ESCA PROJECT NO. 1359.03

FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	1
	ILLINOIS	CONTRACT NO. 78685		

06-17-2022 LETTING ITEM 090

FOR INDEX OF SHEETS, SEE SHEET NO. 3

FOR SUMMARY OF QUANTITIES, SEE SHEETS 5-12

TRAFFIC DATA

SN 064-0017 (WB)

FUNCTIONAL CLASSIFICATION:	FEDERAL-AID INTERSTATE MAIN ROUTE
ADT:	10,000 (2022)
PV:	60.6%
TRUCKS:	39.4%
DESIGN SPEED:	70 MPH
POSTED SPEED:	70 MPH

TRAFFIC DATA

SN 064-0018 (EB)

FUNCTIONAL CLASSIFICATION:	FEDERAL-AID INTERSTATE MAIN ROUTE
ADT:	10,000 (2022)
PV:	60.6%
TRUCKS:	39.4%
DESIGN SPEED:	70 MPH
POSTED SPEED:	70 MPH

TOWNSHIP

MASSAC COUNTY UNIT ROAD DISTRICT

DESIGN DESIGNATION : N.A.

COORDINATE SYSTEM : NAD 1983 STATE PLANE ILLINOIS EAST FIPS 1201 FEET (HORIZONTAL) NAVD88 (VERTICAL)

POSTED SPEED : 70 MPH

ESCA CONSULTANTS, INC.

ESCA PROJECT NO. 1359.03

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: GRANT DETERDING
PROJECT DESIGNER: ESCA CONSULTANTS, INC.

CONTRACT NO. 78685

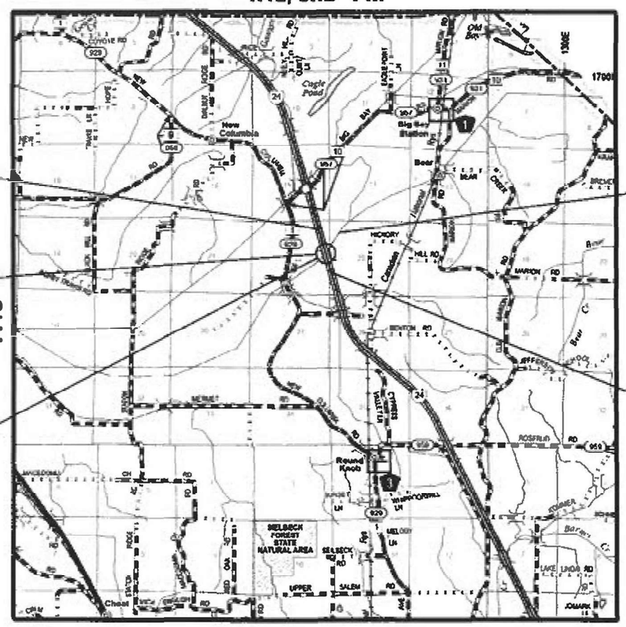
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAI ROUTE 24 (I-24)
SECTION (64-1)B-2
PROJECT NHPP-AE4L(503)
BRIDGE REPLACEMENT
OVER BEAR CREEK
MASSAC COUNTY

C-99-110-18

R4E, 3RD PM



LOCATION MAP

ERIC L. HENKEL
54498
LICENSED PROFESSIONAL ENGINEER
OF
STATE OF ILLINOIS

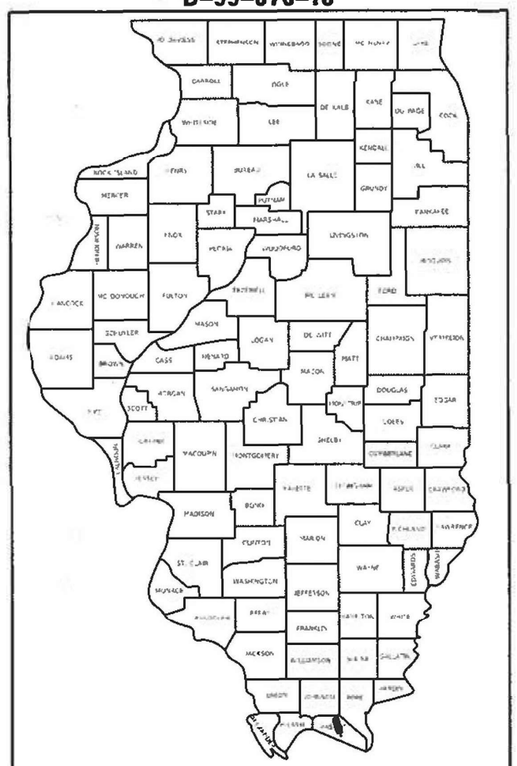
EXPIRES 11-30-23

SIGNATURE

03-23-22
DATE

GROSS LENGTH = 380.94 FT. = 0.072 MILE
NET LENGTH = 380.94 FT. = 0.072 MILE

D-99-076-18



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 23 20 22

Stephen M. Travis
REGION FIVE ENGINEER

May 13, 2022
ENGINEER OF DESIGN AND ENVIRONMENT

May 13, 2022
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS

PREPARED BY: Charles Stein
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: Nancy Hall
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: _____
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Doyle J. Hulick
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: Doyle J. Hulick
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: _____
DISTRICT MATERIALS ENGINEER

MODEL: PLOT
FILE NAME: D:\DOT\1359-03-78685\CADD\Highway\CADD Sheets\D78685-sht-general01.dgn

ESCA CONSULTANTS, INC.

USLR NAME = nhl	DESIGNED - SMA	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM/ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 02/22	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNATURE BLOCK

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	2
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-10	PAVEMENT JOINTS
420101-07	24''(7.2 M) JOINTED PCC PAVEMENT
420401-13	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
420701-03	PAVEMENT WELDED WIRE REINFORCEMENT
515001-04	NAME PLATE FOR BRIDGES
542401-04	METAL FLARED END SECTION FOR PIPE CULVERTS
601001-05	PIPE UNDERDRAINS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
602301-04	INLET, TYPE A
604036-03	GRATE, TYPE 8
610001-09	SHOULDER INLET WITH CURB
630001-12	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-17	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-02	DELINEATORS
642001-03	SHOULDER RUMBLE STRIPS, 16 IN.
665001-02	WOVEN WIRE FENCE
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15'(4.5 M) TO 24"(600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15'(4.5 M) AWAY
701400-11	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-13	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701406-13	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
701416-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH CROSSOVER AND BARRIER
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≥ 45 MPH
701428-01	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
60600I-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

INDEX OF SHEETS

REV. - MS

MODEL: PLOT
FILE NAME: Y:\DOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-gennote02.dgn

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SMA/ELH	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA/IRC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM/ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND HIGHWAY STANDARDS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	3
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

1. FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT-MIX ASPHALT	2.016 TONS/CU YD
ALL AGGREGATE	2.05 TONS/CU YD
RIPRAP	1.50 TONS/CU YD

2. AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

3. THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION ON THE COMPLETED SURFACE AND THAT NECESSARY AFTER REMOVAL OF TRAFFIC CONTROL.

4. EXISTING PIPE UNDERDRAIN OUTLETS IN THE FORESLOPES OR MEDIAN SLOPES SHALL BE PRESERVED AND PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO AN UNDERDRAIN OUTLET RESULTING FROM CONSTRUCTION ACTIVITY SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE DEPARTMENT.

5. CONNECTING OF NEW OR EXISTING STORM SEWER TO NEW OR EXISTING INLETS OR MANHOLES SHALL BE MADE IN A MANNER WHICH RESULTS IN A NEAT AND WATERTIGHT JOINT. WHEN PLACED THROUGH THE WALL OF AN INLET OR MANHOLE, STORM SEWER PIPE SHALL BE PLACED OR CUT FLUSH WITH THE FACE OF THE WALL AND DRESSED WITH MORTAR TO PROVIDE A SMOOTH ROUNDED OR BEVELED EDGE. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES OF THE STORM SEWERS OR STRUCTURES INVOLVED.

6. THE RUMBLE STRIPS ADJACENT TO BOTH WESTBOUND LANES OF I-24 SHALL NOT BE INSTALLED UNTIL AFTER COMPLETION OF STAGE III.

7. REFER TO HIGHWAY STANDARD 420101 FOR CONSTRUCTION DETAILS OF PCC PAVEMENT FOR CROSSOVERS.

8. THE TEMPORARY PAVEMENT MARKING USED WITH HIGHWAY STANDARD 701416 IN STAGES II & III SHALL BE PAINT.

9. THE EASTBOUND LANE PAVED SHOULDER REMOVAL AND HMA BASE COURSE FOR STAGE III TRAFFIC SHALL BE PERFORMED AT THE BUTT JOINT TRANSITIONS PRIOR TO MILLING AND PLACING THE HMA SURFACE COURSE AT THE BUTT JOINT.

10. EXISTING CROSS SECTIONS, PROFILES, AND PAVEMENT ELEVATIONS SHOWN THROUGHOUT THE PLANS ASSUME A NET ROADWAY GRADE RAISE OF ½" WITH 20' TRANSITIONS DOWN TO EACH END OF THE EXISTING BRIDGE DECK DUE TO THE 2021 I-24 RESURFACING PROJECT CONSTRUCTED AFTER THE DEVELOPMENT OF THESE PLANS.

COMMITMENTS

1. DUE TO THE POTENTIAL PRESENCE OF THE INDIANA BAT AND NORTHERN LONG-EARED BAT, TREE REMOVAL SHALL BE PROHIBITED FROM APRIL 1 THROUGH SEPTEMBER 30.

2. NO OTHER COMMITMENTS AS OF MARCH 31ST, 2022.

HMA MIXTURES REQUIREMENTS

MIXTURE USE	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE	HOT-MIX ASPHALT SHOULDERS (TOP LIFT)	HOT-MIX ASPHALT SHOULDERS (LOWER LIFTS)	TEMPORARY PAVEMENT (TOP LIFT)	TEMPORARY PAVEMENT (LOWER LIFTS)
AC/PG	SBS PG 76-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ Ndes=90	4.0% @ Ndes=70	4.0% @ Ndes=70	4.0% @ Ndes=90	4.0% @ Ndes=90
MIX COMPOSITION	IL-9.5	IL-9.5 L	IL-19.0 L	IL-9.5	IL-9.5
FRICTION AGGREGATE	MIX D	N/A	N/A	MIX D	MIX D
LOCATIONS	I-24 MAINLINE	I-24 SHOULDERS	I-24 SHOULDERS	CROSSOVERS	CROSSOVERS
MIXTURE WEIGHT	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN	112 LBS/SQ YD/IN
MATERIAL TRANSFER DEVICE	NO	NO	NO	NO	NO
QUALITY MANAGEMENT PROGRAM	QCQA	QCQA	QCQA	QCQA	QCQA
SUBLOT SIZE	N/A	N/A	N/A	N/A	N/A

PAVEMENT LIFT REQUIREMENTS:

8" SHOULDERS

1 ¾ " SURFACE COURSE
2 ¼ " BINDER COURSE
4" BOTTOM LIFT BINDER COURSE

13 ½ " CROSSOVER:

2" SURFACE COURSE
2 ¼ " BINDER COURSE
2 ¼ " BINDER COURSE
3" BINDER COURSE
4" BINDER COURSE

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-gennote03.dgn

ESCA CONSULTANTS, INC.

USER NAME = IRC	DESIGNED - SMA	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**GENERAL NOTES AND COMMITMENTS**	
ESCA PROJECT NO. 1359.03	DRAWN - SMA/IRC	REVISED -			
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM/ELH	REVISED -			
PLOT DATE = 3/25/2022	DATE - 03/22	REVISED -		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	4
		CONTRACT NO. 78685		
	ILLINOIS | FED. AID PROJECT			

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	15	15		
20200100	EARTH EXCAVATION	CU YD	5185	5185		
20400800	FURNISHED EXCAVATION	CU YD	1225	1225		
20800150	TRENCH BACKFILL	CU YD	27	27		
25000200	SEEDING, CLASS 2	ACRE	2.75	2.75		
25000350	SEEDING, CLASS 7	ACRE	2.75	2.75		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	248	248		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	248	248		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	248	248		
25000700	AGRICULTURAL GROUND LIMESTONE	TON	5.5	5.5		
25100115	MULCH, METHOD 2	ACRE	5.5	5.5		
25100630	EROSION CONTROL BLANKET	SQ YD	408	408		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	550	550		
28000305	TEMPORARY DITCH CHECKS	FOOT	777	777		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
28000400	PERIMETER EROSION BARRIER	FOOT	608	608		
28000500	INLET AND PIPE PROTECTION	EACH	11	11		
28100109	STONE RIPRAP, CLASS A5	SQ YD	2164		1082	1082
28200200	FILTER FABRIC	SQ YD	2164		1082	1082
31100700	SUBBASE GRANULAR MATERIAL, TYPE A 8"	SQ YD	6693	6693		
35600730	HOT-MIX ASPHALT BASE COURSE WIDENING, 13 1/2"	SQ YD	2831	2831		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	9754	9754		
40600370	LONGITUDINAL JOINT SEALANT	FOOT	160	160		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	713	713		
40604164	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	TON	36	36		
42000060	WELDED WIRE REINFORCEMENT	SQ YD	374	374		
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	666	666		
42001300	PROTECTIVE COAT	SQ YD	674	674		
44000100	PAVEMENT REMOVAL	SQ YD	5040	5040		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
44004250	PAVED SHOULDER REMOVAL	SQ YD	4743	4743		
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	1771	1771		
48203003	HOT-MIX ASPHALT SHOULDERS, 1 1/2"	SQ YD	288	288		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	424	424		
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1			1
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1	
50104400	CONCRETE HEADWALL REMOVAL	EACH	12	12		
50200100	STRUCTURE EXCAVATION	CU YD	940		465	475
50300100	FLOOR DRAINS	EACH	24		12	12
50300225	CONCRETE STRUCTURES	CU YD	574.3		285.7	288.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	536.3	0.1	268.1	268.1
50300300	PROTECTIVE COAT	SQ YD	2306		1153	1153
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	249.2		124.6	124.6
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		0.5	0.5

REV. - MS

MODEL: PLOT03
FILE NAME: Y:\IDOT\1135E-03_78685\CADD\HighwayCADD Sheets\D978685-sht-sqq01.dgn

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SKM/ELH	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM/IRC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 3 OF 8 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	7
		CONTRACT NO. 78685		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
50500505	STUD SHEAR CONNECTORS	EACH	10440		5220	5220
50800105	REINFORCEMENT BARS	POUND	23	23		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	299970		149875	150095
51200963	FURNISHING METAL SHELL PILES 16" X 0.375"	FOOT	7114		3706	3408
51202305	DRIVING PILES	FOOT	7114		3706	3408
51203200	TEST PILE METAL SHELLS	EACH	8		4	4
51500100	NAME PLATES	EACH	2		1	1
52100510	ANCHOR BOLTS, 3/4"	EACH	48		24	24
52100520	ANCHOR BOLTS, 1"	EACH	48		24	24
5421D015	PIPE CULVERTS, CLASS D, TYPE 1 15" (TEMPORARY)	FOOT	306	306		
54262712	METAL FLARED END SECTIONS 12"	EACH	4	4		
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	350		175	175
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	212		106	106
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	12	12		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
	60100945	PIPE DRAINS 12"	FOOT	96	96		
	60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	94	94		
	60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	360		180	180
	60600605	CONCRETE CURB, TYPE B	FOOT	15	15		
	61000050	CONCRETE THRUST BLOCKS	EACH	2	2		
	61000225	TYPE F INLET BOX, STANDARD 610001	EACH	2	2		
	61000335	TYPE G INLET BOX, STANDARD 610001	EACH	2	2		
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	700	700		
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
	63200310	GUARDRAIL REMOVAL	FOOT	1043	1043		
	63500105	DELINEATORS	EACH	2	2		
	64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	7432	7432		
	66500105	WOVEN WIRE FENCE, 4'	FOOT	302	302		

* SPECIALTY ITEM

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24	24		
67100100	MOBILIZATION	L SUM	1	1		
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	3	3		
70100410	TRAFFIC CONTROL AND PROTECTION, STANDARD 701416	EACH	2	2		
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4	4		
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1		
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	24	24		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	1036	1036		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	6096	6096		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	2037	2037		
70300241	TEMPORARY PAVEMENT MARKING - LINE 6" - PAINT	FOOT	38917	38917		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	6125	6125		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	425	425		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
	70500665	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2		
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	1	1		
	70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	1	1		
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	6		
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	17845	17845		
*	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	140	140		
*	78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	1256	1256		
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4		
*	78100300	REPLACEMENT REFLECTOR	EACH	168	168		
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	18	18		
*	78200006	GUARDRAIL REFLECTORS, TYPE B	EACH	18	18		
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4		
	78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	29103	29103		
	X0301993	REMOVE AND REINSTALL CONCRETE HEADWALL FOR PIPE DRAIN	EACH	12	12		
❋❋❋	X2503100	MOWING	UNIT	16	16		

* SPECIALTY ITEM ❋❋❋ 100% STATE

REV. - MS

MODEL: PLOT07
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ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SKM/ELH	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM/IRC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

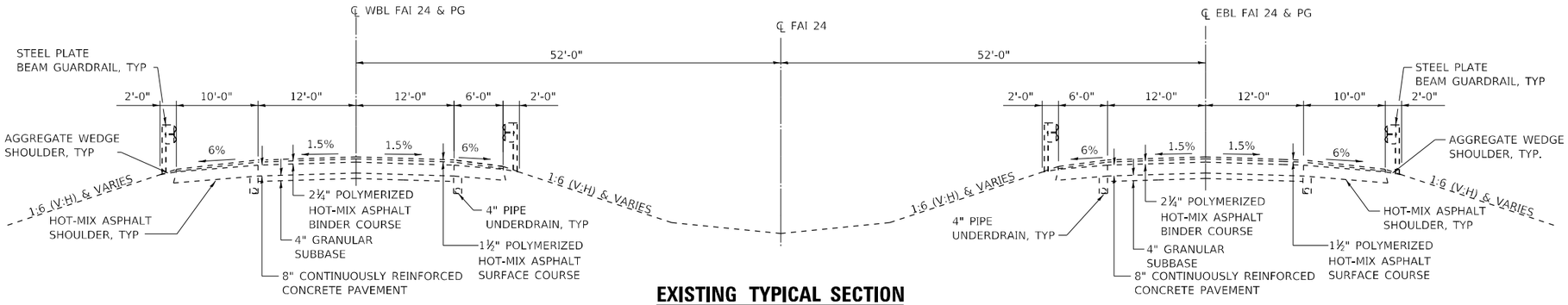
SCALE: NONE | SHEET NO. 7 OF 8 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	11
		CONTRACT NO. 78685		
		ILLINOIS FED. AID PROJECT		

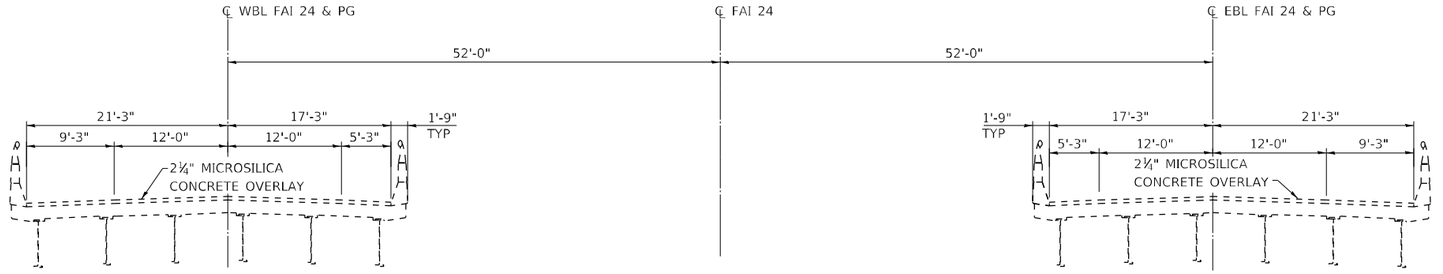
SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE ROADWAY CONSTRUCTION CODE 0004 ROADWAY	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0047	90% FEDERAL 10% STATE STRUCTURE CONSTRUCTION CODE 0010 S.N. 064-0048
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	1486		743	743
	X6020073	INLETS, TYPE A, TYPE 8 GRATE, TEMPORARY	EACH	4	4		
	X6650202	WOVEN WIRE FENCE REMOVAL	FOOT	231	231		
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
	X7050169	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (FLARED)	EACH	2	2		
	X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	168	168		
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10		10	
	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	10		10	
	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	60		60	
	Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	4		2	2
	Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	2350		1175	1175
	Z0062456	TEMPORARY PAVEMENT	SQ YD	5799	5799		
Ø	Z0076600	TRAINEES	HOUR	1000	1000		
Ø	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000		

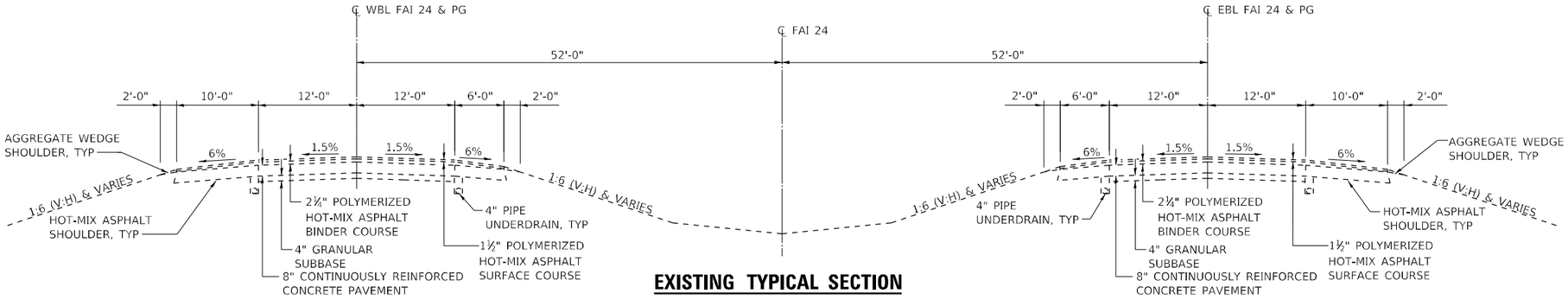
Ø 0042



EXISTING TYPICAL SECTION
STA 254+06.92 TO STA 256+91.35 WBL
STA 251+07.34 TO STA 253+53.07 EBL



EXISTING TYPICAL SECTION
STA 252+56.09 TO STA 254+06.92 WBL
STA 253+53.07 TO STA 255+03.90 EBL



EXISTING TYPICAL SECTION
STA 234+00 TO STA 252+56.09 WBL
STA 256+91.35 TO STA 263+00 WBL
STA 245+00 TO STA 251+07.34 EBL
STA 255+03.90 TO STA 275+00 EBL

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-typ1cad01.dgn

ESCA CONSULTANTS, INC.

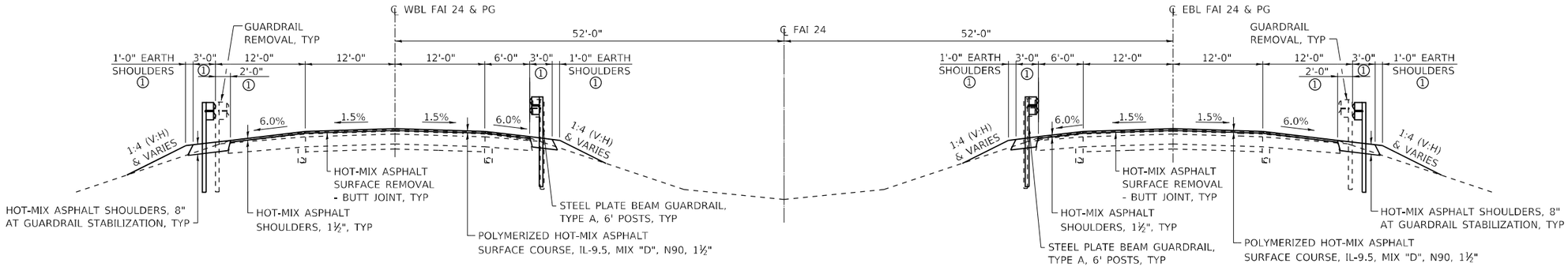
USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 0:2 ':' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

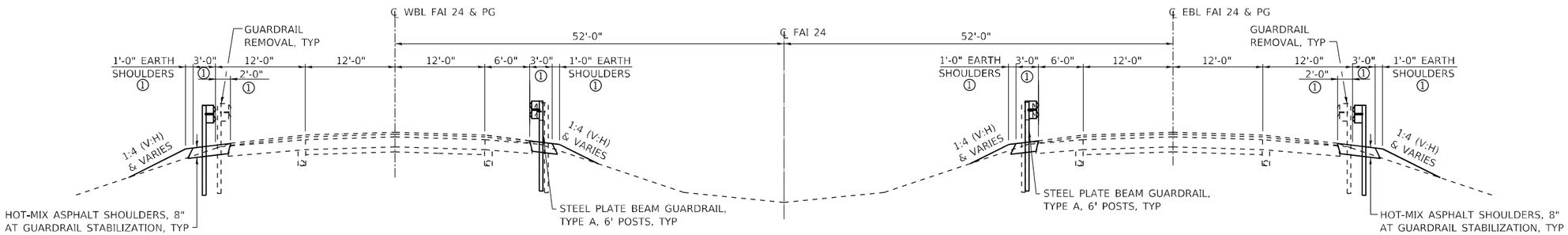
I–24 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

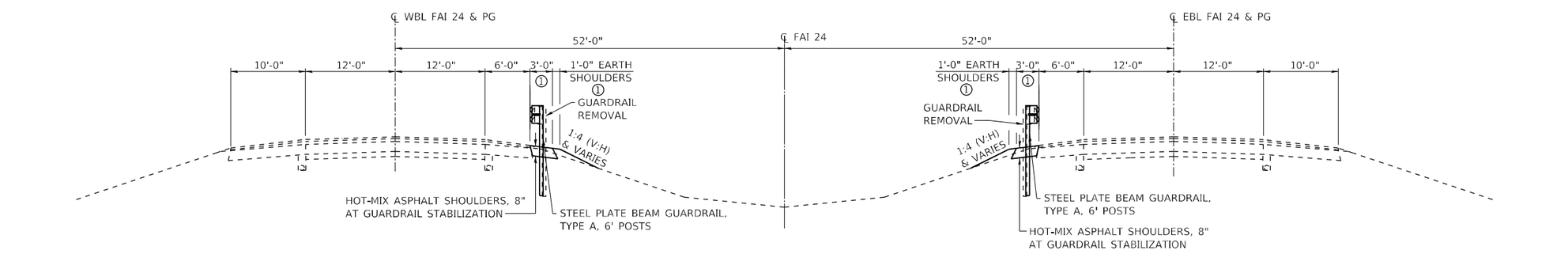
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	13
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



PROPOSED TYPICAL SECTION
STA 254+75.52 TO STA 255+15.52 WBL
STA 252+59.74 TO STA 252+99.74 EBL



PROPOSED TYPICAL SECTION
STA 255+15.52 TO STA 256+46 WBL
STA 251+29 TO STA 252+59.74 EBL



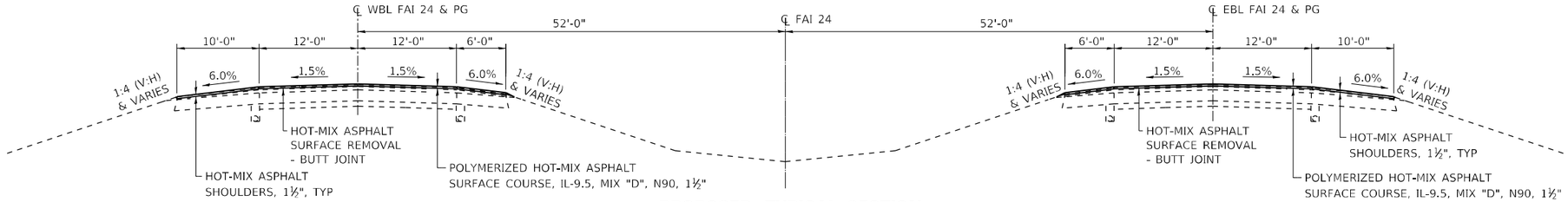
PROPOSED TYPICAL SECTION
STA 256+46 TO STA 257+56 WBL
STA 250+19 TO STA 251+29 EBL

① 6.0% CROSS SLOPE

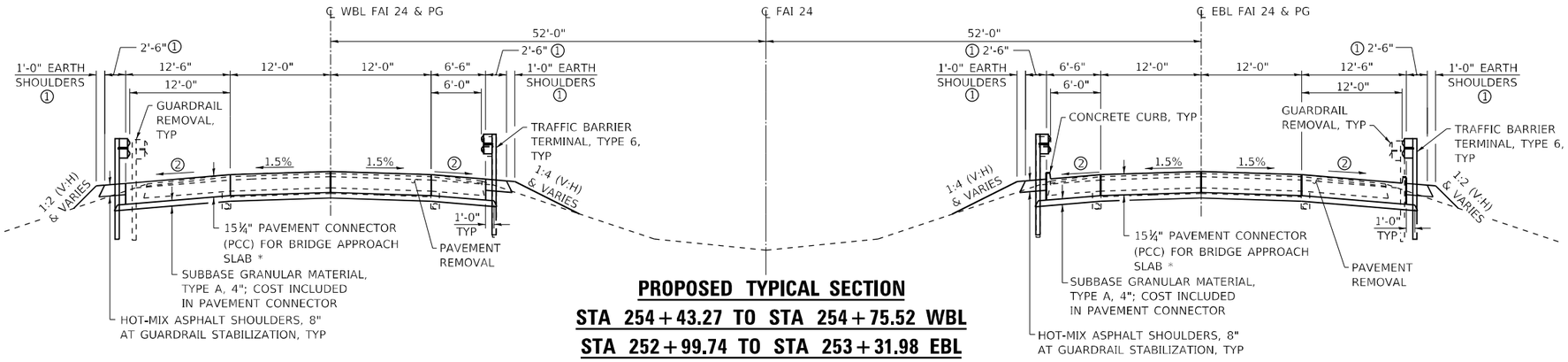
MODEL: PLOT
FILE NAME: Y:\IDOT\13359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-typicalt2.dgn

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-24 TYPICAL SECTIONS
	ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: NONE SHEET NO. 2 OF 3 SHEETS STA. TO STA.
	PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -		

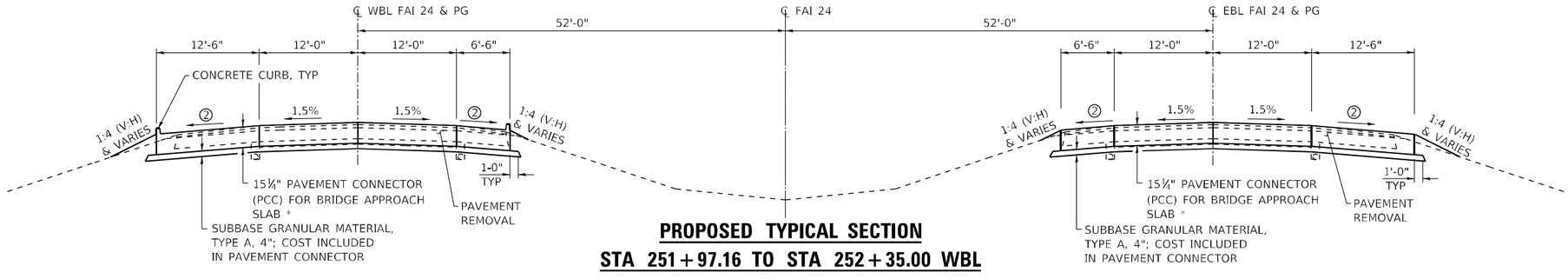
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	14
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



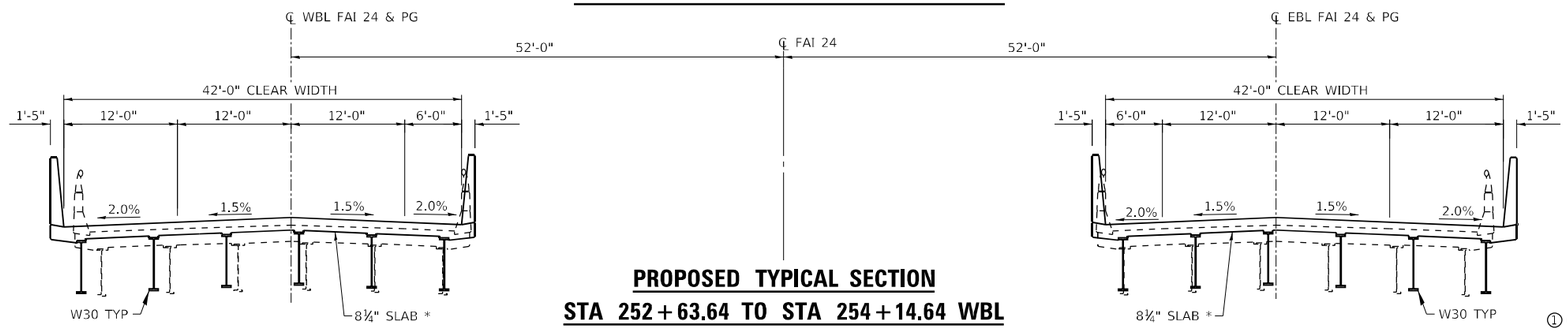
PROPOSED TYPICAL SECTION
STA 251+57.16 TO STA 251+97.16 WBL
STA 255+78.10 TO STA 256+18.10 EBL



PROPOSED TYPICAL SECTION
STA 254+43.27 TO STA 254+75.52 WBL
STA 252+99.74 TO STA 253+31.98 EBL



PROPOSED TYPICAL SECTION
STA 251+97.16 TO STA 252+35.00 WBL
STA 255+40.25 TO STA 255+78.10 EBL



PROPOSED TYPICAL SECTION
STA 252+63.64 TO STA 254+14.64 WBL
STA 253+60.62 TO STA 255+11.62 EBL

* PRIOR TO GRINDING

① 6.0% CROSS SLOPE

② TRANSITION SHOULDER CROSS SLOPE FROM 2.0% AT APPROACH SLAB TO 6.0% AT END OF CONNECTOR

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03-78685\CADD\Highway\CADD Sheets\D9786851-sht-typ1ca003.dgn

ESCA CONSULTANTS, INC.

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ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	15
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

EARTHWORK SCHEDULE

LOCATION			EARTH EXCAVATION	AVERAGE SHRINKAGE FACTOR	EARTH EXCAVATION ADJUSTED	EMBANKMENT	EARTHWORK BALANCE		FURNISHED EXCAVATION	REMARKS
							EXCAVATION REQUIRED TO COMPLETE	EXCESS EXCAVATION		
STA	TO	STA	CU YD	%	CU YD	CU YD	CU YD	CU YD	CU YD	
STA 234+25		STA 245+05	520	18	426	1055	630		630	NORTH CROSSOVERS CONSTRUCTION
STA 262+95		STA 273+75	595	18	488	1081	595		595	SOUTH CROSSOVERS CONSTRUCTION
RT STA 250+19		RT STA 253+49	90	18	74	18		56		EB I-24 STAGE II
RT STA 253+49		RT STA 255+23	810	18	664			664		EB CHANNEL EXCAVATION
RT STA 255+23		RT STA 256+18	45	18	37	10		27		EB I-24 STAGE II
LT STA 251+97		LT STA 252+52	55	18	45	1		44		WB I-24 STAGE III
LT STA 252+52		LT STA 254+26	810	18	664			664		WB CHANNEL EXCAVATION
LT STA 254+26		LT STA 257+56	80	18	66	30		36		WB I-24 STAGE III
LT STA 235+42		LT STA 243+42	570	18	467	54		413		NORTH CROSSOVERS REMOVAL (LT)
RT STA 235+89		RT STA 243+42	545	18	447	49		398		NORTH CROSSOVERS REMOVAL (RT)
LT STA 264+70		LT STA 273+50	540	18	443	65		378		SOUTH CROSSOVERS REMOVAL (LT)
RT STA 264+58		RT STA 273+50	525	18	431	77		354		SOUTH CROSSOVERS REMOVAL (RT)
		TOTALS	5185						1225	

EROSION CONTROL SCHEDULE

LOCATION	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER	TEMPORARY DITCH CHECKS	INLET AND PIPE PROTECTION	EROSION CONTROL BLANKET
	POUND	FOOT	FOOT	EACH	SQ YD
NORTHEAST QUADRANT	6	64			89
NORTHWEST QUADRANT	16	248			92
SOUTHEAST QUADRANT	18	231			201
SOUTHWEST QUADRANT	4	65			26
NORTH MEDIAN	14		138	1	
SOUTH MEDIAN	22		286	3	
NORTH CROSSOVERS	194		210	3	
SOUTH CROSSOVERS	276		143	4	
TOTALS	550	608	777	11	408

SEEDING SCHEDULE

LOCATION	SEEDING, CLASS 2	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NORTHEAST QUADRANT	0.03	0.03	3	3	3	0.06	0.06
NORTHWEST QUADRANT	0.08	0.08	7	7	7	0.16	0.16
SOUTHEAST QUADRANT	0.09	0.09	8	8	8	0.18	0.18
SOUTHWEST QUADRANT	0.02	0.02	2	2	2	0.04	0.04
NORTH MEDIAN	0.07	0.07	7	7	7	0.14	0.14
SOUTH MEDIAN	0.11	0.11	10	10	10	0.22	0.22
NORTH CROSSOVERS	0.97	0.97	87	87	87	1.94	1.94
SOUTH CROSSOVERS	1.38	1.38	124	124	124	2.76	2.76
TOTALS	2.75	2.75	248	248	248	5.5	5.50

CONCRETE WINGWALL EXTENSION SCHEDULE

LOCATION	CONCRETE SUPERSTRUCTURE	REINFORCEMENT BARS
	CU YD	POUND
NORTHWEST WINGWALL SN 064-0017	0.1	23
TOTALS	0.1	23

MEDIAN CROSSOVERS SCHEDULE

LOCATION	TRENCH BACKFILL	SUBBASE GRANULAR MATERIAL, TYPE A 8"	AGGREGATE SHOULDERS, TYPE B 6"	TEMPORARY PAVEMENT	PIPE CULVERTS, CLASS D, TYPE 1 15" (TEMPORARY)	END SECTIONS 15" SPECIAL	INLETS, TYPE A, TYPE 8 GRATE, TEMPORARY	PAVEMENT REMOVAL
	CU YD	SQ YD	SQ YD	SQ YD	FOOT	EACH	EACH	SQ YD
NORTH CROSSOVERS	17	3342	540	2895	200	2	2	1940
SOUTH CROSSOVERS	10	3351	540	2904	106	2	2	1936
TOTALS	27	6693	1080	5799	306		4	3876

TREE REMOVAL SCHEDULE

LOCATION	TREE REMOVAL, (6 TO 15 UNITS DIAMETER)
	UNIT
STA 255+48, 111' RT	15
TOTALS	15

CONCRETE CURB SCHEDULE

LOCATION	CONCRETE CURB, TYPE B	PROTECTIVE COAT
	FOOT	SQ YD
EBL STA 252+84.74 TO STA 252+99.74	15	2
TOTALS	15	2

BRIDGE APPROACH SCHEDULE

LOCATION	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	WELDED WIRE REINFORCEMENT	PROTECTIVE COAT	PAVEMENT REMOVAL
	SQ YD	SQ YD	SQ YD	SQ YD
SN 064-0047 NORTH APPROACH	165	101	168	264
SN 064-0047 SOUTH APPROACH	168	86	168	316
SN 064-0048 NORTH APPROACH	165	86	168	248
SN 064-0048 SOUTH APPROACH	168	101	168	336
TOTALS	666	374	672	1164

PIPE UNDERDRAIN SCHEDULE

LOCATION	CONCRETE HEADWALL REMOVAL	CONCRETE HEADWALLS FOR PIPE DRAINS	PIPE UNDERDRAINS 4" (SPECIAL)	REMOVE AND REINSTALL CONCRETE HEADWALL FOR PIPE DRAIN
	EACH	EACH	FOOT	EACH
RT STA 237+99	1	1	9	1
RT STA 238+03	1	1	9	1
LT STA 238+03	1	1	14	1
LT STA 238+06	1	1	14	1
LT STA 242+76	1	1	6	1
LT STA 242+78	1	1	6	1
RT STA 242+82	1	1	4	1
RT STA 242+84	1	1	4	1
RT STA 269+94	1	1	8	1
RT STA 269+98	1	1	8	1
LT STA 270+09	1	1	6	1
LT STA 270+12	1	1	6	1
TOTALS	12	12	94	12

SHOULDER SCHEDULE

LOCATION	AGGREGATE SHOULDERS, TYPE B 6"	HOT-MIX ASPHALT SHOULDERS, 1 1/2"	HOT-MIX ASPHALT SHOULDERS, 8"	PAVED SHOULDER REMOVAL	HOT-MIX ASPHALT BASE COURSE WIDENING, 13 1/2"	SHOULDER RUMBLE STRIPS, 16 INCH	BITUMINOUS MATERIALS (TACK COAT)
	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	FOOT	POUND
EBL STA 234+30.71 TO STA 237+84.43				236		354	
EBL STA 235+88.70 TO STA 243+42.01	168						
EBL STA 241+28.95 TO STA 245+00.00				248		372	
EBL STA 242+00 TO STA 253+00				734	734	1100	2147
EBL STA 250+19 TO STA 253+30			87				235
EBL STA 251+29 TO STA 253+69			122				329
EBL STA 252+59.74 TO STA 252+99.74		72				80	33
EBL STA 255+78 TO STA 266+00				682	682	1022	1995
EBL STA 255+78.10 TO STA 256+18.10		72				80	33
EBL STA 263+00.00 TO STA 266+53.72				236		354	
EBL STA 264+57.99 TO STA 272+64.10	180						
EBL STA 270+15.57 TO STA 273+69.29				236		354	
WBL STA 234+30.71 TO STA 237+84.43				236		354	
WBL STA 235+42.40 TO STA 243+42.01	178						
WBL STA 241+46.28 TO STA 245+00.00				236		354	
WBL STA 242+00 TO STA 251+97				665	665	997	1945
WBL STA 251+57.16 TO STA 251+97.16		72				80	33
WBL STA 254+06 TO STA 256+46			124				335
WBL STA 254+45 TO STA 257+56			91				246
WBL STA 254+75 TO STA 266+00				750	750	1125	2194
WBL STA 254+75.52 TO STA 255+15.52		72				80	33
WBL STA 263+00.00 TO STA 266+71.05				248		372	
WBL STA 264+69.80 TO STA 272+11.31	165						
WBL STA 270+15.57 TO STA 273+69.29				236		354	
TOTALS	691	288	424	4743	2831	7432	9558

PAVING SCHEDULE

LOCATION	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	LONGITUDINAL JOINT SEALANT	BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT
	TON	FOOT	POUND	SQ YD
WBL STA 251+57.16 TO STA 251+97.16	9	40	49	179
WBL STA 254+75.52 TO STA 255+15.52	9	40	49	175
EBL STA 252+59.74 TO STA 252+99.74	9	40	49	177
EBL STA 255+78.10 TO STA 256+18.10	9	40	49	182
TOTALS	36	160	196	713

GUARDRAIL SCHEDULE

LOCATION	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (FLARED)	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL REFLECTORS, TYPE A	* GUARDRAIL REFLECTORS, TYPE B
	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SN 064-0047 SOUTHEAST CORNER	281	137.5	1	1			1	3	3
SN 064-0047 SOUTHWEST CORNER	261	212.5	1	1			1	4	3
SN 064-0048 NORTHEAST CORNER	222	212.5	1	1			1	4	3
SN 064-0048 NORTHWEST CORNER	279	137.5	1	1			1	3	3
SN 064-0048 SOUTHEAST CORNER					1	1	1	2	3
SN 064-0017 NORTHWEST CORNER					1	1	1	2	3
TOTALS	1043	700	4	4	2	2	6	18	18

* LOCATED ON BRIDGE PARAPETS

MODEL: PLOT
FILE NAME: Y:\IDOT\13359-03_78685\CADD\Highway\CADD Sheets\D9786852-sht-schedule02.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM	REVISED -	**STATE OF ILLINOIS**	**SCHEDULES OF QUANTITIES**	
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -	**DEPARTMENT OF TRANSPORTATION**		
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: NONE	SHEET NO. 2 OF 3 SHEETS STA. TO STA.
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	17
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

TEMPORARY PAVEMENT MARKING SCHEDULE

LOCATION	DESCRIPTION	TEMPORARY PAVEMENT MARKING - LINE 6" - PAINT		PAVEMENT MARKING REMOVAL - GRINDING	SHORT TERM PAVEMENT MARKING		SHORT TERM PAVEMENT MARKING REMOVAL
		FOOT		SQ FT	FOOT		SQ FT
		WHITE	YELLOW		WHITE	YELLOW	
AFTER STAGE 1A & 1B							
WB I-24							
STA 251+19 TO STA 257+07	WHITE EDGE LINE	588		294	24		8
STA 251+19 TO STA 257+07	YELLOW EDGE LINE		588	294		24	8
STA 252+19 TO STA 272+07	CENTERLINE SKIP	500		250	200		67
STAGE II TRAFFIC CONTROL *							
WB I-24							
STA 242+00 TO STA 266+00	WHITE EDGE LINE	2400		1200			
AFTER STAGE II							
WB I-24							
STA 240+00 TO STA 268+40	YELLOW EDGE LINE		2840	1420		116	39
STA 242+00 TO STA 1305+02	CENTERLINE SKIP	1580		790	632		211
STA 242+00 TO STA 266+00	WHITE EDGE LINE	2400		1200	96		32
EB I-24							
STA 207+87 TO STA 273+69	CENTERLINE SKIP	1650		825	660		220
STA 217+87 TO STA 273+69	YELLOW EDGE LINE		5582	2791		224	75
STA 218+80 TO STA 220+20	WHITE EDGE LINE	140		70	8		3
STA 218+80 TO STA 220+20	WHITE EDGE LINE	140		70	8		3
STA 220+20 TO STA 222+90	ENTRANCE MERGE SKIP	70		35	28		10
STA 242+00 TO STA 266+00	WHITE EDGE LINE	2400		1200	96		32
STAGE III TRAFFIC CONTROL *							
STA 242+00 TO STA 266+00	WHITE EDGE LINE	2400		1200	96		32
AFTER STAGE III							
WB I-24							
STA 234+31 TO STA 284+00	YELLOW EDGE LINE		4969	2485		200	67
STA 234+31 TO STA 294+00	CENTERLINE SKIP	1500		750	600		200
STA 242+00 TO STA 266+00	WHITE EDGE LINE	2400		1200	96		32
EB I-24							
STA 203+00 TO STA 273+69	CENTERLINE SKIP	1770		885	708		236
STA 242+00 TO STA 268+00	YELLOW EDGE LINE		2600	1300		104	35
STA 242+00 TO STA 266+00	WHITE EDGE LINE	2400		1200	96		32
	SUBTOTALS	22338	16579	19459	3348	668	1342
	TOTALS	38917		19459	4016		1342

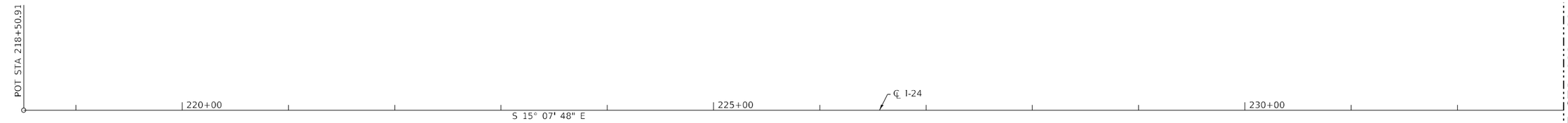
* ADDITIONAL TEMPORARY PAVEMENT MARKING NOT INCLUDED IN STANDARD 701416 OR 701411

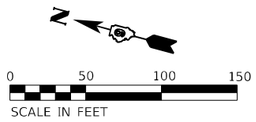
TEMPORARY CONCRETE BARRIER SCHEDULE

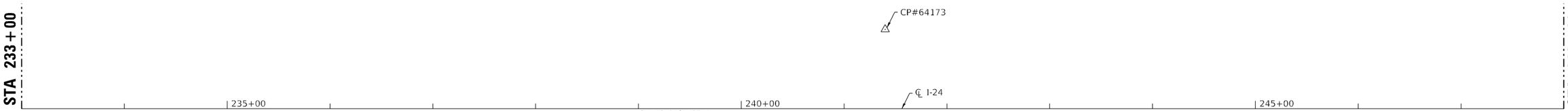
LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3
	FOOT	FOOT	EACH	EACH
STAGE 1A TRAFFIC CONTROL	425		1	
STAGE 1B TRAFFIC CONTROL		425		1
STAGE II TRAFFIC CONTROL	2850			
STAGE III TRAFFIC CONTROL	2850			
TOTALS	6125	425	1	1

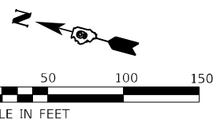
PAVEMENT MARKING SCHEDULE

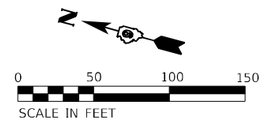
LOCATION	DESCRIPTION	SHORT TERM PAVEMENT MARKING		SHORT TERM PAVEMENT MARKING REMOVAL	THERMOPLASTIC PAVEMENT MARKING - LINE 6"		THERMOPLASTIC PAVEMENT MARKING - LINE 8"	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"		PAVEMENT MARKING REMOVAL - GRINDING	RAISED REFLECTIVE PAVEMENT MARKER	REPLACEMENT REFLECTOR	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL
		FOOT		SQ FT	FOOT		FOOT	FOOT		SQ FT	EACH	EACH	EACH	EACH
		WHITE	YELLOW		WHITE	YELLOW	WHITE	WHITE	YELLOW					
WB I-24														
STA 234+31 TO STA 1305+02	CENTERLINE SKIP	708		236	1700			70		885	2	84	2	84
STA 234+31 TO STA 284+00	YELLOW EDGE LINE		200	67		4690			279	2485				
STA 242+00 TO STA 266+00	WHITE EDGE LINE	96		32	2121			279		1200				
EB I-24														
STA 203+00 TO STA 273+69	CENTERLINE SKIP	708		236	1700			70		885	2	84	2	84
STA 217+87 TO STA 273+69	YELLOW EDGE LINE		224	75		5303			279	2791				
STA 218+80 TO STA 220+20	WHITE EDGE LINE	8		3			140			93				
STA 218+80 TO STA 220+20	WHITE EDGE LINE	8		3	140					70				
STA 220+20 TO STA 222+90	ENTRANCE MERGE SKIP	32		11	70					35				
STA 242+00 TO STA 266+00	WHITE EDGE LINE	96		32	2121			279		1200				
	SUBTOTALS	1656	424	695	7852	9993	140	698	558	9644	4	168	4	168
	TOTALS	2080		695	17845		140	1256		9644	4	168	4	168

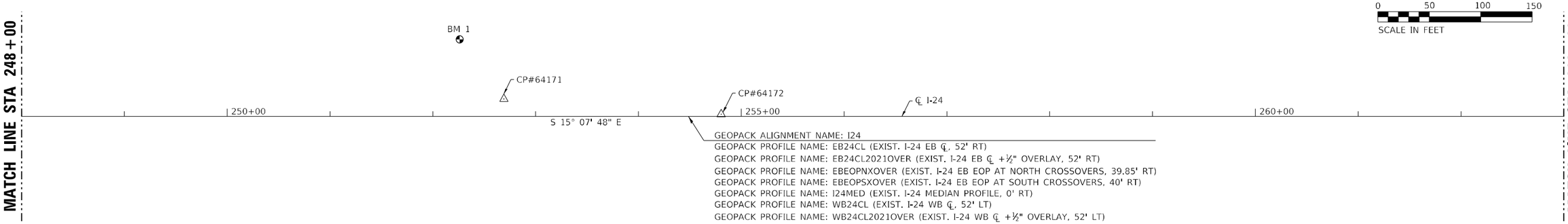












GEOPACK ALIGNMENT NAME: I24
GEOPACK PROFILE NAME: EB24CL (EXIST. I-24 EB ℄, 52' RT)
GEOPACK PROFILE NAME: EB24CL2021OVER (EXIST. I-24 EB ℄ +½" OVERLAY, 52' RT)
GEOPACK PROFILE NAME: EBEOPNXOVER (EXIST. I-24 EB EOP AT NORTH CROSSOVERS, 39.85' RT)
GEOPACK PROFILE NAME: EBEOPSXOVER (EXIST. I-24 EB EOP AT SOUTH CROSSOVERS, 40' RT)
GEOPACK PROFILE NAME: I24MED (EXIST. I-24 MEDIAN PROFILE, 0' RT)
GEOPACK PROFILE NAME: WB24CL (EXIST. I-24 WB ℄, 52' LT)
GEOPACK PROFILE NAME: WB24CL2021OVER (EXIST. I-24 WB ℄ +½" OVERLAY, 52' LT)
GEOPACK PROFILE NAME: WBEOPNXOVER (EXIST. I-24 WB EOP AT NORTH CROSSOVERS, 40.2' LT)
GEOPACK PROFILE NAME: WBEOPSXOVER (EXIST. I-24 WB EOP AT SOUTH CROSSOVERS, 40' LT)

BENCHMARK

NAVD 88

BM 1 - "□" IN N.E. WINGWALL OF WEST BOUND IL-24 STRUCTURE 064-0017
STA 252+26, 75.0' LT ℄ I-24, EL 350.74

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-ih-alm10.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JPC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1"=50' | SHEET NO. 1 OF 2 SHEETS | STA. 218+50.91 | TO STA. 263+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	19
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

MATCH LINE STA 263+00
SEE SHEET 19 FOR CONT.

CP#76

265+00 | 270+00 | 275+00

℄ I-24

S 15° 07' 48" E

MATCH LINE STA 278+00

N

0 50 100 150

SCALE IN FEET

MATCH LINE STA 278+00

280+00 | 285+00 | 290+00

℄ I-24

S 15° 07' 48" E

MATCH LINE STA 293+00

N

0 50 100 150

SCALE IN FEET

MATCH LINE STA 293+00

295+00

℄ I-24

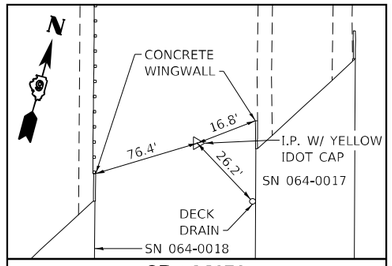
POT STA 298+82.15

S 15° 07' 48" E

N

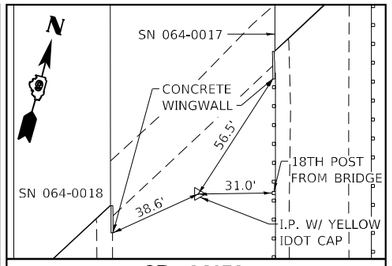
0 50 100 150

SCALE IN FEET



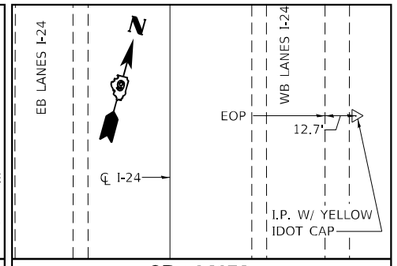
CP#64171

STA 252+69.2, 17.0' LT ℄ I-24
N = 226497.4430 E = 863402.4060



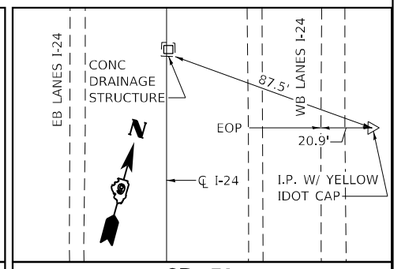
CP#64172

STA 254+80.5, 2.2' LT ℄ I-24
N = 226289.5670 E = 863443.2210



CP#64173

STA 241+40.0, 76.8' LT ℄ I-24
N = 227603.1140 E = 863165.4130



CP#76

STA 264+39.9, 84.7' LT ℄ I-24
N = 225384.8880 E = 863773.2870

MODEL: PLOT
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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JPC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1"=50' | SHEET NO. 2 OF 2 SHEETS | STA. 263+00.00 TO STA. 298+82.15

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	20
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

N

0 20 40 60

SCALE IN FEET

LEGEND

HMA SHOULDERS

EX ROW

EXISTING PIPE UNDERDRAINS TO REMAIN

EXISTING PIPE UNDERDRAIN TO REMAIN

EXISTING 6'S x 4'R RC BOX CULVERT TO REMAIN

195'

155'

175'

10'

24'

6'

HMA

℄ WBL I-24 & PROFILE GRADE

℄ EBL I-24 & PROFILE GRADE

℄ I-24

GRASS MEDIAN

245+00 246 247 248 249 250+00

EXISTING PIPE UNDERDRAINS TO REMAIN

SPBGR TY A 6' POSTS

TBT TY1 SPL (TAN)

+19 +25

+43.3 BLON

+80.8

MATCH LINE STA 251+00
SEE SHEET 22 FOR CONT.

EX ROW

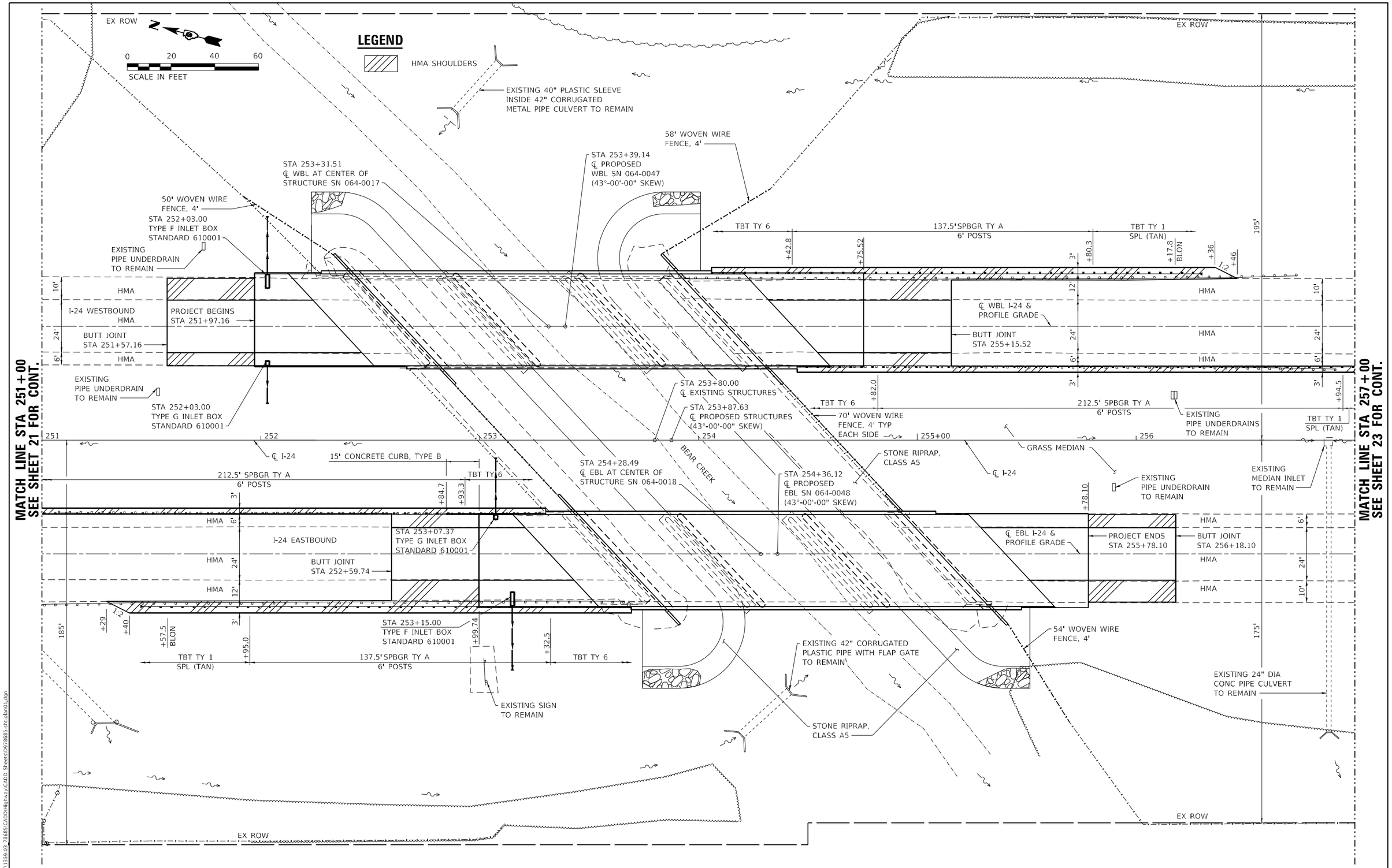
EX ROW

MODEL: Default
FILE NAME: X:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\0978685-ilh-ilan01.dgn

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SKM	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**I-24 PLAN**
	ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -		

SCALE: 1"=20' | SHEET NO. 1 OF 3 SHEETS | STA. 245+00 | TO STA. 251+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	21
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



MODEL: Default
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ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SKM	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**I-24 PLAN**
	ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -		SCALE: 1"=20' | SHEET NO. 2 OF 3 SHEETS | STA. 251+00 TO STA. 257+00
	PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	22
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

EX ROW

EX ROW

LEGEND

HMA SHOULDERS

0 20 40 60

SCALE IN FEET

195'

EXISTING
PIPE UNDERDRAINS
TO REMAIN

10'
24'
6'

HMA

HMA

HMA

℄ WBL I-24 &
PROFILE GRADE

10'
24'
6'

+32.0
BLON

+50

+56

2

TBT TY 1
SPL (TAN)

GRASS MEDIAN

EXISTING
PIPE UNDERDRAINS
TO REMAIN

257 258 259 260+00 261 262

℄ I-24

EXISTING
PIPE UNDERDRAINS
TO REMAIN

MATCH LINE STA 257+00
SEE SHEET 22 FOR CONT.

6'
24'
10'

HMA

HMA

HMA

℄ EBL I-24 &
PROFILE GRADE

6'
24'
10'

175'

EXISTING
PIPE UNDERDRAINS
TO REMAIN

EX ROW

EX ROW

MODEL: Default
FILE NAME: X:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\0978685-dh-plan01.dgn

ESCA CONSULTANTS, INC.

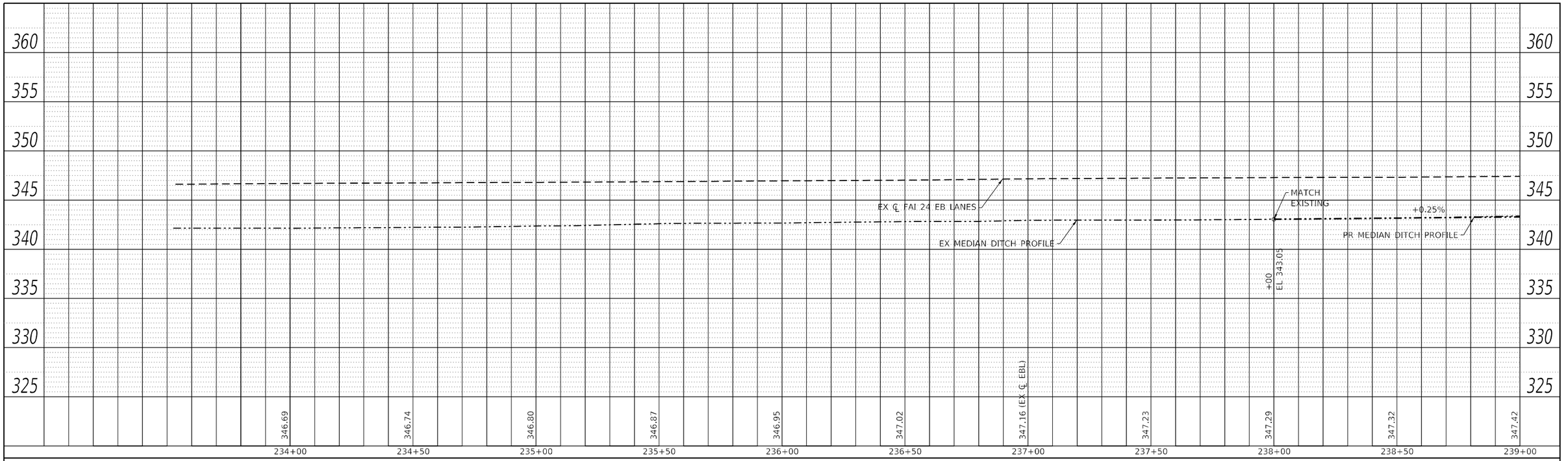
USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -

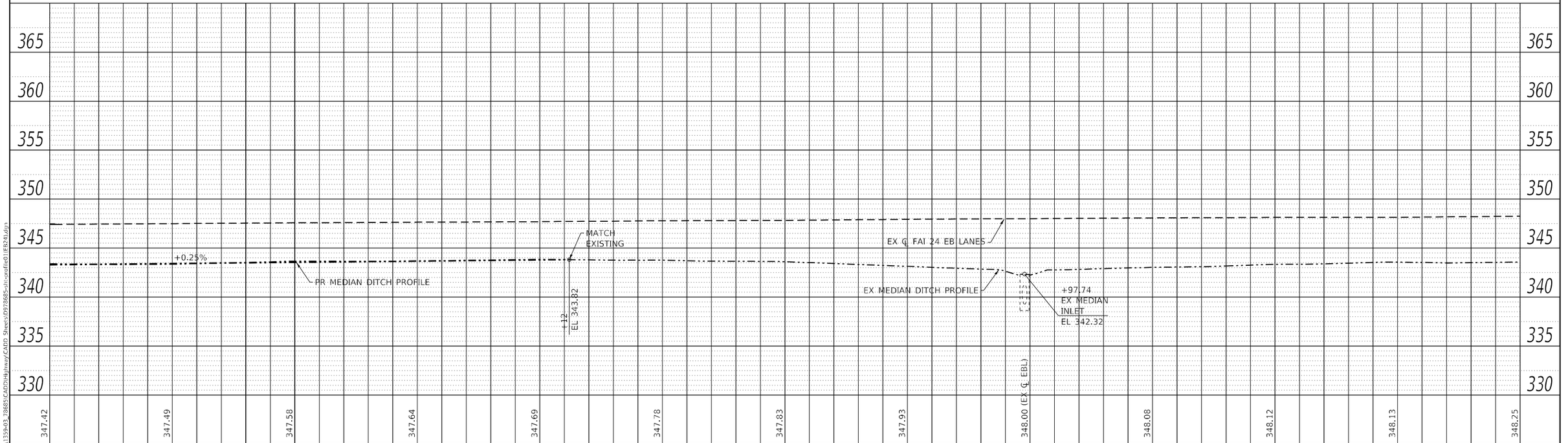
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-24 PLAN

SCALE: 1"=20' | SHEET NO. 3 OF 3 SHEETS | STA. 257+00 | TO STA. 263+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	23
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			





PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. CHECKED
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

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ESCA CONSULTANTS, INC.

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ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 EASTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 1 OF 4 SHEETS | STA. 233+50 TO STA. 245+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	24
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

PLAN

BY	DATE
SURVEYED	
PLOTTED	
DESIGN CHECKED	
ALIGNMENT CHECKED	
R.O.W. CHECKED	
CADD FILE NAME	
NOTE BOOK	
NO.	

365 360 355 350 345 340 335 330

EX ℄ FAI 24 EB LANES

EX MEDIAN DITCH PROFILE

EX 4 X 6'
BOX CULVERT

348.25 348.33 348.40 348.42 348.55 348.52 348.59 348.62 348.64 (EX ℄ EBL) 348.71 348.77 348.86 348.89

245+00 245+50 246+00 246+50 247+00 247+50 248+00 248+50 249+00 249+50 250+00 250+50 251+00

PROFILE

BY	DATE
SURVEYED	
PLOTTED	
DESIGN CHECKED	
DRA. NOTED	
STRUCTURE NOTATNS CHKD	
NOTE BOOK	
NO.	

365 360 355 350 345 340 335 330

PR ℄ FAI 24 EB LANES

+0.101%

STA 252+59.74
EL 349.08
BUTT JOINT

STA 252+99.74
EL 349.23

EX STRUCTURE

PR STRUCTURE

STA 255+78.10
EL 349.51

STA 256+18.10
EL 349.44
BUTT JOINT

EX ℄ FAI 24 EB LANES

+88.08
EX MEDIAN
INLET
EL 344.67

EX MEDIAN DITCH PROFILE

348.89 348.94 348.99 349.07 349.15 (EX ℄ EBL) 349.23 (PR ℄ EBL) 349.30 349.28 349.35 349.33 349.41 349.38 349.43 349.43 349.36 349.49 349.46 349.47 349.41 349.37

251+00 251+50 252+00 252+50 253+00 253+50 254+00 254+50 255+00 255+50 256+00 256+50 257+00

MODEL: Default
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-profile01EB241.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 EASTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 2 OF 4 SHEETS | STA. 245+00 TO STA. 257+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	25
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

PLAN

SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. CHECKED
CADD FILE NAME

NOTE BOOK
NO.

BY

DATE

365
360
355
350
345
340
335
330

EX ℄ FAI 24 EB LANES
EX MEDIAN DITCH PROFILE

349.37 | 349.41 | 349.47 | 349.50 | 349.54 | 349.59 | 349.50 | 349.58 | 349.83 (EX ℄ EBL) | 350.17 | 350.46 | 350.59 | 350.66

257+00 | 257+50 | 258+00 | 258+50 | 259+00 | 259+50 | 260+00 | 260+50 | 261+00 | 261+50 | 262+00 | 262+50 | 263+00

PROFILE

SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. CHECKED
BM. NOTED
STRUCTURE NO(S).

NOTE BOOK
NO.

BY

DATE

365
360
355
350
345
340
335
330

EX ℄ FAI 24 EB LANES
MATCH EXISTING
PR MEDIAN DITCH PROFILE
+0.36%
EX MEDIAN DITCH PROFILE
+07.79
EX MEDIAN INLET
EL 346.25
+96
EL 347.56

350.66 | 350.75 | 350.85 | 350.93 | 351.00 | 351.11 | 351.14 | 351.16 | 351.24 (EX ℄ EBL) | 351.29 | 351.39 | 351.44 | 351.51

263+00 | 263+50 | 264+00 | 264+50 | 265+00 | 265+50 | 266+00 | 266+50 | 267+00 | 267+50 | 268+00 | 268+50 | 269+00

MODEL: Default
FILE NAME: Y:\IDOT\1339-03_78685\CADD\Highway\CADD Sheets\D978685-sht-profile01EB241.dgn

ESCA CONSULTANTS, INC.

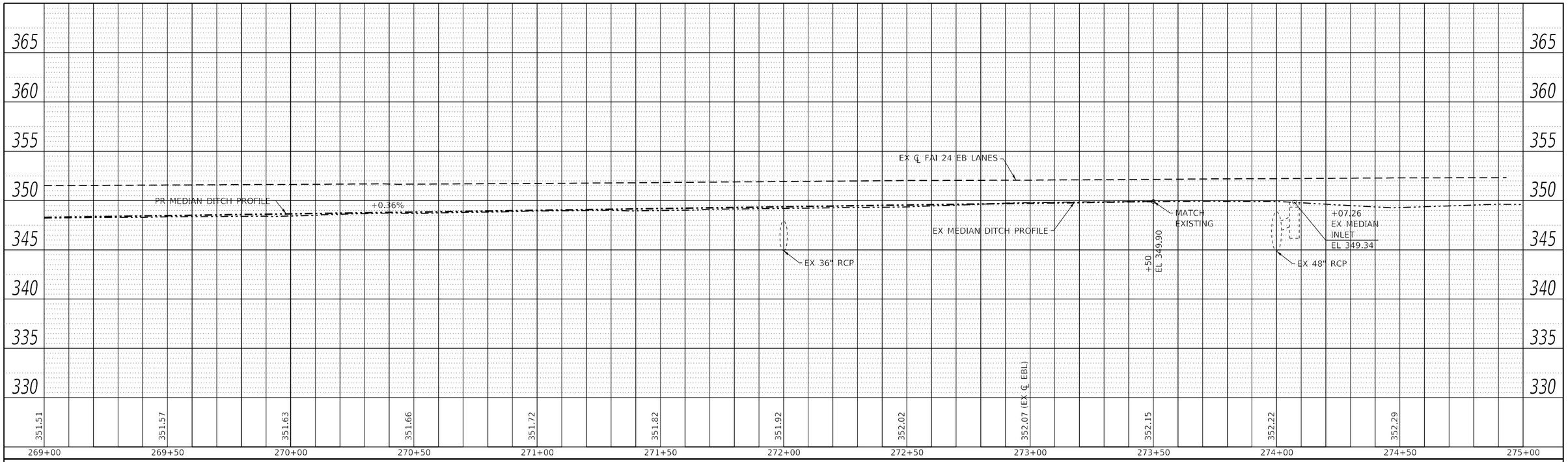
USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 EASTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 3 OF 4 SHEETS | STA. 257+00 | TO STA. 269+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	26
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



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SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
PROFILE CHECKED
S.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

MODEL: Default
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9378685-sht-roadfile03(FE9241.dgn

ESCA CONSULTANTS, INC.

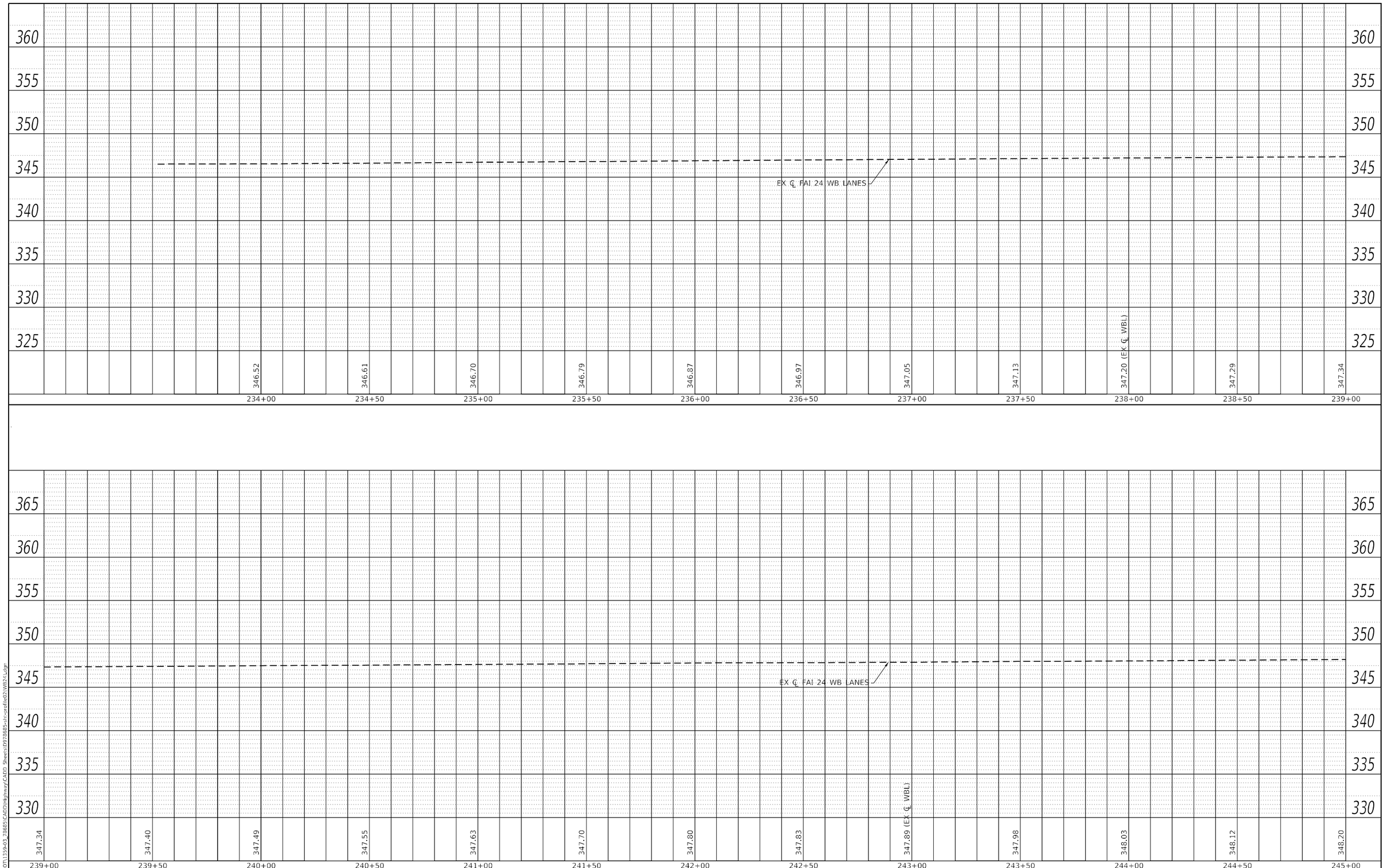
USER NAME = nhc	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 EASTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 4 OF 4 SHEETS | STA. 269+00 | TO STA. 275+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	27
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADE CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

MODEL: Default
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USER NAME = nhc	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -	

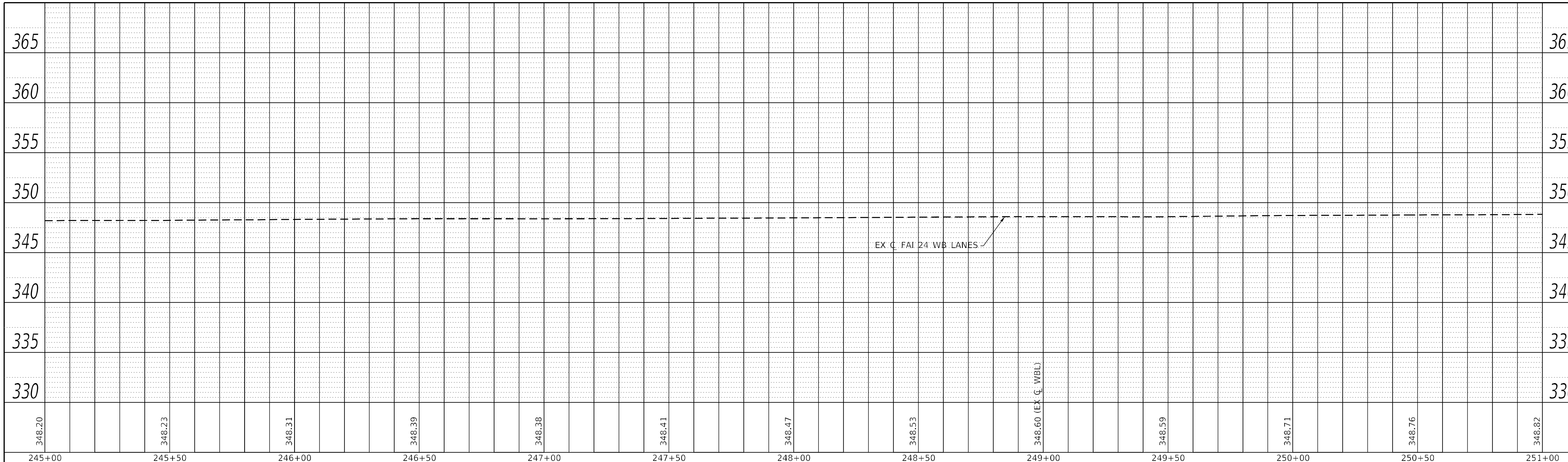
ESCA CONSULTANTS, INC.

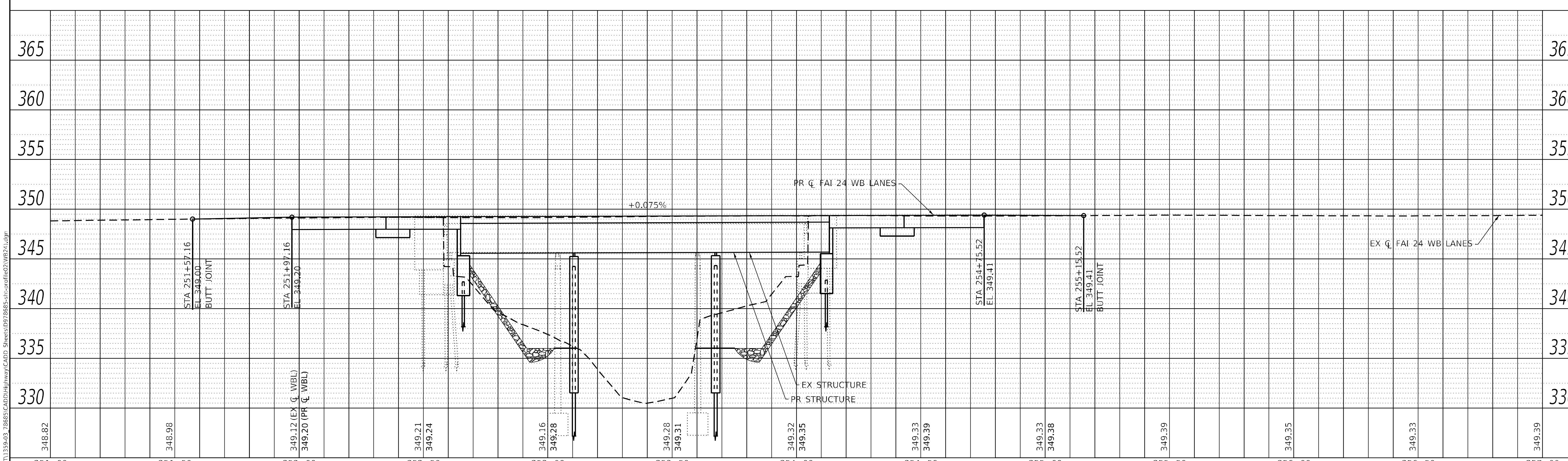
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 WESTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 1 OF 4 SHEETS | STA. 233+50 | TO STA. 245+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	28
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			





PLAN — NOTE BOOK NO. ___ — SURVEYED / PLOTTED / ALIGNMENT CHECKED / R.O.W. CHECKED / CADD FILE NAME — BY — DATE

PROFILE — NOTE BOOK NO. ___ — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATNS CTYED — BY — DATE

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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 WESTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 2 OF 4 SHEETS | STA. 245+00 TO STA. 257+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	29
		CONTRACT NO. 78685		
		ILLINOIS FED. AID PROJECT		

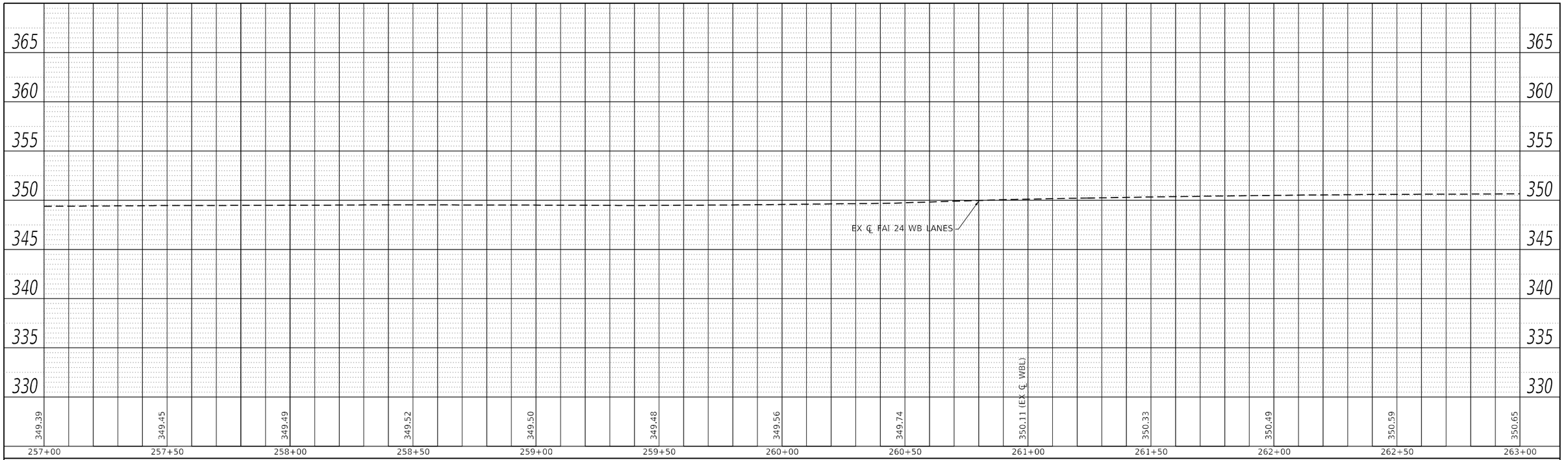
PLAN

SURVEYED
PLOTTED
ABSENT CHECKED
R.O.W. CHECKED
CADD FILE NAME

NOTE BOOK
NO.

BY

DATE

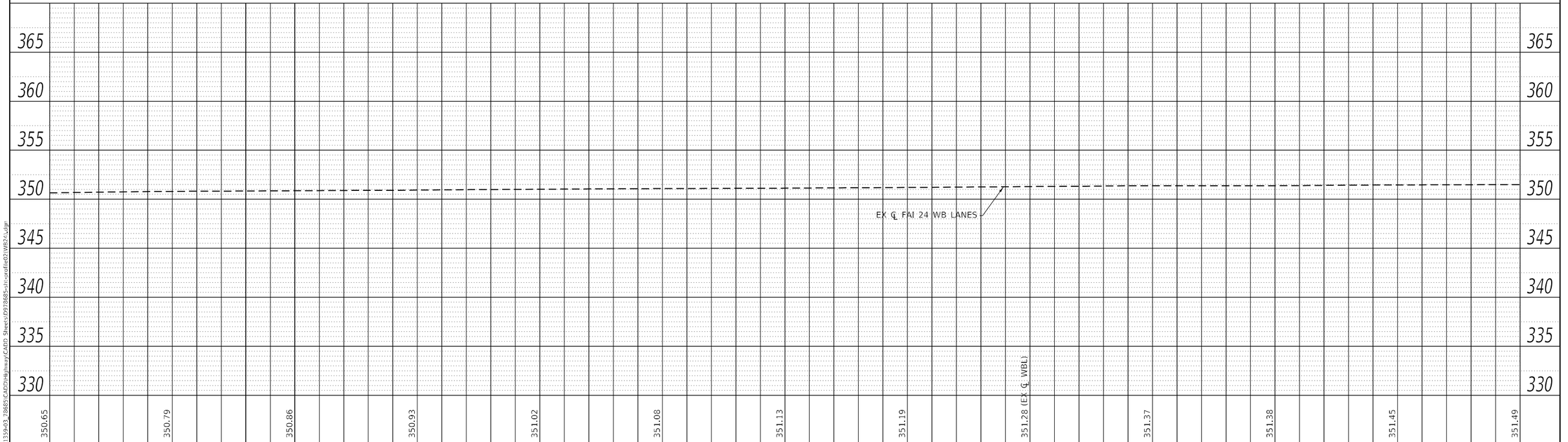


PROFILE

SURVEYED
PLOTTED
CHECKED
R.O.W. MONUMENTED
NOTE BOOK
NO.

BY

DATE



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ESCA CONSULTANTS, INC.

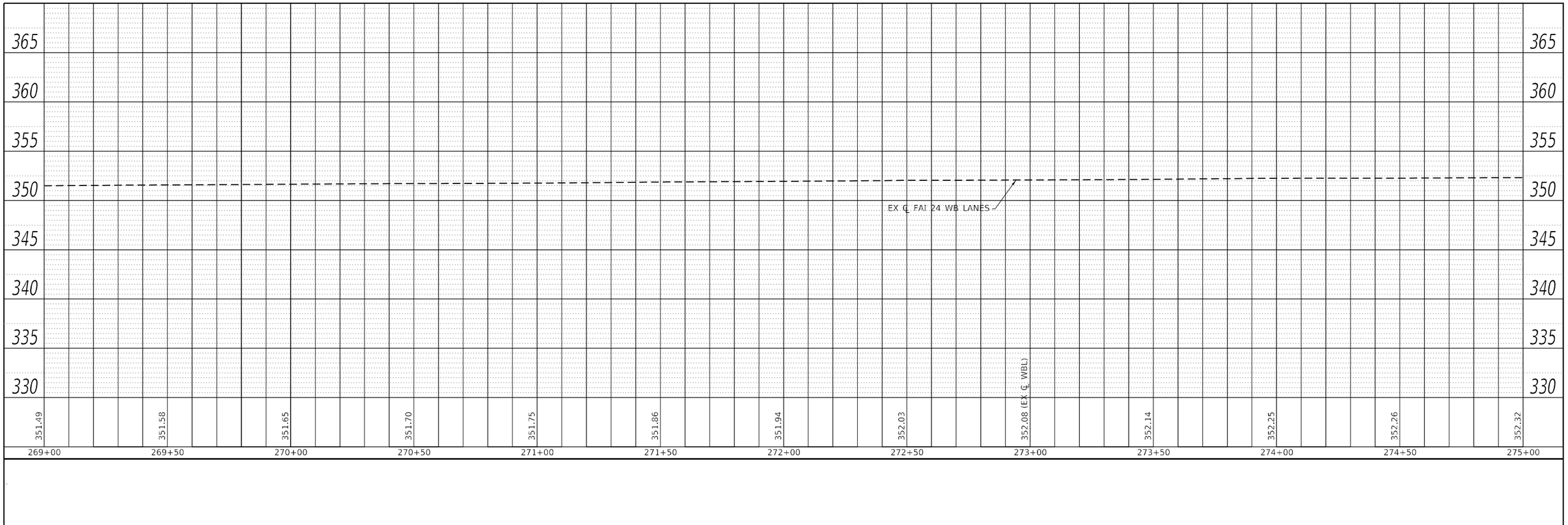
USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-24 WESTBOUND PROFILE

SCALE: AS SHOWN | SHEET NO. 3 OF 4 SHEETS | STA. 257+00 | TO STA. 269+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	30
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



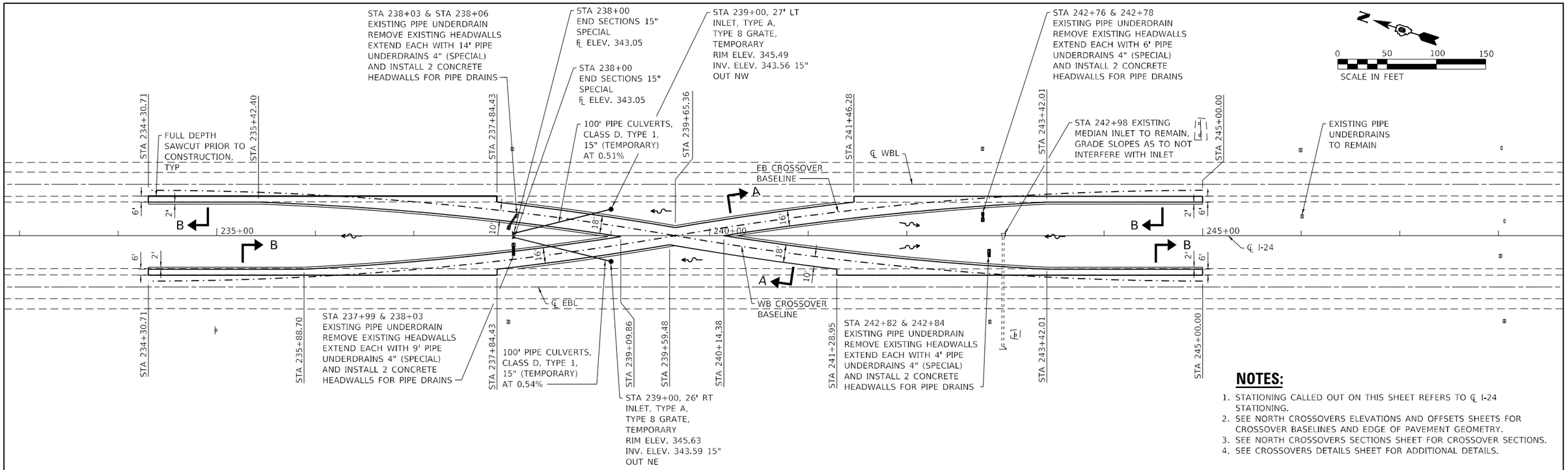
PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. CHECKED
NOTE BOOK
NO.
CADD FILE NAME
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADE CHECKED
S.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

MODEL: Default
FILE NAME: Y:\IDOT\1359-03_78685\CADD\HighwayCADD Sheets\0978685-alt-profile02(WB24).dgn

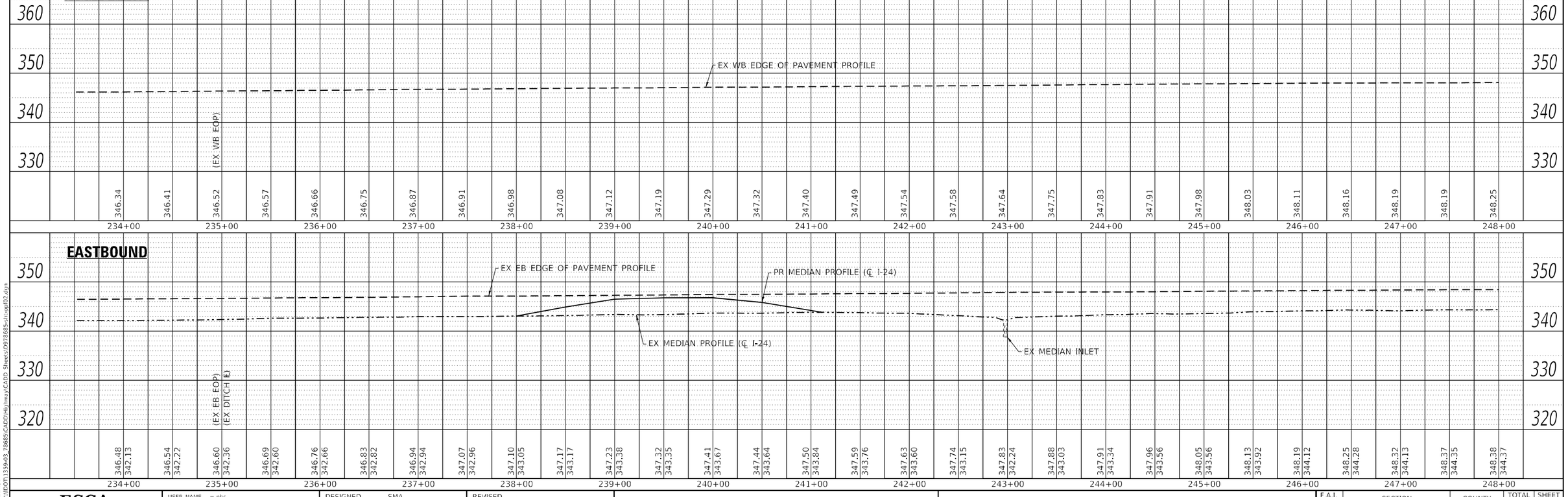
ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SKM	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**I–24 WESTBOUND PROFILE**
	ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -		
	PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -		SCALE: AS SHOWN | SHEET NO. 4 OF 4 SHEETS | STA. 269+00 TO STA. 275+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	31
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. STATIONING CALLED OUT ON THIS SHEET REFERS TO ℄ I-24 STATIONING.
2. SEE NORTH CROSSOVERS ELEVATIONS AND OFFSETS SHEETS FOR CROSSOVER BASELINES AND EDGE OF PAVEMENT GEOMETRY.
3. SEE NORTH CROSSOVERS SECTIONS SHEET FOR CROSSOVER SECTIONS.
4. SEE CROSSOVERS DETAILS SHEET FOR ADDITIONAL DETAILS.



ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SMA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTH CROSSOVERS PLAN AND PROFILE
	ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -		SCALE: AS SHOWN | SHEET NO. 1 OF 1 SHEETS | STA. 233+50 TO STA. 248+00
	PLOT SCALE = 100.0000 ' / in.	CHECKED - SKM	REVISED -		
	PLOT DATE = 3/22/2022	DATE - 04/21	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	32
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

PLAN — SURVEYED — PLOTTED — DRAWN — CHECKED — QUANTITIES CHECKED — R.O.W. NOTED — STRUCTURE NOTATIONS CHKD — NOTE BOOK — NO. — BY — DATE

PROFILE — SURVEYED — PLOTTED — DRAWN — CHECKED — QUANTITIES CHECKED — R.O.W. NOTED — STRUCTURE NOTATIONS CHKD — NOTE BOOK — NO. — BY — DATE

MODEL: BORDER01
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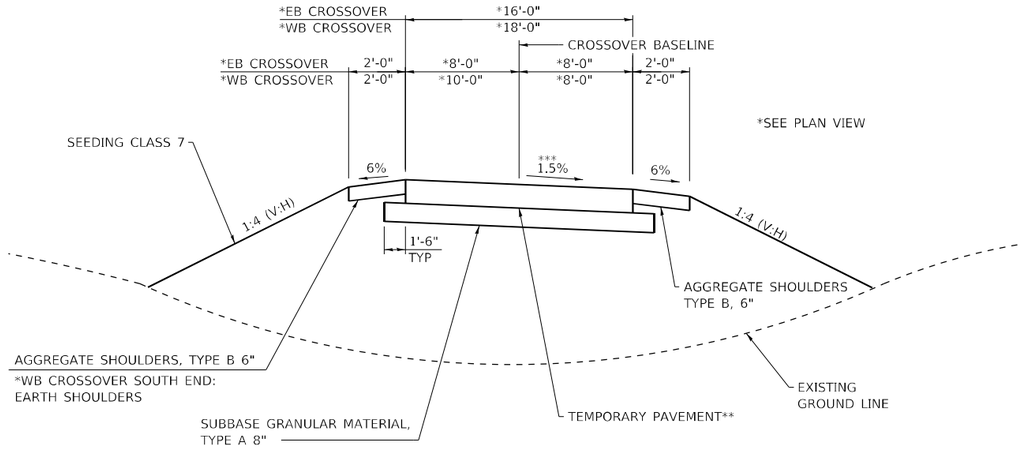
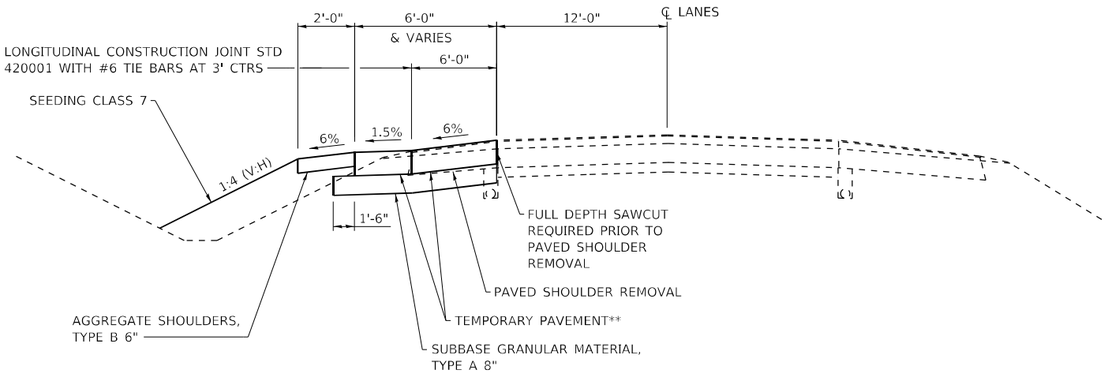


NORTH CROSSOVERS SECTION A

**CONTRACTOR MAY CONSTRUCT 10¼" JOINTED PCC PAVEMENT (SHOWN) OR 13½" FULL DEPTH HMA PAVEMENT AS TEMPORARY PAVEMENT

***SOUTH ENDS SHOWN;
NORTH ENDS OPPOSITE CROSSLOPE



NORTH CROSSOVERS SECTION B

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-typ1cat04.dgn

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SMA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTH CROSSOVERS TYPICAL SECTIONS
	ESCA PROJECT NO. 1359.03	DRAWN - SMA/IRC	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -		
	PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	33
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

N

0 50 100 150

SCALE IN FEET

WB CROSSOVER
BASELINE CURVE 1 DATA

PI STA 51+94.74
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PC STA 49+25.44 = I-24 STA 234+30.71, 46' LT
PCC STA 54+62.72 = I-24 STA 239+65.36, 0' RT

WB CROSSOVER
BASELINE CURVE 2 DATA

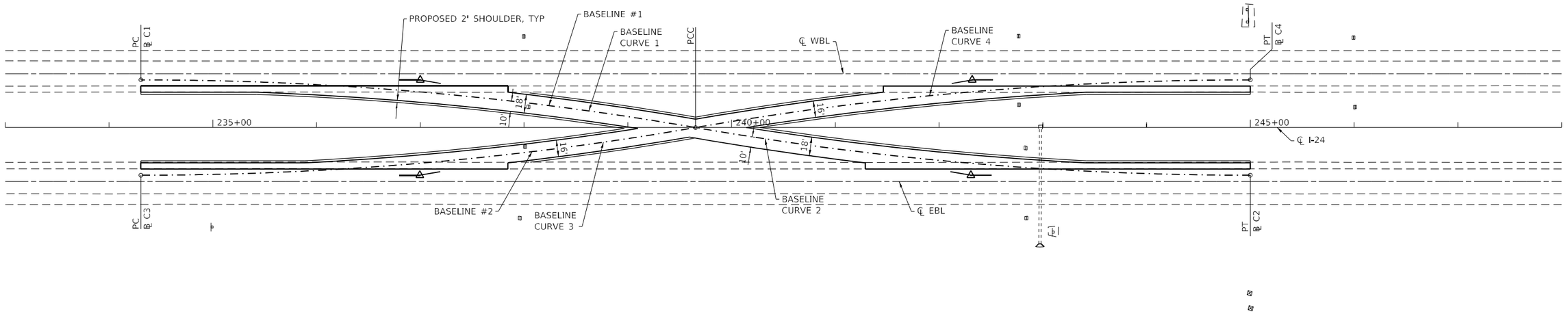
PI STA 57+32.02
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PCC STA 54+62.72 = I-24 STA 239+65.36, 0' LT
PT STA 60+00.00 = I-24 STA 245+00, 46' RT

EB CROSSOVER
BASELINE CURVE 3 DATA

PI STA 71+94.74
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PC STA 69+25.44 = I-24 STA 234+30.71, 46' RT
PCC STA 74+62.72 = I-24 239+65.36, 0' LT

EB CROSSOVER
BASELINE CURVE 4 DATA

PI STA 77+32.02
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PCC STA 74+62.72 = I-24 STA 239+65.36, 0' LT
PT STA 80+00.00 = I-24 STA 245+00, 46' LT



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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA/JPC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH CROSSOVERS ELEVATIONS AND OFFSETS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. 233+00 | TO STA. 248+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	34
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

ELEVATION AND OFFSET DATA

℄ I-24 STATION	BASELINE #1		BASELINE #2		E.O.P. LEFT OF ℄			LEFT BREAK POINT			E.O.P. LEFT OF ℄			BREAK POINT			E.O.P. RIGHT OF ℄			RIGHT BREAK POINT			E.O.P. RIGHT OF ℄		
	OFFSET (FT)		OFFSET (FT)		OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION
234+30.71	46.00	LT	46.00	RT	40.00	LT	346.38	-	-	-	34.00	LT	346.03	-	-	-	34.00	RT	346.22	-	-	-	40.00	RT	346.51
234+50.00	45.94	LT	45.94	RT	40.00	LT	346.41	-	-	-	34.00	LT	346.05	-	-	-	34.00	RT	346.17	-	-	-	40.00	RT	346.53
234+75.00	45.69	LT	45.69	RT	40.00	LT	346.47	-	-	-	34.00	LT	346.11	-	-	-	34.00	RT	346.20	-	-	-	40.00	RT	346.56
235+00.00	45.23	LT	45.23	RT	40.00	LT	346.52	-	-	-	34.00	LT	346.16	-	-	-	34.00	RT	346.23	-	-	-	40.00	RT	346.59
235+25.00	44.58	LT	44.58	RT	40.00	LT	346.54	-	-	-	34.00	LT	346.18	-	-	-	34.00	RT	346.28	-	-	-	40.00	RT	346.64
235+42.40	44.01	LT	44.01	RT	40.00	LT	346.56	-	-	-	34.00	LT	346.20	-	-	-	34.00	RT	346.32	-	-	-	40.00	RT	346.68
235+50.00	43.73	LT	43.73	RT	40.00	LT	346.57	34.00	LT	346.21	33.72	LT	346.21	-	-	-	34.00	RT	346.33	-	-	-	40.00	RT	346.69
235+75.00	42.67	LT	42.67	RT	40.00	LT	346.62	34.00	LT	346.26	32.66	LT	346.24	-	-	-	34.00	RT	346.36	-	-	-	40.00	RT	346.72
235+88.70	42.01	LT	42.01	RT	40.00	LT	346.64	34.00	LT	346.28	32.00	LT	346.25	-	-	-	34.00	RT	346.38	-	-	-	40.00	RT	346.74
236+00.00	41.42	LT	41.42	RT	40.00	LT	346.66	34.00	LT	346.30	31.40	LT	346.26	-	-	-	33.41	RT	346.38	34.00	RT	346.39	40.00	RT	346.75
236+25.00	39.96	LT	39.96	RT	40.00	LT	346.71	34.00	LT	346.35	29.94	LT	346.29	-	-	-	31.95	RT	346.40	34.00	RT	346.43	40.00	RT	346.79
236+50.00	38.31	LT	38.31	RT	40.00	LT	346.75	34.00	LT	346.39	28.28	LT	346.31	-	-	-	30.29	RT	346.41	34.00	RT	346.46	40.00	RT	346.82
236+75.00	36.45	LT	36.45	RT	40.00	LT	346.81	34.00	LT	346.45	26.42	LT	346.34	-	-	-	28.43	RT	346.44	34.00	RT	346.52	40.00	RT	346.88
237+00.00	34.39	LT	34.39	RT	40.00	LT	346.86	34.00	LT	346.50	24.36	LT	346.36	-	-	-	26.37	RT	346.47	34.00	RT	346.58	40.00	RT	346.94
237+25.00	32.13	LT	32.13	RT	40.00	LT	346.88	34.00	LT	346.52	22.09	LT	346.34	-	-	-	24.10	RT	346.49	34.00	RT	346.64	40.00	RT	347.00
237+50.00	29.67	LT	29.67	RT	40.00	LT	346.90	34.00	LT	346.54	19.62	LT	346.33	-	-	-	21.63	RT	346.53	34.00	RT	346.71	40.00	RT	347.07
237+75.00	27.01	LT	27.01	RT	40.00	LT	346.94	34.00	LT	346.58	16.95	LT	346.33	-	-	-	18.96	RT	346.50	34.00	RT	346.72	40.00	RT	347.08
237+84.43	25.95	LT	25.95	RT	40.00	LT	346.96	34.00	LT	346.60	15.89	LT	346.33	-	-	-	17.90	RT	346.47	34.00	RT	346.71	40.00	RT	347.09
238+00.00	24.14	LT	24.14	RT	32.20	LT	346.63	-	-	-	14.07	LT	346.36	-	-	-	16.08	RT	346.48	-	-	-	32.20	RT	346.72
238+25.00	21.07	LT	21.07	RT	29.13	LT	346.67	-	-	-	10.99	LT	346.40	-	-	-	13.00	RT	346.51	-	-	-	29.13	RT	346.75
238+50.00	17.79	LT	17.79	RT	25.86	LT	346.72	-	-	-	7.70	LT	346.45	-	-	-	9.72	RT	346.52	-	-	-	25.86	RT	346.76
238+75.00	14.31	LT	14.31	RT	22.39	LT	346.76	-	-	-	4.22	LT	346.49	-	-	-	6.23	RT	346.55	-	-	-	22.39	RT	346.79
239+00.00	10.62	LT	10.62	RT	18.71	LT	346.80	-	-	-	0.52	LT	346.53	-	-	-	2.53	RT	346.57	-	-	-	18.71	RT	346.81
239+09.86	9.11	LT	9.11	RT	17.20	LT	346.82	-	-	-	-	-	-	1.01	RT	346.56	-	-	-	-	-	-	17.20	RT	346.82
239+25.00	6.73	LT	6.73	RT	14.83	LT	346.87	-	-	-	-	-	-	0.87	RT	346.63	-	-	-	-	-	-	14.83	RT	346.84
239+50.00	2.63	LT	2.63	RT	10.74	LT	346.90	-	-	-	-	-	-	0.63	RT	346.73	-	-	-	-	-	-	10.74	RT	346.88
239+59.48	1.01	LT	1.01	RT	9.13	LT	346.92	-	-	-	-	-	-	0.53	RT	346.77	-	-	-	-	-	-	9.13	RT	346.90
239+65.36	0.00	LT	0.00	RT	8.12	LT	346.93	-	-	-	-	-	-	0.48	RT	346.80	-	-	-	-	-	-	10.15	RT	346.95
239+75.00	1.65	RT	1.65	LT	9.77	LT	346.94	-	-	-	-	-	-	0.38	RT	346.79	-	-	-	-	-	-	11.80	RT	346.96
240+00.00	5.81	RT	5.81	LT	13.91	LT	346.97	-	-	-	-	-	-	0.14	RT	346.76	-	-	-	-	-	-	15.93	RT	347.00
240+14.38	8.10	RT	8.10	LT	16.20	LT	346.97	-	-	-	-	-	-	0.00	RT	346.74	-	-	-	-	-	-	18.22	RT	347.02
240+25.00	9.75	RT	9.75	LT	17.84	LT	346.98	-	-	-	1.65	LT	346.74	-	-	-	1.65	RT	346.77	-	-	-	19.86	RT	347.04
240+50.00	13.48	RT	13.48	LT	21.57	LT	347.01	-	-	-	5.40	LT	346.77	-	-	-	5.40	RT	346.81	-	-	-	23.58	RT	347.08
240+75.00	17.01	RT	17.01	LT	25.09	LT	347.04	-	-	-	8.94	LT	346.80	-	-	-	8.94	RT	346.85	-	-	-	27.10	RT	347.12
241+00.00	20.33	RT	20.33	LT	28.40	LT	347.07	-	-	-	12.27	LT	346.83	-	-	-	12.27	RT	346.89	-	-	-	30.41	RT	347.16
241+25.00	23.45	RT	23.45	LT	31.51	LT	347.10	-	-	-	15.40	LT	346.86	-	-	-	15.40	RT	346.92	-	-	-	33.52	RT	347.19
241+28.95	23.93	RT	23.93	LT	31.99	LT	347.11	-	-	-	15.87	LT	346.87	-	-	-	15.87	RT	346.93	34.00	RT	347.20	40.00	RT	347.55
241+46.28	25.95	RT	25.95	LT	40.00	LT	347.47	34.00	LT	347.13	17.90	LT	346.89	-	-	-	17.90	RT	346.98	34.00	RT	347.22	40.00	RT	347.58
241+50.00	26.37	RT	26.37	LT	40.00	LT	347.48	34.00	LT	347.12	18.32	LT	346.89	-	-	-	18.32	RT	347.00	34.00	RT	347.23	40.00	RT	347.59
241+75.00	29.08	RT	29.08	LT	40.00	LT	347.51	34.00	LT	347.15	21.04	LT	346.96	-	-	-	21.04	RT	347.06	34.00	RT	347.25	40.00	RT	347.61
242+00.00	31.59	RT	31.59	LT	40.00	LT	347.53	34.00	LT	347.17	23.55	LT	347.01	-	-	-	23.55	RT	347.11	34.00	RT	347.27	40.00	RT	347.63
242+25.00	33.90	RT	33.90	LT	40.00	LT	347.55	34.00	LT	347.19	25.86	LT	347.07	-	-	-	25.86	RT	347.20	34.00	RT	347.32	40.00	RT	347.68
242+50.00	36.00	RT	36.00	LT	40.00	LT	347.57	34.00	LT	347.21	27.97	LT	347.12	-	-	-	27.97	RT	347.28	34.00	RT	347.37	40.00	RT	347.73
242+75.00	37.90	RT	37.90	LT	40.00	LT	347.61	34.00	LT	347.25	29.88	LT	347.19	-	-	-	29.88	RT	347.36	34.00	RT	347.42	40.00	RT	347.78
243+00.00	39.60	RT	39.60	LT	40.00	LT	347.64	34.00	LT	347.28	31.59	LT	347.25	-	-	-	31.59	RT	347.43	34.00	RT	347.46	40.00	RT	347.82
243+25.00	41.10	RT	41.10	LT	40.00	LT	347.69	34.00	LT	347.33	33.09	LT	347.32	-	-	-	33.09	RT	347.48	34.00	RT	347.49	40.00	RT	347.85
243+42.01	42.01	RT	42.01	LT	40.00	LT	347.72	-	-	-	34.00	LT	347.36	-	-	-	34.00	RT	347.51	-	-	-	40.00	RT	347.87
243+50.00	42.40	RT	42.40	LT	40.00	LT	347.74	-	-	-	34.00	LT	347.38	-	-	-	34.00	RT	347.52	-	-	-	40.00	RT	347.88
243+75.00	43.50	RT	43.50	LT	40.00	LT	347.78	-	-	-	34.00	LT	347.42	-	-	-	34.00	RT	347.53	-	-	-	40.00	RT	347.89
244+00.00	44.40	RT	44.40	LT	40.00	LT	347.82	-	-	-	34.00	LT	347.46	-	-	-	34.00	RT	347.54	-	-	-	40.00	RT	347.90
244+25.00	45.10	RT	45.10	LT	40.00	LT	347.87	-	-	-	34.00	LT	347.51	-	-	-	34.00	RT	347.57	-	-	-	40.00	RT	347.93
244+50.00	45.60	RT	45.60	LT	40.00	LT	347.91	-	-	-	34.00	LT	347.55	-	-	-	34.00	RT	347.60	-	-	-	40.00	RT	347.96
244+75.00	45.90	RT	45.90	LT	40.00	LT	347.94	-	-	-	34.00	LT	347.58	-	-	-	34.00	RT	347.64	-	-	-	40.00	RT	348.00
245+00.00	46.00	RT	46.00	LT	40.00	LT	347.98	-	-	-	34.00	LT	347.62	-	-	-	34.00	RT	347.65	-	-	-	40.00	RT	348.05

NOTE:

THE CONTRACTOR SHALL CONSTRUCT THIS MEDIAN CROSSOVER USING THE ELEVATION AND OFFSET DATA TABLE FOUND ON THIS SHEET. VALUES SHOWN ARE BASED ON THE ORIGINAL ROADWAY PLANS, FIELD SURVEY, AND ADJUSTED TO ACCOUNT FOR THE ½" NET GRADE RAISE TO BE COMPLETED IN 2021. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN THE FIELD AS APPROVED BY THE ENGINEER.

MODEL: PLOT
FILE NAME: X:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-sht-v02.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

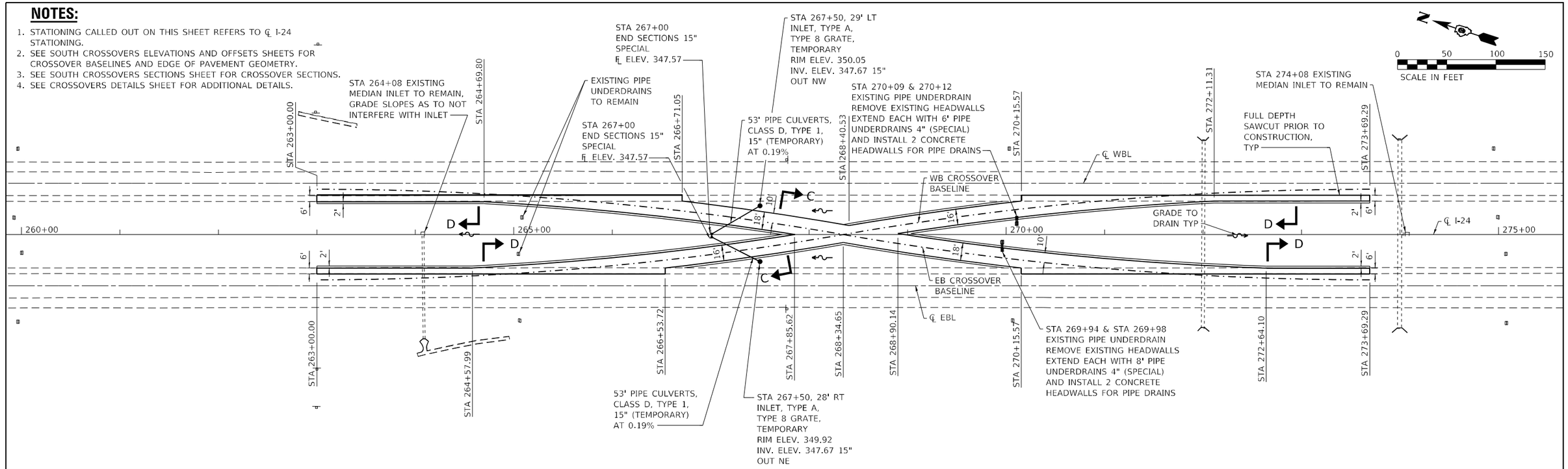
NORTH CROSSOVERS ELEVATIONS AND OFFSETS

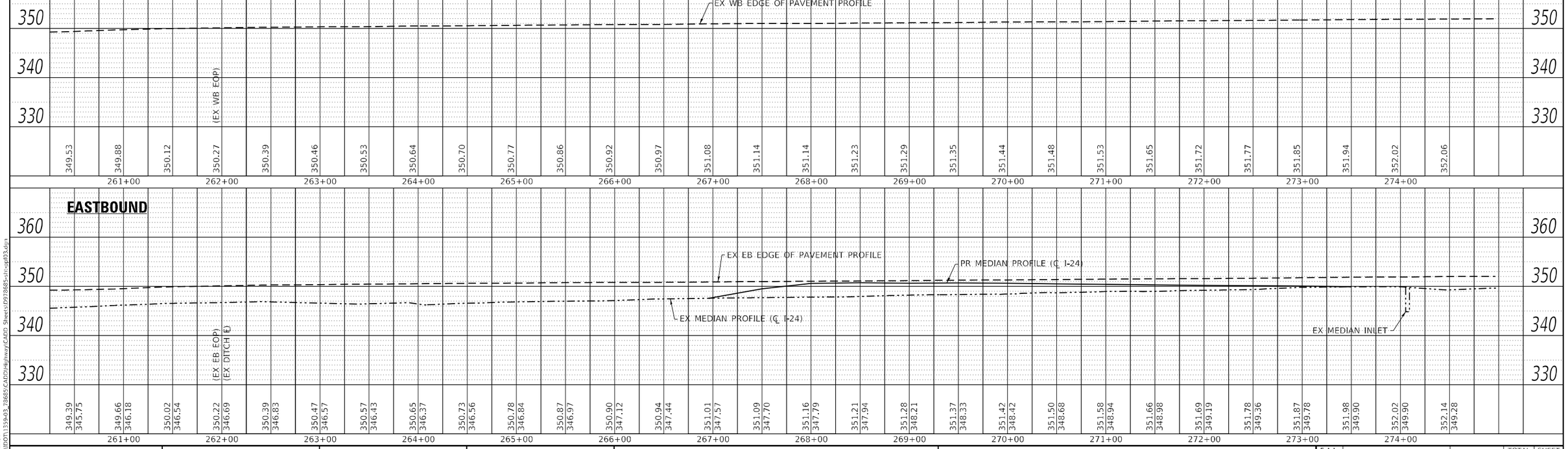
SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	35
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

NOTES:

1. STATIONING CALLED OUT ON THIS SHEET REFERS TO ℄ I-24 STATIONING.
2. SEE SOUTH CROSSOVERS ELEVATIONS AND OFFSETS SHEETS FOR CROSSOVER BASELINES AND EDGE OF PAVEMENT GEOMETRY.
3. SEE SOUTH CROSSOVERS SECTIONS SHEET FOR CROSSOVER SECTIONS.
4. SEE CROSSOVERS DETAILS SHEET FOR ADDITIONAL DETAILS.





PLAN — SURVEYED; PLOTTED; ALIGNMENT CHECKED; R.O.W. CHECKED; CADD FILE NAME; NOTE BOOK; NO.; DATE; BY

PROFILE — SURVEYED; PLOTTED; ALIGNMENT CHECKED; R.O.W. CHECKED; U.M. NOTED; STRUCTURE NOTATIONS CHKD; NOTE BOOK; NO.

MODEL: BORDER01
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9786B5-sht-opt03.dgn

ESCA CONSULTANTS, INC.

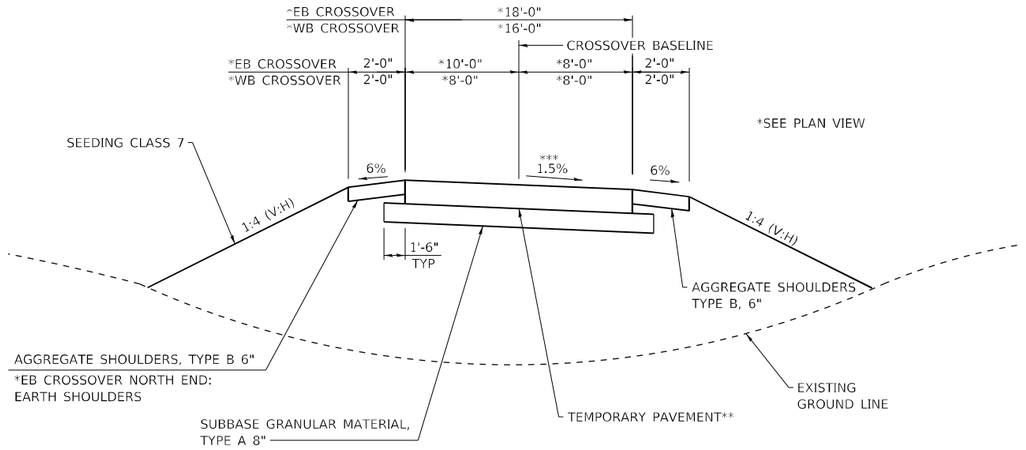
USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 04/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CROSSOVERS PLAN AND PROFILE

SCALE: AS SHOWN | SHEET NO. 1 OF 1 SHEETS | STA. 260+50 | TO STA. 275+00

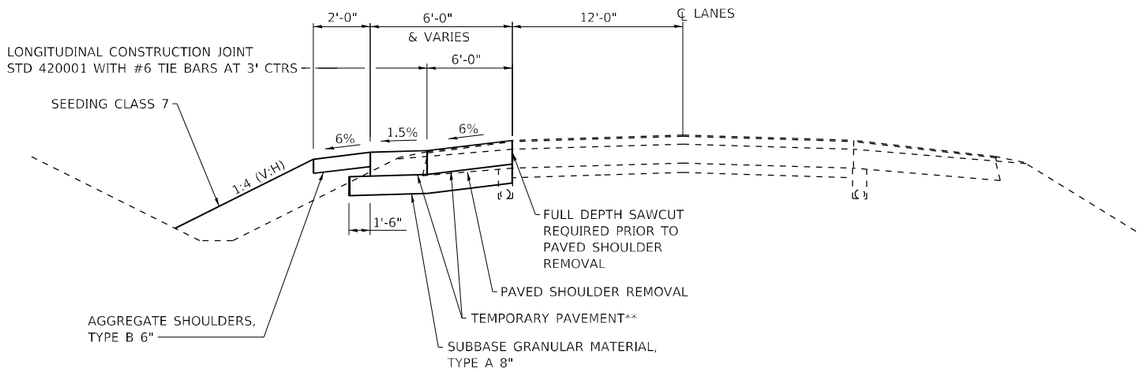
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	36
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



SOUTH CROSSOVERS SECTION C

**CONTRACTOR MAY CONSTRUCT 10¼" JOINTED PCC PAVEMENT (SHOWN) OR 13½" FULL DEPTH HMA PAVEMENT AS TEMPORARY PAVEMENT

***NORTH ENDS SHOWN;
SOUTH ENDS OPPOSITE CROSSLOPE



SOUTH CROSSOVERS SECTION D

MODEL: PLOT
FILE NAME: Y:\IDOT\13394-03_78685\CADD\Highway\CADD Sheets\D978685-sht-typicalt05.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SMA	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SMA/IRC	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CROSSOVERS TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	37
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

N

0 50 100 150

SCALE IN FEET

EB CROSSOVER
BASELINE CURVE 5 DATA

PI STA 12+69.30
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PC STA 10+00 = I-24 STA 263+00, 46' LT
PCC STA 15+37.28 = I-24 STA 268+34.65, 0' LT

EB CROSSOVER
BASELINE CURVE 6 DATA

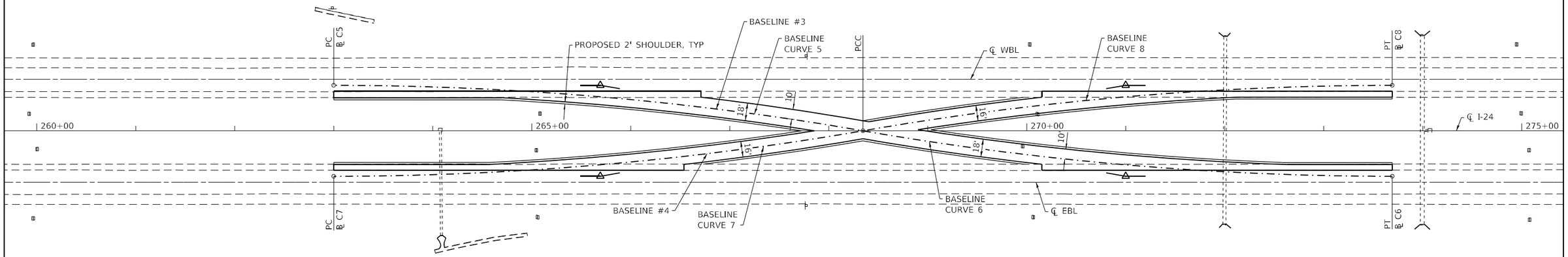
PI STA 18+06.58
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PCC STA 15+37.28 = I-24 268+34.65, 0' RT
PT STA 20+74.56 = I-24 STA 273+69.29, 46' RT

WB CROSSOVER
BASELINE CURVE 7 DATA

PI STA 32+69.30
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PC STA 30+00 = I-24 STA 263+00, 46' RT
PCC STA 35+37.28 = I-24 STA 268+34.65, 0' RT

WB CROSSOVER
BASELINE CURVE 8 DATA

PI STA 38+06.58
Δ = 9° 50' 06"
D = 1° 49' 50"
R = 3130.00'
T = 269.30'
L = 537.28'
E = 11.56'
S.E. = NONE
PCC STA 35+37.28 = I-24 STA 268+34.65, 0' LT
PT STA 40+74.56 = I-24 STA 273+69.29, 46' LT



MODEL: PLOT
FILE NAME: Y:\IDOT\13394-03_78685\CADD\Highway\CADD Sheets\D978685-sht-dtv03.dgn

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA/JPC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CROSSOVERS ELEVATIONS AND OFFSETS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. 260+00 | TO STA. 275+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	38
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

ELEVATION AND OFFSET DATA

℄ I-24 STATION	BASELINE #3		BASELINE #4		E.O.P. LEFT OF ℄			LEFT BREAK POINT			E.O.P. LEFT OF ℄			BREAK POINT			E.O.P. RIGHT OF ℄			RIGHT BREAK POINT			E.O.P. RIGHT OF ℄		
	OFFSET (FT)		OFFSET (FT)		OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION	OFFSET (FT)		ELEVATION
263+00.00	46.00	LT	46.00	RT	40.00	LT	350.45	-	-	-	34.00	LT	350.46	-	-	-	34.00	RT	350.10	-	-	-	40.00	RT	350.47
263+25.00	45.90	LT	45.90	RT	40.00	LT	350.48	-	-	-	34.00	LT	350.12	-	-	-	34.00	RT	350.16	-	-	-	40.00	RT	350.52
263+50.00	45.60	LT	45.60	RT	40.00	LT	350.52	-	-	-	34.00	LT	350.16	-	-	-	34.00	RT	350.21	-	-	-	40.00	RT	350.57
263+75.00	45.10	LT	45.10	RT	40.00	LT	350.58	-	-	-	34.00	LT	350.22	-	-	-	34.00	RT	350.25	-	-	-	40.00	RT	350.61
264+00.00	44.40	LT	44.40	RT	40.00	LT	350.63	-	-	-	34.00	LT	350.27	-	-	-	34.00	RT	350.29	-	-	-	40.00	RT	350.65
264+25.00	43.50	LT	43.50	RT	40.00	LT	350.66	-	-	-	34.00	LT	350.30	-	-	-	34.00	RT	350.34	-	-	-	40.00	RT	350.70
264+50.00	42.40	LT	42.40	RT	40.00	LT	350.69	-	-	-	34.00	LT	350.33	-	-	-	34.00	RT	350.37	-	-	-	40.00	RT	350.73
264+57.99	42.01	LT	42.01	RT	40.00	LT	350.70	-	-	-	34.00	LT	350.34	-	-	-	34.00	RT	350.38	-	-	-	40.00	RT	350.74
264+69.80	41.39	LT	41.39	RT	40.00	LT	350.72	-	-	-	34.00	LT	350.36	-	-	-	33.38	RT	350.37	34.00	RT	350.38	40.00	RT	350.74
264+75.00	41.10	LT	41.10	RT	40.00	LT	350.73	34.00	LT	350.37	33.09	LT	350.36	-	-	-	33.09	RT	350.38	34.00	RT	350.39	40.00	RT	350.75
265+00.00	39.60	LT	39.60	RT	40.00	LT	350.77	34.00	LT	350.41	31.59	LT	350.38	-	-	-	31.59	RT	350.39	34.00	RT	350.42	40.00	RT	350.78
265+25.00	37.90	LT	37.90	RT	40.00	LT	350.81	34.00	LT	350.45	29.88	LT	350.39	-	-	-	29.88	RT	350.41	34.00	RT	350.47	40.00	RT	350.83
265+50.00	36.00	LT	36.00	RT	40.00	LT	350.85	34.00	LT	350.49	27.97	LT	350.40	-	-	-	27.97	RT	350.42	34.00	RT	350.51	40.00	RT	350.87
265+75.00	33.90	LT	33.90	RT	40.00	LT	350.89	34.00	LT	350.53	25.87	LT	350.41	-	-	-	25.87	RT	350.41	34.00	RT	350.53	40.00	RT	350.89
266+00.00	31.59	LT	31.59	RT	40.00	LT	350.92	34.00	LT	350.56	23.55	LT	350.40	-	-	-	23.55	RT	350.39	34.00	RT	350.55	40.00	RT	350.91
266+25.00	29.08	LT	29.08	RT	40.00	LT	350.93	34.00	LT	350.57	21.04	LT	350.38	-	-	-	21.04	RT	350.37	34.00	RT	350.56	40.00	RT	350.92
266+50.00	26.37	LT	26.37	RT	40.00	LT	350.96	34.00	LT	350.60	18.32	LT	350.37	-	-	-	18.32	RT	350.35	34.00	RT	350.58	40.00	RT	350.94
266+53.72	25.95	LT	25.95	RT	40.00	LT	350.97	34.00	LT	350.61	17.90	LT	350.37	-	-	-	17.90	RT	350.30	34.00	RT	350.54	40.00	RT	350.95
266+71.05	23.93	LT	23.93	RT	40.00	LT	351.01	34.00	LT	350.62	15.87	LT	350.35	-	-	-	15.87	RT	350.33	-	-	-	31.99	RT	350.57
266+75.00	23.46	LT	23.46	RT	33.53	LT	350.63	-	-	-	15.40	LT	350.36	-	-	-	15.40	RT	350.34	-	-	-	31.51	RT	350.58
267+00.00	20.34	LT	20.34	RT	30.42	LT	350.67	-	-	-	12.27	LT	350.39	-	-	-	12.27	RT	350.38	-	-	-	28.40	RT	350.62
267+25.00	17.01	LT	17.01	RT	27.11	LT	350.70	-	-	-	8.94	LT	350.43	-	-	-	8.94	RT	350.42	-	-	-	25.09	RT	350.66
267+50.00	13.48	LT	13.48	RT	23.59	LT	350.74	-	-	-	5.40	LT	350.47	-	-	-	5.40	RT	350.46	-	-	-	21.57	RT	350.70
267+75.00	9.75	LT	9.75	RT	19.87	LT	350.78	-	-	-	1.65	LT	350.50	-	-	-	1.65	RT	350.50	-	-	-	17.84	RT	350.74
267+85.62	8.10	LT	8.10	RT	18.22	LT	350.79	-	-	-	-	-	-	0.00	LT	350.52	-	-	-	-	-	-	16.20	RT	350.76
268+00.00	5.81	LT	5.81	RT	15.80	LT	350.81	-	-	-	-	-	-	0.14	LT	350.58	-	-	-	-	-	-	13.91	RT	350.78
268+25.00	1.66	LT	1.66	RT	11.80	LT	350.85	-	-	-	-	-	-	0.38	LT	350.68	-	-	-	-	-	-	9.77	RT	350.82
268+34.64	0.00	RT	0.00	LT	10.15	LT	350.87	-	-	-	-	-	-	0.48	LT	350.72	-	-	-	-	-	-	8.12	RT	350.84
268+40.53	1.02	RT	1.02	LT	9.13	LT	350.85	-	-	-	-	-	-	0.53	LT	350.72	-	-	-	-	-	-	9.13	RT	350.85
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268+75.00	6.73	RT	6.73	LT	14.83	LT	350.90	-	-	-	-	-	-	0.87	LT	350.68	-	-	-	-	-	-	14.83	RT	350.91
268+90.14	9.11	RT	9.11	LT	17.20	LT	350.92	-	-	-	-	-	-	1.01	LT	350.67	-	-	-	-	-	-	17.20	RT	350.93
269+00.00	10.62	RT	10.62	LT	18.71	LT	350.94	-	-	-	2.53	LT	350.69	-	-	-	0.51	RT	350.68	-	-	-	18.71	RT	350.95
269+25.00	14.31	RT	14.31	LT	22.39	LT	350.97	-	-	-	6.23	LT	350.73	-	-	-	4.21	RT	350.72	-	-	-	22.39	RT	350.99
269+50.00	17.79	RT	17.79	LT	25.86	LT	351.01	-	-	-	9.72	LT	350.77	-	-	-	7.70	RT	350.76	-	-	-	25.86	RT	351.03
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270+00.00	24.14	RT	24.14	LT	32.20	LT	351.08	-	-	-	16.08	LT	350.84	-	-	-	14.07	RT	350.84	-	-	-	32.20	RT	351.12
270+15.57	25.95	RT	25.95	LT	40.00	LT	351.45	34.00	LT	351.10	17.90	LT	350.86	-	-	-	15.88	RT	350.87	34.00	RT	351.14	40.00	RT	351.45
270+25.00	27.01	RT	27.01	LT	40.00	LT	351.45	34.00	LT	351.09	18.96	LT	350.87	-	-	-	16.95	RT	350.84	34.00	RT	351.10	40.00	RT	351.46
270+50.00	29.67	RT	29.67	LT	40.00	LT	351.47	34.00	LT	351.11	22.18	LT	350.93	-	-	-	19.54	RT	350.92	34.00	RT	351.13	40.00	RT	351.49
270+75.00	32.14	RT	32.14	LT	40.00	LT	351.50	34.00	LT	351.14	24.10	LT	350.99	-	-	-	22.09	RT	351.00	34.00	RT	351.18	40.00	RT	351.54
271+00.00	34.40	RT	34.40	LT	40.00	LT	351.53	34.00	LT	351.17	26.37	LT	351.06	-	-	-	24.36	RT	351.09	34.00	RT	351.23	40.00	RT	351.59
271+25.00	36.45	RT	36.45	LT	40.00	LT	351.59	34.00	LT	351.23	28.43	LT	351.14	-	-	-	26.42	RT	351.15	34.00	RT	351.27	40.00	RT	351.63
271+50.00	38.31	RT	38.31	LT	40.00	LT	351.64	34.00	LT	351.28	30.29	LT	351.23	-	-	-	28.28	RT	351.21	34.00	RT	351.30	40.00	RT	351.66
271+75.00	39.96	RT	39.96	LT	40.00	LT	351.68	34.00	LT	351.32	31.95	LT	351.29	-	-	-	29.95	RT	351.26	34.00	RT	351.32	40.00	RT	351.68
272+00.00	41.42	RT	41.42	LT	40.00	LT	351.72	34.00	LT	351.36	33.41	LT	351.35	-	-	-	31.40	RT	351.30	34.00	RT	351.34	40.00	RT	351.70
272+11.31	42.01	RT	42.01	LT	40.00	LT	351.73	-	-	-	34.00	LT	351.37	-	-	-	32.00	RT	351.33	34.00	RT	351.36	40.00	RT	351.72
272+25.00	42.67	RT	42.67	LT	40.00	LT	351.74	-	-	-	34.00	LT	351.38	-	-	-	32.99	RT	351.36	34.00	RT	351.38	40.00	RT	351.74
272+50.00	43.73	RT	43.73	LT	40.00	LT	351.76	-	-	-	34.00	LT	351.40	-	-	-	33.72	RT	351.41	34.00	RT	351.42	40.00	RT	351.78
272+64.10	44.23	RT	44.23	LT	40.00	LT	351.78	-	-	-	34.00	LT	351.42	-	-	-	34.00	RT	351.44	-	-	-	40.00	RT	351.80
272+75.00	44.58	RT	44.58	LT	40.00	LT	351.80	-	-	-	34.00	LT	351.44	-	-	-	34.00	RT	351.46	-	-	-	40.00	RT	351.82
273+00.00	45.23	RT	45.23	LT	40.00	LT	351.84	-	-	-	34.00	LT	351.48	-	-	-	34.00	RT	351.51	-	-	-	40.00	RT	351.87
273+25.00	45.69	RT	45.69	LT	40.00	LT	351.89	-	-	-	34.00	LT	351.53	-	-	-	34.00	RT	351.57	-	-	-	40.00	RT	351.93
273+50.00	45.94	RT	45.94	LT	40.00	LT	351.94	-	-	-	34.00	LT	351.58	-	-	-	34.00	RT	351.63	-	-	-	40.00	RT	351.99
273+69.29	46.00	RT	46.00	LT	40.00	LT	351.97	-	-	-	34.00	LT	351.64	-	-	-	34.00	RT	351.63	-	-	-	40.00	RT	352.00

NOTE:

THE CONTRACTOR SHALL CONSTRUCT THIS MEDIAN CROSSOVER USING THE ELEVATION AND OFFSET DATA TABLE FOUND ON THIS SHEET. VALUES SHOWN ARE BASED ON THE ORIGINAL ROADWAY PLANS, FIELD SURVEY, AND ADJUSTED TO ACCOUNT FOR THE ½" NET GRADE RAISE TO BE COMPLETED IN 2021. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN THE FIELD AS APPROVED BY THE ENGINEER.

MODEL: PLOT
FILE NAME: X:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9786852-sht-3Rev04.dgn

ESCA CONSULTANTS, INC.

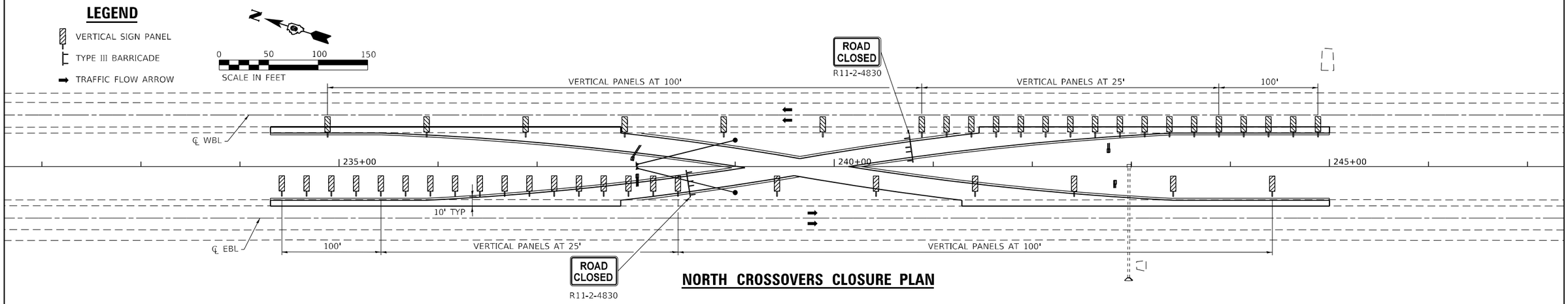
USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 04/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

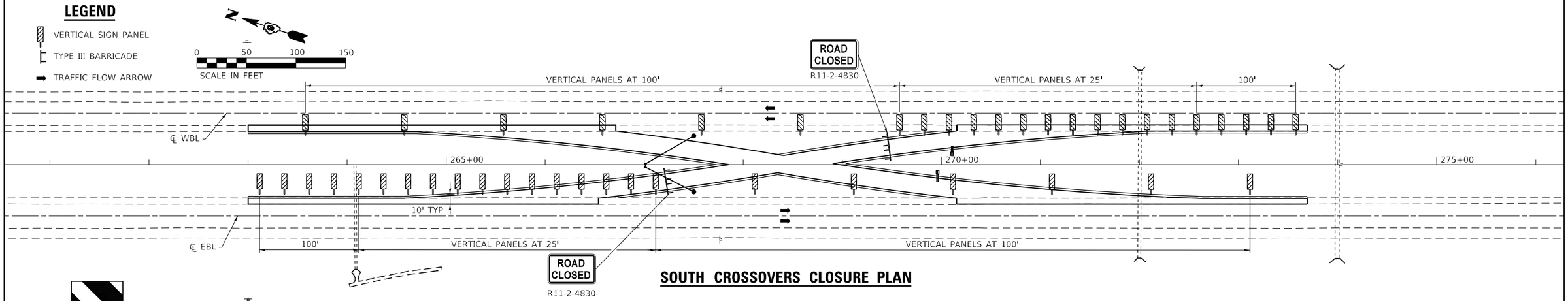
SOUTH CROSSOVERS ELEVATIONS AND OFFSETS

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

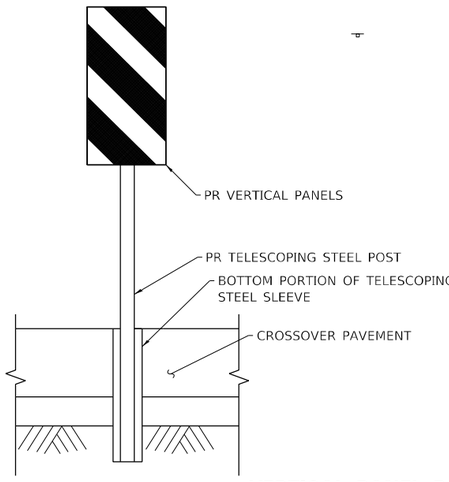
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	39
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



NORTH CROSSOVERS CLOSURE PLAN



SOUTH CROSSOVERS CLOSURE PLAN

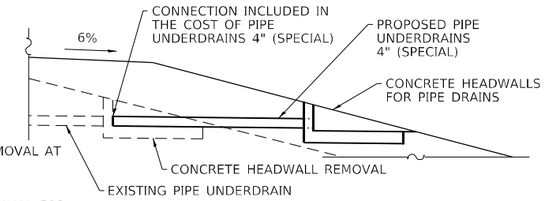


VERTICAL PANEL DETAIL

NOTE: FOR INSTALLATION OF VERTICAL PANELS IN AREAS OF CROSSOVER PAVEMENT, 3" DIA. HOLES WILL BE CORED THROUGH PAVEMENT FOR PLACEMENT. TELESCOPING STEEL POLES WILL BE PLACED 1" BELOW SURFACE, AND WORK SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER. WHEN OPENING CROSSOVER, PANELS WILL BE REMOVED AND HOLES WILL BE LEFT IN PLACE. COST OF PANELS, POSTS, SLEEVES, TYPE III BARRICADES, SIGNS, AND CORING SHALL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

CROSSOVER CLOSURE SCHEDULE

LOCATION	VERTICAL SIGN PANELS	TELESCOPING STEEL SIGN SUPPORTS	TYPE III BARRICADES	SIGN PANEL, TYPE 2
	EACH	EACH	EACH	SQ FT
NORTH CROSSOVERS	46	46	4	20
SOUTH CROSSOVERS	46	46	4	20
TOTALS	92	92	8	40



NOTE: DURING CROSSOVERS REMOVAL AT UNDERDRAIN EXTENSIONS, THE PROPOSED PIPE UNDERDRAIN 4" (SPECIAL) EXTENSION SHALL BE REMOVED. THE CONCRETE HEADWALL FOR PIPE DRAINS SHALL BE REINSTALLED AT THE ORIGINAL END OF THE UNDERDRAIN. THIS WORK WILL BE PAID FOR AS REMOVE AND REINSTALL CONCRETE HEADWALL FOR PIPE DRAIN.

UNDERDRAIN EXTENSION AT CROSSOVERS

MODEL: PLOT
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ESCA CONSULTANTS, INC.

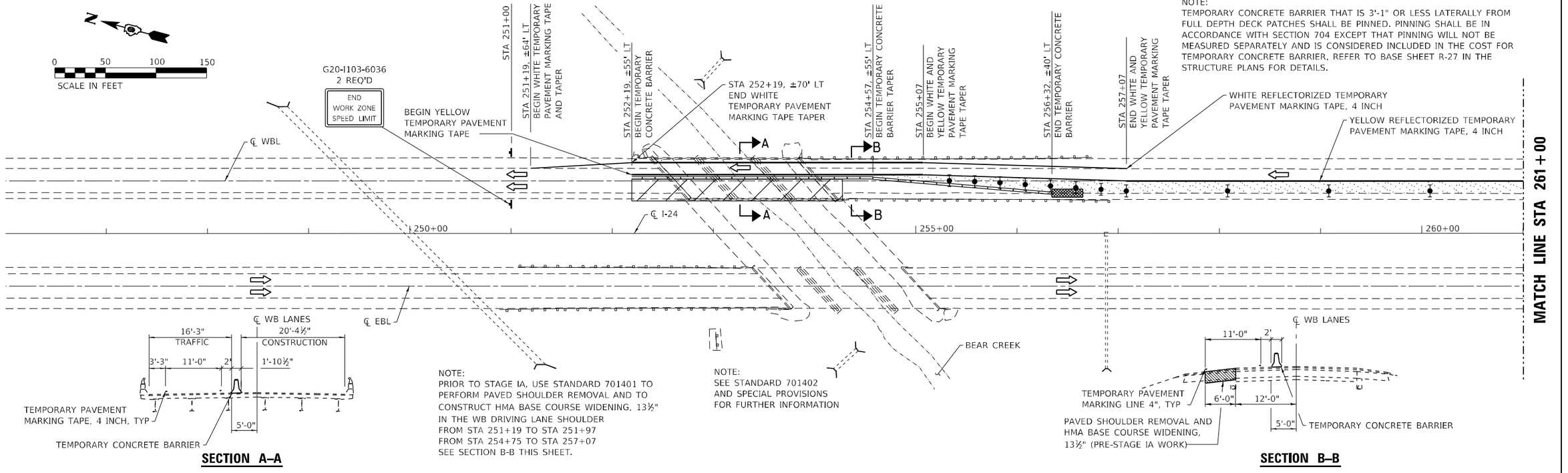
USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

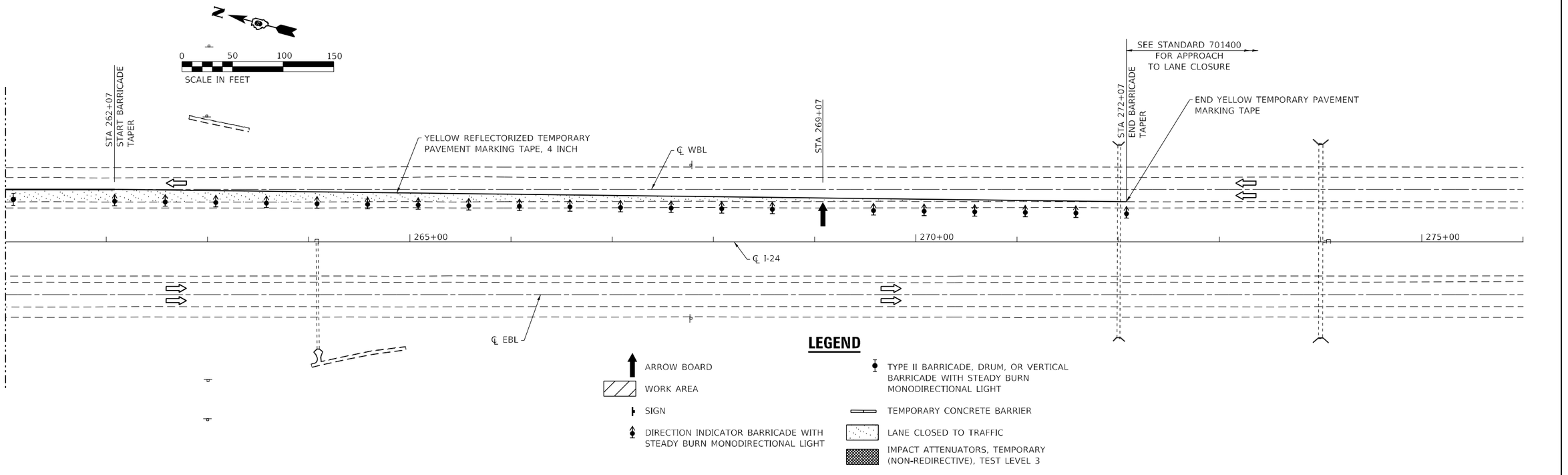
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSSOVERS DETAILS

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	40
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			





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ESCA CONSULTANTS, INC.

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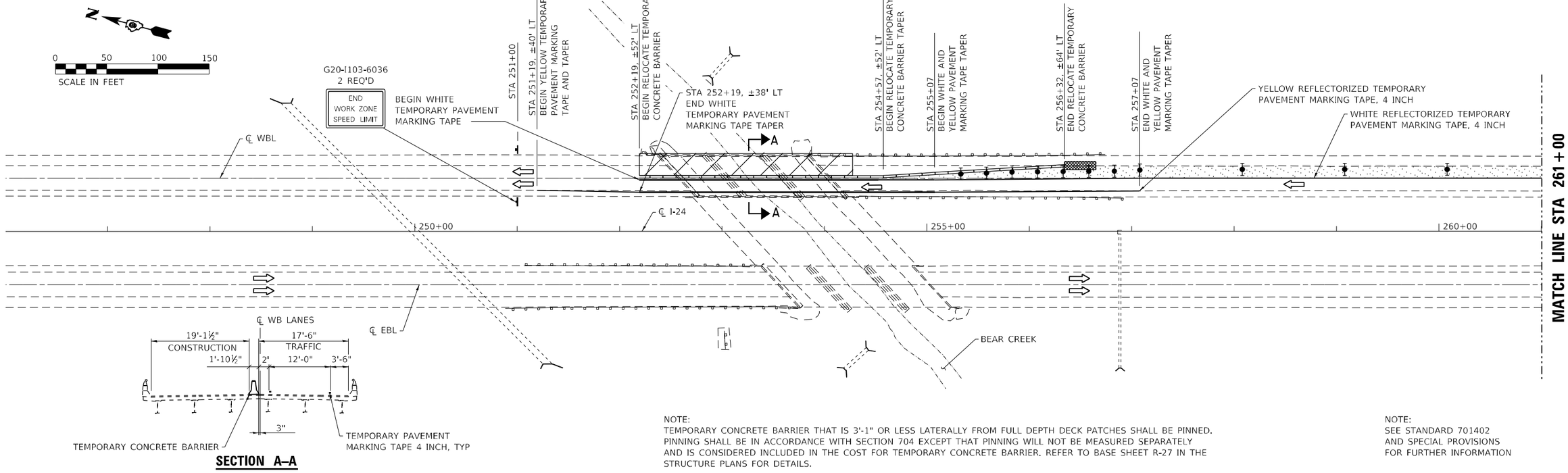
ESCA PROJECT NO. 1359.03	DRAWN - JMK/JRC	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM/ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE IA TRAFFIC CONTROL

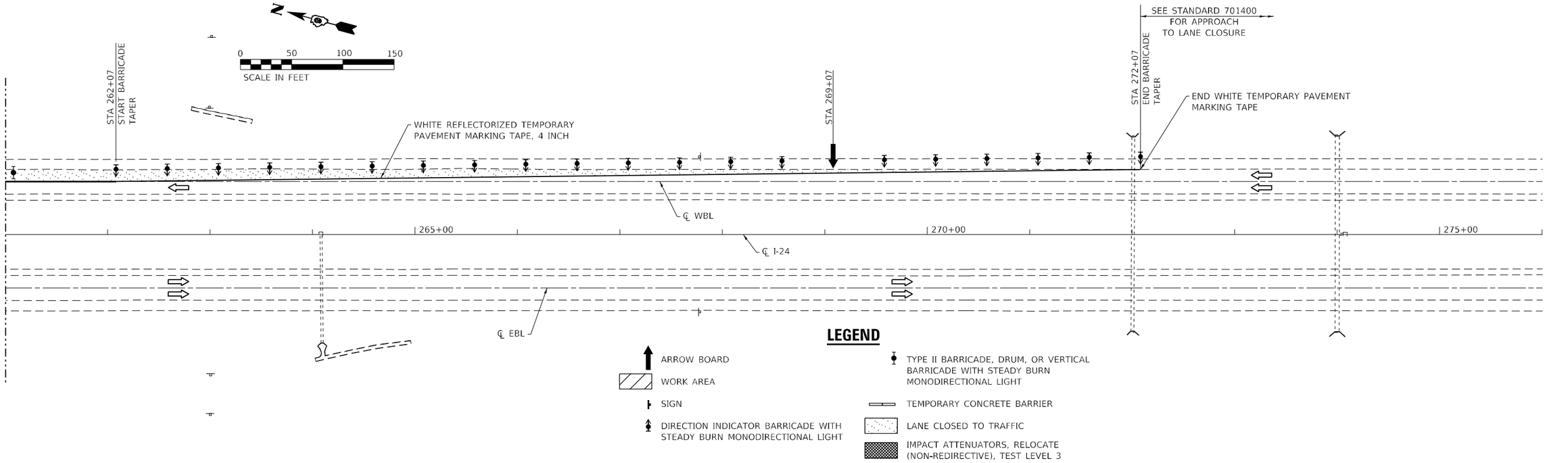
SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 246+00 TO STA. 276+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	41
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



NOTE:
TEMPORARY CONCRETE BARRIER THAT IS 3'-1" OR LESS LATERALLY FROM FULL DEPTH DECK PATCHES SHALL BE PINNED. PINNING SHALL BE IN ACCORDANCE WITH SECTION 704 EXCEPT THAT PINNING WILL NOT BE MEASURED SEPARATELY AND IS CONSIDERED INCLUDED IN THE COST FOR TEMPORARY CONCRETE BARRIER. REFER TO BASE SHEET R-27 IN THE STRUCTURE PLANS FOR DETAILS.

NOTE:
SEE STANDARD 701402
AND SPECIAL PROVISIONS
FOR FURTHER INFORMATION



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ESCA CONSULTANTS, INC.

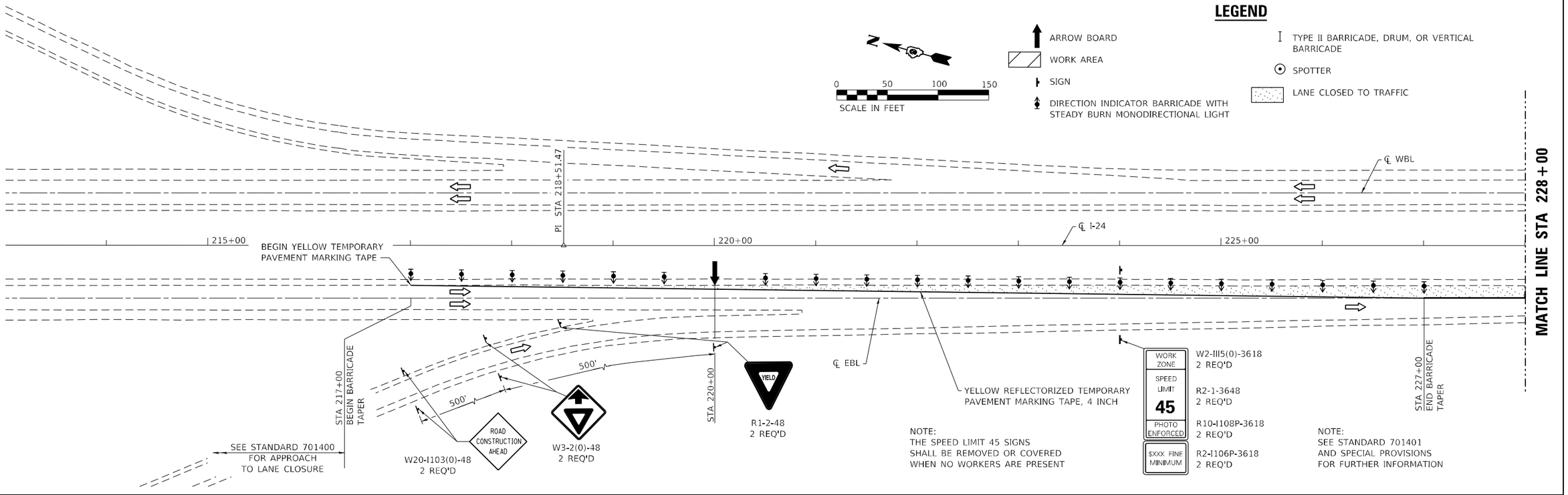
USER NAME = nhc	DESIGNED - JMK	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - JMK/JRC	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM/ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE IB TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 246+00 TO STA. 276+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	42
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

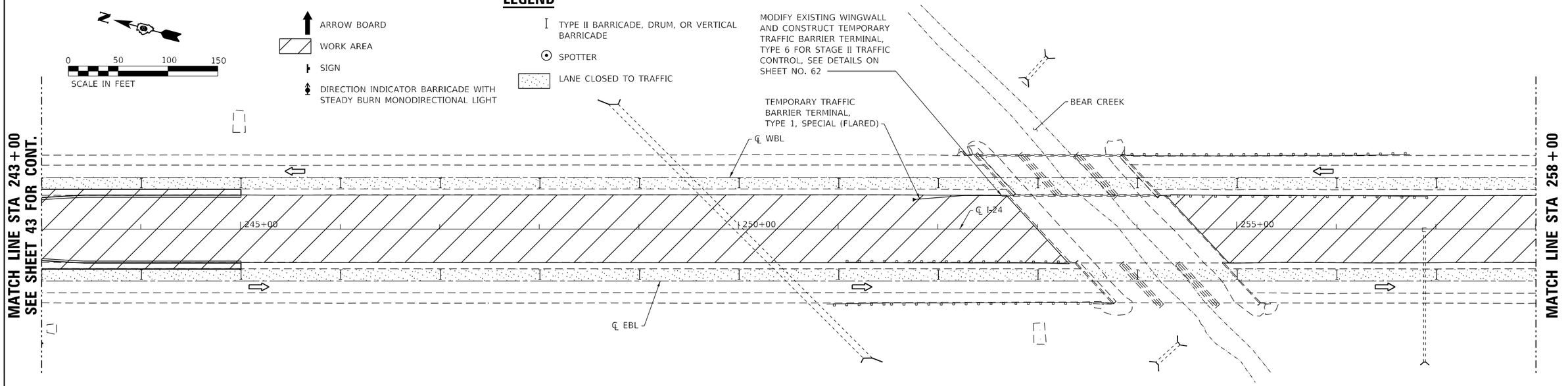
STAGES I & IV TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 1 OF 3 SHEETS | STA. 213+00 TO STA. 243+00

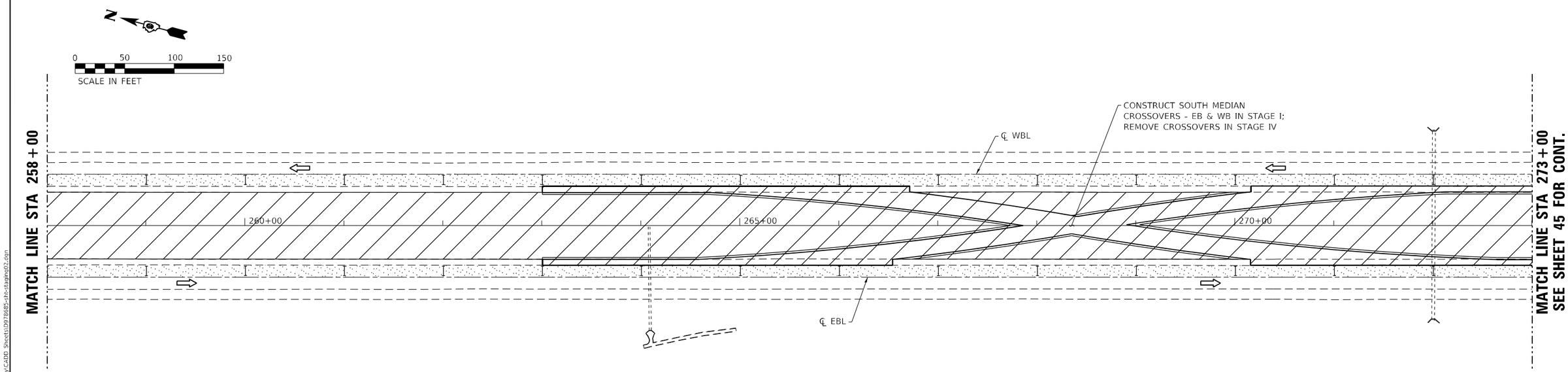
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	43
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE
- SPOTTER
- LANE CLOSED TO TRAFFIC



NOTE:
SEE STANDARD 701401
AND SPECIAL PROVISIONS
FOR FURTHER INFORMATION



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ESCA CONSULTANTS, INC.

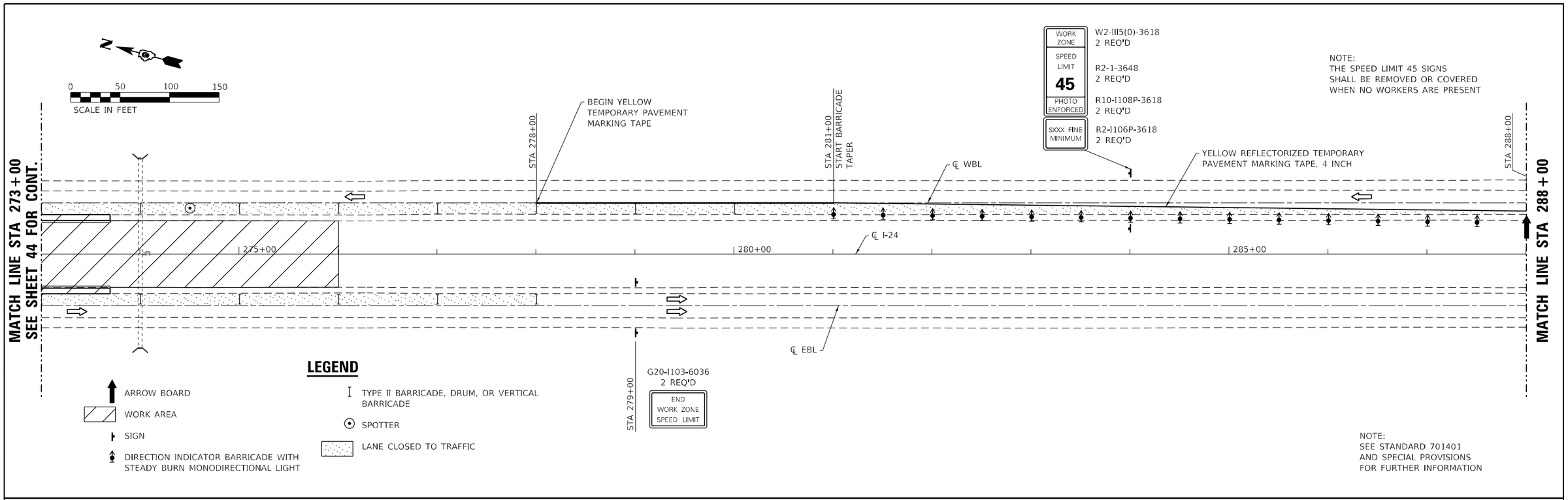
USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGES I & IV TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 2 OF 3 SHEETS | STA. 243+00 | TO STA. 273+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	44
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - JMK	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGES I & IV TRAFFIC CONTROL**
	ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -		
	PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -		SCALE: 1" = 50' | SHEET NO. 3 OF 3 SHEETS | STA. 273+00 TO STA. 303+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	45
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

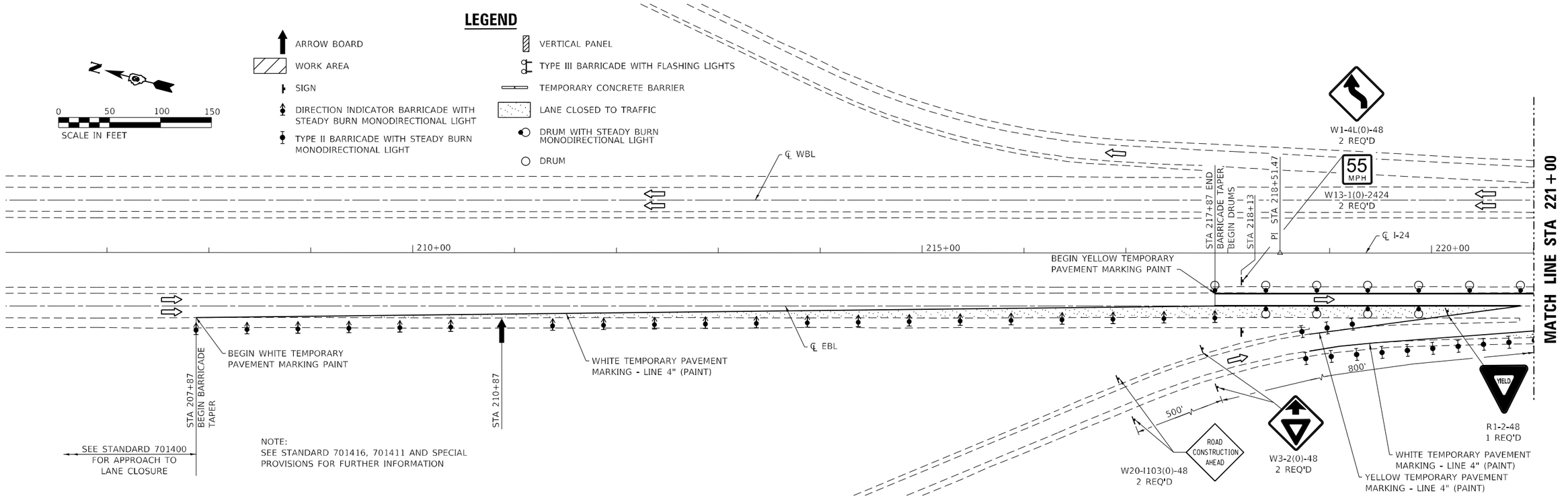
MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9786885-sht-staging03.dgn

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM

N

0 50 100 150
SCALE IN FEET

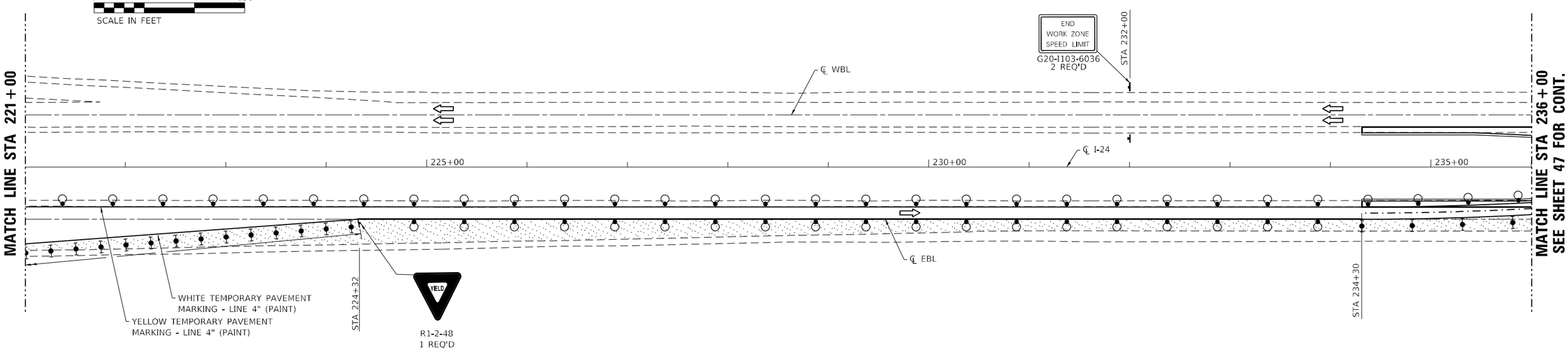


SEE STANDARD 701400
FOR APPROACH TO
LANE CLOSURE

NOTE:
SEE STANDARD 701416, 701411 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

N

0 50 100 150
SCALE IN FEET



MODEL: PLOT
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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 1 OF 4 SHEETS | STA. 206+00 | TO STA. 236+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	46
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

MATCH LINE STA 236+00
SEE SHEET 46 FOR CONT.

STA 240+00, ±40' LT
BEGIN TEMPORARY CONCRETE BARRIER TAPER

STA 242+00, ±64' LT
BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT AND TAPER

℄ WBL

STA 242+00, WBL
BEGIN PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½", SEE SECTION C-C (PRE-STAGE II WORK)

STA 244+00, ±58' LT
BEGIN YELLOW TEMPORARY PAVEMENT MARKING PAINT

STA 244+00
END TEMPORARY CONCRETE BARRIER TAPER

STA 244+00, ±69' LT
END WHITE TEMPORARY PAVEMENT MARKING PAINT TAPER

STA 245+00

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

240+00 | 245+00 | 250+00

℄ I-24

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

EB CROSSOVER BASELINE

℄ EBL

MATCH LINE STA 251+00

DRUMS WITH STEADY BURN MONODIRECTIONAL LIGHTS AT 50' CENTERS

VERTICAL PANELS AT 50' CENTERS

16' | 2' | 2' | 12' | 2' | 4' | 6' | 1:4 | 1:4

YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

SECTION A–A

0 50 100 150
SCALE IN FEET

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM

NOTE:
PRIOR TO STAGE II USE STANDARD 701401 FOR PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING 13½"

NOTE:
SEE STANDARD 701416, 701411 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

MATCH LINE STA 251+00

STA 251+19, WBL
END PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½" (PRE-STAGE II WORK)

STA 257+07, WBL
BEGIN PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½", SEE SECTION C-C (PRE-STAGE II WORK)

W1-4R(0)-48
1 REQ'D

℄ WBL

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

STA 263+00, ± 54' LT
BEGIN TEMPORARY CONCRETE BARRIER AND YELLOW TEMPORARY PAVEMENT MARKING PAINT TAPERS

STA 263+75, ±69' LT
BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT TAPER

STA 266+00, WBL
END PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½" (PRE-STAGE II WORK)

STA 266+00, ±64' LT
END WHITE TEMPORARY PAVEMENT MARKING PAINT AND TAPER

255+00 | 260+00 | 265+00

℄ I-24

STA 259+00

INSTALL 3 TYPE B MONODIRECTIONAL GUARDRAIL REFLECTORS ON WEST PARAPET

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

℄ EBL

CONSTRUCT SN 064-0048 (EB)

BEAR CREEK

0 50 100 150
SCALE IN FEET

℄ WB LANES
21'-3" | 17'-3"
3'-6" | 12'-0" | 2' | 2' | 11'-10½" | 5'-3"

TEMPORARY PAVEMENT MARKING LINE 4", TYP

TEMPORARY CONCRETE BARRIER

SECTION B–B

℄ WB LANES
12'-0" | 2' | 2' | 11'-10½"
6'-0" | 12'-0"

TEMPORARY PAVEMENT MARKING LINE 4", TYP

TEMPORARY CONCRETE BARRIER

PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½" (PRE-STAGE II WORK)

SECTION C–C

MATCH LINE STA 266+00
SEE SHEET 48 FOR CONT.

MODEL: PLOT
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ESCA CONSULTANTS, INC.

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ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -	
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -	

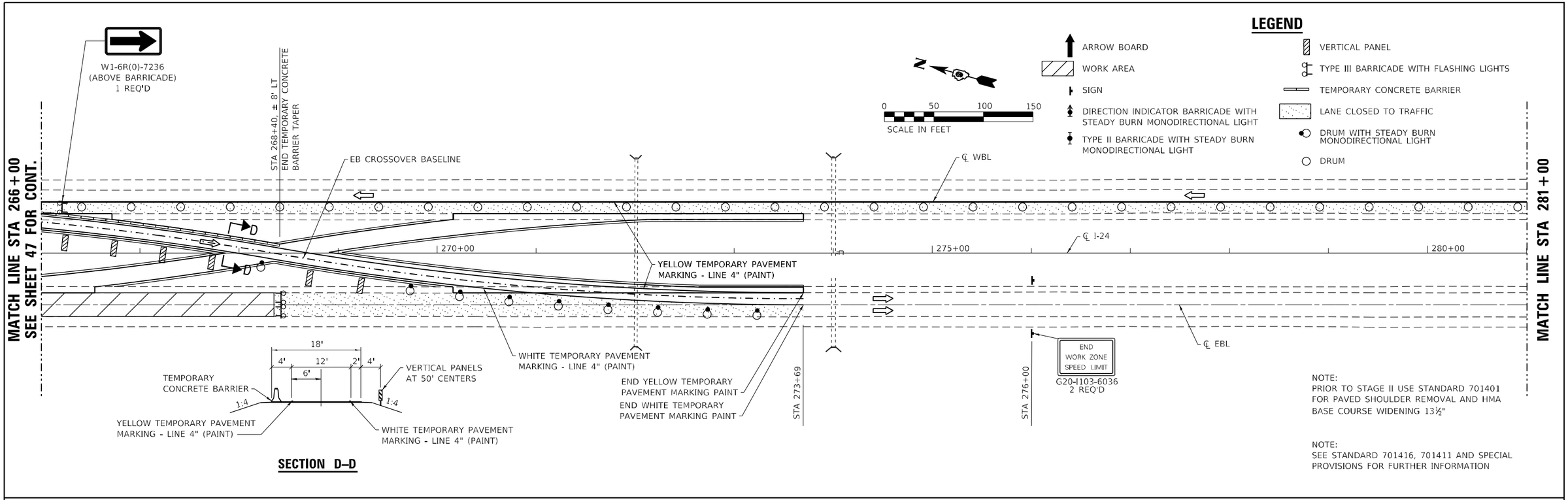
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

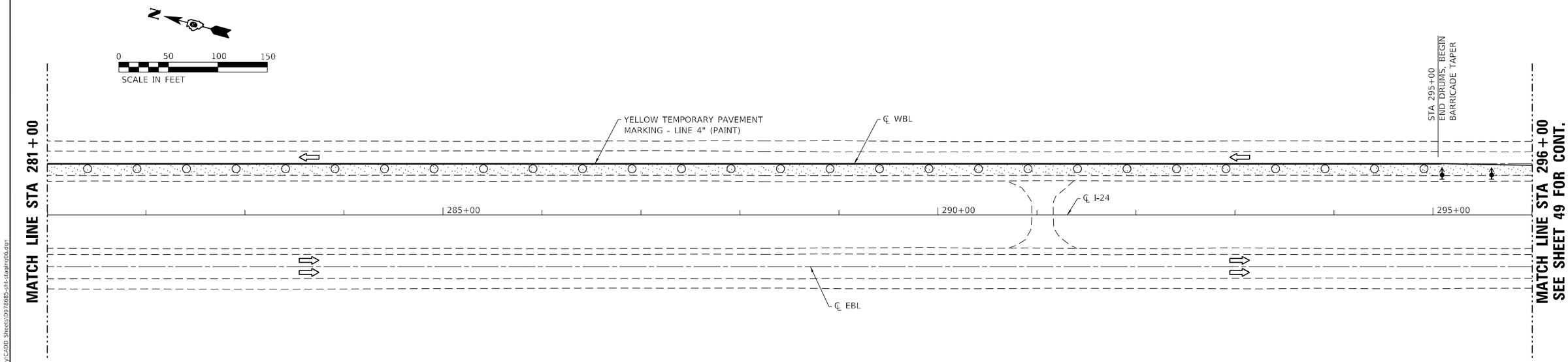
STAGE II TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 2 OF 4 SHEETS | STA. 236+00 TO STA. 266+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	47

CONTRACT NO. 78685
ILLINOIS FED. AID PROJECT





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ESCA CONSULTANTS, INC.

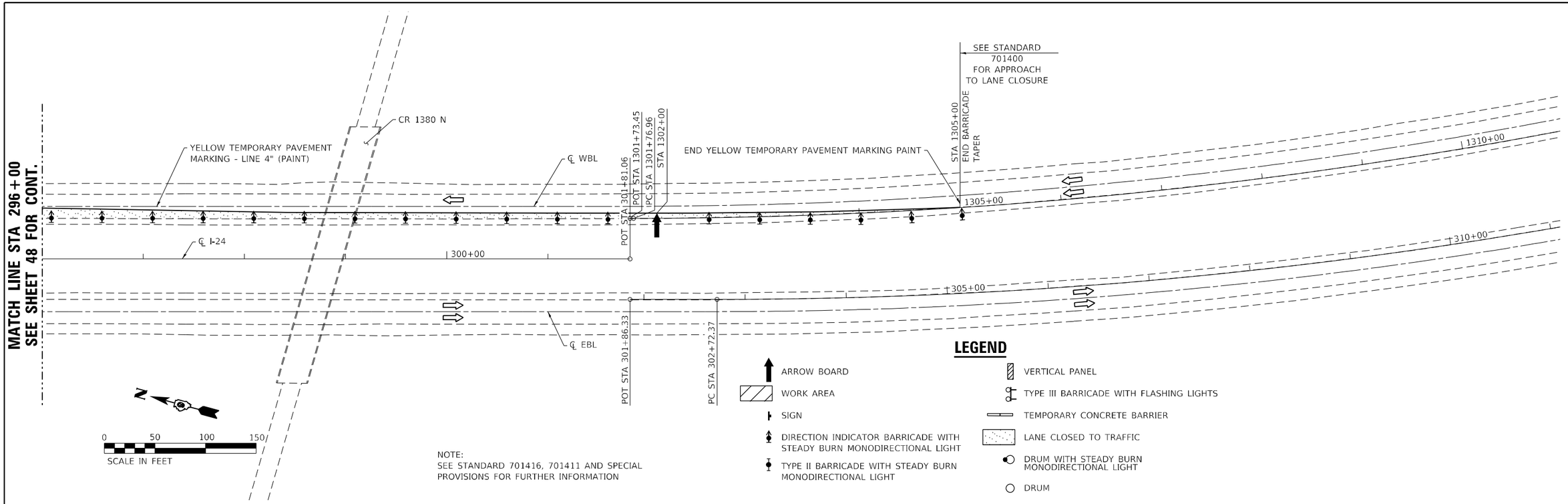
USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 3 OF 4 SHEETS | STA. 266+00 | TO STA. 296+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	48
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



MODEL: PLOT
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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

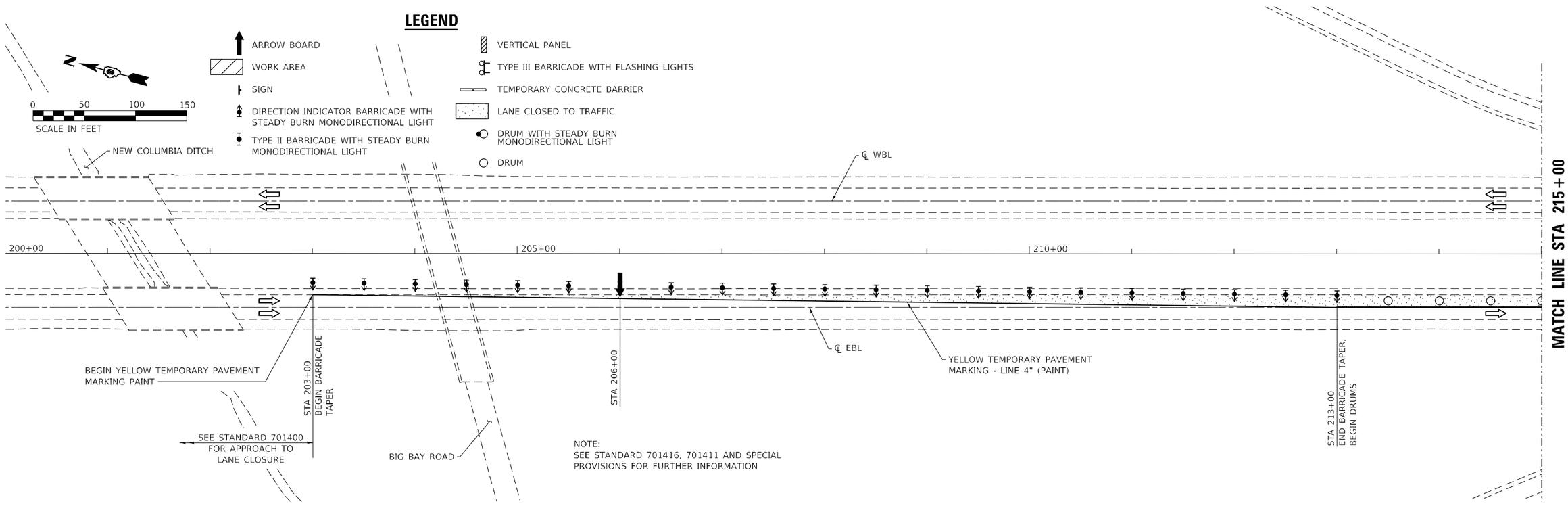
STAGE II TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 4 OF 4 SHEETS | STA. 296+00 | TO STA. 311+00

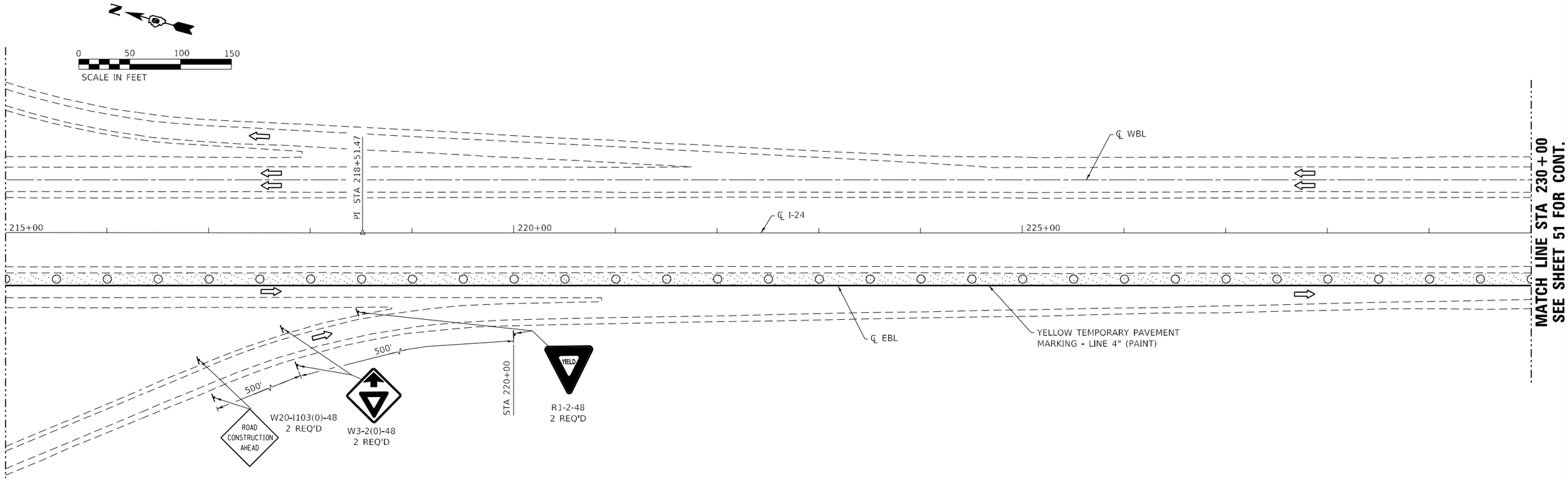
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	49
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM



NOTE:
SEE STANDARD 701416, 701411 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION



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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - JMK	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -	
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE III TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 1 OF 4 SHEETS | STA. 200+00 TO STA. 230+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	50
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- VERTICAL PANEL
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TEMPORARY CONCRETE BARRIER
- LANE CLOSED TO TRAFFIC
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DRUM

MATCH LINE STA 230+00
SEE SHEET 50 FOR CONT.

END WORK ZONE SPEED LIMIT
G20-I103-6036
2 REQ'D

STA 232+00

STA 234+31

BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

℄ WBL

WB CROSSOVER BASELINE

℄ I-24

230+00

235+00

240+00

BEGIN YELLOW TEMPORARY PAVEMENT MARKING PAINT

YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

E

E

YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

℄ EBL

0 50 100 150
SCALE IN FEET

18'
4' 2' 12' 4'
6'
VERTICAL PANELS AT 50' CENTERS
TEMPORARY CONCRETE BARRIER
1:4
1:4
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

SECTION E–E

NOTE:
SEE STANDARD 701416, 701411 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

STA 239+60
±8' RT BEGIN TEMPORARY CONCRETE BARRIER TAPER

STA 241+67

W1-6R(0)-7236
(ABOVE BARRICADE)
1 REQ'D

STA 242+00, EBL
BEGIN PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½"
(PRE-STAGE III WORK)

STA 245+00, ±64' RT
END WHITE TEMPORARY PAVEMENT MARKING PAINT TAPER

STA 242+00, ±64' RT
BEGIN WHITE TEMPORARY PAVEMENT MARKING PAINT AND TAPER

STA 245+00, ± 54' RT
END TEMPORARY CONCRETE BARRIER AND YELLOW TEMPORARY PAVEMENT MARKING PAINT TAPERS

MATCH LINE STA 245+00

0 50 100 150
SCALE IN FEET

BEAR CREEK

CONSTRUCT SN 064-0047 (WB)

℄ WBL

℄ I-24

245+00

250+00

255+00

F

F

YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

℄ EBL

STA 250+00

℄ EB LANES
12'-0" 2' 2' 12'-0"
TEMPORARY PAVEMENT MARKING LINE 4", TYP
TEMPORARY CONCRETE BARRIER
12'-0" 6'-0"
PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½" (PRE-STAGE III WORK)

SECTION F–F

W1-4R(0)-48
1 REQ'D

STA 252+99.74, EBL
END PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½"
(PRE-STAGE III WORK)

TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6

INSTALL 3 - TYPE B BIDIRECTIONAL GUARDRAIL REFLECTORS ON EAST PARAPET

TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (FLARED)

STA 255+78.10, EBL
BEGIN PAVED SHOULDER REMOVAL AND HMA BASE COURSE WIDENING, 13½"
(PRE-STAGE III WORK)

G

G

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)

℄ EB LANES
18'-0" 24'-0"
6'-0" 12'-0" 2' 2' 12'-0" 6'-1½"
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
WHITE TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
YELLOW TEMPORARY PAVEMENT MARKING - LINE 4" (PAINT)
TEMPORARY CONCRETE BARRIER

SECTION G–G

MATCH LINE STA 260+00
SEE SHEET 52 FOR CONT.

MODEL: PLOT
FILE NAME: X:\IDOT\13359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-staging09.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE III TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 2 OF 4 SHEETS | STA. 230+00 | TO STA. 260+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	51
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

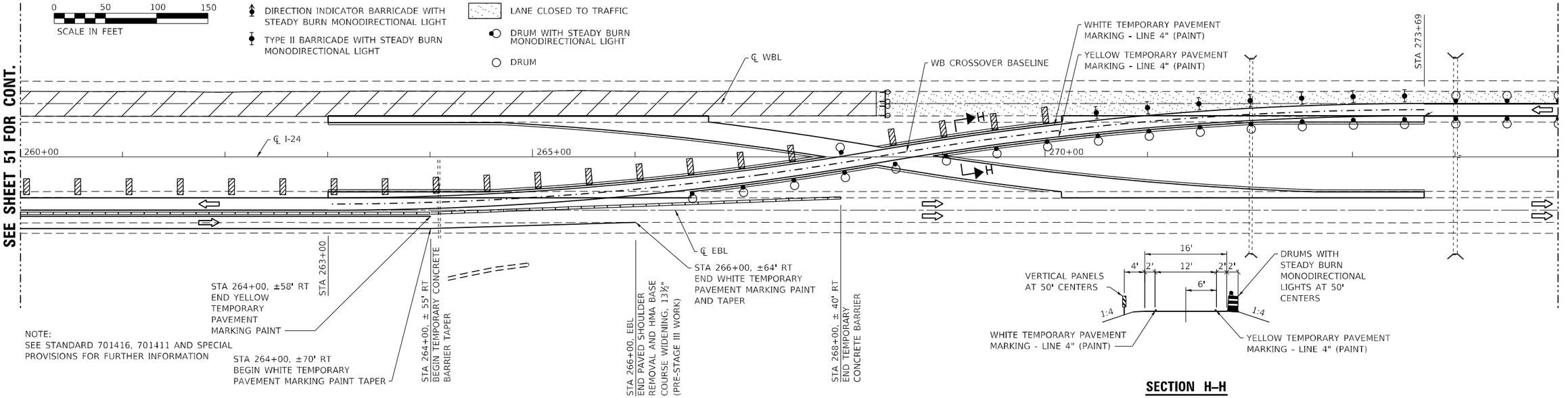
LEGEND

ARROW BOARD
WORK AREA
SIGN
DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
VERTICAL PANEL
TYPE III BARRICADE WITH FLASHING LIGHTS
TEMPORARY CONCRETE BARRIER
LANE CLOSED TO TRAFFIC
DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
DRUM

N

0 50 100 150
SCALE IN FEET

MATCH LINE STA 260+00
SEE SHEET 51 FOR CONT.



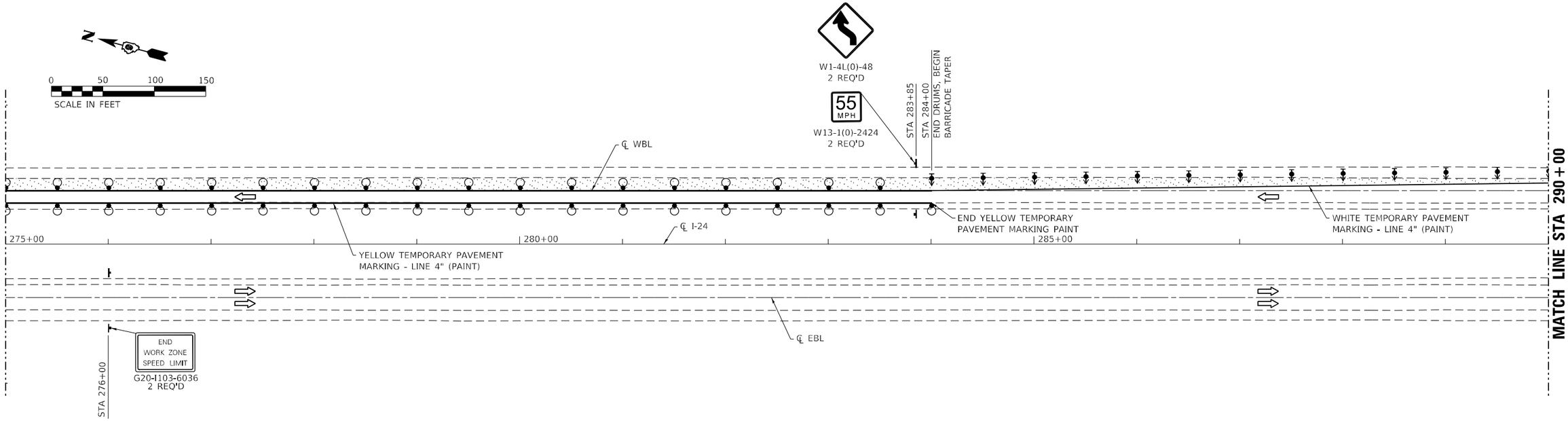
NOTE:
SEE STANDARD 701416, 701411 AND SPECIAL PROVISIONS FOR FURTHER INFORMATION

SECTION H–H

N

0 50 100 150
SCALE IN FEET

MATCH LINE STA 275+00



MATCH LINE STA 290+00
SEE SHEET 53 FOR CONT.

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9978685-sht-staging10.dgn

USER NAME = nhc	DESIGNED - JMK	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -	
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -	

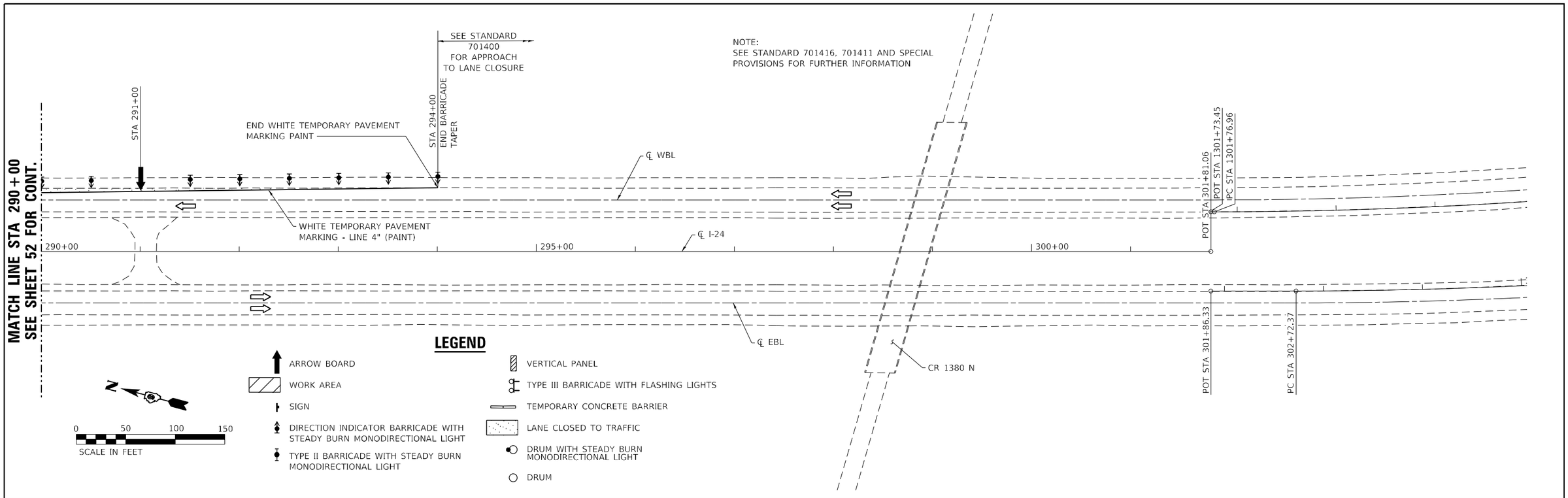
ESCA CONSULTANTS, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE III TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 3 OF 4 SHEETS | STA. 260+00 TO STA. 290+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	52
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



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ESCA CONSULTANTS, INC.

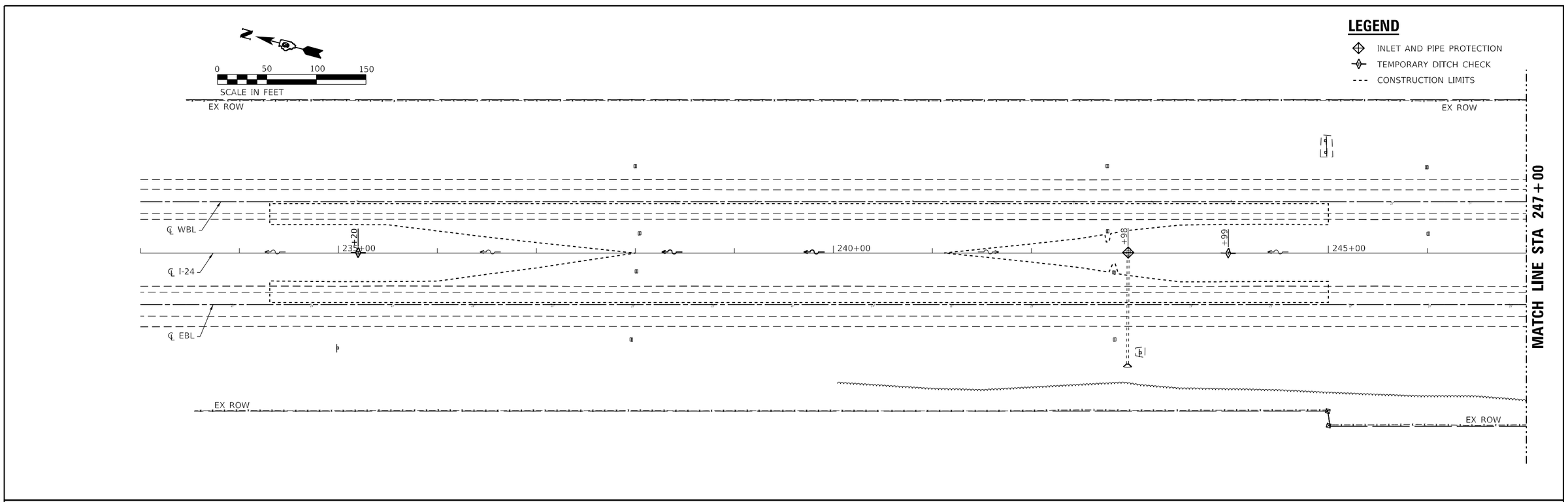
USER NAME = nhc	DESIGNED - JMK	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - JMK	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

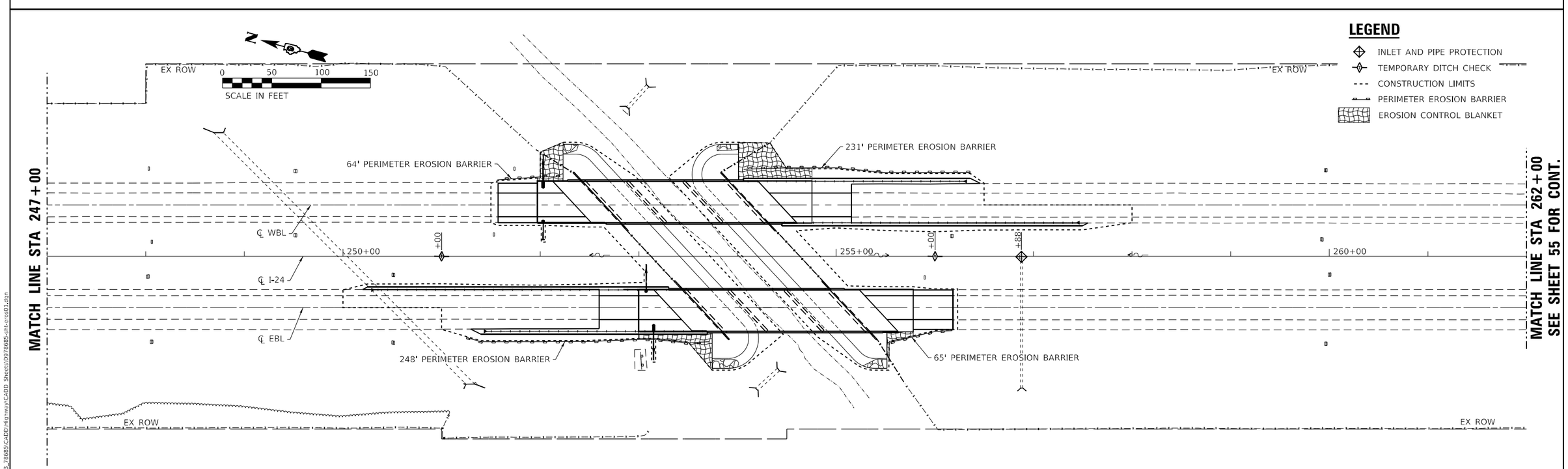
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE III TRAFFIC CONTROL

SCALE: 1" = 50' | SHEET NO. 4 OF 4 SHEETS | STA. 290+00 | TO STA. 305+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	53
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			





MODEL: PLOT
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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

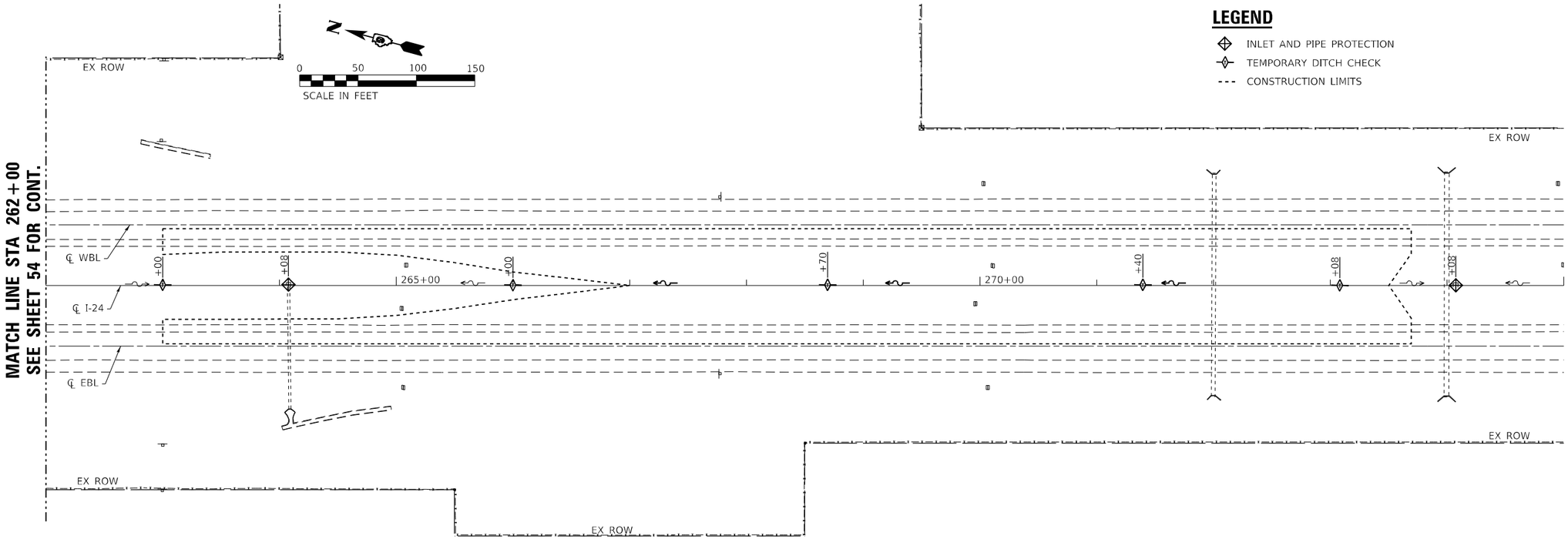
EROSION CONTROL PLANS

SCALE: 1" = 50' | SHEET NO. 1 OF 3 SHEETS | STA. 233+00 | TO STA. 262+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	54

CONTRACT NO. 78685

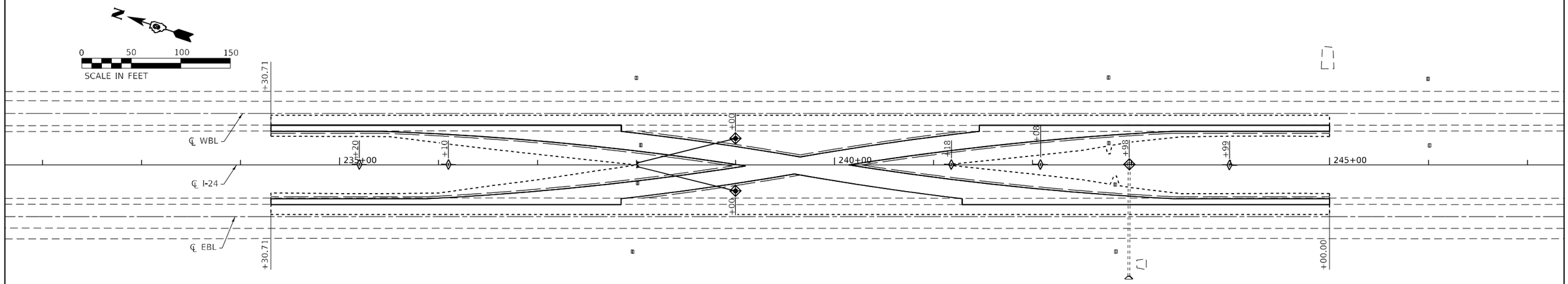
ILLINOIS | FED. AID PROJECT



MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-ero02.dgn

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SKM	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**EROSION CONTROL PLANS**
	ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: 1" = 50' | SHEET NO. 2 OF 3 SHEETS | STA. 262+00 TO STA. 275+00
	PLOT DATE = 3/22/2022	DATE - 04/21	REVISED -		

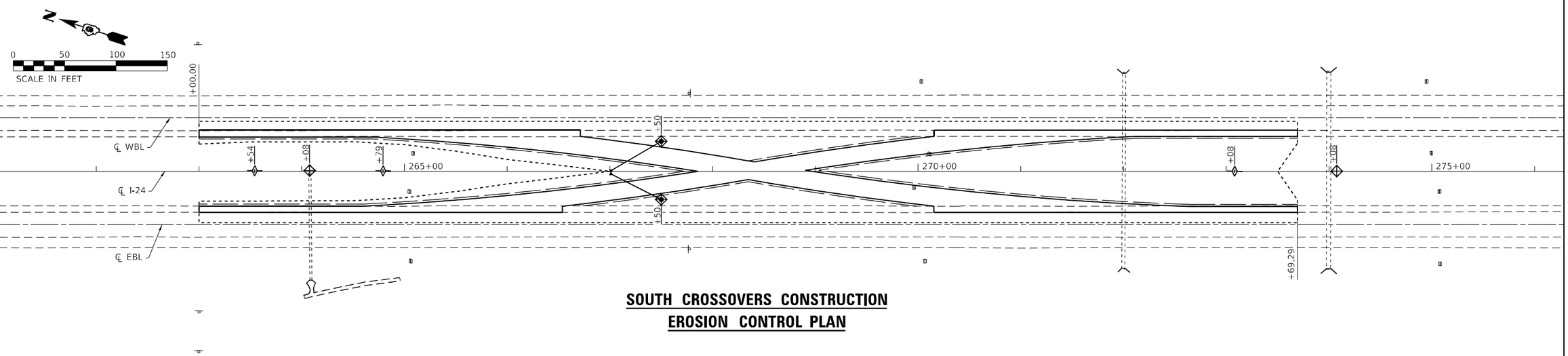
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	55
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



NORTH CROSSOVERS CONSTRUCTION
EROSION CONTROL PLAN

LEGEND

- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- CONSTRUCTION LIMITS



SOUTH CROSSOVERS CONSTRUCTION
EROSION CONTROL PLAN

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9786851-sht-ero03.dgn

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLANS

SCALE: 1"=50' | SHEET NO. 3 OF 3 SHEETS | STA. 231+70 TO STA. 276+20

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	56
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

0 30 60 90
SCALE IN FEET

LEGEND

PAVEMENT REMOVAL

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

EX ROW

EX ROW

STA 253+31.51
REMOVAL OF EXISTING
STRUCTURES NO. 2 SN 064-0017

52' WOVEN WIRE
FENCE REMOVAL

281' GUARDRAIL REMOVAL

10'
24'
6'

+57.16

+97.16

+75.52

+15.52

261' GUARDRAIL REMOVAL

90' WOVEN WIRE
FENCE REMOVAL

250+00 251 252 253 254 255+00 256 257 258

℄ I-24

STA 254+28.49
REMOVAL OF EXISTING
STRUCTURES NO. 1 SN 064-0018

89' WOVEN WIRE FENCE
REMOVAL

222' GUARDRAIL REMOVAL

6'
24'
10'

+59.74

+99.74

+78.10

+18.10

TREE REMOVAL,
15" DIA.

279' GUARDRAIL REMOVAL

EX ROW

EX ROW

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D9978685-sht-rem01.dgn

ESCA CONSULTANTS, INC.
CIVIL • STRUCTURAL • TRAFFIC

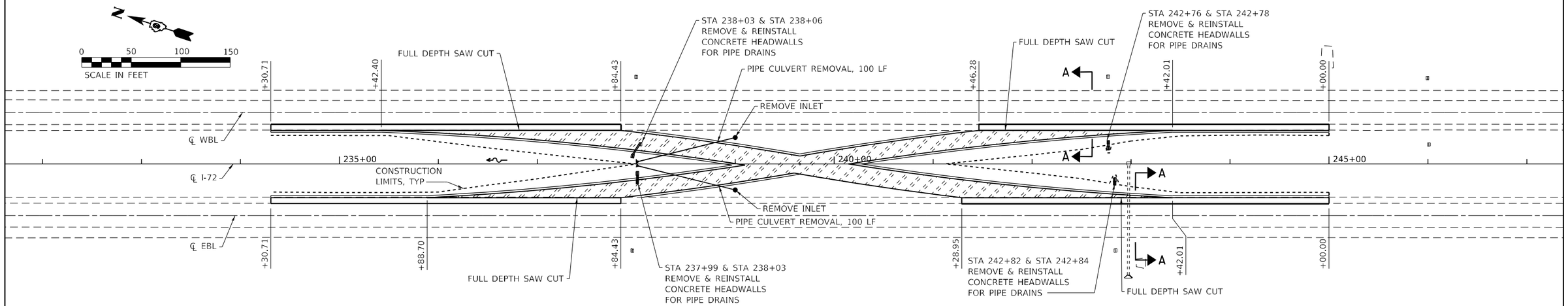
USER NAME = nhc	DESIGNED - SKM	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SKM	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN

SCALE: 1"=30' | SHEET NO. 1 OF 1 SHEETS | STA. 249+25 TO STA. 258+70

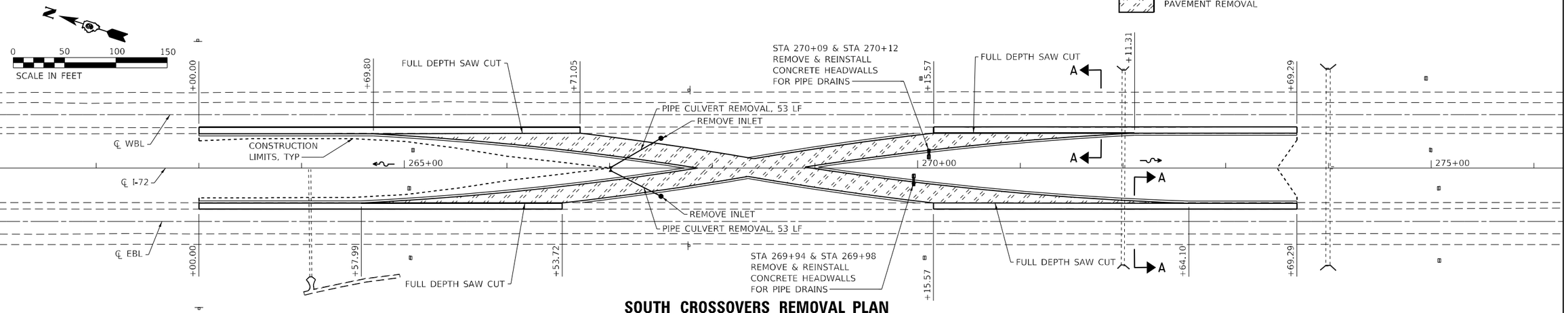
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	57
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



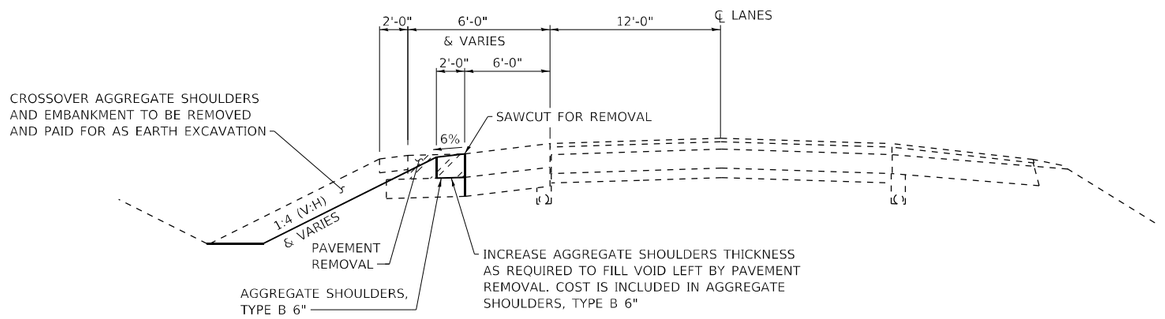
NORTH CROSSOVERS REMOVAL PLAN

LEGEND

PAVEMENT REMOVAL



SOUTH CROSSOVERS REMOVAL PLAN



SECTION A–A

MODEL: PLOT
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ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

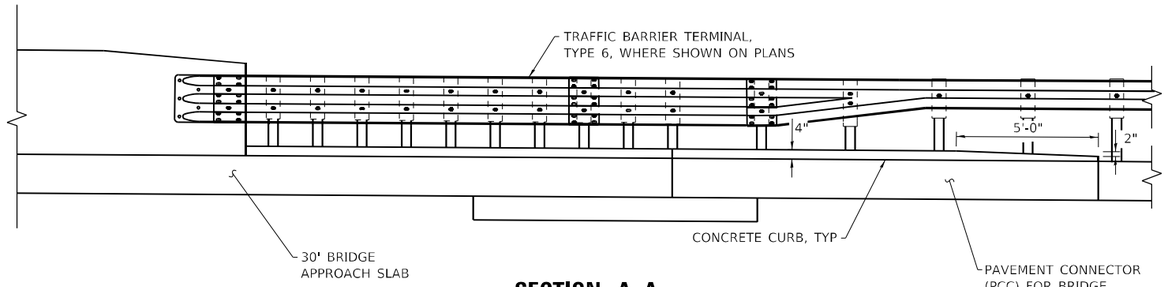
USER NAME = nhc	DESIGNED - SMA	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -	
PLOT DATE = 3/22/2022	DATE - 05/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

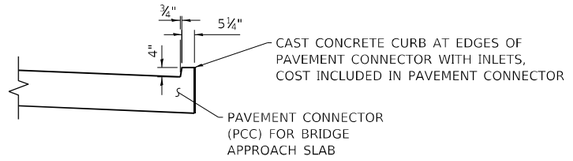
CROSSOVERS REMOVAL PLANS

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

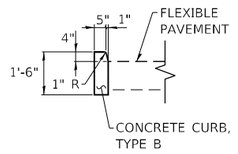
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	58
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



SECTION A–A

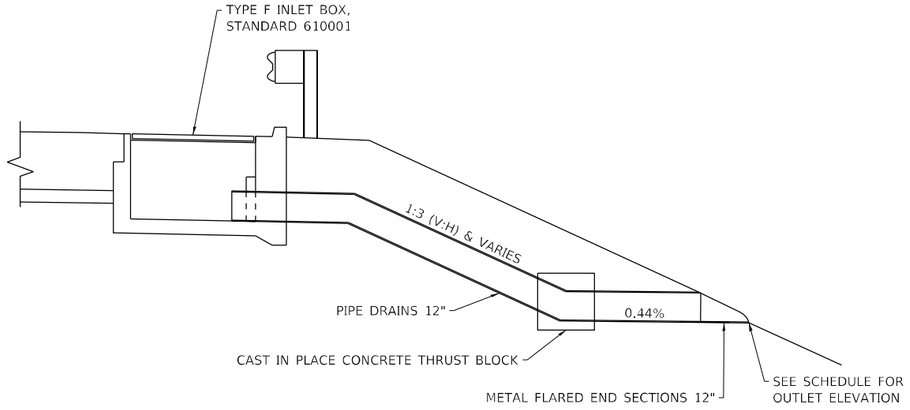


SECTION B–B

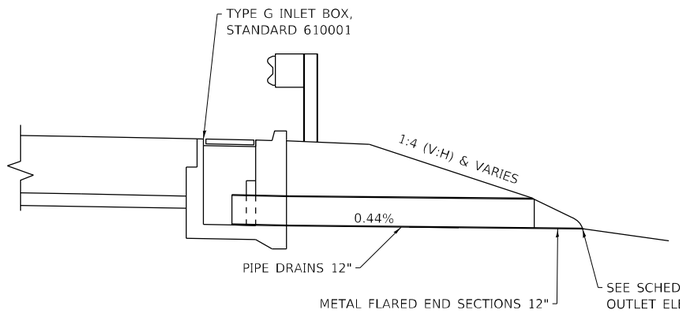


SECTION C–C

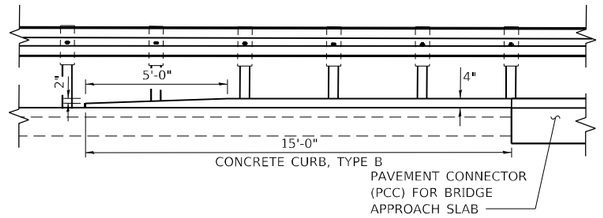
(SN 064-0048 ONLY)



SECTION AT TYPE F INLET BOX

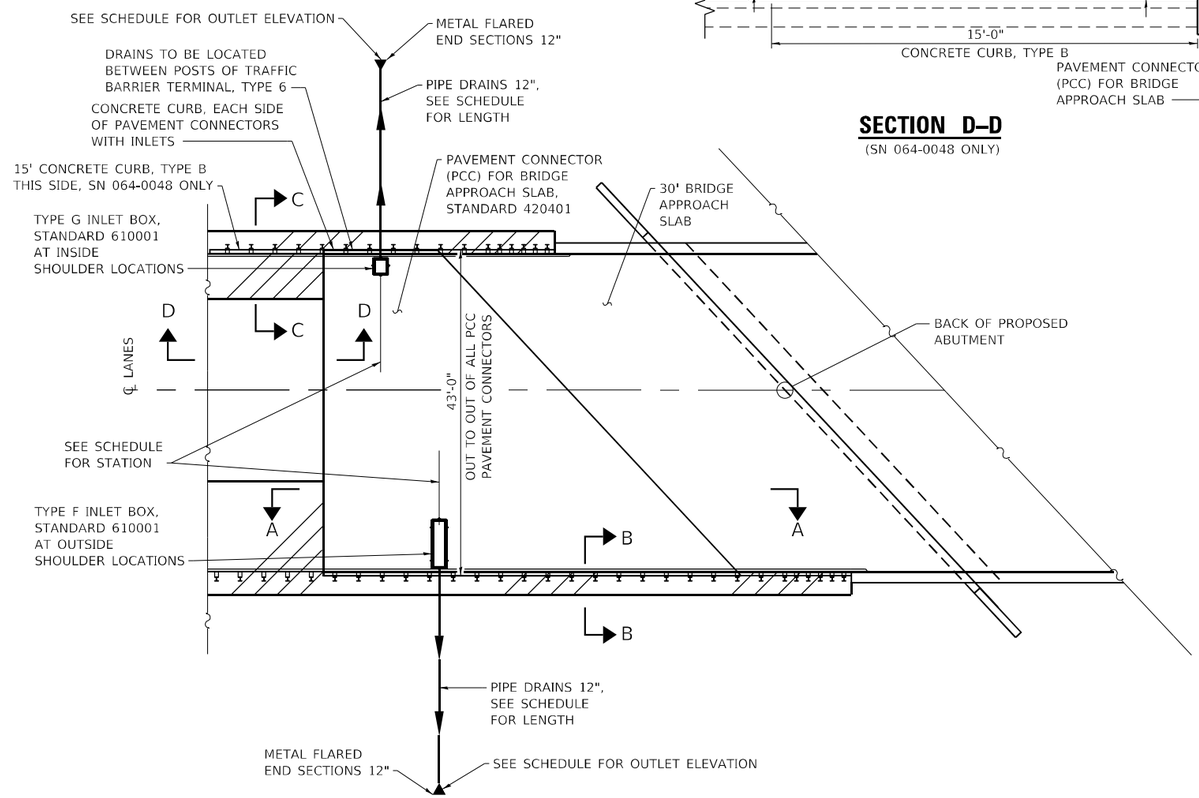


SECTION AT TYPE G INLET BOX



SECTION D–D

(SN 064-0048 ONLY)



PLAN

(NORTH ABUTMENT OF EASTBOUND SN 064-0048 SHOWN, OTHER LOCATIONS SIMILAR)

PCC PAVEMENT CONNECTOR DRAINAGE SCHEDULE

LOCATION			INLET BOX, STD. 610001		CONCRETE THRUST BLOCKS	PIPE DRAINS 12"	METAL FLARED END SECTIONS 12"	OUTLET ELEVATION
			TYPE G	TYPE F				
STATION	LANE	OFFSET	EACH	EACH	EACH	FOOT	EACH	
253+07.37	EBL	RIGHT	1			25	1	345.92
253+15.00	EBL	RIGHT		1	1	28	1	344.01
252+03.00	WBL	LEFT	1			17	1	345.99
252+03.00	WBL	LEFT		1	1	26	1	343.84
		TOTALS	2	2	2	96	4	

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\Highway\CADD Sheets\D978685-sht-detail606.dgn

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

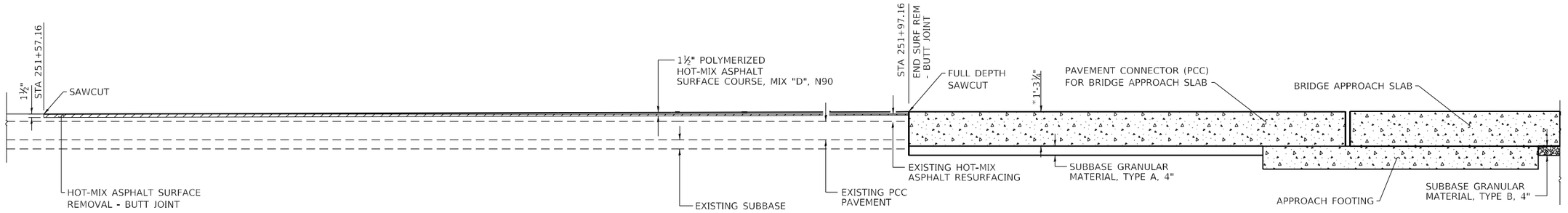
USER NAME = nhc	DESIGNED - SMA	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -	
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT CONNECTOR DETAILS

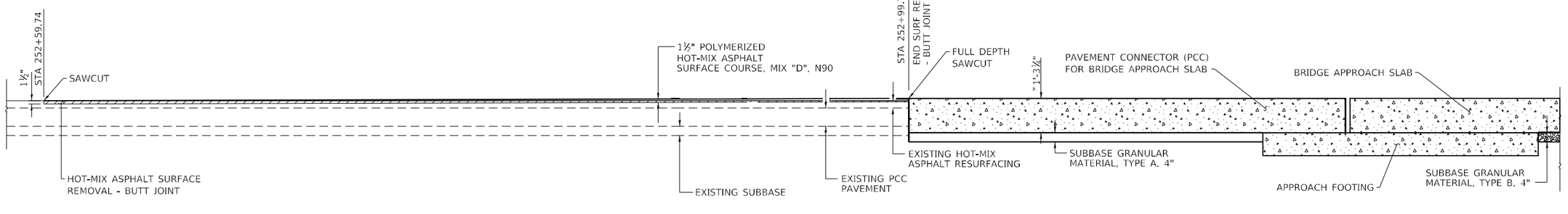
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	59
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



LONGITUDINAL SECTION

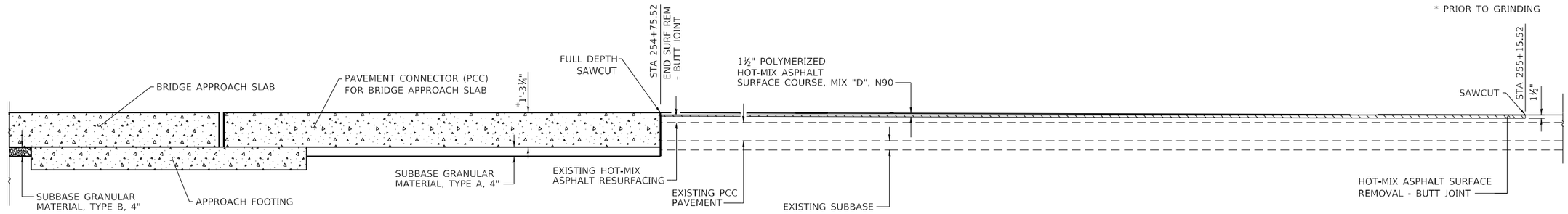
WBL I-24 STA 251+57.16 TO STA 251+97.16



LONGITUDINAL SECTION

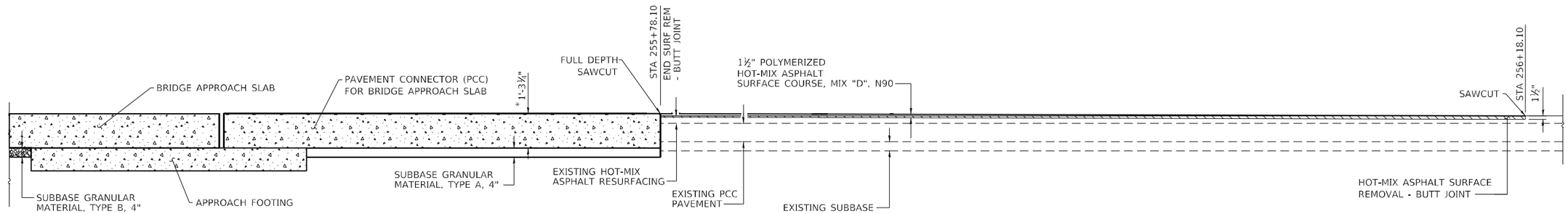
EBL I-24 STA 252+59.74 TO STA 252+99.74

* PRIOR TO GRINDING



LONGITUDINAL SECTION

WBL I-24 STA 254+75.52 TO STA 255+15.52



LONGITUDINAL SECTION

WBL I-24 STA 255+78.10 TO STA 256+18.10

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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

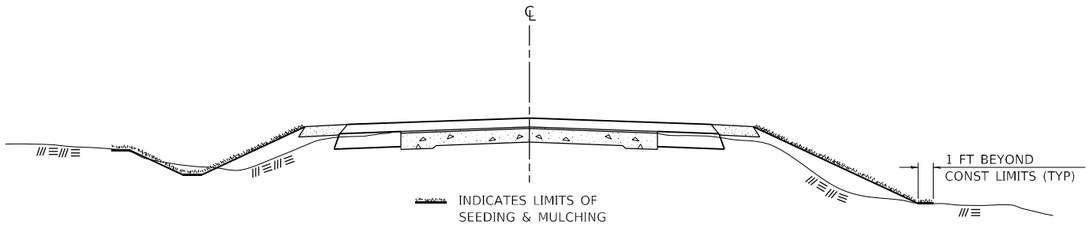
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT TRANSITION DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	60
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

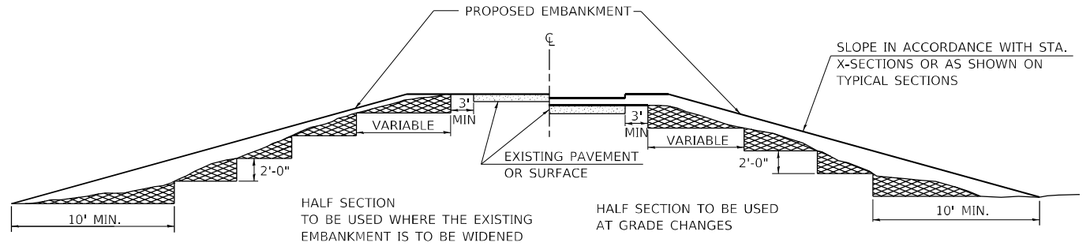
FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

STD. 9-12

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

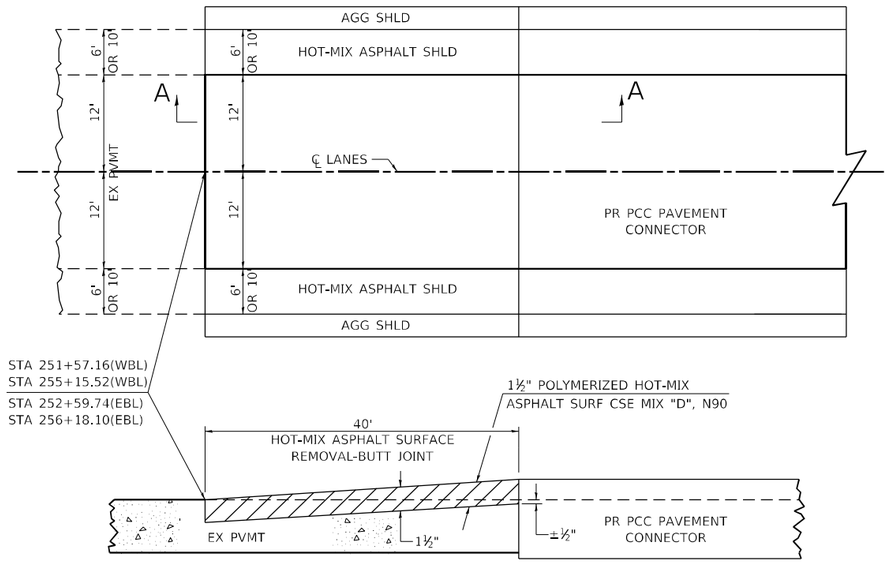


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

STD. 9-16

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

BUTT JOINT



SECTION A–A

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ESCA CONSULTANTS, INC.

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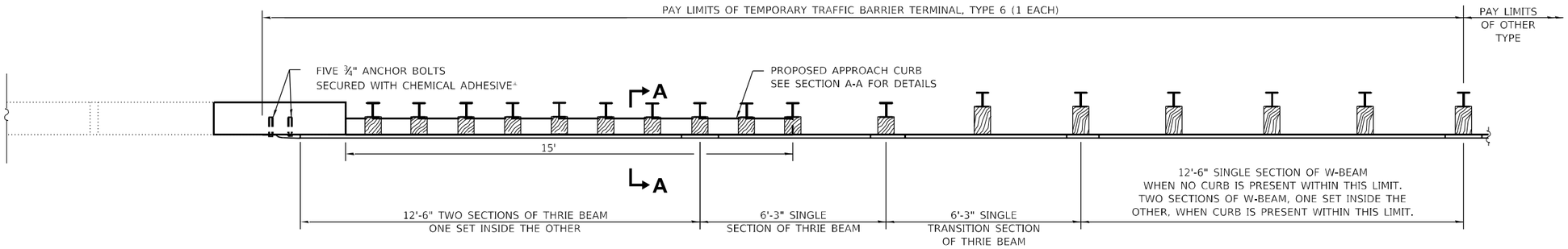
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

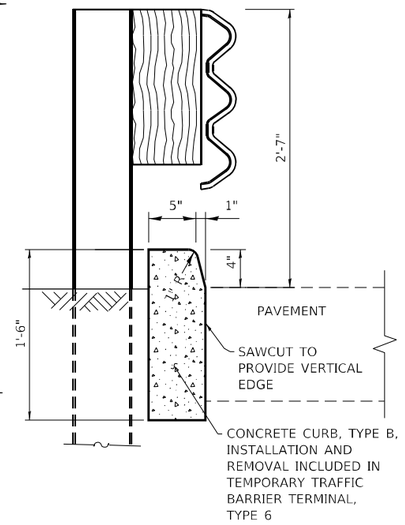
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	61
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



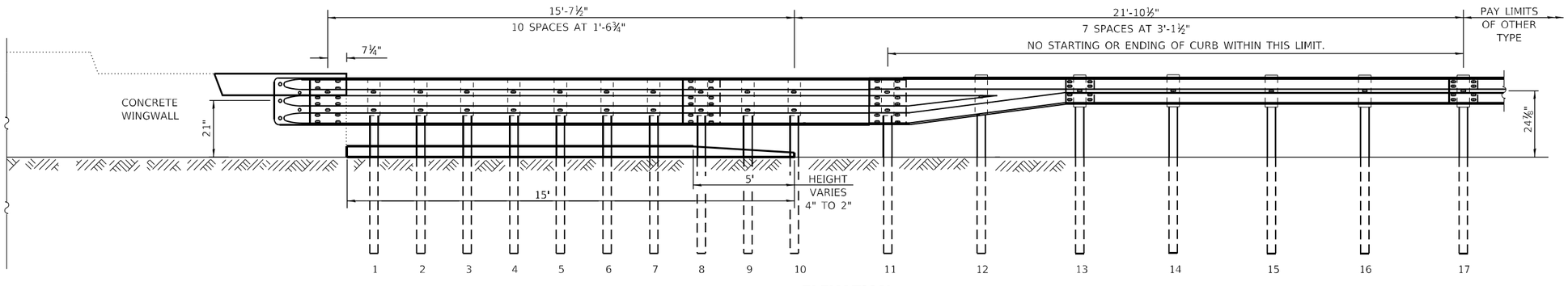
PLAN

*WITH STANDARD WASHERS. AFTER TIGHTENING, CUT THE ANCHOR BOLTS FLUSH WITH THE NUTS AND DAMAGE THE NUTS TO PREVENT THEM FROM LOOSENING.

SEE HIGHWAY STANDARD 631031 FOR ADDITIONAL DETAILS



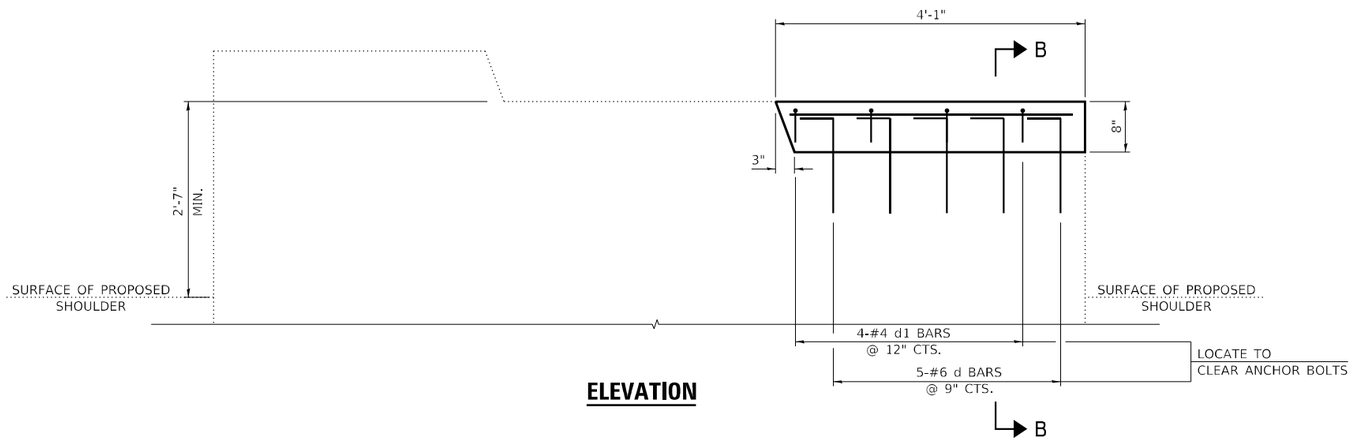
SECTION A–A



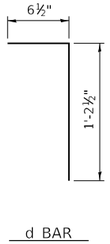
ELEVATION

TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6

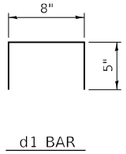
PLAN



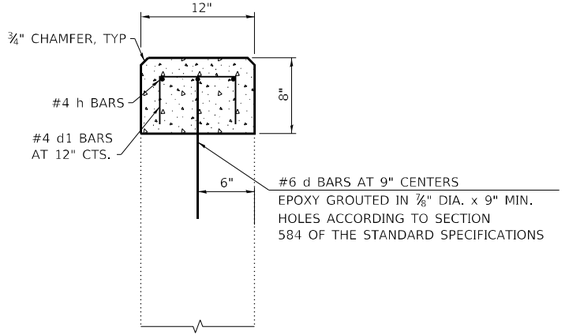
ELEVATION



d BAR



d1 BAR



SECTION B–B

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d	5	#6	1'-9"	
d1	4	#4	1'-6"	
h	2	#4	3'-10"	
CONCRETE SUPERSTRUCTURE			CU YD	0.1
REINFORCEMENT BARS			POUND	23

NORTHWEST WINGWALL EXTENSION ON SN 064–0017

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SMA	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
PLOT DATE = 3/22/2022	DATE - 07/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	62
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

MODEL: PLOT
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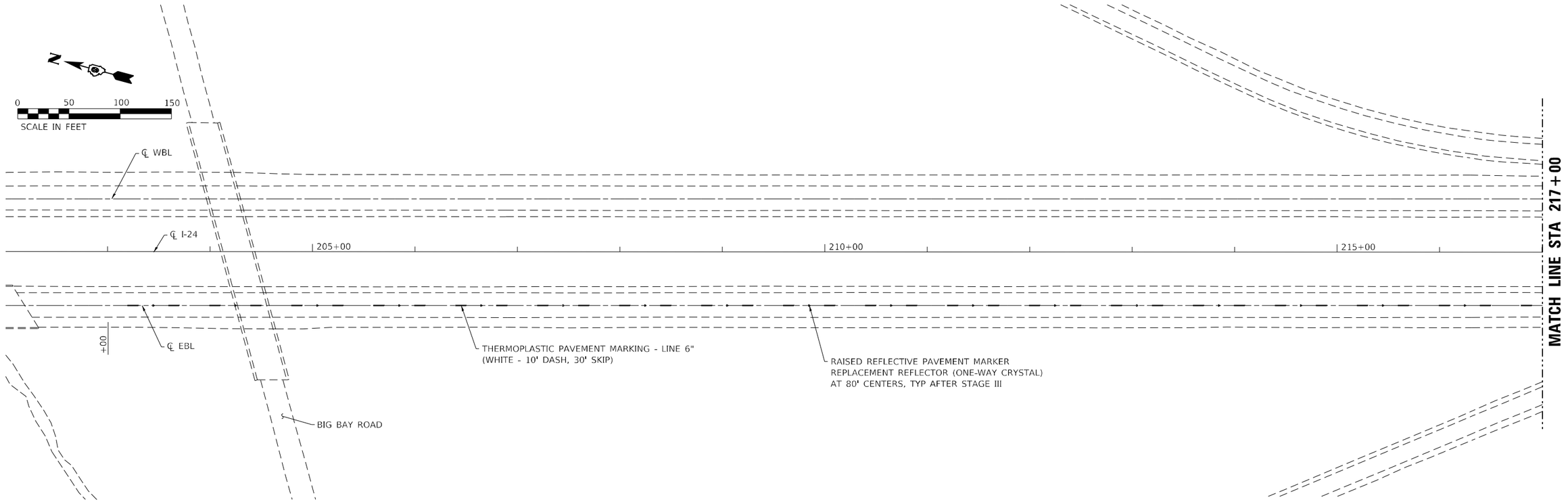

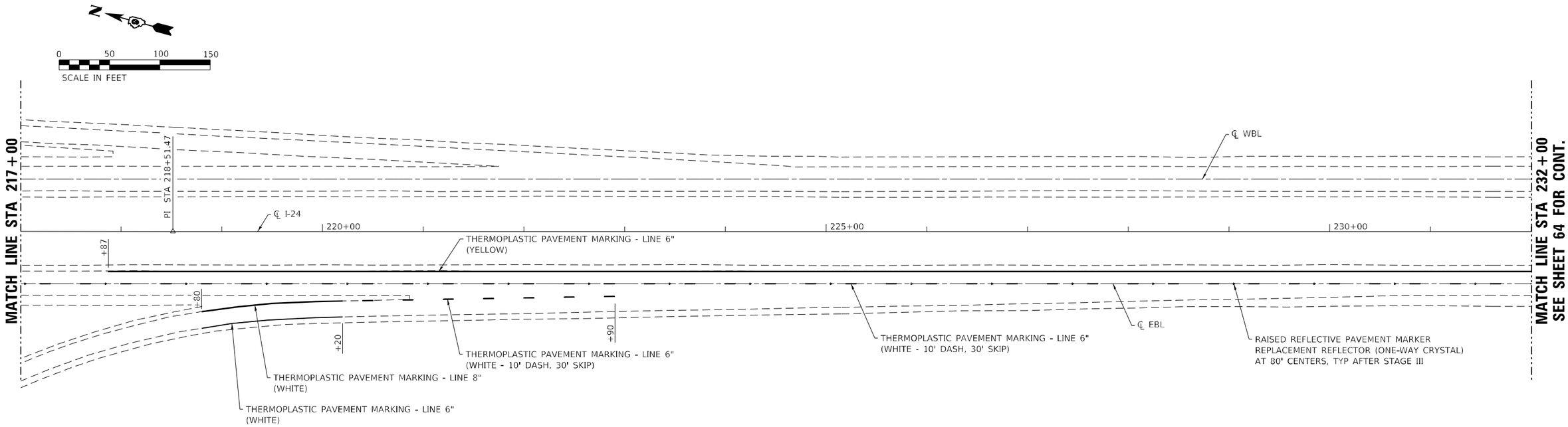

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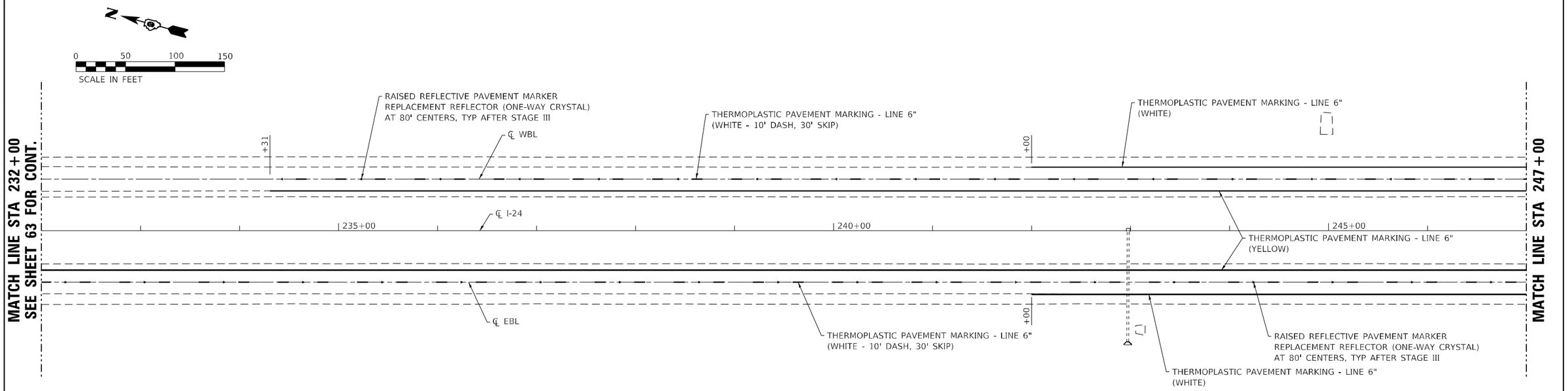
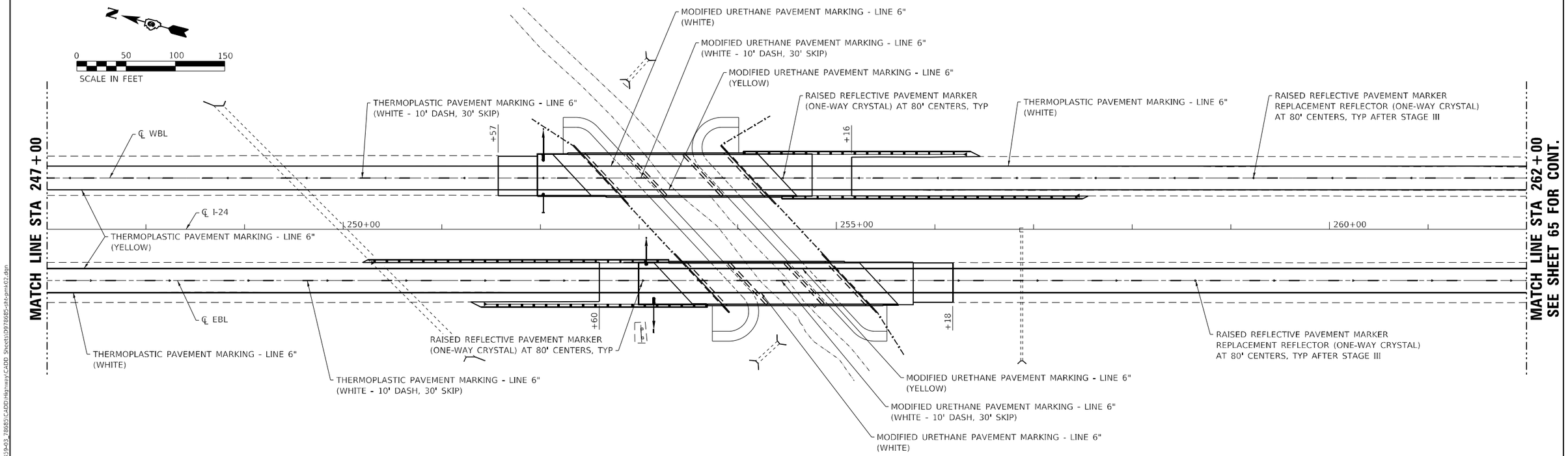
ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM/IRC	REVISED -	**STATE OF ILLINOIS**	**I–24 PAVEMENT MARKING PLANS**	
ESCA PROJECT NO. 1359.03	DRAWN - SKM/IRC	REVISED -	**DEPARTMENT OF TRANSPORTATION**		
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: 1" = 50'	SHEET NO. 1 OF 4 SHEETS STA. 203+00 TO STA. 232+00
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	63
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			





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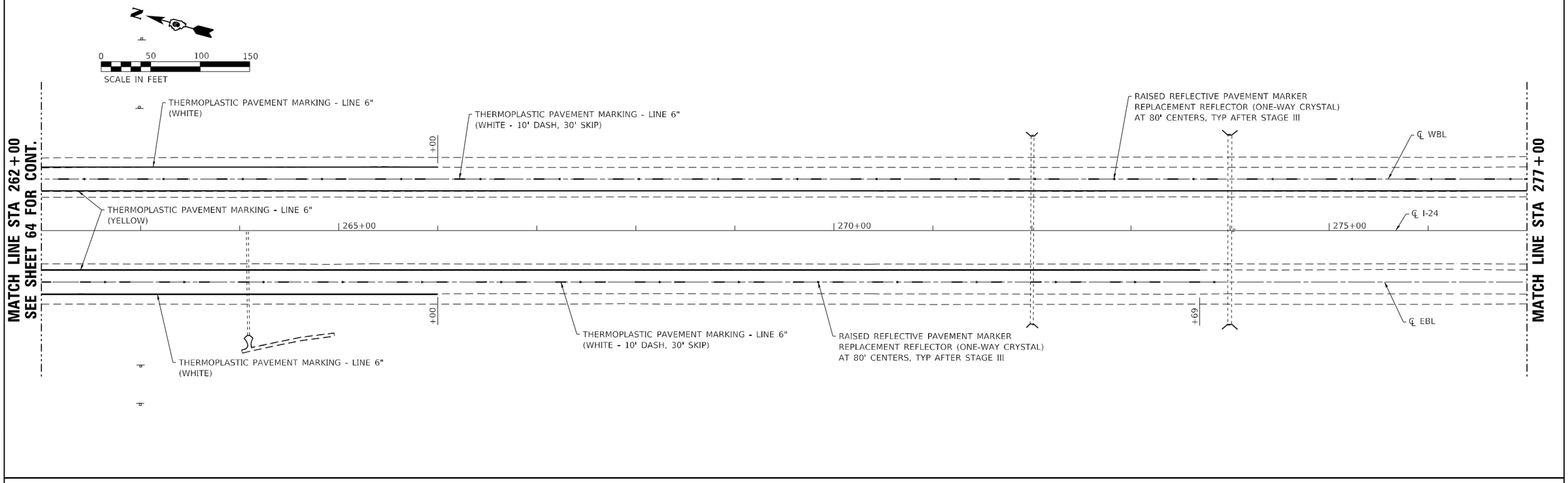
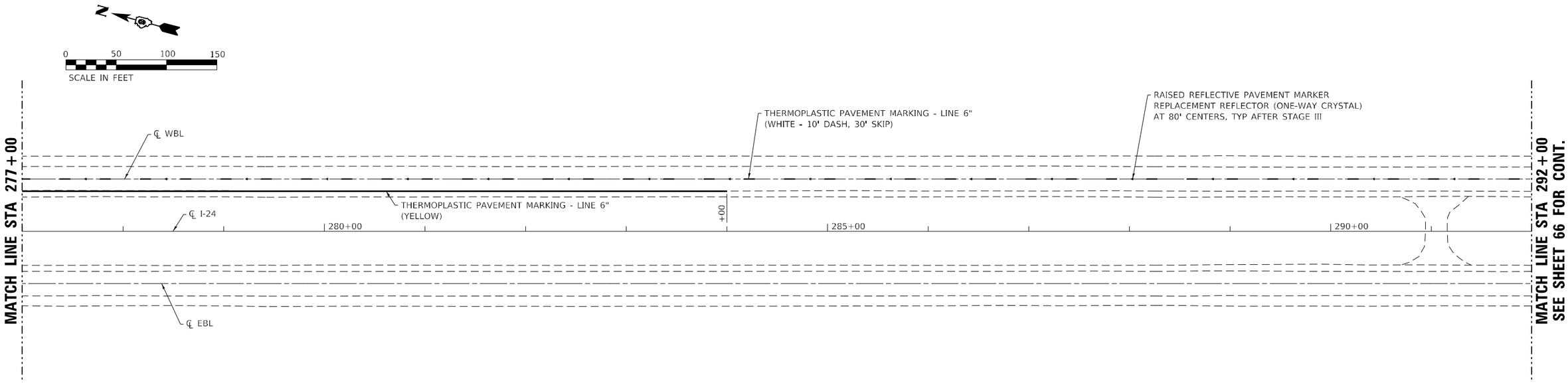
ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM/IRC	REVISED -	**STATE OF ILLINOIS**	**I–24 PAVEMENT MARKING PLANS**	
ESCA PROJECT NO. 1359.03	DRAWN - SKM/IRC	REVISED -	**DEPARTMENT OF TRANSPORTATION**		
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -		SCALE: 1" = 50'	SHEET NO. 2 OF 4 SHEETS STA. 232+00 TO STA. 262+00
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	64
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			





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ESCA CONSULTANTS, INC.

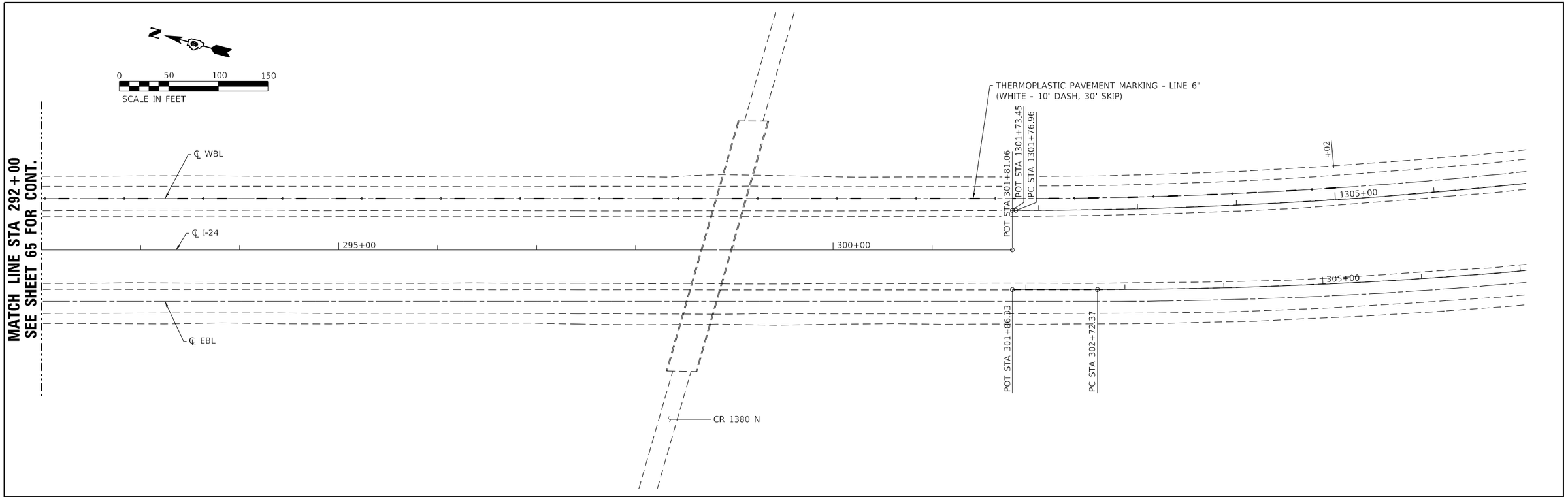
USER NAME = nhc	DESIGNED - SKM/IRC	REVISED -	
ESCA PROJECT NO. 1359.03	DRAWN - SKM/IRC	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 PAVEMENT MARKING PLANS

SCALE: 1" = 50' | SHEET NO. 3 OF 4 SHEETS | STA. 262+00 | TO STA. 292+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	65
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SKM/JRC	REVISED -
ESCA PROJECT NO. 1359.03	DRAWN - SKM/JRC	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - ELH	REVISED -
PLOT DATE = 3/22/2022	DATE - 03/22	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I–24 PAVEMENT MARKING PLANS

SCALE: 1" = 50' | SHEET NO. 4 OF 4 SHEETS | STA. 292+00 | TO STA. 307+08

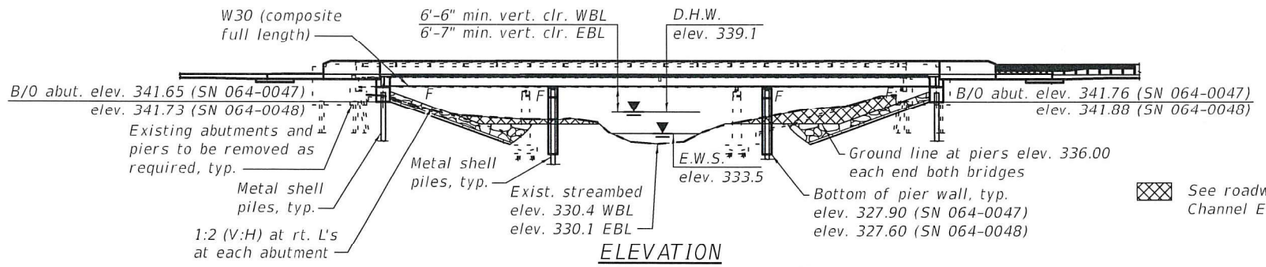
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	66
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

BENCHMARK: BM1 - Cut square in the northeast wingwall of SN 064-0017, Sta. 252+26, 75' left of the centerline of F.A.I. 24. Elev. 350.74

EXISTING STRUCTURES:
SN 064-0017 and SN 064-0018 were originally constructed in 1971 as F.A.I. 24, Section 64-1B-1. The three-span structures consist of concrete decks supported by six 30WF116. The steel beams are supported by concrete wall piers and stub abutments. The abutments are supported by concrete piles, and the piers are supported by untreated timber piles. Back to back abutments is 150'-10" for both WB Lanes and EB Lanes. The superstructure width is 38'-6" between parapets. The skew is 43° right forward. Interstate traffic will be maintained utilizing crossovers.

No salvage.

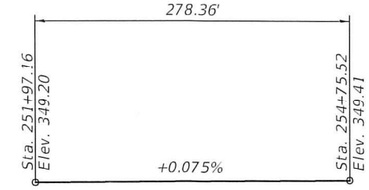
Up to ¼" may be ground off the bridge deck, the bridge approach slabs, and the pavement connectors.



ELEVATION

(SN 064-0047 shown, SN 064-0048 similar)

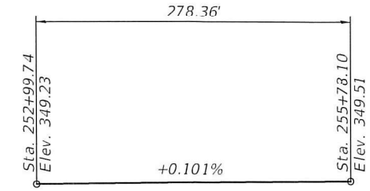
See roadway plans for Channel Excavation



WBL PROFILE GRADE

(Along ℄ lanes)

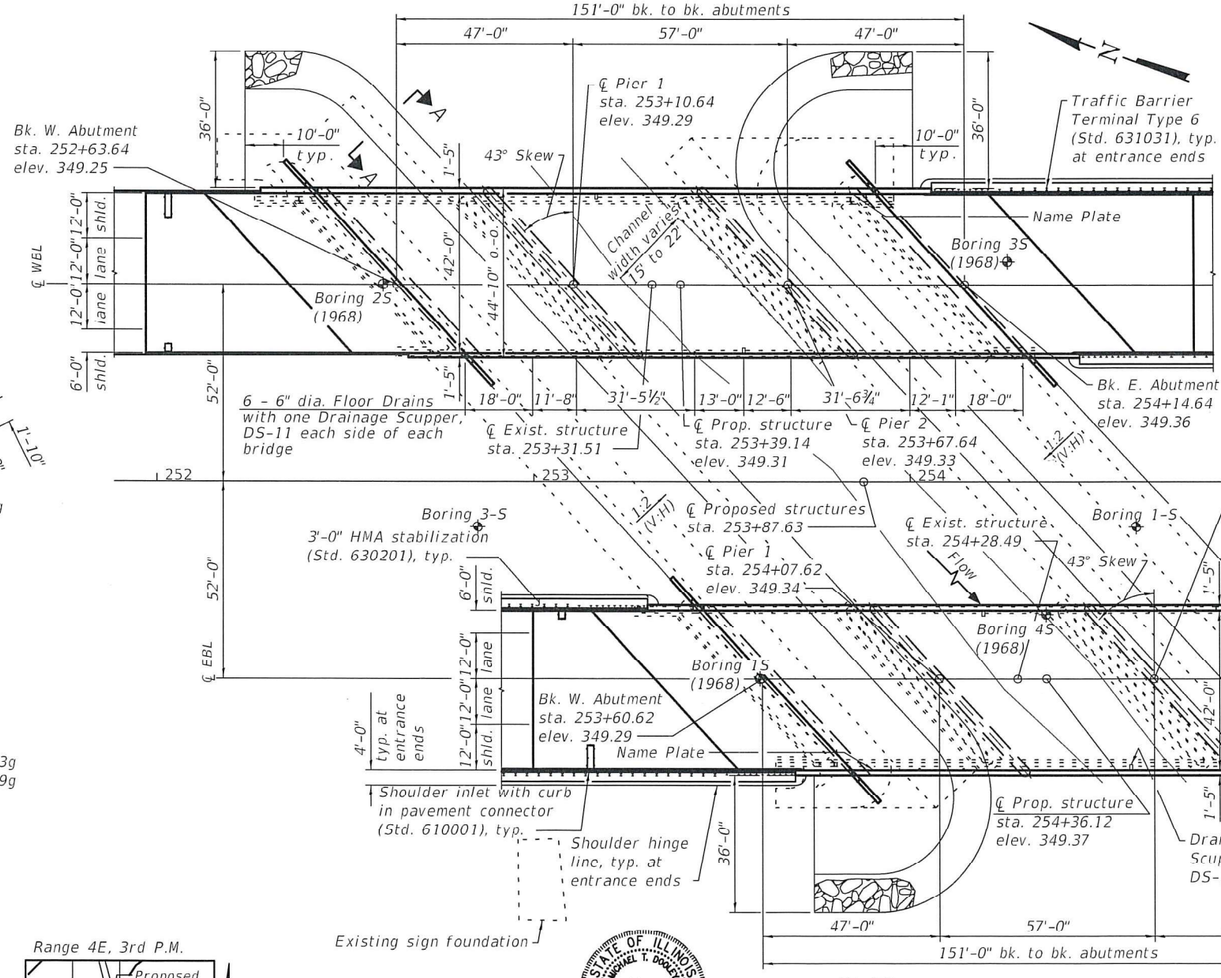
(PG shows the final elevations after grinding)



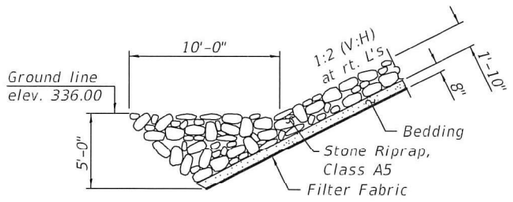
EBL PROFILE GRADE

(Along ℄ lanes)

(PG shows the final elevations after grinding)



PLAN



SECTION A-A

SEISMIC DATA

Seismic Performance Zone (SPZ) = 4
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.783g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.959g
Soil Site Class = E

LOADING HL-93

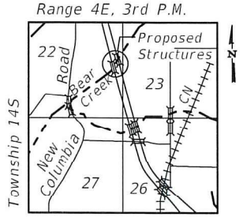
Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

2020 AASHTO LRFD
Bridge Design Specifications 9th Edition

DESIGN STRESSES FIELD UNITS

f'c = 3,500 psi (substructure)
f'c = 4,000 psi (superstructure)
fy = 50,000 psi (AASHTO M270 Grade 50W)
fy = 60,000 psi (reinforcement)



LOCATION SKETCH

STATE OF ILLINOIS
MICHAEL T. DOOLEY
No. 5661
LICENSED STRUCTURAL ENGINEER

EXPIRES 11-30-22

Michael T. Dooley
SIGNATURE

03-22-2022
DATE

APPROVED
For Structural Adequacy Only

Engineer of Bridges & Structures

GENERAL PLAN & ELEVATION
I-24 OVER BEAR CREEK
F.A.I. RTE. 24 - SECTION (64-1)B-2
MASSAC COUNTY
STATION 253+87.63
STRUCTURE NO. 064-0047 (WB)
STRUCTURE NO. 064-0048 (EB)

MODEL: SMODELNAME
FILE NAME: $FILEIL

$DATE$ $TIME$

ESCA CONSULTANTS, INC.

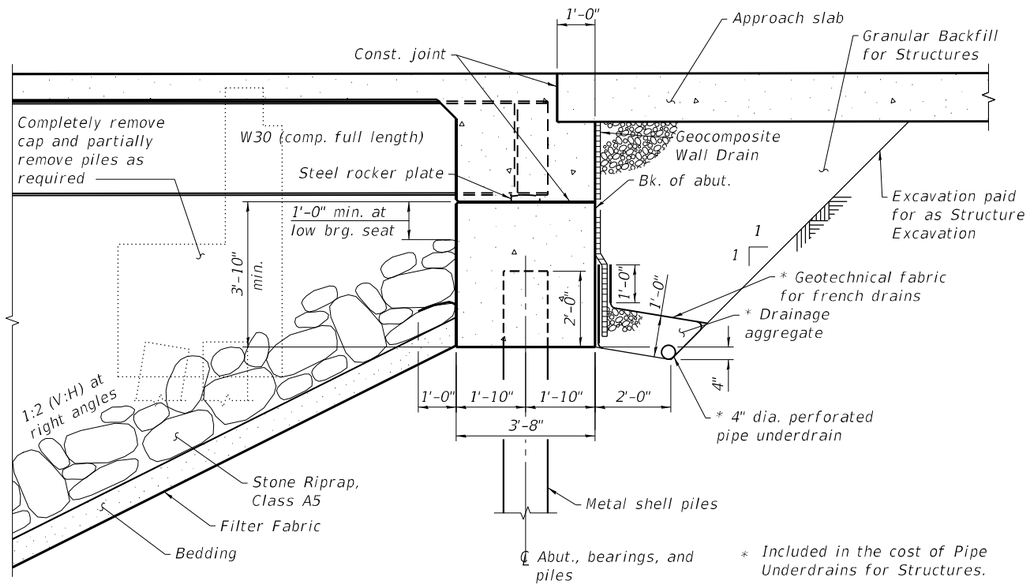
USER NAME = $USER$	DESIGNED - SHL	05/21	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -		
PLOT SCALE = $SCALE$	DRAWN - KAH	05/21	REVISED -		
PLOT DATE = $DATE$	CHECKED - MTD	11/21	REVISED -		

SHEET 1 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	67
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

1. Fasteners shall be ASTM F3125 Grade A325 Type 1, mechanically galvanized bolts in painted or metallized areas and ASTM F3125 Grade A325 Type 3 weathering steel bolts in unpainted areas.
2. All structural steel shall be AASHTO M270 Grade 50W (except bearings which shall be AASHTO M270 Grade 36).
3. Calculated weight of Structural Steel = 224,350 lbs. (Grade 50W)
   = 5,400 lbs. (Grade 36)
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
8. Structural steel shall be painted for a distance equal to the depth of the embedment into the concrete cap plus 18 inches. Painted areas shall be primed in the shop with a Department-approved zinc rich primer. Field painting will not be required.
9. Slipforming of the parapets is not allowed.
10. Removal of SN 064-0018 (EB) will be paid for as Removal of Existing Structures No. 1 and removal of SN 064-0017 (WB) will be paid for as Removal of Existing Structures No. 2.
11. The cost of concrete slope wall removal and bridge rail removal are included in Removal of Existing Structures.
12. Quantities of Deck Slab Repair are included to repair SN 064-0017 prior to allowing two-way traffic over the structure. The locations and quantities used shall be determined by the Engineer.
13. The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.
14. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.



SECTION THROUGH ABUTMENT

(Horizontal dimensions at rt. angles)

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

STRUCTURE INDEX OF SHEETS

SN 064-0047
DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				
	W. Abut.	Pier 1	Pier 2	E. Abut.	Item 113
Q100	341.7	332.0	332.0	341.8	8
Q200	341.7	331.8	331.8	341.8	
Design	341.7	327.9	327.9	341.8	
Check	341.7	327.9	327.9	341.8	

SN 064-0048
DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				
	W. Abut.	Pier 1	Pier 2	E. Abut.	Item 113
Q100	341.7	332.0	332.0	341.9	8
Q200	341.7	331.8	331.8	341.9	
Design	341.7	327.6	327.6	341.9	
Check	341.7	327.6	327.6	341.9	

SN 064-0047/SN 064-0048 WATERWAY INFORMATION

Drainage Area = 16.6 Sq. Mi.

Exist. Overtopping Elev. 346.21 at Sta. 231+00
Prop. Overtopping Elev. 346.21 at Sta. 231+00

Flood	Freq. Yr.	Discharge (cfs)	Waterway Opening (sq. ft.) Exist.	Waterway Opening (sq. ft.) Prop.	Nat. H.W.E.	Head (ft.) Exist.	Head (ft.) Prop.	Headwater Elev. (ft.) Exist.	Headwater Elev. (ft.) Prop.
	10	776	216	282	338.7	1.7	1.6	340.4	340.3
Design	50	1115	242	313	339.1	2.3	2.2	341.4	341.3
Base	100	1257	249	320	339.2	2.5	2.4	341.7	341.6
Scour Design Check	200	1417	262	336	339.4	2.8	2.7	342.2	342.1
Overtop Existing	-	-	-	-	-	-	-	-	-
Overtop Proposed	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1620	269	344	339.5	3.1	2.9	342.6	342.4

10 Year Outlet Velocity through Existing Structure: 3.6 ft/s
10 Year Outlet Velocity through Proposed Structure: 2.8 ft/s

TOTAL BILL OF MATERIAL

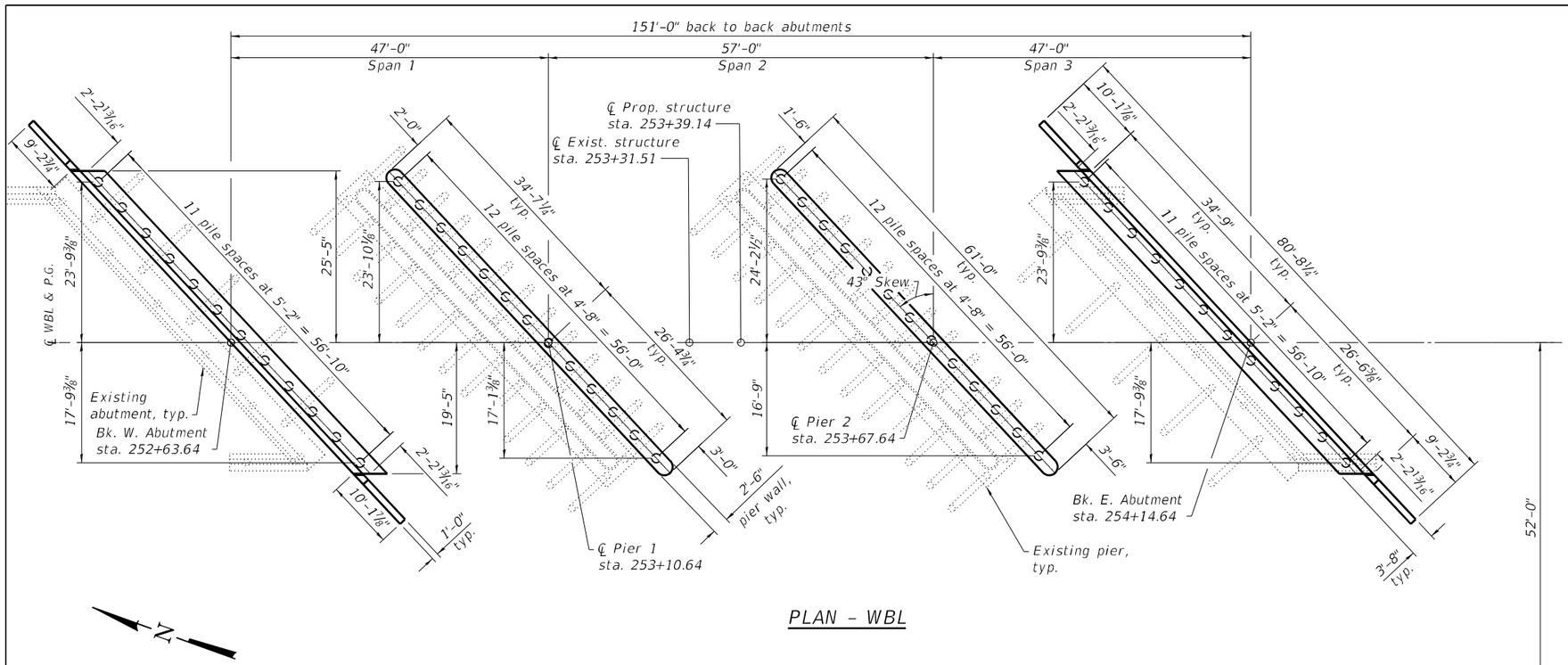
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		2,164	2,164
Filter Fabric	Sq. Yd.		2,164	2,164
Removal of Existing Structures No. 1	Each			1
Removal of Existing Structures No. 2	Each			1
Structure Excavation	Cu. Yd.		940	940
Floor Drains	Each	24		24
Concrete Structures	Cu. Yd.		574.3	574.3
Concrete Superstructure	Cu. Yd.	536.2		536.2
Protective Coat	Sq. Yd.	2,306		2,306
Concrete Superstructure (Approach Slab)	Cu. Yd.	249.2		249.2
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	10,440		10,440
Reinforcement Bars, Epoxy Coated	Pound	223,450	76,520	299,970
Furnishing Metal Shell Piles 16" x 0.375"	Foot		7,114	7,114
Driving Piles	Foot		7,114	7,114
Test Pile Metal Shells	Each		8	8
Name Plates	Each		2	2
Anchor Bolts, ¾"	Each	48		48
Anchor Bolts, 1"	Each	48		48
Granular Backfill for Structures	Cu. Yd.		350	350
Geocomposite Wall Drain	Sq. Yd.		212	212
Pipe Underdrains for Structures 4"	Foot		360	360
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1,486		1,486
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	10		10
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	10		10
Deck Slab Repair (Partial)	Sq. Yd.	60		60
Drainage Scuppers, DS-11	Each	4		4
Diamond Grinding (Bridge Section)	Sq. Yd.	2,350		2,350

STATION 253+39.14
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 24 SEC. (64-1)B-2
LOADING HL-93
STR. NO. 064-0047

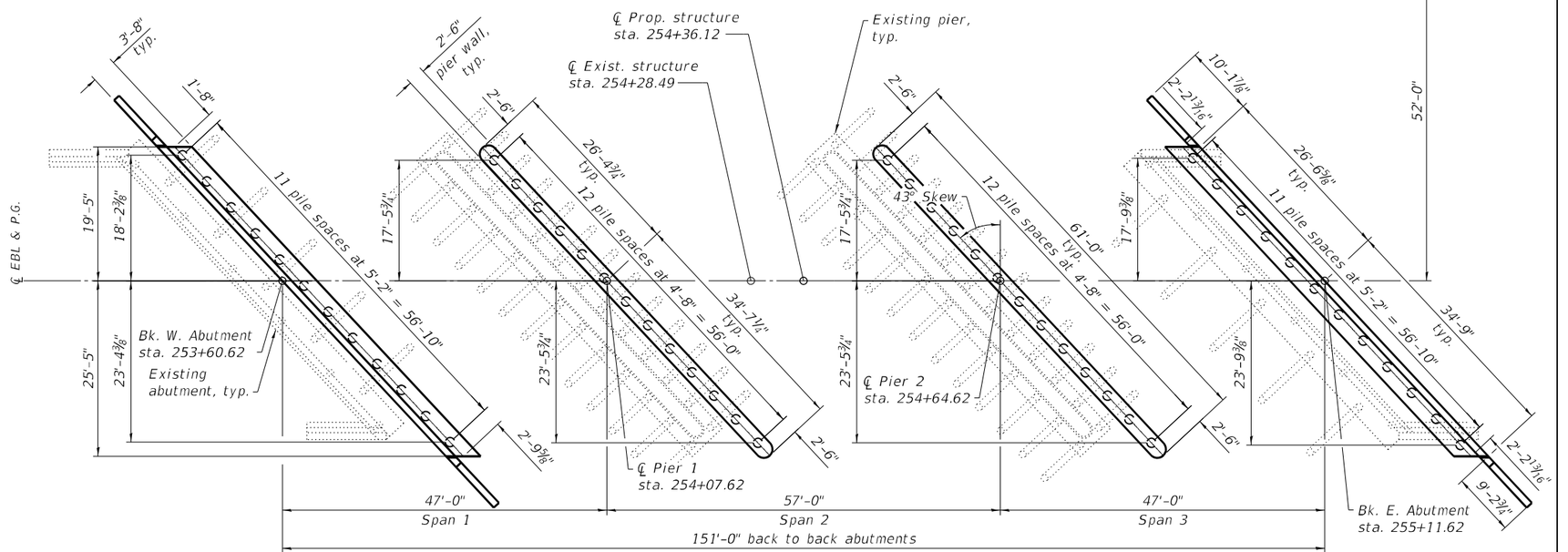
WESTBOUND NAME PLATE
See Std. 515001

STATION 254+36.12
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 24 SEC. (64-1)B-2
LOADING HL-93
STR. NO. 064-0048

EASTBOUND NAME PLATE
See Std. 515001



PLAN – WBL



PLAN – EBL

Notes:

Existing structure details are taken from existing plans and are subject to nominal construction variations.

The proposed piles shall be located to clear the existing piles. Pile spacings shown provide 4" minimum clearance between plan locations of proposed and existing piles. Field adjustments within the limitations set forth in Article 512.12 of the Standard Specifications may be necessary.

For more details of pile layout, see sheets 19 thru 26 of 32.

ESCA CONSULTANTS, INC. CIVIL • STRUCTURAL • ENVIRONMENTAL

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -		
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -		
PLOT SCALE = 0.2 '' / in.	DRAWN - KAH	05/21	REVISED -		
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE LAYOUT
STRUCTURE NO. 064–0047 (WB) & 064–0048 (EB)
SHEET 3 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	69
		CONTRACT NO. 78685		
ILLINOIS	FED. AID PROJECT			

MODEL: PLOT
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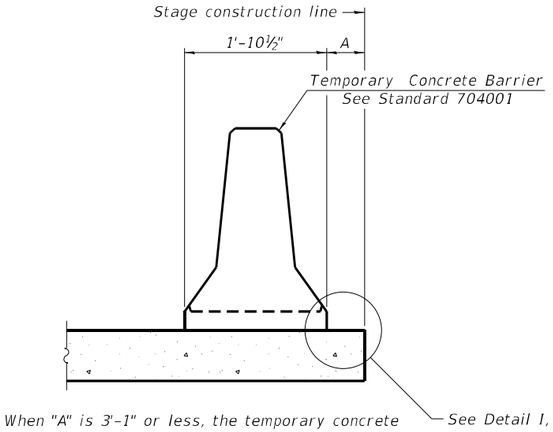
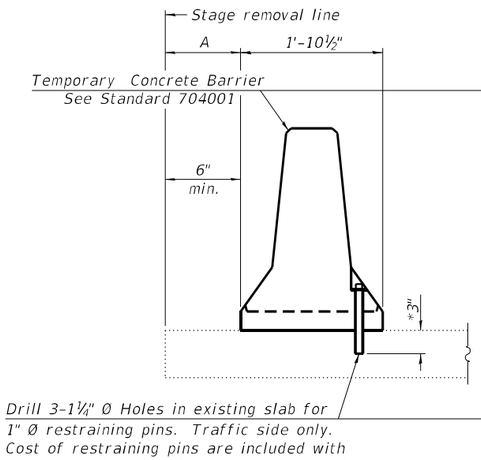


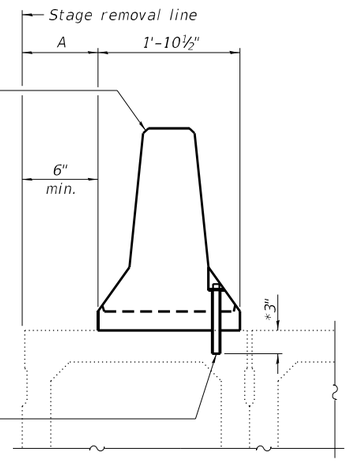
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

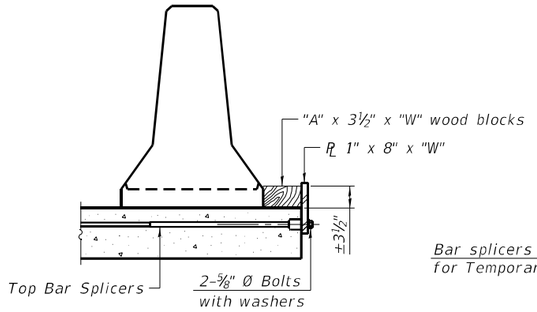
EXISTING SLAB



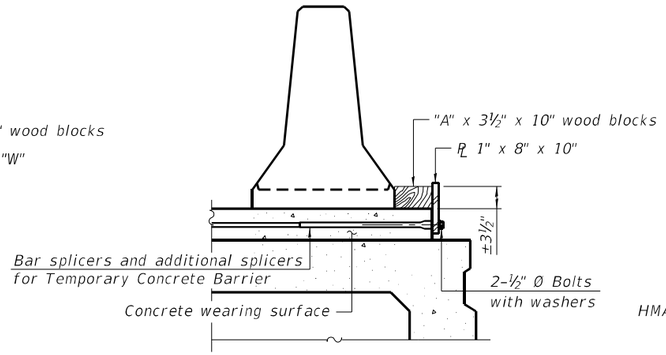
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

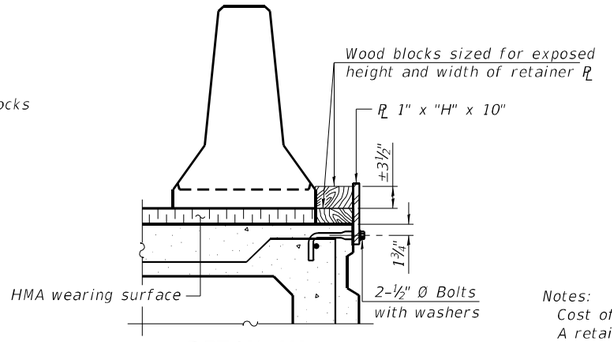
SECTIONS THRU SLAB OR DECK BEAM



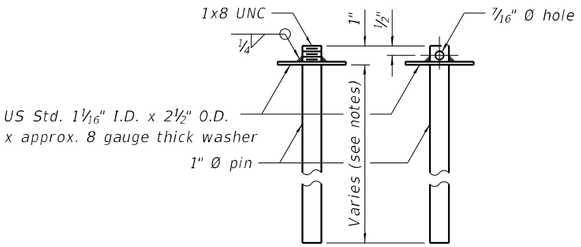
DETAIL I



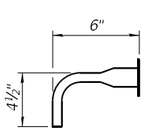
DETAIL II



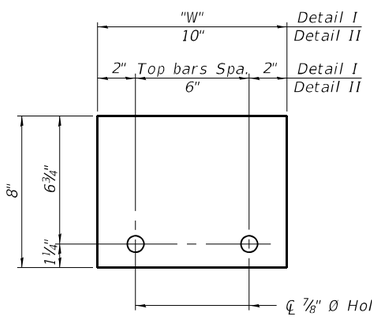
DETAIL III



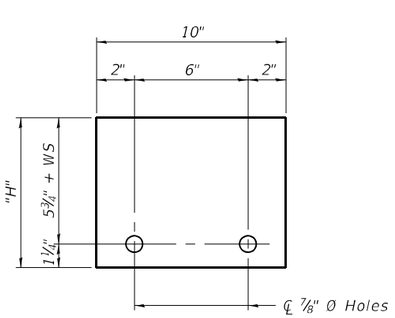
RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER ℄ 1" x "H" x 10"
(Detail III)

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

10-12-2021

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 4 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	70
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

MODEL: PLOT
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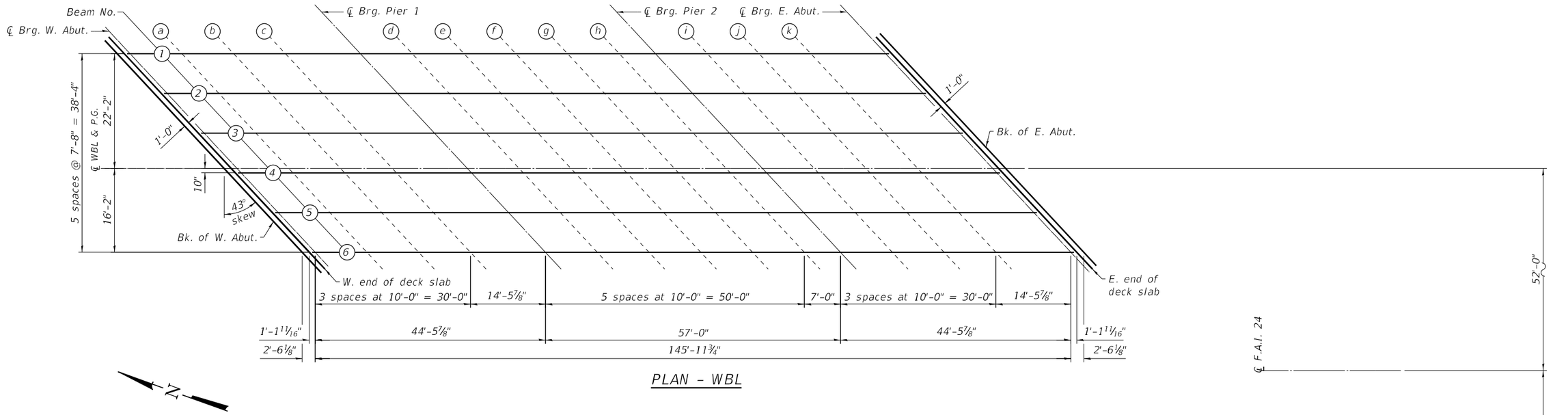
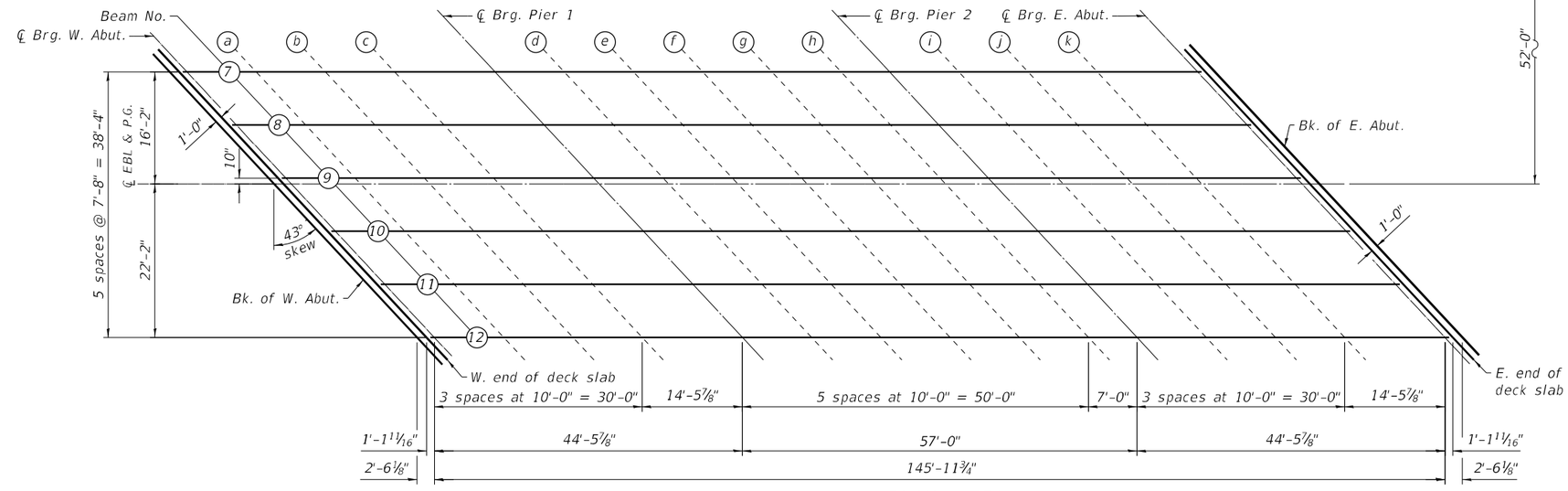
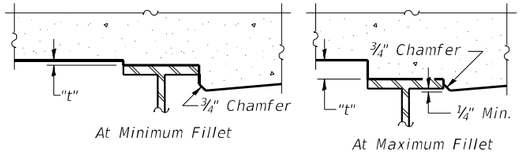


PLAN - WBL



PLAN - EBL



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 6 and 7 of 32, minus the initial slab thickness prior to grinding, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown sheets 6 and 7 of 32. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

MODEL: PLOT
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ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 5 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	71
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

BEAM 1

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+42.97	-22.17	348.85	348.87
W. End of Slab	252+44.34	-22.17	348.85	348.87
℄ Brg. W. Abut	252+45.48	-22.17	348.85	348.87
a	252+55.48	-22.17	348.86	348.90
b	252+65.48	-22.17	348.87	348.91
c	252+75.48	-22.17	348.88	348.91
℄ Brg. Pier 1	252+89.97	-22.17	348.89	348.91
d	252+99.97	-22.17	348.89	348.93
e	253+09.97	-22.17	348.90	348.96
f	253+19.97	-22.17	348.91	348.98
g	253+29.97	-22.17	348.92	348.97
h	253+39.97	-22.17	348.92	348.96
℄ Brg. Pier 2	253+46.97	-22.17	348.93	348.95
i	253+56.97	-22.17	348.94	348.97
j	253+66.97	-22.17	348.94	348.99
k	253+76.97	-22.17	348.95	349.00
℄ Brg. E. Abut	253+91.46	-22.17	348.96	348.98
E. End of Slab	253+92.60	-22.17	348.96	348.98
Bk. of E. Abut.	253+93.97	-22.17	348.97	348.99

BEAM 2

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+50.12	-14.50	349.01	349.03
W. End of Slab	252+51.49	-14.50	349.01	349.03
℄ Brg. W. Abut	252+52.63	-14.50	349.01	349.03
a	252+62.63	-14.50	349.02	349.06
b	252+72.63	-14.50	349.03	349.07
c	252+82.63	-14.50	349.03	349.07
℄ Brg. Pier 1	252+97.12	-14.50	349.05	349.07
d	253+07.12	-14.50	349.05	349.09
e	253+17.12	-14.50	349.06	349.12
f	253+27.12	-14.50	349.07	349.14
g	253+37.12	-14.50	349.08	349.13
h	253+47.12	-14.50	349.08	349.11
℄ Brg. Pier 2	253+54.12	-14.50	349.09	349.11
i	253+64.12	-14.50	349.10	349.13
j	253+74.12	-14.50	349.10	349.15
k	253+84.12	-14.50	349.11	349.16
℄ Brg. E. Abut	253+98.61	-14.50	349.12	349.14
E. End of Slab	253+99.75	-14.50	349.12	349.14
Bk. of E. Abut.	254+01.12	-14.50	349.12	349.14

BEAM 3

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+57.27	-6.83	349.14	349.16
W. End of Slab	252+58.64	-6.83	349.14	349.16
℄ Brg. W. Abut	252+59.77	-6.83	349.14	349.16
a	252+69.77	-6.83	349.15	349.19
b	252+79.77	-6.83	349.16	349.21
c	252+89.77	-6.83	349.17	349.20
℄ Brg. Pier 1	253+04.27	-6.83	349.18	349.20
d	253+14.27	-6.83	349.19	349.22
e	253+24.27	-6.83	349.19	349.25
f	253+34.27	-6.83	349.20	349.27
g	253+44.27	-6.83	349.21	349.26
h	253+54.27	-6.83	349.22	349.25
℄ Brg. Pier 2	253+61.27	-6.83	349.22	349.24
i	253+71.27	-6.83	349.23	349.26
j	253+81.27	-6.83	349.24	349.28
k	253+91.27	-6.83	349.24	349.29
℄ Brg. E. Abut	254+05.76	-6.83	349.25	349.27
E. End of Slab	254+06.90	-6.83	349.26	349.28
Bk. of E. Abut.	254+08.27	-6.83	349.26	349.28

℄ WBL & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+63.64	0.00	349.25	349.27
W. End of Slab	252+65.01	0.00	349.25	349.27
℄ Brg. W. Abut	252+66.15	0.00	349.25	349.27
a	252+76.15	0.00	349.26	349.30
b	252+86.15	0.00	349.27	349.31
c	252+96.15	0.00	349.27	349.31
℄ Brg. Pier 1	253+10.64	0.00	349.29	349.31
d	253+20.64	0.00	349.29	349.33
e	253+30.64	0.00	349.30	349.36
f	253+40.64	0.00	349.31	349.38
g	253+50.64	0.00	349.32	349.37
h	253+60.64	0.00	349.32	349.35
℄ Brg. Pier 2	253+67.64	0.00	349.33	349.35
i	253+77.64	0.00	349.34	349.37
j	253+87.64	0.00	349.34	349.39
k	253+97.64	0.00	349.35	349.40
℄ Brg. E. Abut	254+12.13	0.00	349.36	349.38
E. End of Slab	254+13.27	0.00	349.36	349.38
Bk. of E. Abut.	254+14.64	0.00	349.36	349.38

BEAM 4

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+64.42	0.83	349.24	349.26
W. End of Slab	252+65.78	0.83	349.24	349.26
℄ Brg. W. Abut	252+66.92	0.83	349.24	349.26
a	252+76.92	0.83	349.25	349.29
b	252+86.92	0.83	349.26	349.30
c	252+96.92	0.83	349.26	349.30
℄ Brg. Pier 1	253+11.42	0.83	349.27	349.29
d	253+21.42	0.83	349.28	349.32
e	253+31.42	0.83	349.29	349.35
f	253+41.42	0.83	349.30	349.36
g	253+51.42	0.83	349.30	349.36
h	253+61.42	0.83	349.31	349.34
℄ Brg. Pier 2	253+68.42	0.83	349.32	349.34
i	253+78.42	0.83	349.32	349.35
j	253+88.42	0.83	349.33	349.38
k	253+98.42	0.83	349.34	349.39
℄ Brg. E. Abut	254+12.91	0.83	349.35	349.37
E. End of Slab	254+14.05	0.83	349.35	349.37
Bk. of E. Abut.	254+15.42	0.83	349.35	349.37

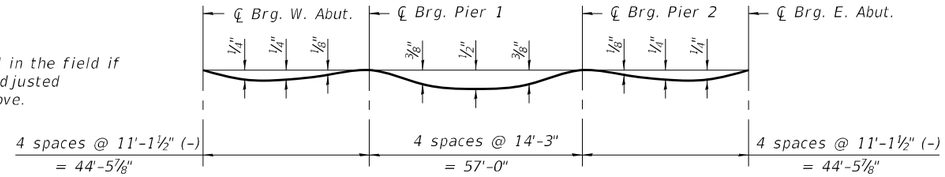
BEAM 5

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+71.57	8.50	349.13	349.15
W. End of Slab	252+72.93	8.50	349.13	349.15
℄ Brg. W. Abut	252+74.07	8.50	349.13	349.15
a	252+84.07	8.50	349.14	349.18
b	252+94.07	8.50	349.15	349.19
c	253+04.07	8.50	349.15	349.19
℄ Brg. Pier 1	253+18.57	8.50	349.16	349.18
d	253+28.57	8.50	349.17	349.21
e	253+38.57	8.50	349.18	349.24
f	253+48.57	8.50	349.19	349.25
g	253+58.57	8.50	349.19	349.25
h	253+68.57	8.50	349.20	349.23
℄ Brg. Pier 2	253+75.57	8.50	349.21	349.23
i	253+85.57	8.50	349.21	349.24
j	253+95.57	8.50	349.22	349.27
k	254+05.57	8.50	349.23	349.28
℄ Brg. E. Abut	254+20.06	8.50	349.24	349.26
E. End of Slab	254+21.20	8.50	349.24	349.26
Bk. of E. Abut.	254+22.57	8.50	349.24	349.26

BEAM 6

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	252+78.72	16.17	349.00	349.02
W. End of Slab	252+80.08	16.17	349.00	349.02
℄ Brg. W. Abut	252+81.22	16.17	349.00	349.02
a	252+91.22	16.17	349.01	349.05
b	253+01.22	16.17	349.02	349.06
c	253+11.22	16.17	349.02	349.06
℄ Brg. Pier 1	253+25.72	16.17	349.03	349.05
d	253+35.72	16.17	349.04	349.08
e	253+45.72	16.17	349.05	349.11
f	253+55.72	16.17	349.06	349.12
g	253+65.72	16.17	349.06	349.12
h	253+75.72	16.17	349.07	349.10
℄ Brg. Pier 2	253+82.72	16.17	349.08	349.10
i	253+92.72	16.17	349.08	349.11
j	254+02.72	16.17	349.09	349.14
k	254+12.72	16.17	349.10	349.14
℄ Brg. E. Abut	254+27.21	16.17	349.11	349.13
E. End of Slab	254+28.35	16.17	349.11	349.13
Bk. of E. Abut.	254+29.72	16.17	349.11	349.13

Note:
The deflections in this diagram are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown above.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SHL 05/21	REVISED -	
ESCA PROJECT NO. 1359.03	CHECKED - MTD 07/21	REVISED -	
PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH 05/21	REVISED -	
PLOT DATE = 3/22/2022	CHECKED - MTD 11/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (WB)
STRUCTURE NO. 064-0047 (WB)
SHEET 6 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	72
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-06-TSlabElevWB.dgn
3/22/2022 9:33:41 AM

BEAM 7

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+45.54	-16.17	349.01	349.03
W. End of Slab	253+46.91	-16.17	349.01	349.03
℄ Brg. W. Abut	253+48.05	-16.17	349.02	349.04
a	253+58.05	-16.17	349.03	349.07
b	253+68.05	-16.17	349.04	349.08
c	253+78.05	-16.17	349.05	349.08
℄ Brg. Pier 1	253+92.54	-16.17	349.06	349.08
d	254+02.54	-16.17	349.07	349.11
e	254+12.54	-16.17	349.08	349.14
f	254+22.54	-16.17	349.09	349.16
g	254+32.54	-16.17	349.10	349.15
h	254+42.54	-16.17	349.11	349.14
℄ Brg. Pier 2	254+49.54	-16.17	349.12	349.14
i	254+59.54	-16.17	349.13	349.16
j	254+69.54	-16.17	349.14	349.18
k	254+79.54	-16.17	349.15	349.19
℄ Brg. E. Abut	254+94.04	-16.17	349.16	349.18
E. End of Slab	254+95.18	-16.17	349.16	349.18
Bk. of E. Abut.	254+96.54	-16.17	349.16	349.18

BEAM 8

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+52.69	-8.50	349.16	349.18
W. End of Slab	253+54.06	-8.50	349.16	349.18
℄ Brg. W. Abut	253+55.20	-8.50	349.16	349.18
a	253+65.20	-8.50	349.17	349.21
b	253+75.20	-8.50	349.18	349.23
c	253+85.20	-8.50	349.19	349.23
℄ Brg. Pier 1	253+99.69	-8.50	349.20	349.22
d	254+09.69	-8.50	349.21	349.25
e	254+19.69	-8.50	349.22	349.28
f	254+29.69	-8.50	349.23	349.30
g	254+39.69	-8.50	349.24	349.30
h	254+49.69	-8.50	349.25	349.28
℄ Brg. Pier 2	254+56.69	-8.50	349.26	349.28
i	254+66.69	-8.50	349.27	349.30
j	254+76.69	-8.50	349.28	349.32
k	254+86.69	-8.50	349.29	349.34
℄ Brg. E. Abut	255+01.19	-8.50	349.31	349.33
E. End of Slab	255+02.33	-8.50	349.31	349.33
Bk. of E. Abut.	255+03.69	-8.50	349.31	349.33

BEAM 9

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+59.84	-0.83	349.28	349.30
W. End of Slab	253+61.21	-0.83	349.28	349.30
℄ Brg. W. Abut	253+62.35	-0.83	349.28	349.30
a	253+72.35	-0.83	349.29	349.33
b	253+82.35	-0.83	349.30	349.35
c	253+92.35	-0.83	349.31	349.35
℄ Brg. Pier 1	254+06.84	-0.83	349.33	349.35
d	254+16.84	-0.83	349.34	349.37
e	254+26.84	-0.83	349.35	349.41
f	254+36.84	-0.83	349.36	349.42
g	254+46.84	-0.83	349.37	349.42
h	254+56.84	-0.83	349.38	349.41
℄ Brg. Pier 2	254+63.84	-0.83	349.38	349.40
i	254+73.84	-0.83	349.39	349.42
j	254+83.84	-0.83	349.40	349.45
k	254+93.84	-0.83	349.41	349.46
℄ Brg. E. Abut	255+08.34	-0.83	349.43	349.45
E. End of Slab	255+09.48	-0.83	349.43	349.45
Bk. of E. Abut.	255+10.84	-0.83	349.43	349.45

℄ EBL & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+60.62	0.00	349.29	349.31
W. End of Slab	253+61.99	0.00	349.29	349.31
℄ Brg. W. Abut	253+63.13	0.00	349.29	349.31
a	253+73.13	0.00	349.30	349.34
b	253+83.13	0.00	349.31	349.36
c	253+93.13	0.00	349.32	349.36
℄ Brg. Pier 1	254+07.62	0.00	349.34	349.36
d	254+17.62	0.00	349.35	349.39
e	254+27.62	0.00	349.36	349.42
f	254+37.62	0.00	349.37	349.44
g	254+47.62	0.00	349.38	349.43
h	254+57.62	0.00	349.39	349.42
℄ Brg. Pier 2	254+64.62	0.00	349.40	349.42
i	254+74.62	0.00	349.41	349.44
j	254+84.62	0.00	349.42	349.46
k	254+94.62	0.00	349.43	349.47
℄ Brg. E. Abut	255+09.11	0.00	349.44	349.46
E. End of Slab	255+10.25	0.00	349.44	349.46
Bk. of E. Abut.	255+11.62	0.00	349.44	349.46

BEAM 10

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+66.99	6.83	349.20	349.22
W. End of Slab	253+68.36	6.83	349.20	349.22
℄ Brg. W. Abut	253+69.50	6.83	349.20	349.22
a	253+79.50	6.83	349.21	349.25
b	253+89.50	6.83	349.22	349.26
c	253+99.50	6.83	349.23	349.26
℄ Brg. Pier 1	254+13.99	6.83	349.24	349.26
d	254+23.99	6.83	349.25	349.29
e	254+33.99	6.83	349.26	349.32
f	254+43.99	6.83	349.27	349.34
g	254+53.99	6.83	349.28	349.34
h	254+63.99	6.83	349.29	349.32
℄ Brg. Pier 2	254+70.99	6.83	349.30	349.32
i	254+80.99	6.83	349.31	349.34
j	254+90.99	6.83	349.32	349.36
k	255+00.99	6.83	349.33	349.38
℄ Brg. E. Abut	255+15.49	6.83	349.34	349.36
E. End of Slab	255+16.62	6.83	349.35	349.37
Bk. of E. Abut.	255+17.99	6.83	349.35	349.37

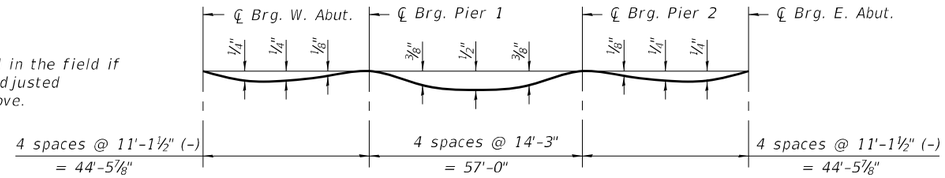
BEAM 11

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+74.14	14.50	349.07	349.09
W. End of Slab	253+75.51	14.50	349.08	349.10
℄ Brg. W. Abut	253+76.65	14.50	349.08	349.10
a	253+86.65	14.50	349.09	349.13
b	253+96.65	14.50	349.10	349.14
c	254+06.65	14.50	349.11	349.14
℄ Brg. Pier 1	254+21.14	14.50	349.12	349.14
d	254+31.14	14.50	349.13	349.17
e	254+41.14	14.50	349.14	349.20
f	254+51.14	14.50	349.15	349.22
g	254+61.14	14.50	349.16	349.22
h	254+71.14	14.50	349.17	349.20
℄ Brg. Pier 2	254+78.14	14.50	349.18	349.20
i	254+88.14	14.50	349.19	349.22
j	254+98.14	14.50	349.20	349.24
k	255+08.14	14.50	349.21	349.26
℄ Brg. E. Abut	255+22.63	14.50	349.22	349.24
E. End of Slab	255+23.77	14.50	349.23	349.25
Bk. of E. Abut.	255+25.14	14.50	349.23	349.25

BEAM 12

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding
Bk. of W. Abut.	253+81.29	22.17	348.93	348.95
W. End of Slab	253+82.66	22.17	348.93	348.95
℄ Brg. W. Abut	253+83.80	22.17	348.93	348.95
a	253+93.80	22.17	348.94	348.98
b	254+03.80	22.17	348.95	349.00
c	254+13.80	22.17	348.96	349.00
℄ Brg. Pier 1	254+28.29	22.17	348.98	349.00
d	254+38.29	22.17	348.99	349.02
e	254+48.29	22.17	349.00	349.06
f	254+58.29	22.17	349.01	349.07
g	254+68.29	22.17	349.02	349.07
h	254+78.29	22.17	349.03	349.06
℄ Brg. Pier 2	254+85.29	22.17	349.03	349.05
i	254+95.29	22.17	349.04	349.07
j	255+05.29	22.17	349.05	349.10
k	255+15.29	22.17	349.06	349.11
℄ Brg. E. Abut	255+29.78	22.17	349.08	349.10
E. End of Slab	255+30.92	22.17	349.08	349.10
Bk. of E. Abut.	255+32.29	22.17	349.08	349.10

Note:
The deflections in this diagram are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown above.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (EB)
STRUCTURE NO. 064-0048 (EB)
SHEET 7 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	73
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

MODEL: PLOT
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3/22/2022 9:33:42 AM

WEST APPROACH SLAB (WB)

NORTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	252+12.63	-24.00	348.79	348.81
A1	252+22.63	-24.00	348.80	348.82
A2	252+32.63	-24.00	348.81	348.83
E. end of W. Appr.	252+42.63	-24.00	348.81	348.83

NORTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	252+23.82	-12.00	349.04	349.06
A1	252+33.82	-12.00	349.05	349.07
A2	252+43.82	-12.00	349.06	349.08
E. end of W. Appr.	252+53.82	-12.00	349.06	349.08

℄ WBL & P.G.

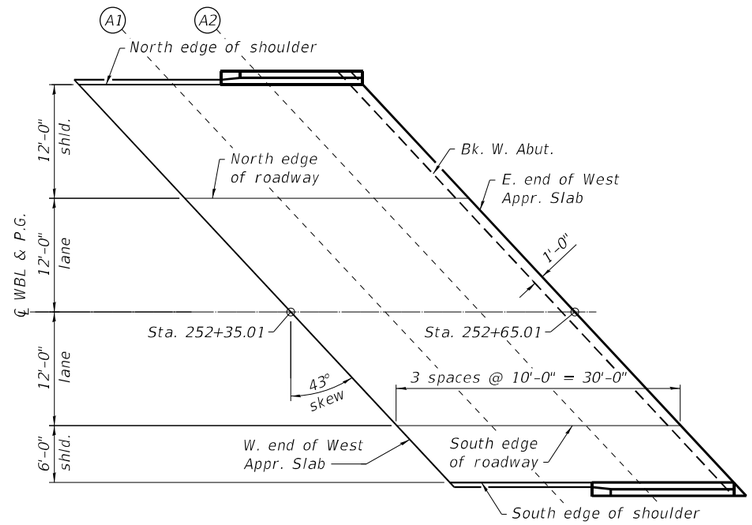
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	252+35.01	0.00	349.23	349.25
A1	252+45.01	0.00	349.24	349.26
A2	252+55.01	0.00	349.24	349.26
E. end of W. Appr.	252+65.01	0.00	349.25	349.27

SOUTH EDGE OF ROADWAY

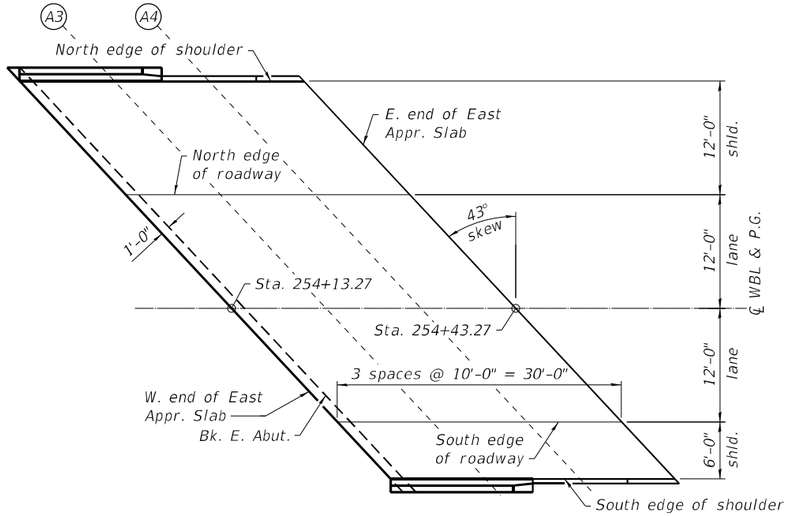
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	252+46.20	12.00	349.06	349.08
A1	252+56.20	12.00	349.06	349.08
A2	252+66.20	12.00	349.07	349.09
E. end of W. Appr.	252+76.20	12.00	349.08	349.10

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	252+51.79	18.00	348.94	348.96
A1	252+61.79	18.00	348.95	348.97
A2	252+71.79	18.00	348.96	348.98
E. end of W. Appr.	252+81.79	18.00	348.96	348.98



WEST APPROACH SLAB PLAN



EAST APPROACH SLAB PLAN

EAST APPROACH SLAB (WB)

NORTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	253+90.89	-24.00	348.93	348.95
A3	254+00.89	-24.00	348.93	348.95
A4	254+10.89	-24.00	348.94	348.96
E. end of E. Appr.	254+20.89	-24.00	348.95	348.97

NORTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	254+02.08	-12.00	349.17	349.19
A3	254+12.08	-12.00	349.18	349.20
A4	254+22.08	-12.00	349.19	349.21
E. end of E. Appr.	254+32.08	-12.00	349.20	349.22

℄ WBL & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	254+13.27	0.00	349.36	349.38
A3	254+23.27	0.00	349.37	349.39
A4	254+33.27	0.00	349.38	349.40
E. end of E. Appr.	254+43.27	0.00	349.39	349.41

SOUTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	254+24.46	12.00	349.19	349.21
A3	254+34.46	12.00	349.20	349.22
A4	254+44.46	12.00	349.21	349.23
E. end of E. Appr.	254+54.46	12.00	349.21	349.23

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	254+30.06	18.00	349.08	349.10
A3	254+40.06	18.00	349.08	349.10
A4	254+50.06	18.00	349.09	349.11
E. end of E. Appr.	254+60.06	18.00	349.10	349.12

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS (WB)
STRUCTURE NO. 064-0047 (WB)
SHEET 8 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	74
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

WEST APPROACH SLAB (EB)

NORTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	253+15.20	-18.00	348.95	348.97
A1	253+25.20	-18.00	348.96	348.98
A2	253+35.20	-18.00	348.97	348.99
E. end of W. Appr.	253+45.20	-18.00	348.98	349.00

NORTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	253+20.80	-12.00	349.07	349.09
A1	253+30.80	-12.00	349.08	349.10
A2	253+40.80	-12.00	349.09	349.11
E. end of W. Appr.	253+50.80	-12.00	349.10	349.12

℄ EBL & P.G.

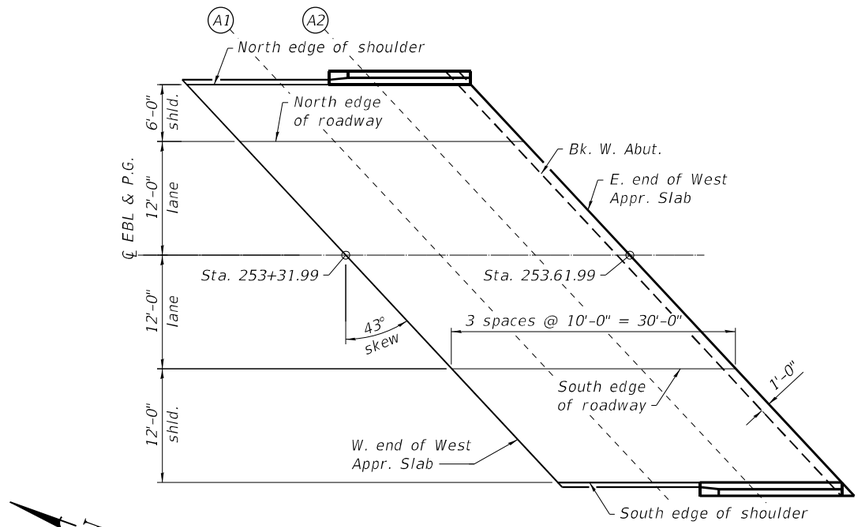
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	253+31.99	0.00	349.26	349.28
A1	253+41.99	0.00	349.27	349.29
A2	253+51.99	0.00	349.28	349.30
E. end of W. Appr.	253+61.99	0.00	349.29	349.31

SOUTH EDGE OF ROADWAY

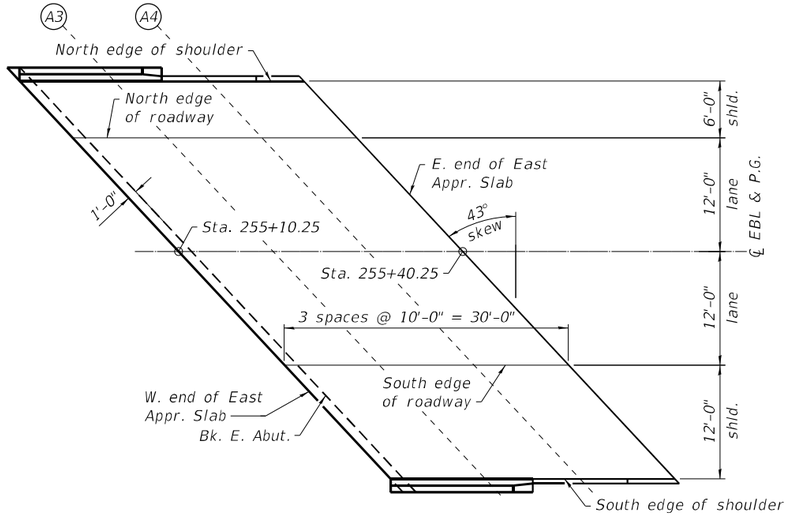
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	253+43.18	12.00	349.09	349.11
A1	253+53.18	12.00	349.10	349.12
A2	253+63.18	12.00	349.11	349.13
E. end of W. Appr.	253+73.18	12.00	349.12	349.14

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of W. Appr.	253+54.37	24.00	348.87	348.89
A1	253+64.37	24.00	348.88	348.90
A2	253+74.37	24.00	348.89	348.91
E. end of W. Appr.	253+84.37	24.00	348.90	348.92



WEST APPROACH SLAB PLAN



EAST APPROACH SLAB PLAN

EAST APPROACH SLAB (EB)

NORTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	254+93.47	-18.00	349.12	349.14
A3	255+03.47	-18.00	349.13	349.15
A4	255+13.47	-18.00	349.14	349.16
E. end of E. Appr.	255+23.47	-18.00	349.15	349.17

NORTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	254+99.06	-12.00	349.25	349.27
A3	255+09.06	-12.00	349.26	349.28
A4	255+19.06	-12.00	349.27	349.29
E. end of E. Appr.	255+29.06	-12.00	349.28	349.30

℄ EBL & P.G.

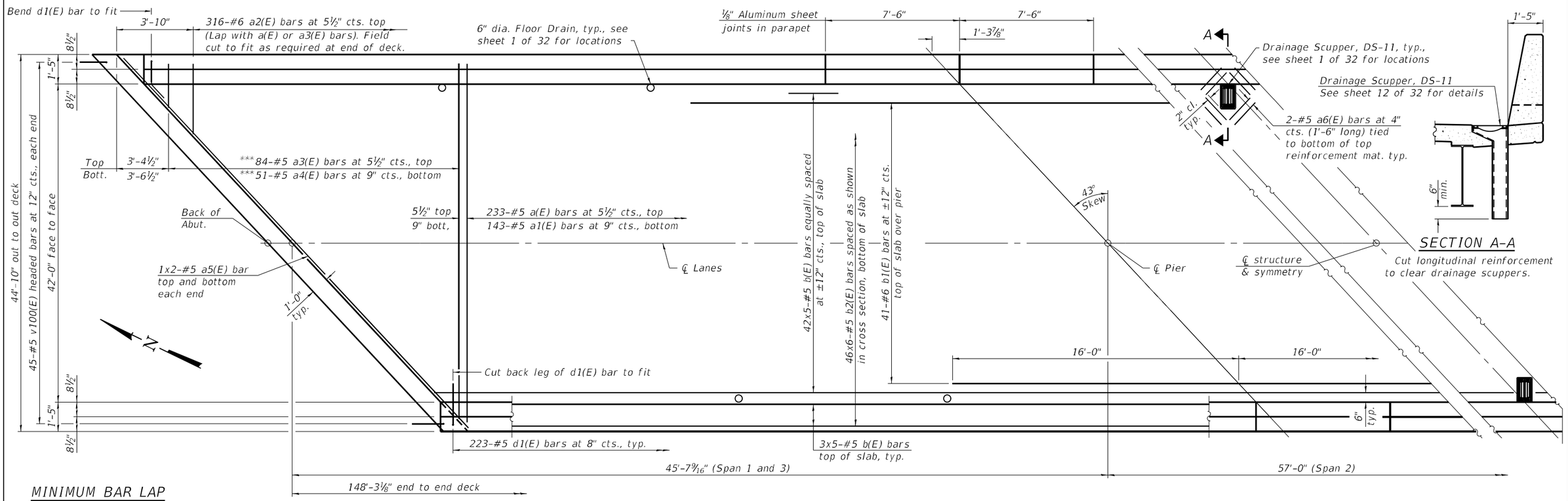
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	255+10.25	0.00	349.44	349.46
A3	255+20.25	0.00	349.45	349.47
A4	255+30.25	0.00	349.46	349.48
E. end of E. Appr.	255+40.25	0.00	349.47	349.49

SOUTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	255+21.44	12.00	349.27	349.29
A3	255+31.44	12.00	349.28	349.30
A4	255+41.44	12.00	349.29	349.31
E. end of E. Appr.	255+51.44	12.00	349.30	349.32

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
W. end of E. Appr.	255+32.63	24.00	349.04	349.06
A3	255+42.63	24.00	349.05	349.07
A4	255+52.63	24.00	349.06	349.08
E. end of E. Appr.	255+62.63	24.00	349.07	349.09

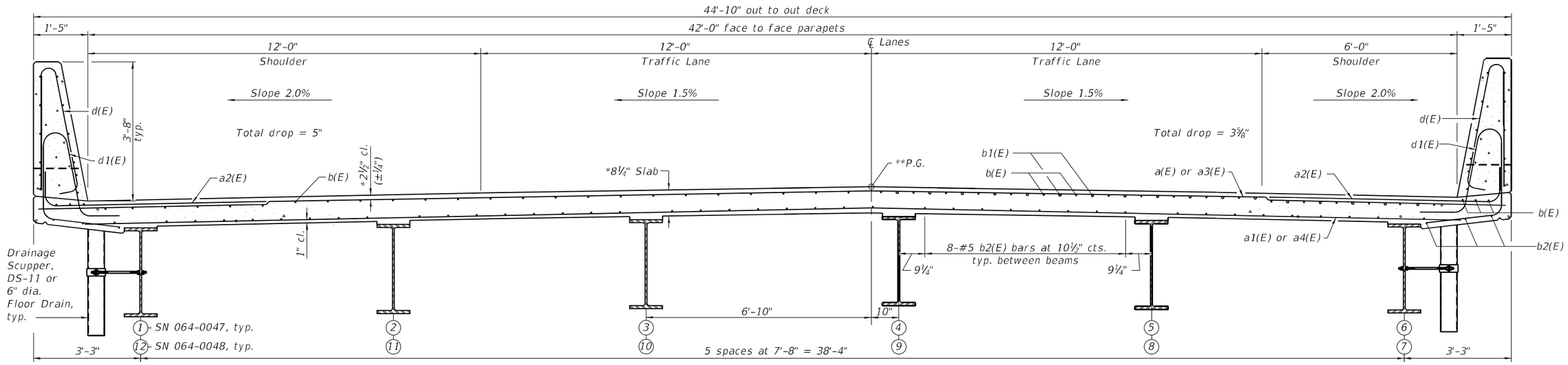


MINIMUM BAR LAP

#5 bar = 3'-6"

*** See Field Cutting Diagram on sheet 11 of 32.

PARTIAL PLAN



NEAR MIDSPAN

NEAR PIER

CROSS SECTION

(SN 064-0047 looking east, SN 064-0048 looking west)

* Prior to grinding
** After grinding

Notes:
See sheet 11 of 32 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-10-Spr.dgn

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ESCA CONSULTANTS, INC.

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ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
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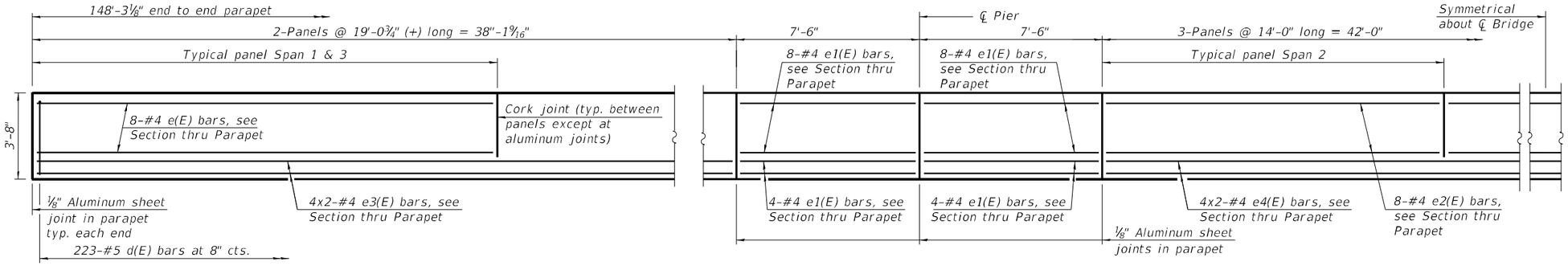
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

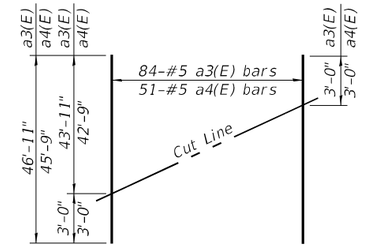
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 10 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	76
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

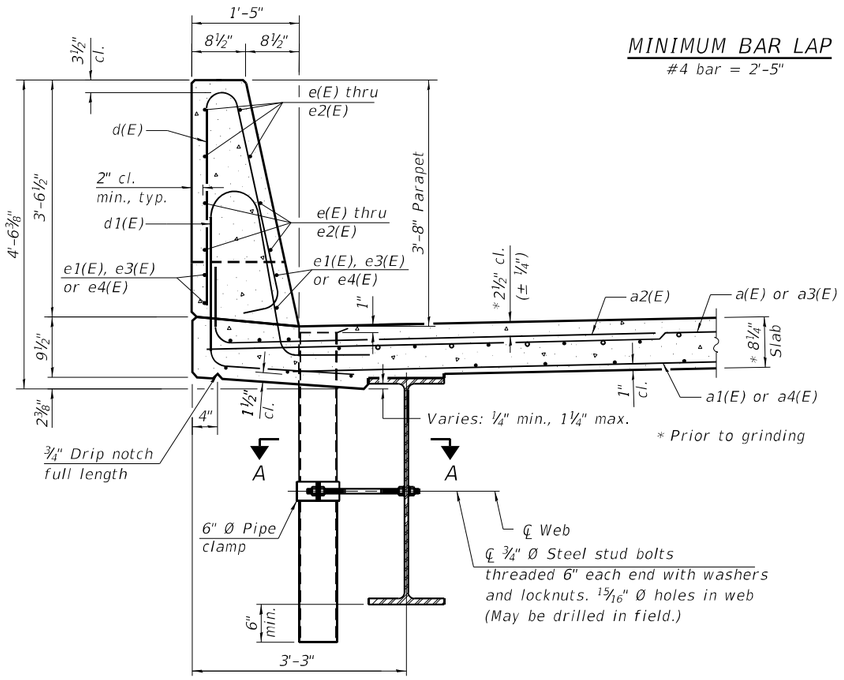


PARTIAL INSIDE ELEVATION OF PARAPET



FIELD CUTTING DIAGRAM

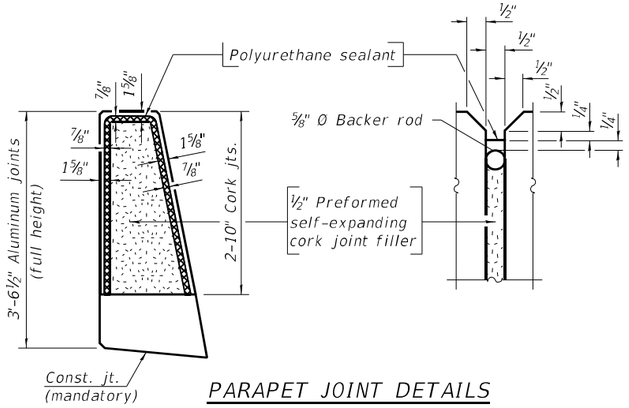
Order a3(E) and a4(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.



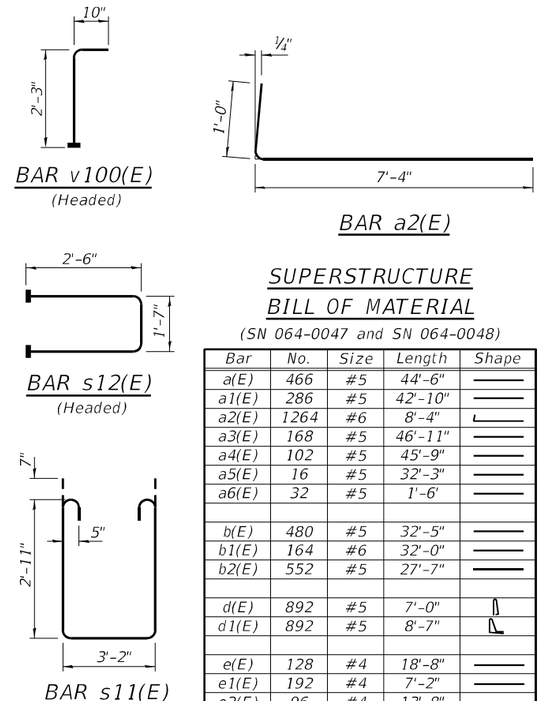
SECTION THRU PARAPET

MINIMUM BAR LAP

#4 bar = 2'-5"



PARAPET JOINT DETAILS



SUPERSTRUCTURE BILL OF MATERIAL

(SN 064-0047 and SN 064-0048)

Bar	No.	Size	Length	Shape
a(E)	466	#5	44'-6"	
a1(E)	286	#5	42'-10"	
a2(E)	1264	#6	8'-4"	
a3(E)	168	#5	46'-11"	
a4(E)	102	#5	45'-9"	
a5(E)	16	#5	32'-3"	
a6(E)	32	#5	1'-6'	
b(E)	480	#5	32'-5"	
b1(E)	164	#6	32'-0"	
b2(E)	552	#5	27'-7"	
d(E)	892	#5	7'-0"	
d1(E)	892	#5	8'-7"	
e(E)	128	#4	18'-8"	
e1(E)	192	#4	7'-2"	
e2(E)	96	#4	13'-8"	
e3(E)	64	#4	20'-2"	
e4(E)	32	#4	22'-1"	
m10(E)	32	#6	32'-6"	
m11(E)	60	#6	10'-0"	
m12(E)	24	#6	4'-0"	
s11(E)	164	#5	10'-2"	
s12(E)	164	#5	6'-7"	
v100(E)	180	#5	3'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	129,170	
Concrete Superstructure		Cu. Yd.	519.4	

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

Floor Drains need not be painted.

The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete.

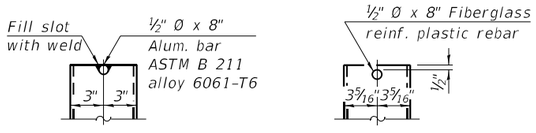
The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.

The ⅛" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

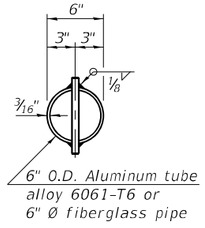
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

Drains shall be located clear of all diaphragms.



ALUMINUM TUBE

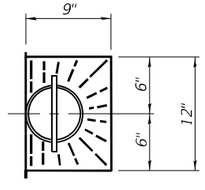
FIBERGLASS PIPE



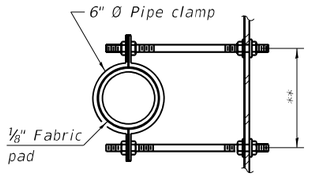
TOP PLAN

(Showing aluminum tube)

FLOOR DRAIN DETAILS

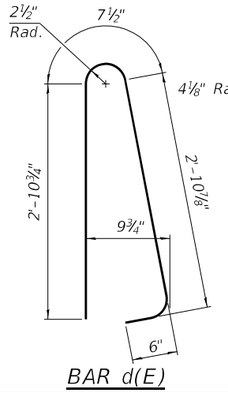


TOP PLAN

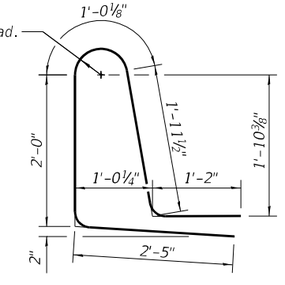


SECTION A-A

**Dimension as required by pipe clamp



BAR d(E)



BAR d1(E)

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SHL 05/21	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1359.03	CHECKED - MTD 07/21	REVISED -	
	PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH 05/21	REVISED -	
	PLOT DATE = 3/22/2022	CHECKED - MTD 11/21	REVISED -	

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 11 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	77
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

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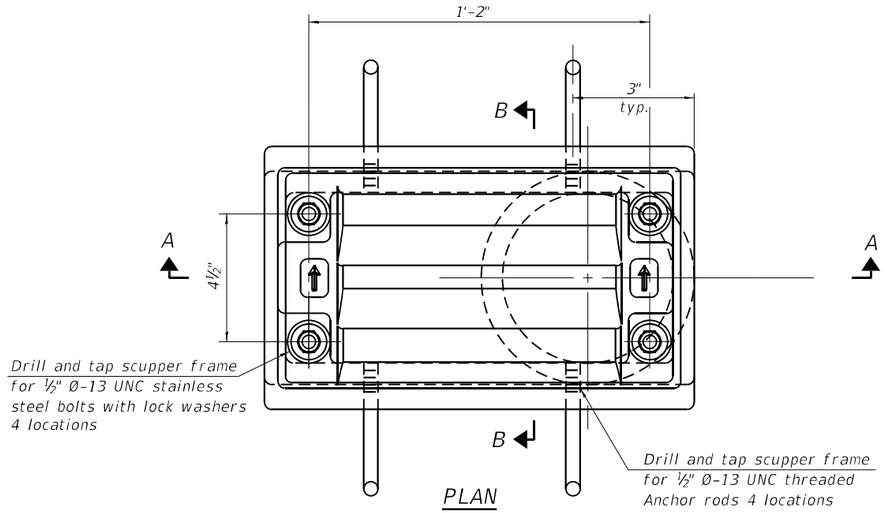
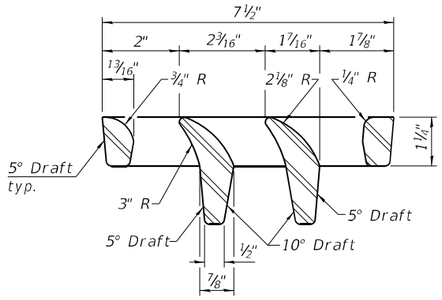
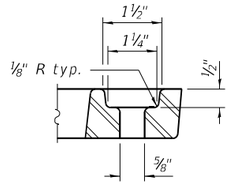


PLAN



VANE GRATE DETAIL



GRATE BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

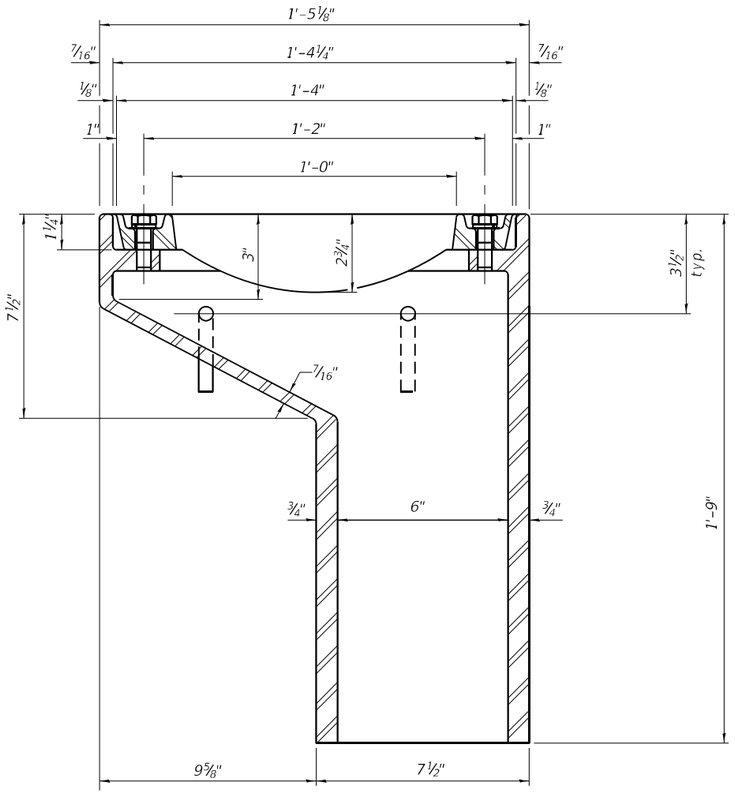
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck need not be painted.

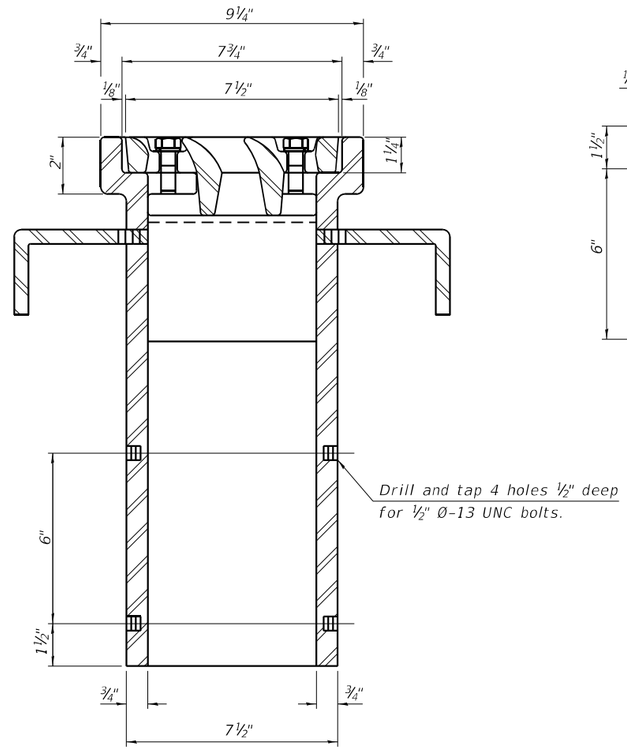
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-11.

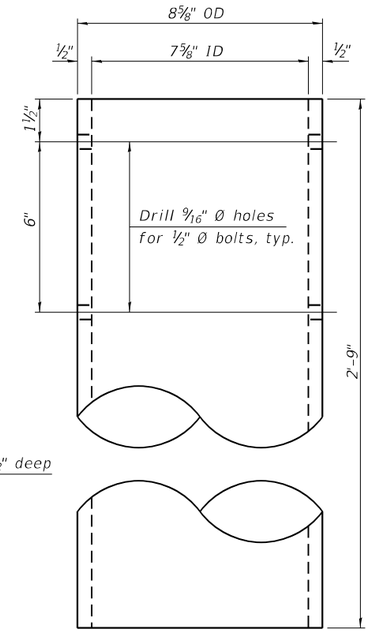


SECTION A-A

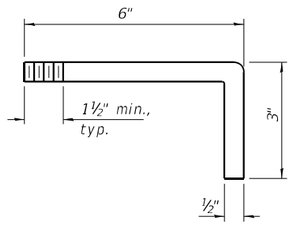
See sheet 10 of 32 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR ROD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DS-11 1-1-2020

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -		
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -		
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -		
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -		

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 12 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	78
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

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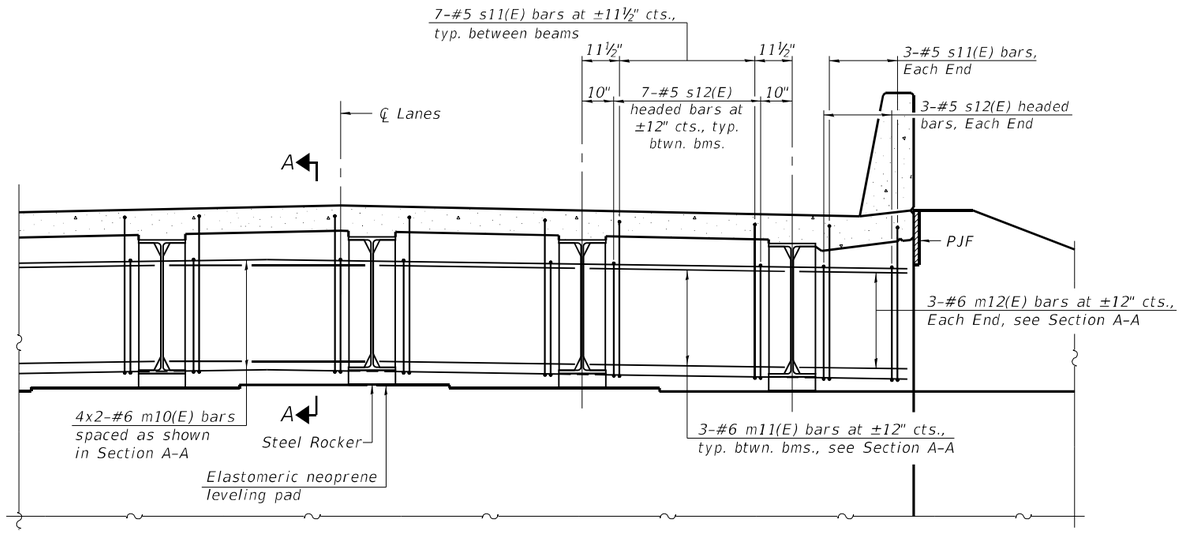
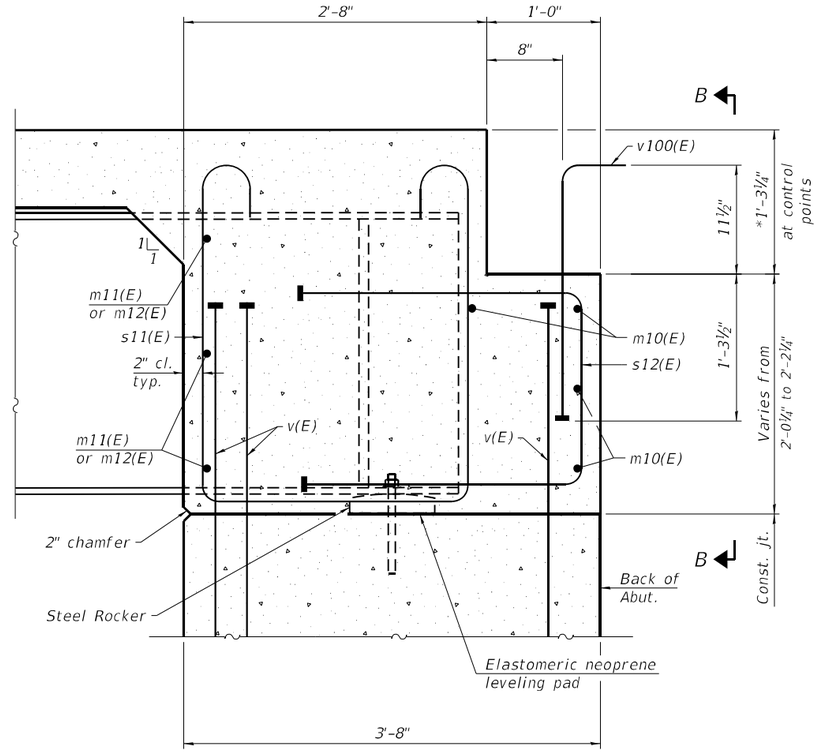


MINIMUM BAR LAP

#6 bars = 4'-0"

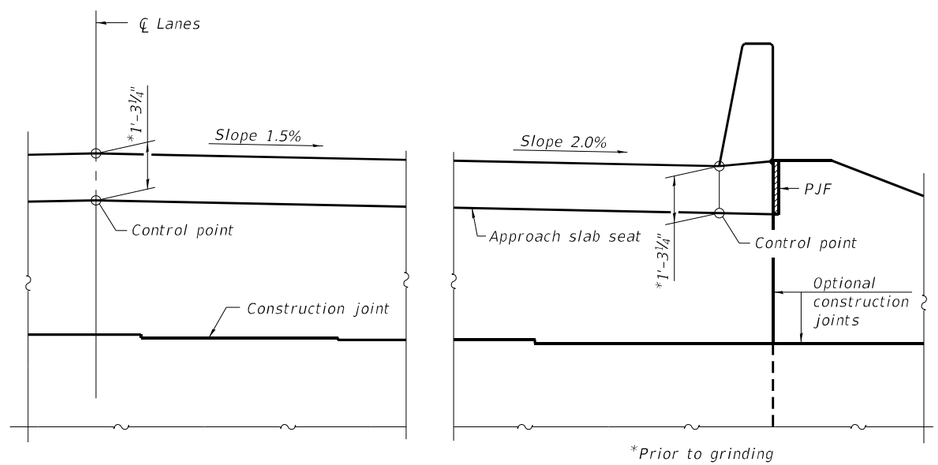
DIAPHRAGM AT ABUTMENT

(Looking east at SN 064-0047 East Abutment, other abutments similar. Horizontal dimensions at right angles to beams.)

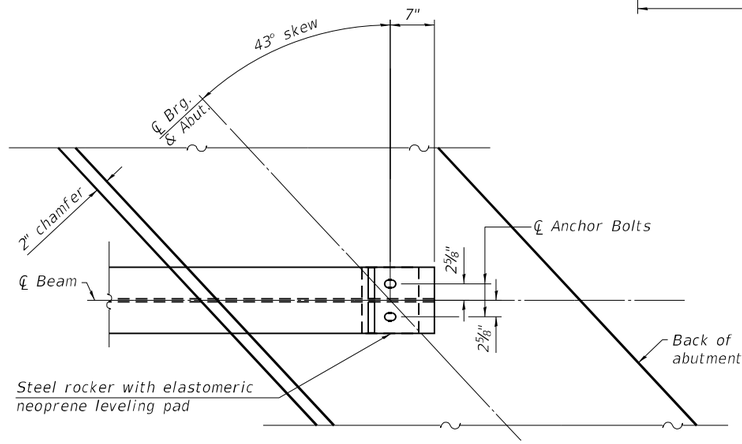


SECTION A-A

(at Rt. ℄'s)



VIEW B-B



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 32.

Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 32.

See sheet 11 of 32 for details of bars s11(E), s12(E) and v100(E).

See sheet 14 of 32 for PJF details.

See sheet 18 of 32 for bearing details.

The s11(E) and s12(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

The approach slab seat shall have a constant slope determined from the control points shown.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

The v(E) bar is billed with the abutments on sheets 19 thru 22 of 32.

MODEL: PLOT
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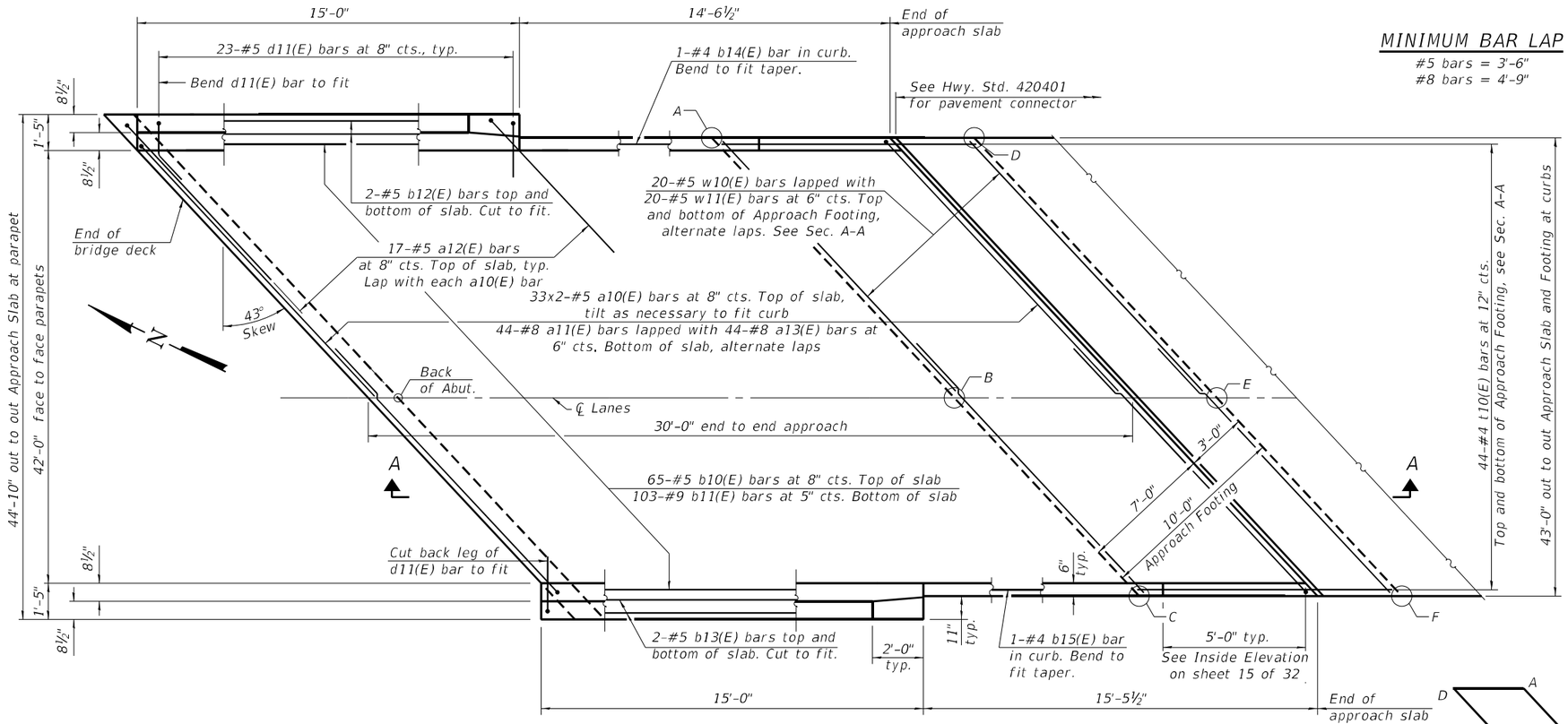
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 13 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	79
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			



PLAN

(Showing WB East Approach; other approaches similar)

MINIMUM BAR LAP

#5 bars = 3'-6"
#8 bars = 4'-9"

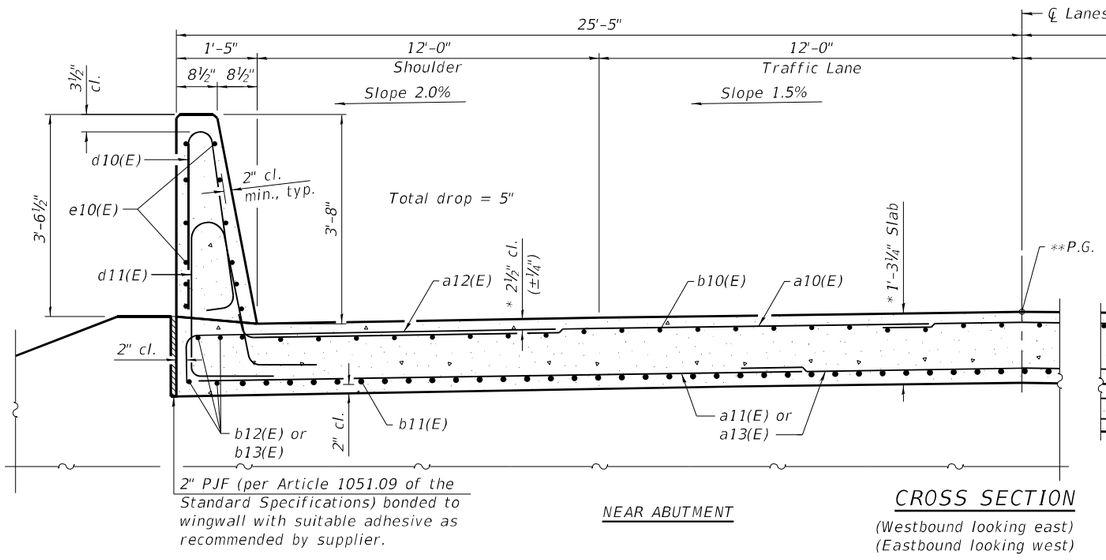
Notes:
See sheet 15 of 32 for Section A-A, Bill of Material and additional details.
Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.

WESTBOUND (WB) TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	West Approach		East Approach	
Point	Top	Bottom	Top	Bottom
A	347.54	346.71	347.68	346.85
B	347.99	347.16	348.13	347.30
C	347.69	346.86	347.83	347.00
D	347.53	346.70	347.69	346.86
E	347.98	347.15	348.14	347.31
F	347.68	346.85	347.84	347.01

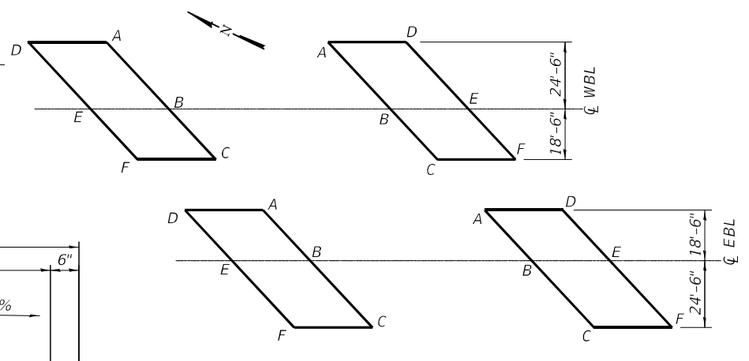
EASTBOUND (EB) TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	West Approach		East Approach	
Point	Top	Bottom	Top	Bottom
A	347.69	346.86	347.88	347.05
B	348.02	347.19	348.21	347.38
C	347.62	346.79	347.81	346.98
D	347.68	346.85	347.90	347.07
E	348.01	347.18	348.23	347.40
F	347.60	346.77	347.82	346.99



CROSS SECTION

(Westbound looking east)
(Eastbound looking west)



NORTH APPROACH FOOTINGS

SOUTH APPROACH FOOTINGS

KEY PLAN FOR APPROACH FOOTING ELEVATIONS

MODEL: PLOT
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PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 14 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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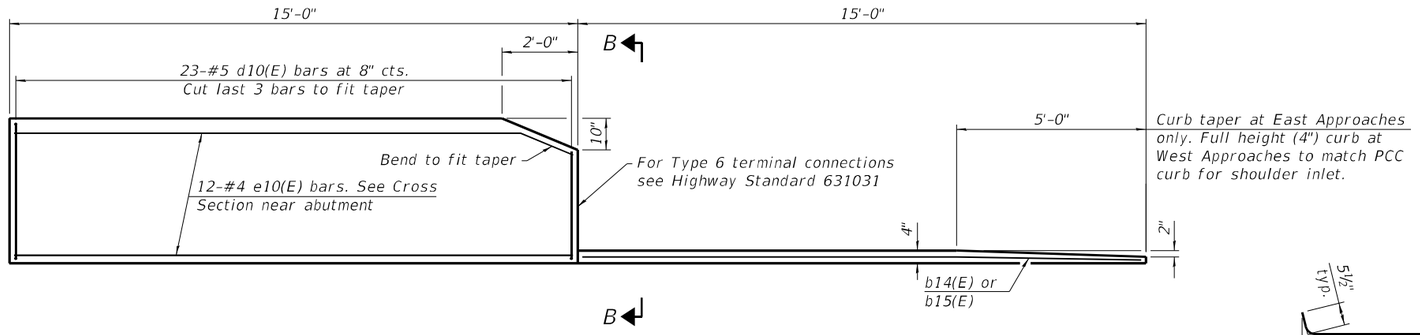
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET AND CURB

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

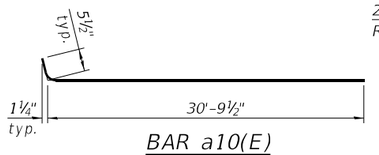
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

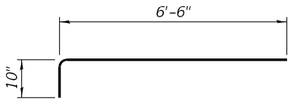
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

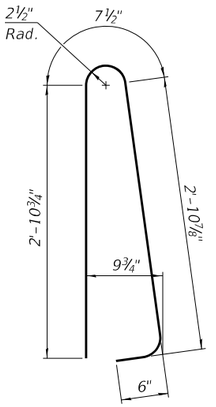
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 32.



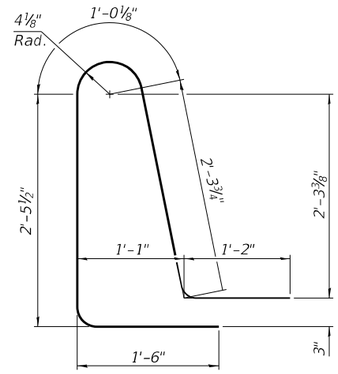
BAR a10(E)



BAR a12(E)



BAR d10(E)



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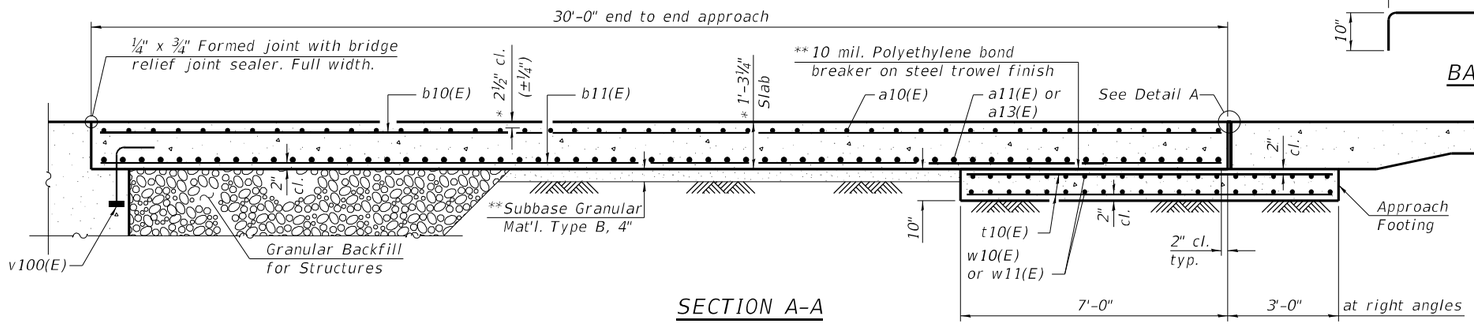
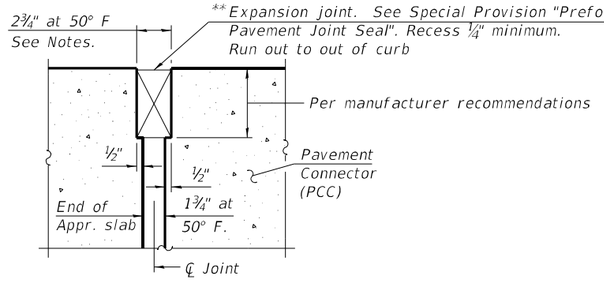


SECTION A-A

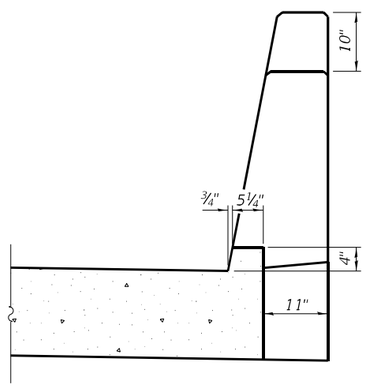
* Prior to grinding

** Cost included with Concrete Superstructure (Approach Slab).



DETAIL A

(Dimensions at right angles)



VIEW B-B

WESTBOUND (WB)
TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	132	#5	31'-3"	
a11(E)	88	#8	30'-0"	
a12(E)	68	#5	7'-4"	
a13(E)	88	#8	35'-0"	
b10(E)	130	#5	29'-8"	
b11(E)	206	#9	29'-8"	
b12(E)	8	#5	15'-8"	
b13(E)	8	#5	13'-11"	
b14(E)	2	#4	14'-4"	
b15(E)	2	#4	14'-10"	
d10(E)	92	#5	7'-0"	
d11(E)	92	#5	8'-6"	
e10(E)	48	#4	14'-8"	
t10(E)	176	#4	9'-8"	
w10(E)	80	#5	29'-0"	
w11(E)	80	#5	32'-10"	
Concrete Superstructure		Cu. Yd.	8.4	
Concrete Superstructure (Approach Slab)		Cu. Yd.	124.6	
Concrete Structures		Cu. Yd.	36.3	
Reinforcement Bars, Epoxy Coated		Pound	53,440	

EASTBOUND (EB)
TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	132	#5	31'-3"	
a11(E)	88	#8	30'-0"	
a12(E)	68	#5	7'-4"	
a13(E)	88	#8	35'-0"	
b10(E)	130	#5	29'-8"	
b11(E)	206	#9	29'-8"	
b12(E)	8	#5	15'-8"	
b13(E)	8	#5	13'-11"	
b14(E)	2	#4	14'-4"	
b15(E)	2	#4	14'-10"	
d10(E)	92	#5	7'-0"	
d11(E)	92	#5	8'-6"	
e10(E)	48	#4	14'-8"	
t10(E)	176	#4	9'-8"	
w10(E)	80	#5	29'-0"	
w11(E)	80	#5	32'-10"	
Concrete Superstructure		Cu. Yd.	8.4	
Concrete Superstructure (Approach Slab)		Cu. Yd.	124.6	
Concrete Structures		Cu. Yd.	36.3	
Reinforcement Bars, Epoxy Coated		Pound	53,440	

MODEL: PLOT
FILE NAME: X:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\064004 7-78685-15-AprDtls.dgn

3/22/2022 9:33:50 AM

ESCA CONSULTANTS, INC.

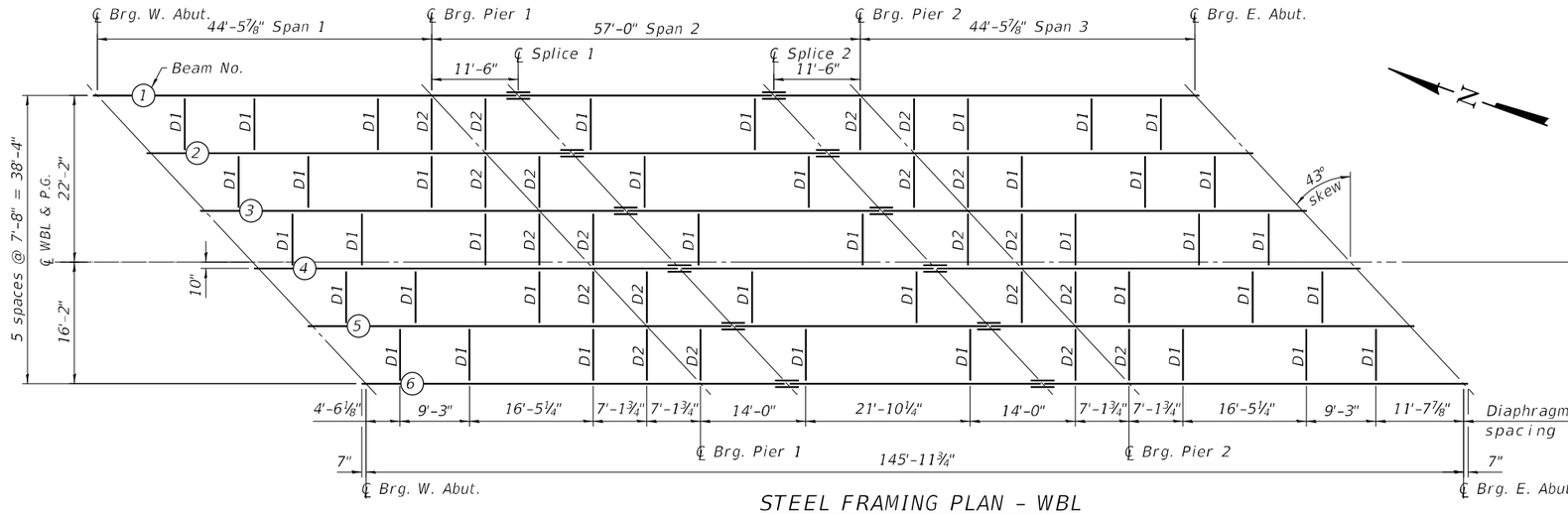
USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

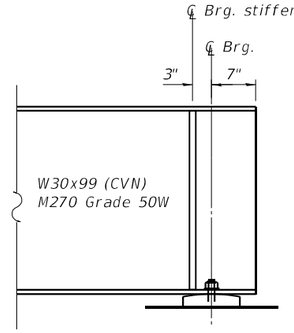
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)

SHEET 15 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	81
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

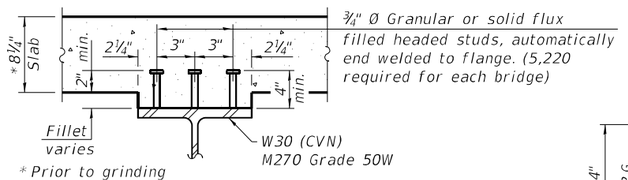


STEEL FRAMING PLAN – WBL

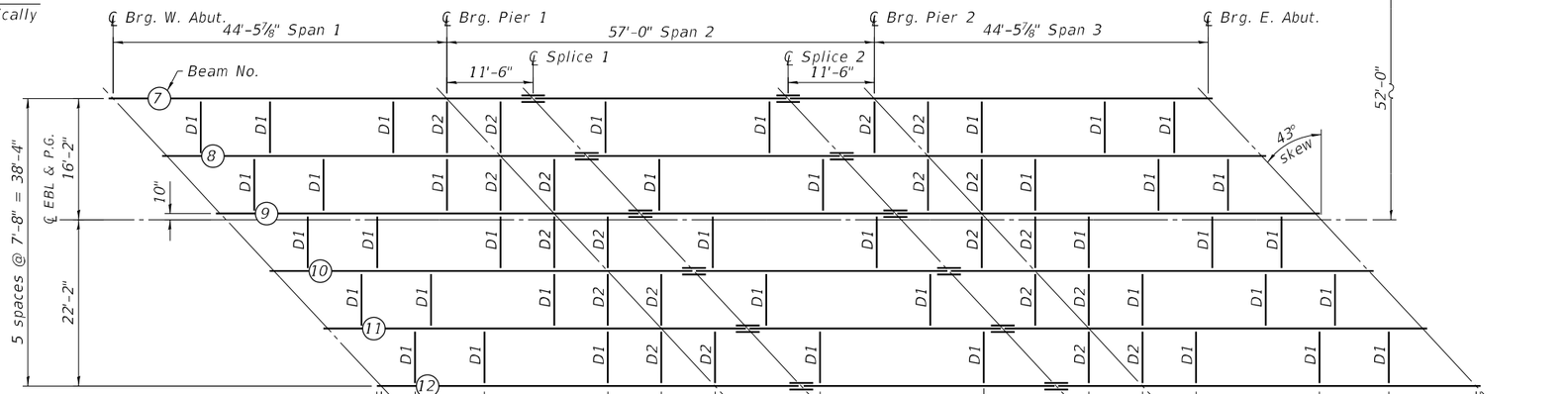


END OF BEAM DETAIL

(Showing bearing stiffener location)



SECTION A–A



STEEL FRAMING PLAN – EBL

Notes:

See sheet 17 of 32 for additional steel details.

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchors rods.

Load carrying components designated "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.

TOP OF BEAM ELEVATIONS (WB)

(For fabrication only)

Beam	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. E. Abut.
1	348.14	348.12	348.12	348.14	348.16	348.25
2	348.29	348.28	348.27	348.30	348.32	348.40
3	348.43	348.41	348.41	348.43	348.45	348.54
4	348.52	348.51	348.50	348.53	348.55	348.63
5	348.41	348.40	348.39	348.42	348.44	348.52
6	348.28	348.27	348.26	348.29	348.31	348.39

TOP OF BEAM ELEVATIONS (EB)

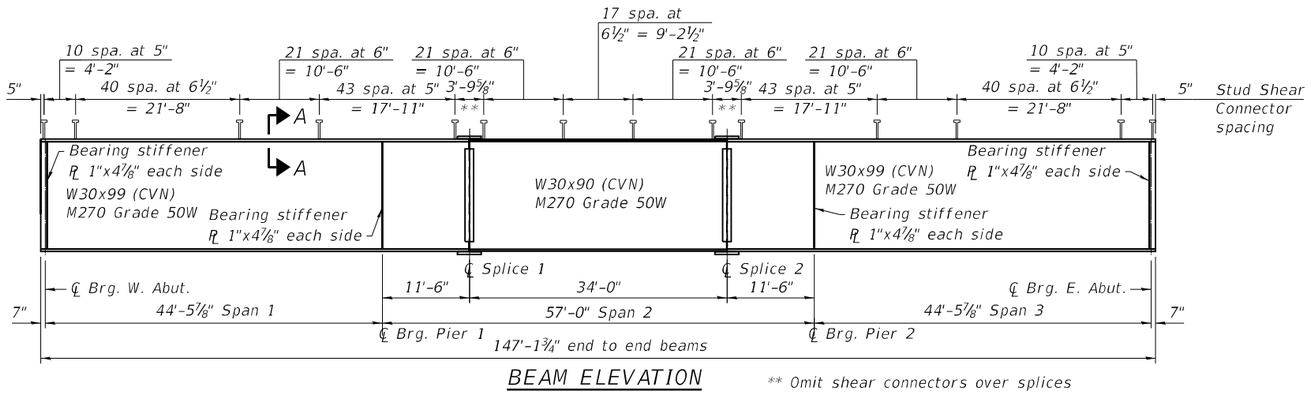
(For fabrication only)

Beam	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. E. Abut.
7	348.30	348.29	348.29	348.33	348.35	348.45
8	348.44	348.44	348.44	348.47	348.49	348.59
9	348.56	348.56	348.56	348.59	348.62	348.71
10	348.48	348.48	348.47	348.51	348.53	348.63
11	348.36	348.36	348.35	348.39	348.41	348.51
12	348.21	348.21	348.21	348.24	348.27	348.36

Notes:

Elevations shown do not include deflection and are intended only for use in fabrication of steel beams.

Elevations at splice locations are top of W30x99 flange (not splice plate).



BEAM ELEVATION

** Omit shear connectors over splices

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SHL 05/21	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1359.03	CHECKED - MTD 07/21	REVISED -	STEEL FRAMING PLANS AND DETAILS STRUCTURE NO. 064–0047 (WB) & 064–0048 (EB)
	PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH 05/21	REVISED -	SHEET 16 OF 32 SHEETS
	PLOT DATE = 3/22/2022	CHECKED - MTD 11/21	REVISED -	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	82
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

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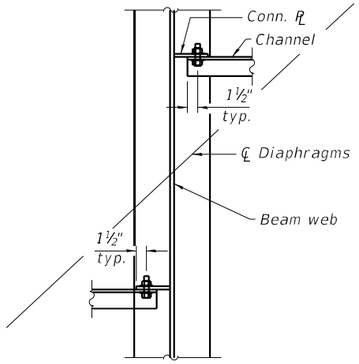


SECTION A-A

BEAM REACTION TABLE					
		Abutment		Pier	
		Interior	Exterior	Interior	Exterior
LLDF		0.7909	0.7043	0.7909	0.7043
OCF		–	1.1865	–	–
R_{DC1}	(k)	15.2	15.0	52.8	52.1
R_{DC2}	(k)	3.1	3.1	10.8	10.8
R_{DW}	(k)	5.7	5.7	19.9	19.9
$R_{ℓ}$	(k)	53.7	56.7	85.0	75.7
R_{IM}	(k)	14.3	15.1	18.0	16.1
R_{Total}	(k)	92.0	95.6	186.5	174.6

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Span 2
Is	(in^4)	3990	3990	3610
Ic(n)	(in^4)	12539	12539	11488
Ic(3n)	(in^4)	9710	9710	8985
Ic(cr)	(in^4)	–	6219	–
Ss	(in^3)	269.0	269.0	245.0
Sc(n)	(in^3)	425.0	425.0	387.7
Sc(3n)	(in^3)	388.6	388.6	355.3
Sc(cr)	(in^3)	–	328.1	–
DC1	(k/')	0.932	0.932	0.927
MDC1	('k)	122.3	247.7	128.5
DC2	(k/')	0.190	0.190	0.190
MDC2	('k)	24.9	50.6	26.5
DW	(k/')	0.350	0.350	0.350
MDW	('k)	45.9	93.1	48.8
LLDF		0.7059	0.6896	0.6754
$M_{ℓ+IM}$	('k)	499.7	437.7	500.2
f_l (Strength I)	(ksi)	0	0	0
$Mu + ⅓ f_l Sxc$	('k)	1127.3	1278.5	1142.3
Øf Mn	('k)	2175.2	–	1965.2
fs DC1	(ksi)	5.46	11.05	6.29
fs DC2	(ksi)	0.77	1.85	0.90
fs DW	(ksi)	1.42	3.41	1.65
fs (ℓ+IM)	(ksi)	14.11	16.01	15.48
f_l (Service II)	(ksi)	0	0	0
fs + ½ f_l(Service II)	(ksi)	25.99	37.11	28.96
0.95R_h F_{yf}	(ksi)	47.50	47.50	47.50
fs + ⅓ f_l (Total)(Strength I)	(ksi)	–	49.26	–
Øf Fn	(ksi)	–	50.00	–
Vf	(k)	51.5	59.3	44.8

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs (Total-Strength I, and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_{ℓ+IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

f_l (Strength I): Factored lateral flange stress (ksi).

$Mu + ½f_l Sxc$: Factored design moment (kip-ft.).
1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 $M_{ℓ+IM}$ + ½ f_l (Strength I)Sxc

Øf Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1/ Ss

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2/ Sc(3n) or MDC2/ Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW/ Sc(3n) or MDW/ Sc(cr) as applicable.

fs (ℓ+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{ℓ+IM}$ / Sc(n) or $M_{ℓ+IM}$ / Sc(cr) as applicable.

f_l (Service II): Un-factored lateral flange stress (ksi).

fs + ½f_l (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs($_{ℓ+IM}$) + ½ f_l (Service II)

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

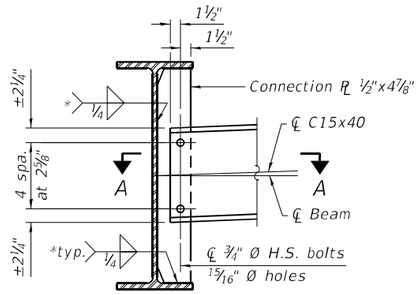
fs + ⅓f_l (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs($_{ℓ+IM}$) + ⅓ f_l (Strength I)

Øf Fn: Non-compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

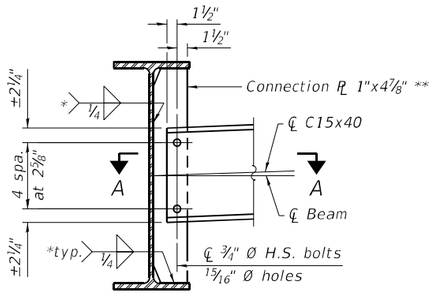
Vf: Maximum factored shear range in span computed according to Article 6.10.10.

LLDF: Live Load Distribution Factor computed according to Table 4.6.2.2.2b-1, Table 4.6.2.2.2d-1, Table 4.6.2.2.3a-1 and Table 4.6.2.2.3b-1.

OCF: Obtuse Correction Factor computed according to Table 4.6.2.2.3c-1 or as simplified in Section 3.3.1 of the Bridge Manual.



INTERIOR DIAPHRAGM (D1)
(80 Required)

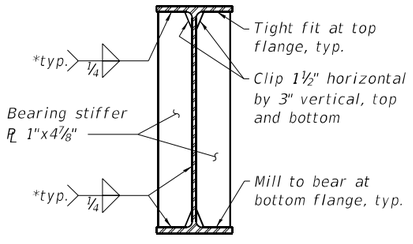


INTERIOR DIAPHRAGM (D2)
(40 Required)

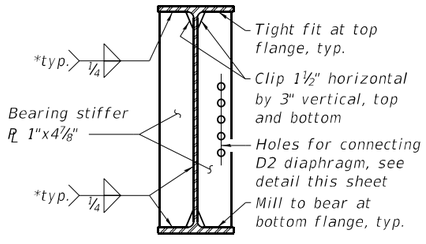
Notes:
Two hardened washers required for each set of oversized holes.
Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition. Alternate channels, if utilized, shall be provided at no additional cost to the Department.
Load carrying components designated "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.

* Stop welds ¼" (±⅛") from edges of plate

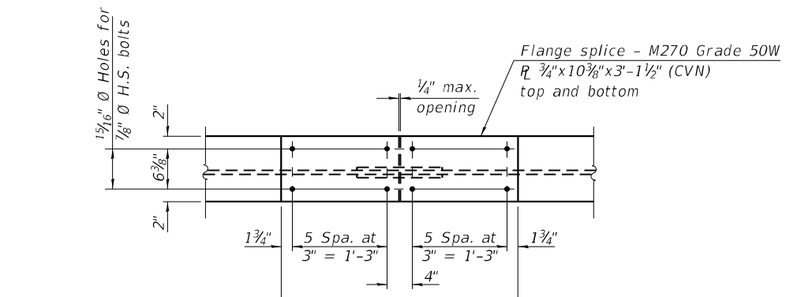
** Also functions as bearing stiffener at piers



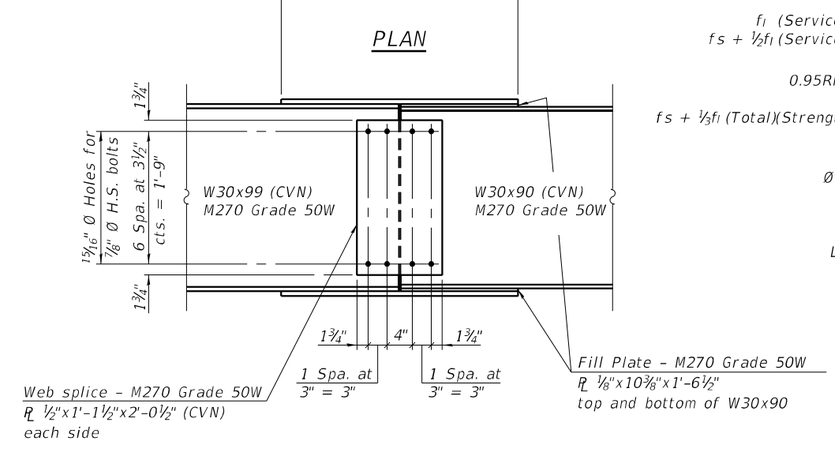
BEARING STIFFENER AT ABUTMENT
(24 Required)



BEARING STIFFENER AT PIER
(24 Required)
(No holes required on exterior side of fascia beams)

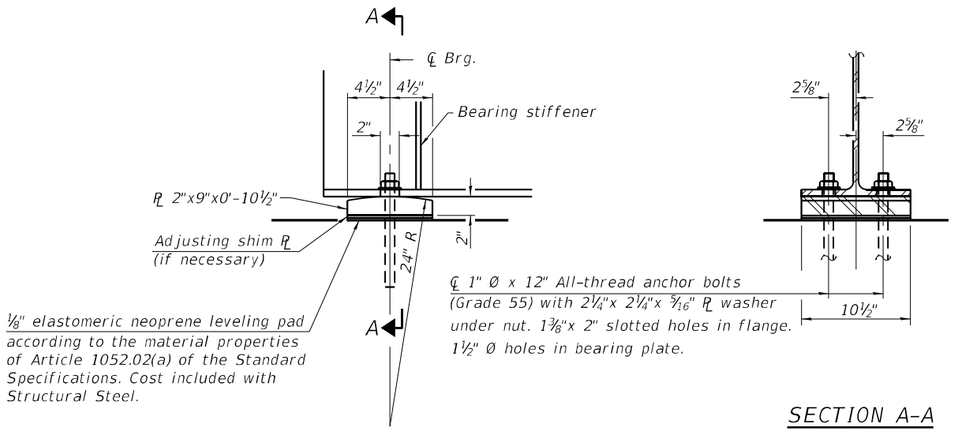


PLAN



ELEVATION

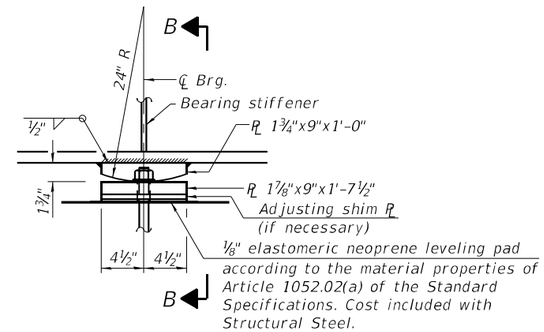
SPLICE DETAIL
(24 Required)



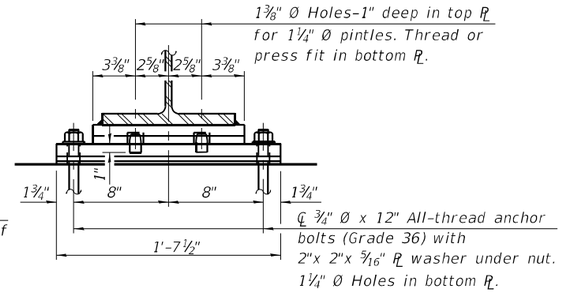
SECTION A-A

ELEVATION AT ABUTMENT

FIXED BEARING AT ABUTMENT

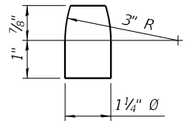


ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIER



PINTLE

Notes:

Anchor bolts shall be according to Article 521.06 of the Standard Specifications.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

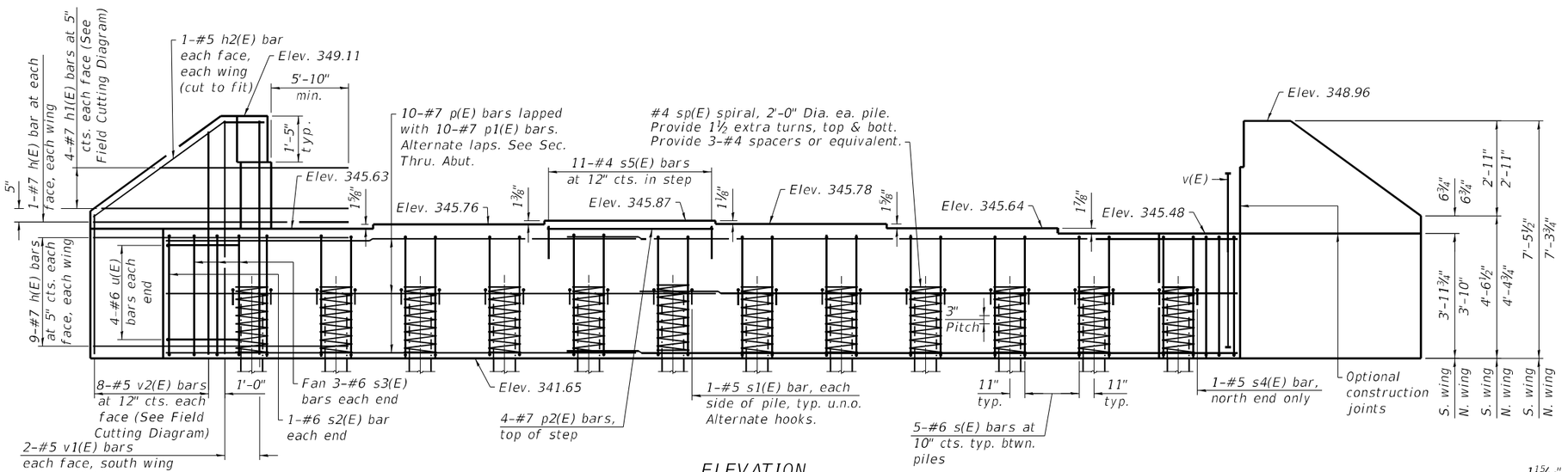
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The pier anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts at the piers will not be allowed.

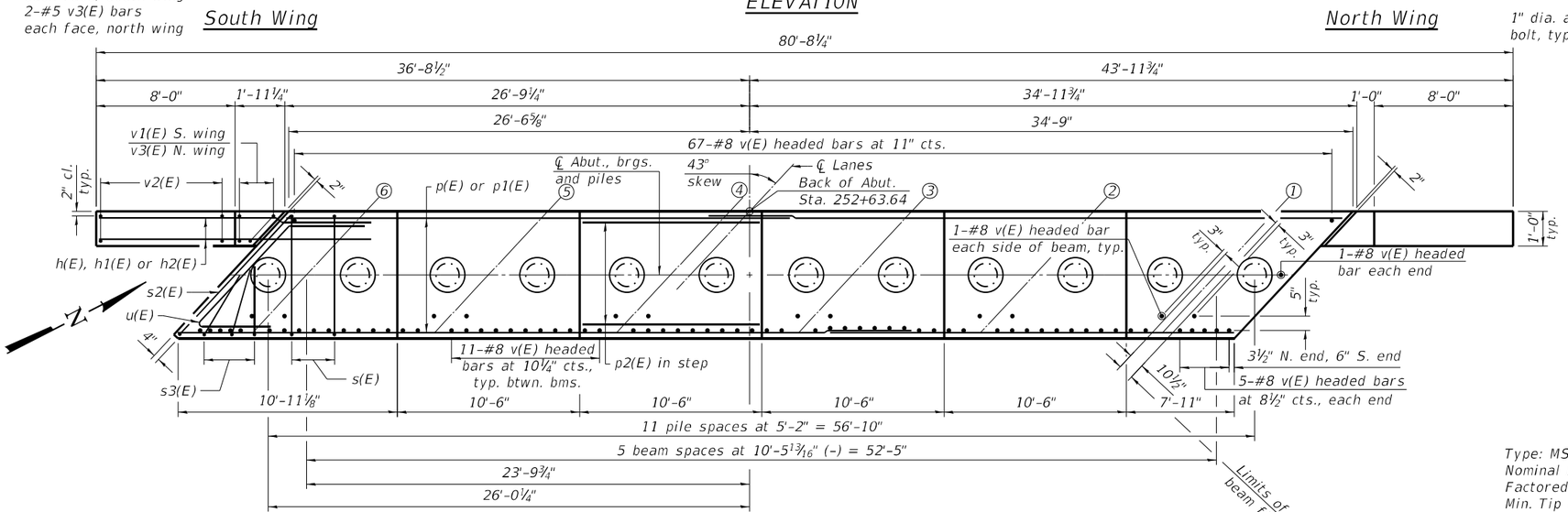
All metal bearing components shall be painted according to Article 506.09 of the Standard Specifications.

BILL OF MATERIAL

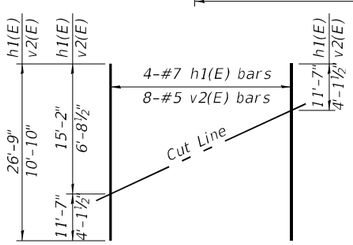
Item	Unit	Total
Anchor Bolts, ¾"	Each	48
Anchor Bolts, 1"	Each	48



ELEVATION



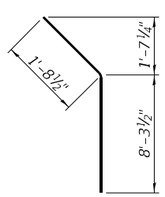
PLAN



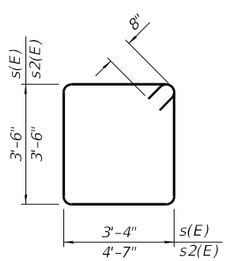
FIELD CUTTING DIAGRAM

Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.

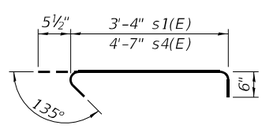
BAR v(E)
(Headed)



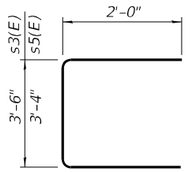
BAR h2(E)



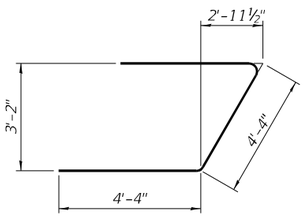
BARS s(E) & s2(E)



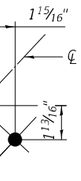
BARS s1(E) & s4(E)



BARS s3(E) & s5(E)

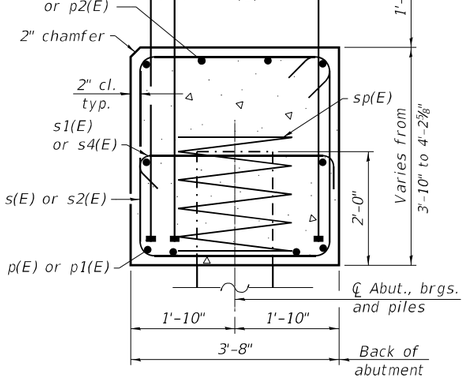


BAR u(E)



ANCHOR BOLT LAYOUT

1" dia. anchor bolt, typ.



SEC. THRU ABUT.

Dimensions at right angles to abutment.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#7	15'-8"	
h1(E)	8	#7	26'-9"	
h2(E)	4	#5	10'-0"	
p(E)	10	#7	29'-0"	
p1(E)	10	#7	36'-8"	
p2(E)	4	#7	10'-2"	
s(E)	55	#6	15'-0"	
s1(E)	23	#5	4'-4"	
s2(E)	2	#6	17'-6"	
s3(E)	6	#6	7'-6"	
s4(E)	1	#5	5'-7"	
s5(E)	11	#4	7'-4"	
* sp(E)	12	#4	2'-0"	
u(E)	8	#6	13'-0"	
v(E)	146	#8	5'-1"	
v1(E)	4	#5	7'-1"	
v2(E)	16	#5	10'-10"	
v3(E)	4	#5	7'-0"	
Structure Excavation		Cu. Yd.	37	
Concrete Structures		Cu. Yd.	36.8	
Reinforcement Bars, Epoxy Coated		Pound	7,640	
Furnishing Metal Shell Piles 16"x0.375"		Foot	924	
Driving Piles		Foot	924	
Test Pile Metal Shells		Each	1	

* Length is height of spiral.

PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 730 kips
Factored Resistance Available: 402 kips
Min. Tip Elevation: 265.0
Est. Length: 84 ft.
No. Production Piles: 11
No. Test Piles: 1

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
The s(E), s1(E), and s5(E) bars shall be placed at right angles to the cap and spaced along the cap.
The s2(E) and s4(E) bars shall be placed along the skewed ends of the cap.
For details of piles, see sheet 28 of 32.

ESCA CONSULTANTS, INC.

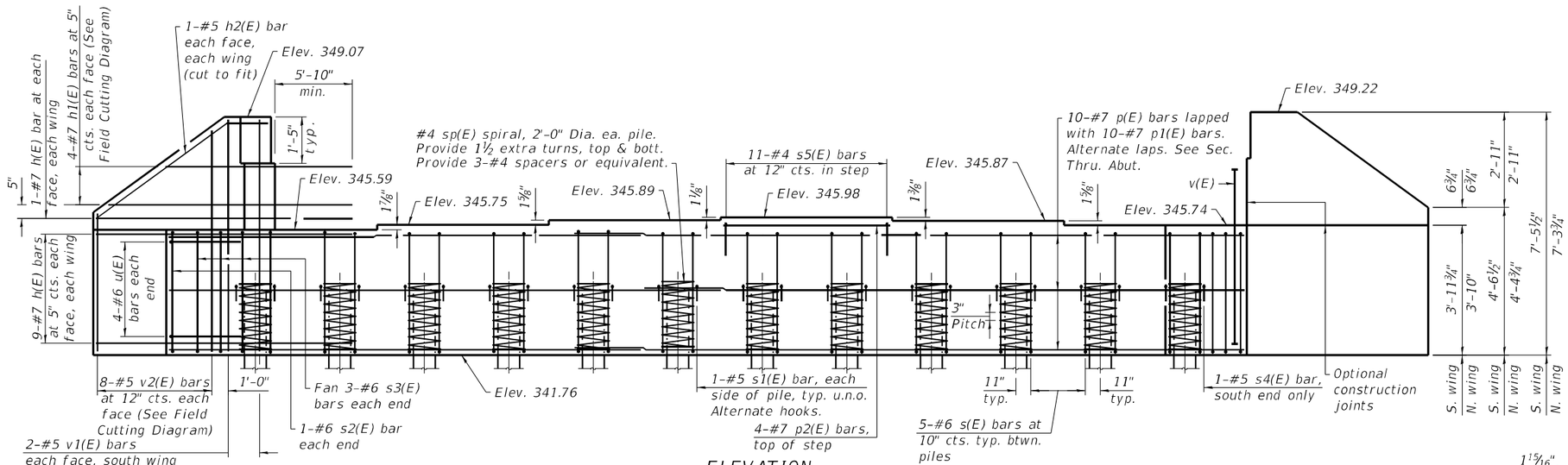
USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -		
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -		
PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH	05/21	REVISED -		
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT (WB)
STRUCTURE NO. 064-0047 (WB)
SHEET 19 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	85
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

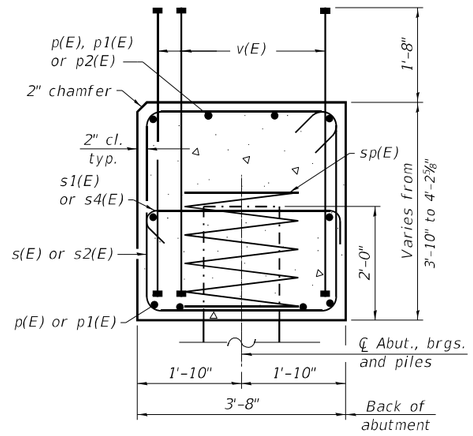
MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_004810640047-78685-19-WAbutWB.dgn
3/22/2022 9:33:54 AM



North Wing

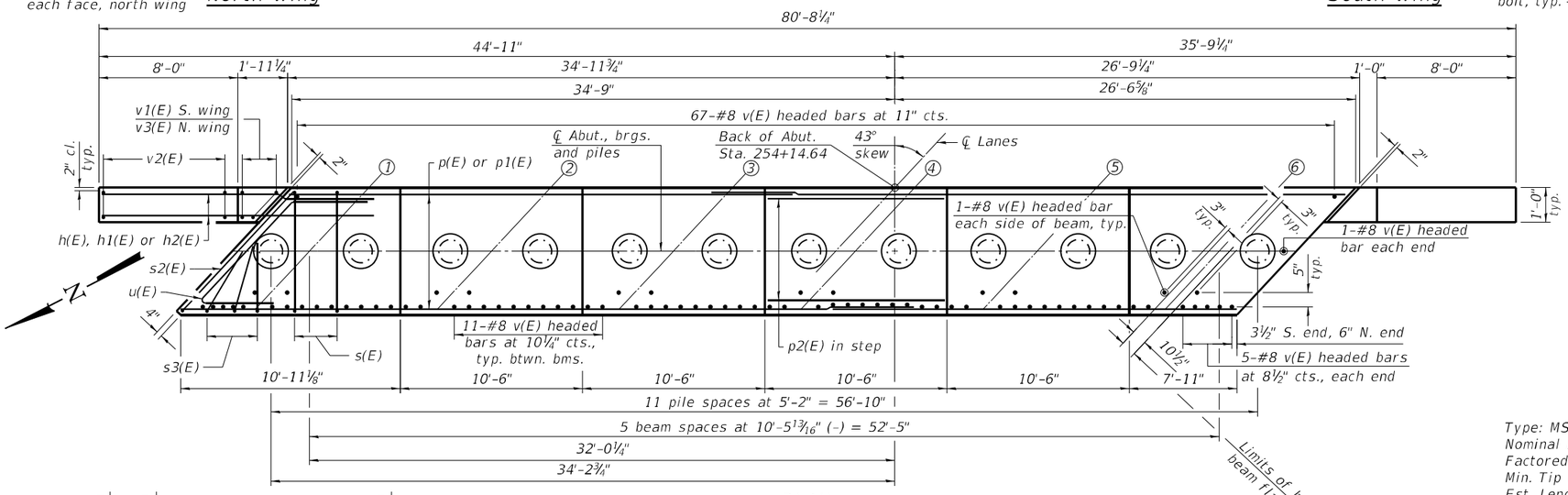
ELEVATION

South Wing

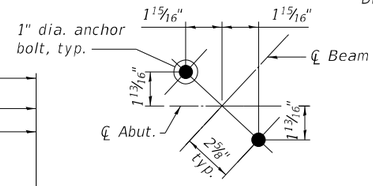


SEC. THRU ABUT.

Dimensions at right angles to abutment.



PLAN



ANCHOR BOLT LAYOUT

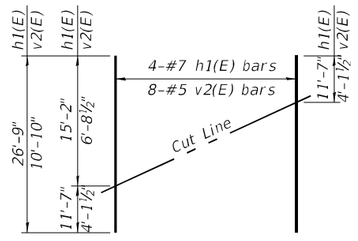
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#7	15'-8"	
h1(E)	8	#7	26'-9"	
h2(E)	4	#5	10'-0"	
p(E)	10	#7	29'-0"	
p1(E)	10	#7	36'-8"	
p2(E)	4	#7	10'-2"	
s(E)	55	#6	15'-0"	
s1(E)	23	#5	4'-4"	
s2(E)	2	#6	17'-6"	
s3(E)	6	#6	7'-6"	
s4(E)	1	#5	5'-7"	
s5(E)	11	#4	7'-4"	
* sp(E)	12	#4	2'-0"	
u(E)	8	#6	13'-0"	
v(E)	146	#8	5'-1"	
v1(E)	4	#5	7'-1"	
v2(E)	16	#5	10'-10"	
v3(E)	4	#5	7'-0"	
Structure Excavation		Cu. Yd.		180
Concrete Structures		Cu. Yd.		36.8
Reinforcement Bars, Epoxy Coated		Pound		7,640
Furnishing Metal Shell Piles 16"x0.375"		Foot		946
Driving Piles		Foot		946
Test Pile Metal Shells		Each		1

* Length is height of spiral.

PILE DATA

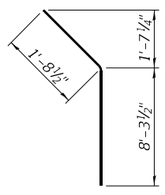
Type: MS 16"x0.375"
Nominal Required Bearing: 730 kips
Factored Resistance Available: 402 kips
Min. Tip Elevation: 272.8
Est. Length: 86 ft.
No. Production Piles: 11
No. Test Piles: 1



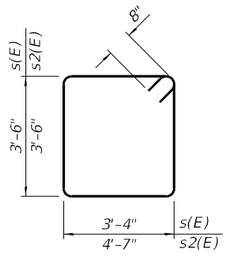
FIELD CUTTING DIAGRAM

Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.

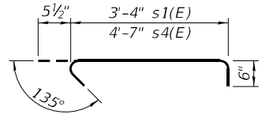
BAR v(E)
(Headed)



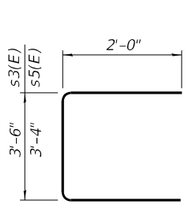
BAR h2(E)



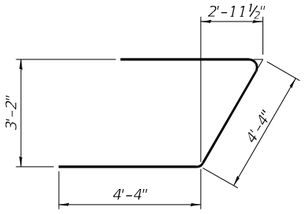
BARS s(E) & s2(E)



BARS s1(E) & s4(E)



BARS s3(E) & s5(E)



BAR u(E)

Notes:
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
The s(E), s1(E), and s5(E) bars shall be placed at right angles to the cap and spaced along the cap.
The s2(E) and s4(E) bars shall be placed along the skewed ends of the cap.
For details of piles, see sheet 28 of 32.

ESCA CONSULTANTS, INC.

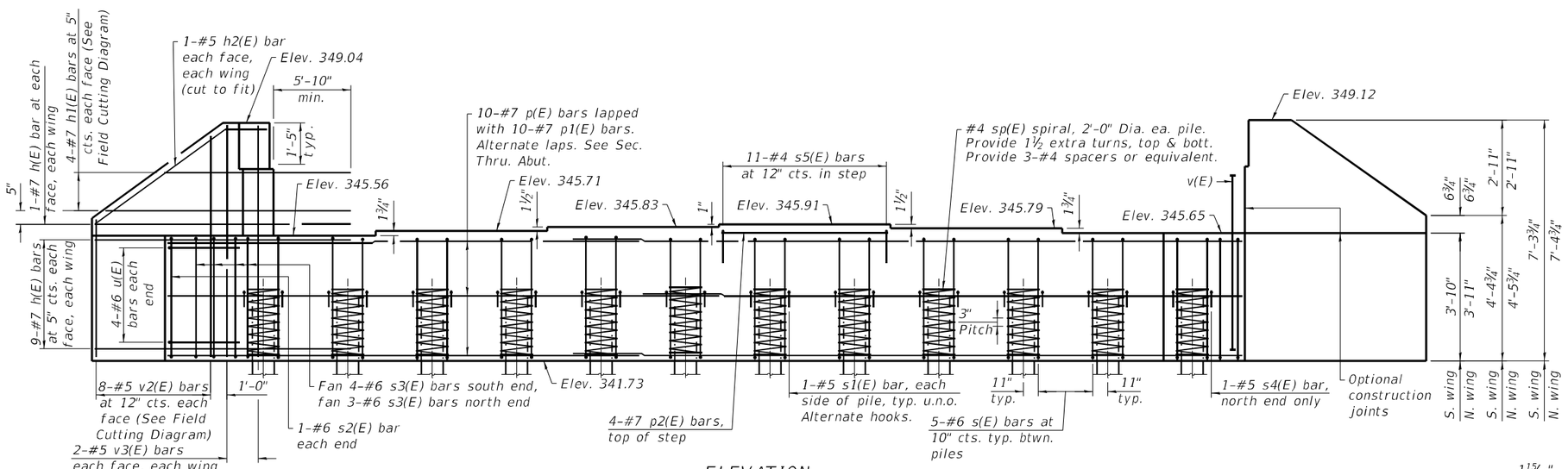
USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT (WB)
STRUCTURE NO. 064-0047 (WB)
SHEET 20 OF 32 SHEETS

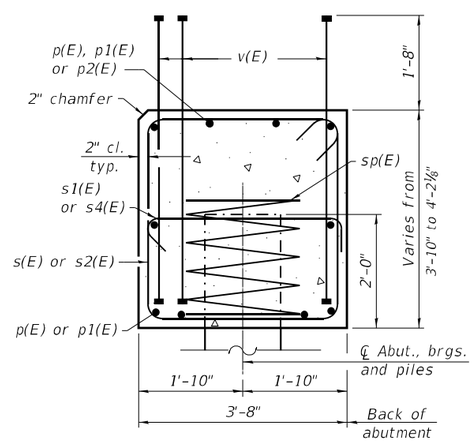
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	86
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_00480640047-78685-20-EAbutWB.dgn
3/22/2022 9:33:55 AM



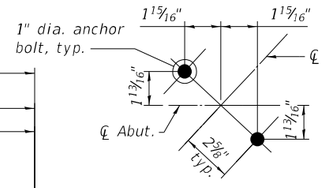
ELEVATION

South Wing — North Wing

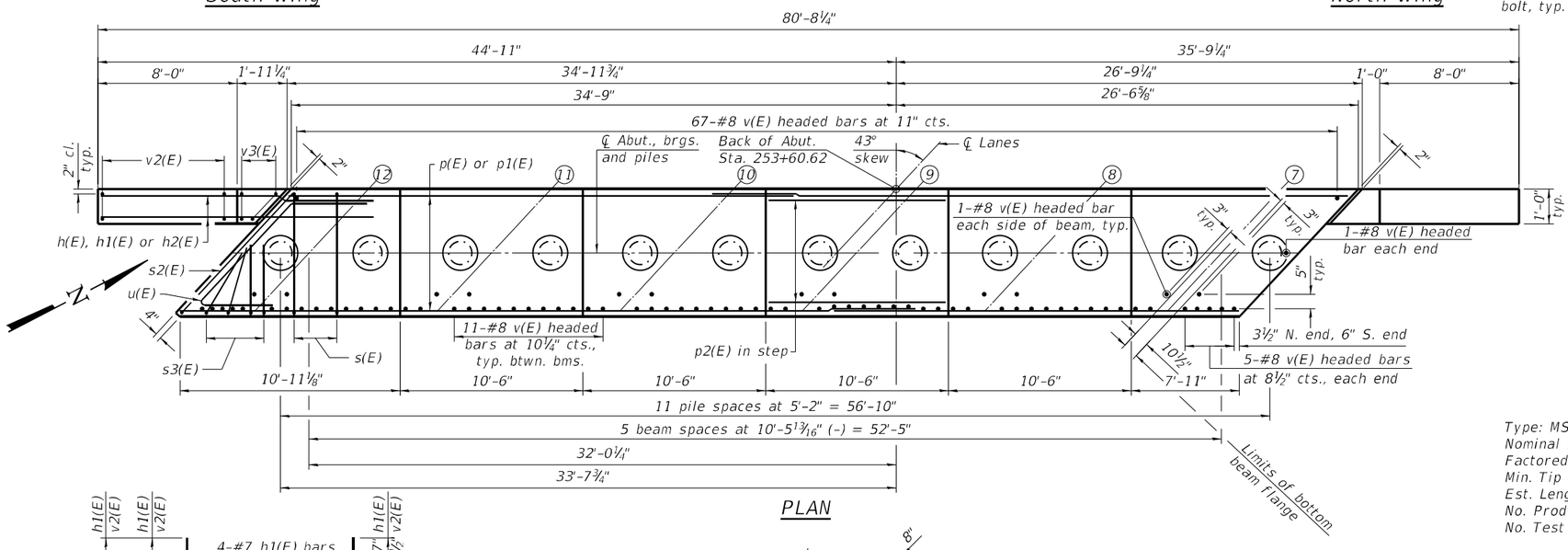


SEC. THRU ABUT.

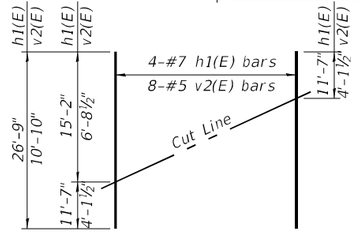
Dimensions at right angles to abutment.



ANCHOR BOLT LAYOUT

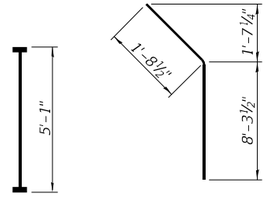


PLAN



FIELD CUTTING DIAGRAM

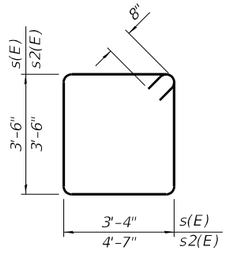
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.



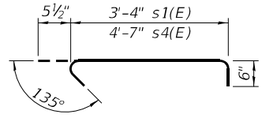
BAR v(E)

(Headed)

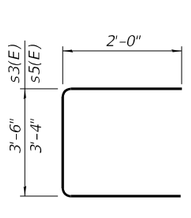
BAR h2(E)



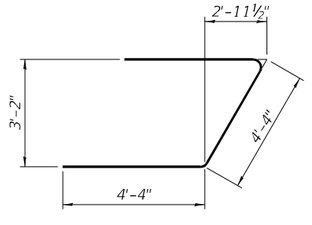
BARS s(E) & s2(E)



BARS s1(E) & s4(E)



BARS s3(E) & s5(E)



BAR u(E)

PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 730 kips
Factored Resistance Available: 402 kips
Min. Tip Elevation: 296.3
Est. Length: 67 ft.
No. Production Piles: 11
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#7	15'-8"	
h1(E)	8	#7	26'-9"	
h2(E)	4	#5	10'-0"	
p(E)	10	#7	29'-0"	
p1(E)	10	#7	36'-8"	
p2(E)	4	#7	10'-2"	
s(E)	55	#6	15'-0"	
s1(E)	23	#5	4'-4"	
s2(E)	2	#6	17'-6"	
s3(E)	7	#6	7'-6"	
s4(E)	1	#5	5'-7"	
s5(E)	11	#4	7'-4"	
* sp(E)	12	#4	2'-0"	
u(E)	8	#6	13'-0"	
v(E)	146	#8	5'-1"	
v2(E)	16	#5	10'-10"	
v3(E)	8	#5	7'-0"	
Structure Excavation		Cu. Yd.	37	
Concrete Structures		Cu. Yd.	36.5	
Reinforcement Bars, Epoxy Coated		Pound	7,650	
Furnishing Metal Shell Piles 16"x0.375"		Foot	737	
Driving Piles		Foot	737	
Test Pile Metal Shells		Each	1	

* Length is height of spiral.

Notes:
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
The s(E), s1(E), and s5(E) bars shall be placed at right angles to the cap and spaced along the cap.
The s2(E) and s4(E) bars shall be placed along the skewed ends of the cap.
For details of piles, see sheet 28 of 32.

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_00480640047-78685-21-WAbutEB.dgn
3/22/2022 9:33:57 AM

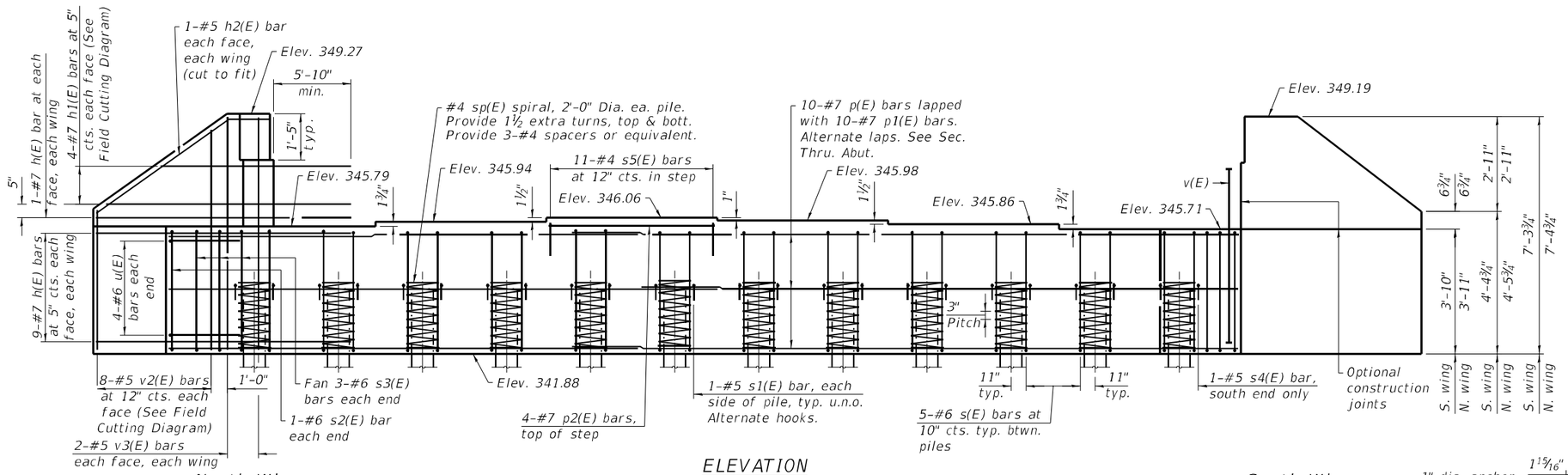
ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0:2 '-' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT (EB)
STRUCTURE NO. 064-0048 (EB)
SHEET 21 OF 32 SHEETS

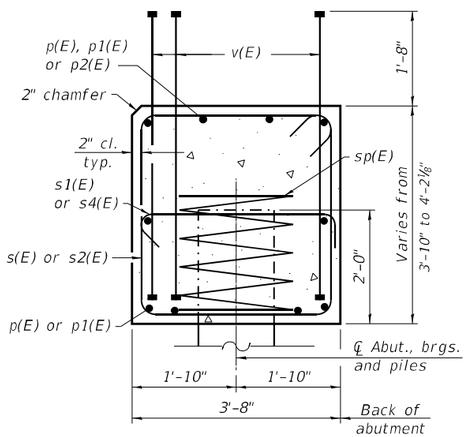
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	87
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



ELEVATION

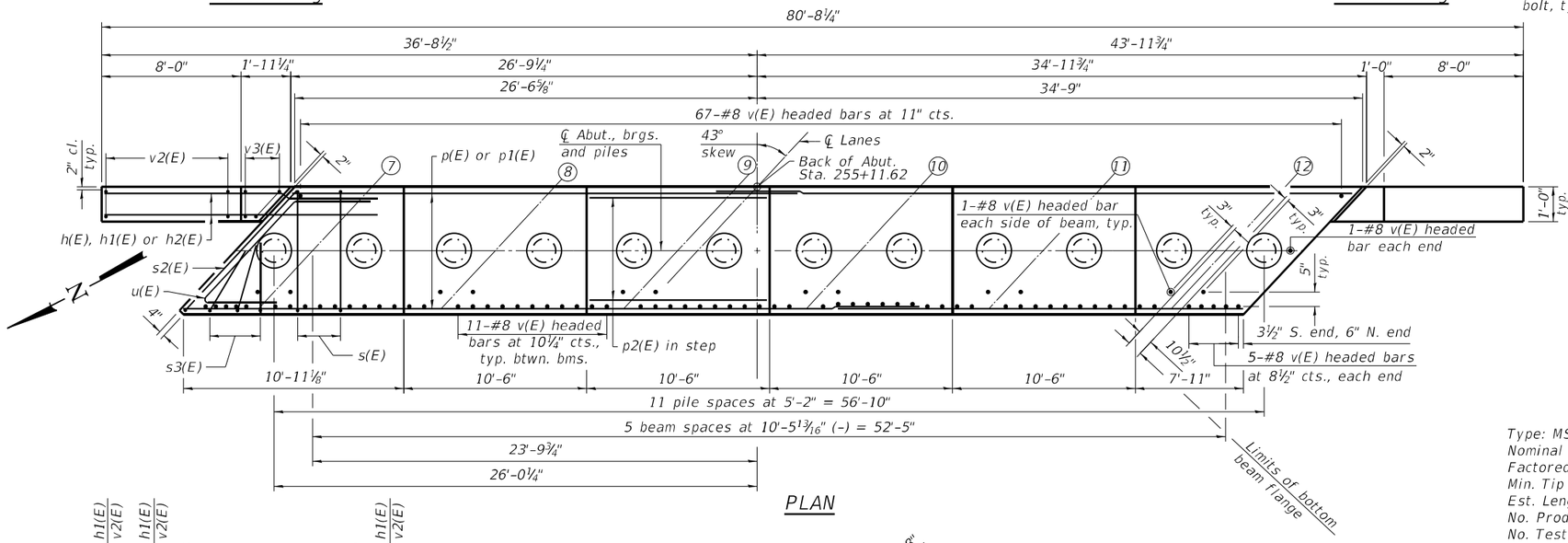
North Wing

South Wing

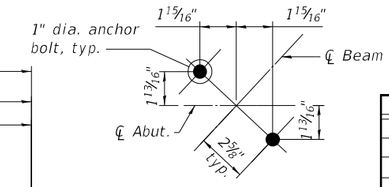


SEC. THRU ABUT.

Dimensions at right angles to abutment.



PLAN



ANCHOR BOLT LAYOUT

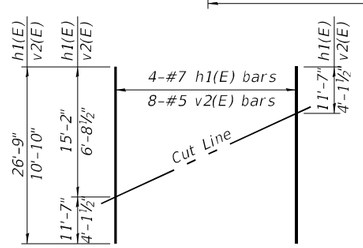
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#7	15'-8"	
h1(E)	8	#7	26'-9"	
h2(E)	4	#5	10'-0"	
p(E)	10	#7	29'-0"	
p1(E)	10	#7	36'-8"	
p2(E)	4	#7	10'-2"	
s(E)	55	#6	15'-0"	
s1(E)	23	#5	4'-4"	
s2(E)	2	#6	17'-6"	
s3(E)	6	#6	7'-6"	
s4(E)	1	#5	5'-7"	
s5(E)	11	#4	7'-4"	
* sp(E)	12	#4	2'-0"	
u(E)	8	#6	13'-0"	
v(E)	146	#8	5'-1"	
v2(E)	16	#5	10'-10"	
v3(E)	8	#5	7'-0"	
Structure Excavation		Cu. Yd.	180	
Concrete Structures		Cu. Yd.	36.5	
Reinforcement Bars, Epoxy Coated		Pound	7,640	
Furnishing Metal Shell Piles 16"x0.375"		Foot	847	
Driving Piles		Foot	847	
Test Pile Metal Shells		Each	1	

* Length is height of spiral.

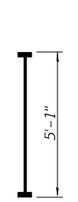
PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 730 kips
Factored Resistance Available: 402 kips
Min. Tip Elevation: 269.3
Est. Length: 77 ft.
No. Production Piles: 11
No. Test Piles: 1



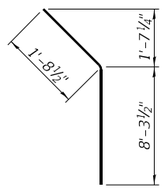
FIELD CUTTING DIAGRAM

Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.

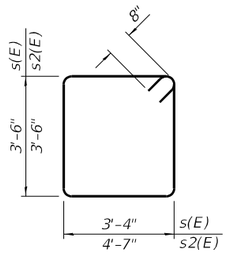


BAR v(E)

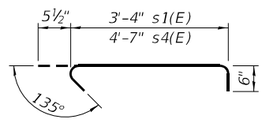
(Headed)



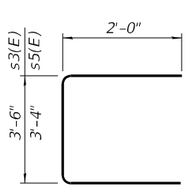
BAR h2(E)



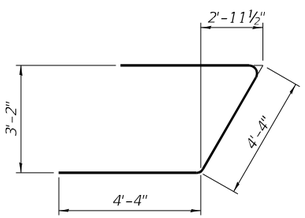
BARS s(E) & s2(E)



BARS s1(E) & s4(E)



BARS s3(E) & s5(E)



BAR u(E)

Notes:

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

The s(E), s1(E), and s5(E) bars shall be placed at right angles to the cap and spaced along the cap.

The s2(E) and s4(E) bars shall be placed along the skewed ends of the cap.

For details of piles, see sheet 28 of 32.

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\064047-78685-22-EAbutEB.dgn

3/22/2022 9:33:58 AM

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

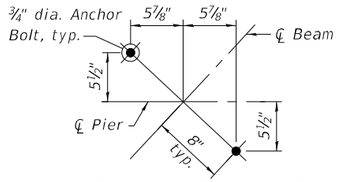
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT (EB)
STRUCTURE NO. 064-0048 (EB)

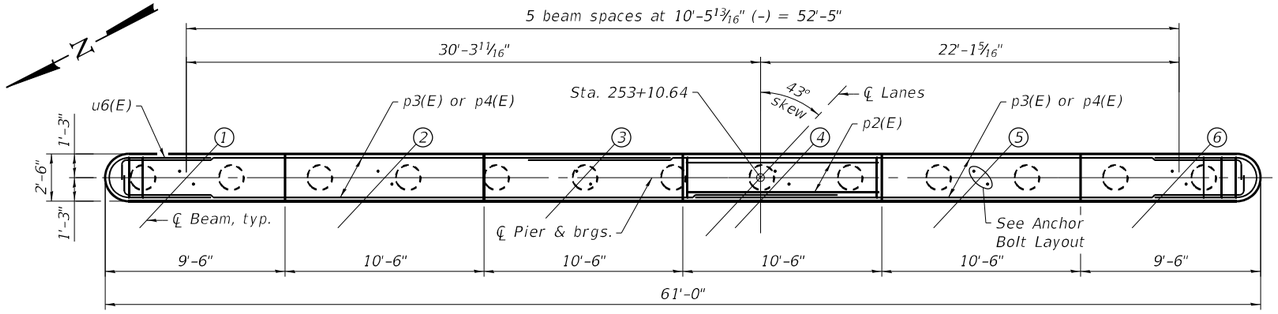
SHEET 22 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	88
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

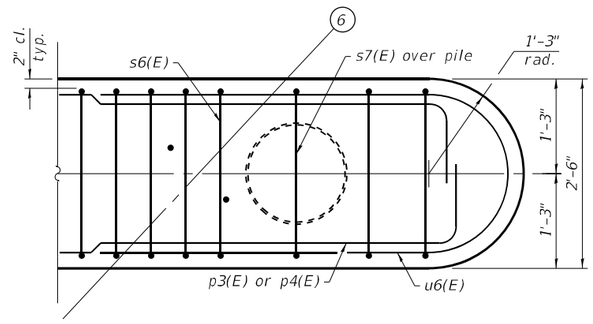
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For bar bending details, see sheet 27 of 32.
For details of piles, see sheet 28 of 32.



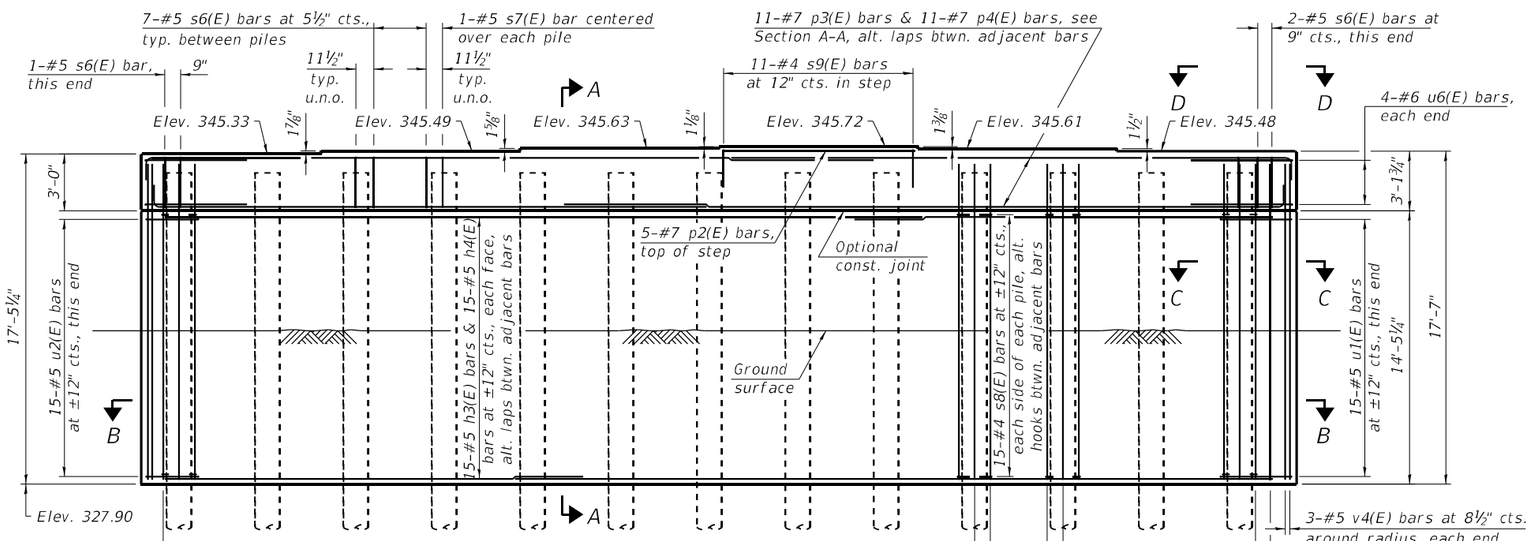
ANCHOR BOLT LAYOUT



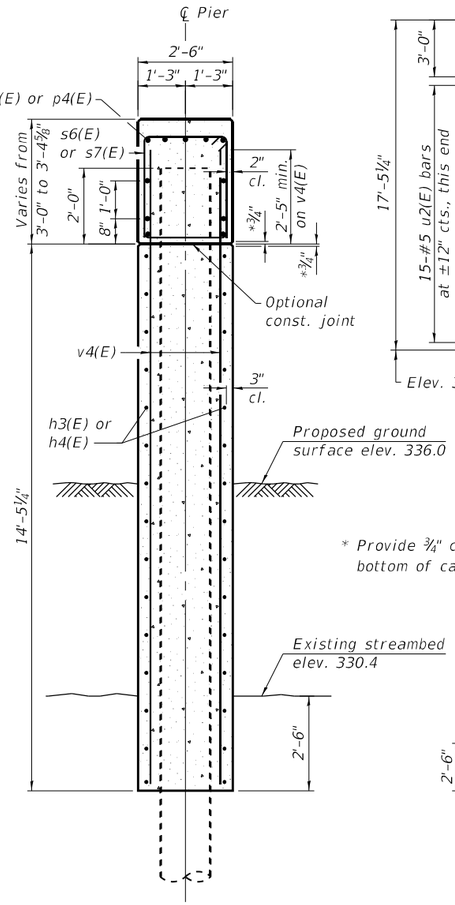
TOP PLAN



VIEW D-D

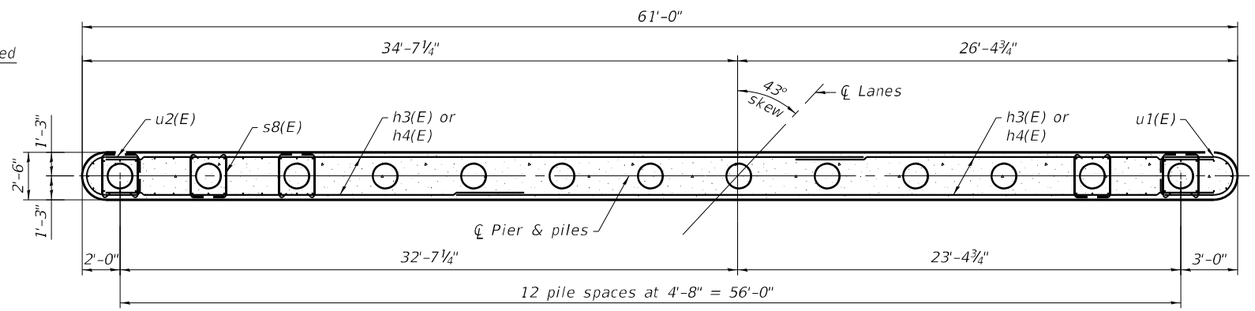


ELEVATION
(Looking east)

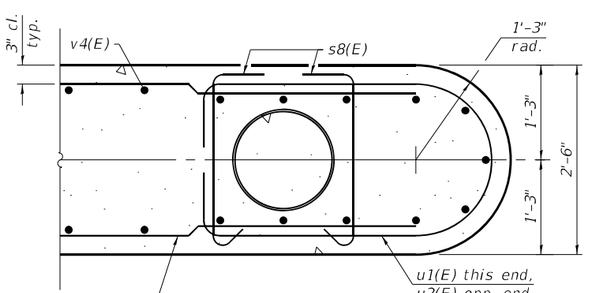


* Provide ¾" chamfer to outline bottom of cap, typ. all around.

SECTION A-A



SECTION B-B



SECTION C-C

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	30	#5	40'-0"	
h4(E)	30	#5	22'-1"	
p2(E)	5	#7	10'-2"	
p3(E)	11	#7	38'-11"	
p4(E)	11	#7	30'-2"	
s6(E)	87	#5	10'-7"	
s7(E)	13	#5	7'-6"	
s8(E)	390	#4	3'-1"	
s9(E)	11	#4	6'-2"	
u1(E)	15	#5	10'-5"	
u2(E)	15	#5	8'-5"	
u6(E)	8	#6	11'-11"	
v4(E)	134	#5	16'-9"	
Structure Excavation		Cu. Yd.	124	
Concrete Structures		Cu. Yd.	87.8	
Reinforcement Bars, Epoxy Coated		Pound	8,290	
Furnishing Metal Shell Piles 16"x0.375"		Foot	960	
Driving Piles		Foot	960	
Test Pile Metal Shells		Each	1	

PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 550 kips
Factored Resistance Available: 303 kips
Min. Tip Elevation: 265.0
Est. Length: 80 ft.
No. Production Piles: 12
No. Test Piles: 1

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\064047-78685-23-Pier1WB.dgn
3/22/2022 9:33:59 AM

ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

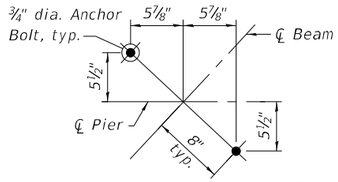
USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -		
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -		
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -		
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

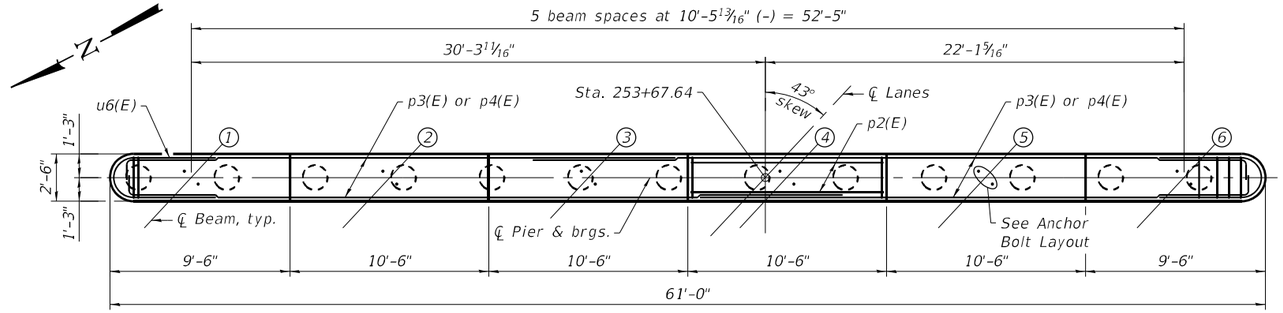
PIER 1 (WB)
STRUCTURE NO. 064-0047 (WB)
SHEET 23 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	89
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

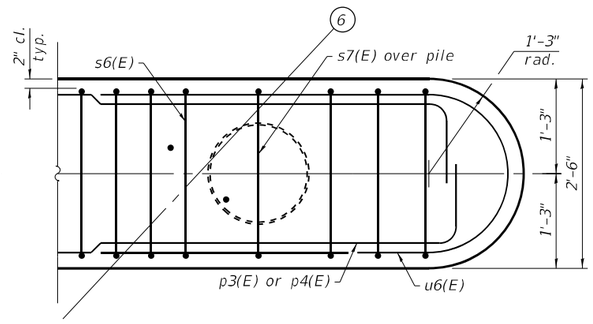
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For bar bending details, see sheet 27 of 32.
For details of piles, see sheet 28 of 32.



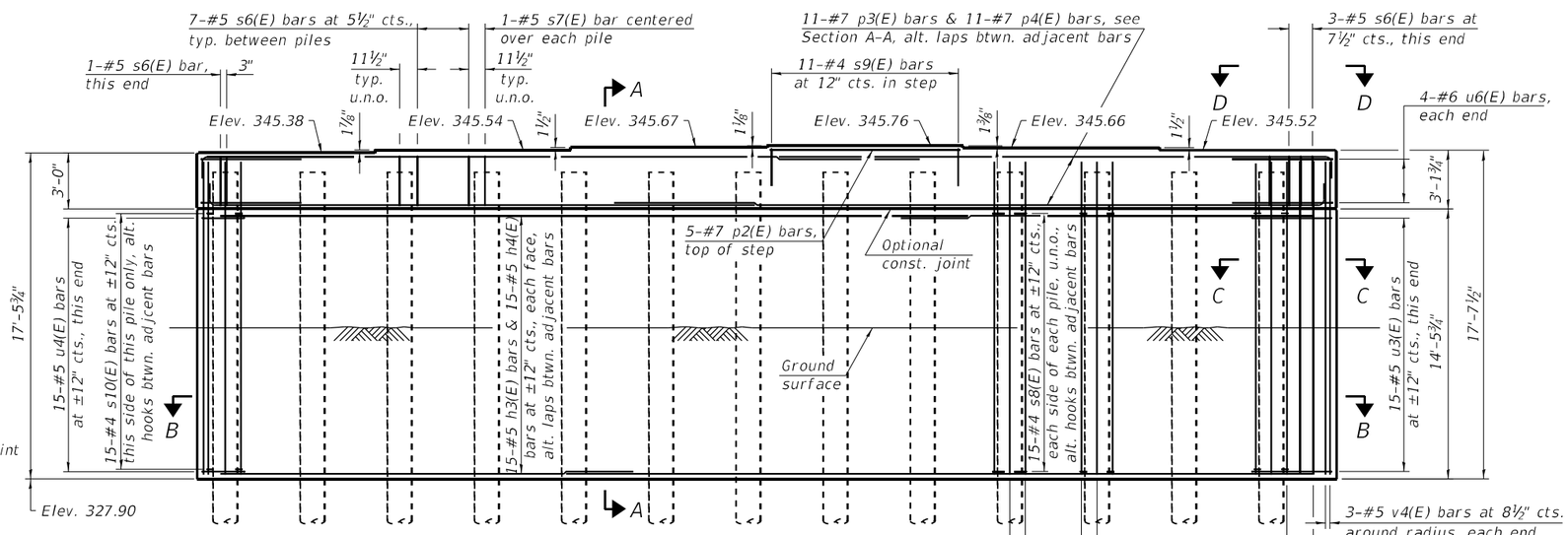
ANCHOR BOLT LAYOUT



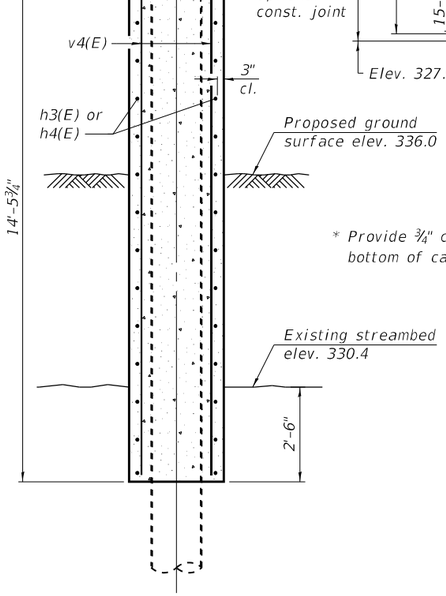
TOP PLAN



VIEW D-D

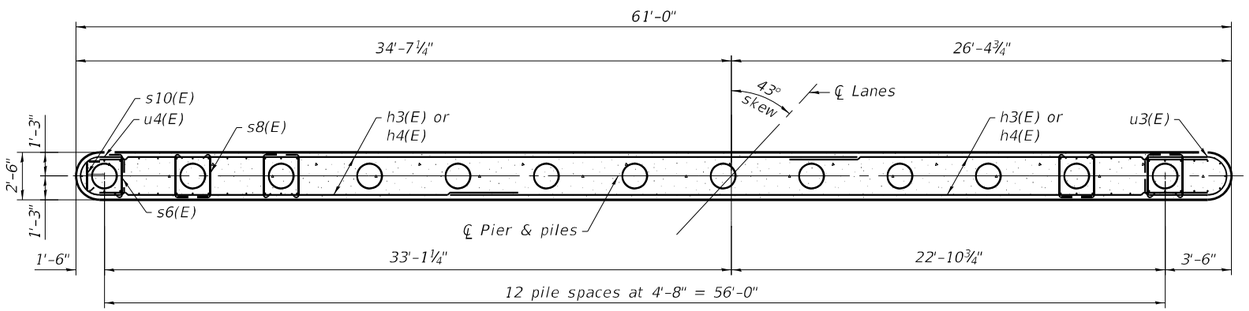


ELEVATION
(Looking east)

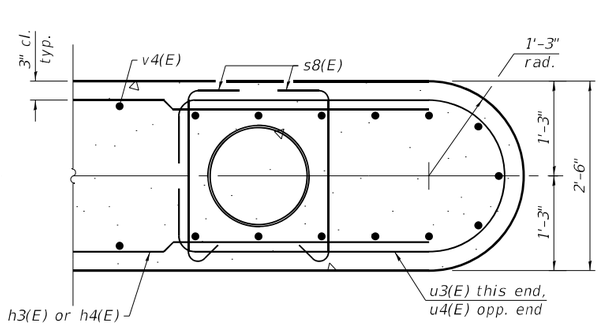


* Provide ¾" chamfer to outline bottom of cap, typ. all around.

SECTION A-A



SECTION B-B



SECTION C-C

10" typ.
3-#5 v4(E) bars at 8½" cts., E.F. this end only
10" typ.
4-#5 v4(E) bars at 12" cts., typ. between piles, each face
1-#5 v3(E) bar centered on each pile, each face
3-#5 v4(E) bars at 8½" cts. around radius, each end

PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 550 kips
Factored Resistance Available: 303 kips
Min. Tip Elevation: 272.8
Est. Length: 73 ft.
No. Production Piles: 12
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	30	#5	40'-0"	——
h4(E)	30	#5	22'-1"	——
p2(E)	5	#7	10'-2"	——
p3(E)	11	#7	38'-11"	
p4(E)	11	#7	30'-2"	
s6(E)	87	#5	10'-7"	
s7(E)	14	#5	7'-6"	
s8(E)	375	#4	3'-1"	
s9(E)	11	#4	6'-2"	
s10(E)	15	#4	2'-8"	
u3(E)	15	#5	11'-5"	
u4(E)	15	#5	7'-5"	
u6(E)	8	#6	11'-11"	
v4(E)	134	#5	16'-9"	——
Structure Excavation		Cu. Yd.	124	
Concrete Structures		Cu. Yd.	88.0	
Reinforcement Bars, Epoxy Coated		Pound	8,280	
Furnishing Metal Shell Piles 16"x0.375"		Foot	876	
Driving Piles		Foot	876	
Test Pile Metal Shells		Each	1	

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\064047-78685-24-Pier2WB.dgn
3/22/2022 9:34:00 AM

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

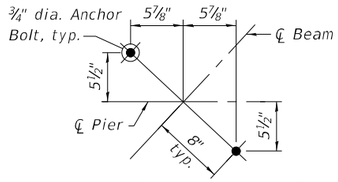
USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.2 '' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

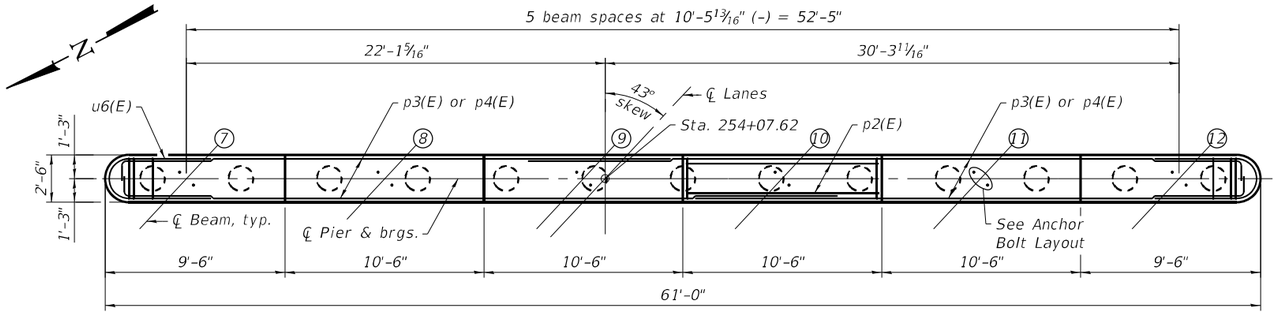
PIER 2 (WB)
STRUCTURE NO. 064-0047 (WB)
SHEET 24 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	90
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

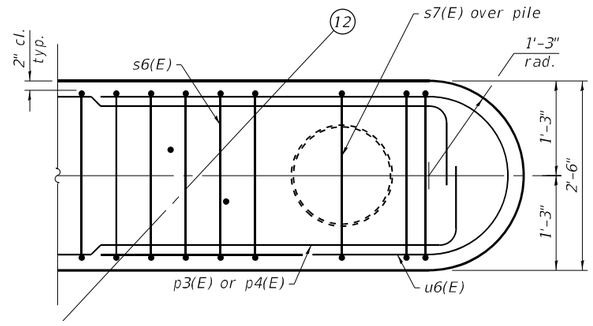
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For bar bending details, see sheet 27 of 32.
For details of piles, see sheet 28 of 32.



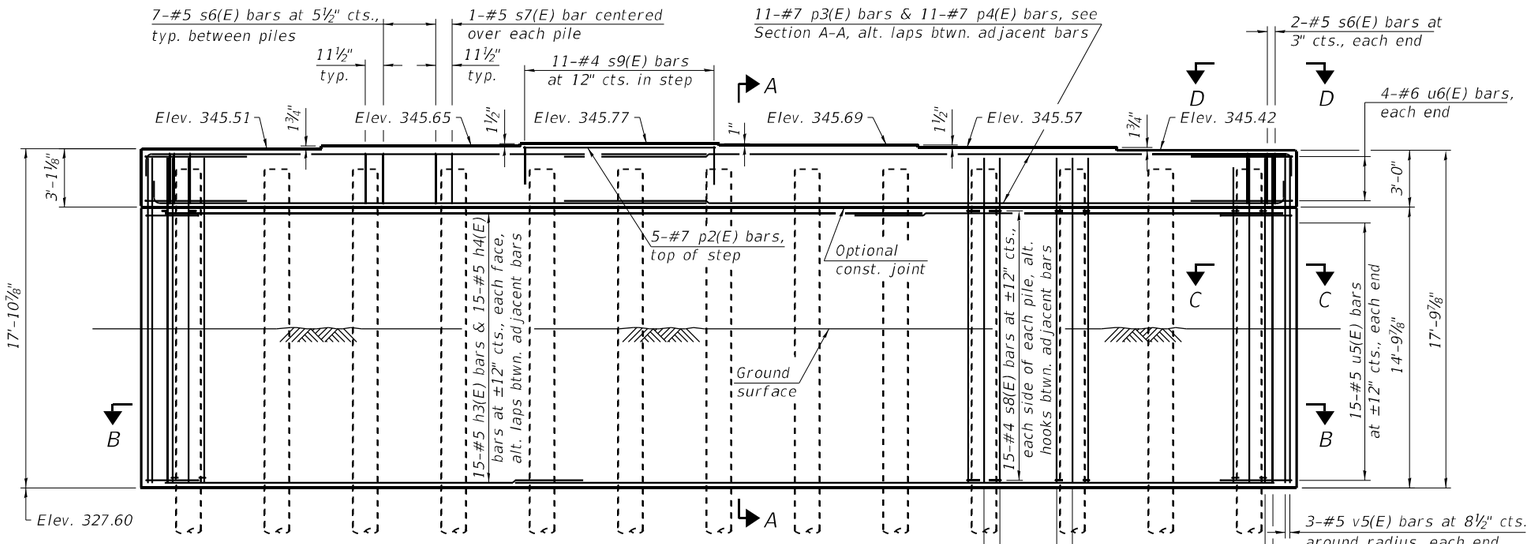
ANCHOR BOLT LAYOUT



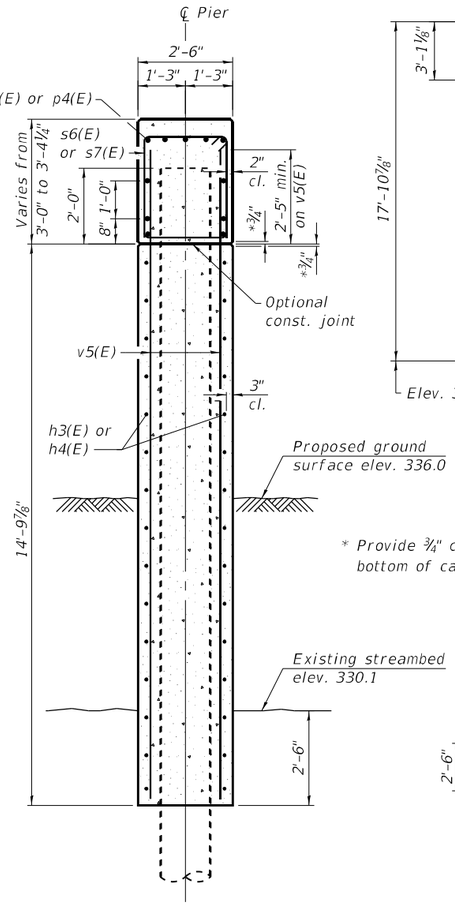
TOP PLAN



VIEW D-D

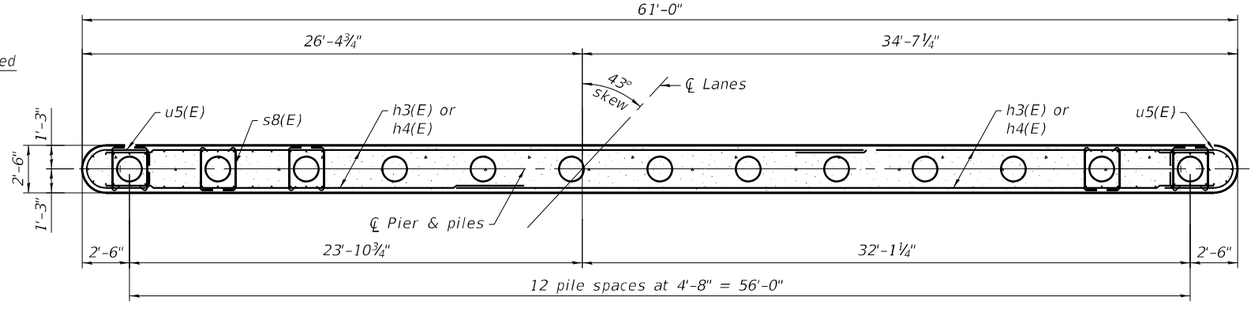


ELEVATION
(Looking east)

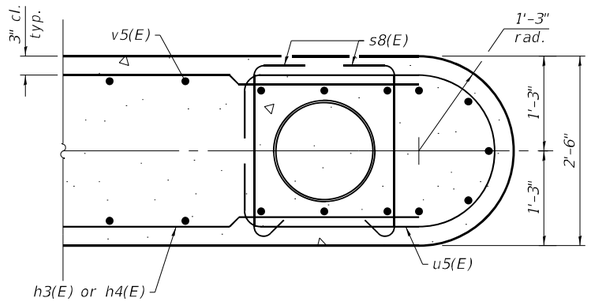


SECTION A-A

* Provide ¾" chamfer to outline bottom of cap, typ. all around.



SECTION B-B



SECTION C-C

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	30	#5	40'-0"	——
h4(E)	30	#5	22'-1"	——
p2(E)	5	#7	10'-2"	——
p3(E)	11	#7	38'-11"	
p4(E)	11	#7	30'-2"	
s6(E)	88	#5	10'-7"	
s7(E)	13	#5	7'-6"	
s8(E)	390	#4	3'-1"	
s9(E)	11	#4	6'-2"	
u5(E)	30	#5	9'-5"	
u6(E)	8	#6	11'-11"	
v5(E)	136	#5	17'-2"	——
Structure Excavation			Cu. Yd.	129
Concrete Structures			Cu. Yd.	89.5
Reinforcement Bars, Epoxy Coated			Pound	8,390
Furnishing Metal Shell Piles 16"x0.375"			Foot	912
Driving Piles			Foot	912
Test Pile Metal Shells			Each	1

PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 550 kips
Factored Resistance Available: 303 kips
Min. Tip Elevation: 269.6
Est. Length: 76 ft.
No. Production Piles: 12
No. Test Piles: 1

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-25-Pier1EB.dgn
3/22/2022 9:34:02 AM

ESCA CONSULTANTS, INC.

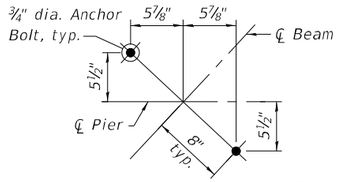
USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.2 '' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

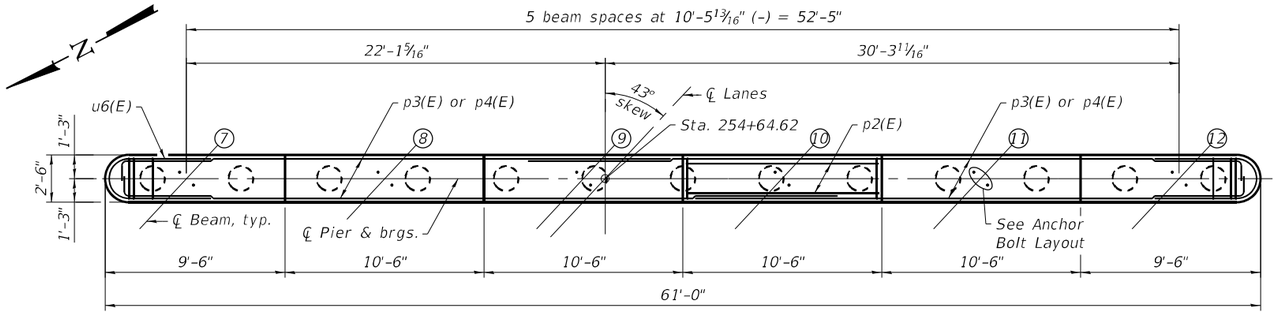
PIER 1 (EB)
STRUCTURE NO. 064-0048 (EB)
SHEET 25 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	91
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	

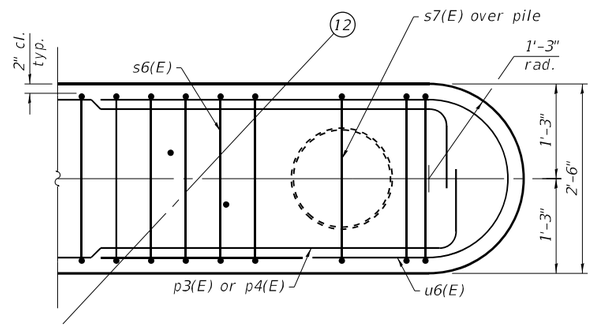
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For bar bending details, see sheet 27 of 32.
For details of piles, see sheet 28 of 32.



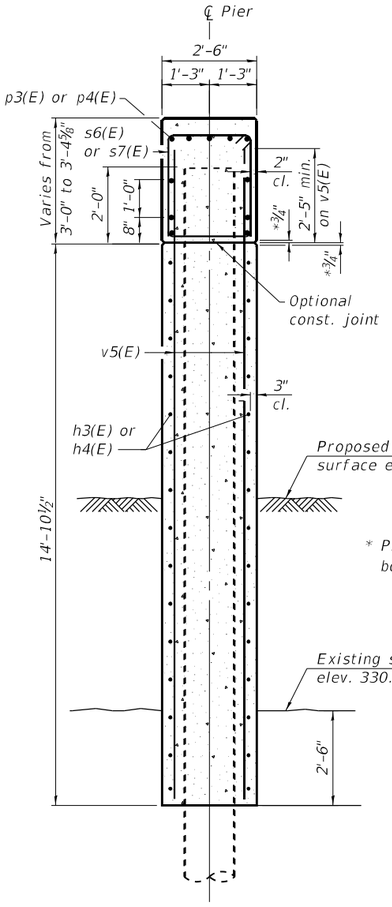
ANCHOR BOLT LAYOUT



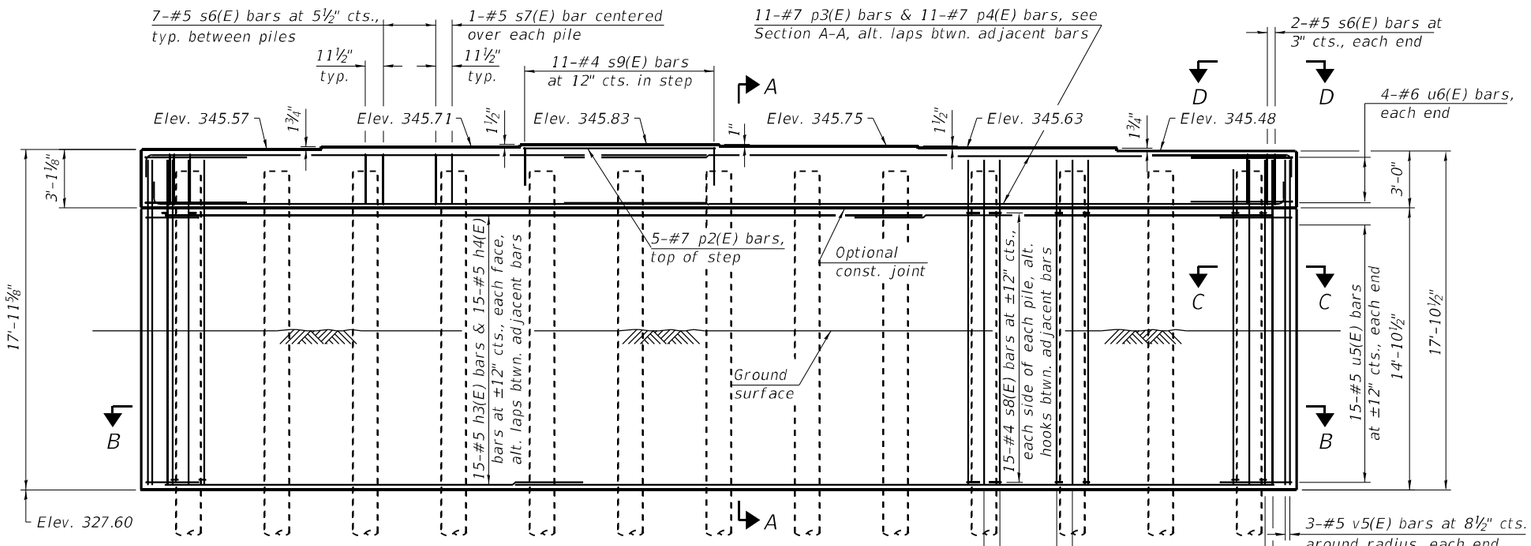
TOP PLAN



VIEW D-D

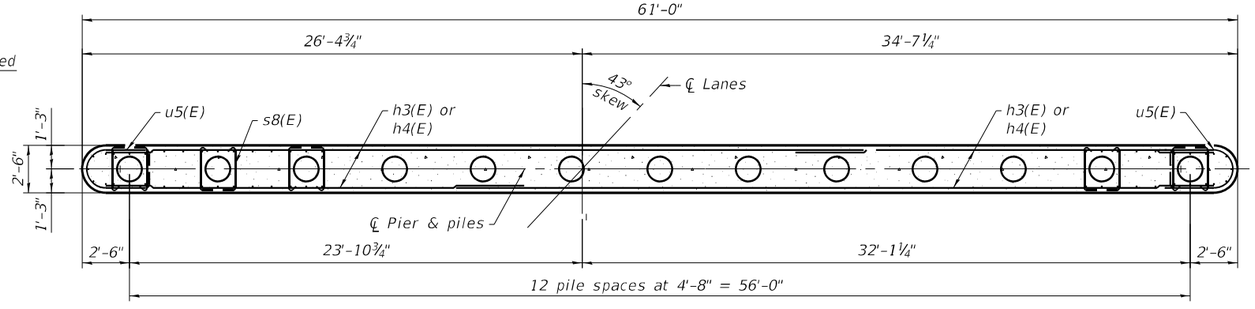


SECTION A-A

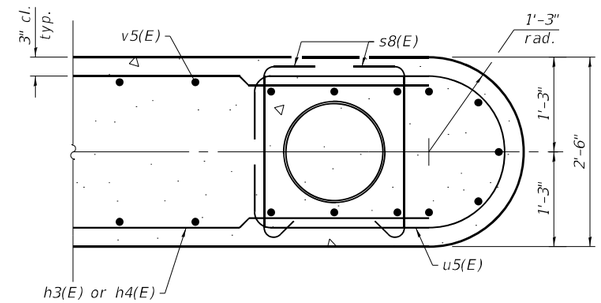


ELEVATION
(Looking east)

* Provide ¾" chamfer to outline bottom of cap, typ. all around.



SECTION B-B



SECTION C-C

PILE DATA

Type: MS 16"x0.375"
Nominal Required Bearing: 550 kips
Factored Resistance Available: 303 kips
Min. Tip Elevation: 269.6
Est. Length: 76 ft.
No. Production Piles: 12
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	30	#5	40'-0"	——
h4(E)	30	#5	22'-1"	——
p2(E)	5	#7	10'-2"	——
p3(E)	11	#7	38'-11"	
p4(E)	11	#7	30'-2"	
s6(E)	88	#5	10'-7"	
s7(E)	13	#5	7'-6"	
s8(E)	390	#4	3'-1"	
s9(E)	11	#4	6'-2"	
u5(E)	30	#5	9'-5"	
u6(E)	8	#6	11'-11"	
v5(E)	136	#5	17'-2"	——

Structure Excavation	Cu. Yd.	129
Concrete Structures	Cu. Yd.	89.8
Reinforcement Bars, Epoxy Coated	Pound	8,390
Furnishing Metal Shell Piles 16"x0.375"	Foot	912
Driving Piles	Foot	912
Test Pile Metal Shells	Each	1

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-26-Pier2EB.dgn
3/22/2022 9:34:03 AM

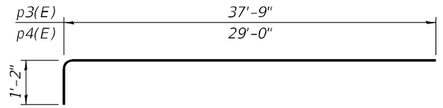
ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.2 '' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

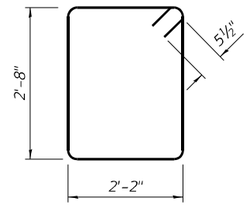
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 (EB)
STRUCTURE NO. 064-0048 (EB)
SHEET 26 OF 32 SHEETS

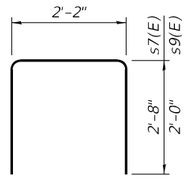
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	92
		CONTRACT NO. 78685		
		ILLINOIS	FED. AID PROJECT	



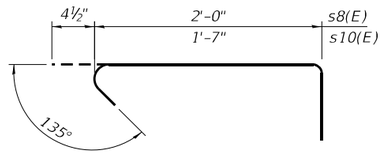
BARS p3(E) & p4(E)



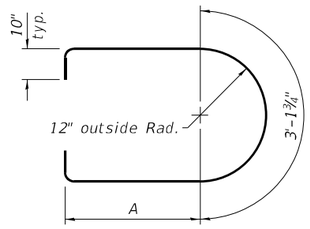
BAR s6(E)



BARS s7(E) & s9(E)



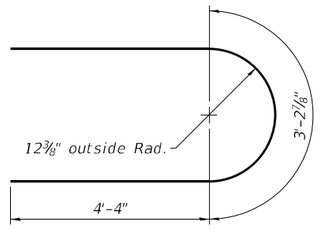
BARS s8(E) & s10(E)



BAR u1(E) THRU u5(E)

A DIMENSIONS

Bar	A
u1(E)	2'-9½"
u2(E)	1'-9½"
u3(E)	3'-3½"
u4(E)	1'-3½"
u5(E)	2'-3½"



BAR u6(E)

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-27-PierDtls.dgn

3/22/2022 9:34:04 AM

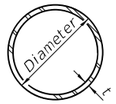
ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

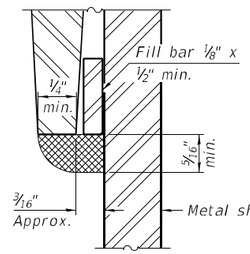
PIER DETAILS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 27 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	93
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

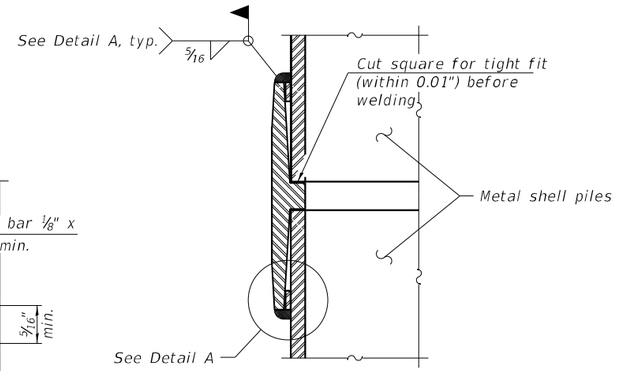


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume ($yd.^3/ft.$)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470

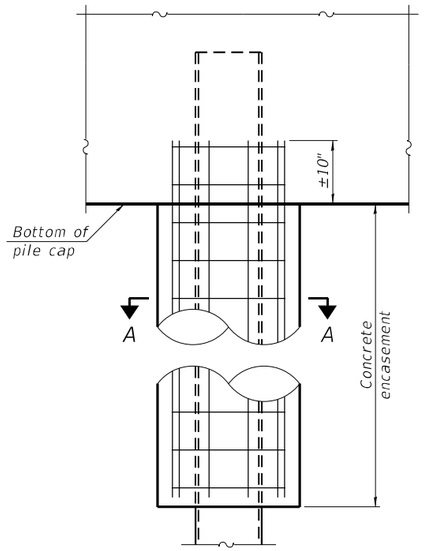


DETAIL A



WELDED COMMERCIAL SPLICE

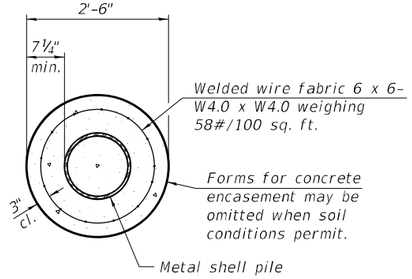
Notes:
The ⅛" x ½" min. fill bar may be constructed of 2 bars with a ⅛" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.



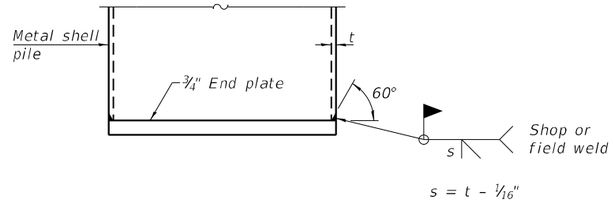
ELEVATION

INDIVIDUAL PILE CONCRETE ENCASEMENT

(When specified)

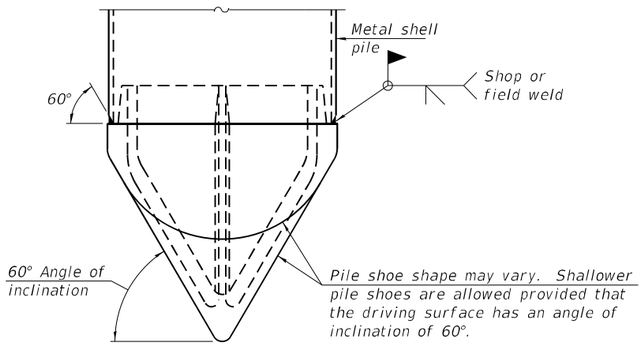


SECTION A–A



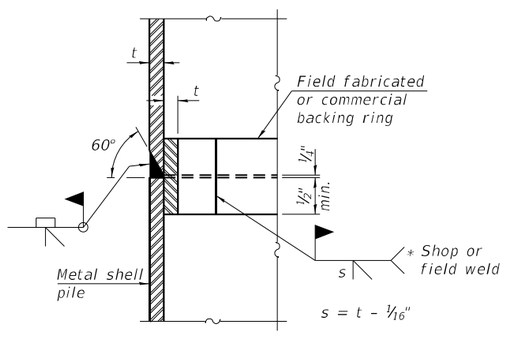
$s = t - 1/16"$

END PLATE ATTACHMENT



PILE SHOE ATTACHMENT

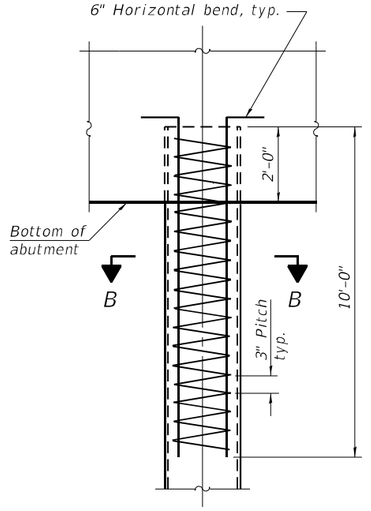
(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80–50 or AASHTO M 103 Grade 65–35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



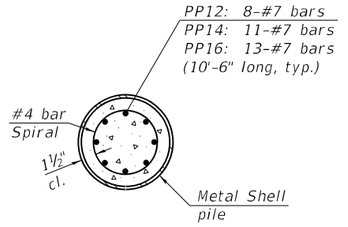
$s = t - 1/16"$

COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B–B

REINFORCEMENT AT ABUTMENTS

(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F–MS 1-1-2020

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-28-MtlShlPileDtls.dgn

3/22/2022 9:34:05 AM

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL 05/21	REVISED -	
ESCA PROJECT NO. 1359.03	CHECKED - MTD 07/21	REVISED -	
PLOT SCALE = 0.1667 ' / in.	DRAWN - KAH 05/21	REVISED -	
PLOT DATE = 3/22/2022	CHECKED - MTD 11/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS
STRUCTURE NO. 064–0047 (WB) & 064–0048 (EB)
SHEET 28 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	94
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 2

FAI-24 Over Bear Creek
Route: FAI-24 Structure Number: 064-0017/18 Date: 10/10/2018
Section (64-1)B-2 Bored By: L Estel
County: Massac Location: 4.0 miles South of Johnson County Checked By: A Hayes

Boring No 1-S
Station 254+60
Offset 40' LT of CL of EB
Ground Surface 346.8 Ft

Surf Wat Elev: 334.7
Ground Water Elevation
when Drilling
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	
				(Wash-type boring operation with bentonite drilling mud below Elev. 321.8) 320.3
	3			
	10	1.5B	14	Stiff Brown, Moist SILTY LOAM A-6
	10			
342.8				
	2			
5.0	4	1.2E	24	Stiff Brown and Grey, Moist SILTY CLAY LOAM
	4			
340.3				
	2			
	3	2.3B	21	V. Stiff Grey, Moist SILTY CLAY LOAM
	3			
337.8				
	1			
10.0	2	1.0B	30	M. Stiff Grey, Moist SILTY CLAY
	3			
335.3				
	WH			
	1	0.9B	51	M. Stiff Grey, Wet CLAY A7-6
	1			
332.8				
	1			
15.0	2	1.6B	29	Stiff Grey and Brown, Moist CLAY A7-6
	3			
	1			
	3	1.6B	28	
	4			
	1			
20.0	3	2.0B	28	
	3			
	1			
	2	1.0B	32	
	2			
323.3	WH			
	1	0.5B	46	M. Stiff Grey and Brown, Moist CLAY A7-6
25.0	1			

DEPTH	BLOWS	Qu tsf	W%	
	3			
	2		28	Loose Grey, Wet SAND with a CLAY seam 75% Sand 16% Silt 6% Clay
	2			
	4			
30.0	3		28	
	2			
312.8				
	WH			
35.0	WH	0.4B	51	Soft Grey, Wet CLAY A7-6
	WH			
310.3				
	2			
	3		23	Loose Grey, Moist Coarse SAND with CLAY layers
	4			
307.8				
	2			
40.0	5		23	Loose Grey, Moist Coarse SAND with a CLAY seam
	5			
302.3				
45.0	7			
	5		23	Loose Grey, Damp Fine SAND
	5			
50.0				

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Route: FAI-24
Section: (64-1)B-2
County: Massac
Date: 10/10/2018

Boring No: 1-S
Station: 254+60
Offset: 40' LT of CL of EBLs
Ground Surface: 346.8 Ft

DEPTH	BLOWS	Qu tsf	W%	
296.3				
	9			M. Dense Grey, Wet Coarse SAND 89% Sand 6% Silt 1% Clay
	8		23	
	10			
55.0				
290.3				
	9			Dense Grey, Wet Coarse SAND
	15		23	
	20			
60.0				
285.3				
	8			M. Dense Grey, Coarse SAND
	10		23	
	12			
65.0				
	7			
	9		23	
	12			
70.0				
	7			
	11		23	
	12			
75.0				

DEPTH	BLOWS	Qu tsf	W%	
	9			
	14		23	M. Dense Grey, Coarse SAND
	16			
80.0				
				Bottom of hole @ 78.7 feet
				Flowline @ Elev. 332.4
				No free water observed prior to start of mud drilling @ Elev. 321.8
85.0				Elevation referenced to BM 1029 cut square in SE corner of SN 064-0017; Elev. = 350.87
				Borehole advanced with hollow stem auger (8" O.D., 3.25" I.D.) Elev. 346.8 to 321.8
				To convert "N" values to "N60" multiply by 1.5
90.0				
95.0				
100.0				

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ESCA CONSULTANTS, INC.

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -
PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH	05/21	REVISED -
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 29 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	95
		CONTRACT NO. 78685		
	ILLINOIS FED. AID PROJECT			

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation
Boring Log
Sheet 1 of 2

FAI-24 Over Bear Creek

Route: FAI-24 Structure Number: 064-0017/18 Date: 10/15/2018
Section (64-1)B-2 Bored By: L Estel
County: Massac Location: 4.0 miles South of Johnson County Checked By: A Hayes

Boring No 3-S
Station 252+85
Offset 40' LT of CL of EB
Ground Surface 346.8 Ft

Surf Wat Elev: 334.7
Ground Water Elevation
when Drilling
At Completion
At: Hrs:

	DEPTH	BLOWS	Qu tsf	W%
		1		
M. Stiff Brown, Moist SILT		3	0.8S	22
		7		
342.3				
	5.0	3		
Stiff Brown, Moist SILT		6	1.6S	20
		7		
339.8				
		1		
V. Stiff Brown and Grey, Moist CLAY A7-6		4	3.1B	19
		6		
337.3				
	10.0	1		
Stiff Grey, Moist SILTY CLAY		2	1.1B	24
		3		
334.8				
		WH		
Stiff Grey, Moist CLAY A7-6		1	1.5E	31
		2		
332.3				
	15.0	1		
Stiff Brown and Mottled Grey, Moist CLAY A7-6		2	1.1S	35
		3		
		WH		
		1	1.1B	36
		2		
	20.0	1		
		3	1.6	27
		3		
		1		
(Wash-type boring operation with bentonite drilling mud below Elev. 322.3)		3	1.5S	44
		3		
322.3				
	25.0	1		

	DEPTH	BLOWS	Qu tsf	W%
M. Stiff Grey, Moist CLAY with SAND seams		2	0.7S	59
		3		
319.8				
		1		
V. Loose Grey, Moist Fine SAND with CLAY layers		1		23
86% Sand		4		
5% Silt				
4% Clay	30.0	1		
		3		23
		1		
		1		
		2		23
		1		
312.3				
	35.0	4		
M. Dense Grey, Moist Fine SAND with CLAY layers		6		23
86% Sand		6		
5% Silt				
4% Clay				
307.3				
	40.0	4		
M. Dense Grey, Moist Fine SAND		6		23
86% Sand		8		
5% Silt				
4% Clay				
302.3				
	45.0	4		
M. Dense Grey, Moist Fine to Medium SAND		7		23
		10		
297.3				
	50.0	6		

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Sheet 2 of 2

Route: FAI-24
Section: (64-1)B-2
County: Massac
Date: 10/15/2018

Boring No: 3-S
Station: 252+85
Offset: 40' LT of CL of EBLs
Ground Surface: 346.8 Ft

	DEPTH	BLOWS	Qu tsf	W%
M. Dense Grey, Moist Fine to Medium SAND		10		
		11		
	55.0	9		
		14		
		14		
	60.0	9		
		13		
		16		
	65.0	7		
		12		
		18		
	70.0	11		
		16		
Dense Grey, Moist Fine to Medium SAND		19		
	75.0			

	DEPTH	BLOWS	Qu tsf	W%
Bottom of hole @ 71.5 feet				
No free water observed prior to start of water cap method @ Elev. 322.3				
Flowline Elev. @ 332.4				
	80.0			
Elevation referenced to BM 1029 cut square in SE corner of SN 064-0017; Elev. = 350.87				
Borehole advanced with hollow stem auger (8" O.D, 3.25" I.D.) Elev. 346.8 to 322.3				
To convert "N" values to "N60" multiply by 1.5	85.0			
	90.0			
	95.0			
	100.0			

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

(Sheet 2 of 4)

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	64-1B-1	MASSAC	29	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
13 SHEETS

Boring No. 1-S
Station 253+60
Offset 52 FEET RIGHT

	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	339.7			
MEDIUM MOIST GREY CLAY A7-6(13-14)	0			
25 INCH RECOVERY SAMPLE #A-1-S	337.2			
MEDIUM MOIST GREY MOTTLED BROWN CLAY A7-6(15)				
25 INCH RECOVERY SAMPLE #A-2-S	334.7 -5			
STIFF VERY MOIST GREY MOTTLED BROWN CLAY A7-6(15) 18 INCH RECOVERY SAMPLE #A-3-S	332.2			
VERY STIFF MOIST GREY MOTTLED BROWN CLAY A7-6(20) INCH RECOVERY ...AMPLE #A-4-S	329.7 -10			
(SAME AS ABOVE) 27 INCH RECOVERY SAMPLE #A-5-S	327.2			
(SAME AS ABOVE) 27 INCH RECOVERY SAMPLE #A-6-S	324.7 -15			
MEDIUM WET GREY SANDY CLAY LOAM 28 INCH RECOVERY SAMPLE #A-7-S	322.2			
MEDIUM WET GREY CLAY LOAM A-6(9-10) 32 INCH RECOVERY SAMPLE #A-8-S	319.7 -20			
MEDIUM WET GREY CLAY A7-6(15) WITH SAND SEAMS 29 INCH RECOVERY SAMPLE #A-9-S	317.2			
(SAME AS ABOVE) 31 INCH RECOVERY SAMPLE #A-10-S	314.7 -25			
(SAME AS ABOVE) 30 INCH RECOVERY SAMPLE #A-11-S	312.2			
(SAME AS ABOVE) 21 INCH RECOVERY SAMPLE #A-12-S	309.7 -30			
LOOSE WET GREY FINE TO COARSE GRAINED SAND NO RECOVERY	307.2			
LOOSE TO MEDIUM WET GREY FINE TO COARSE GRAINED SAND WITH CLAY SEAMS		13	-	-
	304.7 -35			
MEDIUM WET GREY FINE TO COARSE GRAINED SAND		15	-	-
		14	-	-
	299.7 -40			
MEDIUM WET GREY FINE TO COARSE GRAINED SAND WITH SILTY LOAM A-4(5-6) SEAMS	296.7	10	-	-
(SEE NEXT SHEET)		22	-	-
	-45			

Boring No. 1-S
Station 253+60
Offset 52 FEET RIGHT

	Elevation	N	Qu t/s.f.	w (%)
	299.740			
(SEE PRECEDING SHEET)				
	296.7			
	45	22	-	-
MEDIUM TO DENSE WET GREY FINE TO COARSE GRAINED SAND		30	-	-
		33	-	-
	50			
		26	-	-
		12	-	-
	55			
		13	-	-
	281.7			
(SEE NEXT SHEET)		35	-	-
	60			
		42	-	-
DENSE TO MEDIUM WET GREY COARSE GRAINED SAND				
	65	25	-	-
	273.2	35	-	-
BOTTOM OF HOLE = 66.5 FEET				
WASHING PROCEDURE USED DURING DRILLING OPERATIONS BELOW 34.0 FEET	70			

LOCATION: SE¼ NE¼ Sec 22 T14S R4E 3rd Princ. Mer.

Surface Water El.	NONE
Groundwater El. at Completion	-
After - Hours	-

Boring No. 2 S
Station 252+60
Offset 52 FEET LEFT

	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	339.7			
	-5			
STIFF TO MEDIUM VERY MOIST GREY TO GREY MOTTLED BROWN CLAY A7-6(18-20)		7	1.0B	32
	-10			
		11	1.4B	29
		6	0.9S	29
	-15			
		4	0.8B	50
	321.7			
VERY LOOSE TO LOOSE WET GREY FINE TO COARSE GRAINED SAND WITH SOME COAL MIXED AND SOME CLAY SEAMS	-20	3	-	30
		4	-	-
(SEE PRECEDING COLUMN)	316.7			
		6	0.3S	65
SOFT WET GREY CLAY A7-6(14)	-25			
		5	0.3B	63
	311.7			
MEDIUM WET GREY COARSE GRAINED SAND		23	-	-
	-30			
	309.2	13	-	-
		32	-	-
DENSE TO LOOSE WET GREY FINE TO COARSE GRAINED SAND	-35			
		9	-	-
		21	-	-
	-40			
		9	-	-
		11	-	-
	-45			

Surface Water El.	NONE
Groundwater El. at Completion	335.2
After - Hours	-

Boring No. 2 S
Station 252+60
Offset 52 FEET LEFT

	Elevation	N	Qu t/s.f.	w (%)
	299.740			
(SEE PRECEDING SHEET)		9	-	-
	45			
		11	-	-
	291.7			
MEDIUM WET GREY COARSE GRAINED SAND WITH SOME COAL AND GRAVEL	50	19	-	-
		21	-	-
		10	-	-
	55			
	284.2	36	-	-
DENSE TO LOOSE WET GREY FINE TO COARSE GRAINED SAND WITH SOME COAL		20	-	-
	60	30	-	-
		5	-	-
(SEE PRECEDING COLUMN)				
	65	16	-	-
		17	-	-
	271.7			
MEDIUM TO DENSE WET TO GREY FINE TO COARSE GRAINED SAND	70	25	-	-
		12	-	-
	265.7	32	-	-
BOTTOM OF HOLE = 74.0 FEET				
DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 15.5 FEET				
WASHING PROCEDURE USED DURING DRILLING OPERATIONS BELOW 19.0 FEET				

N-Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu-Unconfined Compressive Strength-t/sf.

w-Water Content-percentage of oven dry weight-%

Type failure:
B-Bulge Failure
S-Shear Failure
E-Estimated Value
P-Penetrometer

DESIGNED	Dinu D. Patel
CHECKED	Li-chou
DRAWN	Patel
CHECKED	Patel

EXAMINED — SEPT. 24, 1968
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — W. E. Bauman
ENGINEER OF DESIGN
APPROVED — W. E. Stadtler
CHIEF HIGHWAY ENGINEER

BORINGS
F.A.I. RT. 24
SEC. 64-1B-1
MASSAC COUNTY
STA. 253+80

(Sheet 3 of 4)

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\064004?78685-31-Soil.dgn
3/22/2022 9:34:23 AM

ESCA CONSULTANTS, INC.

USER NAME = mhc	DESIGNED - SHL	05/21	REVISED -	
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -	
PLOT SCALE = 0:2 ':' / in.	DRAWN - KAH	05/21	REVISED -	
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 31 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	97
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	64-1B)	MASSAC	29	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 12
13 SHEETS

Boring No. 3 S
Station 254+26 MEDIAN
Offset 58 FEET LEFT

Elevation	N	Qu t/s.f.	(%) w
Ground Surface 337.0	0		
STIFF MOIST BROWN MOTTLED GREY CLAY A-7-6(15)			
	4	1.1B	30
-5			
331.0			
STIFF MOIST TO VERY MOIST GREY MOTTLED BROWN CLAY A-7-6(15)	8	1.2B	32
328.5			
STIFF MOIST GREY MOTTLED BROWN CLAY A-7-6(13-14)	7	1.3B	26
-10			
	7	1.3B	32
	6	1.4B	42
-15			
321.0			
VERY LOOSE TO LOOSE WET GREY FINE TO COARSE GRAINED SAND WITH SOME CLAY SEAMS	3	-	25
	7	-	-
-20			
316.0			
MEDIUM WET GREY FINE SAND	18	-	-
SEE PRECEDING COLUMN			
313.5			
SOFT VERY MOIST MOTTLED BROWN CLAY A-7-6(15+)	1	0.3E	
-25			
311.0			
VERY SOFT VERY MOIST GREY MOTTLED BROWN CLAY A-7-6(15+) WITH SOME SANDSEAMS	4	0.7E	
303.5			
MEDIUM WET GRAY COARSE GRAINED SAND WITH CLAY SEAMS	14		
-30			
306.0			
MEDIUM TO LOOSE WET GREY FINE TO COARSE GRAINED SAND	16		
	14		
-35			
	13		
	22		
-40			
	6		
293.5			
MEDIUM WET GREY COARSE GRAINED SAND	23		

Boring No. 3 S
Station 254+26 CENTERLINE
Offset 58 FEET LEFT

Elevation	N	Qu t/s.f.	(%) w
Ground Surface -40			
SEE PRECEDING COLUMN			
	9	-	-
293.5			
MEDIUM WET GREY COARSE GRAINED SAND	23		
-45			
	30		
-50			
	15		
	15		
283.5			
DENSE TO MEDIUM WET GREY COARSE GRAINED SAND			
-55			
	28		
	14		
-60			
275.0	15		
BOTTOM OF HOLE = 62.0			
DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 6.0 FEET			
BEGAN USING WASHING PROCEDURE BELOW 17.0 FEET			
-65			
-70			

Surface Water El. ——
Groundwater El. at Completion 336.0
After —— Hours ——

Boring No. 4-S
Station 254+36
Offset 35 FEET RIGHT

Elevation	N	Qu t/s.f.	(%) w
Ground Surface 336.8	0		
STIFF TO MEDIUM MOIST BROWN AND GREY CLAY A7-6(14-15)	5	1.0B	30
-5			
	7	0.9S	30
	5	1.2B	28
-10			
325.8			
MEDIUM TO STIFF MOIST GREY MOTTLED BROWN SILTY CLAY TO CLAY A7-6(13-14)	7	0.8B	26
	6	1.4B	32
-15			
320.8			
	13	-	-
MEDIUM TO LOOSE WET GREY FINE TO COARSE GRAINED SAND WITH CLAY SEAM	9	-	-
-20			
	6	-	-
SEE PRECEDING COLUMN			
313.3			
VERY SOFT VERY MOIST GREY CLAY A-7-6(15+) WITH SAND SEAM	1	0.2B	56
-25			
	2	0.2S	56
308.3			
	9	-	-
-30			
LOOSE TO MEDIUM WET GREY FINE TO COARSE GRAINED SAND WITH CLAY SEAMS	11	-	-
	17	-	-
-35			
300.8			
	8	-	-
	17	-	-
-40			
	16	-	-
	23	-	-
-45			

(See NEXT SHEET)

Boring No. 4-S
Station 254+36
Offset 35 FEET RIGHT

Elevation	N	Qu t/s.f.	(%) w
Ground Surface 296.8 -40			
	19	-	-
	23	-	-
-45			
	8	-	-
LOOSE TO DENSE WET GREY COARSE GRAINED SAND WITH SOME GRAVEL -50	10	-	-
	22	-	-
	17	-	-
-55			
	18	-	-
	33	-	-
-60			
	17	-	-
SEE PRECEDING COLUMN			
-65	18	-	-
269.8	31	-	-
BOTTOM OF HOLE = 67.0 FEET			
DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 3.5 FEET			
* HOLE FILLED AT COMPLETION; NO 24 HOUR WATER ELEVATION			
-70			

Surface Water El. NONE
Groundwater El. at Completion 336.8
After —— Hours *

N-Standard Penetration Test Blows per foot to drive 2" OD Split Spoon Sampler (2" with 140# hammer falling 30"

Qu-Unconfined Compressive Strength-t/sf

w-Water Content-percentage of oven dry weight-%

Type failure:
B-Bulge Failure
S-Shear Failure
E-Estimated Value
P-Penetrometer

DESIGNED	Dinu D. Patel
CHECKED	Li-Chou
DRAWN	Patel
CHECKED	Patel

SEPT. 24 1968

EXAMINED — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED W.E. Bawmann — ENGINEER OF DESIGN
APPROVED V.E. Stadel — CHIEF HIGHWAY ENGINEER

BORINGS
F.A.I. RT. 24
SEC. 64-1B-1
MASSAC COUNTY
STA. 253+80

(Sheet 4 of 4)

MODEL: PLOT
FILE NAME: Y:\IDOT\1359-03_78685\CADD\SP SN 064-0047_0048\0640047-78685-32-Soil.dgn
3/22/2022 9:34:34 AM

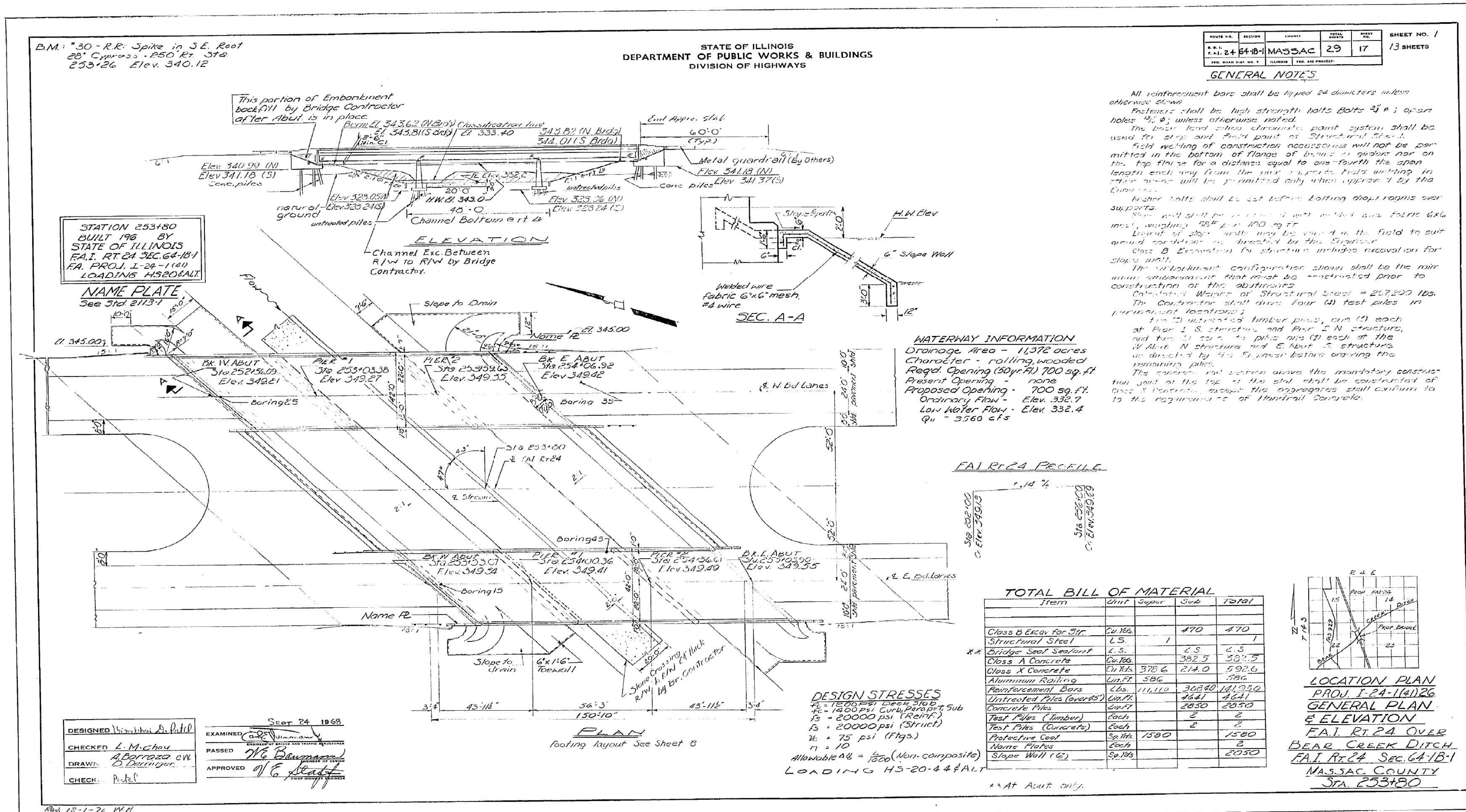
ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = nhc	DESIGNED - SHL	05/21	REVISED -		
ESCA PROJECT NO. 1359.03	CHECKED - MTD	07/21	REVISED -		
PLOT SCALE = 0.2 '' / in.	DRAWN - KAH	05/21	REVISED -		
PLOT DATE = 3/22/2022	CHECKED - MTD	11/21	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 064-0047 (WB) & 064-0048 (EB)
SHEET 32 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	98
		CONTRACT NO. 78685		
	ILLINOIS	FED. AID PROJECT		



TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
	Class B Excav for Str.	Cu. Yds.		470	470
	Structural Steel	L.S.	1		1
**	Bridge Seat Sealant	L.S.		L.S.	L.S.
	Class A Concrete	Cu. Yds.		382.5	382.5
	Class X Concrete	Cu. Yds.	378.6	214.0	592.6
	Aluminum Railing	Lin. Ft.	586		586
	Reinforcement Bars	Lbs.	111,110	30840	141,950
	Untreated Piles (over 45')	Lin. Ft.		4641	4641
	Concrete Piles	Lin. Ft.		2850	2850
	Test Piles (Timber)	Each		2	2
	Test Piles (Concrete)	Each		2	2
	Protective Coat	Sq. Yds.	1580		1580
	Name Plates	Each			2
	Slope Wall (6")	Sq. Yds.			2050

** At Abut. only.

ESCA CONSULTANTS, INC.	USER NAME = nhc	DESIGNED - SMA	REVISED -
	ESCA PROJECT NO. 1359.03	DRAWN - SMA	REVISED -
	PLOT SCALE = 0.1667 ' / in.	CHECKED - SKM	REVISED -
	PLOT DATE = 3/22/2022	DATE - 03/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

SCALE: NA | SHEET NO. 1 OF 8 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-1)B-2	MASSAC	140	99

CONTRACT NO. 78685

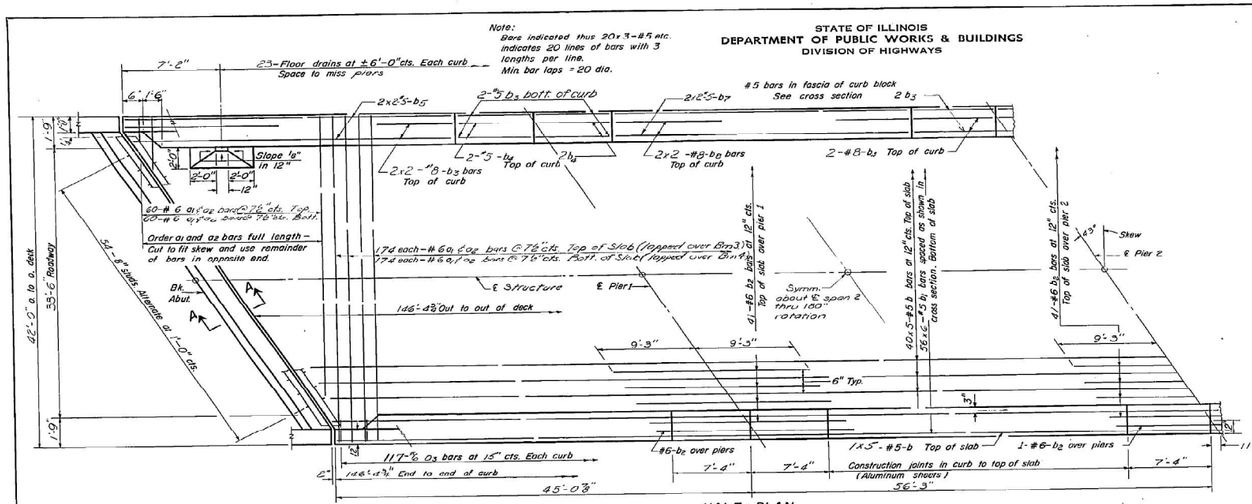
ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	64-1B-1	MASSAC	29	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

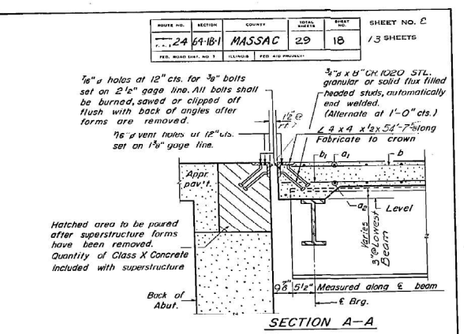
SHEET NO. 8
13 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

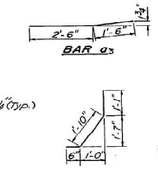
Note:
Bars indicated thus 20 v 7 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.



HALF PLAN



SECTION A-A



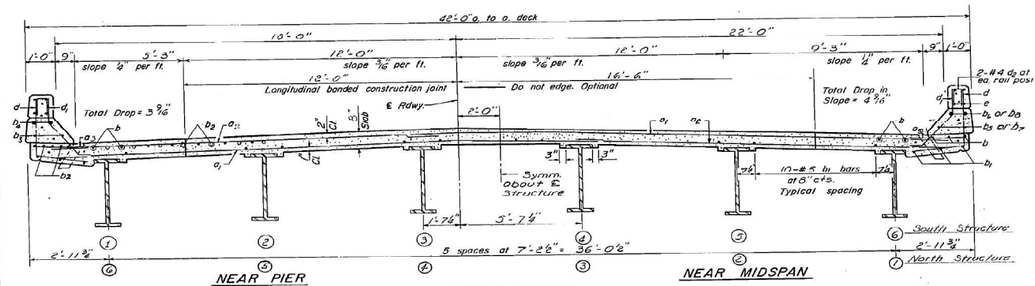
BAR a3

BAR d1

BAR d

TWO STRUCTURES
BILL OF MATERIAL

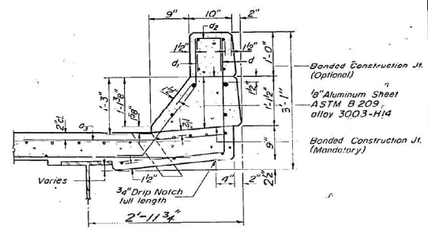
Bar	No.	Size	Length	Shape
a1	936	#6	25'-6"	
a2	936	#6	18'-2"	
a3	168	#6	2'-0"	
b	420	#5	30'-3"	
b1	672	#5	25'-3"	
b2	172	#6	18'-6"	
b3	32	#5	1'-0"	
b4	32	#5	7'-10"	
b5	32	#5	19'-6"	
b6	32	#8	19'-9"	
b7	14	#5	21'-6"	
b8	14	#5	21'-9"	
d	588	#4	3'-5"	L
d1	588	#5	2'-7"	L
Reinforcement Bars		Lbs.	168530	
Class X Concrete		Cu. Yd.	359.5	



NEAR PIER — CROSS SECTION — NEAR MIDSPAN

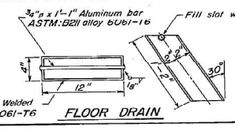
LOOKING East (S. Str.) West (N. Str.)

Note: For placement of d2, B e bars see sheet #3



CURB SECTION

Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete



FLOOR DRAIN

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet #3

SUPERSTRUCTURE
F.A.I. RT. 24 SEC. 64-1B-1
MASSAC COUNTY
STA. 253+80

DESIGNED	Rambhia & Patel	
CHECKED	L. M. Chau	
DRAWN	J. P. Zink, D. L. Deemer	C.E.W.
CHECKED	Patel	

SEPT. 24 1968

EXAMINED	
PASSED	
APPROVED	

I-6-R (> 14°) MODIFIED

8-1-65 Rev. 1-11-66