Index of Sheets

SEE SHEET 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

TENN.	YEAR	SHEET NO.
	1983	1
FED. AID PROJ. NO.	I-ID-IR-440-4(55)211	
STATE PROJ. NO.	19015-3115-44 19015-3116-44	

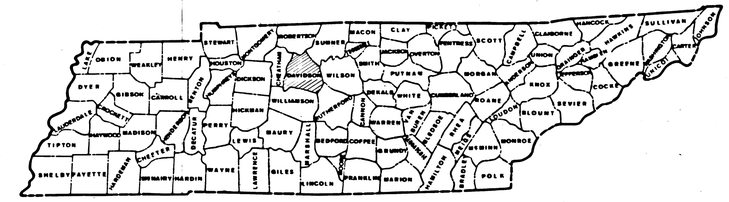
REV. 3-22-83: CHANGED PROJECT NUMBERS. ADDED STATE PROJ. NO.

DAVIDSON COUNTY

I-440 FROM I-65 DIRECTIONAL INTERCHANGE
TO I-24 DIRECTIONAL INTERCHANGE

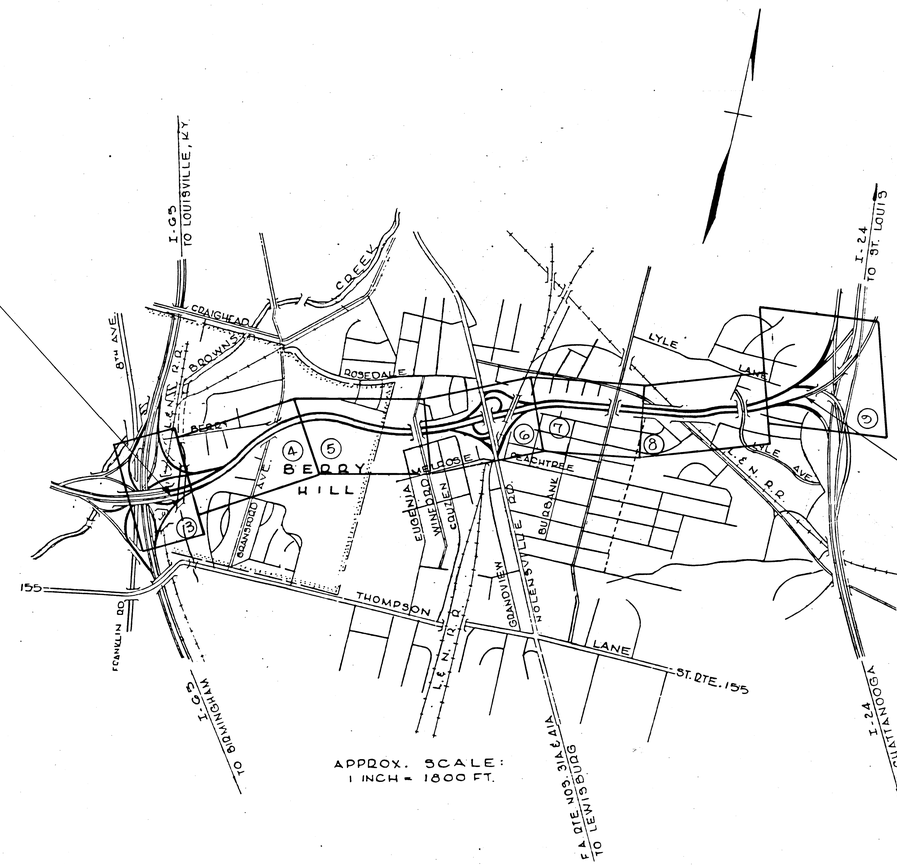
PAVING, LIGHTING, SIGNING, NOISE WALLS, LANDSCAPING AND SIGNALIZATION

INTER-STATE HIGHWAY NO. I-440 F.A.H.S. NO. I-440



EQUATIONS	LOC.	+	−
STA. 371+76.07 BK. = STA. 369+95.37 AH.	℄	180.70	
STA. 444+67.57 BK. = STA. 444+67.77 AH.	℄		-.20
STA. 444+71.55 BK. = STA. 444+71.58 AH.	℄		.03
NET EFFECT ON ENUMERATION =		+180.47	

19015-3115-44
19015-3116-44
BEG. PROJ. NO. I-[illegible] 440 4(55)211
STA. 355+65.81



19015-3115-44
19015-3116-44
END PROJ. NO. I-[illegible] 440 4(55)211
STA. 487+65.50

APPROX. SCALE:
1 INCH = 1800 FT.

ROADWAY LENGTH 2.533 MILES
BRIDGE LENGTH 0.000 MILES
PROJECT LENGTH 2.533 MILES

APPROVED Louis Evans
STATE TRANSPORTATION ENGINEER

DATE

APPROVED [illegible]
COMMISSIONER

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, 1981 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

DESIGNERS

ROADWAY: REAVIS PENDERGRASS AND STEVE JOBE
LIGHTING: FLORENCE & HUTCHESON, INC.
NOISE WALLS: VANDERBILT UNIVERSITY
LANDSCAPING: GRESHAM, SMITH & PARTNERS

PE NO. 19015-1101-44

THIS PROJECT WAS NOT DESIGNED BASED ON TRAFFIC SHOWN, BUT AS DESCRIBED IN THE F.E.I.S. AS APPROVED BY THE F.H.W.A. ON 9-19-80.

TRAFFIC DATA	
ADT (1981)	55,000
ADT (2001)	94,000
DHV (2001)	9,400
D	55-45
T	8 %
V	60 M.P.H.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

REV 2-11-85 : ADDED STD DWG NOS. D-PE-4X, D-CB-12, AND D-CBC-12. ADDED NOTE CONCERNING SHEET NO. 2I(1).

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	1A

REV. 1-24-83: STD. DWG. RP-J-9 MOVED TO "TO BE PRINTED WITH PLANS" SECTION, AND REVISION DATE REVISED.

REV. 3-22-83: DELETED STD. DWG. EL-P-3. MOVED STD. DWG. T-M-10 AND GUARDRAIL STANDARDS TO STANDARD ROADWAY DRAWINGS SECTION. MOVED STD. DWG. NOS. RP-J-1, RP-J-5 & RP-J-7 TO "TO BE PRINTED WITH PLANS" SECTION & CHANGED REVISION DATES. CHANGED "ESTIMATED BRIDGE QUANTITIES" TO "ESTIMATED NOISE WALL QUANTITIES".

REV. 7-6-83: ADDED SHEET NO. 76A TO INDEX.

SHEET NO.	SHEET NAME
1	TITLE SHEET
1A	INDEX
2	ESTIMATED NOISE WALL QUANTITIES
2A, 2B	ESTIMATED ROADWAY QUANTITIES
2C	ESTIMATED LIGHTING QUANTITIES
2D	ESTIMATED LANDSCAPING QUANTITIES
2E, 2F	GENERAL NOTES
** 2G-2J	TABULATED QUANTITIES
2K-2L	TYPICAL SECTIONS
2M-2U	MISCELLANEOUS DETAILS
3-9	PROPOSED LAYOUTS
10-13	SIGNING LAYOUTS I-24
14-17	SIGNING LAYOUTS I-65
18, 19	CURVE DATA
20-25	SIGN SCHEDULES
26-27	MISC. SIGNING DETAILS
28	GENERAL NOTES FOR SIGN SUPPORTS, DWG NO. M-96-11
29-38	GENERAL LAYOUT OF OVERHEAD STRUCTURES, DWG NOS. M-96-106 THRU M-96-115
39	MODIFICATIONS TO EXISTING OVERHEAD SIGN STRUCTURES DWG NO. M-96-116
40-42	GENERAL LAYOUT OF CANTILEVER STRUCTURES, DWG NOS. M-96-117 THRU M-96-119
43-50	SIGNS MOUNTED ON BRIDGES, DWG NOS. M-96-120 THRU M-96-127, (INCLUDES REFERENCE DWG NOS. K-82-138, M-93-54, M-93-90, M-93-116, AND M-112-74)
* 51-73	PROFILES
74-105, 76A	LIGHTING PLANS
106, 107	SIGNAL LAYOUTS
108	OVERHEAD STEEL STRAIN POLE DETAILS
109	DETAILS OF CANTILEVER SIGNAL SUPPORT
110-127	LANDSCAPING PLANS

* SHEET NO'S. 51, 52, 53, 54, 55, 56, 57, 58, 69, 70, 71, 72 AND 73 ARE FILED UNDER PROJ. NO. I-440-4(33)211, IN FILE NO. IN 308

** INCLUDES SHEET NO. 2I(1)

TO BE PRINTED WITH PLANS

RP-J-1	1-31-83	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING FOR DESIGN SPEED OVER 40 MPH.
RP-J-5	1-31-83	TYPICAL ACCELERATION & DECELERATION LANE JOINT TYPES & SPACING FOR CONCRETE RAMPS.
RP-J-7	1-31-83	CONCRETE RAMP JOINT TYPES AND SPACING
RP-J-9	1-4-83	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT.

STANDARD ROADWAY DRAWINGS

DWG NO	REV DATE	TITLE
		ROADWAY DESIGN STANDARDS
RD-A-1	9-18-79	STANDARD ABBREVIATIONS
RD-L-1	3-15-76	STANDARD LEGEND
RD-L-2	1-11-82	STANDARD LEGEND
RD-S-11A	1-11-82	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD-S-15	1-11-82	DESIGN STANDARD 4-6 LANE DEPRESSED MEDIAN ON F.A.I. AND F.A.P. SYSTEMS
RD-S-15C	1-11-82	DESIGN STANDARDS 1 & 2 LANE RAMPS
RD-SE-1	11-9-76	STANDARD SUPERELEVATION DETAILS
		DRAINAGE - CULVERTS AND ENDWALLS
D-CE-1	1-1-76	CONSTRUCTION DETAILS
D-CE-3		SAFETY ADJUSTMENT FOR ENDWALLS
D-PB-1	2-25-77	CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PE-4U		TYPE "U" ENDWALL WITH STEEL GRATE (15"-48" PIPE, 4:1 SLOPE)
D-PE-4X	7-17-81	TYPE "X" ENDWALL WITH STEEL GRATE (15"-48" PIPE, 4:1 SLOPE)
D-PE-4		CONCRETE ENDWALLS, STRAIGHT "U" AND "L" TYPE
E-PE-6U	7-17-81	ENDWALL WITH STEEL GRATE (15"-48" PIPE, 6:1 SLOPE)
		DRAINAGE - CATCH BASINS AND MANHOLES
D-CB-3	7-17-81	NOS. 36 AND 37 CATCH BASIN AND GRATE
D-CB-12-32	3-15-76	STANDARD NO. 12-32 CATCH BASIN & CASTINGS
D-CB-24	7-17-81	STANDARD NOS. 24 AND 48 CATCH BASIN WITH WELDED STEEL GRATE
D-MH-4	7-17-81	NO. 3 MANHOLE CASTINGS
D-CB-12	3-15-76	STANDARD NO. 12 CATCH BASIN
D-CBC-12	3-15-76	CASTINGS FOR NOS. 10, 12, 14, AND 15 CATCH BASINS (WITH TYPE "C" GRATE)
		ROADWAY AND PAVEMENT APPURTENANCES
RP-C-15	7-17-81	STANDARD CONCRETE CURBS & GUTTERS
RP-C-16	3-15-76	STANDARD CIRCULAR CONCRETE CURB & GUTTERS
RP-J-3		PORTLAND CEMENT CONCRETE PAVING JOINT TYPES AND SPACING FOR DESIGN SPEED 40 MPH AND LESS
RP-J-11	7-17-81	3/4" AND 1 3/4" EXPANSION & EDGE PAVEMENT JOINTS
RP-J-13		3/8", 3/4" & 1 3/4" ELASTIC JOINT SEALS
RP-J-15		METAL LONGITUDINAL JOINTS
RP-J-17		DOWEL ASSEMBLIES
RP-J-19		DOWEL ASSEMBLIES
RP-J-21		DOWEL ASSEMBLIES
		SAFETY APPURTENANCES AND FENCE
S-F-10	7-17-81	STAND RIGHT-OF-WAY STOCK FENCE & CHAIN LINK FENCE
S-F-10B	7-17-81	STANDARD RIGHT-OF-WAY CHAIN LINK FENCE
S-FG-20	1-1-76	EXAMPLES OF WATER GATES & CROSSINGS
S-FA-5	1-1-76	FLASHING YELLOW ARROW BOARD
S-GR-11	9-15-82	W-BEAM BARRIER RAIL AND RUB RAIL
S-GR-12	9-15-82	BARRIER RAIL MOUNTING, POST BLOCK-OUTS, POST BASE DETAILS
S-GR-13	9-15-82	W-BEAM BARRIER POST DETAILS & SPECIFICATIONS
S-GR-14	9-15-82	W-BEAM BARRIER FASTENING HARDWARE AND REFLECTORS
S-GR-15	9-15-82	W-BEAM BARRIER TERMINAL ELEMENT DETAILS
S-GR-16	9-15-82	GUARDRAIL BARRIER TREATMENT FOR PIERS IN MEDIAN
S-GR-17	9-15-82	BRIDGE END PROTECTION IN MEDIAN FOR DUAL BRIDGES
S-GR-18	9-15-82	GUARDRAIL TERMINAL ANCHOR, TYPE 11
S-GR-19	9-15-82	TERMINAL ANCHORS, TYPE 12, TYPE 13
S-GR-20	9-15-82	PROTECTIVE GUARDRAIL FOR BRIDGE ENDS AND MEDIAN DIVIDER GUARDRAIL
S-GR-21	9-15-82	LENGTH OF NEED AND TERMINAL REQUIREMENTS IN FILLS

		TRAFFIC CONTROL APPURTENANCES
T-M-2		MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS
T-M-3		MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS
T-M-4		MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS
T-M-5		MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS
T-M-6		MARKING DETAILS OF RAMP INTERSECTIONS
T-M-7		SPACING DETAILS OF RAISED REFLECTIVE PAVEMENT MARKERS
T-M-8		SPACING DETAILS OF RAISED REFLECTIVE PAVEMENT MARKERS
T-M-9		DETAILS OF RAISED REFLECTIVE PAVEMENT MARKERS
T-M-10		MARKING STANDARDS FOR TRAFFIC ISLANDS & PAVED SHOULDERS
T-S-6	1-01-76	MOUNTING DETAILS, BOLTED EXTRUDED PANELS
T-S-7	2-18-76	HIGHWAY SHIELDS AND ARROWS
T-S-9	1-01-76	STANDARD LAYOUT, GROUND MOUNTED SIGNS
T-S-11	7-17-81	DELINEATOR, MILEPOST, AND PAVEMENT ARROW DETAILS
T-S-12	10-24-79	STANDARD MOUNTING DETAILS, FLAT SHEET SIGNS, ALUMINUM-STEEL DESIGN
T-S-13	4-12-77	STANDARD STEEL GROUND MOUNTED SIGNS, BREAKAWAY TYPE POST, FOOTING DETAILS I-BEAM AND SQUARE TUBE
T-S-14	4-12-77	STANDARD STEEL GROUND MOUNTED SIGNS, BREAKAWAY TYPE POST, FOOTING DETAILS, W-F BEAMS BUTTERFLY SIGN STRUCTURE
T-S-18	1-11-82	END OF ROADWAY, DEAD END SIGNS, METAL BARRICADES TYPE III
T-SG-2	1-1-76	LOOP LEAD-INS AND PULL BOXES
T-SG-3	9-27-77	STANDARD NOTES AND DETAILS OF DETECTION LOOPS
T-SG-4	4-4-77	TYPICAL LAYOUT AND DETAILS OF DETECTION LOOPS
T-SG-5	1-1-76	CONTROLLER CABINET DETAILS
T-SG-6	1-1-76	CONTROLLER CABINET MOUNTING DETAILS
		EROSION CONTROL AND LANDSCAPING
EL-P-1	1-11-82	TEMPORARY POLLUTION CONTROL STRUCTURES
EL-P-2	1-11-82	TYPICAL TEMPORARY POLLUTION CONTROL STRUCTURE LOCATIONS
EL-P-10	1-1-76	TYPICAL ROADWAY LANDSCAPE PLANTING DETAILS
EL-P-11	1-1-76	TYPICAL MATURE PLANT SPREAD AND CRITERIA FOR PROXIMITY TO ROADWAY
		BRIDGES APPURTENANCES
M-28-1	7-17-81	BRIDGE RAILING CONCRETE PARAPET
M-42-149	7-17-81	STANDARD GUARDRAIL ATTACHMENT TO BRIDGES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

INDEX

CONST NO. 19015-3115-44

REV 2/30/83: HANGED QUANTITY FOR ITEM NO. 718-02

3 REV 5/23/83: DELETED 2'-0 ϕ DRILLED CAISSON ITEM NOS. 204-02.10 (EARTH) AND 204-02.15 (ROCK) AND INCREASED 2'-6" ϕ DRILLED CAISSON.

TYPE	YEAR	PROJECT NO.	SHEET NO.
	83	I-440-4(55)211	2

REV. 3-22-83: CHANGED 'ESTIMATED BRIDGE QUANTITIES' HEADINGS AND TITLE TO 'ESTIMATED NOISE WALL QUANTITIES'.

ESTIMATED NOISE WALL QUANTITIES

		Noise Barrier 1A Interstate 440 Station 523+00. @ S-E Roadway Total Length = 1,373'-3" Layout Dwg. No. M-119-58.	Noise Barrier 1B Interstate 440 Station 368+24 Bk. Total Length = 713'-9" Layout Dwg. No. M-119-58.	Noise Barrier 2 Interstate 440 Station 525+20. @ E-N Roadway Total Length = 1,636'-2" Layout Dwg. No. M-119-63.	Noise Barrier 3A Interstate 440 Station 390+12 Total Length = 1,602'-0" Layout Dwg. No. M-119-66	Noise Barrier 3B Interstate 440 Station 0+47. - 23' Lt. @ Service Road "M" Total Length = 1,63'-0" Layout Dwg. No. M-119-66.	Noise Barrier 4A Interstate 440 Station 400+97. - 104' Rt. Total Length = 561'-0" Layout Dwg. No. M-119-71.	Noise Barrier 4B Interstate 440 Station 407+48 - 158' Rt. Total Length = 1,224'-0" Layout Dwg. No. M-119-71.
Item No.	Description	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
3						3		
204-02.11	Drilled Caisson (Earth) 2'-6" ϕ	564	241	603	672	3 415	155	357
3						3		
204-02.16	Drilled Caisson (Rock) 2'-6" ϕ	68	26	103	82	3 240	107	172
718-01	Noise Barrier	13,345	6,732	17,986	20,494	16,133	7,395	10,540
718-02	Noise Barrier Safety Wall	893	757	1203		918		

ESTIMATED NOISE WALL QUANTITIES (CONT'D)

		Noise Barrier 5A Interstate 440 Station 12+00. - 52' Rt. @ Ramp N-F Total Length = 516'-0" Layout Dwg. No. M-119-74.	Noise Barrier 5B Interstate 440 Station 5+38 - 60' Rt. @ Ramp N-F Total Length = 907'-0" Layout Dwg. No. M-119-74.	Noise Barrier 5C Interstate 440 Station 438+22. - 100' Lt. Total Length = 915'-0". Layout Dwg. No. M-119-74.	Noise Barrier 5D Interstate 440 Station 448+38. - 116' Lt. Total Length = 992'-0" Layout Dwg. No. M-119-74	Noise Barrier 6A Interstate 440 Station 4+00. - 12' Rt. @ Ramp N-B Total Length = 1,871'-0" Layout Dwg. No. M-119-79	Noise Barrier 6B Interstate 440 Station 437+70. - 120' Rt. Total Length = 783'-0" Layout Dwg. No. M-119-79.	Noise Barrier 6C Interstate 440 Station 448+42. - 130' Rt. Total Length = 1,113'-0" Layout Dwg. No. M-119-79.
Item No.	Description	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
3								
204-02.11	Drilled Caisson (Earth) 2'-6" ϕ	213	365	425	431	711	392	465
3								
204-02.16	Drilled Caisson (Rock) 2'-6" ϕ	47	134	64	124	88	4	137
718-01	Noise Barrier	4,760	10,897	9,333	12,733	15,878	6,987	14,297
718-02	Noise Barrier Safety Wall				229	200		155

ESTIMATED NOISE WALL QUANTITIES (CONT'D.)

		Noise Barrier 7A Interstate 440 Station 463+25 Total Length = 926'-0" Layout Dwg. No. M-119-83A	Total Quantities	Unit
Item No.	Description	Quantity		
3		3	3	
204-02.11	Drilled Caisson (Earth) 2'-6" ϕ	3 401	6,410 3	L.F.
3			3	
204-02.16	Drilled Caisson (Rock) 2'-6" ϕ		1,396 3	L.F.
718-01	Noise Barrier	5,651	173,161	S.F.
718-02	Noise Barrier Safety Wall	825	5180	L.F.

LIST OF DRAWINGS

	DWG. NO.
Layout - Noise Barriers 1A and 1B	M-119-58.
Profile - Noise Barrier 1A	M-119-59
Profile - Noise Barrier 1B	M-119-60.
Schedules - Wall, Panel, Post, and Pile Noise Barrier 1A	M-119-61
Schedules - Wall, Panel, Post, and Pile Noise Barrier 1B	M-119-62
Layout - Noise Barrier No. 2	M-119-63
Profile - Noise Barrier No. 2	M-119-64
Schedules - Wall, Panel, Post, and Pile Noise Barrier No. 2	M-119-65.
Layout - Noise Barriers 3A and 3B	M-119-66
Profile - Noise Barrier 3A	M-119-67.
Profile - Noise Barrier 3B	M-119-68
Schedules - Wall Panel, Post, and Pile Noise Barrier 3A	M-119-69
Schedules - Wall, Panel, Post, and Pile Noise Barrier 3B	M-119-70
Layout - Noise Barriers 4A and 4B	M-119-71.
Profile - Noise Barriers 4A and 4B	M-119-72.
Schedules - Wall Panel, Post, and Pile Noise Barriers 4A and 4B	M-119-73
Layout - Noise Barriers 5A, 5B, 5C, and 5D	M-119-74
Profile - Noise Barriers 5A and 5B	M-119-75
Profile - Noise Barriers 5C and 5D	M-119-76
Schedules - Wall Panel, Post, and Pile Noise Barriers 5A and 5B	M-119-77.
Schedules - Wall Panel, Post, and Pile Noise Barriers 5C and 5D	M-119-78.
Layout - Noise Barriers 6A, 6B, and 6C	M-119-79.
Profile - Noise Barrier 6A	M-119-80
Profile - Noise Barriers 6B and 6C	M-119-81.
Schedules - Wall Panel, Post, and Pile Noise Barrier 6A	M-119-82.
Schedules - Wall Panel, Post, and Pile Noise Barriers 6B and 6C	M-119-83.
Layout - Noise Barrier 7A	M-119-83A.
Profile - Noise Barrier 7A	M-119-83B
Schedule - Wall Panel, Post and Pile Noise Barrier 7A	M-119-83C

Non-Pay Items: Only items shown on the proposal as pay items will be paid for. Compensation for all labor, materials, tools, equipment and incidentals for the complete installation of walls shall be included in the price bid for pay items.

LIST OF DRAWINGS (CONT'D.)

Masonry Noise Barrier Wall Panel Details	M-119-84.
Masonry Noise Barrier Post and Pile Details	M-119-85.
Concrete Panel Noise Barrier Details	M-119-86.
Concrete Panel Noise Barrier Post and Pile Details	M-119-87.
Reinforced Concrete Safety Shape	M-119-88

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED NOISE WALL QUANTITIES

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	109-10.01	TRAINEE	HOUR	7,000
1	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L S	1
	203-04.01	PLACING AND SPREADING SOIL FOR LANDSCAPING	C Y	93,125
3	203-06	WATER	M G	2,604
	203-07	FURNISHING AND SPREADING TOPSOIL	C Y	12,243
	204-07	BEDDING MATERIAL (PIPE) CLASS (B)	C Y	969
	207-01	SUBGRADE CONSTRUCTION AND PREPARATION	PER. STA.	134
2	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING 'D'	TON	25,758
	303-10.01	MINERAL AGGREGATE, (SIZE 4)	TON	14,848
	501-01.02	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 9"	S Y	38,623
	501-01.03	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"	S Y	92,340
	501-03.01	COLORED CONCRETE SHOULDERS	S Y	78,430
4	604-01.01	CLASS A CONCRETE (ROADWAY)	C Y	56
14	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB	1,910
	607-01.02	12" CONCRETE PIPE CULVERT (CLASS III)	L F	1,154
	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L F	7,357
	607-37.01	15" CORRUGATED METAL PIPE CULVERT	L F	806
	607-37.02	18" CORRUGATED METAL PIPE CULVERT	L F	236
	209-01	TEMPORARY BERM	L F	13,400
	209-02	TEMPORARY SLOPE DRAIN	L F	600
	209-05	SEDIMENT REMOVAL	C Y	1,825
	209-06	BALED HAY OR STRAW EROSION CHECKS	BALE	6,300
	209-07	DUMPED ROCK	C Y	1,825
	611-02.51	CAPPING EXISTING CATCH BASIN	EACH	6
	611-03.01	CLASS A CONCRETE (CATCHBASIN)	C Y	54
	611-03.03	BRICK MASONRY (CATCHBASIN)	M BRICK	57.677
	611-04.52	ADJUSTMENT OF EXISTING CATCH BASIN	EACH	17
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C Y	14
	611-07.02	STEEL BAR REINFORCING (PIPE ENDWALLS)	LB	313
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	LB	674
	611-07.04	STRUCTURAL STEEL (CATCH BASIN)	LB	25,506
	611-03.04	GRAY IRON CASTINGS (CATCHBASIN)	LB	13,284
	620-03	CONCRETE PARAPET	L F	2,657
	702-03	CONCRETE COMBINED CURB AND GUTTER	C Y	34
	703-01	CEMENT CONCRETE DITCH PAVING	C Y	170
	705-01.01	PROTECTIVE GUARDRAIL AT BRIDGE ENDS	L F	188
	705-01.41	PROTECTIVE GUARDRAIL AT BRIDGE ENDS (POWDER COATED)	L F	427
	705-01.42	PROTECTIVE GUARDRAIL AT BRIDGE PIERS (POWDER COATED)	L F	112
	705-02.02	METAL DEEP BEAM SINGLE GUARDRAIL (POST SP 6 FT 3 IN)	L F	1,619
	705-02.42	METAL DEEP BEAM SINGLE GUARDRAIL (POST SP 6 FT 3 IN)(POWDER COATED)	L F	8,320
	705-03.42	METAL MEDIAN DIVIDER GUARDRAIL (POST SP. 6 FT 3 IN)(POWDER COATED)	L F	450
	705-03.43	METAL MEDIAN DIVIDER GUARDRAIL (POST SP 6 FT 3 IN)(27" MOUNTING HEIGHT)(POWDER COATED)	L F	216
	705-04.01	GUARDRAIL TERMINAL ANCHOR (TYPE 11)	EACH	3
	705-04.41	GRARDRAIL TERMINAL ANCHOR (TYPE 11)(POWDER COATED)	EACH	34
	705-04.43	GUARDRAIL TERMINAL ANCHOR (TYPE 13)(POWDER COATED)	EACH	32
	705-04.44	MEDIAN DIVIDER GUARDRAIL TERMINAL ANCHOR (POWDER COATED)	EACH	2
	705-07.70	ENERGY ATTENUATION DEVICE	EACH	1
	706-01	GUARDRAIL REMOVED	L F	5521
17	707-02.15	END AND CORNER POST ASSEMBLIES (CHAIN LINK) FENCE-6 FT VINYL COATED)	EACH	36
18	707-02.20	CHAIN LINK FENCE (6 FT) (VINYL COATED)	L F	1,800
	709-04	REINFORCED CONCRETE SLOPE PAVEMENT	C.Y	342
15	710-04	FILTER CLOTH UNDERDRAIN (WITH PIPE)	L F	21,076
	710-10.02	6" PERFORATED C.M. PIPE UNDERDRAINS	L F	13,876
16	710-13.03	FILTER CLOTH	S Y	40,587
ALTS.	305-02	LEAN CONCRETE BASE (5 INCHES)	S Y	228,400
	312-01	MINERAL AGGREGATE (ALFSB)	TON	51,628
	312-02	LIME	TON	2,113
	312-03	FLY ASH	TON	6,642
	312-04	BITUMINOUS MATERIAL (ALFSB)	TON	178

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	712-01	TRAFFIC CONTROL	L S	1
	712-04	DRUMS (CHANNELIZING)	EACH	51
	712-06	SIGNS (CONSTRUCTION)	S F	96
	712-08.03	ARROW BOARDS (TYPE C)	EACH	2
	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L F	8608
	713-01.01	CLASS A CONCRETE (FOUNDATIONS FOR SIGN SUPPORTS)	C Y	16
	713-01.02	STEEL BAR REINFORCEMENT (FOUNDATIONS FOR SIGN SUPPORTS)	LB	4,248
	713-02.01	DELINEATOR (SINGLE WHITE REFLECTOR) AND STEEL POST	EACH	40
6	713-02.04	DELINEATOR (MILE MARKER) AND STEEL POST	EACH	4
	713-02.12	DELINEATOR (DOUBLE WHITE) REFLECTOR AND STEEL POST	EACH	27
	713-02.13	DELINEATOR (SINGLE AMBER) REFLECTOR AND STEEL POST	EACH	35
	713-02.30	DELINEATOR (SINGLE WHITE) REFLECTOR AND STEEL POST(PAINTED)	EACH	85
	713-02.31	DELINEATOR (DOUBLE WHITE) REFLECTOR AND STEEL POST(PAINTED)	EACH	72
	713-02.32	DELINEATOR (SINGLE AMBER) REFLECTOR AND STEEL POST(PAINTED)	EACH	132
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S F	12
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S F	96
	713-13.20	FLAT SHEET ALUMINUM SIGNS (0.080" THICK) (ANODIZED)	S F	140
	713-13.21	FLAT SHEET ALUMINUM SIGNS (0.100" THICK) (ANODIZED)	S F	343
	713-14	EXTRUDED ALUMINUM PANEL SIGNS	S F	~~4,141~~ 4029 REV. 3-8-84
	713-14.01	EXTRUDED ALUMINUM PANEL SIGNS (ANODIZED)	S F	4,798
	713-15.07	SUSPENDED FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	EACH	3
13	713-15.09	STEEL CABLE OVERHEAD SIGN SUPPORT	EACH	1
	713-15.11	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 14)	L S	1
	713-15.12	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 15)	L S	1
	713-15.13	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 36)	L S	1
9	713-15.14	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 58)	L S	1
	713-15.15	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 61)	L S	1
	713-15.16	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 65)	L S	1
	713-15.17	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 66)	L S	1
	713-15.18	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN NO. 94)	L S	1
	713-15.35	METAL BARRICADE (TYPE III)	EACH	3
7	713-17.02	INSTALLATION OF EXIT NUMBERING PANEL	EACH	1
8	713-17.08	MODIFICATION TO EXISTING OVERHEAD STRUCTURE	L S	1
	713-05	STRUCTURAL STEEL HOLLOW SQUARE POSTS (BREAKAWAY) FOR SIGN SUPPORTS	LB	75
	713-05.01	STRUCTURAL STEEL HOLLOW SQUARE POSTS (BREAKAWAY) FOR SIGN SUP. (PAINTED)	LB	989
	713-06	STRUCTURAL STEEL I-BEAMS AND W-BEAMS (BREAKAWAY) FOR SIGN SUPPORTS	LB	1151
	713-06.01	STRUCTURAL STEEL I-BEAMS AND W-BEAMS (BREAKAWAY) FOR SIGN SUP. (PAINTED)	LB	6868
9	713-09.01	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 73'-0")	EACH	1
	713-09.02	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 73'-0")	EACH	1
9	713-09.03	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 84'-0")	EACH	1
	713-09.04	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 88'-0")	EACH	1
9	713-09.05	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 90'-0")	EACH	1
	713-09.06	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 97'-0")	EACH	1
9	713-09.07	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 102'-0")	EACH	1
	713-09.08	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 113'-0")	EACH	1
9	713-09.09	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 117'-0")	EACH	1
	713-09.10	STRUCTURAL STEEL OVERHEAD SIGN STRUCTURE (SPAN 121'-0")	EACH	1

NON-PARTICIPATING ROADWAY QUANTITY

ITEM	DESCRIPTION	TOTAL	UNIT
705-07.99	SPARE PARTS (ENERGY ATTENUATION DEVICE, HYDRO CELLS, ETC)	1	LUMP SUM

THE CONTRACTOR SHALL FURNISH AND DELIVER THIS MATERIAL TO THE REGIONAL MAINTENANCE ENGINEER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2A

REV. 2-18-83; ITEM NOS. DELETED REGARDING THE ERECTION, FURNISHING DOMESTIC STEEL, & FURNISHING FOREIGN STEEL ON CANTILEVER & OVERHEAD SIGN STRUCTURES. NEW ITEM NOS. ADDED FOR THESE STRUCTURES.

REV. 3-22-83: CHANGED QUANTITIES FOR ITEM NOS. 204-07, 305-02, 604-01.01, 604-01.02, 607-03.02, 611-03.01, 611-03.03, 611-04.52, 611-07.01, 611-07.02, 611-07.03, 611-07.04, 705-02.42, 705-01.42, 705-03.42, 705-04.41, 707-02.15, AND 707-02.20. ADDED ITEM NOS. 303-01, 303-10.01, 312-01, & 2-02, 312-03, 312-04, 607-37.01, 607-37.02 AND 710-10.02. DELETED 203-03, 707-01.14, 707-02.19, 707-04 AND 707-05.

REV. 3/30/83: DELETED ITEM NO. 711-01.

REV. 11-16-83: QUANTITIES REVISED ON ITEM NOS. 303-10.01, 611-03.01, 611-03.03, 611-07.04, 707-02.20, 710-10.02, 712-04, ITEM NOS. 710-04, 710-13.03 ADDED TO PLANS. FOOTNOTE NOS. 15, 16, 17, & 18 ADDED.

REV. 12-12-83: CORRECTED ITEM NOS. 204-07, 604-01.01, 604-01.02, 607-37.02, 611-03.01, 611-03.03, 611-07.01, 611-07.02, 611-07.03, 611-07.04, 705-01.41, 705-02.42, 705-04.41 & 705-04.

REV. 3-8-84; QUANTITY CHANGED ON ITEM 713-14.

REV. 11-14-84: CHANGED QUANTITIES FOR ITEM NOS. 303-10.01, 611-07.04, 710-04, AND 710-13.03. ADDED ITEM NOS. 611-03.04 AND 712-09.01.

REV. 2-11-85: CHANGED QUANTITIES FOR ITEM NOS. 204-07, 604-01.01, 604-01.02, 607-01.02, 607-03.02, 607-37.01, 611-03.01, 611-03.03, 611-04.52, 611-07.01, 611-07.02, 611-07.04, 611-03.04, 703-01, 705-02.42, 705-04.41 AND 705-04.43.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED ROADWAY QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	23

REV. 2-18-83; ITEM NOS. DELETED REGARDING THE ERECTION, FURNISHING DOMESTIC STEEL, & FURNISHING FOREIGN STEEL ON CANTILEVER & OVERHEAD SIGN STRUCTURES. NEW ITEM NOS. ADDED FOR THESE STRUCTURES.

REV. 11-14-84: DELETED ITEM NOS. 716-05.01 AND 716-05.04 CHANGED QUANTITY FOR ITEM NO. 716-12.04.

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	713-10.01	STRUCTURAL STEEL CANTILEVER SIGN STRUCTURE (SIGN NO. 8)	EACH	1
	713-10.02	STRUCTURAL STEEL CANTILEVER SIGN STRUCTURE (SIGN NO. 22)	EACH	1
9	713-10.03	STRUCTURAL STEEL CANTILEVER SIGN STRUCTURE (SIGN NO. 34)	EACH	1
	713-10.04	STRUCTURAL STEEL CANTILEVER SIGN STRUCTURE (SIGN NO. 37)	EACH	1
	713-10.05	STRUCTURAL STEEL CANTILEVER SIGN STRUCTURE (SIGN NO. 52)	EACH	1
	713-10.06	STRUCTURAL STEEL CANTILEVER SIGN STRUCTURE (SIGN NO. 6A)	EACH	1
	716-01.02	RAISED PAVEMENT MARKERS (TYPE 2)	EACH	406
	716-12.01	EPOXY PAVEMENT MARKING (LINE)	LIN. MI.	20
	716-12.02	EPOXY PAVEMENT MARKING (8 INCH BARRIER LINE)	L.F.	3260
	716-12.04	EPOXY PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	642
	716-12.05	EPOXY PAVEMENT MARKING (STOP LINE)	L.F.	173
	716-12.06	EPOXY PAVEMENT MARKING (TURN LANE ARROW)	EACH	8
	716-14.05	EPOXY PAVEMENT MARKING (STRAIGHT ARROW)	EACH	3
	717-01	MOBILIZATION	L.S.	1
	730-02.04	SIGNAL HEAD ASSEMBLY (130)	EACH	8
	730-02.17	SIGNAL HEAD ASSEMBLY (130 WITH B.P.)	EACH	4
	730-03.01	INSTALL PULL BOX	EACH	4
10	730-05.01	ELECTRICAL SERVICE CONNECTOR	EACH	1
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	1100
	730-08.05	SIGNAL CABLE - 12 CONDUCTOR	L.F.	555
	730-10.02	MESSENGER CABLE 1/4" DIAMETER	L.F.	1000
	730-12.01	CONDUIT 1" DIAMETER	L.F.	60
	730-12.02	CONDUIT 2" DIAMETER	L.F.	210
	730-13.01	VEHICLE LOOP DETECTOR	EACH	5
	730-14.01	SHIELDED DETECTOR CABLE	L.F.	260
11	730-14.02	FURNISHING, INSTALLING LOOP WIRING AND SEALING	L.F.	700
	730-16.01	TWO PHASE ACTUATED CONTROLLER	EACH	2
	730-19.01	ELECTRIC TIME SWITCH	EACH	1
12	730-20.01	LOCAL SYNCHRONOUS COORDINATOR	EACH	2
	730-20.02	MASTER SYNCHRONOUS COORDINATOR	EACH	1
	730-23.17	CANTILEVER SIGNAL SUPPORT (30' M.A. & 40' M.A.)	EACH	1
	730-23.18	CANTILEVER SIGNAL SUPPORT (45' M.A. & 45' M.A.)	EACH	1
	730-23.19	CANTILEVER SIGNAL SUPPORT (45' M.A.)	EACH	1
	730-23.20	CANTILEVER SIGNAL SUPPORT (35' M.A.)	EACH	1
	801-03	WATER (SEEDING AND SODDING)	M. GAL.	35
	803-01	SODDING (NEW SOD)	S.Y.	444

STATE OF TENNESSEE
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BUREAU OF HIGHWAYS

ESTIMATED ROADWAY QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	2C

REV. 1-24-83: NUMBERS AND WATTAGE OF H.P.S. LUMINAIRES CHANGED IN DESCRIPTION FOR ITEM NOS. 714-01.01 & 714-01.02.
NUMBERS OF H.P.S. LUMINAIRES CHANGED IN DESCRIPTION FOR ITEM NOS. 714-01.03, .04, .05, .06, & .11.

REV. 3-22-83: CHANGED FOOTNOTE NO. 1, 2 AND NO. 4. ADDED FOOTNOTE NO. 14.

REV. 3-29-83: REVISED ITEM NOS.– 714-08.01, 714-08.02, 714-08.03, 714-08.04, 714-08.07 AND ADDED ITEM NOS. 714-08.08 & 714-08.09.

REV. 3-30-83: DELETED FOOTNOTE NO. 5.

REV. 7-6-83 REVISED DESCRIPTION OF ITEM NOS. 714-01.03 THRU 714-01.12, 714-06.01 THRU 714-06.03, 714-09.03, AND 714-12.01 THRU 714-12.04; REVISED QUANTITIES OF ITEM NOS. 714-03.01, 714-06.01 THRU 714-06.03, 714-06.02 AND 714-08.03; ADDED ITEM NOS. 714-06.04 AND 714-06.05; ADDED NOTES 1 AND 2.

REV. 11-16-83 FOOTNOTES 15, 16, 17 & 18 ADDED TO PLANS

REV. 2-11-85 : REVISED FOOTNOTE NOS. 4 AND 14.

ESTIMATED ROADWAY QUANTITIES FOR LIGHTING

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
714-01.01	STRUCTURE LIGHTING (S-W ROADWAY OVER I-65) INCLUDES 4 150 W H.P.S		
	UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.02	STRUCTURE LIGHTING (N-E ROADWAY OVER I-65) INCLUDES 4 150 W		
	H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.03	STRUCTURE LIGHTING (S-E ROADWAY OVER S-W & N-E ROADWAYS) INCLUDES		
	2 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.04	STRUCTURE LIGHTING (W-N ROADWAY OVER S-W & N-E ROADWAYS) INCLUDES		
	2 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.05	STRUCTURE LIGHTING (EASTBOUND I-440 OVER S-E & W-N) INCLUDES		
	2 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.06	STRUCTURE LIGHTING (WESTBOUND I-440 OVER S-E & W-N) INCLUDES		
	2 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.07	STRUCTURE LIGHTING (I-440 OVER BRANSFORD AVE.) INCLUDES		
	4 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.08	STRUCTURE LIGHTING (NOLENSVILLE RD. OVER I-440) INCLUDES		
	8 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.09	STRUCTURE LIGHTING (L&N R.R. OVER I-440) INCLUDES 4 150 W		
	H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.10	STRUCTURE LIGHTING (FOSTER AVE. OVER I-440) INCLUDES		
	8 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.11	STRUCTURE LIGHTING (I-440 OVER GLENROSE AVE. & L&N R.R.) INCLUDES		
	5 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-01.12	STRUCTURE LIGHTING (RELOC. LYLE AVE. OVER I-440) INCLUDES		
	8 150W H.P.S. UNDER BRIDGE LUMINAIRES	1	L.S.
714-02.01	ENCASED CONDUIT (2" RIGID)	2,246	L.F.
714-03.01	DIRECT BURIAL CONDUIT (2" P.V.C.)	37,980	L.F.
714-03.02	CONDUIT JACKED OR BORED UNDER EXISTING PAVEMENT (2" RIGID)	37	L.F.
714-05.01	PULL BOXES	43	EACH
714-06.01	CABLE (1/c, #8 TYPE THW-MTW, 600V) (STRANDED)	40,421	
714-06.02	CABLE (1/c, #10 TYPE THW-MTW, 600V) (STRANDED)	12,230	L.F.
714-06.03	CABLE (1/c, #6 BARE COPPER, 600V) (SOILD)	40,226	L.F.
714-06.04	CABLE (1/c, #6 TYPE THW-MTW, 600V) (STRANDED)	33,890	L.F.
714-06.05	CABLE (1/c, #4 TYPE THW-MTW, 600V) (STRANDED)	55,114	L.F.
714-08.01	LIGHT STANDARDS (SQ. TAPPERED STEEL, 35' M.H. W/SQ. 4' ARM)	4	EACH
714-08.02	LIGHT STANDARDS (SQ. TAPPERED STEEL 35' M.H. W/SQ. 7'± ARM)	9	EACH
714-08.03	LIGHT STANDARDS (SQ. TAPPERED STEEL 35' M.H. W/SQ. 15'± ARM)	32	EACH
714-08.04	LIGHT STANDARDS (SQ. TAPPERED STEEL 40' M.H. W/SQ. 15'± ARM)	74	EACH
714-08.05	H.M.S. POLES (GALV. STEEL, 150' M.H., W/LOWERING SYSTEM)	10	EACH
714-08.06	H.M.S. POLES (GALV. STEEL, 120' M.H., W/LOWERING SYSTEM)	6	EACH
714-08.07	LIGHT STANDARDS (SQ. TAPPERED STEEL, 35' M.H., W/11'± ARM)	8	EACH
714-09.01	LUMINAIRES (RECTILINEAR TYPE, 250 W H.P.S.)	150	EACH
714-09.02	LUMINAIRES (HIGH MAST TYPE, 1000 W H.P.S.)	192	EACH
714-09.03	LUMINAIRES (GLOBE TYPE, POST TOP MOUNTING, 150 W H.P.S.)	2	EACH
714-11	CABLE MARKERS	52	EACH
714-12.01	CONTROL CENTER (#1 SEE NOTE 1)	1	L.S.
714-12.02	CONTROL CENTER (#2 SEE NOTE 2)	1	L.S.
714-12.03	CONTROL CENTER (#3 SEE NOTE 2)	1	L.S.
714-12.04	CONTROL CENTER (#4 SEE NOTE 2)	1	L.S.
714-13	CLASS "A" CONCRETE (ROADWAY AND STRUCTURE LIGHTING)	296	C.Y.
714-30	AS BUILT PLANS	2	SET
714-08.08	LIGHT STANDARDS (SQ. TAPPERED STEEL, 40' M.H. W/11'± ARM)	22	EACH
714-08.09	LIGHT STANDARDS (SQ. STRAIGHT STEEL, 16' M.H. W/POST TOP MOUNTING)	2	EACH

FOOTNOTES
(ROADWAY QUANTITIES)

1. INCLUDES THE REMOVAL OF 14,385 LIN. FT. OF 6' GREEN VINYL COATED CHAIN LINK FENCE AND 12 END AND CORNER POST ASSEMBLIES.
2. TO BE USED AS DIRECTED BY THE ENGINEER, FOR LEVELING THE SUBGRADE.
3. INCLUDES 1410 M. GAL. FOR EMBANKMENT AND 1194 M. GAL. FOR SUBGRADE CONSTRUCTION AND PREPARATION.
4. INCLUDES 46 CU. YDS. FOR JUNCTION BOXES AND 10 CU. YDS. FOR ENERGY ATTENUATOR.
6. SIGN FACE TO BE 0.080" SHEET ALUMINUM (ANODIZED) AND POSTS TO BE PAINTED.
7. SIGN NO. 55, SEE DETAIL ON SHEET NO. 27.
8. SIGN NOS. 85, 90, AND 92, SEE DETAIL ON SHEET NO. 39.
9. STRUCTURE TO BE PAINTED. FOR DETAILS SEE GENERAL NOTE REGARDING PAINTED.
10. ITEM TO INCLUDE NECESSARY MATERIAL AND LABOR FOR CONNECTION TO ELECTRICAL SERVICE WIRING OF CONTROLLER AND DETECTORS AND ALL INCIDENTALS NECESSARY TO RENDER A COMPLETE AND OPERABLE SYSTEM.
11. QUANTITY IS BASED ON 700 LIN. FT. OF SAW SLOT. PRICE BID ITEM 730-14.02 TO INCLUDE 1500 LIN. FT. OF LOOP WIRE IN SAW SLOT AND SEALING.
12. THE COORDINATOR SHALL BE EXTERNAL TO THE CONTROLLER.
13. INCLUDES ALL CABLE ETC., AS NOTED ON DETAIL SHEET.
14. INCLUDES 1320 LBS. FOR JUNCTION BOXES AND 590 LBS. FOR ENERGY ATTENUATOR.
15. TO BE USED IN I-440 MEDIAN ON LOW SIDE SHOULDER.
16. SEE STANDARD SPECIFICATIONS SECTION 918.27 FOR FILTER CLOTH MATERIAL INFORMATION TO BE USED TO CAP STONE DRAINS AT ROCK CUT AREAS.
17. 28 POST ASSEMBLIES TO BE GREEN VINYL, 8 POST ASSEMBLIES TO BE BLACK VINYL.
18. THIS FENCE TO BE BLACK VINYL, SEE GENERAL NOTE NO. 10 ON SHEET NO. 2E.

NOTE 1: CONTROL CENTER CONTAINS 2 CABINETS, 2-2 POLE 60A LIGHTING CONTACTORS, 4 TRIPLE FUSE DISCONNECTS

NOTE 2: CONTROL CENTER CONTAINS 2 CABINETS, 2-2 POLE 60A LIGHTING CONTACTORS, 3 TRIPLE FUSE DISCONNECTS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED LIGHTING QUANTITIES

PLANT SCHEDULE (IR) (19015-3116-44)

⚠ REVISED INTERCHANGE 5-30-85

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2D

REV. 3-22-83: DESIGNATED ALL QUANTITIES LISTED FOR IR FUNDING. ADDED STATE PROJECT NO. DELETED NOTE CONCERNING SECTION 802.15C.

REV. 3-25-83: ITEM NO. 802-05 ADDED PLANS.

REV. 11-27-84: ITEM NO. 802-04.10 ADDED TO PLANS.

	PAY ITEM NO.	KEY	BOTANICAL NAME	COMMON NAME	QTY	HGT	SPRD	TRUNK	ROOTS	SPCNG	REMARKS
TREES	802-01.01	AR	ACER SACCHARUM	SUGAR MAPLE	65 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.02	CC	CERCIS CANADENSIS	EASTERN REDBUD CLUMPS	644 E.A.	6'-8'	3'-4'	MULTIPLE	18" BALL MIN.	AS SHOWN	TRUNKS MATCHED IN DIA.
	802-01.03	CF	CORNUS FLORIDA 'CLOUD NINE'	CLOUD 9 DOGWOOD	689 E.A.	6'-8'	3'-4'	1" CAL.	18" BALL MIN.	AS SHOWN	MATCHED
	802-01.04	CP	CRATAEGUS CORDATA	WASHINGTON HAWTHORN	209 E.A.	6'-8'	3'-4'	1" CAL.	18" BALL MIN.	AS SHOWN	TREE FORM
	802-01.05	FP	FRAXINUS PENNSYLVANICA	GREEN ASH	159 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.06	IO	ILEX OPACA	AMERICAN HOLLY	43 E.A.	8'-10'	4'-5'	1-1½" CAL.	20" BALL MIN.	AS SHOWN	MATCHED
	802-01.07	KP	KOELREUTERIA PANICULATA	GOLDEN RAINTREE	191 E.A.	8'-10'	4'-5'	1½" CAL.	20" BALL MIN.	AS SHOWN	MATCHED
	802-01.08	LI	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	106 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.09	LT	LIRIODENDRON TULIPIFERA	TULIPTREE	86 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.10	MH	MALUS HOPA	CRABAPPLE	337 E.A.	6'-8'	3'-4'	1" CAL.	18" BALL MIN.	AS SHOWN	MATCHED
	802-01.11	PO	PLATANUS OCCIDENTALIS	PLANE TREE	117 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.12	PT	PINUS TAEDA	LOBLOLLY PINE	1681 E.A.	8'-10'	3'-4'	1-½" CAL.	20" BALL MIN.	AS SHOWN	MATCHED
	802-01.13	QC	QUERCUS BOREALIS	RED OAK	18 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.14	QP	QUERCUS PALUSTRIS	PIN OAK	190 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.15	TC	TILIA CORDATA	LITTLELEAF LINDEN	45 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.	AS SHOWN	MATCHED
	802-01.16	AA	ACER RUBRUM	RED MAPLE	50 E.A.	12'-14'	6'-7'	2"-2½" CAL.	24" BALL MIN.		MATCHED TO BE FIELD STAKED
	802-01.17	PN	PINUS NIGRA	AUSTRIAN PINE	96 E.A.	8'-10'	3'-4'	1-1½" CAL.	20" BALL MIN.	AS SHOWN	MATCHED
SHRUBS	802-03.01	CS	CHAENOMELES LAGENARIA	FLOWERING QUINCE	6938 E.A.	3'-4'	3'	FULL TO BASE	12" BALL MIN.	4' O.C.	MATCHED
	802-03.02	EA	EUONYMUS ALATUS	WINGED EUONYMUS	2554 E.A.	3'-4'	3'	FULL TO BASE	12" BALL MIN.	3' O.C.	MATCHED
	802-03.03	EP	ELEAGNUS PUNGENS	AUTUMN ELEAGNUS	6800 E.A.	3'-4'	3'	FULL TO BASE	12" BALL MIN.	6' O.C.	MATCHED
	802-03.04	FS	FORSYTHIA SUSPENSA	FORSYTHIA	10591 E.A.	3'-4'	3'	FULL TO BASE	12" BALL MIN.	4' O.C.	MATCHED
	802-03.05	RR	RHUS RADICANS	SUMAC	1094 E.A.	6'-8'	3'-4'	FULL TO BASE	12" BALL MIN.	AS SHOWN	MATCHED
	802-03.06	VS	VIBURNUM RHYTIDOPHYLLUM	LEATHER LEAF VIBURNUM	1487 E.A.	3'-4'	3'	FULL TO BASE	12" BALL MIN.	4' O.C.	MATCHED
VINES	802-04.01	GS	GELSEIUM SEMPERVIRENS	CAROLINA JESSAMINE	14522 E.A.				QUART POT	12" O.C.	MATCHED
	802-04.02	LO	LONICERA JAPONICA HALLIANA	HALL'S JAPANESE HONEYSUCKLE	900 E.A.				QUART POT	12" O.C.	MATCHED
	802-04.03	PI	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	21,906 E.A.				QUART POT	12" O.C.	MATCHED
	802-04.04	PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	8345 E.A.				QUART POT	12" O.C.	MATCHED
	802-04.05	WS	WISTERIA SINENSIS	WISTERIA	16834 E.A.				QUART POT	12" O.C.	MATCHED
									QUART POT	12" O.C.	MATCHED
GROUND COVER	802-04.06	WF	WILD FLOWER MIXTURE (SEE SPECS FOR MIX)		68,235 S.Y.						
	802-04.07	CV	CROWN VETCH (SEE SPECS FOR MIX)		34,260 S.Y.						
	802-04.08	HH	HEDERA HELIX	ENGLISH IVY	370 E.A.				QUART POT	12" O.C.	MATCHED
SEEDINGS	802-02.01	PS	PINUS TAEDA	PINE SEEDLING	12,825 E.A.						1 YR. SEEDLING
	802-02.02	SS	RHUS RADICANS	SUMAC SEEDLING	11,167 E.A.						1 YR. SEEDLING
	802-04.10		GRASS (SEE NOTE #2)	GRASS (UNITS)	549.5						
(1)	802-05			WATER (PLANT ESTABLISHMENT)	3,000M.GAL						

GENERAL NOTES:

1. ALL AREAS DESIGNATED AS CROWNVETCH SHALL BE 85% PER CROWNVETCH AND 15% KENTUCKY FESCUE. SEED AT A RATE OF 1 LB. PER 1,000 SQ. FT.

2. SEE BELOW.

3. IF THE CONTRACTOR ENCOUNTERS CONDITIONS DIFFERENT FROM THOSE INDICATED ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO BEGINNING WORK IN THE AREA.

4. ALL AREAS OTHER THAN THE CENTER MEDIAN ARE TO BE SEEDED BY PREVIOUS CONTRACT. PRIOR TO THE INSTALLATION OF WILD FLOWER AREAS OR SHRUB MASS AREAS, APPLY HERBICIDE TO KILL AREAS. MARK AREAS TO BE SPRAYED AND RECEIVE REGIONAL LANDSCAPE SUPERINTENDENTS APPROVAL PRIOR TO SPRAYING HERBICIDE. WAIT TWO WEEKS PRIOR TO ENGAGING IN ANY FURTHER WORK IN THESE AREAS. TILL AND SCARIFY ALL WILD FLOWER AND SHRUB MASS AREAS PRIOR TO PLANTING. SEED WILD FLOWER AREAS AS DIRECTED IN THE SPECIFICATIONS.

5. PROTECT ALL SEEDED OR ESTABLISHED SLOPES DURING THE LANDSCAPE INSTALLATION.

6. STAKE ALL PLANT MATERIAL LOCATIONS AND SHRUB MASSES AND RECEIVE APPROVAL FROM REGIONAL LANDSCAPE SUPERINTENDENT PRIOR TO INSTALLATION.

7. NO PLANT MATERIALS SHALL BE PLACED THAT WOULD PROHIBIT PROPER SIGHT LINES ALONG THE TRAVEL WAY AS WELL AS ON AND OFF RAMP MERGING AREAS.

8. ALL MOWING LIMITS THAT ARE SHOWN ON THE PLANS WILL BE DETERMINED BY THE REGIONAL LANDSCAPE SUPERINTENDENT AND ARE SHOWN FOR INFORMATION ONLY.

9. ALL PLANTING SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE EXISTING DRAINAGE AS DETERMINED BY THE REGIONAL LANDSCAPE SUPERINTENDENT.

10. AFTER ALL TREES AND SHRUBS ARE PLANTED, THE CONTRACTOR WILL BE REQUIRED TO WATER SAME AS DIRECTED BY THE LANDSCAPE SUPERINTENDENT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS REGARDING SECTION 802.14 BETWEEN APRIL 15 AND SEPT. 15. COST OF THIS WORK TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 802.05 WATER (LANDSCAPING).

11. TREES WHICH WILL ULTIMATELY HAVE TRUNKS WITH DIAMETERS LARGER THAN 4 INCHES NOT TO BE PLANTED WITHIN THE CLEAR ZONE AS DEFINED IN ("THE GUIDE FOR SELECTING, LOCATING, AND DESIGNING TRAFFIC BARRIERS") UNLESS PROTECTED BY GUARDRAIL.

12. WILD FLOWER MIXTURE SHALL BE COMPOSED OF:

INDIAN BLANKET - GAILLARDIA PULCHELLA
SULPHUR COSMOS - COSMOS SULPHUREUS
LANCE-LEAVED COREOPSIS - COREOPSIS LANCEOLATA
DAMES ROCKET - HESPERIS MATRONALIS
POOR MANS WEATHER GLASS - ANAGALLIS ARVENSIS VAR. COERULA
CONEFLOWER - ECHNIACEA PURPUREA
TICKSEED - COREOPSIS TINCTORIA
BLACKEYED SUSAN - RUDBECKIA HIRTA
UPRIGHT PRAIRIE CONEFLOWER - RATIBIDA COLUMNARIS

RATE OF SEEDING SHALL BE 8 LBS. OF MIXED SEED PER ACRE (44 UNITS).

2. ALL AREAS DESIGNATED AS "LAWNS" SHALL BE 80% KENTUCKY FESCUE AND 20% ANNUAL RYE. SEED AT A RATE OF 4 LBS. PER 1,000 SQ. FT. COST OF SEEDING THESE AREAS DESIGNATED AS "LAWNS" SHALL BE PAID FOR UNDER THE UNIT PRICE BID FOR ITEM NO. 802-04.10, GRASS PER UNIT.

SPECIAL PROVISIONS

Following are amendments to the General Specifications:

TOPSOIL: SECTION 203.06:

4th Paragraph: ..., Three to four inches of topsoil shall be added after light compaction.

PREPARING THE SEEDBED: SECTION 801.05:

Fertilizer, at a rate of not less than 20 lbs. of grade 10-10-10 or equivalent for areas designated as lawns and 15 lbs. of grade 5-10-15 or equivalent for areas designated as crownvetch, shall be uniformly incorporated into the soil for a depth of approximately 1/2 inch.

SEEDING: SECTION 801.06:

Seed of the specified group shall be sown uniformly by means of a rotary seeder, hydraulic equipment, or other satisfactory means, at a rate specified on the plans.

MATERIALS: SECTION 802.02:

Mulch shall be aged 2 year shredded hardwood bark free of weeds, seeds, large sticks, or other debris. Submit sample of bark to Regional Landscape Superintendent for approval.

(1) QUANTITY BASED ON 12 WATERINGS.

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LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

GRESHAM, SMITH AND PARTNERS
3310 West End Avenue
Nashville, Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PLANT SCHEDULE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2 E

REV. 3-22-83: CHANGED NOTE NOS. 4, 6, 10 AND 23. ADDED NOTE NOS. 30 AND 31. DELETED NOTE NOS. 7, 8 AND 11.

REV. 11/16/83: ADDED GENERAL NOTES 5a, 5b, AND 5c, ALSO REVISED GENERAL NOTE 6.

REV. 11-14-84: REVISED GEN. NOTE NO. 31.

GRADING

(1) GRADES SHOWN ARE SAME AS FINISHED GRADES SHOWN ON TYPICAL CROSS-SECTIONS AND SAME AS FINISHED GRADE ELEVATIONS SHOWN ON CROSS-SECTIONS.

(2) ON ALL SUPERELEVATED CURVES, THE FINISHED GRADE IS CARRIED ON THE INSIDE EDGE OF PAVEMENTS OF PROPOSED IMPROVEMENTS. SEE PLAN AND PROFILE SHEETS, TYPICAL SECTIONS CROSS SECTIONS AND STANDARD DWG. NO. RD-SE-1 FOR SUPERELEVATION DETAILS.

(3) SOME GRADING MAY BE REQUIRED IN ORDER TO TIE PAVEMENT TO BRIDGE OVER I-65 AND BRIDGE OVER GLENROSE AVENUE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN UNIT PRICE BID FOR ITEM NO. 207-01.

(4) THE CONTRACTOR WILL BE REQUIRED TO USE MATERIAL WHICH HAS BEEN STOCKPILED UNDER PREVIOUS PROJECTS TO CONSTRUCT EARTH BERMS IN THE MEDIAN AND IN ROCK CUTS AS SHOWN ON THE TYPICAL SECTIONS. THIS WORK SHALL BE PAID FOR UNDER ITEM NO. 203-04.01 IN THE EVENT THAT THE AMOUNT OF STOCKPILED MATERIAL SHOULD PROVE TO BE INSUFFICIENT FOR THE CONSTRUCTION OF THESE BERMS AS SHOWN, THE TYPICAL CROSS SECTION WILL BE MODIFIED TO UTILIZE THE MATERIAL THAT IS AVAILABLE.

(5) AFTER THE SPREADING OF THE MATERIAL FOR THE EARTH BERMS, IT SHALL BE SHAPED AND LIGHTLY COMPACTED. A 3" LAYER OF TOPSOIL SHALL THEN BE SPREAD ON THE BERMS.

(5a) THE CONTRACTOR WILL BE REQUIRED TO INSTALL STRIPS OF FILTER CLOTH(710-13.03) ON TOP OF MINERAL AGGREGATE THAT IS BEING INSTALLED IN AREAS WHERE THERE ARE "ROCKS CUT." THIS FILTER CLOTH IS TO BE INSTALLED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. WHERE THERE ARE OVERLAPS EITHER TRANSVERSE OR LONGITUDINAL THERE SHALL BE A 12" MINIMUM OVERLAP. THIS FILTER CLOTH SHALL BE INSTALLED JUST PRIOR TO THE EARTH BERMS BEING INSTALLED. ANY FILTER CLOTH THAT IS DAMAGED WHILE THE EARTH BERMS ARE BEING INSTALLED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

(5b) IF AVAILABLE TO THE CONTRACTOR, THE CONTRACTOR IS TO INSTALL THE FILTER CLOTH IN WIDE ENOUGH STRIPS SO AS TO AVOID AS MANY SEAMS AS POSSIBLE. IN THE EVENT THE CONTRACTOR CAN NOT PROVIDE THESE EXTRA WIDE WIDTHS THEN THE 12" MINIMUM OVERLAP WILL APPLY AT ALL JOINTS.

(5c) ANY AND ALL EXCAVATION REQUIRED TO INSTALL THE FILTER CLOTH UNDERDRAINS IN THE MEDIAN ON I-440 WILL BE INCLUDE IN THE UNIT PRICE BID FOR ITEM NO. 710-04, FILTER CLOTH UNDERDRAIN (WITH PIPE).

FENCING

(6) THE EXISTING FENCE IS TO BE ABUTTED TO NOISE WALLS AT APPROXIMATE LOCATIONS SHOWN ON PLANS. THE FENCE SHALL ABUT THE NOISE WALLS AS SHOWN ON STD. DWG. S-F-10. THE CONTRACTOR WILL BE REQUIRED TO FURNISH NEW END POSTS AT THESE LOCATIONS. THESE SHALL BE GREEN VINYL COATED AND WILL BE PAID FOR UNDER ITEM NO. 707-02.15. THE FENCE AND END AND CORNER POST ASSEMBLIES BEHIND THE NOISE WALLS TO WHICH THE FENCE IS ABUTTED SHALL BE REMOVED AND STOCKPILED, AS DIRECTED BY THE ENGINEER, TO BE PICKED UP BY STATE MAINTENANCE FORCES. ALL COSTS OF REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 202-01. THIS EXISTING FENCE BEHIND THE PROPOSED NOISE WALL IS TO REMAIN IN PLACE TILL ENOUGH OF THE NOISE WALL IS BUILT TO SERVE AS ACCESS CONTROL. THE EXISTING GREEN VINYL FENCE AND GALVINIZED POST FROM GLENROSE AVENUE TO EXISTING LYLE AVENUE IS TO BE REMOVED AND REPLACED WITH BLACK VINYL FENCE AND POST. THE PROPOSED FENCE AND POST SHALL COMPLY WITH GENERAL NOTE 10.

(9) THE CONTRACTOR WILL NOT CUT ANY FENCE UNTIL THE AFFECTED PROPERTY OWNERS HAVE BEEN NOTIFIED OF THE INTENTION TO CUT FENCES.

(10) PROPOSED FENCE SHALL COMPLY WITH STANDARD DRAWING S-F-10B EXCEPT AS NOTED HERE: VINYL COATED FABRIC IN ACCORDANCE WITH AASHTO M-181-77, TYPE 4 VINYL COATED FABRIC. SIZE OF COATED WIRE SHALL BE 9 GAGE. COLOR OF FABRIC SHALL BE BLACK AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. POSTS, BRACES, RAIL, AND ALL OTHER FRAMEWORK FOR FENCES SHALL COMPLY WITH STANDARD DRAWING S-F-10B AND SHALL BE COATED WITH BLACK VINYL.

SIGNING NOTES

(12) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2' SHORTER OR LONGER THAN SHOWN ON PLANS, THE ENGINEER SHOULD VERIFY THE SUPPORT TYPE WITH MR. RONALD HAMLIN, SPECIAL DESIGN AND ESTIMATES OFFICE, TELEPHONE NO. 615-741-0982. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

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

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

(15) 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.

(16) THE CONTRACTOR WILL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMBERS, SHIELDS, AND ARROWS. THE LAYOUT DRAWINGS SHOULD BE SENT TO MR. RONALD G. HAMLIN, SPECIAL DESIGN AND ESTIMATES OFFICE, SUITE 1100, J.K. POLK BUILDING, NASHVILLE, TN 37219.

(17) THE OVERHEAD AND CANTILEVER SIGN STRUCTURES THAT ARE TO BE ERECTED ALONG I-440 PARKWAY (SIGN NO'S. 3,5,7,10,67,8,22,34,37,52, & 6A) ARE TO BE OF THE TWO TUBE TRUSS SIGN SUPPORT TYPE FOR THE OVERHEADS AND SINGLE SIGN POST-CANTILEVER TYPE DOUBLE MASTARM FOR THE CANTILEVER STRUCTURES. THE STRUCTURES SHALL BE PAINTED USING SYSTEM "B" - INORGANIC ZINC WITH VINYL TOPCOAT OUTLINED IN SECTION 603 - PAINTING - IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION - 1981 EDITION. THE COLOR OF THE TOP COAT SHALL BE DARK BRONZE, FEDERAL COLOR STANDARD 595a, COLOR NO. 20059. IF DURING SHIPMENT OR ERECTION OF THESE STRUCTURES THE PAINTED SURFACE IS DAMAGED IN ANY MANNER THEN IT SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT ENGINEER. THE SIGN STRUCTURES NUMBERED ABOVE SHALL NOT BE GALVANIZED BEFORE PAINTING. SEE DRAWING M-66-11 FOR FURTHER NOTES PERTAINING TO THESE STRUCTURES. BRIDGE MOUNT SIGN STRUCTURE NO'S. 14,15,36,58,61,65, AND 66 ARE TO BE PAINTED USING SYSTEM "B" AS OUTLINED ABOVE. AFTER STRUCTURES ARE ERECTED THE CONTRACTOR WILL BE REQUIRED TO PAINT THE BOLTED CONNECTIONS WITH DARK BRONZE VINYL PAINT.

(18) THE EXTRUDED PANELS AND FLAT SHEET ALUMINUM SIGN FACES SHOWN ON SIGN SCHEDULE AS ANODIZED SHALL BE ANODIZED DARK BRONZE, FEDERAL COLOR STANDARD 595a, COLOR NO. 20059 THIS INCLUDES THE POST CLIPS FOR EXTRUDED PANES CONNECTION. THE NUT END OF THE BOLT CONNECTION ON FLAT SHEET SIGNS SHALL BE PAINTED (DARK BRONZE VINYL) AFTER SIGN IS INSTALLED ON SUPPORT. THE ABOVE ALSO APPLIES TO MILEPOST MARKER AND DELINEATOR POST.

(19) THE STEEL SIGN SUPPORTS (SQUARE TUBE, I-BEAMS AND WF-BEAMS) SHOWN ON SIGN SCHEDULE AS PAINTED, SHALL BE PAINTED USING SYSTEM "B" - INORGANIC ZINC WITH VINYL TOPCOAT OUTLINED IN SECTION 603 PAINTING IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION - 1981 EDITION. THE COLOR OF THE TOPCOAT SHALL BE DARK BRONZE, FEDERAL COLOR STANDARD 595a, COLOR NO. 20059 THIS INCLUDES STUBS, FUSE PLATES, BOLT KEEPER PLATES AND SHIMS. ALL BOLTS AND NUTS SHALL BE PAINTED (DARK BRONZE VINYL) AFTER SIGN SUPPORTS ARE INSTALLED.

DRAINAGE

(20) THE COST OF EXCAVATION FOR PIPE CULVERTS AND ENDWALLS IS TO BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF PIPE.

(21) THE CONTRACTOR WILL BE REQUIRED TO SHAPE DITCHES TO THE SPECIFIED DESIGN, ALL COSTS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PAY ITEM FOR PAVED DITCHES.

(22) THE COST OF EXCAVATION FOR CATCH BASINS, MANHOLES, AND JUNCTION BOXES WILL BE INCLUDED IN THEIR RESPECTIVE PAY ITEMS AND WILL NOT BE PAID FOR DIRECTLY.

MISCELLANEOUS

(23) NOISE WALL LOCATIONS SHOWN ON PROPOSED LAYOUTS AND LANDSCAPING PLANS ARE FOR REFERENCE ONLY. FOR EXACT LOCATIONS, SEE NOISE BARRIER LAYOUTS.

(24) THE CONCRETE USED TO CONSTRUCT CONCRETE SHOULDERS, CONCRETE DITCHES ADJACENT TO SHOULDERS, SLOPE PAVEMENT IN THE MEDIAN, AND THE SAFETY SHAPE WALLS BUILT IN CONJUNCTION WITH NOISE WALLS SHALL BE TINTED TO MATCH FERERAL COLOR STANDARD 595A COLOR NO. 23619. THIS TINT SHALL BE ACHIEVED BY THE ADDITION OF APPROVED PIGMENTS TO THE CONCRETE MIXTURE TO OBTAIN A UNIFORM TINT THROUGHOUT.

(25) THE LANDSCAPING SHALL NOT BEGIN UNTIL ALL OTHER WORK IS COMPLETED. IT SHALL BE ADJUSTED, AS DIRECTED BY THE ENGINEER, SO AS NOT TO BLOCK THE VIEW OF SIGNS, AND NOT INTERFERE WITH LIGHTING OR SIGHT DISTANCES AT RAMP INTERSECTIONS. THIS NOTE IS NOT MEANT TO EXCLUDE ANY SEEDING OR SODDING NECESSARY FOR EROSION CONTROL

(26) THE ABATEMENT OF CONSTRUCTION NOISE IS A HIGH PRIORITY ON THIS PROJECT. THEREFORE, THE CONTRACTOR WILL BE REQUIRED TO PERFORM HIS NORMAL CONSTRUCTION OPERATIONS BETWEEN THE HOURS OF 6:00 A.M. AND 7:00 P.M. OR AS DIRECTED BY THE ENGINEER.

(27) THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS WORK WITH CONTRACTORS WORKING ON ADJACENT PROJECTS. NO EXTRA COMPENSATION WILL BE GRANTED FOR DELAYS.

(28) THE CONTRACTOR WILL BE REQUIRED TO REMOVE GUARDRAIL ATTACHED TO BARRELS ALONG I-65 AT 'S-E' ROADWAY AND 'N-W' ROADWAY AND IN THE NOLENSVILLE ROAD INTERCHANGE AREA AFTER THE COMPLETION OF THIS PROJECT. THE GUARDRAIL AND BARRELS SHALL BE STOCKPILED, AS DIRECTED BY THE ENGINEER, TO BE PICKED UP BY STATE MAINTENANCE FORCES. ALL COSTS FOR THIS WORK ARE TO BE INCLUDED IN ITEM NO. 706-01.

(29) THE CONTRACTOR IS TO USE CAUTION WHILE APPLYING EPOXY PAVEMENT MARKINGS, ESPECIALLY WHEN PREPARING THE CONCRETE SURFACE FOR THE PAINT. IN THE EVENT ANY CONCRETE PAVEMENT, OR ANY CONCRETE JOINTS ARE DAMAGED DURING THIS OPERATION, THEN THE PAVEMENT AND/OR JOINTS WILL BE REPAIRED AT THE CONTRACTORS EXPENSE.

(30) NO PAVEMENT MARKING (EDGE LINES, ETC.) SHALL BE APPLIED TO SHOULDERS, BUT SHALL BE APPLIED TO THE PAVEMENT ONLY.

(31) ALL JOINTS IN THE CONCRETE PAVEMENT AND CONCRETE SHOULDERS SHALL BE SEALED WITH SILICONE MATERIAL (SEE DETAIL ON SHEET NO. 2M, AND SPECIAL PROVISION 905A). THE JOINTS IN THE CONCRETE SHOULDERS (EXPANSION, TRANSVERSE AND LONGITUDINAL) SHALL MATCH THE JOINTS ON THE ROADWAY PAVEMENT, BOTH FROM A TYPE AND LOCATION STANDPOINT. SEE RP-J SERIES STANDARD DRAWINGS FOR DETAILS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2F

REV. 11-16-83: REFERENCE NOTE ADDED TO FENCE NOTE UNDER SCOPE-OF-WORK.

GENERAL NOTES

SIGNALIZATION

(30) Equipment and installation shall comply with the TDOT, Bureau of Highways "Special Provisions Regarding Sections 730N-Traffic Signals, 730E-Master Coordinator, and 730F-Modular Solid State Digital Coordination Unit."

(31) All detours and construction signing shall be in strict accordance with the Manual on Uniform Traffic Control Devices.

(32) When the installation of the proposed traffic signal equipment requires the removal of existing pavements, curb and gutter and sidewalks or where such existing improvements are damaged in the course of installation, the contractor shall make replacements and repairs in kind or of equal as directed by the engineer. All cost of such replacements and repair shall be included in the price bid for related items of construction.

(33) All controllers furnished by the contractor shall be complete with all necessary auxiliary equipment, hardware and cabinet necessary for installation.

(34) The cost of all signal hangers, clamps and miscellaneous hardware to be included in the price bid for related items.

(35) The Regional Traffic Engineer shall be contacted regarding signal timing a minimum of 30 days prior to the activation of the traffic signal.

(36) All loops shall be 6' x 45' with a double run of wire unless indicated otherwise on the plans, and loops in the same lane shall be wired in parallel

(37) Signal lamps shall comply to Special Provision 730.202 .

(38) All loops and leads to the pullbox are to be one continuous length of #14 AWG (Cross Link Polyethylene) Single Conductor Stranded Cable which meets the requirements of I.M.S.A. specification 19.2. All leads from the pullbox to the controller are to be one continuous length of #14 AWG (Cross Link Polyethylene) 2 Conductor Stranded Cable which meets the requirements of I.M.S.A. specification 19.2. All leads are to be twisted at least three times per foot.

(39) All conduit shall be galvanized steel (sherardized conduit not acceptable) and shall be laid no less than 24" below the pavement.

(40) A lightning arrestor shall be provided across the lead-in external to each detector loop amplifier.

(41) A lightning arrestor shall be provided across the electrical service input to the controller.

(42) THE CANTILEVER STRUCTURE SHALL BE PAINTED USING SYSTEM "B" INORGANIC ZINC WITH VINYL TOPCOAT OUTLINED IN SECTION-603-PAINTING, IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION-1981 EDITION. THE COLOR OF THE TOPCOAT SHALL BE DARK BRONZE NO. 313 FEDERAL STANDARD COLOR NO. 20059. IF DURING THE SHIPMENT OR ERECTION OF THESE STRUCTURES, THE PAINTED SURFACE IS DAMAGED IN ANY MANNER, THEN IT SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

(43) AN INSPECTION SHALL BE MADE PRIOR TO THE CLOSING OF THIS CONTRACT BY REPRESENTATIVES OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, INCLUDING THE REGIONAL TRAFFIC ENGINEER AND THE AGENCY ASSUMING MAINTENANCE RESPONSIBILITY, ACCOMPANIED BY A REPRESENTATIVE OF THE CONTRACTOR.

UTILITIES

(44) The locations of utilities, public or private, are approximate only. Their exact location shall be determined in the field by the contractor.

(45) Utility owners are to reset, relay, or make adjustments of power and telephone lines and poles, water and sewer lines and all other public utilities conflicting with the proposed improvements.

(46) The contractor will be required to cooperate with the owners of local utilities in the adjustment of their facilities where they interfere with construction.

(47) The contractor will provide all necessary protection measures to safeguard existing underground utilities from damage during construction of this project. In the event that special equipment is required to work around and over the underground utilities, the contractor will be required to furnish such equipment. The cost of protecting underground pipe lines from damage and furnishing special equipment will be included in the price bid on other items. The contractor will not be allowed to place base and pavement until all underground utilities are adjusted and/or installed.

(48) No claims or damages due to delays caused by utility adjustments or installations will be made.

(49) The contractor shall accomplish all work in accordance with the National Electric Safety Code (NESC) and shall provide the proper clearance between signal span wires/tether wire and adjacent electrical distribution facilities in accordance with the NESC.

JOE McKENZIE – N.E.S. – 747-3969

SEE SHEET NO. 74 FOR LIGHTING NOTES.

SCOPE OF WORK

THE PREPARATION OF THE SUBGRADE, CONSTRUCTION OF LEAN CONCRETE BASE AND THE CONSTRUCTION OF CEMENT CONCRETE PAVEMENT AND SHOULDERS ALONG I-440 AND INTERCHANGE RAMPS WITHIN THE LIMITS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE CONSTRUCTION OF CONCRETE CURBS AND GUTTER IN THE NOLENSVILLE ROAD INTERCHANGE.

THE CONSTRUCTION OF NOISE WALLS AND CONCRETE PARAPET WALLS AS INDICATED ON PROPOSED LAYOUTS AND TYPICAL CROSS-SECTIONS, OR AS DIRECTED BY THE ENGINEER.

THE REMOVAL OF EXISTING CHAIN LINK FENCE AND THE ERECTION OF NEW CHAIN LINK FENCE. (SEE GENERAL NOTE (2) ON SHT. NO. 2E).

THE CONSTRUCTION OF HIGHWAY SIGNING AND LIGHTING.

THE INSTALLATION OF GUARDRAIL AND TERMINAL ANCHORS AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE INSTALLATION OF ONE ENERGY ATTENUATION DEVICE AT THE LOCATION INDICATED ON PLANS AS DIRECTED BY THE ENGINEER.

THE MARKING OF PAVEMENT WITH EPOXY PAVEMENT MARKING AS INDICATED ON THE PLANS, STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER.

THE CONSTRUCTION OF EARTH BERMS IN THE MEDIAN AND ROCK CUTS AS SHOWN ON THE TYPICAL SECTION OR AS DIRECTED BY THE ENGINEER.

THE CONSTRUCTION OF A STORM DRAIN SYSTEM AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

LANDSCAPING AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGNALIZATION IN THE NOLENSVILLE ROAD INTERCHANGE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE CONSTRUCTION OF CONCRETE DITCHES, AND OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THIS PROJECT.

PRIORITY OF CONSTRUCTION

FOLLOWING IS A SUGGESTED PRIORITY OF CONSTRUCTION, IF THE CONTRACTOR ELECTS TO SET A DIFFERENT PRIORITY THEN HE MUST SUBMIT IT TO THE ENGINEER FOR APPROVAL.

(1) THE INSTALLATION AND/OR ADJUSTMENT OF THE DRAINAGE SYSTEM, THE INSTALLATION OF THE EARTH BERMS.

(2) THE INSTALLATION OF LEAN CONCRETE BASE, CONCRETE PAVING, COLORED CONCRETE SHOULDERS CURB AND GUTTER, SAFETY SHAPE BARRIERS, CONCRETE BARRIERS.

(3) THE INSTALLATION OF GUARDRAIL, SIGNING, SIGNALS, PAVEMENT MARKINGS, LIGHTING.

(4) THE REMOVAL OF EXISTING CHAIN LINK FENCE AND THE INSTALLATION OF PROPOSED CHAIN LINK FENCE.

(5) THE LANDSCAPING WORK AS SHOWN ON THE PLANS SHALL BE THE LAST ORDER OF WORK DONE ON THIS PROJECT.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1985	I-440-4(55)211	26

REV. 3-22-83 : CHANGED LIMITS OF GUARDRAIL & QUANTIES. TOTALS ADJUSTED ACCORDINGLY.

REV. 12-12-83: ADDED GUARDRAIL, AND QUANTITY TOTALS ADJUSTED ACCORDINGLY.

REV. 2-11-85 : ADDED GUARDRAIL FOR RAMPS "N-A", "N-B", AND "N-F" AND ADJUSTED TOTALS ACCORDINGLY.

PROPOSED GUARDRAIL (STD. DWG. S-GR-11-21)

	LOCATION	SHEET NO.	SIDE	STATIONS FROM	STATIONS TO	TERMINAL ANCHOR 705-04.01 (1) OR 705-04.41	705-04.43	705-04.44	705-01.01 OR 705.01.41	705-01.42	705-02.02 OR 705-02.42	705-03.42	705-03.43
(2)	"S-E" RDWY.	3	RT.	511+00	515+60				26.9'		453.1'		
(2)	"S-E" RDWY.	3	LT.	515+80	516+30				26.9'		23.1'		
(3)	"S-E" RDWY.	3	LT.	519+55	520+75		1				120'		
	"S-W" RDWY.	3	RT.	142+35	146+15				26.9'		353.1'		
	"S-W" RDWY.	3	LT.	141+60	142+25	1			26.9'		12.5'		
(2)	"N-W" RDWY.	5	RT.	644+00	646+68				26.9'		241.1'		
	"N-W" RDWY.	3	LT.	645+00	646+68	1			26.9'		116.1'		
	"N-E" RDWY.	3	RT.	46+61	47+25	1			26.9'		12.1'		
	"N-E" RDWY.	3	RT.	56+00	56+75		1				75'		
(3)	"N-E" RDWY.	3	LT.	56+00	56+75		1				75'		
	"E-N" RDWY.	3	LT.	528+91	529+55	1			26.9'		12.1'		
(2)	"E-N" RDWY.	3	RT.	535+72	540+00						428'		
	"W-N" RDWY.	3	RT.	454+90	459+50		1				460'		
	"W-N" RDWY.	3	LT.	454+90	461+42	—			26.9'		625.1'		
	"E-S" RDWY.	3	RT.	242+00	243+02	1			26.9'		50.1'		
	"E-S" RDWY.	3	LT.	242+00	243+12	1			26.9'		60.1'		
	"E-N" RDWY.	4	RT.	523+02	523+68	1			26.9'		12.1'		
	I-440 (WBL)	3	RT.	355+60	357+40	1			50'		105'		
	I-440 (WBL)	3	LT.	355+60	356+24	1			26.9'		12.1'		
	"E-N" RDWY. (RT. STA. 368+50± I-440)	4	RT.	70+40	71+04	1			26.9'		12.1'		
	I-440 ℄	4	RT.	369+70	370+56.25	1	1			28'	6.25'		54'
	I-440 ℄	4	LT.	370+43.75	371+30	1	1			28'	6.25'		54'
	I-440 ℄	4	℄	373+50	378+00			2				450'	
	I-440 (EBL)	4	RT.	375+70	388+25		1				1255'		
	I-440 (WBL)	4	LT.	377+40	386+30		1		26.9'		838'		
	I-440 ℄	5	RT.	384+70	385+56.25	1	1			28'	6.25'		54'
	I-440 ℄	5	LT.	385+43.75	386+30	1	1			28'	6.25'		54'
	I-440 ℄	5	RT.	405+50	407+00	1	1				125'		
(3)	I-440 ℄	5	LT.	406+50	408+10	1	1				125'		
	RAMP 'N-D'	6	LT.	13+25	17+00	1	1				350'		
	RAMP 'N-C'	6	LT.	2+25	5+00	1	1				250'		
	I-440 ℄	6	RT.	420+40	422+01.75	1	1				130'		
	I-440 ℄	6	LT.	421+08.75	422+70	1	1				130'		
	RAMP 'N-B'	6	RT.	3+34	4+00	1			26.9'		12.1'		
	RAMP 'N-B'	6	LT.	3+00	5+50		1				250'		
	I-440 ℄	6	RT.	424+50	425+94	1	1				119'		
	I-440 ℄	6	LT.	425+74	427+18	1	1				119'		
	I-440 ℄	7	RT.	435+96	437+14	1	1				93'		
	I-440 ℄	7	LT.	437+04	438+22	1	1				93'		
	I-440 ℄	7	RT.	446+28	447+86	1	1				133'		
	I-440 ℄	7	LT.	447+38	448+96	1	1				133'		
	I-440 (E.B.L.)	7	RT.	457+34	458+00	1			26.9'		12.1'		
	I-440 (W.B.L.)	8	LT.	461+80	465+08	1			26.9'		276.1'		
	LINE 'G'	8	LT.	471+80	473+02	1	1				97'		
	LINE 'G'	8	RT.	826+06	827+28	1	1				97'		
	LINE 'G'	9	LT.	483+90	487+80	1			26.9'		338.1'		
	LINE 'G'	9	RT.	487+14	487+80	1			26.9'		12.1'		
	LINE 'C'	9	RT.	841+60	843+30		1				170'		
	LINE 'C'	9	LT.	841+60	843+30		1				170'		
	LINE 'F'	9	RT.	941+00	944+00		1				300'		
	LINE 'F'	9	LT.	941+20	944+00		1				280'		
	I-440 (WBL)	8	LT.	462+30	464+51	1			26.9		169'		
	RAMP 'N-A'	6	RT.	3+00	4+90	1	1				165'		
	RAMP 'N-B'	6	LT.	10+25	12+00	1	1				150'		
	RAMP 'N-F'	6	LT.	7+70	10+80	1	1				285'		
	TOTAL (GALVANIZED)					3			188.3		1619.1'		
	TOTAL (POWDER COATED)					34	32	2	426.6	112	8320.2	450	216'

(1) INCLUDES 25' OF W-BEAM GUARDRAIL (SEE STD. DWG. S-GR-18).

(2) TO BE GALVANIZED.

(3) TO BE POWDER COATED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

TABULATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2H

ESTIMATED STORM SEWER DRAINAGE QUANTITIES

CODE NO.	STATION	LOC.	TYPE	DRAWING NUMBER	DEPTH	OUTLET FLOW ELEV.	CATCH BASINS G11-03.01 CLASS "A" CONC. (C.Y.)	CATCH BASINS G11-03.02 "M" BRICK	CATCH BASINS G11-03.04 GRAY IRON CASTINGS (LB.)	CATCH BASINS G02-06.01 STRUCT. STEEL (LB.)	ENDWALLS G11-07.01 CLASS "A" CONC. (C.Y.)	ENDWALLS G11-07.02 STEEL BAR REINF. (LB.)	ENDWALLS G02-01.01 STRUCT. STEEL (LB.)	JUNCTION BOXES G04-01.01 CLASS "A" CONC. (C.Y.)	JUNCTION BOXES G04-01.02 STEEL BAR REIN. (LB.)
1	370+00, I-440	RT.	#24 C.B.	D-CB-24	4.29	513.51	.32	.548		310.53					
2	370+00, I-440	LT.	#24 C.B.	D-CB-24	4.57	513.23	.32	.556		310.53					
3	367+55, I-440	LT.	#48 C.B.	D-CB-24	4.19	511.27	.48	.710		529.17					
(2) 4	71+36, "N-E" RDWY.	RT.	# 1 C.B.	D-CB-12-32	3.5	513.31	.85	.626	834						
(2) 5	72+24, "N-E" RDWY.	RT.	# 1 C.B.	D-CB-12-32	3.5	513.31	.85	.626	834						
(2) 6	71+76, "N-E" RDWY.	RT.	# 1 C.B.	D-CB-12-32	4.36	512.50	.86	.768	834						
7	71+70, "N-E" RDWY.	RT.	ADJ.												
8	70+00, "N-E" RDWY.	RT.	#24 CB	D-CB-24	4.29	514.65	.32	.548		310.53					
9	367+60, I-440	RT.	#48 C.B.	D-CB-24	4.46	512.89	.48	.768		529.17					
10	367+55, I-440	LT.	CAP												
11	365+00, I-440	RT.	#24 C.B.	D-CB-24	4.29	515.02	.32	.548		310.53					
12	365+00, I-440	LT.	#24 C.B.	D-CB-24	2.68	514.74	.32	.265		310.53					
13	364+90, I-440	LT.	J.B. (1)	—	—	506.51								1.50	48
14	361+00, I-440	RT.	#24 C.B.	D-CB-24	4.29	526.22	.32	.548		310.53					
15	361+20, I-440	LT.	ADJ.												
(2) 16	63+55, "N-E" RDWY.	RT.	# 1 C.B.	D-CB-12-32	4.3	518.12	.86	.791	834						
17	63+55, "N-E" RDWY.	RT.	"U" EW	D-PE-4	—	514.50					1.01	20			
18	64+20, "N-E" RDWY.	RT.	#36 C.B.	D-CB-3	2.67	515.83	1.51			71.82					
19	63+90, "N-E" RDWY.	RT.	"U" EW	D-PE-4	—	515.00					1.01	20			
(2) 20	371+00, I-440	LT.	# 1 C.B.	D-CB-12-32	4.29	513.71	.86	.789	834						
21	370+90, I-440	LT.	"U" EW	D-PE-4	—	509.00					1.01	20			
22	370+20, I-440	LT.	#36 C.B.	D-CB-3	1.67	511.33	1.41			71.82					
23	370+40, I-440	LT.	"U" EW	D-PE-4	—	510.00					.68	20			
(2) 24	523+80, "E-N" RDWY.	RT.	# 1 C.B.	D-CB-12-32	4.29	506.27	.86	.789	834						
25	523+80, "E-N" RDWY.	RT.	"U" EW	D-PE-4		501.00					1.01	20			
26	382+25, I-440	LT.	#24 C.B.	D-CB-24	4.29	518.02	.32	.548		310.53					
27	382+25, I-440	RT.	#24 C.B.	D-CB-24	2.35	517.53	.32	.237		310.53					
28	404+50,	RT.	#24 C.B.	D-CB-24	4.29	560.50	.32	.548		310.53					
29	403+50	LT.	#24 C.B.	D-CB-24	3.50	557.61	.32	.446		310.53					
30	403+50	LT	CAP												
31	401+00	RT.	#24 C.B.	D-CB-24	4.29	554.05	.32	.548		310.53					
32	401+00	LT.	J.B. (1)			552.37								1.20	37
33	400+50	RT.	#36 CB	D-CB-3	2.17	551.36	.77			71.82					
34	400+00	℄	J.B. (1)			550.45								1.20	37
35	398+00	RT.	#24 C.B.	D-CB-24	4.29	547.20	.32	.548		310.53					
36	398+00	℄	CAP												
37	395+00	RT.	#24 CB.	D-CB-24	4.29	539.21	.32	.548		310.53					
38	395+00	LT.	#24 CB	D-CB-24	4.29	539.44	.32	.548		310.53					
39	395+00	℄	JB (1)			538.77								1.10	37
40	393+00	LT.	#36 CB	D-CB-3	2.17	535.43	.77			71.82					
41	393+00	RT.	CAP												
42	392+50	RT.	#24 CB	D-CB-24	3.25	532.63	.32	.408		310.53					
43	392+50	RT.	JB (1)			532.03								1.20	37
44	390+00	RT.	#24 CB	D-CB-24	3.25	525.60	.32	.408		310.53					
45	390+00	LT.	#24 CB	D-CB-24	4.29	526.78	.32	.548		310.53					
46	390+00	℄	JB (1)			525.06								1.10	37
47	389+00	RT.	CAP												
48	388+00	RT.	#24 CB	D-CB-24	2.91	520.51	.32	.355		310.53					
49	388+00	℄	JB (1)			520.31								1.20	37
50	386+50	LT.	#24 CB	D-CB-24	4.29	518.53	.32	.548		310.53					
51	386+50	RT.	JB (1)			517.58								1.20	37
52	385+50	RT.	#24 CB	D-CB-24	3.00	516.49	.32	.369		310.53					
53	385+50	℄	JB (1)			515.76								1.20	37
54	384+18	RT.	#48 CB	D-CB-24	4.29	514.66	.48	.766		529.17					
55	384+18	RT.	CAP												
55a	395+40	LT.	#37 CB	D-CB-3	2.5	547.5	2.22			133.45					
56	384+18	LT.	#48 CB	D-CB-24	8.72	512.45	.48	1.634		529.17					
56a	395+40	LT.	4 "U" EW	D-PE-4U	—	541.2					1.63	78.44	259		
57	9+00, RAMP "ND"	RT.	#24 CB	D-CB-24	4.4	564.42	.32	.480		310.53					
58	7+64, RAMP "NE"	RT.	#24 CB	D-CB-24	4.29	557.17	.32	.548		310.53					
59	5+30, RAMP "NE"	RT.	ADJ.												
60	419+40, I-440	LT.	#24 CB	D-CB-24	4.29	547.37	.32	.548		310.53					
61	419+50, I-440	LT.	ADJ.												
62	419+65, I-440	RT.	#48 CB	D-CB-24	4.29	548.07	.48	.766		529.17					
63	419+40, I-440	℄	ADJ.												
64	424+00, I-440	RT.	#48 CB	D-CB-24	4.29	534.19	.48	.766		529.17					
65	424+00, I-440	LT.	#48 CB	D-CB-24	5.3	533.82	.48	.946		529.17					
66	8+10, RAMP "NA"	RT.	#24 CB	D-CB-24	4.29	535.29	.32	.548		310.53					
67	424+00, I-440	LT.	#48 CB	D-CB-24	6.89	533.1	.48	1.283		529.17					
68	5+80, RAMP "NA"	RT.	#24 CB	D-CB-24	4.29	532.91	.32	.548		310.53					
69	6+35, RAMP "NA"	RT.	#48 CB	D-CB-24	4.41	532.59	.48	.757		529.17					
70	6+80, RAMP "NA"	RT.	#24 CB	D-CB-24	4.95	532.26	.32	.614		310.53					
TOTALS (SHEET 2H)							24.46	25.137	5004	13,257.04	6.35	178.44	259	10.9	344

(1) FOR DETAIL SEE SHEET NO. 2N
(2) FOR ADDITIONAL DETAILS ON #1 CATCH BASIN, SEE DETAILS ON SHT. NO. 2M.

REV. 3-22-83: CODE NOS. 3, 6, 8, 16, 18, 20, 22, 24, 27, 29, 42, 44, 48, 52, 55, 56, 62, & 64 REVISED & QUANTITIES ADJUSTED ACCORDINGLY.
REV. 11-16-83: FOOTNOTE NO. 2 ADDED TO QUANTITY BLOCK. CORRECTED DRAINAGE ITEM NO. 9.

REV. 11-14-84: CHANGED STRUCTURAL STEEL TO GRAY IRON CASTINGS FOR ALL NO. 1 CATCH BASINS, AND REVISED TOTALS ACCORDINGLY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

ESTIMATED STORM SEWER DRAINAGE QUANTITIES

CODE NO.	STATION	LOC.	TYPE	DRAWING NUMBER	DEPTH	OUTLET FLOW ELEV.	CATCH BASINS G11-03.01 CLASS "A" CONC. (C.Y.)	CATCH BASINS G11-03.03 BRICK MASONRY "M" BRICK	CATCH BASINS G11-03.04 GRAY IRON CASTINGS (LB.)	CATCH BASINS G11-07.04 STRUCT. STEEL (LB.)	ENDWALLS G11-07.01 CLASS "A" CONC. (C.Y.)	ENDWALLS G11-07.02 STEEL BAR REINF. (LB.)	ENDWALLS G11-07.03 STRUCT. STEEL (LB.)	JUNCTION BOXES G04-01.01 CLASS "A" CONC. (C.Y.)	JUNCTION BOXES G04-01.02 STEEL BAR REINF. (LB.)
71	425+00, I-440	LT.	ADJ.												
72	428+00, I-440	LT.	#24 CB	D-CB-24	5.98	527.56	.32	.483		310.53					
73	429+50, I-440	RT.	#24 CB	D-CB-24	4.29	527.99	.32	.548		310.53					
74	10+10, RAMP "N-B"	RT.	#36 CB	D-CB-3	2.17	536.43	1.51			71.82					
75	7+60, RAMP "N-B"	LT.	@ U"EW	D-PE-60	-	562.7					2.28	118	415		
76	8+00, RAMP "N B"	LT.	JB (1)		-	553.32								1.30	37
77	10+90, RAMP "N B"	LT.	JB (1)		-	525.67								1.20	37
78	11+00, RAMP "N B"	LT.	ADJ.												
79	429+25, I-440	RT.	#24 CB	D-CB-24	4.29	526.79	.32	.548		310.53					
80	429+25, I-440	RT.	ADJ												
81	431+50, I-440	LT.	#24 CB	D-CB-24	4.29	526.83	.32	.548		310.53					
82	431+50, I-440	LT.	JB (1)		-	524.77								3.20	88
83	435+40, I-440	LT.	#24 CB	D-CB-24	4.29	524.13	.32	.548		310.53					
84	435+40, I-440	LT	EXIST.			522.06									
85	435+45, I-440	RT.	#24 CB	D-CB-24	4.29	522.60	.32	.548		310.53					
86	435+45, I-440	RT.	ADJ.			518.05									
87	437+80, I-440	LT.	#36 C.B.	D-CB-3	2.16	522.07	.77			71.82					
88	437+90, I-440	RT.	STUB			517.97									
89	438+50, I-440	LT.	#24 CB	D-CB-24	4.29	521.95	.32	.548		310.53					
90	438+50, I-440	RT.	STUB			517.43									
91	442+00, I-440	LT.	#24 CB	D-CB-24	4.29	519.57	.32	.548		310.53					
92	442+00, I-440	RT.	#24 MOD.CB	D-CB-24	8.97	513.54	.51	1.972		310.53					
93	446+00, I-440	RT.	#24 MOD.CB	D-CB-24	9.44	510.57	.51	2.110		310.53					
94	447+00, I-440	LT.	#24 CB	D-CB-24	4.29	515.04	.32	.548		310.53					
95	447+00, I-440	RT.	STUB			511.36									
96	450+00, I-440	LT	#24 CB	D-CB-24	4.29	513.00	.32	.548		310.53					
97	450+00, I-440	RT.	#24 MOD.CB	D-CB-24	9.58	507.71	.51	2.152		310.53					
98	452+50, I-440	LT.	#48 CB	D-CB-24	7.49	508.98	.48	1.360		529.17					
99	452+50, I-440	RT.	#48 MOD.CB	D-CB-24	10.49	505.98	.51	2.522		529.17					
100	456+00, I-440	LT.	#24 CB	D-CB-24	4.29	513.10	.32	.548		310.53					
101	456+00, I-440	RT.	STUB			505.63									
102	457+00, I-440	RT.	#24 MOD.CB	D-CB-24	15.34	503.41	.51	3.851		310.53					
(3) 103	259+00, "E-S" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	513.14	.86	.737	834						
104	259+70, "E-S" RDY.	LT.	ADJ.			482.87									
(3) 105	254+75, "E-S" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	525.64	.86	.737	834						
106	254+30, "E-S" RDY.	LT.	STUB			481.78									
(3) 107	47+15, "N-E" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	500.74	.86	.728	834						
108	47+90, "N-E" RDY.	LT.	ADJ.			480.26									
(3) 109	44+50, "N-E" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	498.23	.86	.737	834						
110	44+00, "N-E" RDY.	LT.	ADJ.			477.67									
(3) 111	146+10, "S-W" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	518.10	.86	.737	834						
112	146+10, "S-W" RDY.	LT.	ST. E.W.	D-PE-4		486.00									
(3) 113	54+00, "N-E" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	518.9	.86	.737	834						
114	54+40, "N-E" RDY.	LT.	ST. E.W.	D-PE-4		493.61									
(3) 115	247+00, "E-S" RDY.	LT.	#1 C.B.	D-CB-12-32	4.0	531.41	.86	.737	834						
116	247+00, "E-S" RDY.	LT.	ST. E.W.	D-PE-4		512.00									
(3) 117	522+85, "E-N" RDY.	RT.	#1 C.B.	D-CB-12-32	4.0	507.89	.86	.728	834						
118	522+55, "E-N" RDY.	RT.	STUB			482.42									
121A	462+95, "LINE G" (2)	L.T.	#24 C.B.	D-CB-24	3.25	523.13	.32	.272		310.53					
122	462+65, "LINE G" (2)	R.T.	ST. E.W.	D-PE-4		496.89					1.04				
121	463+40 "LINE G" (2)	R.T.	#1 C.B.	SEE SHT. NO. 2T	4.64	522.63	.86	0.897	834						
120	819+60 "LINE G" (2)	RT.	#24 C.B.	D-CB-24	3.25	525.00	.32	.272		310.53					
	TOTALS OF SHEET NO. 2I(1)						12.52	5.291	7.4	5,768.04	0.88	17		31.1	851
	TOTALS OF SHEET NO. 2H						24.46	25.137	5004	13,257.04	6.35	178.44	259	10.9	344
	TOTALS OF SHEET NO. 2I						17.21	27.249	7506	6480.99	7.20	117.90	415	4.4	125
	TOTALS						54.19	57.677	13,284	25,506.07	14.43	313.34	674	46.4	1,320

(1) FOR DETAIL SEE SHEET NO. 2N

(2) I-24 INTERCHANGE.

(3) FOR ADDITIONAL DETAILS ON #1 CATCH BASIN, SEE DETAILS ON SHT. NO. 2M

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	2I

REV. 3-22-83: CODE NOS. 108 TO 124 ADDED TO TABLE & CODE NOS. 72, 74, 90 & 101 REVISED, & TOTALS ADJUSTED ACCORDINGLY.

REV. 11-16-83: CATCH BASIN NOS. 103, 105, 107, 109, 111, 113, 115, 117 CHANGED FROM NO. 24 TO NO. 1 CATCH BASINS. QUANTITES AND TOTALS REVISED. FOOTNOTE NO. 3 ADDED.

REV. 12-12-83: DELETED DRAINAGE ITEMS 119, 120, 123, 124, AND ADDED DRAINAGE ITEMS 121A & 122; AND ADJUSTED QUANTITY TOTALS ACCORDINGLY. CHANGED 121 FROM NO. 24 C.B. TO NO. 1 C.B..

REV. 11-14-84: CHANGED STRUCTURAL STEEL TO GRAY IRON CASTINGS FOR ALL NO. 1 CATCH BASINS, AND REVISED TOTALS ACCORDINGLY.

REV. 2-11-85: ADDED TOTALS FOR SHEET NO. 2I(1) AND REVISED QUANTITY TOTALS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2I(1)

REV. 2-11-85 : THIS SHEET ADDED TO PLANS.

ESTIMATED STORM SEWER DRAINAGE QUANTITIES

CODE NO.	STATION	LOC.	TYPE	DRAWING NUMBER	DEPTH	OUTLET FLOW ELEV.	CATCH BASINS 611-03.01 CLASS "A" CONC. (C.Y.)	CATCH BASINS 611-03.03 BRICK MASONRY "M" BRICK	CATCH BASINS 611-05.04 GRAY IRON CASTINGS (LB.)	CATCH BASINS 611-07.04 STRUCT. STEEL (LB.)	ENDWALLS 611-07.01 CLASS "A" CONC. (C.Y.)	ENDWALLS 611-07.02 STEEL BAR REINF. (LB.)	ENDWALLS 602-01.01 STRUCT. STEEL (LB.)	JUNCTION BOXES 604-01.01 CLASS "A" CONC. (C.Y.)	JUNCTION BOXES 604-01.02 STEEL BAR REINF (LB)
29A	405+40, I-440	LT	J.B.	(1)		568.00								1.2	26
29B	401+75, I-440	LT	E.W.	D-PE-4X		554.68					0.88	17			
61A	2+00, RAMP "N-C"	RT	J.B.	(1)		582.00								1.3	37
68A	8+00, RAMP "N-F"	RT	#12 C.B.	D-CB-12	2.75	535.87	0.66	0.469	774						
68B	8+00, RAMP "N-F"	LT	J.B.	(1)		535.00								1.3	37
68C	425+50, I-440	LT	#36 C.B.	D-CB-3	2.17	533.63	1.44			71.82					
68D	424+95, I-440	LT	J.B.	(1)		531.37								1.5	48
69A	17+50, NOLENSVILLE RD.	RT	J.B.	(1)		552.00								1.3	37
69B	3+50, RAMP "N-A"	RT	J.B.	(1)		549.18								1.3	37
79A	13+00, RAMP "N-B"	RT	#24 C.B.	D-CB-24	2.16	525.77	0.32	0.317		310.53					
79B	13+00, RAMP "N-B"	RT	J.B.	(1)		524.26								1.3	37
79C	433+50, I-440	RT	#24 C.B.	D-CB-24	2.00	524.99	0.32	0.292		310.53					
79D	433+50, I-440	RT	J.B.	(1)		523.32								1.2	37
79E	435+25, I-440	RT	ADJ												
80A	5+00, RAMP "N-F"	RT	#24 C.B.	D-CB-24	2.16	531.33	0.32	0.317		310.53					
80B	5+00, RAMP "N-F"	RT	J.B.	(1)		529.82								1.0	24
80C	3+00, RAMP "N-F"	RT	#24 C.B.	D-CB-24	1.58	531.07	0.32	0.227		310.53					
80D	3+00, RAMP "N-F"	RT	J.B.	(1)		528.98								1.3	37
80E	1+00, RAMP "N-F"	RT	#24 C.B.	D-CB-24	1.94	529.74	0.32	0.283		310.53					
80F	1+00, RAMP "N-F"	RT	J.B.	(1)		528.01								1.3	37
80G	435+00, I-440	LT	#24 C.B.	D-CB-24	1.93	527.46	0.32	0.286		310.53					
80H	435+00, I-440	LT	J.B.	(1)		525.72								1.3	37
85A	435+20, I-440	RT	#36 C.B.	D-CB-3	14.00	522.00	4.82			71.82					
85B	435+25, I-440	RT	ADJ			520.79									
89A	442+00, I-440	LT	#48 C.B.	D-CB-24	1.78	522.52	0.48	0.360		529.17					
89B	442+00, I-440	LT	J.B.	(1)		521.30								1.0	24
89C	444+00, I-440	LT	#24 C.B.	D-CB-24	1.78	519.69	0.32	0.258		310.53					
89D	444+00, I-440	LT	J.B.	(1)		518.47								1.3	37
89E	447+00, I-440	LT	#48 C.B.	D-CB-24	1.88	516.81	0.48	0.382		529.17					
89F	447+00, I-440	LT	J.B.	(1)		515.69								1.3	37
89G	450+00, I-440	LT	#48 C.B.	D-CB-24	1.89	514.77	0.48	0.383		529.17					
89H	450+00, I-440	LT	J.B.	(1)		513.65								1.3	37
89I	452+40, I-440	LT	ADJ			510.21									
90A	439+25, I-440	RT	#24 C.B.	D-CB-24	2.05	521.36	0.32	0.299		310.53					
90B	439+25, I-440	RT	J.B.	(1)		519.74								1.0	24
90C	441+00, I-440	RT	#24 C.B.	D-CB-24	2.05	520.26	0.32	0.299		310.53					
90D	441+00, I-440	RT	J.B.	(1)		518.64								1.3	37
90E	442+75, I-440	RT	#24 C.B.	D-CB-24	2.03	519.29	0.32	0.297		310.53					
90F	442+75, I-440	RT	J.B.	(1)		517.65								1.3	37
90G	444+00, I-440	RT	ADJ												
94A	447+30, I-440	LT	J.B.	(1)		521.00								1.2	26
94B	448+15, I-440	LT	J.B.	(1)		520.00								1.2	26
94C	448+15, I-440	LT	J.B.	(1)		514.91								1.3	37
95A	448+00, I-440	RT	#24 C.B.	D-CB-24	1.88	516.13	0.32	0.274		310.53					
95B	448+00, I-440	RT	J.B.	(1)		515.01								1.0	24
95C	449+75, I-440	RT	#24 C.B.	D-CB-24	1.88	514.94	0.32	0.274		310.53					
95D	449+75, I-440	RT	J.B.	(1)		513.82								1.3	37
95E	451+50, I-440	RT	#24 C.B.	D-CB-24	1.88	514.07	0.32	0.274		310.53					
95F	451+50, I-440	RT	J.B.	(1)		512.95								1.3	37
95G	452+40, I-440	RT	ADJ			510.16									
* TOTALS (THIS SHEET)							12.52	5.291	774	5768.04	0.88	17		31.1	851

(1) FOR DETAIL, SEE SHEET NO. 2N.

* FOR QUANTITY TOTALS, SEE SHEET NO. 2I.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2J

PIPE CULVERTS

SHEET NO.	FROM CODE	FROM ELEV.	TO CODE	TO ELEV.	GRADE %	CONCRETE PIPE CULVERTS 12"	18"	24"	30"	36"	48"	54"	C.M. PIPE CULVERTS 18"	30"	36"	73"X45 CONCARCH	15"	ITEM 204-07 BED. MAT'L. CU. YD.	REMARKS
4	1	513.51	2	513.4	0.26		40'											8.5	
4	2	513.23	3	511.44	0.75		240'											50.9	
4	8	511.27	10	511.00	2.70		10'											2.1	
4	4	513.31	6	512.67	1.60		40'											8.5	
4	5	513.31	6	512.67	1.28		50'											10.6	
4	6	512.50	7	511.50	5.00		20'											4.2	
4	8	514.65	9	513.06	2.12		75'											15.9	
4	9	512.89	10	511.00	7.56		25'											5.3	
4	11	515.02	12	514.91	0.275		40'											8.5	
4	12	514.74	13	506.68	14.65		55'											11.7	
4	14	526.22	15	500.17	18.61		140'											29.7	
4	16	518.52	17	514.50	10.05		40'											8.5	
4	18	515.83	19	515.00	2.77		30'											6.4	
4	20	513.71	21	509.00	13.46		35'											7.4	
4	22	511.33	23	510.00	5.32	25'												4.0	
4	24	506.27	25	501.00	8.11		65'											13.8	
4	26	518.02	27	517.77	.575		40'											8.5	
4&5	27	517.59	58	513.40	2.10		200'											42.4	
6	58	557.17	59	552.47	2.07		225'											47.7	
6	60	547.37	61	545.48	4.20		45'											9.5	
6	62	548.07	63	547.62	0.54		85'											18.0	
6	64	534.19	65	533.99	0.40		50'											10.6	
6	65	533.82	67	533.27	1.22		45'											9.5	
6	66	533.29	67	533.27	0.036		55'											11.7	
6	68	532.91	69	532.76	0.33		45'											9.5	
6	69	532.59	70	532.43	0.36		45'											9.5	
6	70	532.86	71	530.41	1.61		115'											24.4	
6	73	527.99	77	525.84	1.23		175'											37.1	
6	75	562.70	76	555.49	9.21		100'											21.2	
6	76	553.32	77	525.84	9.16		300'											63.6	
6	77	525.67	78	525.50	1.70		10'											2.1	
6	79	526.79	80	524.99	15.00		12'											2.5	
6	81	526.83	82	524.94	31.50		6'											1.3	
5	28	560.50	30	557.2	3.3		100'											21.2	
5	29	557.61	30	557.2	2.73	15'												2.4	
5	31	554.05	32	552.37	6.72		25'											5.3	
5	33	551.36	34	550.66	0.74		95'											20.1	
5	35	547.20	36	546.80	2.00		20'											4.2	
5	37	539.21	39	538.94	1.35		20'											4.2	
5	38	539.44	39	538.94	2.50		20'											4.2	
5	40	535.44	41	533.60	1.84		100'											21.2	
5	42	532.63	43	532.20	4.36	10'												1.6	
5	44	525.60	46	525.23	3.70	10'												1.6	
5	45	526.78	46	525.23	6.2		25'											5.3	
5	48	520.51	49	520.48	0.30	10'												1.6	
5	50	518.53	51	517.75	3.12		25'											5.3	
5	52	516.49	53	515.93	5.60	10'												1.6	
5	54	514.66	55	513.37	12.9		10'											2.1	
5	55	513.37	56	512.62	2.14		35'											7.4	
5	55A	547.50	56A	541.20	11.45		55'											11.7	
7	83	524.13	84	522.23	19.00		10'											2.1	
7	85	522.60	86	518.22	21.90		20'											4.2	
7	87	522.07	88	517.97	4.63		100'											21.2	
7	89	521.95	90	517.43	11.30		40'											8.5	
7	91	519.57	92	513.71	14.65		40'											8.5	
7	94	515.04	95	511.36	9.20		40'											8.5	
7	96	513.00	97	507.88	12.80		40'											8.5	
7	100	513.10	101	505.63	18.68		40'											8.5	
3	103	513.14	104	483.07	68.28											44'		7.1	
3	105	525.64	106	481.78	51.00											86'		13.8	
3	107	500.74	108	480.26	28.44								72'					13.2	
3	109	498.23	110	477.67	20.97											98'		15.8	
3	111	518.1	112	486.00	59.44											54'		8.7	
3	113	518.9	114	473.61	35.12											72'		11.6	
3	115	531.41	116	512.00	30.33											64'		10.3	
3	117	507.89	118	482.42	42.45								60'					11.0	
8	121A	523.44	121	522.63									50'					9.2	
8	121	522.63	122	496.89	47.67								54'					9.9	
8	123	536.83	124	535.80	.60		172'											36.5	
	SUB- TOTAL					80'	3490'						236'			418'		953.2	

SHEET NO.	FROM CODE	FROM ELEV.	TO CODE	TO ELEV.	GRADE %	CONCRETE PIPE 12"	18"		C.M. PIPE 15"	18"	ITEM NO. 204-07 BED MAT'L. CU. YD.
5	29A	568.00	29B	554.68	3.92				340		
6	61A	582.00	62	548.07	6.79		500				
6	68A	535.87	68B	535.00	1.34		65				8.5
6	68B	535.00	68C	533.63	0.77		178				
6	68C	533.63	68D	531.37	4.52		50				
6	69A	552.00	69B	549.18	3.44		82				6.8
6	69B	549.18	70	532.26	4.90		345				
6	79A	525.77	79B	524.26	6.86	22					
6	79B	524.26	79D	523.32	0.34		275				
6	79C	524.99	79D	523.32	7.59	22					
6	79D	523.32	79E	518.99	2.47		175				
6	80A	531.33	80B	529.82	6.86	22					
6	80B	529.82	80D	528.98	0.42	200					
6	80C	531.07	80D	528.98	9.50	22					
6	80D	528.98	80F	528.01	0.49		200				
6	80E	529.74	80F	528.01	7.86	22					
6	80F	528.01	80H	525.72	0.76		300				
6	80G	527.46	80H	525.72	7.91	22					
7	80H	525.72	87	522.07	1.35		270				
7	89A	522.52	89B	521.30	6.78	18					
7	89B	521.30	89D	518.47	1.42	200					
7	89C	519.69	89D	518.47	6.78	18					
7	89D	518.47	89F	515.69	0.93		300				
7	89E	516.81	89F	515.69	6.22	18					
7	89F	515.69	94C	514.91	0.68		115				
7	94C	514.91	89H	513.65	0.68		185				
7	89G	514.77	89H	513.65	6.22	18					
7	89H	513.65	89I	510.21	1.38		250				
7	94A	521.00	89F	515.69	16.09				33		
7	94B	520.00	94C	514.91	33.93				15		
7	90A	521.36	90B	519.74	7.36	22					
7	90B	519.74	90D	518.64	0.63	175					
7	90C	520.26	90D	518.64	7.36	22					
7	90D	518.64	90F	517.65	0.57		175				
7	90E	519.29	90F	517.65	7.45	22					
7	90F	517.65	90G	515.63	1.62		125				
7	95A	516.13	95B	515.01	6.22	18					
7	95B	515.01	95D	513.82	0.68	175					
7	95C	514.94	95D	513.82	6.22	18					
7	95D	513.82	95F	512.95	0.50		175				
7	95E	514.07	95F	512.95	6.22	18					
7	95F	512.95	95G	510.16	3.10		90				
7	85A	522.00	85B	520.79	10.08		12				
	TOTALS					1154	7357		806		968.5

REV 3-22-83: CODES ADDED FOR SHEET NOS. 3 & 8. TO TABLE AND BED MATERIAL ADJUSTED FOR CODES ON SHEET NO. 5. QUANTITIES ADJUSTED ACCORDINGLY.

REV. 11-16-83 *ELEVATIONS REVISED ON CODE NOS. 103, 105, 107, 109, 111, 113, 115, 117 AND GRADES REVISED ON THESE PIPE

REV. 12-12-83: DELETED DRAINAGE ITEMS 119 & 120, AND ADDED DRAINAGE ITEM 121A, AND ADJUSTED QUANTITY TOTALS ACCORDINGLY.

REV. 2-11-85 : ADDED NEW TABLE AND REVISED TOTALS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

TABULATED QUANTITIES

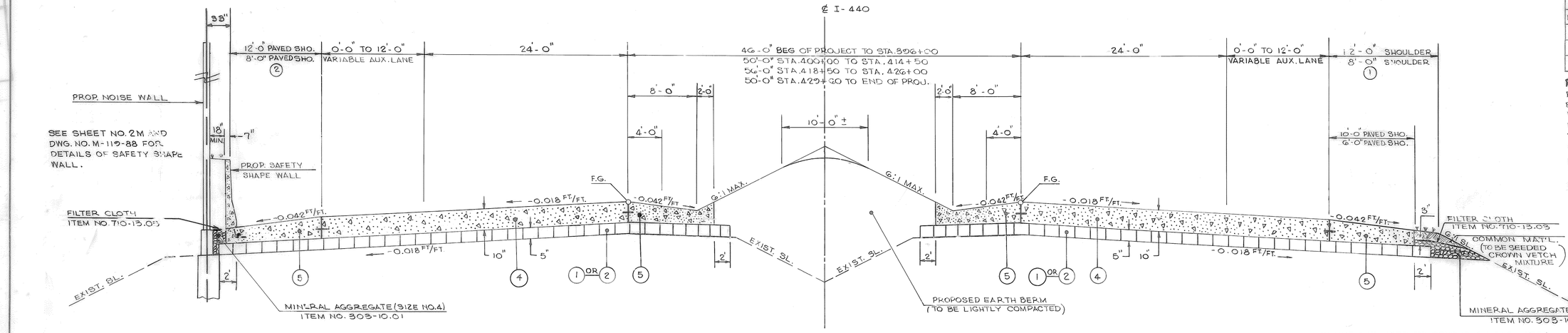
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2K

REV. 3-22-83: ADDED ALTERNATE FOR AGGREGATE-LIME-FLY ASH BASE, MINERAL AGGREGATE (SIZE NO. 4), 6" PERFORATED C.M. PIPE UNDERDRAINS, NOTE CONCERNING SAFETY SHAPE WALL AND NOTE CONCERNING BERM.

REV. 11-16-83: ADDED FILTER CLOTH UNDERDRAIN TO SUPERELEVATED SECTION, ADDED FILTER CLOTH TO TOP OF MINERAL AGGREGATE DRAINS. NOTE ADDED FOR LANDSCAPING REFERENCE. THICKNESS OF MINERAL AGGREGATE DRAIN INCREASED AT EDGE OF CONCRETE SHOULDER.

REV. 12-12-83: CORRECTED DIMENSION BETWEEN PROPOSED NOISE WALL AND PROPOSED SAFETY BARRIER.

REV. 11-14-84: CHANGED UNDERDRAIN IN PRE-SPLIT LINE AND ADDED UNDERDRAIN NOTE.



MAIN LINE (TANGENT)
FILL SECTION
I-440
ALT. 'A' & 'B'

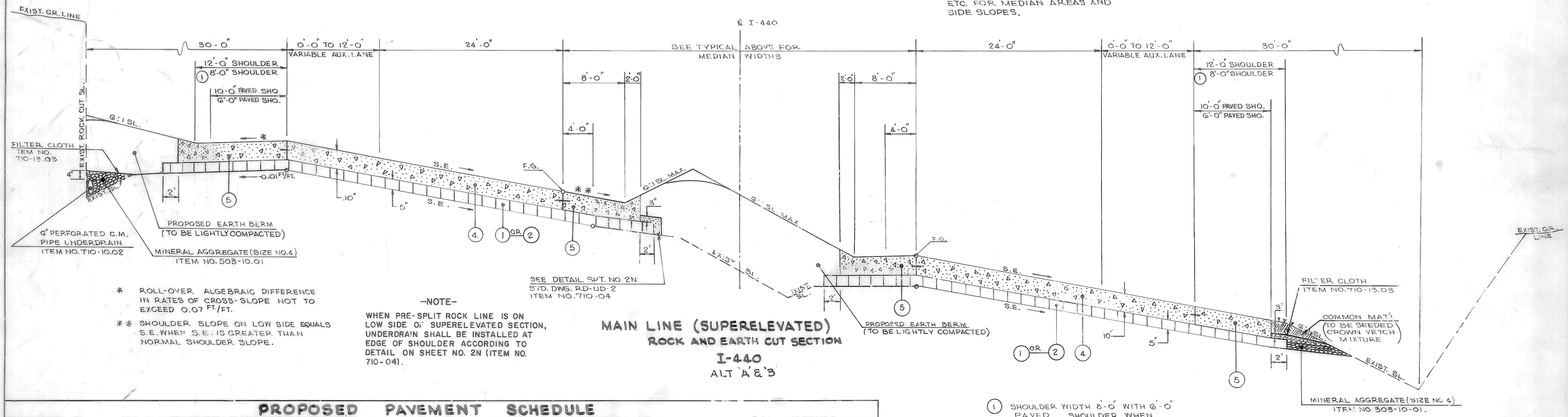
PIPE UNDERDRAINS SHALL BE TIED TO CATCH BASINS OR TURNED OUT TO ROADWAY DITCHES

AFTER MATERIAL FOR BERMS IS PLACED, IT SHALL BE SHAPED AND ROLLED UNTIL IT IS UNYIELDING.

NOTE

SEE LANDSCAPING PLANS FOR FINAL SEEDING, PLANTINGS, ETC. FOR MEDIAN AREAS AND SIDE SLOPES.

CONCRETE USED TO CONSTRUCT SHOULDERS, DITCHES, AND SAFETY SHAPE WALL SHALL BE TINTED. SEE GENERAL NOTE NO. 24



* ROLL-OVER ALGEBRAIC DIFFERENCE IN RATES OF CROSS-SLOPE NOT TO EXCEED 0.07 FT/FT.

** SHOULDER SLOPE ON LOW SIDE EQUALS S.E. WHEN S.E. IS GREATER THAN NORMAL SHOULDER SLOPE.

-NOTE-

WHEN PRE-SPLIT ROCK LINE IS ON LOW SIDE OF SUPERELEVATED SECTION, UNDERDRAIN SHALL BE INSTALLED AT EDGE OF SHOULDER ACCORDING TO DETAIL ON SHEET NO. 2N (ITEM NO. 710-04).

MAIN LINE (SUPERELEVATED)
ROCK AND EARTH CUT SECTION
I-440
ALT 'A' & 'B'

PROPOSED PAVEMENT SCHEDULE

(1) **AGGREGATE-LIME-FLY ASH STABILIZED BASE (ALFSB) 5" ± ALT. 'A'**
- 312-01 MINERAL AGGREGATE (ALFSB)
- 312-02 LIME (3 1/2 %)
- 312-03 FLY ASH (11 %)
- 312-04 BITUMINOUS MATERIAL (ALFSB)

(2) **BASE 5" ± ALT 'B'**
- 305-02 LEAN CONCRETE BASE (L.C.B.) 5" THICK

(3) **CONCRETE SURFACE**
- 501-01.02 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 5"

(4) **CONCRETE SURFACE**
- 501-01.03 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"

(5) **CONCRETE SHOULDER**
- 501-03.01 COLORED CONCRETE SHOULDERS

(1) SHOULDER WIDTH 8'-0" WITH 6'-0" PAVED SHOULDER WHEN AUXILIARY LANE IS PRESENT. SEE PLANS FOR LOCATIONS OF AUXILIARY LANE.

(2) PAVED SHOULDER WIDTH IS 8'-0" WHEN AUXILIARY LANE IS PRESENT. SEE PROPOSED LAYOUTS FOR LOCATIONS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

TYPICAL SECTIONS

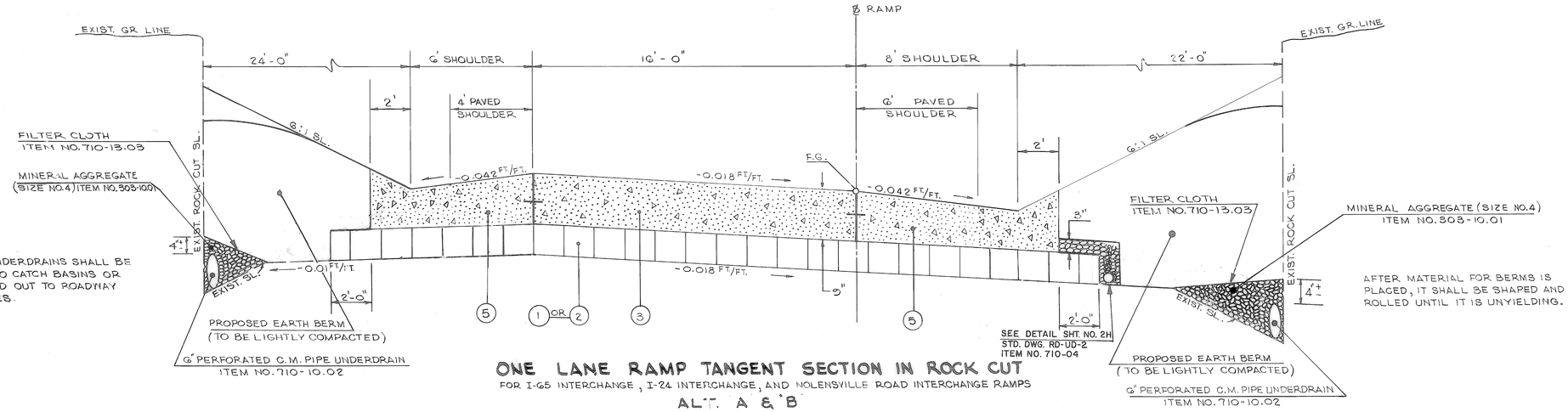
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2L

REV. 3-22-83: ADDED BASE ALTERNATE, MINERAL AGGREGATE (SIZE NO.4), 6" PERFORATED C.M. PIPE UNDERDRAINS, NOTE CONCERNING SAFETY SHAPE WALL AND NOTE CONCERNING BERM.

REV. 11-16-83: FILTER CLOTH ADDED TO TOP OF MINERAL AGGREGATE DRAIN ON SHOULDERS, AND THICKNESS OF MINERAL AGGREGATE DRAIN INCREASED AT EDGE OF CONCRETE SHOULDER. NOTE FOR REFERENCE TO LANDSCAPING PLANS ADDED.

REV. 12-12-83: CORRECTED DIMENSION BETWEEN PROPOSED NOISE WALL AND PROPOSED SAFETY BARRIER, ALSO ADDED NOTE ON NOLENSVILLE ROAD RAMP "N-F".

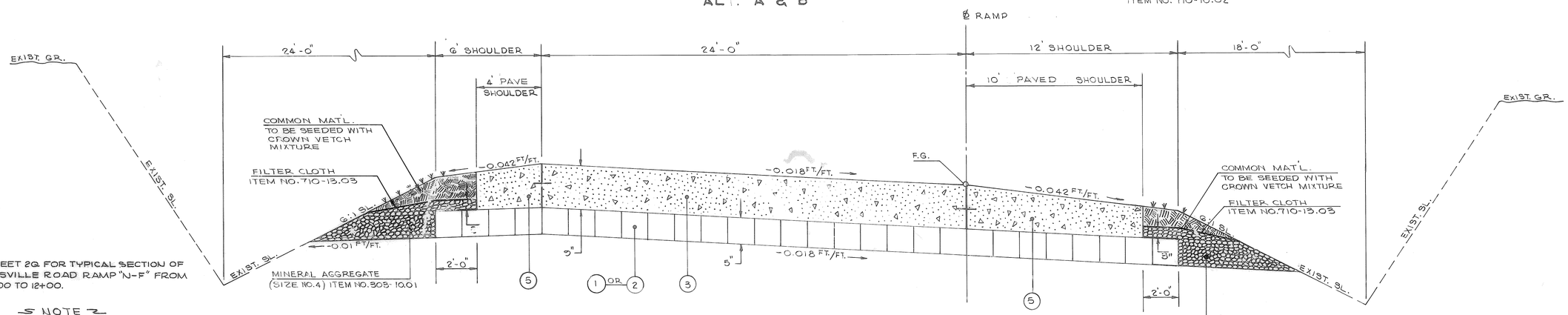
REV. 11-14-84: CHANGED UNDERDRAINS IN ROCK CUT SECTION.



ONE LANE RAMP TANGENT SECTION IN ROCK CUT

FOR I-65 INTERCHANGE, I-24 INTERCHANGE, AND NOLENSVILLE ROAD INTERCHANGE RAMPS

ALT. A & B



SEE SHEET 2G FOR TYPICAL SECTION OF NOLENSVILLE ROAD RAMP "N-F" FROM STA. 8+00 TO 12+00.

NOTE

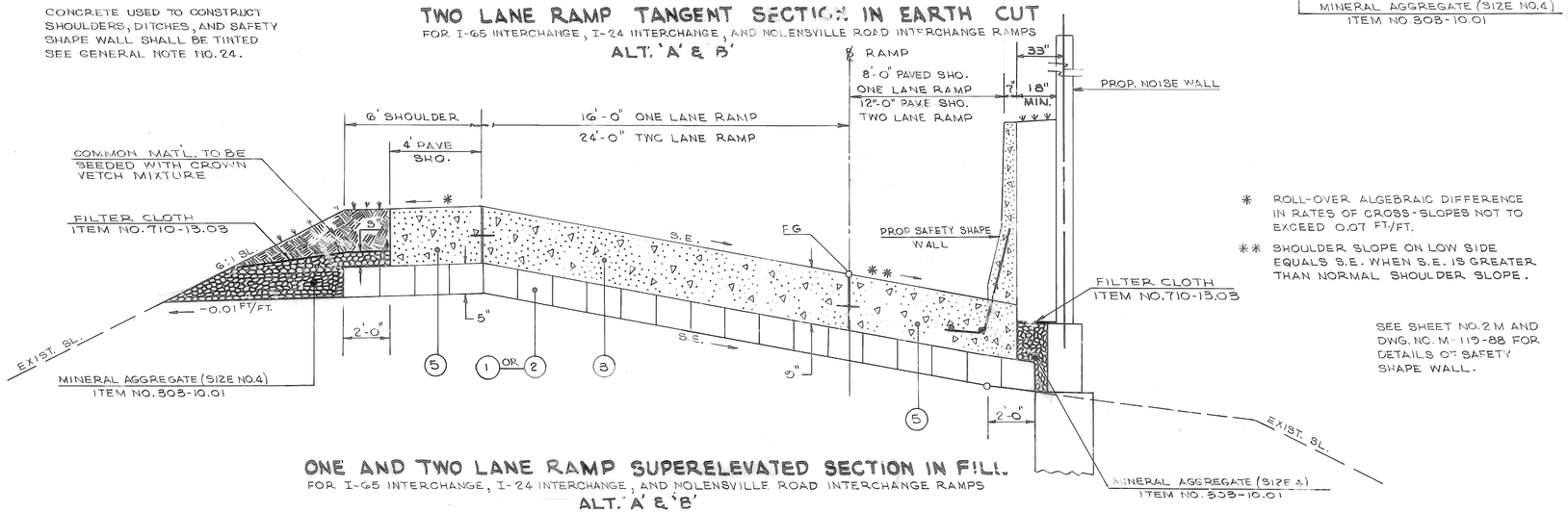
SEE LANDSCAPING PLANS (IN THIS CONTRACT) FOR DETAILS ON PLANTING, SEEDING, ETC. ON SIDE SLOPES.

CONCRETE USED TO CONSTRUCT SHOULDERS, DITCHES, AND SAFETY SHAPE WALL SHALL BE TINTED SEE GENERAL NOTE NO. 24.

TWO LANE RAMP TANGENT SECTION IN EARTH CUT

FOR I-65 INTERCHANGE, I-24 INTERCHANGE, AND NOLENSVILLE ROAD INTERCHANGE RAMPS

ALT. 'A' & 'B'



* ROLL-OVER ALGEBRAIC DIFFERENCE IN RATES OF CROSS-SLOPES NOT TO EXCEED 0.07 FT./FT.

** SHOULDER SLOPE ON LOW SIDE EQUALS S.E. WHEN S.E. IS GREATER THAN NORMAL SHOULDER SLOPE.

SEE SHEET NO. 2M AND DWG. NO. M-119-88 FOR DETAILS OF SAFETY SHAPE WALL.

ONE AND TWO LANE RAMP SUPERELEVATED SECTION IN FILL

FOR I-65 INTERCHANGE, I-24 INTERCHANGE, AND NOLENSVILLE ROAD INTERCHANGE RAMPS

ALT. 'A' & 'B'

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

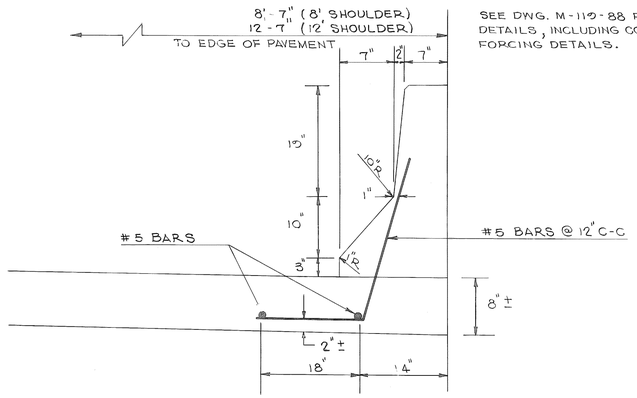
TYPICAL SECTIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2 M

REV. 3-22-85: ADDED TITLE TO NO. 1 CATCH BASIN DETAIL. CHANGED REINFORCING BAR DESIGNATION AND ADDED NOTE TO SAFETY SHAPE WALL DETAIL.

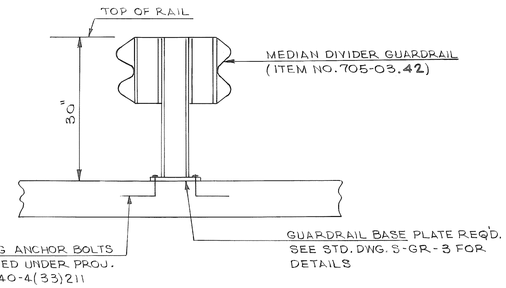
REV. 11-16-83: "CONCRETE PARAPET" ADDED TO DETAIL OF TYPE 1 CATCH BASIN.

REV. 11-14-84: ADDED CONCRETE SLAB JOINT DETAILS.

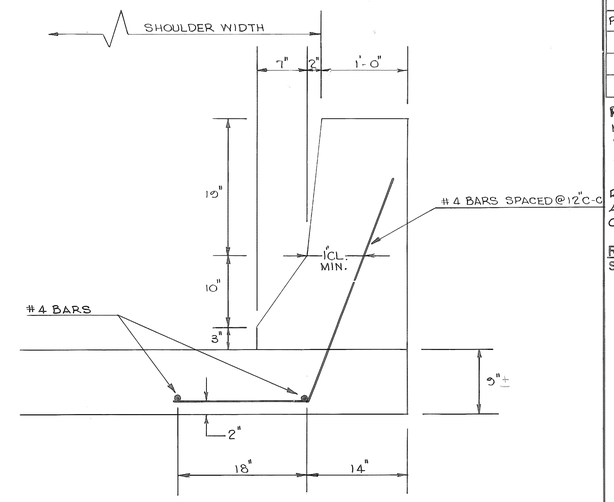


SEE DWG. M-119-88 FOR ADDITIONAL DETAILS, INCLUDING COMPLETE REINFORCING DETAILS.

DETAIL OF SAFETY SHAPE WALL TO BE BUILT IN CONJUNCTION WITH NOISE WALLS

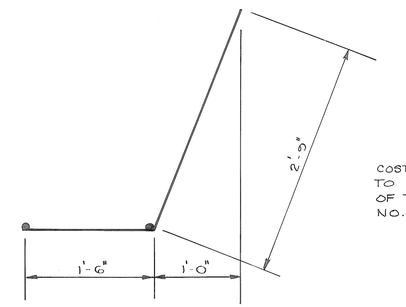


DETAIL FOR MEDIAN DIVIDER GUARDRAIL ACROSS BRANSFORD AVE. BRIDGE

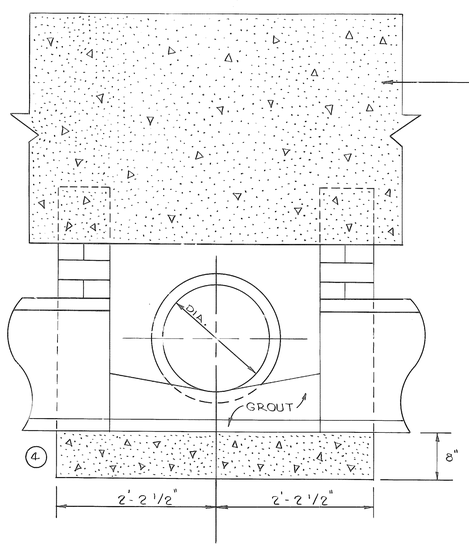


DETAIL OF CONCRETE PARAPET

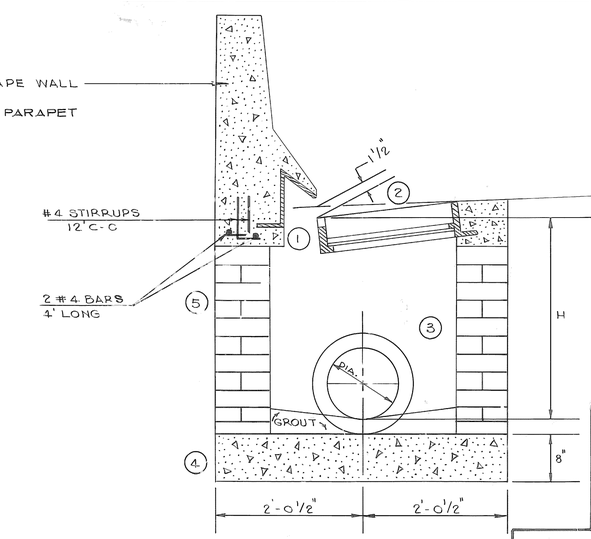
A TEXTURED COATED FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO OFF-WHITE, FEDERAL SPECIFICATION NO 37778, FEDERAL COLOR STANDARD NO. 595A, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER OF STRUCTURES FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE PARAPET LOCATIONS. COST OF TEXTURED COATED FINISH SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. G20-03.



COST OF STEEL BAR REINFORCING TO BE INCLUDED IN THE COST OF THE PARAPET WALL, ITEM NO. G20-03.



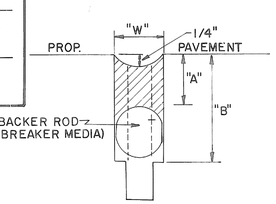
FRONT VIEW



SIDE VIEW

1. FOR CURB IRON DETAIL, SEE STD. DWG. D-CB-12-82.
2. FOR GRATE AND FRAME DETAIL, SEE STD. DWG. D-CB-12-82.
3. FOR STEP DETAIL, SEE STD. DWG. D-CB-12-82 AND D-MH-4.
4. BASE SHALL BE CLASS "A" CONCRETE (CATCHBASIN).
5. BRICK SHALL CONFORM TO AASHTO DESIGNATION, GRADE SM, SIZE NO. 1.

DETAIL OF TYPE 1 CATCH BASIN



LONGITUDINAL & TRANSVERSE JOINT DIMENSIONS				
SILICONE SEALANT				
JOINT SPACING	JOINT WIDTH	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH	MINIMUM JOINT DEPTH
FT.	"W"	"W"+1/8"	"A"	"B"
20 OR LESS	3/8"	1/2"	1/2"	1 1/4"
21-30	1/2"	5/8"	1/2"	1 1/4"

1. SECOND CUT SHALL BE TO DEPTH AND WIDTH GIVEN IN TABLE
2. BOTH CUTS MAY BE MADE AT SAME TIME AT CONTRACTOR'S OPTION

LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND CONTRACTION JOINT DETAIL

CONCRETE SLAB JOINT DETAILS (SILICONE)

(APPLIES TO CONCRETE PAVEMENT AND CONCRETE SHOULDERS)

SEE SPECIAL PROVISION 905A

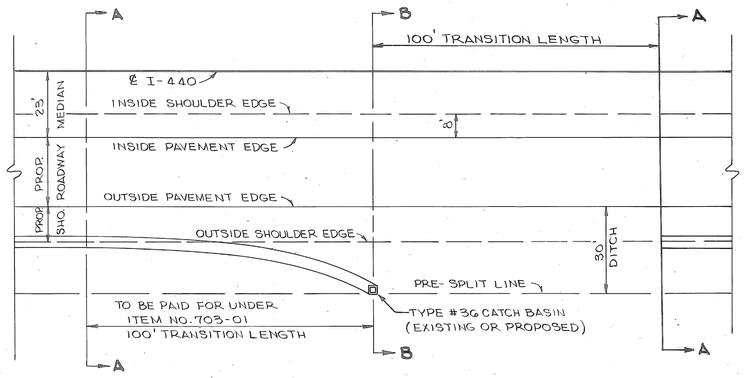
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

MISC. DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2N

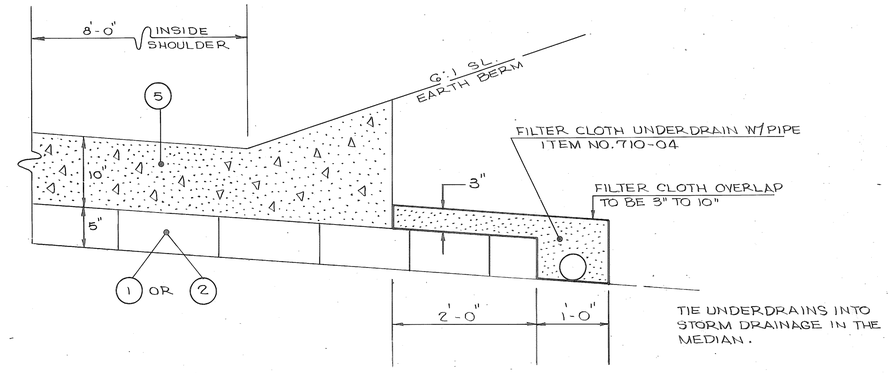
REV. 3-22-83: ADDED DETAIL FOR CONCRETE DITCH TRANSITION.

REV. 11-16-83: ADDED DETAIL FOR FILTER CLOTH UNDER-DRAIN. DETAIL FOR CONCRETE TRANSITION REVISED.

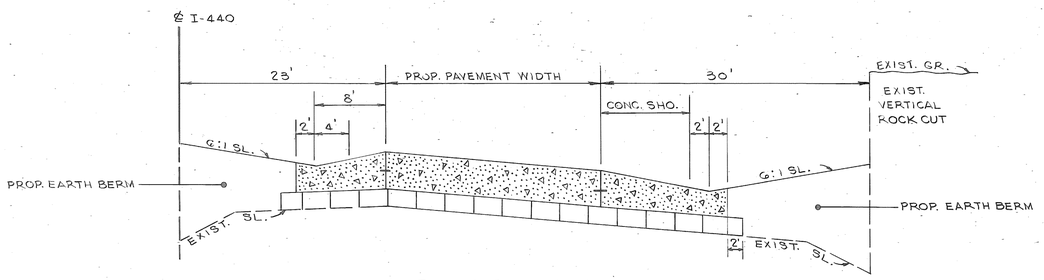


PLAN VIEW

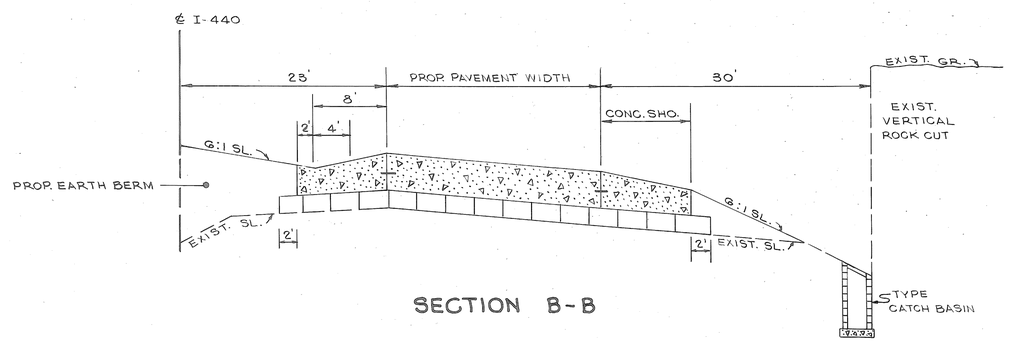
CONCRETE DITCH TRANSITION



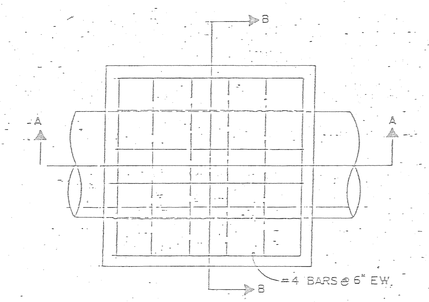
DETAIL FOR FILTER CLOTH UNDERDRAIN AT LOW EDGE OF INSIDE SHOULDER



SECTION A-A



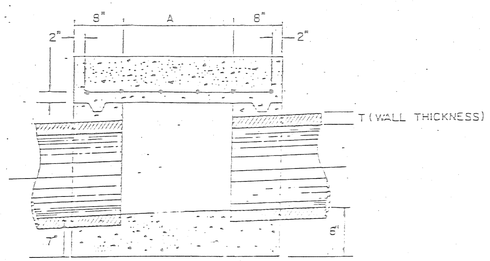
SECTION B-B

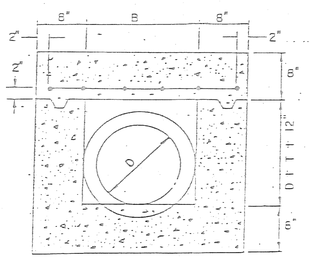


PIPE SIZE	DIMENSION	CLASS A CONCRETE ENTIRE STRUCTURE	CLASS A CONCRETE DEDUCT FOR EACH PIPE OPENING	STEEL REINFORCEMENT
	A OR B	CUBIC YARD		POUND
18"	2'-6"	1.5	0.1	37
24"	3'-0"	2.0	0.2	48
30"	3'-6"	2.5	0.2	60
36"	4'-0"	3.2	0.3	73
42"	4'-6"	3.9	0.3	88
48"	5'-0"	4.7	0.4	104

THE STRUCTURE SHALL BE CONSTRUCTED TO ACCOMMODATE THE LARGEST SIZE PIPE INSTALLED WITHIN THE A OR B DIMENSIONS.

TO BE PAID FOR UNDER ITEM: 604-01.01 & 604-01.02





JUNCTION BOX DETAIL

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

MISCELLANEOUS DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2 P

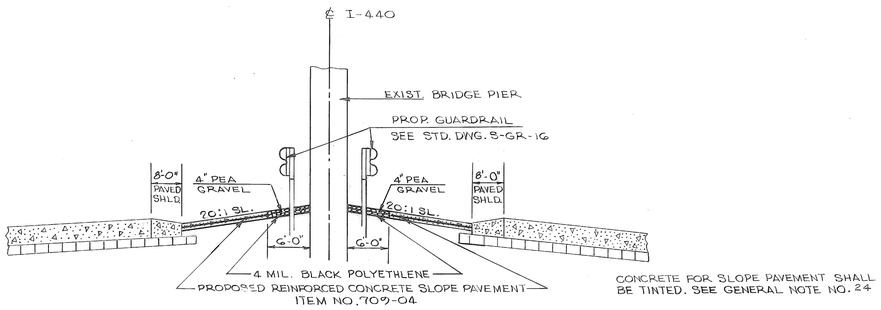
NOTE : COSTS OF PEA GRAVEL AND BLACK POLYETHYLENE ARE TO BE INCLUDED IN ITEM NO. 709-04.

PAVE SLOPES UNDER BRIDGES WITH 4" THICK CEMENT CONCRETE SLAB REINFORCED WITH NO. 4 GAGE WIRE FABRIC @ 6' CENTER AND 58 LBS. PER 100 S.F. THE SLAB SHALL EXTEND THE WIDTH OF THE STRUCTURE. THE WIRE FABRIC REINFORCEMENT SHALL BE PLACED ONE-HALF THE DEPTH OF THE SLAB AND EXTEND TO WITHIN 3" OF ITS EDGE WITH A 2" OVERLAP REQUIRED ON ALL SHEETS. THE COST OF THE WIRE FABRIC REINFORCEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 709-04, REINFORCED CONCRETE SLOPE PAVEMENT. ONE-HALF INCH PREMOULDED EXPANSION JOINTS WITHOUT LOAD TRANSFERS SHALL BE FORMED ABOUT ALL STRUCTURES AND FEATURES PROJECTING THRU, IN OR AGAINST THE SLAB. THE SLAB SHALL BE GROOVED PARALLEL WITH AND AT RIGHT ANGLES TO THE UNDER ROADWAY CENTER LINE AT 6' CENTER TO CENTER. DEPTH OF GROOVE TO BE NOT LESS THAN 1".

REV. 3-22-83: CHANGED SECTION 'A-A' TO SHOW PEA GRAVEL, BLACK POLYETHYLENE AND REINFORCING.

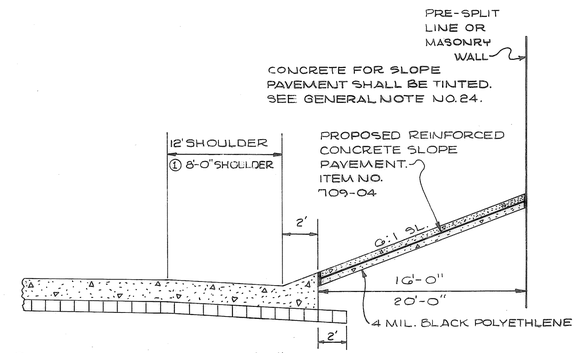
REV. 11-16-83 NOTE ON PAVED SLOPE UNDER BRIDGES REVISED. WIDTH OF PAVED SHOULDER REVISE ON SAME DETAIL.

REV. 12-12-85: ADDED TREATMENT DETAIL



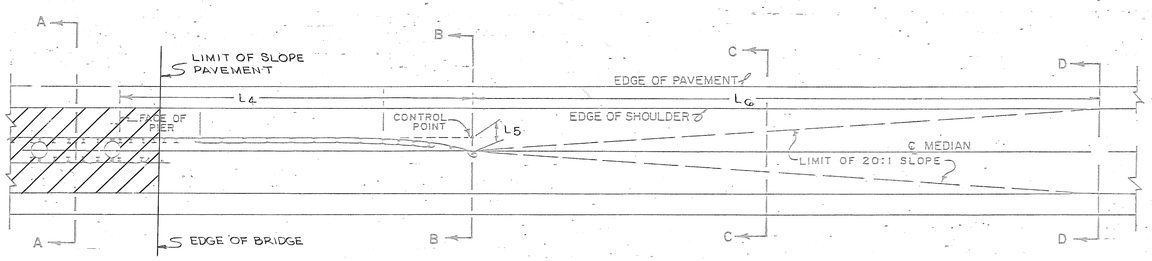
SECTION "A-A"

DETAIL OF MEDIAN TREATMENT AT BRIDGE PIERS



① PAVED SHOULDER WIDTH IS 8'-0" WHEN AUXILIARY LANE IS PRESENT. SEE PROPOSED LAYOUTS FOR LOCATIONS.

DETAIL OF TREATMENT BELOW BRIDGE ABUTMENTS

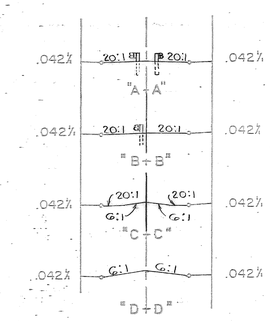


MEDIAN TREATMENT TYPE "B"

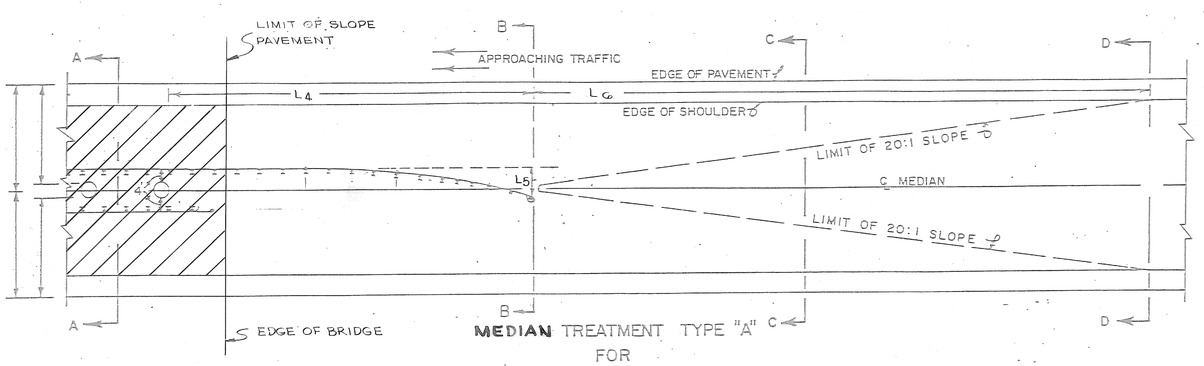
(FOR MEDIAN WIDTH > 30' < 48')

HALF TYPICAL- TREATMENT IS SAME FOR APPROACHING TRAFFIC IN OTHER DIRECTION BUT ON OPPOSITE SIDE FROM THAT AS SHOWN.

FOR DIMENSIONS SEE STD. DWG. S-GR-16



SECTIONS TYPE "B"



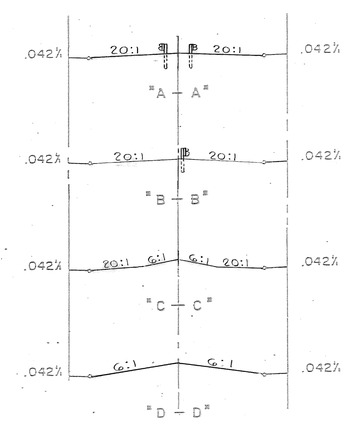
MEDIAN TREATMENT TYPE "A"

FOR

PIERS IN MEDIAN

(FOR MEDIAN WIDTH 48' TO 60' INCLUSIVE)

HALF TYPICAL- TREATMENT IS SAME FOR APPROACHING TRAFFIC IN OTHER DIRECTION BUT ON OPPOSITE SIDE FROM THAT AS SHOWN.



SECTIONS TYPE "A"

NOTE

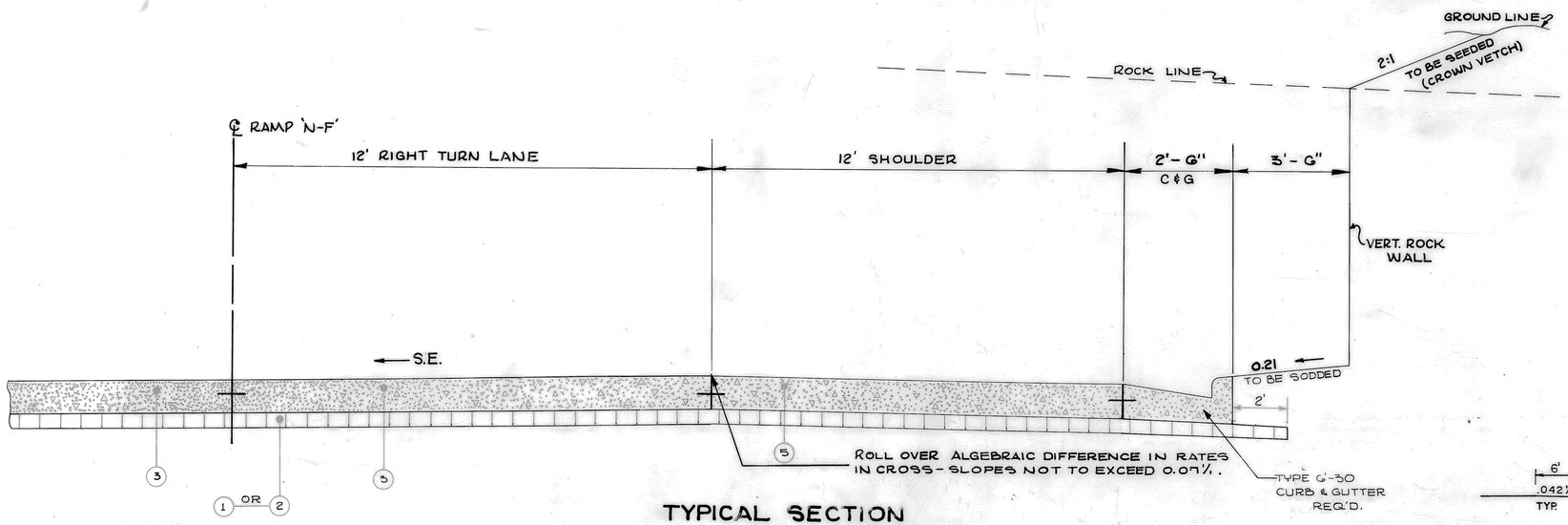
THESE DETAILS SHALL ALSO BE USED WHERE THE VERTICAL MEMBERS OF OVERHEAD SIGN STRUCTURES ARE IN THE MEDIAN, EXCEPT THAT NO SLOPE PAVEMENT WILL BE REQUIRED. SEE PROPOSED LAYOUTS FOR LOCATIONS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DETAIL OF MEDIAN TREATMENT AT BRIDGE PIERS

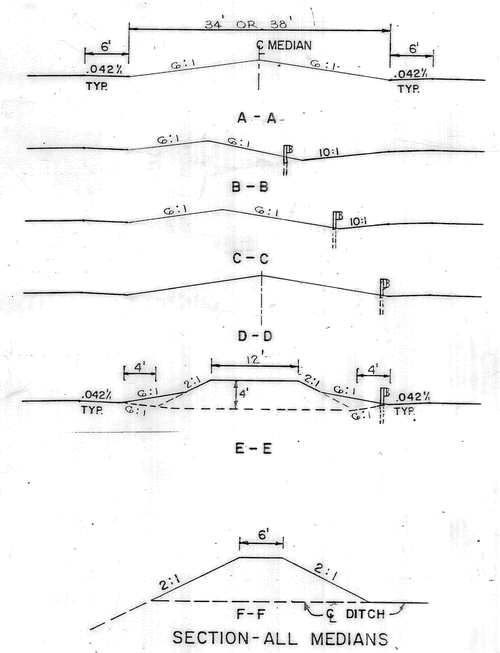
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2Q

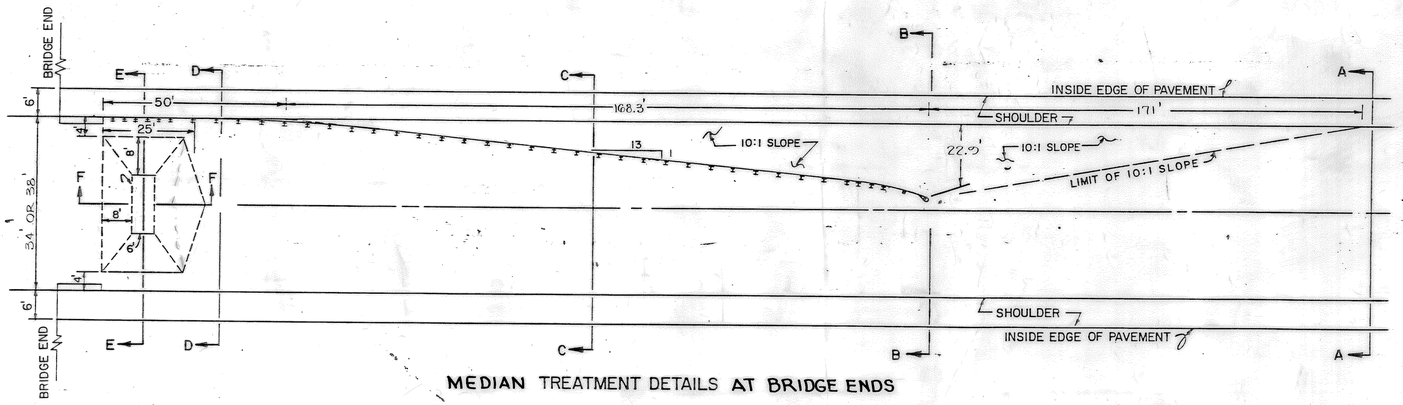
REV. 12-12-83: ADDED TYPICAL SECTION OF RAMP 'N-F'.



TYPICAL SECTION

(RIGHT TURN LANE RAMP 'N-F')
FROM STA. 8+00 TO STA. 12+00





MEDIAN TREATMENT DETAILS AT BRIDGE ENDS

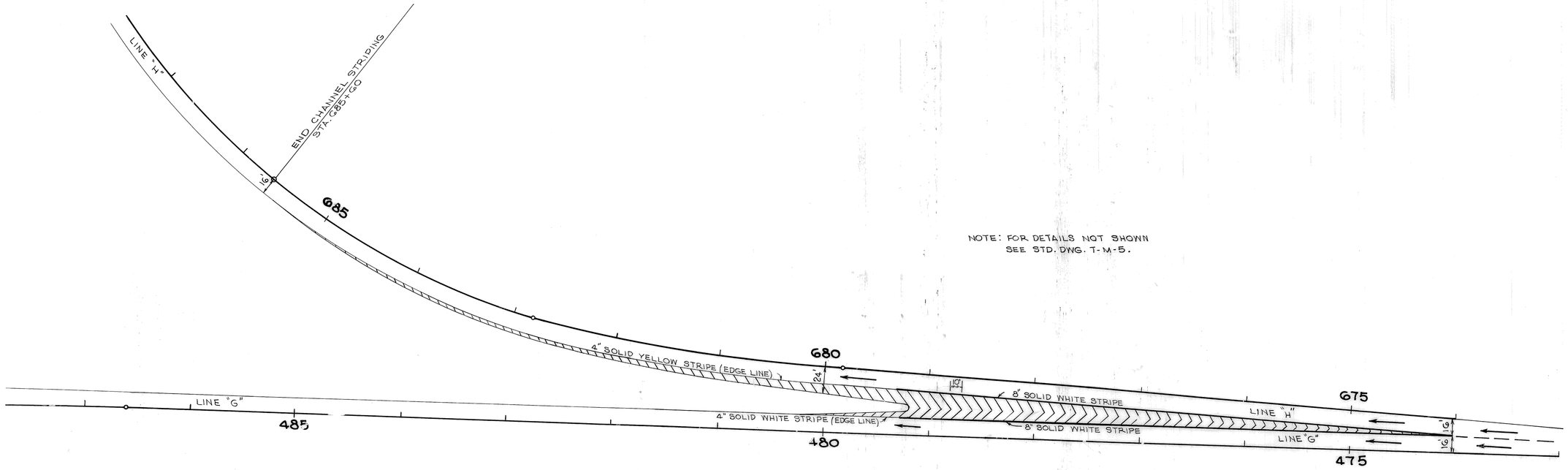
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DETAIL OF MEDIAN TREATMENT AT BRIDGE ENDS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2R

REV. 11-16-83 : DESIGNATION OF DETAILS ADDED, DISTANCE BETWEEN BARRELS REVISED ON 'N-E' & 'N-W' ROADWAY SPLIT.

REV. 11-14-84 : CHANGED PAINTED LINE TO REMOVABLE LINE, AND ADDED NOTES ON LOWER DETAIL.



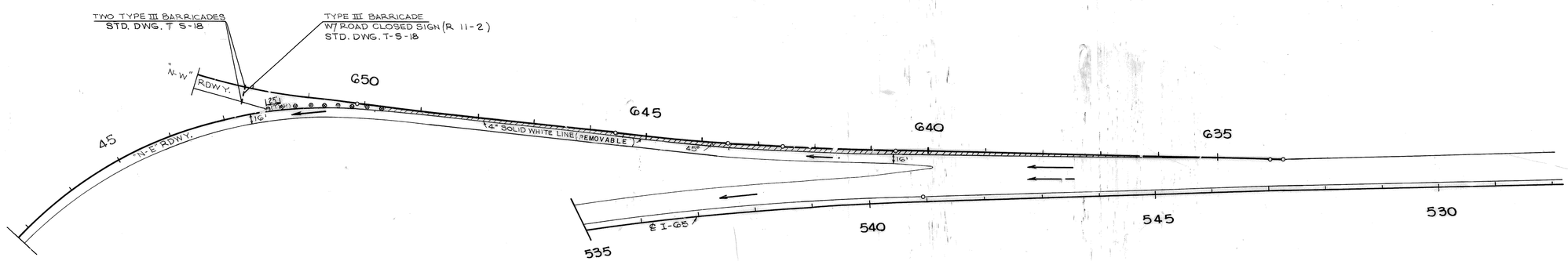
NOTE: FOR DETAILS NOT SHOWN SEE STD. DWG. T-M-5.

I-24 & I-440

SCALE: 1" = 50'

NOTES: DIAGONAL LINES SHALL BE 4" SOLID WHITE LINE (REMOVABLE) SPACED 25' APART.

ALL LINES DESIGNATED "REMOVABLE" SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.01.



I-65 & I-440

SCALE: 1" = 100'

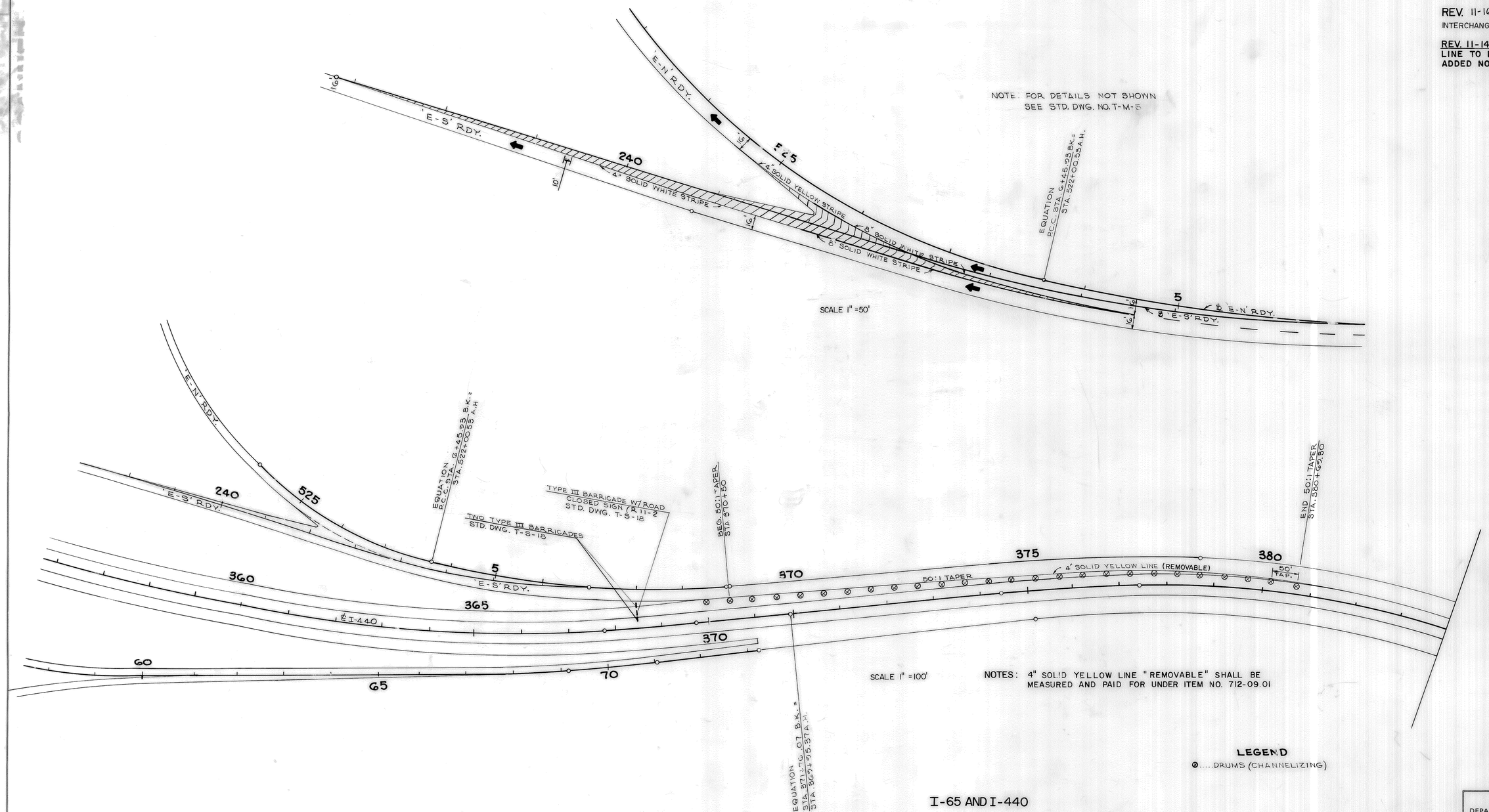
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SPECIAL MARKING DETAIL

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	28

REV. 11-16-83 DESIGNATION OF INTERCHANGE ADDED.

REV. 11-14-84: CHANGED PAINTED LINE TO REMOVABLE LINE AND ADDED NOTE.



NOTES: 4" SOLID YELLOW LINE "REMOVABLE" SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.01

LEGEND

⊗.....DRUMS (CHANNELIZING)

I-65 AND I-440

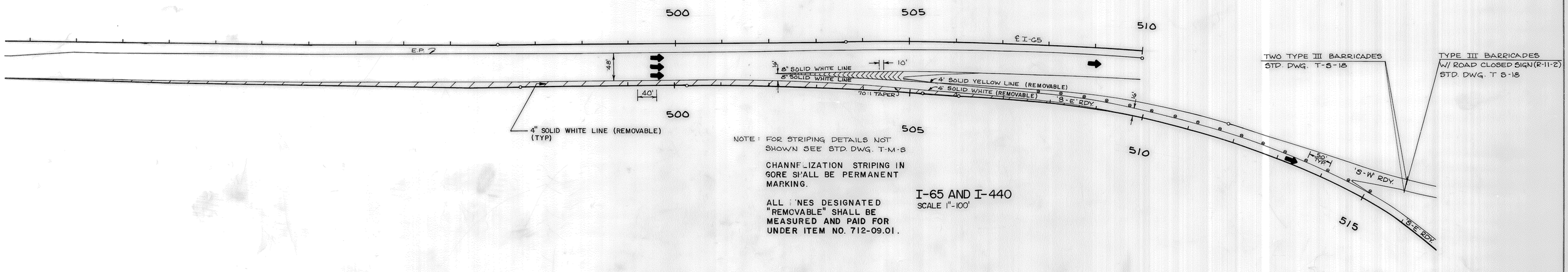
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SPECIAL MARKING DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2T

REV. 11-16-83 : DESIGNATION OF INTERCHANGE ADDED

REV. 11-14-84: CHANGED CHANNELIZATION STRIPING IN GORE FROM TEMPORARY TO PERMANENT MARKING, CHANGED PAINTED LINE TO REMOVABLE LINE, DESIGNATED DIAGONAL LINES AS 4" REMOVABLE LINE, AND ADDED NOTES.



NOTE: FOR STRIPING DETAILS NOT SHOWN SEE STD. DWG. T-M-S

CHANNELIZATION STRIPING IN GORE SHALL BE PERMANENT MARKING.

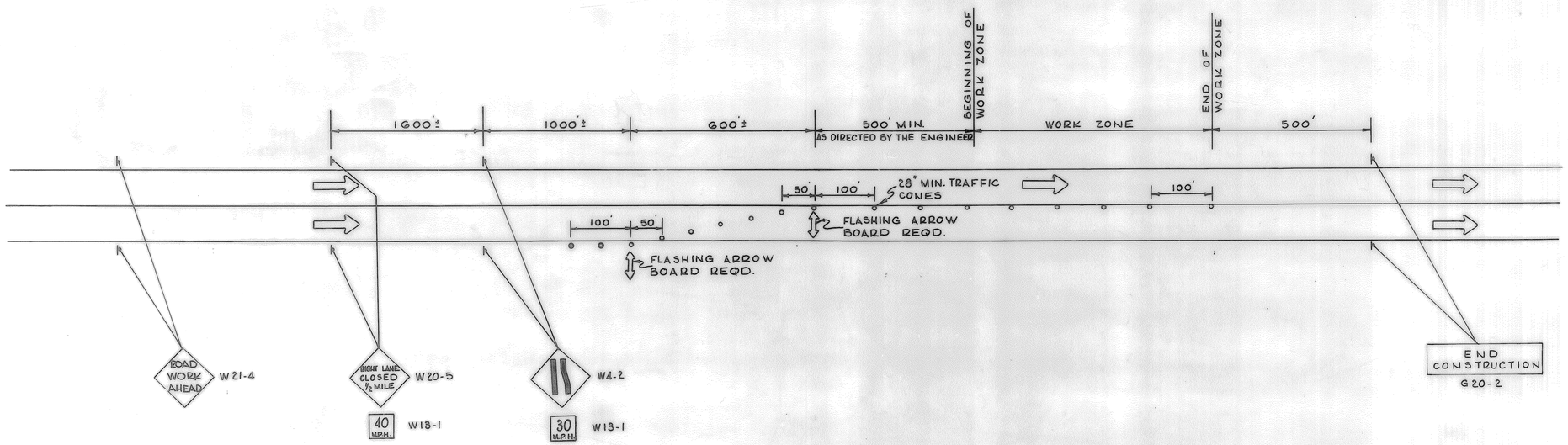
ALL LINES DESIGNATED "REMOVABLE" SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.01.

I-65 AND I-440
SCALE 1"-100'

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SPECIAL MARKING DETAIL

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2U



TYPICAL SHOWING CLOSING OF 1-LANE OF INTERSTATE

THE SIGNING FOR DETOURING AND MAINTAINING TRAFFIC IS THE MINIMUM AMOUNT THAT WILL BE REQUIRED. THE CONTRACTOR MAY NEED TO PROVIDE ADDITIONAL SIGNS AS DEEMED NECESSARY.

THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE CONES AT THE END OF EACH DAYS WORK & REPLACE THEM BEFORE THE START OF EACH DAYS WORK.

ALL SIGNS SHALL AGREE WITH "MANUAL UNIFORM TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS." FOR DETAILS OF FLASHING ARROW BOARD SEE STD. DWG. NO. S-FA-5.

WHERE CONES ARE USED ADJACENT TO LANES OF MOVING TRAFFIC WHERE THERE WILL BE A WIND CREATED BY PASSING VEHICLES, WEIGHTED CONES WILL BE NECESSARY AS OUTLINED IN SECTION GC-9 M.U.T.C.D. 1971, CURRENT EDITION.

THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN TRAFFIC AS FOLLOWS:

1. THE CONTRACTOR WILL BE PERMITTED TO CLOSE ONE-LANE OF TRAFFIC FROM 9 A.M. TO 3 P.M. TYPICAL DETAILS OF CLOSURE SHOWN ON THIS SHEET. THE CONTRACTOR WILL BE REQUIRED TO HAVE ALL TRAFFIC CONTROL DEVICES REMOVED FROM ROADWAY BEFORE 3 P.M.
2. THE CONTRACTOR WILL BE PERMITTED TO CLOSE INTERSTATE TRAFFIC WHILE INSTALLING OVERHEAD SIGN TRUSS OR DIAGRAMMATIC SIGN FACES. HE WILL NOT BE ABLE TO STOP TRAFFIC MORE THAN 10 MINUTES AT ANY ONE TIME. IN THE EVENT THAT AN EMERGENCY VEHICLE HAS TO GET THROUGH, THE CONTRACTOR WILL STOP ALL WORK AND ALLOW THEM TO PASS. DURING THE PERIOD OF CLOSURE POLICE OFFICERS SHALL BE IN THE EMPLOY OF THE CONTRACTOR TO ASSIST IN THE CONTROL OF TRAFFIC. TRAFFIC WILL ONLY BE CLOSED ON A SUNDAY FROM 6 A.M. TO 10 A.M.
3. THE REGIONAL TRAFFIC ENGINEER SHALL REVIEW AND APPROVE THE LAYOUT OF THESE LANE CLOSURES PRIOR TO THEIR PLACEMENT.
4. THE CONTRACTOR WILL NOT BE ALLOWED TO CLOSE ANY INTERSTATE LANES DURING A HOLIDAY WEEKEND.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DETAILS OF MAINTAINING TRAFFIC

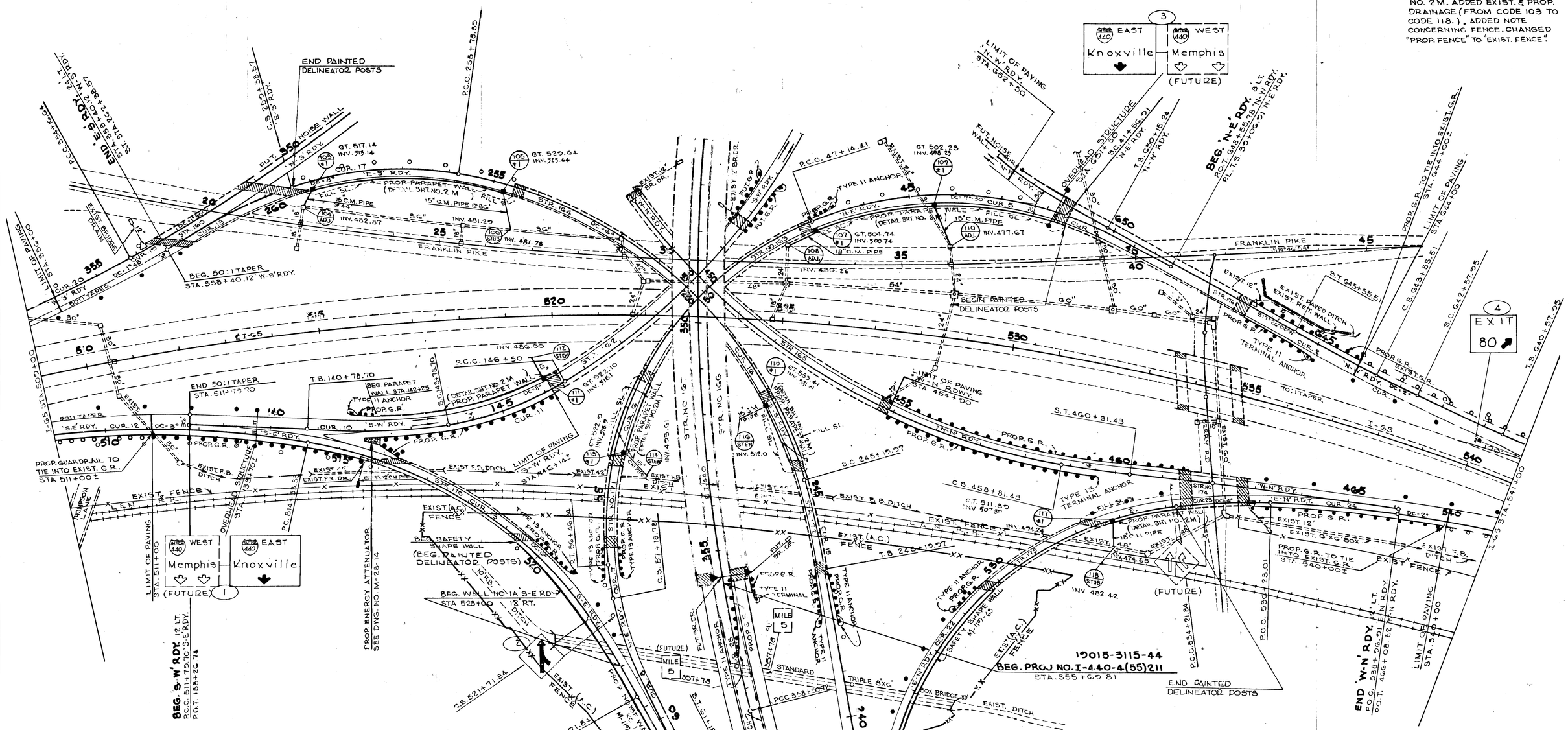
REV. 11-16-83 TYPE 24 CATCH BASINS CHANGED TO TYPE I CATCH BASINS, AND INVERTS REVISED ON CATCH BASIN NOS. 103,105,107,109,111,113,115,117
REFERENCE TO STRUCTURE DWG. NO. FOR NOISE WALLS ADDED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	3

REV. 3-22-83 : ADDED PAVING LIMIT ON 'W-N' RDWY. REFERENCED PARAPET WALLS TO DETAIL SHEET NO. 2M. ADDED EXIST. & PROP. DRAINAGE (FROM CODE 103 TO CODE 118.). ADDED NOTE CONCERNING FENCE. CHANGED "PROP. FENCE" TO "EXIST. FENCE".

NOTE

COST OF STUBBING 12" & 18" PIPES INTO EXIST. 36" OR 48" PIPE TO BE INCLUDED IN COST OF C.M. PIPE.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

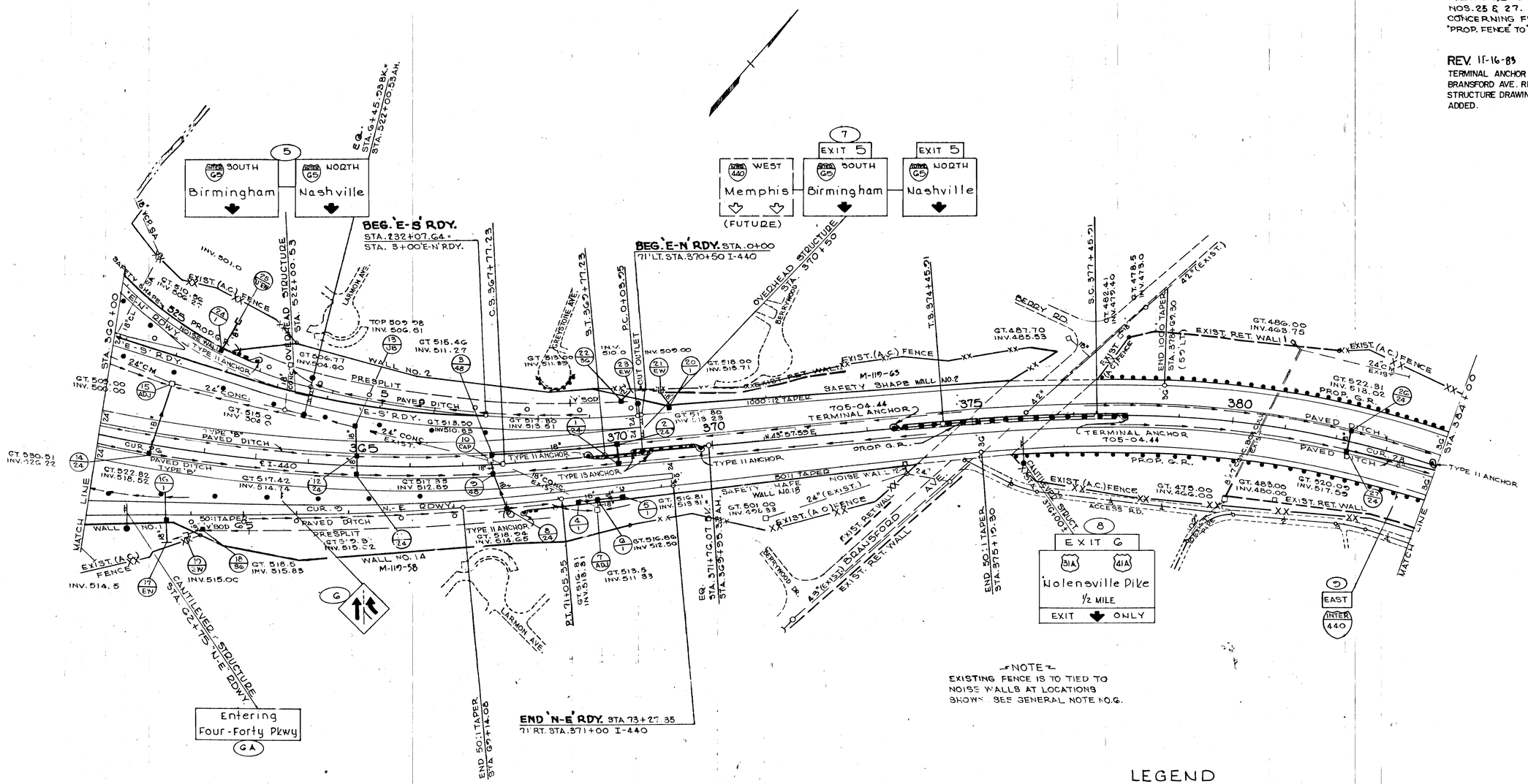
BEG. PROJ. TO STA. 540+00

Plans Divn. File No. IN-332

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	4

REV. 3-22-83: REVISED CODE NOS. 25 & 27. ADDED NOTE CONCERNING FENCE. CHANGED "PROP. FENCE" TO "EXIST. FENCE".

REV. 11-16-83 ITEM NO FOR TERMINAL ANCHOR CORRECTED ON BRANSFORD AVE. REFERENCE TO STRUCTURE DRAWING ON NOISE WALLS ADDED.



-NOTE-
EXISTING FENCE IS TO TIED TO NOISE WALLS AT LOCATIONS SHOWN. SEE GENERAL NOTE NO. 6.

NOTE: FOR MEDIAN PIER PROTECTION GRADING DETAILS SEE SHEET NO. 2P FOR DETAILS.

LEGEND
- ○ SINGLE WHITE DELINEATOR
- ● SINGLE YELLOW DELINEATOR

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 360+00 TO STA. 384+00

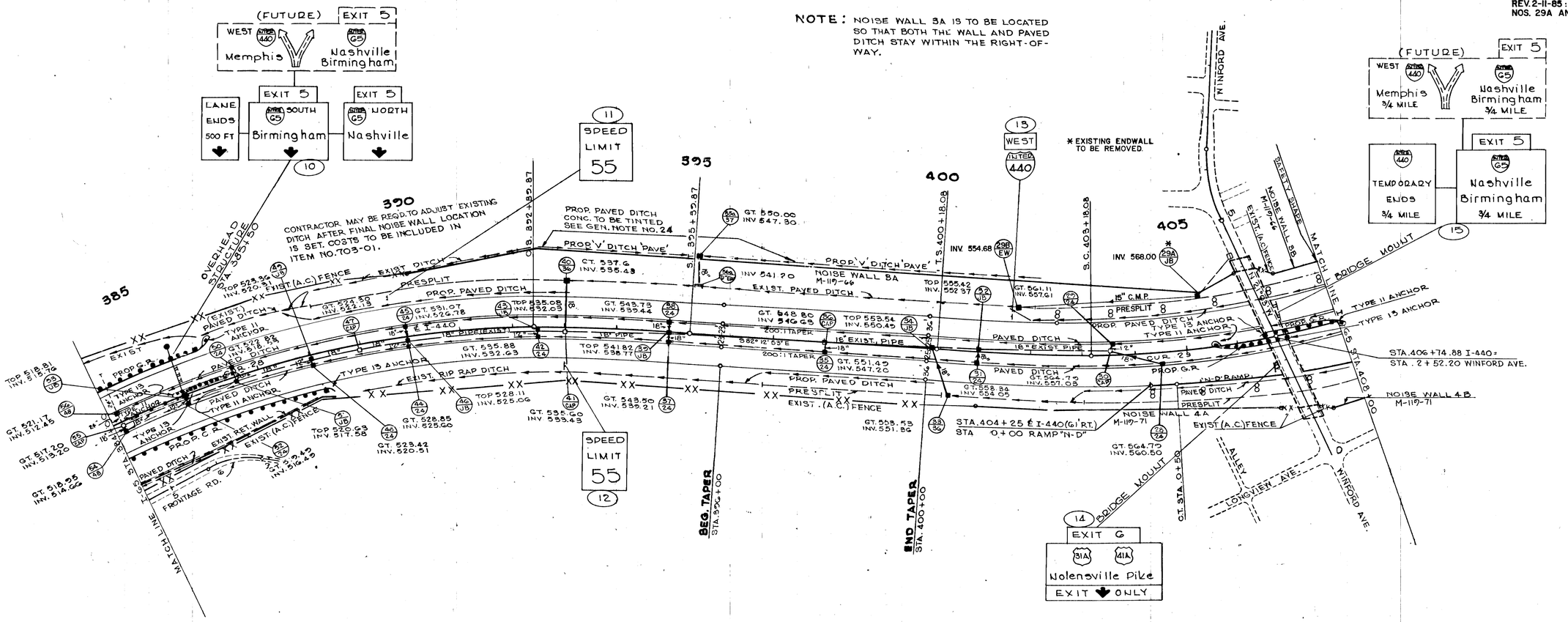
SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	5

REV. 3-22-83: REVISED CODE NOS. 40 & 56a. ADDED NOTE CONCERNING FENCE. CHANGED "PROP. FENCE" TO "EXIST. FENCE".

REV. 11-16-83 REFERENCE TO STRUCTURE DWG. NO ADDED TO NOISE WALLS

REV. 2-11-85: ADDED DRAINAGE CODE NOS. 29A AND 29B, AND PIPE.



NOTE: FOR MEDIAN PIER PROTECTION GRADING DETAILS SEE SHEET NO. 2P FOR DETAILS.

NOTE
EXISTING FENCE IS TO TIED TO NOISE WALLS AT LOCATIONS SHOWN SEE GENERAL NOTE NO.6.

LEGEND
∞ DOUBLE WHITE DELINEATOR

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 384+00 TO STA. 408+00

SCALE: 1" = 100'

TENN. STATE HIGHWAYS
Plans Divn. File IN-832

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	6

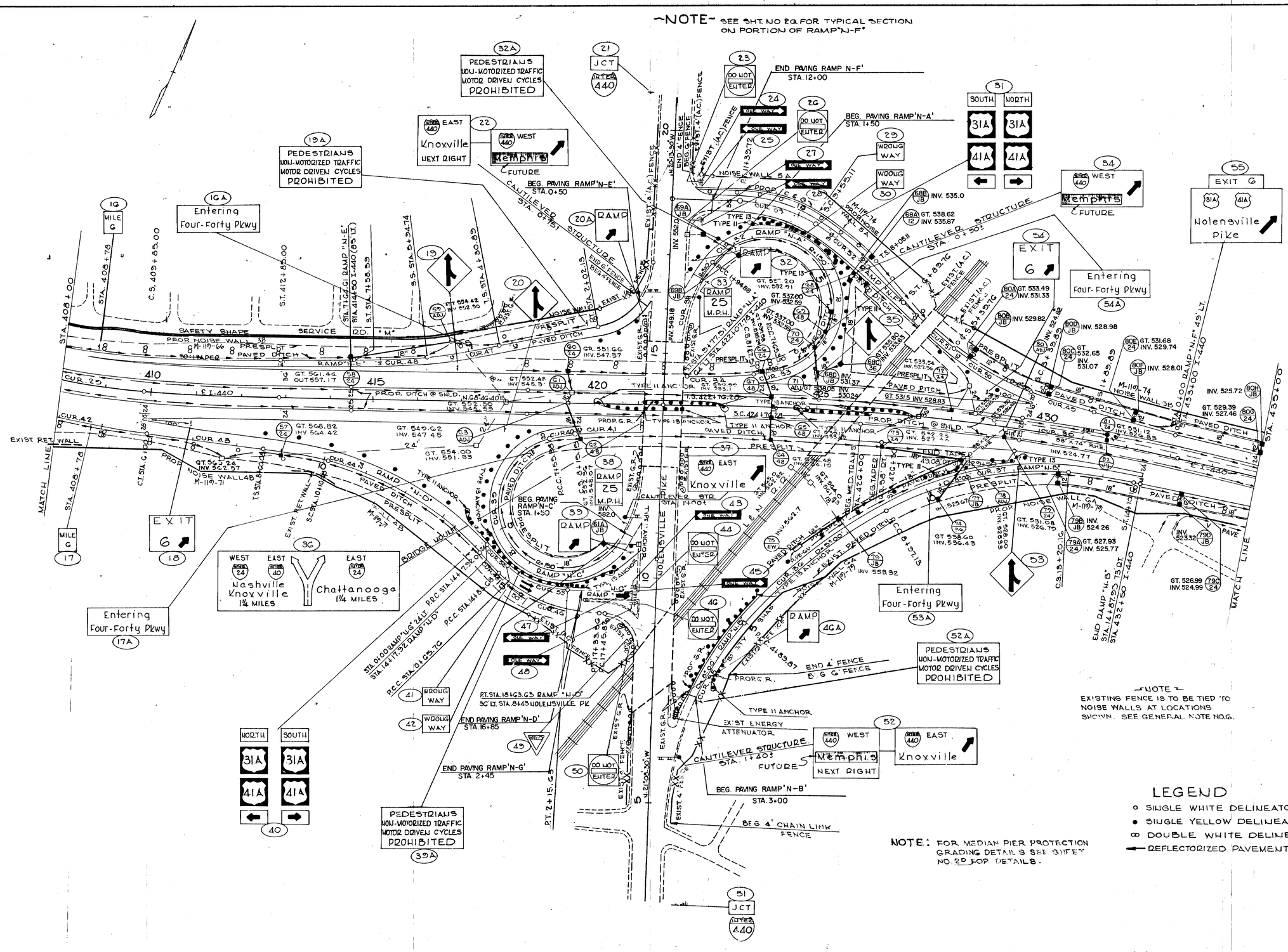
REV. 3-22-83: ADDED LIMITS OF 4' & 6' FENCE, LABELED ENERGY ATTENUATOR AS EXISTING. ADJUSTED DRAINAGE CODE NO 66. ADDED NOTE CONCERNING FENCE. CHANGED "PROP. FENCE" TO "EXIST. FENCE".

REV. 11-16-83 REFERENCE TO STRUCTURE DWG. NOS. FOR NOISE WALLS ADDED. LIMITS OF PAVING ADDED TO NOLENSVILLE ROAD INTERCHANGE RAMPS

REV. 12-12-83: ADDED NOTE REGARDING TO RAMP "N-F".

REV. 2-11-85 :ADDED DRAINAGE STRUCTURE NOS. 61A, 68A, 68B, 68C, 68D, 69A, 69B, 79A, 79B, 79C, 79D, 80A, 80B, 80C, 80D, 80E, 80F, 80G, & 80H. ADDED PIPE FOR THESE STRUCTURES. ADDED PROPOSED GUARDRAIL AND TERMINAL ANCHORS ON RAMPS "N-A", "N-B", & "N-F". ADDED PAVED DITCH ON RIGHT FROM STA 433+50 TO STA 435+25.

~NOTE~ SEE SHT. NO 2G FOR TYPICAL SECTION ON PORTION OF RAMP "N-F"



~NOTE~
EXISTING FENCE IS TO BE TIED TO NOISE WALLS AT LOCATIONS SHOWN. SEE GENERAL NOTE NO.6.

NOTE: FOR MEDIAN PIER PROTECTION GRADING DETAILS SEE SHEET NO. 2D FOR DETAILS.

LEGEND

- ○ SINGLE WHITE DELINEATOR
- ● SINGLE YELLOW DELINEATOR
- ∞ DOUBLE WHITE DELINEATOR
- ← REFLECTORIZED PAVEMENT ARROW

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 408+00 TO STA. 435+00

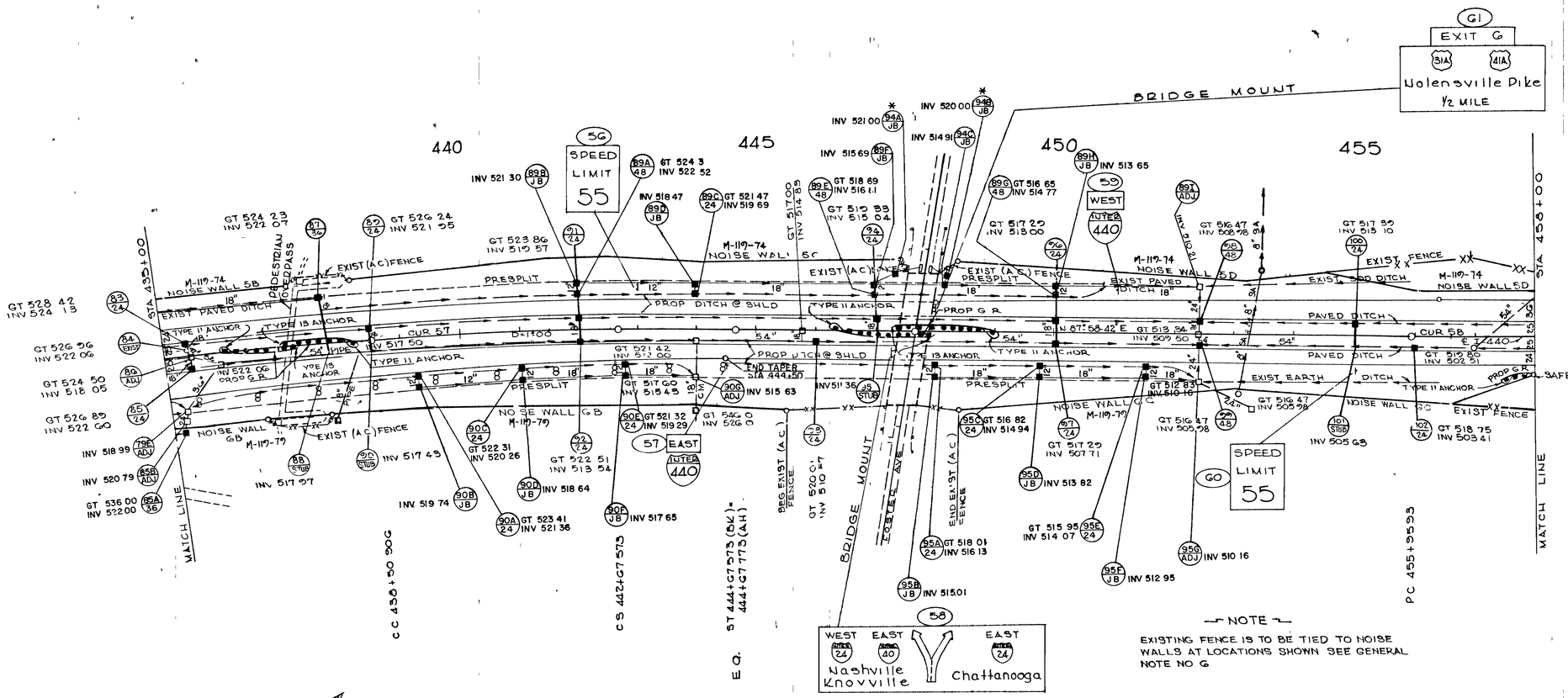
SCALE: 1" = 100'

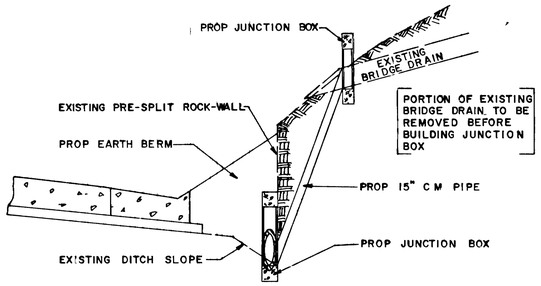
TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)271	7

REV. 5-22-83: ADDED NOTE CONCERNING FENCE CHANGED PROP FENCE TO EXIST FENCE

REV 11-16-83 REFERENCE TO STRUCTURE DWG NOS ADDED TO WALLS

REV 2-11-85 ADDED END OF TAPER STA 444+50 ADDED DRAINAGE STRUCTURES NOS 79E, 85A, 85B, 89A, 89B, 89C, 89D, 89E, 89F, 89G, 89H, 89I, 90A, 90B, 90C, 90D, 90E, 90F, 90G, 94A, 94B, 94C, 95A, 95B, 95C, 95D, 95E, 95F, & 95G ADDED ALL PIPE NECESSARY FOR THESE STRUCTURES. ADDED DETAIL FOR BRIDGE DRAIN TREATMENT





* DETAIL FOR BRIDGE DRAIN TREATMENT

NOTE: FOR MEDIAN PIER PROTECTION GRADING DETAILS SEE SHEET NO 2P FOR DETAILS

LEGEND

∞ DOUBLE WHITE DELINEATOR

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA 435+00 TO STA 458+00

SCALE 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	8

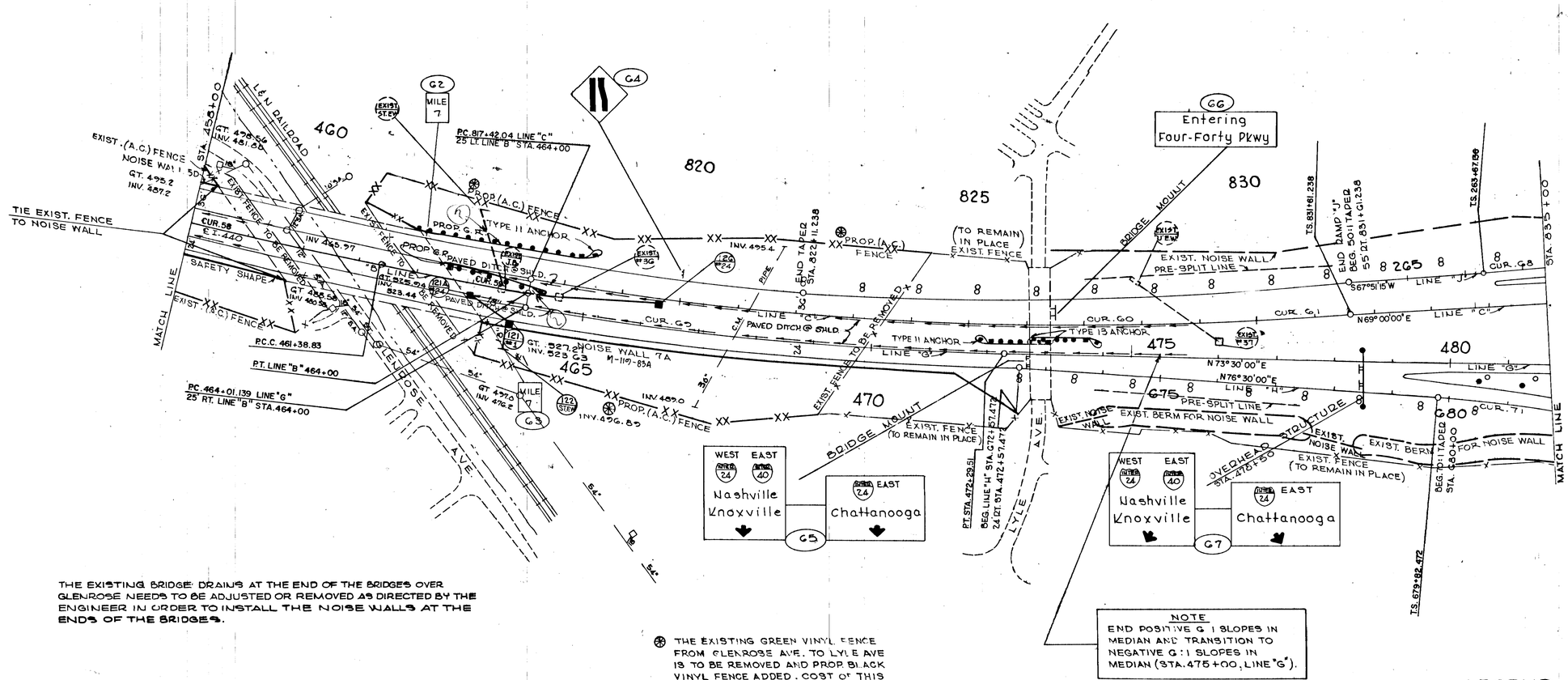
REV. 3-22-83: ADDED PROPOSED DRAINAGE STRUCTURES (CODES 119 TO 124). NOTES CONCERNING FENCING AND LANDSCAPING ADDED. CHANGED "PROP. FENCE" TO "EXIST. FENCE".

REV. 11-16-83 REFERENCE TO STRUCTURE DWG. NO. FOR NOISE WALL ADDED TO PLANS. & CURVE POINT STATIONS AND BEARINGS ADDED TO ALIGNMENT.

REV. 12-12-83: DELETED DRAINAGE ITEMS 119 & 120, AND ADDED DRAINAGE ITEMS 121A & 126, AND ADDED GUARDRAIL AT BRIDGE OVER GLENROSE, ALSO DRAINAGE ITEMS 123 & 124 CHANGED FROM PROPOSED TO EXISTING. CHANGED 121 FROM NO. 24 C.B. TO NO. 1 C.B.

NOTE

THE CONTRACTOR WILL NOT BE REQUIRED TO INSTALL POSITIVE G:1 SLOPES AT THE VERTICAL ROCK SLOPES ALONG RAMPS 'LINE J' AND 'LINE H'. THE ROCK DITCHES ON THESE RAMPS WILL BE CAPPED WITH COMMON MATERIAL AND SEEDED AND/OR PLANTED AS INDICATED ON THE LANDSCAPING PLANS.



THE EXISTING BRIDGE DRAINS AT THE END OF THE BRIDGES OVER GLENROSE NEEDS TO BE ADJUSTED OR REMOVED AS DIRECTED BY THE ENGINEER IN ORDER TO INSTALL THE NOISE WALLS AT THE ENDS OF THE BRIDGES.

⊛ THE EXISTING GREEN VINYL FENCE FROM GLENROSE AVE. TO LYLE AVE IS TO BE REMOVED AND PROP. BLACK VINYL FENCE ADDED. COST OF THIS WORK TO BE INCLUDED IN THE APPROPRIATE PAY ITEMS.

NOTE

END POSITIVE G:1 SLOPES IN MEDIAN AND TRANSITION TO NEGATIVE G:1 SLOPES IN MEDIAN (STA. 475+00, LINE "G").

LEGEND

- ○ SINGLE WHITE DELINEATOR
- ● SINGLE YELLOW DELINEATOR
- ∞ DOUBLE WHITE DELINEATOR

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

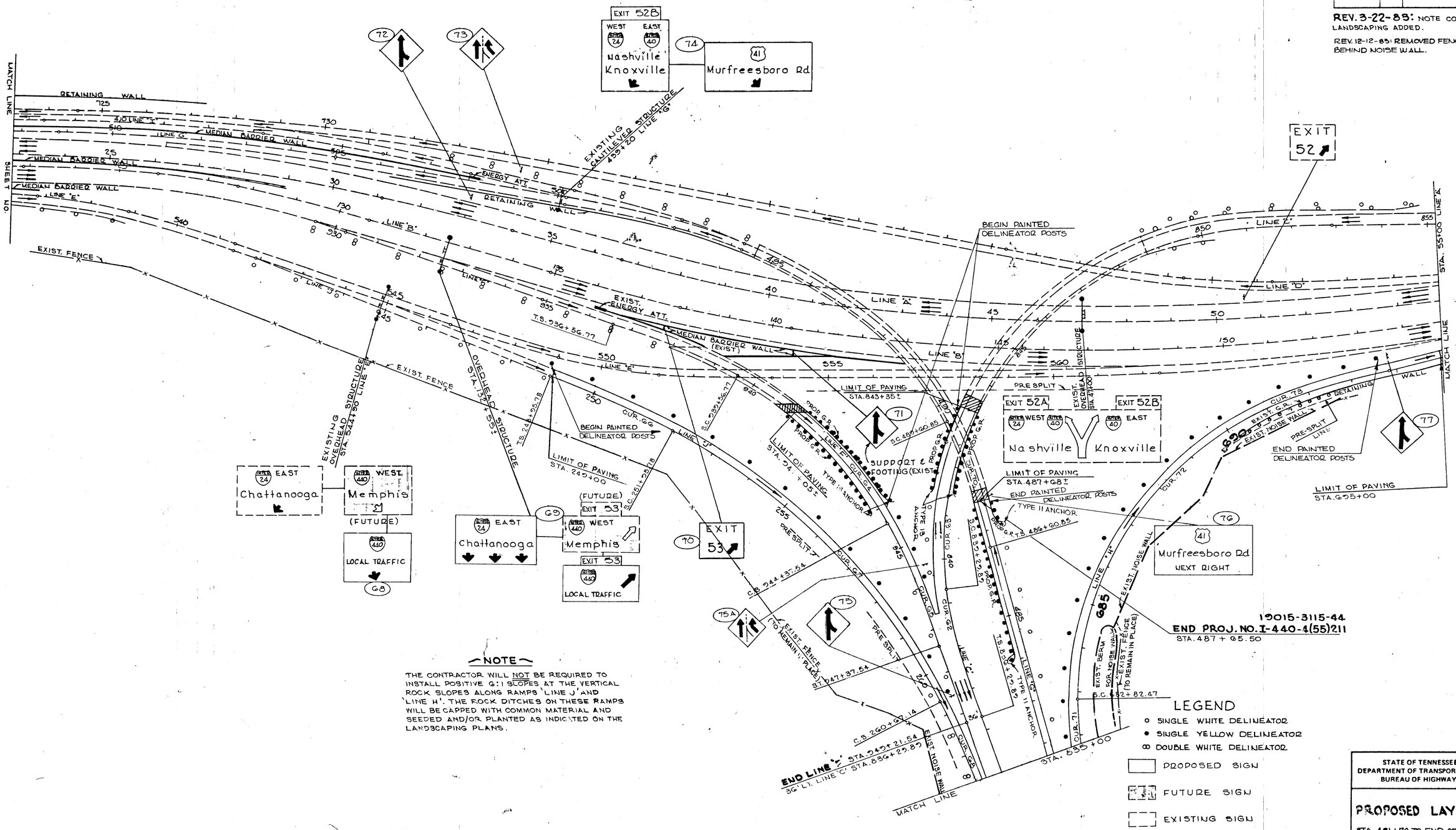
STA. 455+00 TO STA. 481+70

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	3

REV. 3-22-83: NOTE CONCERNING LANDSCAPING ADDED.

REV. 12-12-83: REMOVED FENCE BEHIND NOISE WALL.



NOTE

THE CONTRACTOR WILL NOT BE REQUIRED TO INSTALL POSITIVE 6:1 SLOPES AT THE VERTICAL ROCK SLOPES ALONG RAMPS 'LINE J' AND 'LINE H'. THE ROCK DITCHES ON THESE RAMPS WILL BE CAPPED WITH COMMON MATERIAL AND SEEDED AND/OR PLANTED AS INDICATED ON THE LANDSCAPING PLANS.

LEGEND

- ○ SINGLE WHITE DELINEATOR
- ● SINGLE YELLOW DELINEATOR
- ∞ DOUBLE WHITE DELINEATOR
- PROPOSED SIGN
- FUTURE SIGN
- EXISTING SIGN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

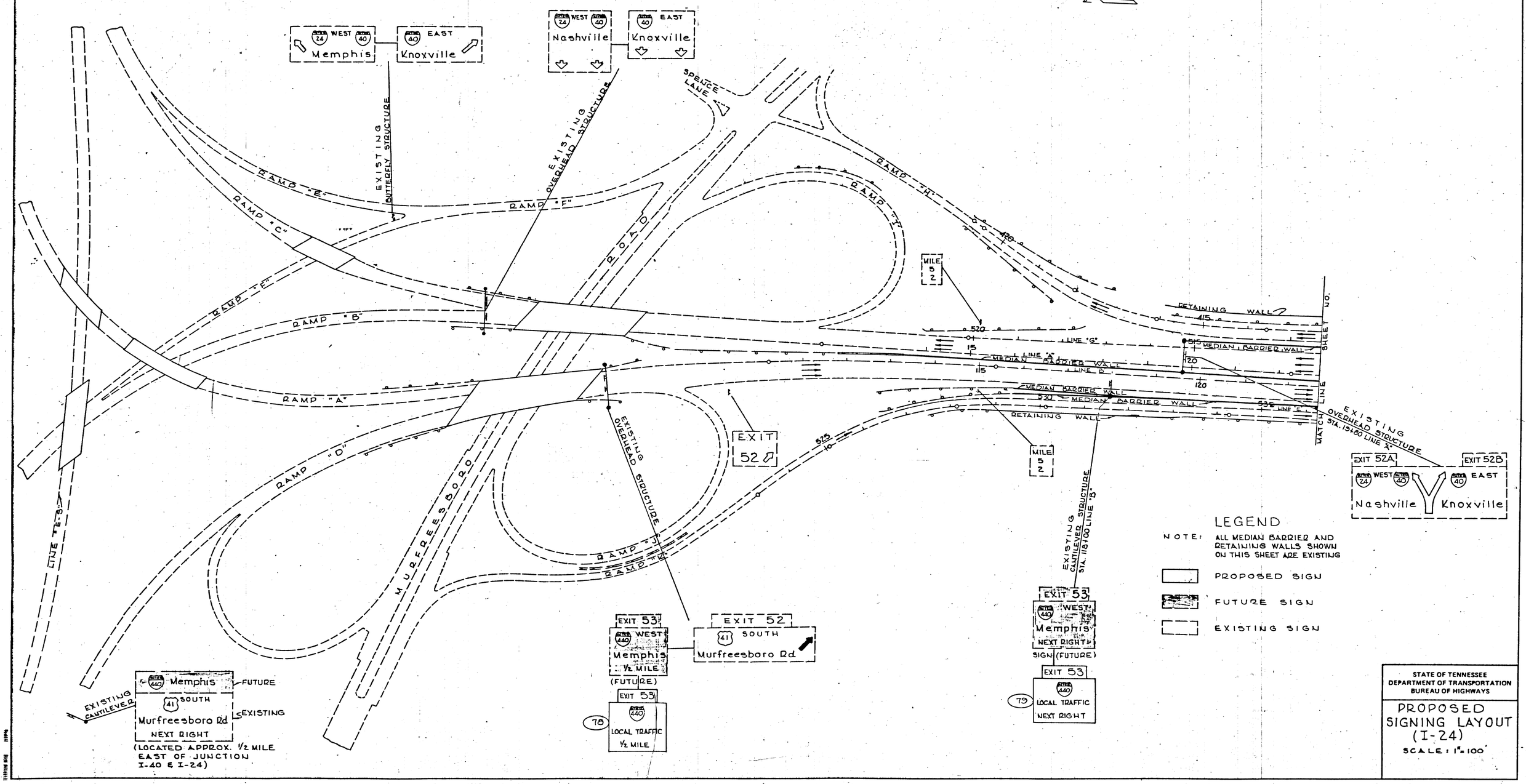
PROPOSED LAYOUT

STA. 481+70 TO END OF PROJ.

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1933	I-440-4(55)211	10

REV. 3-8-84; LEFT SIGN ON OVERHEAD SIGN NO. 78 DELETED.

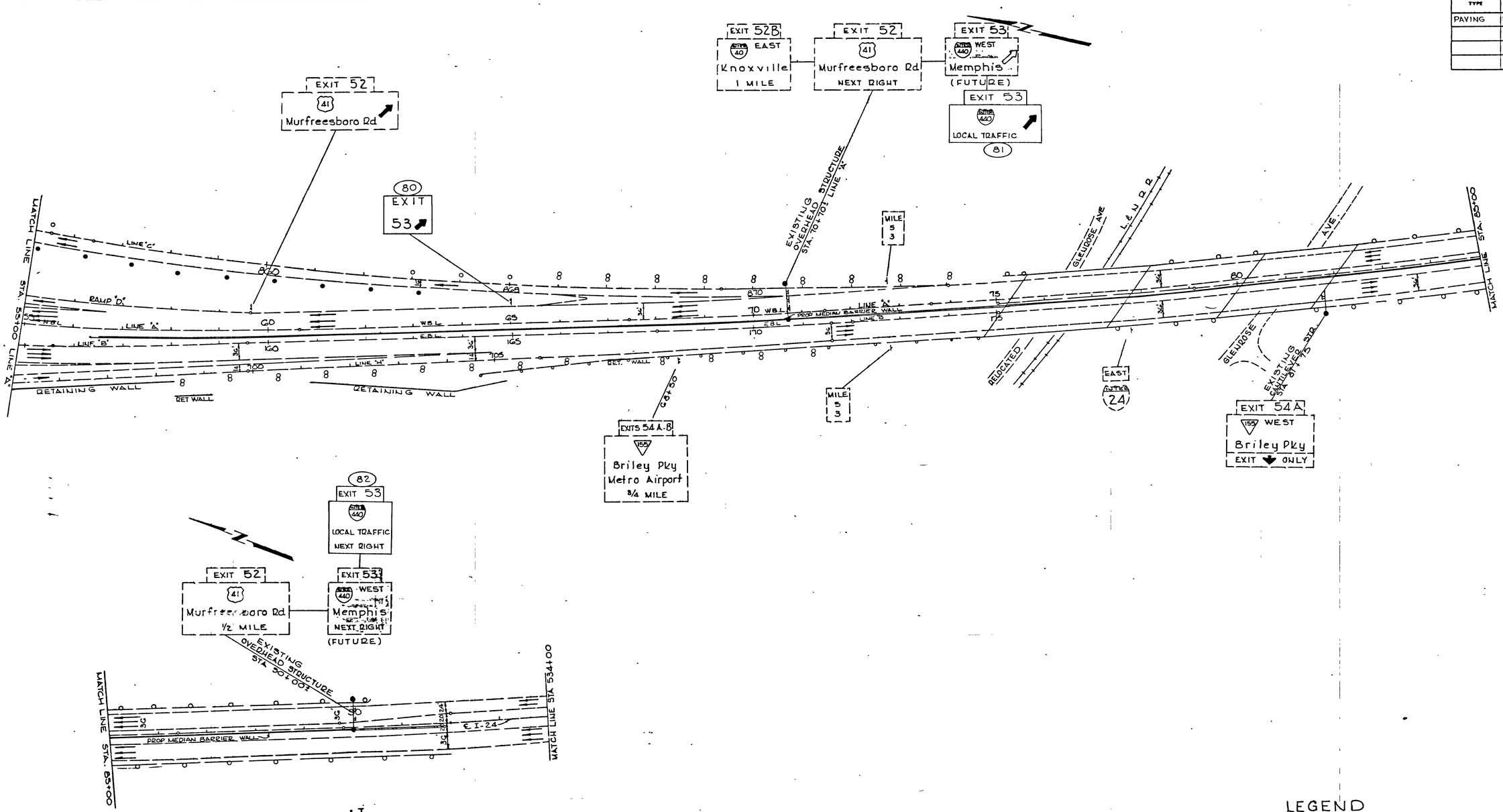


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED SIGNING LAYOUT (I-24)

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO
PAVING	1983	I-440-4(55)211	11



LEGEND

- o SINGLE WHITE DELINEATOR
- • SINGLE YELLOW DELINEATOR
- ∞ DOUBLE- WHITE DELINEATOR

NOTE: ALL MEDIAN BARRIER AND RETAINING WALLS SHOWN ON THIS SHEET ARE EXISTING

PROPOSED SIGN

FUTURE SIGN

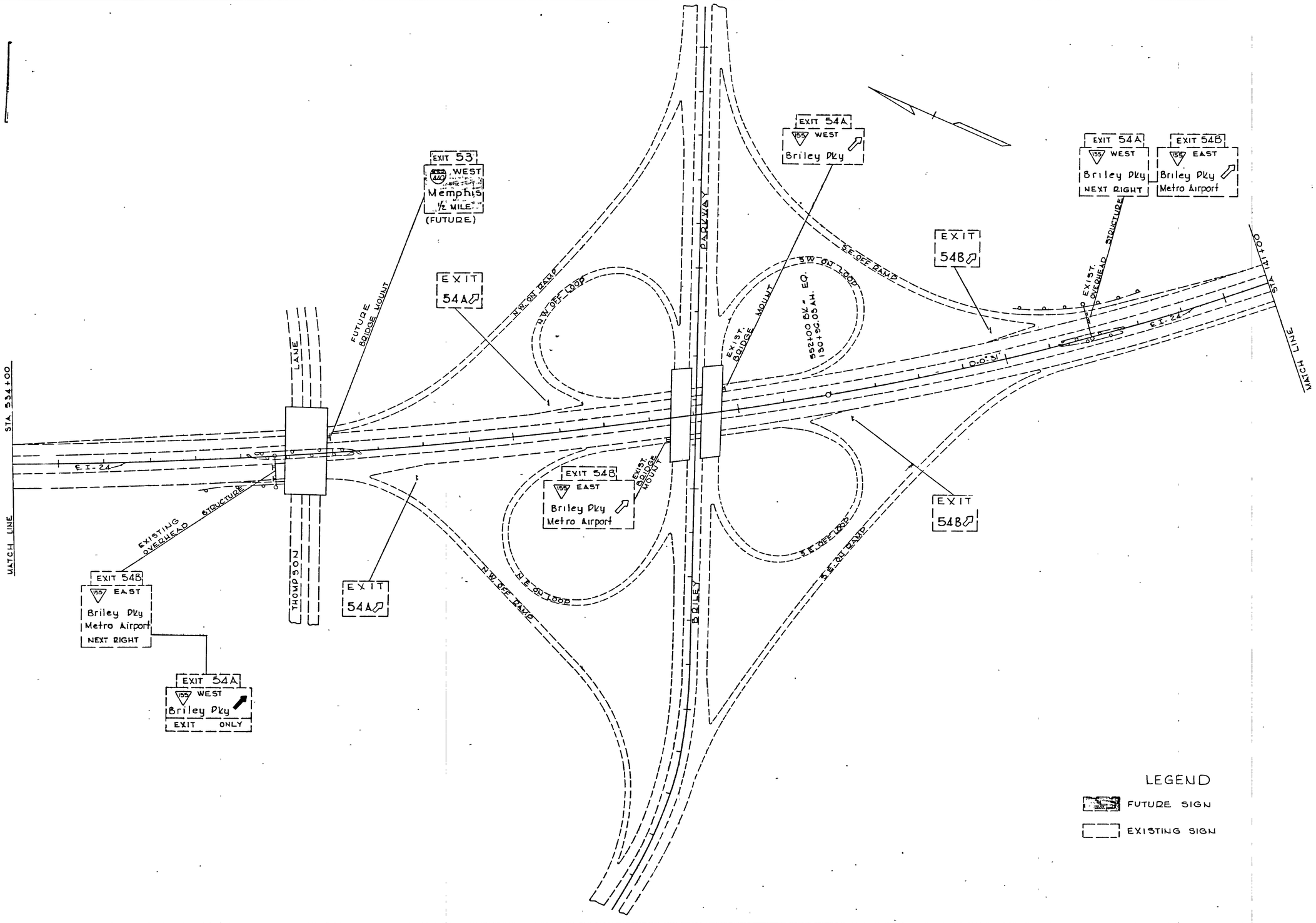
EXISTING SIGN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED SIGNING LAYOUT (I-24)

SCALE 1" = 100'

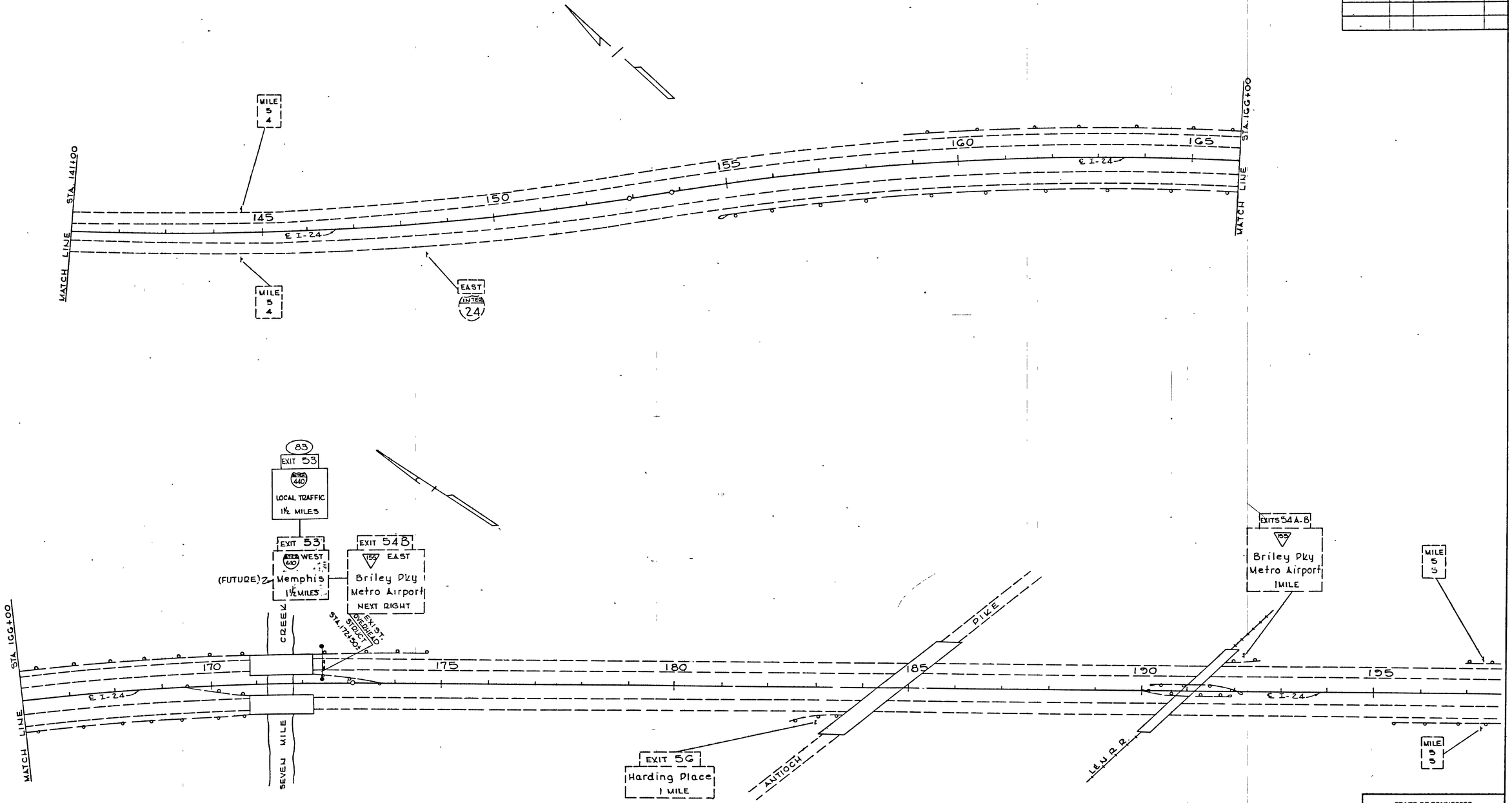
TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	12



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED SIGNING LAYOUT
(I-24)
SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	13



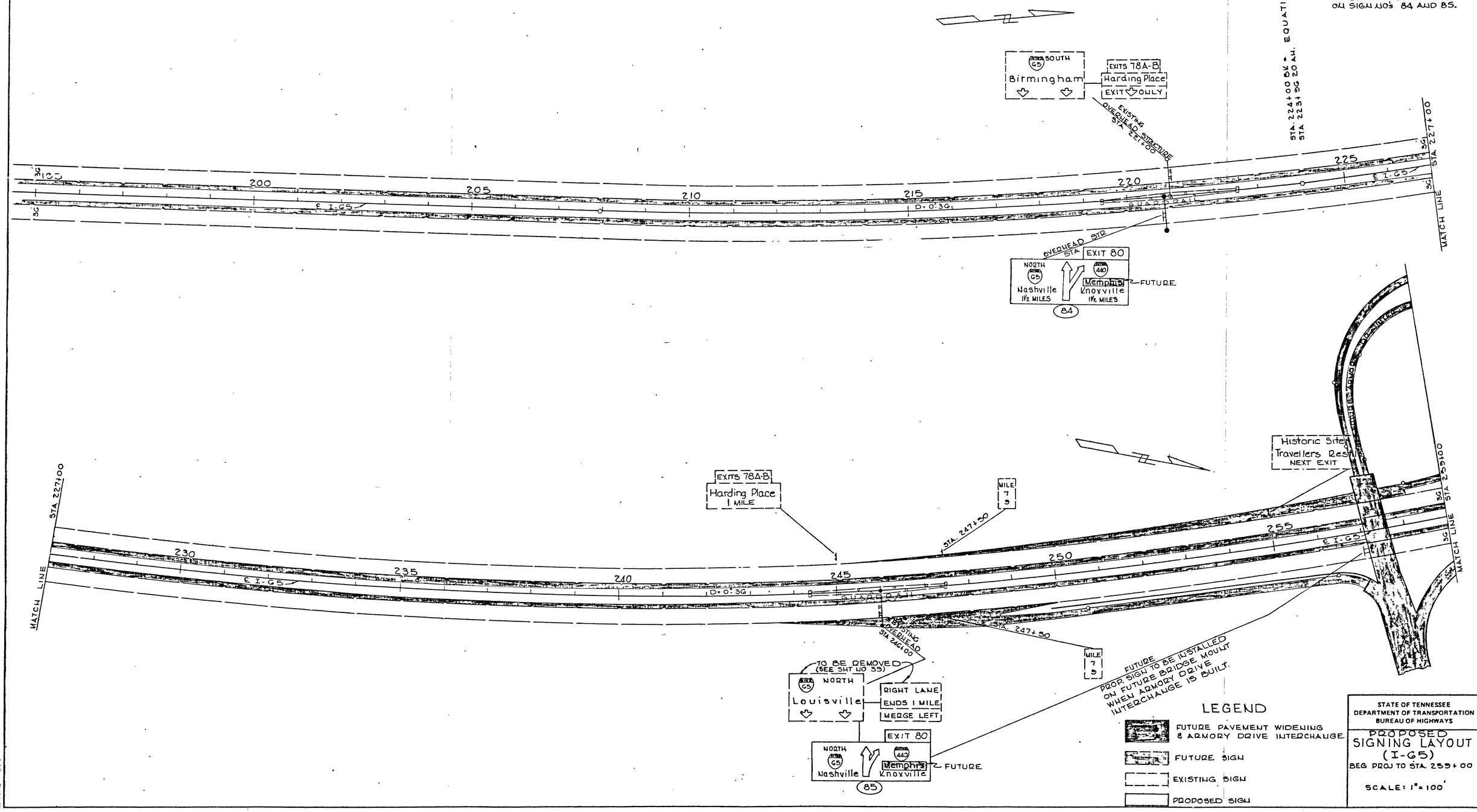
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED
SIGNING LAYOUT
(I-24)

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	1983	I-440-4(55)211	14

REV. 2/14/85: REMOVED LANE LINES FROM DIRECTIONAL ARROW ON SIGN NO's 84 AND 85.

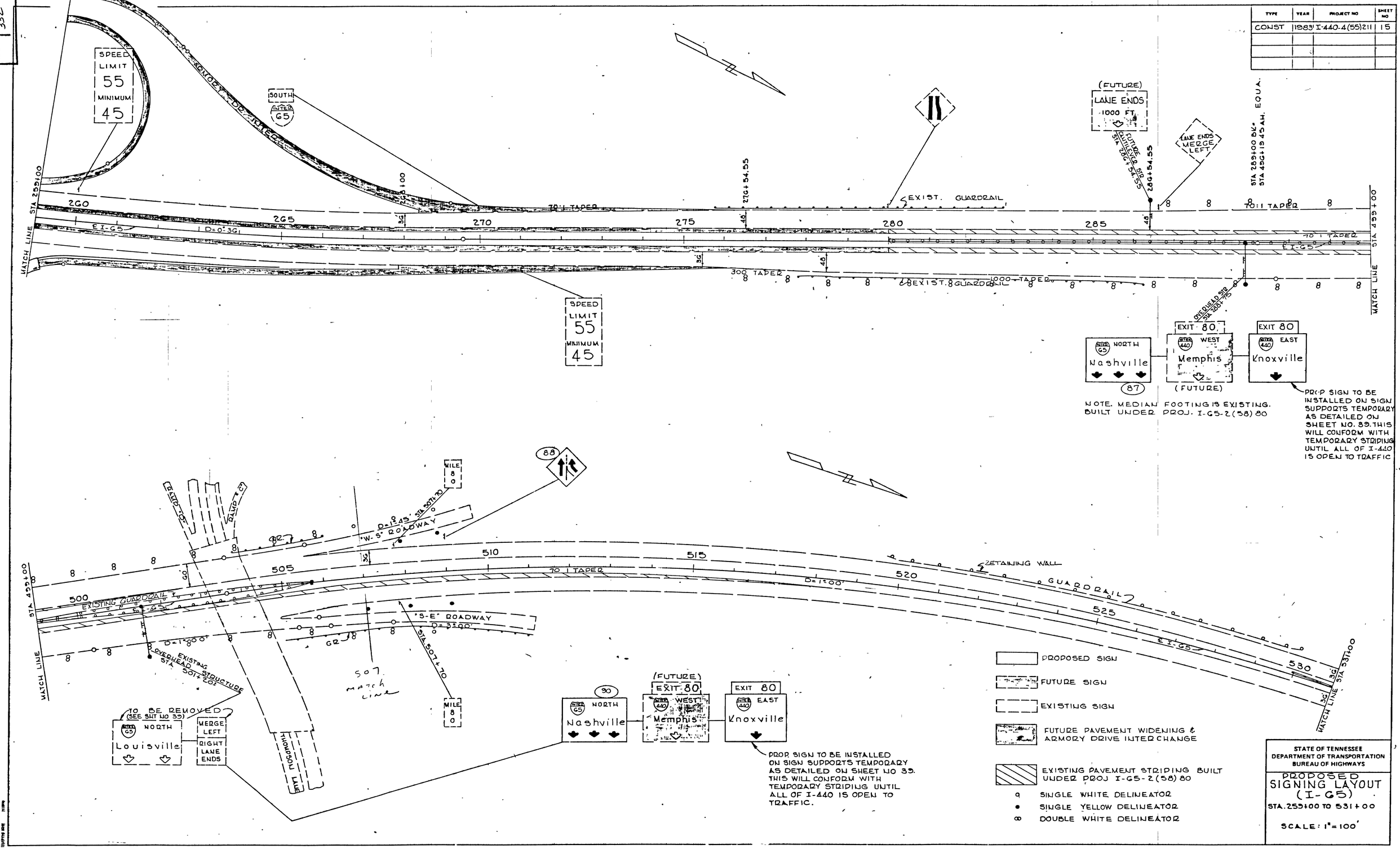


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED
SIGNING LAYOUT
(I-G5)
BEG PROJ TO STA. 255+00

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO	SHEET NO
CONST	1983	I-440-4(55)211	15



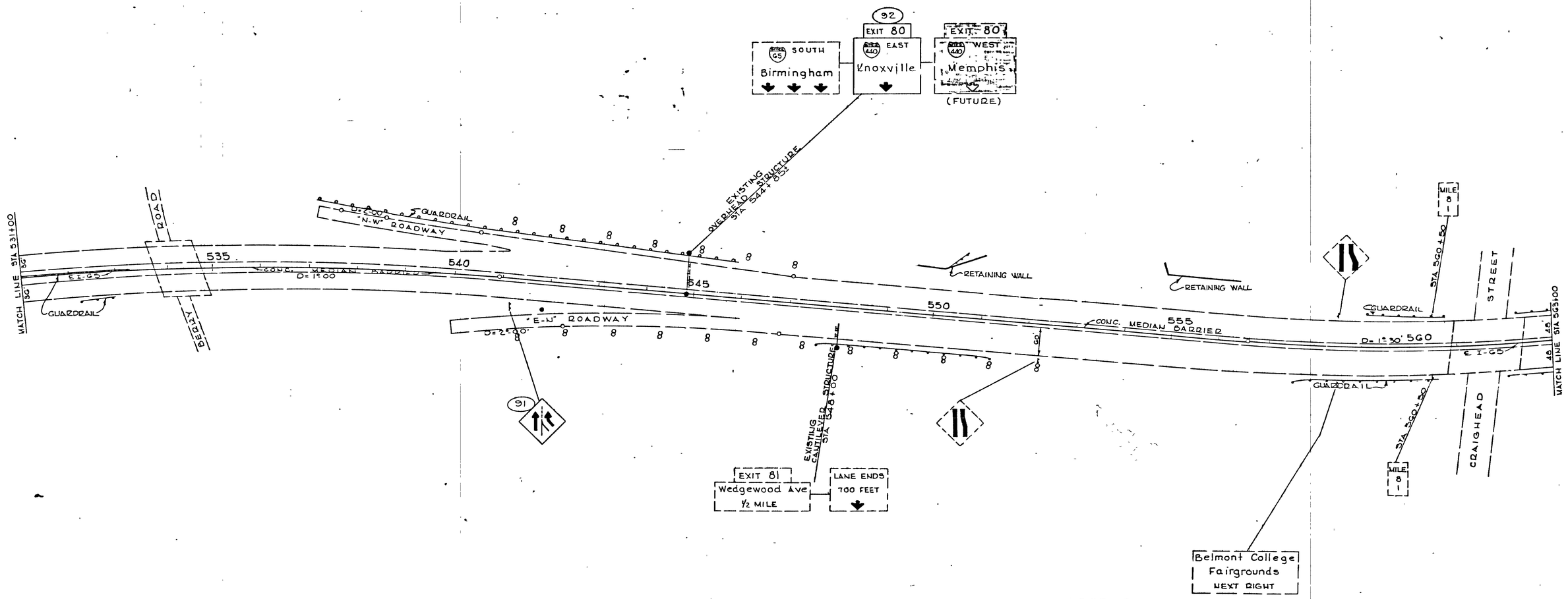
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED SIGNING LAYOUT (I-65)

STA. 259+00 TO 531+00

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO
CONST	1983	I-440-4(55)211	16



LEGEND

- • SINGLE YELLOW DELINEATOR
- ∞ DOUBLE WHITE DELINEATOR

NOTE: ALL MEDIAN BARRIER AND RETAINING WALLS SHOWN ON THIS SHEET ARE EXISTING

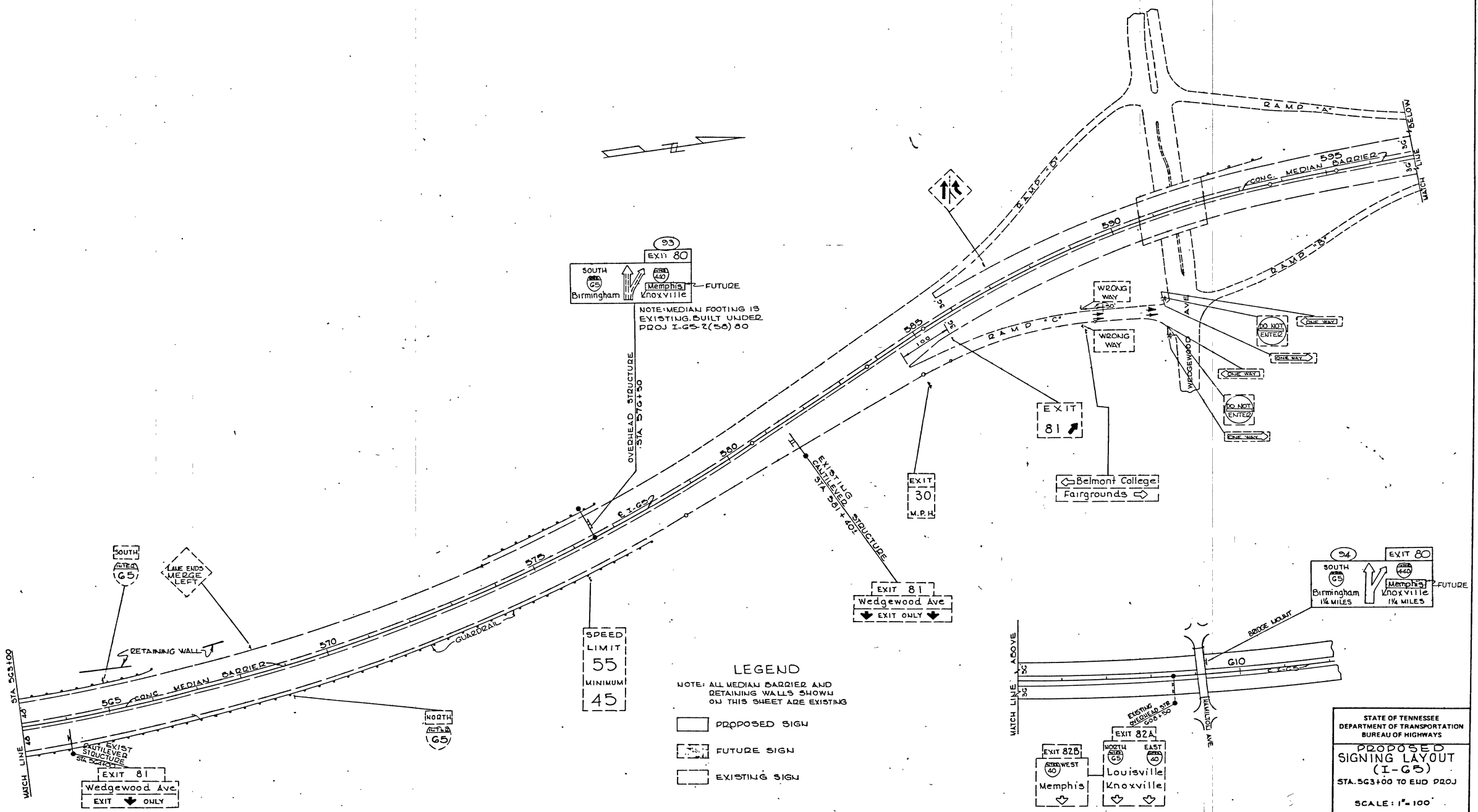
- PROPOSED SIGN
- FUTURE SIGN
- EXISTING SIGN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED
SIGNING LAYOUT
- (I-65)
STA. 531+00 TO 563+00

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO
CONST	1983	I-440-4(55)211	17



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED SIGNING LAYOUT (I-65)

STA. 563+00 TO END PROJ

SCALE: 1" = 100'

File No. IN-332

Hwys Divn.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	18

"N-W" ROADWAY

CURVE 1

PI. STA. 643+06.89
ΔT = 5° 57' 05"
Dc = 2°
LS = 200'
XC = 199.98'
YC = 2.33'
θS = 2°
RC = 2,864.79
TC = 148.79
LC = 297.57
TS = 248.95
PI. N = 629,932.92
E = 1,771,414.99

CURVE 2

PI. STA. 644+22.19
LS = 200'
θS = 2°
LT = 133.34'
ST = 66.67
LC = 199.99
XC = 199.98
YC = 2.33
PI. N = 629,822.63
E = 1,771,380.35

CURVE 3

PI. STA. 652+15.70
LS = 300'
θS = 12°
LT = 200.46'
ST = 100.42'
LC = 299.42'
XC = 298.69'
YC = 20.88'
PI. N 629,065.56
E 1,771,142.60

"N-E" ROADWAY

CURVE 4

PI. STA. 40+73.81
LS = 250'
θS = 9° 22' 30"
LT = 166.90'
ST = 83.55'
LC = 249.70
XC = 249.33
YC = 13.61
PI. N = 629,247.38
E = 1,771,208.08

CURVE 5

PAPER LOCATION (P.L.) ℄
P.I. STA. 44+48.68
Δc = 41° 48' 21.61" LT.
Dc = 7° 30' 00"
T = 291.77'
E = 53.82'
Lc = 557.41'
R = 763.94'
C.C.N. = G29,057.55
E = 1,771,052.77
P.I.N = G28,875.77
E = 1,771,155.46

"N-W" ROADWAY

CURVE 6

PAPER LOCATION (P.L.) ℄
P.I. STA. 52+59.53
Δc = 74° 36' 04.32" LT.
Dc = 8° 00' 00"
T = 545.61'
E = 184.15'
Lc = 932.52'
R = 716.20'
C.C.N. = G29,031.02
E = 1,771,918.07
P.I. N = G28,175.45
E = 1,771,620.64

CURVE 7

PI. STA. 56+82.84
Δ = 5° 40' 59.52"
D = 7° 54'
R = 725.26'
L = 71.94'
T = 36'
E = 0.89'
PI. N = 628,362.56
E = 1,772,172.68

CURVE 8

P.I. = STA. 58+09.46
ΔT = 21° 28' - 59.5" LT.
Δc = 5° - 40' - 59.5 LT.
θS = 15° - 48'
Dc = 7° - 54'
TSB = 162.62
TSA = 313.79
Lc = 71.94
LS = 400.0'
Tc = 36.0'
Ec = 0.89'
Rc = 725.26'
P.I.N = G28,402.42
E = 1,772,292.86
S.E. = 0.06 1/1
V = 50 M.P.H.

CURVE 9

P.I. = STA. 68+60.72
Δ = 7° - 20' - 55.7"
D = 1° 30'
R = 3819.72'
T = 245.30'
L = 489.92'
E = 7.87'
c/c = N. 629,078.64
E. 1,773,103.60
S.E. = .028%

"S-W" ROADWAY

CURVE 10

PI. STA 142+79.16
LS = 300'
θS = 12°
LT = 200.46'
ST = 100.42'
LC = 299.42'
XC = 298.69'
YC = 20.88'
PI N = 627,853.63
E = 1,771,942.60

"S-W" ROADWAY

CURVE 11

P.I. STA. 145+16.00
Δc = 21° 42' 15" LT.
Dc = 8° 00' 00"
T = 137.30'
E = 13.04'
Lc = 271.30'
R = 716.20'
C.C.N. = 627,691.99
E = 1,771,237.69
P.I. N = 628,075.71
E = 1,771,857.81

"S-E" ROADWAY

CURVE 12

PI. STA. 510+99.11
Δ = 20° 16' 00"
D = 3°
R = 1909.86'
L = 675.66'
T = 341.34'
E = 30.26'
PI. N = 627,319.69
E = 1,772,009.60

CURVE 13

P.I. = STA. 518+84.04
Δ = 50° - 18' - 38.8" RT.
Δc = 44° 18' - 38.8" RT.
θS = 6° 00' RT.
Dc = 6° 00'
TSB = 450.72'
TSA = 546.96'
Lc = 738.51'
LS = 200.00'
Tc = 388.83'
Ec = 76.13'
Rc = 954.93'
S.E. = .059 FT/FT
P.I. = N. 628,111.54'
E. 1,771,991.81

"E-S" ROADWAY

CURVE 15

PI. STA. 244+53.38
LS = 200'
θS = 6°
LT = 133.41
ST = 66.74
LC = 199.90
XC = 199.78
YC = 6.98
PI. N = 628,761.12
E = 1,771,934.27

CURVE 16

P.I. STA. 251+10.56
Δc = 63° 30' 18" LT.
Dc = 6° 00' 00"
T = 590.55'
E = 168.08'
Lc = 1058.42'
R = 954.93'
C.C.N. = G27,885.27
= 1,772,320.58
P.I.N = G28,454.35
E = 1,771,352.45

"E-S" ROADWAY

CURVE 17

P.I. STA. 257+62.35
Δc = 28° - 48' - 41" LT.
Dc = 8° 00'
T = 183.96'
E = 23.25
Lc = 360.14
R = 716.20'
P.I. N = 627,675.64
E = 1,771,370.08

CURVE 18

P.I. STA. 260+38.55
θS = 12° 00' LT.
L.T. = 200.46'
S.T. = 100.42'
LS = 300.00'

"W-S" ROADWAY

CURVE 19

P.I. STA. 350+03.01
Δc = 12° 27' 30"
Dc = 1° 30'
T = 416.52
R = 3819.72
Lc = 828.92
E = 22.65
L = 830.52
P.I.N = 627,526.35
E = 1,771,462.83

CURVE 20

P.I. STA. 357+15.06
Δc = 10° 24' 57"
Dc = 1° 45'
T = 258.42'
R = 3274.05'
Lc = 594.37'
E = 13.52'
P.I.N = 626,986.23
E = 1,771,875.85

CURVE 21

P.I. = STA. 3+28.00
Δ = 19° 15' - 34 RT.
D = 3° 00
R = 1909.86'
T = 324.05'
E = 27.30'
L = 641.98'
P.I. = N. 629,250.66
E. 1,773,053.78
S.E. = .044%

CURVE 22

P.I. = 530 + 20.15
Δ = 97° 42' - 17.4" RT.
Dc = 8° 00'
R = 716.20'
T = 819.62'
L = 1221.31'
E = 372.25'
c/c = N. 629,751.40
E. 1,772,447.81
S.E. = 0.06%
P.I.N = 628,747.76
E = 1,772,026.62

CURVE 23

PI. STA 535+22.59
Δc = 8° 02' 48"
Dc = 4°
T = 100.75
LC = 201.17
E = 3.53
R = 1432.39
PI N = 629,621.16
E = 1,771,936.38

"W-S" ROADWAY

CURVE 24

P.I. STA. 539+28.78
Δ = 12° 11' 06"
D = 2°
R = 2864.79
L = 609.25
T = 305.78
E = 16.27
PI. N = 630,021.09
E = 1,771,663.45

I-440

CURVE 25

P.I. = STA. 349+65.28
Δ = 27° 04' - 43.5" LT.
Dc = 1° 30'
R = 3819.72'
T = 919.81'
Lc = 1805.25'
E = 109.19'
P.I. = N. 628,317.91
E. 1,771,556.42
S.E. = 0.036 1/1 V = 60 M.P.H.

CURVE 26

P.I. = STA. 363+71.194
θS = 2° 00'
Δc = 18° 31' - 49"
Lc = 926.51'
LS = 200.00'
TB = 520.48'
TA = 617.26'
ES = 38.47'
Dc = 2° 00
Rc = 2,864.79'
Yc = 2.33'
P.I. = N. 628,938.047
E. 1,772,856.366
S.E = 0.044 1/1 V = 60 M.P.H.
RUNOFF = 200'

CURVE 28

P.I. = 385 + 66.20
Δ = 53° - 49' - 08"
Dc = 3° 00'
LS = 300.00'
TS = 1120.29'
ES = 234.10'
Yc = 7.85'
θS = 4° 30'
Rc = 1909.86'
Lc = 1493.96'
P.I. = N. 630,656.219
E. 1,774,513.638
S.E. = 0.054%; V = 60 M.P.H.

CURVE 29

PI = 406+62.61
Δ = 29° 00' - 27"
Dc = 3° 00'
LS = 300.00'
TS = 644.53'
ES = 64.93'
Yc = 7.85'
θS = 4° 30'
Rc = 1909.86'
Lc = 966.92'
P.I. = N. 630,352.376
E. 1,776,735.994
S.E. = 0.054 V = 60 MPH

I-440

CURVE 30

P.I. = 428+47.560
ΔT = 11° 47' 02" RT.
Δc = 10° 32' 02" RT.
θS = 1° 15'
TB = 571.28'
TA = 474.805'
LS = 200.0'
XS = 199.99'
YS = 1.454'
Rc = 4,583.662'
Lc = 842.711
Tc = 422.546'
Ec = 19.435'
Dc = 1° 15'
DS = 1° 15'
S.E. 0.032%
P.I. { N 631,151.312
E 1,778,753.406

RAMP "N-A" *

CURVE 31

P.I. = 11+00.779
Δ = 36° - 01' - 05" RT.
Dc = 18.4825°
R = 310'
T = 100.779'
L = 194.876'

CURVE 32

P.I. =
Δ = 217° - 53' - 41" RT.
Dc = 38.197°
R = 150'
T =
L = 570.446'
C/C N 631,154.887
E 1,778,274.144

CURVE 33

P.I. = 7+56.451
Δ = 6° 50' - 24" RT.
Dc = 11°
R = 520.871'
T = 31.128'
L = 62.183'

CURVE 34

P.I. = 8+77.61
θS = 8° 15' RT.
DS = 11°
L.T. = 100.109'
S.T. = 50.055'
L = 150'

RAMP "N-B" *

CURVE 35

P.I. = 27+60.60
Δ = 39° 55' - 22" RT.
Dc = 8°
R = 716.197'
T = 260.6'
L = 499.868'
S.E. = 0.056 1/1
V = 40 M.P.H.

CURVE 36

P.I. = 7+00.512
Δ = 19° 51' - 47" RT.
Dc = 5°
R = 1145.916'
T = 200.644'
L = 397.262'
S.E. = 0.056 1/1
V = 50 M.P.H.

RAMP "N-B" *

CURVE 37

P.I. = 11+15.017
Δc = 33° 50' - 33" RT.
Dc = 8°
R = 716.197'
T = 217.887'
L = 423.031'
S.E = 0.056 1/1
V = 40 M.P.H.

CURVE 38

P.I. = 13+70.213
θS = 6° RT.
DS = 8°
L.T. = 100.058'
S.T. = 50.052'
L = 150'
S.E. =
V =

RAMP "N-C" *

CURVE 39

P.I. =
Δ = 222° - 31' - 54" RT.
Dc = 38.197°
R = 150'
T =
L = 582.587'

CURVE 40

P.I. = 7+85.597
Δ = 6° 21' - 39" RT.
Dc = 10.75'
R = 532.984'
T = 29.6155'
L = 59.170'

CURVE 41

P.I. = 8+65.247
θS = 8° 03' - 45" RT.
DS = 10.75'
L.T. = 100.104'
S.T. = 50.095'
L = 150'

RAMP "N-D" *

CURVE 42

P.I. = 3+26.916
Δ = 16° - 30' LT.
Dc = 3°
R = 1909.859'
T = 276.916'
L = 550'
S.E. = 0.044 1/1
V = 50 M.P.H.

CURVE 43

P.I. = 9+60.137
θS = 6° 11' - 15" RT.
DS = 8.25°
L.T. = 100.062'
S.T. = 50.056'
L = 150'

CURVE 44

P.I. = 12+20.07
Δ = 33° 38 - 50" RT.
Dc = 8.25'
R = 694.495'
T = 205.993'
L = 407.845'
S.E = 0.06 1/1
V = 45 M.P.H.

RAMP "N-D" *

CURVE 45

P.I. = 14+50.84
Δ = 6° 34' - 33" LT.
Dc = 10°
R = 572.958'
T = 32.917'
L = 65.761'
S.E. = 0.06 1/1
V = 40 M.P.H.

CURVE 46

P.I. = 16+13.95
Δ = 35° 58' - 46" LT.
Dc = 16°
R = 358.099'
T = 130.265'
L = 249.873'
S.E. = 0.06 1/1
V = 30 M.P.H.

RAMP "N-E" *

CURVE 47

P.I. = 5+40.17
θS = 5° - 19' - 31" RT.
DS = 6.5°
L.T. = 109.284'
S.T. = 54.662'
L = 163.851'
S.E = 0.06 1/1
V = 50 M.P.H.

CURVE 48

P.I. = 6+49.40
θS = 5° 19' - 31" RT.
DS = 6.5°
L.T. = 109.284'
S.T. = 54.662'
L = 163.851'
S.E = 0.06 1/1
V = 50 M.P.H.

RAMP "N-F" *

CURVE 49

P.I. = 9+05.344
θS = 12° LT.
DS = 16°
L.T. = 100.231'
S.T. = 50.21'
L = 150'

CURVE 50

P.I. = 4+40.463
Δ = 15° 55' - 14" RT.
Dc = 8°
R = 716.197'
T = 100.574'
L = 199.840'
S.E = 0.06 1/1
V = 45 M.P.H.

CURVE 51

P.I. = 5+89.781
θS = 6° RT.
DS = 8°
L.T. = 100.058'
S.T. = 50.052'
L = 150'

RAMP "N-F" *

CURVE 52

P.I. = 9+05.344
θS = 12° LT.
DS = 16°
L.T. = 100.231'
S.T. = 50.21'
L = 150'

CURVE 53

P.I. = 10+49.514
Δ = 29° 32' - 11" LT.
Dc = 16°
R = 358.099'
T = 94.401'
L = 184.602'
S.E. = 0.058 1/1
V = 30 M.P.H.

RAMP "N-G" *

CURVE 54

P.I. = 0+32.92
Δ = 6° 34' - 33" LT.
Dc = 10°
R = 572.958'
T = 32.917'
L = 65.761'
S.E = 0.06 1/1
V = 40 M.P.H.

CURVE 55

P.I. = 1+43.89
Δ = 35° 58' - 47" LT.
Dc = 26° 40' - 33"
R = 214.784'
T = 78.132'
L = 149.872'
S.E. = 0.06 1/1
V = 30 M.P.H.

I-440

CURVE 56

P.I. = 435+84.983
Δ = 2° 15' RT.
Dc = 0° 25' 23"
R = 13,545.102'
T = 265.992'
Lc = 531.915'
E = 2.611'
P.I. { N. = 631,272.793
E. = 1,779,524.174

CURVE 57

P.I. 441+12.645
ΔT = 5° 10' RT.
Δc = 4° 10' RT.
θS = 1°
TB = 261.735'
TA = 355.290'
LS = 200'
XS = 199.994'
YS = 1.164'
Rc = 5,729.578'
Lc = 416.667'
Tc = 208.425'
Ec = 3.790'
Dc = 1°
DS = 1°
SE = 0.027 1/1
N = 631,338.528 } P.I.
E = 1,780,047.756

★ NOLENSVILLE ROAD INTERCHANGE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CURVE DATA

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	15

I-440

CURVE 58

P.I. = 458+67.520
N = 631,438.5530
E = 1,781,908.5903
Δ = 8°37'12"
Dc = 0°40'00"
T = 271.5903
L = 543.000
R = 8594.367
PC = 455+95.930
N = 631,425.3720
E = 1,781,637.1690
CC = 461+38.930
N = 631,465.6521
E = 1,782,178.8650
SE = 0.021 FT/FT
L.TRANS. = 225'

CURVE 59

P.I. = 462+69.488
N = 631,478.4868
E = 1,782,308.7902
Δ = 2°36'39"
Dc = 1°
T = 130.5576
L = 261.07
R = 5729.578
PT = 464+00
N = 631,497.2262
E = 1,782,437.9960
SE = 0.021 FT/FT

RAMP C

CURVE 60

P.I. = 823+03.441
N = 631,602.5472
E = 1,782,989.9959
Δ = 11°14'28"
Dc = 1°00'16"
T = 561.4014
L = 1119.1984
R = 5704.578
PC = 817+42.040
N = 631,521.9673
E = 1,782,434.4075
S.E. = .027 ft/ft
L.TRANS. = 225'

CURVE 61

P.I. = 829+61.245
N = 631,823.2584
E = 1,783,613.4519
LS = 300
θs = 1°30'24"
LT = 200.0072
ST = 100.0066
Lc = 299.9908
Xc = 299.9793
Yc = 2.6293
Ds = 1°00'16"
CS = 828+61.238
N = 631,789.8863
E = 1,783,515.2177
ST = 831+61.238
N = 631,894.9345
E = 1,783,800.2147
MAX.S.E. = .027 ft/ft

RAMP C

CURVE 62

P.I. = 836+30.353
N = 632,154.7239
E = 1,784,424.8874
LS = 300
θs = 12°00'
LT = 200.461
ST = 100.420
Lc = 299.416
Xc = 298.687
Yc = 20.878
Ds = 8°00'
TS = 836+29.892
N = 632,062.8851
E = 1,784,237.7409
SC = 839+29.892
N = 632,150.4330
E = 1,784,524.0711
MAX.S.E. = .060 ft/ft

CURVE 63

P.I. = 845+86.166
N = 632,258.0969
E = 1,785,172.2652
Δ = 85°00'
Dc = 8°00'
T = 656.274
L = 1062.500
R = 716.197
S.E. = 0.06 ft/ft

RAMP F

CURVE 64

P.I. = 942+03.298
N = 632,411.5349
E = 1,784,881.6657
Δ = 31°15'00"
Dc = 6°30'00"
T = 246.5265
L = 480.7652
R = 881.473
S.E. = 0.06 ft/ft

CURVE 65

P.I. = 945+37.817
N = 632,234.2168
E = 1,784,583.6209
LS = 300
θs = 9°45'00"
LT = 200.3042
ST = 100.2766
Lc = 299.6141
Xc = 299.1324
Yc = 16.5818
Ds = 6°30'00"
CS = 944+37.541
N = 632,285.4876
E = 1,784,665.7993
ST = 947+37.541
N = 632,162.4342
E = 1,784,396.6208
MAX.S.E. = .06 ft/ft

RAMP J

CURVE 66

P.I. = 250+95.895
N = 632,858.9022
E = 1,784,916.5019
LS = 300
θs = 6°00'
LT = 200.115
ST = 100.105
Lc = 299.854
Xc = 299.671
Yc = 10.464
Ds = 4°00'
TS = 248+95.789
N = 633,045.7256
E = 1,784,988.2167
SC = 251+95.780
N = 632,769.708
E = 1,784,871.0552
MAX.S.E. = .05 ft/ft

CURVE 67

P.I. = 256+45.410
N = 632,369.0848
E = 1,784,666.9275
Δ = 34°51'15"
Dc = 4°00'
T = 449.6299
L = 871.3559
R = 1,432.394

CURVE 68

P.I. = 261+67.241
N = 632,109.7659
E = 1,784,182.1985
LS = 300
θs = 6°00'
LT = 200.115
ST = 100.105
Lc = 299.854
Xc = 299.671
Yc = 10.464
Ds = 4°00'
CS = 260+67.136
N = 632,156.9871
E = 1,784,270.4661
ST = 263+67.136
N = 632,034.3297
E = 1,783,996.8464
MAX.SE = .051 ft/ft

RAMP G

CURVE 69

P.I. = 468+16.040
N = 631,532.0373
E = 1,782,852.1890
Δ = 8°14'52"
Dc = 0°59'46"
T = 414.9008
L = 828.3688
R = 5754.578
PC = 464+01.139
N = 631,472.4851
E = 1,782,441.5844
PT = 472+29.508
N = 631,640.8769
E = 1,783,250.0045
S.E. = .027 ft/ft
L.TRANS. = 175'

CURVE 70

P.I. = 488+61.508
N = 632,115.3342
E = 1,784,814.6065
LS = 300
θs = 12°00'
LT = 200.461
ST = 100.420
Lc = 299.416
Xc = 298.687
Yc = 20.878
Ds = 8°00'
TS = 486+60.847
N = 632,056.400
E = 1,784,622.4006
SC = 489+60.847
N = 632,161.2506
E = 1,784,902.8572
MAX.S.E. = .06 ft/ft

RAMP H

CURVE 71

P.I. = 681+82.533
N = 631,850.8511
E = 1,784,183.5236
LS = 300
θs = 12°00'
LT = 200.461
ST = 100.420
Lc = 299.416
Xc = 298.687
Yc = 20.878
Ds = 8°00'
TS = 679+82.472
N = 631,804.0544
E = 1,783,988.6014
SC = 682+82.472
N = 631,853.4798
E = 1,784,283.5052
MAX.S.E. = .06 ft/ft

CURVE 72

P.I. = 687+30.508
N = 631,865.2185
E = 1,784,732.1517
Δ = 64°6'15"
Dc = 8°00'
T = 448.4361
L = 801.3030
R = 716.197
S.E. = 0.06 ft/ft

RAMP H

CURVE 73

P.I. = 691+84.195
N = 631,877.9169
E = 1,784,984.7351
LS = 300
θs = 12°00'
LT = 200.461
ST = 100.420
Lc = 299.416
Xc = 298.687
Yc = 20.878
Ds = 8°00'
CS = 690+88.775
N = 631,467.0747
E = 1,784,988.5324
ST = 693+88.775
N = 631,184.6494
E = 1,785,037.9584
MAX.S.E. = .06 ft/ft

"E-S" ROADWAY

CURVE 74

P.I. = STA. 284+89.92
Δ = 14°39'59.4" RT.
Dc = 3°30'
L = 419.04'
T = 210.67'
Rc = 1637.02'
PI { N = 625,119.74
E = 1,772,830.98
SE = .044 FT/FT.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CURVE DATA

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	20

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

SIGN NO.	LEGEND	SHEET NO	SIZE LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHEILD	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
16	AS REQD. MILE D10-4	6	12"	24"									WHITE (REF.)	GREEN (REF.)								SIGNS #16 & 17 ARE NUMERAL NO. 6
17		6																				
62		8																				SIGNS #62 & 63 ARE NUMERAL NO. 7
63		8																				
21	JCT INTER 440 M2-1	6	21"	15"							30"X24"		WHITE (REF.)	BLUE (REF.)	0.080" SHEET ALUMINUM	2"ϕ @ 3.12#/FT. (GALVANIZED)	h= 12'-0"	TYPE 4 D= 1'-0"	0.12	26.4	7'-0"	
51		6															h=12'-0"					
9	EAST INTER 440 M3-2	4	30"	15"							45"X36"		WHITE (REF.)	BLUE (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	2½"ϕ @ 3.98#/FT. (PAINTED)	h= 14'-3"	TYPE 4 D= 1'-0"	0.12	26.4	6'-0"	
57		7															h= 15'-6"					
13	WEST INTER 440 M3-4	5	30"	15"							45"X36"		WHITE (REF.)	BLUE (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	2½"ϕ @ 3.98#/FT. (PAINTED)	h= 14'-6"	TYPE 4 D= 1'-0"	0.12	26.4	6'-0"	
59		7															h= 15'-0"					
31	M3-3 SOUTH NORTH M3-1; 31A 31A; 41A 41A; MG-1 ← → MG-1	6	24" 30" 30" 21"	12" 24" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM (ANODIZED)	3"ϕ @ 4.83#/FT. (PAINTED)	h1= 15'-6" h2= 15'-6"	TYPE 4 D= 1'-0"	0.12	26.4	7'-0"	
40	M3-1 NORTH SOUTH M3-3; 31A 31A; 41A 41A; MG-1 ← → MG-1	6	24" 30" 30" 21"	12" 24" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM (ANODIZED)	3"ϕ @ 4.83#/FT. (PAINTED)	h1= 16'-6" h2= 17'-0"	TYPE 4 D= 1'-0"	0.12	26.4	5'-0"	
64	W4-2	8	48"	48"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	5 3 X 5.7 (PAINTED)	h1= 16'-0" h2= 16'-6"	TYPE 5 D= 1'-3"	0.18	50.1	6'-0"	
19A	PEDESTRIANS NON-MOTORIZED TRAFFIC MOTOR DRIVEN CYCLES PROHIBITED TN-21	6	36"	30"									BLACK	WHITE (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	2"ϕ @ 3.12#/FT. (PAINTED)	h= 11'-6"	TYPE 4 D= 1'-0"	0.12	26.4	5'-0"	
32A		6															h= 11'-6"					
39A		6															h= 11'-6"					
52A		6															h= 11'-6"					
2	W4-1	3	48"	48"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	5 3 X 5.7 (PAINTED)	h1= 14'-3" h2= 14'-3"	TYPE 5 D= 1'-3"	0.18	50.1	6'-0"	
19		6															h1= 14'-3" h2= 14'-3"					
20		6															h1= 14'-3" h2= 14'-3"					
35		6															h1= 14'-3" h2= 14'-3"					
53		6															h1= 14'-3" h2= 14'-3"					
75		9															h1= 14'-3" h2= 14'-3"					
72		9													0.100" SHEET ALUMINUM	5 3 X 5.7 (GALVANIZED)	h1= 14'-3" h2= 14'-3"					
77		9															h1= 14'-3" h2= 14'-3"					
71		9														EXISTING SUPPORTS & FOOTING (BUILT UNDER PROJ. I-24-1(55)51)						
6	W4-3	4	48"	48"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	5 3 X 5.7 (PAINTED)	h1= 14'-3" h2= 14'-3"	TYPE 5 D= 1'-3"	0.18	50.1	6'-0"	
73		9															h1=14'-3" h2=14'-3"					
75A		9															h1=14'-3" h2=14'-3"					
88		15													0.100" SHEET ALUMINUM	5 3 X 5.7 (GALVANIZED)	h1=14'-3" h2=14'-3"					
91		16															h1=14'-3" h2=14'-3"					
23	DO NOT ENTER R5-1	6	30"	30"									WHITE (REF.)	WHITE (REF.) RED (REF.)	0.080" SHEET ALUMINUM (ANODIZED)	2"ϕ @ 3.12#/FT. (PAINTED)	h= 11'-0"	TYPE 4 D= 1'-0"	0.12	26.4	7'-0"	
26		6															h= 11'-0"					
44		6															h= 11'-0"					
46		6															h= 11'-0"					
50		6																				SIGN #50 MOUNTED ON BACK OF SIGN #49
25	ONE WAY R6-1(L)	6	36"	12"									BLACK	WHITE (REF.) BLACK	0.080" SHEET ALUMINUM (ANODIZED)							SIGN #25 MOUNTED UNDER SIGN # 23
28		6																				SIGN #28 MOUNTED UNDER SIGN # 26
43		6																				SIGN #43 MOUNTED UNDER SIGN # 44
47		6																				SIGN #47 MOUNTED UNDER SIGN # 46

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SIGN SCHEDULE

TENN. STATE HIGHWAYS
Plans File No. IN-332
Divn.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	21

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

SIGN NO.	LEGEND	SHEET NO.	SIZE LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHEILD	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
24	ONE WAY RG-1(R)	G	36"	12"									BLACK	WHITE (REF.) BLACK	0.080" SHEET ALUMINUM (ANODIZED)							SIGN #24 MOUNTED UNDER SIGN # 23
27		G																				SIGN #27 MOUNTED UNDER SIGN # 26
45		G																				SIGN #45 MOUNTED UNDER SIGN # 44
48		G																				SIGN #48 MOUNTED UNDER SIGN # 46
29	WRONG WAY R1-1a	G	36"	24"									WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM (ANODIZED)	2"ϕ @ 3.12#/FT. (PAINTED)	h=10'-6"	TYPE 4 D=1'-0"	0.12	26.4	7'-0"	
30		G															h=10'-0"				5'-0"	
41		G															h=10'-0"					
42		G															h=10'-0"					
49	YIELD R1-2	G	36" X 36" X 36"										RED (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM (ANODIZED)	2"ϕ @ 3.12#/FT. (PAINTED)	h=11'-0"	TYPE 4 D=1'-0"	0.12	26.4	7'-0"	
20A	RAMP	G	6'-0"	5'-0"	6"	2"	12"			"E"		TYPE "F" @ 45°	WHITE (REF.)	GREEN (REF.)	5-12" ALUM. EXTRUSIONS (ANODIZED)	S4 X 7.7 (PAINTED)	h1=14'-3" h2=14'-3"	TYPE 5 D=1'-3"	0.18	50.1	5'-0"	
32		G															h1=14'-3" h2=14'-3"					
39		G															h1=14'-3" h2=14'-3"					
46A		G															h1=14'-3" h2=14'-3"					
33	RAMP 25 M.P.H. W13-3	G	3'-0"	4'-0"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	S3 X 5.7 (PAINTED)	h1=13'-3" h2=13'-3"	TYPE 5 D=1'-3"	0.18	50.1	5'-0"	
38		G															h1=13'-3" h2=13'-3"					
18	EXIT 6	G	6'-0"	5'-0"	6"	2"	12"		18"	"E" "E"		TYPE "F" @ 45°	WHITE (REF.)	GREEN (REF.)	5-12" ALUM. EXTRUSIONS (ANODIZED)	S4 X 7.7 (PAINTED)	h1=15'-3" h2=15'-3"	TYPE 5 D=1'-3"	0.18	50.1	7'-0"	
54		G															h1=16'-3" h2=16'-3"					
4	EXIT 80 AS REQD 2	3	6'-0"	5'-0"	6"	2"	12"		18"	"E" "E"		TYPE "F" @ 45°	WHITE (REF.)	GREEN (REF.)	5-12" ALUM. EXTRUSIONS	S4 X 7.7 (GALVANIZED)	h1=16'-3" h2=16'-3" h1=16'-3" h2=16'-3"	TYPE 5 D=1'-3"	0.18	50.1	7'-0"	SIGN #4 IS NUMERAL NO. 80
80		11																				SIGNS #70 & 80 ARE NUMERAL NO. 53
70		9														EXISTING SUPPORTS & FOOTINGS (BUILT UNDER PROJ. I-24-1(55)51)						
11	SPEED LIMIT 55 R2-1	5	48"	60"									BLACK	WHITE (REF.)	0.100" SHEET ALUMINUM (ANODIZED)	S3 X 5.7 (PAINTED)	h1=14'-6" h2=13'-3"	TYPE 5 D=1'-3"	0.18	50.1	6'-0"	
12		5															h1=14'-6" h2=14'-6"					
56		7															h1=16'-0" h2=16'-3"					
60		7															h1=16'-3" h2=15'-3"					
1	I-440 EAST Knoxville	3	12'-0"	9'-0"	12"	2"	12" 16"	12"		"E" "E"	45" X 36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	9-12" ALUM. EXTRUSIONS							OVERHEAD STRUCTURE
3		3													9-12" ALUM. EXTRUSIONS (ANODIZED)							OVERHEAD STRUCTURE
5	I-65 SOUTH Birmingham	4	15'-0"	9'-0"	12"	2"	12" 16"	12"		"E" "E"	36" X 36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	9-12" ALUM. EXTRUSIONS (ANODIZED)							OVERHEAD STRUCTURE
	I-65 NORTH Nashville		12'-0"	9'-0"	12"	2"	12" 16"	12"		"E" "E"	36" X 36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	9-12" ALUM. EXTRUSIONS (ANODIZED)							
7	EXIT 5 I-65 SOUTH Birmingham	4	8'-0"	2'-0"	6" TOP ONLY	2"	10" 12"		15"	"E" "E"	36" X 36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED)							OVERHEAD STRUCTURE
			15'-0"	9'-0"	12"	2"	16"	12"		"E"					9-12" ALUM. EXTRUSIONS (ANODIZED)							
	EXIT 5 I-65 NORTH Nashville		8'-0"	2'-0"	6" TOP ONLY	2"	10" 12"		15"	"E" "E"	36" X 36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED)							
			12'-0"	9'-0"	12"	2"	16"	12"		"E"					9-12" ALUM. EXTRUSIONS (ANODIZED)							
G1	EXIT 6 31A 41A Nolensville Pike 1/2 MILE	7	9'-0"	2'-0"	6" TOP ONLY	2"	10"		15"	"E"	45" X 36"		WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED)							BRIDGE MOUNT
			20'-0"	9'-0"	12"	2"	16" 10"	12"	10"/10"	"E" "E"					9-12" ALUM. EXTRUSIONS (ANODIZED)							

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SIGN SCHEDULE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	22

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

SIGN NO.	LEGEND	SHEET NO	SIZE				COPY				SHEILD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU.YD.	REIN. STEEL LBS.		
55	EXIT G 31A 41A Nolensville Pike	G	8'-0" 17'-0"	2'-0" 9'-0"	G" TOP ONLY 12"	2" 2"	10" 1G" 1G"	12" 12"	15"	"E" "E" "E"	45"X3G"	TYPE "G" @ 45°	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED) 9-12" ALUM. EXTRUSIONS (ANODIZED)	WG X 20 (PAINTED)	h1= 21'-G" h2= 18'-3"	TYPE G E=5'-0"	0.23	G3.4	7'-0"	USE AUXILIARY SUPPORTS ON EXIT PANEL. SEE DETAIL ON SHEET NO. 27
8	EXIT G 31A 41A Nolensville Pike 1/2 MILE EXIT ONLY BOTTOM 3 PANELS TO BE YELLOW(REF.) W/BLACK COPY NO BORDER REQD.	4	8'-0" 20'-0"	2'-0" 12'-0"	G" TOP ONLY 12"	2" 2"	10" 1G" 10" 12"	12"	15" 10"/10"	"E" "E" "E" "E"	45"X3G"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED) 12-12" ALUM. EXTRUSIONS (ANODIZED)							CANTILEVER STRUCTURE
14	EXIT G 31A 41A Nolensville Pike EXIT ONLY BOTTOM 3 PANELS TO BE YELLOW(REF.) W/BLACK COPY NO BORDER REQD.	5	8'-0" 20'-0"	2'-0" 10'-0"	G" TOP ONLY 12"	2" 2"	10" 1G" 12"	12"	15"	"E" "E" "E"	45"X3G"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED) 10-12" ALUM. EXTRUSIONS (ANODIZED)							BRIDGE MOUNT
15	INTER 440 TEMPORARY ENDS 3/4 MILE EXIT 5 INTER G5 Nashville Birmingham 3/4 MILE	5	13'-0" 8'-0" 15'-0"	9'-0" 2'-0" 11'-0"	12" G" TOP ONLY 12"	2" 2" 2"	12" 12" 10" 10" 1G" 1G" 10"	12" 12"	10"/10" 15" 10"/10"	"E" "E" "E" "E" "E" "E"	45"X3G" 3G"X3G"		WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	9-12" ALUM. EXTRUSIONS (ANODIZED) 2-12" ALUM. EXTRUSIONS (ANODIZED) 11-12" ALUM. EXTRUSIONS (ANODIZED)							BRIDGE MOUNT
22	INTER 440 EAST Knoxville NEXT RIGHT INTER 440 WEST FUTURE 2 Memphis	G	12'-0" 14'-0"	9'-0" 7'-0"	12" 9"	2" 2"	12" 1G" 12" 12"	12"		"E" "E" "E" "E"	45"X3G" 45"X3G"	TYPE "G" @ 45°	WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	9-12" ALUM. EXTRUSIONS (ANODIZED) 7-12" ALUM. EXTRUSIONS (ANODIZED)							CANTILEVER STRUCTURE
34	INTER 440 WEST FUTURE 2 Memphis	G	14'-0"	7'-0"	9"	2"	12"			"E"	45"X3G"	TYPE "G" @ 45°	WHITE (REF.)	GREEN (REF.)	7-12" ALUM. EXTRUSIONS (ANODIZED)							CANTILEVER STRUCTURE
37	INTER 440 EAST Knoxville	G	15'-0"	7'-0"	9"	2"	12" 1G"	12"		"E" "E"	45"X3G"	TYPE "G" @ 45°	WHITE (REF.)	GREEN (REF.)	7-12" ALUM. EXTRUSIONS (ANODIZED)							CANTILEVER STRUCTURE
52	INTER 440 WEST FUTURE 2 Memphis NEXT RIGHT INTER 440 EAST Knoxville	G	12'-0" 15'-0"	9'-0" 7'-0"	12" 9"	2" 2"	12" 12" 12" 1G"	12"		"E" "E" "E" "E"	45"X3G" 45"X3G"	TYPE "G" @ 45°	WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	9-12" ALUM. EXTRUSIONS (ANODIZED) 7-12" ALUM. EXTRUSIONS (ANODIZED)							CANTILEVER STRUCTURE
68	INTER 440 LOCAL TRAFFIC	9	13'-0"	9'-0"	12"	2"	10"			"E"	45"X3G"	TYPE "H" @ 45°	WHITE (REF.)	GREEN (REF.)	9-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE BUILT UNDER PROJ. NO. I-24-1(55)51
76	41 Murfreesboro Rd NEXT RIGHT	9	20'-0"	9'-0"	12"	2"	1G" 12"	12"		"E" "E"	3G"X3G"		WHITE (REF.)	GREEN (REF.)	9-12" ALUM. EXTRUSIONS (ANODIZED)	W10 X 33 (PAINTED)	h1= 21'-0" h2= 27'-0"	TYPE G E=5'-G"	0.49	154.0	7'-0"	

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SIGN SCHEDULE

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	23

REV. 3-8-84; TOP SIGN (LEFT SIGN ON STRUCTURE) ON OVERHEAD SIGN NO. 78 DELETED.

SIGN NO.	LEGEND	SHEET NO.	SIZE LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHEILD	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
G5	WEST EAST INTER 24 INTER 40 Nashville Knoxville EAST INTER 24 Chattanooga	8	12'-0" 16'-0"	13'-0" 9'-0"	12" 12"	2" 2"	12" 16" 16" 12" 16"	12" 12" 12"		"E" "E" "E" "E" "E"	36"X36" 36"X36"	TYPE "H" TYPE "H"	WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	13-12" ALUM. EXTRUSIONS (ANODIZED) 9-12" ALUM. EXTRUSIONS (ANODIZED)							BRIDGE MOUNT
G7	WEST EAST INTER 24 INTER 40 Nashville Knoxville EAST INTER 24 Chattanooga	8	12'-0" 16'-0"	13'-0" 9'-0"	12" 12"	2" 2"	12" 16" 16" 12" 16"	12" 12" 12"		"E" "E" "E" "E" "E"	36"X36" 36"X36"	TYPE "H" @ 45° TYPE "H" @ 45°	WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	13-12" ALUM. EXTRUSIONS (ANODIZED) 9-12" ALUM. EXTRUSIONS (ANODIZED)							OVERHEAD STRUCTURE
G9	EAST INTER 24 Chattanooga EXIT 53 INTER 440 LOCAL TRAFFIC	9	28'-0" 9'-0" 15'-0"	9'-0" 2'-0" 7'-0"	12" 6" TOP ONLY 9"	2" 2" 2"	12" 16" 10" 10"	12"	15"	"E" "E" "E" "E"	36"X36" 45"X36"	TYPE "H" TYPE "G" @ 45°	WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	9-12" ALUM. EXTRUSIONS 2-12" ALUM. EXTRUSIONS 7-12" ALUM. EXTRUSIONS							OVERHEAD STRUCTURE
74	WEST EAST INTER 24 INTER 40 Nashville Knoxville 41 Murfreesboro Rd	9	12'-0" 20'-0"	13'-0" 9'-0"	12" 12"	2" 2"	12" 16" 16" 16"	12" 12" 12"		"E" "E" "E" "E"	36"X36" 36"X36"	TYPE "H" @ 45° TYPE "H" @ 45°	WHITE (REF.) WHITE (REF.)	GREEN (REF.) GREEN (REF.)	13-12" ALUM. EXTRUSIONS 9-12" ALUM. EXTRUSIONS							EXISTING CANTILEVER STRUCTURE BUILT UNDER PROJ. NO. I-24-1(55)51
78	EXIT 53 INTER 440 LOCAL TRAFFIC 1/2 MILE	10	9'-0" 13'-0"	2'-0" 9'-0"	6" TOP ONLY 12"	2" 2"	10" 10" 10"		15" 10"/10"	"E" "E" "E"	45"X36"		WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 9-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE BUILT UNDER PROJ. I-24-1(55)51
83	EXIT 53 INTER 440 LOCAL TRAFFIC 1 1/2 MILES	13	9'-0" 13'-0"	2'-0" 9'-0"	6" TOP ONLY 12"	2" 2"	10" 10" 10"		15" 15" 10"/10"	"E" "E" "E"	45"X36"		WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 9-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE BUILT UNDER PROJ. I-24-1(55)51
79	EXIT 53 INTER 440 LOCAL TRAFFIC NEXT RIGHT	10	9'-0" 13'-0"	2'-0" 9'-0"	6" TOP ONLY 12"	2" 2"	10" 12"		15"	"E" "E"	45"X36"		WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 9-12" ALUM. EXTRUSIONS							EXISTING CANTILEVER STRUCTURE BUILT UNDER PROJ. I-24-1(55)51
82		11																				EXISTING OVERHEAD STRUCTURE BUILT UNDER PROJ. I-24-1(55)51

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SIGN SCHEDULE

TYPE	YEAR	PROJECT NO	SHEET NO.
PAVING	1983	I-440-4(55)211	24

REV. 2/14/85: REMOVED LANE LINES FROM DIRECTIONAL ARROW ON SIGN NO'S. 84 AND 85.

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

SIGN NO.	LEGEND	SHEET NO.	SIZE: LENGTH	SIZE: HEIGHT	SIZE: RADIUS	SIZE: BORDER WIDTH	COPY: CAPITAL	COPY: LOWER CASE	COPY: NUMERAL	COPY: SERIES	SHEILD	ARROW	SIGN FACE: COPY	SIGN FACE: BACKGROUND	SIGN FACE: MATERIAL	STEEL DESIGN (BREAK-AWAY): SUPPORT TYPE	STEEL DESIGN (BREAK-AWAY): SUPPORT LENGTH	STEEL DESIGN (BREAK-AWAY): FOOTING	STEEL DESIGN (BREAK-AWAY): CONC. CU.YD.	STEEL DESIGN (BREAK-AWAY): REIN. STEEL LBS.	MINIMUM VERTICAL CLEARANCE	REMARKS
81	EXIT 53 440 LOCAL TRAFFIC	11	9'-0" 15'-0"	2'-0" 7'-0"	6" TOP ONLY 9"	2" 2"	10" 10"		15"	"E" "E"	45"X36"	TYPE "G" @ 45°	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 7-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE BUILT UNDER PROJ. I-24-1(55)51
87	G5 NORTH Nashville	15	28'-0"	9'-0"	12"	2"	12" 16"	12"		"E" "E"	36"X36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	9'-12" ALUM. EXTRUSIONS							OVERHEAD STRUCTURE (MEDIAN FOOTING EXISTING, BUILT UNDER PROJ. NO. I-G5-2(58)80)
90	EXIT 80 440 EAST Knoxville	15	9'-0" 12'-0"	2'-0" 9'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16"	12"	15"	"E" "E" "E"	45"X36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 9-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE FOR MOUNTING DETAILS SEE SHEET NO. 39
92	EXIT 80 440 EAST Knoxville	16	9'-0" 12'-0"	2'-0" 9'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16"	12"	15"	"E" "E" "E"	45"X36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 9-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE FOR MOUNTING DETAILS SEE SHEET NO. 39
36	WEST 24 EAST 40 Nashville Knoxville 1¼ MILES EAST 24 Chattanooga 1¼ MILES	6	34'-0"	13'-0"	12"	2"	12" 12" 16" 16" 16" 10"	12" 12" 12"	15" 10"/10"	"E" "E" "E" "E" "E" "E"	36"X36"	SEE SHEET NO. 26 FOR DETAILS	WHITE (REF.)	GREEN (REF.)	13-12" ALUM. EXTRUSIONS (ANODIZED)							BRIDGE MOUNT
58	WEST 24 EAST 40 Nashville Knoxville EAST 24 Chattanooga	7	34'-0"	11'-0"	12"	2"	12" 12" 16" 16" 16"	12" 12" 12"		"E" "E" "E" "E" "E"	36"X36"	SEE SHEET NO. 26 FOR DETAILS	WHITE (REF.)	GREEN (REF.)	11-12" ALUM. EXTRUSIONS (ANODIZED)							BRIDGE MOUNT
84	EXIT 80 NORTH G5 440 Memphis Nashville 1½ MILES Knoxville 1½ MILES	14 FUTURE	9'-0" 30'-0"	2'-0" 12'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16" 10"	12"	15" 15" 10"/10"	"E" "E" "E" "E"	G5 36"X36" 440 45"X36"	SEE SHEET NO. 26 FOR DETAILS	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 12-12" ALUM. EXTRUSIONS							OVERHEAD STRUCTURE
85	EXIT 80 NORTH G5 440 Memphis Nashville Knoxville	14 FUTURE	9'-0" 30'-0"	2'-0" 10'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16"	12"	15"	"E" "E" "E"	G5 36"X36" 440 45"X36"	SEE SHEET NO. 26 FOR DETAILS	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 10-12" ALUM. EXTRUSIONS							EXISTING OVERHEAD STRUCTURE FOR MOUNTING DETAILS SEE SHEET NO. 39
94	EXIT 80 SOUTH G5 440 Memphis Birmingham 1¼ MILES Knoxville 1¼ MILES	17 FUTURE	9'-0" 33'-0"	2'-0" 12'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16" 10"	12"	15" 15" 10"/10"	"E" "E" "E" "E"	G5 36"X36" 440 45"X36"	SEE SHEET NO. 26 FOR DETAILS	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 12-12" ALUM. EXTRUSIONS							BRIDGE MOUNT
93	EXIT 80 SOUTH G5 440 Memphis Birmingham Knoxville	17 FUTURE	9'-0" 33'-0"	2'-0" 10'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16"	12"	15"	"E" "E" "E"	G5 36"X36" 440 45"X36"	SEE SHEET NO. 26 FOR DETAILS	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS 10-12" ALUM. EXTRUSIONS							OVERHEAD STRUCTURE (MEDIAN FOOTING EXISTING, BUILT UNDER PROJ. I-G5-2(58)80)

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SIGN SCHEDULE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	25

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

SIGN NO.	LEGEND	SHEET NO.	SIZE LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHEILD	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
X10	LANE ENDS 500 FT	5	8'-0"	3'-0"	12"	2"	12" 12" 12"		12"	"E" "E" "E"	36"X36"	TYPE "H"	BLACK	YELLOW(REF.)	3-12" ALUM. EXTRUSIONS (ANODIZED)							OVERHEAD STRUCTURE
	EXIT 5 / SOUTH / Birmingham		8'-0" 15'-0"	2'-0" 3'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16"	12"	15"	"E" "E" "E"		TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED) 3-12" ALUM. EXTRUSIONS (ANODIZED)							
	EXIT 5 / NORTH / Nashville		8'-0" 12'-0"	2'-0" 3'-0"	6" TOP ONLY 12"	2" 2"	10" 12" 16"	12"	15"	"E" "E" "E"	36"X36"	TYPE "H"	WHITE (REF.)	GREEN (REF.)	2-12" ALUM. EXTRUSIONS (ANODIZED) 3-12" ALUM. EXTRUSIONS (ANODIZED)							
X G A	Entering Four-Forty Pkwy	4	17'-0"	5'-0"	9"	2"	13.33"	10"		"E"			WHITE (REF.)	BROWN (REF.)	5-12" ALUM. EXTRUSIONS (ANODIZED)							CANTILEVER STRUCTURE
X G G		8					13.33"	10"		"E"												BRIDGE MOUNT
X 16 A	Entering Four-Forty Pkwy	6	10'-0"	3'-0"	3"	1"	8"	6"		"E"			WHITE (REF.)	BROWN (REF.)	3-12" ALUM. EXTRUSIONS (ANODIZED)	3.3 X 5.7 (PAINTED)	h1= 11'-3" h2= 10'-3"	TYPE 5 D= 1'-3"	0.18	50.1	7'-0"	
X 17 A		6					8"	6"		"E"							h1= 11'-3" h2= 10'-3"					
53 A		6															h1= 11'-3" h2 10'-3"					
54 A		6															h1= 11'-3" h2= 10'-3"					

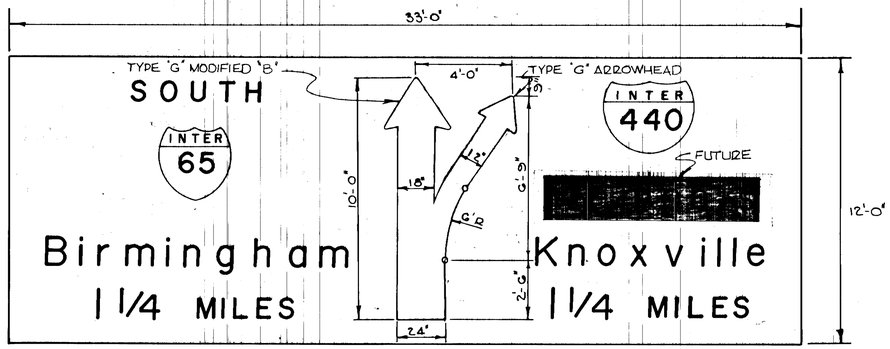
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SIGN SCHEDULE

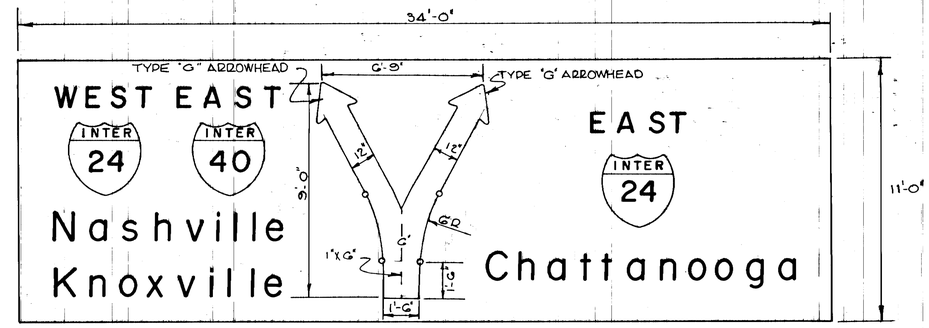
TENN. STATE HIGHWAYS
Plans File IN-No.332
Divn.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	2G

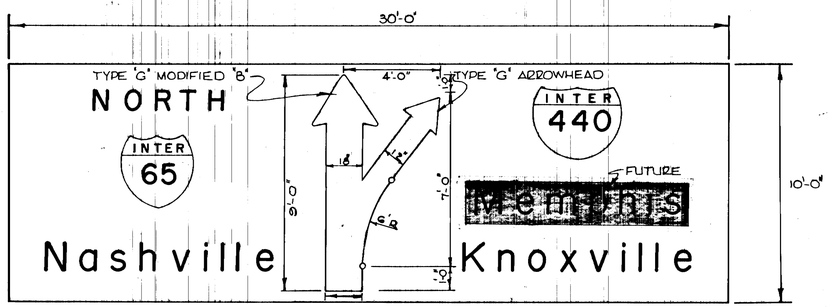
REV. 2/14/85: REMOVED LANE LINES FROM DIRECTIONAL ARROW ON SIGN NOS. 84 AND 85.



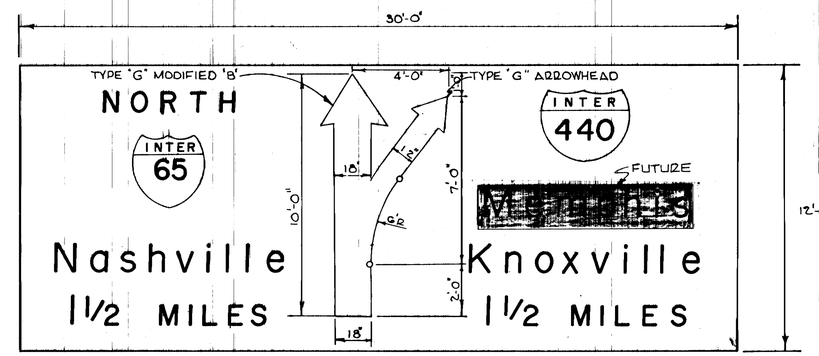
SIGN NO. 94



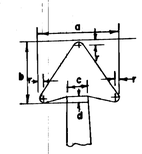
SIGN NO. 58



SIGN NO. 85

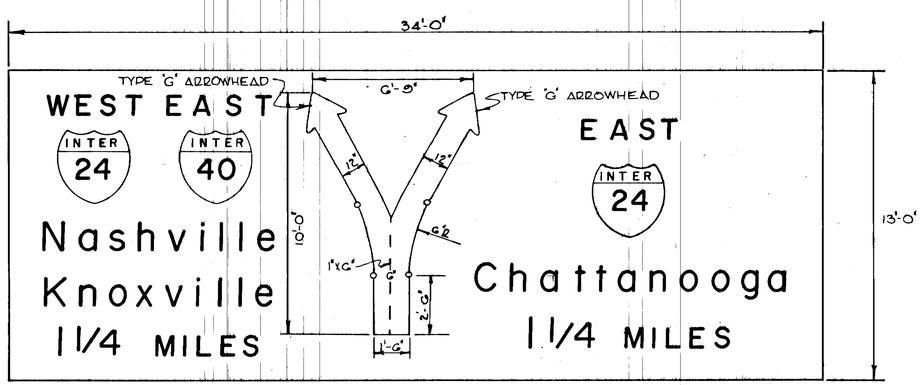


SIGN NO. 84

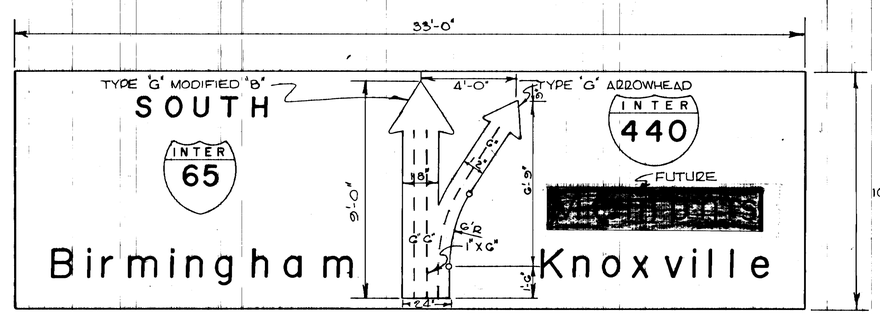


"G" ARROWHEAD

ARROWHEAD	ARROW DIMENSIONS IN INCHES				
	a	b	c	d	r
'G'	22-1/4	17	5-3/8	1-3/4	1
'G' MODIFIED 'B'	33-3/8	25-1/2	8-1/16	2-5/8	1-1/2



SIGN NO. 36

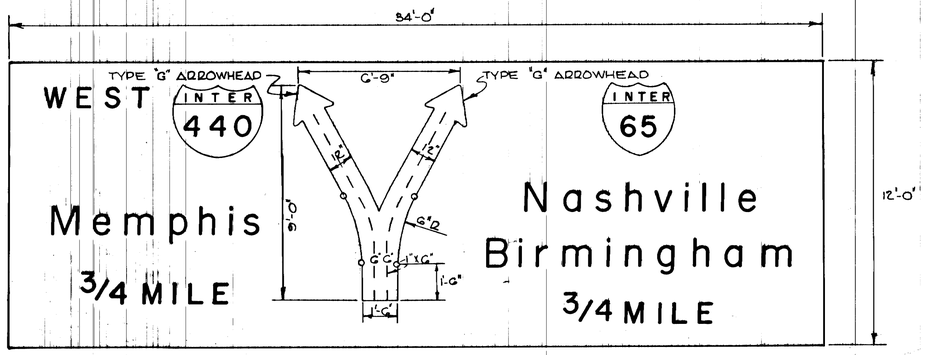


SIGN NO. 93

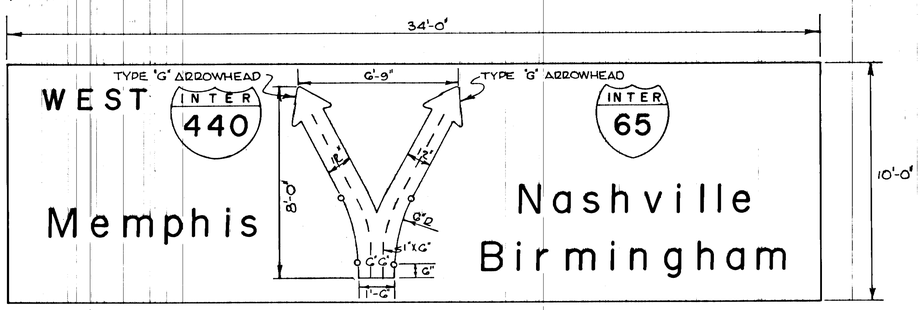
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

MISCELLANEOUS SIGNING DETAILS

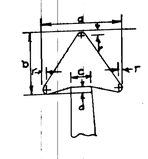
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1989	I-440-4(55)211	27



(FUTURE) SIGN NO. 15

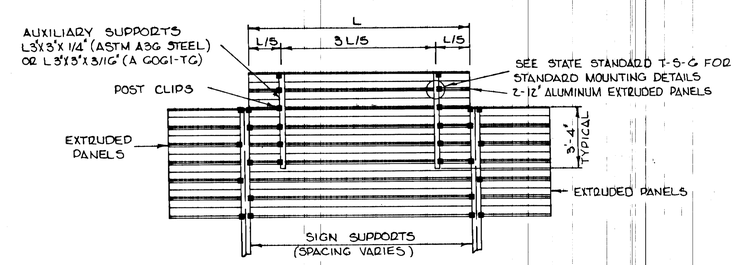


(FUTURE) SIGN NO. 10



"G" ARROWHEAD

ARROWHEAD	ARROW DIMENSIONS IN INCHES				
	a	b	c	d	r
"G"	22-1/4	17	5-3/8	1-3/4	1



EXIT PANEL MOUNTING DETAIL

ITEM NO. 713-17.02
(INCLUDES THE COST OF AUXILIARY SUPPORTS & POST CLIPS.)

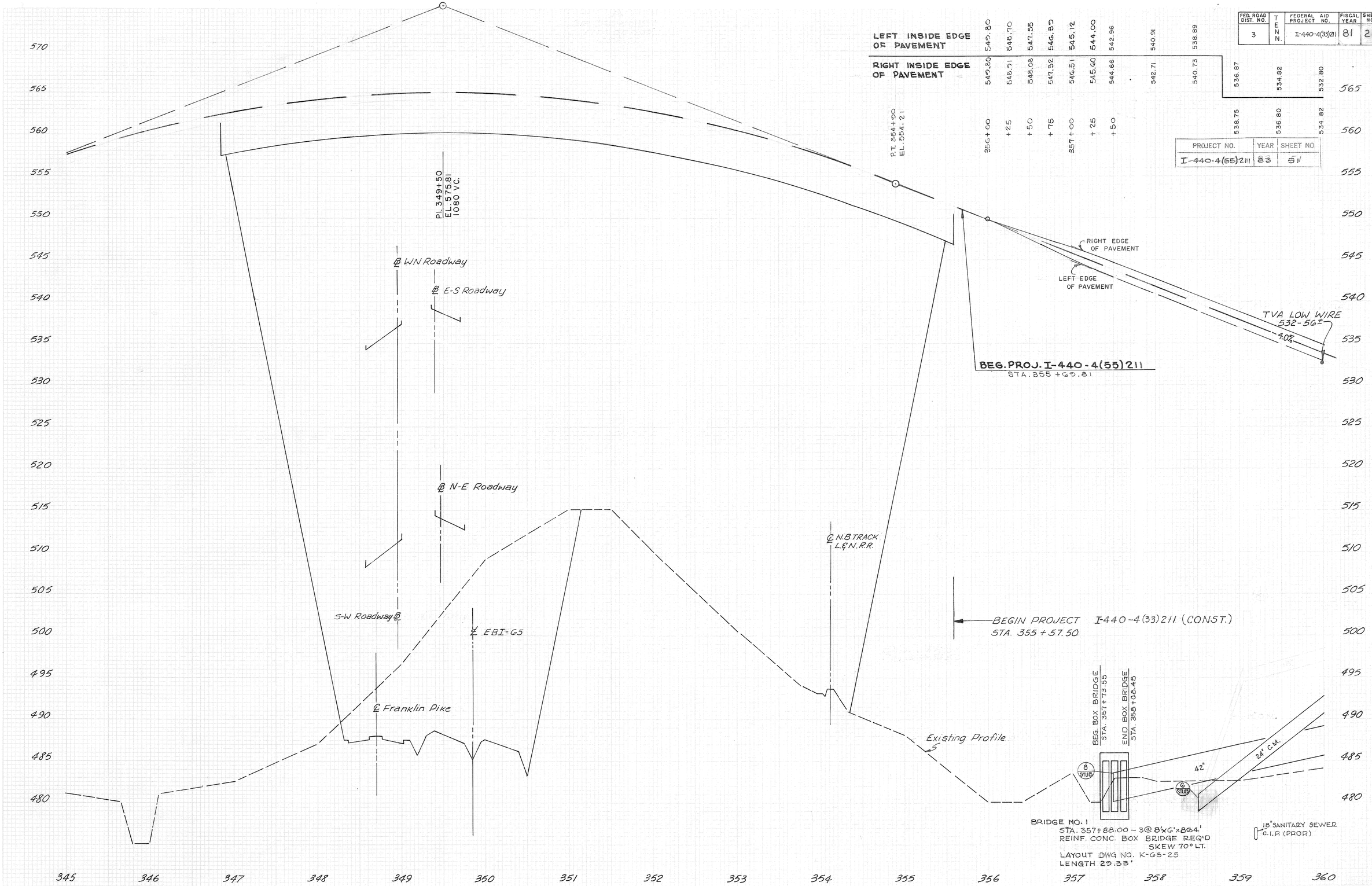
NOTE: TO BE USED WHERE EXIT PANEL LENGTH IS LESS THAN LENGTH BETWEEN SIGN SUPPORTS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

MISCELLANEOUS SIGNING DETAILS

FED. ROAD DIST. NO.	TENN.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.
3	TENN.	I-440-4(33)211	81	28

PROJECT NO.	YEAR	SHEET NO.
I-440-4(55)211	83	51



EBI-440 PROFILE STA. 345+00 TO STA. 360+00

PROJECT NO.	YEAR	SHEET NO.
I-440-4(55)211	83	52

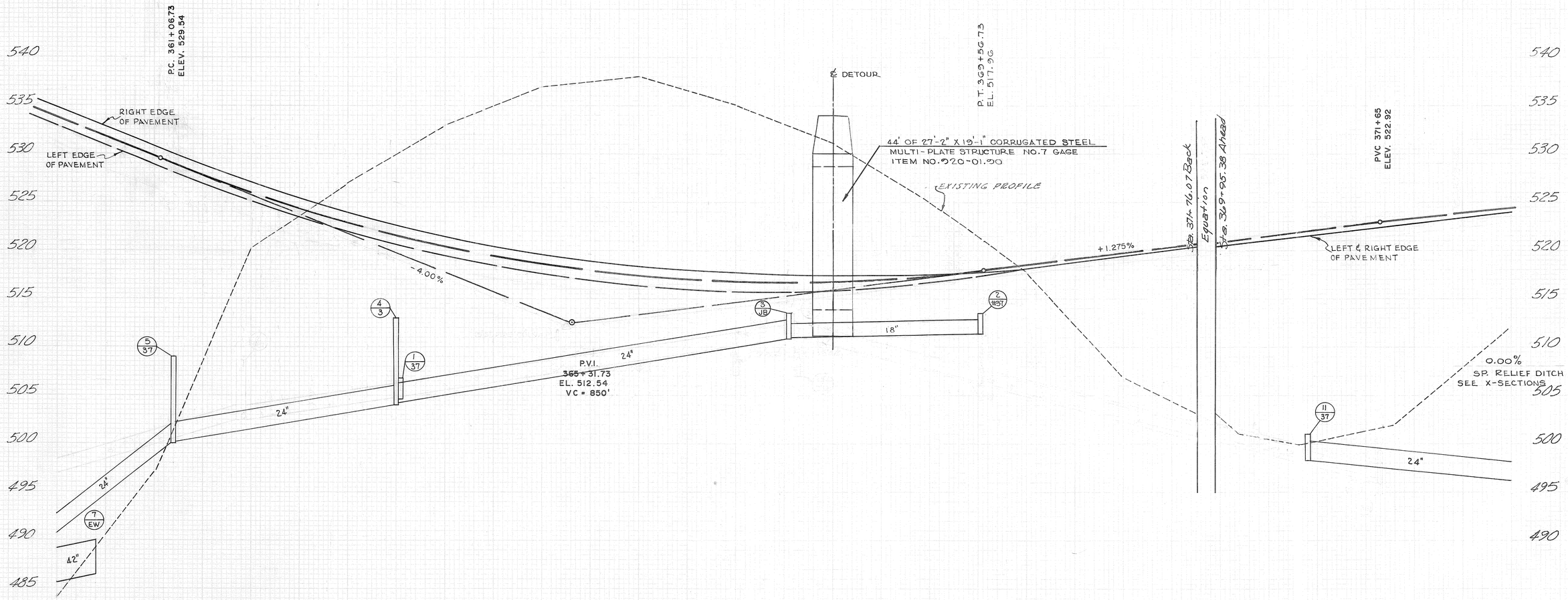
FED ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I440-4(33)211	81	29	

LEFT INSIDE EDGE OF PAVEMENT	532.80	530.80	528.80	526.85	525.07	523.45	521.97	520.65	519.45	518.45	517.59	516.89	516.35	515.95	515.71	515.64	515.87	516.45	516.92	517.46	518.10	518.75	519.37	520.01	520.40	521.04	521.68	522.31	522.93	523.49	523.98
RIGHT INSIDE EDGE OF PAVEMENT	534.82	532.82	530.85	528.88	527.07	525.43	523.99	522.68	521.45	520.45	519.61	518.93	518.37	517.98	517.75	517.66	517.57	517.46	517.47	517.65											

REV. 4-24-81: RIGHT INSIDE EDGE OF PAVEMENT ELEVATION ADJUSTED AT STA. 369+50.

REV. 2-11-82: MULTI-PLATE STRUCTURE ADDED TO PROFILE AT STA. 368+00±.

REV. 2-9-83 CHANGED STRUCTURE NO. 3 TO JUNCTION BOX.

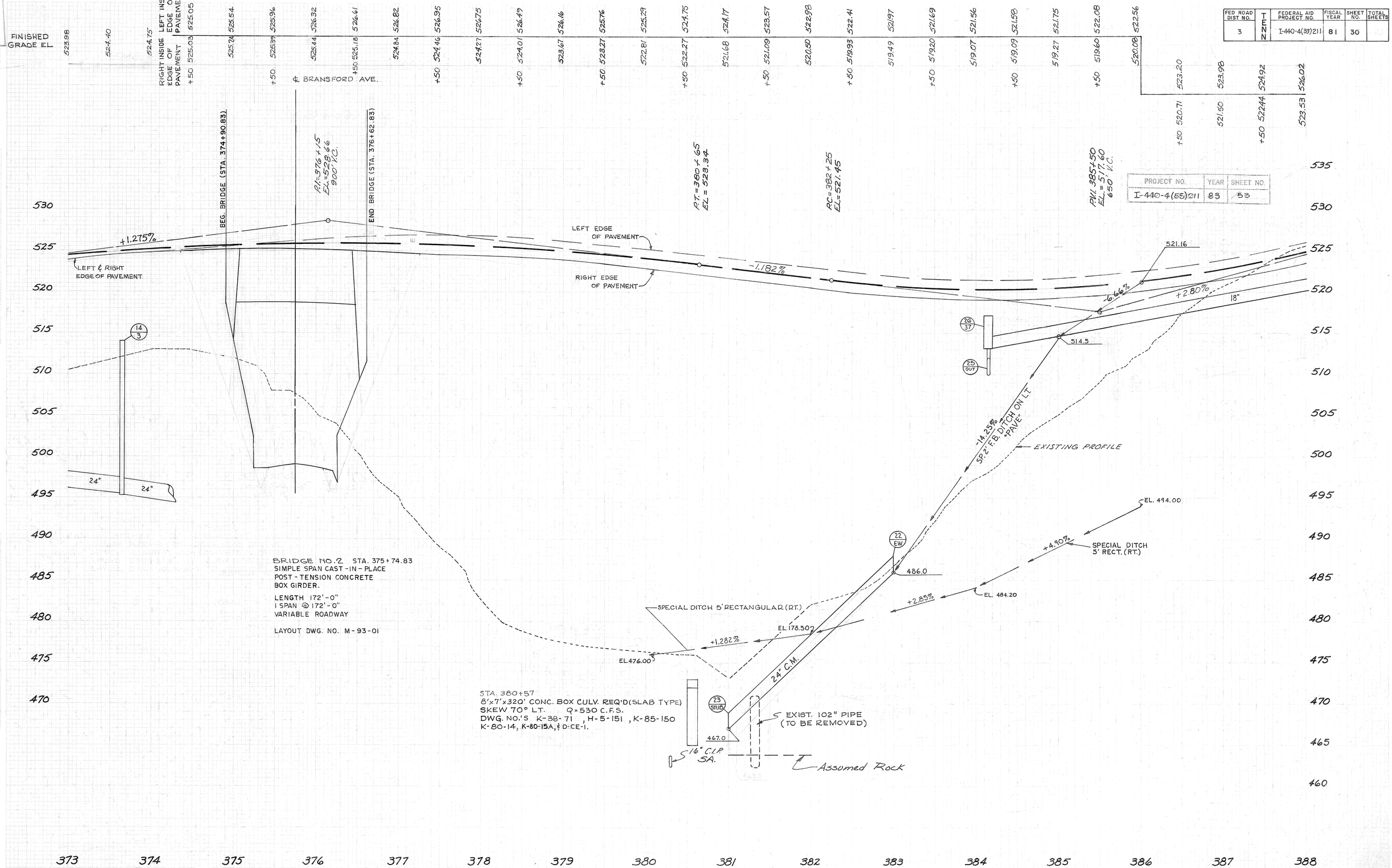


Equation Sta. 371+76.07 Back
= Sta. 369+95.38 Ahead

EB I-440 PROFILE STA. 360+00 TO STA. 373+00

FED ROAD DIST NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-440-4(33)211	81	30	

PROJECT NO.	YEAR	SHEET NO.
I-440-4(55)211	83	53



"S" LINE PROFILE STA. 373+00 TO STA. 388+00

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-440-4(33)211	81	31	

EXCAVATION (UNCLAS) 1,290,132 C.Y.

- COMMON 678,283 C.Y. (INCLUDES 21,174 C.Y. TOPSOIL FROM EXC. AREAS, 10,353 C.Y. FROM EMB. AREAS, 21,708 C.Y. FOR THE I-65 INTERCHANGE RAMPS, 144,003 C.Y. FOR NOLENSVILLE RD. INTERCHANGE RAMPS, 9,290 C.Y. FOR BRANSFORD AVE., 341 C.Y. FOR FRONTAGE RD. "B"; 15,291 C.Y. FOR NOLENSVILLE RD. DETOUR, 2,213 C.Y. FOR L & N R.R. RUNAROUND, 4,666 C.Y. FOR GLENROSE AVE. 41,870 C.Y. TO BE EXCESS MATERIAL, 1300 C.Y. TO BE RESERVED FOR WINFORD AVE.)
- ROCK 611,849 C.Y. (INCLUDES 8,954 C.Y. FOR I-65 INTERCHANGE RAMPS, 250,617 C.Y. FOR NOLENSVILLE RD. INTERCHANGE RAMPS, 3,944 C.Y. FOR BRANSFORD AVE., 20,289 C.Y. FOR NOLENSVILLE RD. DETOUR.)
- CHANNEL 4,110 C.Y. (NOT USED IN THIS BALANCE)

EMBANKMENT 1,225,485 C.Y.

INCLUDES 10,353 C.Y. TO REPLACE STRIPPED TOPSOIL, 1200 C.Y. FOR BERMS AT STREET CLOSURES, 6,702 C.Y. FOR CAPPING ROCK CUT SLOPES AT THE NOLENSVILLE ROAD INTERCHANGE, 11,100 C.Y. FOR CAPPING ROCK FILLS, 403,998 C.Y. FOR THE I-65 INTERCHANGE RAMPS, 12,787 C.Y. FOR NOLENSVILLE ROAD INTERCHANGE RAMPS, 32 C.Y. FOR BRANSFORD AVE., 287 C.Y. FOR FRONT RD. "B", 2,304 C.Y. FOR NOLENSVILLE RD. DETOUR, 10,453 C.Y. FOR L & N R.R. RUNAROUND, 4,455 C.Y. FOR GLENROSE AVE., 1179 C.Y. FOR WINFORD AVE. 8,371 C.Y. FOR BACKFILLING MEDIAN DITCHES IN ROCK CUT.

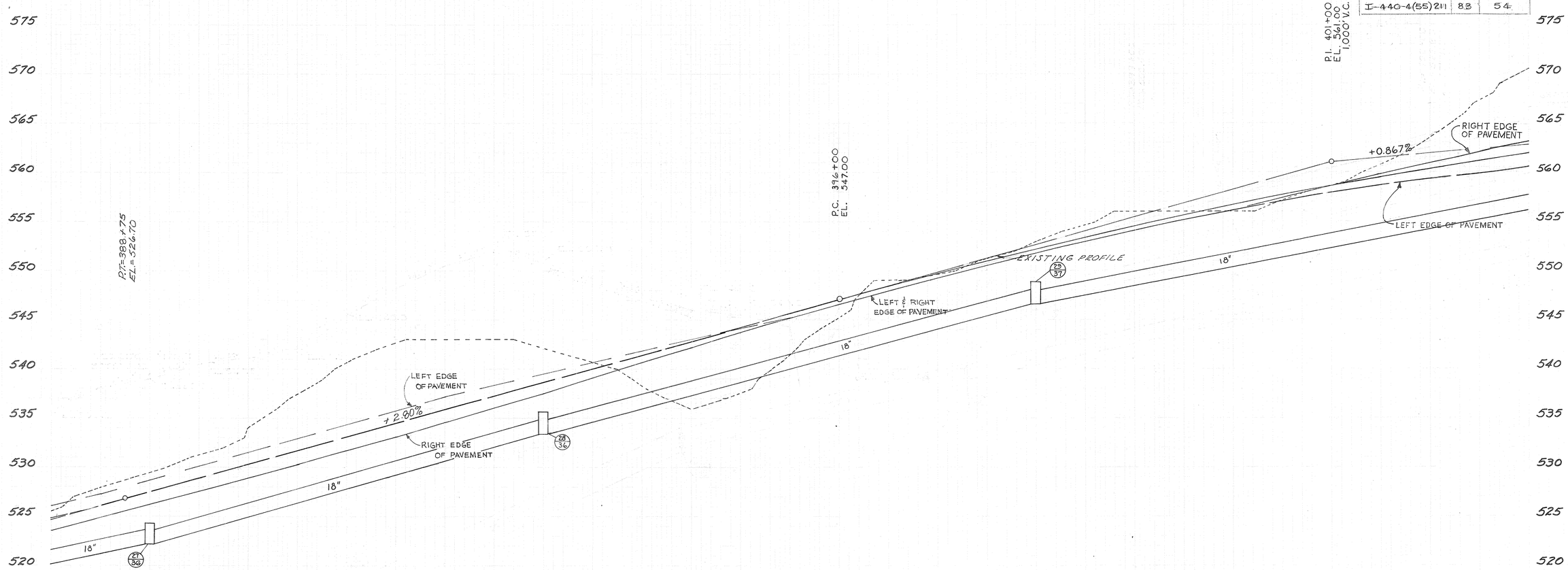
REV. 2-20-81: EARTHWORK QUANTITIES REVISED.

REV. 8-19-81: E.M.B. EARTHWORK QUANTITIES REVISED.

REV. 2-11-82: EARTHWORK QUANTITIES REVISED.

LEFT INSIDE EDGE OF PAVEMENT	526.02	527.27	528.65	530.05	531.45	532.85	534.25	535.65	537.05	538.40	539.52	540.65	541.77	542.90	544.02	545.19	546.59	547.36	549.28	550.56	551.79	552.96	554.09	555.17	556.21	557.20	558.14	559.03	559.67	560.17	560.62
RIGHT INSIDE EDGE OF PAVEMENT	523.53	524.78	526.16	527.56	528.96	530.36	531.76	533.16	534.56	536.01	537.68	539.36	540.99	542.39	543.79											557.40	558.64	559.83	560.97	562.07	563.12

PROJECT NO.	YEAR	SHEET NO
I-440-4(55)211	83	54



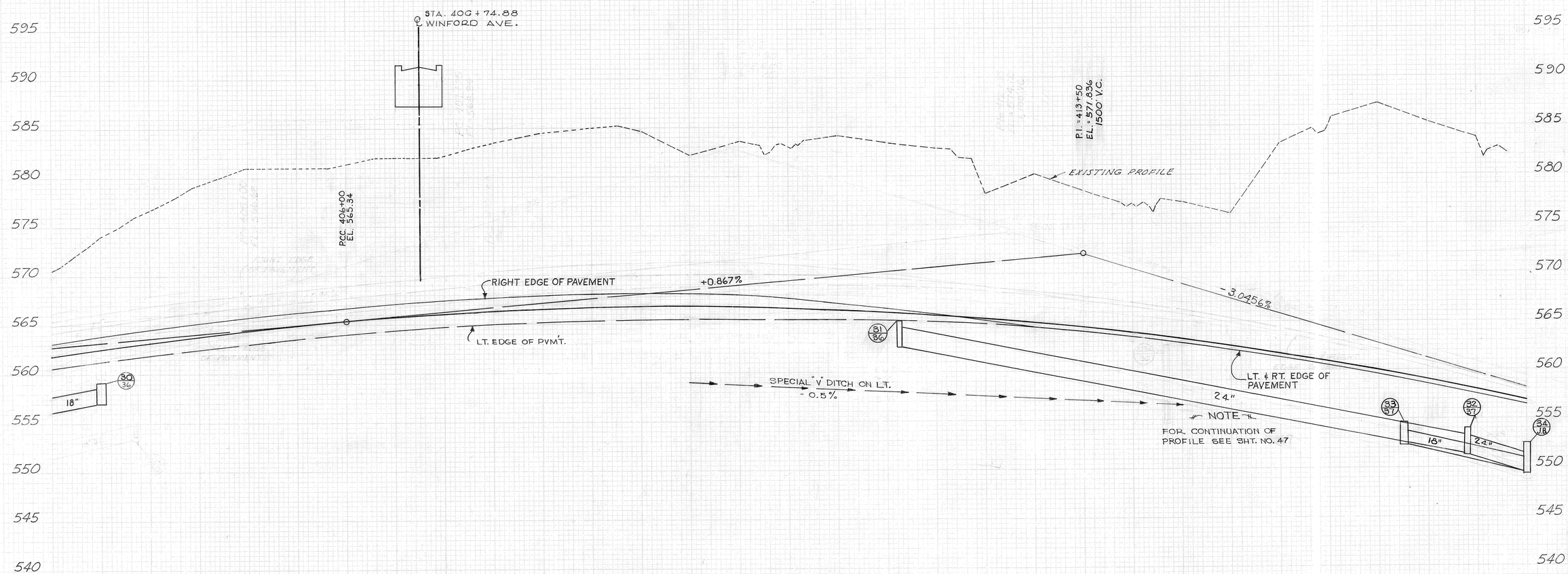
"S" LINE PROFILE STA. 388+00 TO STA. 403+00

PROJECT NO.	YEAR	SHEET NO.
I-44-4(55)211	83	55

FED ROAD DIST NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-440-4(33)211	81	32	

REV. 4-24-81: ADDED SPECIAL MEDIAN DITCH FROM STA. 408+50 TO STA. 411+00.
REV. 2-9-83 DELETED SPECIAL DITCH FROM MEDIAN. CHANGED STRUCTURE NO. 34 TO JUNCTION BOX.

LEFT INSIDE EDGE OF PAVEMENT	560.62	561.22	561.87	562.47	563.02	563.53	563.99	564.39	564.73	565.00	565.20	565.34	565.42	565.43	565.47	565.45	565.76	565.71	565.39	565.01	564.57	564.05	563.48	562.83	562.12	561.34	560.50	559.59	558.61	557.57	556.46
RIGHT INSIDE EDGE OF PAVEMENT	563.12	563.92	564.57	565.17	565.72	566.23	566.69	567.09	567.43	567.70	567.90	568.04	568.12	568.13	567.97	567.55	567.06	566.51	565.89	565.71	564.57										



403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418

"S" LINE PROFILE STA 403+00 TO STA 418+00

FED ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-440-4(33)211	81	33	

PROJECT NO.	YEAR	SHEET NO
I-440-4(55)211	83	56

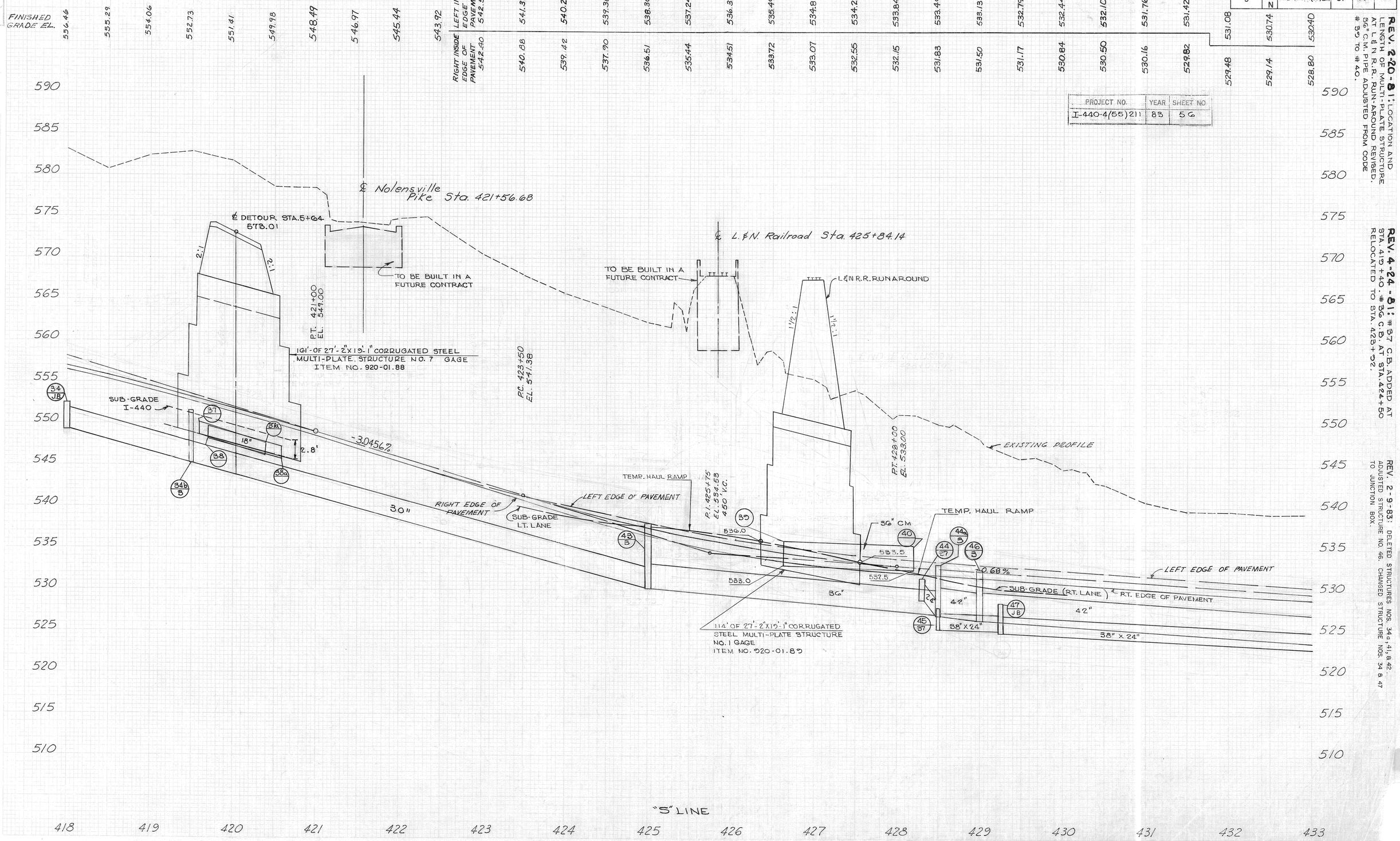
REV. 4-14-82: ELEVATION OF MULTI-PLATE STRUCTURE LOWERED UNDER L&N R.R. RUNAROUND.

REV. 5-14-81: STORM SEWER SYSTEM REVISED FROM STA. 418+00 TO STA. 433+00.

REV. 2-20-81: LOCATION AND LENGTH OF MULTI-PLATE STRUCTURE AT L&N R.R. RUN-AROUND REVISED. 36" C.M. PIPE ADJUSTED FROM CODE # 35 TO # 40.

REV. 4-24-81: #37 C.B. ADDED AT STA. 419+40. #36 C.B. AT STA. 424+50 RELOCATED TO STA. 423+92.

REV. 2-9-83: DELETED STRUCTURES NOS. 34a, 41, & 42. ADJUSTED STRUCTURE NO. 46. CHANGED STRUCTURE NOS. 34 & 47 TO JUNCTION BOX.



"S" LINE PROFILE STA 418+00 TO STA 433+00

PROJECT NO.	YEAR	SHEET NO
I-440-4(55)211	83	57

FED. ROAD DIST. NO.		FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-440-4(33)211	81	34	[illegible]

LEFT INSIDE EDGE OF PAVEMENT	530.40	530.06	529.69	529.35	528.99	528.65	528.28	527.94	527.58	527.24	526.90	526.53	526.19	525.85	525.51	525.17	524.83	524.49	524.15	523.81	523.00	522.68	522.07	521.45							
																									520.99	520.65	520.31	519.97	519.63	519.29	518.95
RIGHT INSIDE EDGE OF PAVEMENT	528.80	528.46	528.14	527.80	527.49	527.15	526.83	526.49	526.18	525.84	525.50	525.18	524.84	524.50	524.16	523.82	523.48	523.14	522.80	522.46	522.60	522.01	521.67	521.33							

REV. 2-20-81: GRADE ADJUSTED ON 54" PIPE FROM STA. 444+00 TO STA. 448+00. DRAINAGE STRUCTURE # 56 ADJUSTED ACCORDINGLY.

REV. 4-24-81: LOCATION OF C.B. #55 AND STUB #56 REVISED.

REV. 5-14-81: DRAINAGE SYSTEM REVISED AT STA. 436+00± AND STA. 444+00±.

REV. 2-9-83 DELETED STRUCTURES NOS. 55 & 56. CHANGED STRUCTURE NO. 51 TO JUNCTION BOX. ADJUSTED STRUCTURE NO. 48.

"S" LINE PROFILE STA 433+00 TO STA 448+00

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET	TOTAL SHEETS
3	TENN	I-440-4(33)211	81	35	

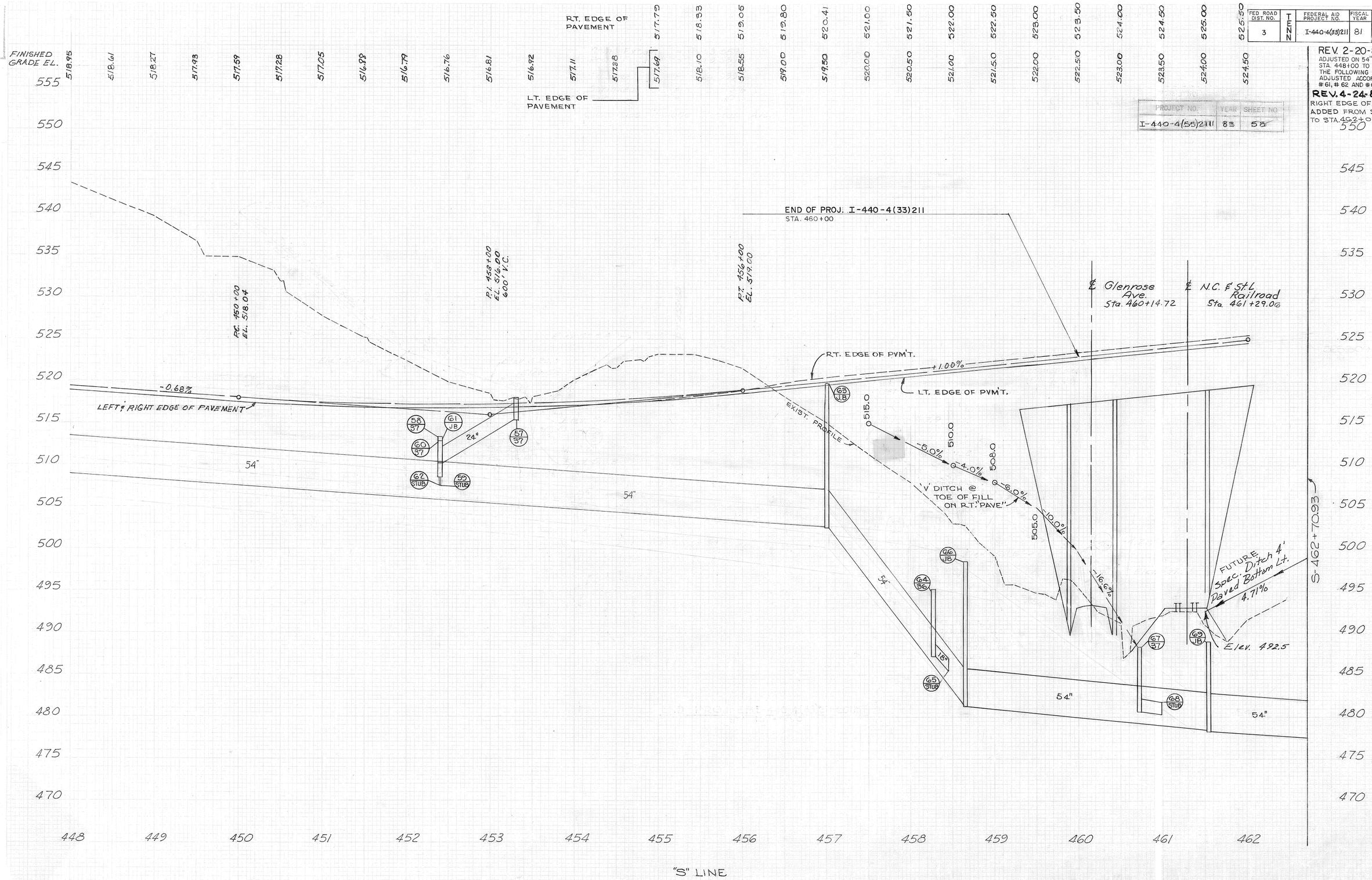
REV. 2-20-81: GRADE ADJUSTED ON 54" PIPE FROM STA. 448+00 TO STA. 458+65. THE FOLLOWING STRUCTURES ADJUSTED ACCORDINGLY: #59, #61, #62 AND #63.

REV. 4-24-81: LEFT & RIGHT EDGE OF PVMT. ELEV'S. ADDED FROM STA. 455+00 TO STA. 462+00.

REV. 5-14-81: #63 J.B. C.T. ELEV. REVISED.

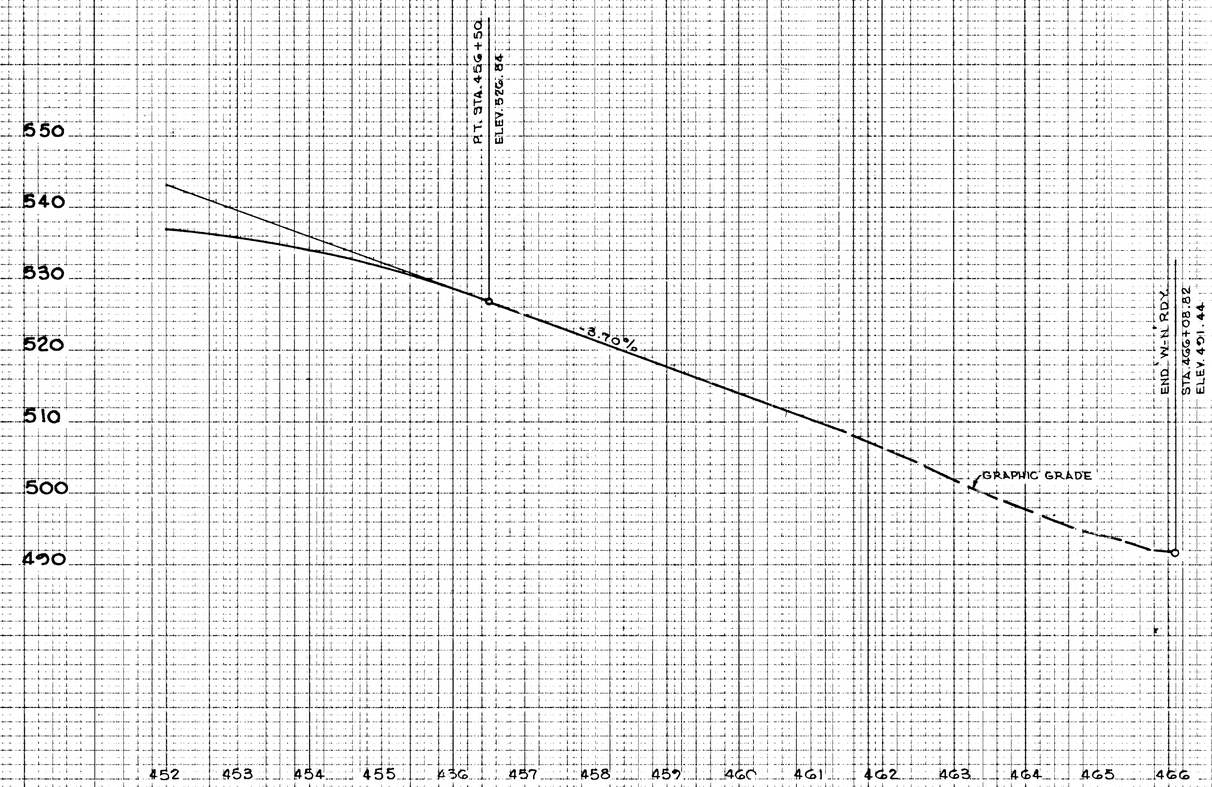
REV. 2-9-83: CHANGED STRUCTURE NO. 61 TO JUNCTION BOX.

PROJECT NO.	YEAR	SHEET NO.
I-440-4(55)2111	83	58



"S" LINE PROFILE STA 448+00 TO STA 462+70.93

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	50



RAMP PROFILE 'W-N' ROADWAY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

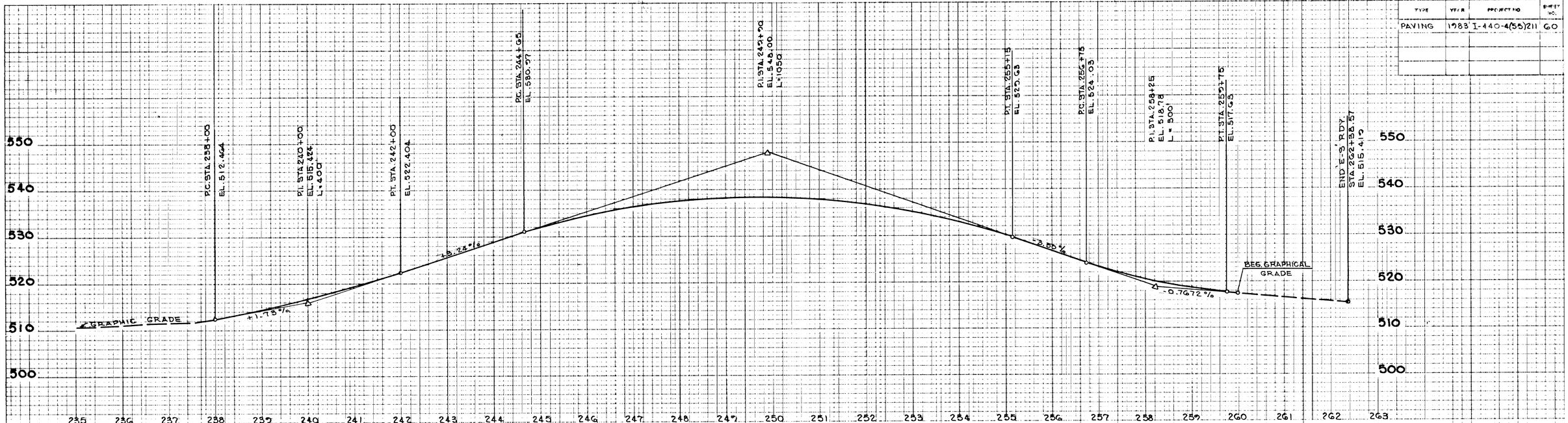
RAMP PROFILE

'W-N' ROADWAY

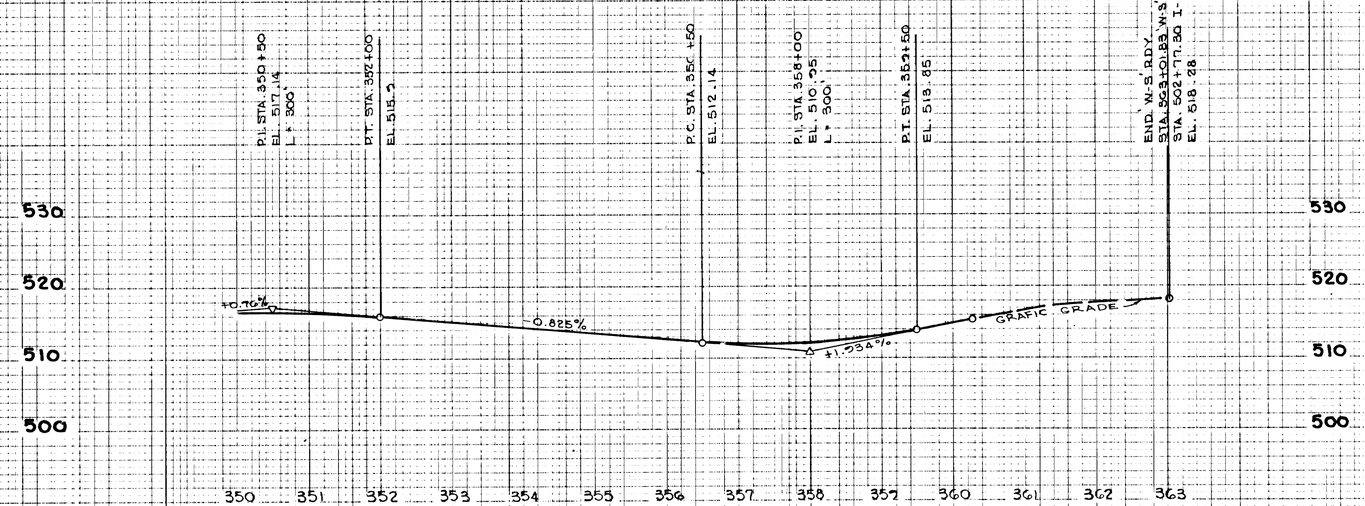
STA. 452+00 TO STA. 466+08.82

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

TYPE	YEAR	PROJECT NO	SHEET NO.
PAVING	1983	I-440-4(55)211	60



RAMP PROFILE 'E-S' ROADWAY



RAMP PROFILE 'W-S' ROADWAY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE

'E-S' ROADWAY

STA. 235+00 TO STA. 262+38.57

'W-S' ROADWAY

STA. 350+00 TO STA. 363+01.83

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

TENN. STATE HIGHWAY
Name
No. 332

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

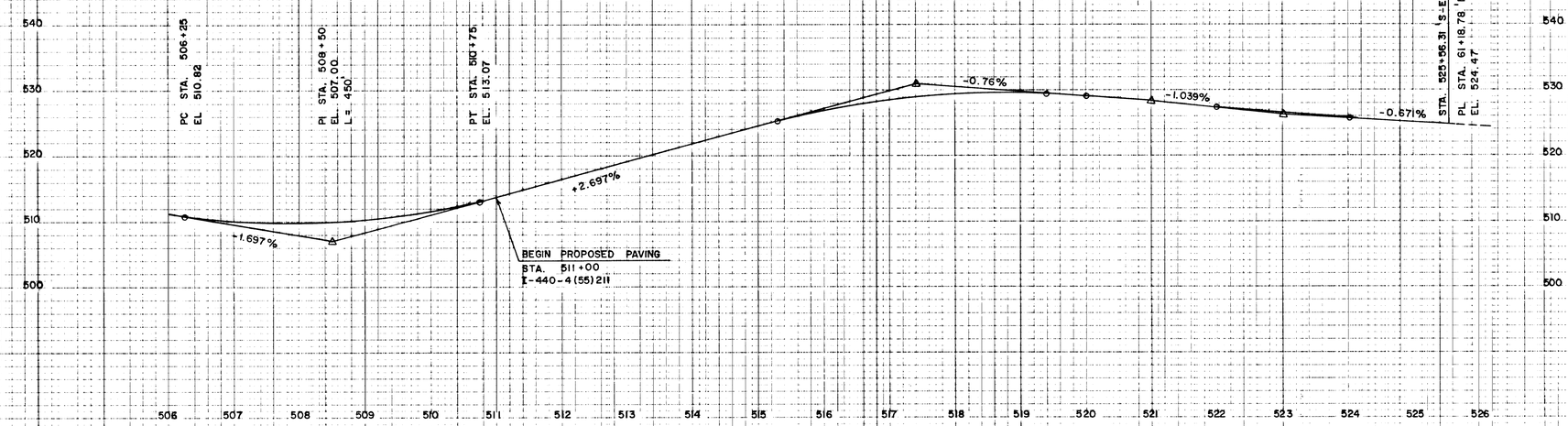
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

TENN. STATE HIGHWAYS
Plate File No. 332

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	G1

FINAL SURVEY — COMPUTED / TRACED / NOTE BOOK / AREAS / NO. — BY / DATE

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS / NO. — BY / DATE



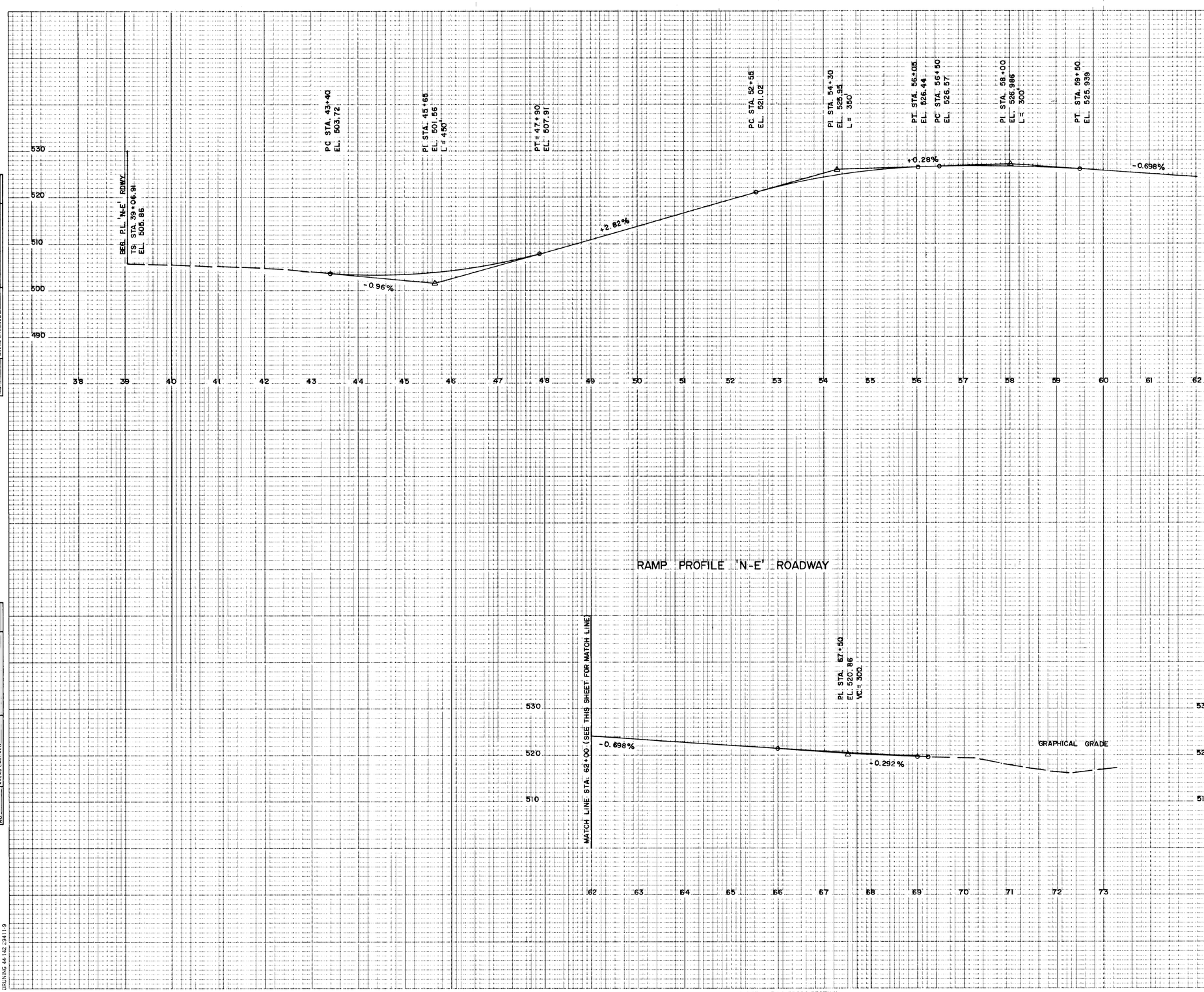
RAMP PROFILE 'S-E' ROADWAY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE
'S-E' RDWY.

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	G2



RAMP PROFILE 'N-E' ROADWAY

FINAL SURVEY			
NOTE BOOK	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY			
NOTE BOOK	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE
'N-E' RDWY.

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

TENN. STATE HIGHWAYS
Plans Divn. File IN- No. 332

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211 G3	

RAMP PROFILE 'E-N' ROADWAY

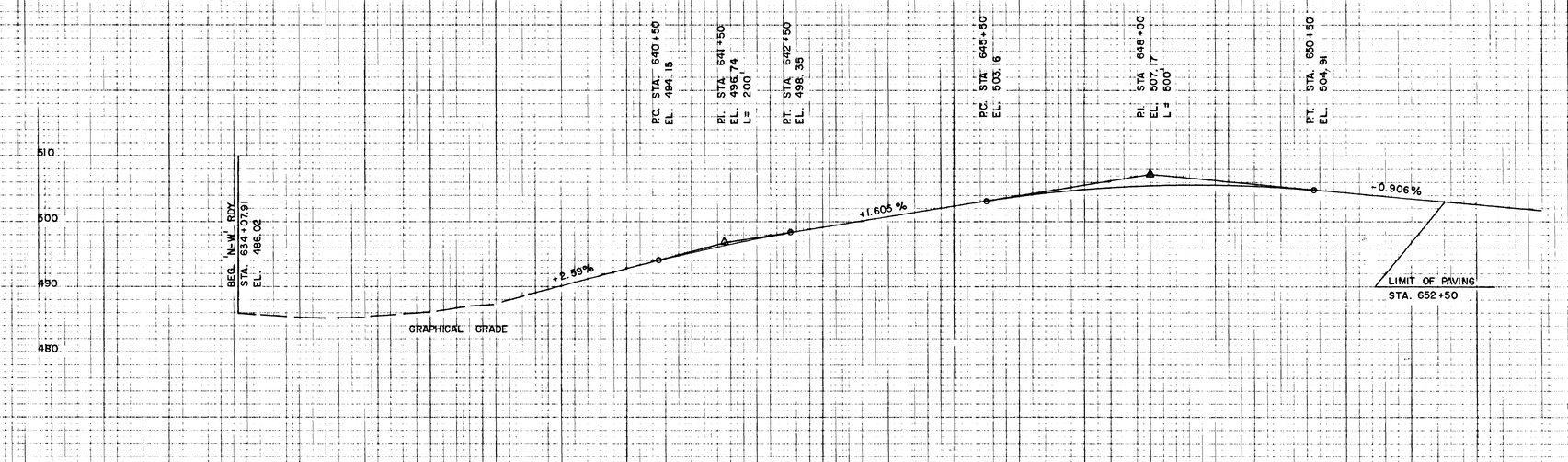
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE
'E-N' ROADWAY
STA. 0+00 TO STA. 550+00
SCALE: HORZ. 1" = 50' VERT. 1" = 5'

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS CHECKED — BY — DATE — NOTE BOOK NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS CHECKED — BY — DATE — NOTE BOOK NO.

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	G4



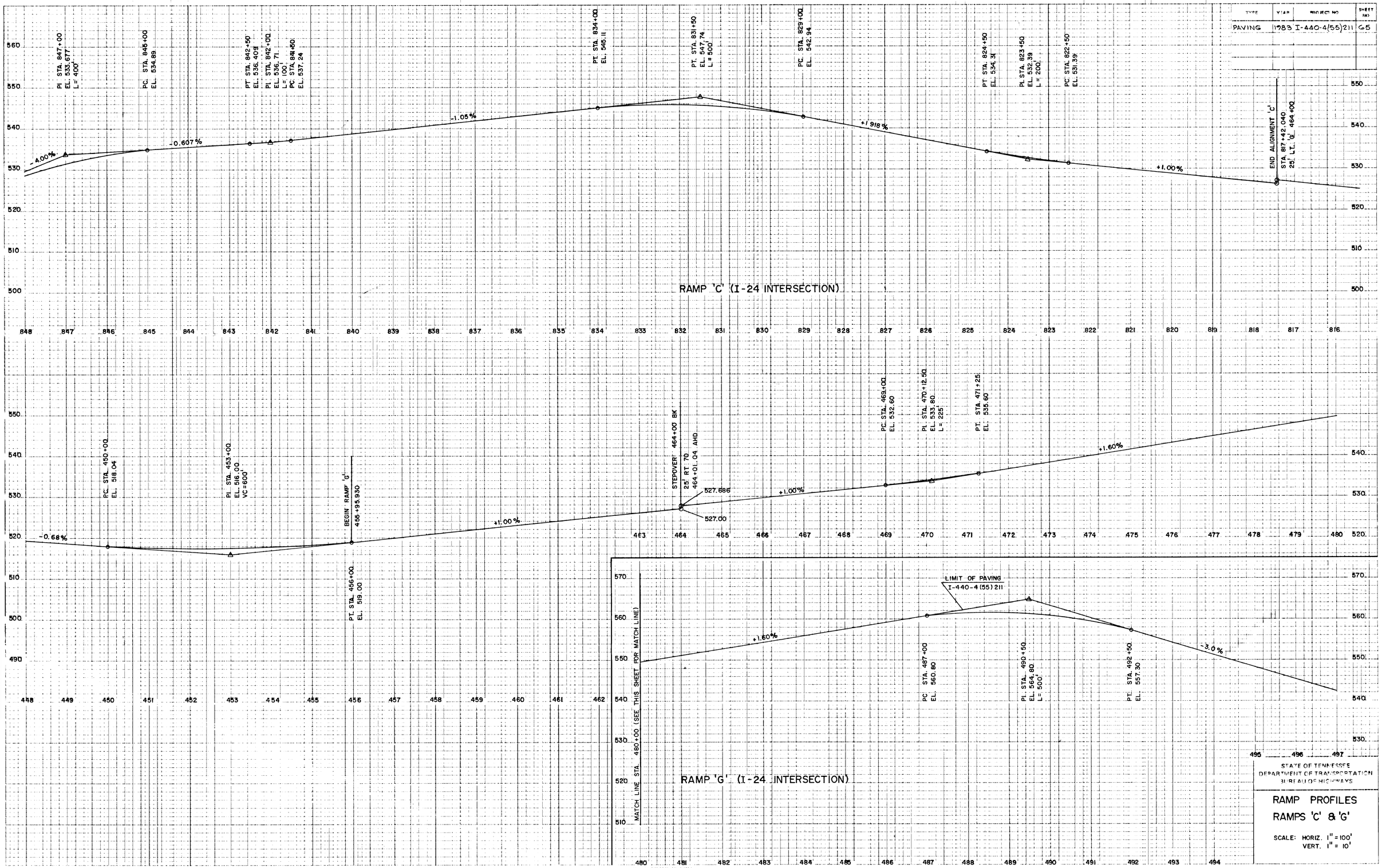
RAMP PROFILE 'N-W' ROADWAY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE
'N-W' RDWY.

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	65

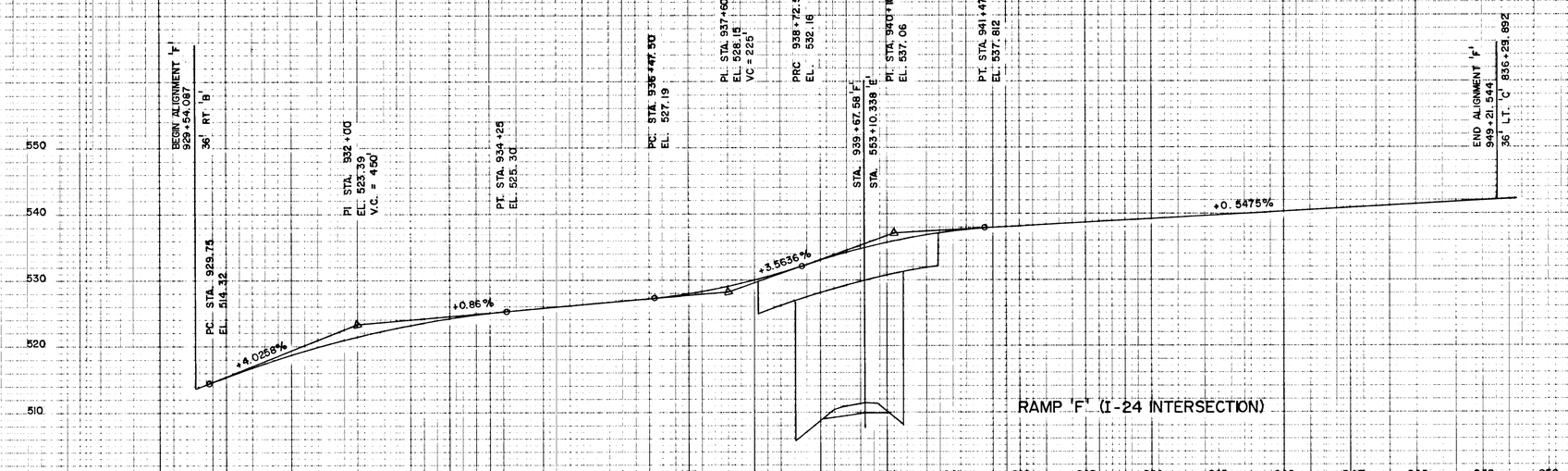


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILES
RAMPS 'C' & 'G'

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	G6



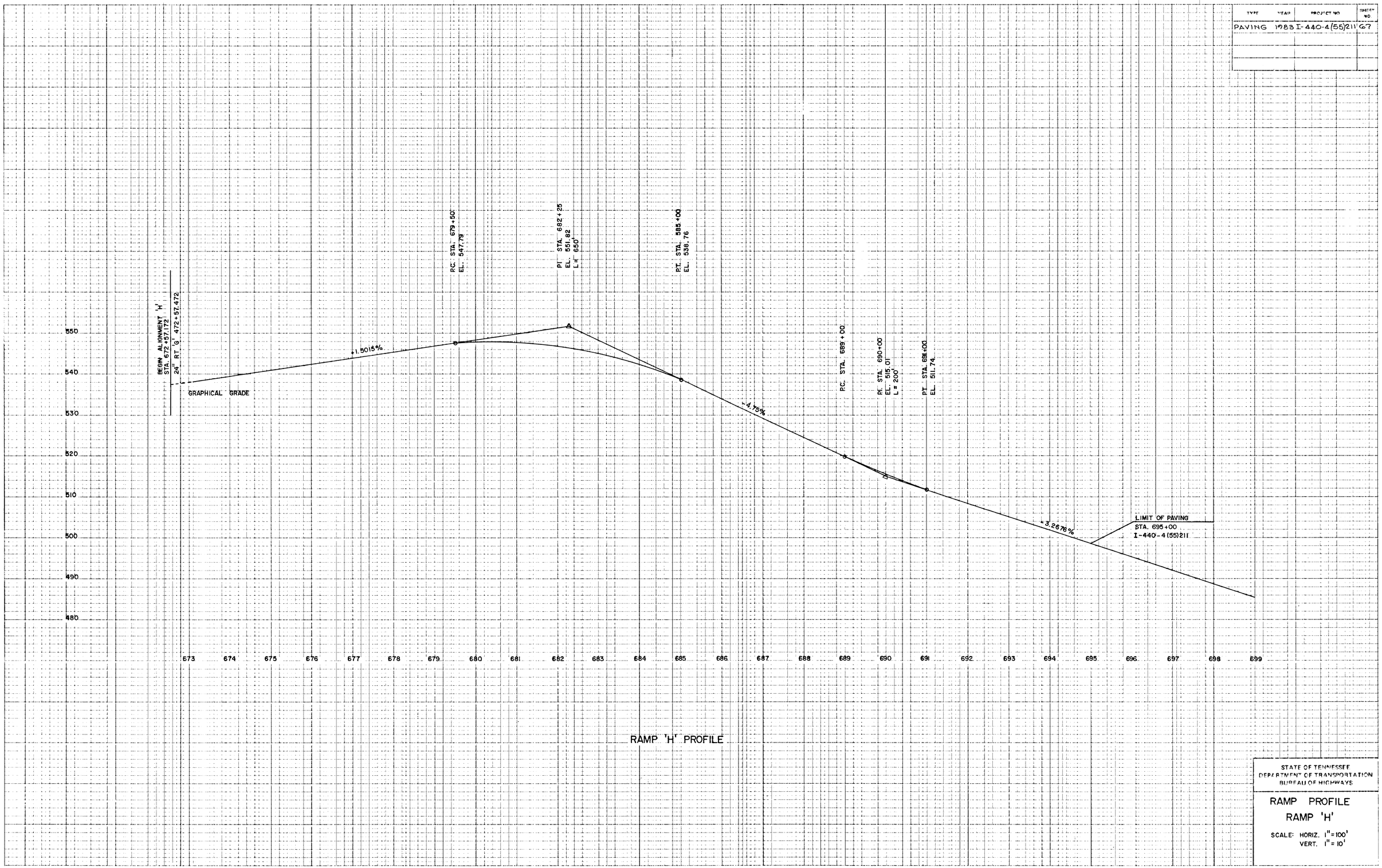
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE
RAMP 'F'

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

ORIGINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK TEMPLATE
AREAS CHECKED
BY
DATE

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	67



RAMP 'H' PROFILE

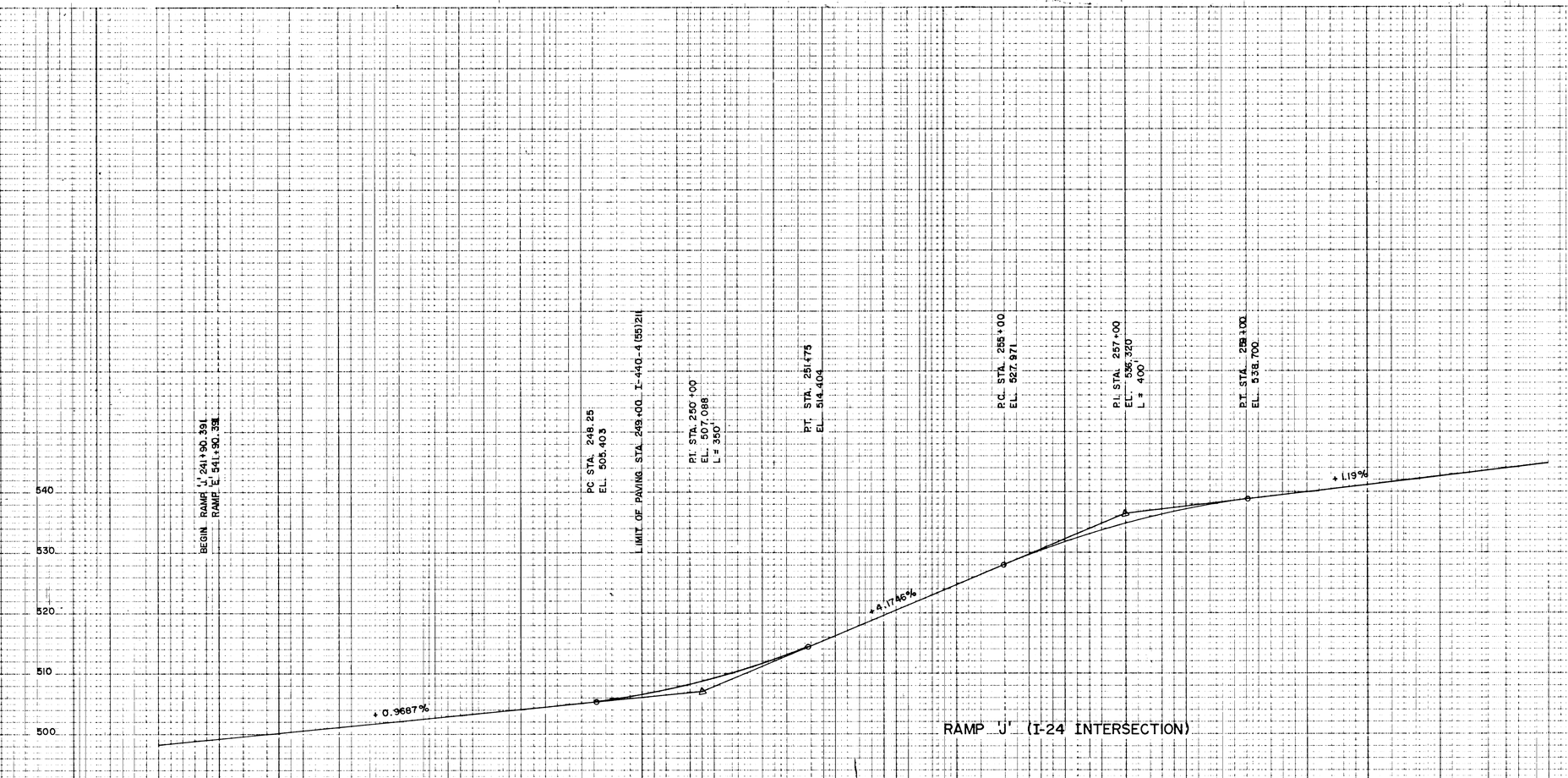
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE
RAMP 'H'

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

PLATE 3-FULL CROSS SECTION-FULL LINE

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	G8



RAMP "J" (I-24 INTERSECTION)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

RAMP PROFILE

RAMP 'J'

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

TENN. STATE HIGHWAY
Plans File No. 32
Divn.

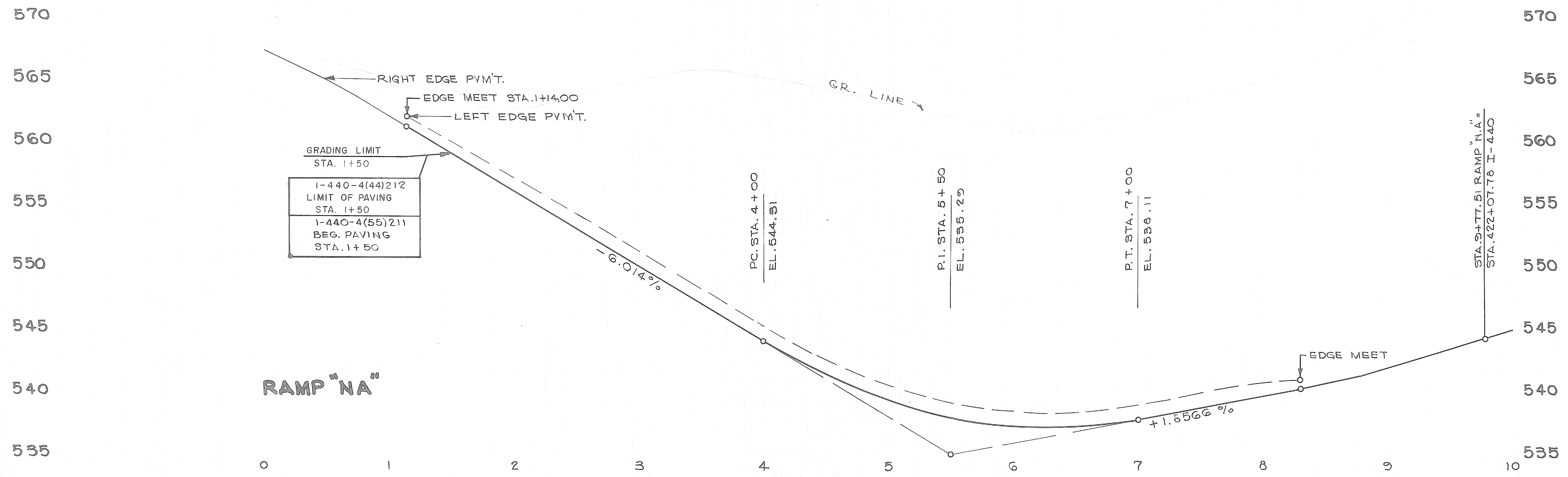
FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

CONST. 1981 I-440-4(33)211 44
BRIDGE 1981 I-440-4(44)212 13
PAVING 1983 I-440-4(55)211 69

REV. 4-24-81: GRADING LIMIT ADDED TO RAMP 'N-A'.

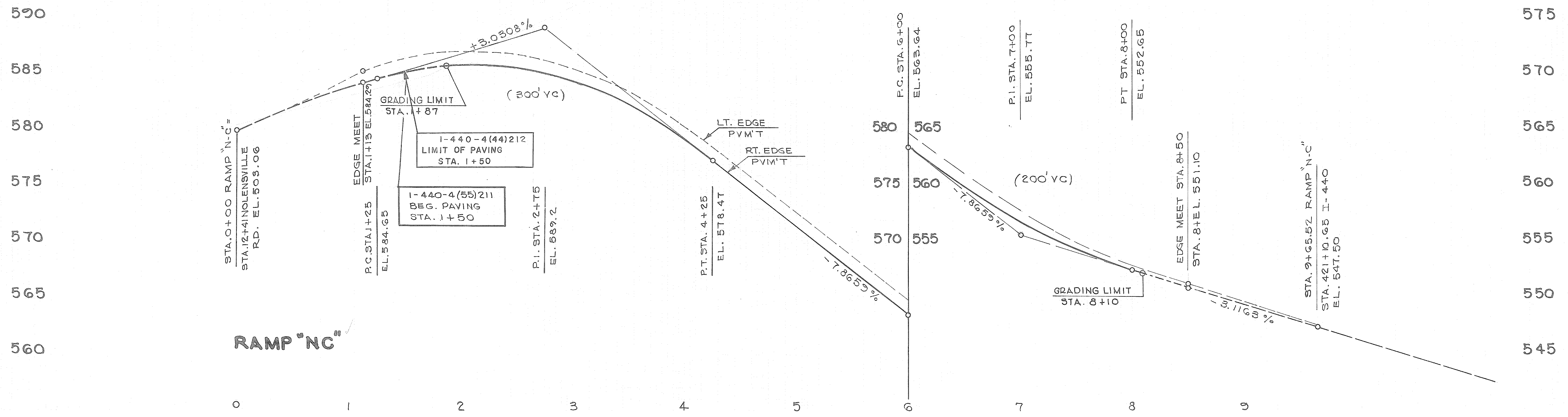
	LEFT EDGE PVMT.	RIGHT EDGE PVMT.
(0+00)	GRAPHICAL GRADE	567.52
(0+25)		566.42
(0+50)		565.23
(0+75)		563.88
(1+00)		562.36
(1+14)	562.29	561.51
(1+50)	560.26	559.34
(2+00)	557.44	556.34
(2+50)	554.53	553.33
(3+00)	551.52	550.32
(3+50)	548.52	547.32
(4+00)	545.51	544.31
(4+25)	544.09	542.89
(4+50)	542.83	541.63
(4+75)	541.74	540.54
(5+00)	540.81	539.61
(5+25)	540.05	538.85
(5+50)	539.44	538.24
(5+75)	539.00	537.80
(6+00)	538.73	537.53
(6+25)	538.62	537.42
(6+50)	538.67	537.47
(6+75)	538.89	537.69
(7+00)	539.27	538.07
(7+50)	540.20	539.00
(8+00)	540.93	539.93
(8+29)	541.25	540.47
(8+50)	GRAPHICAL GRADE	540.40
(8+75)		541.50
(9+00)		542.19
(9+25)		542.92
(9+50)		543.68
(9+75)		544.46
(10+00)		545.23



RAMP "N-C"

	LT. SIDE E.P.	RT. SIDE E.P.
(0+00)		580.06
(0+25)		581.11
(0+42)		581.81
(0+50)	582.19	582.10
(0+75)	583.36	583.00
(0+88)		583.54
(1+00)	584.71	
(1+13)		584.29
(1+25)	585.75	584.65
(1+50)	586.50	585.30
(1+75)	586.92	585.72
(2+00)	587.10	585.91
(2+25)	587.07	585.87
(2+50)	586.81	585.61
(2+75)	586.31	585.11
(3+00)	585.60	584.40
(3+25)	584.66	583.45
(3+50)	583.49	582.28
(3+75)	582.09	580.88
(4+00)	580.45	574.25
(4+25)	578.40	577.40
(4+50)	576.64	575.44
(5+00)	572.70	571.50
(5+50)	568.77	567.57
(6+00)	564.84	563.64
(6+25)	562.98	561.74
(6+50)	561.20	560.00
(6+75)	559.50	558.40
(7+00)	557.93	556.96
(7+25)	556.43	555.66
(7+50)	555.10	554.51
(8+00)	552.96	552.65
(8+50)	551.37	551.10
(9+00)	549.77	549.54
(9+50)	548.20	547.98
(9+65.25)	547.72	547.50

GR. LINE
GR. LINE



PROFILE
OF RAMP "NA" & "NC"

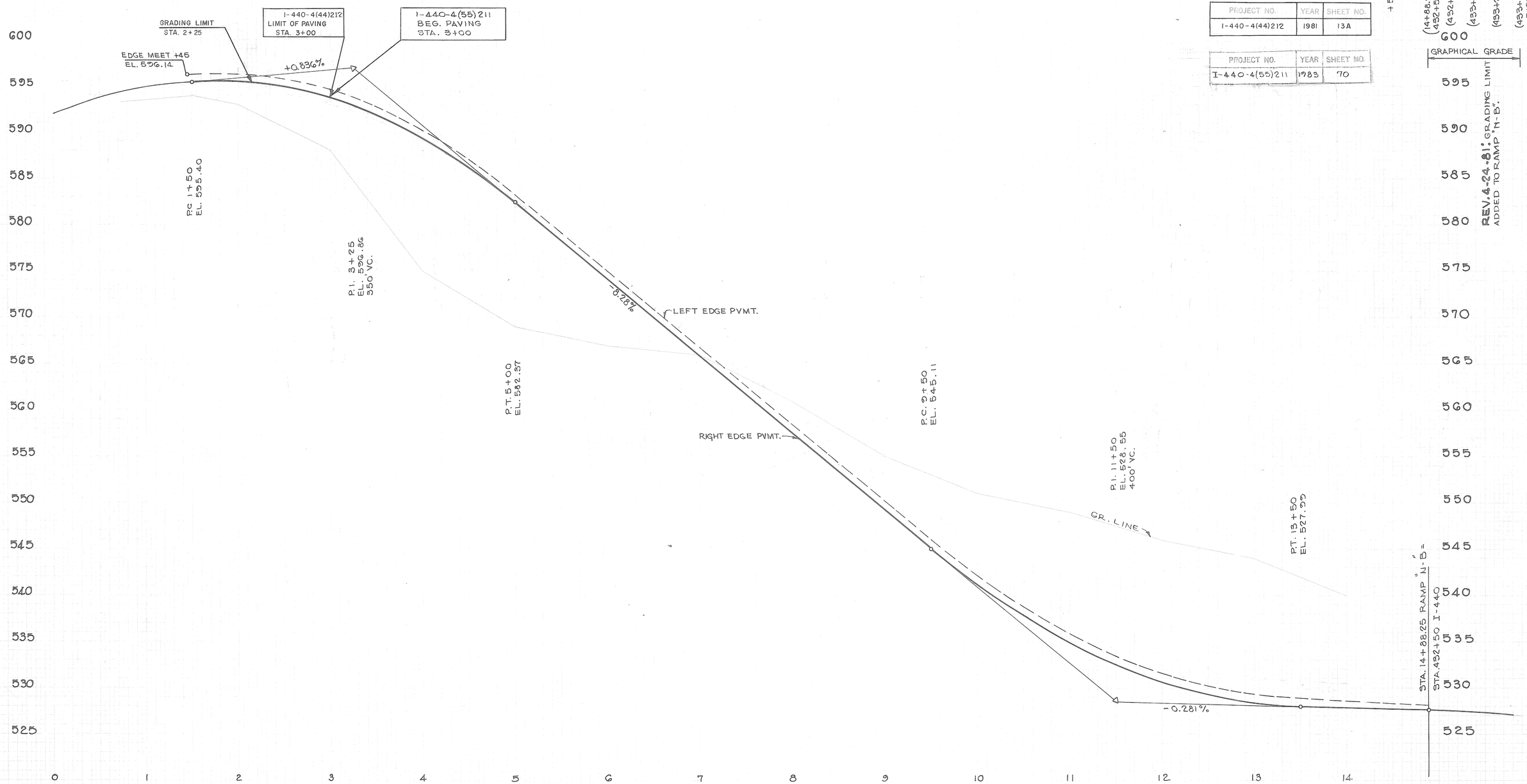
PROJECT NO.	YEAR	SHEET NO.
I-440-4(33)211	1981	45

PROJECT NO.	YEAR	SHEET NO.
I-440-4(44)212	1981	13A

PROJECT NO.	YEAR	SHEET NO.
I-440-4(55)211	1983	70

	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14
LEFT EDGE PVMT. ELEV.			596.21	596.31	596.27	596.10	595.79	595.50	594.92	593.80	592.76	591.58	590.24	588.74	587.08	585.26	583.27	579.13	574.99	570.85	566.71	562.57	558.43	554.29	550.15	546.01	544.00	542.12	540.36	538.73	537.22	535.84	534.58	533.45	532.44	531.56	530.80	530.17	529.66	529.27	529.02	528.82
RIGHT EDGE PVMT. ELEV.	592.00	592.87	593.65	594.35	594.89	595.20	595.40	595.53	595.45	595.29	595.03	594.72	593.72	592.87	591.86	590.69	589.35	587.85	586.18	584.36	582.37	578.23	574.09	569.95	565.81	561.67	557.53	553.39	549.25	545.11	543.10	541.22	539.46	537.83	536.32	534.94	533.68	532.55	531.54	530.66	529.90	529.27	528.76	528.38	528.12	527.99	527.85	527.71	527.59	527.46	527.29	527.14	526.99
		+25	+50	+75		+25	+50	+75		+25	+50	+75		+25	+50	+75		+50		+50		+50		+50		+50	+75		+25	+50	+75		+25	+50	+75		+25	+50	+75		+25	+50		+50	(14+88.25) 452+50	(452+75)	(453+00)	(453+25)	(453+50)
LEFT EDGE PVMT. ELEV.																																																			

GRAPHICAL GRADE



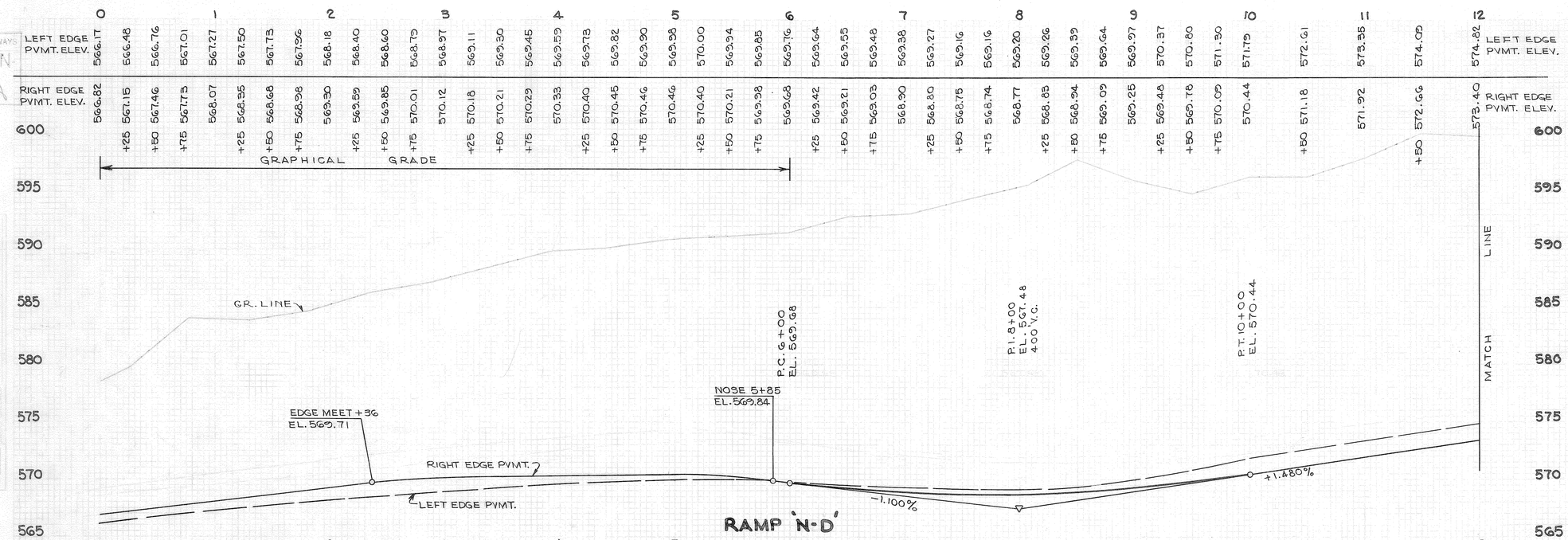
RAMP "N-B"

SCALE 1" = 5' VERT. 1" = 50' HOR.

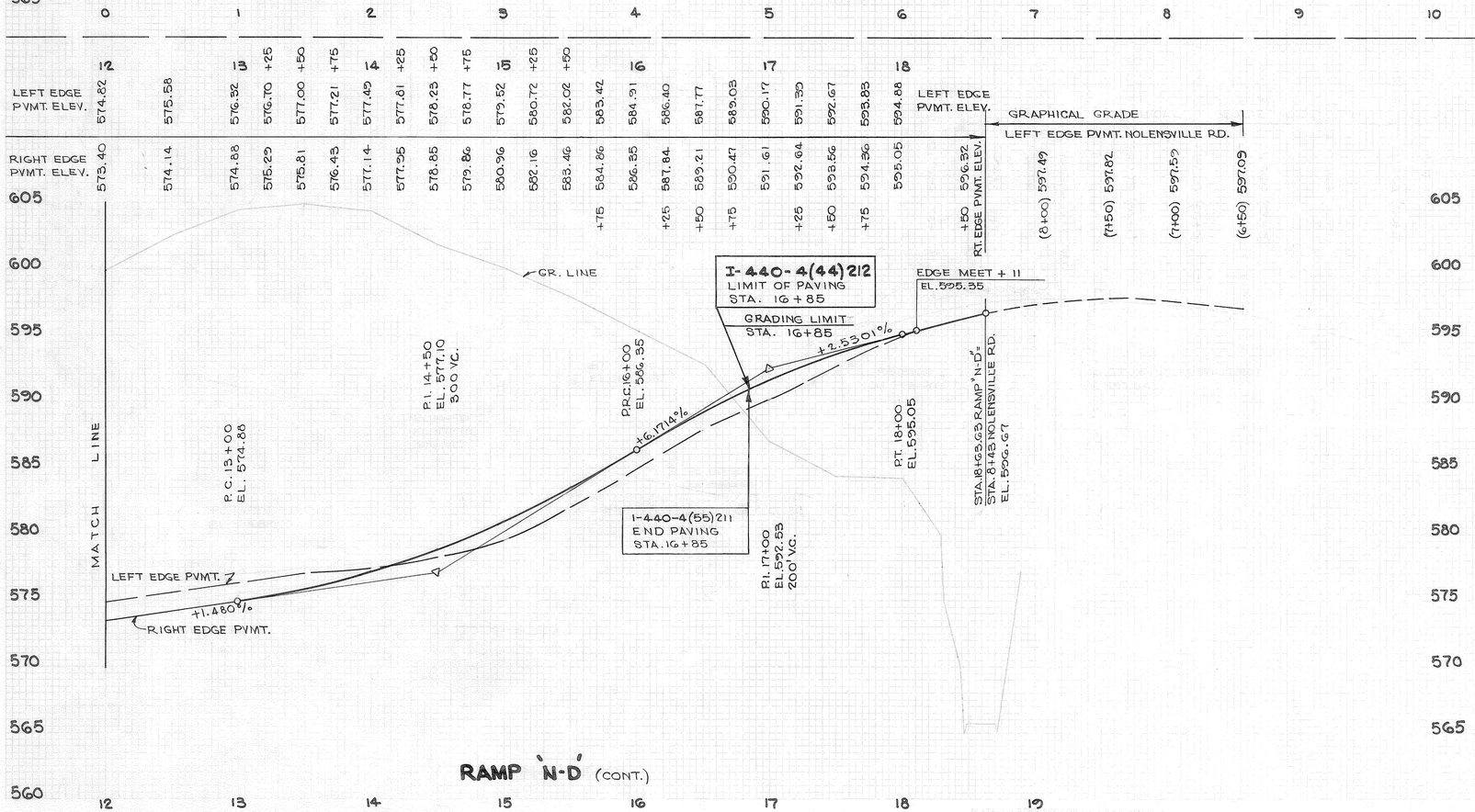
RAMP "N-B" @ NOLENSVILLE RD. & I-440 INTERCHANGE

CONST.	1981	I-440-4(33)211	46
BRIDGE	1981	I-440-4(44)212	13B
PAVING	1983	I-440-4(55)211	71

REV. 4-24-81: GRADING LIMIT ADDED TO RAMP 'N-D'.



RAMP 'N-D'



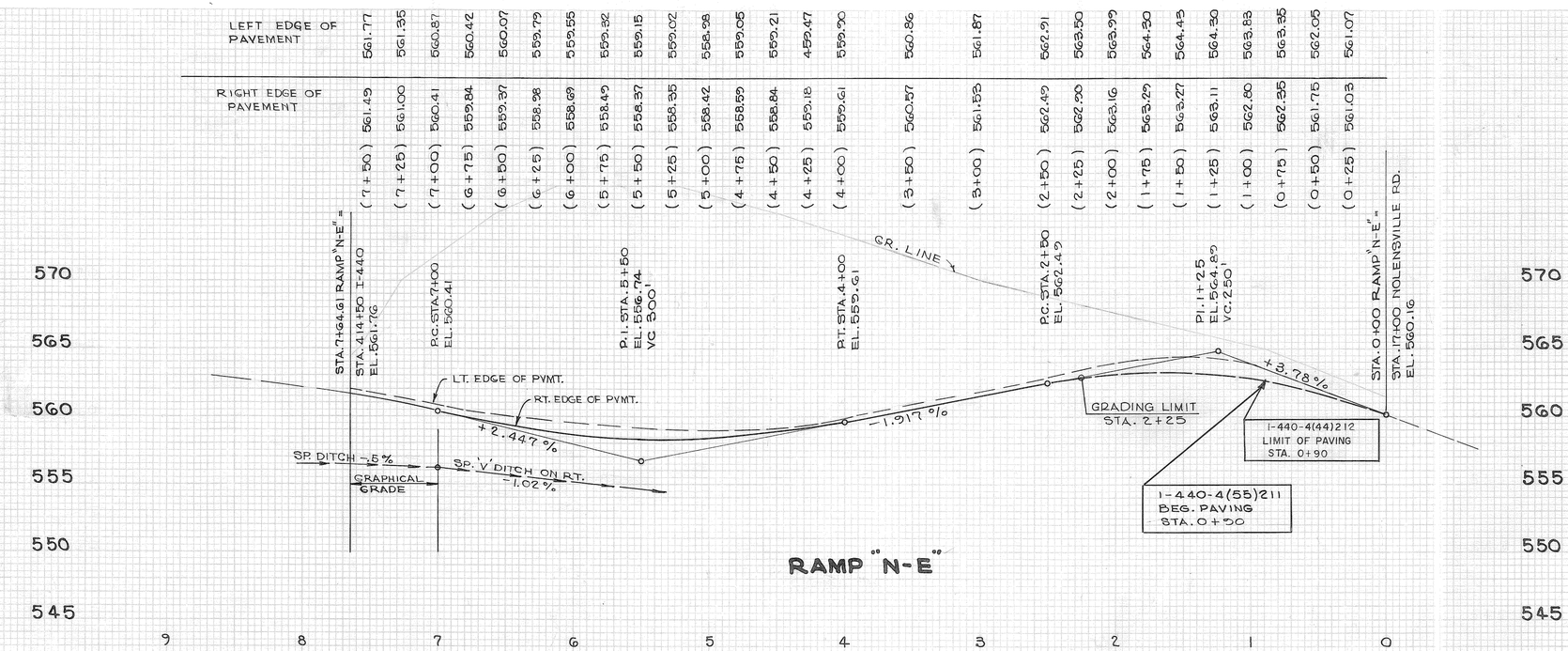
RAMP 'N-D' (CONT.)

PROFILE
RAMP 'N-D'

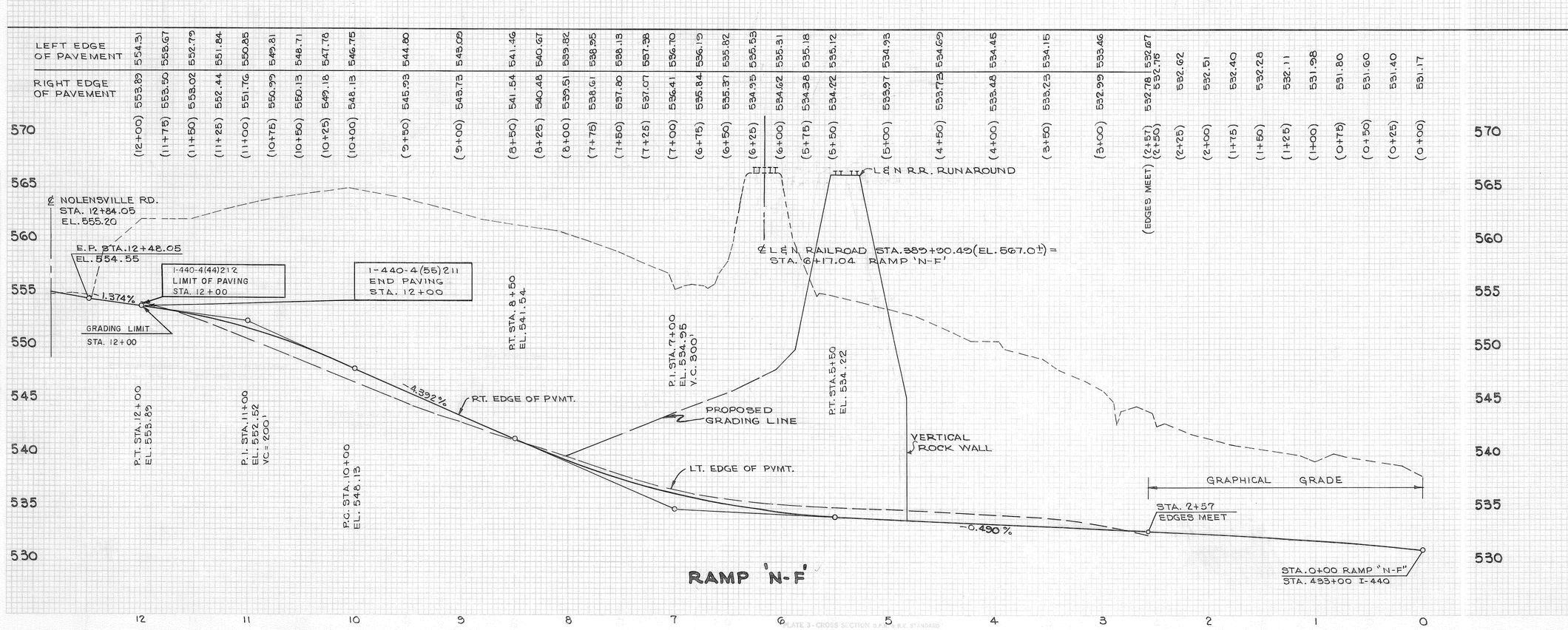
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1981	I-440-4(33)211	47
BRIDGE	1981	I-440-4(44)212	13C
PAVING	1983	I-440-4(55)211	72

REV. 2-20-81, GRADING LIMITS OF L&N. R.R. RUNAROUND REVISED.

REV. 4-24-81: GRADING LIMIT ADDED TO RAMP "N-E".



RAMP "N-E"



RAMP 'N-F'

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS

PROFILES

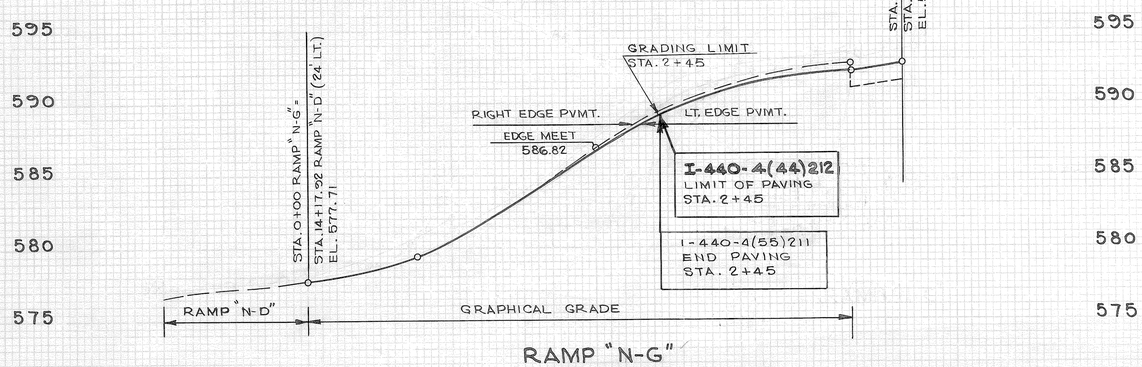
RAMP "N-E"
RAMP "N-F"

PLATE 3 - CROSS SECTION O.F.R.O.W. R.E. STANDARD

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1981	I-440-4(55)211	48
BRIDGE	1981	I-440-4(44)212	13D
PAVING	1983	I-440-4(55)211	73

REV. 4-24-81: GRADING LIMIT ADDED TO RAMP "N-G".

LEFT EDGE OF PAVEMENT	577.71		578.10		578.60		579.01	579.35	580.59	581.99	583.50	585.15	586.69	588.14	589.32	590.30	591.18	591.73	592.01	592.08				
RIGHT EDGE OF PAVEMENT						579.01	579.35		580.59	581.99	583.52	585.30	586.82	588.34	589.61	590.60	591.41	592.06	592.47	592.65				
	(0+00)	(0+25)		(0+50)	(0+65.76) (0+75)				(1+00)	(1+25)	(1+50)	(1+75)	(2+00)	(2+25)	(2+50)	(2+75)	(3+00)	(3+25)	(3+50)	(3+75)	STA. 4+19.55 RAMP "N-G" = STA. 9+16.5 NOLENSVILLE RD. EL. 592.72			



RAMP "N-G"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS

PROFILE

RAMP "N-G"

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	74

REV. 1-24-83: NOTE Q ADDED UNDER LIGHTING GENERAL.

GENERAL NOTES

LIGHTING GENERAL

A. THIS PROJECT SHALL BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS DATED MARCH 1981, AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSED CONTRACT.

B. CONDUITS TO BE INSTALLED UNDER EXIST. PAVEMENT SHALL BE RIGID GALVINIZED STEEL CONDUIT SHALL BE JACKED OR BORED UNDER EXISTING PAVEMENT, UNLESS ROCK IS ENCOUNTERED. WHERE ROCK IS ENCOUNTERED, OBTAIN APPROVAL FROM THE ENGINEER TO SAW CUT EXISTING PAVEMENT. BURIAL DEPTH OF CONDUIT UNDER PAVEMENT SHALL BE 36". CONDUIT SHALL BE EXTENDED 3'-0" BEYOND EDGE OF PAVED SHOULDER.

C. CONDUITS IN UNPAVED AREAS SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE (RIGID)

D. 250 W LUMINAIRES SHALL BE EQUIPPED WITH 240V AUTO REGULATOR BALLAST AND A.N.S.I. CODE S50 LAMPS. FUSE EACH LUMINAIRE WITH A 15A, SLOW BLOWING 600V FUSE WITH A WEATHER PROOF FUSE HOLDER IN THE BASE OF EACH POLE.

E. LUMINAIRES SHALL BE BOLTED TO EXTENSION ARMS AND EXTENSION ARMS SHALL BE BOLTED TO POLE TOPS. USE OF SLIP FIT TENNON CONNECTIONS WILL NOT BE PERMITTED.

F. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE LIGHTING ENGINEER FOR APPROVAL PRIOR TO PURCHASING MATERIAL.

G. THE RESIDENT ENGINEER SHALL INSPECT EACH LUMINAIRE TO VERIFY THAT THE LAMP POSITION MATCHES THAT WHICH IS CALLED FOR IN THE APPROVED SHOP DRAWINGS.

H. THIS CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRICAL CODE, N.F.P.A. NO. 70, AND THE NATIONAL ELECTRICAL SAFETY CODE.

I. ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED WHETHER SPECIFICALLY NOTED OR NOT.

J. OMITTED.

K. CONTROL POINT CIRCUIT FUSES SHALL BE DUAL-ELEMENT SLOW BLOWING TYPE 600 V, 100,000 AMP INTERUPTING CAPACITY.

L. 150 W LUMINAIRES SHALL BE EQUIPPED WITH 240V AUTO REGULATOR BALLAST AND A.N.S.I. CODE S55 LAMPS. FUSE EACH LUMINARE WITH A 15A, SLOW BLOWING 600V FUSE WITH A WEATHER PROOF FUSE HOLDER.

M. THE POLES SHALL BE SQUARE TAPERED STEEL POLES DESIGNED IN ACCORDANCE WITH THE REQUIRMENTS OF THE 1981 EDITION OF THE STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICALS. EXCEPT AS FURTHER PROVIDED HEREIN.

N. POLES SHALL BE DESIGNED FOR 80 M.P.H. WIND PRESSURE. THE DESIGN SHALL SUPPORT THE NUMBER AND TYPE LUMINAIRES AND MOUNTING HEAD SPECIFIED ON THE PLANS.

O. EXISTING LUMINAIRES CHANGED OUT ARE TO BE STOCKPILED AT A LOCATION APPROVED BY THE ENGINEER AND ARE TO REMAIN THE PROPERTY OF THE STATE.

P. CONTROL POINTS #1, #2, AND #3 SHALL BE PROVIDED WITH A SPARE CIRCUIT AND CONDUIT FOR FUTURE USE.

Q. ALL 1" GALVANIZED CONDUIT AND JUNCTION BOXES IN STRUCTURE IS TO BE INSTALLED BY OTHERS.

PERFORMANCE SPECIFICATIONS: (ROADWAY LUMINAIRES)

A. 250 WATT HIGH PRESSURE SODIUM LUMINAIRE SHALL CONFORM TO I.E.S. CLASSIFICATIONS: TYPE II MEDIUM DISTRIBUTION SEMI-CUTOFF.

B. 150 WATT HIGH PRESSURE SODIUM UNDER BRIDGE LUMINAIRES SHALL BE SET FOR MAX. C.P. AT $\theta = 70°$ EXCEPT THE I-65/I-440 STACKED BRIDGES SHALL BE SET FOR MAX. C.P. AT $\theta = 60°$ WITH A CUT-OFF SHEILD AT $\theta = 80°$

C. DESIGN ILLUMINATION BASIS:

I-440	0.6 fc MAINTAINED
NOLENSVILLE ROAD	0.9 fc MAINTAINED
NOLENSVILLE ROAD RAMPS	0.8 fc MAINTAINED
LAMP LUMEN DEPRECIATION FACTOR 0.73	
LUMINAIRE DIRT DEPRECIATION FACTOR 0.90	

D. 250 W H.P.S. LAMPS PROVIDED SHALL BE RATED TO PROVIDE AN AVERAGE LIFE NOT LESS THAN 24,000 HOURS.

E. MAXIUM CANDLE POWER SHALL OCCUR BETWEEN $\theta = 60°$ AND $\theta = 70°$ EXCEPT AS NOTED IN PAR. B (ABOVE).

F. OMITTED.

G. 150 W H.P.S. LAMPS SHALL BE RATED TO PROVIDE AN AVERAGE LIFE NOT LESS THAN 24,000 HOURS.

CONSTRUCTION SPECIFICATIONS (ROADWAY LUMINAIRES)

A. LUMINAIRES SHALL BE "RECTILINEAR" TYPE WITH:

1. HINGED AND GASKETED ACCESS DOOR, POSITIVE LOCKING WITH SAFETY CHAIN.
2. BALLAST AND CAPACITOR MOUNTED ON A SINGLE PLATE WITH HIGH TEMPERATURE DISCONNECT OR SCREW PLUG TERMINALS.
3. ALUMINUM HOUSING, ANODIZED DARK BRONZE "313" COLOR OR PRIMED AND PAINTED DARK BRONZE U.C. 20059.

B. FRANGIBLE BASES SHALL BE AASHTO APPROVED WITH ACCESS DOOR.

C. POLES SHALL BE SQUARE TAPERED STEEL AND LENGTH AS REQUIRED BY MOUNTING HEIGHT. BOLT CIRCLE FOR PARAPET MOUNTED POLES SHALL BE 11 3/4" FOR FOUR 1"x40 ANCHOR BOLTS.

D. BRACKET ARMS SHALL BE SQUARE STRAIGHT STEEL AND LENGTH AS REQUIRED BY MOUNTING OFFSET.

E. FRANGIBLE BASES, POLES AND BRACKET ARMS SHALL BE PRIMED AND PAINTED USING "SYSTEM B-INORGANIC ZINC/VINYL" CONFORMING TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. FINISH COAT COLOR SHALL BE DARK BRONZE COLOR U.S. 20059.

F. THE CONTRACTOR SHALL PROVIDE THE STATE ONE FINISHED LUMINAIRE AND A REPRESENTATIVE POLE SECTION (PRIMED AND PAINTED) FOR APPROVAL OF LUMINAIRE CONSTRUCTION, COLOR, AND PAINTING METHODS.

POST TOP LUMINAIRES:

A. POST TOP LUMINAIRES TO BE INSTALLED AT THE PEDESTRIAN OVERPASS SHALL HAVE A CLEAR "VANDALPROOF" GLOBE 18" DIA. WITH INTERNAL "PYREX" OPTICAL REFRACTOR.

B. ANSI S55 150 W H.P.S. LAMPS SHALL BE PROVIDED WITH A 240 VOLT AUTO REGULATOR BALLAST. FUSE EACH LUMINAIRE WITH A 15A SLOW BLOWING 600V FUSE WITH A WEATHERPROOF FUSE HOLDER IN THE BASE OF EACH POLE.

C. 150 W H.P.S. LAMPS SHALL BE RATED TO PROVIDE AN AVERAGE LIFE NOT LESS THAN 24,000 HOURS.

D. POLES SHALL BE SQUARE STRAIGHT STEEL AND PRIMED AND PAINTED ACCORDING TO THE SAME SPECIFICATIONS REQUIRED FOR ROADWAY LUMINAIRE POLES.

REV. 7-6-83: DELETED NOTE J AND REVISED NOTES D AND L IN LIGHTING GENERAL, DELETED NOTE F AND REVISED NOTES B, D, & G IN PER. SPEC., REVISED NOTE B IN CONST. SPEC., REVISED NOTES B AND C IN POST TOP LUM.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	75

REV. 3-22-83: CHANGED NOTE I UNDER CONSTRUCTION SPECIFICATIONS (HIGH MAST POLES).

GENERAL NOTES (CONT.)

CONSTRUCTION SPECIFICATIONS (HIGH MAST POLES)

A. THE POLES SHALL BE ROUND TAPERED STEEL POLES DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 1981 EDITION OF THE STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICIALS. EXCEPT AS FURTHER PROVIDED HEREIN.

B. POLES SHALL BE DESIGNED FOR 100 MPH WIND PRESSURE. THE DESIGN SHALL SUPPORT THE NUMBER AND TYPE LUMINAIRES AND MOUNTING HEAD SPECIFIED ON THE PLANS.

C. MATERIAL USED IN THE MANUFACTURE OF STEEL HIGH MAST POLES SHALL BE:

1. ASTM A-572 GRADE 60 HIGH STRENGTH STEEL
2. POLES SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM A-687 AND ANCHOR BOLT NUTS SHALL CONFORM TO ASTM A-563.
4. ANCHOR BOLTS SHALL BE THREADED ON END (LOWER THREADING IS FOR A PLATE NUT ATTACHMEMT)
5. ANCHOR BOLTS SHALL BE GALVANIZED ON THE THREADED ENDS A MINIMUM OF 10"
6. ANCHOR BOLTS AND ANCHOR BOLT NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123
7. AN ANCHOR BOLT CASING METHOD TO MECHANICALLY ALIGN ANCHOR BOLTS SHALL BE PROVIDED. NO WELDING OF ANCHOR BOLTS SHALL BE PERMITTED.

D. FABRICATION AND WELDING OF THESE POLES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS D1.1 SPECIFICATION.

1. ALL WELDS SHALL BE INSPECTED ACCORDING TO THE AWS STANDARDS, SECTION 6, USING DYE PENETRANT OR MAGNETIC PARTICLE INSPECTIONS.
2. THE FIRST WELDED JOINT OF EACH FULL PENETRATION TRANSVERSE WELD FOR EACH ORDER SHALL BE NONDESTRUCTIVELY EXAMINED TO VERIFY THE PREPARATION, PROCEDURES, MAINTENANCE OF UNIFORMITY, AND THAT THE WELD IS OF REQUIRED QUALITY.
3. LONGITUDINAL SEAM WELDS SHALL HAVE A MINIMUM OF 60% PENETRATION AND SHALL BE VERIFIED BY POLISHING, ETCHING AND EXAMINING A TRIMMING CUT-OFF FROM SELECTED MALE TUBE ENDS.
4. THE FEMALE TUBE ENDS IN THE AREA OF TELESCOPING JOINTS SHALL BE WELDED BOTH INSIDE AND OUTSIDE TO INSURE THE INTEGRITY OF THE WELD.
5. NO TRANSVERSE WELDING SHALL BE PERMITTED TO SECURE OVERLAPPING TELESCOPING JOINTS.

E. EACH POLE SHALL BE FURNISHED WITH A TOP MOUNTING TENON TO ACCEPT THE LUMINAIRE MOUNTING DEVICE.

F. THE POLE, NEAR THE BASE, SHALL HAVE A HANDHOLE OPENING 10" WIDE BY 20" HIGH TO RECEIVE THE MOUNTING HEAD LOWERING MECHANISM. HANDHOLE MUST BE OVAL IN SHAPE.

1. THE OPENING SHALL BE REINFORCED ON THE INSIDE WITH A STEEL SLEEVE. THE SLEEVE SHALL HAVE SUFFICIENT THICKNESS AND LENGTH TO REPLACE THE EQUIVALENT STRENGTH OF THE TUBE SECTION LOST BY THE 10" BY 20" OPENING.
2. A MOUNTING PLATE FOR ATTACHING THE LOWERING MECHANISM SHALL BE ATTACHED TO THE REINFORCING SLEEVE AND BE ACCESSIBLE THROUGH THE HANDHOLE.
3. EACH POLE SHALL HAVE A HANDHOLE COVER, ATTACHED BY FOUR STAINLESS HEX. BOLTS.

G. EACH POLE SHALL BE PROVIDED WITH A MEANS FOR GROUNDING CONSISTING OF 1/2" UNC-2 NUT WELDED TO THE INSIDE OF THE POLE.

H. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A SOIL ANALYSIS AFTER COMPACTION AT EACH POLE LOCATION TO VERIFY FOOTING DESIGNS AND TO SUBMIT TO THE ENGINEER OF STRUCTURES SHOP DRAWINGS OF FOOTINGS. ANY ADJUSTMENTS IN DEPTHS OF FOOTINGS WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM NO. 714-13.

I. ONLY QUALIFIED MANUFACTURERS WILL MANUFACTURE THE SPECIFIED POLES. RESPONSIBILITY FOR COMPLIANCE WITH THE SPECIFICATION REMAINS WITH THE CONTRACTOR. MANUFACTURER WILL SUPPLY A CERTIFICATE OF COMPLIANCE TO SPECIFICATION BY AN INDEPENDENT TESTING LABORATORY HIRED BY THE MANUFACTURER AND APPROVED BY THE STATE.

PERFORMANCE SPECS. & CONSTRUCTION SPECIFICATIONS (HIGH MAST LUMINAIRIES)

A. DESIGN ILLUMINATION BASIS:

I-440 & I-65	0.6 fc MAINTAINED
I-440 & I-65 RAMPS	0.6 fc MAINTAINED

B. LUMINAIRES SHALL BE A COMPLETE ASSEMBLY CONSISTING OF A BALLAST HOUSING, REFRACTOR, BALLAST, LAMP SOCKET, AND ALL MISCELLANEOUS HARDWARE. THE BALLAST HOUSING SHALL BE CAST ALUMINUM WITH A 2" SIDE ENTRY SLIP-FITTER MOUNT. THE REFLECTOR SHALL BE SHEET ALUMINUM SPUN, OR PRESSED. REFRACTORS SHALL BE BOROSILICATE GLASS. ALL SCREWS, CLAMPS BANDS, AND OTHER HARDWARE ON THE LUMINAIRE SHALL BE STAINLESS STEEL. THE LUMINAIRE SHALL BE FOR OPERATION WITH A AN A.N.S.I. S52 1000 W H.P.S. LAMP. THE BALLAST SHALL REGULATOR TYPE FOR 480 VOLT SUPPLY VOLTSUPPLY VOLTAGE. EACH LUMINAIRE SHALL BE INDIVIDUALLY FUSED WITH A 5.0A, 600V FUSE WITH WEATHERPROFF FUSEHOLDER. THE LUMINAIRES SHALL HAVE A TYPE V DISTRIBUTION (DESIGN IS BASED ON MANVILLE-HOLOPHANE NO. 1171-SYM. TEST NO. 27895.

C. 1000 W H.P.S. LAMPS SHALL BE RATED TO PROVIDE AN AVERAGE LIFE NOT LESS THAN 126,000 HOURS.

LOWERING SYSTEM (HIGH MAST LUMINAIRIES)

A. THE LOWERING SYSTEM SHALL CONSIST OF A HEAD FRAME, A LUMINAIRE RING AND A WINCH AND HOISTING ASSEMBLY. THE HEAD FRAME SHALL BE GALVANIZED STEEL CONSTRUCTION, AND SHALL ATTACH TO THE POLE BY MEANS OF A SLIP-FITTER AND SET SCREWS. THE HEAD FRAME SHALL BE EQUIPPED WITH SIX CABLE SHEAVES GROOVED TO THE EXACT DIAMETER OF THE HOIST CABLES. THE HOIST CABLES SHALL BE STAINLESS STEEL, 7 X 19 STRANDED AIRCRAFT CABLES, 3/16 DIAMETER.

B. A POWER CABLE SHEAVE SHALL BE PROVIDED AND SHALL BE EQUIPPED WITH "KEEPER" DEVICES TO PREVENT THE CABLE FROM JUMPING THE GROOVE DURING OPERATION.

C. THREE LATCHING DEVICES SHALL BE PROVIDED IN THE HEAD FRAME TO SUPPORT THE LUMINAIRE RING ASSEMBLY WHEN THE LOWERING DEVICE IS NOT IN OPERATION. THE LATCHES SHALL ALTERNATELY LATCH AND UNLATCH UPON SUCCESSIVE ACTUATIONS OF RAISING THE LUMINAIRE RING. EACH LATCH SHALL BE EQUIPPED WITH A FLAG TO INDICATE THE LATCHED-UNLATCHED POSITIONS. ALL COMPONENTS OF THE LATCH MECHANISM MUST BE SERVICABLE FROM THE GROUND WHEN THE RING IS LOWERED.

D. THE LUMINAIRE RING SHALL BE GALVANIZED STEEL CHANNEL CONSTRUCTION WITH 2" NPS GALVANIZED PIPE MOUNTING ARMS FOR THE LUMINAIRES. RING SHALL BE PREWIRED WITH TYPE ST. 105°C, 600V CABLE TO A MAIN TERMINAL BLOCK MOUNTED WITHIN A WEATHERPROOF HOUSING. A WEATHERTIGHT TWISTLOCK POWER PLUG AND RECEPTACLE, NEMA L8-20R CONFIGURATION, SHALL BE PROVIDED ON THE RING FOR TESTING THE LUMINAIRES WHILE IN THE LOWERED POSITION.

E. ROLLER CONTACT, SPRING LOADED CENTERING ARMS SHALL BE PROVIDED TO CENTER THE LUMINAIRE RING DURING RAISING OR LOWERING. ROLLERS SHALL BE CONSTRUCTED OF A WATER RESISTANT NON-MARKING COMPOSITION MATERIAL. ALL SHAFTS, HARDWARES, ETC. ON THE LUMINAIRE RING SHALL BE STAINLESS STEEL.

F. THE WINCH SHALL BE WORM GEAR, SELF-LOCKING TYPE, DESIGNED FOR HAND OPERATION OR FOR OPERATION BY A 1/2" HEAVY DUTY REVERSING DRILL MOTOR. TWO (2) PORTABLE HAND CRANKS SHALL BE FURNISHED TO THE ENGINEER.

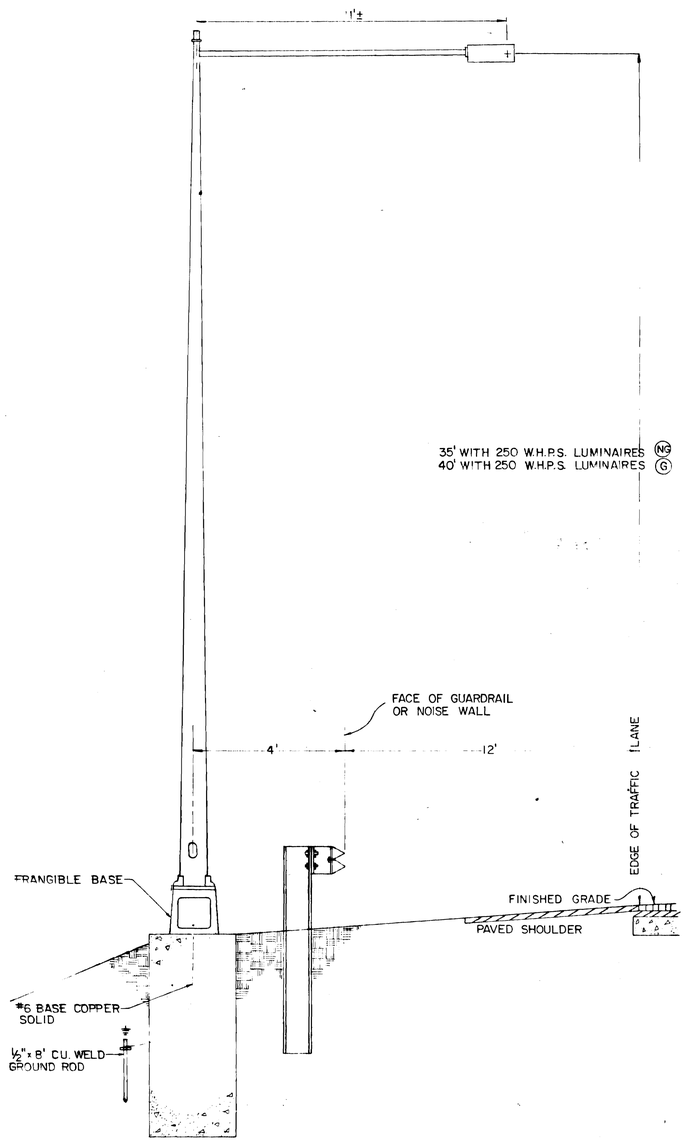
G. ONE COMPLETE ASSEMBLY OF A PORTABLE POWER UNIT CONSISTING OF 1/2" HEAVY DUTY DRILL MOTOR, A TORQUE-LIMITING SLIP CLUTCH, REMOVE CONTROL UNIT WITH 15' CORD AND 480V-120V STEP-DOWN TRANSFORMER WITH NEMA L8-20P PLUG, SHALL BE FURNISHED TO THE ENGINEER. THIS ASSEMBLY SHALL BE MOUNTED ON A SUITABLE BED PLATE AND HAVE A QUICK-CONNECT. SHAFT CONNECTOR TO THE WINCH DRIVE.

H. A 1/4" STAINLESS STEEL 7 X 19 AIRCRAFT CABLE SHALL BE PROVIDED ON THE WINCH. A NON-AUTOMATIC CIRCUIT BREAKER DISCONNECT AND A MATCHING NEMA L8-20P PLUG AND RECEPTACLE SHALL BE FURNISHED IN THE BASE OF THE POLE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING

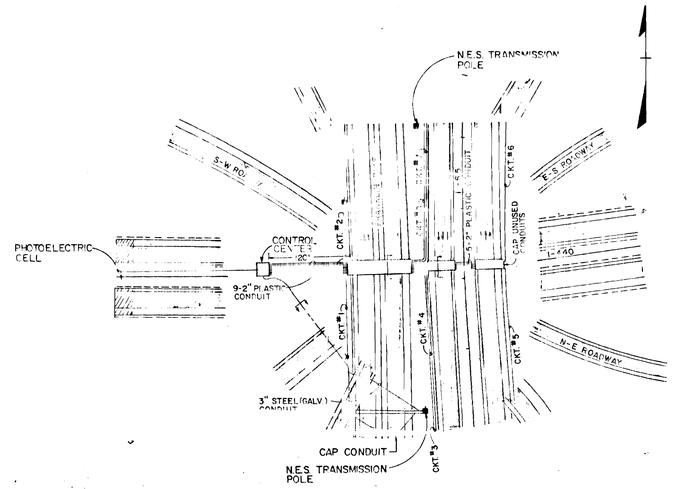
GENERAL NOTES



SHOULDER MOUNTED LUMINAIRE (G) (NG)

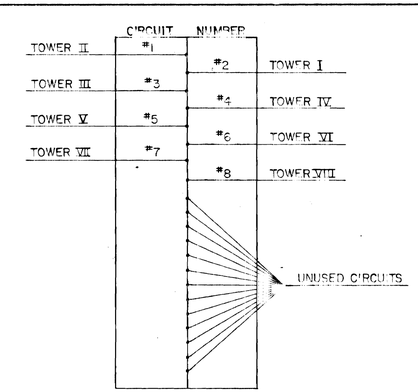
WITH GUARDRAIL OR NOISE WALL

EXISTING CONTROL POINT @ I-440 / I-65



CONDUIT AND CONTROL CENTER

NOT IN THIS CONTRACT
FOR INFORMATION ONLY



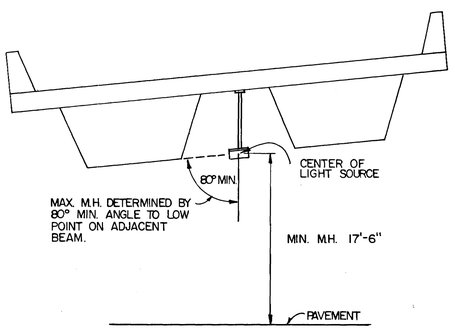
PANEL DIAGRAM

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	76

REV. 3-22-83 ADDED NOISE WALL TO SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL DETAIL.

REV. 3-29-83: ADDED LUMINAIRE ARM FOR SHOULDER MOUNTED LUMINAIRE DETAIL.

REV. 7-6-83 OMITTED CONTROL POINT CONSTRUCTION DETAIL AND WIRING DETAIL.
ADDED UNDERPASS LUMINAIRE MOUNTING HEIGHT DETAIL.



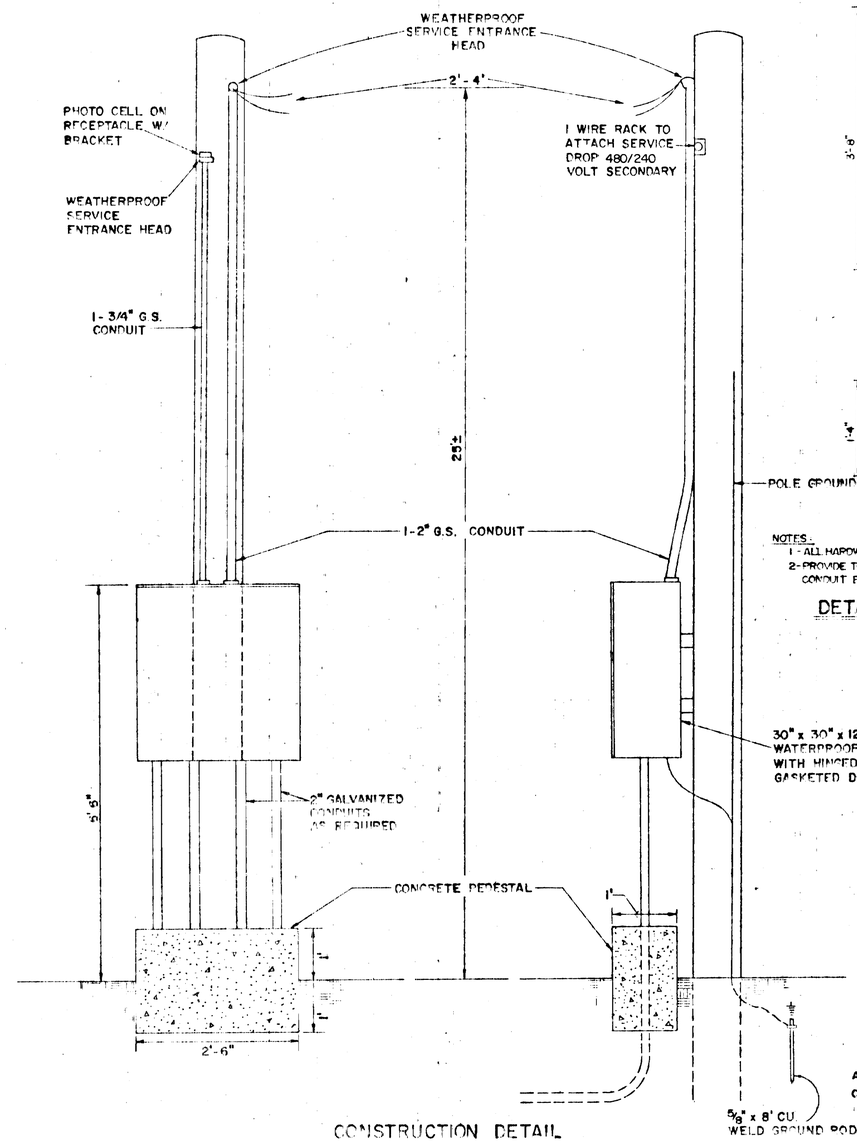
UNDERPASS LUMINAIRE MOUNTING HEIGHT DETAIL

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAIL

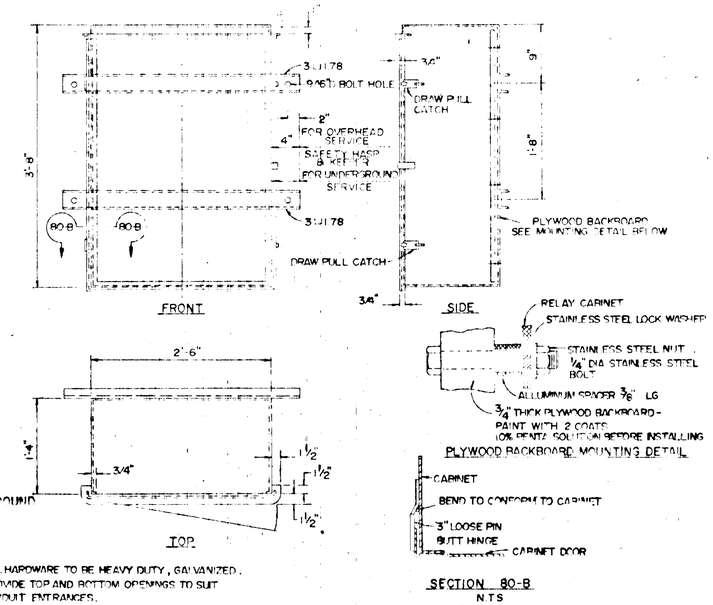
NO SCALE

REV. 7-6-83 ADDED NEW SHEET.



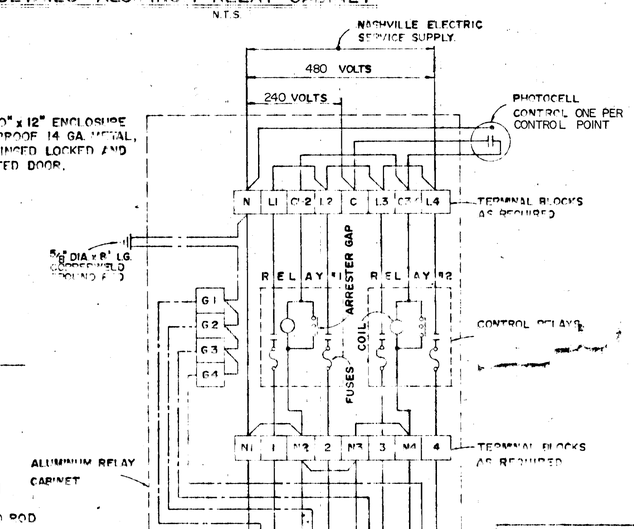
CONSTRUCTION DETAIL
CONTROL POINT

NUMBER OF CABINETS AS REQUIRED - SEE ESTIMATED ROADWAY QUANTITIES FOR LIGHTING



NOTES:
1 - ALL HARDWARE TO BE HEAVY DUTY, GALVANIZED.
2 - PROVIDE TOP AND BOTTOM OPENINGS TO SUIT CONDUIT ENTRANCES.

DETAILS - ALUMINUM RELAY CABINET
N.T.S



NOTE:
1. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL [illegible]

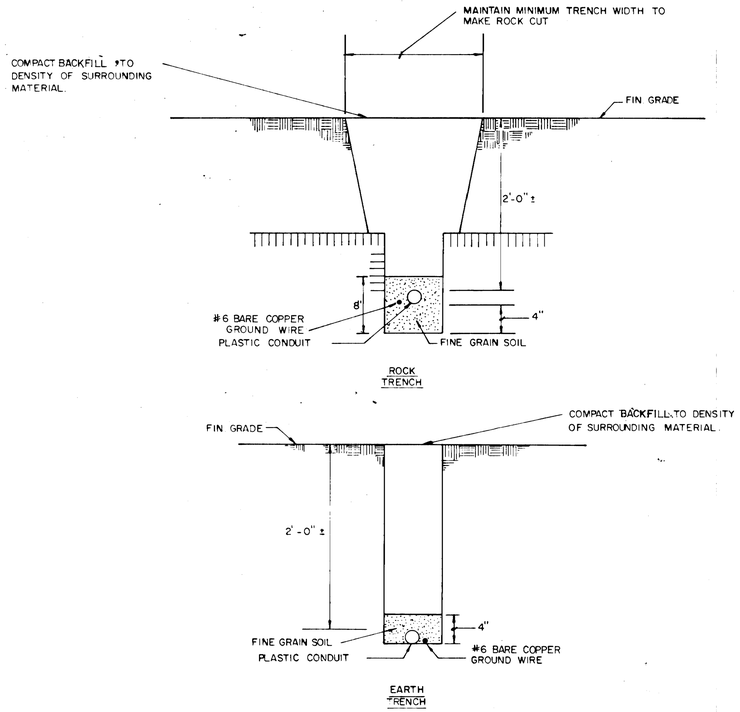
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
[illegible]

LIGHTING DETAIL

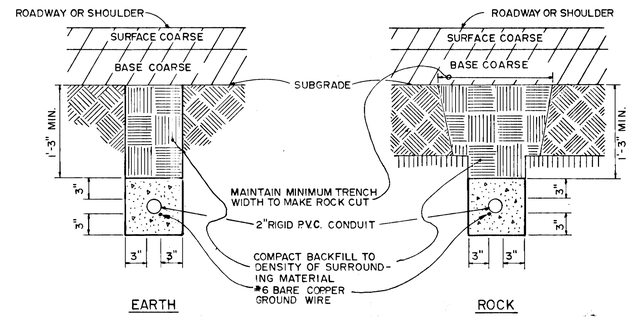
WIRING DIAGRAM

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	77

REV. 3-29-83: REVISED LUMINAIRE ARM LENGTH ON SHOULDER MOUNTED LUMINAIRE WITHOUT GUARDRAIL.

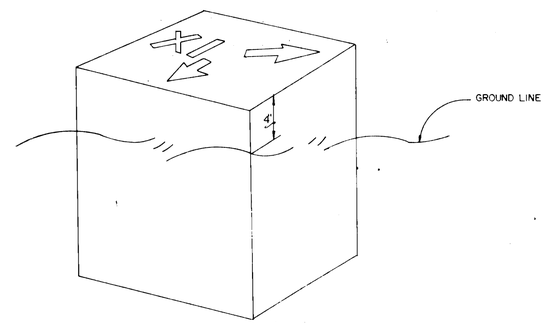


DIRECT BURIAL CONDUIT DETAILS



CONCRETE ENCASED CONDUIT DETAILS

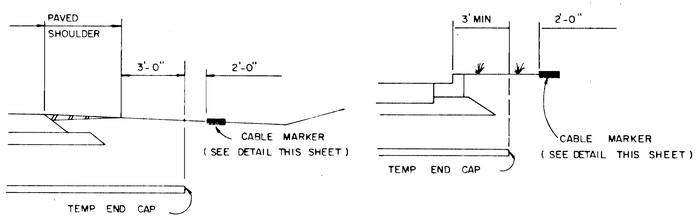
NO SCALE



6" x 6" x 1' CLASS 'A' CONCRETE

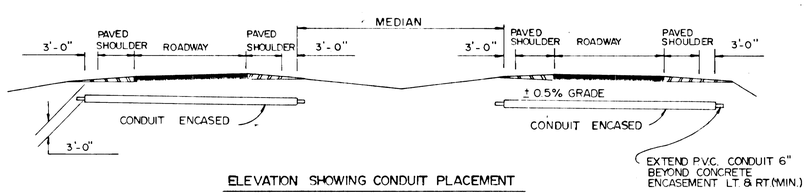
CABLE MARKER

NO SCALE

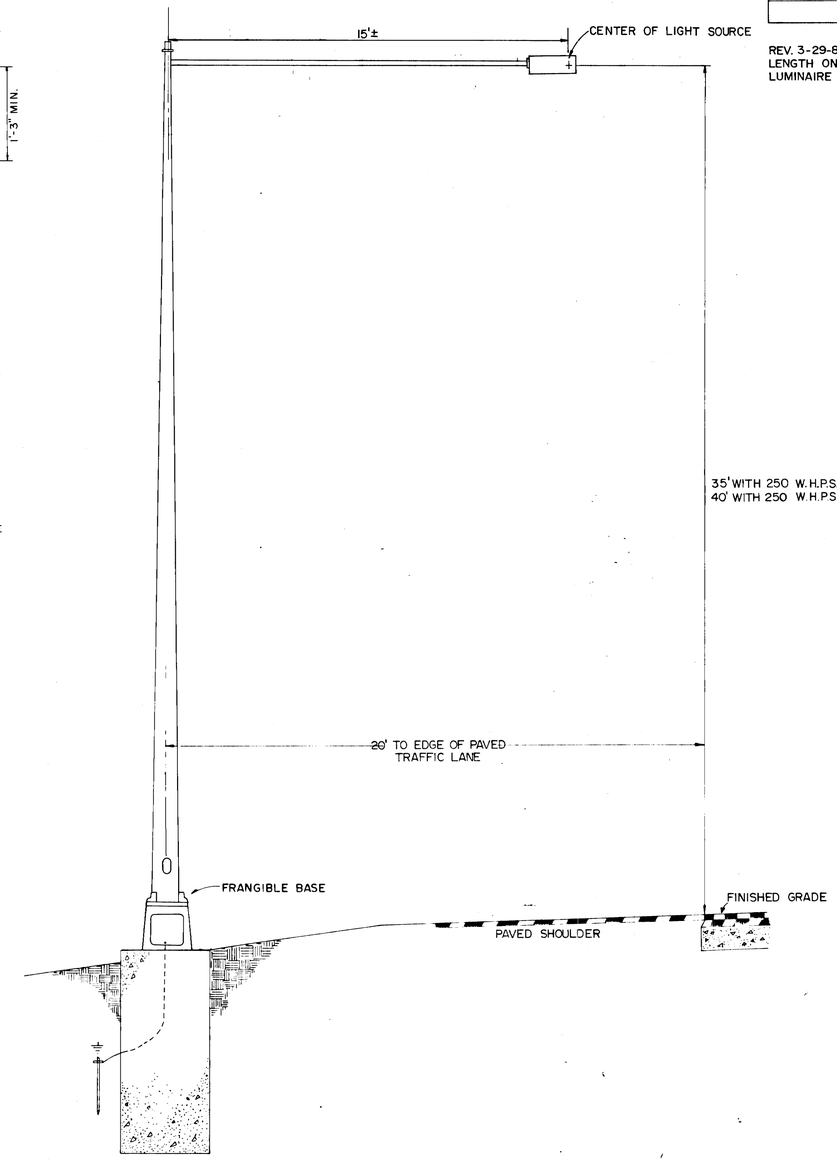


CONDUIT CROSSING

CABLE MARKER LOCATIONS
NO SCALE



ELEVATION SHOWING CONDUIT PLACEMENT



SHOULDER MOUNTED LUMINAIRE (S)(NS)
(WITHOUT GUARDRAIL)

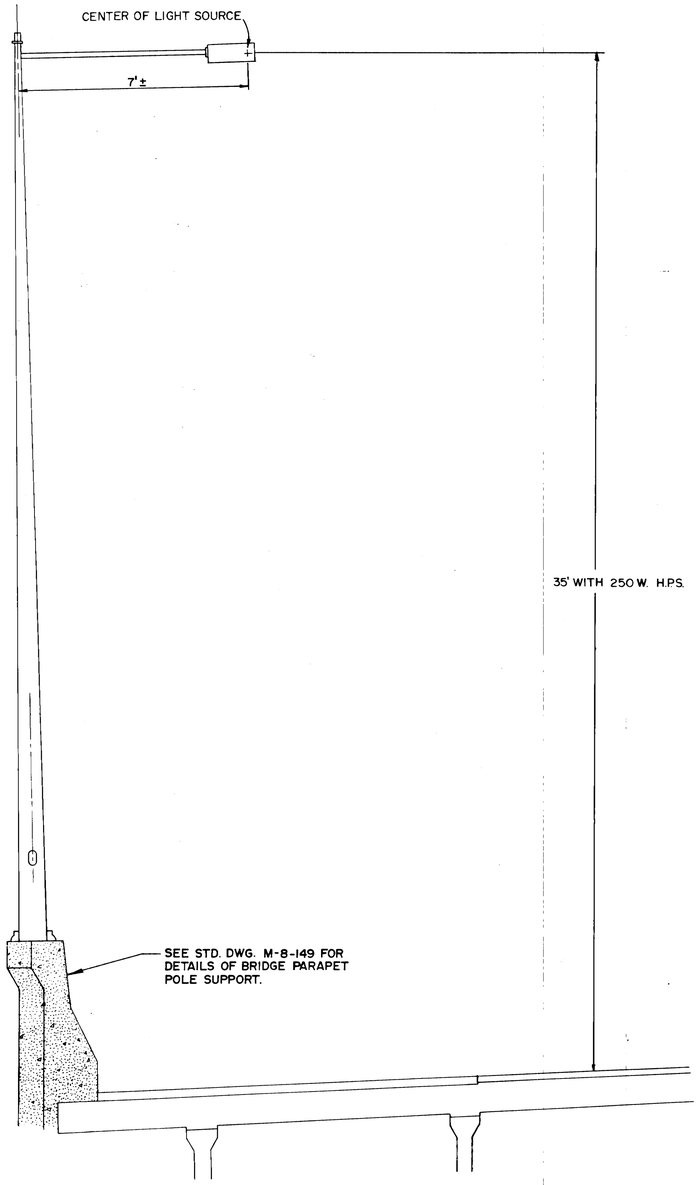
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAIL

NO SCALE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	78

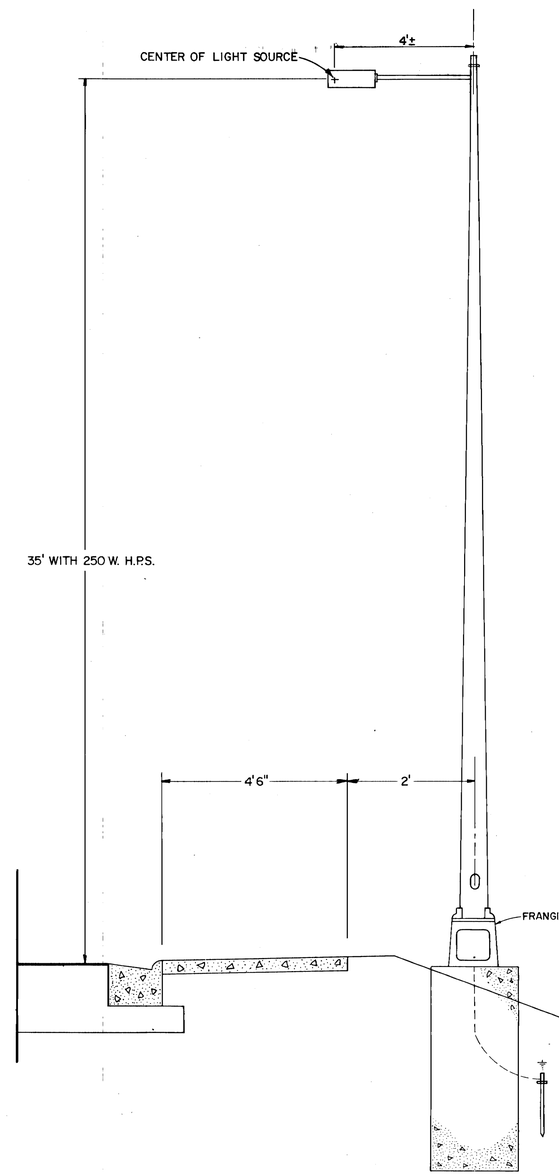
REV. 3-29-83: ADDED LUMINAIRE ARM FOR BRIDGE PARAPET & CURB & GUTTER MOUNTED LUMINAIRE DETAILS.



NOTE:
GROUND ROD SHALL BE LOCATED SO AS TO PROVIDE ADEQUATE CONDUCTIVITY WITH THE GROUND.

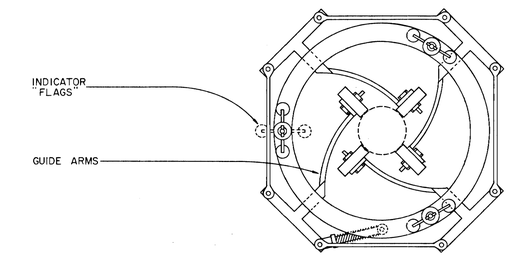
BRIDGE PARAPET MOUNTED LUMINAIRE (P)

NO SCALE

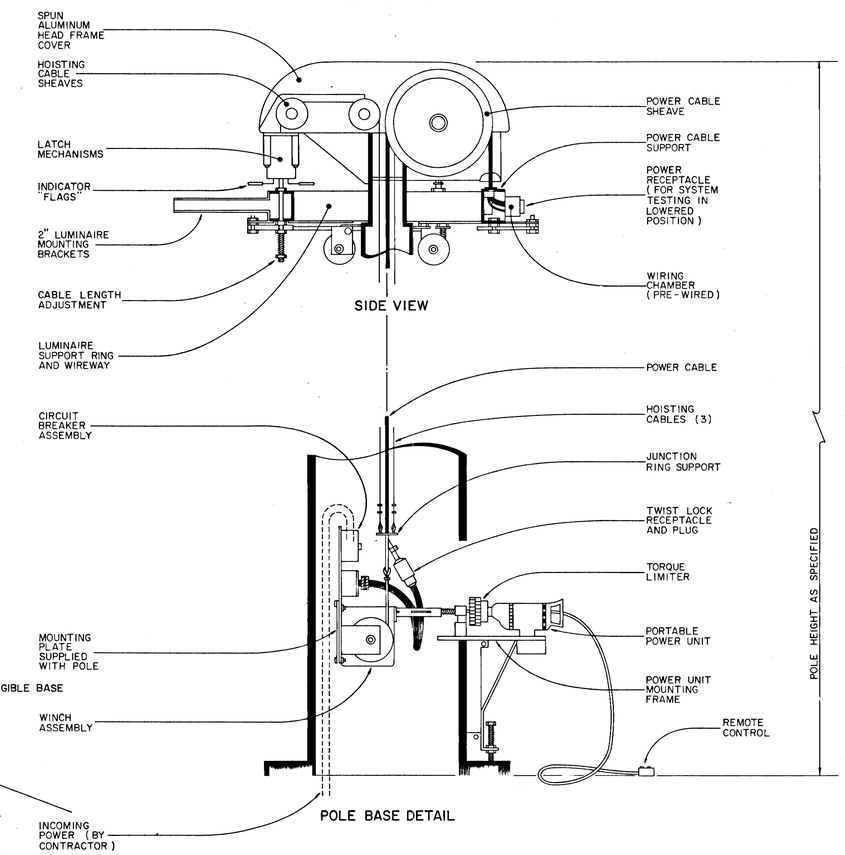


CURB & GUTTER MOUNTED LUMINAIRE (NC)

NO SCALE



TOP VIEW
(MOUNTING RING)



SIDE VIEW

POLE BASE DETAIL

NOTE: THE ABOVE DETAILS INDICATE THE FEATURES AND FUNCTIONS REQUIRED FOR THE HIGHMAST LOWERING DEVICE. THESE DETAILS SHALL NOT BE CONSTRUED AS LIMITING COMPETITION OR SPECIFYING PROPRIETARY EQUIPMENT OR DEVICES.

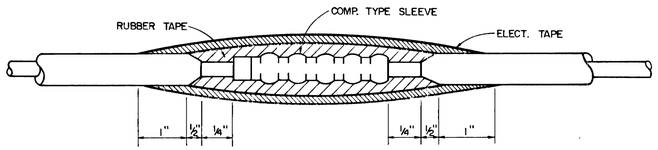
HIGH-MAST LOWERING DEVICE

NO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAIL

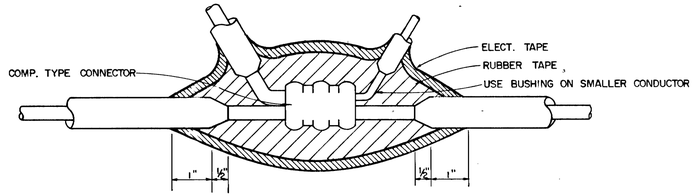
TYPE	YEAR	PROJECT NO.	SHEET NO.
DRAWING	83	I-440-4(55)211	79



1. REMOVE INSULATION FROM CONDUCTORS SO THAT WHEN SLEEVE IS INSTALLED APPROXIMATELY 1/4" BARE CONDUCTOR WILL REMAIN. TAPER INSULATION.
2. INSTALL COMPRESSION TYPE SLEEVE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
3. APPLY COATING OF RUBBER CEMENT OVERALL, THEN WRAP WITH RUBBER TAPE SO THAT MINIMUM RUBBER TAPE THICKNESS EQUALS CONDUCTOR INSULATION THICKNESS.
4. FINISH WRAPPING SPLICE WITH SCOTCH #33 ELECTRICAL TAPE, MINIMUM OF FOUR WRAPS, EACH HALF LAPPED WITH ALTERNATE WRAPS REVERSED LAY.

STRAIGHT SPLICE DETAIL

NO SCALE

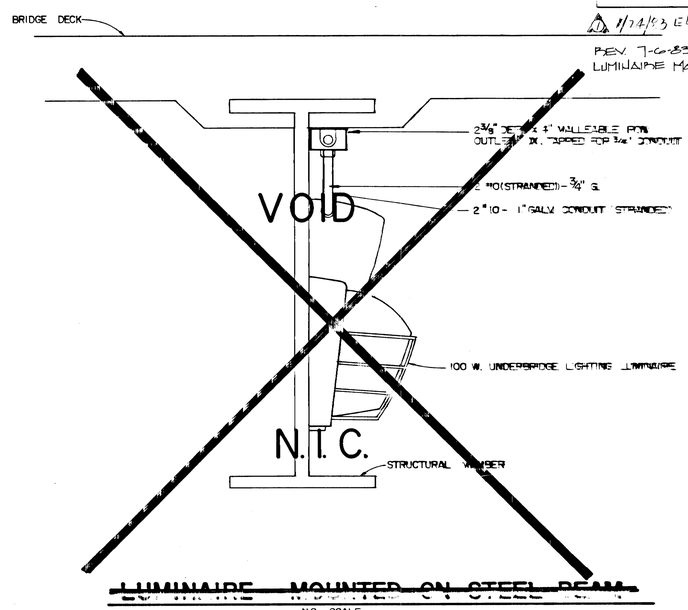


1. REMOVE INSULATION FROM CONDUCTORS TAPERING INSULATION AS SHOWN.
2. INSTALL COMPRESSION TYPE CONNECTOR IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
   A. WHERE ONLY 3 CONDUCTORS ARE REQUIRED INSERT SHORT LENGTH OF WIRE IN UNUSED OPENING.
   B. WHERE CONDUCTORS ARE OF DIFFERENT SIZE, USE COMPRESSION SLEEVE TO FIT LARGER SIZE WITH BUSHING FOR SMALLER CONDUCTOR.

3.
4. } SAME AS NOTES 3 & 4 FOR STRAIGHT SPLICE.

SPLICE DETAIL FOR 3 OR MORE CONDUCTORS

NO SCALE

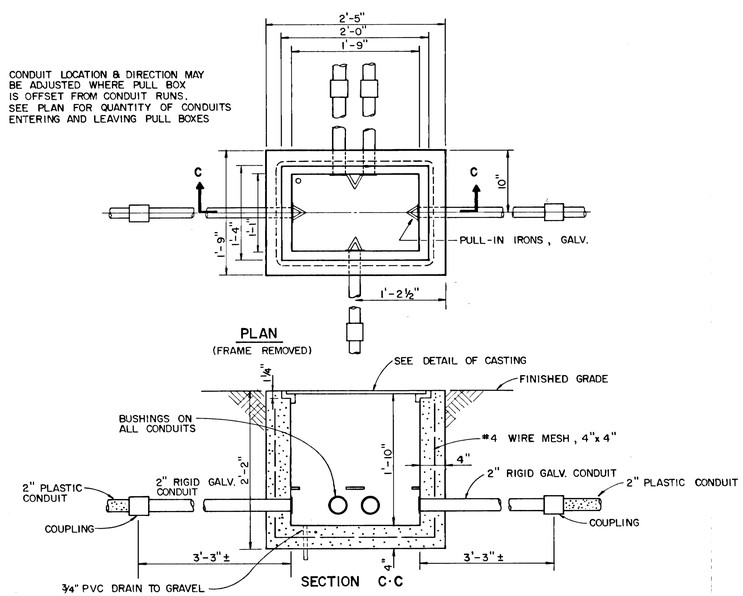


△1 1/24/83 ELD Footing Depth

REV. 7-6-83 OMITTED DETAIL OF LUMINAIRE MOUNTED ON STEEL BEAM.

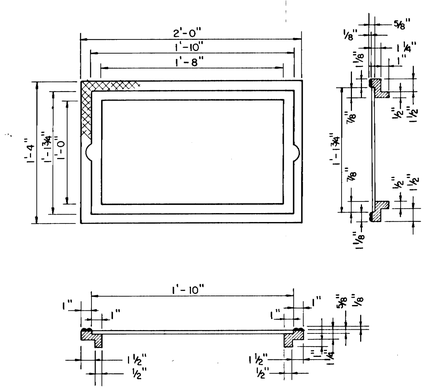
~~LUMINAIRE MOUNTED ON STEEL BEAM~~

NO SCALE

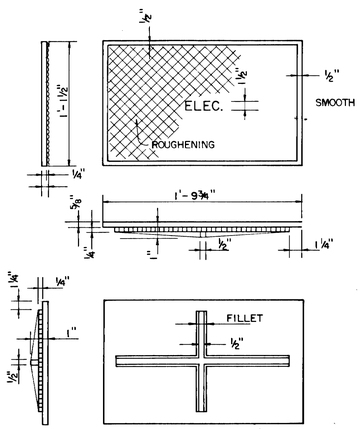


DETAIL OF PULL BOX

NO SCALE



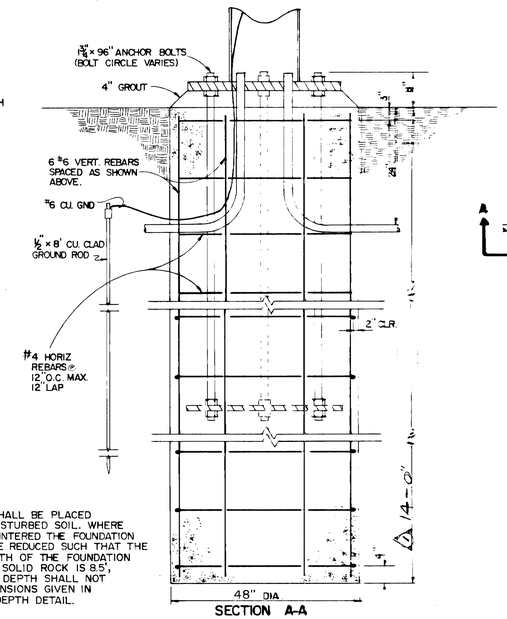
FRAME

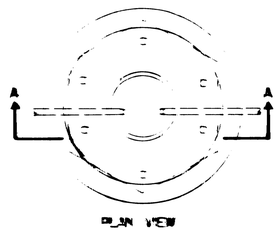


COVER

DETAIL OF PULL BOX CASTING

NO SCALE





NOTE: FOUNDATION SHALL BE PLACED AGAINST UNDISTURBED SOIL. WHERE ROCK IS ENCOUNTERED THE FOUNDATION DEPTH MAY BE REDUCED SUCH THAT THE MINIMUM DEPTH OF THE FOUNDATION EMBEDDED IN SOLID ROCK IS 8.5', BUT OVERALL DEPTH SHALL NOT EXCEED DIMENSIONS GIVEN IN FOUNDATION DEPTH DETAIL.

HIGH MAST FOUNDATION DETAIL

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAILS

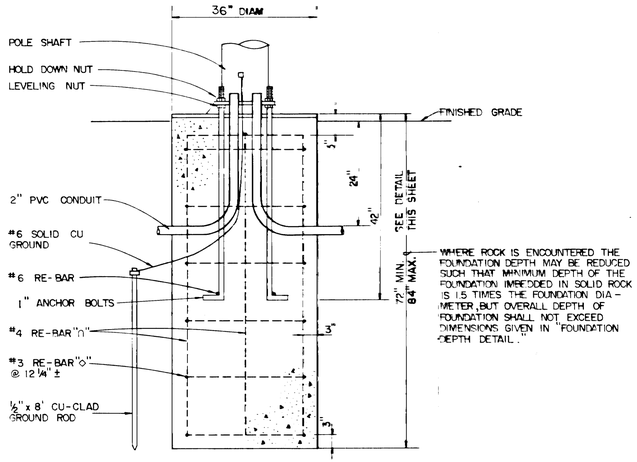
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	80

REV. 1-24-83: SPECIAL NOTE ADDED AND WATTAGE CHANGED FOR LUMINAIRE MOUNTED ON BRIDGE SLAB.

REV. 7-6-83 CHANGED DETAIL OF CONDUCTOR CONNECTIONS INSIDE STANDARD TO TWO (2) WIRES

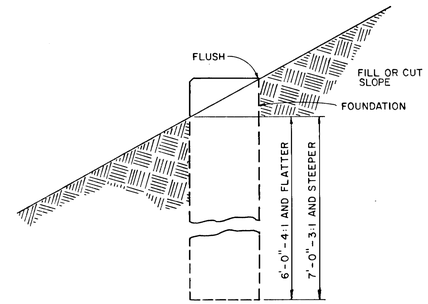
CHANGED 3/4" CONDUIT TO 1"

REVISED LUMINAIRE MOUNTED ON PIER DETAIL, 5 AMP TO 15 AMP



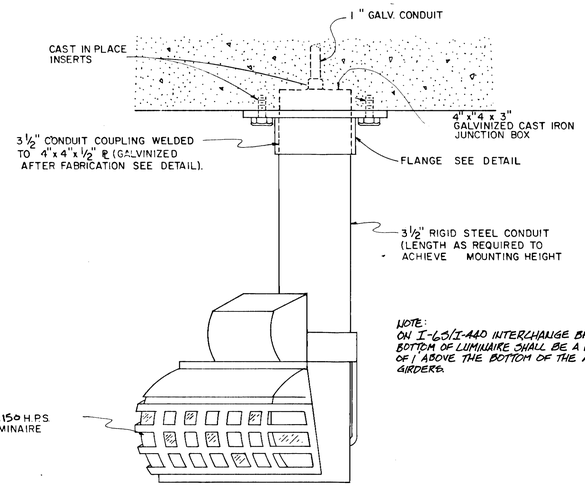
FOUNDATION DETAILS FOR ROADWAY LIGHT STANDARDS

NO SCALE

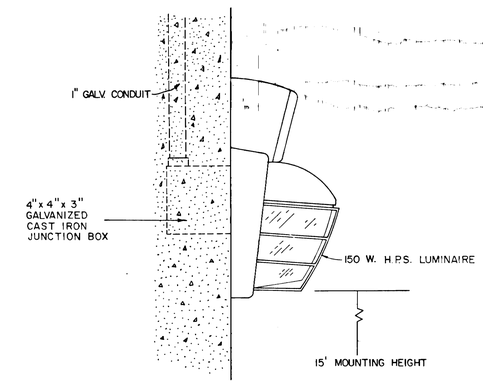


FOUNDATION DEPTH DETAIL

NO SCALE

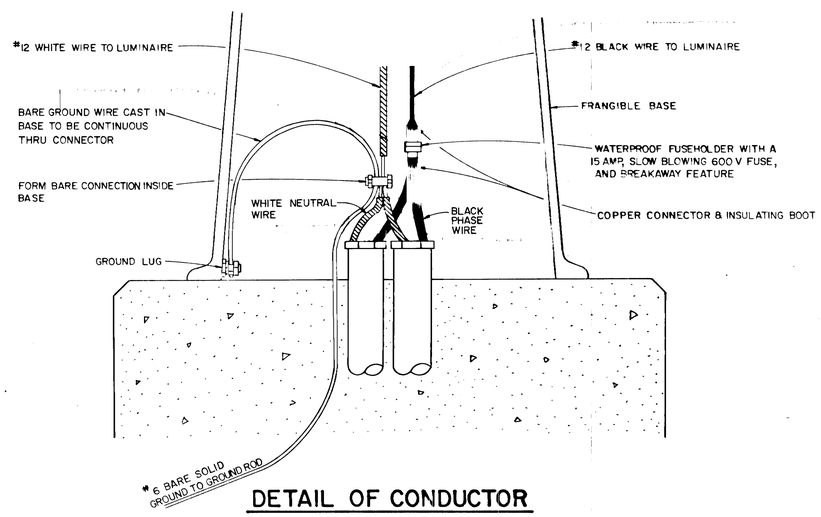


NOTE:
ON I-65/I-440 INTERCHANGE BRIDGE, THE BOTTOM OF LUMINAIRE SHALL BE A MINIMUM OF 1' ABOVE THE BOTTOM OF THE ADJACENT GIRDERS.



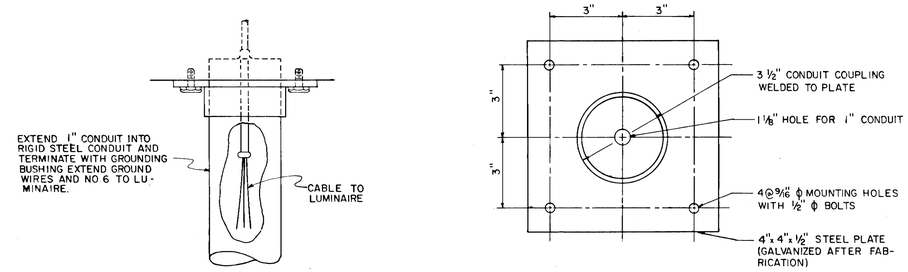
LUMINAIRE MOUNTED ON PIER

NO SCALE



DETAIL OF CONDUCTOR CONNECTIONS INSIDE STANDARD

NO SCALE



LUMINAIRE MOUNTED ON BRIDGE SLAB

NO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAIL

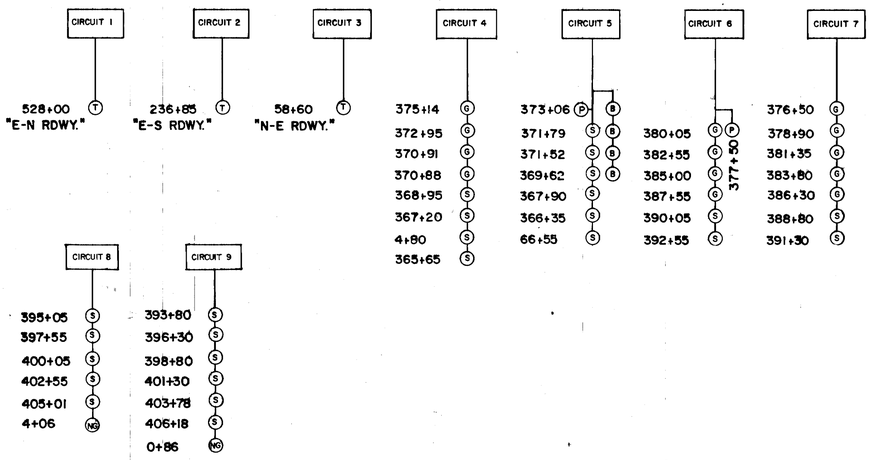
TELEDYNE POST N1R156

TENN. STATE HIGHWAYS
Plans Div. File No. IN-332

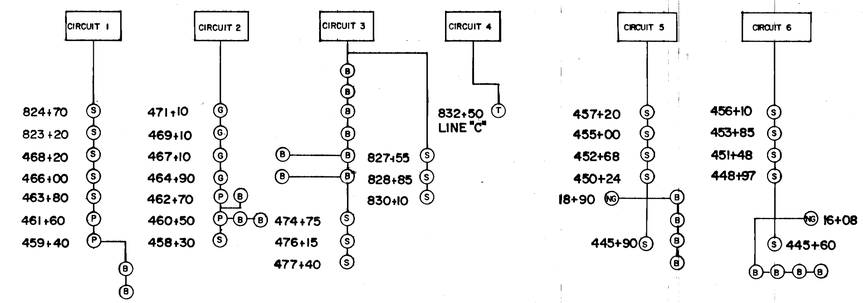
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	81

REV. 7-6-83: CHANGED CIRCUITS IN CONTROL POINTS 1-3 & CIRCUIT 12 IN EXISTING CONTROL POINT. CHANGED SHEET NOS. FOR UNDER BRIDGE LIGHTING DETAILS.

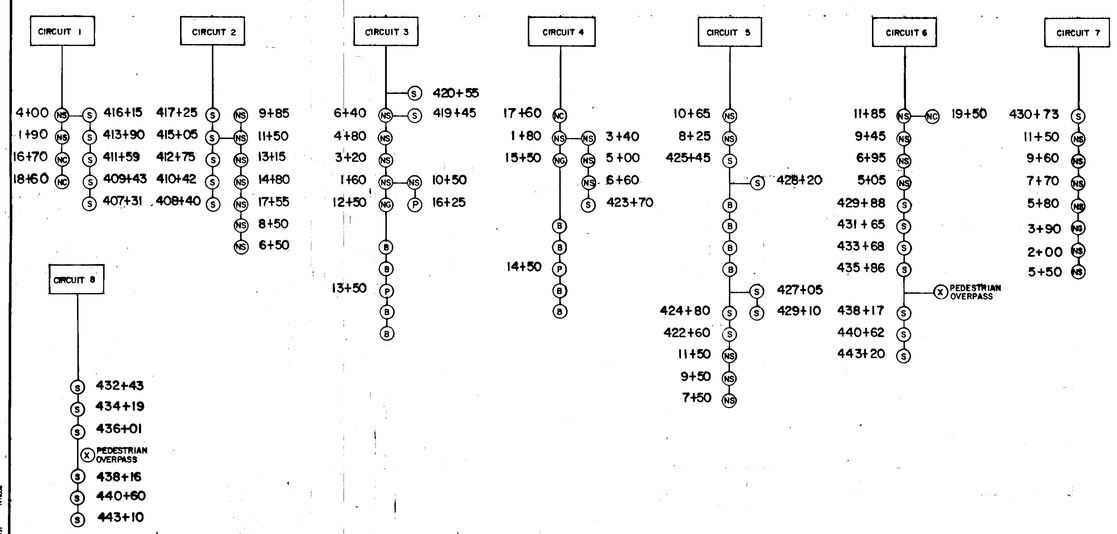
CIRCUIT DIAGRAM CONTROL POINT NO. 1



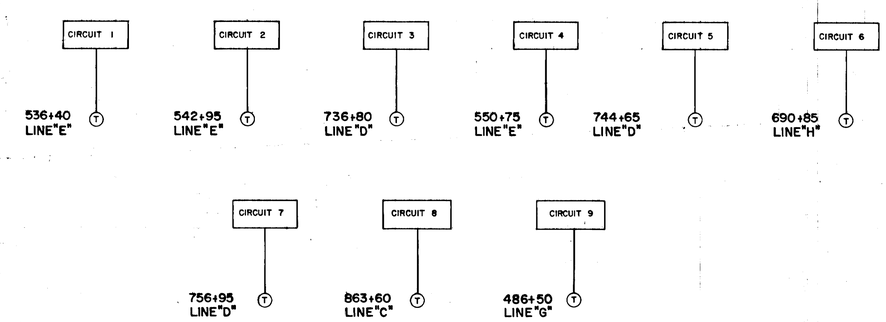
CIRCUIT DIAGRAM CONTROL POINT NO. 3



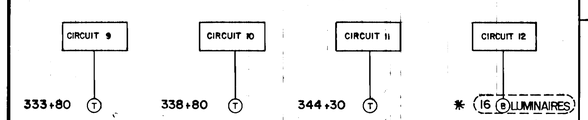
CIRCUIT DIAGRAM CONTROL POINT NO. 2



CIRCUIT DIAGRAM CONTROL POINT NO. 4



EXISTING CONTROL POINT I-65 & I-440



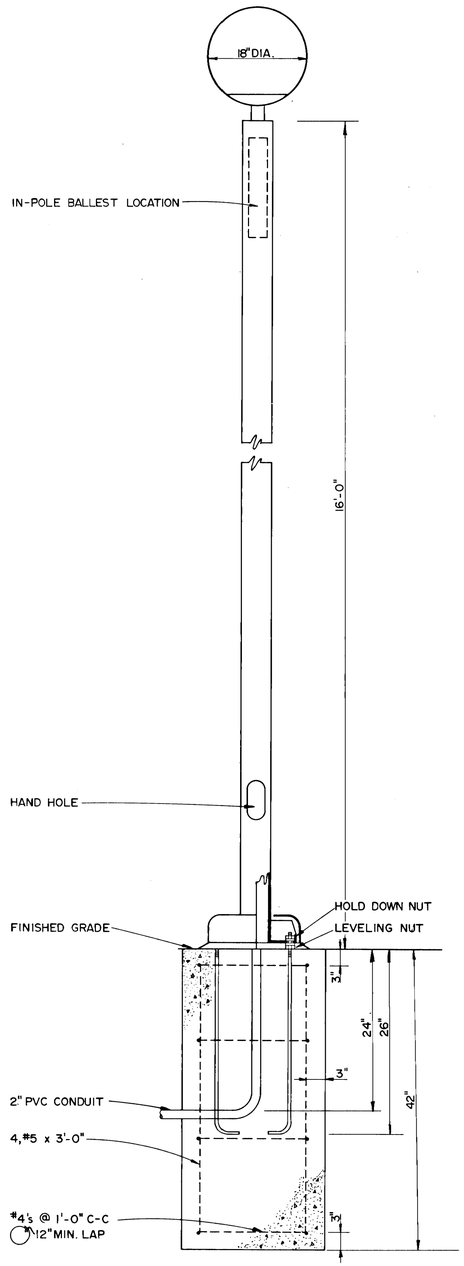
* SEE I-440/I-65 UNDER BRIDGE LIGHTING DETAILS, SHTS. 85-87.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CIRCUIT DIAGRAM

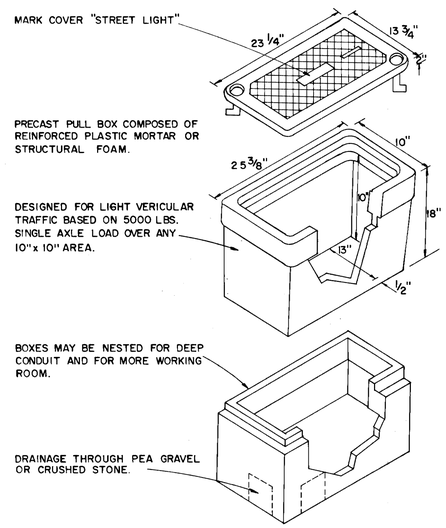
TELEPHONE POST N1806A

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55) 211	82



POLE TOP LUMINAIRE

N.T.S.



ALTERNATE UNDERGROUND PULL BOX DETAIL

N.T.S.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAIL

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING		I-440-4(55)211	83

REV. 11-19-82: ADDED 12' TRAFFIC LANE IN THE MEDIAN ON N B L, MEDIAN DRAINAGE ADJUSTED.

W-S PL RDY CURVE DATA
PI STA 357+15 06
ΔC = 10° 24' 57"
DC = 1° 45'
T = 258 42'
R = 3274 05
LC = 594 37'
E = 18 52'
PI N = 627,986 23
E = 1,771,875 85

W-S RDY CURVE DATA
PI STA 350+03.01
ΔC = 12° 27' 30'
DC = 1° 30'
T = 416 92
R = 3819 72
LC = 828.92
E = 22 65
L = 830 56
PI N = 627,526 35
E = 1,771,406.83

FRANKLIN PIKE CURVE DATA
PI STA 28+06.53
ΔC = 15° 31' 16" LT.
DC = 0° 40'
T = 1171 26'
E = 79 44'
L = 2328 17'
R = 8594 37'
PI N = 628,158 129
E = 1,771,625 602

"E-S" RDY CURVE DATA
PI STA 251+10 90
ΔC = 63° 30' 18" LT.
DC = 6° 00'
T = 590 99'
E = 168 08
LC = 1058 42
R = 954 93
PI N = 628,454.39
E = 1,771,352 45'

E-S PL RDY CURVE DATA
PI STA 257+62 35
ΔC = 28° 48' 41" LT.
DC = 8° 00'
T = 183 96
E = 23 25
LC = 360 14
R = 716 20'
PI N = 627,679 64
E = 1,771,370 08

END "E-S RDY" 24' LT
STA 353+40 12' W-S RDY
ST STA 262+38 57
N 627,284 93
E 1,771,647 20

PROJ NO I-65-2(55)80
STA 356-00

STA 509+74 I-65
REPLACE EXISTING
W/1000 W HPS LUM

STA 257+63 "E-S" ROADWAY
REPLACE EXISTING
W/1000 W HPS LUM

STA 515+29 I-65
REPLACE EXISTING
W/1000 W HPS LUM.

I-65 CURVE DATA
PI = STA 522+93 25
ΔC = 37° 17' 14" RT
DC = 1° 00'
T = 1,933 07
LC = 3,728 72
E = 317 31'
R = 5,729 58
PI = N 628,296 39
E 1,771,274 19

"E-S" RDY CURVE DATA
PI STA 260+38 95
ES = 12° 00' LT.
LT = 200 46
ST = 100 42'
LS = 300 00'

"S-E" RDY CURVE DATA
PI STA 510+69 11
ΔC = 20° 16' 00" RT
DC = 3° 00'
T = 341 34'
E = 80 26'
LC = 675 56'
R = 1,909 86'
PI N = 627,319 69
E = 1,772,009.6
SE = +0 024'/1
V = 50 MPH

"S-E" RDY CURVE DATA
PI STA 518+22.16
ΔC = 44° 18' 38.75" RT
DC = 6° 00'
T = 388 83'
LC = 738.51'
E = 76 13'
R = 954 93'
PI N = 628,049 68
E = 1,771 993 2
SE = -0 059'/1
V = 50 MPH

"S-W" RDY CURVE DATA
PI STA 142+19 00
ΔC = 21° 42' 15" LT
DC = 8° 00'
T = 137 30'
E = 13 04'
LC = 271 30
R = 716 20'
PI N = 628,075 71
E = 1,771,65 91

"S-W" RDY CURVE DATA
PI STA 150+55
ΔC = 3° 31' 14" LT
DC = 4° 00'
T = 405 83
E = 56 38
LC = 790.93'
R = 1432 39'
PI N = 628,475 5
E = 1,771,490 18

S-W RDY CURVE DATA
PI = STA 142+77 16
ES = 12° 00' LT
LT = 200 46
ST = 100 42'
LS = 300'

LEGEND
(E) REMOVE & REPLACE EXIST TOWER LAMPS W/1000 W HPS
□ PULL BOX
— — FLEXIBLE CONDUIT

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT
I-65
STA 507+00 TO 521+00
SCALE 1" = 50'

LIGHTING

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING		I-440-4(55)211	84

REV 3-22-83 CHANGED LEGEND, CHANGED NOTE CONCERNING SHEET REFERENCE FROM 2C TO 76
REV 7-6-83 CHANGED LEGEND

NOTE TRANSITION TO FULL 6-LANE ROADWAY BEGINS AT STA 40+00 ON FRANKLIN ROAD

PL N-E RDY CURVE DATA
PI = STA 52+55 93
Δc = 74° 36' 4 32"
Dc = 8°
T = 545 61
Lc = 932.52
E = 184.15
R = 716 20

PL N-E RDY CURVE DATA
PI = STA 44+48 68
Δc = 41° 48' 21 61"
Dc = 7° 30'
T = 291 77'
Lc = 557 21'
E = 53 82
R = 763 94'

PL N-E RDY CURVE DATA
PI 40+73 81
Δc = 9° 22' 30"
LT = 166 90'
ST = 83 55
Ls = 250 00

TOP 484 5
INV 480 8

MATCH LINE STA 346 + 00

TOWER I

STA 153 + 87 "S-W" RDWY.
REPLACE EXISTING
W/1000 W H.P.S LUM

"N-E" ROADWAY

FUTURE PARAPET WALL

PL PCC STA 47+14 41

EXIST. CONTROL POINT

MATCH LINE STA 447+50

TOP 485 47
INV 479 62

TOP 482 06
INV 480 00

TOP 482 66
INV 477 67

TOP 483 51
INV 476 52

N 00° 21' 51" W
461 51

N 00° 14' 20" W 8.5
275.58'

N 13° 16' 20" W

CURB & GUTTER

℄ DELOCATED FRANKLIN PIKE

CONCRETE MED IN BARRIER

FILL SL

SOD DITCH

GT EL 490 0

GT EL 485 6
M H

BEG EXIST PVMT TRANS
STA 532+20

TYPE II
ANCHOR BLOCK

PROP 12 - SHOULDER

PROP 12' TRAFFIC LANE

PROPOSED MEDIAN GUARDRAIL

EXIST PVMT EDGE

SEE SHEET NO 76 FOR
CONTROL POINT DETAIL

EXIST PVMT EDGE

PROP 12 SHOULDER

BEGIN PROP MED AN BARRIER (STA 532+00)

TOP 487 5
INV 484 6

PROP 12 TRAFFIC LANE

PROP 12 SHOULDER

CUT SL

FACE OF ROCK WALL

SOD DITCH

GT 488 58
INV 485 2

TYPE I
ANCHOR BLOCK

TOWER VII

STA 531+49 I-65
150' M.H.
W/8 1000 W H.P.S LUM
BASE EL. 4970

STA 454 + 28 "W-N" ROADWAY
REPLACE EXISTING
W/1000 W H.P.S LUM

"W-N" RDY CURVE DATA
PI STA 453+54 02
Δc = 42° 55' 20"
Dc = 4°
T = 687 31
Lc = 1114 72
E = 115 73
R = 1432 39
PI N = 628 678.711
E = 1 771,748.17

TOWER VI

FUTURE CONC PARAPET RAIL

FUTURE CONC PARAPET RAIL

FUT G-3 GUARDRAIL

"E-N" RDY CURVE DATA
PI STA 530-20 15
Δc = 57° 42' 17" RT
Dc = 8° 00'
T = 819.62
Lc = 1221 31
E = 372 242
R = 716 2
PI N = 628,747.76
E = 1 772,026.62

SEE SHEETS NO 4A, 4B, & 4C
FOR CONDUITS ON BRIDGE

FUT CONC PARAPET RAIL

S-STA 460+31 43
N 628,435 35
E 1,771,719.04

STA 521 + 00

MATCH LINE

NOTE
FACE OF ROCK WALL TO BE 100' RT OF STA 523+20 TAPER BACK TO NORMAL DITCH IN 100' BOTH DIRECTIONS (NORTH & SOUTH)

INV 453 61

EXIST 42"

EX. ST F B DITCH

EXIST R O W E(AC) FENCE

L & N RAILROAD

EXIST R O W E(AC) FENCE

S 00° 28 30" W
190 05

S 00° 41' 20" E
217 29

S 08° 55' 10 E
457 39

"E-S" ROY CURVE DATA
PI STA 244 + 53 38
Δs = 0° 00' LT.
LT = 133 41'
ST = 66.74'
Ls = 200 00'

S 00° 08' 10" E
500 13

MATCH LINE STA 56 + 00

MATCH LINE STA 243 + 00

MATCH LINE STA 530 + 00

PROP GRAVITY TYPE
RET WALL - FOR
DETAIL SEE SHT NO 2A

STA 52 + 32 "N-E" RDWY
REPLACE EXISTING
W/1000 W H.P.S LUM.

TOWER V

NOTE
FACE OF ROCK WALL TO BE 100' RT OF STA 523+20 TAPER BACK TO NORMAL DITCH IN 100' BOTH DIRECTIONS (NORTH & SOUTH)

FUT PARAPET WALL

FACE OF ROCK WALL

CUT SL

EXIST R O W E(AC) FENCE

INV 477.1

PL SO STA 41+86 01

FUTURE NOISE WALL

"N-W" RDWY.

STA 40+59 20 FRANK PK.

STA 643+82 73 N-W RDY.

TOP 478 5
INV 476 3

"N E" RDY CURVE DATA
PI = STA 41-25 03
Δs = 12° 00'
LT = 200 46'
ST = 100 42'
Ls = 300 00'

LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND G R OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H P S ——— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST TOWER LAMPS W/1000 W H P S
- □ PULL BOX
- □ CONTROL POINT
- —— RIGID CONDUIT
- — — FLEXIBLE CONDUIT

W-N RDY CURVE DATA
PI = STA 450-31 45
Δs = 3° 00'
L = 100 01'
ST = 50 01'
Ls = 150 00'
PI N = 628,815 7
E = 1,771,727 51

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

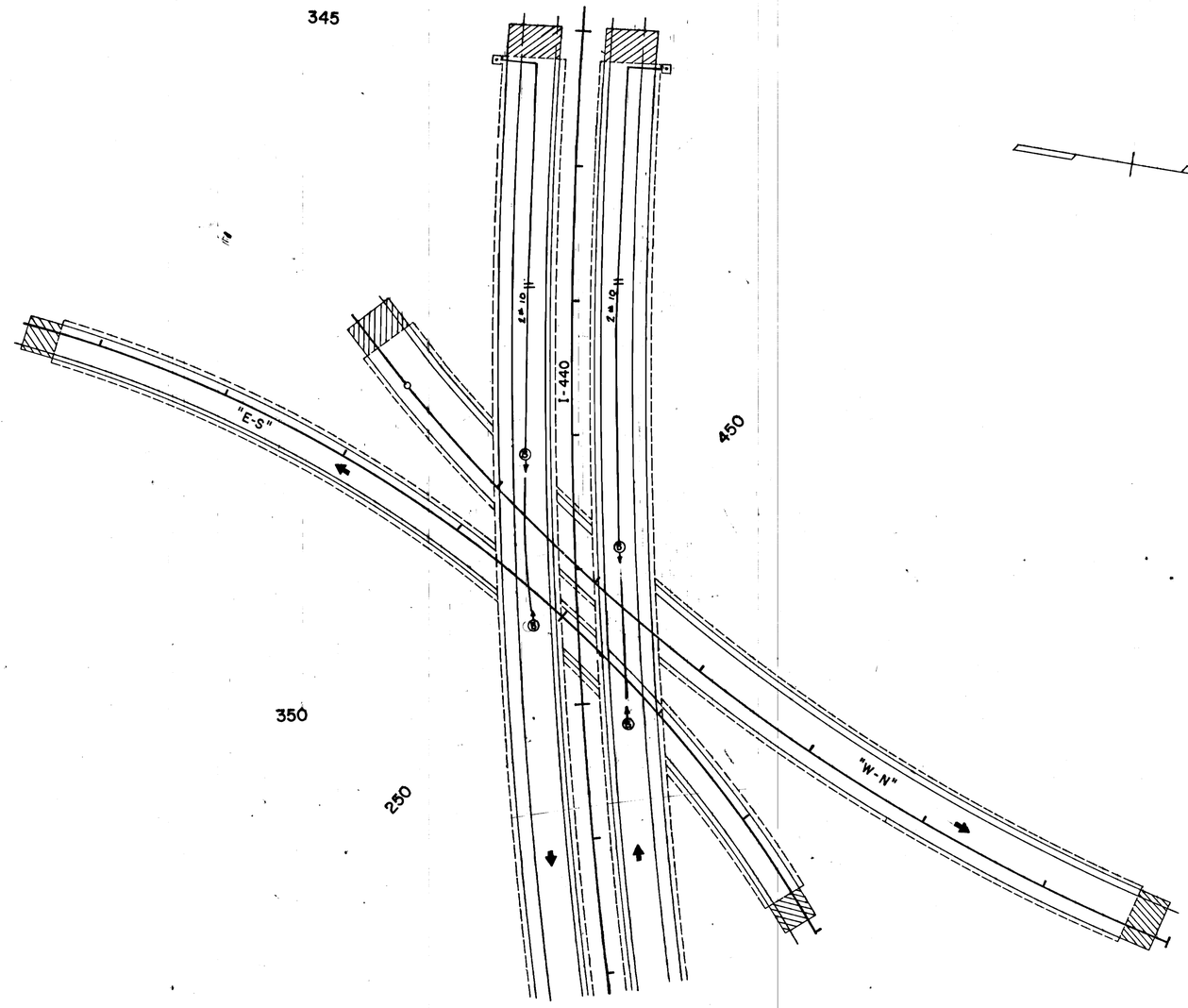
STA 521+00 TO 533+00

SCALE 1" = 50'

LIGHTING

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	85

REV. 1-24-83: FIXTURE LOCATION CHANGED.

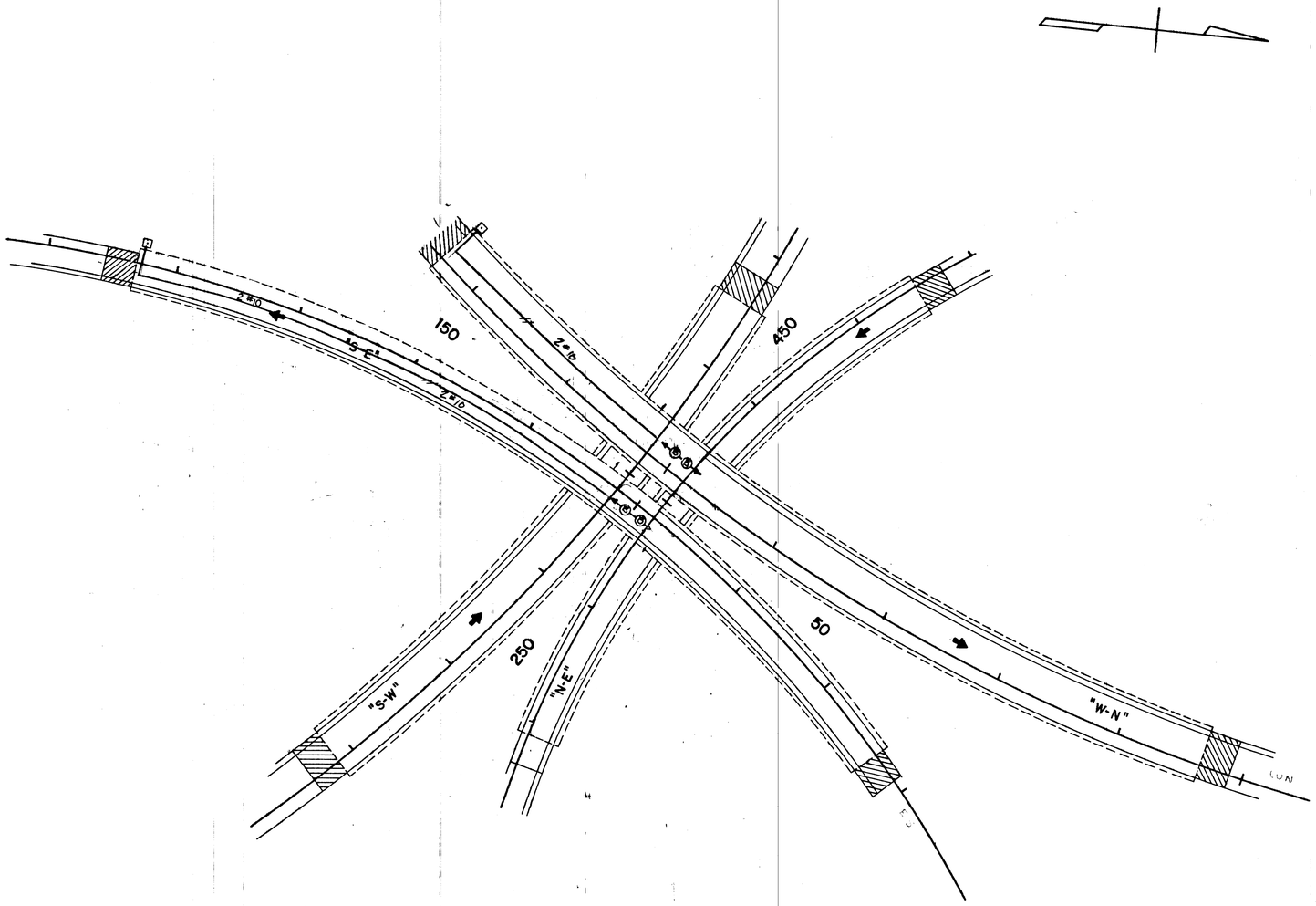


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

UNDER BRIDGE
LIGHTING
I-440 AT I-65

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	86

REV 1-24-83: FIXTURE LOCATION CHANGED

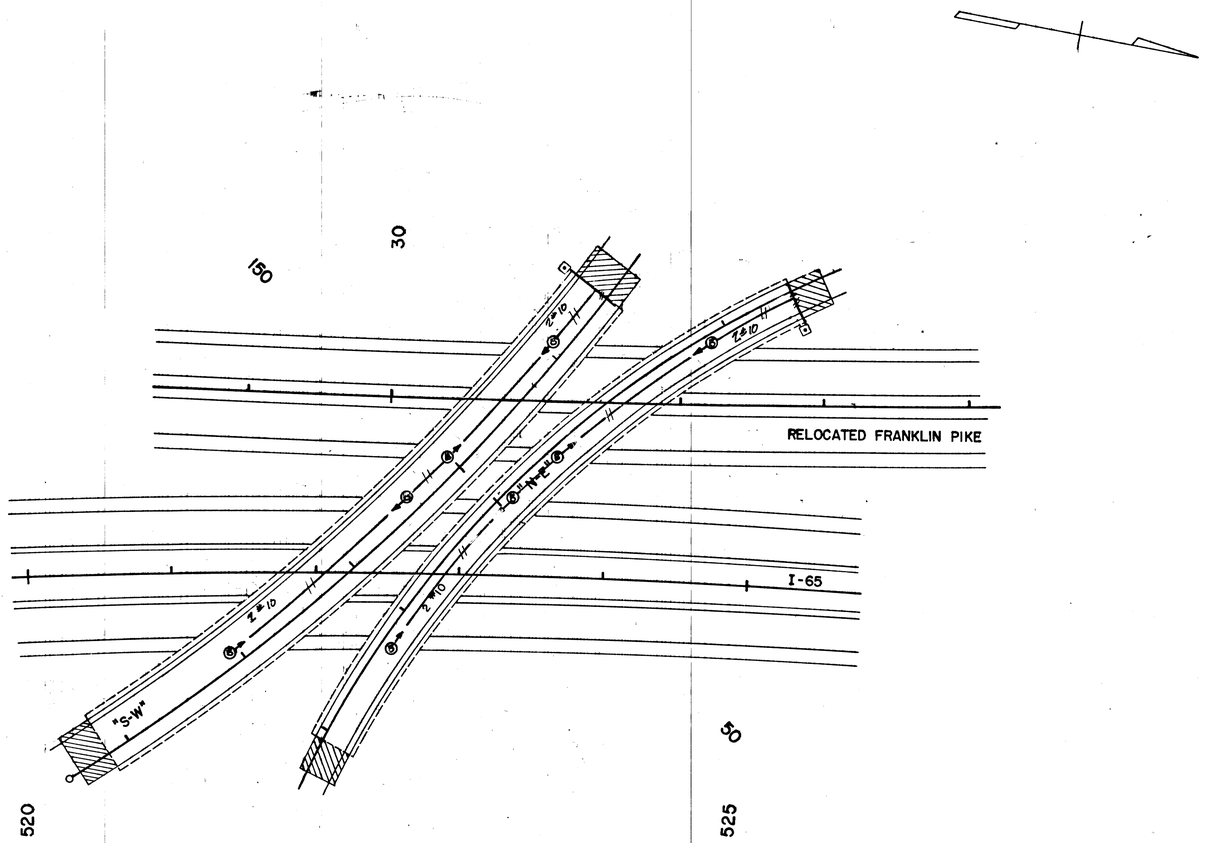


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

UNDER BRIDGE
LIGHTING
I-440 AT I-65

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	87

REV. 1-24-83: FIXTURE LOCATIONS CHANGED.

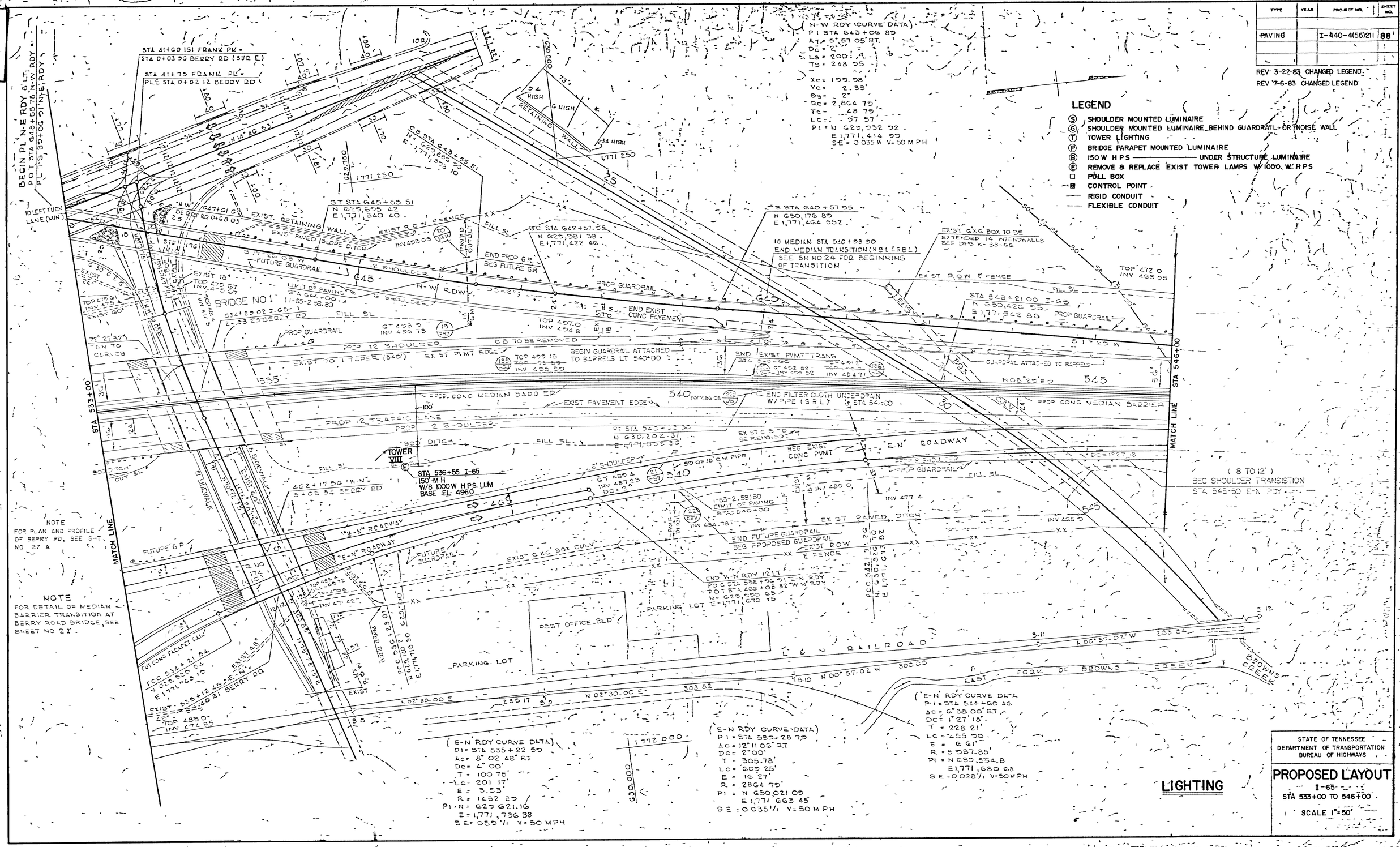


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

UNDER BRIDGE
LIGHTING
I-440 AT I-65

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING		I-440-4(55)211	88

REV 3-22-83 CHANGED LEGEND.
REV 7-6-83 CHANGED LEGEND

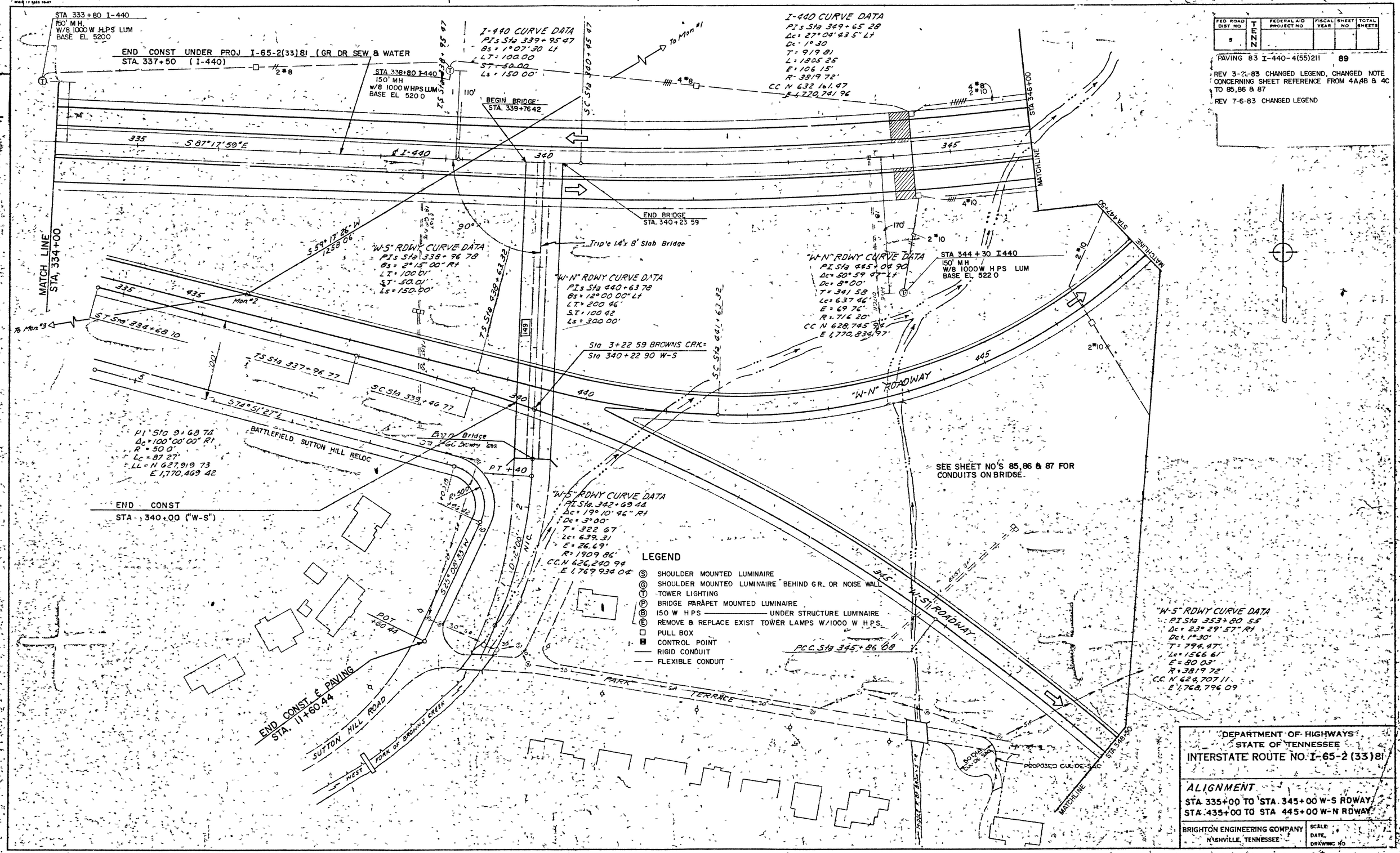


FED ROAD DIST NO	STATE	FEDERAL AID PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
9	TENN				

PAVING 83 I-440-4(55)211 89

REV 3-7-83 CHANGED LEGEND, CHANGED NOTE CONCERNING SHEET REFERENCE FROM 4A,4B & 4C TO 85,86 & 87

REV 7-6-83 CHANGED LEGEND



DEPARTMENT OF HIGHWAYS
STATE OF TENNESSEE
INTERSTATE ROUTE NO. I-65-2 (33)81

ALIGNMENT
STA 335+00 TO STA 345+00 W-S RDWAY
STA 435+00 TO STA 445+00 W-N RDWAY

BRIGHTON ENGINEERING COMPANY
NASHVILLE, TENNESSEE

SCALE:
DATE:
DRAWING NO

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING		I-440-4(55)211	90

REV. 3-22-83 CHANGED LEGEND

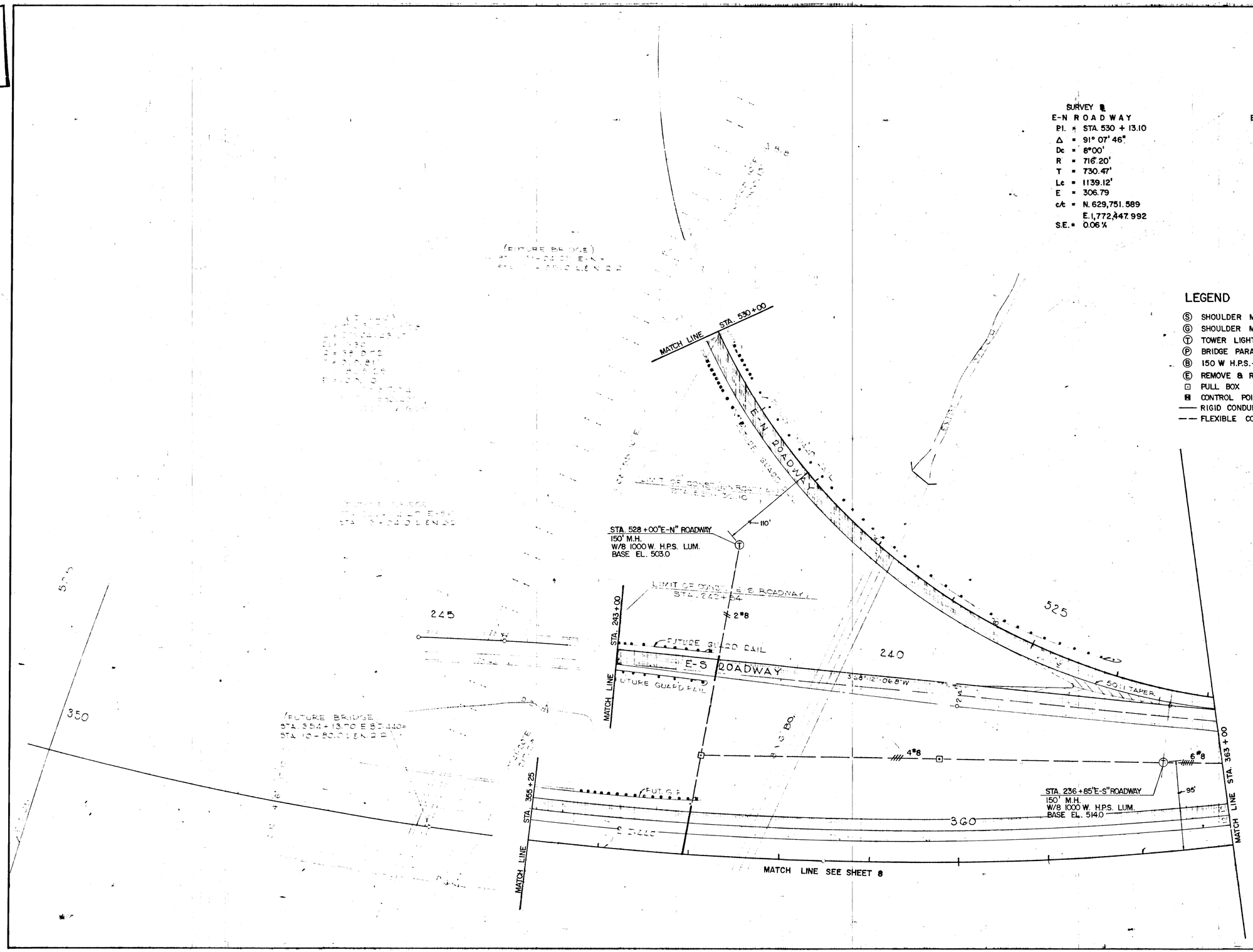
REV. 7-6-83 CHANGED LEGEND

SURVEY ℄
E-N ROADWAY
P.I. = STA. 530 + 13.10
Δ = 91° 07' 46"
Dc = 8°00'
R = 716.20'
T = 730.47'
Lc = 1139.12'
E = 306.79
c/c = N. 629,751.589
E. 1,772,447.992
S.E. = 0.06 %

PAP. LOC. ℄
E-N ROADWAY
P.I. = 530 + 20.24
Δ = 97° 42' 174" RT.
Dc = 8°00'
R = 716.20'
T = 819.63'
Lc = 1221.31
E = 372.25
c/c = N. 629,751.589
E. 1,772,447.992
S.E. = 0.06 %

LEGEND

- Ⓢ SHOULDER MOUNTED LUMINAIRE
- Ⓖ SHOULDER MOUNTED LUMINARE BEHIND GUARDRAIL OR NOISE WALL
- Ⓣ TOWER LIGHTING
- Ⓟ BRIDGE PARAPET MOUNTED LUMINAIRE
- Ⓑ 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- Ⓔ REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ⊠ CONTROL POINT
- —— RIGID CONDUIT
- — — FLEXIBLE CONDUIT



LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

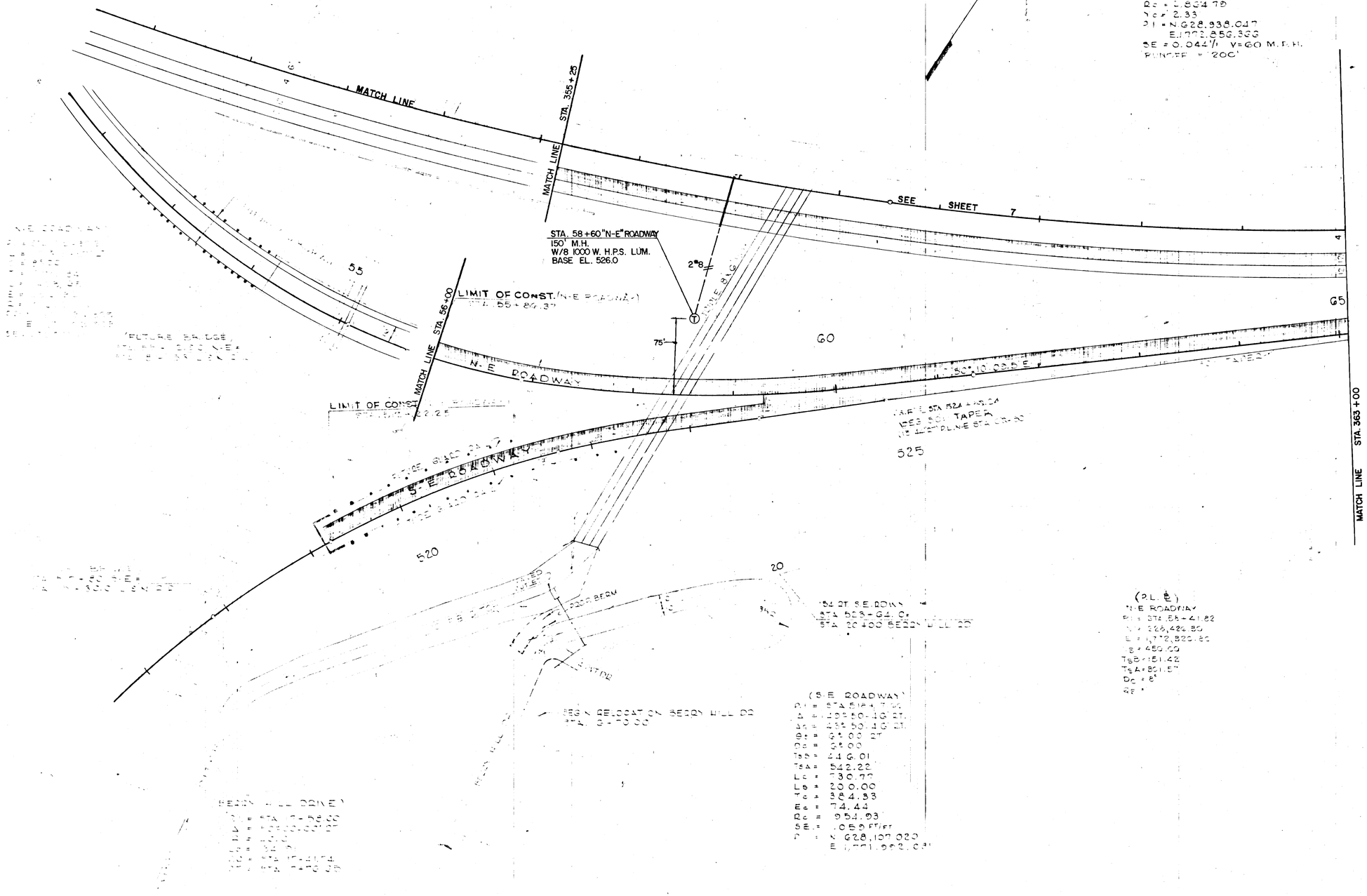
STA. 352+00 TO 363+00

SCALE 1" = 50'

TENN. STATE Highway Dept. Plans Div. FILE No. 337

PAVING 83 I-440-4(55)211 91

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND G.R. OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ——— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ■ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 352+00 TO 363+00

SCALE 1" = 50'

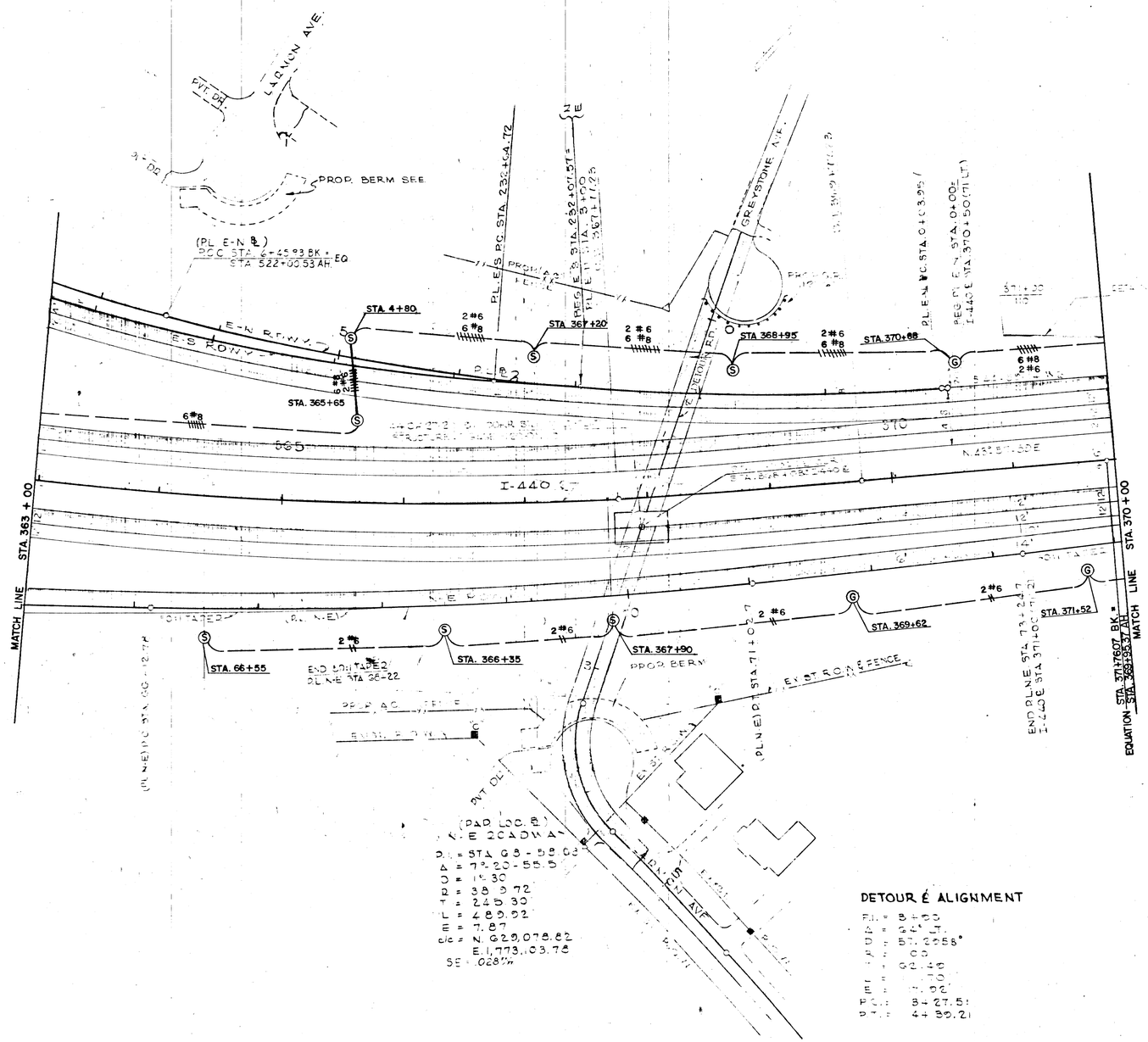
PAVING 83 I-440-4(55) 211 92

REV. 3-22-83 CHANGED LEGEND & LUMINAIRES AT STA. 369+62 & STA. 371+52 FROM Ⓢ TO Ⓖ.

REV. 7-6-83 CHANGED WIRE SIZES, CHANGED LEGEND

(PAD LOC. ℄)
E-N ROADWAY
P.I. = STA. 5+28.00
Δ = 19°15'33.6" RT
D = 3°00'
R = 909.86
T = 324.05
E = 27.30
L = 611.98
P.I. = N. 629,250.846
E. 1773,053.963
SE = .044 ft/ft

(PAD LOC. ℄)
E-S ROADWAY
P.I. = STA. 284+75.33
Δ = 8° 52' 53.4"
D = 3° 30'
L = 419.04'
T = 210.67'
P.C. = 1909.86'
P.I. N = 629,128.53
P.I. E = 1,772,842.8
SE = .044 ft/ft



LEGEND

- Ⓢ SHOULDER MOUNTED LUMINAIRE
- Ⓖ SHOULDER MOUNTED LUMINAIRE BEHIND G.R. OR NOISE WALL
- Ⓣ TOWER LIGHTING
- Ⓟ BRIDGE PARAPET MOUNTED LUMINAIRE
- Ⓑ 150W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- Ⓔ REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ▣ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT

LIGHTING

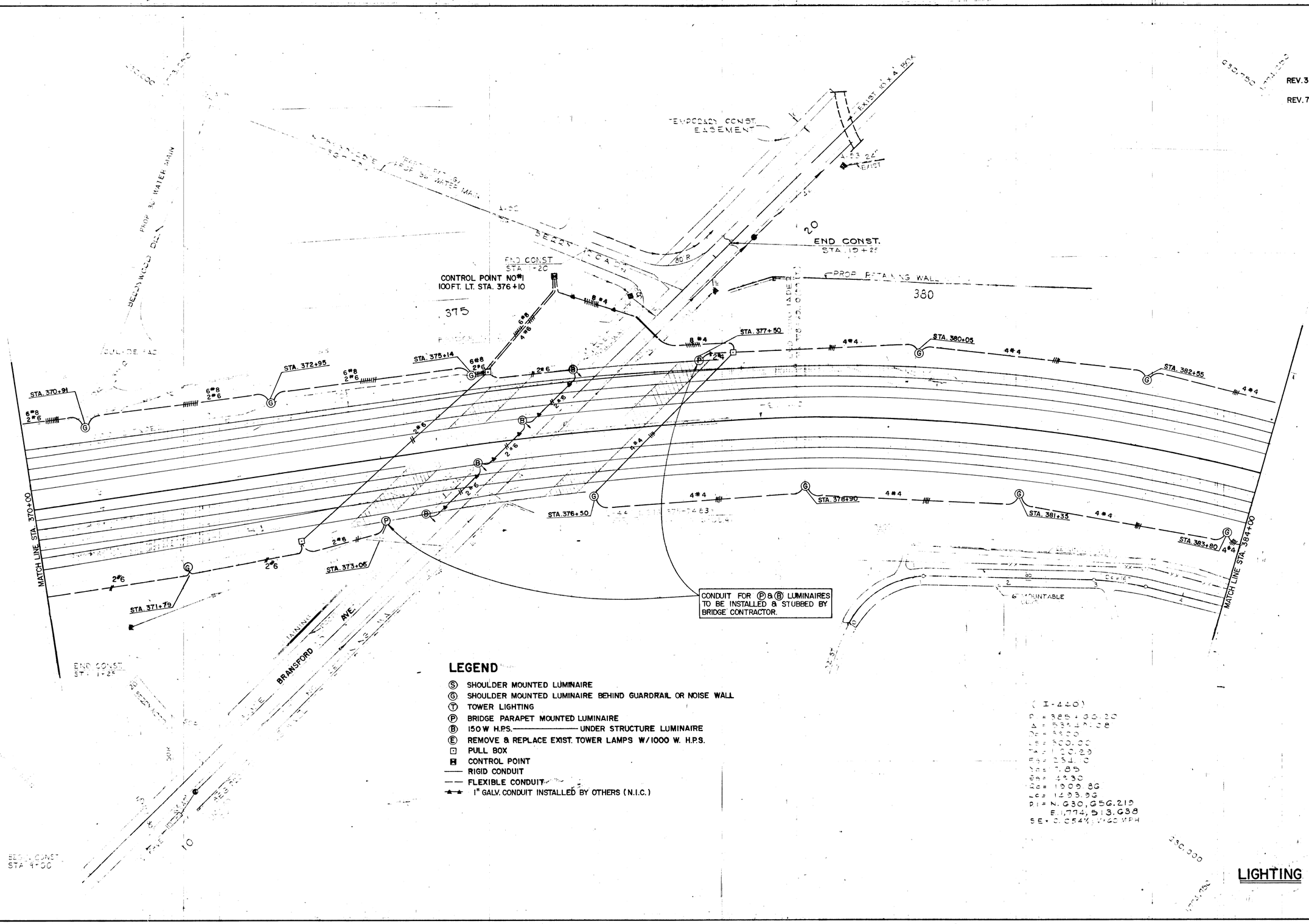
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 363+00 TO 370+00

SCALE 1" = 50'

REV. 3-22-83 CHANGED LEGEND & LUMINAIRE AT STA. 371+79 FROM (S) TO (G).
REV. 7-6-83 CHANGED WIRE SIZES CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ▣ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT
- ▲▲ 1" GALV. CONDUIT INSTALLED BY OTHERS (N.I.C.)

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

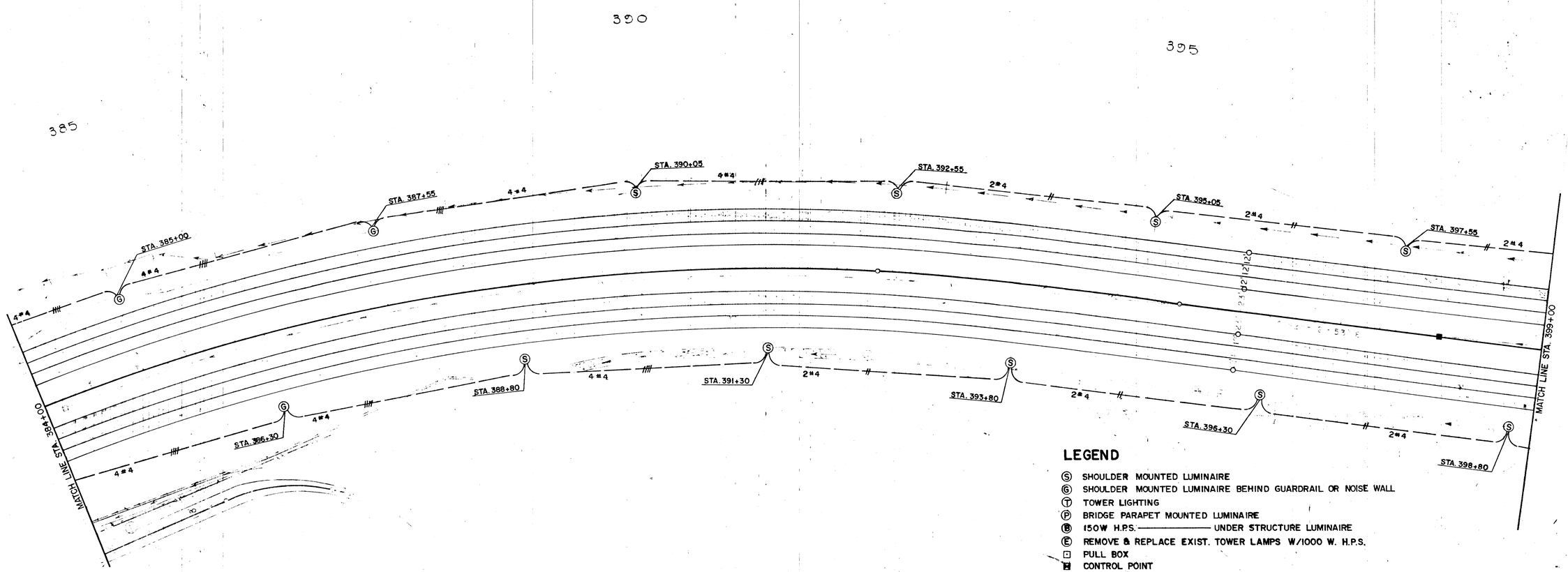
PROPOSED LAYOUT

STA. 370+00 TO 384+00

SCALE 1" = 50'

PAVING 83 I-440-4(55)211 94

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES
CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ■ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

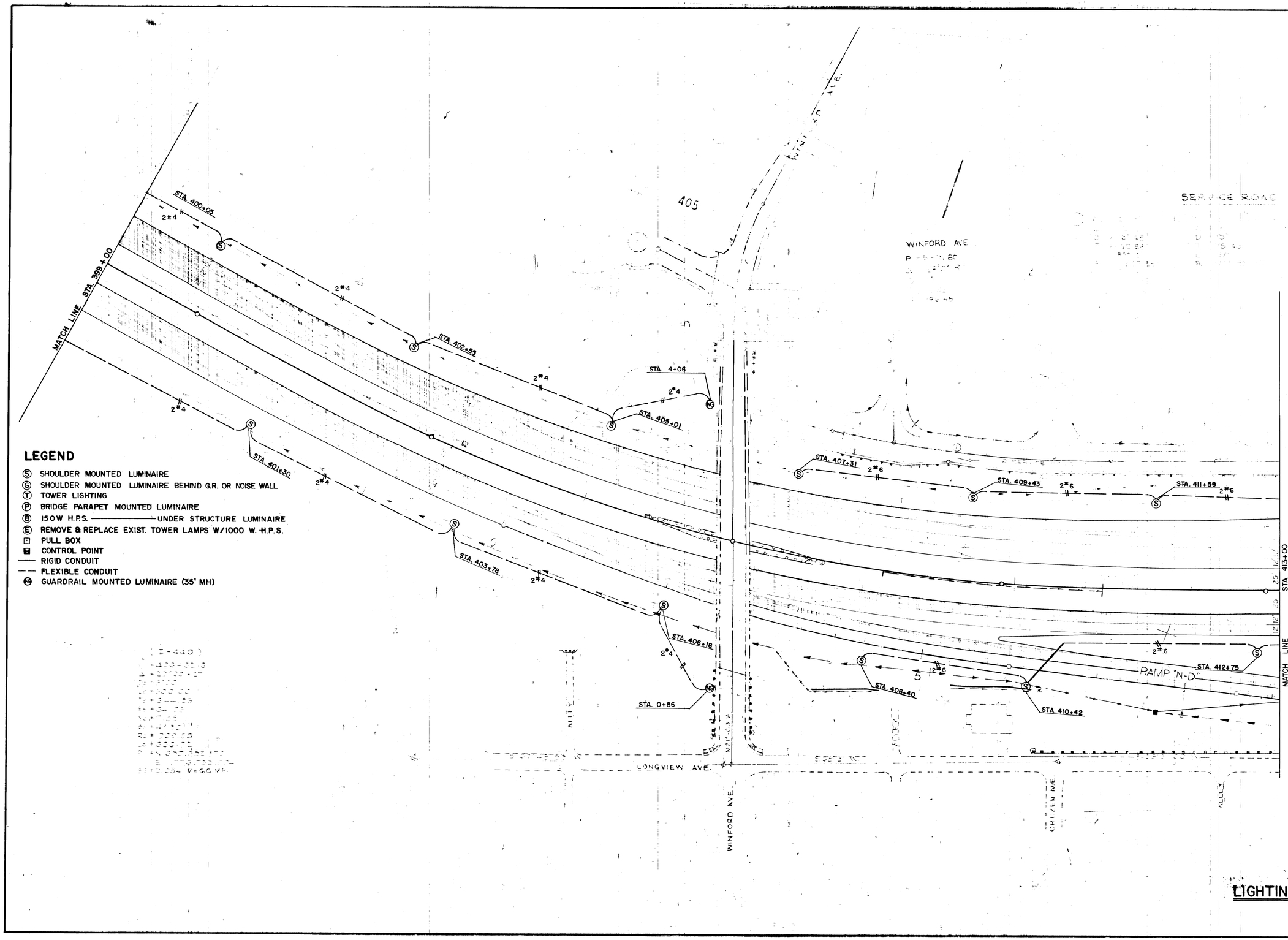
PROPOSED LAYOUT

STA. 384+00 TO 399+00

SCALE 1" = 50'

	83	
PAVING	83 I-440-4(55) 211	85

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES
CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND G.R. OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150W H.P.S. ——— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- [ ] PULL BOX
- [■] CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT
- (M) GUARDRAIL MOUNTED LUMINAIRE (35' MH)

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 399+00 TO 413+00

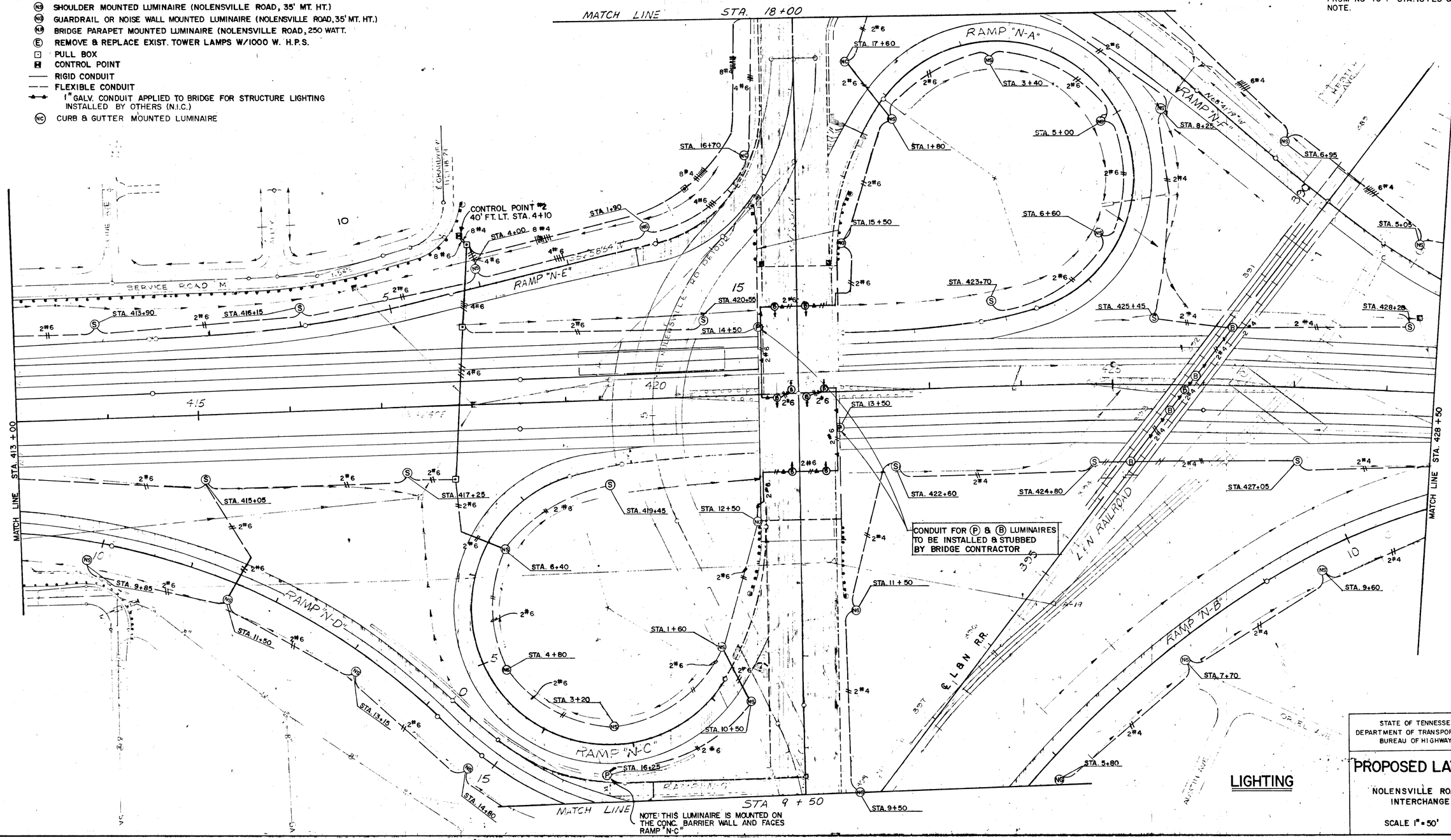
SCALE 1"=50'

TYPE	YEAR	PROJECT NO	SHT NO
PAVING	83	I-440-4(55)211	96

REV. 1-24-83: FIXTURE LOCATIONS CHANGED.
REV. 3-22-83 CHANGED LEGEND & LUMINAIRE AT STA. 5+80 FROM (NS) TO (NG).
REV. 7-6-83: CHANGED WIRE SIZES. CHANGED LEGEND. CHANGED FIXTURE FROM "NS" TO "P" STA. 16+25 & ADDED NOTE.

LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ——— UNDER STRUCTURE LUMINAIRE
- (NS) SHOULDER MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 35' MT. HT.)
- (NG) GUARDRAIL OR NOISE WALL MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 35' MT. HT.)
- (NP) BRIDGE PARAPET MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 250 WATT.
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- PULL BOX
- CONTROL POINT
- RIGID CONDUIT
- FLEXIBLE CONDUIT
- 1" GALV. CONDUIT APPLIED TO BRIDGE FOR STRUCTURE LIGHTING INSTALLED BY OTHERS (N.I.C.)
- (NC) CURB & GUTTER MOUNTED LUMINAIRE



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

NOLENSVILLE ROAD INTERCHANGE

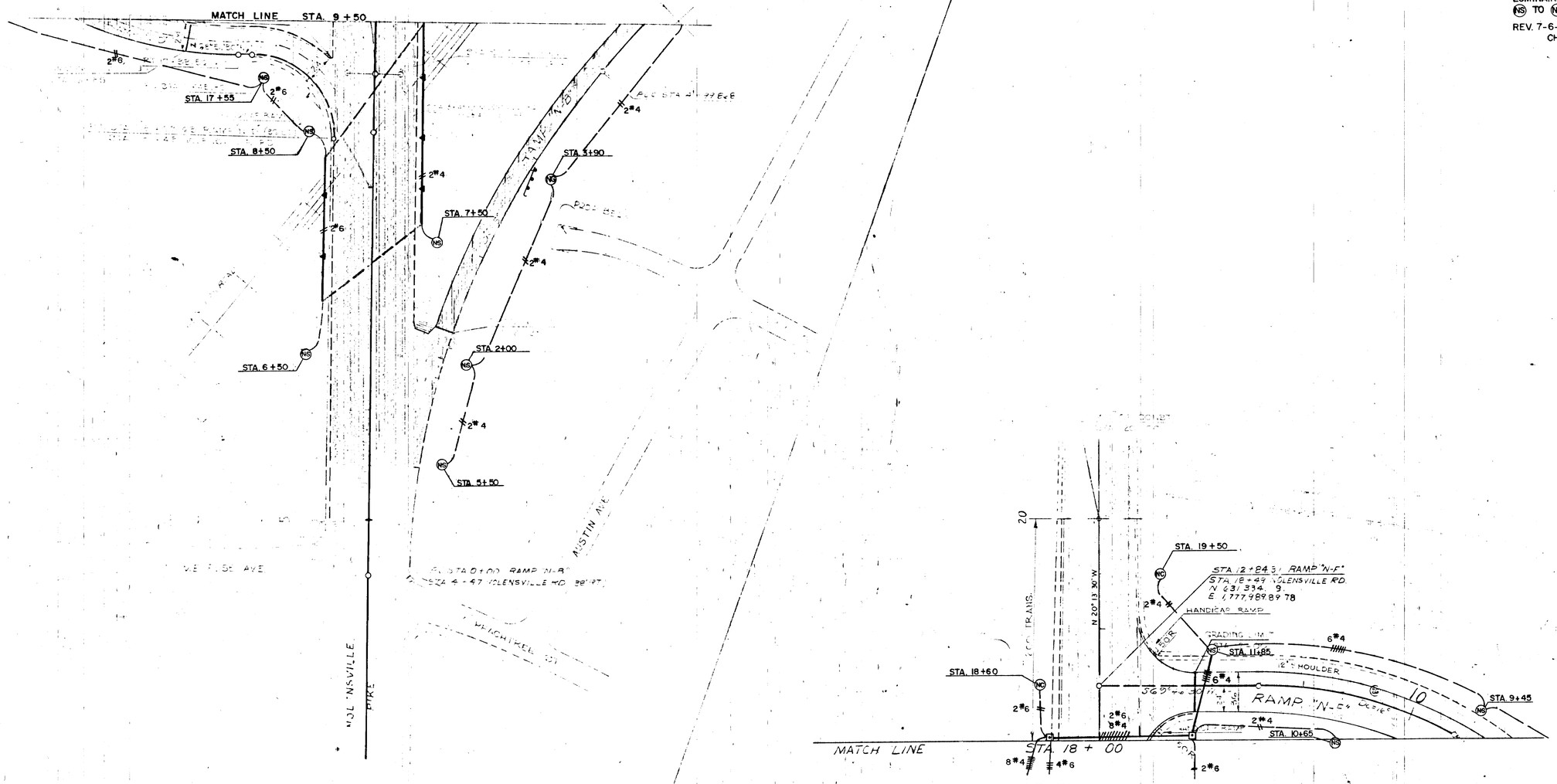
SCALE 1" = 50'

LIGHTING

PAVING 83 I-440-4(55)211 97

REV. 3-22-83 CHANGED LEGEND & LUMINAIRE AT STA. 3+90 FROM (NS) TO (NG).

REV. 7-6-83 CHANGED WIRE SIZES CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (NS) SHOULDER MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 35' MT. HT.)
- (NG) GUARDRAIL OR NOISE WALL MOUNTED LUMINAIRE (NOLENSVILLE ROAD 35' MT. HT.)
- (NB) BRIDGE PARAPET MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 250 WATT.)
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ■ CONTROL POINT
- —— RIGID CONDUIT
- — — FLEXIBLE CONDUIT
- —•—•— 1" GALV. CONDUIT INSTALLED BY OTHERS (N.I.C.)
- (NC) CURB & GUTTER MOUNTED LUMINAIRE

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

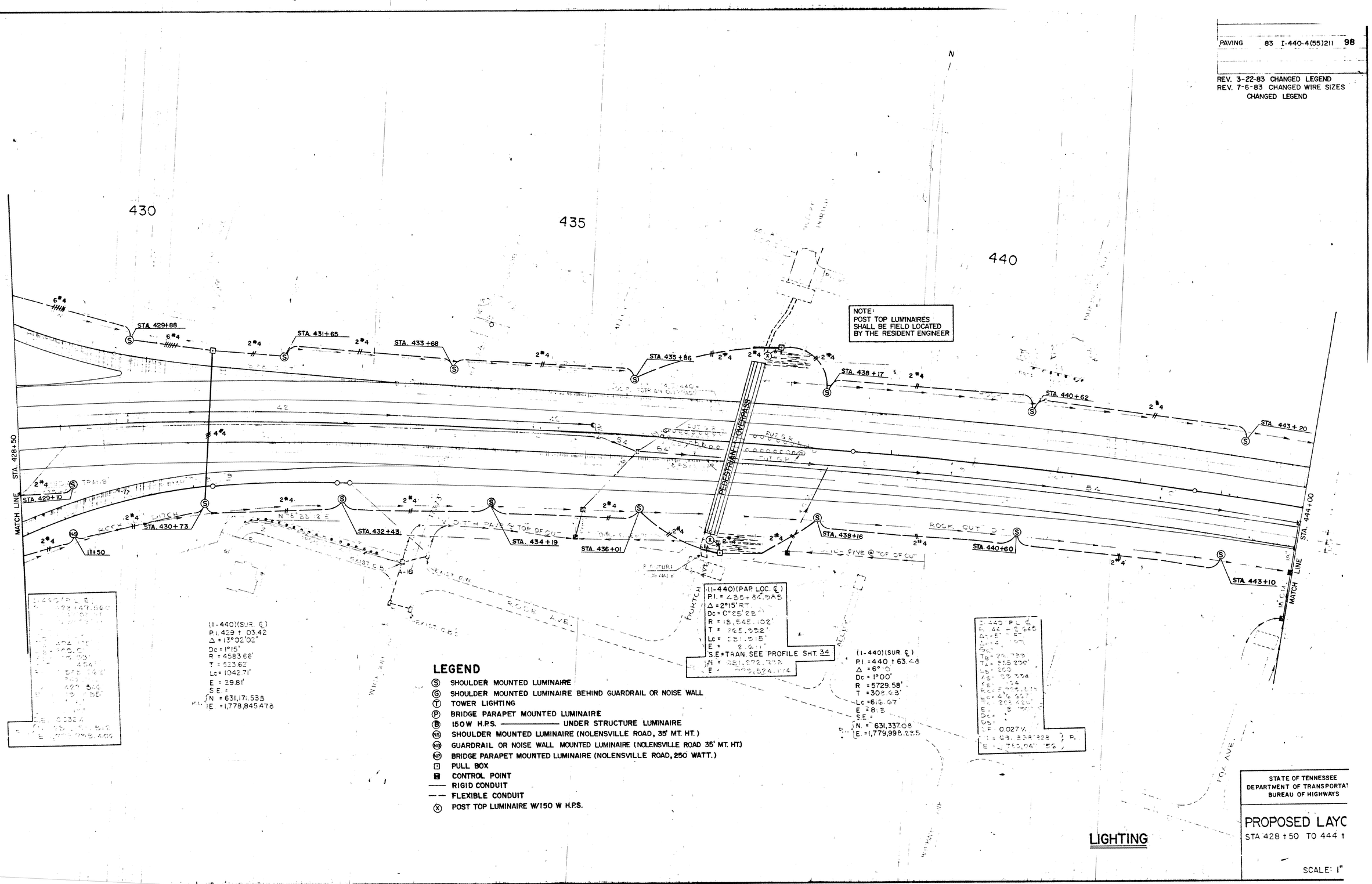
PROPOSED LAYOUT

NOLANSVILLE ROAD
INTERCHANGE

SCALE 1"=50'

PAVING 83 I-440-4(55)211 98

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES
CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (NS) SHOULDER MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 35' MT. HT.)
- (NG) GUARDRAIL OR NOISE WALL MOUNTED LUMINAIRE (NOLENSVILLE ROAD 35' MT. HT.)
- (NP) BRIDGE PARAPET MOUNTED LUMINAIRE (NOLENSVILLE ROAD, 250 WATT.)
- ⊡ PULL BOX
- ▣ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT
- (X) POST TOP LUMINAIRE W/150 W H.P.S.

LIGHTING

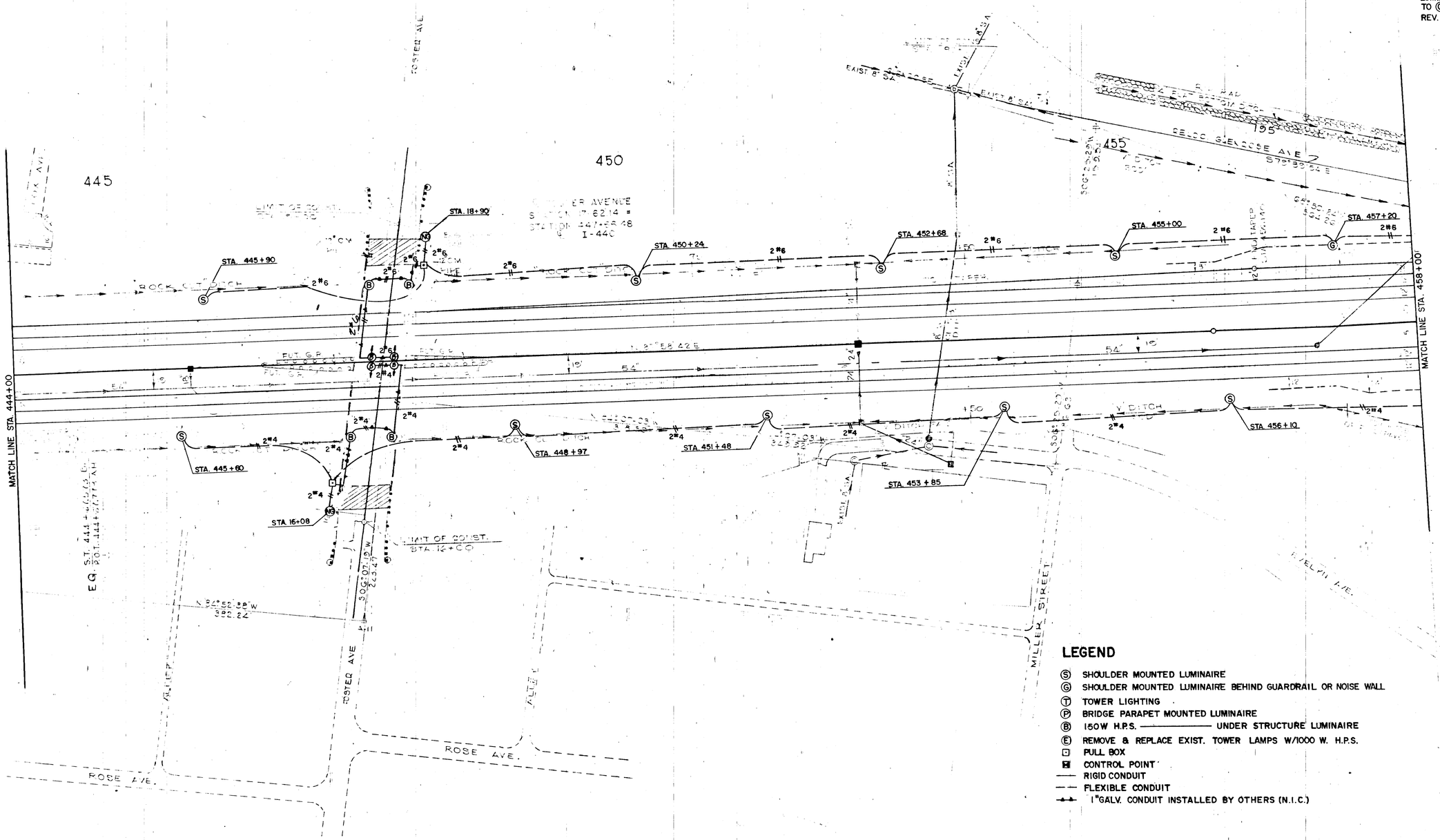
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTAT
BUREAU OF HIGHWAYS

PROPOSED LAYC
STA 428 + 50 TO 444 +

SCALE: 1"

PAVING	83	I-440-4(55)211	99

REV. 1-24-83: FIXTURE LOCATIONS CHANGED.
REV. 3-22-83 CHANGED LEGEND & LUMINAIRE AT STA. 457+20 FROM Ⓢ TO Ⓖ.
REV. 7-6-83 CHANGED WIRE SIZES CHANGED LEGEND



LEGEND

- Ⓢ SHOULDER MOUNTED LUMINAIRE
- Ⓖ SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- Ⓣ TOWER LIGHTING
- Ⓟ BRIDGE PARAPET MOUNTED LUMINAIRE
- Ⓑ 150W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- Ⓔ REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ■ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT
- —▲— 1" GALV. CONDUIT INSTALLED BY OTHERS (N.I.C.)

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 444+00 TO 458+00

SCALE 1"=50'

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	83	I-440-4(55)211	100

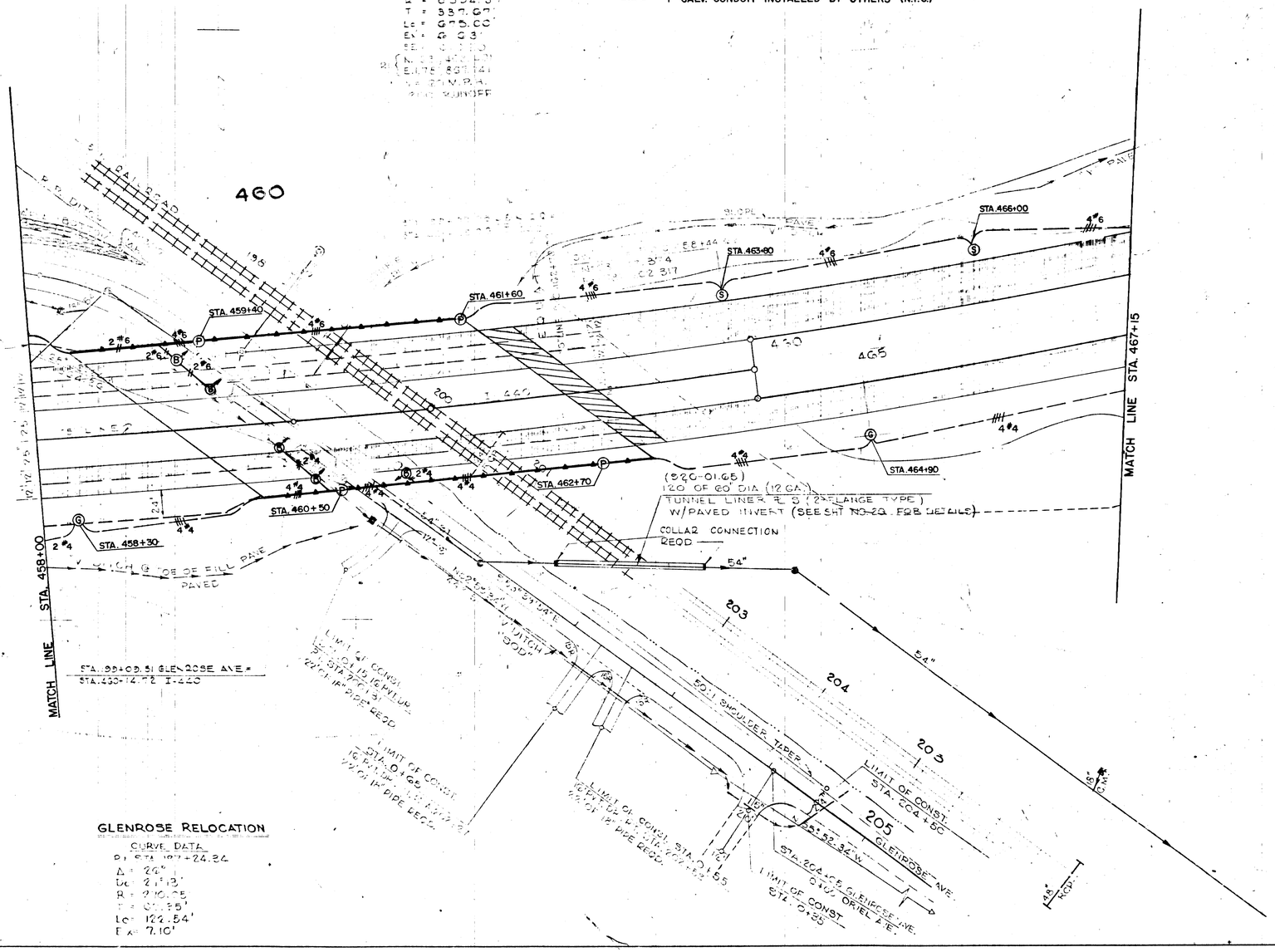
REV. 1-24-83: FIXTURE LOCATIONS CHANGED.

REV. 3-22-83 CHANGED LEGEND & LUMINAIRE AT STA. 458+30 FROM Ⓢ TO Ⓖ.

REV. 7-6-83 CHANGED WIRE SIZES CHANGED LEGEND

LEGEND

- Ⓢ SHOULDER MOUNTED LUMINAIRE
- Ⓖ SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- Ⓣ TOWER LIGHTING
- Ⓟ BRIDGE PARAPET MOUNTED LUMINAIRE
- Ⓑ 150W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- Ⓔ REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ⊠ CONTROL POINT
- —— RIGID CONDUIT
- — — FLEXIBLE CONDUIT
- —•—•— 1" GALV. CONDUIT INSTALLED BY OTHERS (N.I.C.)



"SW" LINE
P.I. = 462+25.31
Δ = 10°35'22.85"
Dc = 1°23'41.47"
R = 4,107.66'
T = 380.69'
Lc = 759.20'
Ex = 17.60'

"SW" LINE
P.I. = 470+10.674
Δ = 10°05'19.31"
Dc = 01°19'09.696"
L = 794.77'
T = 398.45'
R = 4,513.75'
E = 17.55'

"SN" LINE
P.I. = 466+51.46
Δ = 5°03'56.68"
Dc = 0°39'57.77"
R = 8,602.37'
T = 380.53'
Lc = 760.57'
Ex = 8.41'

GLENROSE RELOCATION

CURVE DATA
P.I. STA. 100+24.24
Δ = 22°
Dc = 2°13'
R = 2,580.25'
T = 501.75'
Lc = 1,122.54'
Ex = 7.10'

LIGHTING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

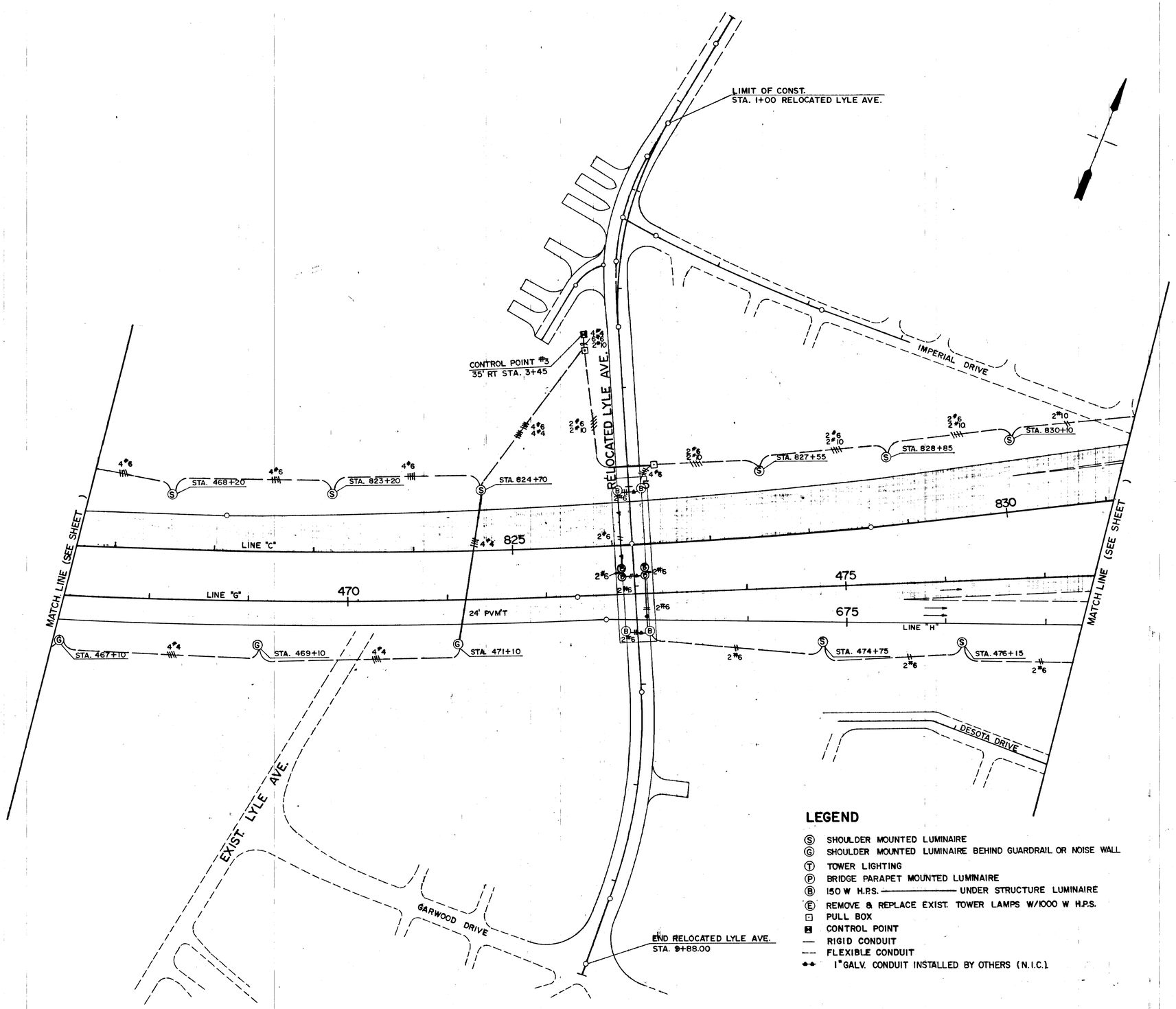
STA. 458+00 TO LYLE AVE.

SCALE 1" = 50

TENN. STATE HIGHWAYS
Plans Div. File No. IN-332

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	101

REV. 1-24-83: FIXTURE LOCATION CHANGED.
REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES
CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W H.P.S.
- ⊡ PULL BOX
- ▣ CONTROL POINT
- — RIGID CONDUIT
- - - FLEXIBLE CONDUIT
- ◆◆ 1" GALV. CONDUIT INSTALLED BY OTHERS (N.I.C.)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

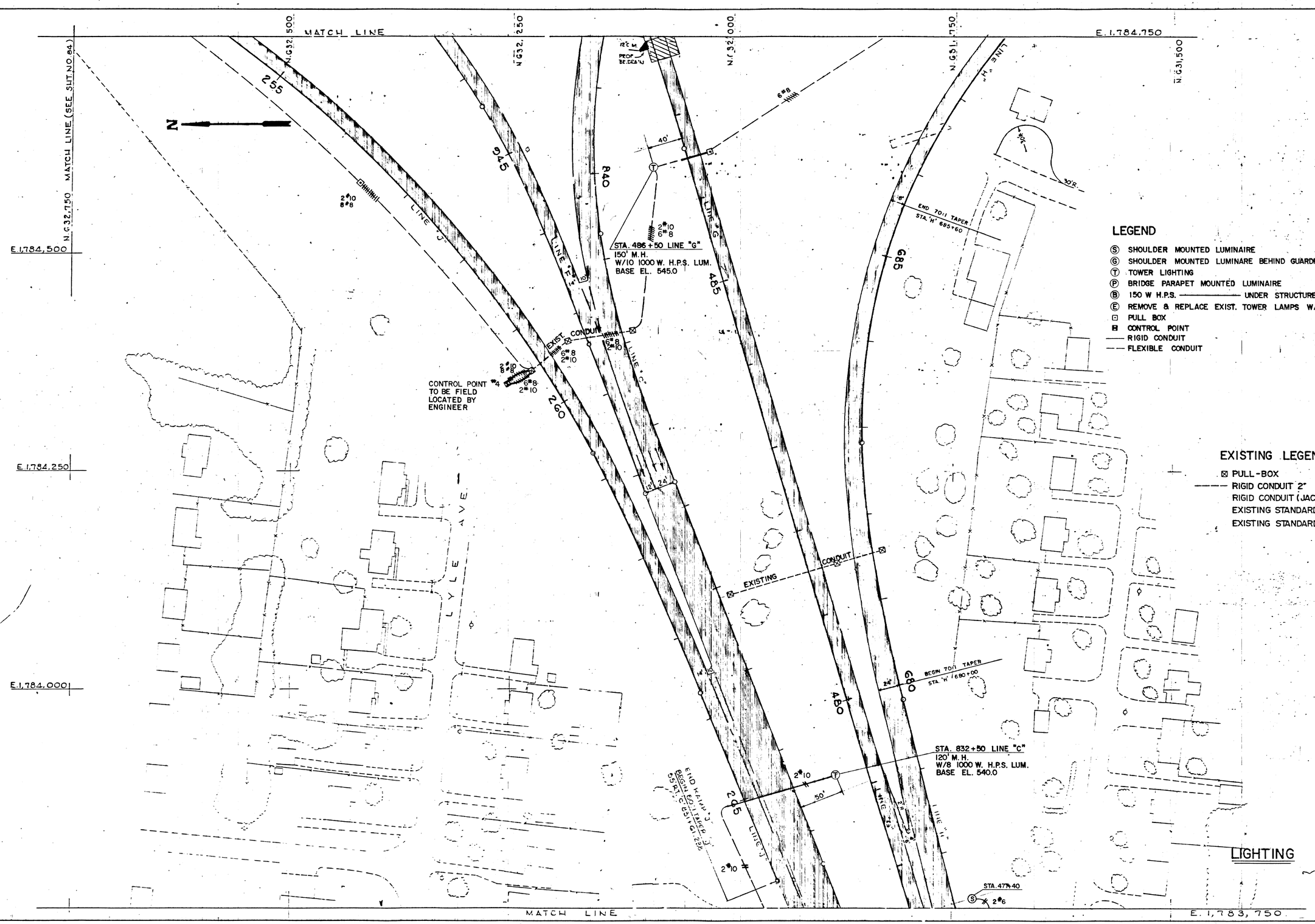
PROPOSED LAYOUT

CO-ORDINATES
E 1,783,750 TO E 1,782,500
SCALE 1"=50'

TELEPHONE POST N1805A

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING		I-440-4(55)211	102

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES, CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINARE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W. H.P.S.
- ⊡ PULL BOX
- ⊠ CONTROL POINT
- —— RIGID CONDUIT
- - - FLEXIBLE CONDUIT

EXISTING LEGEND

- ⊠ PULL-BOX
- ——— RIGID CONDUIT 2"
- RIGID CONDUIT (JACKED OR BORED) - 2"
- EXISTING STANDARD AND FIXTURE (TO REMAIN IN-PLACE)
- EXISTING STANDARD AND FIXTURE (TO BE REMOVED)

NOTE

COORDINATES SHOWN ARE FOR TENN. D.O.T. TO CONVERT TO TENN. RECTANGULAR GRID DIVIDE BY 1.00006.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

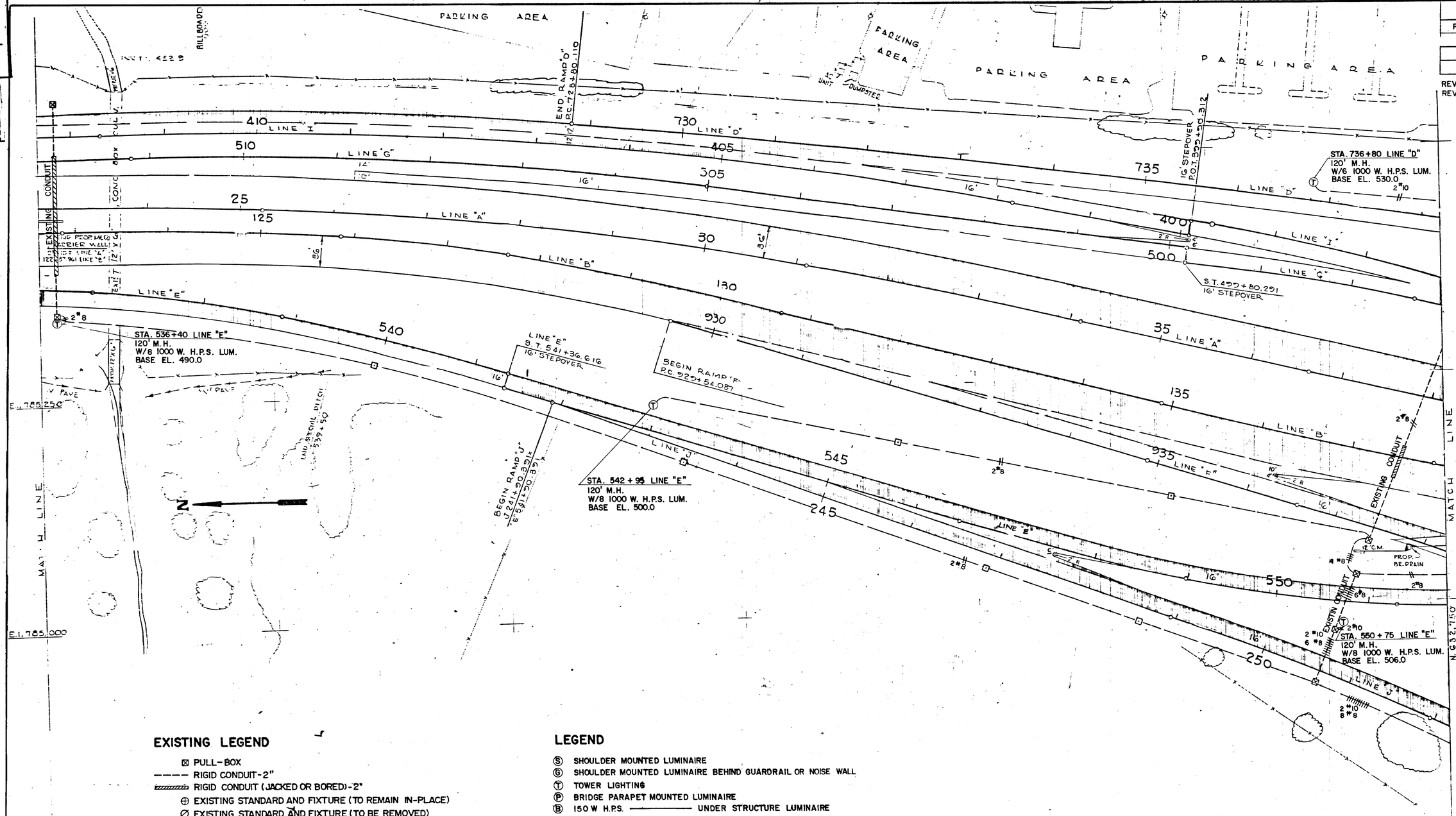
CO-ORDINATES
E. 1,784,750 TO E. 1,783,750

SCALE: 1" = 50'

LIGHTING

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	D-440-4(55)211	103

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES
CHANGED LEGEND



EXISTING LEGEND

- ⊠ PULL-BOX
- ----- RIGID CONDUIT-2"
- ▨ RIGID CONDUIT (JACKED OR BORED)-2"
- ⊕ EXISTING STANDARD AND FIXTURE (TO REMAIN IN-PLACE)
- ∅ EXISTING STANDARD AND FIXTURE (TO BE REMOVED)

LEGEND

- Ⓢ SHOULDER MOUNTED LUMINAIRE
- Ⓖ SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- Ⓣ TOWER LIGHTING
- Ⓟ BRIDGE PARAPET MOUNTED LUMINAIRE
- Ⓑ 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- Ⓔ REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W H.P.S.
- ⊡ PULL BOX
- ■ CONTROL POINT
- — RIGID CONDUIT
- — FLEXIBLE CONDUIT

NOTE

COORDINATES SHOWN ARE FOR TENN. D.O.T. TO CONVERT TO TENN. RECTANGULAR GRID DIVIDE BY 1.00006.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING

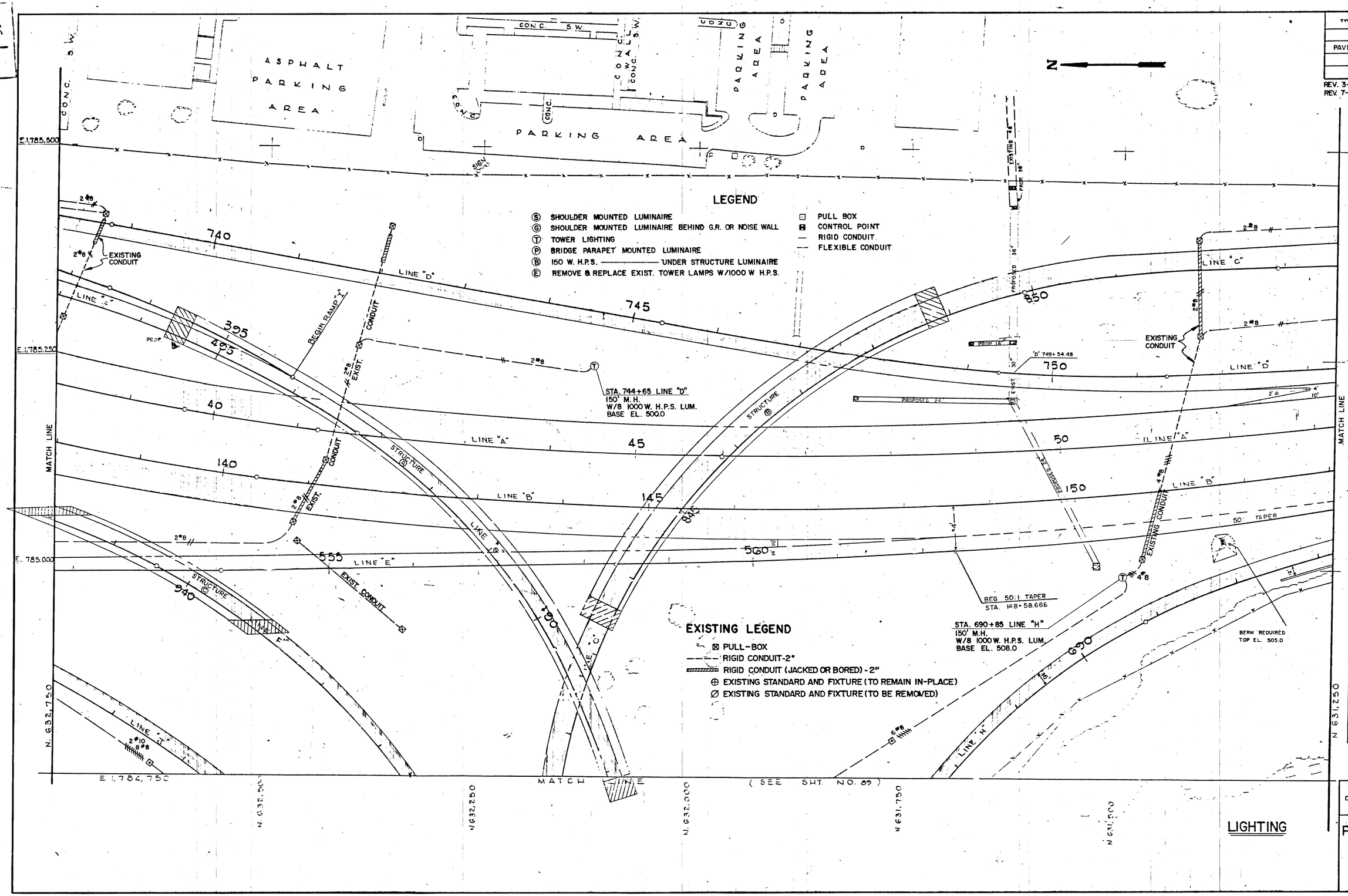
PROPOSED LAYOUT

CO-ORDINATES
N. 634,250 TO N. 632,750

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	104

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED WIRE SIZES
CHANGED LEGEND



NOTE
COORDINATES SHOWN ARE FOR TENN. D.O.T. TO CONVERT TO TENN. RECTANGULAR GRID DIVIDE BY 1.00000G

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

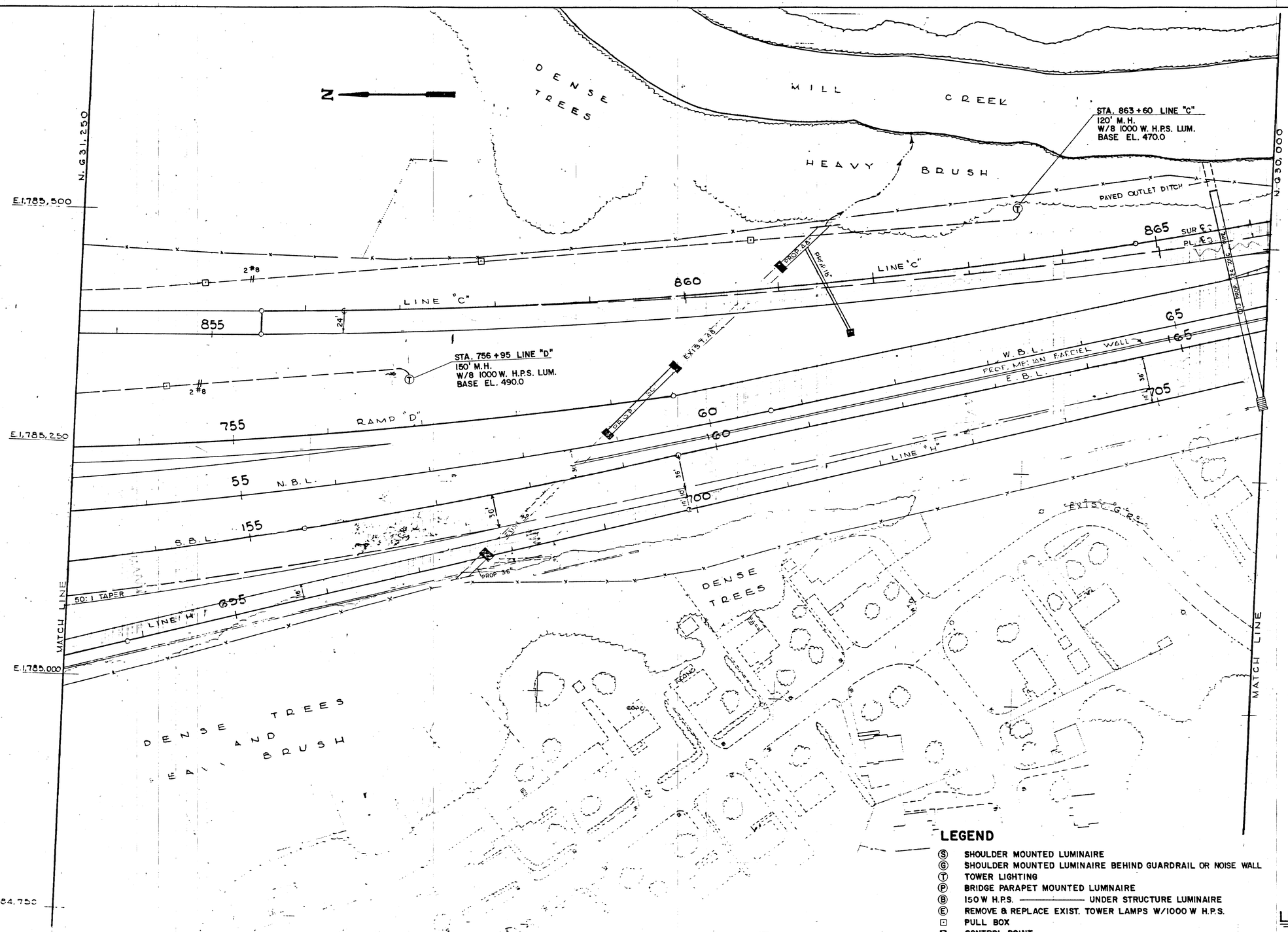
LIGHTING

PROPOSED LAYOUT
CO-ORDINATES
N.632,750 TO N. 631,250

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	83	I-440-4(55)211	105

REV. 3-22-83 CHANGED LEGEND
REV. 7-6-83 CHANGED LEGEND



LEGEND

- (S) SHOULDER MOUNTED LUMINAIRE
- (G) SHOULDER MOUNTED LUMINAIRE BEHIND GUARDRAIL OR NOISE WALL
- (T) TOWER LIGHTING
- (P) BRIDGE PARAPET MOUNTED LUMINAIRE
- (B) 150 W H.P.S. ———— UNDER STRUCTURE LUMINAIRE
- (E) REMOVE & REPLACE EXIST. TOWER LAMPS W/1000 W H.P.S.
- ⊡ PULL BOX
- ■ CONTROL POINT
- —— RIGID CONDUIT
- – – FLEXIBLE CONDUIT

LIGHTING

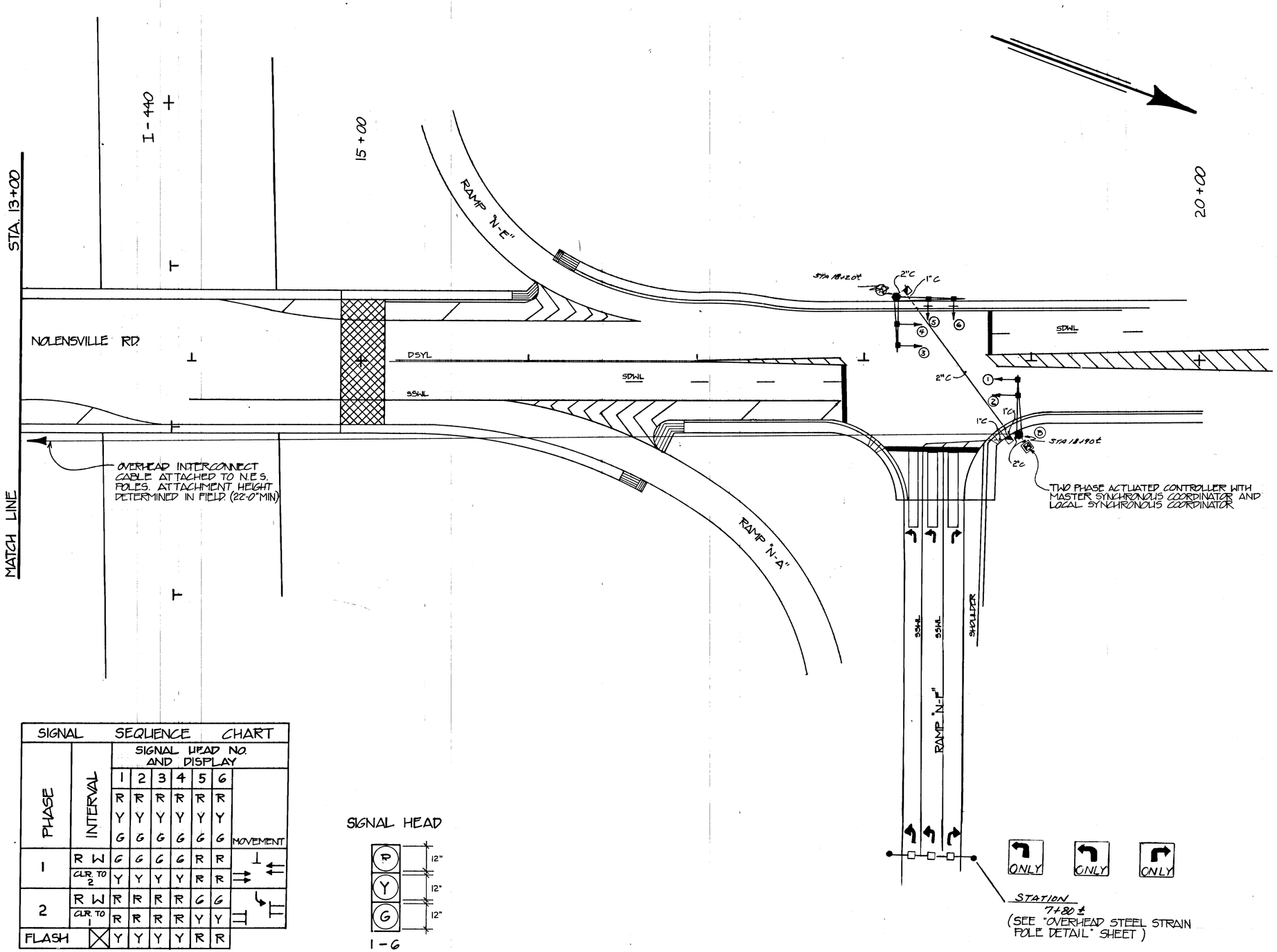
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

CO-ORDINATES
N.631,250 TO N.630,000

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	106



SIGNAL SEQUENCE CHART

PHASE	INTERVAL	SIGNAL HEAD NO. AND DISPLAY 1	2	3	4	5	6	MOVEMENT
		R	R	R	R	R	R	
		Y	Y	Y	Y	Y	Y	
		G	G	G	G	G	G	
1	R W	G	G	G	G	R	R	⊥ ⇇
	CLR. TO 2	Y	Y	Y	Y	R	R	⇉
2	R W	R	R	R	R	G	G	↳ ⊥
	CLR. TO 1	R	R	R	R	Y	Y	⊣
FLASH	☒	Y	Y	Y	Y	R	R	

SIGNAL HEAD

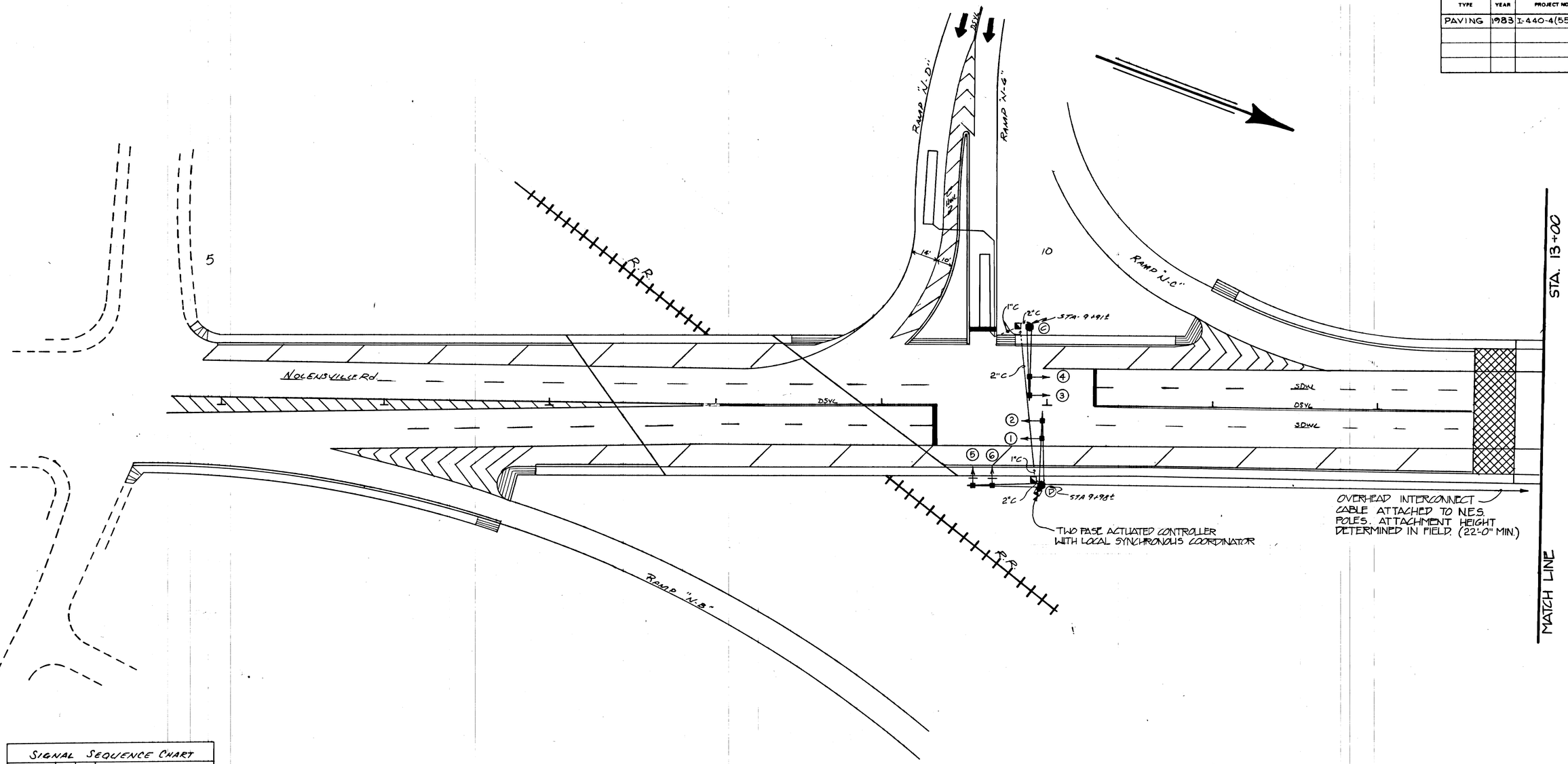
1-6

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

I-440 W.B. OFF RAMP WITH NOLENSVILLE RD.

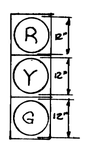
SCALE: 1" = 30'-0"

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	107



SIGNAL SEQUENCE CHART

PHASE		REFERENCE	INTERVAL	SIGNAL HEAD No. AND DISPLAY 1	2	3	4	5	6	MOVEMENT
				R	R	R	R	R	R	
				Y	Y	Y	Y	Y	Y	
				G	G	G	G	G	G	
1		1	R/W	G	G	G	G	R	R	⊥ ⇇
	CLR.	2	2	Y	Y	Y	Y	R	R	⇉
2		3	R/W	R	R	R	R	G	G	↓ ⊨
	CLR.	4	1	R	R	R	R	Y	Y	⊥
FLASH		5	Y	Y	Y	Y	Y	R	R	



1-6

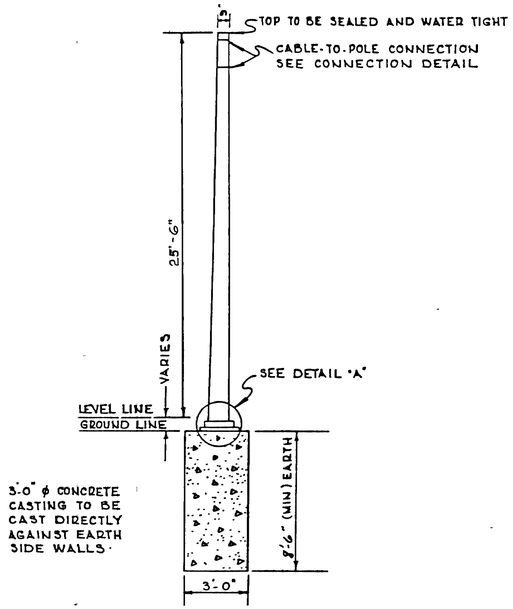
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

I-440 E.B. off RAMP WITH Nolensville Rd.

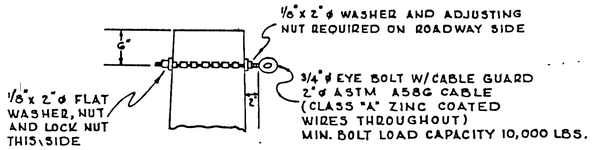
1"=30'

TENN. STATE HIGHWAYS
Plans File No. IN-332
Plans Dist.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	108



STRAIN POLE DETAILS

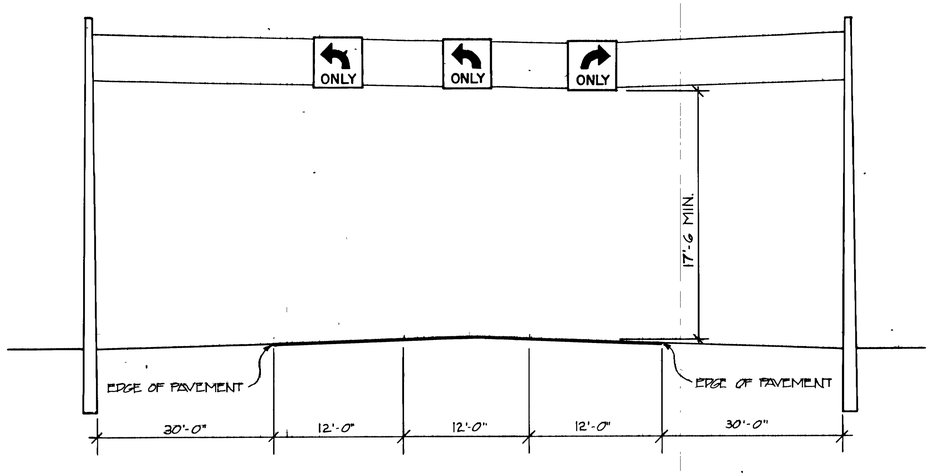


CONNECTION DETAIL

ALL HARDWARE TO BE GALVANIZED ACCORDING TO ASTM DESIGNATION A153

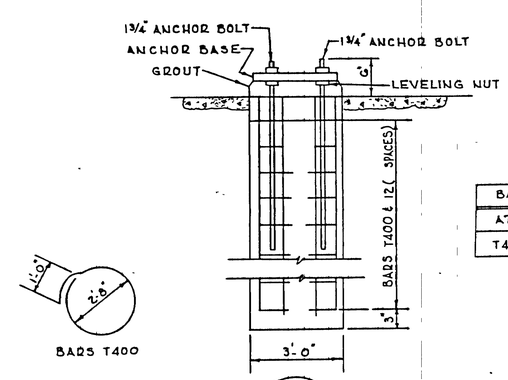
GENERAL NOTES

1. ANCHOR BOLTS SHALL BE 1 3/4" DIAMETER AND SHALL BE THREADED AND GALVANIZED AT THE TOP END FOR A LENGTH OF 8". EACH ANCHOR BOLT SHALL HAVE AN OVERALL LENGTH CAPABLE OF RESISTING THE FULL BENDING MOMENT OF THE SHAFT AT ITS YIELD STRENGTH STRESS.
2. ALL STEEL STRAIN POLES SHALL CONFORM TO THE SPECIAL PROVISION REGARDING TRAFFIC SIGNALS. THE CONTRACTOR SHALL FURNISH POLES DESIGNED FOR A WIND VELOCITY OF 70 M.P.H. STRAIN POLES SHALL BE DESIGNED ACCORDING TO A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND SIGNALS (1975 EDITION).
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND NOTES TO THE ENGINEER OF STRUCTURES FOR APPROVAL PRIOR TO FABRICATION.
4. STRAIN POLES FURNISHED SHALL HAVE A MOMENT CAPACITY OF 99,500 FT. LBS.



ESTIMATED QUANTITIES PER FOOTING

CON CLASS "A"	21 Cu Yd.
REINFORCING	155 lbs.



DETAIL "A"

BILL OF STEEL

BAR	SIZE	NO.	LENGTH
A700	#7	6	8'-0"
T400	#4	9	9'-5"

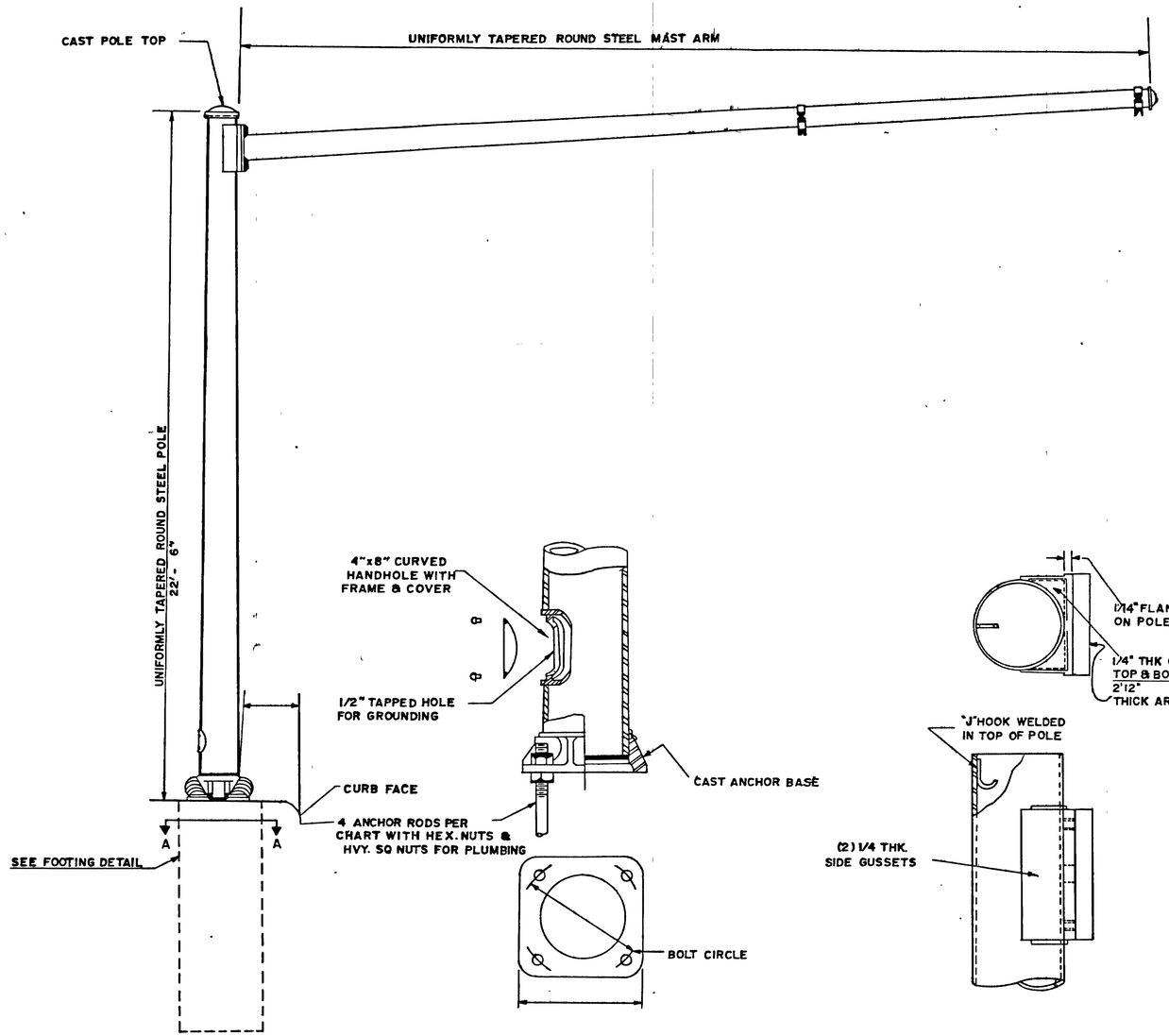
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

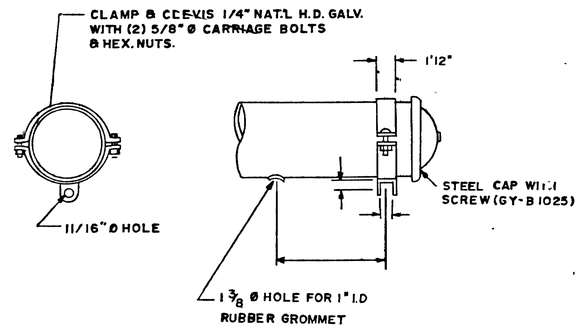
OVERHEAD STEEL STRAIN POLE DETAILS

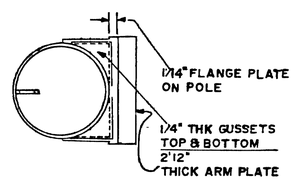
STA. 7+80 ±

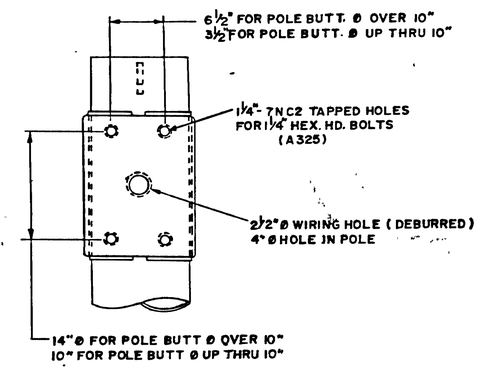
BRUNING 28411

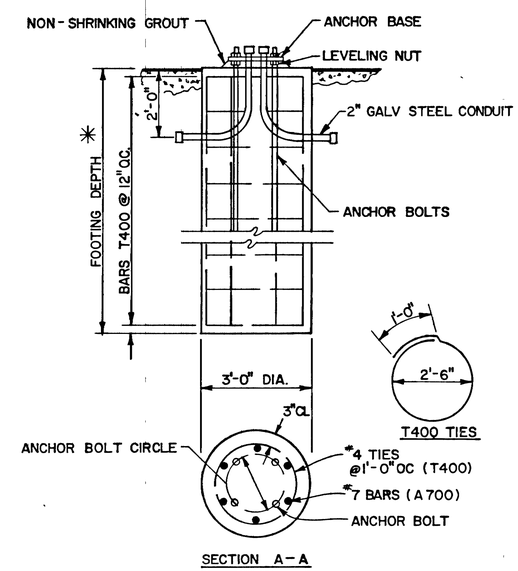
TYPE	YEAR	PROJECT NO.	SHEET NO
PAVING	1983	I-440-4(55)211	109











FOOTING DETAIL

		POLE "A"		POLE "B"		POLE "C"		POLE "D"	
BARS	SIZE	NO	LGTH	NO.	LGTH	NO	LGTH.	NO	LGTH.
A 700	7	6	10'-0"	6	8'-0"	6	8'-0"	6	14'-0"
T400	4	11	9'-4"	9	9'-4"	9	9'-4"	15	9'-4"
* FOOTING DEPTH		10'-6"		8'-6"		8'-6"		14'-6"	
CONC. CLASS "A"		2.8 cu. yd.		2.3 cu. yd.		2.3 cu yd.		4.0 cu yd.	
REINF. STEEL		192 lbs		155 lbs		155 lbs		266 lbs	

POLE	MAST ARM LENGTH
A	30' & 40'
B	35'
C	45'
D	45' & 45'

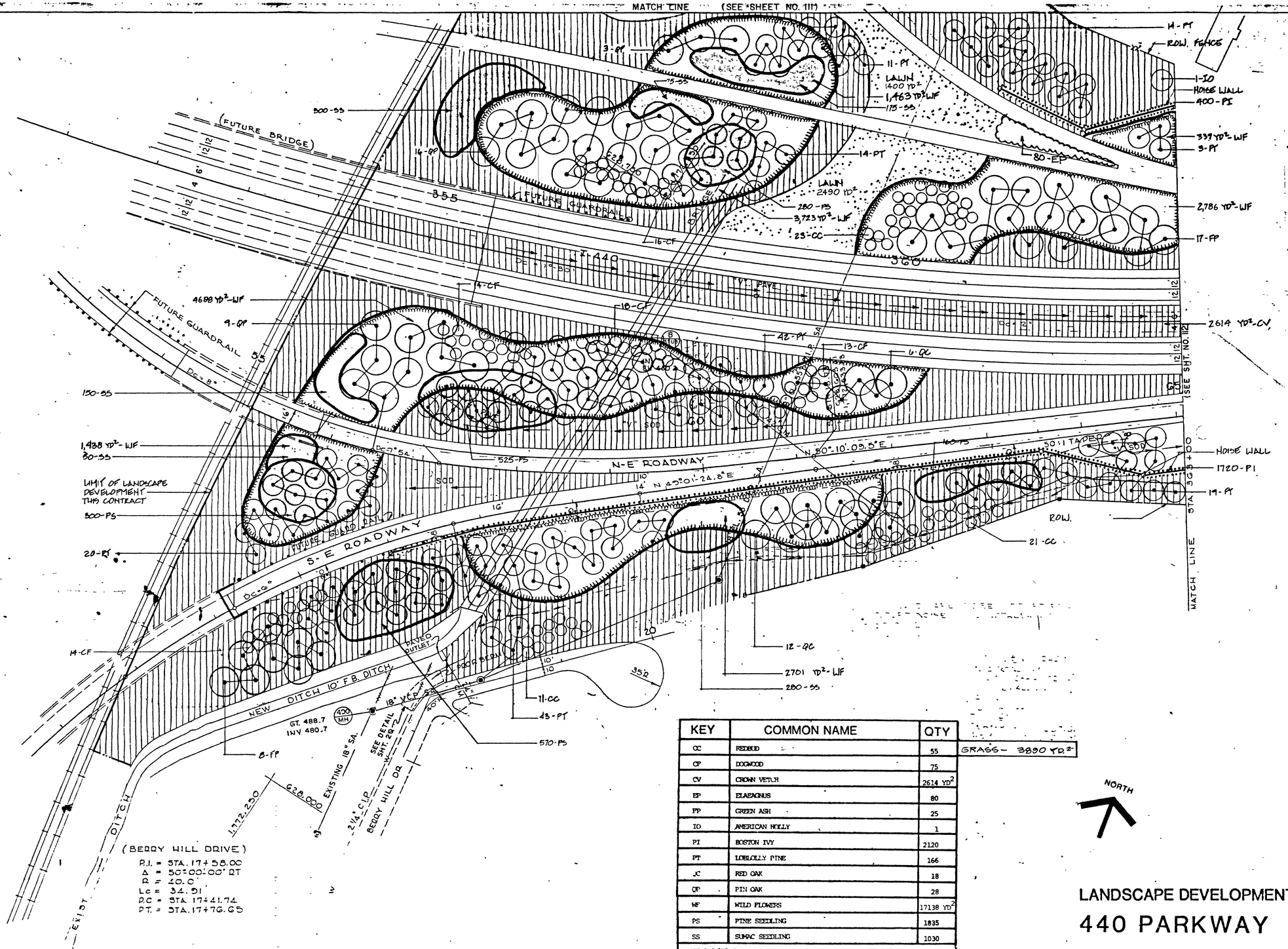
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DETAILS OF CANTILEVER SIGNAL SUPPORT

NO SCALE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	110

REV 11-27-84 ADDED GRASS



LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN

KEY	COMMON NAME	QTY
CC	REDBUD	55
CF	DOGWOOD	75
CV	CROWN VETCH	2614 YD²
EP	ELAEAGNUS	80
FP	GREEN ASH	25
IO	AMERICAN HOLLY	1
PI	BOSTON IVY	2120
PT	LOBLOLLY PINE	166
QC	RED OAK	18
QP	PIN OAK	28
WF	WILD FLOWERS	17138 YD²
PS	PINE SEEDLING	1835
SS	SUMAC SEEDLING	1030

GRASS - 3890 YD²

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

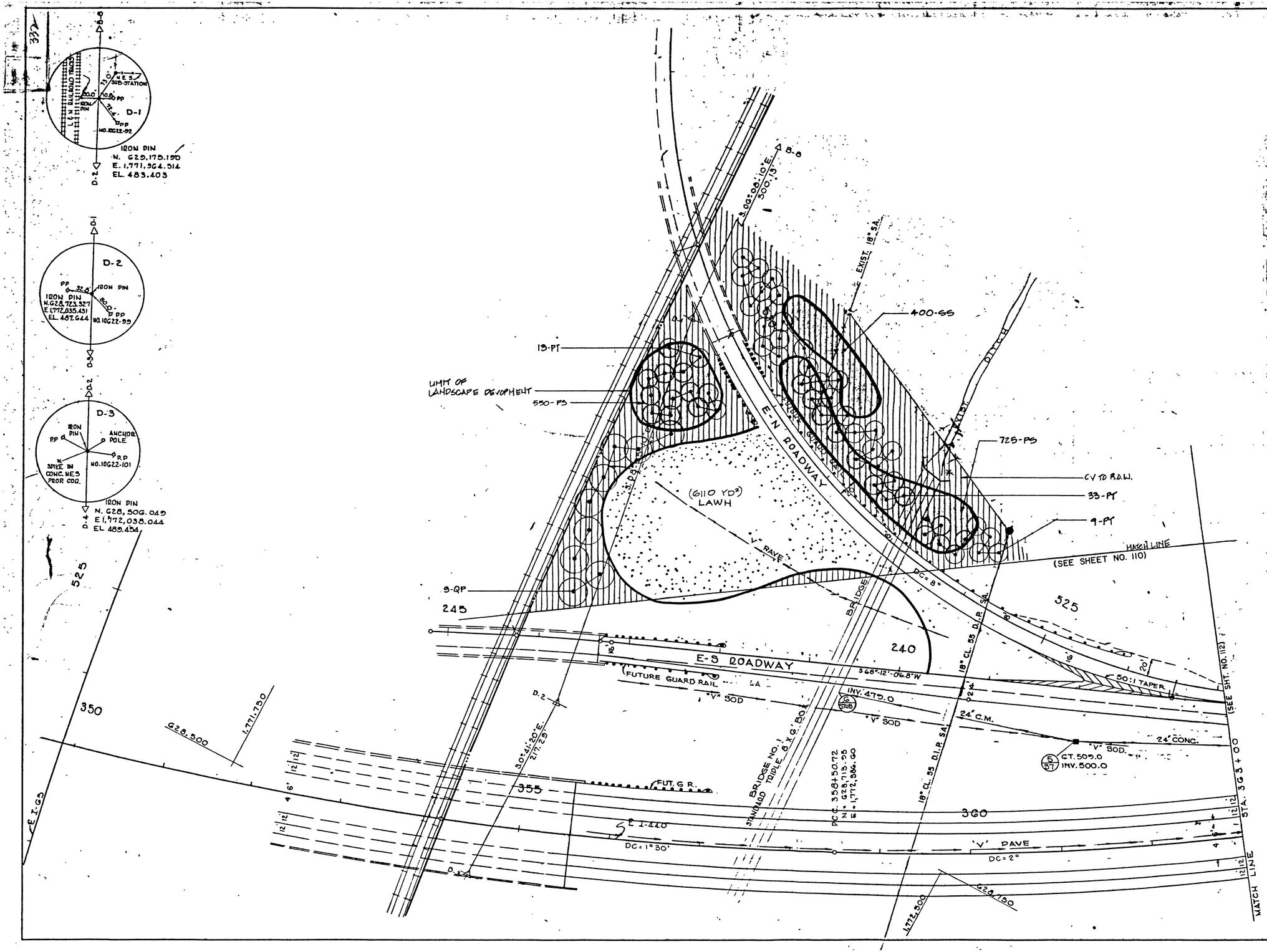
STA 352+00 TO 363+00

SCALE 1" = 50'

DT 1390M

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)21	110

REV 11-27-84 ADDED GRASS.



LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN

KEY	COMMON NAME	QTY
PT	LOBLOLLY	55
QP	PIN OAK	9
PS	PINE SEEDLING	1275
SS	SUMAC SEEDLING	400
	GRASS LAWN	6110 YD²

SEE SHEET 20 OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

2

NORTH

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA. 352+00 TO 3G3+00

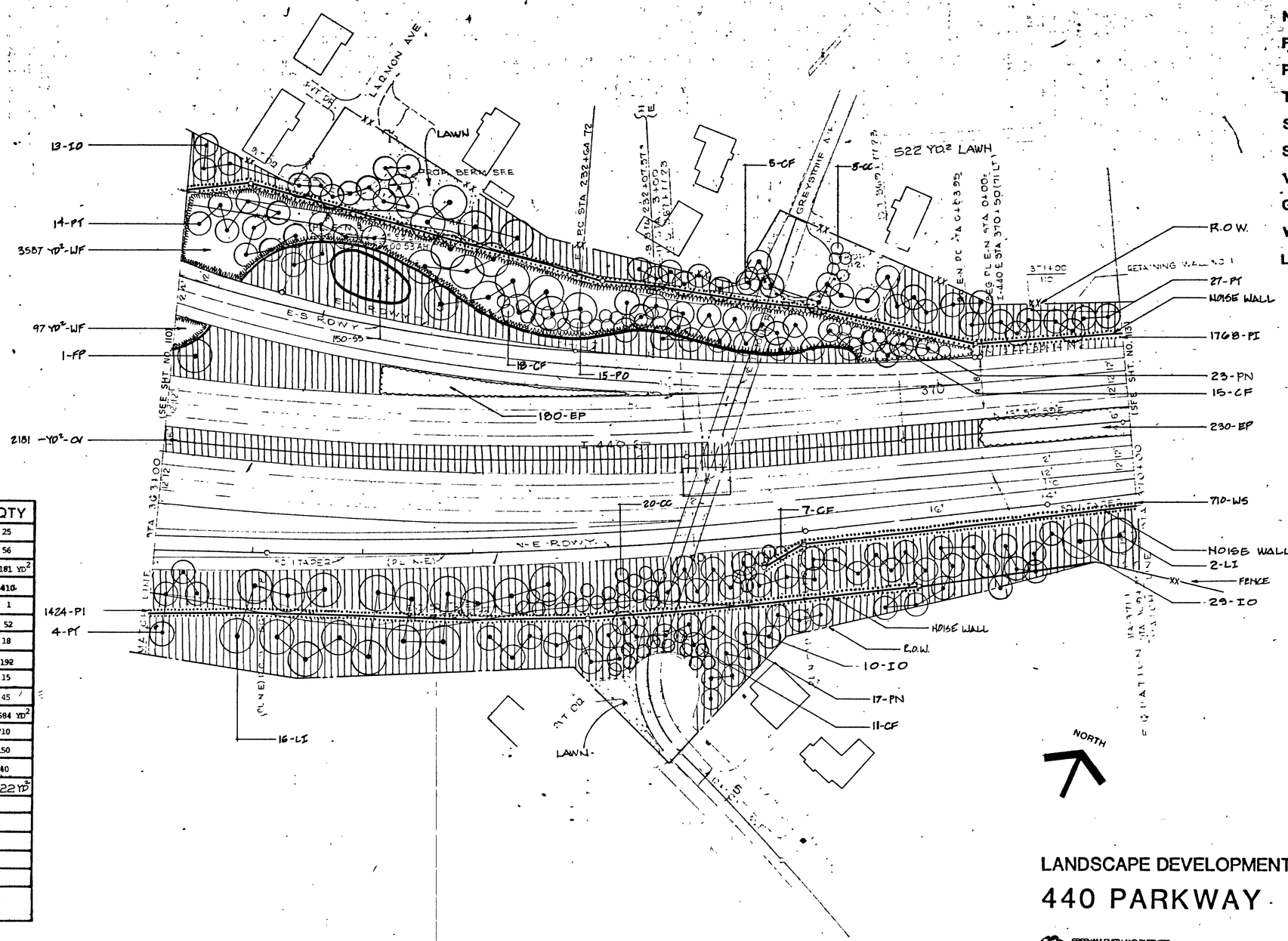
SCALE 1" = 50'

PAVING	1983	I-440-4(55)211	112

REV. 11-27-84 ADDED GRASS.

LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN



KEY	COMMON NAME	QTY
CC	REDBUD	25
CF	DOGWOOD	56
CV	CROWN VETCH	2181 YD²
EP	ELAEAGNUS	410
FP	GREEN ASH	1
IO	AMERICAN HOLLY	52
LI	SWEET GUM	18
PI	BOSTON IVY	3192
PO	PLANE TREE	15
PT	LOBLOLLY PINE	45
WF	WILD FLOWERS	3684 YD²
WS	WISTERIA	710
SS	SUMAC SEEDLING	150
PN	AUSTRIAN PINE	40
	GRASS LAWN	522 YD²

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

3

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

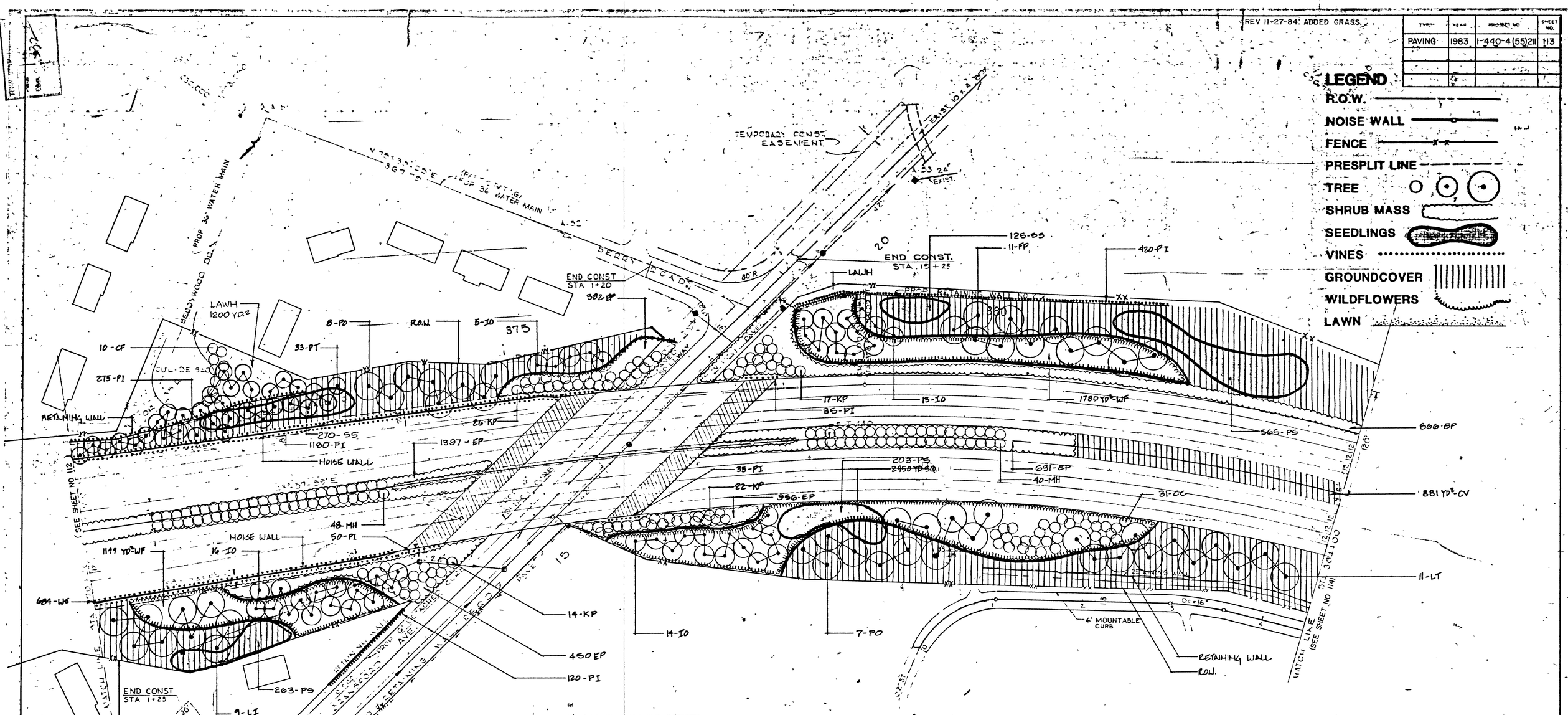
PROPOSED LAYOUT

STA 363+00 TO 370+00

SCALE 1"=50'

REV 11-27-84: ADDED GRASS

TYPE	YEAR	PROJECT NO	SHEET NO.
PAVING	1983	I-440-4(55)211	113



KEY	COMMON NAME	QTY
CC	REDBUD	31
CF	DOGWOOD	10
CV	CROWN VETCH	881 YD²
EP	ELAEAGNUS	4742
FP	GREEN ASH	11
IO	AMERICAN HOLLY	48
KP	GOLDEN RAIN	79
LI	SWEET GUM	9
LT	TULIP POPLAR	11
MH	CRABAPPLE	88

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

KEY	COMMON NAME	QTY
PI	BOSTON IVY	2115
PO	PLANE TREE	15
PT	LOBLOLLY PINE	33
WF	WILD FLOWERS	5879 YD²
WS	WISTERIA	684
PS	PINE SEEDLING	1031
SS	SUMAC SEEDLING	395
	GRASS LAWH	1200 YD²

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville, Tennessee 37203

PROPOSED LAYOUT

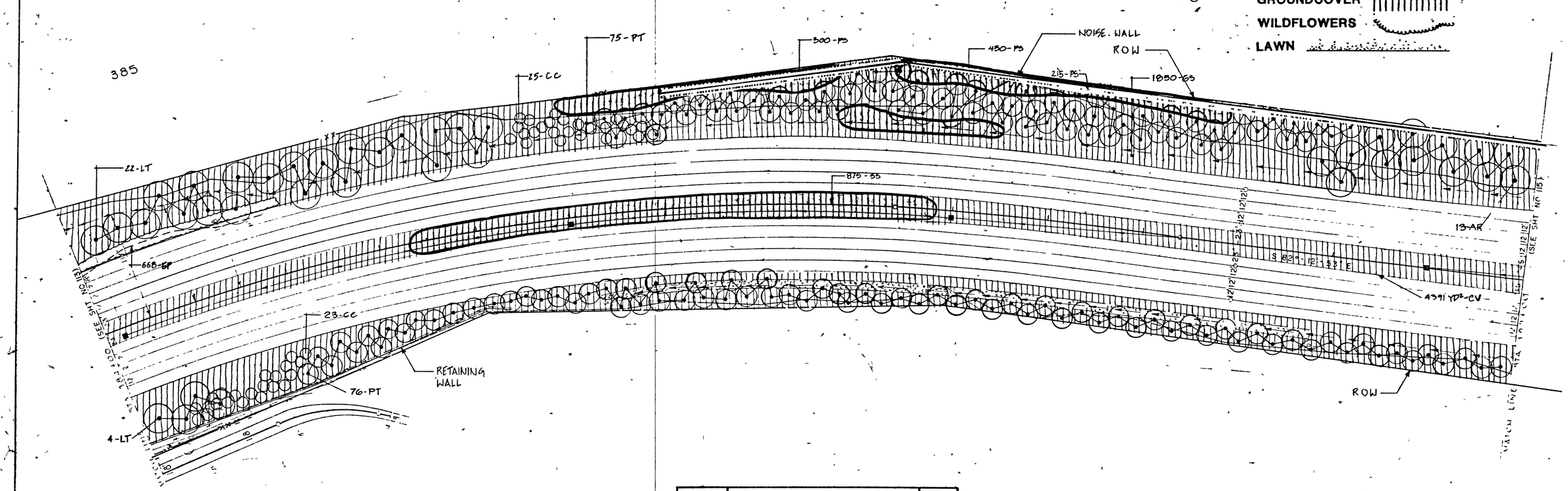
STA 370+00 TO 384+00

SCALE 1" = 50'

PAVING	1983	I-440-4(55)211	114

LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN



KEY	COMMON NAME	QTY
AR	SUGAR MAPLE	13
CC	REDBUD	48
CV	CROWN VETCH	4391 YD^2
EP	ELAEAGNUS	668
GS	CAROLINA JESSAMINE	1850
LT	TULIP POPLAR	26
PT	LOBLOLLY PINE	151
PS	PINE SEEDLING	965
SS	SUMAC SEEDLING	875

SEE "SHEET 20" OF DRAWINGS FOR "CUMULATIVE" TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NORTH

5

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

PROPOSED LAYOUT

STA 384+00 TO 399+00

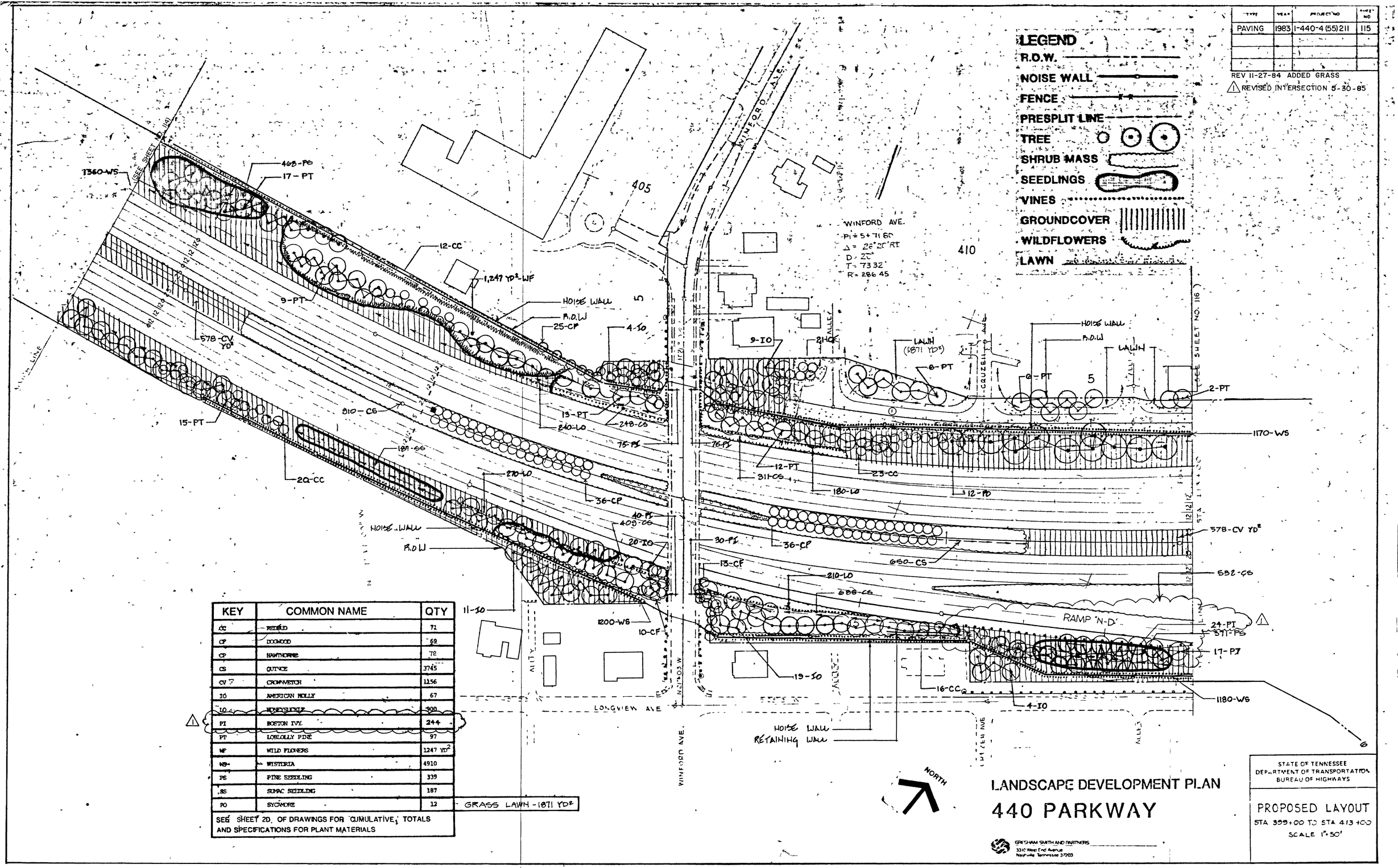
SCALE 1" = 50'

BRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville, Tennessee 37203

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	115

REV 11-27-84 ADDED GRASS

1 REVISED INTERSECTION 5-30-85



KEY	COMMON NAME	QTY
CC	REDBUD	71
CF	DOGWOOD	69
CP	HAWTHORNE	78
CS	QUINCE	3745
CV	CROWNVETCH	1156
IO	AMERICAN HOLLY	67
LO	HONEYSUCKLE	900
PI	BOSTON IVY	244
PT	LOBLOLLY PINE	97
WF	WILD FLOWERS	1247 YD²
WS	WISTERIA	4910
PS	PINE SEEDLING	339
SS	SUMAC SEEDLING	187
PO	SYCAMORE	12

SEE SHEET 2D. OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

GRASS LAWN - 1871 YD²

LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT
STA 399+00 TO STA 413+00
SCALE 1"=50'

KEY	COMMON NAME	QTY
AR	RED MAPLE	25
CC	REDBUD	164
CF	DOGWOOD	189
CV	CROWN VETCH	1322 YD²
FT	FORSYTHIA	9412'
FP	GREEN ASH	39
IO	AMERICAN HOLLY	33
KP	GOLDEN RAIN	112
MH	CRABAPPLE	129
PI	BOSTON IVY	1157

SEE SHEET 20 OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

KEY	COMMON NAME	QTY
PO	PLANE TREE	5
PT	LOBLOLLY PINE	224
QP	PIN OAK	67
WF	WILD FLOWERS	16,373 YD²
WS	WISTERIA	3910'
	GRASS LAWN	14,855
PS	PINE SEEDLINGS	898
SS	SUMMAC SEEDLINGS	2725

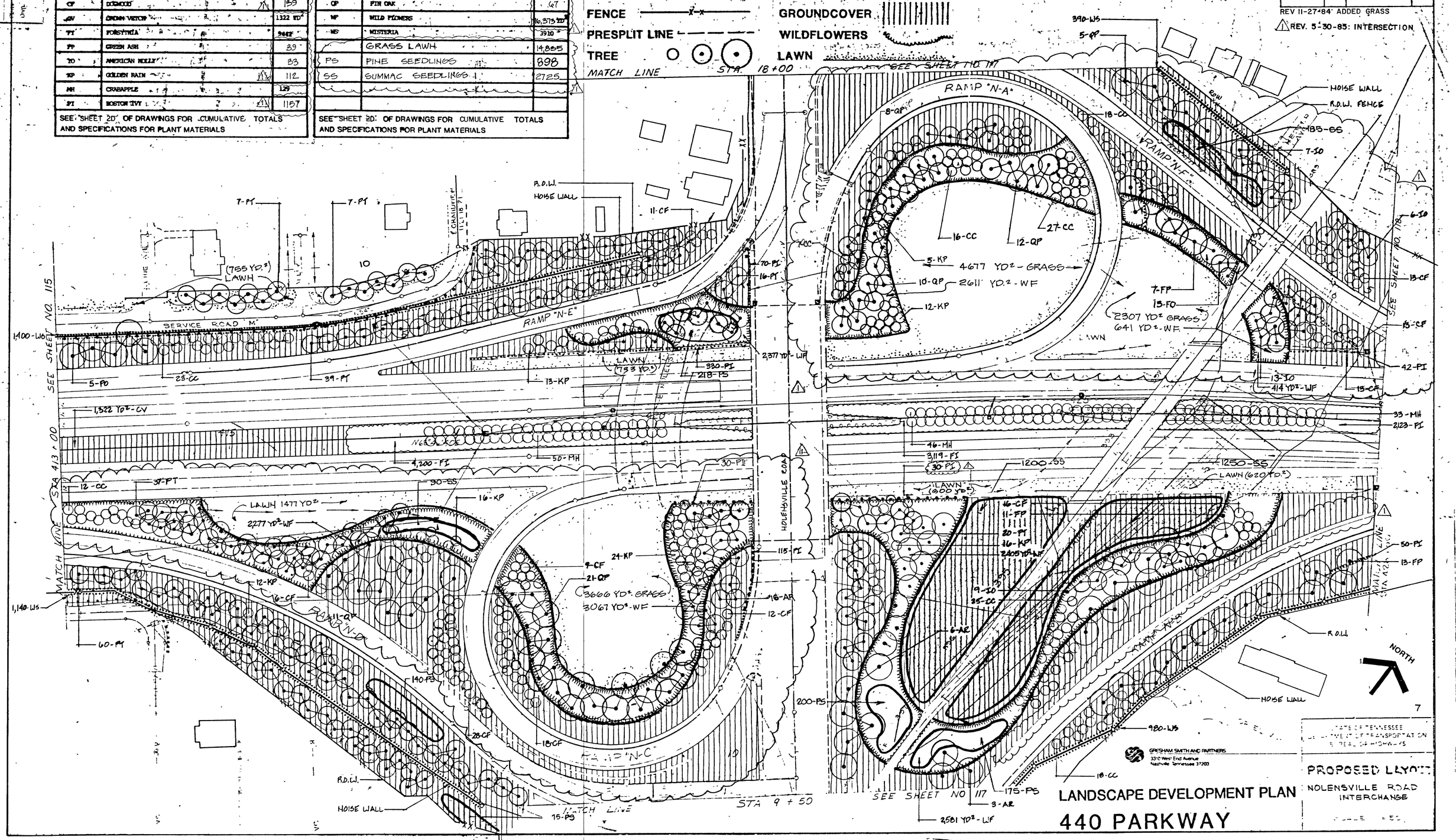
SEE SHEET 20 OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

LEGEND

R.O.W.
NOISE WALL
FENCE
PRESPLIT LINE
TREE
SHRUB MASS
SEEDLINGS
VINES
GROUNDCOVER
WILDFLOWERS
LAWN

TYPE	YEAR	PROJECT NO	SHEET NO.
PAVING	1983	I-440-4(55)211	116

REV 11-27-84 ADDED GRASS
REV. 5-30-85: INTERSECTION



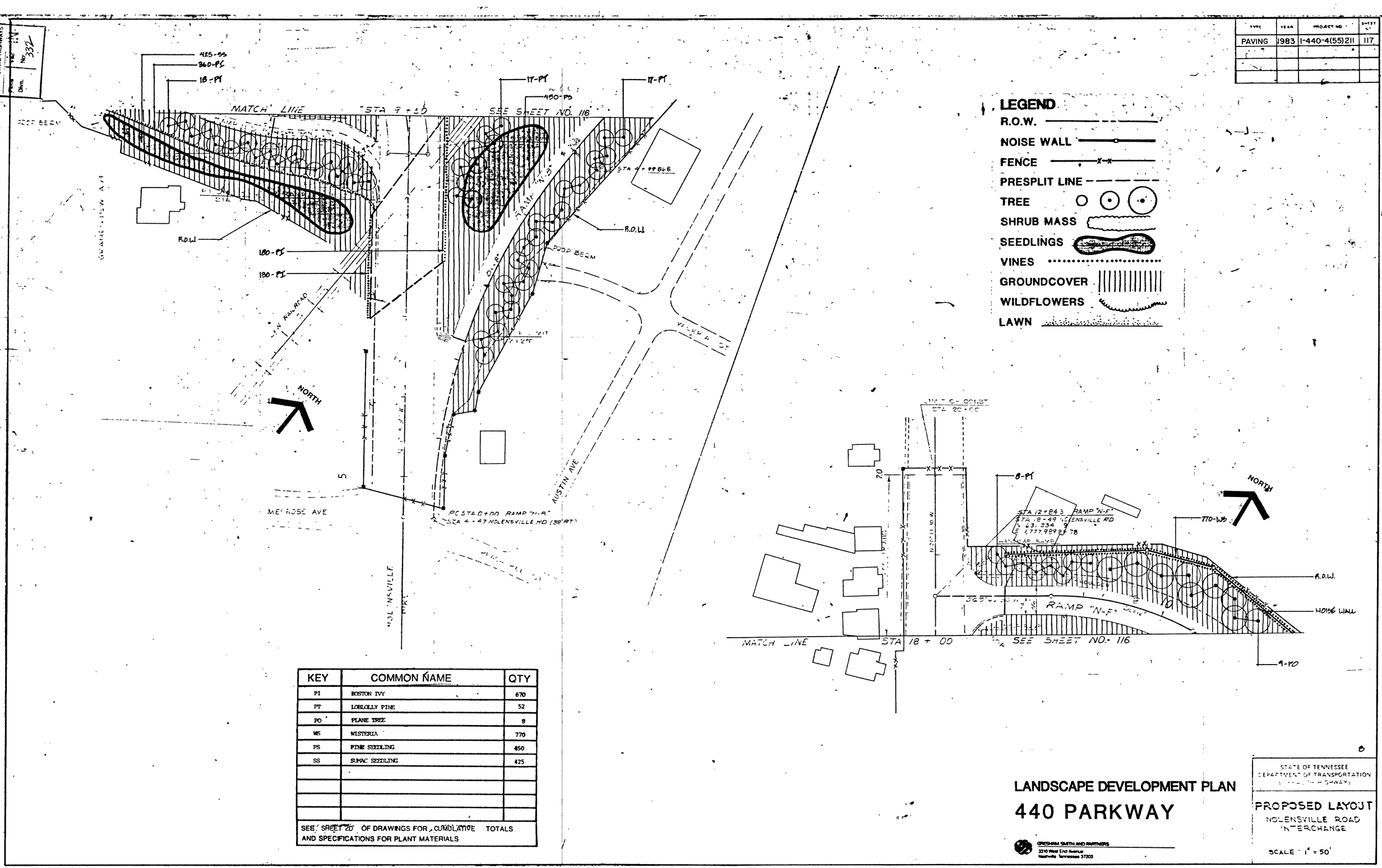
GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT
NOLENSVILLE ROAD INTERCHANGE

LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	117



KEY	COMMON NAME	QTY
PI	BOSTON IVY	670
PT	LOBLOLLY PINE	52
PO	PLANE TREE	9
WS	WISTERIA	770
PS	PINE SEEDLING	450
SS	SUMAC SEEDLING	425

SEE SHEET 20 OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

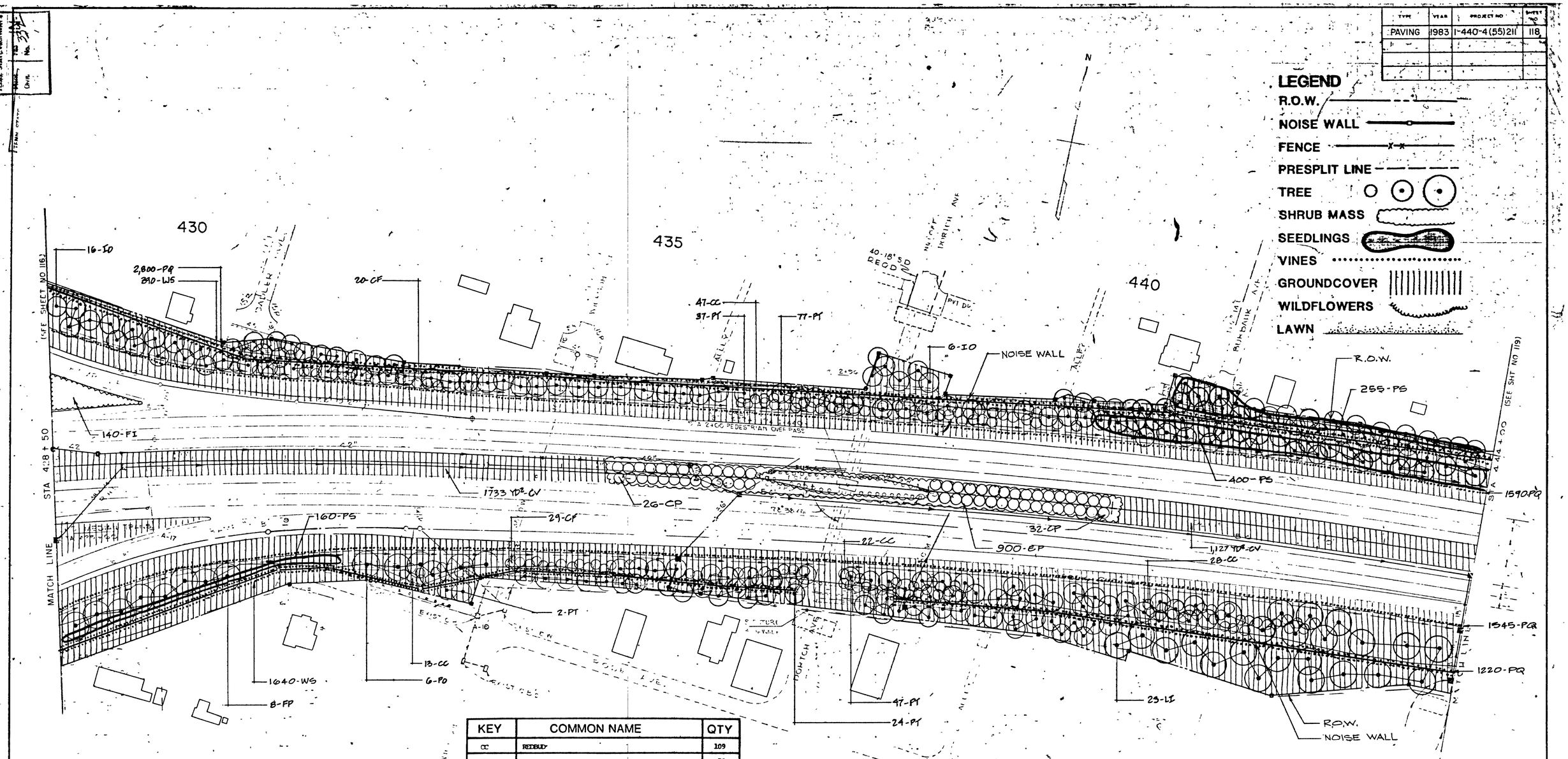
GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED LAYOUT
NOLENSVILLE ROAD
INTERCHANGE

SCALE 1" = 50'

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	118



KEY	COMMON NAME	QTY
CC	REDBUD	109
CF	DOGWOOD	50
CP	HAWTHORNE	58
CV	CROWN VETCH	2860 YD²
EP	ELAEAGNUS	900
FI	FORSYTHIA	140
FP	GREEN ASH	8
IO	AMERICAN HOLLY	22
LI	SWEET GUM	23
PO	PLANE TREE	6
PQ	VIRGINIA CREEPER	7155
PT	LOBLOLLY PINE	187
WS	WISTERIA	2030
PS	PINE SEEDLING	815

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NORTH

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

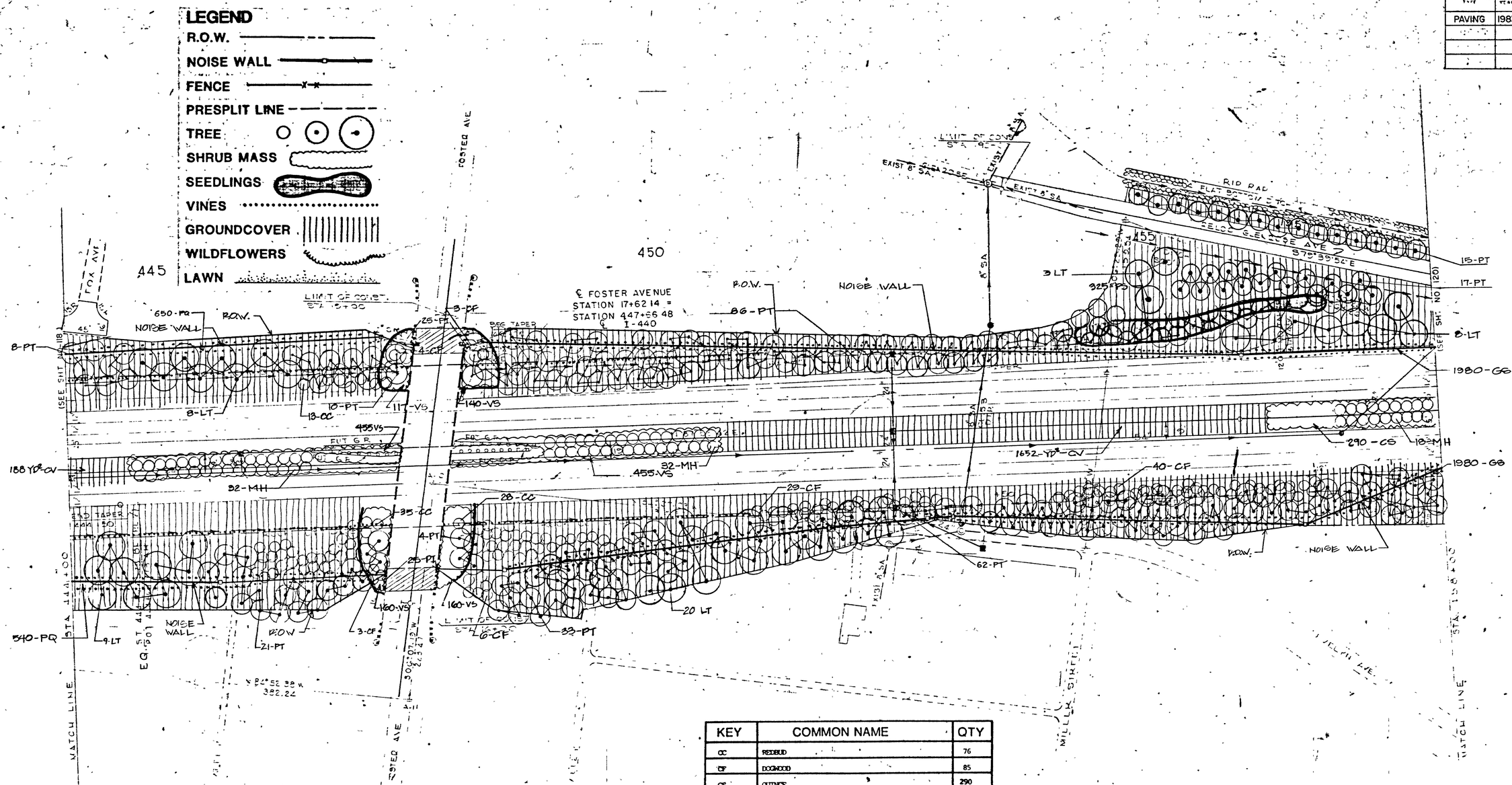
LINSCHAM SMITH AND ASSOCIATES
3010 Ave E d Avenue
Nashville Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT
STA 428 + 50 TO 444 + 00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	119



KEY	COMMON NAME	QTY
CC	REDBUD	76
CF	DOGWOOD	85
CS	QUINCE	290
CV	CROWN VETCH	1840 YD²
GS	CAROLINA JESSAMINE	3960
LT	TULIP POPLAR	48
MH	CRABAPPLE	82
PI	BOSTON IVY	100
PQ	VIRGINIA CREEPER	1190
PT	LOBLOLLY PINE	256
VS	VIBURNUM	1487
PS	PINE SEEDLING	325

SEE SHEET 20 OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NORTH

10

LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENGINEERING

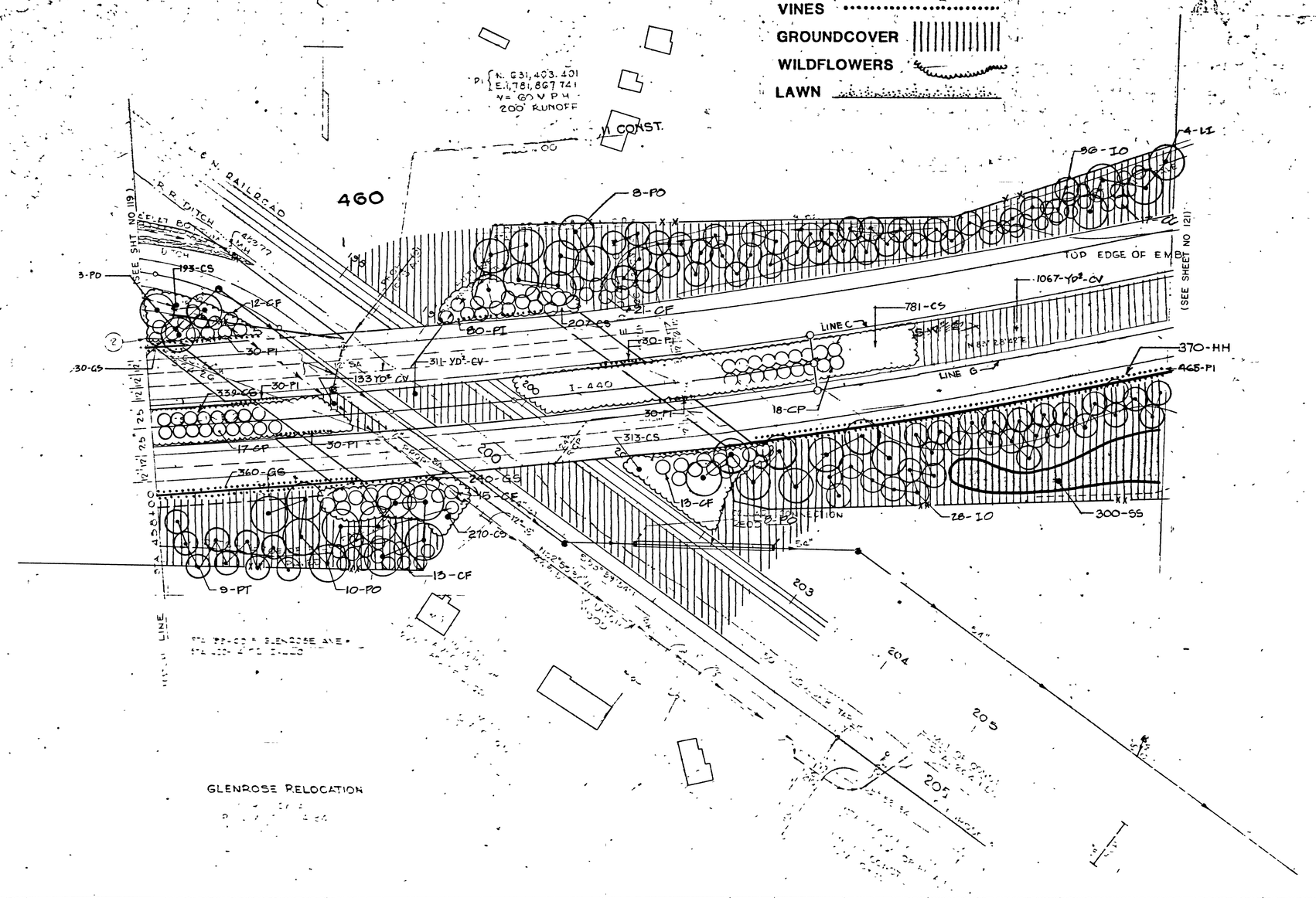
PROPOSED LAYOUT
STA 444+00 TO 458+00

SCALE 1:50

TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	120

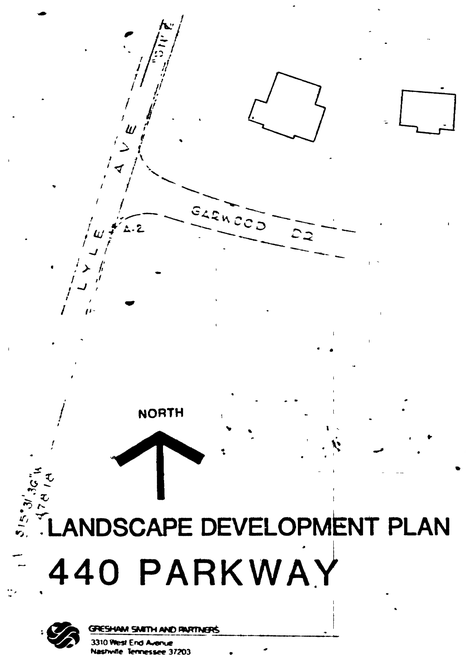
LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN



KEY	COMMON NAME	QTY
CF	DOGWOOD	94
CP	HAWTHORNE	35
CS	QUINCE	2103
CV	CROWNVETCH	1511 YD²
GS	CAROLINA JESSAMINE	630
IO	AMERICAN HOLLY	64
LI	SWEET GUM	4
PI	BOSTON IVY	700
PO	PLANE TREE	29
PT	LOBLOLLY PINE	9
SS	SUMAC	300
CC	REDBUD	17
HH	ENGLISH IVY	370

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECS FOR PLANT MATERIALS.



LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

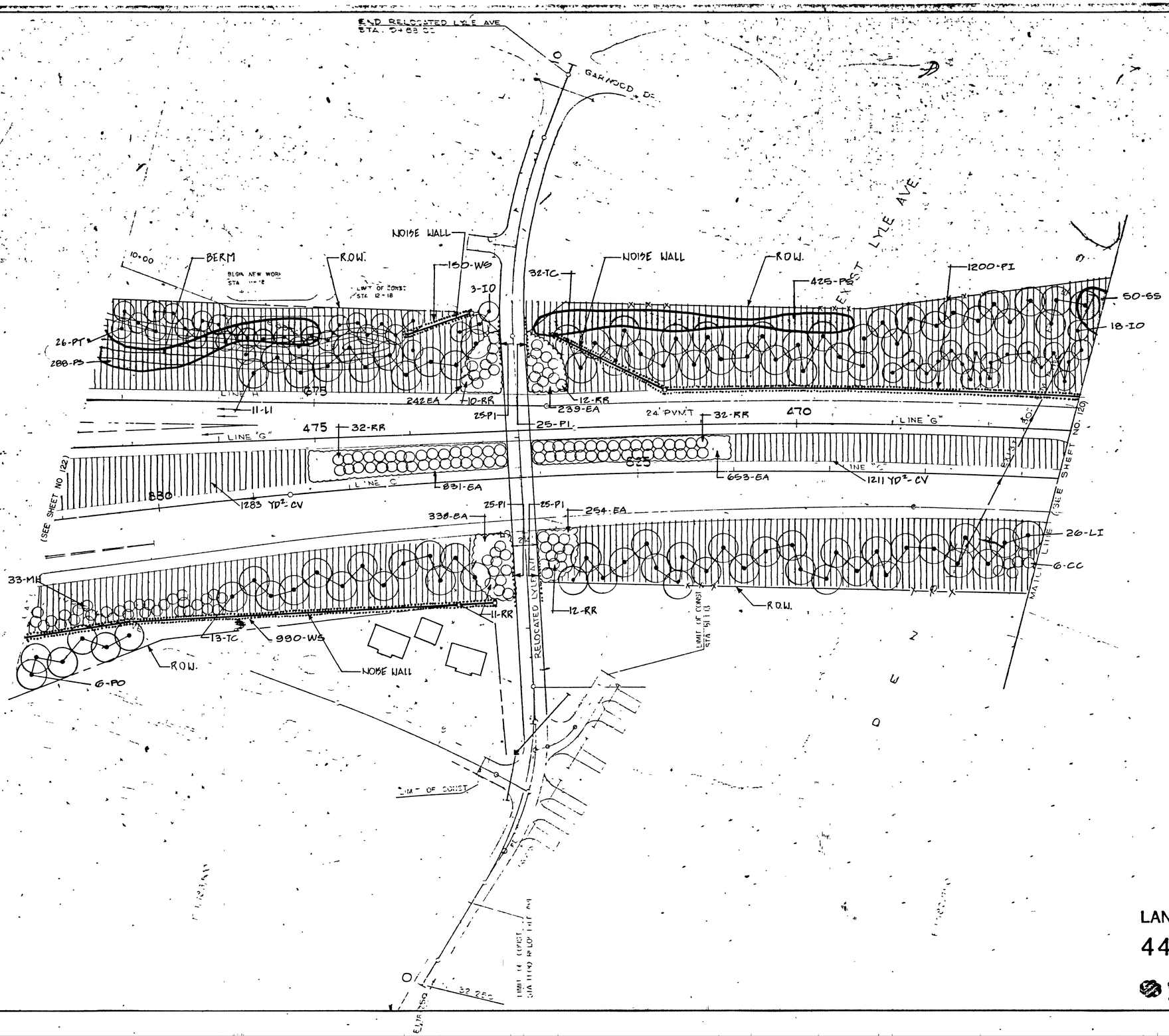
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

STA 458+00 TO LYLE AVE

SCALE 1" = 50

PAVING	1983	I-440-4(55)211	12J



LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN

KEY	COMMON NAME	QTY
CC	REDBUD	6
CV	CROWNVETCH	2454 YD²
EA	WINGED EUONYMOUS	2554
IO	AMERICAN HOLLY	21
LI	SWEET GUM	37
MH	CRABAPPLE	33
PO	PLANE TREE	6
PI	BOSTON IVY	1300
PT	LOBLOLLY PINE	26
RR	SUMAC	109
TC	LINDEN	45
WS	WISTERIA	1140
SS	SUMAC SEEDLING	50
PS	PINE SEEDLING	713

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NORTH

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

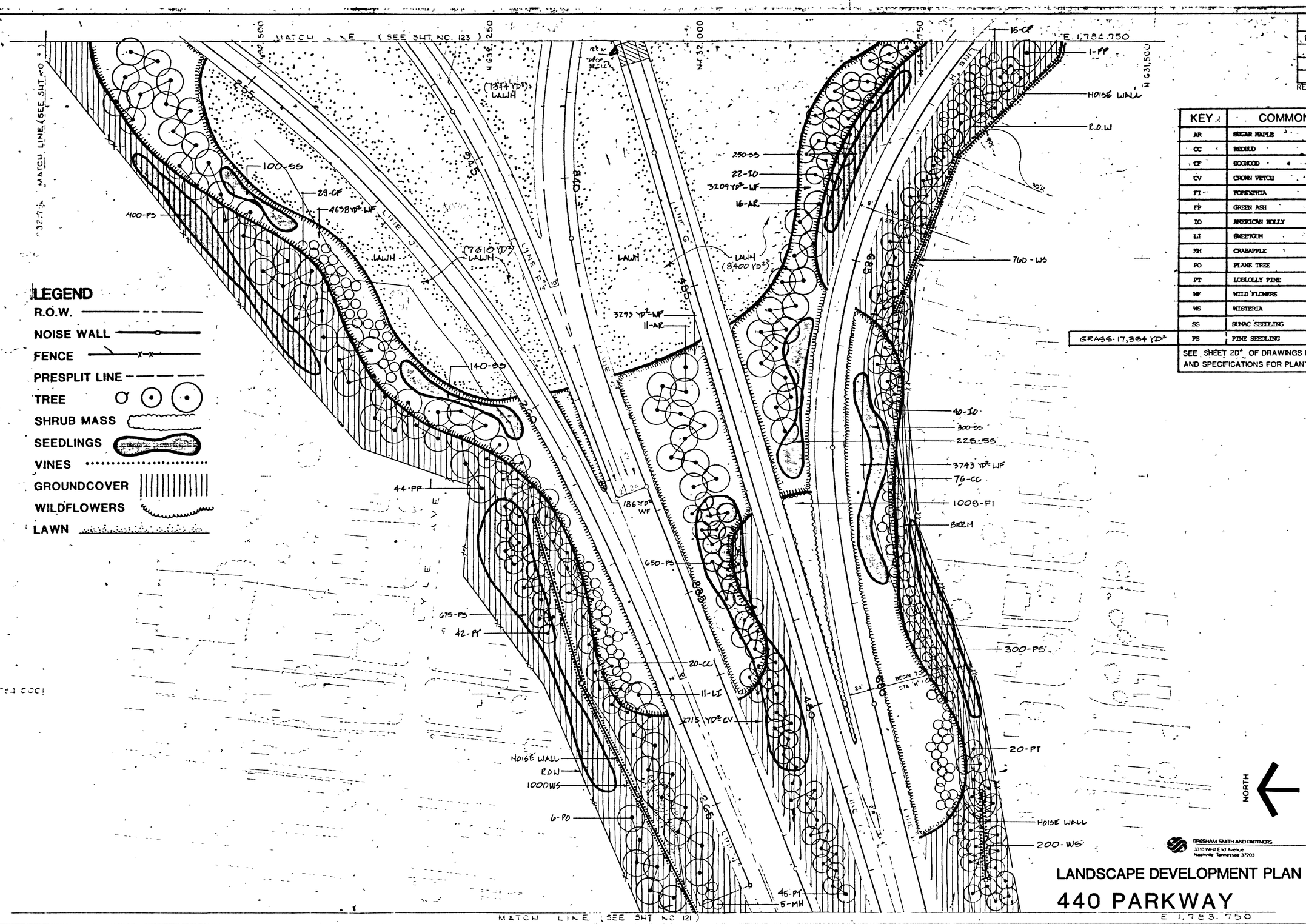
12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT
COORDINATES
E 1753750 TO E 1750,500
SCALE 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	122

REV. 11-27-84 ADDED GRASS



KEY	COMMON NAME	QTY
AR	SUGAR MAPLE	27
CC	REDBUD	96
CF	DOGWOOD	44
CV	CROWN VETCH	2715 YD²
FI	FORSYTHIA	1009
FP	GREEN ASH	45
IO	AMERICAN HOLLY	62
LI	SWEETGUM	11
MH	CRABAPPLE	5
PO	PLANE TREE	6
PT	LOBLOLLY PINE	107
WF	WILD FLOWERS	15069 YD²
WS	WISTERIA	1960
SS	SUMAC SEEDLING	1015
PS	PINE SEEDLING	2025

GRASS-17,364 YD²

SEE SHEET 20 OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NOTE

COORDINATES SHOWN ARE FOR TENN DOT TO CONVERT TO TENN RECTANGULAR GRID DIVIDE BY 1.00006

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville Tennessee 37203

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

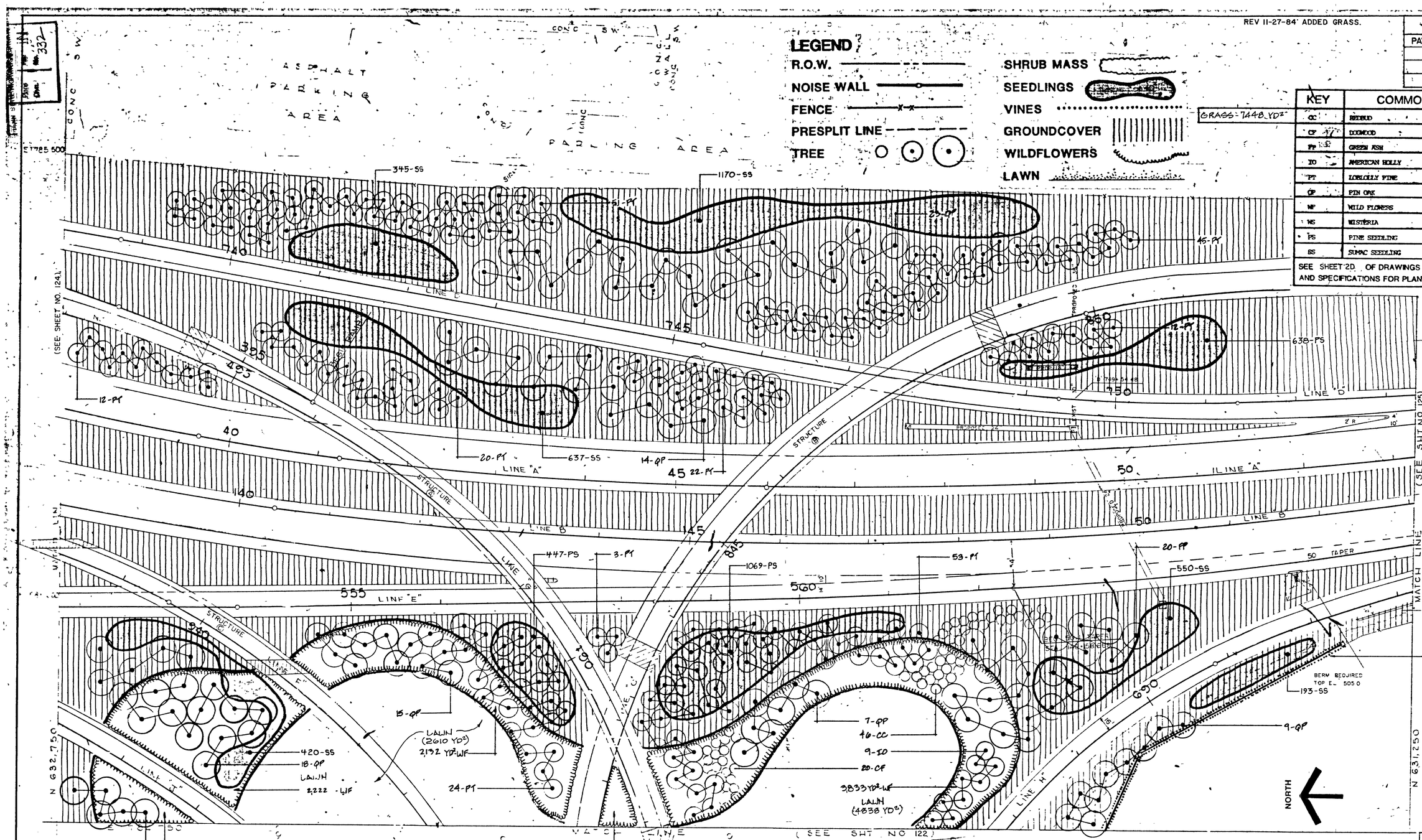
PROPOSED LAYOUT

CO-ORDINATES
E 1,784,750 TO E 1,783,750

SCALE 1" = 50'

REV 11-27-84 ADDED GRASS.

PAVING	1983	I-440-4(55)211	123



KEY	COMMON NAME	QTY
CC	REDBUD	46
CF	DOGWOOD	20
FP	GREEN ASH	25
IO	AMERICAN HOLLY	9
PT	LOBLOLLY PINE	242
QP	PIN OAK	86
WF	WILD FLOWERS	8885 YD²
WS	WISTERIA	720
PS	PINE SEEDLING	2154
SS	SUMAC SEEDLING	3315

GRASS: 7448 YD²

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NOTE
COORDINATES SHOWN ARE FOR TENN. D.O.T
TO CONVERT TO TENN RECTANGULAR GRID DIVIDE BY 1.00006

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LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

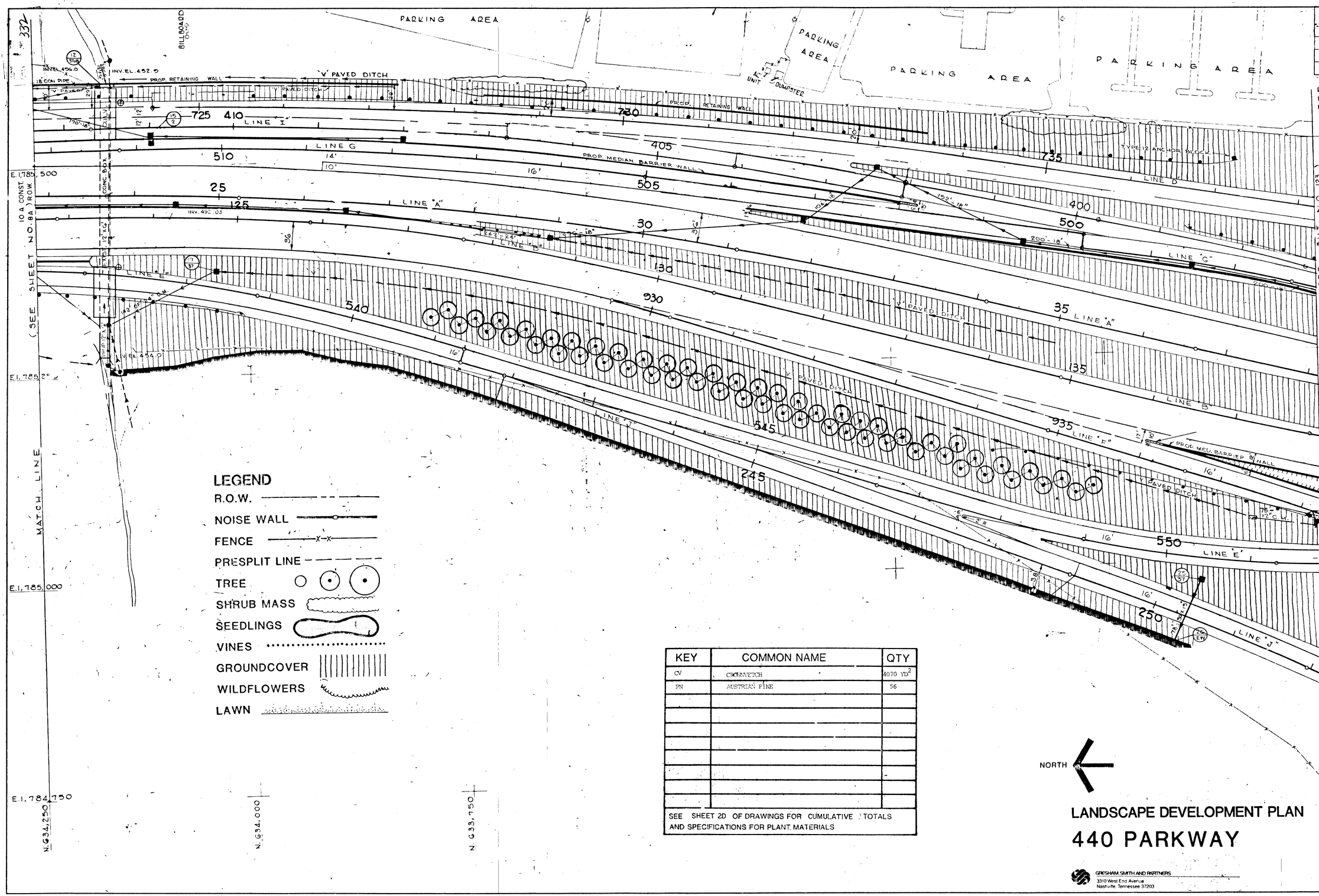
GRESHAM SMITH AND PARTNERS
3310 West End Avenue
Nashville, Tennessee 37203

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT
CO-ORDINATES
N 632,750 TO N. 631,250
SCALE 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	124

REV. 10-19-82: ADDED SPECIAL DITCH DETAIL AND SEWER DETAIL.



KEY	COMMON NAME	QTY
CV	CROWNVETCH	4070 YD²
PN	AUSTRIAN PINE	56

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS

NOTE

COORDINATES SHOWN ARE FOR TENN. D.O.T. TO CONVERT TO TENN. RECTANGULAR GRID DIVIDE BY 1.00006.

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

GRESHAM, SMITH AND PARTNERS
3310 West End Avenue
Nashville, Tennessee 37203

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PROPOSED LAYOUT

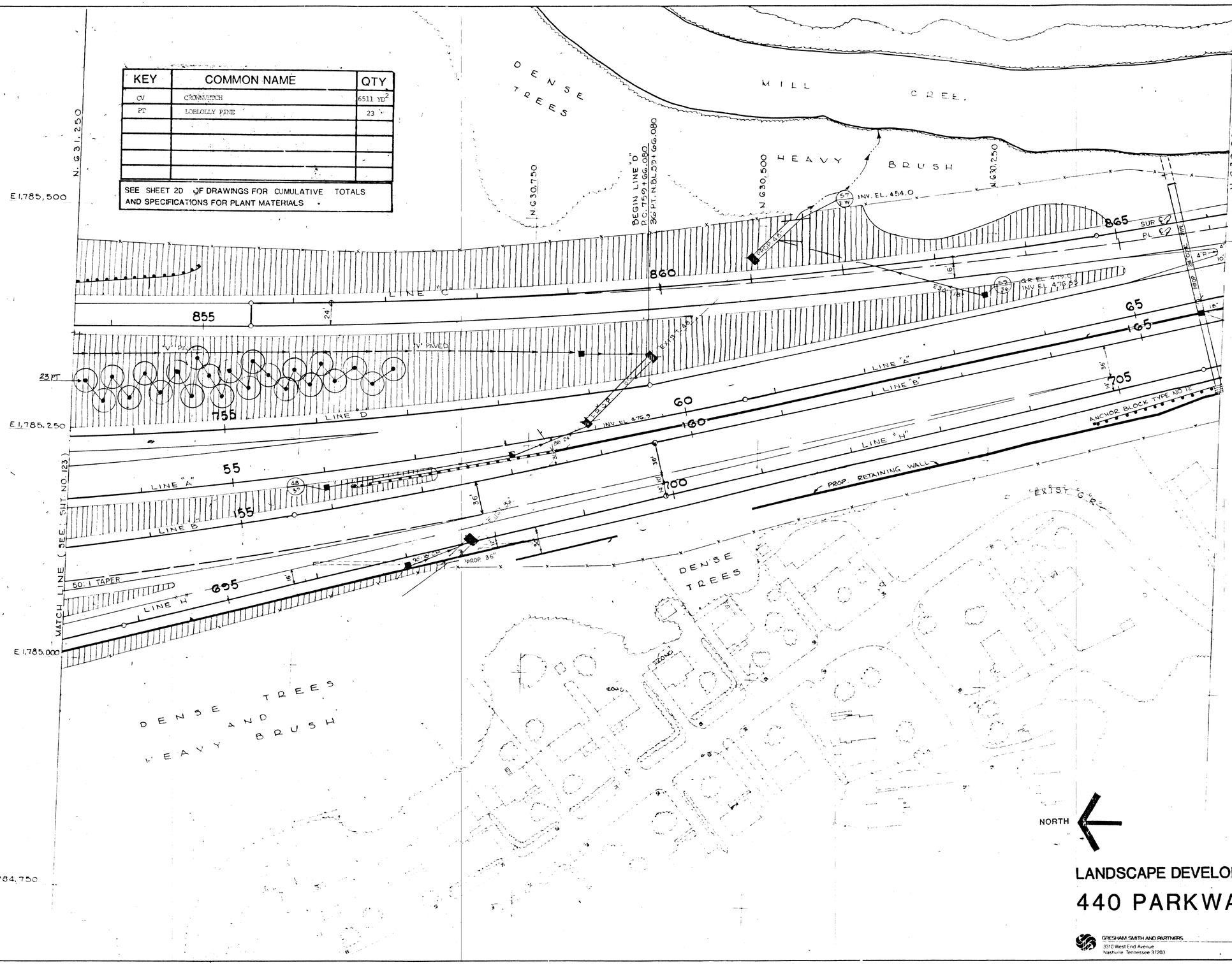
CO-ORDINATES
N. 634,250 TO N. 632,750

SCALE: 1" = 50

TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55) 211	125

KEY	COMMON NAME	QTY
CV	CROWNVETCH	6511 YD^2
PT	LOBLOLLY PINE	23

SEE SHEET 2D OF DRAWINGS FOR CUMULATIVE TOTALS AND SPECIFICATIONS FOR PLANT MATERIALS



LEGEND

- R.O.W.
- NOISE WALL
- FENCE
- PRESPLIT LINE
- TREE
- SHRUB MASS
- SEEDLINGS
- VINES
- GROUNDCOVER
- WILDFLOWERS
- LAWN

NOTE

COORDINATES SHOWN ARE FOR TENN. D.O.T. TO CONVERT TO TENN. RECTANGULAR GRID DIVIDE BY 1.00006

LANDSCAPE DEVELOPMENT PLAN

440 PARKWAY

GRESHAM SMITH AND PARTNERS
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

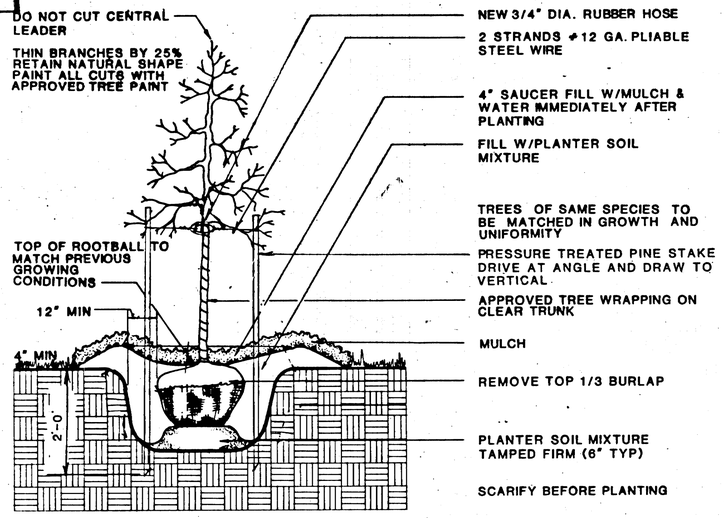
PROPOSED LAYOUT

CO-ORDINATES
N 631,250 TO N. 630,000

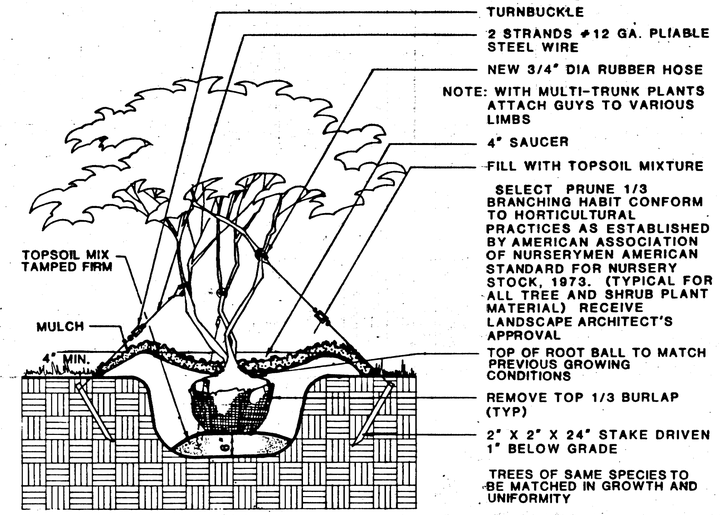
SCALE 1" = 50'

REV. 11-16-88 DETAIL FOR NOISE WALL PLANTING REVISED

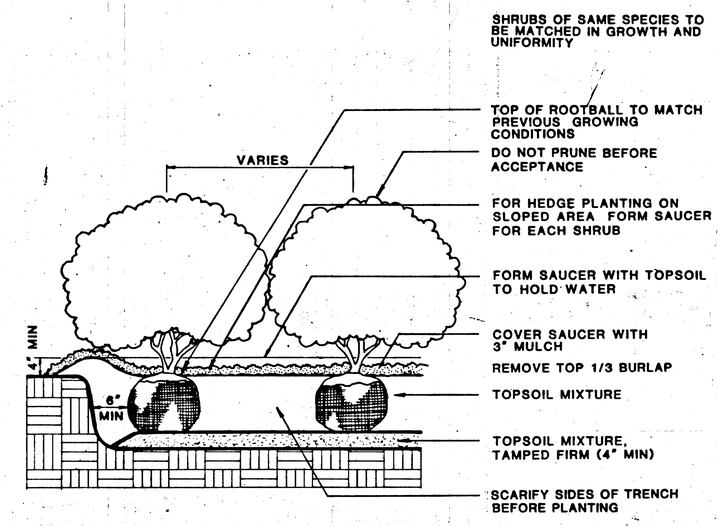
TYPE	YEAR	PROJECT NO.	SHEET NO.
PAVING	1983	I-440-4(55)211	126



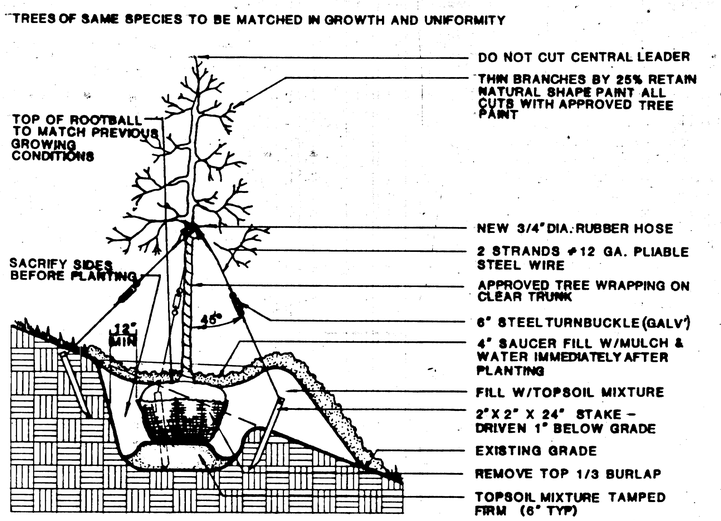
DETAIL: TYPICAL TREE GUYING
NO SCALE



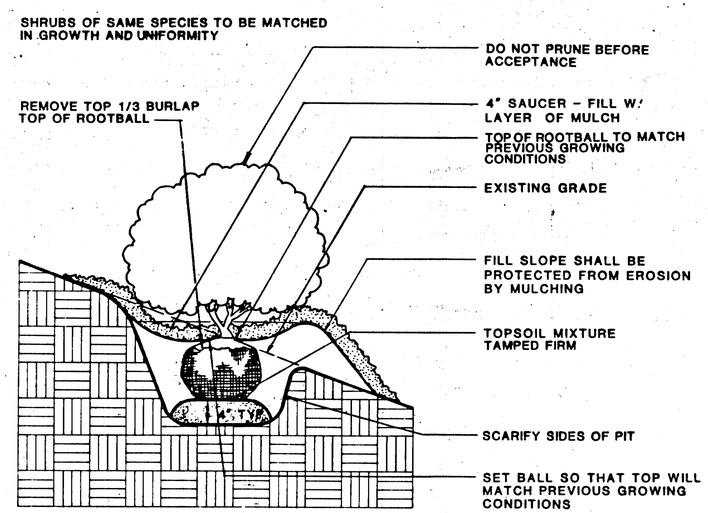
DETAIL: MULTI-TRUNKED TREE PLANTING
NO SCALE



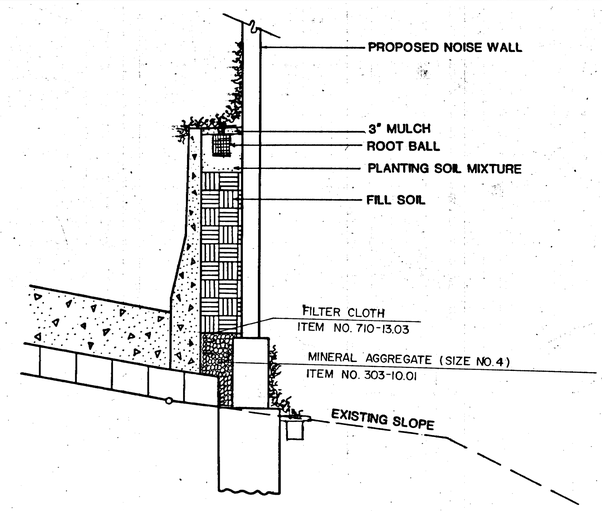
DETAIL: TYPICAL TRENCH PLANTING
NO SCALE



DETAIL: TYPICAL SLOPE PLANTING FOR TREES OVER 2" CALIPER
NO SCALE



DETAIL: TYPICAL SHRUB PLANTING ON SLOPE
NO SCALE



DETAIL: NOISE WALL VINE PLANTING
NO SCALE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PLANTING DETAILS

LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM SMITH AND PARTNERS
3310 West End Avenue
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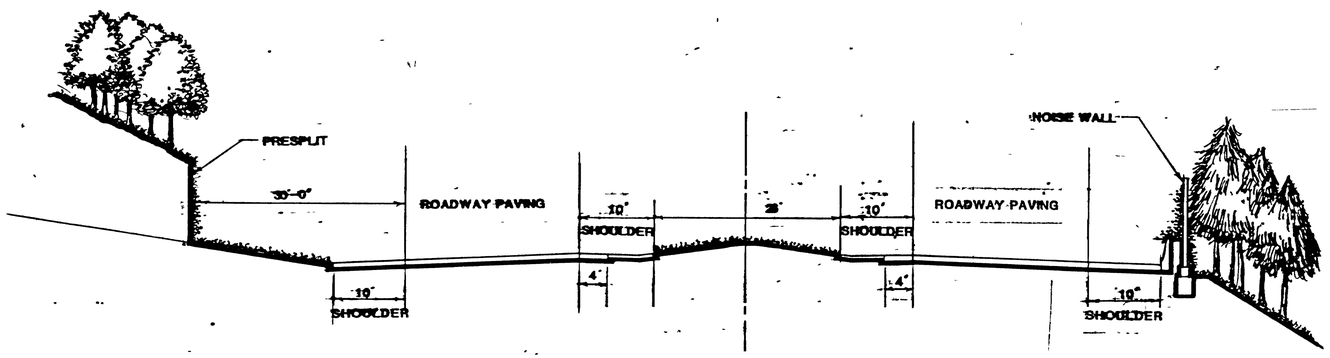
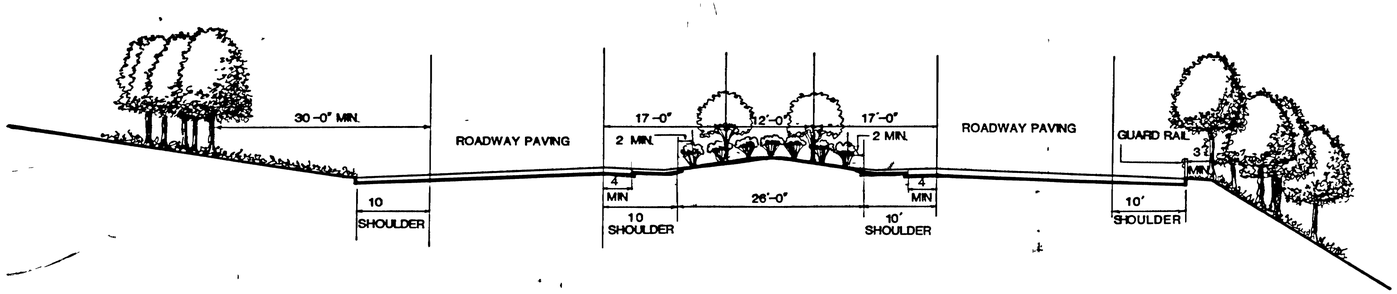
TYPE	YEAR	PROJECT NO	SHEET NO
PAVING	1983	I-440-4(55)211	127





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LANDSCAPE DEVELOPMENT PLAN
440 PARKWAY

GRESHAM, SMITH AND PARTNERS
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
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PLANTING DETAILS