAFFIC LANE OVER TO THE LEFT 4'. DUE TO THE TIGHT RADIUS OF THE LOOP RAMP, PROVIDE AS WIDE A LANE AS POSSIBLE – A MINIMUM 14' LANE IS ATTAINABLE.

RAMP C

3. UTILIZING THE PAVED INSIDE SHOULDER, SHIFT TRAFFIC LANE OVER TO THE LEFT 4'. A MINIMUM 12' LANE IS ATTAINABLE.

PHASE 2

MAINLINE

1. FROM THE BEGINNING OF PROJECT TO STATION 446+00: TRAFFIC CONTROL LANES FROM PHASE 1 STILL APPLIES.

   FROM STATION 446+00 TO END OF PROJECT: TRAFFIC SHALL FLOW ONTO THE NEW LANES.

RAMP B

2. SHIFT TRAFFIC OVER TO THE NEW PAVEMENTS AND CONSTRUCT THE REMAINDER OF RAMP.

RAMP C

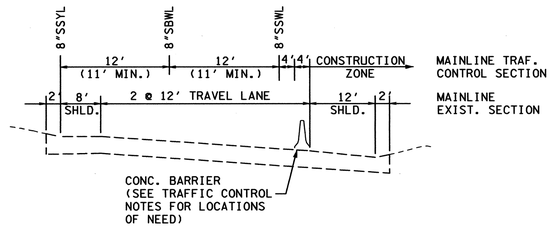
SHIFT TRAFFIC OVER TO THE NEW PAVEMENTS AND CONSTRUCT THE REMAINDER OF RAMP.

TRAFFIC CONTROL LEGEND

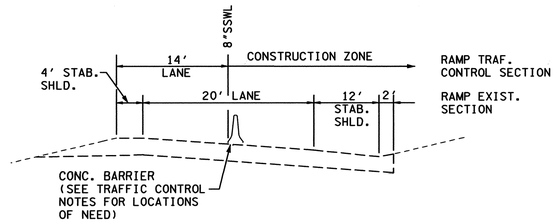
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
C	WARNING LIGHT (TYPE C) (STEADY)
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR
	WORK ZONE

TRAFFIC CONTROL NOTE - GENERAL

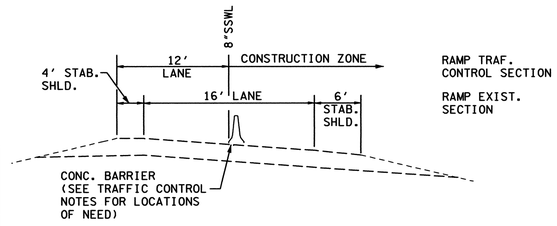
1) INSTALL ARROW BOARDS AND CHANGEABLE MESSAGE SIGN UNITS AS DIRECTED BY THE ENGINEER.



MAINLINE
TRAFFIC CONTROL



RAMP B
TRAFFIC CONTROL
PHASE 1



RAMP C
TRAFFIC CONTROL
PHASE 1

SP-1

TRAFFIC CONTROL QUANTITIES

	ITEM		UNIT	PHASE 1	PHASE 2	TOTALS
	705-04.50	BARRIER RAIL DELINEATORS	EACH	354	195	**354**
	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	7	7	**14**
	712-01	TRAFFIC CONTROL	L.S.	1		**1**
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	7068	3899	**7068**
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	81	92	**173**
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	43	19	**62**
	712-06	SIGNS (CONSTRUCTION)	S.F.	452	84	**536**
	712-08.03	ARROW BOARD (TYPE C)	EACH	1	1	**2**
	713-16.03	CHANGEABLE MESSAGE SIGN	EACH	1	1	**2**
1	716-01.06	TEMPORARY RAISED PAVEMENT MARKER,WHITE	EACH	173	29	**202**
1	716-01.07	TEMPORARY RAISED PAVEMENT MARKER,YELLOW	EACH	291	49	**340**
	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	162	17	**179**
2	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	0.122	0.121	**0.243**
	716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	L.F.	7700	3143	**10843**
	716-05.50	PAINTED PAVEMENT MARKING (8" LINE)	L.F.	14364	5710	**20074**
	716-08.04	REMOVAL OF PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	967	0	**967**
	716-08.20	REMOVAL OF PAVEMENT MARKING (LINE)	L.M.	7.887	1.664	**9.551**

1 MISSING TEMPORARY RAISED PAVEMENT MARKERS SHALL BE REPLACED AT LEAST ONCE MONTHLY OR AT THE DIRECTION OF THE ENGINEER.

2 FOR USE ON GLENROSE AVENUE TRAFFIC CONTROL .

TRAFFIC CONTROL SIGN SCHEDULE

SIGN TYPE	MUTCD NUMBER	SIZE AREA	PHASE ONE	PHASE TWO	TOTAL
ROAD WORK 1MILE	W20-1	48" X 48" 16 s.f.	2	0	2
ROAD WORK ½MILE	W20-1	48" X 48" 16 s.f.	2	0	2
	W1-4BL	48" X 48" 16 s.f.	4	0	4
RIGHT SHOULDER CLOSED	W21-5A	48" X 48" 16 s.f.	1	0	1
RAMP NARROWS	W5-4	48" X 48" 16 s.f.	2	1	3
ROAD WORK AHEAD	W20-1	48" X 48" 16 s.f.	2	1	3
END ROAD WORK	G20-2	48" X 24" 8 s.f.	4	0	4
ROAD WORK 500 FT	W20-1	48" X 48" 16 s.f.	2	0	2
	W1-4BR	48" X 48" 16 s.f.	2	0	2
ROAD WORK 1000 FT	W20-1	36" X 36" 9 s.f.	2	2	4
END ROAD WORK	G20-2	36" X 18" 4.5 s.f.	2	2	4
	W24-1	36" X 36" 9 s.f.	1	1	2
ROAD NARROWS	W5-1	48" X 48" 16 s.f.	1	1	2
		TOTAL S.F.	356.00	84.00	440.00

TRAFFIC CONTROL SPECIAL SIGN SCHEDULE

SIGN TYPE	SPECIAL SIGN NUMBER	SIZE AREA	PHASE ONE	TOTAL
EXIT 6 NOLENSVILLE PIKE RIGHT LANE ONLY	SP-1	66" X 34" 15.58 s.f.	2	2
TDOT Construction Record-A-Comment 1-877-SmartWay	TN-55A	96" x 48" 32 s.f.	2	2
		TOTAL S.F.	95.16	95.16

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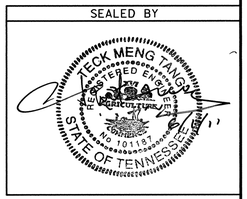

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

NOT TO SCALE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15A

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

A. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 2 INCHES:

   a. WARNING SIGNS, UNEVEN PAVEMENT (W8-11) AND/OR SHOULDER DROP-OFF (W8-9A), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   b. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   c. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.

2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES. TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH a, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   c. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THROUGH TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3.5 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE ENGINEER. SEE PARAGRAPH a REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 2 MILES IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

3. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 INCHES BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:

   a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   IN ORDER TO USE THIS METHOD, THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO 6 INCHES OR LESS BY THE END OF THE WORKDAY THAT THE CONDITION IS CREATED.

   b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.

   c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.

   d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

   FOR PRECEDING CONDITIONS a, b, AND c, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN (W8-9A). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN THE SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

4. FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES.

   SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL

   IN THIS SITUATION THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING ONE MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

B. IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC.:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES.

   WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL

   THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

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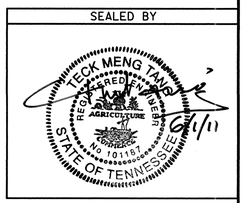

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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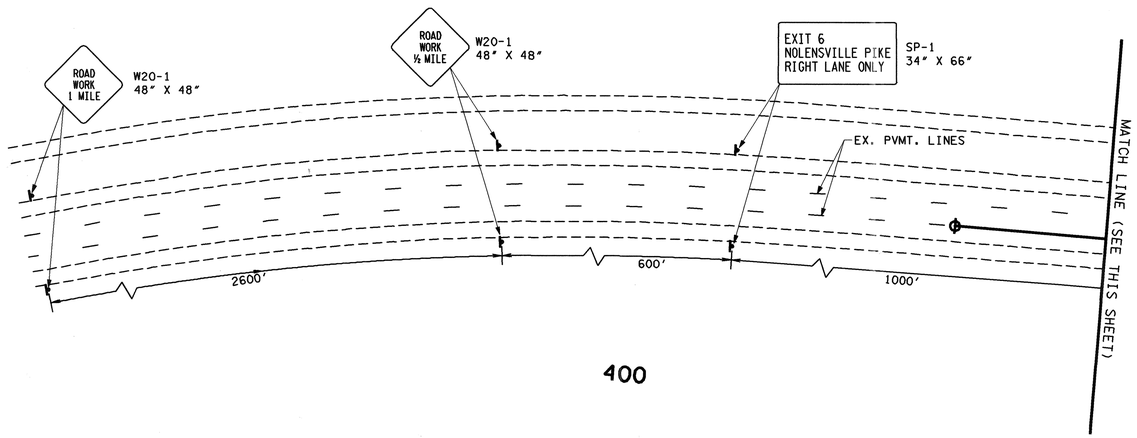
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15B

BEGIN SURVEY
POT 395+00.00
N 651877.3326
E 1744188.5929



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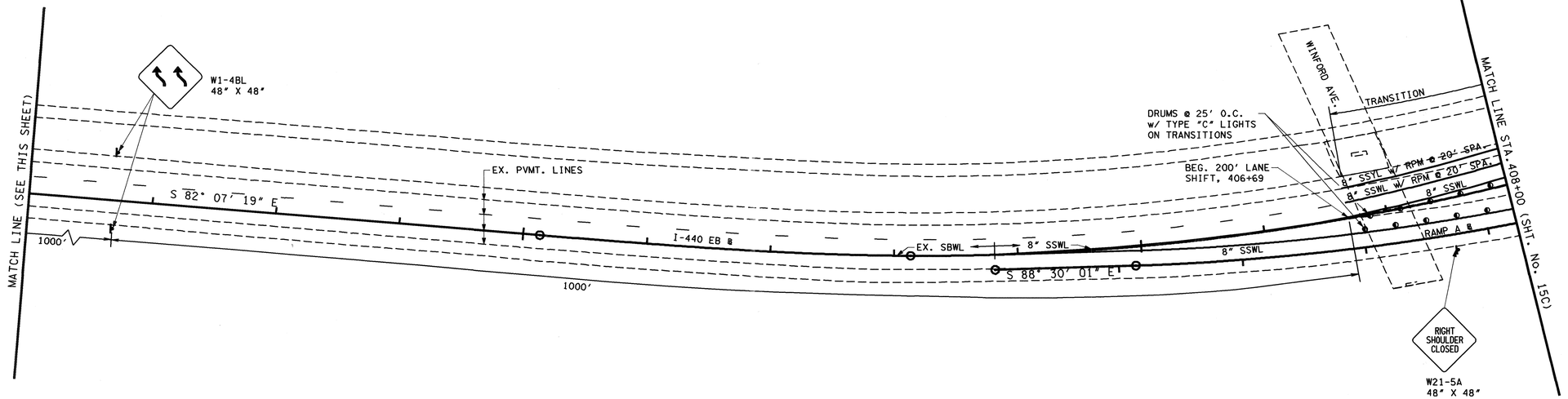

NOTE

REMOVE OPTIONAL EXIT PAVEMENT ARROWS AT APPROXIMATELY STATION 391+15 TO 376+70 (EXTENDED ℄ I-440)

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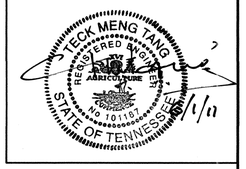

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

BEG. PROJ. TO STA. 408+00

SCALE: 1"= 50'

PHASE 1

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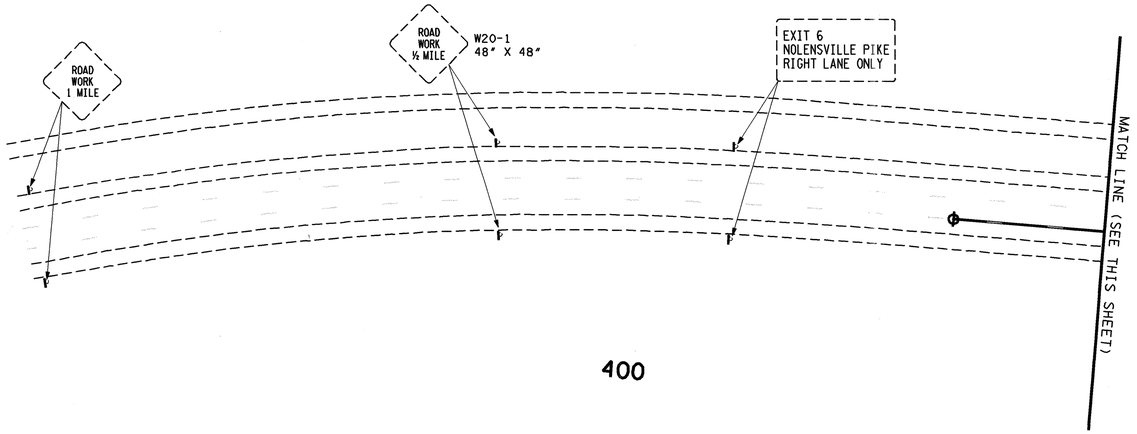
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15C

BEGIN SURVEY
POT 395+00.00
N 651877.3326
E 1744188.5929



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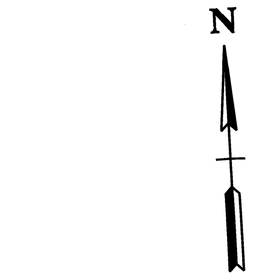

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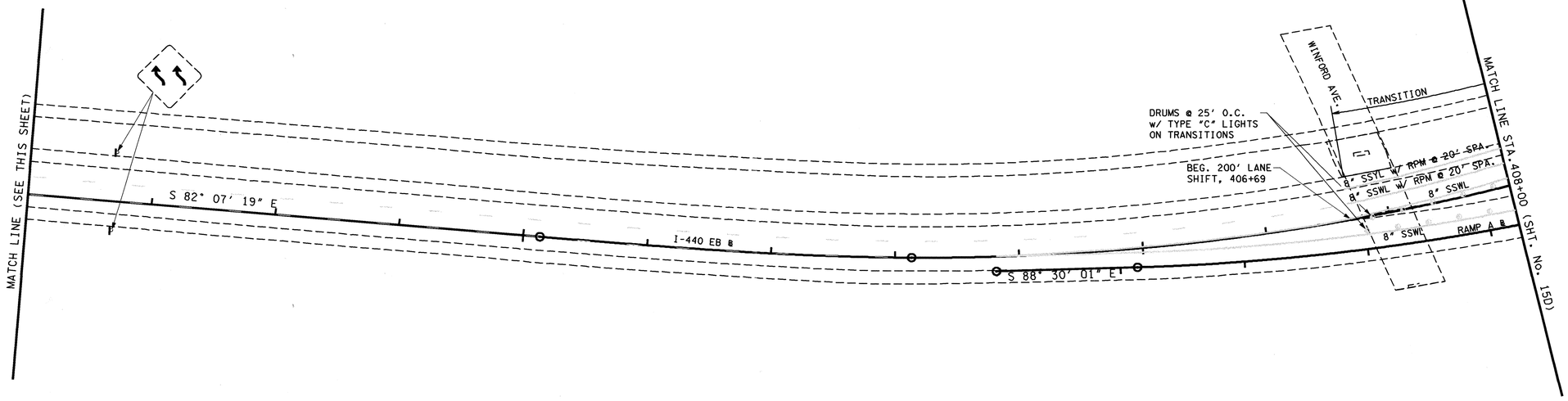

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

BEG. PROJ. TO STA. 408+00

SCALE: 1"= 50'

PHASE 2

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15D

N

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00 I-440 EB
N 651861.6581
E 1745707.2763

410 415 420

MATCH LINE STA. 408+00 (SHT. No. 15A)

TRANSITION
75' FLARE @ 15:1
12' LANES
8" SSYL w/ RPM @ 20' SPA.
8" SBWL w/ RPM @ 40' SPA.
8" SSWL
PORTABLE BARRIER RAIL
I-440 EB
N 68° 47' 47" E
8" SSWL
CONSTRUCTION ZONE
12' LANES
N 75° 33' 52" E
RAMP A
EXIT 6
ATTENUATOR (TYP.)
RELOCATE EXIST. SIGN HERE
PORTABLE BARRIER RAIL

15

20

S 68° 20' 46" E
500'

DRUMS @ 25' O.C.
8" SSWL
RAMP B
CONSTRUCTION ZONE
14' LANE
PORTABLE BARRIER RAIL

30

50' FLARE @ 10:1
ATTENUATOR (TYP.)
DRUMS @ 25' O.C. w/ TYPE "C" LIGHTS ON TRANSITION
100' TAPER
W20-1 48" X 48"
ROAD WORK AHEAD
RAMP NARROWS
W5-4 48" X 48"
100'
100'
END ROAD WORK
G20-2 48" X 24"

MATCH LINE STA. 421+00 (SHT. No. 15E)

PHASE 1

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HECK MENG TANG
REGISTERED ENGINEER
AGRICULTURE
No. 101137
STATE OF TENNESSEE
5/1/11

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 408+00 TO STA. 421+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15E

N

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00 I-440 EB
N 651861.6581
E 1745707.2763

410

415

420

TEMP. RAMP B @
CURVE DC16
PI 0+57.71
N 652,208.3570
E 1,746,714.9934
Δ 8° 15′ 09″ (LT)
D 7° 09′ 43″
R 800.00
L 115.23
T 57.71

STA. 0+00.00 TEMP. RAMP B @ =
STA. 420+42.29 35.5′RT. I-440 EB
N 652187.4827
E 1746661.1867

MATCH LINE STA. 408+00 (SHT. No. 15B)

TRANSITION

75′ FLARE @ 15:1

12′ LANES

8″ SSYL w/ RPM @ 20′ SPA.
8″ SBWL w/ RPM @ 40′ SPA.
8″ SSWL

PORTABLE BARRIER RAIL

I-440 EB @

TRAFFIC CONTROL STRIPES FROM PHASE 1

N 68° 47′ 47″ E

8″ SSWL

DC16

MATCH LINE STA. 421+00 (SHT. No. 15F)

EXIT 6

ATTENUATOR (TYP.)

N 75° 33′ 52″ E

24′ ST

RAMP A @

15

20

CONSTRUCTION ZONE

PORTABLE BARRIER RAIL

RAMP B @

8″ SSWL

DRUMS @ 25′ O.C.

DRUMS @ 50′ O.C.

14′ LANE

30

DRUMS @ 25′ O.C. w/ TYPE "C" LIGHTS ON TRANSITION

W5-4
48″ X 48″
RAMP NARROWS

W20-1
48″ X 48″
ROAD WORK AHEAD

120′ TAPER

S 68° 20′ 46″ E

FLARE @ 10:1

ATTENUATOR (TYP.)

100′

100′

PHASE 2

SEALED BY

TECK MENG TAN
REGISTERED ENGINEER
AGRICULTURE
No 101181
STATE OF TENNESSEE
6/11

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 408+00 TO STA. 421+00

SCALE: 1″= 50′

5/23/2011 10:52:10 AM
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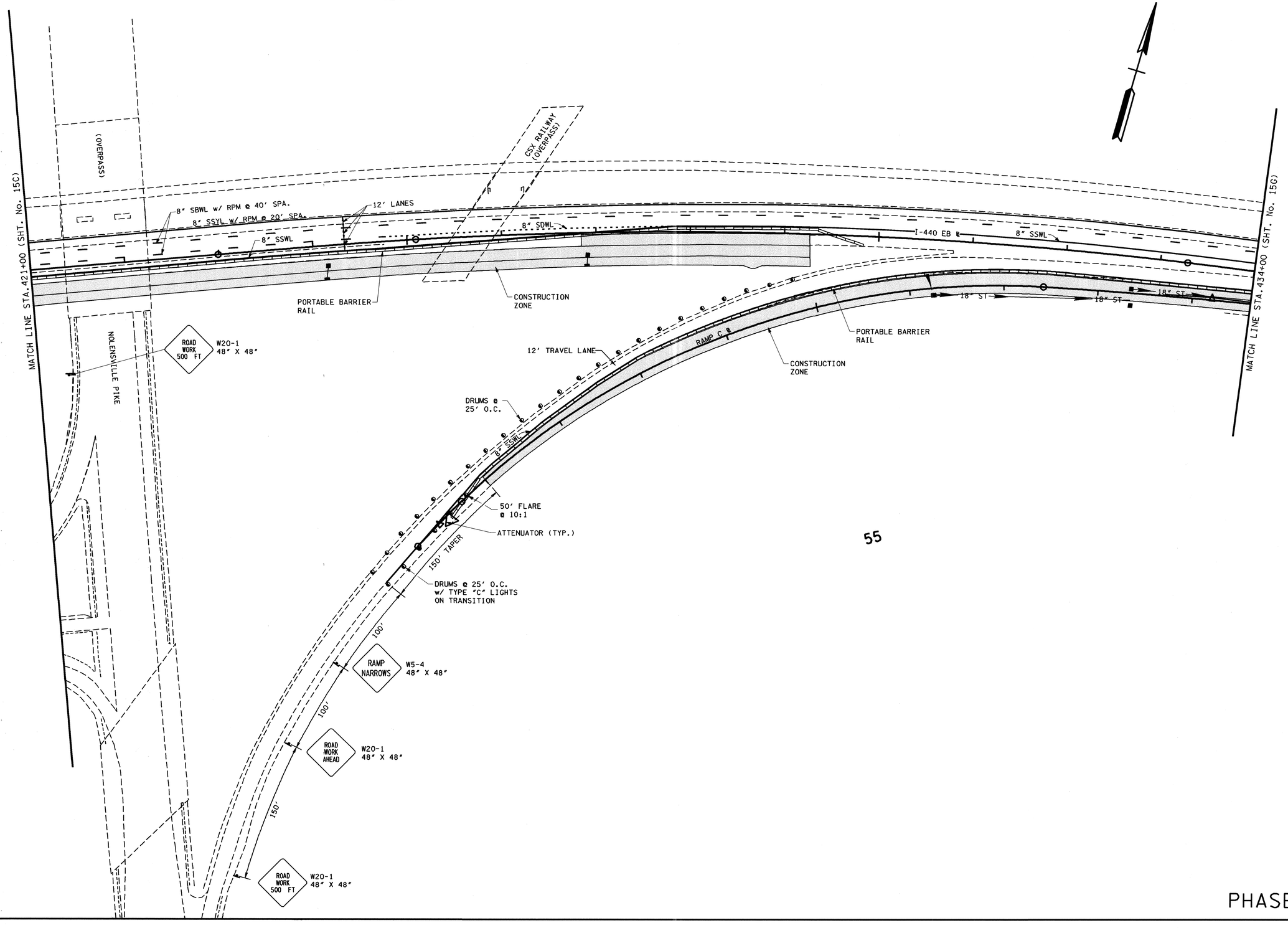
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15F

425

430

N



55

PHASE 1

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TECK MENG TANG
REGISTERED ENGINEER
AGRICULTURE
No. 101157
STATE OF TENNESSEE
6/1/11

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15G

TEMP. RAMP B ℄
CURVE DC17
PI 2+58.94
N 652,307.4080
E 1,746,890.3771
Δ 8° 53′ 30″ (RT)
D 3° 10′ 59″
R 1,800.00
L 279.34
T 139.95

TEMP. RAMP B ℄
CURVE DC18
PI 5+25.57
N 652,400.6169
E 1,747,140.7817
Δ 1° 27′ 09″ (RT)
D 1° 15′ 56″
R 4,527.35
L 114.77
T 57.39

425

430

N

MATCH LINE STA.421+00 (SHT. No. 15D)

MATCH LINE STA.434+00 (SHT. No. 15H)

PT 1+15.23

(OVERPASS)

PI 2+58.94

PI 5+25.57

CSX RAILWAY (OVERPASS)

8" SBWL w/ RPM @ 40' SPA.

8" SSYL w/ RPM @ 20' SPA.

8" SDWL

12' LANES

8" SSWL

8" SSWL

8" SSWL

TEMP. RAMP B ℄

DRUMS @ 50' O.C.

ATTENUATOR (TYP.)

150' FLARE @ 15:1

CONSTRUCTION ZONE

TRAFFIC CONTROL STRIPES FROM PHASE 1

I-440 EB ℄

8" SSWL

18' ST

10' ST

PORTABLE BARRIER RAIL

ROAD WORK 500 FT

NOLENSVILLE PIKE

PC 1+18.98

PT 3+98.33

PC 4+68.18

PT 5+82.95
N 652418.7546
E 1747195.2277

RAMP C ℄

12' LANE

8" SSWL

50' FLARE @ 10:1

ATTENUATOR (TYP.)

TYPE 38 51"x25

DRUMS @ 25' O.C. w/ TYPE "C" LIGHTS ON TRANSITION

150' TAPER

100'

RAMP NARROWS

100'

ROAD WORK AHEAD

150'

ROAD WORK 500 FT

55

PHASE 2

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TECK MENG TANG
REGISTERED ENGINEER
STATE OF TENNESSEE
No. 101157
6/1/11

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

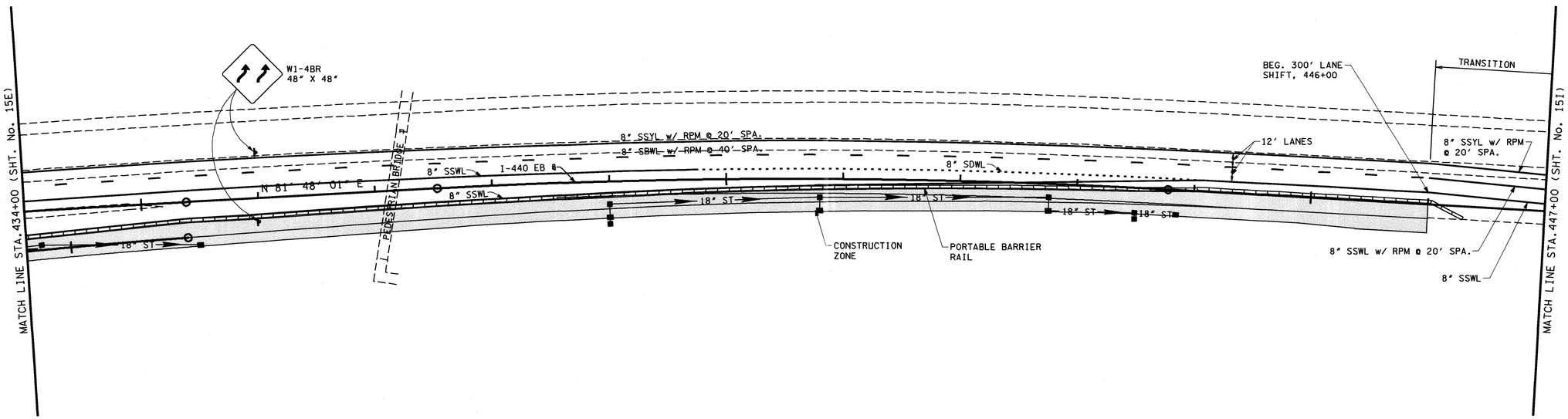
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15H

N

435

440

445



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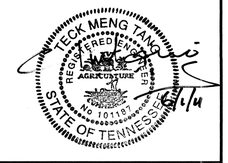

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 434+00 TO STA. 447+00

SCALE: 1"= 50'

PHASE 1

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

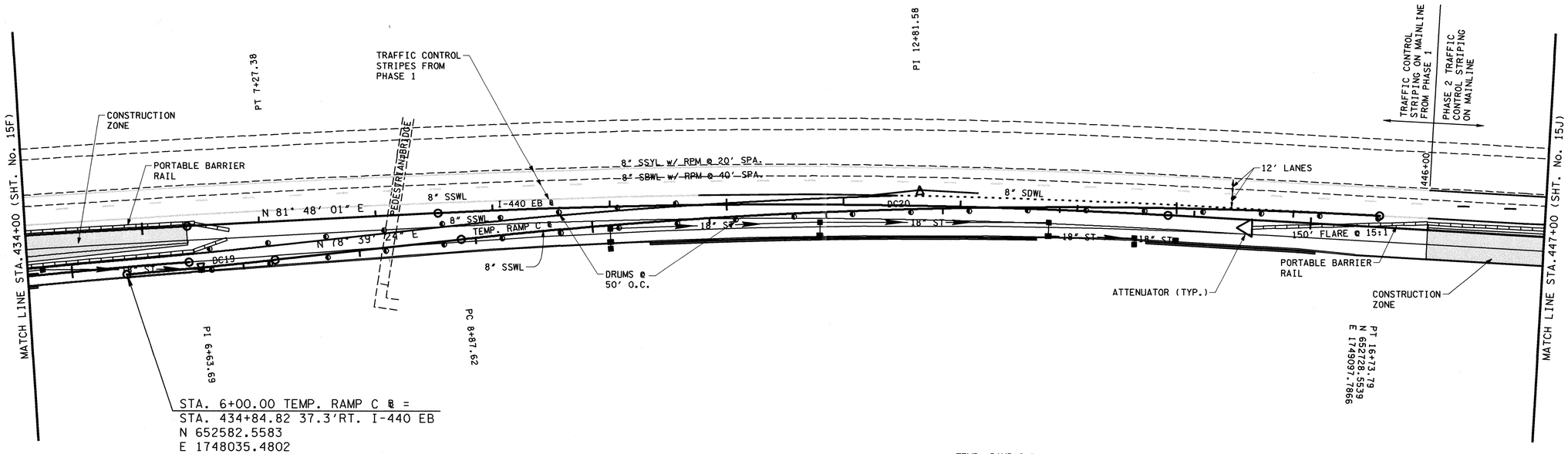
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	151

N

435

440

445



STA. 6+00.00 TEMP. RAMP C ℄ =
STA. 434+84.82 37.3'RT. I-440 EB
N 652582.5583
E 1748035.4802

TEMP. RAMP C ℄
CURVE DC19
PI 6+63.69
N 652,593.4910
E 1,748,098.2262
Δ 1° 27' 35" (LT)
D 1° 08' 45"
R 5,000.00
L 127.38
T 63.69

TEMP. RAMP C ℄
CURVE DC20
PI 12+81.58
N 652,715.0248
E 1,748,704.0551
Δ 9° 22' 32" (RT)
D 1° 11' 33"
R 4,804.50
L 786.17
T 393.96

SEALED BY

6/1/11

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 434+00 TO STA. 447+00

SCALE: 1"= 50'

PHASE 2

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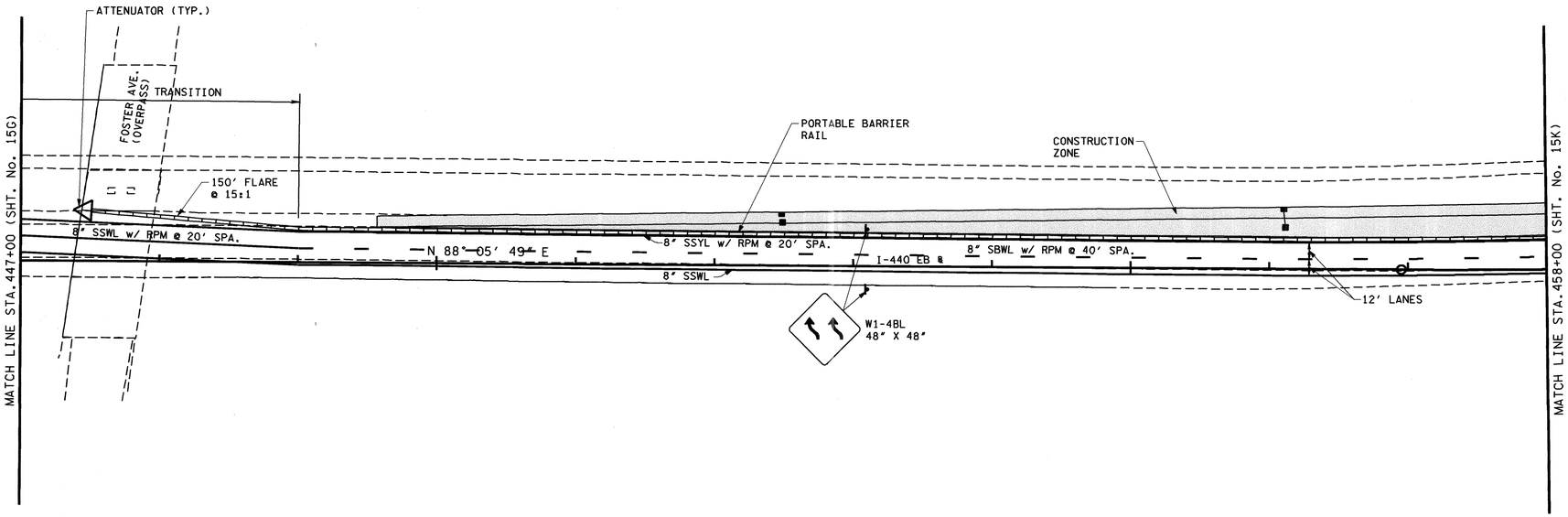
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15J

N

450

455



PHASE 1

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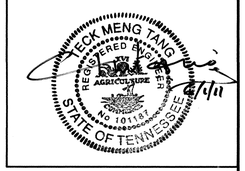

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 447+00 TO STA. 458+00

SCALE: 1"= 50'

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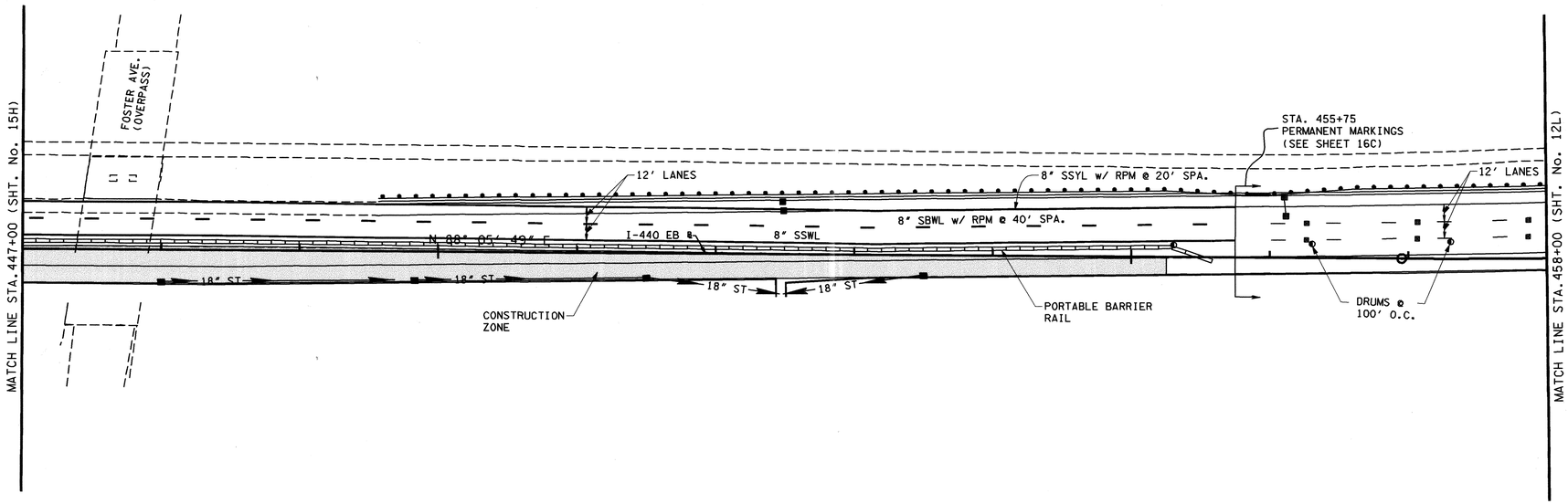
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15K

N

450

455



PHASE 2

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TECK MENG TANG
REGISTERED ENGINEER
AGRICULTURE
No. 101167
STATE OF TENNESSEE
5/23/11

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 447+00 TO STA. 458+00

SCALE: 1"= 50'

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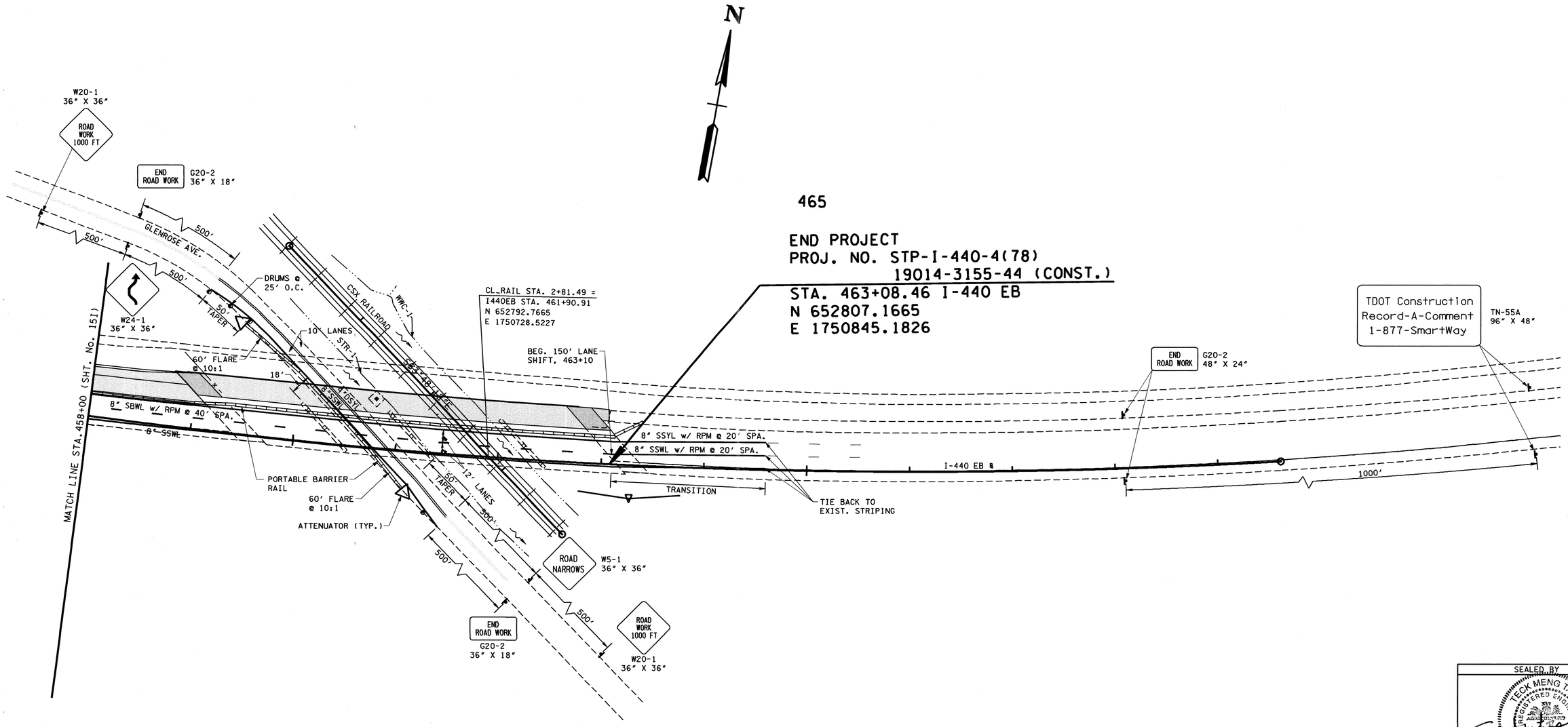
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15L



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 458+00 TO END PROJ.

SCALE: 1"= 50'

PHASE 1

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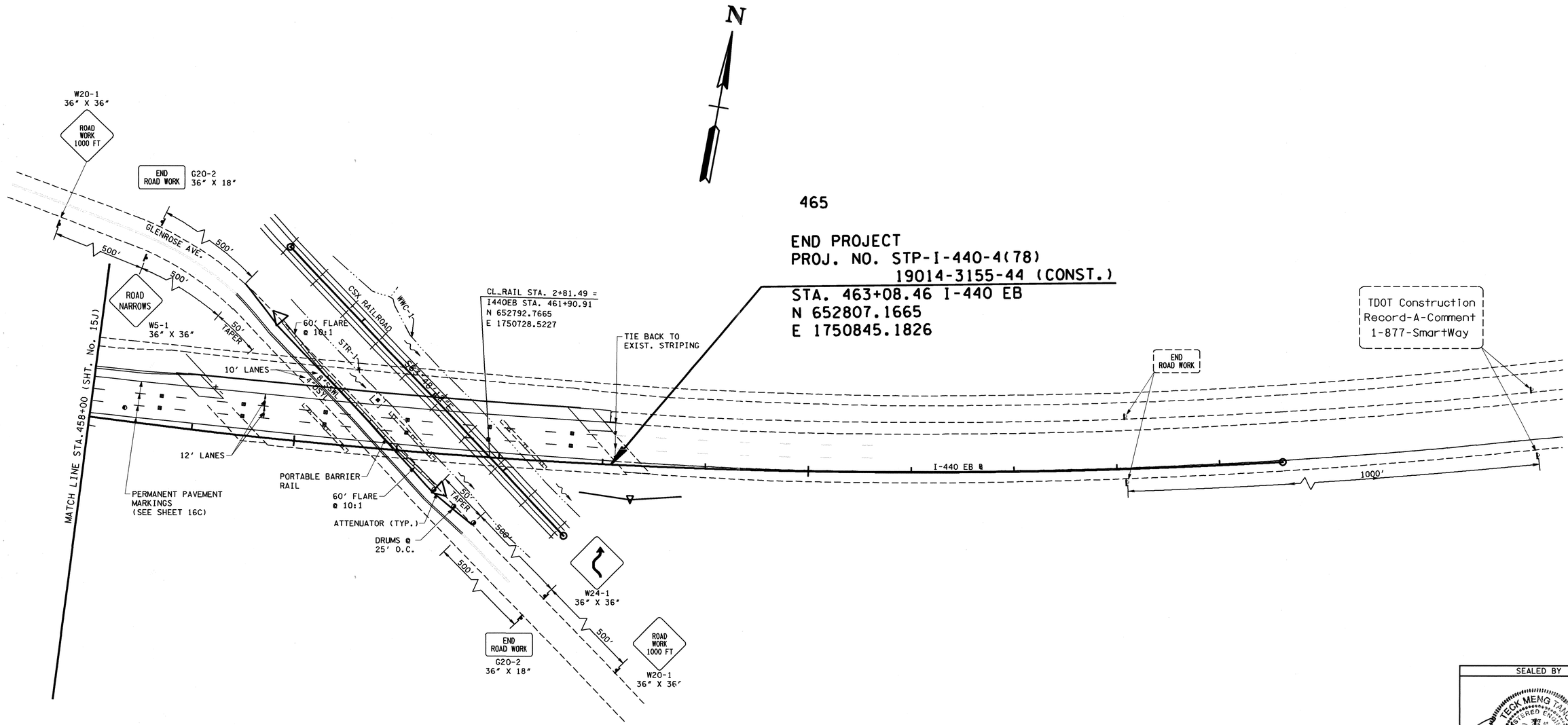
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	15M



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STA. 458+00 TO END PROJ.

SCALE: 1"= 50'

PHASE 2

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	16

395

400

405

N

BEGIN PROPOSED PAVEMENT MARKING
STA. 404+00

MATCH EX. PVMT. STRIPING
STA. 404+00

S 82° 07' 19" E

I-440 EB ℄

6" SSYL
6" SBWL
6" SBWL
6" DWL

RAMP A

S 88° 30' 01" E

12'
12'
12'
16'

13+42.56

MATCH LINE STA. 408+00 (SHT. NO. 16A)

BEG. RAMP A ℄
STA. 10+00 = 12.00' RT. STA. 403+81.19 I-440 EB ℄
N 651758.4770
E 1745062.9011

EXIT 6
31A 41A
Nolensville Pike
½ MILE
EXIT ONLY
1A
REMOVE SIGN FACE ONLY

EXIT 6
31A 41A
Nolensville Pike
½ MILE
1
USE EXISTING CANTILEVER SIGN STRUCTURE

EXIT 6
31A 41A
Nolensville Pike
EXIT ONLY
2A
REMOVE SIGN FACE ONLY

EXIT 6
31A 41A
Nolensville Pike
2
USE EXISTING BRIDGE MOUNT STRUCTURE

NOTE

REMOVE EXIT ONLY PAVEMENT ARROWS AT APPROXIMATELY STATION 391+15 TO 376+70 (EXTENDED ℄ I-440)

SEALED BY

TECK MENG TANG
REGISTERED ENGINEER
No 101187
STATE OF TENNESSEE
6/1/11

PAVEMENT MARKING ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING & MARKING

BEG. PROJ. TO STA. 408+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	16A

N

BEGIN PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 410+35.00 I-440 EB
N 651861.6581
E 1745707.2763

410 415 420

MATCH LINE STA. 408+00 (SHT. No. 16)

MATCH LINE STA. 421+00 (SHT. No. 16B)

EXIST. MEDIAN TRANSITION

414+50

418+50

8" SSWL

6" SSYL

6" SBWL

6" SBWL

N 68° 47' 47" E

I-440 EB

6" SSWL

12'

12'

12'

14'

6" SBWL

24" SWL

8" SSWL

EX. 6" SSWL

N 75° 33' 52" E

16' 6" SSYL

RAMP A

19+72.79

21+72.79

24'

MATCH EX. LINE

EXIT 6

3A

REMOVE SIGN, SUPPORT, AND FOOTING

EXIT 6

3

4A

REMOVE SIGN, SUPPORT, AND FOOTING

4

20'

6" SSWL

31+69.44

32+69.44

6" SSYL

RAMP B

MATCH EX. LINES STA. 30+00

15

20

30

S 68° 20' 46" E

SEALED BY

TECK MENG TAN
REGISTERED ENGINEER
AGRICULTURE
NO. 101181
STATE OF TENNESSEE

6/1/11

PAVEMENT MARKING ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING & MARKING

STA. 408+00 TO STA. 421+00

SCALE: 1"= 50'

5/23/2011 10:56:21 AM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	16B

N

425

430

WEST EAST 24 40 Nashville Knoxville 1¼ MILE

EAST 24 Chattanooga 1¼ MILE

(5A) REMOVE SIGN FACE ONLY

(5) USE EXISTING BRIDGE MOUNT STRUCTURE

EXIST. MEDIAN TRANSITION

426+00

429+24.67

430+00

432+24.67

MATCH LINE STA.421+00 (SHT. No. 16A)

MATCH LINE STA.434+00 (SHT. No. 16C)

6" SSYL
6" SBWL
6" DWL
6" SBWL
6" SSWL
6" SBWL

12' 12' 12' 12' 12' 12' 12' 12' 16'

I-440 EB B

32+69.44

24" SWL

8" SSWL

(6)

RAMP C B

6" SSWL
6" SSYL

(6A) REMOVE SIGN, SUPPORT, AND FOOTING

MATCH EX. LINES STA. 50+70

55

SEALED BY

TECK MENG TANG REGISTERED ENGINEER No. 101193 STATE OF TENNESSEE 5/1/11

PAVEMENT MARKING ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING & MARKING

STA. 421+00 TO STA. 434+00

SCALE: 1"= 50'

5/23/2011 10:56:23 AM
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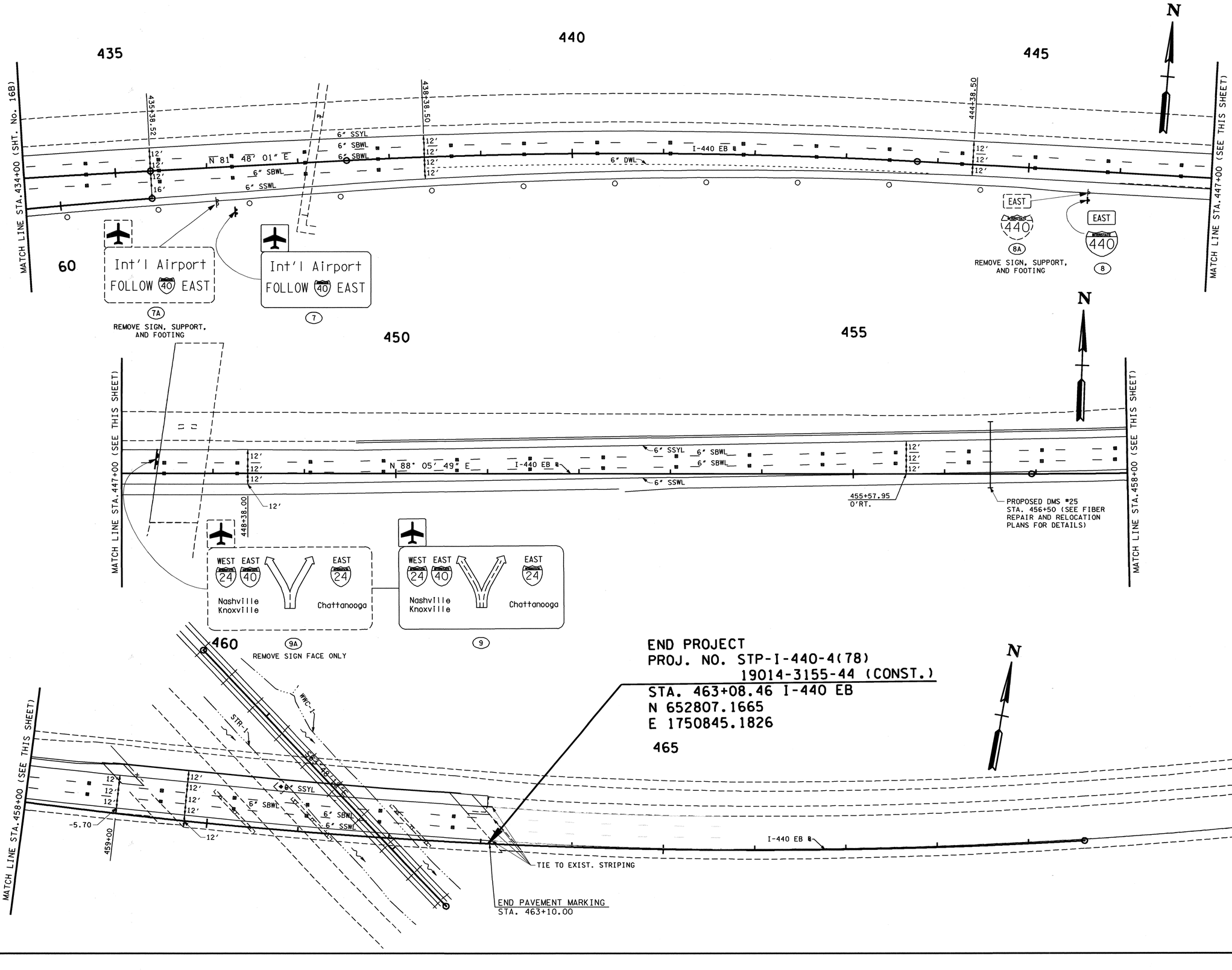
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	16C

REV. 09-19-11: DELETED EXIST. DMS. ADDED PROPOSED DMS STRUCTURE AT STA. 456+50.



END PROJECT
PROJ. NO. STP-I-440-4(78)
19014-3155-44 (CONST.)
STA. 463+08.46 I-440 EB
N 652807.1665
E 1750845.1826

465

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000600 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING & MARKING

STA. 434+00 TO END PROJ.

SCALE: 1"= 50'

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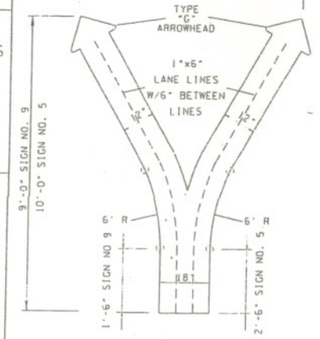
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ALL SIGNS SHOWN WITH DESIGNATIONS ARE TO BE FABRICATED AS DETAILED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION)

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	17

SIGN NO	LEGEND	SHEET NO	SIZE LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHIELD	ARROW	SIGN FACE COPY	SIGN FACE BACKGROUND	SIGN FACE MATERIAL	STEEL DESIGN (BREAK-AWAY) SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.	MINIMUM VERTICAL CLEARANCE	REMARKS
8	EAST M3-2 / INTERSTATE 440 / M1-1	16C	15"	30"							45"x36"		WHITE (REF.)	BLUE (REF.)	0.100" SHEET ALUMINUM	2.5"ø @ 3.98#/FT.	h=15'-0"	TYPE 4 D=1'-0"	0.12	26.4	7'-0"	SEE SPECIAL NOTE FOR POWDER COATING FOR SUPPORTS - DARK BROWN FEDERAL COLOR STANDARD 595 B COLOR NO. 20059.
4 / 6	W4-1	16A / 16B	48"	48"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	S3X5.7	h1=14'-9" h2=15'-3"	TYPE 5 D=1'-7"	0.18	50.1	7'-0"	SEE SPECIAL NOTE FOR POWDER COATING FOR SUPPORTS - DARK BROWN FEDERAL COLOR STANDARD 595 B COLOR NO. 20059.
3	EXIT 6	16A	6'-0"	5'-0"	6"	2"	12"		15"	EMOD D			WHITE (REF.)	GREEN (REF.)	5-12" ALUMINUM EXTRUSIONS	S4X4.7	h1=15'-3" h2=15'-3"	TYPE 5 D=1'-3"	0.18	50.1	7'-0"	SEE SPECIAL NOTE FOR POWDER COATING FOR SUPPORTS - DARK BROWN FEDERAL COLOR STANDARD 595 B COLOR NO. 20059.
7	I-5 / Int'l Airport FOLLOW 40 EAST	16C	30" 14'-0"	30" 6'-0"	9"	2"	13.33" 10"	10"		EMOD	24"x24"		WHITE (REF.)	GREEN (REF.)	0.080" SHEET ALUMINUM 6-12" ALUMINUM EXTRUSIONS	W6X15	h1=17'-0" h2=17'-6"	TYPE 6 E=5'-6"	0.25	70.7	7'-0"	USE EXISTING AUXILIARY SUPPORTS FOR I-5 SIGN. SEE SPECIAL NOTE FOR POWDER COATING FOR SUPPORTS - DARK BROWN FEDERAL COLOR STANDARD 595 B COLOR NO. 20059.
2	EXIT 6 / 31A 41A / Nolensville Pike	16	8'-0" 20'-0"	2'-0" 10'-0"	6" TOP ONLY 12"	2" 2"	10" 16" 16"	12" 12"	15"	EMOD	45"x36"	TYPE "G"ø45°	WHITE (REF.)	GREEN (REF.)	2-12" & 10-12" ALUMINUM EXTRUSIONS							USE EXISTING BRIDGE MOUNT SIGN STRUCTURE AND AUXILIARY SUPPORTS FOR EXIT PANEL.
1	EXIT 6 / 31A 41A / Nolensville Pike ½ MILE	16	8'-0" 20'-0"	2'-0" 10'-0"	6" TOP ONLY 12"	2" 2"	10" 16" 10"	12"	15" 10"/10"	EMOD	45"x36"		WHITE (REF.)	GREEN (REF.)	2-12" & 10-12" ALUMINUM EXTRUSIONS							USE EXISTING CANTILEVER SIGN STRUCTURE AND AUXILIARY SUPPORTS FOR EXIT PANEL
5	WEST 24 EAST 40 / Nashville Knoxville 1¼ MILE / EAST 24 Chattanooga 1¼ MILE	16B	34'-0"	13'-0"	12"	2"	12" 16" 16" 10"	12" 12" 12"	15" 10"/10"	EMOD	36"x36"	SEE DETAIL RIGHT	WHITE (REF.)	GREEN (REF.)	13-12" ALUMINUM EXTRUSIONS							USE EXISTING BRIDGE MOUNT SIGN STRUCTURE.
9	I-5 / WEST 24 EAST 40 / Nashville Knoxville / EAST 24 Chattanooga	16C	30" 34'-0"	30" 11'-0"	12"	2"	12" 16" 16"	12" 12"		EMOD	36"x36"	SEE DETAIL RIGHT	WHITE (REF.)	GREEN REF.)	0.080" SHEET ALUMINUM 11-12" ALUMINUM EXTRUSIONS							USE EXISTING BRIDGE MOUNT SIGN STRUCTURE AND AUXILIARY SUPPORTS FOR I-5 SIGN.



SEALED BY

5-11-11

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

3-MAY-2011 11:05
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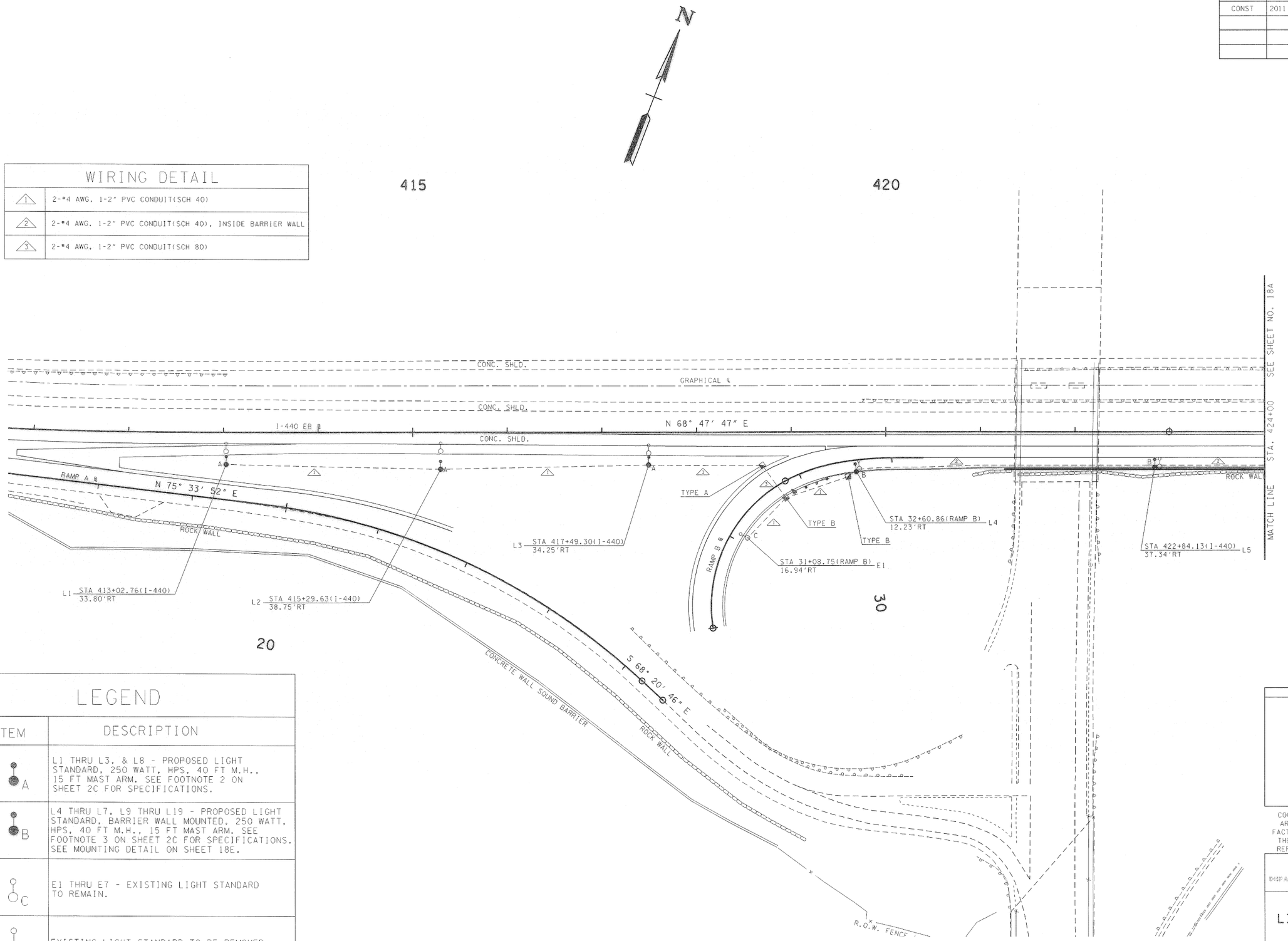
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-I-440-4(78)	18

WIRING DETAIL	
1	2-#4 AWG, 1-2" PVC CONDUIT(SCH 40)
2	2-#4 AWG, 1-2" PVC CONDUIT(SCH 40), INSIDE BARRIER WALL
3	2-#4 AWG, 1-2" PVC CONDUIT(SCH 80)



LEGEND	
ITEM	DESCRIPTION
A	L1 THRU L3, & L8 - PROPOSED LIGHT STANDARD, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 2 ON SHEET 2C FOR SPECIFICATIONS.
B	L4 THRU L7, L9 THRU L19 - PROPOSED LIGHT STANDARD, BARRIER WALL MOUNTED, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 3 ON SHEET 2C FOR SPECIFICATIONS. SEE MOUNTING DETAIL ON SHEET 18E.
C	E1 THRU E7 - EXISTING LIGHT STANDARD TO REMAIN.
	EXISTING LIGHT STANDARD TO BE REMOVED.

SEALED BY

DAVID W. HORNE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 20405
STATE OF TENNESSEE
6/1/2011

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000060 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING LAYOUT
I-440
EASTBOUND

SCALE: 1"=50'

01-JUN-2011 13:35
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

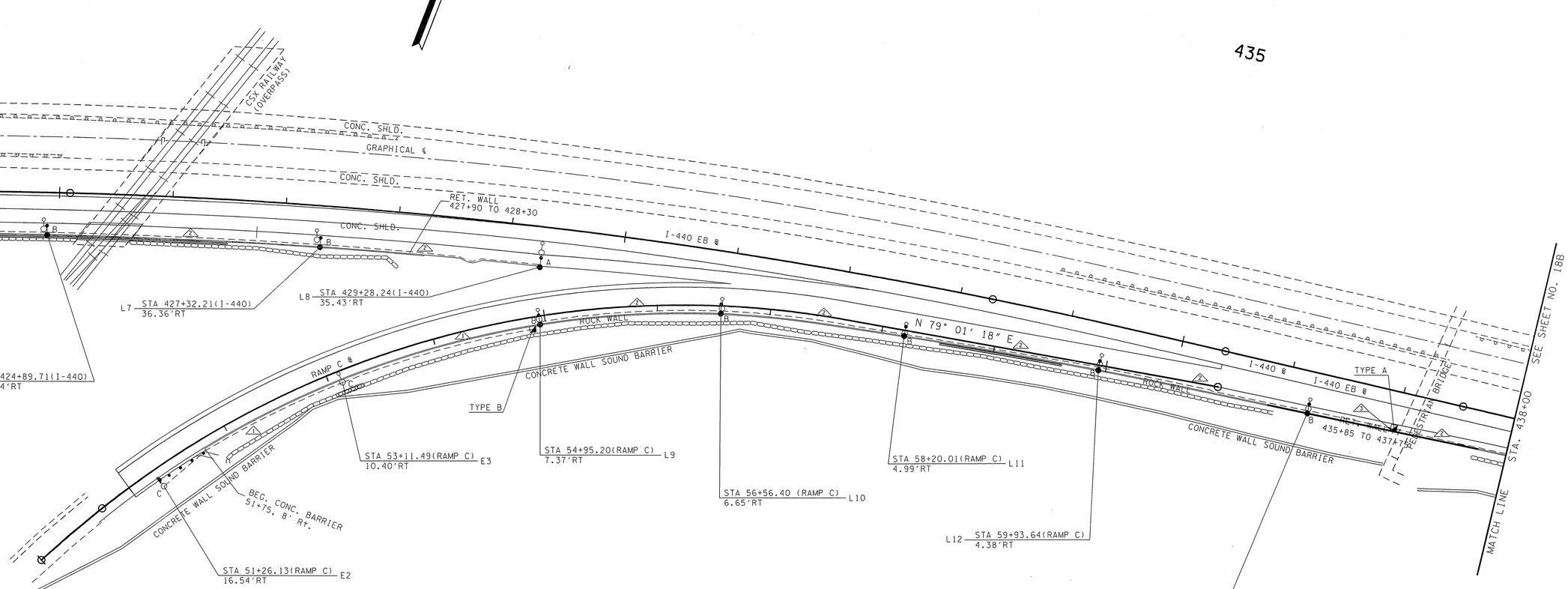
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-I-440-4(78)	18A

425

430

435

N



55

LEGEND

ITEM	DESCRIPTION
A	L1 THRU L3, & L8 - PROPOSED LIGHT STANDARD, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 2 ON SHEET 2C FOR SPECIFICATIONS.
B	L4 THRU L7, L9 THRU L19 - PROPOSED LIGHT STANDARD, BARRIER WALL MOUNTED, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 3 ON SHEET 2C FOR SPECIFICATIONS. SEE MOUNTING DETAIL ON SHEET 18E.
C	E1 THRU E7 - EXISTING LIGHT STANDARD TO REMAIN.
	EXISTING LIGHT STANDARD TO BE REMOVED.

WIRING DETAIL

1	2-#4 AWG. 1-2" PVC CONDUIT(SCH 40)
2	2-#4 AWG. 1-2" PVC CONDUIT(SCH 40). INSIDE BARRIER WALL
3	2-#4 AWG. 1-2" PVC CONDUIT(SCH 80)

SEALED BY

DAVID W. HORNSBY
REGISTERED ENGINEER
No. 20405
STATE OF TENNESSEE
AGRICULTURE
6/24/2011

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000060 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING LAYOUT
I-440
EASTBOUND

SCALE: 1"=50'

24-JUN-2011 13:30
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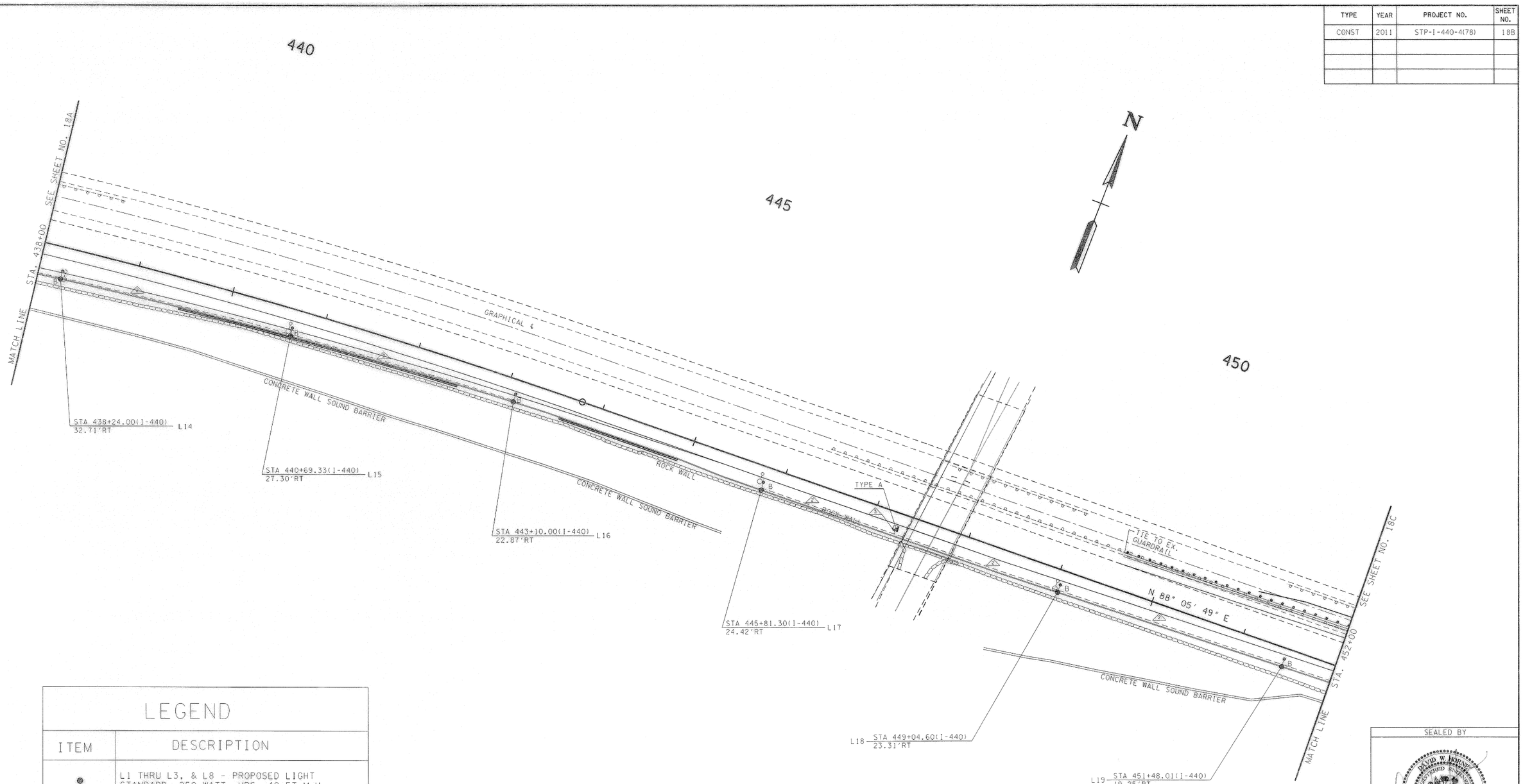
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-I-440-4(78)	18B



LEGEND

ITEM	DESCRIPTION
A	L1 THRU L3, & L8 - PROPOSED LIGHT STANDARD, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 2 ON SHEET 2C FOR SPECIFICATIONS.
B	L4 THRU L7, L9 THRU L19 - PROPOSED LIGHT STANDARD, BARRIER WALL MOUNTED, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 3 ON SHEET 2C FOR SPECIFICATIONS. SEE MOUNTING DETAIL ON SHEET 18E.
C	E1 THRU E7 - EXISTING LIGHT STANDARD TO REMAIN.
	EXISTING LIGHT STANDARD TO BE REMOVED.

WIRING DETAIL

1	2-#4 AWG, 1-2" PVC CONDUIT(SCH 40)
2	2-#4 AWG, 1-2" PVC CONDUIT(SCH 40), INSIDE BARRIER WALL
3	2-#4 AWG, 1-2" PVC CONDUIT(SCH 80)

SEALED BY

DAVID W. HORNE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 99098
STATE OF TENNESSEE
6/17/2011

COORDINATES ARE NAD/83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.000060 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING LAYOUT
I-440
EASTBOUND

SCALE: 1"=50'

01-JUN-2011 13:37
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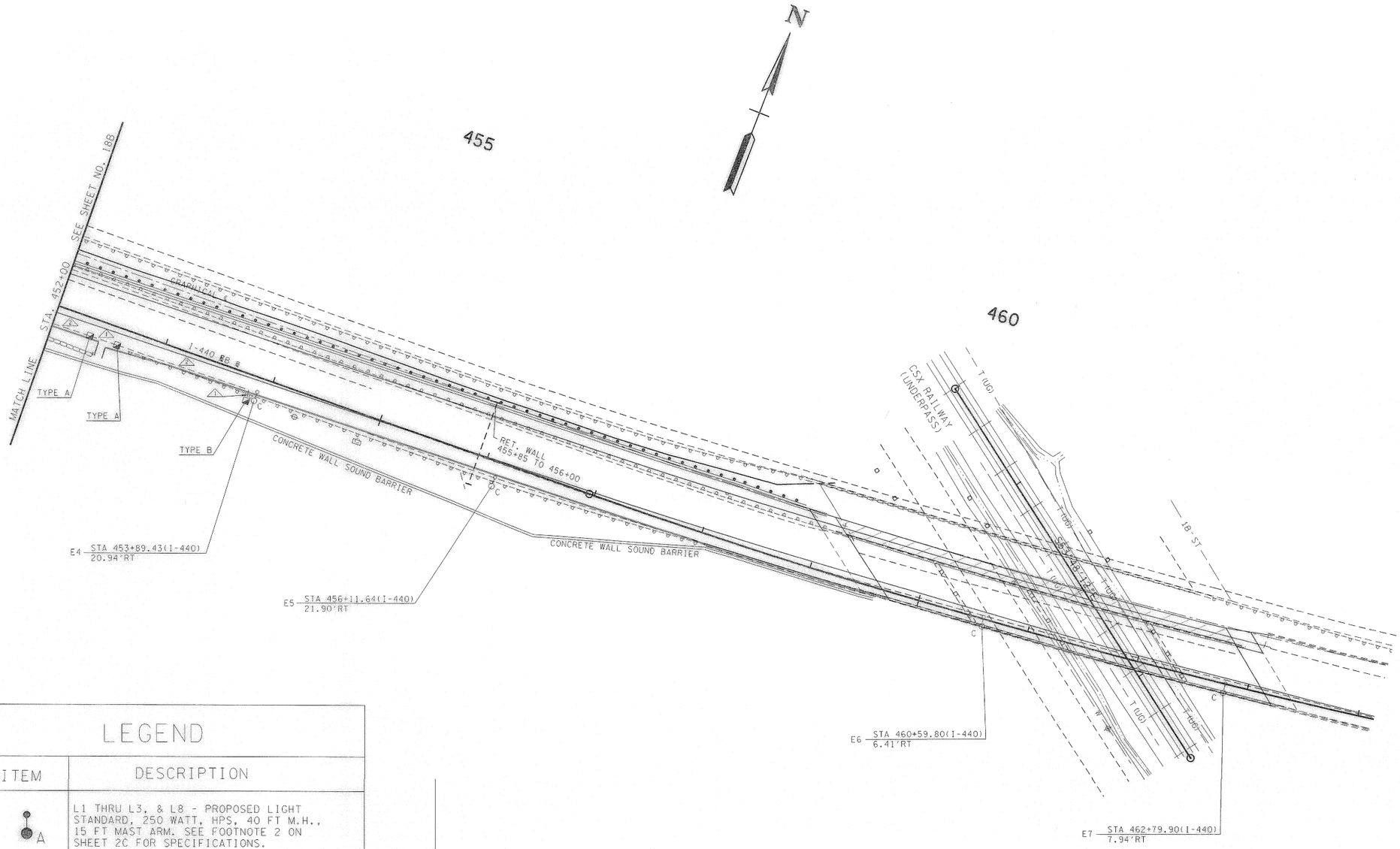
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-I-440-4(78)	18C



LEGEND

ITEM	DESCRIPTION
A	L1 THRU L3, & L8 - PROPOSED LIGHT STANDARD, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 2 ON SHEET 2C FOR SPECIFICATIONS.
B	L4 THRU L7, L9 THRU L19 - PROPOSED LIGHT STANDARD, BARRIER WALL MOUNTED, 250 WATT, HPS, 40 FT M.H., 15 FT MAST ARM. SEE FOOTNOTE 3 ON SHEET 2C FOR SPECIFICATIONS. SEE MOUNTING DETAIL ON SHEET 18E.
C	E1 THRU E7 - EXISTING LIGHT STANDARD TO REMAIN.
	EXISTING LIGHT STANDARD TO BE REMOVED.

WIRING DETAIL

1	2-#4 AWG, 1-2" PVC CONDUIT(SCH 40)
2	2-#4 AWG, 1-2" PVC CONDUIT(SCH 40), INSIDE BARRIER WALL
3	2-#4 AWG, 1-2" PVC CONDUIT(SCH 80)

SEALED BY

DAVID W. BORNE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 21405
STATE OF TENNESSEE

6/7/2011

COORDINATES ARE NAD/83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.000060 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING LAYOUT
I-440
EASTBOUND

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-I-440-4(78)	18D

ROADWAY LIGHTING POLE SCHEDULE

SHEET NO.	POLE LABEL	STA.	OFFSET	M.H. (FT)	CONTROL CENTER*	CIRCUIT NO.
18	L1	413+02.76 (I-440)	33.80' RT	40	2	2
18	L2	415+29.63 (I-440)	38.75' RT	40	2	2
18	L3	417+49.30 (I-440)	34.25' RT	40	2	2
18	L4	32+60.86 (RAMP B)	12.23' RT	40	2	3
18	L5	422+84.13 (I-440)	37.34' RT	40	2	5
18A	L6	424+89.71 (I-440)	37.34' RT	40	2	5
18A	L7	427+32.21 (I-440)	36.36' RT	40	2	5
18A	L8	429+28.24 (I-440)	35.43' RT	40	2	5
18A	L9	54+95.20(RAMP C)	7.37' RT	40	2	7
18A	L10	56+56.40 (RAMP C)	6.65' RT	40	2	7
18A	L11	58+20.01 (RAMP C)	4.99' RT	40	2	8
18A	L12	59+93.64 (RAMP C)	4.38' RT	40	2	8
18A	L13	436+21.01 (I-440)	36.65' RT	40	2	8
18B	L14	438+24.00 (I-440)	32.71' RT	40	2	8
18B	L15	440+69.33 (I-440)	27.30' RT	40	2	8
18B	L16	443+10.00 (I-440)	22.87' RT	40	2	8
18B	L17	445+81.30 (I-440)	24.42' RT	40	3	6
18B	L18	449+04.60 (I-440)	23.31' RT	40	3	6
18B	L19	451+48.01 (I-440)	19.25' RT	40	3	6
18	E1	31+08.75 (RAMP B)	16.94' RT	35	2	3
18A	E2	51+26.13 (RAMP C)	16.54' RT	35	2	7
18A	E3	53+11.49 (RAMP C)	10.40' RT	35	2	7
18C	E4	453+89.43 (I-440)	20.94' RT	45	3	6
18C	E5	456+11.64 (I-440)	21.90' RT	45	3	6
18C	E6	460+59.80 (I-440)	6.41' RT	35	3	2
18C	E7	462+79.90(I-440)	7.94' RT	35	3	2

*NOTE: APPROXIMATE LOCATIONS FOR THE EXISTING CONTROL CENTERS ARE GIVEN IN STATE OF TN COORDINATES AS FOLLOWS:
EXISTING CONTROL CENTER 2 - N652351.79, E1746357.53 (TO BE FIELD VERIFIED)
EXISTING CONTROL CENTER 3 - N653173.75, E1751614.53 (TO BE FIELD VERIFIED)

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LIGHT
POLE
SCHEDULE

01-JUN-2011 13:40
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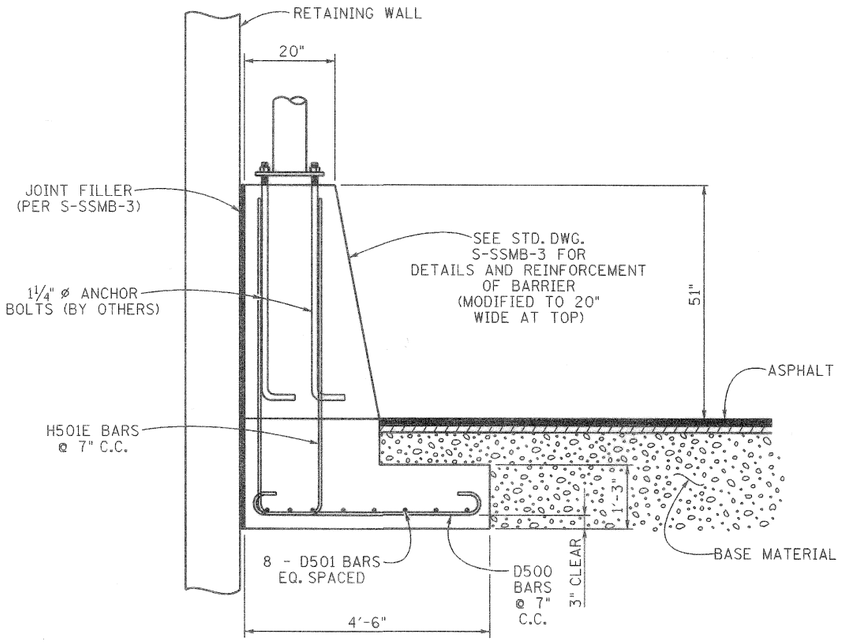
MIS088R1.DGN

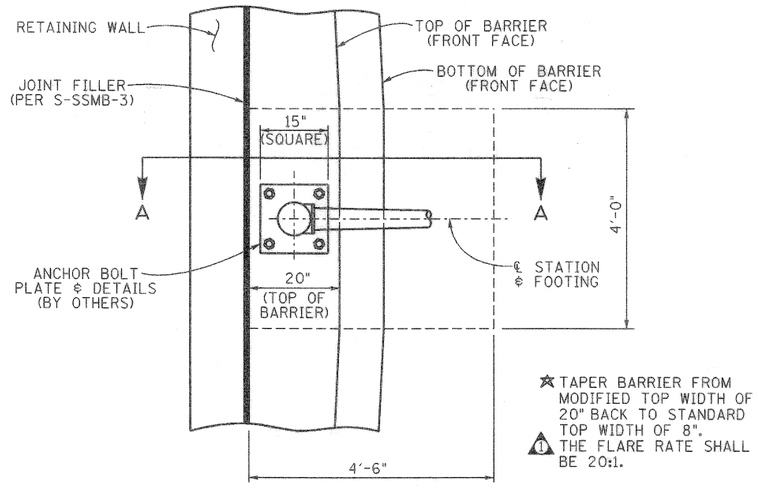
TENN.	YEAR	SHEET NO.
	2011	18E
FED. AID PROJ. NO.	STP-I-440-4(78)	
STATE PROJ. NO.	19014-3155-44	

1 8-29-11 S. STEPP ADDED TRANSITION RATE



SECTION A-A

★BOTTOM OF FOOTING TO BE PLACED 2'-0" BELOW ASPHALT



PLAN VIEW

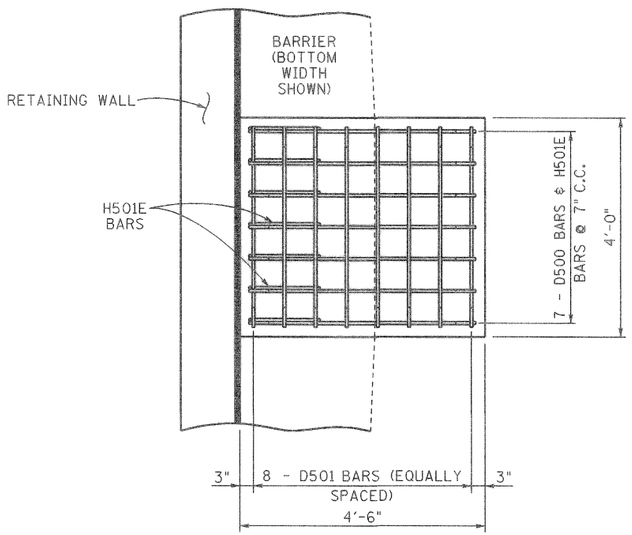
★TAPER BARRIER FROM MODIFIED TOP WIDTH OF 20" BACK TO STANDARD TOP WIDTH OF 8". 1 THE FLARE RATE SHALL BE 20:1.

CONCRETE FOOTING

CONCRETE TO BE CLASS "A" CAST IN PLACE f'c = 3,000 psi.

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60.

COST OF ALL MATERIAL AND LABOR FOR LIGHT POLE FOUNDATION TO BE INCUDED IN ITEM NO. 714-08.28 FOUNDATION (ONLY) FOR LIGHT STANDARDS.



FOOTING PLAN

LIGHT POLE FOOTING STATIONS	
STA. 32+60.86 (RAMP B)	STA. 59+93.64 (RAMP C)
STA. 422+84.13 (I-440)	STA. 436+21.01 (I-440)
STA. 424+89.71 (I-440)	STA. 438+24.00 (I-440)
STA. 427+32.21 (I-440)	STA. 440+69.33 (I-440)
STA. 429+28.24 (I-440)	STA. 443+10.00 (I-440)
STA. 54+95.16 (RAMP C)	STA. 445+81.30 (I-440)
STA. 56+56.40 (RAMP C)	STA. 449+04.60 (I-440)
STA. 58+19.98 (RAMP C)	STA. 451+48.01 (I-440)

NOTES

ANCHOR BOLTS, PLATES, ETC. PER LIGHT POLE SUPPLIER.

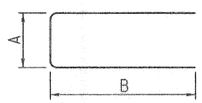
1 ESTIMATED QUANTITIES DO NOT INCLUDE BARRIER AND TRANSITION, WHICH IS PAID FOR UNDER ITEM NO. 711-05.72.

BILL OF STEEL - PER FOOTING*					
BAR	SIZE	NUMBER REQUIRED	BENDING DIMENSIONS A	BENDING DIMENSIONS B	LENGTH
D500	5	7	4'-2"		5'-4"
D501	5	8	3'-8"		4'-10"
H501E	5	7	1'-3"	5'-8"	12'-7"

*DENOTES: 16 FOOTINGS REQUIRED.

ESTIMATED QUANTITIES - PER FOOTING		
NUMBER OF FOOTINGS REQUIRED	CLASS 'A' CONCRETE C.Y.	STEEL BAR REINFORCEMENT LB.
16	1.110	171

BARS D



BARS H

PROPOSED LIGHTING DETAIL

BARRIER FOUNDATION @ LIGHT POLE
I-440 (EB) WIDENING
STATION 410+35 TO
STATION 463+10
DAVIDSON COUNTY
2011

Plotted: 26-AUG-2011 11:53
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M. DYE

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19

ABBREVIATIONS

APPROX.	APPROXIMATELY
AQ	AQUA
ASSY(S)	ASSEMBLY(S)
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
BK	BLACK
BL	BLUE
BR	BROWN
CCTV	CLOSED CIRCUIT TELEVISION
COAX	COAXIAL
COMM.	COMMUNICATIONS
DET	DETECTOR
DIA	DIAMETER
DEMARC	DEMARCATION POINT
DMS	DYNAMIC MESSAGE SIGN
EB	EAST BOUND
EOP	EDGE OF PAVEMENT
E.O.T.L.	EDGE OF TRAVEL LANE
EXIST	EXISTING
F	FIBERS
FCC	FEDERAL COMMUNICATIONS COMMISSION
FO	FIBER OPTIC
G.M.	GROUND MOUNTED
GR	GREEN
G.R.	GUARDRAIL
HAR	HIGHWAY ADVISORY RADIO
HDPE	HIGH DENSITY POLYETHYLENE
HEX	HEXAGONAL
INFO	INFORMATION
IP	INTERNET PROTOCOL
ITS	INTELLIGENT TRANSPORTATION SYSTEM
KVA	KILOVOLT-AMPERE
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MTEC	MIDDLE TENNESSEE ELECTRIC CORPORATION
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
L.D.	LOWERING DEVICE

NEC	NASHVILLE ELECTRIC COMPANY
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NO(S)	NUMBER(S)
N.T.S.	NOT TO SCALE
O.H.	OVERHEAD
OR	ORANGE
P	POWER
PB	PULL BOX
PTZ	PAN TILT AND ZOOM
PVC	POLYVINYLCHLORIDE CONDUIT
RC	RECEIVE
RD	RED
RDS	RADAR DETECTION SYSTEM
RGS	RIGID GALVANIZED STEEL
REFL.	REFLECTIVE
RT	RIGHT
SCH.	SCHEDULE
SHLD.	SHOULDER
SL	SLATE
STA.	STATION
TMC	TRANSPORTATION MANAGEMENT CENTER
TSP	TECHNICAL SPECIAL PROVISIONS
TYP	TYPICAL
UL	UNITED LABORATORIES
V	VOLTS
VDS	VIDEO DETECTION SYSTEM
VI	VIOLET
W	WATTS
W/	WITH
WB	WEST BOUND
WH	WHITE
YL	YELLOW

PLANS LEGEND

TYPE C PULL BOX — PB
TYPE D PULL BOX
TYPE E PULL BOX
SURFACE MOUNTED PULL BOX — SP
LABEL FOR PULL BOX TYPE(S) — C,D
POWER CONDUIT — P (UG)
COMMUNICATION CONDUIT — F (UG)
EXISTING DEMARCATION POINT
EXISTING TYPE A CABINET — A
EXISTING TYPE B CABINET — B
EXISTING TYPE C CABINET — C

EXISTING POWER CONDUIT — P (UG)
EXISTING COMMUNICATION CONDUIT — F (UG)
EXISTING RDS — RDS
EXISTING WIRELESS RADAR DETECTION SYSTEM — RDS
EXISTING CLOSED CIRCUIT TELEVISION CAMERA — CCTV (ARROW REPRESENTS DIRECTION OF ARM AWAY FROM POLE)
EXISTING DYNAMIC MESSAGE SIGN — DMS
EXISTING PULL BOX — PB
EXISTING GUARDRAIL

** NOTE
ALL DEVICES ARE SHOWN FOR GRAPHICAL REPRESENTATION ONLY AND ARE NOT TO SCALE. THE CENTER OF THE POLE OR DEVICE IS INDICATED ON THE PLANS BY THE STATION LOCATION.

CONDUIT/CABLE LABEL DESCRIPTION

EXAMPLE LABEL: (SEE BELOW FOR DESCRIPTION OF EACH LINE)

{LINE 1} CONDUIT BANK TYPE 4 (290 LF)
{LINE 2} 1-2" CONDUIT W/BANK (290 LF)
{LINE 3} FO CABLE, 72F (490 LF)
{LINE 4} RDS COMM CABLE (340 LF)
{LINE 5} 3-#8 AWG POWER (365 LF)

LINE 1-INDICATES A TYPE 4 COMMUNICATIONS CONDUIT BANK. THIS WILL INCLUDE FOUR 1-1/4" HDPE CONDUITS AND THE LENGTH OF EACH CONDUIT IN THAT SEGMENT IS 290 LINEAR FEET.

LINE 2-INDICATES THAT ONE 2" CONDUIT WILL BE INSTALLED ALONG WITH THE COMMUNICATIONS CONDUIT BANK IN THE SAME TRENCH. TOTAL LENGTH OF CONDUIT IN THAT SEGMENT IS 290 LINEAR FEET.

LINE 3-INDICATES THAT FIBER OPTIC CABLE WITH 72 FIBERS WILL BE INSTALLED IN ONE OF THE CONDUITS. THE TOTAL LENGTH OF CABLE IN THAT SEGMENT INCLUDING THE COILS INSIDE THE PULL BOXES IS 490 LINEAR FEET.

LINE 4-INDICATES THAT RDS COMMUNICATIONS CABLE WILL BE INSTALLED IN ONE OF THE CONDUITS. THE TOTAL LENGTH OF CABLE IN THAT SEGMENT INCLUDING THE COILS INSIDE THE PULL BOXES IS 340 LINEAR FEET.

LINE 5-INDICATES THAT THREE #8 AWG POWER CABLES WILL BE INSTALLED INSIDE THE 2" CONDUIT. TOTAL LENGTH OF EACH CABLE IN THAT SEGMENT INCLUDING COILS INSIDE THE PULL BOXES IS 365 LINEAR FEET.

A NEW CONDUIT LABEL IS LISTED BETWEEN PULL BOXES.

LENGTHS ARE APPROXIMATE ONLY. PAYMENT WILL BE BASED ON ACTUAL LENGTHS INSTALLED.

MARK H. WASHINGTON — REGISTERED ENGINEER — No. 107029 — STATE OF TENNESSEE — 6/3/11

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

LEGEND AND ABBREVIATIONS
N.T.S.

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TENNESSEE D.O.T.
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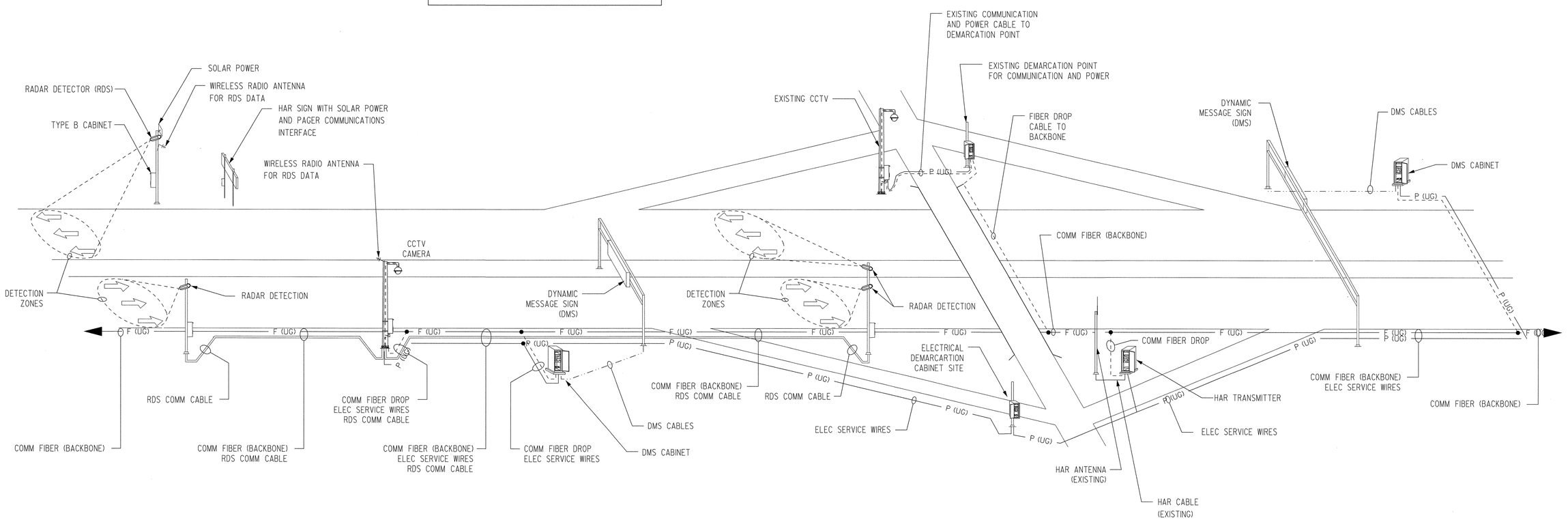
CONST.	2011	STP-I-440-4(78)	19A

NOTE:

THIS SYSTEM SCHEMATIC IS INTENDED AS A HIGH LEVEL OVERVIEW ONLY. REFER TO THE TECHNICAL SPECIAL PROVISIONS AND OTHER PLAN SHEETS FOR SPECIFIC DETAILS AND QUANTITIES.

CABLE LEGEND

F (UG)	COMM FIBER (BACKBONE)
	COMM FIBER DROP
	FIBER SPLICE CLOSURE
	RDS COMM CABLE
P (UG)	ELEC SERVICE WIRES
	DMS CABLES



MARK H. WASHBURN
REGISTERED ENGINEER
No. 107309
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

SYSTEM SCHEMATIC
N.T.S.

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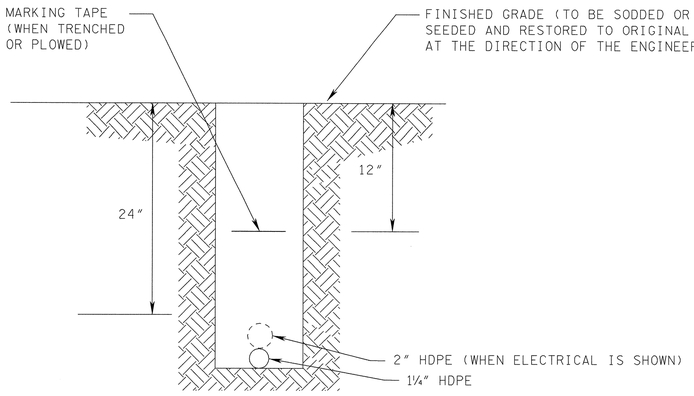
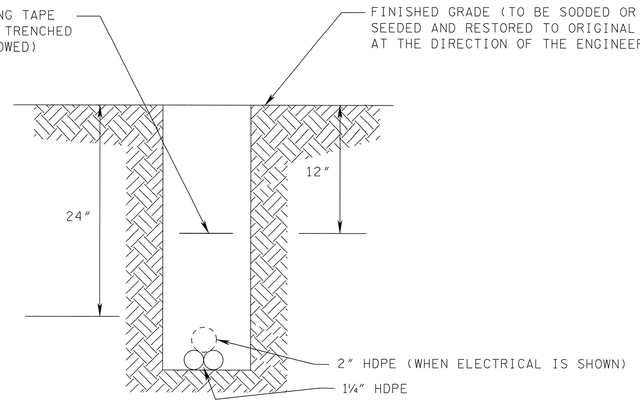
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

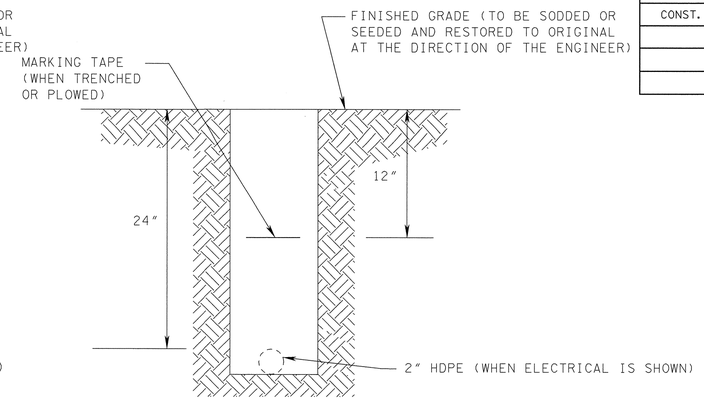
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19B



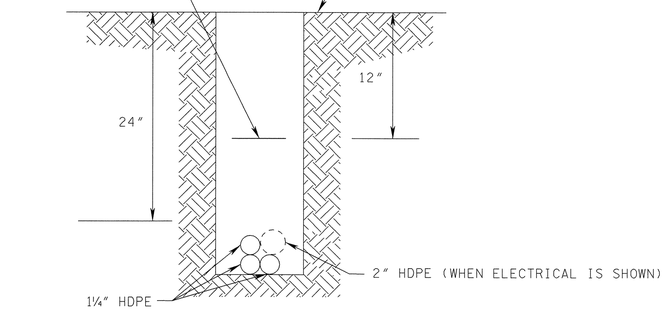
CONDUIT BANK TYPE 1
N.T.S.
ONE 1¼″ HDPE COMMUNICATIONS CONDUIT WITH OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



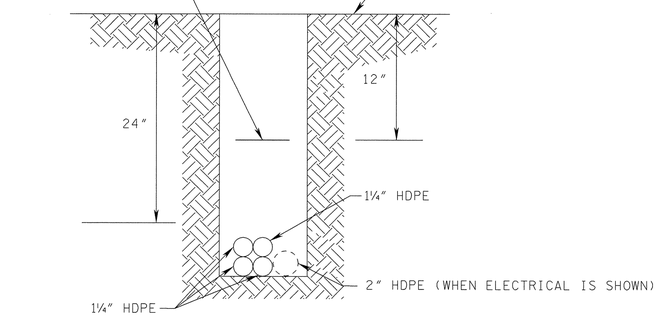
CONDUIT BANK TYPE 2
N.T.S.
TWO 1¼″ HDPE COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



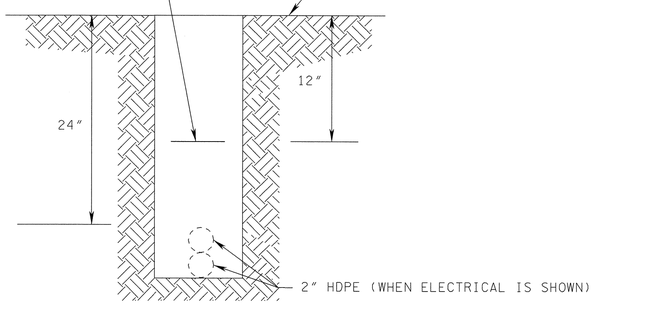
1-2″ CONDUIT
N.T.S.
ONE 2″ HDPE ELECTRICAL CONDUIT



CONDUIT BANK TYPE 3
N.T.S.
THREE 1¼″ HDPE COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 4
N.T.S.
FOUR 1¼″ HDPE COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



2-2″ CONDUIT
N.T.S.
TWO 2″ HDPE ELECTRICAL CONDUIT

NOTES:

DETAILS FOR CONDUIT BANKS APPEAR AS TRENCHED INSTALLATION FOR GRAPHICAL PURPOSES ONLY. AS DESCRIBED IN SECTION 2, TSP 725 CONDUIT BANKS IN EARTH MAY BE TRENCHED, PLOWED, HORIZONTAL DIRECTIONAL BORED, OR DRILLED.

CONDUIT COLORS

ALL CONDUIT USED ON THIS PROJECT SHALL CONFORM TO THE COLOR SCHEME AND USE DESCRIBED BELOW:

CONDUIT BANK TYPE 1: GREEN (DROP FIBER OR RDS COMM)

CONDUIT BANK TYPE 2: GREEN (DROP FIBER OR RDS COMM)
WHITE (RDS COMM, 2ND DROP FIBER OR SPARE)

CONDUIT BANK TYPE 3: GREEN (DROP FIBER OR RDS COMM)
BLUE (RDS COMM OR 2ND DROP FIBER)
WHITE (2ND RDS COMM OR SPARE)

CONDUIT BANK TYPE 4: ORANGE (TRUNK FIBER CABLE)
BLUE (RDS COMM OR DROP FIBER)
WHITE (SPARE OR 2ND RDS COMM)
BROWN (SPARE)

2″ ELECTRICAL CONDUIT: GREY (ELECTRICAL WIRE)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

CONDUIT AND TRENCHING DETAILS
N.T.S.

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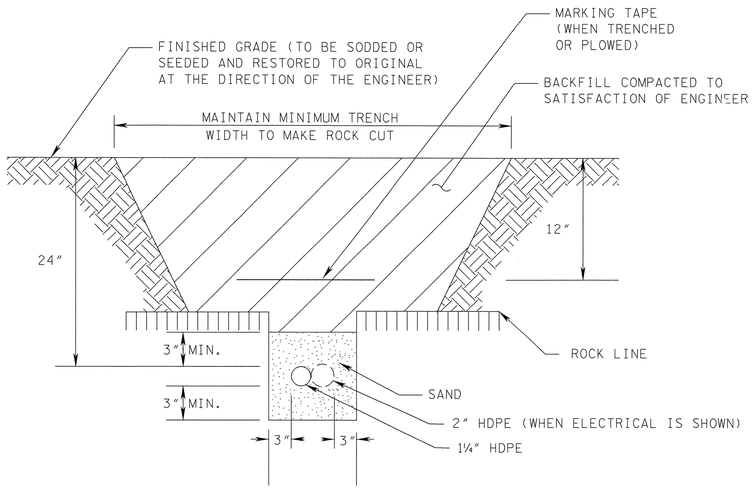
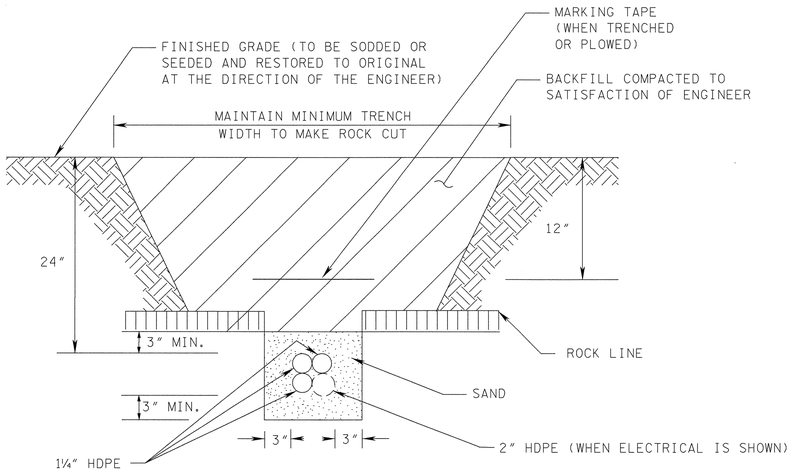
CONST.	2011	STP-I-440-4(78)	19C



CONDUIT BANK TYPE 1 IN ROCK

N.T.S.

ONE 1¼″ HDPE COMMUNICATIONS CONDUITS WITH
OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT
WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 3 IN ROCK

N.T.S.

THREE 1¼″ HDPE COMMUNICATIONS CONDUITS WITH
OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT
WHICH IS PAID SEPARATELY

CONDUIT COLORS

ALL CONDUIT USED ON THIS PROJECT SHALL CONFORM TO THE
COLOR SCHEME AND USE DESCRIBED BELOW:

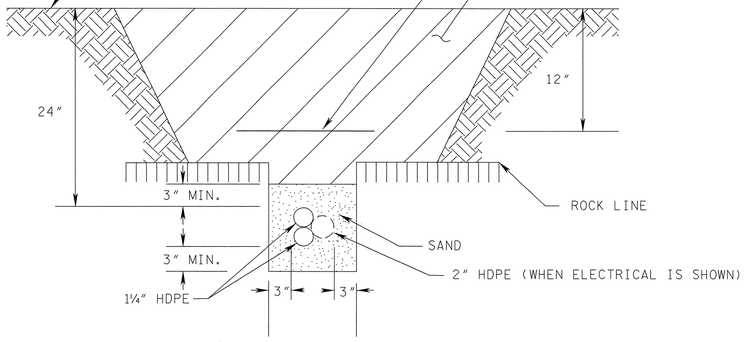
CONDUIT BANK TYPE 1: GREEN (DROP FIBER OR RDS COMM)

CONDUIT BANK TYPE 2: GREEN (DROP FIBER OR RDS COMM)
WHITE (RDS COMM, 2ND DROP FIBER OR SPARE)

CONDUIT BANK TYPE 3: GREEN (DROP FIBER OR RDS COMM)
BLUE (RDS COMM OR 2ND DROP FIBER)
WHITE (2ND RDS COMM OR SPARE)

CONDUIT BANK TYPE 4: ORANGE (TRUNK FIBER CABLE)
BLUE (RDS COMM OR DROP FIBER)
WHITE (SPARE OR 2ND RDS COMM)
BROWN (SPARE)

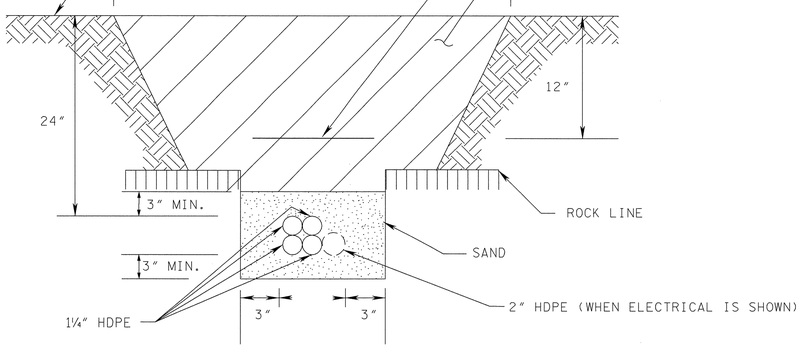
2″ ELECTRICAL CONDUIT: GREY (ELECTRICAL WIRE)



CONDUIT BANK TYPE 2 IN ROCK

N.T.S.

TWO 1¼″ HDPE COMMUNICATIONS CONDUITS WITH
OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT
WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 4 IN ROCK

N.T.S.

FOUR 1¼″ HDPE COMMUNICATIONS CONDUITS WITH
OR WITHOUT ONE 2″ HDPE ELECTRICAL CONDUIT
WHICH IS PAID SEPARATELY

NOTES:

1. ROCK LINE WILL VARY. ROCK EXCAVATION TO BE INCLUDED IN CONDUIT BANK.
2. WHERE ROCK IS FOUND TRENCH MUST CONTAIN MINUMUM 3″ SAND COVER OVER CONDUIT THEN 9″ BACK FILL WITH SOIL FREE OF ROCKS OR OTHER FOREIGN MATTER. THE REMAINDER OF THE TRENCH MAY BE BACK-FILLED WITH EXISTING MATERIAL REMOVED FROM THE TRENCH PROVIDED NO STONES ARE GREATER THAN #2 STONE.

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6/3/11

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

CONDUIT AND TRENCHING DETAILS

N.T.S.

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TENNESSEE D.O.T.
DESIGN DIVISION
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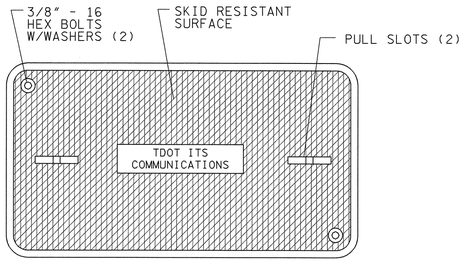
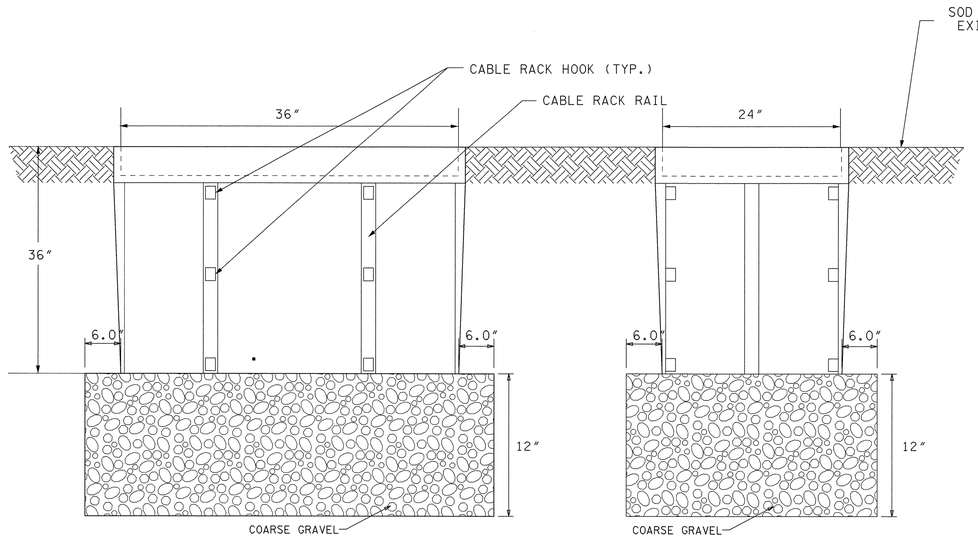
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19D





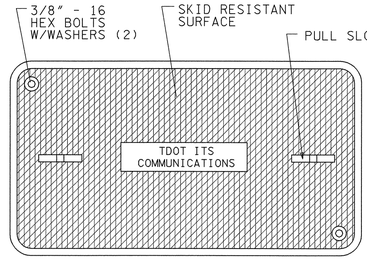
TYPE D PULL BOX ASSEMBLY

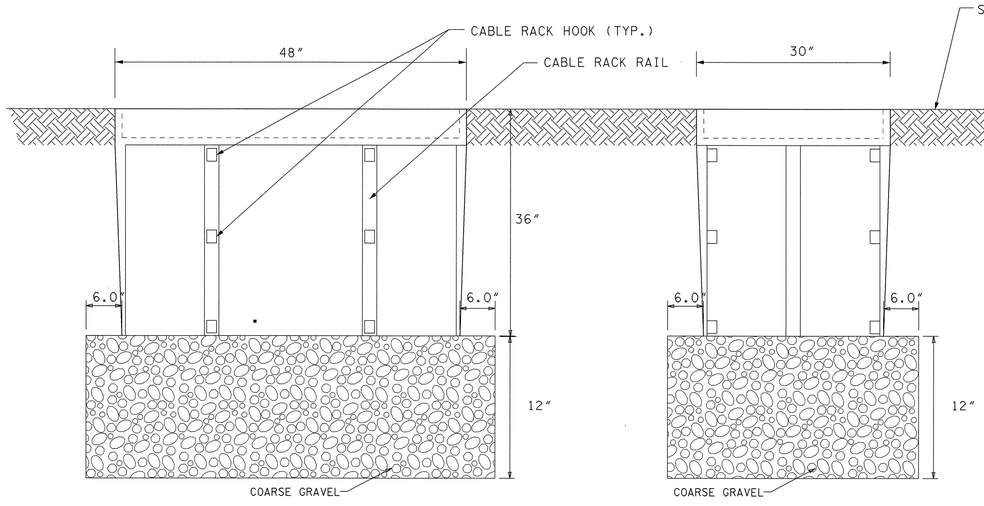
N.T.S.

SHOWN AS

TYPE D PULL BOX NOTES

1. ALL CONDUITS SHALL ENTER SIDE OF PULL BOX
2. ALL CONDUIT HOLES ARE TO BE CUT BY CONTRACTOR
3. ALL CONDUITS SHALL BE TERMINATED WITH A TERMINATOR KIT





TYPE E PULL BOX ASSEMBLY

N.T.S.

SHOWN AS

TYPE E PULL BOX NOTES

1. ALL CONDUITS SHALL ENTER SIDE OF PULL BOX
2. ALL CONDUIT HOLES ARE TO BE CUT BY CONTRACTOR
3. ALL CONDUITS SHALL BE TERMINATED WITH A TERMINATOR KIT

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

TYPICAL PULL BOX DETAIL
N.T.S.

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TENNESSEE D.O.T.
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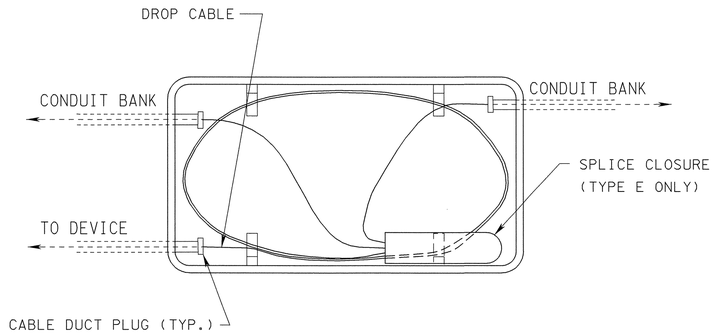
CONST.	2011	STP-I-440-4(78)	19E

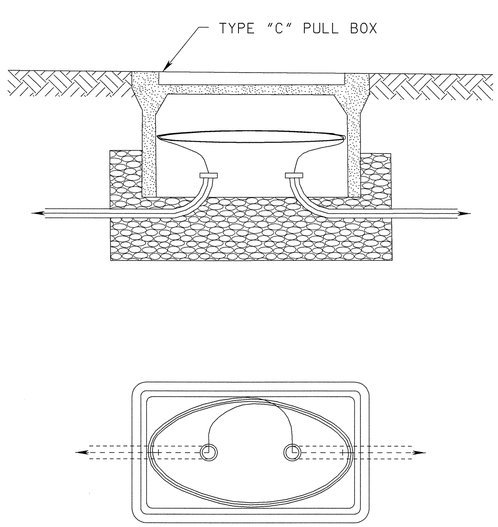
TYPICAL CABLE COIL INSTALLATION GUIDE

(FEET OF COIL LENGTH PER ENTERING CABLE)

CABLE TYPE	TYPE "C" PULL BOX	TYPE "D" PULL BOX ON TRUNK	TYPE "D" PULL BOX ON DROP	TYPE "E" PULL BOX
FIBER OPTIC CABLES (TRUNK)		25		200
FIBER OPTIC CABLES (DROP)			10	100
ELECTRICAL SERVICE CONDUCTORS	10			
VDS LEAD-IN CABLE			10	
RDS COMM CABLE		20	20	20
DMS COMM CABLE			10	

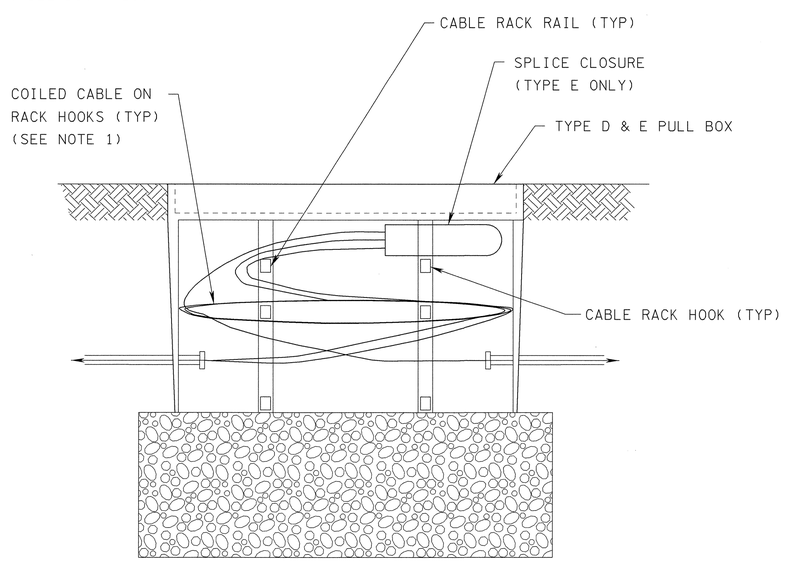
NOTE: SEE TSP 725 FOR ADDITIONAL INFORMATION





CABLE MANAGEMENT IN TYPE "C" PULL BOX

N.T.S.



CABLE MANAGEMENT IN TYPE D & E PULL BOX

N.T.S.

NOTES: 1. FIBER TRUNK AND DROP CABLE SHALL BE COILED TOGETHER. EACH RDS COMM CABLE SHALL BE COILED SEPARATELY AND SUPPORTED ON RACK HOOKS.

2. CONDUIT MAY ENTER THE LONG SIDE OF THE PULL BOX WHEN FIELD CONDITIONS WARRANT

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

CABLE MANAGEMENT DETAILS

N.T.S.

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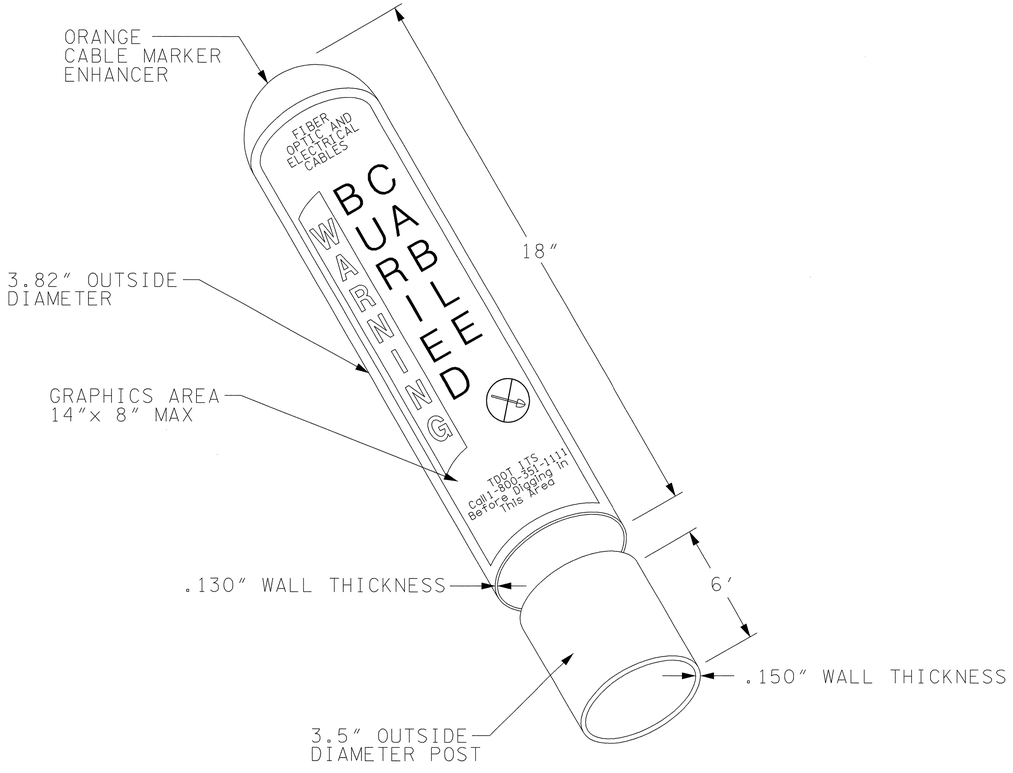
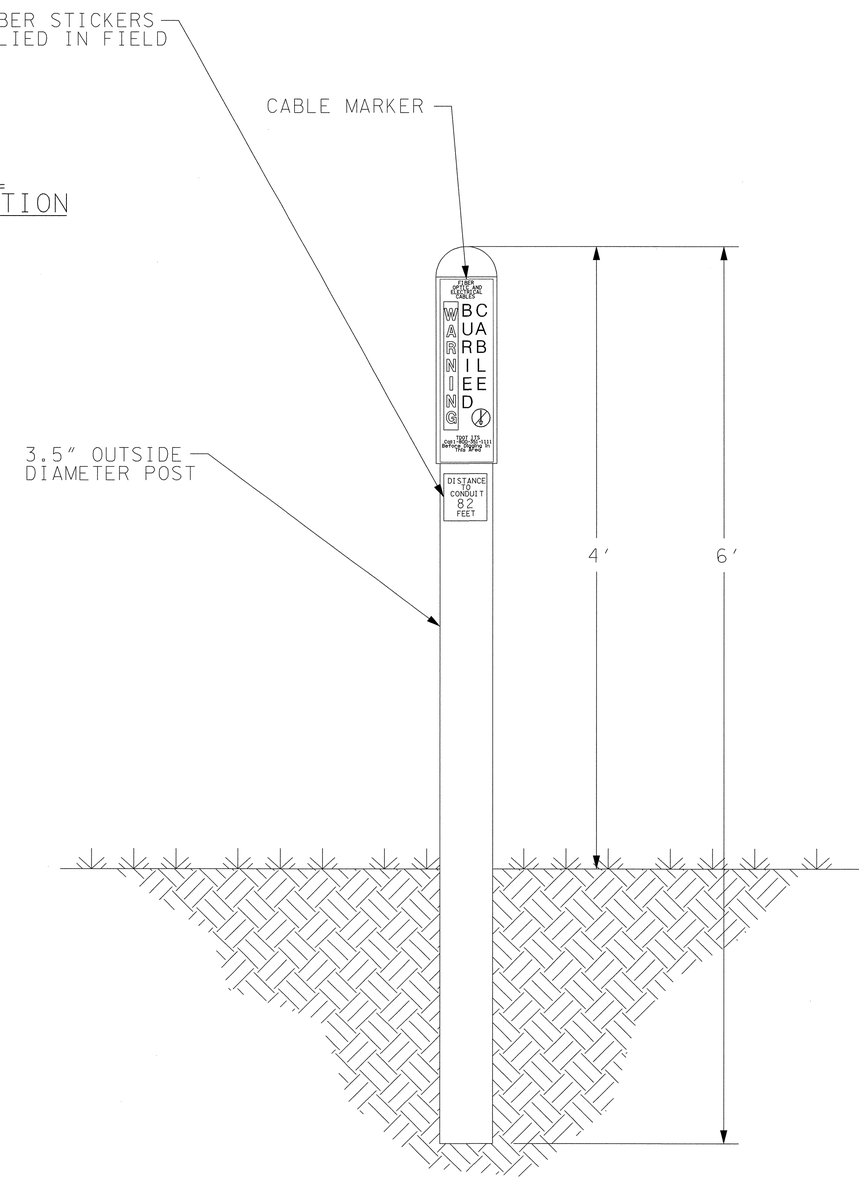
CONST.	2011	STP-I-440-4(78)	19F



DETAIL VIEW OF CABLE MARKER
N.T.S.

NOTE: REFER TO NASHVILLE SMARTWAY TSP 725 SECTION 2.3.8 FOR INFORMATION ON CABLE MARKER INSTALLATION REQUIREMENTS.



TYPICAL INSTALLATION OF CABLE MARKER
N.T.S.

MARK H. WASHINGTON
REGISTERED ENGINEER
No. 103151
STATE OF TENNESSEE
6/13/11

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

CABLE MARKER DETAILS
N.T.S.

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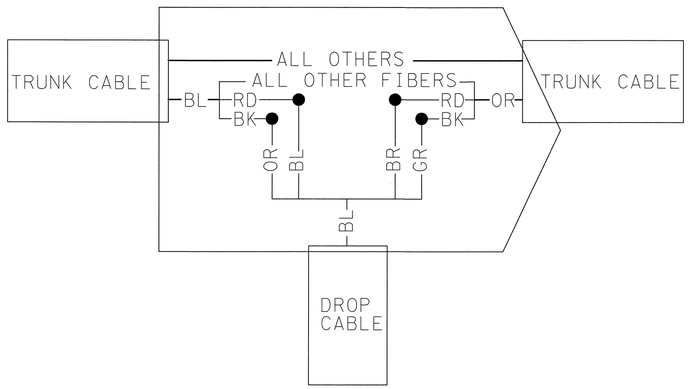
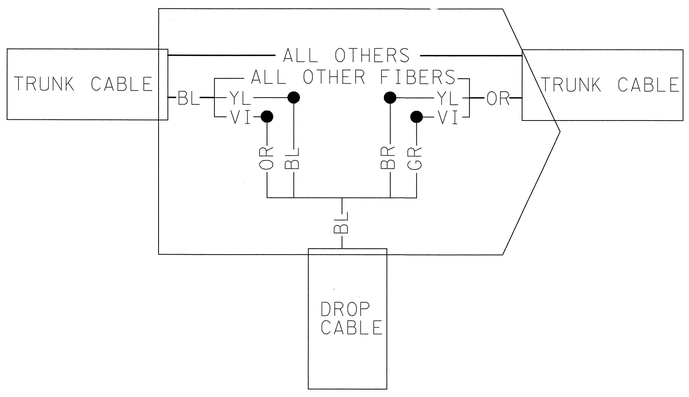
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19G

SPLICE CLOSURE TYPE 1



SPLICE CLOSURE TYPE 2



FIBER COLOR STANDARD

AQ	AQUA	RS	ROSE
BK	BLACK	SL	SLATE
BL	BLUE	VI	VIOLET
BR	BROWN	WH	WHITE
GR	GREEN	YL	YELLOW
OR	ORANGE	RD	RED

LEGEND

- FO CABLE
- FO BUFFER
- FO FIBER
- FUSION SPLICE
- UNTERMINATED FIBER(S) OR BUFFER(S)

NOTE: REFER TO NASHVILLE SMARTWAY TSP 725 SECTION 4 FOR FIBER SPLICING REQUIREMENTS, TESTING AND INSTALLATION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

FIBER SPLICING DETAILS

N.T.S.

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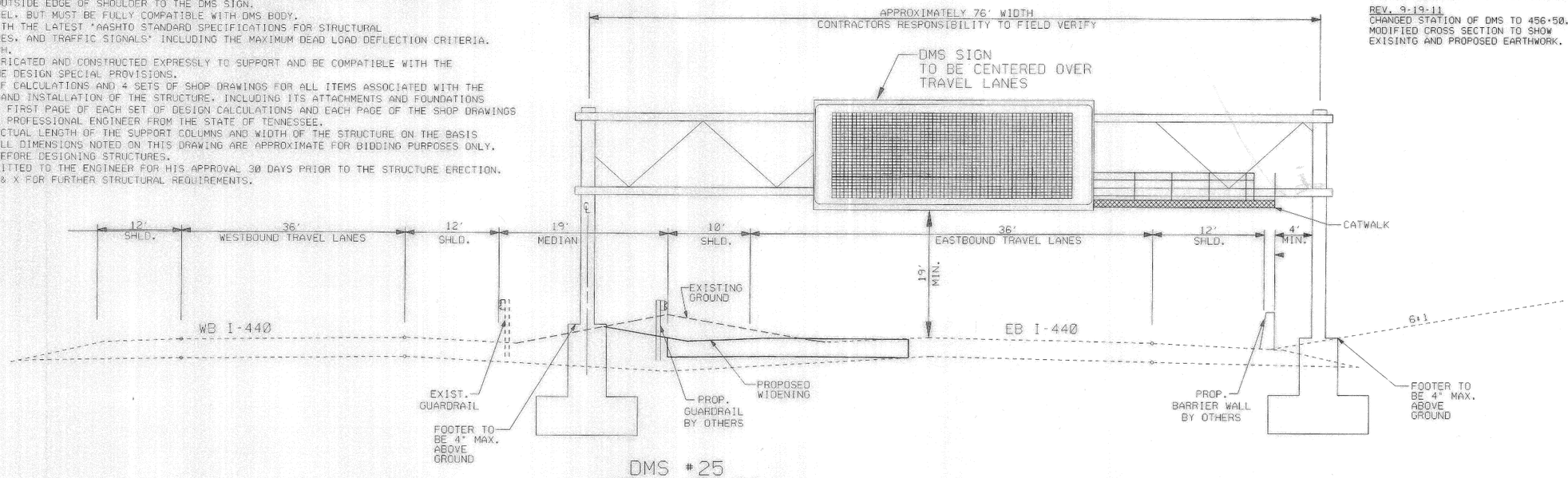
CONST.	2011	STP-I-440-4(78)	19H

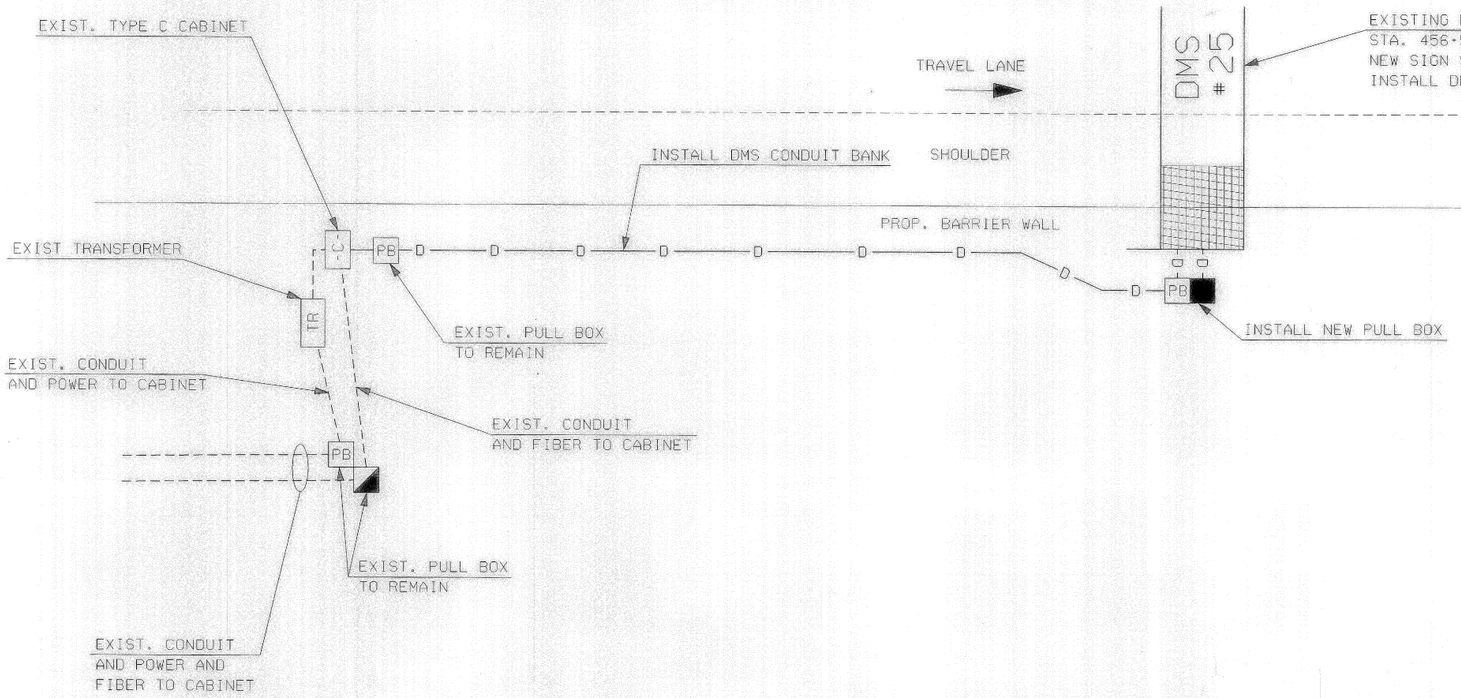
REV. 9-19-11
CHANGED STATION OF DMS TO 456+50.
MODIFIED CROSS SECTION TO SHOW EXISINTG AND PROPOSED EARTHWORK.

DMS STRUCTURE NOTES:

1. SIGN STRUCTURE, SUPPORTS, CATWALK AND FOOTINGS ARE ALL SCHEMATIC AND FOR ILLUSTRATIVE PURPOSES ONLY.
2. THE CONTRACTOR SHALL DESIGN THE OVERHEAD SIGN STRUCTURE WITH CONNECTIONS, FOUNDATIONS, AND THE CATWALK. THE CATWALK SHALL BE DESIGNED FROM THE OUTSIDE EDGE OF SHOULDER TO THE DMS SIGN.
3. MATERIAL USED MAY BE ALUMINUM OR STEEL, BUT MUST BE FULLY COMPATIBLE WITH DMS BODY.
4. THE DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" INCLUDING THE MAXIMUM DEAD LOAD DEFLECTION CRITERIA. THE DESIGN WIND SPEED SHALL BE 90 MPH.
5. THE STRUCTURE SHALL BE DESIGNED, FABRICATED AND CONSTRUCTED EXPRESSLY TO SUPPORT AND BE COMPATIBLE WITH THE DYNAMIC MESSAGE SIGN DESCRIBED IN THE DESIGN SPECIAL PROVISIONS.
6. THE CONTRACTOR SHALL SUBMIT 2 SETS OF CALCULATIONS AND 4 SETS OF SHOP DRAWINGS FOR ALL ITEMS ASSOCIATED WITH THE DESIGN, MANUFACTURING, CONSTRUCTION AND INSTALLATION OF THE STRUCTURE, INCLUDING ITS ATTACHMENTS AND FOUNDATIONS TO TDOT DIVISION OF STRUCTURES. THE FIRST PAGE OF EACH SET OF DESIGN CALCULATIONS AND EACH PAGE OF THE SHOP DRAWINGS SHALL BEAR THE STAMP OF A REGISTERED PROFESSIONAL ENGINEER FROM THE STATE OF TENNESSEE.
7. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LENGTH OF THE SUPPORT COLUMNS AND WIDTH OF THE STRUCTURE ON THE BASIS OF THE EXISTING FIELD CONDITIONS. ALL DIMENSIONS NOTED ON THIS DRAWING ARE APPROXIMATE FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL VERIFY DIMENSIONS BEFORE DESIGNING STRUCTURES.
8. MATERIAL CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR HIS APPROVAL 30 DAYS PRIOR TO THE STRUCTURE ERECTION.
9. SEE SPECIAL PROVISIONS AND SHEETS X & X FOR FURTHER STRUCTURAL REQUIREMENTS.



DMS #25
STA. 456+50
I-440 EASTBOUND



DMS PLAN DETAIL NOTES:

10. DMS PLAN DETAIL IS SCHEMATIC ONLY AND SHOWS APPROXIMATE RELATIVE LOCATIONS OF MATERIALS.

N

DMS PLAN DETAIL

ALL ROADWAY DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

DMS LOCATION DETAIL
N.T.S.

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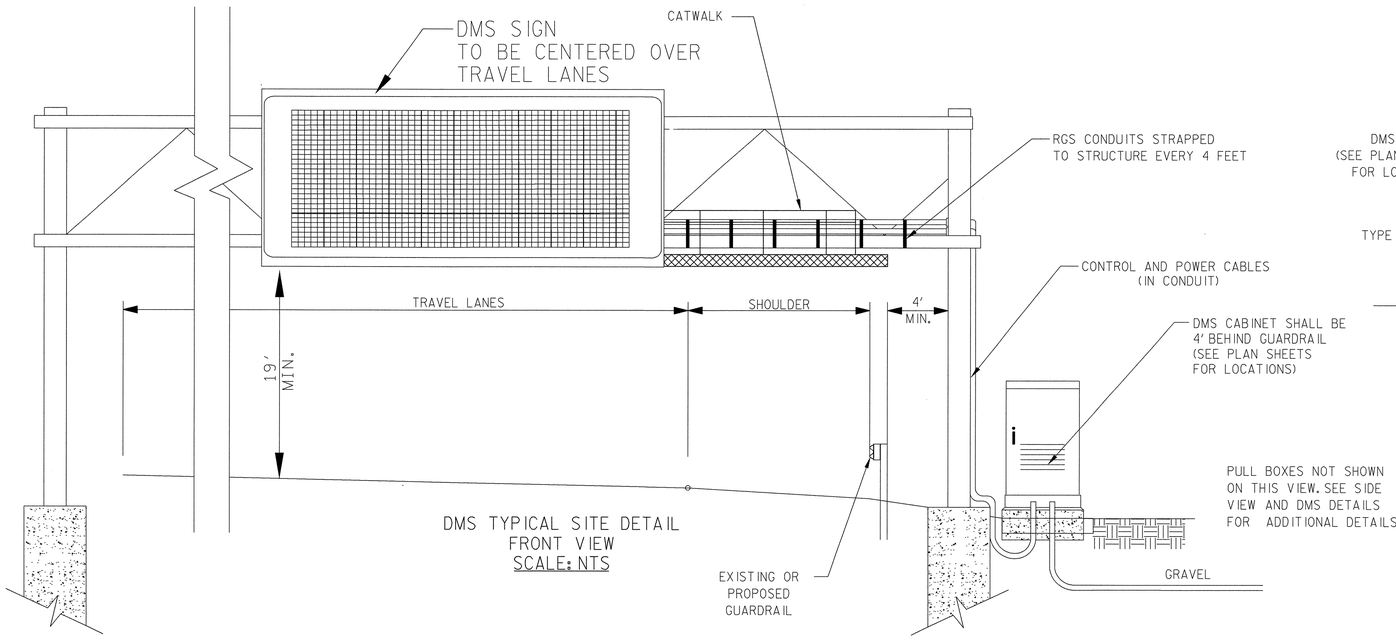
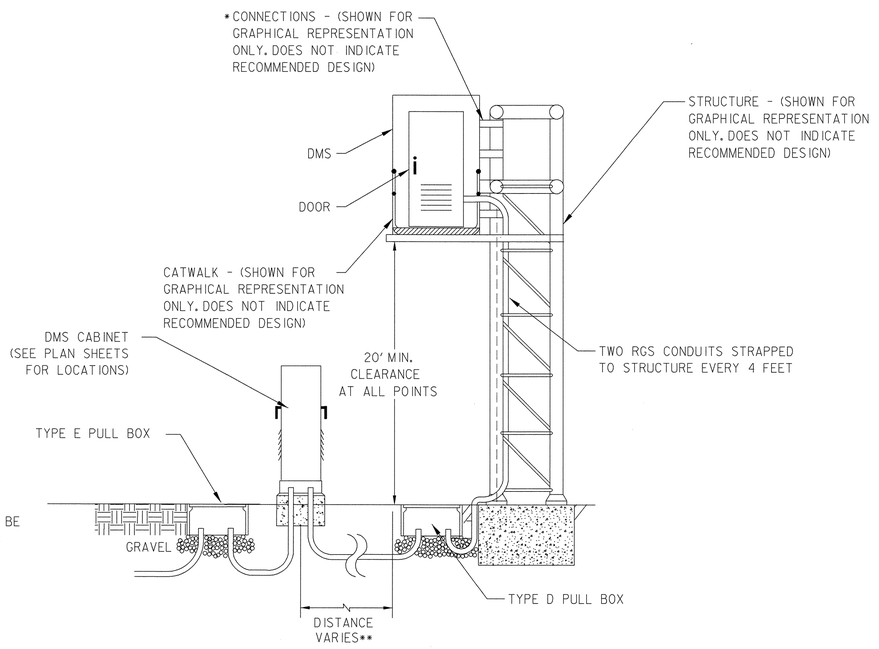
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19J

NOTES:
* ALL EQUIPMENT CONNECTIONS SHALL BE MADE ACCORDING TO MANUFACTURER RECOMMENDATIONS.
** CABINET SHALL BE PLACED SO SIGN MESSAGE CAN BE READ WHILE SERVICING CABINET. CABINET SHALL BE PLACED 100' FROM DMS STRUCTURE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



DMS TYPICAL SITE DETAIL
FRONT VIEW
SCALE: NTS



DMS SITE DETAIL
SIDE VIEW
SCALE: NTS

STRUCTURE NOTES:

1. PROVISIONS FOR WIRING AS WELL AS FOR GROUNDING MUST BE PROVIDED. (FOR GROUNDING DETAILS SEE STD DWG. T-S-15)
2. UPRIGHT SHALL BE FURNISHED WITH A ½"-BNC GROUND NUT WELDED TO THE OUTSIDE EDGE OF THE BASE.
3. ANCHOR BOLT MATERIAL SHALL CONFORM TO REQUIREMENTS OF ASTM F1554. THE ANCHOR BOLT SHALL BE GALVANIZED ON THE THREADED END (GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM-A153). BOLTS SHALL BE FURNISHED WITH TWO GALVANIZED HEX NUTS AND WASHERS.
4. FOR FURTHER STRUCTURE INFORMATION, SEE TECHNICAL SPECIAL PROVISION 725.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

TYPICAL DMS SITE LAYOUT
N.T.S.

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19K

GENERAL NOTES FOR SIGN SUPPORTS:

DESIGN SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION AND TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION - 2006.

CONCRETE:
TO BE CLASS "A" (CAST IN PLACE) f'c = 3000 psi.

REINFORCING STEEL:
TO BE ASTM A615, GRADE 60. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY.

WELDING:
SHALL CONFORM TO AWS D1.1 LATEST REVISION.

MATERIAL SPECIFICATIONS - BOLTS:
1. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55 ksi WITH THREADS CONFORMING TO THE REQUIREMENTS OF ASTM A563.
2. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563.
3. HARDENED STEEL WASHERS SHALL BE ASTM F436.
4. U-BOLTS MAY BE FABRICATED FROM ASTM F1554 GRADE 36 ksi MATERIAL OR CONFORM TO THE REQUIREMENTS OF ASTM F708.
5. STRUCTURAL BOLTS SHALL BE ASTM A325.
6. STAINLESS STEEL NUTS, BOLTS, U-BOLTS AND WASHERS MAY BE SUBSTITUTED FOR ANY OF THE ABOVE REFERENCED MATERIALS.
7. ALL HARDWARE, EXCEPT STAINLESS STEEL, SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A153 OR MECHANICALLY GALVANIZED ACCORDING TO ASTM B695.

MATERIAL SPECIFICATIONS - ALUMINUM:
SHALL CONFORM TO THE REQUIREMENTS OF SECTION 6 OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.

MATERIAL SPECIFICATIONS - STEEL:
1. MATERIAL FOR POST, CHORDS AND BRACING MEMBERS TO BE ASTM A36 STEEL OR ASTM A53 GRADE B PIPE.
2. MATERIAL FOR STRUCTURAL SHAPES AND PLATES TO BE ASTM A36 STEEL.
3. MATERIAL FOR POST CAPS AND CHORD CAPS SHALL BE ASTM A27 STEEL.
4. ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH THE REQUIREMENTS OF ASTM A123. DAMAGE TO THE COATING SHALL BE REPAIRED.

PARAPET BASE MOUNTS:
BASE PREPARATION SHALL BE AS SHOWN ON TENNESSEE DOT STANDARD STD-8-2.

MEDIAN BARRIER BASE MOUNTS:
BASE PREPARATION SHALL BE AS SHOWN ON TENNESSEE DOT STANDARD STD-8-3.

BASE INSTALLATION:
THE ANCHOR BOLT SHALL BE THREADED OVER THE ENTIRE PROJECTING LENGTH. ONE HEX LEVELING NUT SHALL BE USED ON BOTTOM SIDE OF BASE PLATE WITH THE CLEARANCE BETWEEN THE NUT AND CONCRETE NOT TO EXCEED ONE INCH. ONE HEX NUT WITH ONE HARDENED WASHER SHALL BE USED ON TOP AND BOTTOM SIDE OF BASE PLATE. THE TOP NUT SHALL BE TORQUED TO PRODUCE A CLAMPING FORCE EQUAL TO 60% OF THE ANCHOR BOLT YIELD CAPACITY. THE SPACE BETWEEN THE BASE PLATE AND TOP OF CONCRETE SHALL NOT BE FILLED WITH GROUT. AN ANCHOR BOLT ALIGNMENT CAGE WITH A TOP BOLT TEMPLATE SHALL BE USED AND WELDING OF ANCHOR BOLT TO CAGE WILL NOT BE PERMITTED. THE TOP TEMPLATE SHALL BE HELD LEVEL AND THE ALIGNMENT CAGE SHALL BE SIDE BLOCKED TO REMAIN CENTERED DURING CONCRETE PLACEMENT. BASE INSTALLATIONS THAT REQUIRE ELECTRICAL CONDUITS SHALL BE GROUNDED IN ACCORDANCE WITH THE DETAILS SHOWN ON TENNESSEE DOT STANDARD T-L-1A.

BASE MOUNT AS DETAILED ON THIS SHEET SHALL APPLY ONLY TO THE FOLLOWING STRUCTURES:
1. OVERHEAD SIGN STRUCTURES
2. BALANCED AND UNBALANCED BUTTERFLY
3. CANTILEVER
4. SIGN BRIDGES
5. SIGN BRIDGE CANTILEVERS
6. HIGH-LEVEL LUMINAIRE SUPPORT STRUCTURES
7. SPAN WIRE MOUNTED TRAFFIC SIGNALS
8. STRAIN POLES

NOTE: SEE FIGURE 1.1.3C THROUGH 1.1.4E(4) OF THE ABOVE REFERENCED SPECIFICATIONS FOR DETAILS REGARDING ITEMS 1 THROUGH 8, ABOVE.

SUPPORT STRUCTURE DESIGN:
1. THE MEMBERS MUST BE DESIGNED ACCORDING TO THE PROVISIONS OF THE REFERENCED SPECIFICATIONS. THESE PROVISIONS INCLUDE BUT ARE NOT LIMITED TO MOMENT, SHEAR, TORSION AND FATIGUE ANALYSIS FOR THE DESIGNATED CONFIGURATION. THE DESIGN WIND VELOCITY SHALL BE 90 mph APPLIED TO MAXIMUM PLANS SURFACE EXPOSURE AREA MULTIPLIED BY A FACTOR OF 1.5 FOR FUTURE SIGN SURFACE ADDITIONS. STRUCTURE ACTUAL AND DESIGN SURFACE AREA SHALL BE EXPLICITLY INDICATED IN THE DESIGN CALCULATIONS AND ON THE SHOP DRAWINGS.
2. EACH DESIGN AND SHOP DRAWING MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER. THE DESIGN AND SHOP DRAWING FOR EACH STRUCTURE IS TO BE SUBMITTED TO THE DIVISION OF STRUCTURES INSPECTION AND REPAIR.

SHOP DRAWINGS:
1. ALL SHOP DRAWINGS FOR OVERHEAD, CANTILEVER AND BUTTERFLY SIGN STRUCTURES SHALL CONTAIN SIGN STRUCTURE ID NUMBERS FOR EACH STRUCTURE.
2. THE CONTRACTOR SHALL SUBMIT DESIGN AND SHOP DRAWINGS ON CD'S. THE DRAWINGS MUST BE .PDF OR .TIF FORMAT. INFORMATION TO BE PRINTED ON THE CD AND THE CASE LABEL TO INCLUDE PROJECT NUMBER, COUNTY NUMBER, CONTRACT NUMBER, SIGN STRUCTURE ID NUMBER, DATE OF FABRICATION, NAME OF FABRICATOR AND STATION.

SOIL FOUNDATION DESIGN:
1. DESIGN OF SUPPORT STRUCTURAL FOUNDATION INCLUDING PROCUREMENT OF SITE SPECIFIC GEOTECHNICAL DATA AND GENERATION OF SOIL ANALYSIS REQUISITE FOR THE FOUNDATION DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL COSTS ASSOCIATED WITH THE FOUNDATION INCLUDING DESIGN AND SOIL ANALYSIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE.
2. FOUNDATION SHALL BE DESIGNED FOR SOIL OR ROCK. COMBINED SOIL/ROCK FOUNDATIONS ARE DISALLOWED. A SOIL ANALYSIS SHALL BE PERFORMED FOR EACH FOUNDATION LOCATION. THE MANDATORY TEST BORING RECORD PROVIDED FOR EACH FOUNDATION LOCATION SHALL REPORT THE TYPES AND DEPTHS OF EACH SOIL STRATA, THE "N" VALUES (NUMBER OF BLOWS PER FOOT USING A SPLIT SPOON SAMPLER), AND Pp (PASSIVE PRESURE) VALUES IN ksf FOR EACH SOIL STRATA. THE SOIL ANALYSIS SHALL BE PERFORMED AFTER FINAL FILL COMPACTION FOR FOUNDATIONS LOCATED IN NEW EMBANKMENTS.
3. CONTRACTOR SHALL SUBMIT FOUNDATION DESIGN, DRAWINGS, SOIL ANALYSIS AND TEST BORING RECORDS TO THE DIRECTOR OF THE DIVISION OF STRUCTURES FOR APPROVAL. CONTRACTOR SHALL ENSURE THAT A REGISTERED PROFESSIONAL ENGINEER STAMPS EACH DOCUMENT.

SPECIAL NOTES FOR SIGN SUPPORTS:

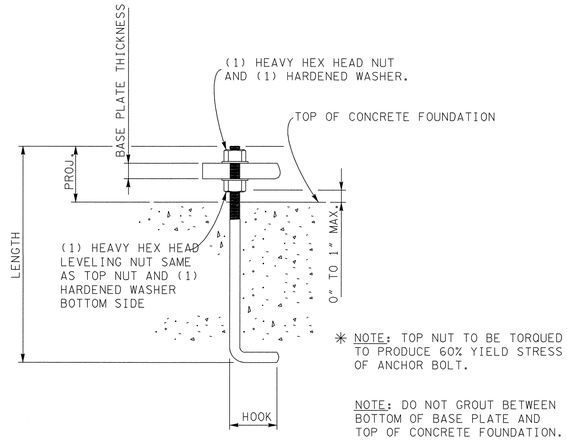
BASIS OF PAYMENT:
THE STRUCTURE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE VARIOUS TYPES AND SIZES SHOWN ON PLANS, COMPLETE IN PLACE AND ACCEPTED, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS IN THE STRUCTURE AND THE FOUNDATIONS, INCLUDING ALL STEEL SECTIONS, CONNECTING UNITS, HARDWARE FOR THE SIGN CONNECTION ON THE OVERHEAD SIGN STRUCTURES, CONCRETE, REINFORCING STEEL, ETC., FOR THE FOUNDATION AND FOR ALL LOADING, HAULING, UNLOADING, ERECTING, THE FINAL CLEANUP, THE COMPLETION OF ALL INCIDENTALS THERE TO (INCLUDING ANY REQUIRED REPAVING AROUND THE MEDIAN FOUNDATIONS), AND ALL OTHER MATERIALS, TOOLS, SUPPLIES, LABOR EQUIPMENT AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE ITEMS.

CATWALK DESIGN:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CATWALK DESIGN AND SHALL SUBMIT THE DESIGN CALCULATIONS TO THE STRUCTURES DIVISION FOR THE ENGINEER'S APPROVAL. THE CATWALK SHALL SPAN FROM THE OUTSIDE EDGE OF THE SHOULDER TO THE DOOR ON THE DMS STRUCTURE. THE BOTTOM OF THE CATWALK SHALL BE COVERED WITH A HEAVY GALVANIZED WIRE MESH WHICH SHALL HAVE OPENINGS NO LARGER THAN ¼".

DESIGN DATA:
THE STRUCTURES SHALL BE DESIGNED USING A WIND VELOCITY = 90 MPH. THE SIGN DESIGN AREA FOR WIND LOAD SHALL BE THE WIDTH OF THE ENTIRE ROADWAY x HEIGHT OF THE DMS SIGN x 1.5.

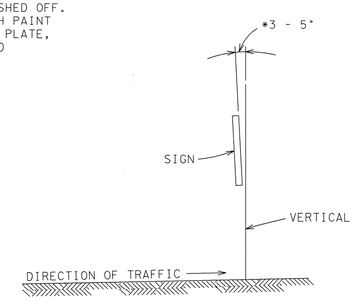
LABELING OF OVERHEAD SIGN SUPPORTS:

THE SIGN STRUCTURE ID NUMBERS, DATE OF FABRICATION, AND NAME OF THE FABRICATOR SHALL BE PERMANENTLY ATTACHED TO THE SIDE OF ONE OF THE UPRIGHTS ON THE SIDE ADJACENT TO THE ROADWAY. THEY SHALL BE LOCATED A MINIMUM OF 4'-0" AND A MAXIMUM OF 6'-0" ABOVE THE BASE PLATE. THE LETTERS SHALL BE A MINIMUM OF ¾" TALL. THE LETTERS SHALL BE DIE CUT OR ENGRAVED INTO THE METAL BEFORE GALVANIZING AND SHALL BE READABLE AFTER GALVANIZING. ALL EXCESS GALVANIZING SHALL BE BRUSHED OFF. THE LOCATION AND DESCRIPTION OF THE DATA MUST BE SHOWN ON THE SHOP PLANS. STENCILING WITH PAINT WILL NOT BE ALLOWED. IF A FABRICATOR ELECTS TO PLACE THE REQUIRED INFORMATION ON A STEEL PLATE, THEN THE PLATE MUST BE BENT TO CONFORM TO THE COLUMN SURFACE PROFILE AND WELDED ALL AROUND BEFORE GALVANIZING. STRUCTURE ID NUMBERS ARE LOCATED ON EACH DMS STRUCTURE LAYOUT SHEET.



ANCHOR BOLT DETAIL

(STRAIGHT ANCHOR BOLTS WILL BE ALLOWED, PROVIDED DEVELOPMENT LENGTH CAN BE OBTAINED. UNDER NO CONDITIONS WILL DRILLED AND GROUTED ANCHOR BOLTS BE ALLOWED)



OVERHEAD SIGN ORIENTATION

* THE ANGULAR ALIGNMENT OF THE SIGN HOUSING SHALL BE ADJUSTABLE IN THE VERTICAL DIRECTION FROM THREE (3) DEGREES TO FIVE (5) DEGREES DOWN IN 1 DEGREE INCREMENTS TO OPTIMIZE THE VIEWING ANGLE.

MARK H. WASHINGTON
REGISTERED ENGINEER
COMMERCE
No. 101208
STATE OF TENNESSEE
6/23/11

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

SIGN SUPPORT NOTES

N.T.S.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19L

N

395

400

405

410

415

420

DETECTOR * 188 & 189
STA. 397+51
TO REMAIN

DEMARCATION POINT * 113
120/240V, SINGLE PHASE
TO REMAIN

CONDUIT BANK TYPE 4 (905 LF)
FO CABLE, 72F (1105 LF)

FIBER CLOSURE, 12F
FIBER SPLICE FUSION (8 EA)
FO DROP CABLE, 4F (110 LF)
SPLICE TYPE 2 SEE SHEET 19G

CONDUIT BANK TYPE 4 BORED (215 LF)
FO CABLE, 72F (240 LF)

CONDUIT BANK TYPE 4 (250 LF)
FO CABLE, 72F (250 LF)

INTERSTATE 440

GRANDVIEW AVE.

WINFORD AVE.

LONGVIEW AVE.

MATCHLINE STA. 420+00 SEE SHEET 19M

EXISTING CONDUIT FOR FIBER
AND POWER TO REMAIN

EXISTING CONDUIT FOR FIBER
TO REMAIN

EXISTING STRUCTURE CONDUIT TO REMAIN
EXISTING FIBER TO BE REMOVED
AND REPLACED W/72F (210 LF)

FIBER CLOSURE, 72F
FIBER SPLICE FUSION (72 EA)
REMOVE EXISTING FIBER EAST OF
PULL BOX AND SPLICE NEW FIBER
TO CABLE WEST OF PULL BOX

CONDUIT TO BE ABANDONED
IN PLACE OR REMOVED IF
UNCOVERED DURING CONST

CONDUIT TO BE ABANDONED
IN PLACE OR REMOVED IF
UNCOVERED DURING CONST

MARK H. WASHINGTON
REGISTERED ENGINEER
No. 107808
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

STA. 395+00 TO STA. 420+00

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19M

CONDUIT BANK TYPE 4 (130 LF)
FO CABLE, 72F (155 LF)

CONDUIT BANK TYPE 4 BORED (210 LF)
FO CABLE, 72F (410 LF)

DEMARCATION POINT * 114
120/240V, SINGLE PHASE
TO REMAIN

FIBER CLOSURE, 12F
FIBER SPLICE FUSION (8 EA)
FO DROP CABLE, 4F (110 LF)
SPLICE TYPE 1 SEE SHEET 19G

CONDUIT BANK TYPE 4 BORED (105 LF)
FO CABLE, 72F (130 LF)

CONDUIT BANK TYPE 4 (235 LF)
FO CABLE, 72F (435 LF)

CONDUIT BANK TYPE 4 (350 LF)
FO CABLE, 72F (375 LF)

CONDUIT BANK TYPE 4 BORED (285 LF)
FO CABLE, 72F (485 LF)

CONDUIT BANK TYPE 4 (610 LF)
FO CABLE, 72F (810 LF)
INSTALL 1' BEHIND PROP.WALL

CONDUIT BANK TYPE 4 (75 LF)
FO CABLE, 72F (75 LF)
INSTALL 1' BEHIND PROP.WALL

CONDUIT TO BE ABANDONED
IN PLACE OR REMOVED IF
UNCOVERED DURING CONST

CONDUIT BANK TYPE 4 (745 LF)
FO CABLE, 72F (945 LF)

CONDUIT BANK TYPE 4 BORED (160 LF)
FO CABLE, 72F (185 LF)

CONDUIT TO BE ABANDONED
IN PLACE OR REMOVED IF
UNCOVERED DURING CONST

CCTV * 72
STA. 422+40
TO REMAIN

DETECTOR * 190 & 191
STA. 420+85
TO REMAIN

CONDUIT BANK TYPE 4 BORED (90 LF)
FO CABLE, 72F (115 LF)
INSTALL 1' BEHIND PROP.WALL

N

420 425 430 435 440 445

SEDALE AVE.
NOLENSVILLE PK.
R.R.
SADLER AVE.
NICKSON AVE.
DORTCH AVE.
BURBANK AVE.
FOX AVE.
INTERSTATE 440
ROSE ST.
ORIEL AVE.
CSX
VALERIA ST.
AUSTIN AVE.
LROSE AVE.
PEACHTREE ST.
MATCHLINE STA. 420+00 SEE SHEET 19L
MATCHLINE STA. 445+00 SEE SHEET 19N

MARK H. WASHINGTON
REGISTERED ENGINEER
COMMISSION
No. 109615
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

STA. 420+00 TO STA. 445+00
SCALE: 1"=100'

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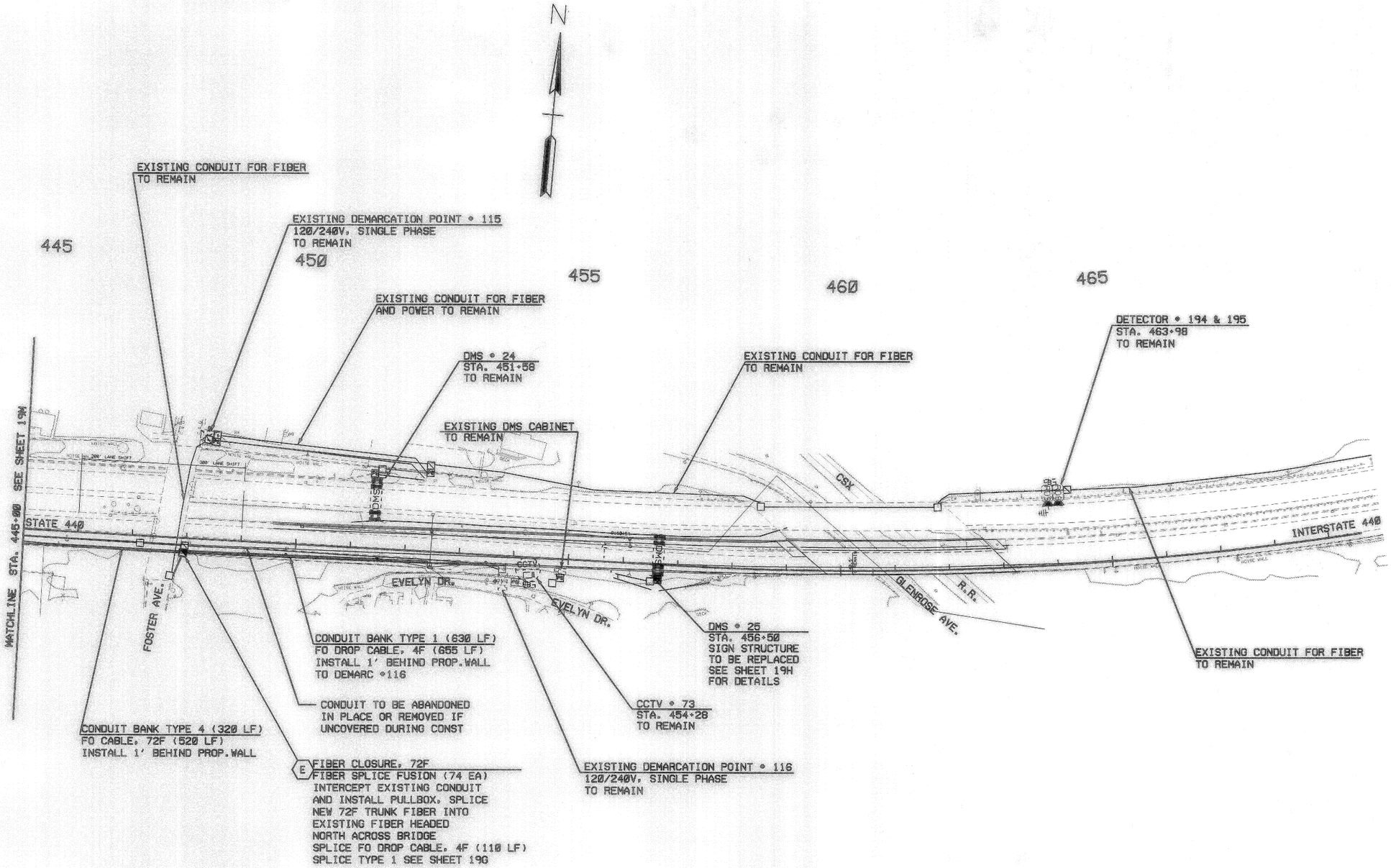
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	19N

REV. 9-19-11
MOVED DMS #25 TO STA. 456+50.



NOTE: DMS#25 IS TO BE REMOVED AND STORED BY CONTRACTOR DUIRING CONSTRUCTION OF ROADWAY AND DMS FOUNDATION. SEE NASHVILLE SMARTWAY PHASE 3 TSP 725. SECTION 8.2.6 FOR INFORMATION ON DMS MOUNTING STRUCTURES REQUIREMENTS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FIBER REPAIR AND RELOCATION PLAN

STA. 445+00 TO E.O.P.
SCALE: 1"=100'

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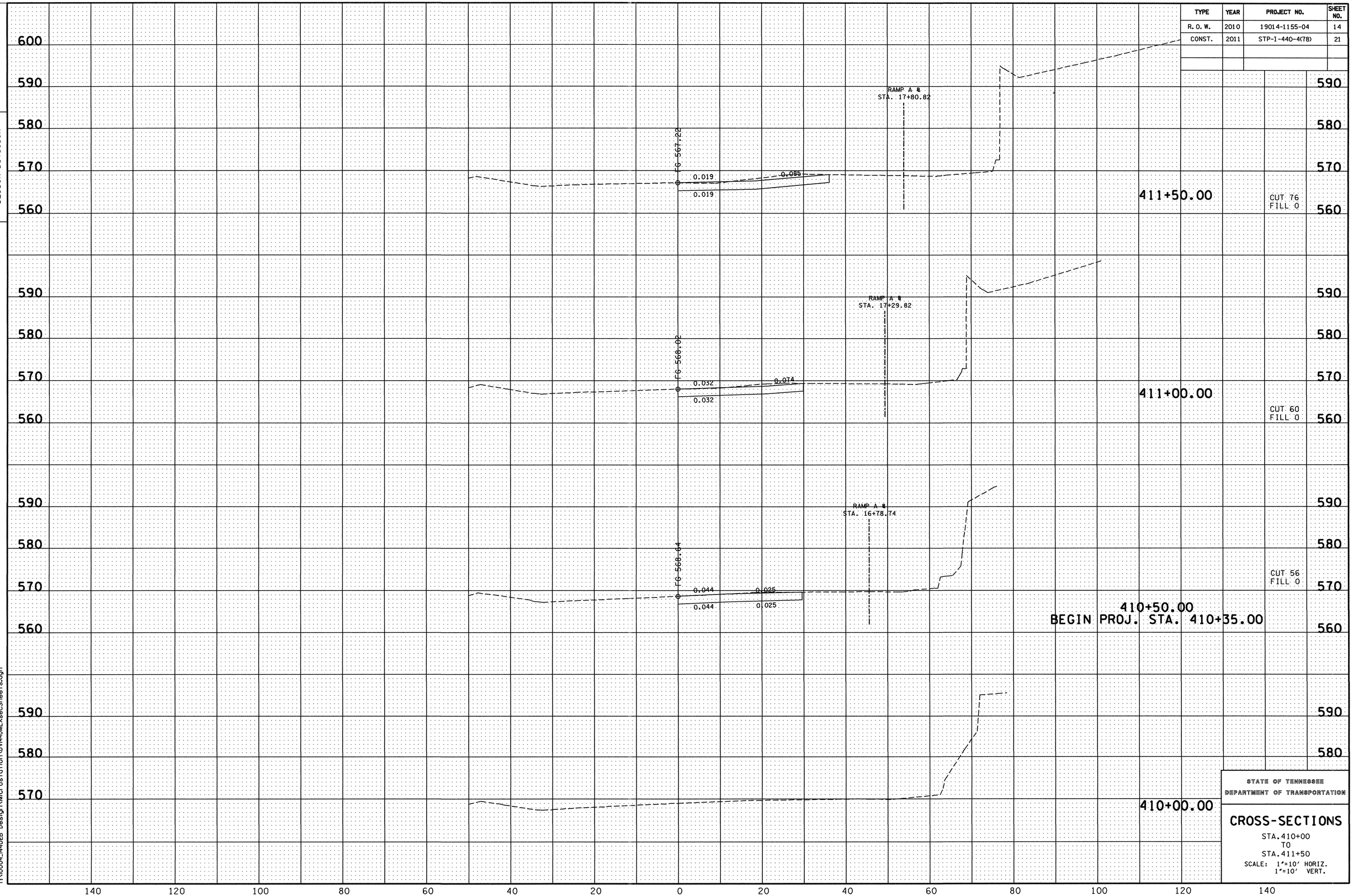
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	14
CONST.	2011	STP-1-440-4(78)	21



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 410+00
TO
STA. 411+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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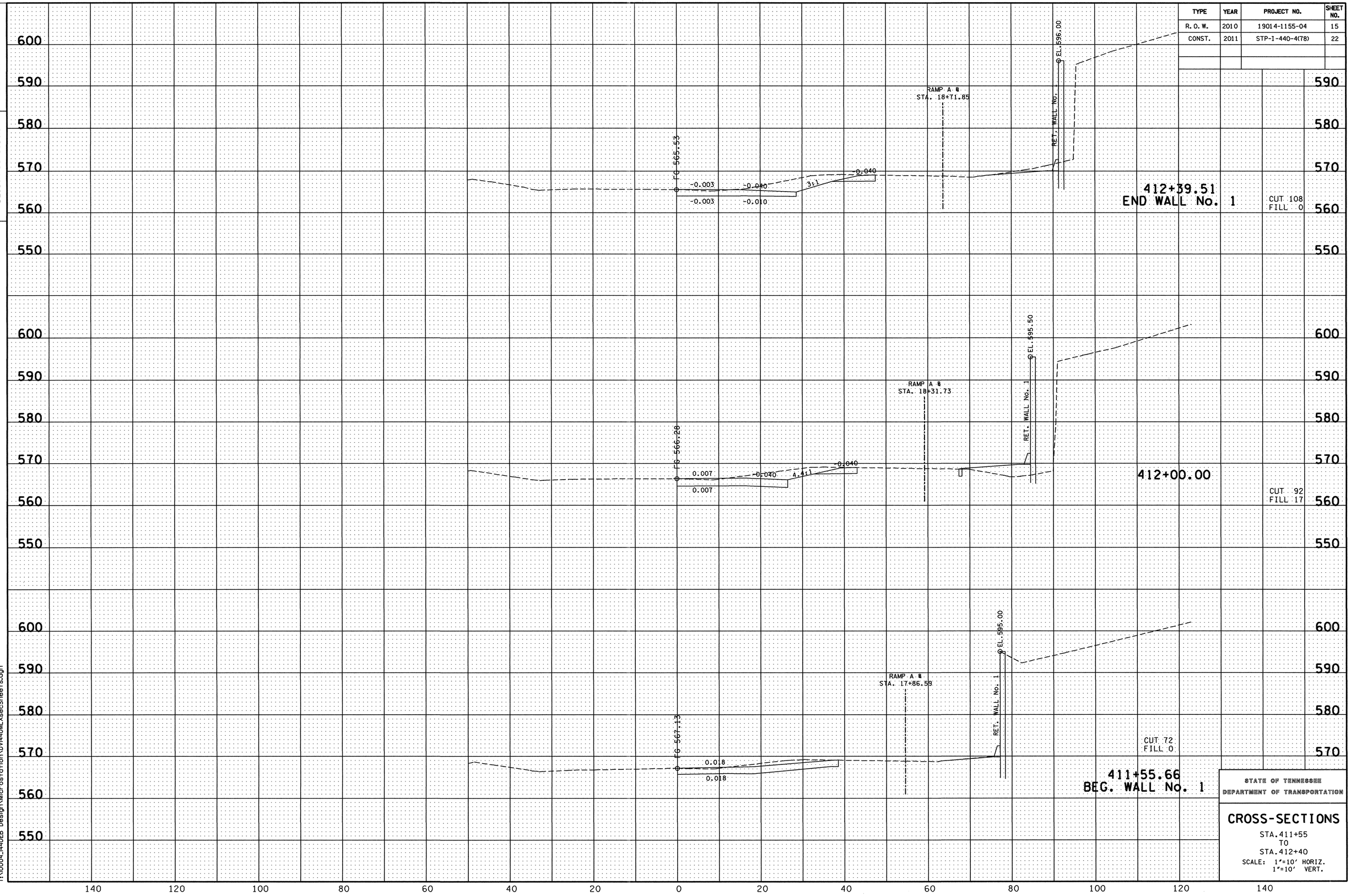
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	15
CONST.	2011	STP-1-440-4(78)	22



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 411+55
TO
STA. 412+40

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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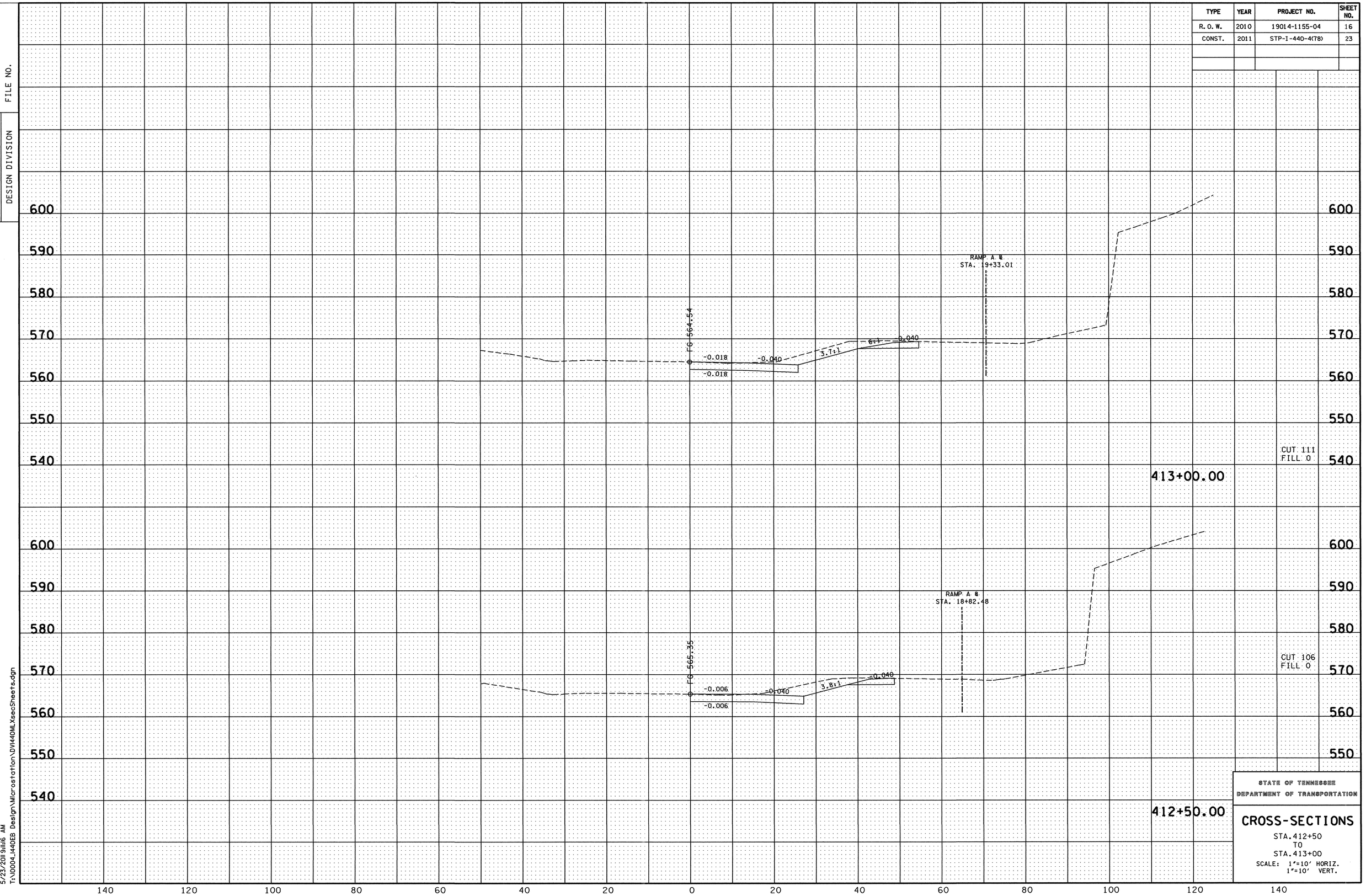
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	16
CONST.	2011	STP-I-440-4(78)	23



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.412+50
TO
STA.413+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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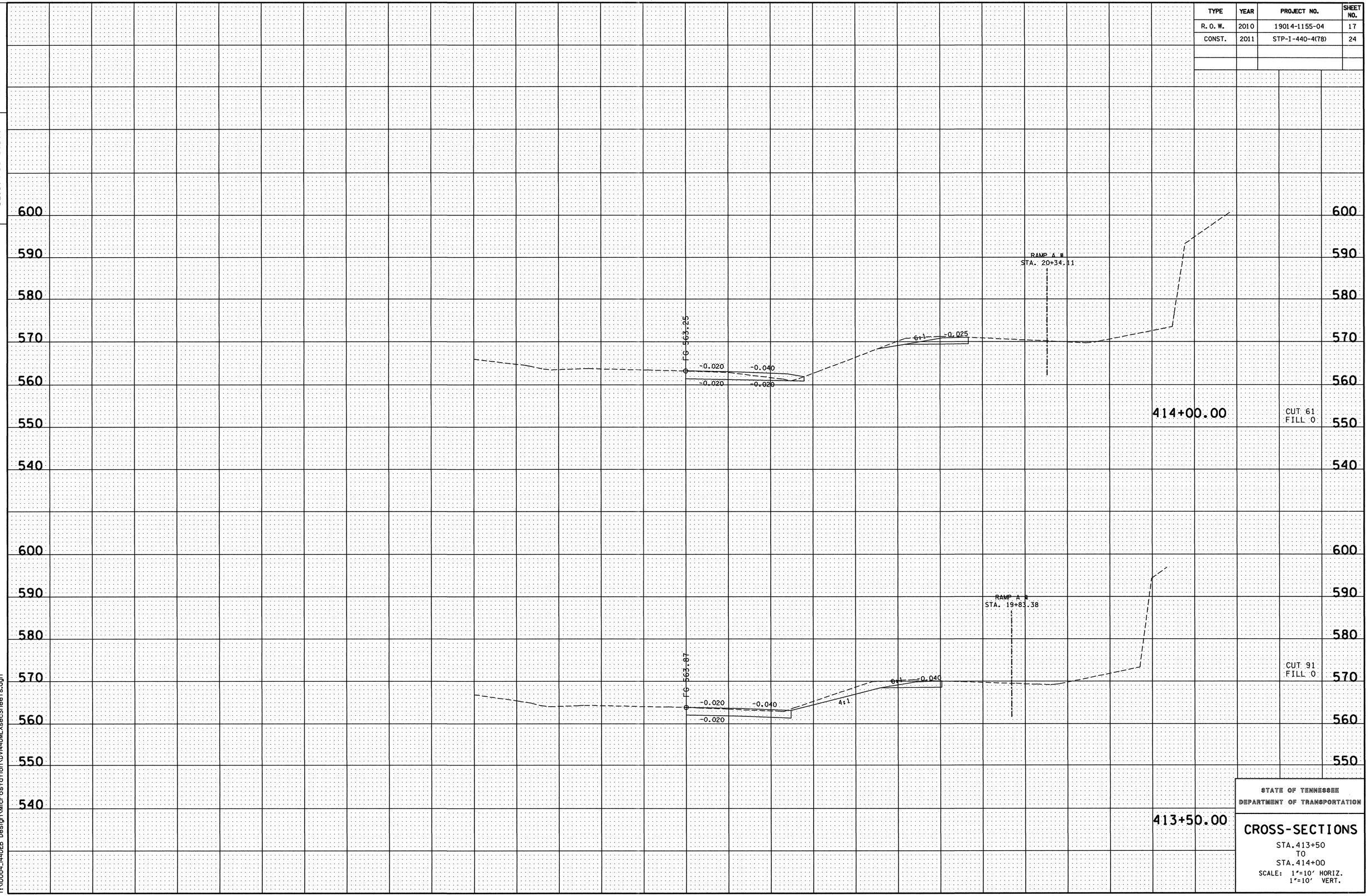
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	17
CONST.	2011	STP-I-440-4(78)	24



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 413+50
TO
STA. 414+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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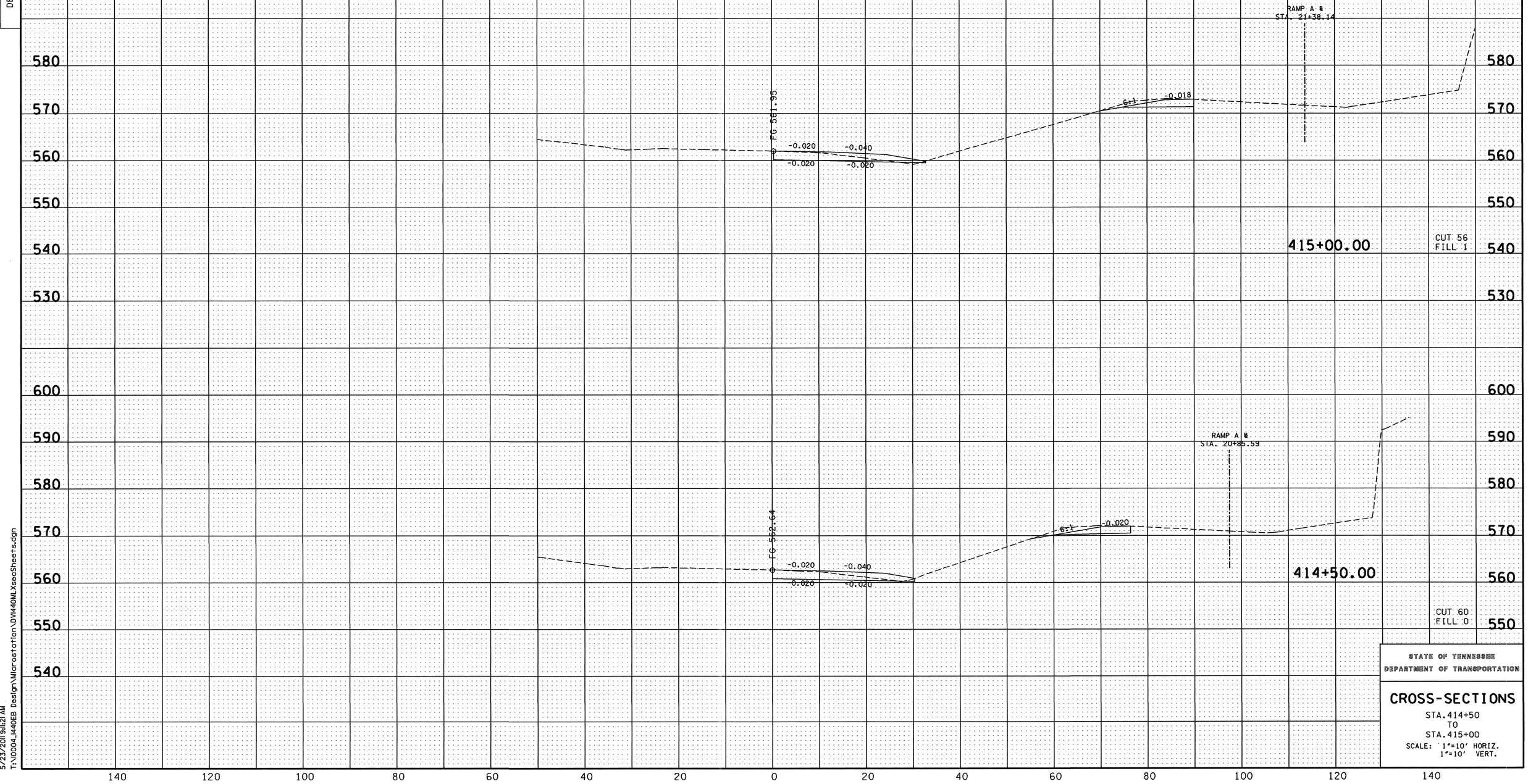
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	18
CONST.	2011	STP-I-440-4(78)	25



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 414+50
TO
STA. 415+00

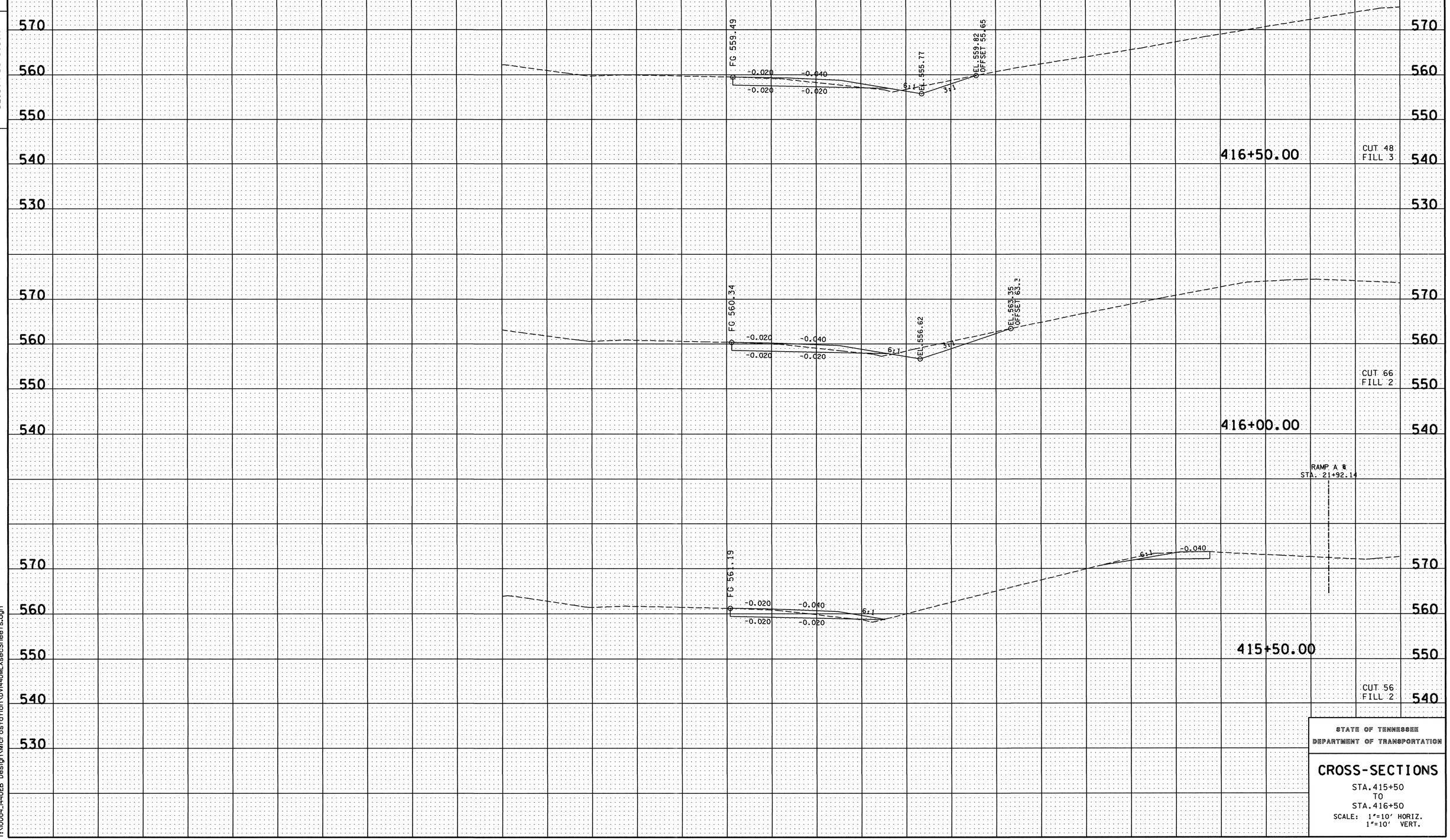
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:21 AM
T:\00004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	19
CONST.	2011	STP-I-440-4(78)	26

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 415+50
TO
STA. 416+50

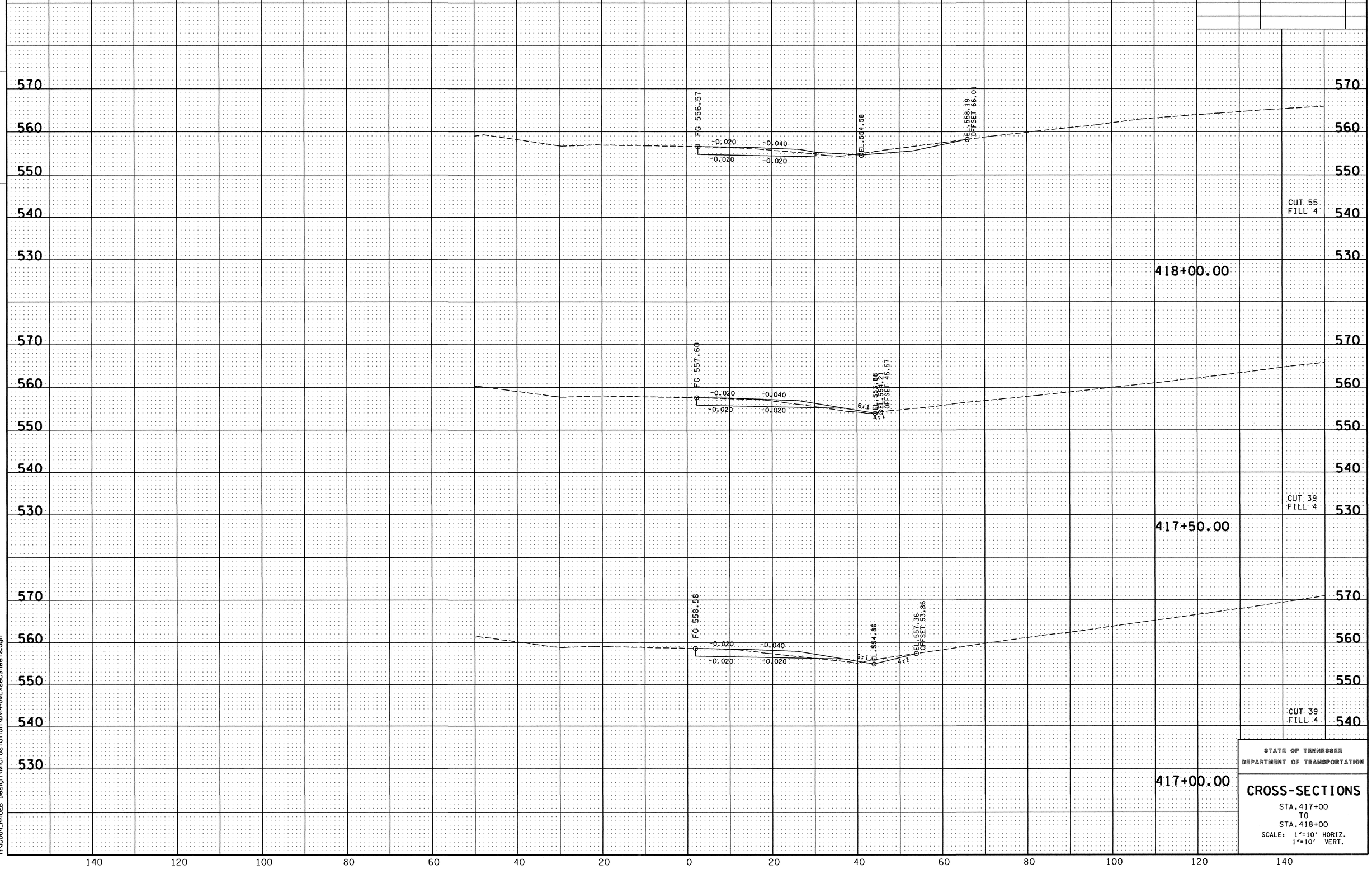
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:24 AM
T:\0004_1440EB Design\Microstation\DV1440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	20
CONST.	2011	STP-I-440-4(78)	27



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 417+00
TO
STA. 418+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:27 AM
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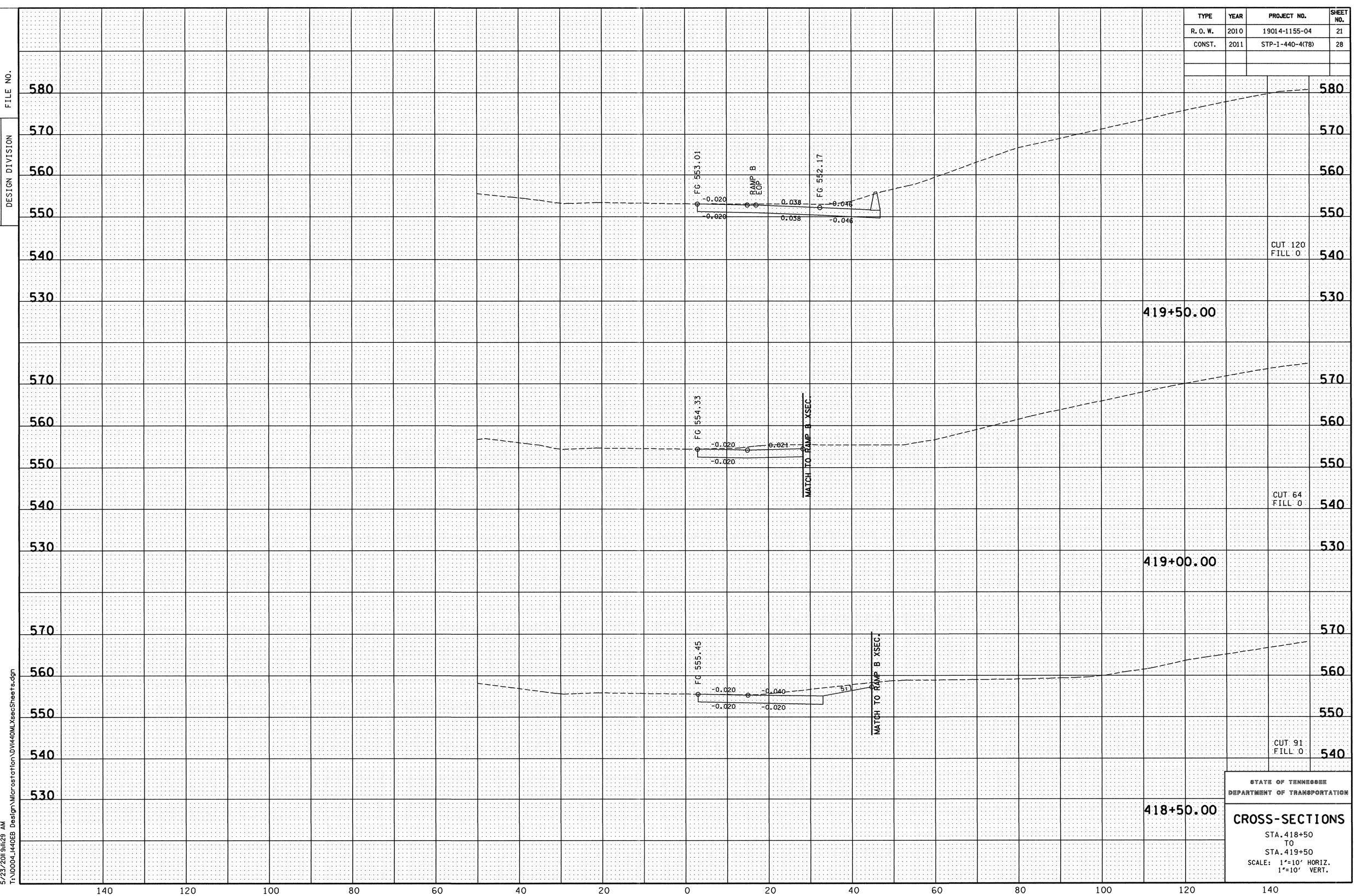
TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	21
CONST.	2011	STP-I-440-4(78)	28

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 418+50
TO
STA. 419+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:29 AM
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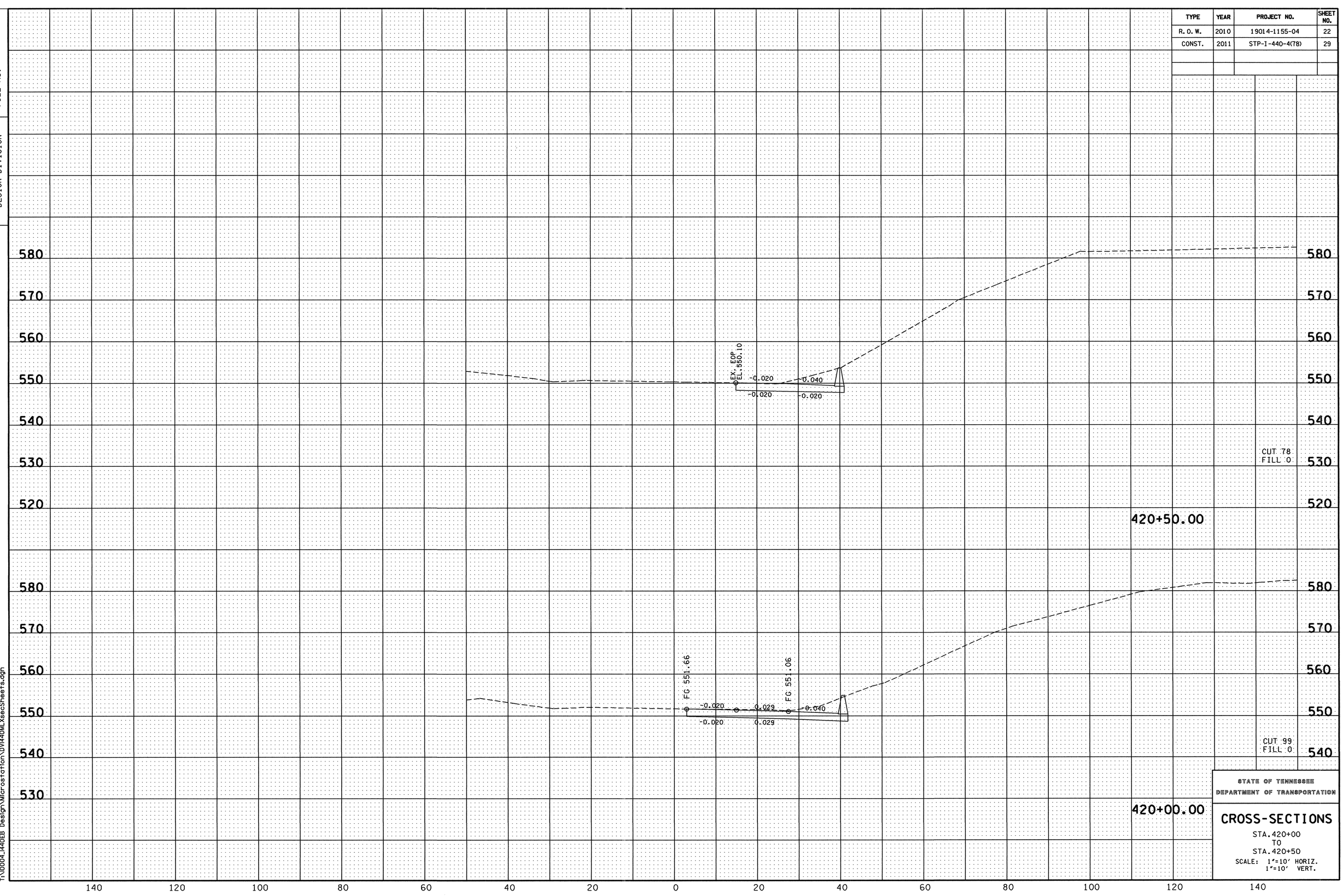
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	22
CONST.	2011	STP-I-440-4(78)	29



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 420+00
TO
STA. 420+50

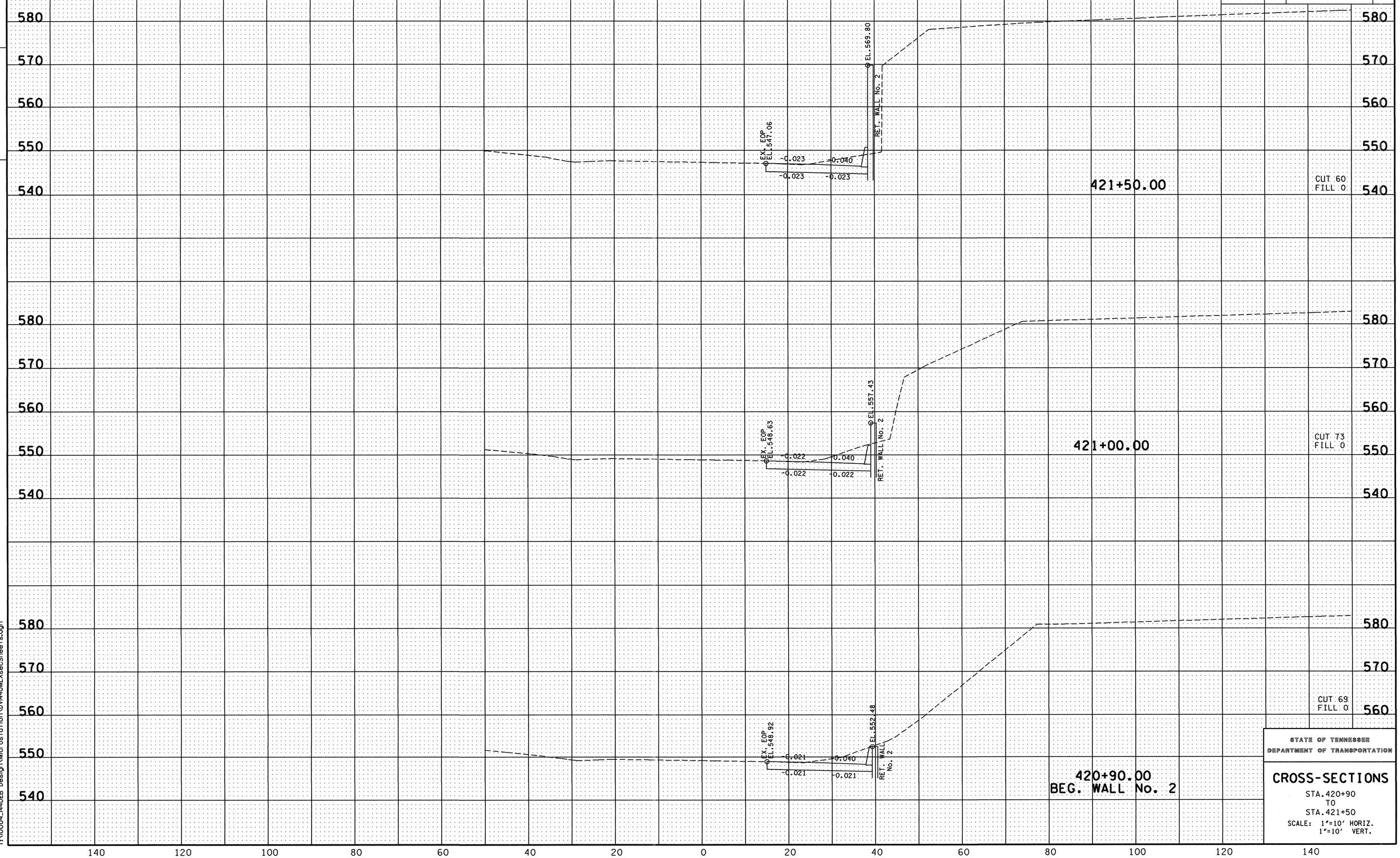
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:32 AM
T:\0004_1440EB Design\Microstation\DV1440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	23
CONST.	2011	STP-I-440-4(78)	30



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 420+90
TO
STA. 421+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:34 AM
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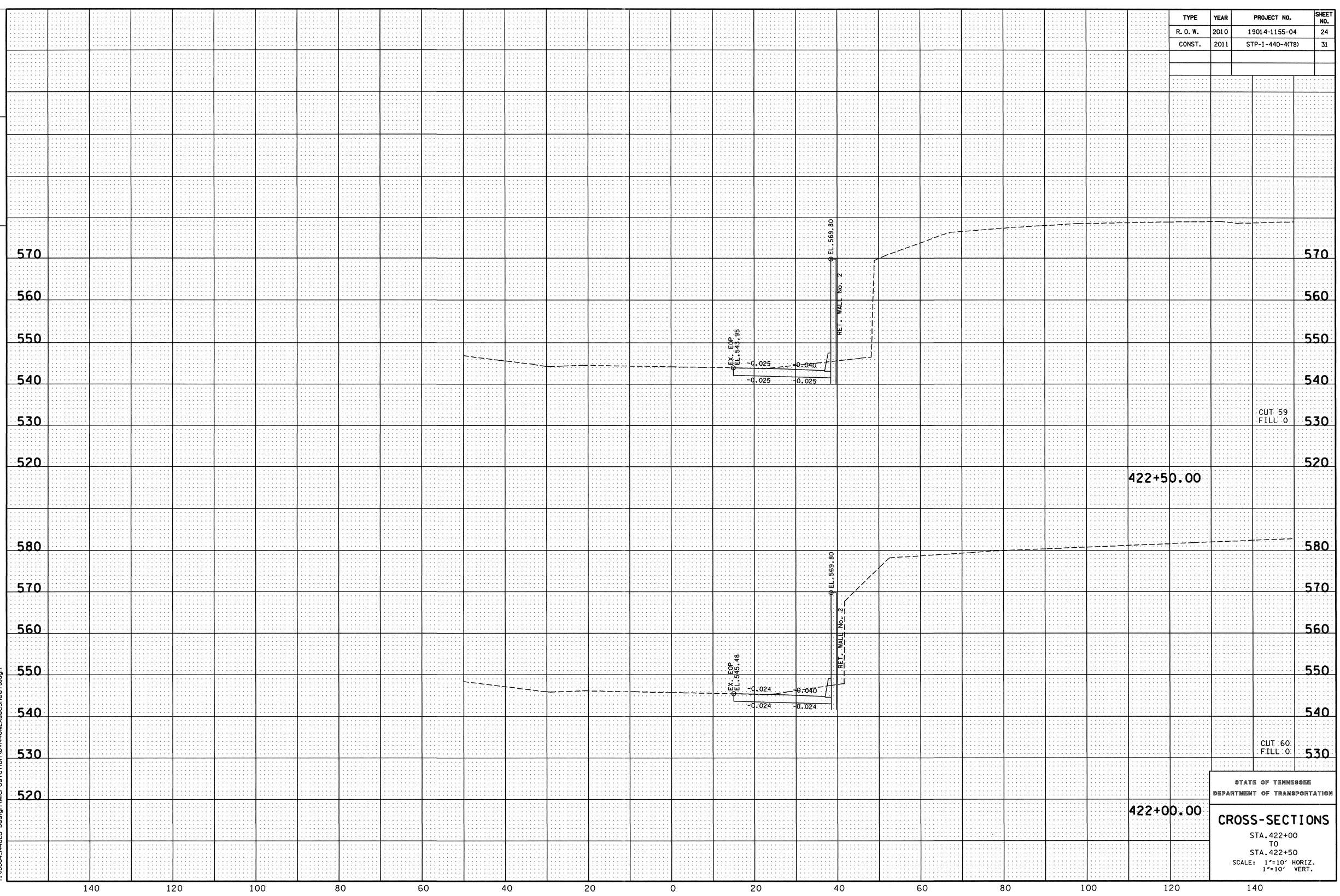
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	24
CONST.	2011	STP-I-440-4(78)	31



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 422+00
TO
STA. 422+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:37 AM
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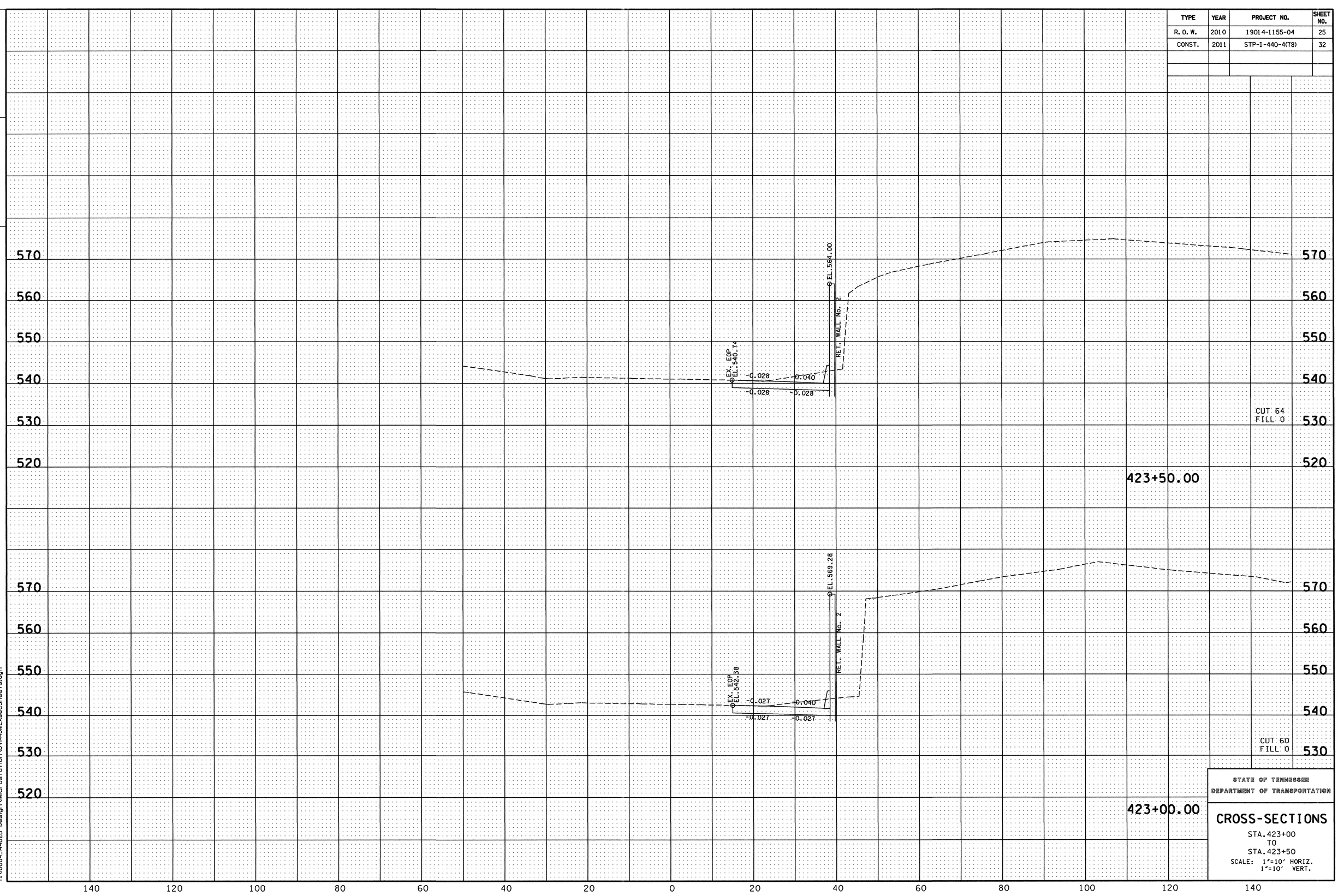
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	25
CONST.	2011	STP-I-440-4(78)	32



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 423+00
TO
STA. 423+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:40 AM
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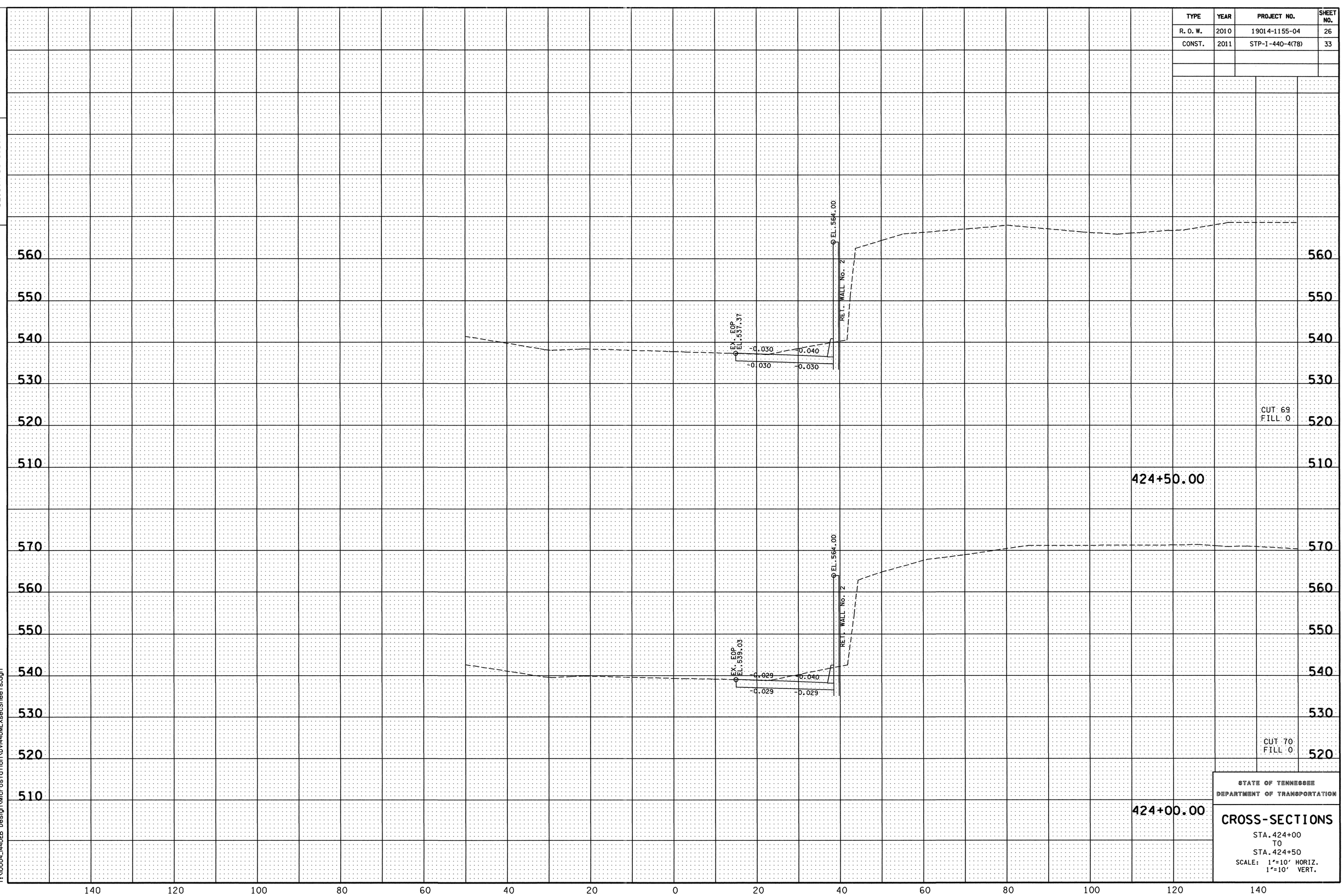
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	26
CONST.	2011	STP-I-440-4(78)	33



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 424+00
TO
STA. 424+50

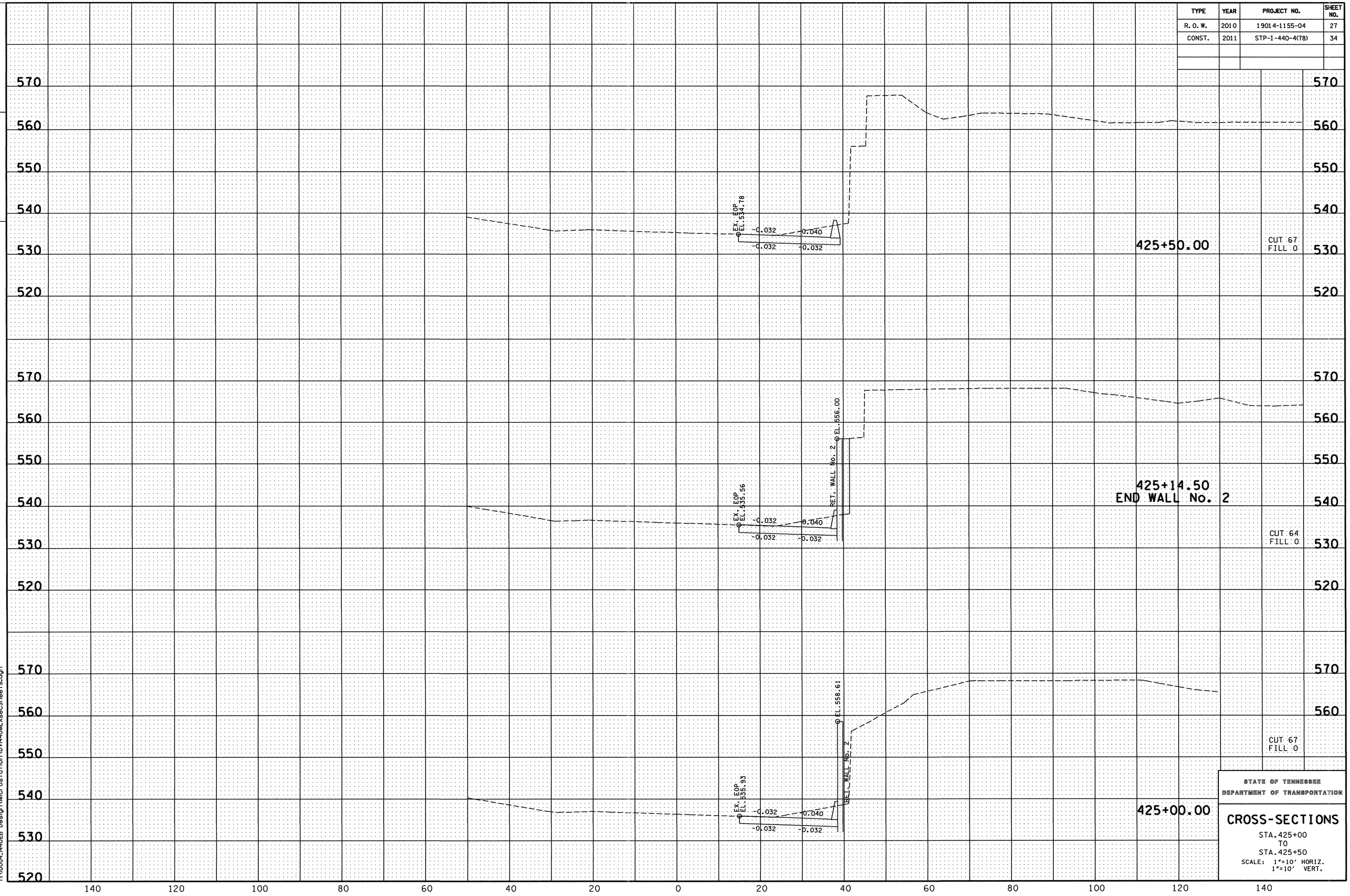
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:42 AM
T:\0004_I440EB Design\Microstation\DV1440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	27
CONST.	2011	STP-I-440-4(78)	34



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 425+00
TO
STA. 425+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:45 AM
T:\NI0004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	28
CONST.	2011	STP-I-440-4(78)	35

426+80.00
END WALL No. 3
EX. EOP EL.532.31
EL.535.86
RET. WALL No. 3
-0.032
-0.040
-0.032
-0.032
CUT 60
FILL 0

426+50.00
EX. EOP EL.532.83
EL.550.80
RET. WALL No. 3
-0.032
-0.040
-0.032
-0.032
CUT 64
FILL 0

426+00.00
EX. EOP EL.533.79
EL.551.50
RET. WALL No. 3
-0.032
-0.040
-0.032
-0.032
CUT 66
FILL 0

425+62.50
BEG. WALL No. 3
EX. EOP EL.534.53
EL.556.10
RET. WALL No. 3
-0.032
-0.040
-0.032
-0.032
CUT 64
FILL 0

560
550
540
530
520

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.425+62
TO
STA.426+80

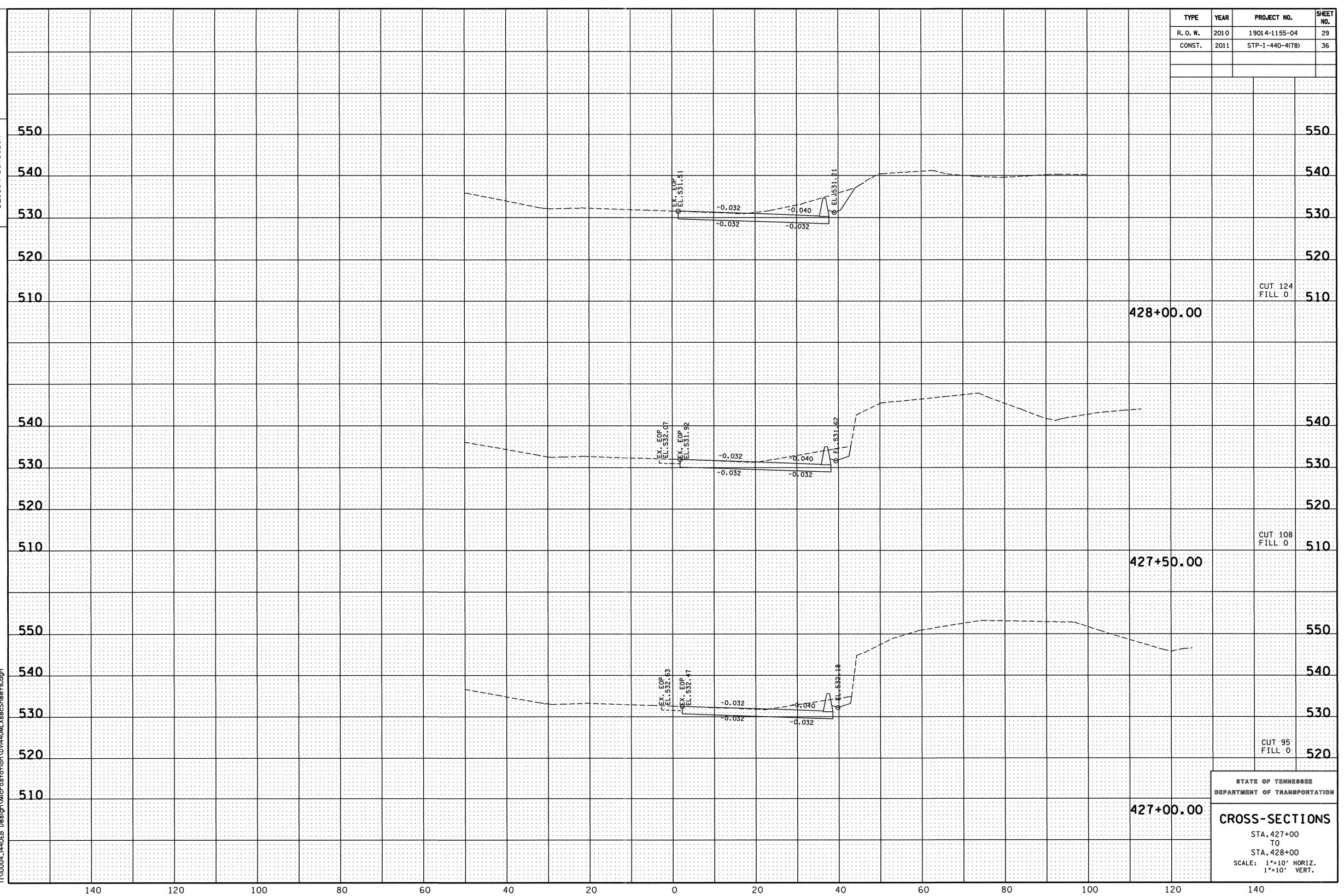
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:48 AM
T:\10004_I440EB Design\Microstation\DVI440ML\XsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	29
CONST.	2011	STP-I-440-4(78)	36



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 427+00
TO
STA. 428+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:50 AM
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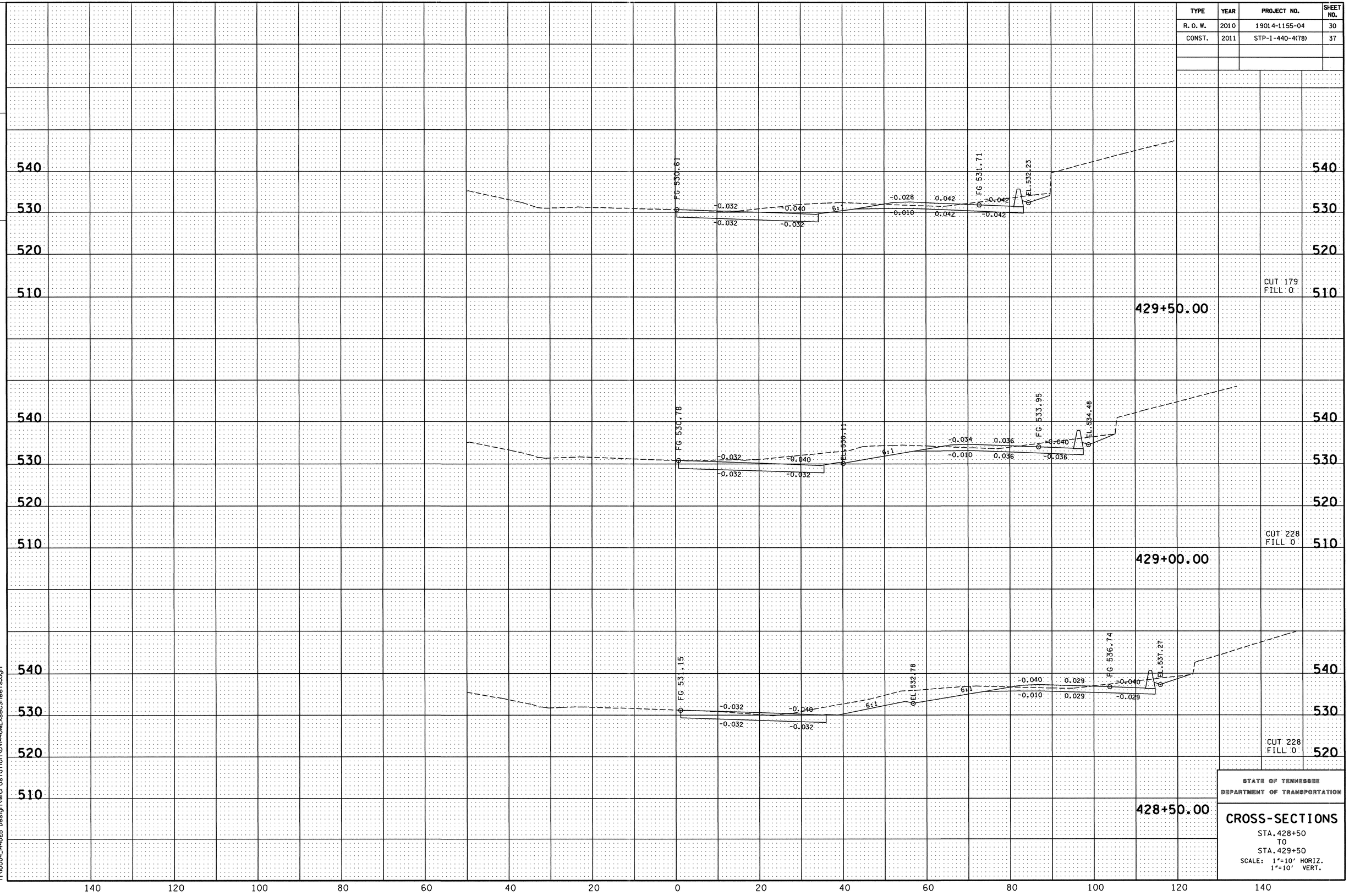
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	30
CONST.	2011	STP-I-440-4(78)	37



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.428+50
TO
STA.429+50

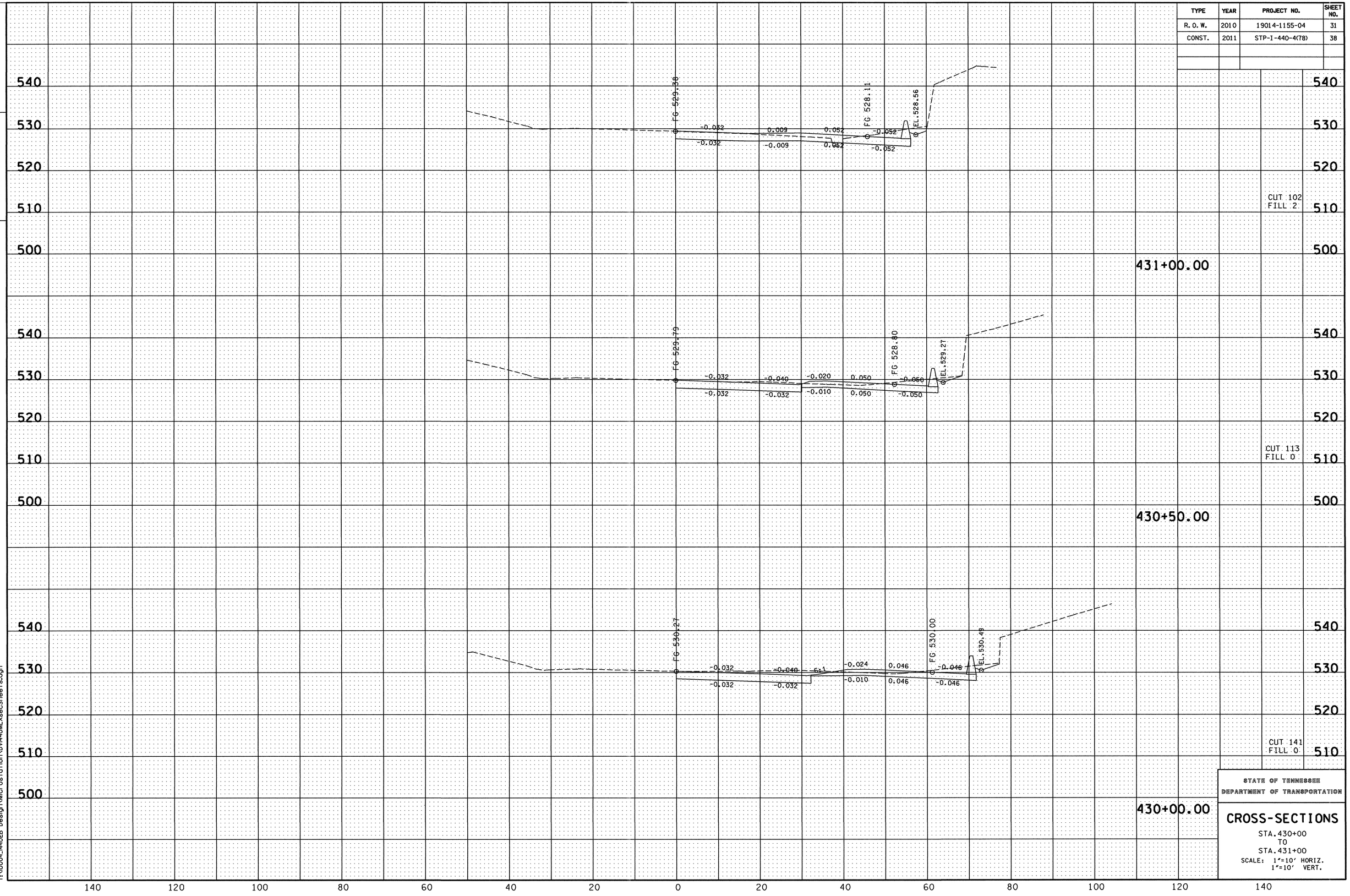
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:53 AM
T:\10004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	31
CONST.	2011	STP-I-440-4(78)	38



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.430+00
TO
STA.431+00

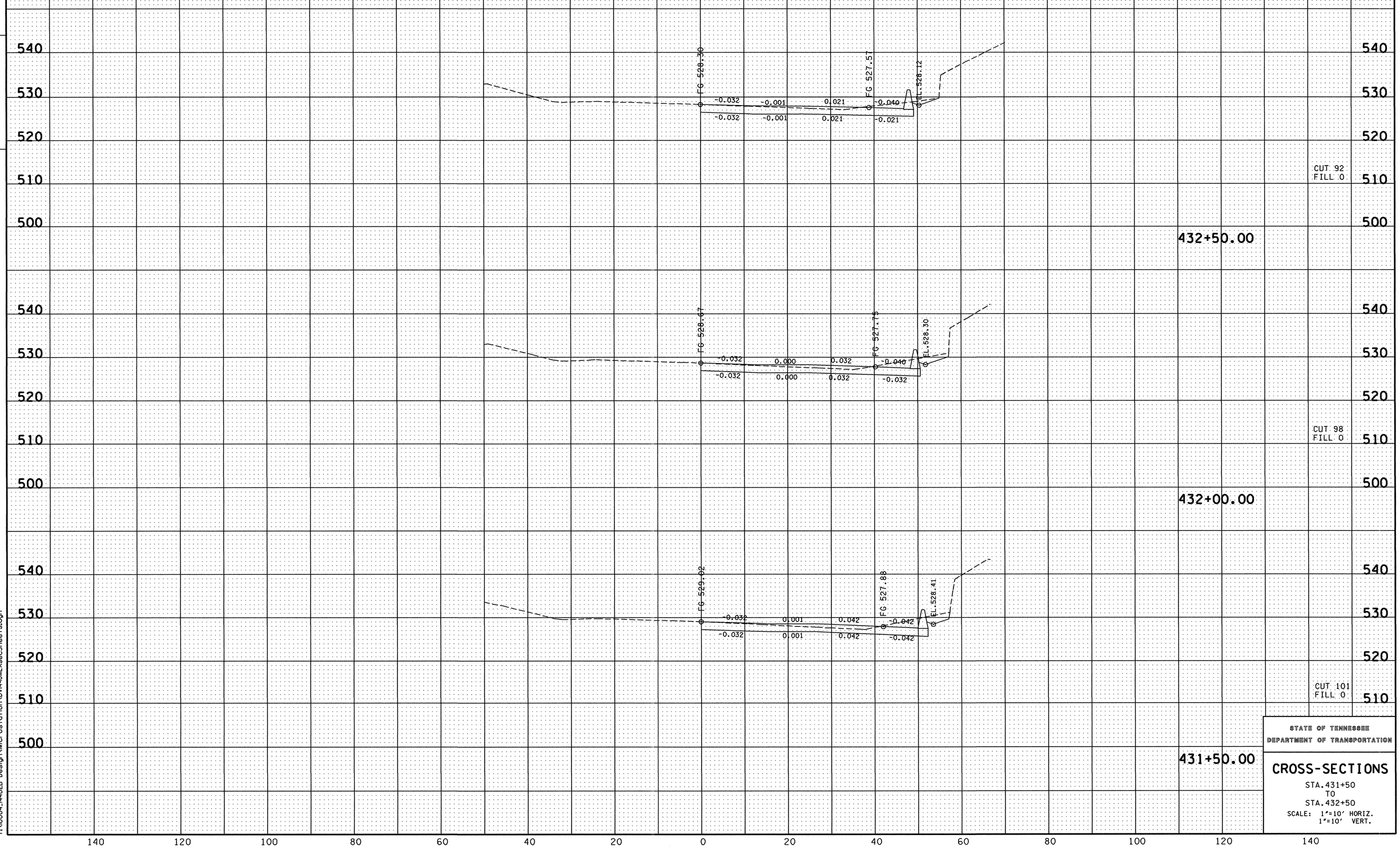
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:55 AM
T:\10004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	32
CONST.	2011	STP-I-440-4(78)	39



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 431+50
TO
STA. 432+50

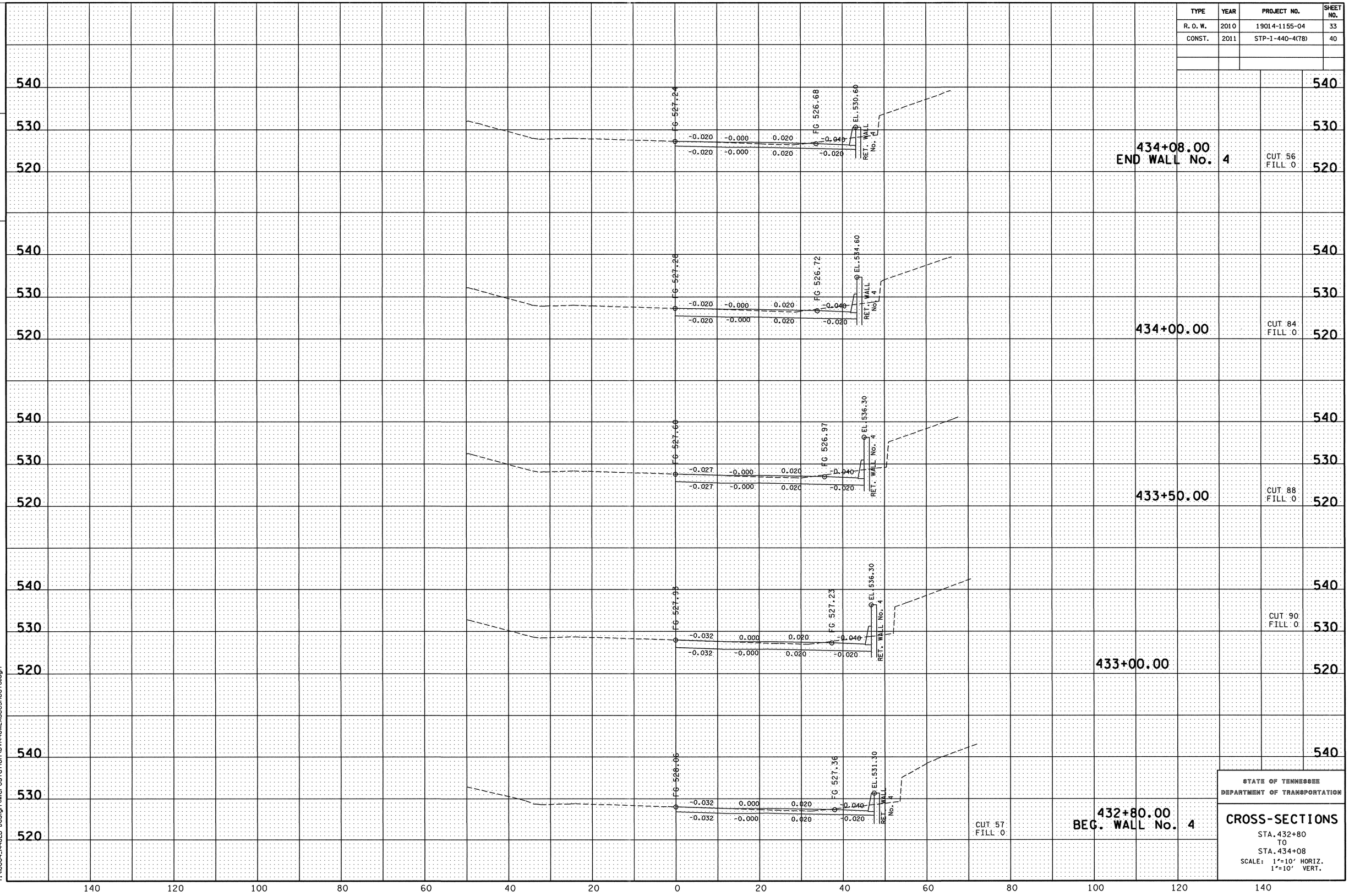
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:11:58 AM
T:\0004_I440EB Design\Microstation\DI\I440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	33
CONST.	2011	STP-I-440-4(78)	40



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 432+80
TO
STA. 434+08

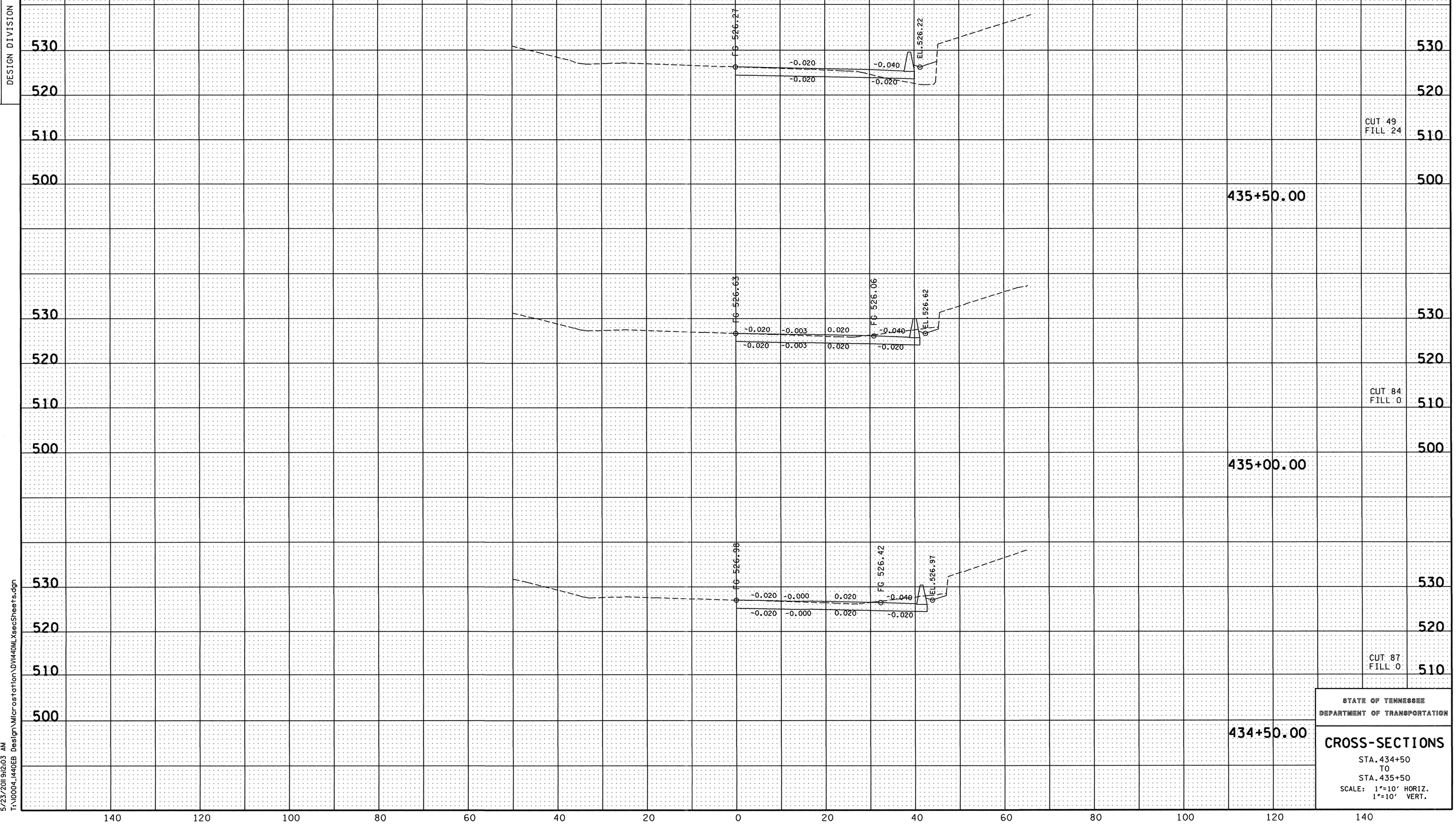
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:01 AM
T:\10004_I440EB Design\Microstation\DI\I440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	34
CONST.	2011	STP-I-440-4(78)	41



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

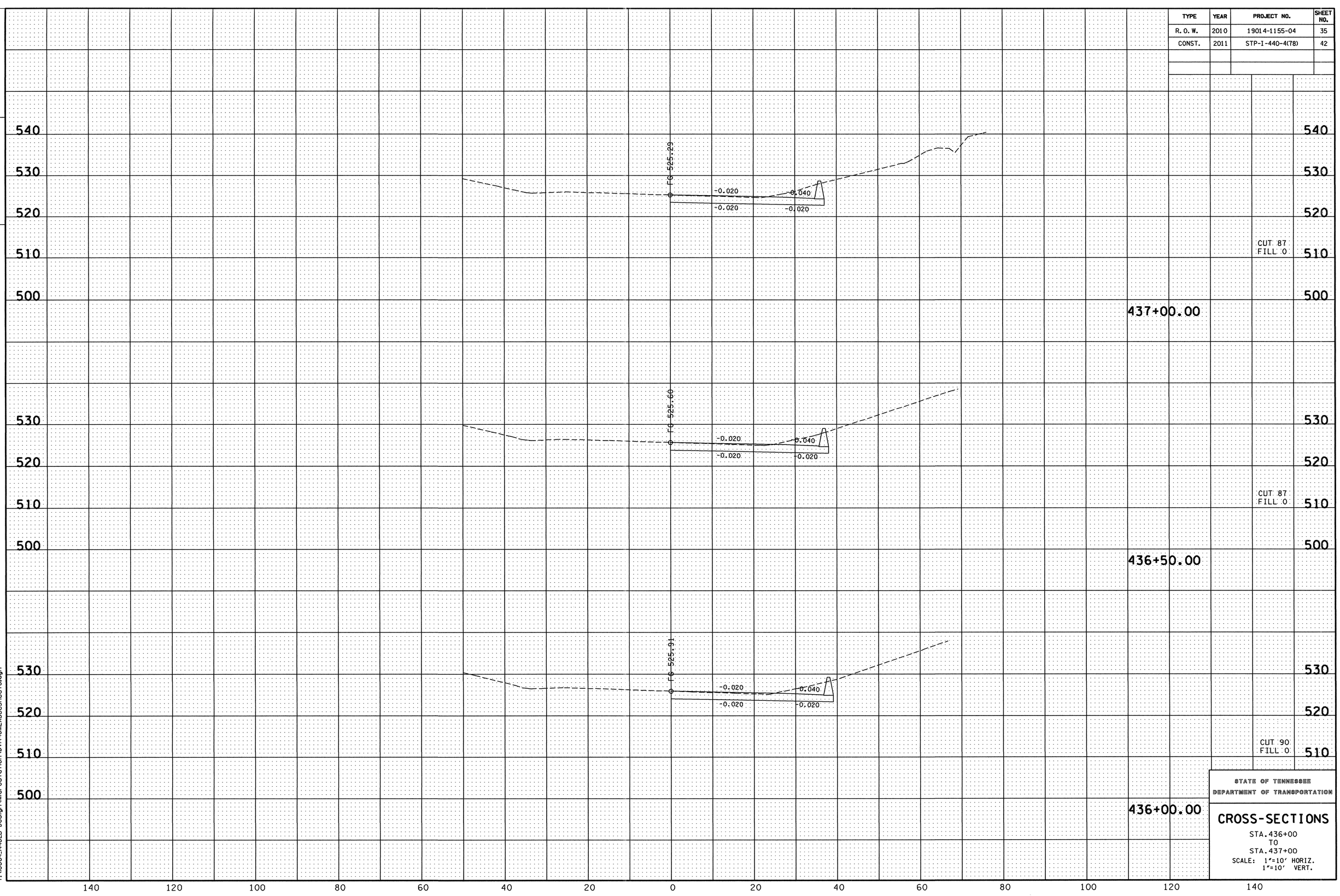
STA. 434+50
TO
STA. 435+50
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:03 AM
T:\10004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	35
CONST.	2011	STP-I-440-4(78)	42



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 436+00
TO
STA. 437+00

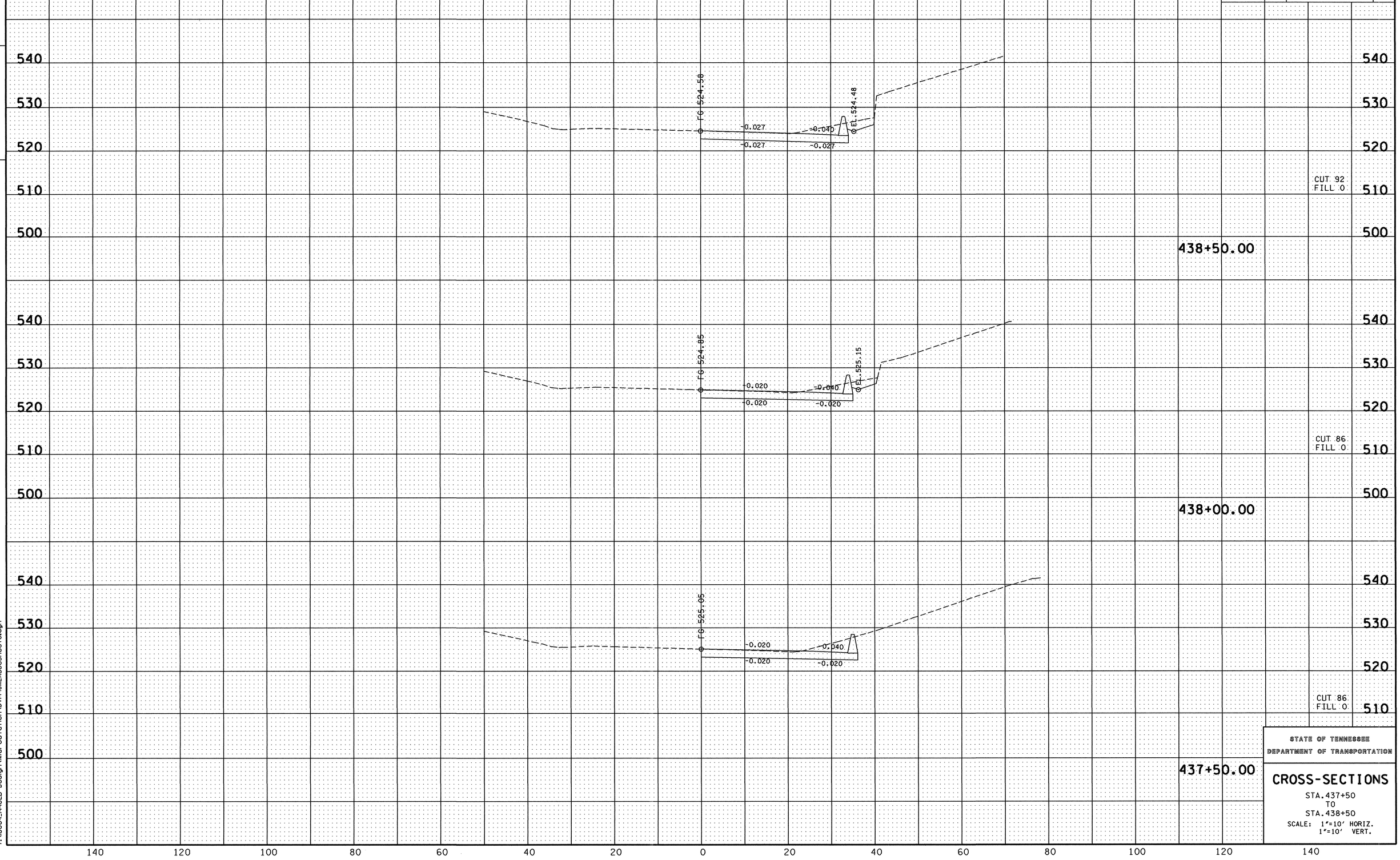
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2019 9:12:06 AM
T:\10004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	36
CONST.	2011	STP-I-440-4(78)	43



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 437+50
TO
STA. 438+50

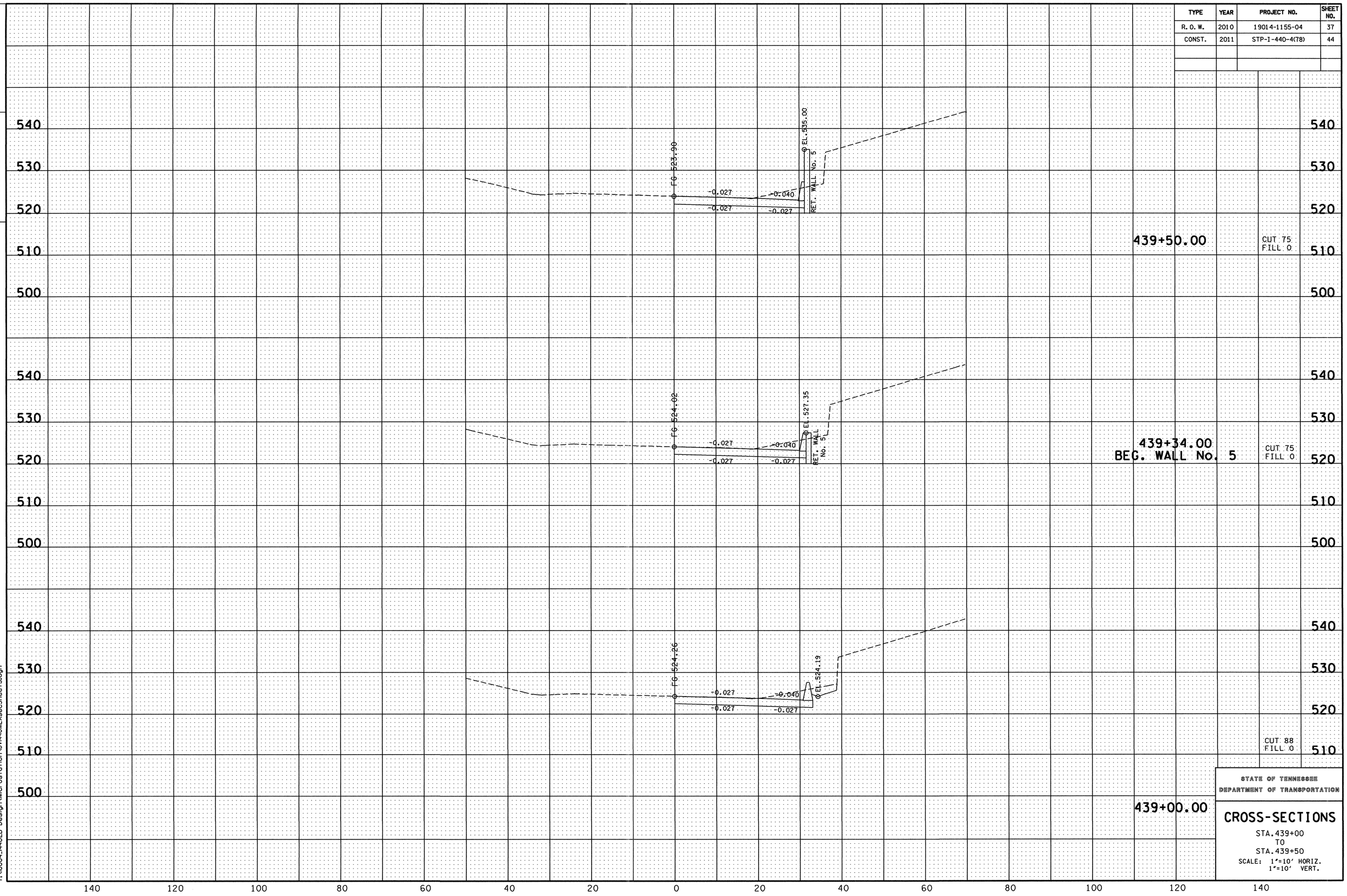
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:09 AM
T:\0004_I440EB Design\Microstation\DI\I440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	37
CONST.	2011	STP-I-440-4(78)	44



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 439+00
TO
STA. 439+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:12 AM
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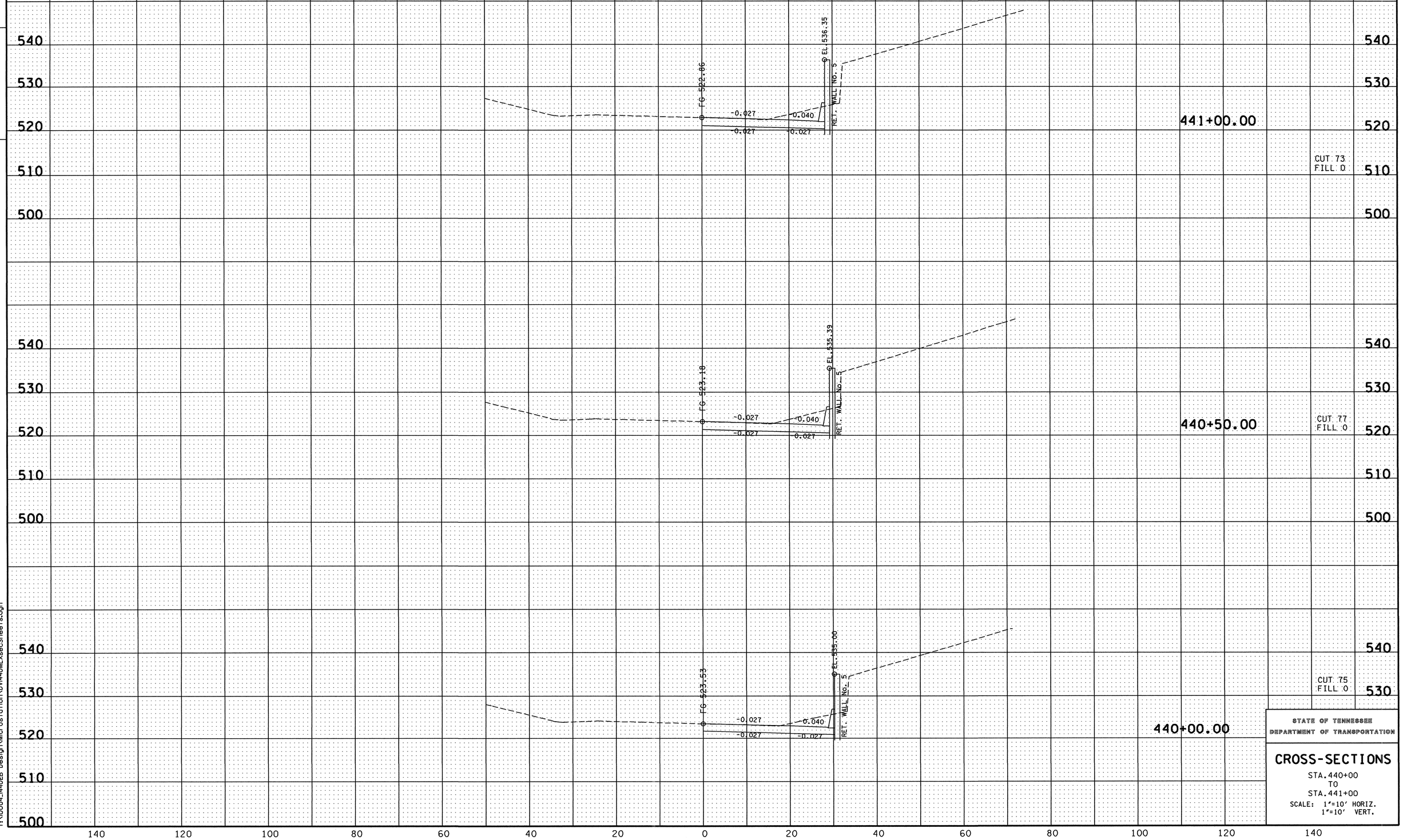
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	38
CONST.	2011	STP-I-440-4(78)	45



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 440+00
TO
STA. 441+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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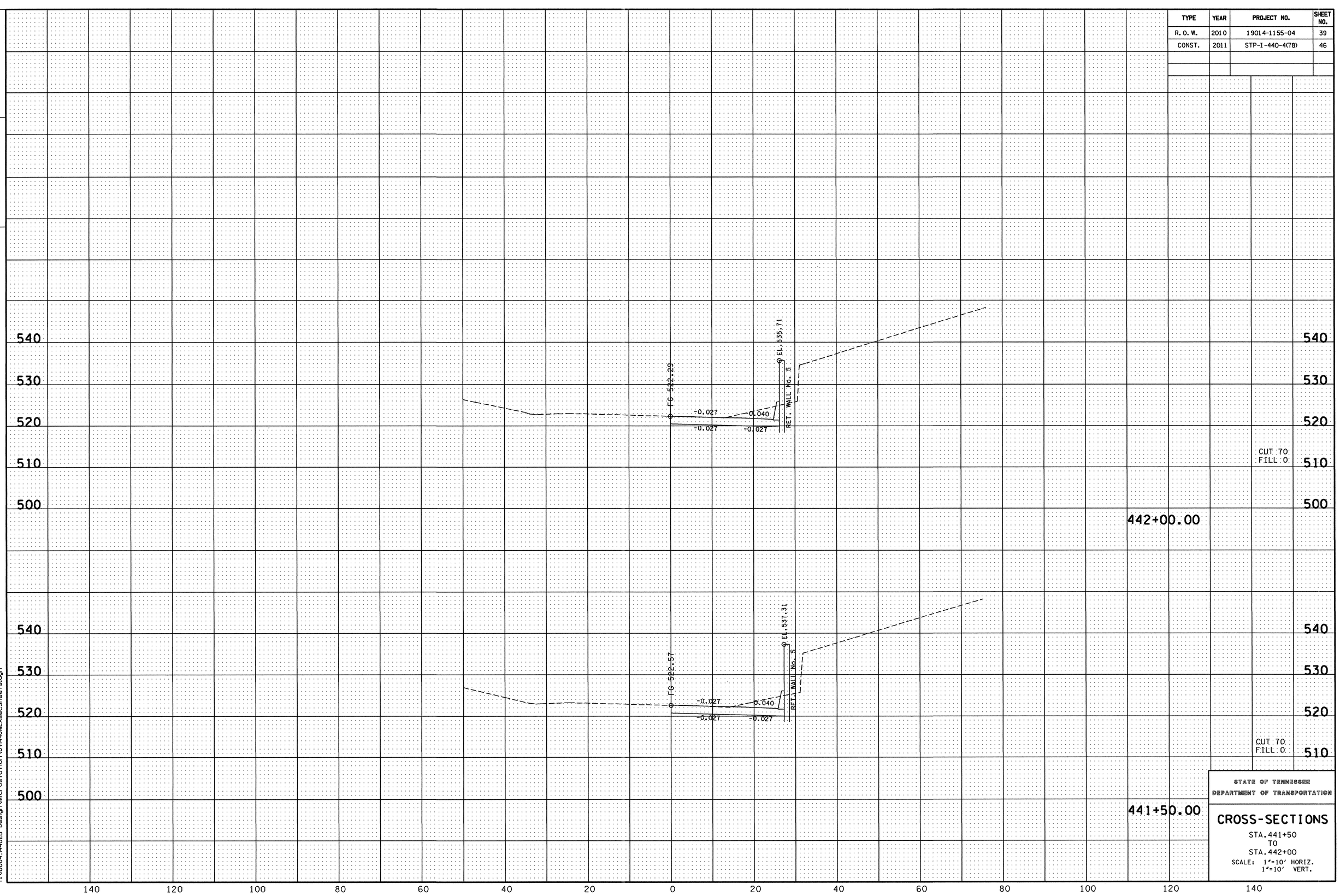
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	39
CONST.	2011	STP-I-440-4(78)	46



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 441+50
TO
STA. 442+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:17 AM
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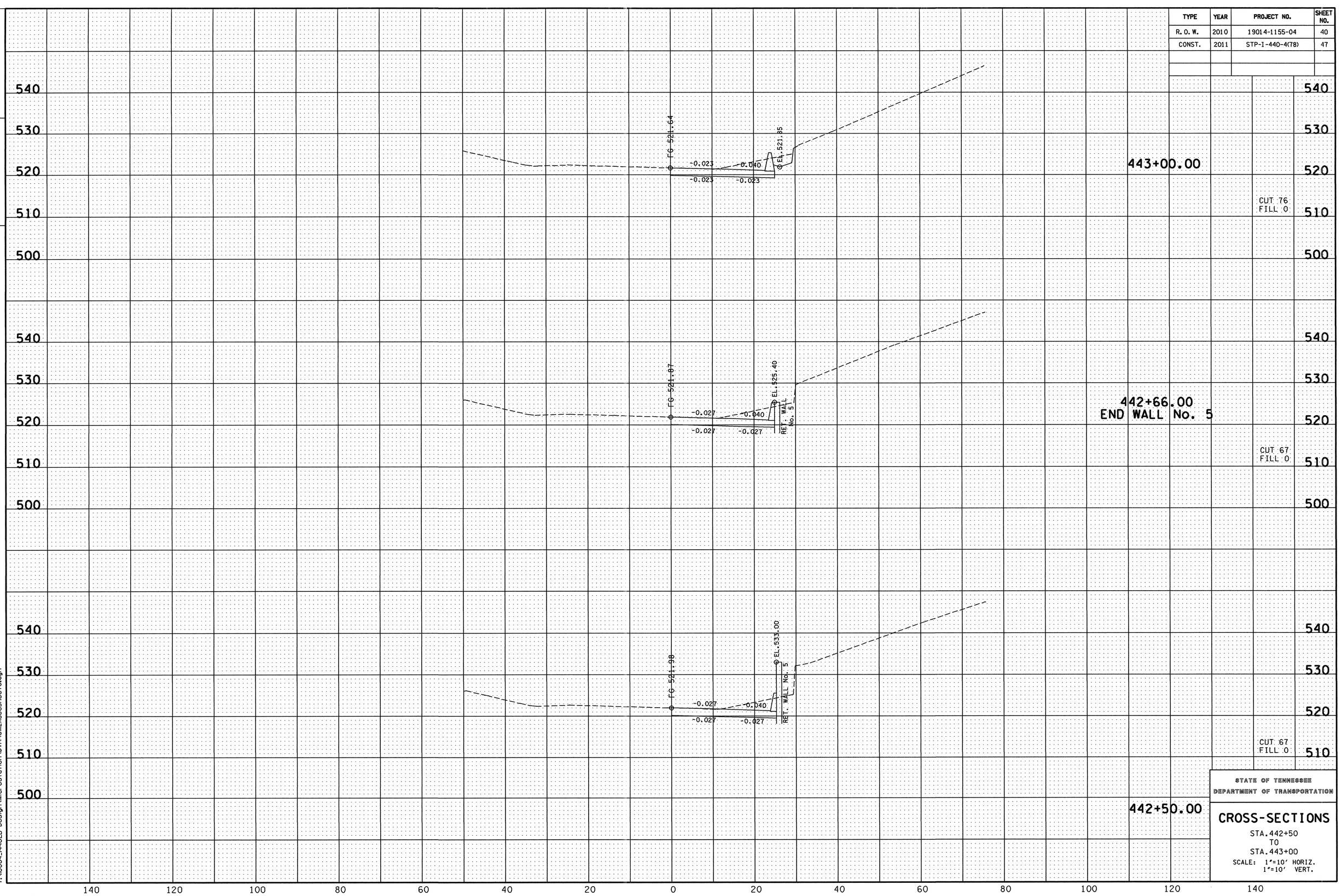
TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	40
CONST.	2011	STP-I-440-4(78)	47

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 442+50
TO
STA. 443+00

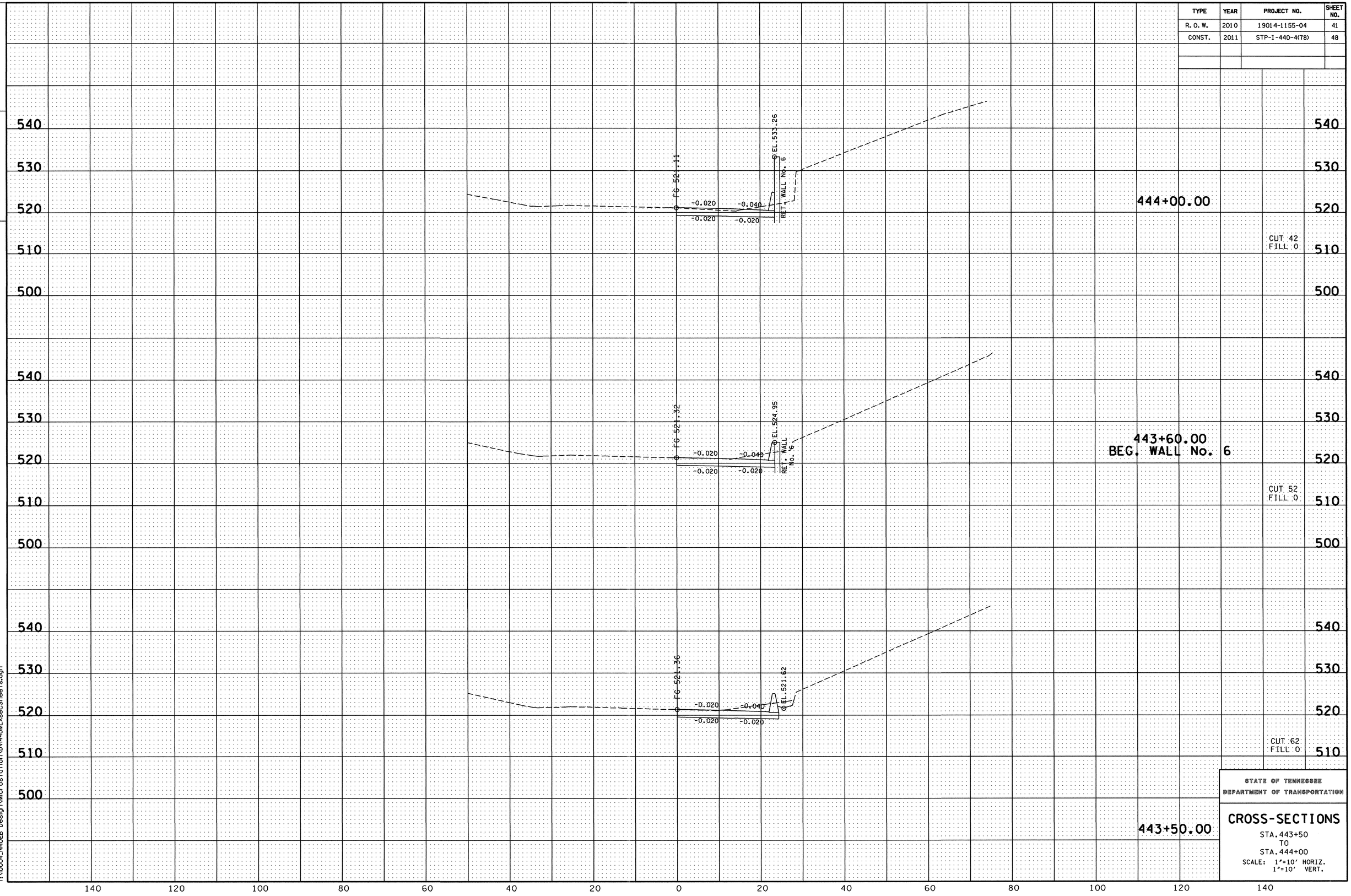
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:20 AM
T:\10004_I440EB Design\Microstation\DV1440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	41
CONST.	2011	STP-I-440-4(78)	48



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.443+50
TO
STA.444+00

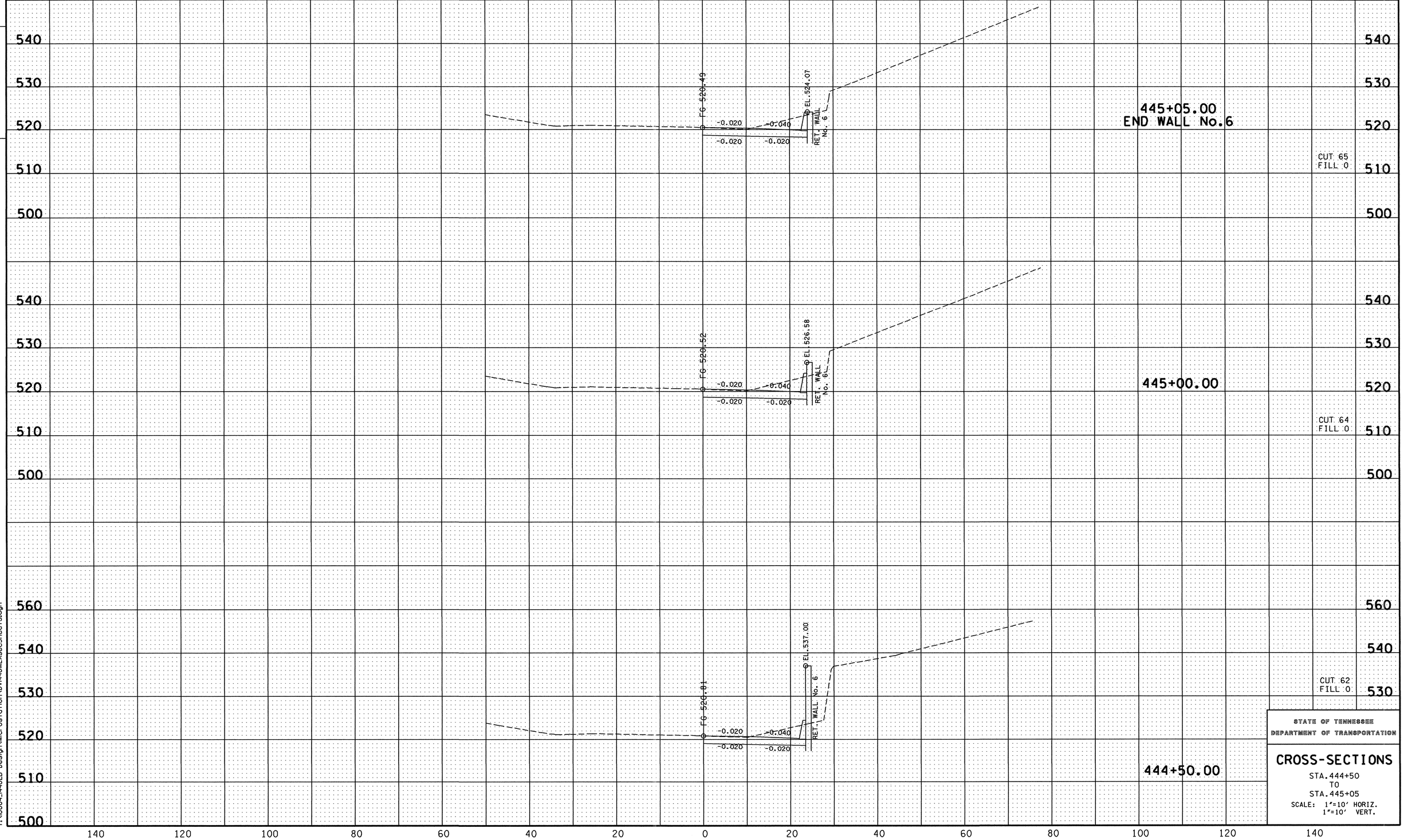
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:22 AM
T:\0004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	42
CONST.	2011	STP-I-440-4(78)	49



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 444+50
TO
STA. 445+05

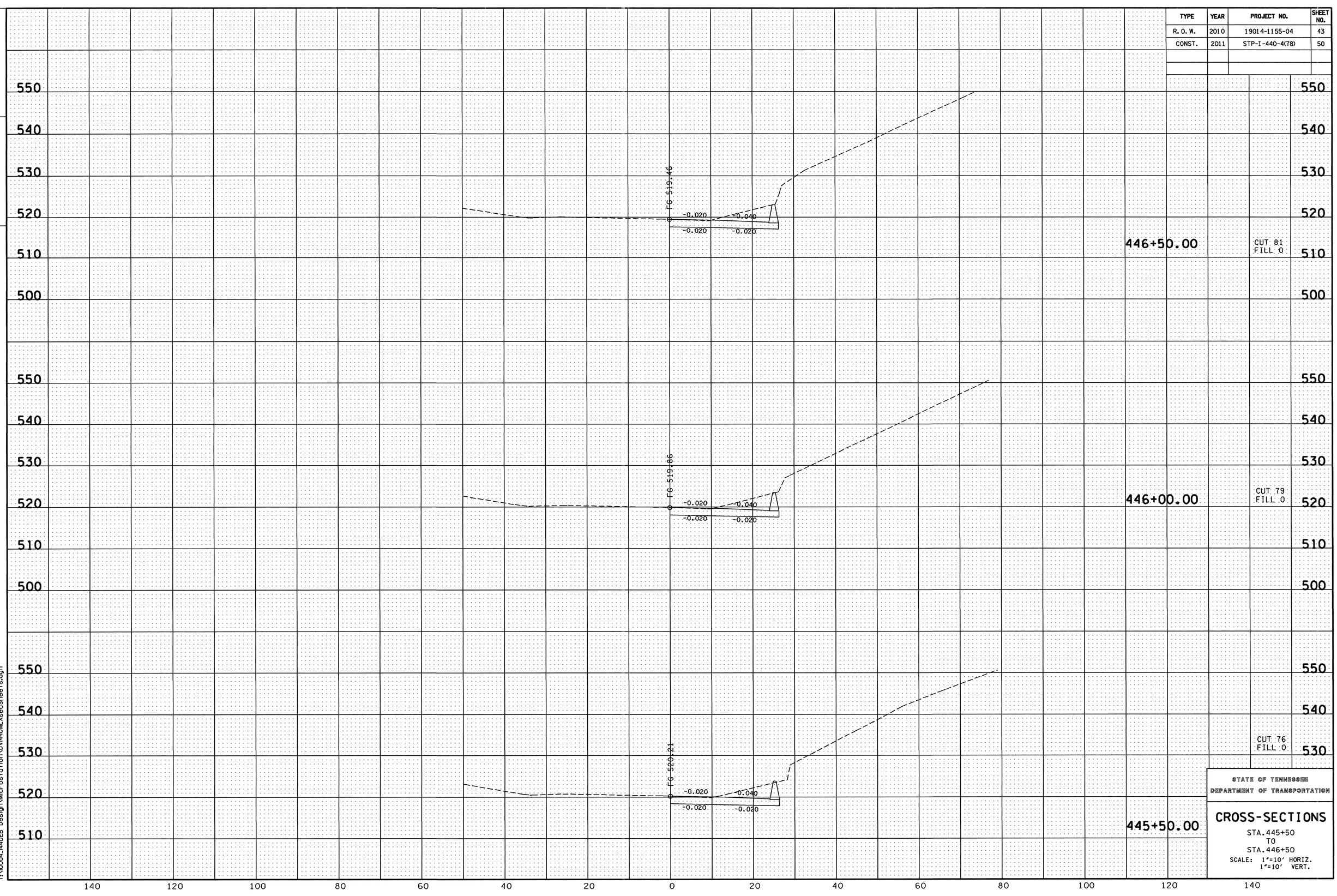
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:25 AM
T:\10004_I440EB Design\Microstation\DI\I440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	43
CONST.	2011	STP-I-440-4(78)	50



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.445+50
TO
STA.446+50

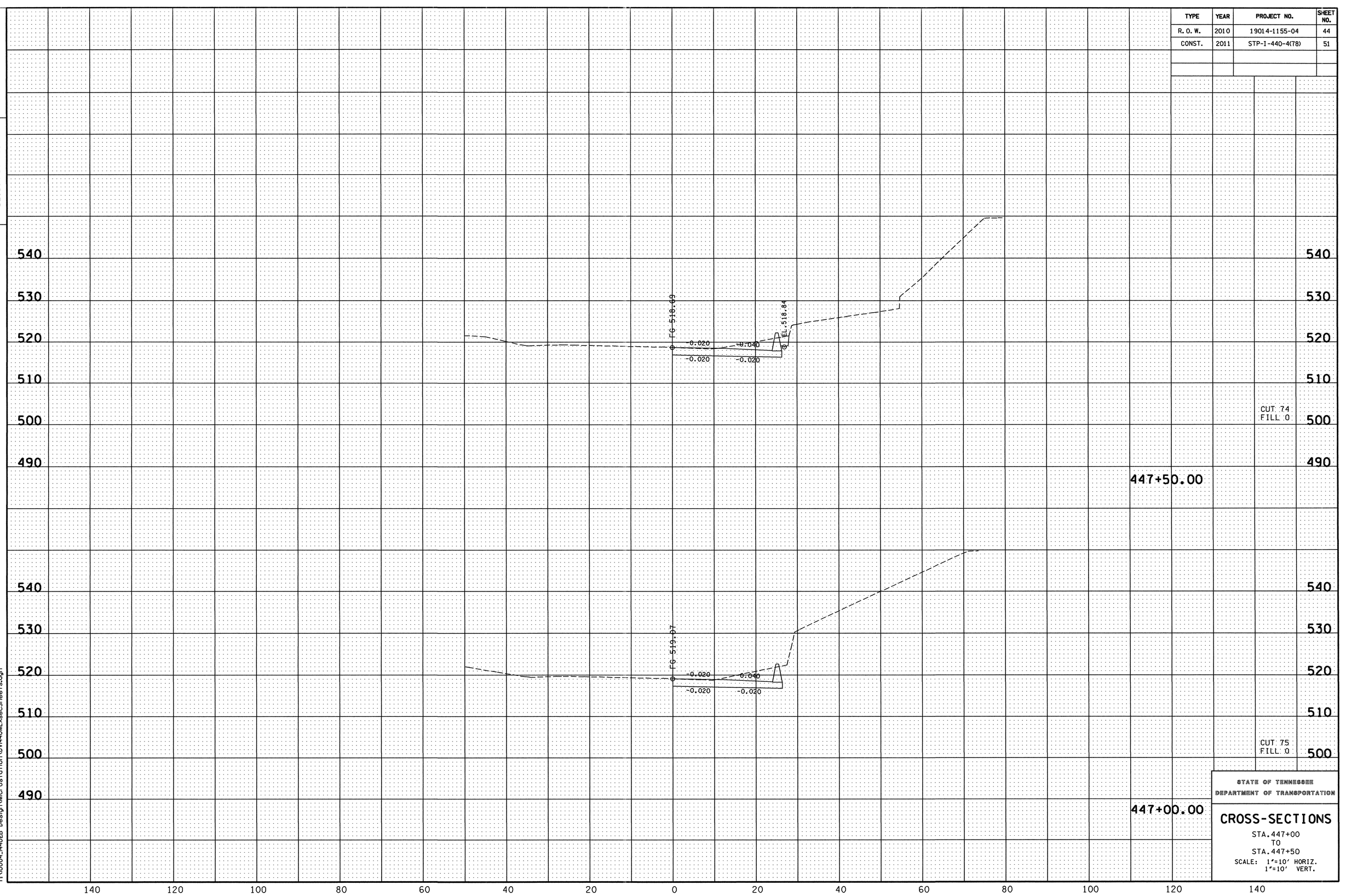
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:28 AM
T:\0004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	44
CONST.	2011	STP-I-440-4(78)	51



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 447+00
TO
STA. 447+50

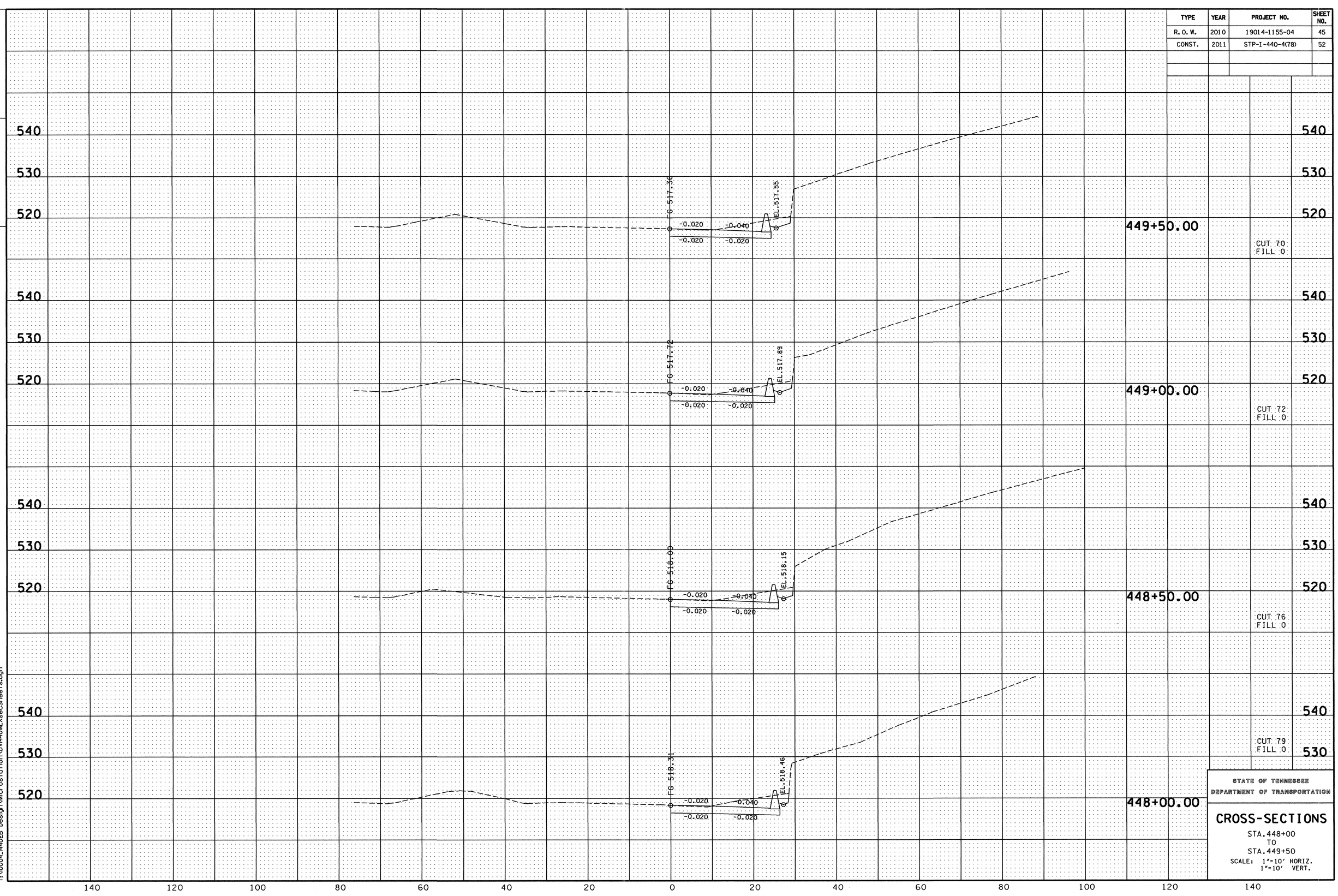
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:30 AM
T:\10004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	45
CONST.	2011	STP-I-440-4(78)	52



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.448+00
TO
STA.449+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

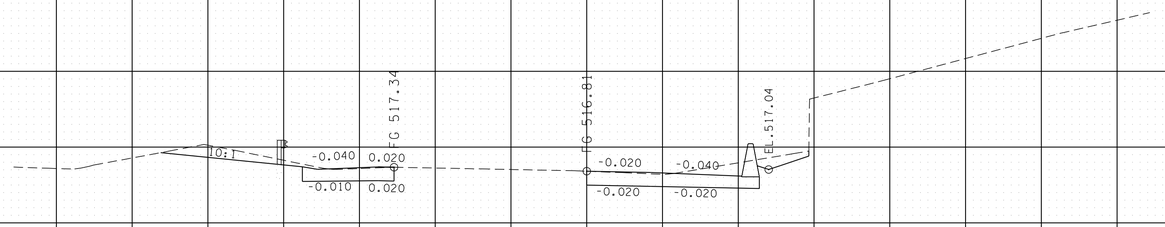
5/23/2011 9:12:33 AM
T:\0004_I440EB Design\Microstation\DI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

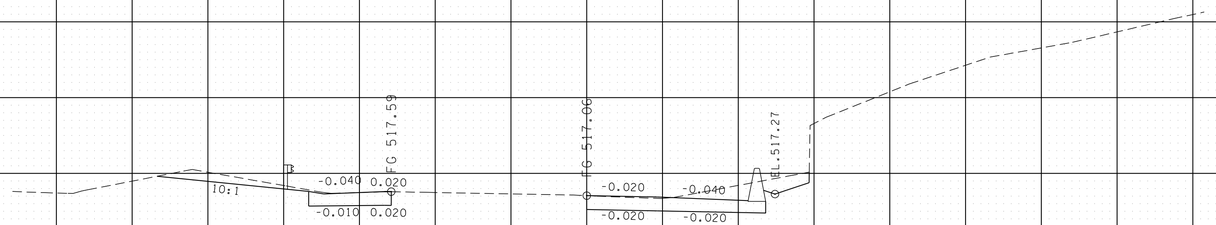
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	46
CONST.	2011	STP-I-440-4(78)	53

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1.



CUT 88
FILL 0

450+50.00



CUT 91
FILL 0

450+00.00

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.450+00
TO
STA.450+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

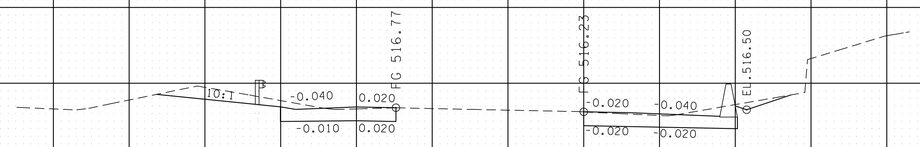
9/21/2011 4:21:29 PM
T:\0004.I440EB Design\Microstation\Sheet Files\DVI440MLXsecSheets.sht

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

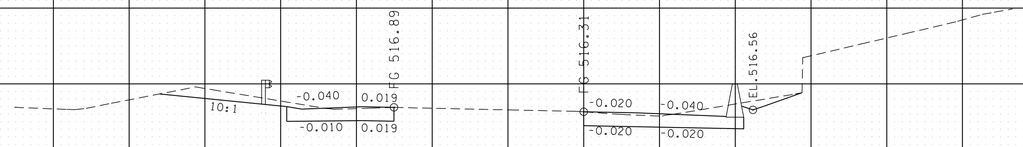
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	47
CONST.	2011	STP-I-440-4(78)	54

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1.



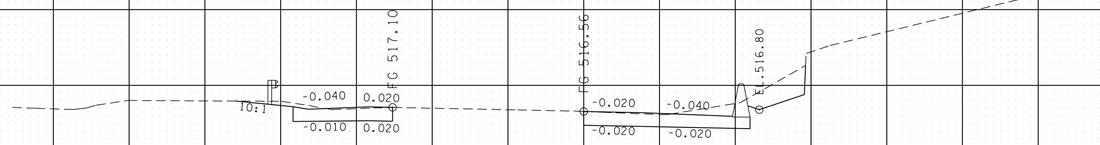
452+00.00

CUT 83
FILL 0



CUT 82
FILL 0

451+50.00



CUT 93
FILL 0

451+00.00

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.451+00
TO
STA.452+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

520 510 500 490 530

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

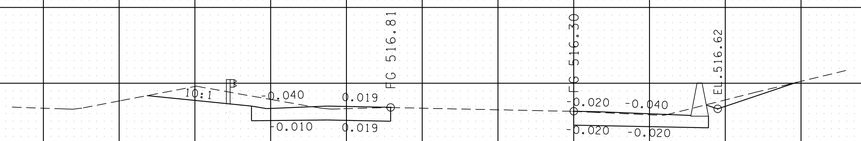
9/21/2011 1:42:48 PM
T:\0004_I440EB Design\Microstation\Sheet Files\DV\440MLXsecSheets.sht

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

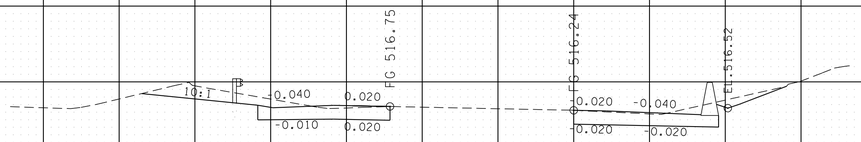
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	48
CONST.	2011	STP-I-440-4(78)	55

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1.



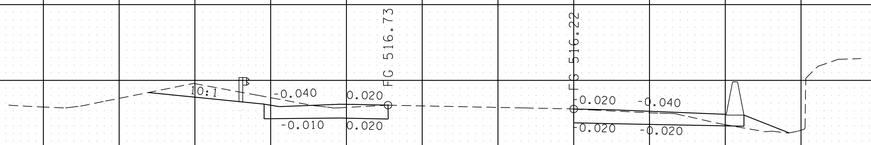
CUT 89
FILL 0

453+50.00



CUT 90
FILL 0

453+00.00



CUT 70
FILL 6

452+50.00

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.452+50
TO
STA.453+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

520 510 500 490

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

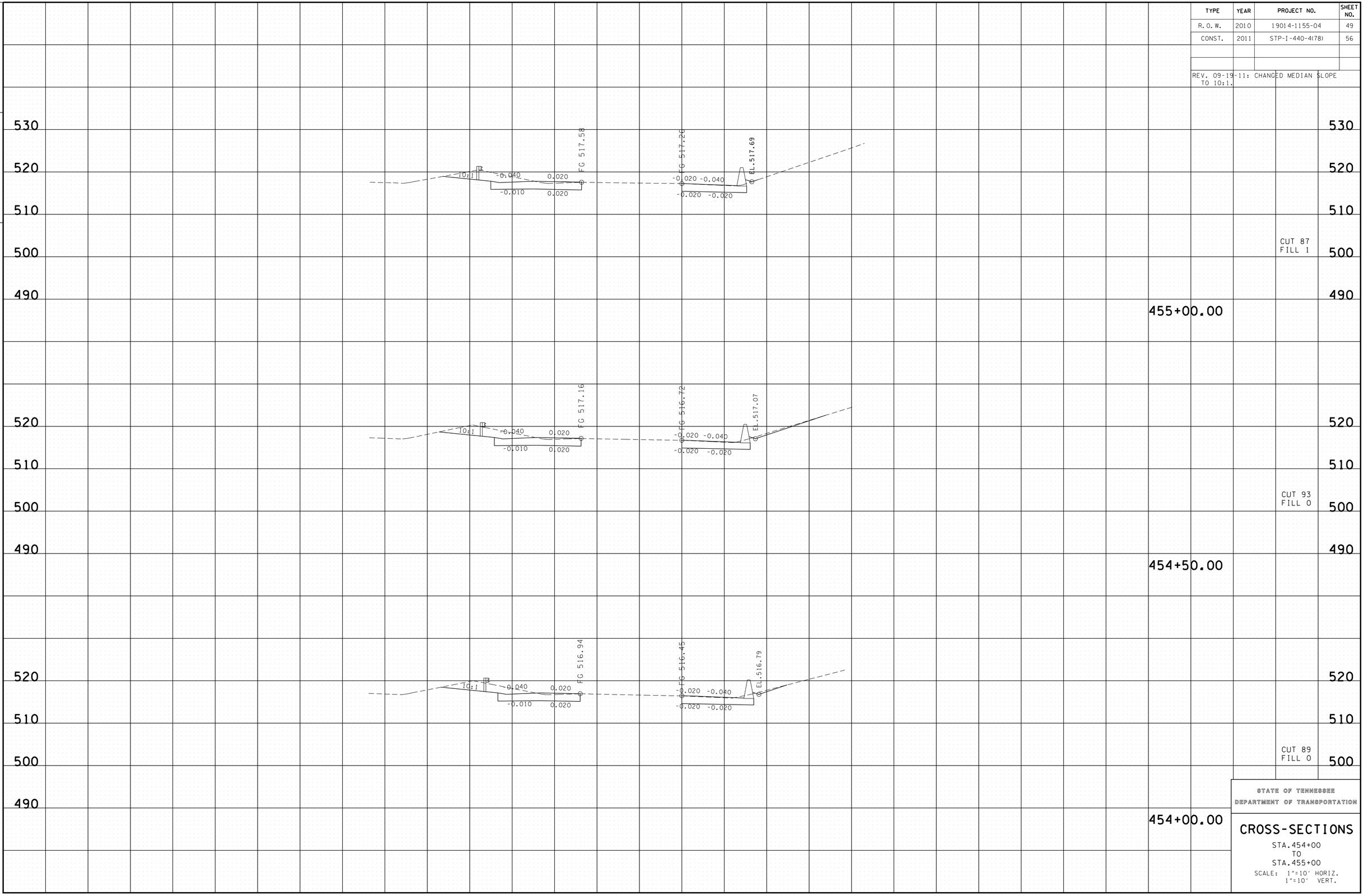
9/21/2011 1:43:04 PM
T:\0004_I440EB Design\Microstation\Sheet Files\DV\440MLXsecSheets.sht

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	49
CONST.	2011	STP-I-440-4(78)	56

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.454+00
TO
STA.455+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

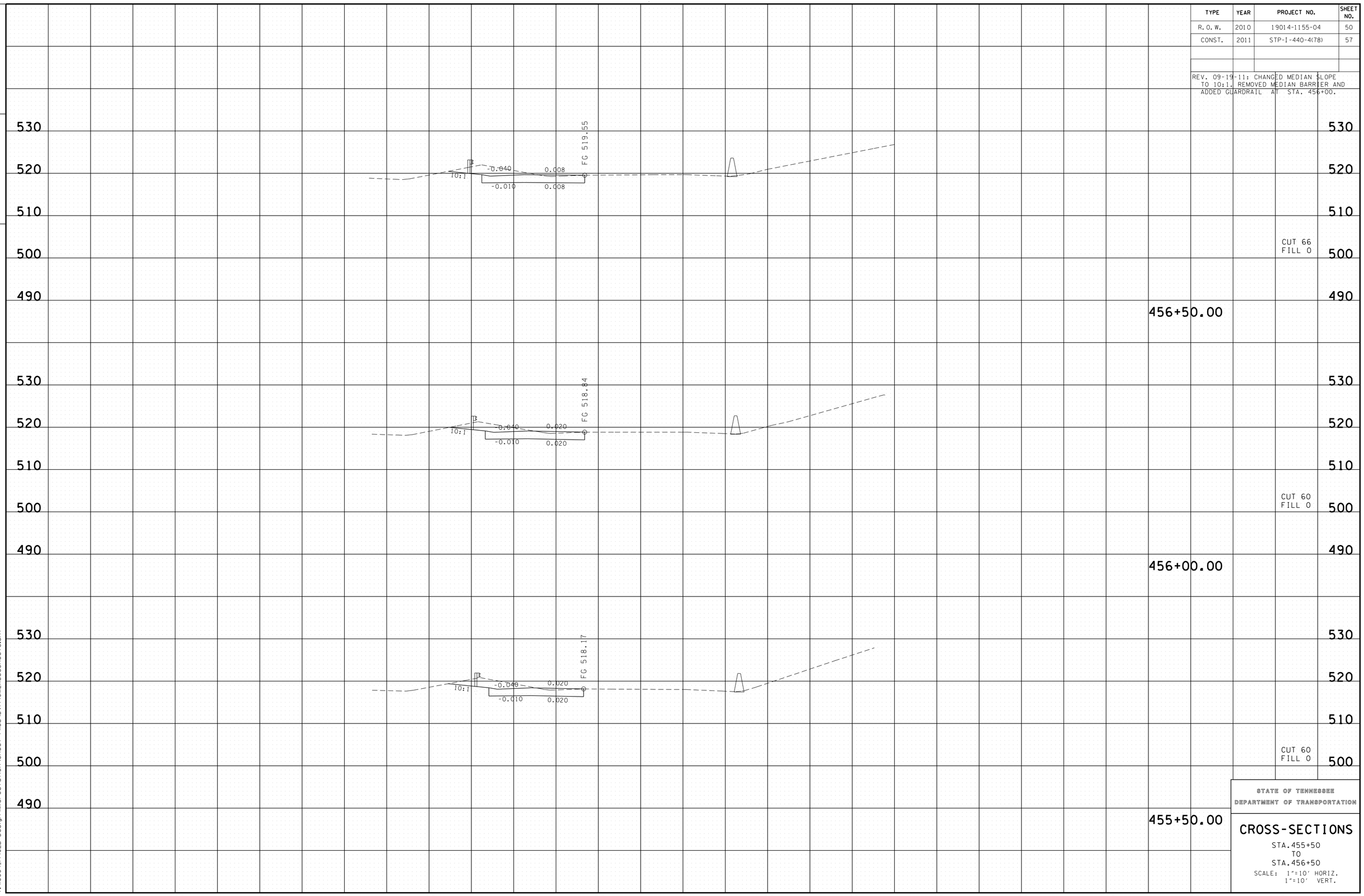
9/21/2011 11:43:18 PM
T:\0004.440EB Design\Microstation\Sheet Files\DVI440MLXsecSheets.sht

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	50
CONST.	2011	STP-I-440-4(78)	57

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1. REMOVED MEDIAN BARRIER AND ADDED GUARDRAIL AT STA. 456+00.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.455+50
TO
STA.456+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

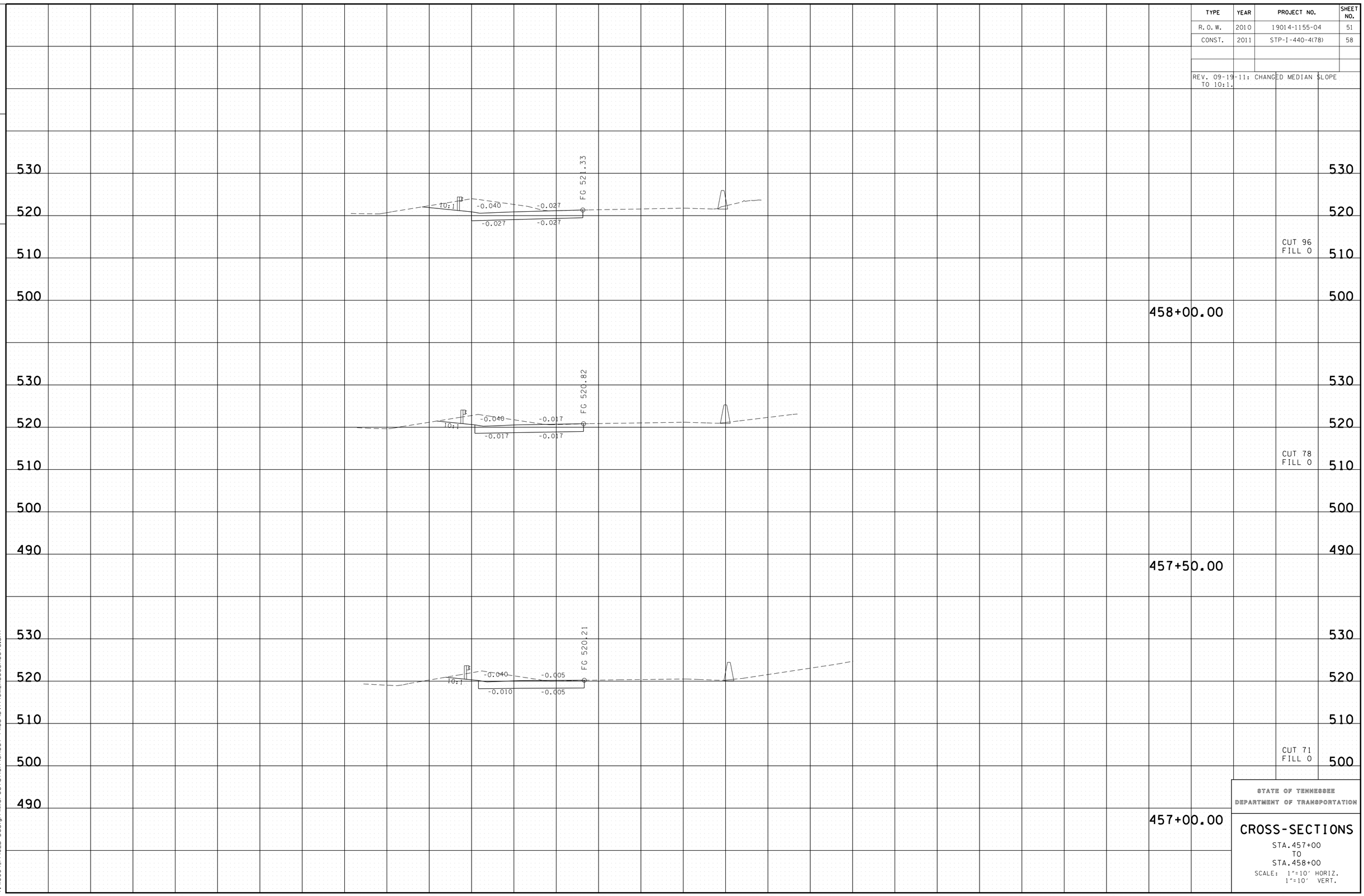
9/21/2011 11:43:34 PM
T:\0004_I440EB Design\Microstation\Sheet Files\DVI440MLXsecSheets.sht

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	51
CONST.	2011	STP-I-440-4(78)	58

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.457+00
TO
STA.458+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

9/21/2011 1:43:50 PM
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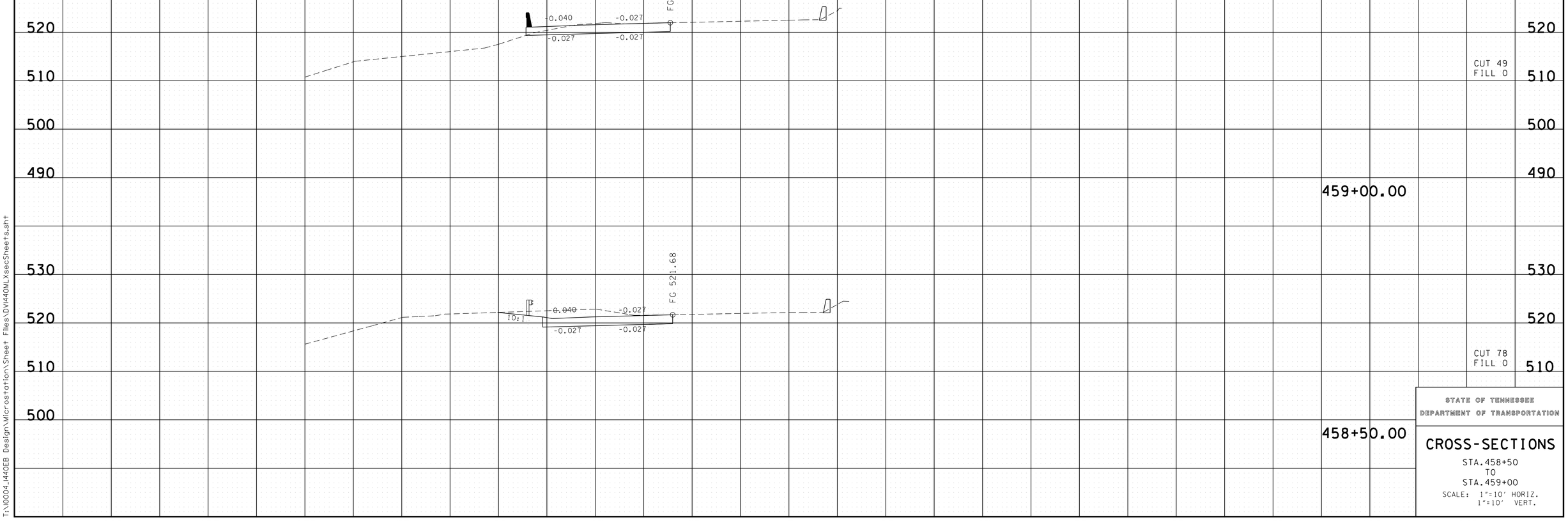
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	19014-1155-04	52
CONST.	2011	STP-I-440-4(78)	59

REV. 09-19-11: CHANGED MEDIAN SLOPE TO 10:1.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.458+50
TO
STA.459+00

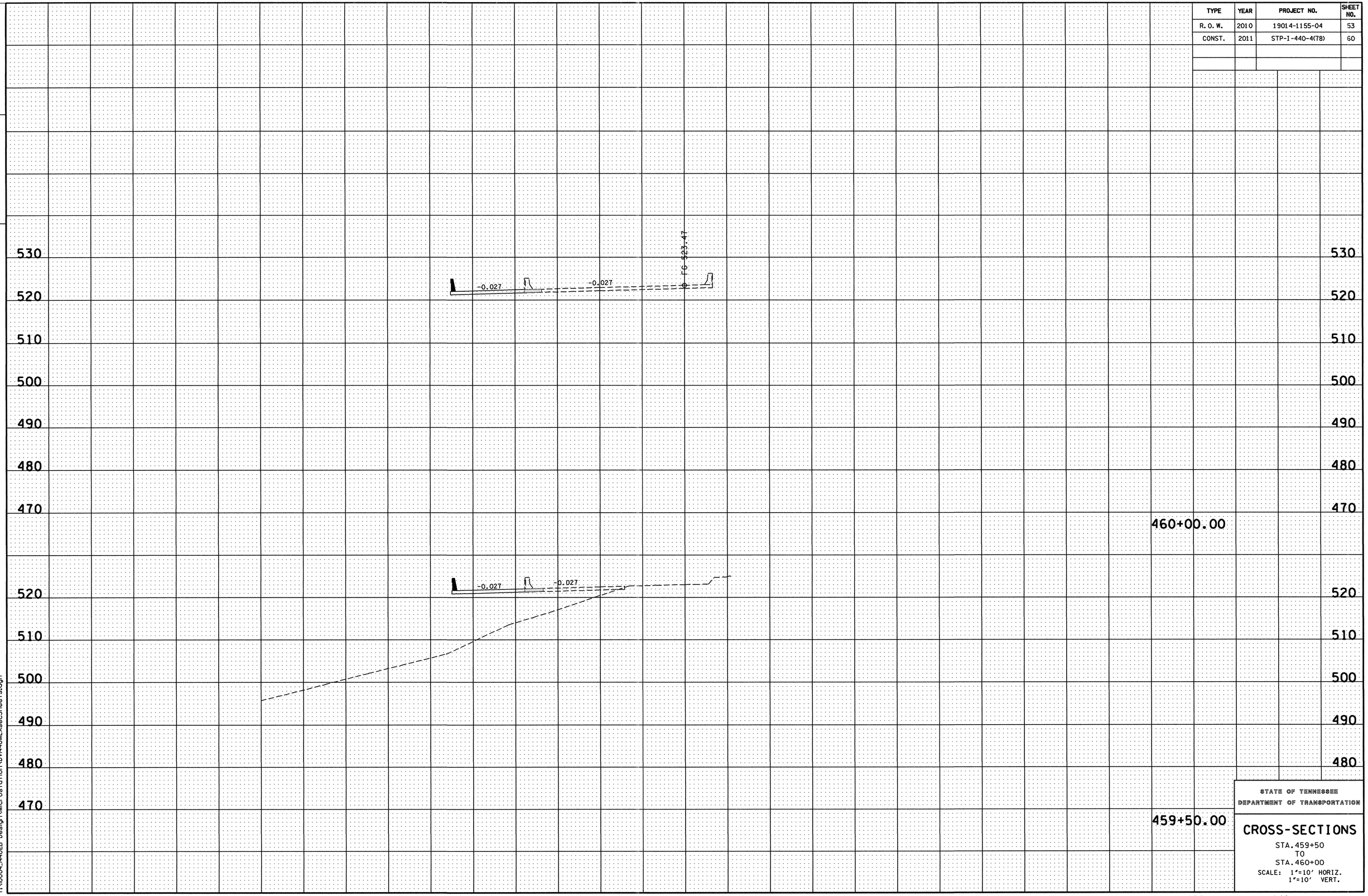
SCALE: 1"=10' HORIZ.
1"=10' VERT.

9/21/2011:44:06 PM
T:\0004_I440EB Design\Microstation\Sheet Files\DI440MLXsecSheets.sht

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	53
CONST.	2011	STP-I-440-4(78)	60



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 459+50
TO
STA. 460+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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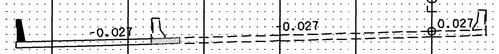
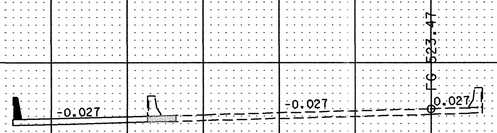
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	54
CONST.	2011	STP-I-440-4(78)	61





530
520
510
500
490
480
470
460

461+00.00

460+50.00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.460+50
TO
STA.461+00

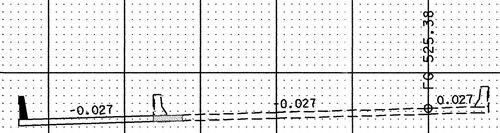
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:56 AM
T:\10004.1440EB Design\Microstation\DW1440MLXsecSheets.dgn

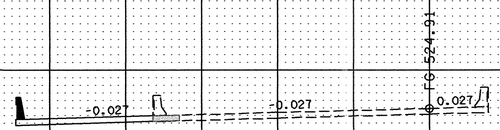
TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	55
CONST.	2011	STP-I-440-4(78)	62

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



462+00.00



461+50.00

530 520 510 500 490 480 470 460

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA.461+50
TO
STA.462+00

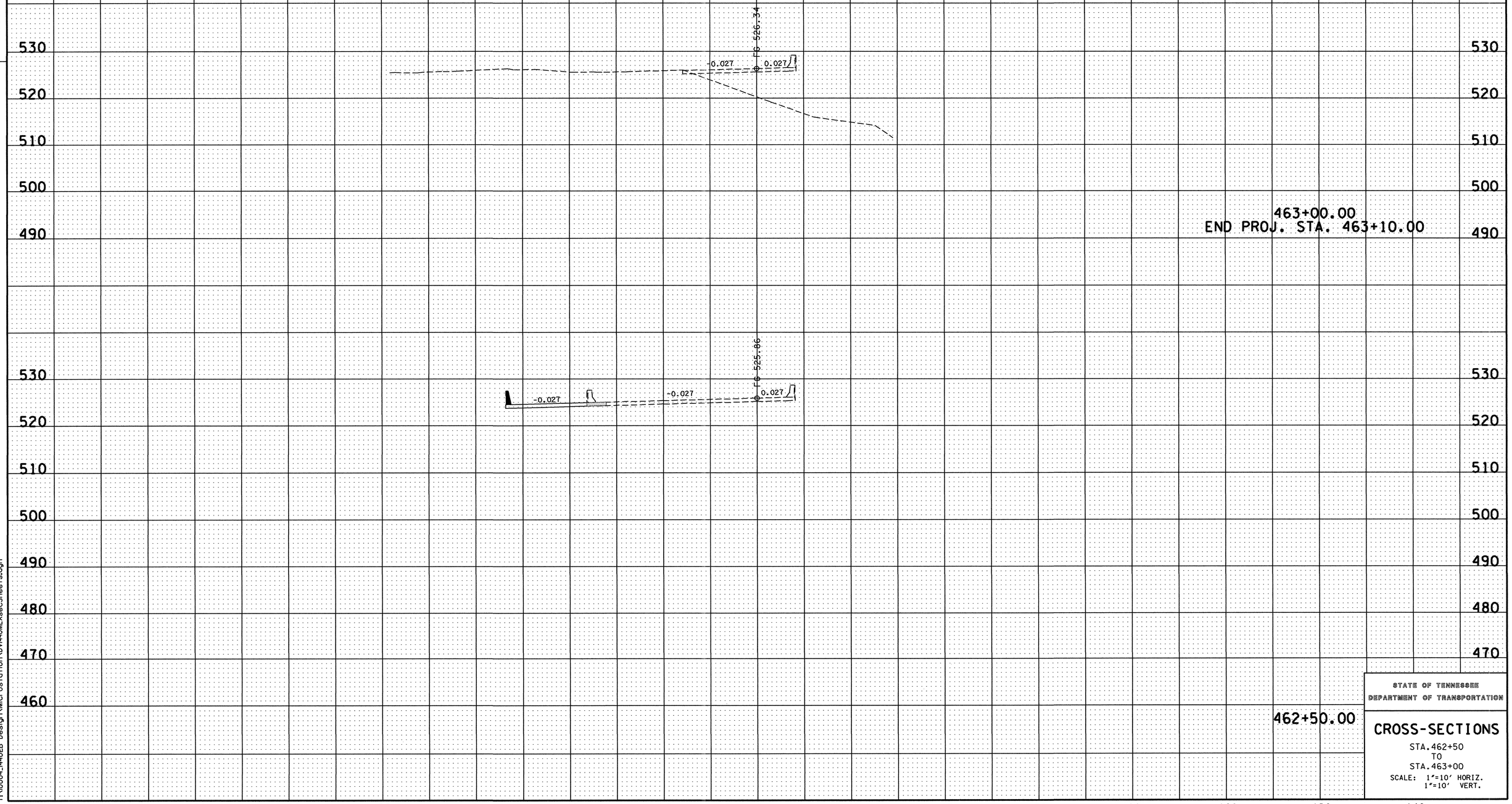
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:12:59 AM
T:\0004_I440EB Design\Microstation\DVI440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	56
CONST.	2011	STP-I-440-4(78)	63



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 462+50
TO
STA. 463+00

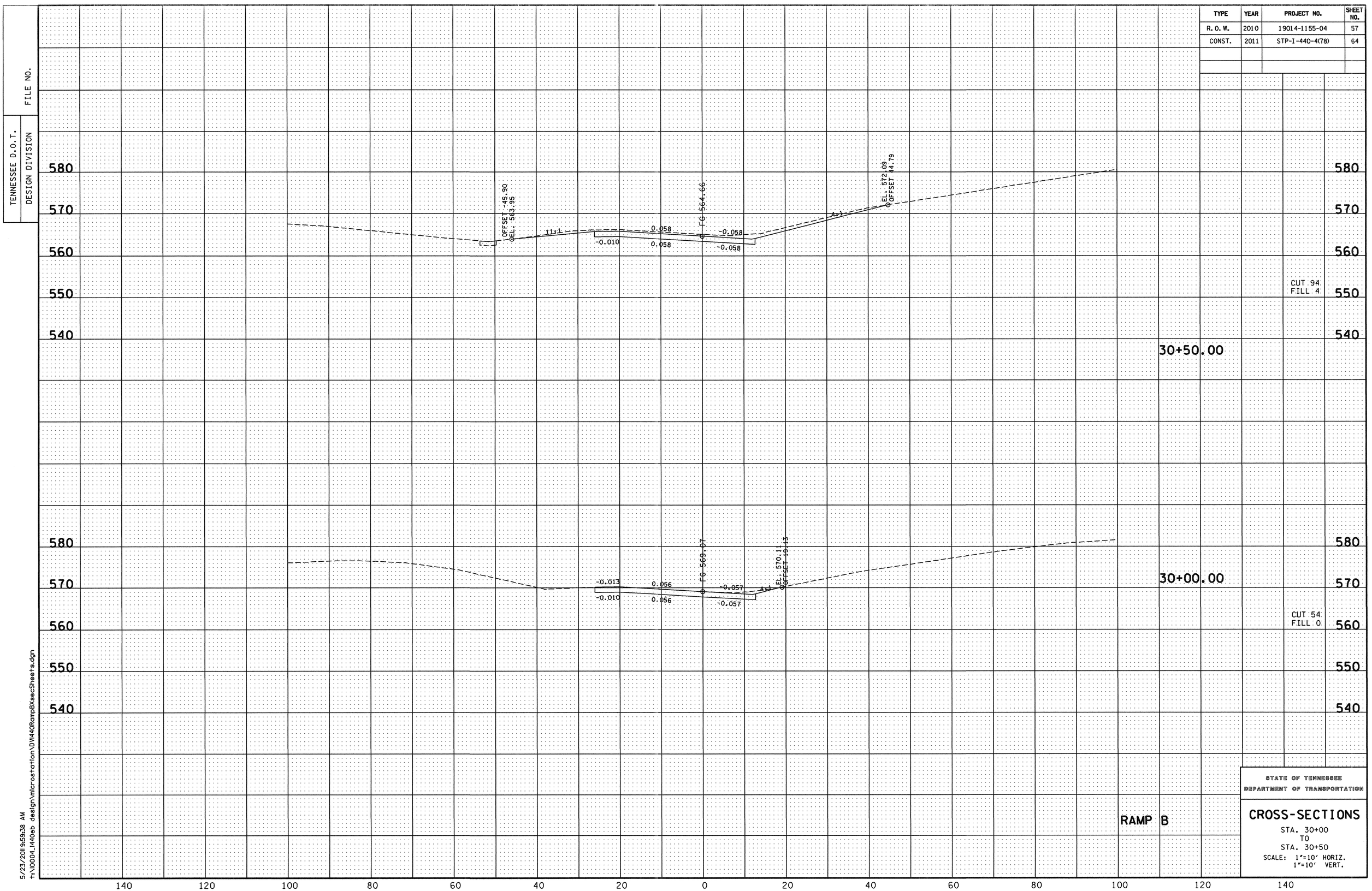
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:13:01 AM
T:\10004_I440EB Design\Microstation\DV1440MLXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	57
CONST.	2011	STP-I-440-4(78)	64



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 30+00
TO
STA. 30+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

RAMP B

5/23/2011 9:59:38 AM
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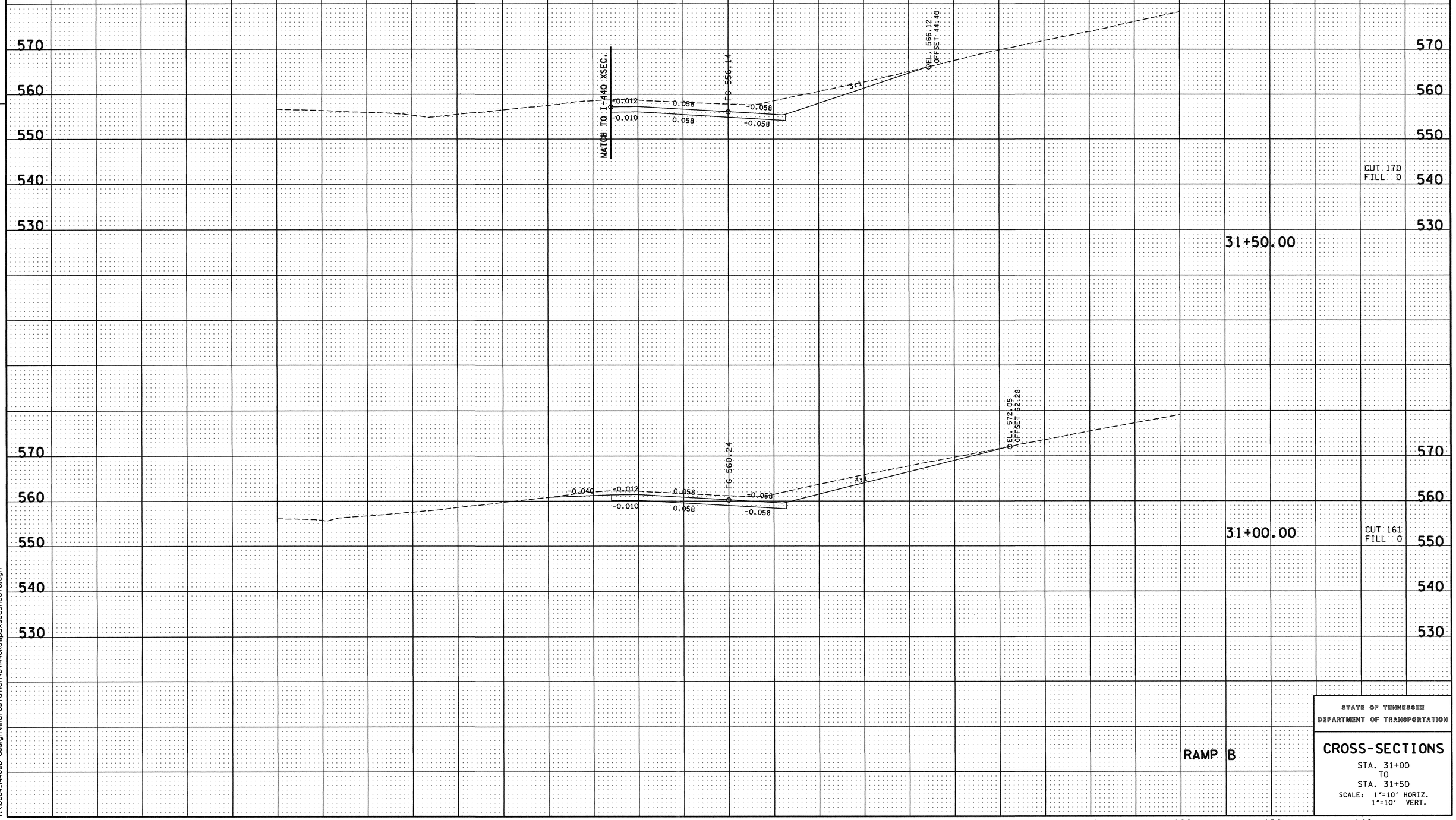
TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	58
CONST.	2011	STP-I-440-4(78)	65

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 31+00
TO
STA. 31+50

SCALE: 1"=10' HORIZ.
1"=10' VERT.

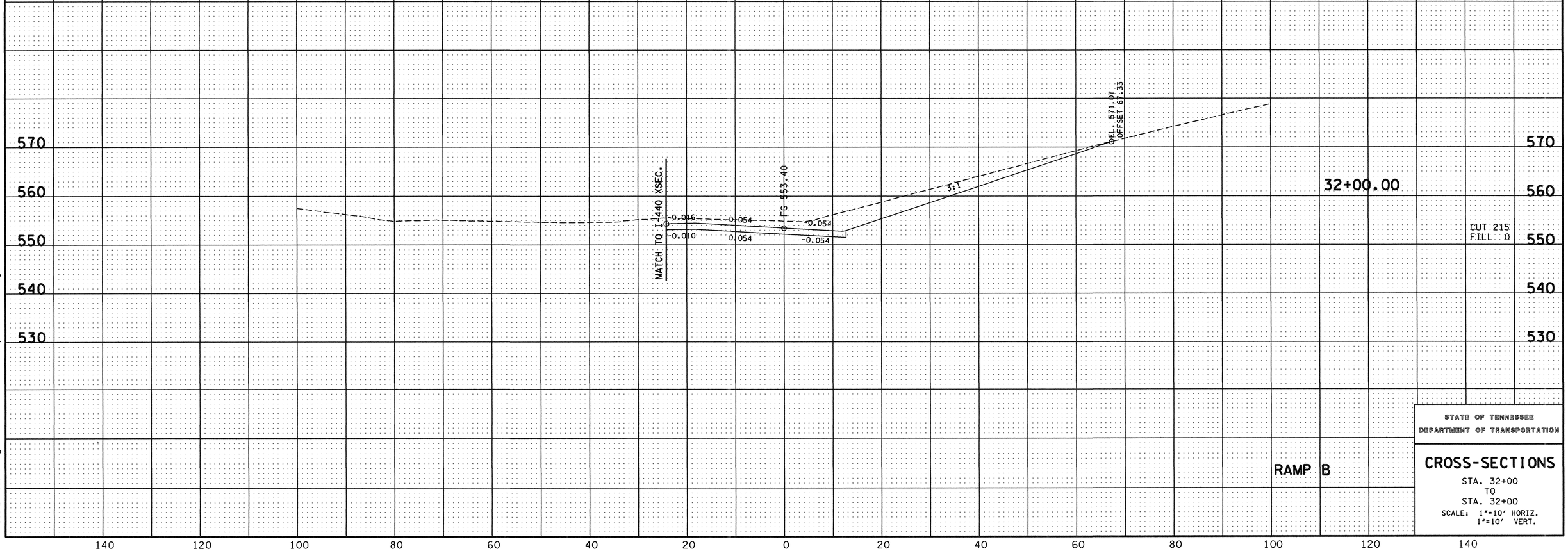
RAMP B

5/23/2011 9:59:41 AM
t:\10004_I440eb design\microstation\DVI440RampBXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	59
CONST.	2011	STP-I-440-4(78)	66



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 32+00
TO
STA. 32+00

SCALE: 1"=10' HORIZ.
1"=10' VERT.

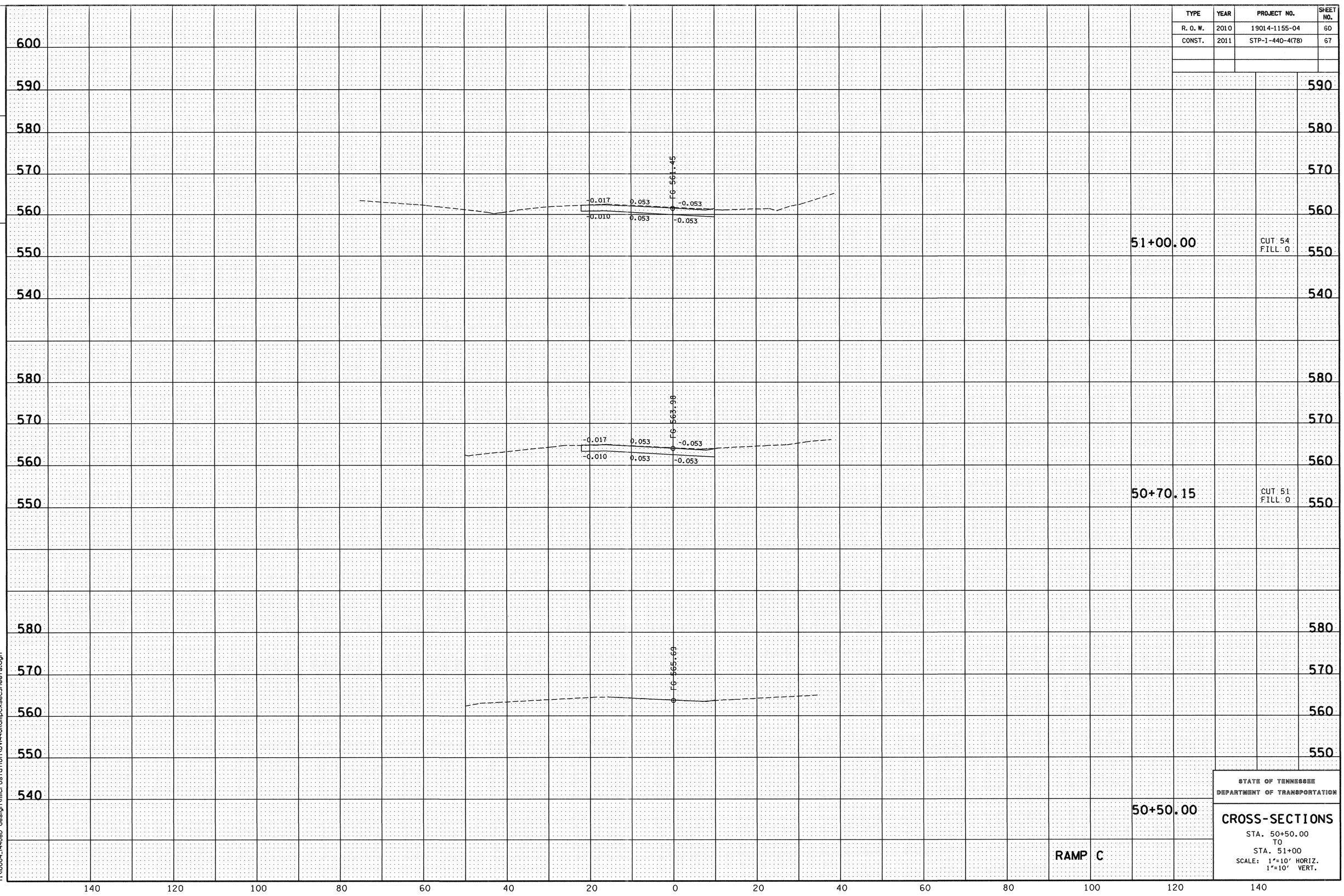
RAMP B

5/23/2011 9:59:43 AM
t:\10004_I440eb design\microstation\DW440RampBXsecsSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	60
CONST.	2011	STP-I-440-4(78)	67



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 50+50.00
TO
STA. 51+00

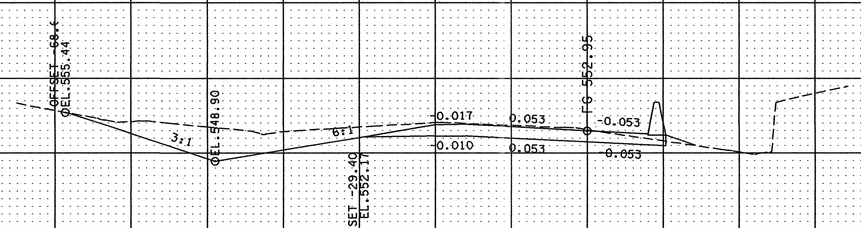
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:59:47 AM
t:\10004_I440eb design\microstation\DWI440RampCXsecSheets.dgn

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

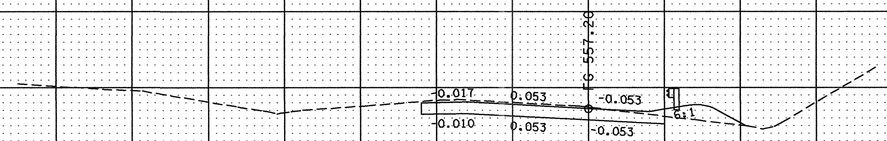
TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	61
CONST.	2011	STP-I-440-4(78)	68



560 550 540 530

52+00.00

CUT 150
FILL 2



590 580 570 560 550 540 530

CUT 46
FILL 21

51+50.00

RAMP C

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 51+50
TO
STA. 52+00

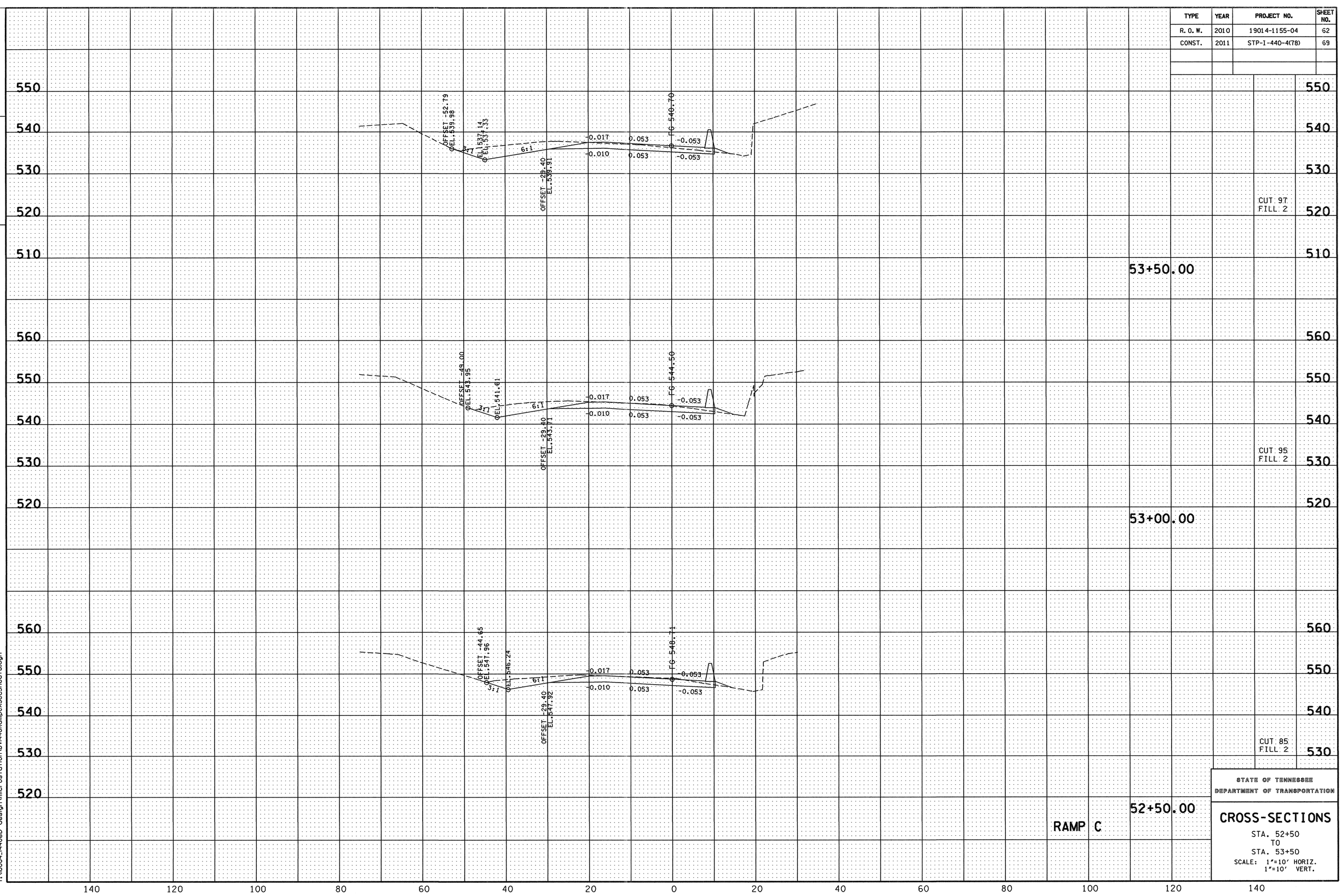
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:59:50 AM
t:\10004_I440eb design\Microstation\DI\I440RampCXsecSheets.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	62
CONST.	2011	STP-I-440-4(78)	69

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 52+50
TO
STA. 53+50

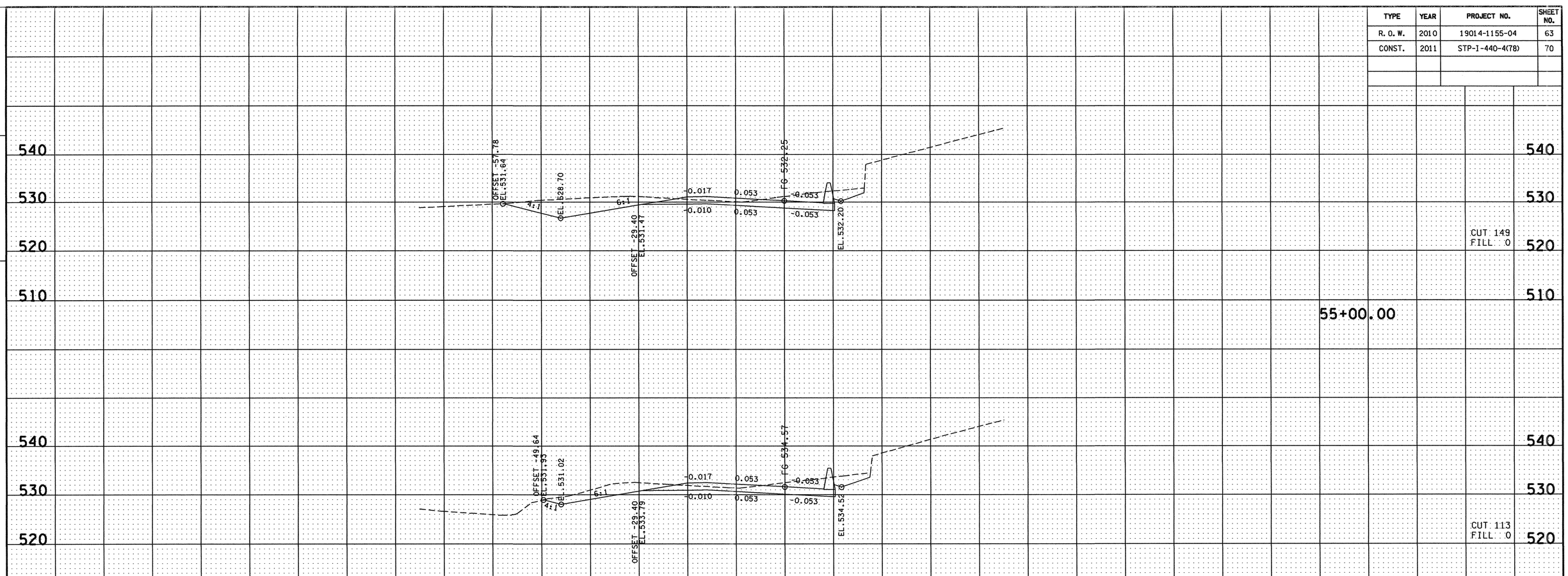
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 9:59:52 AM
t:\10004_I440eb design\Microstation\DI440RampCXsecSheets.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
R. O. W.	2010	19014-1155-04	63
CONST.	2011	STP-I-440-4(78)	70

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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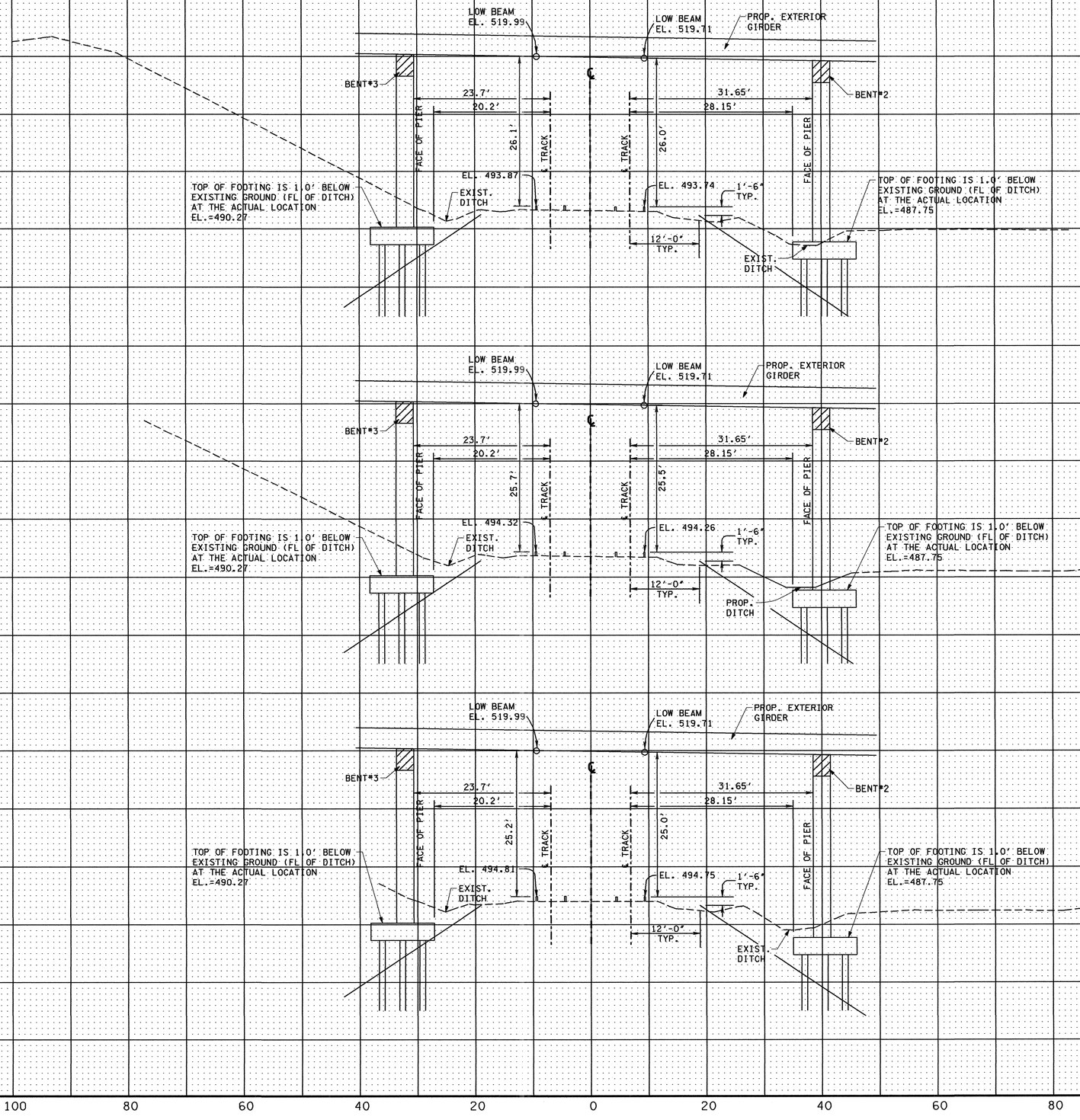
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2011	STP-I-440-4(78)	71

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS-SECTIONS

STA. 1 +50
TO
STA. 2 +50
SCALE: 1"=10' HORIZ.
1"=10' VERT.

5/23/2011 40:32 PM
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