06-16-2023 LETTING ITEM 214

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142*	1
	ILLINOIS	CONTRACT NO. 72984		

* MONTGOMERY & CHRISTIAN

*142 + 1 = 143 TOTAL SHEETS

D-96-522-05

INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 325 (IL 16)
SECTION 18(B–2, B–3); 16(CR)
PROJECT COVD–S3VW(207)
MONTGOMERY & CHRISTIAN COUNTIES
C–96–015–12

LOCATION OF SECTION INDICATED THUS: – ■–

EXISTING SN 068–0017
SANGAMON CREEK W OF OHLMAN
STA 38+29.51 TO 47+93.91
REMOVE EXISTING STRUCTURE
REPLACE WITH 10' W X 10' H TRIPLE BOX CULVERT
PROPOSED SN 068–2509

PROJECT OMISSION
STA 47+93.91 TO STA 138+00

PROJECT OMISSION
STA 4+00 TO STA 38+29.51

EXISTING SN 011–7039
TRIBUTARY OF SOUTH FORK SANGAMON RIVER
BEGIN PROJECT STA 359+00.00
STA 359+00 TO STA 364+71.18 BK = STA 0+00 AH
STA 0+00 AH TO STA 4+00
REMOVE EXISTING STRUCTURE
REPLACE WITH 10' W X 4'H DOUBLE BOX CULVERT
PROPOSED SN 011–2513

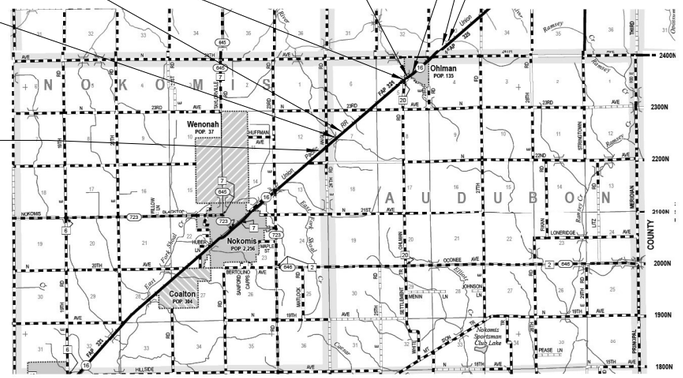
EXISTING SN 068–0016
SOUTH FORK SANGAMON RIVER 2.4 MI NE OF ELM ST IN NOKOMIS
STA 138+00 TO 148+00
END PROJECT STA 148+00
REMOVE EXISTING STRUCTURE
REPLACE WITH 12' W X 8'H TRIPLE BOX CULVERT
PROPOSED SN 068–2508

EXISTING SN 068–7076
0.3 MI SW OF SN 068–0016
STA 158+68
CULVERT REPAIR

R 2 W

R 1 W

T 10 N



LOCATION MAP

N

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: JON KELLEY (217) 785–2735
SQUAD LEADER: CHRIS SIEFERT (217) 524–7940

CONTRACT NO. 72984

AVERAGE DAILY TRAFFIC

EX SN 011–7039
1450 (2019) MU = 100, SU = 50

EX SN 068–0017
1550 (2019) MU = 80, SU = 60

EX SN 068–0016
1500 (2019) MU = 70, SU = 60

SN 011–2513
GROSS LENGTH = 971.18 FT. = 0.184 MILE

SN 068–2509
GROSS LENGTH = 964.40 FT. = 0.183 MILE

SN 068–2508
GROSS LENGTH = 1000.00 FT. = 0.189 MILE

OVERALL
GROSS LENGTH = 2935.58 FT. = 0.556 MILE

MARY COOMBE BLOXDORF
43208
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Mary Coombe Bloxdorf

ILLINOIS PROFESSIONAL NO 43208
EXPIRES 11-30-23
DATE: 04-07-2023

FEHR GRAHAM ILLINOIS IOWA WISCONSIN
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 8 20 23

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 12, 2023

ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 2023

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS

FILE NAME = G:\Microstation\21\21-188\CADdata SN 068-0016\CADsheets\D6729B4-sht-cover.dgn
FEHR GRAHAM PROJECT NO 10005-2

LIST OF STANDARDS

000001-08	630201-07	701901-08
001001-02	630301-09	704001-08
001006	642006-01	725001-01
280001-07	666001-01	780001-05
406201-01	701001-02	781001-04
442201-03	701006-05	782006-01
482001-02	701011-04	353001-05
542301-03	701201-05	420001-10
602301-04	701301-04	515001-04
604021-04	701306-04	542401-04
630001-12	701311-03	
630101-10	701321-18	
630106-02	701326-04	

GENERAL NOTES

ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

ALL EXISTING FENCE WITHIN THE PROPOSED RIGHT-OF-WAY SHALL BE REMOVED. THE COST OF THE FENCE REMOVAL WILL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

EXISTING RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE REMOVED PRIOR TO RESURFACING.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN ASSUMED IN CALCULATING PLAN QUANTITIES:

AGGREGATE (SURFACE TYPE A, BASE TYPE A, SUBBASE TYPE A)	1.80 TONS/CUBIC YARD
AGGREGATE (GRANULAR STRUCTURAL BACKFILL, TRENCH BACKFILL)	1.80 TONS/CUBIC YARD
AGGREGATE OTHER (TYPE B, TYPE C, WEDGE SHOULDER, ETC)	1.60 TONS/CUBIC YARD
STONE DUMPED RIPRAP	1.50 TONS/CUBIC YARD
BITUMINOUS MATERIALS (TACK COAT)	0.05 LBS/SQUARE FEET (MILLED SURFACE)
BITUMINOUS MATERIALS (TACK COAT)	0.025 LBS/SQUARE FEET (BETWEEN LIFTS)
AGGREGATE (PRIME COAT)	0.25 LBS/SQUARE FEET
HMA SURFACE/BINDER (112 LBS)	0.056 TON/SQUARE YARD - INCH
NITROGEN FERTILIZER NUTRIENT	90 LBS/ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS/ACRE
PHOSPHOROUS FERTILIZER NUTRIENT	90 LBS/ACRE
TEMPORARY EROSION CONTROL SEEDING	100 LBS/ACRE
MULCH	2 TONS/ACRE
AGRICULTURAL GROUND LIMESTONE	2 TONS/ACRE

ALL DETAILS IN THE PLANS SHALL GOVERN CONSTRUCTION OF THIS PROJECT, AND IN CASE OF CONFLICT WITH ANY STANDARD DRAWINGS INCLUDED, THE SAID DETAILS SHALL TAKE PRECEDENCE AND GOVERN.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

MIXTURE USE:	MAINLINE SURFACE	BINDER	BASE COURSE (1)	SHOULDERS & INCIDENTAL HMA
PG:	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION:	IL 9.5	IL 9.5FG	IL 19.0	IL 9.5
FRICTION AGGREGATE:	MIX "C"	N/A	N/A	MIX "C"
QUALITY MANAGEMENT:	QC/QA	QC/QA	QC/QA	QC/QA
SUBLOT SIZE:	N/A	N/A	N/A	N/A

(1) THIS MIXTURE SHALL ALSO BE USED FOR THE HMA BINDER IL-19.0, N50 PAY ITEM AND LOWER LIFTS OF HMA SHOULDERS

COMMITMENTS

SEEDING SHALL BE COMPLETED AS DESIGNATED IN THE STORM WATER POLLUTION PREVENTION PLAN. ALL AREAS OF POTENTIAL FOR EROSION SHALL BE SEEDED BY OCTOBER 1, AND SHALL NOT BE REOPENED UNTIL AFTER THE WINTER SHUT DOWN PERIOD (SEE SWPPP).

ROADS SHALL BE OPENED AT ALL TIMES TO PROVIDE FARMERS ACCESS TO NECESSARY FARM FIELDS.

STORM WATER POLLUTION PREVENTION PLAN REQUIRED FOR NPDES PERMIT BY IEPA.

SWPPP / NPDES PERMIT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED April, 7 20 23

ENGINEER OF OPERATIONS

EXAMINED April, 7 20 23

ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED April, 7 20 23

ENGINEER OF PROGRAM DEVELOPMENT

REV. - MS

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 2.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 1/23/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIST OF STANDARDS, GENERAL NOTES & COMMITMENTS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	2
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* PPS# TYPICAL FOR ALL SOQ SHEETS

100% FEDERAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				PPS# 6-00205-0000	PPS# 6-00205-0000	PPS# 6-00207-0000	PPS# 6-00514-0000 *
				ROADWAY	BOX CULVERT	BOX CULVERT	BOX CULVERT
				0004	0010	0010	0004
				S.N. 068-7076	S.N. 068-2508	S.N. 068-2509	S.N. 011-2513
20200100	EARTH EXCAVATION	CU YD	2548		1441	139	968
20200500	EARTH EXCAVATION (WIDENING)	CU YD	364		106	167	91
20300100	CHANNEL EXCAVATION	CU YD	1787		1218	220	349
25000200	SEEDING, CLASS 2	ACRE	2.5		1.3	0.4	0.8
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	224		112	38	74
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	224		112	38	74
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	224		112	38	74
25000700	AGRICULTURAL GROUND LIMESTONE	TON	5		2.5	0.8	1.7
25100115	MULCH, METHOD 2	ACRE	2.5		1.3	0.4	0.8
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	248		124	42	82
28000305	TEMPORARY DITCH CHECKS	FOOT	396		176	121	99
28000400	PERIMETER EROSION BARRIER	FOOT	699			699	
28000500	INLET AND PIPE PROTECTION	EACH	4				4

▪ SPECIALTY ITEM

REV. - MS

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PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	3
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

▪ MONTGOMERY & CHRISTIAN

100%
FEDERAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: ROADWAY 0004 S.N. 068-7076	BOX CULVERT 0010 S.N. 068-2508	BOX CULVERT 0010 S.N. 068-2509	BOX CULVERT 0004 S.N. 011-2513
28100109	STONE RIPRAP, CLASS A5	SQ YD	2448		2006	235	207
28200200	FILTER FABRIC	SQ YD	2448		2006	235	207
35101400	AGGREGATE BASE COURSE, TYPE B	TON	13			13	
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	2291		770	1013	508
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	7314		2749	2737	1828
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	485		166	172	147
40602965	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N50	TON	551		208	195	148
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	1006		643	363	
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	579		197	190	192
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	4			4	
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	47			47	
44000100	PAVEMENT REMOVAL	SQ YD	446		103	89	254
44004250	PAVED SHOULDER REMOVAL	SQ YD	1004		298	597	109
44200184	PAVEMENT PATCHING, TYPE III, 15 INCH	SQ YD	16	16			
48101200	AGGREGATE SHOULDERS, TYPE B	TON	144		63	72	9

* SPECIALTY ITEM

REV. - MS

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	DRAWN -	REVISED -		
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 4/7/2023	DATE -	REVISED -		SCALE: NONE	SHEET 2 OF 7 SHEETS	STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	4

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

100%
FEDERAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				ROADWAY	BOX CULVERT	BOX CULVERT	BOX CULVERT
				0004	0010	0010	0004
				S.N. 068-7076	S.N. 068-2508	S.N. 068-2509	S.N. 011-2513
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	56		5		51
48203100	HOT-MIX ASPHALT SHOULDERS	TON	473		131	191	151
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1			1	
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1		
50105220	PIPE CULVERT REMOVAL	FOOT	29				29
50500505	STUD SHEAR CONNECTORS	EACH	78		78		
50800105	REINFORCEMENT BARS	POUND	135635	45	40060	44310	51220
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	890			890	
50800515	BAR SPLICERS	EACH	408		160	148	100
52200200	DRILLING AND SETTING SOLDIER PILES (IN SOIL)	CU FT	892		892		
51500100	NAME PLATES	EACH	3		1	1	1
52200010	TEMPORARY SHEET PILING	SQ FT	1251				1251
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	679		381	298	
52200100	FURNISHING SOLDIER PILES (HP SECTION)	FOOT	272		272		

* SPECIALTY ITEM

REV. - MS

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PLOT DATE = 4/7/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET 3 OF 7 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	5
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN

100%
FEDERAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 0004 S.N. 068-7076	BOX CULVERT 0010 S.N. 068-2508	BOX CULVERT 0010 S.N. 068-2509	BOX CULVERT 0004 S.N. 011-2513
52200250	UNTREATED TIMBER LAGGING	SQ FT	461		461		
54002020	EXPANSION BOLTS 3/4 INCH	EACH	26	8			18
54003000	CONCRETE BOX CULVERTS	CU YD	703.7	0.3	243.2	261	199.2
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	42				42
5421D048	PIPE CULVERTS, CLASS D, TYPE 1 48" (TEMPORARY)	FOOT	24				24
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	1			1	
54248510	CONCRETE COLLAR	CU YD	2.9				2.9
54262724	METAL FLARED END SECTIONS 24"	EACH	2				2
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	191			191	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	754		269	239	246
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	10	10			
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	2			2	
61100500	EXPLORATION TRENCH 52" DEPTH	FOOT	1400		600	400	400
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	337.5			337.5	

* SPECIALTY ITEM

REV. - MS

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PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET 4 OF 7 SHEETS | STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	6

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

100%
FEDERAL

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: ROADWAY 0004 S.N. 068-7076	BOX CULVERT 0010 S.N. 068-2508	BOX CULVERT 0010 S.N. 068-2509	BOX CULVERT 0004 S.N. 011-2513
*	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	575		400		175
*	63000030	STRONG POST GUARDRAIL ATTACHED TO CULVERT	FOOT	216.5		94	85	37.5
*	63000370	LONG-SPAN GUARDRAIL OVER CULVERT, 25 FT SPAN	FOOT	50				50
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	10		4	4	2
	63200310	GUARDRAIL REMOVAL	FOOT	1484		1160	324	
	64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	5469		1837	1929	1703
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	8		4		4
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	18		6	6	6
	67100100	MOBILIZATION	L SUM	1		0.34	0.33	0.33
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	3		1	1	1
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5			0.5
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1		0.34	0.33	0.33
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1		0.34	0.33	0.33
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	210		90	60	60

* SPECIALTY ITEM

REV. - MS

100%
FEDERAL

				CONSTRUCTION CODE			
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004 S.N. 068-7076	BOX CULVERT 0010 S.N. 068-2508	BOX CULVERT 0010 S.N. 068-2509	BOX CULVERT 0004 S.N. 011-2513
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	3		1	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	18		6	6	6
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	45		15	15	15
70300100	SHORT TERM PAVEMENT MARKING	FOOT	1586		540	521	525
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	177		61	58	58
70300231	TEMPORARY PAVEMENT MARKING - LINE 5" - PAINT	FOOT	10460		3952	3860	2648
70300281	TEMPORARY PAVEMENT MARKING - LINE 24" - PAINT	FOOT	101		22	57	22
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1450		600	487.5	362.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1213.5		475	387.5	351
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	6		2	2	2
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	6		2	2	2
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	10		4	4	2
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	6606		2250	2170	2186
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	39		13	13	13

* SPECIALTY ITEM

REV. - MS

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	DRAWN -	REVISED -	
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PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET 6 OF 7 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	B
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

100%
FEDERAL

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: ROADWAY 0004 S.N. 068-7076	BOX CULVERT 0010 S.N. 068-2508	BOX CULVERT 0010 S.N. 068-2509	BOX CULVERT 0004 S.N. 011-2513
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	23		10	8	5
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	39		13	13	13
	78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	2559		880	869	810
	X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	732		247	239	246
	X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	164			164	
	X7200201	WIDTH RESTRICTION SIGNING	L SUM	1		0.34	0.33	0.33
	Z0002900	BASE COURSE (OPTION)	SQ YD	872		230	261	381
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1		0.33	0.33	0.34
	Z0023600	FILLING EXISTING CULVERTS	EACH	1				1
	Z0023602	GRANULAR CULVERT BACKFILL	CU YD	471		143	213	115
Ø	Z0076600	TRAINEES	HOUR	1500	1500			
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1		0.34	0.33	0.33
Ø	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1500	1500			
*	Z0054517	ROCK FILL - FOUNDATION	TON	14			14	

* SPECIALTY ITEM

Ø 0042

REV. - MS

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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET 7 OF 7 SHEETS | STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	9

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

EARTHWORK

LOCATION	20200100 EARTH EXCAVATION CU YD	EARTH EXCAVATION WIDENING CU YD	EXCAVATION USED IN EMBANKMENT (25% SHRINKAGE) CU YD	EMBANKMENT CU YD	EARTHWORK BALANCE "+" WASTE "-" SHORTAGE
SN 011-2513					
STA 360+50.00 TO STA 04+00.00	967.80	91.00	794.10	297.00	497.10
SN 068-2509					
STA 38+00.00 TO STA 48+00.00	138.90	167.00	229.43	685.20	-455.78
SN 068-2508					
STA 137+00.00 TO STA 148+00.00	1,441.00	106.00	1,160.25	928.00	232.25
TOTAL:	2,547.70	364.00	2,183.78	1,911.00	274.00

20200500 - EARTH EXCAVATION (WIDENING)

LOCATION STATION TO STATION		LENGTH FT	WIDTH FT	DEPTH IN	AREA SQ FT	VOLUME CU YD
SN 011-2513						
STA. 360+53.00 TO STA. 361+00.00	LT	47.00	2.75	8	129.25	3.19
STA. 361+00.00 TO STA. 363+50.00	LT	250.00	3.0	8	750.00	18.52
STA. 364+54.00 TO STA. 364+71.18	LT	17.18	3.0	8	51.54	1.27
STA. 00+00.00 TO STA. 02+10.00	LT	210.00	7.0	8	1470.00	36.30
STA. 00+00.00 TO STA. 02+56.00	RT	256.00	3.5	8	896.00	22.12
STA. 02+10.00 TO STA. 02+80.00	LT	70.00	4.8	8	332.50	8.21
STA. 02+56.00 TO STA. 02+80.00	RT	24.00	1.8	8	42.00	1.04
SN 068-2509						
STA. 38+29.51 TO STA. 39+00.00	LT	70.49	3.5	8	246.71	6.09
STA. 39+00.00 TO STA. 39+50.00	LT	50.00	2.8	8	140.00	3.46
STA. 39+50.00 TO STA. 44+00.00	LT	450.00	2.0	8	900.00	22.22
STA. 44+00.00 TO STA. 44+95.00	LT	95.00	2.8	8	266.00	6.57
STA. 38+29.51 TO STA. 39+30.00	RT	100.49	3.5	8	351.71	8.68
STA. 39+30.00 TO STA. 40+30.00	RT	100.00	5.5	8	550.00	13.58
STA. 40+30.00 TO STA. 42+89.50	RT	259.50	7.5	8	1946.25	48.06
STA. 43+57.50 TO STA. 45+72.50	RT	215.00	7.5	8	1612.50	39.81
STA. 45+72.50 TO STA. 47+60.00	RT	187.50	3.75	8	703.13	17.36
STA. 47+60.00 TO STA. 47+93.91	RT	33.91	1.5	8	50.86	1.26
SN 068-2508						
STA. 138+75.00 TO STA. 139+28.33	LT	53.33	1.00	8	53.33	1.32
STA. 139+28.33 TO STA. 147+34.17	LT	805.84	2.0	8	1611.68	39.79
STA. 147+34.17 TO STA. 147+87.50	LT	53.33	1.00	8	53.33	1.32
STA. 138+00.00 TO STA. 138+92.00	RT	92.00	1.71	8	157.32	3.88
STA. 138+92.00 TO STA. 142+60.00	RT	368.00	3.4	8	1258.56	31.08
STA. 143+28.00 TO STA. 146+20.50	RT	292.50	3.4	8	1000.35	24.70
STA. 146+20.50 TO STA. 147+12.50		92.00	1.7	8	157.32	3.88
TOTAL:					TOTAL:	364.00

SIDE ROAD / ENTRANCE SCHEDULE

BITUMINOUS MATERIALS COAT RATES
MILLED HMA OR PCC SURFACE 0.05 LB/SF
HMA LIFT 0.025 LB/SF
AGG BASE COURSE 0.25 LB/SF
HMA SURFACE 0.056 T/SQYD*IN
AGG SURFACE COURSE RATE 1.60 TONS/CU YD

LOCATION		TYPE OF ENTRANCE/ SIDEROAD	EX MATERIAL TYPE	PAVED AREA SQ FT	AGGREGATE AREA SQ FT	35101400 AGGREGATE BASE COURSE, TYPE B 6" TON	40800050 INCIDENTAL HMA SURFACING TON	42300400 PORTLAND CEMENT DRIVEWAY PAVEMENT 8" SQ YD
SN 068-2509								
RT	STA. 38+50	CE	AGG		420.0	12.4		
LT	STA. 38+53.0	OAK STREET	HMA	222.0			3.6	
RT	STA. 39+86.4	CE		420.0				46.7
					TOTAL=	13.0	4.0	47.0

RIPRAP

LOCATION	*AREA SQ FT	28200200 FILTER FABRIC SQ YD	28100109 STONE RIPRAP CLASS A5 SQ YD
SN 011-2513			
LT	1,325.00	147.2	147.2
RT	541.00	60.1	60.1
SN 068-2509			
LT	1,057.00	117.4	117.4
RT	1,057.00	117.4	117.4
SN 068-2508			
LT	12,336.00	1,370.7	1,370.7
RT	5,716.00	635.1	635.1
	TOTAL:	2,448.0	2,448.0

SEEDING & FERTILIZER

LOCATION	*AREA SQ FT	25000200 SEEDING, CLASS 2 ACRE	25000400 NITROGEN FERT NUTRIENT POUND	25000500 PHOSPHORUS FERT NUTRIENT POUND	25000600 POTASSIUM FERT NUTRIENT POUND	25000700 AGRICULTURAL GROUND LIMESTONE TON	25100115 MULCH, METHOD 2 ACRE
SN 011-2513							
PR ROW LINE TO PR ROW LINE (DEDUCT ROAD & RIPRAP)	35,700.00	0.82	73.76	73.76	73.76	1.64	0.82
SN 068-2509							
PR ROW LINE TO PR ROW LINE (DEDUCT ROAD & RIPRAP)	18,094.00	0.42	37.38	37.38	37.38	0.83	0.42
SN 068-2508							
PR ROW LINE TO PR ROW LINE (DEDUCT ROAD & RIPRAP)	54,258.00	1.25	112.10	112.10	112.10	2.49	1.25
TOTAL:		2.48	224.00	224.00	224.00	5.00	2.48

*MEASURED IN CADD

EROSION CONTROL

LOCATION	AVE LENGTH FOOT	*AREA SQ FT	28000250 TEMPORARY EROSION CONTROL SEEDING POUND	28000305 TEMPORARY DITCH CHECKS FOOT	28000400 PERIMETER EROSION BARRIER FOOT	28000500 INLET AND PIPE PROTECTION EACH
SN 011-2513						
PR ROW LINE TO PR ROW LINE (DEDUCT ROAD & RIPRAP)		35,700.00	81.96			
LT (STA 361+50, 363+00, 1+00 & 2+50)	11.00			44.00		
RT (STA 361+50, 363+00, 0+00, 1+00 & 2+50)	11.00			55.00		
LT STA 43+00					26.00	
LT STA 43+47.45 TO STA 45+00					182.00	
RT STA 43+00					16.00	
RT STA 43+46.97 TO STA 47+93.91					475.00	
LT STA 363+38.8						1.00
LT STA 363+58.2						1.00
LT STA 363+75.5						1.00
LT STA 0+01.2						1.00
SN 068-2509						
PR ROW LINE TO PR ROW LINE (DEDUCT ROAD & RIPRAP)		18,094.00	41.54			
LT (STA 39+00, 39+50, 40+15, 40+85, 41+45, 42+15, 42+80 & 43+60)	11.00			88.00		
RT (STA 42+15, 42+80 & 43+75)	11.00			33.00		
SN 068-2508						
PR ROW LINE TO PR ROW LINE (DEDUCT ROAD & RIPRAP)		54,258.00	124.56			
LT (STA 140+00, 141+00, 142+00, 142+50, 143+55, 144+50, 145+55 & 146+55)	11.00			88.00		
RT (STA 140+00, 141+00, 142+00, 142+50, 143+55, 144+50, 145+55 & 146+55)	11.00			88.00		
TOTAL:			248.05	396.00	699.00	4.00

*MEASURED IN CADD

DRAINAGE IMPROVEMENTS

LOCATION STATION TO STATION			50800105 REINFORCEMENT BARS POUND	54002020 EXPANSION BOLTS 3/4" EACH	54248510 CONCRETE COLLAR CU YD	542D0229 PIPE CULVERTS CL D, TY 1 24" FOOT	5421D048 PIPE CULVERTS CL D, TY 1 48" TEMPORARY FOOT	54213660 PRC FLARED END SECTIONS 15" EACH	54262724 METAL FLARED END SECTIONS 24" EACH	550A0070 STORM SEWERS CL A, TY 1 15" FOOT	60236200 INLETS TY A TY 8 GRATE EACH
SN 011-2513											
STA. 364+29.00	TO STA. 00+00.00	LT				42					
STA. 363+41.00	2 - 12' BARRELS	LT					24				
STA. 364+50.00		LT							2.00		
STA. 363+41.00		LT	45	18	2.90						
SN 068-2509											
STA. 40+07.50	TO STA. 41+24.00	RT								117.00	
STA. 41+26.00	TO STA. 42+00.00	RT								74.00	
STA. 42+00.00		RT						1			
STA. 40+06.50		RT									1.00
STA. 41+25.00		RT									1.00
TOTAL :			45	18	2.9	42	24	1	2.00	191.00	2.00

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	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 5/10/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 3 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	12
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

• MONTGOMERY & CHRISTIAN

78001120 - PAINT
PAVEMENT MARKING - LINE 5"

STATION TO STATION				LENGTH FOOT	CENTERLINE (YELLOW) SKIP-DASH FOOT	EDGE LINE (WHITE) SOLID FOOT
SN 011-2513						
STA. 359+00.00	TO STA.	364+71.18	LT	571.18		571.18
STA. 359+00.00	TO STA.	364+71.18		571.18	142.80	
STA. 359+00.00	TO STA.	364+71.18	RT	571.18		571.18
STA. 00+00.00	TO STA.	04+00.00	LT	400.00		400.00
STA. 00+00.00	TO STA.	04+00.00		400.00	100.00	
STA. 00+00.00	TO STA.	04+00.00	RT	400.00		400.00
SN 068-2509						
STA. 38+29.51	TO STA.	47+93.91	LT	964.40		964.40
STA. 38+29.51	TO STA.	47+93.91		964.40	241.10	
STA. 38+29.51	TO STA.	47+93.91	RT	964.40		964.40
SN 068-2508						
STA. 138+00.00	TO STA.	148+00.00	LT	1,000.00		1,000.00
STA. 138+00.00	TO STA.	148+00.00		1,000.00	250.00	
STA. 138+00.00	TO STA.	148+00.00	RT	1,000.00		1,000.00
			SUB TOTAL:		733.90	5,871.16
			TOTAL:		6,606.00	

70300100 - SHORT TERM PAVEMENT MARKING

LOCATION STATION TO STATION				LENGTH FT	TYPE (4") YELLOW FT	TYPE (4") WHITE FT
SN 011-2513						
STA. 359+00.00	TO STA.	364+71.18	LT	571.18		22.85
STA. 359+00.00	TO STA.	364+71.18		571.18	57.12	
STA. 359+00.00	TO STA.	364+71.18	RT	571.18		22.85
STA. 00+00.00	TO STA.	04+00.00	LT	400.00		16.00
STA. 00+00.00	TO STA.	04+00.00		400.00	40.00	
STA. 00+00.00	TO STA.	04+00.00	RT	400.00		16.00
SN 068-2509						
STA. 38+29.51	TO STA.	47+93.91	LT	964.40		38.58
STA. 38+29.51	TO STA.	47+93.91		964.40	96.44	
STA. 38+29.51	TO STA.	47+93.91	RT	964.40		38.58
SN 068-2508						
STA. 138+00.00	TO STA.	148+00.00	LT	1,000.00		40.00
STA. 138+00.00	TO STA.	148+00.00		1,000.00	100.00	
STA. 138+00.00	TO STA.	148+00.00	RT	1,000.00		40.00
			SUBTOTAL:		293.56	234.85
			(3 APPLICATIONS) :		880.67	704.54
			TOTAL:		1,586.00	

PAVEMENT MARKERS

78100100 - RAISED REFLECTIVE PAVEMENT MARKER

78300200 - RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

LOCATION STATION TO STATION	LENGTH FT	TWO-WAY AMBER EACH
SN 011-2513	971.18	13
SN 068-2509	964.40	13
SN 068-2508	1,000.00	13
TOTAL:		39

78300201 - PAVEMENT MARKING REMOVAL - GRINDING

STATION TO STATION				LENGTH FOOT	WIDTH INCH	CENTERLINE SQ FT	EDGE LINE SQ FT
SN 011-2513							
STA. 359+70.00	TO STA.	364+71.18	LT	501.18	5.00		208.83
STA. 00+00.00	TO STA.	03+30.00	LT	330.00	5.00		137.50
STA. 359+70.00	TO STA.	362+00.00		230.00	5.00	23.96	
STA. 00+00.00	TO STA.	03+30.00		330.00	5.00	34.38	
STA. 359+00.00	TO STA.	364+71.18	RT	571.18	5.00		237.99
STA. 00+00.00	TO STA.	04+00.00	RT	400.00	5.00		166.67
SN 068-2509							
STA. 38+29.51	TO STA.	47+93.91	LT	964.40	5.00		401.83
STA. 38+29.51	TO STA.	41+15.00		285.49	5.00	29.74	
STA. 44+50.00	TO STA.	47+93.71		343.71	5.00	35.80	
STA. 38+29.51	TO STA.	47+93.91	RT	964.40	5.00		401.83
SN 068-2508							
STA. 138+00.00	TO STA.	148+00.00	LT	1,000.00	5.00		416.67
STA. 138+00.00	TO STA.	139+70.00		170.00	5.00	17.71	
STA. 145+20.00	TO STA.	148+00.00		280.00	5.00	29.17	
STA. 138+00.00	TO STA.	148+00.00	RT	1,000.00	5.00		416.67
			SUB TOTAL:			170.75	2,387.98
			TOTAL:			2,559.00	

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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 5/10/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 4 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	13
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

PAVEMENT REMOVAL

LOCATION STATION TO STATION	LENGTH FT	WIDTH FT	AREA SQ FT	40600982 HMA SURFACE REMOVAL BUTT JOINT SQ YD	44000100 PAVEMENT REMOVAL SQ YD	44004250 PAVED SHOULDER REMOVAL SQ YD	X4401198 HMA SURFACE REMOVAL, VARIABLE DEPTH SQ YD
SN 011-2513							
STA. 359+00.00 TO STA. 359+30.00	30.00	22.00	660.00	73.33			
STA. 03+70.00 TO STA. 04+00.00	30.00	22.00	660.00	73.33			
STA. 363+50.00 TO STA. 364+54.00			3,016.00		335.11		
STA. 00+00.00 TO STA. 02+80.00 LT			420.00			46.67	
STA. 00+00.00 TO STA. 02+80.00 RT			560.00			62.22	
SN 068-2509							
STA. 38+53.00 LT			220.22	24.47			
STA. 38+29.51 TO STA. 38+59.51	30.00	22.00	660.00	73.33			
STA. 47+63.91 TO STA. 47+93.91	30.00	22.00	660.00	73.33			
STA. 42+89.50 TO STA. 43+07.20			389.00		43.22		
STA. 43+38.99 TO STA. 43+57.50			407.00		45.22		
STA. 38+29.51 TO STA. 43+07.20 LT			1,002.00			111.33	
STA. 43+38.99 TO STA. 45+00.00 LT			1,430.00			158.89	
STA. 38+29.51 TO STA. 43+07.20 RT			1,577.00			175.22	
STA. 43+38.99 TO STA. 47+93.91 RT			1,363.00			151.44	
STA. 45+00.00 TO STA. 47+93.91 LT	293.91	5.00	1,469.55				163.28
SN 068-2508							
STA. 138+00.00 TO STA. 138+30.00	30.00	25.00	750.00	83.33			
STA. 147+70.00 TO STA. 148+00.00	30.00	25.00	750.00	83.33			
STA. 142+60.00 TO STA. 142+87.02			593.00		65.89		
STA. 143+12.89 TO STA. 143+28.00			332.00		36.89		
STA. 138+75.00 TO STA. 142+87.02 LT			618.00			68.67	
STA. 143+12.89 TO STA. 147+70.00 LT			686.00			76.22	
STA. 138+00.00 TO STA. 142+87.02 RT			776.00			86.22	
STA. 143+12.89 TO STA. 147+12.50 RT			599.00			66.56	
TOTAL:				485.00	527.00	1,004.00	164.00

50105220
PIPE CULVERT REMOVAL

LOCATION	TYPE	LENGTH FT
SN 011-2513		
STA. 364+03.00 LT 24"	CMP	29.00
TOTAL:		29.00

GUARDRAIL REMOVAL

LOCATION STATION TO STATION	63200310 GUARDRAIL REMOVAL FOOT
SN 068-2509	
NE QUADRANT	81.00
NW QUADRANT	81.00
SE QUADRANT	81.00
SW QUADRANT	81.00
SN 068-2508	
NE QUADRANT	235.00
NW QUADRANT	334.00
SE QUADRANT	345.00
SW QUADRANT	246.00
TOTAL:	1,484.00

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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 5/11/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 5 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	14
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

• MONTGOMERY & CHRISTIAN

MAINLINE IMPROVEMENTS

MILLED HMA OR PCC (TACK COAT) RATE - 0.05 POUNDS/SF HMA LIFT (TACK COAT) RATE - 0.025 POUNDS/SF AGGREGATE BASE COURSE (PRIME COAT) RATE - 0.25 POUNDS/SF BITUMINOUS SURFACE / BINDER (112 LBS) RATE - 0.056 T/SY*IN				35501316 HMA BASE COURSE 8"	40600290 BITUMINOUS MATERIALS (TACK COAT)	40602965 HMA BINDER COURSE IL 9.5FG, N50	40603080 HMA BINDER COURSE IL 19.0FG, N50	40604050 HMA SURFACE COURSE IL 9.5, MIX "C", N50	Z0002900 BASE COURSE (OPTION)
LOCATION STATION TO STATION	LENGTH FT	WIDTH FT	AREA SQ FT	SQ YD	POUNDS	TON	TON	TON	SQ YD
SN 011-2513									
STA. LT 360+53.00 TO STA. 361+00.00	47.00	2.75	129.25	14.36					
STA. LT 361+00.00 TO STA. 363+50.00	250.00	3.00	750.00	83.33					
STA. LT 363+50.00 TO STA. 364+54.00	104.00	7.00	728.00	80.89					
STA. LT 364+54.00 TO STA. 364+71.18	17.18	3.00	51.54	5.73					
STA. LT 00+00.00 TO STA. 02+10.00	210.00	7.00	1,470.00	163.33					
STA. LT 02+10.00 TO STA. 02+80.00	70.00	4.80	336.00	37.33					
STA. RT 00+00.00 TO STA. 02+56.00	256.00	4.00	1,024.00	113.78					
STA. RT 02+56.00 TO STA. 02+80.00	24.00	3.25	78.00	8.67					
STA. LT & RT 359+30.00 TO STA. 359+55.00	25.00	11.00	550.00		41.25			7.27	
STA. LT & RT 359+55.00 TO STA. 363+50.00	395.00	11.00	8,690.00		651.75	67.59		81.11	
STA. LT & RT 363+50.00 TO STA. 364+54.00	104.00	11.00	2,288.00		57.20	17.80		21.35	
STA. LT & RT 363+50.00 TO STA. 364+54.00	104.00	33.00	3,432.00						381.33
STA. LT & RT 364+54.00 TO STA. 364+71.18	17.18	11.00	377.96		28.35	2.94		3.53	
STA. LT & RT 00+00.00 TO STA. 03+45.00	345.00	11.00	7,590.00		569.25	59.03		70.84	
STA. LT & RT 03+45.00 TO STA. 03+70.00	25.00	11.00	550.00		41.25			7.27	
FROM SHOULDERS			8,787.00		439.35				
SN 068-2509									
STA. LT 38+29.51 TO STA. 39+00.00	70.49	5.00	352.45	39.16					
STA. LT 39+00.00 TO STA. 39+50.00	50.00	4.30	215.00	23.89					
STA. LT 39+50.00 TO STA. 43+57.50	407.50	3.50	1,426.25	158.47					
STA. LT 43+57.50 TO STA. 44+95.00	137.50	4.30	591.25	65.69					
STA. LT 44+95.00 TO STA. 45+00.00	5.00	5.00	25.00	2.78					
STA. RT 38+29.51 TO STA. 39+30.00	100.49	5.00	502.45	55.83					
STA. RT 39+30.00 TO STA. 40+30.00	100.00	7.00	700.00	77.78					
STA. RT 40+30.00 TO STA. 42+89.50	259.50	9.00	2,335.50	259.50					
STA. RT 43+57.50 TO STA. 45+72.50	215.00	9.00	1,935.00	215.00					
STA. RT 45+72.50 TO STA. 47+60.00	187.50	5.25	984.38	109.38					
STA. RT 47+60.00 TO STA. 47+93.91	33.91	1.50	50.86	5.65					
BETWEEN STAGE LIFT & LEVELING BINDER									
STA. LT & RT 42+00.00 TO STA. 44+50.00	250.00	34.50	8,625.00		215.63				
STA. LT & RT 38+59.51 TO STA. 38+84.51	25.00	11.00	550.00		41.25			7.27	
STA. LT & RT 38+84.51 TO STA. 42+89.50	404.99	11.00	8,909.78		668.23	69.30		83.16	
STA. LT & RT 42+89.50 TO STA. 43+57.50	68.00	34.50	2,346.00				129.48		260.67
STA. LT & RT 42+89.50 TO STA. 43+57.50	68.00	11.00	1,496.00		112.20	11.64		13.96	
STA. LT & RT 43+57.50 TO STA. 47+38.91	381.41	11.00	8,391.02		629.33	65.26		78.32	
STA. LT & RT 47+38.91 TO STA. 47+63.91	25.00	11.00	550.00		41.25			7.27	
FROM SHOULDERS			11,158.44		557.92				
STA. LT & RT 42+00.00 TO STA. 42+50.00	50.00	34.50	1,725.00		129.38	13.42	36.06		
STA. LT & RT 42+50.00 TO STA. 42+89.50	39.50	34.50	1,362.75		102.21	10.60	72.07		
STA. LT & RT 43+57.50 TO STA. 44+00.00	42.50	34.50	1,466.25		109.97	11.40	84.30		
STA. LT & RT 44+00.00 TO STA. 44+50.00	50.00	34.50	1,725.00		129.38	13.42	41.22		

MODEL: Default
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USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 5/10/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 6 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	15
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

• MONTGOMERY & CHRISTIAN

MAINLINE IMPROVEMENTS

MILLED HMA OR PCC (TACK COAT) RATE - 0.05 POUNDS/SF
HMA LIFT (TACK COAT) RATE - 0.025 POUNDS/SF
AGGREGATE BASE COURSE (PRIME COAT) RATE - 0.25 POUNDS/SF
BITUMINOUS SURFACE / BINDER (112 LBS) RATE - 0.056 T/SY*IN

LOCATION STATION TO STATION	LENGTH FT	WIDTH FT	AREA SQ FT	35501316 HMA BASE COURSE 8" SQ YD	40600290 BITUMINOUS MATERIALS (TACK COAT) POUNDS	40602965 HMA BINDER COURSE IL 9.5FG, N50 TON	40603080 HMA BINDER COURSE IL 19.0FG, N50 TON	40604050 HMA SURFACE COURSE IL 9.5, MIX "C", N50 TON	Z0002900 BASE COURSE (OPTION) SQ YD
SN 068-2508									
STA. LT 138+75.00 TO STA. 139+28.33	53.33	2.50	133.33	14.81					
STA. LT 139+28.33 TO STA. 147+34.17	805.84	3.50	2,820.44	313.38					
STA. LT 147+34.17 TO STA. 147+87.50	53.33	2.50	133.33	14.81					
STA. RT 138+00.00 TO STA. 138+92.00	92.00	3.21	295.32	32.81					
STA. RT 138+92.00 TO STA. 142+60.00	368.00	4.92	1,810.56	201.17					
STA. RT 143+28.00 TO STA. 146+20.50	292.50	4.92	1,439.10	159.90					
STA. RT 146+20.50 TO STA. 147+12.50	92.00	3.21	295.32	32.81					
BETWEEN STAGE LIFT & LEVELING BINDER									
STA. LT 141+50.00 TO STA. 144+50.00	300.00	20.00	6,000.00		150.00				
RT 141+50.00 TO STA. 144+50.00	300.00	16.92	5,076.00		126.90				
STA. LT & RT 138+30.00 TO STA. 138+55.00	25.00	11.00	550.00		41.25			7.27	
STA. LT & RT 138+55.00 TO STA. 142+60.00	405.00	11.00	8,910.00		668.25	69.30		83.16	
STA. LT & RT 142+60.00 TO STA. 143+28.00	68.00	30.42	2,068.56				193.07		229.84
STA. LT & RT 142+60.00 TO STA. 143+28.00	68.00	11.00	1,496.00		112.20	11.64		13.96	
STA. LT & RT 143+28.00 TO STA. 147+45.00	417.00	11.00	9,174.00		688.05	71.35		85.62	
STA. LT & RT 147+45.00 TO STA. 147+70.00	25.00	11.00	550.00		41.25			7.27	
FROM SHOULDERS			7,658.00		382.90				
STA. LT & RT 141+50.00 TO STA. 141+80.00	30.00	30.92	927.60		69.57	7.21	17.32		
STA. LT & RT 141+80.00 TO STA. 142+00.00	20.00	30.92	618.40		46.38	4.81	23.09		
STA. LT & RT 142+00.00 TO STA. 142+50.00	50.00	30.92	1,546.00		115.95	12.02	130.44		
STA. LT & RT 142+50.00 TO STA. 142+60.00	10.00	30.92	309.20		23.19	2.40	28.40		
STA. LT & RT 143+28.00 TO STA. 143+50.00	22.00	30.92	680.24		51.02	5.29	64.50		
STA. LT & RT 143+50.00 TO STA. 144+00.00	50.00	30.92	1,546.00		115.95	12.02	130.44		
STA. LT & RT 144+00.00 TO STA. 144+20.00	20.00	30.92	618.40		46.38	4.81	34.63		
STA. LT & RT 144+20.00 TO STA. 144+50.00	30.00	30.92	927.60		69.57	7.21	20.78		
TOTAL:				2,291.00	7,314.00	551.00	1,006.00	579.00	872.00

MODEL: Default
FILE NAME: \\ROCHFIL1\Data\Drawings\Microstation\2121-7188J\CAD\dgn\ SN 011-7039 (011-2513)\CADSheets\D672984-sht-Schedule.dgn

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 5/10/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 7 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	16
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

• MONTGOMERY & CHRISTIAN

SHOULDER IMPROVEMENTS

MILLED HMA OR PCC (TACK COAT) RATE - 0.05 POUNDS/SF
AGG BASE COURSE (PRIME COAT) RATE - 0.25 POUNDS/SF
HMA SHOULDER (112 LBS) RATE - 0.056 T/SY*IN
AGG (SHOULDERS, WEDGE SHOULDERS) RATE - 1.6 T/CY
SHOULDER THICKNESS (IN) - 2.75 TYPICAL

LOCATION STATION TO STATION				LENGTH FT	WIDTH FT	DEPTH IN	VOLUME CU YD	AREA HMA SQ YD	48101200 AGGREGATE SHOULDERS, TY B TON	48102100 AGGREGATE WEDGE SHLD, TY B TON	48203100 HMA SHOULDERS 2 3/4" TON	64200108 SHOULDER RUMBLE STRIPS 8 INCH FOOT
SN 011-2513												
STA. 363+50.00	TO STA.	364+54.00	LT	104.00	4.0	2.75	3.53		5.65			
STA. 363+50.00	TO STA.	364+54.00	RT	104.00	2.0	2.75	1.77		2.82			
STA. 359+00.00	TO STA.	360+53.00	LT	153.00	3.0	1.875	2.66			4.25		
STA. 359+00.00	TO STA.	360+53.00	RT	153.00	3.0	1.875	2.66			4.25		
STA. 360+53.00	TO STA.	361+00.00	LT	47.00	3.5	1.875	0.95			1.52		
STA. 360+53.00	TO STA.	361+00.00	RT	47.00	2.5	1.875	0.68			1.09		
STA. 361+00.00	TO STA.	363+50.00	RT	250.00	2.0	1.875	2.89			4.63		
STA. 361+00.00	TO STA.	363+50.00	LT	250.00	4.0	1.875	5.79			9.26		
STA. 364+54.00	TO STA.	364+71.18	LT	17.18	4.0	1.875	0.40			0.64		
STA. 364+54.00	TO STA.	364+71.18	RT	17.18	2.0	1.875	0.20			0.32		
STA. 00+00.00	TO STA.	04+00.00	LT	400.00	4.0	1.875	9.26			14.81		
STA. 00+00.00	TO STA.	02+56.00	RT	256.00	2.0	1.875	2.96			4.74		
STA. 02+56.00	TO STA.	02+80.00	RT	24.00	3.0	1.875	0.42			0.67		
STA. 02+80.00	TO STA.	04+00.00	RT	120.00	4.0	1.875	2.78			4.44		
STA. 359+00.00	TO STA.	360+53.00	LT	153.00	4.00			612.00			10.47	153.00
STA. 360+53.00	TO STA.	361+00.00	LT	47.00	6.75			317.25			5.43	47.00
STA. 361+00.00	TO STA.	363+50.00	LT	250.00	7.0			1,750.00			29.94	250.00
STA. 359+00.00	TO STA.	363+50.00	RT	450.00	4.00			1,800.00			30.80	450.00
STA. 363+50.00	TO STA.	364+54.00	LT	104.00	7.0			728.00			12.46	104.00
STA. 363+50.00	TO STA.	364+54.00	RT	104.00	4.0			416.00			7.12	104.00
STA. 364+54.00	TO STA.	364+71.18	LT	17.18	7.0			120.26			2.06	17.18
STA. 364+54.00	TO STA.	364+71.18	RT	17.18	4.0			68.72			1.18	17.18
STA. 00+00.00	TO STA.	02+10.00	LT	210.00	7.0			1,470.00			25.15	210.00
STA. 02+10.00	TO STA.	02+80.00	LT	70.00	5.75			402.50			6.89	70.00
STA. 00+00.00	TO STA.	02+56.00	RT	256.00	4.0			1,024.00			17.52	256.00
STA. 02+56.00	TO STA.	02+80.00	RT	24.00	3.25			78.00			1.33	24.00
SN 068-2509												
STA. 38+29.51	TO STA.	47+93.51	RT	964.00	3.3	2.75	26.59		42.55			
STA. 38+29.51	TO STA.	45+00.00	LT	670.49	3.3	2.75	18.50		29.59			
STA. 38+29.51	TO STA.	39+00.00	LT	70.49	5.0			352.45			6.03	70.49
STA. 39+00.00	TO STA.	39+50.00	LT	50.00	4.3			212.50			3.64	50.00
STA. 39+50.00	TO STA.	44+00.00	LT	450.00	3.5			1,575.00			26.95	450.00
STA. 44+00.00	TO STA.	44+95.00	LT	95.00	4.3			403.75			6.91	95.00
STA. 44+95.00	TO STA.	45+00.00	LT	5.00	5.0			25.00			0.43	5.00
STA. 45+00.00	TO STA.	47+93.91	LT	293.91	5.0			1,469.55			25.15	293.91
STA. 38+29.51	TO STA.	39+30.00	RT	100.49	5.0			502.45			8.60	100.49
STA. 39+30.00	TO STA.	40+30.00	RT	100.00	7.0			700.00			11.98	100.00
STA. 40+30.00	TO STA.	42+89.50	RT	259.50	9.0			2,335.50			39.96	259.50
STA. 42+89.50	TO STA.	43+57.50	RT	68.00	9.0			612.00			10.47	68.00
STA. 43+57.50	TO STA.	45+72.50	RT	215.00	9.0			1,935.00			33.11	215.00
STA. 45+72.50	TO STA.	47+60.00	RT	187.50	5.3			984.38			16.84	187.50
STA. 47+60.00	TO STA.	47+93.91	RT	33.91	1.5			50.86			0.87	33.91

MODEL: Default
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USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 5/10/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 8 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	17
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

SHOULDER IMPROVEMENTS

						48101200 AGGREGATE SHOULDERS, TY B	48102100 AGGREGATE WEDGE SHLD, TY B	48203100 HMA SHOULDERS 2 3/4"	64200108 SHOULDER RUMBLE STRIPS 8 INCH
MILLED HMA OR PCC (TACK COAT) RATE - 0.05 POUNDS/SF									
AGG BASE COURSE (PRIME COAT) RATE - 0.25 POUNDS/SF									
HMA SHOULDER (112 LBS) RATE - 0.056 T/SY*IN									
AGG (SHOULDERS, WEDGE SHOULDERS) RATE - 1.6 T/CY									
SHOULDER THICKNESS (IN) - 2.75 TYPICAL									
LOCATION STATION TO STATION	LENGTH FT	WIDTH FT	DEPTH IN	VOLUME CU YD	AREA HMA SQ YD	TON	TON	TON	FOOT
SN 068-2508									
STA. 138+00.00 TO STA. 138+75.00 LT	75.00	3.0	1.875	1.30			2.08		
STA. 147+12.56 TO STA. 148+00.00 RT	87.44	3.0	1.875	1.52			2.43		
STA. 147+87.50 TO STA. 148+00.00 LT	12.50	3.0	1.875	0.22			0.35		
STA. 138+75.00 TO STA. 147+87.50 LT	912.50	3.0	2.75	23.23		37.18			
STA. 138+00.00 TO STA. 138+92.00 RT	92.00	2.5	2.75	1.95		3.12			
STA. 138+92.00 TO STA. 146+20.50 RT	728.50	2.0	2.75	12.37		19.79			
STA. 146+20.50 TO STA. 147+12.50 RT	92.00	2.5	2.75	1.95		3.12			
STA. 138+00.00 TO STA. 138+75.00 LT	75.00	1.5			112.50			1.93	
STA. 138+75.00 TO STA. 139+28.33 LT	53.33	2.50			133.33			2.28	53.33
STA. 139+28.53 TO STA. 147+34.17 LT	805.64	3.5			2,819.74			48.25	805.64
STA. 147+34.17 TO STA. 147+87.50 LT	53.33	5.0			266.65			4.56	53.33
STA. 147+87.50 TO STA. 148+00.00 LT	12.50	1.5			18.75			0.32	12.50
STA. 138+00.00 TO STA. 138+92.00 RT	92.00	3.21			295.32			5.05	92.00
STA. 138+92.00 TO STA. 146+20.50 RT	728.50	4.9			3,584.22			61.33	728.50
STA. 146+20.50 TO STA. 147+12.50 RT	92.00	3.21			295.32			5.05	92.00
STA. 147+12.50 TO STA. 148+00.00 RT	87.50	1.50			131.25			2.25	
TOTAL:						144.00	56.00	473.00	5,469.00

GUARDRAIL

LOCATION STATION TO STATION	63000001 STEEL PLATE BEAM GUARDRAIL TYPE A 6 FOOT POSTS FOOT	63000003 STEEL PLATE BEAM GUARDRAIL TYPE A 9 FOOT POSTS FOOT	63000030 STRONG POST GUARDRAIL ATTACHED TO CULVERT FOOT	63000370 LONG-SPAN GUARDRAIL OVER CULVERT 25 FT SPAN FOOT	63100167 TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT EACH	72501000 TERMINAL MARKER DIRECT APPLIED EACH	78200005 GUARDRAIL REFLECTORS TYPE A EACH
SN 011-2513							
STA. RT 362+56.25 TO STA. 363+06.25					1.00	1.00	
STA. RT 363+06.25 TO STA. 363+18.75		12.50					
STA. RT 363+18.75 TO STA. 363+68.75				50.00			
STA. RT 363+68.75 TO STA. 364+06.25		37.50					
STA. RT 364+06.25 TO STA. 364+43.75			37.50				
STA. RT 364+43.75 TO STA. 00+97.57		125.00					
STA. RT 00+97.57 TO STA. 01+47.57					1.00	1.00	
STA. RT 362+56.00 TO STA. 01+47.57							5.00
SN 068-2509							
STA. RT 41+39.92 TO STA. 41+89.92					1.00	1.00	
STA. RT 41+89.92 TO STA. 43+02.42	112.50						
STA. RT 43+02.42 TO STA. 43+44.58			42.30				
STA. RT 43+44.58 TO STA. 44+19.58	75.00						
STA. RT 44+19.58 TO STA. 44+69.58					1.00	1.00	
STA. RT 41+39.92 TO STA. 44+69.58							4.00
STA. LT 41+77.42 TO STA. 42+27.42					1.00	1.00	
STA. LT 42+27.42 TO STA. 43+02.42	75.00						
STA. LT 43+02.42 TO STA. 43+44.58			42.30				
STA. LT 43+44.58 TO STA. 44+19.58	75.00						
STA. LT 44+19.58 TO STA. 44+69.58					1.00	1.00	
STA. LT 41+77.42 TO STA. 44+69.58							4.00
SN 068-2508							
STA. RT 140+96.56 TO STA. 141+46.56					1.00	1.00	
STA. RT 141+46.56 TO STA. 142+71.56		125.00					
STA. RT 142+71.56 TO STA. 143+18.43			46.875				
STA. RT 143+18.43 TO STA. 143+93.43		75.00					
STA. RT 143+93.43 TO STA. 144+43.43					1.00	1.00	
STA. RT 140+96.56 TO STA. 144+43.43							5.00
STA. LT 141+46.56 TO STA. 141+96.56					1.00	1.00	
STA. LT 141+96.56 TO STA. 142+71.56		75.00					
STA. LT 142+71.56 TO STA. 143+18.43			46.875				
STA. LT 143+18.43 TO STA. 144+43.43		125.00					
STA. LT 144+43.43 TO STA. 144+93.43					1.00	1.00	
STA. LT 141+46.56 TO STA. 144+93.43							5.00
TOTAL :	337.50	575.00	216.50	50.00	10.00	10.00	23.00

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 5/11/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 10 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	19
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

TEMPORARY CONCRETE BARRIER

STATION TO STATION	LENGTH FOOT	70400100 TEMP CONCRETE BARRIER FOOT	70400200 RELOCATE TEMP CONCRETE BARRIER FOOT	70600260 IMPACT ATT TEMP FULLY REDIRECTIVE NARROW TL3 EACH	70600332 IMPACT ATT RELOCATE FULLY REDIRECTIVE NARROW TL3 EACH
SN 011-2513					
STAGE 1					
STA. 362+20.00 6' RT TO STA. 363+20.00 5' LT	100.00	100.00		1.00	
STA. 363+20.00 5' LT TO STA. 364+71.18 5' LT	150.00	150.00			
STA. 00+00.00 5' LT TO STA. 00+28.82 5' LT	25.00	25.00			
STA. 00+28.82 5' LT TO STA. 01+16.32 6' RT	87.50	87.50		1.00	
STAGE 2					
STA. 362+44.30 9' LT TO STA. 363+01.08 0' RT	56.78		57.00		1.00
STA. 363+01.08 0' RT TO STA. 363+20.00 3' RT	18.92		19.00		
STA. 363+20.00 3' RT TO STA. 364+71.18 3' RT	150.00		150.00		
STA. 00+00.00 3' RT TO STA. 00+28.82 3' RT	25.00		25.00		
STA. 00+28.82 3' RT TO STA. 00+53.52 0' RT	24.70		25.00		
STA. 00+53.52 0' RT TO STA. 01+28.52 9' LT	75.00		75.00		1.00
SN 068-2509					
STAGE 1					
STA. 41+10.00 4.91' RT TO STA. 42+00.00 2.5' LT	87.50	87.50		1.00	
STA. 42+00.00 2.5' LT TO STA. 44+50.00 2.5' LT	250.00	250.00			
STA. 44+50.00 2.5' LT TO STA. 45+40.00 5.08' RT	87.50	87.50		1.00	
STAGE 2					
STA. 40+50.00 4.57' LT TO STA. 41+10.00 0.46' RT	62.50	62.50			1.00
STA. 41+10.00 0.46' RT TO STA. 42+00.00 8' RT	87.50		87.50		
STA. 42+00.00 8' RT TO STA. 44+50.00 8' RT	250.00		250.00		
STA. 44+50.00 8' RT TO STA. 45+00.00 9' RT	50.00		50.00		1.00
SN 068-2508					
STAGE 1					
STA. 140+60.00 4' RT TO STA. 141+50.00 2.88' LT	87.50	87.50		1.00	
STA. 141+50.00 2.88' LT TO STA. 144+50.00 2.88' LT	300.00	300.00			
STA. 144+50.00 2.88' LT TO STA. 145+40.00 4' RT	87.50	87.50		1.00	
STAGE 2					
STA. 140+00.00 4.5' LT TO STA. 140+60.00 0.5' RT	62.50	62.50			1.00
STA. 140+60.00 0.5' RT TO STA. 141+50.00 6.88' RT	87.50		87.50		
STA. 141+50.00 6.88' RT TO STA. 144+50.00 6.88' RT	300.00		300.00		
STA. 144+50.00 6.88' RT TO STA. 145+40.00 0.5' RT	87.50		87.50		
STA. 145+40.00 0.5' RT TO STA. 146+00.00 4.5' LT	62.50	62.50			1.00
TOTAL :		1,450.00	1,213.50	6.00	6.00

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2102-7188-21CAD\Data SN 011-2039 (011-2513)\CAD\sheets\072984-sht-Schedule.dgn

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/28/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET 11 OF 12 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	20
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

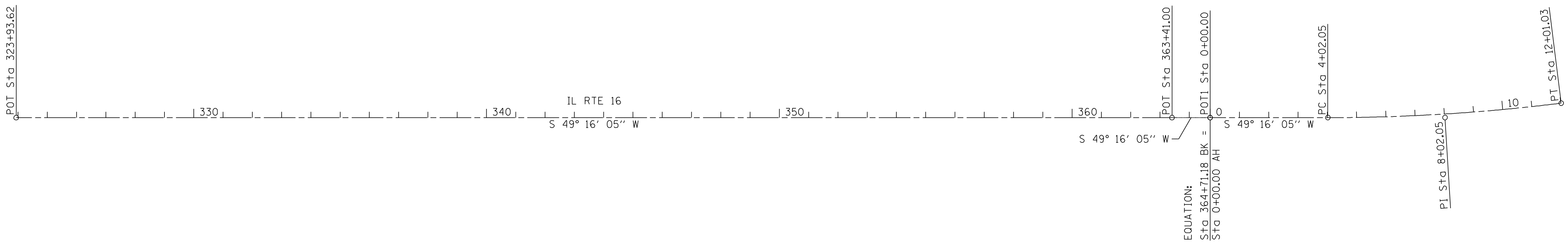
* MONTGOMERY & CHRISTIAN

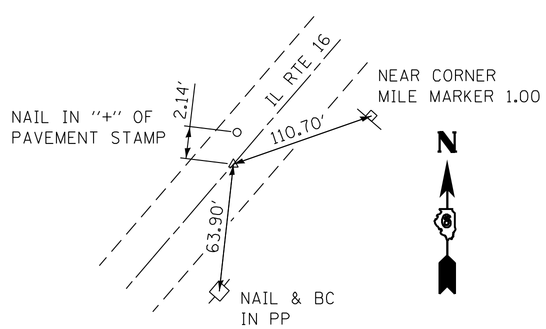
TEMPORARY PAVEMENT MARKING

STATION TO STATION					LENGTH FOOT	70300231 LINE 5" EDGE LINE (WHITE) SOLID FOOT	70300281 LINE 24" STOP BAR (WHITE) SOLID FOOT
SN 011-2513							
STAGE 1							
STA.	360+86.00	TO STA.	364+71.18	LT	385.18	386.00	
STA.	360+86.00	TO STA.	364+71.18	RT	385.18	386.00	
STA.	00+00.00	TO STA.	02+76.00	LT	276.00	276.00	
STA.	00+00.00	TO STA.	02+76.00	RT	276.00	276.00	
STA.	360+86.00			RT			11.00
STA.	02+76.00			LT			11.00
STAGE 2							
STA.	360+86.00	TO STA.	364+71.18	LT	385.18	386.00	
STA.	360+86.00	TO STA.	364+71.18	RT	385.18	386.00	
STA.	00+00.00	TO STA.	02+76.00	LT	276.00	276.00	
STA.	00+00.00	TO STA.	02+76.00	RT	276.00	276.00	
SN 068-2509							
STAGE 1							
STA.	38+29.51	TO STA.	47+93.91	LT	964.40	965.00	
STA.	38+29.51	TO STA.	47+93.91	RT	964.40	965.00	
STA.	39+30.00			RT			14.00
STA.	47+80.00			LT			11.00
STA.	45+50.00			PE			10.00
STAGE 2							
STA.	38+29.51	TO STA.	47+93.91	LT	964.40	965.00	
STA.	38+29.51	TO STA.	47+93.91	RT	964.40	965.00	
STA.	38+82.00			RT			11.00
STA.	47+50.00			LT			11.00
SN 068-2508							
STAGE 1							
STA.	138+00.00	TO STA.	147+87.50	LT	987.50	988.00	
STA.	138+00.00	TO STA.	147+87.50	RT	987.50	988.00	
STAGE 2							
STA.	138+00.00	TO STA.	147+87.50	LT	987.50	988.00	
STA.	138+00.00	TO STA.	147+87.50	RT	987.50	988.00	
STA.	138+00.00			RT			11.00
STA.	148+00.00			LT			11.00
					TOTAL:	10,460.00	101.00

ALIGNMENT COORDINATES - IL 16			
	STATION	N	E
POT	323+93.62	981689.8920	2570303.7160
POT	363+41.00	979114.1380	2567312.5072
EQN	364+71.18 = 0+00.00	979029.1957	2567213.8642
PC	4+02.05	978766.8507	2566909.2043
PI	8+02.05	978505.8419	2566606.0964
PT	12+01.03	978209.3886	2566337.5532

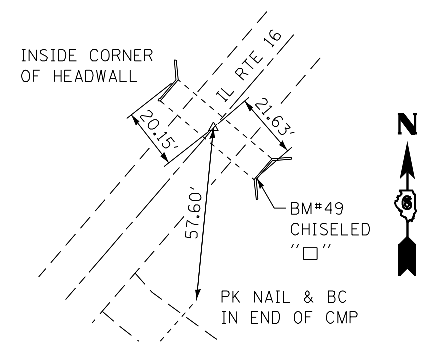
EXIST. CURVE 234
PI STA. = 8+02.05
Δ = 7° 05′ 46″ (LT)
D = 0° 53′ 17″
R = 6,451.21′
T = 400.00′
L = 798.98′
E = 12.39′
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 4+02.05
P.T. STA. = 12+01.03





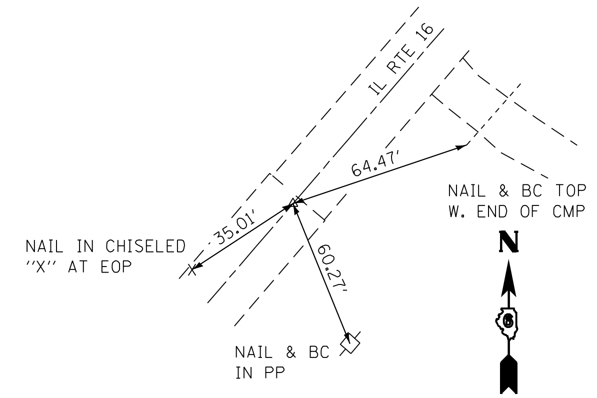
P.O.T. STA. 323+93.62

PK NAIL & BC
W/ CHISELED "X"



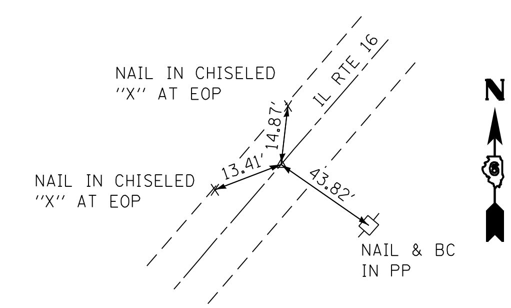
P.O.T. STA. 363+41.00

PK NAIL & BC
W/ CHISELED "X"



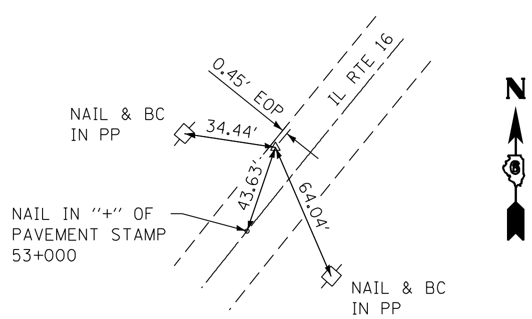
STA. EQN. POT 364+71.18 BK =
POT 0+00.00 AH

PK NAIL & BC
W/ CHISELED "X"



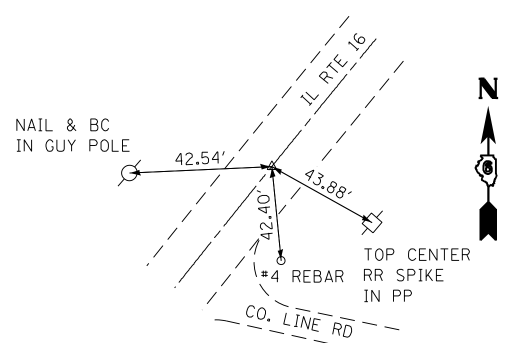
P.C. STA. 4+02.05

PK NAIL & BC
W/ CHISELED "X"



P.I. STA. 8+02.05

PK NAIL & BC
W/ CHISELED "X"



P.T. STA. 12+01.03

PK NAIL & BC
W/ CHISELED "X"

BENCHMARK #46

ELEVATION 704.068

CHISELED "+" ON WEST END OF NORTH
HEADWALL TO BOX CULVERT
STA. 307+70.90, 19.8′ RT.

BENCHMARK #49

ELEVATION 683.826

CHISELED "□" ON WEST END OF
SOUTH HEADWALL
STA. 363+44.20, 21.6′ LT.

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\21\21-7188\21\CAD\Data SN 011-7039 (011-2513)\CAD\sheets\D677984-sht-014-ATB-001.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 400.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/1/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS
IL 16 SN 011–2513

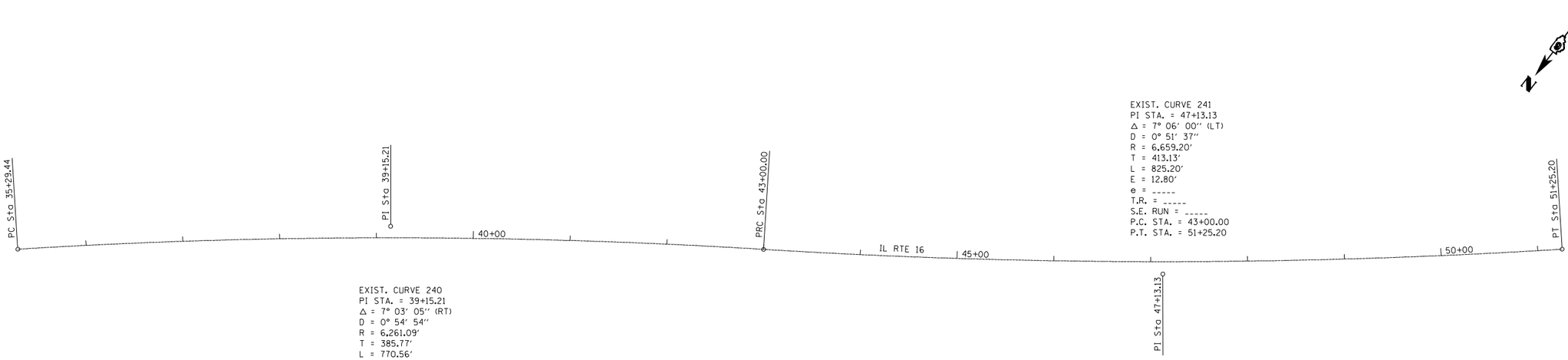
SCALE: SHEET OF SHEETS STA. TO STA.

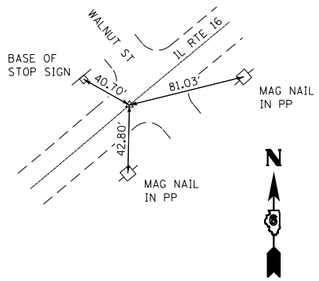
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3)	*	142	22
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN

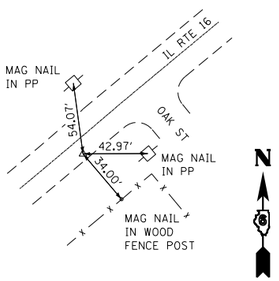
ALIGNMENT COORDINATES - IL 16			
	STATION	N	E
PC	35+29.44	976665.4067	2564619.5775
PI	39+15.21	976413.9193	2564327.0523
PRC	43+00.00	976200.2448	2564005.8667
PI	47+13.13	975971.4150	2563661.9005
PT	51+25.20	975701.8253	2563348.8559





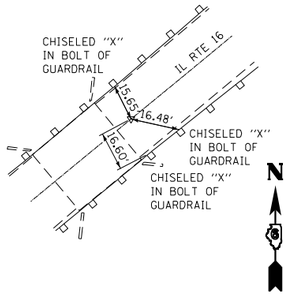
P.C. STA. 35 + 29.44

MAG NAIL IN PAVEMENT



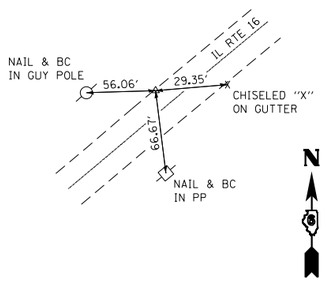
P.I. STA. 39 + 15.21

MAG NAIL



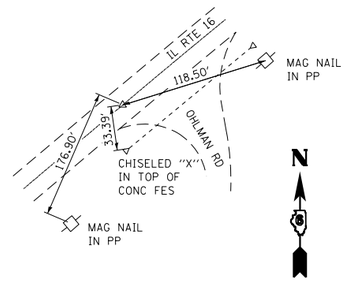
P.R.C. STA. 43 + 00.00

MAG NAIL



P.I. STA. 47 + 13.13

MAG NAIL



P.T. STA. 51 + 25.20

MAG NAIL

BENCHMARK 1B

ELEVATION 680.23

60D NAIL IN PP ON N. SIDE IL-16 EAST
OF SN 068-0017 JUST S. OF BULIDING
STA. 40+54.32, 29.98' RT.

BENCHMARK CB–2

ELEVATION 679.01

CHISELED "□" ON NORTHWEST WINGWALL
SN 068-0017
STA. 43+38.90, 16.39' RT.

BENCHMARK 1A

ELEVATION 681.835

60D NAIL IN GUY POLE ON N. SIDE IL-16
JUST W. OF SN 068-0017
(2ND GUY POLE FROM BRIDGE) N. SIDE OF GUY POLE
STA. 47+66.43, 28.75' RT.

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2101-7188\2\CADData SN 011-7039 (01-25)13\CADsheets\D672984-sht-015-ATR-002.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -		REVISED -
	DRAWN - CFC		REVISED -
PLOT SCALE = 120.000000 ' / in.	CHECKED - MCB		REVISED -
PLOT DATE = 5/1/2023	DATE -		REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

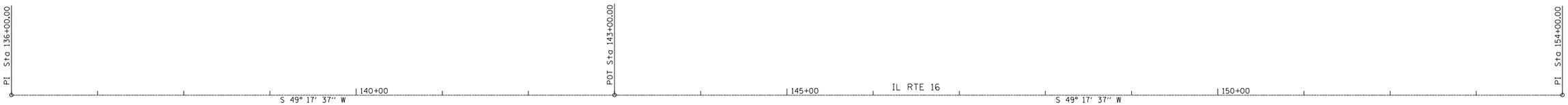
ALIGNMENT, TIES AND BENCHMARKS
IL 16 SN 068–0509

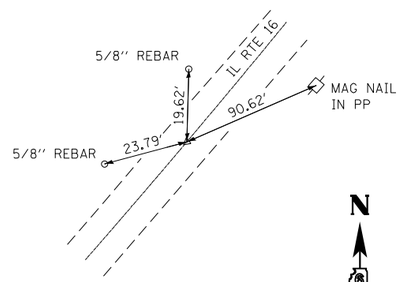
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3)	*	142	23
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

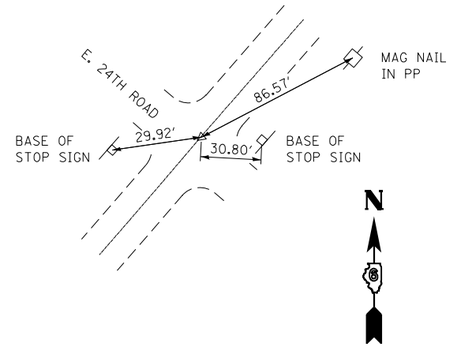
ALIGNMENT COORDINATES - IL 16			
	STATION	N	E
POT	136+00.00	970177.7470	2556938.1000
POT	143+00.00	969721.2190	2556407.4568
POT	154+00.00	969003.8179	2555573.5888





P.I. STA. 136 + 00.00

MAG NAIL



P.O.T. STA. 154 + 00.00

MAG NAIL

BENCHMARK CB–101

ELEVATION 670.37

RR SPIKE IN N. SIDE TEL POLE
ON S. SIDE IL 16 6TH TEL POLE
E. OF SN 068-0016
STA. 130+45.6, 40.6' LT.

BENCHMARK CB–1

ELEVATION 668.47

CHISELED "□" ON TOP NORTHWEST
WINGWALL SN 068-0016
STA. 143+12.61, 16.5' RT

BENCHMARK 1C

ELEVATION 669.076

CHISELED "□" ON S.E. CORNER OF
BRIDGE CURB SN 068-0016 ON
S. SIDE OF IL-16
STA. 142+87, 15.5' LT.

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2101-7188\2 CAD\Data SN 011-7039 (01-2513)\CADsheets\D672984-sht-016-ATR-003.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 120.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

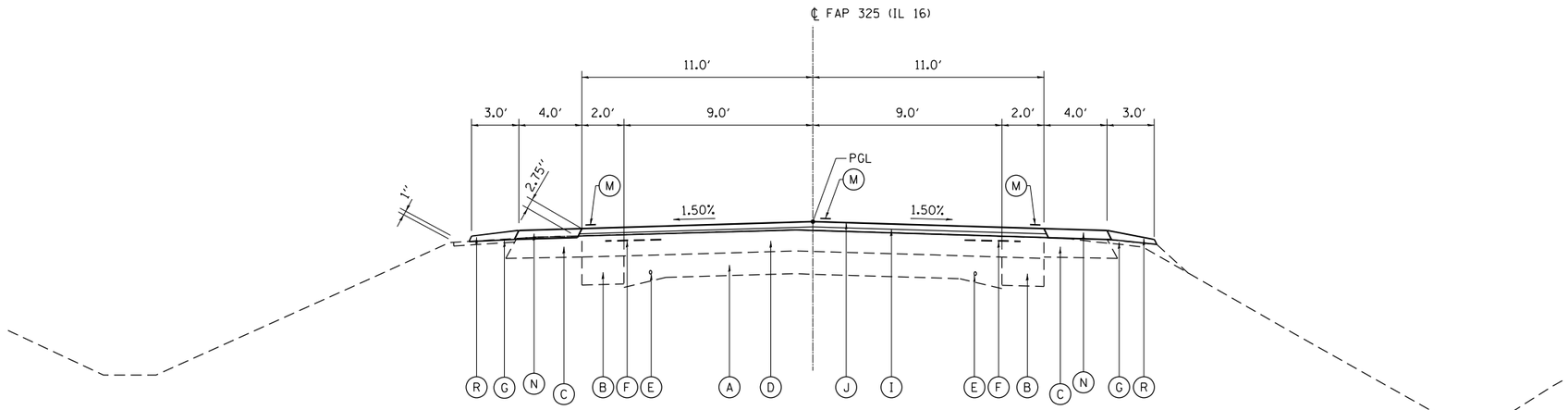
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS
IL 16 SN 068–0508

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3)	*	142	24
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

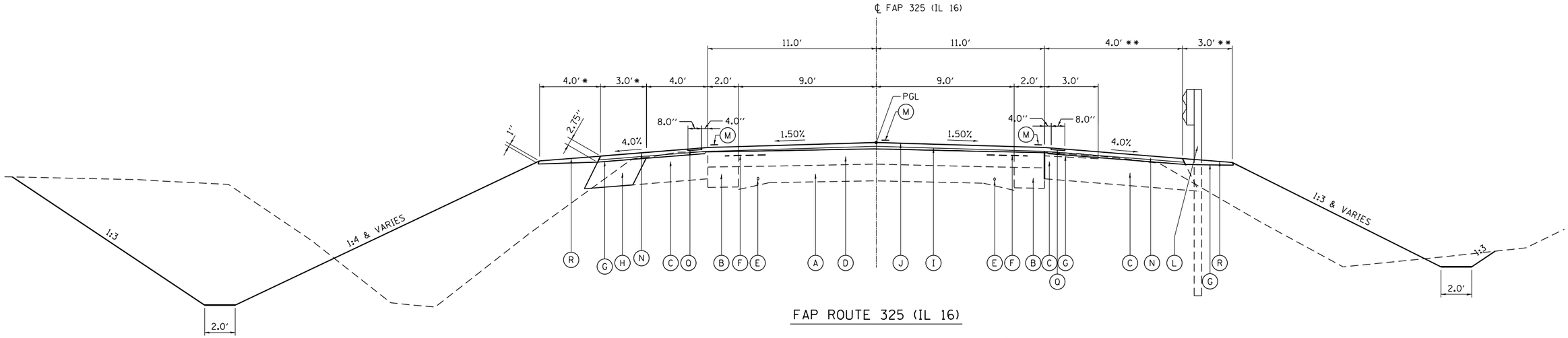


FAP ROUTE 325 (IL 16)

STA. 359+00.00 TO STA. 360+53.00

LEGEND

- (A) EXIST. 9-6-9 PCC PAVEMENT
- (B) EXIST. HMA WIDENING, 9″
- (C) EXIST. HMA SHOULDERS 8″ & VAR.
- (D) EXIST. HMA SURFACE, 6″
- (E) EXIST. SMOOTH BAR
- (F) EXIST. STRIP REF. CRACK CONTROL TREATMENT
- (G) EXIST. AGGREGATE WEDGE SHOULDERS, TYPE B
- (H) PROP. HMA BASE COURSE, 8″
- (I) PROP. HMA BINDER COURSE IL-9.5FG, N50, 1 1/4″ AVG.
- (J) PROP. HMA SURFACE COURSE, MIX ″C″, N50, 1 1/2″
- (K) PROP. AGGREGATE SHOULDERS, TYPE B
- (L) PROP. GUARDRAIL (SEE SCHEDULE)
- (M) PROP. PAVEMENT MARKING, LINE 5″
- (N) PROP. HMA SHOULDERS, 2-3/4″
- (O) PROP. GRANULAR CULVERT BACKFILL
- (P) PROP. BASE COURSE (OPTION) 8″
- (Q) PROP. SHOULDER RUMBLE STRIPS, 8 INCH
- (R) PROP. AGGREGATE WEDGE SHOULDERS, TYPE B



FAP ROUTE 325 (IL 16)

LT STA. 360+53.00 TO STA. 361+00.00 - *WIDTH OF HMA BASE COURSE VARIES FROM 2.5′ TO 3.0′
WIDTH OF AGGREGATE WEDGE SHLDR VARIES FROM 3.0′ TO 4.0′

RT STA. 360+53.00 TO STA. 361+00.00 - ** WIDTH OF AGGREGATE WEDGE SHLDR VAREIS FROM 3.0′ TO 2.0′

LT & RT STA. 361+00.00 TO STA. 363+50.00
LT & RT STA. 364+54.00 TO STA. 364+71.18 BK

NOTE : STA. EQU. 364+71.18 = 0+00.00 AH

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 2000.0000 ′ / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/11/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
IL 16 SN 011–2513

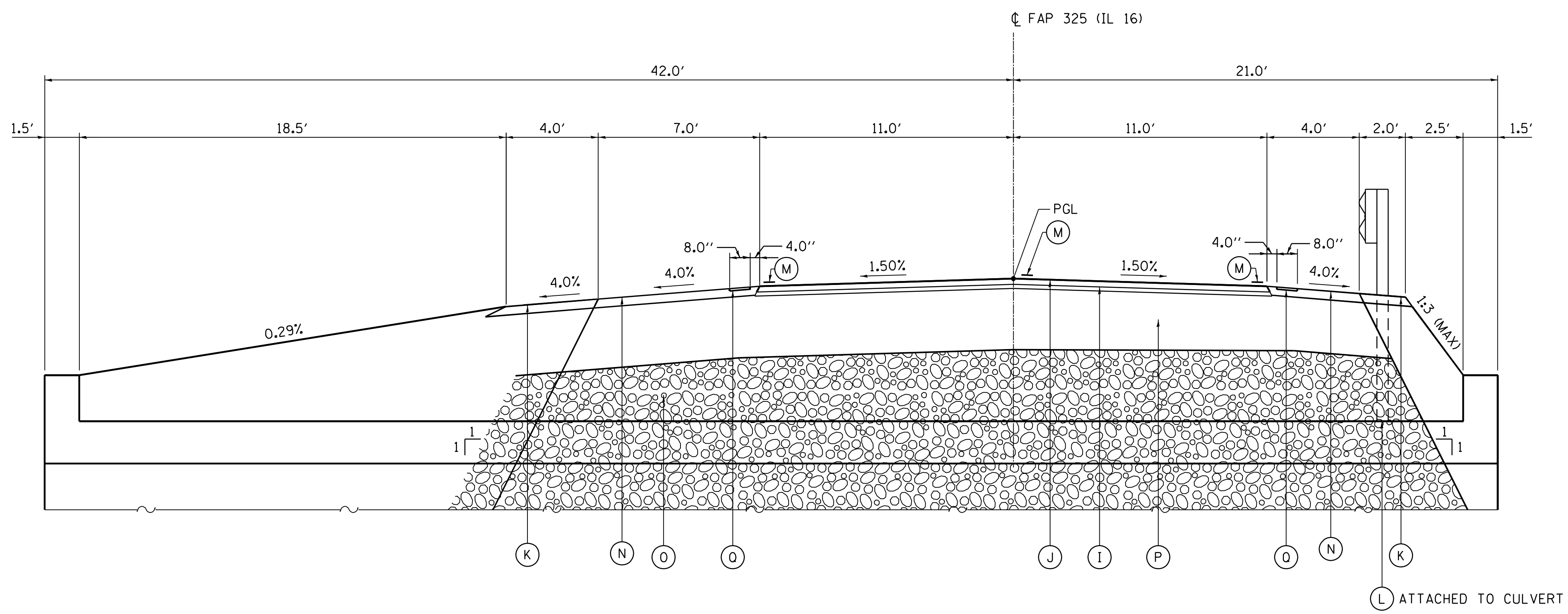
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	25
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN

LEGEND

- (A) EXIST. 9-6-9 PCC PAVEMENT
- (B) EXIST. HMA WIDENING, 9"
- (C) EXIST. HMA SHOULDERS 8" & VAR.
- (D) EXIST. HMA SURFACE, 6"
- (E) EXIST. SMOOTH BAR
- (F) EXIST. STRIP REF. CRACK CONTROL TREATMENT
- (G) EXIST. AGGREGATE WEDGE SHOULDERS, TYPE B
- (H) PROP. HMA BASE COURSE, 8"
- (I) PROP. HMA BINDER COURSE IL-9.5FG, N50, 1 1/4" AVG.
- (J) PROP. HMA SURFACE COURSE, MIX "C", N50, 1 1/2"
- (K) PROP. AGGREGATE SHOULDERS, TYPE B
- (L) PROP. GUARDRAIL (SEE SCHEDULE)
- (M) PROP. PAVEMENT MARKING, LINE 5"
- (N) PROP. HMA SHOULDERS, 2-3/4"
- (O) PROP. GRANULAR CULVERT BACKFILL
- (P) PROP. BASE COURSE (OPTION) 8"
- (Q) PROP. SHOULDER RUMBLE STRIPS, 8 INCH
- (R) PROP. AGGREGATE WEDGE SHOULDERS, TYPE B



FAP ROUTE 325 (IL 16)

STA 363+50.00 TO STA 364+54.00

MODEL: Default
FILE NAME: \ROCHELLE\Data\Drawings\Microstation\21\21-7188\21CAD\Data SN 011-7039 (011-2513)\CAD\sheets\0677984-sht-typicals-2513.dgn

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 2000.0000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/9/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

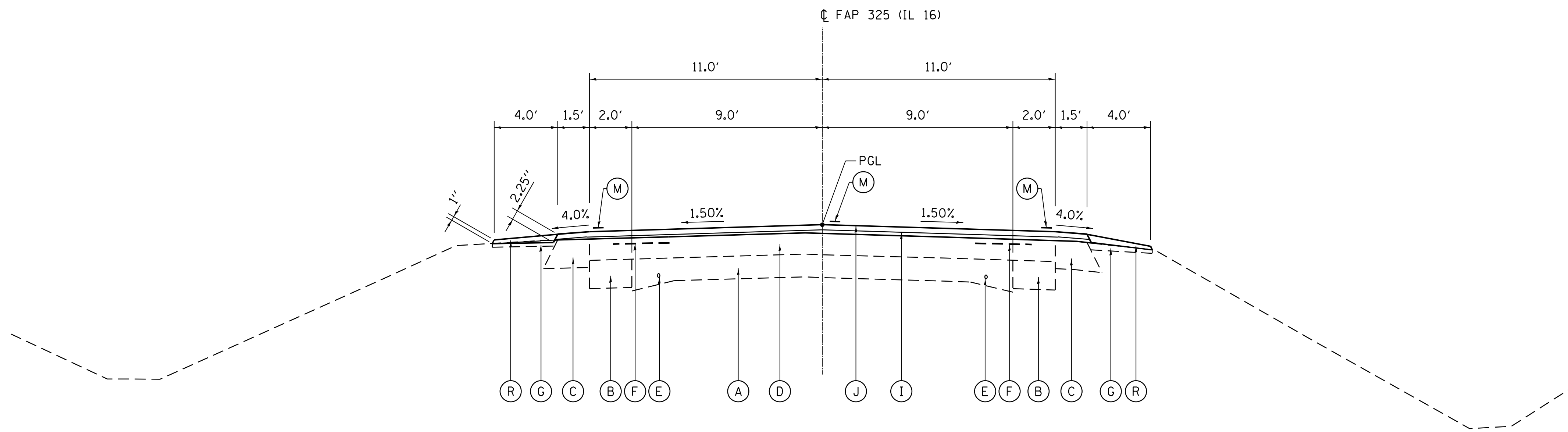
TYPICAL SECTIONS
IL 16 SN 011-2513

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	26
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

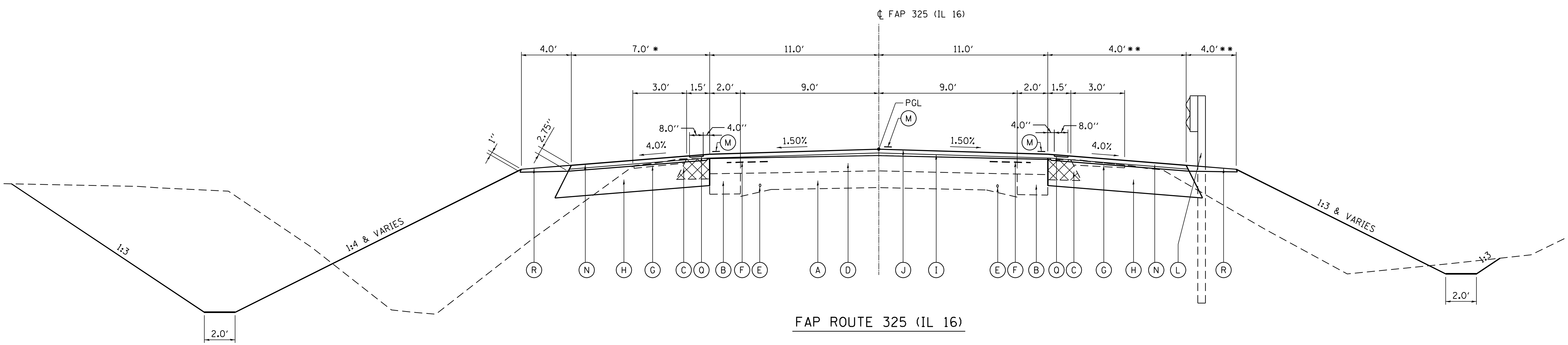


FAP ROUTE 325 (IL 16)

STA. 2+80.00 TO STA. 4+00.00

LEGEND

- (A) EXIST. 9-6-9 PCC PAVEMENT
- (B) EXIST. HMA WIDENING, 9″
- (C) EXIST. HMA SHOULDERS 8″ & VAR.
- (D) EXIST. HMA SURFACE, 6″
- (E) EXIST. SMOOTH BAR
- (F) EXIST. STRIP REF. CRACK CONTROL TREATMENT
- (G) EXIST. AGGREGATE WEDGE SHOULDERS, TYPE B
- (H) PROP. HMA BASE COURSE, 8″
- (I) PROP. HMA BINDER COURSE IL-9.5FG, N50, 1 1/4″ AVG.
- (J) PROP. HMA SURFACE COURSE, MIX ″C″, N50, 1 1/2″
- (K) PROP. AGGREGATE SHOULDERS, TYPE B
- (L) PROP. GUARDRAIL (SEE SCHEDULE)
- (M) PROP. PAVEMENT MARKING, LINE 5″
- (N) PROP. HMA SHOULDERS, 2-3/4″
- (O) PROP. GRANULAR CULVERT BACKFILL
- (P) PROP. BASE COURSE (OPTION) 8″
- (Q) PROP. SHOULDER RUMBLE STRIPS, 8 INCH
- (R) PROP. AGGREGATE WEDGE SHOULDERS, TYPE B



FAP ROUTE 325 (IL 16)

LT STA. 0+00.00 TO STA. 2+10.00
LT STA. 2+10.00 TO STA. 2+80.00 - * WIDTH OF HMA BASE COURSE / WIDENING VARIES FROM 7.0′ TO 2.5′

RT STA. 0+00.00 TO STA. 2+56.00
RT STA. 2+56.00 TO STA. 2+80.00 - ** WIDTH OF HMA BASE COURSE VARIES FROM 4.0′ TO 2.5′ WIDTH OF AGGREGATE SHOULDERS VARIES FROM 2.0′ TO 4.0′

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 2000.0000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/11/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

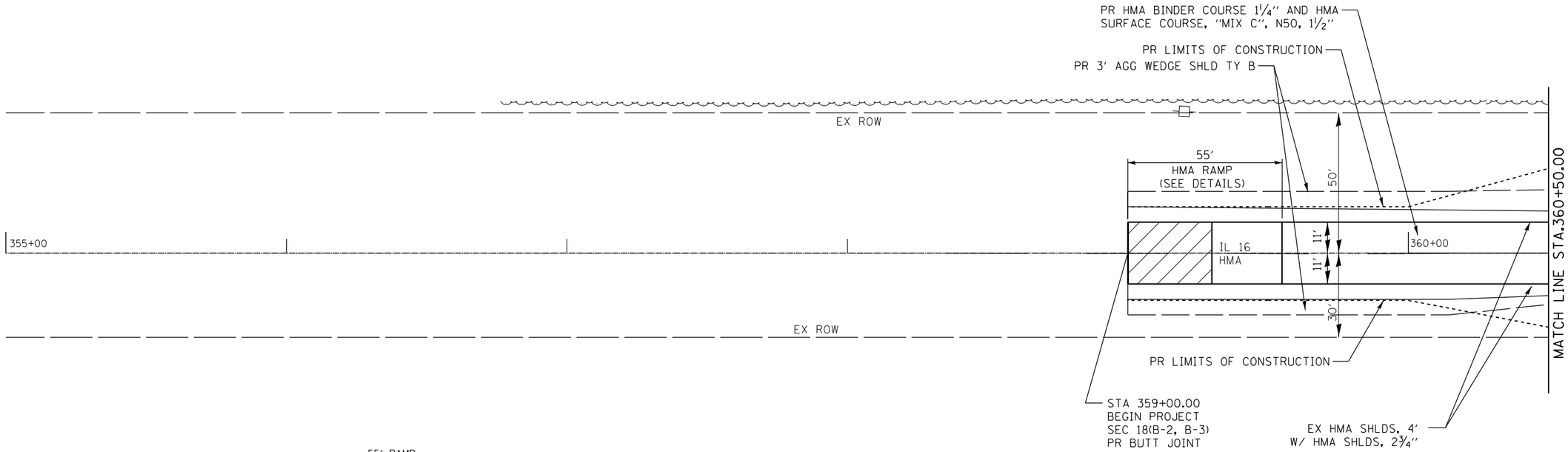
TYPICAL SECTIONS
IL 16 SN 011-2513

SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	27
	CONTRACT NO. 72984			
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN



RAMP DETAIL

STA. 359+00.00 TO STA. 359+55.00

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 011-2513

SCALE: | SHEET 1 OF 3 SHEETS | STA. 359+00 TO STA. 360+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	28
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

JOSEPH ANDREW & LUCY ANN GLEESPAN

PARCEL NO. 6196113

363+00
150.0' LT

364+00
150.0' LT

PR TCE

STA 364+08.00 (45° SKEW - RT FWD)
PR DBL 10.0' x 4.0' CIP SN 011-2513
(SEE DETAILS)

20' 0' 20'

PR HMA BINDER AND SURFACE CSE
OVER BASE COURSE, OPTION 8"
EXIST CONC PAVEMENT WITH HMA TBR

24" X 29' CMP TBR

4" CLAY
FIELD TILE
STONE RIPRAP,
CL A5

LT STA 364+50.00
PR PIPE CULV 24"x 42'
CLASS D, TYPE 1
+29.00, 45.0' LT DSFL = 680.23
+00.00, 42.0' LT USFL = 680.40
2 - METAL END SEC 24"

STA 363+41.00
EX 8' W x 4' H BOX CULV
TO BE FILLED w/ CLSM
PR 2 - 48" x 12' (EAST END) TEMP
PIPE CULV w/ CONC. COLLAR
FOR STAGE CONSTRUCTION
(SEE DETAILS)

364+00
65.0' LT

361+50
50.0' LT

363+00
65.0' LT

POT Sta 363+41.00

PR HMA BINDER COURSE 1¼" AND HMA
SURFACE COURSE, "MIX C", N50, 1½"

PR 4.0' AGG WEDGE SHLD TY B

PR LIMITS OF CONSTRUCTION

PR ROW

+53.0
17.5' LT

+53.0
15.0' LT

+00.0
18.0' LT

+26.3
47.5' LT

EX ROW

+90.0
47.5' LT

FE

PR ROW

POT Sta 364+71.18
POT Sta 0+00.00

1+00.00
45.93' LT

FE
DIRT

24"
CMP

+34.59

20'

PR HMA BASE CSE 8", 3'

7' HMA
SHLD

45.93'

50'

IL 16
HMA

BUTT
JOINT

0+00

11'

11'

MATCH LINE STA.360+50.00

30'

+50

+54

EX ROW

EX. PERM. CONST. EASEMENT

4' HMA
SHLD

MATCH LINE STA.1+50.00

+53.0
15.0' RT

+53.0
18.0' RT

PR 2.0' AGG SHLD TY B

+00.0
17.0' LT

STONE RIPRAP,
CL A5

PR LIMITS OF
CONSTRUCTION

THIS WING WALL
IS LAYING FLAT

361+00.00
30.0' RT

361+00.00
40.0' RT

PR SHLDS
(PR HMA BASE CSE, 8"
W/HMA SHLD 2¾")
EX HMA SHLD TBR

48" CONC

U P R R

U P R R

PR GUARDRAIL
(SEE SCHEDULE)

SW¼ SEC.33

362+56.25
363+06.25
363+18.75
363+68.75
364+06.25
364+43.75
0+97.57
1+47.57

50'
TBT T1

12.5'
SPBGR A

50.00'
LONG-SPAN
OVER CULVERT

37.5'
SPBGR A

37.5'
STRONG POST
ATTACHED
TO CULVERT

125'
SPBGR A

50'
TBT T1

EX 4' HMA SHLD TO REMAIN
w/ HMA SHLD 2¾"

LEGEND

PR HMA SURFACE REMOVAL - BUTT JOINT

PR PAVED SHOULDER REMOVAL

PR PAVEMENT REMOVAL

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/10/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 011-2513

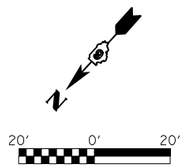
SCALE: | SHEET 2 OF 3 SHEETS | STA. 360+50 TO STA. 1+50

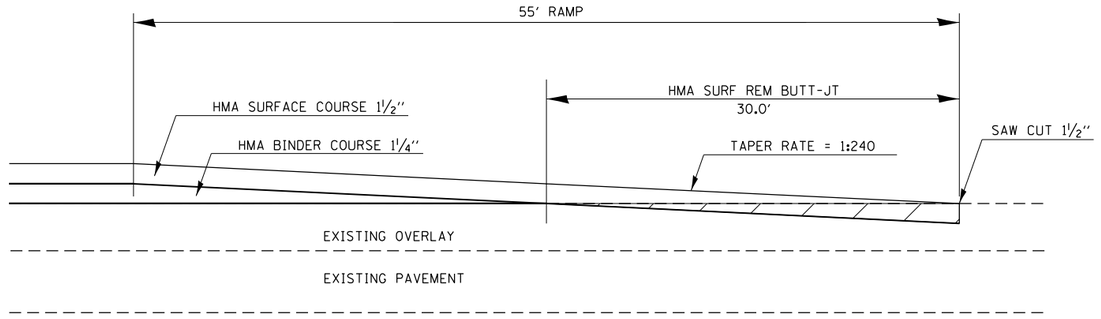
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	29

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

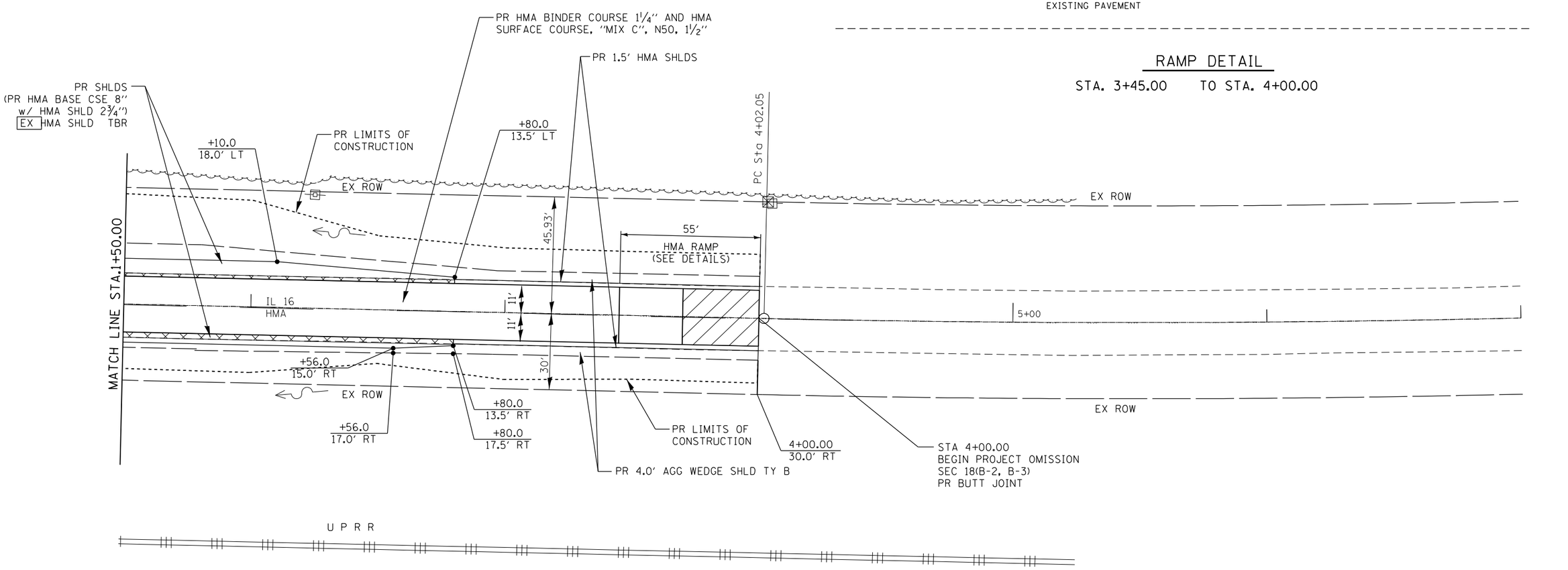
* MONTGOMERY & CHRISTIAN





RAMP DETAIL

STA. 3+45.00 TO STA. 4+00.00



LEGEND

- PR HMA SURFACE REMOVAL - BUTT JOINT
- PR PAVED SHOULDER REMOVAL
- PR PAVEMENT REMOVAL

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 011–2513

SCALE: | SHEET 3 OF 3 SHEETS | STA. 1+50 TO STA. 4+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	30
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

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

PROFILE
SURVEYED
PLOTTED
CROSS CHECKED
R.O.W. CHECKED
B.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
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	PLOT DATE = 5/2/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

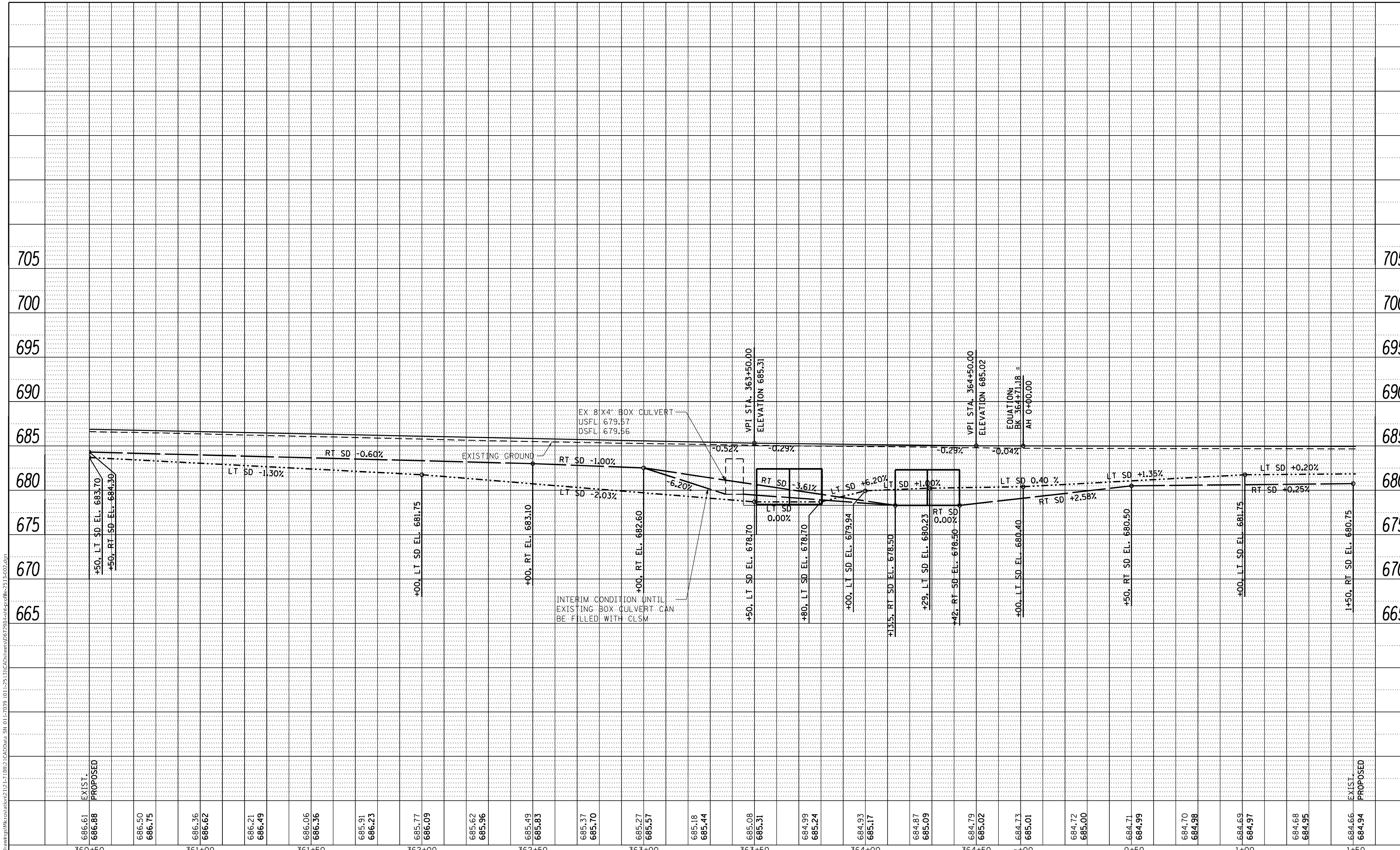
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
IL 16 SN 011–2513

SCALE: | SHEET 1 OF 3 SHEETS | STA. 359+00 | TO STA. 360+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	31
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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PROFILE — NOTE BOOK NO. — SURVEYED / PLOTTED / GRADES CHECKED / BM. NOTED / STRUCTURE NOTATNS CHKED — BY — DATE

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/2/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
IL 16 SN 011–2513

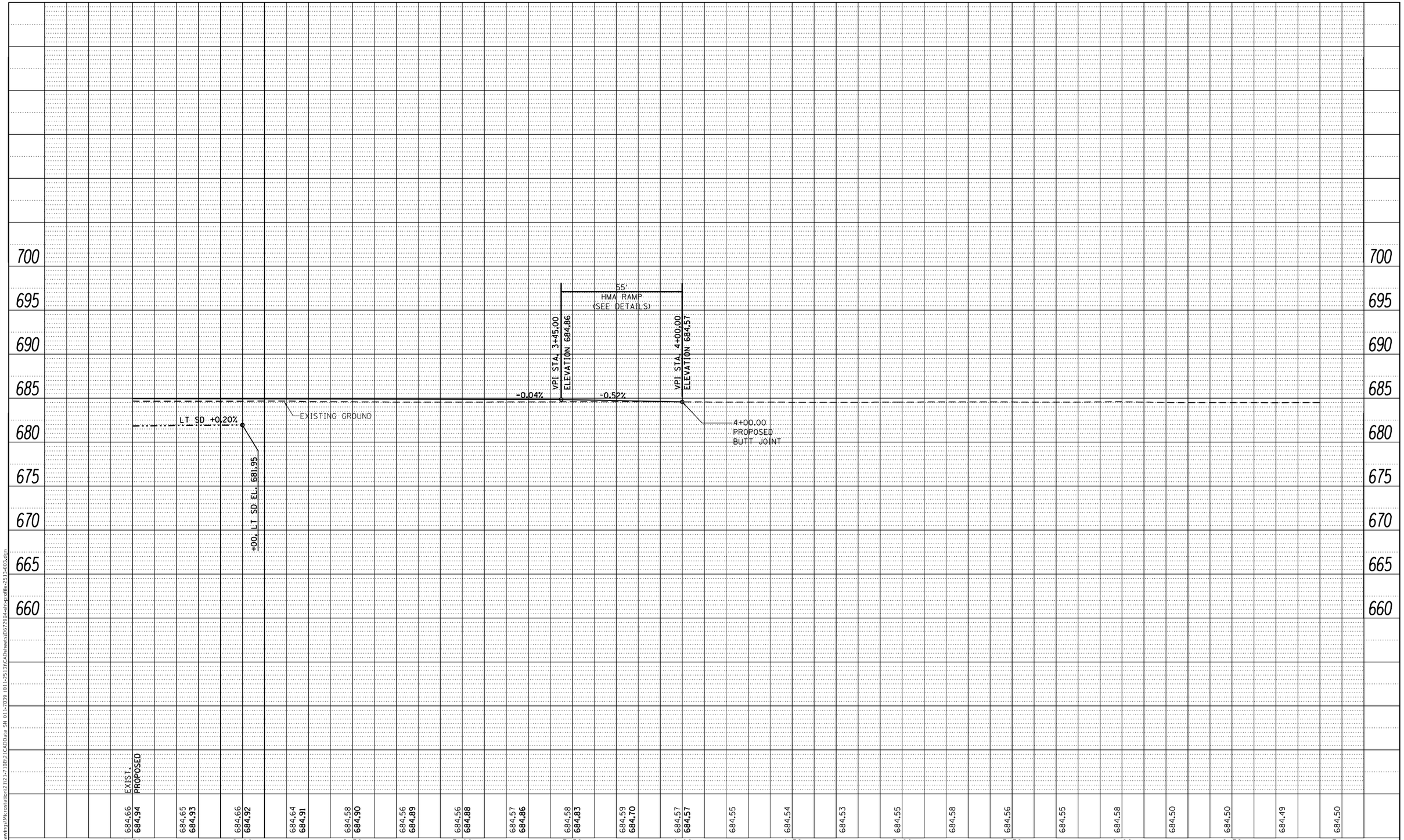
SCALE: | SHEET 2 OF 3 SHEETS | STA. 360+50 TO STA. 1+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	32

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN



PLAN
SURVEYED
PLOTTED
CHECKED
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CHECKED
NOTE BOOK
NO.
BY
DATE

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
		DRAWN - CFC	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -	
	PLOT DATE = 5/2/2023	DATE -	REVISED -	

PROFILE
IL 16 SN 011–2513
SCALE: | SHEET 3 OF 3 SHEETS | STA. 1+50 | TO STA. 4+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	33

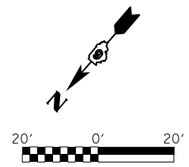
CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT

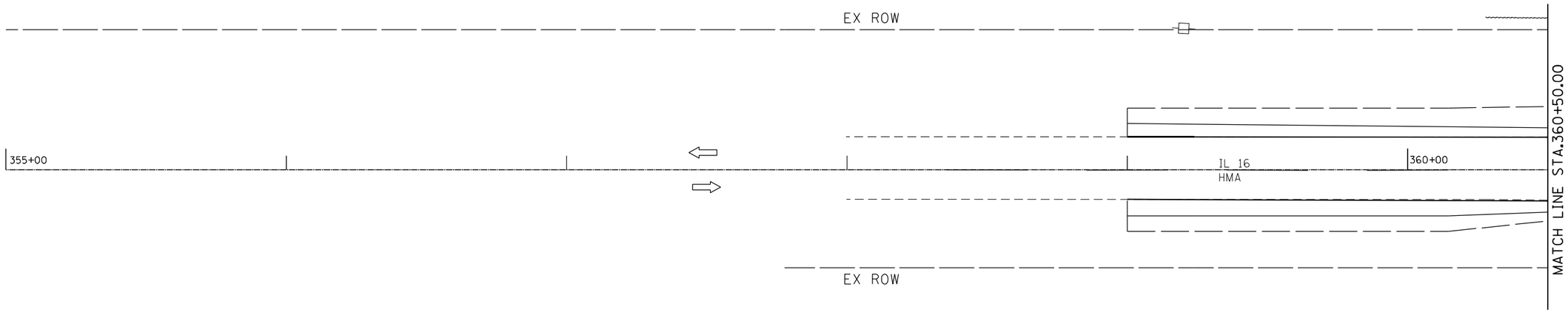
FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

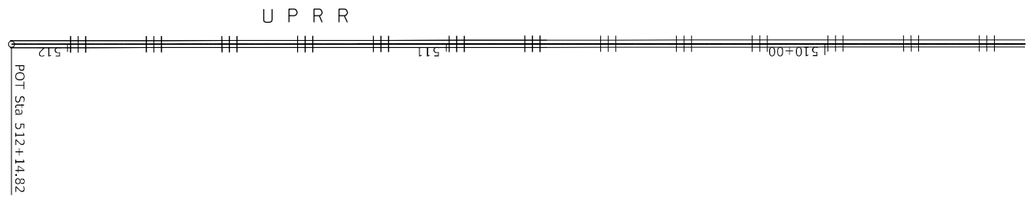
* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER







GENERAL NOTES

1. THIS TRAFFIC CONTROL PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD 701321 AND AS DIRECTED BY THE ENGINEER.
2. VERTICAL PANELS, DRUMS WITH STEADY BURNING LIGHTS, TYPE III BARRICADES, SIGNS, DETECTOR LOOPS, TEMPORARY PAVEMENT MARKINGS, AND TYPE C BIDIRECTIONAL REFLECTORS SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
3. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS (PH: (217) 785-5306) AT LEAST SEVEN DAYS PRIOR TO IMPLEMENTING ANY STAGE I TRAFFIC CONTROL AND AT LEAST SEVEN DAYS PRIOR TO IMPLEMENTING STAGE II TRAFFIC CONTROL.
4. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS (PH: (217) 785-5306) AT LEAST THREE DAYS PRIOR TO ACTIVATING THE TEMPORARY TRAFFIC SIGNALS.

SEQUENCE OF CONSTRUCTION

PRE-STAGE I

1. INSTALL ALL NECESSARY ITEMS IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701326
2. INSTALL TEMPORARY EROSION CONTROL AS SHOWN IN THE PLANS AS NECESSARY DURING ALL STAGES OF CONSTRUCTION.
3. CONSTRUCT EARTHWORK, HMA BASE COURSE 8" AND PIPE EXTENSIONS LEFT AND RIGHT OF THE CENTERLINE.

STAGE I

1. INSTALL STAGE I TRAFFIC CONTROL AND PROTECTION AS DETAILED IN THE PLANS AND ACCORDING TO STANDARD 701321.
2. PLACE TRAFFIC IN STAGE I LANE.
3. INSTALL TEMPORARY SHEET PILING. REMOVE STAGE I PORTION OF THE EXISTING PAVEMENT AND STRUCTURE. CONSTRUCT STAGE I PORTION OF THE PROPOSED BOX CULVERT AND PAVEMENT.
4. INSTALL PROPOSED GUARDRAIL AND TERMINALS ON THE RIGHT SIDE AS SHOWN IN THE PLANS.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL
IL 16 SN 011-2513

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	34
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)
* MONTGOMERY & CHRISTIAN

MODEL: Default
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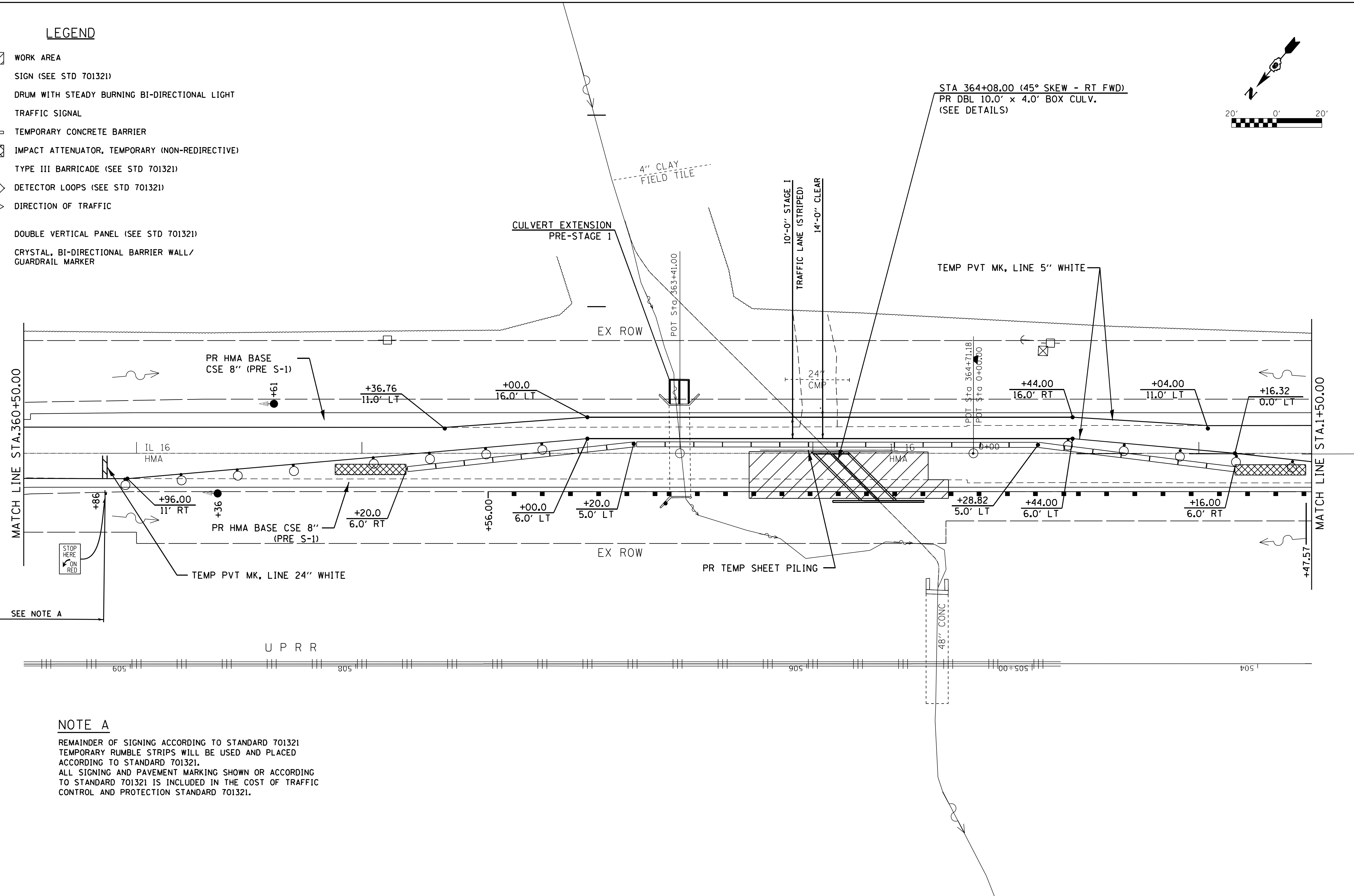
LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/10/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL
IL 16 SN 011-2513

SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	35
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN

MODEL: Default
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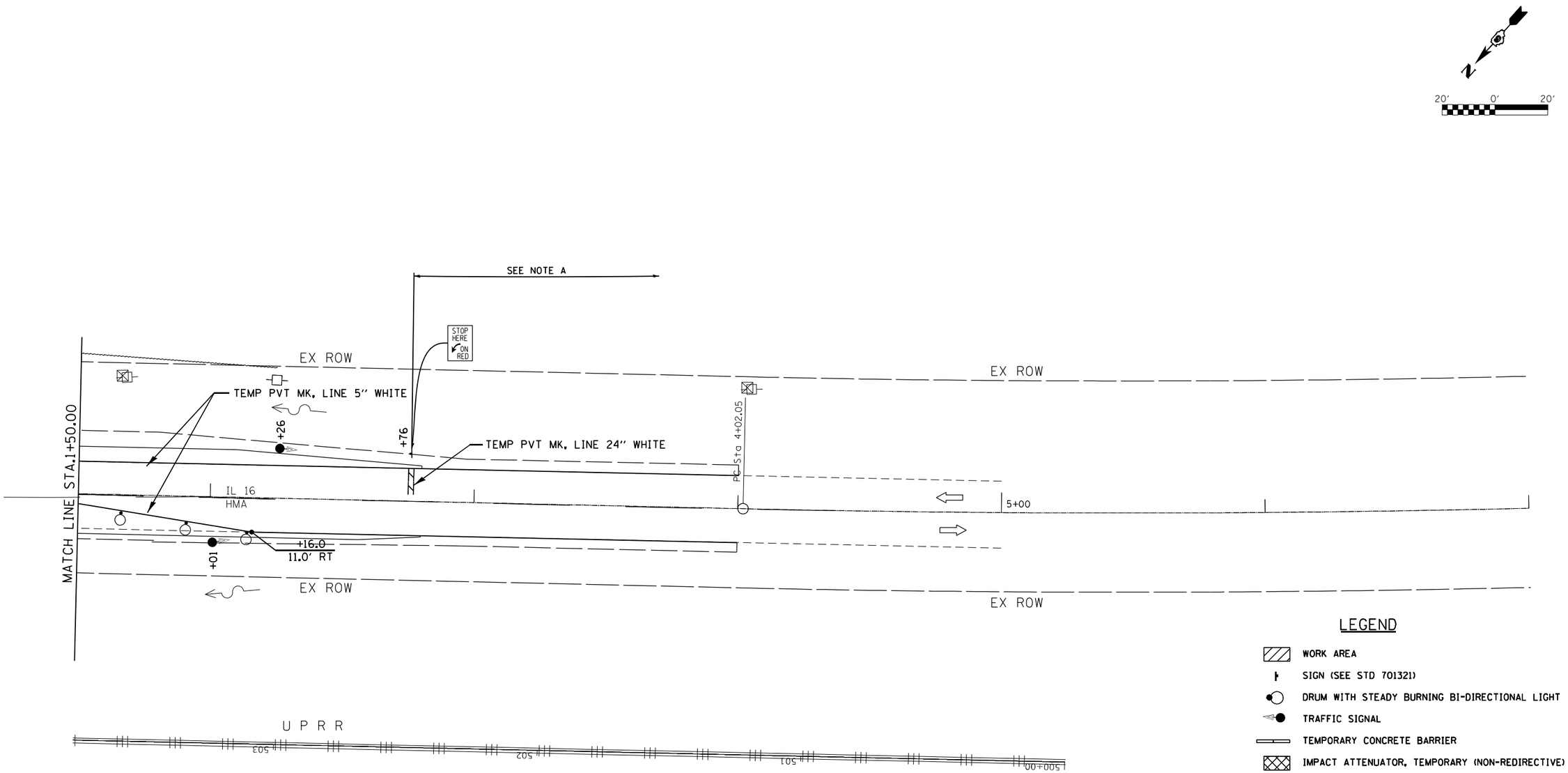

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL
IL 16 SN 011-2513

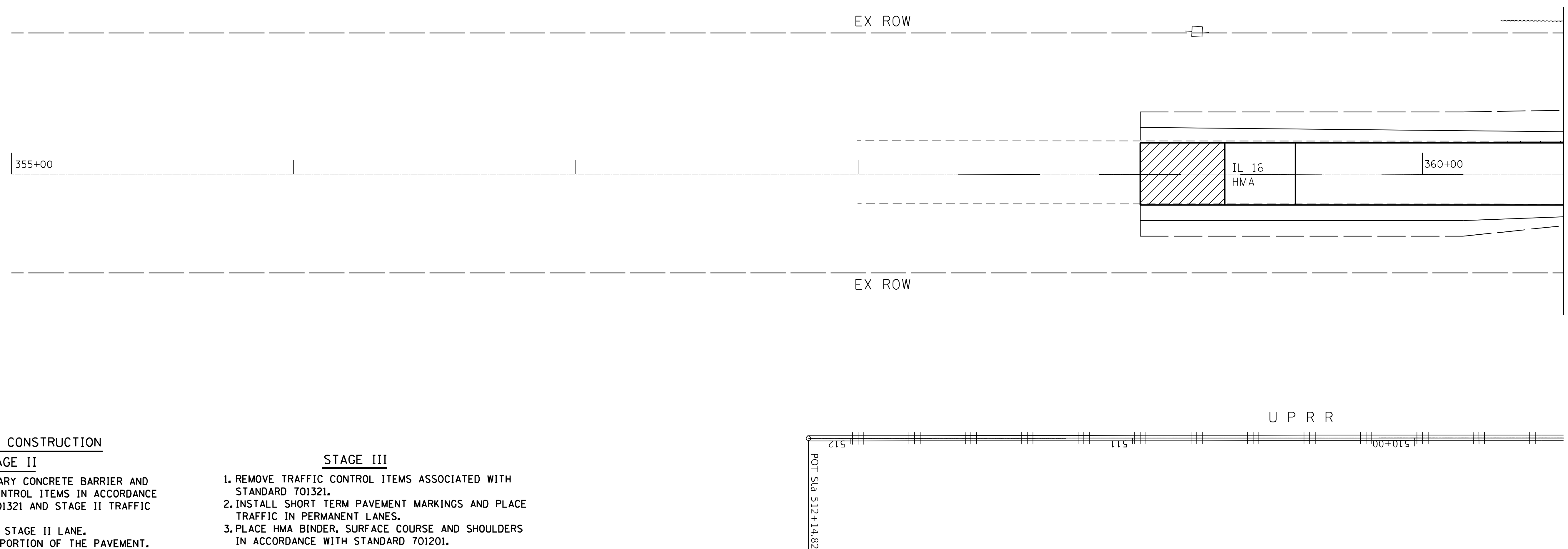
SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	36
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



SEQUENCE OF CONSTRUCTION

STAGE II

1. RELOCATE TEMPORARY CONCRETE BARRIER AND OTHER TRAFFIC CONTROL ITEMS IN ACCORDANCE WITH STANDARD 701321 AND STAGE II TRAFFIC CONTROL DETAILS.
2. PLACE TRAFFIC IN STAGE II LANE. REMOVE STAGE II PORTION OF THE PAVEMENT.
3. CONSTRUCT STAGE II PORTION OF THE PROPOSED BOX CULVERT AND PAVEMENT.
4. REMOVE TEMPORARY CULVERT EXTENSIONS AND CONCRETE COLLARS AS SHOWN IN PLANS. FILL EX CULVERT AT STA 363+41.00 WITH CLSM.

STAGE III

1. REMOVE TRAFFIC CONTROL ITEMS ASSOCIATED WITH STANDARD 701321.
2. INSTALL SHORT TERM PAVEMENT MARKINGS AND PLACE TRAFFIC IN PERMANENT LANES.
3. PLACE HMA BINDER, SURFACE COURSE AND SHOULDERS IN ACCORDANCE WITH STANDARD 701201.
4. INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH STANDARD 701311.

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/1/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 011–2513

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

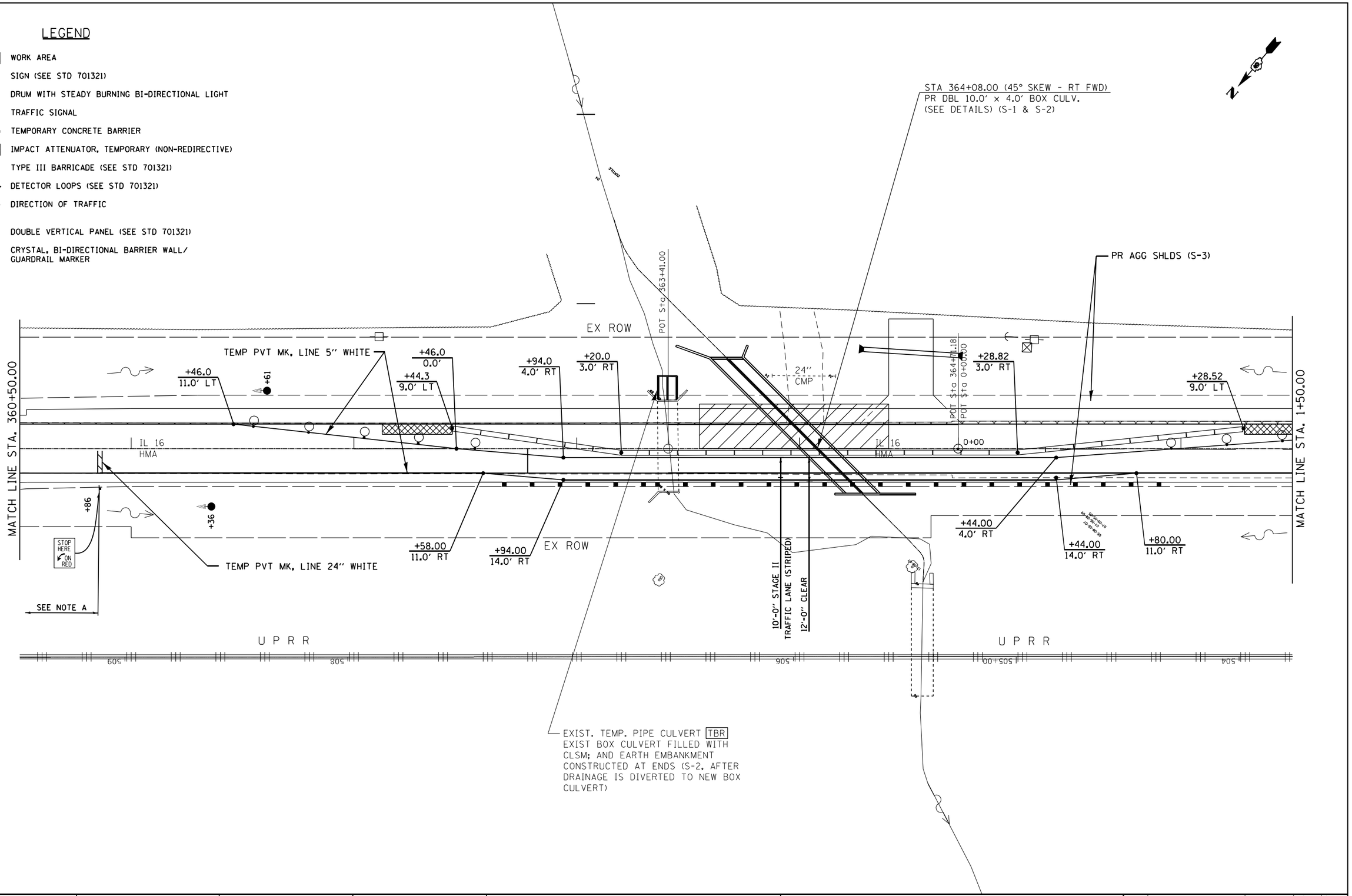
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	37

CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)
* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

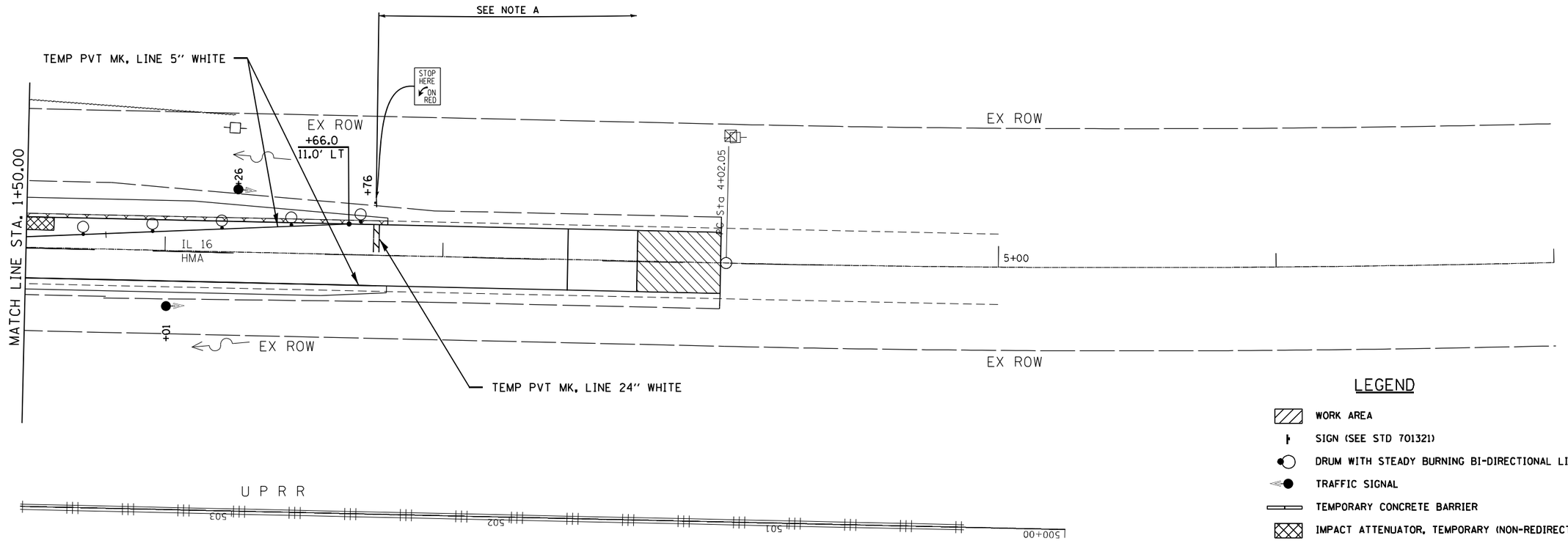
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 011-2513

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	38
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

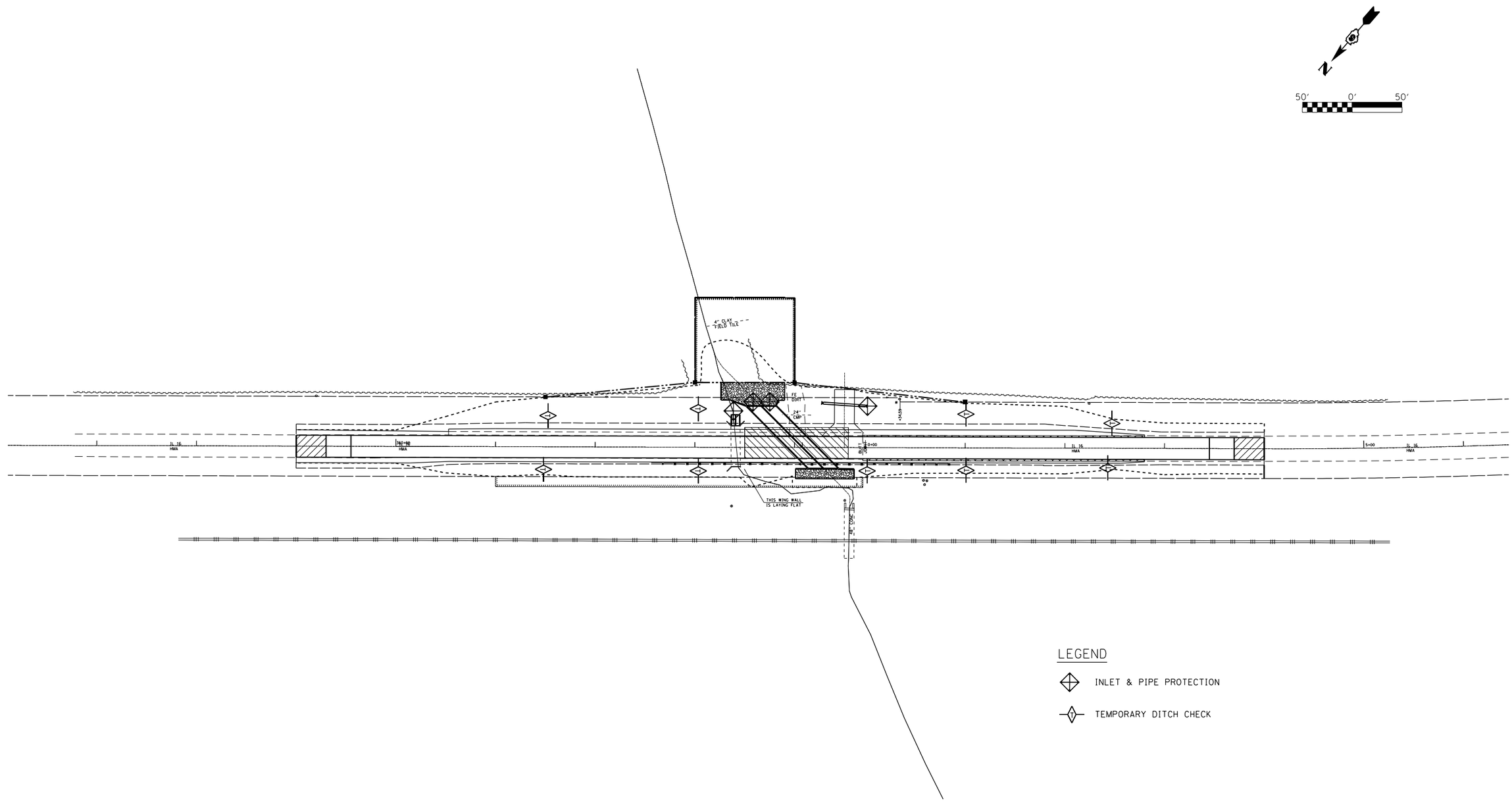
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 011-2513

SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	39
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN



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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
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	PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
IL 16 SN 011-2513

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	40
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

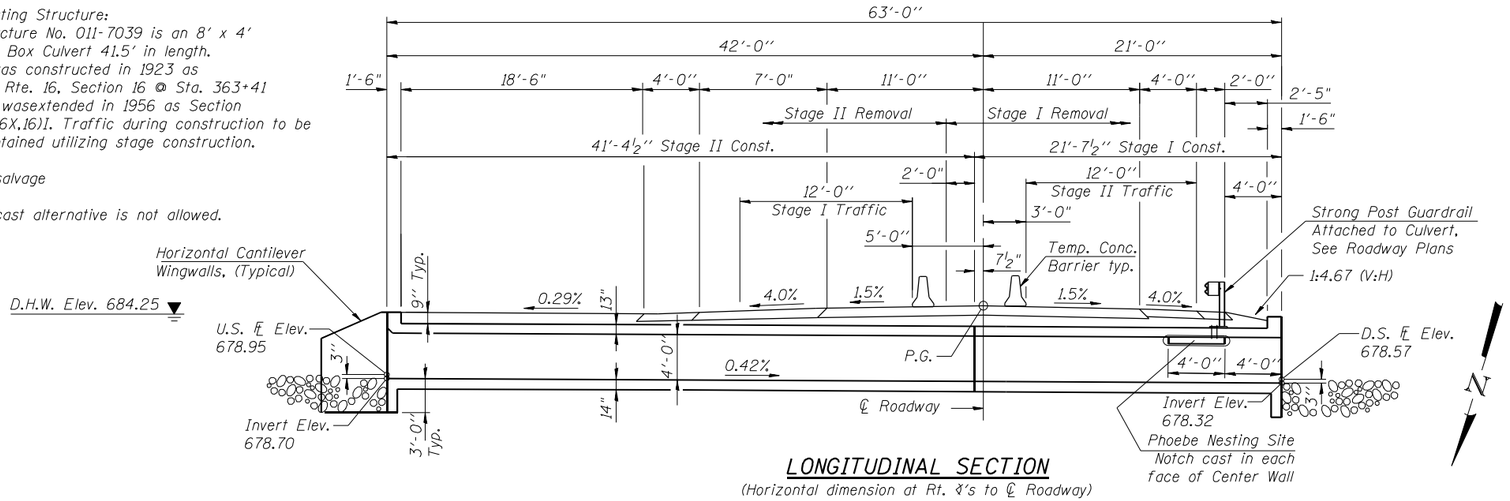
* MONTGOMERY & CHRISTIAN

Bench Mark: BM#49 - Chiseled " "□on West end of South headwall.
Station 363+44.20, 21.6' Lt., Elev. 683.826

Existing Structure:
Structure No. 011-7039 is an 8' x 4' R.C. Box Culvert 41.5' in length. It was constructed in 1923 as SBI Rte. 16, Section 16 @ Sta. 363+41 and wasextended in 1956 as Section (15,16X,16)I. Traffic during construction to be maintained utilizing stage construction.

No salvage

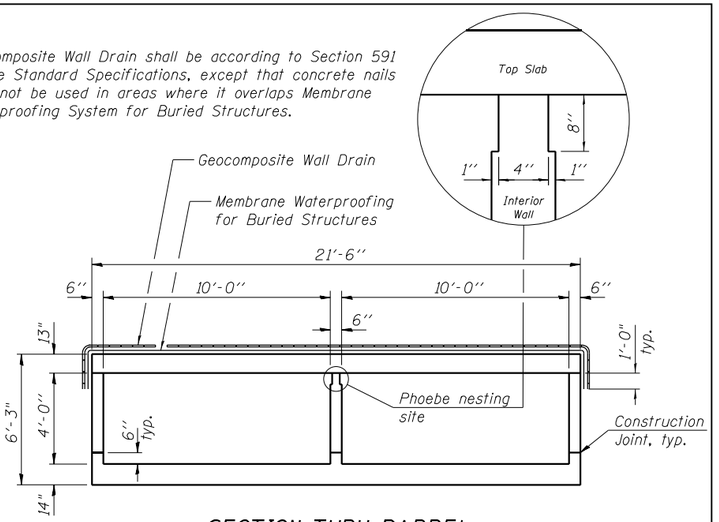
Precast alternative is not allowed.



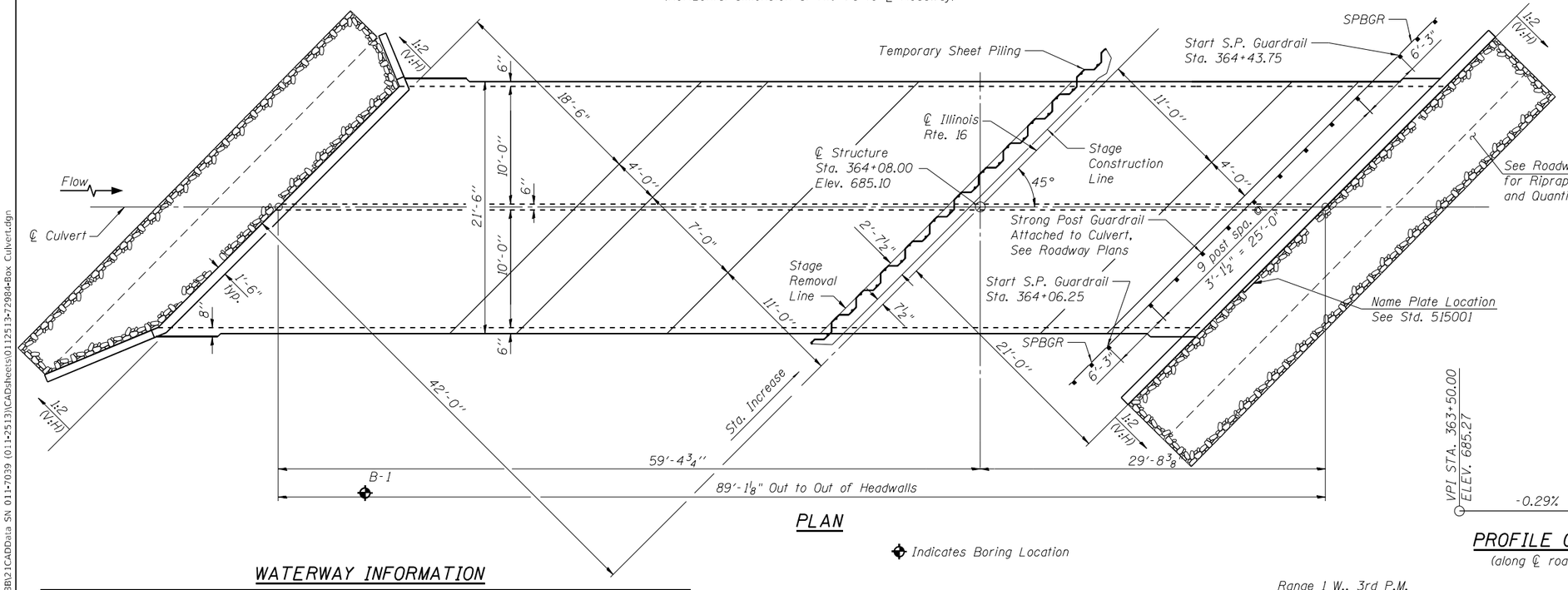
LONGITUDINAL SECTION

(Horizontal dimension at Rt. 4's to ℄ Roadway)

Note:
Geocomposite Wall Drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Membrane Waterproofing System for Buried Structures.



SECTION THRU BARREL



PLAN

◈ Indicates Boring Location

WATERWAY INFORMATION

Trib. to So. Fork Sangamon River — Existing Overtopping Elevation = 684.70 ft. @ Sta. 364+69
Drainage Area = 0.21 sq. mi. — Proposed Overtopping Elevation = 684.90 ft. @ Sta. 364+69

Flood	Freq. Year	'Q' C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head (ft.) Exist.	Head (ft.) Prop.	Headwater Elev. (ft.) Exist.	Headwater Elev. (ft.) Prop.
	10	190	32	80	683.44	0.6	0	684.01	683.36
Design	50	330	32/70	80	684.25	0.7	0	684.97	684.28
Base	100	390	32/90	80	684.44	0.6	0.2	685.04	684.67
Overtopping (Exist.)	20	230	Culv./Weir	Culv./Weir					
Overtopping (Prop.)	140	430							
Max. Calc.	500	550	32/170	80/160	684.90	0.4	0.3	685.25	685.22

Datum: NAVD 88
All-Time H.W.E. & Date: 684.65 2009
850' West of culvert

10 yr. velocity thru existing Structure = 5.88 fps
10 yr. velocity thru proposed structure = 2.51 fps

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

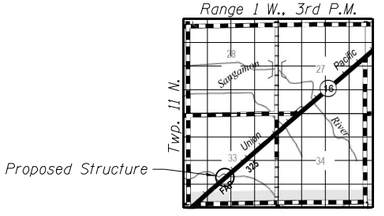
Allow 50#/sq. ft. for future wearing surface.

PROFILE GRADE

(along ℄ roadway)

LICENSED STRUCTURAL ENGINEER
MARY COOMBE BLOXDORF
4859
SPRINGFIELD
STATE OF ILLINOIS

ILLINOIS STRUCTURAL NO. 4859
EXPIRES 11/30/24
DATE: 04/28/2023



LOCATION SKETCH

GENERAL PLAN
ILLINOIS RTE. 16 OVER
TRIBUTARY TO SOUTH FORK SANGAMON RIVER
F.A.P. RTE. 325 - SEC. 18(B-2, B-3)
CHRISTIAN COUNTY
STATION 364+08.00
STRUCTURE NO. 011-2513

MODEL: 001
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - SEG	REVISED -	
	CHECKED - JGT	REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - DAP	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - JGT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 011-2513
SHEET 1 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	142	41
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

1. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

2. The Contractor shall sawcut the existing slabs and walls at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

3. If the culvert barrel is lowered to more closely match existing flowline, the foundation recommendations do not change. "Contact the District Geotechnical Engineer to verify foundation conditions meet plan requirements".

STATION 364+08.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 325 SEC. 18(B-2, B-3)
LOADING HL-93
STR. NO. 011-2513

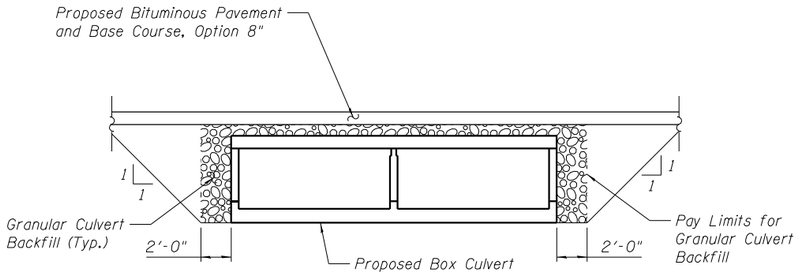
NAME PLATE

Locate Name Plate on Headwall.
(See Std. 515001)

INDEX OF SHEETS

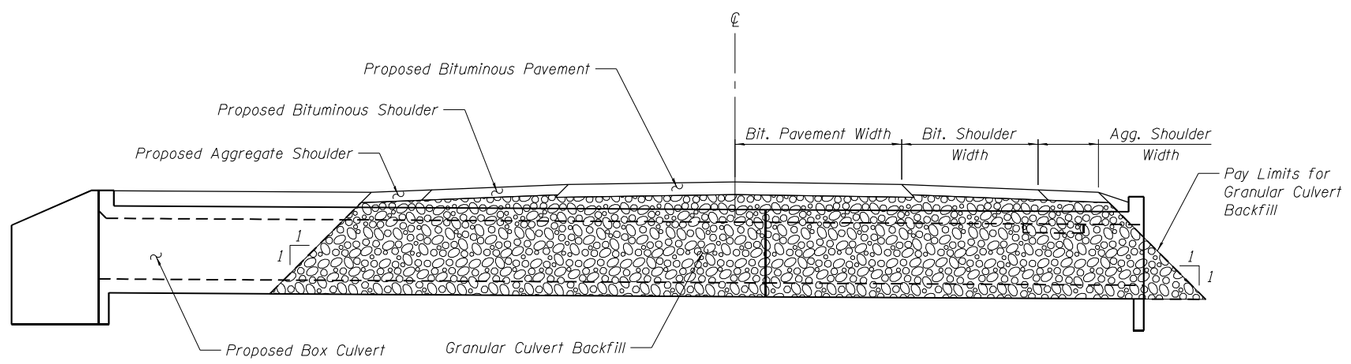
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Reinforcement Bars	Pound	-	51,220	51,220
Bar Splicers	Each	-	100	100
Name Plates	Each	-	1	1
Temporary Sheet Piling	Sq. Ft.	-	1251	1251
Concrete Box Culverts	Cu. Yd.	-	199.2	199.2
Granular Culvert Backfill	Cu. Yd.	-	115	115
Membrane Waterproofing System for Buried Structures	Sq. Yd.	-	246	246
Geocomposite Wall Drain	Sq. Yd.	-	246	246
Strong Post Guardrail Attached to Culvert	Lin. Ft.	-	37.5	37.5

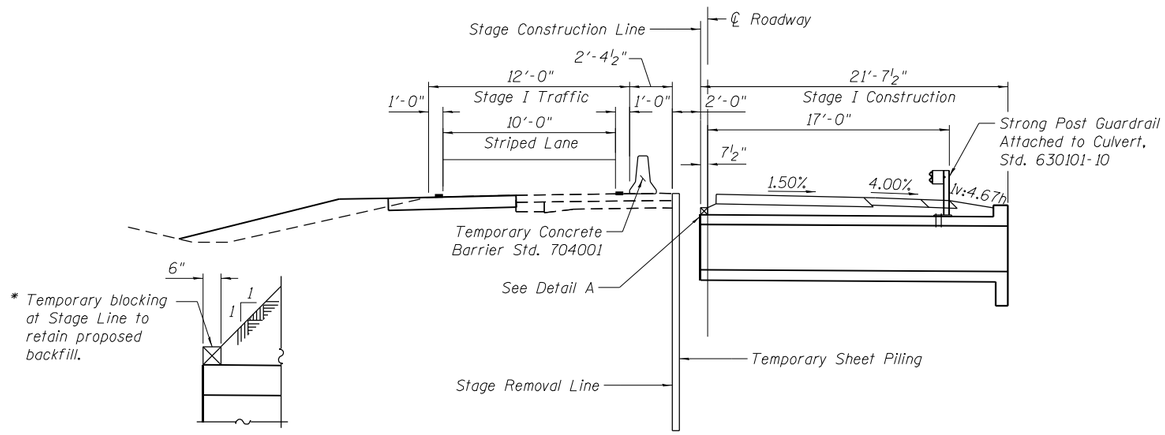


PROFILE GRANULAR CULVERT BACKFILL DETAIL

(At Rt. angle to ℄ Box Culvert)



CROSS SECTION GRANULAR CULVERT BACKFILL DETAIL



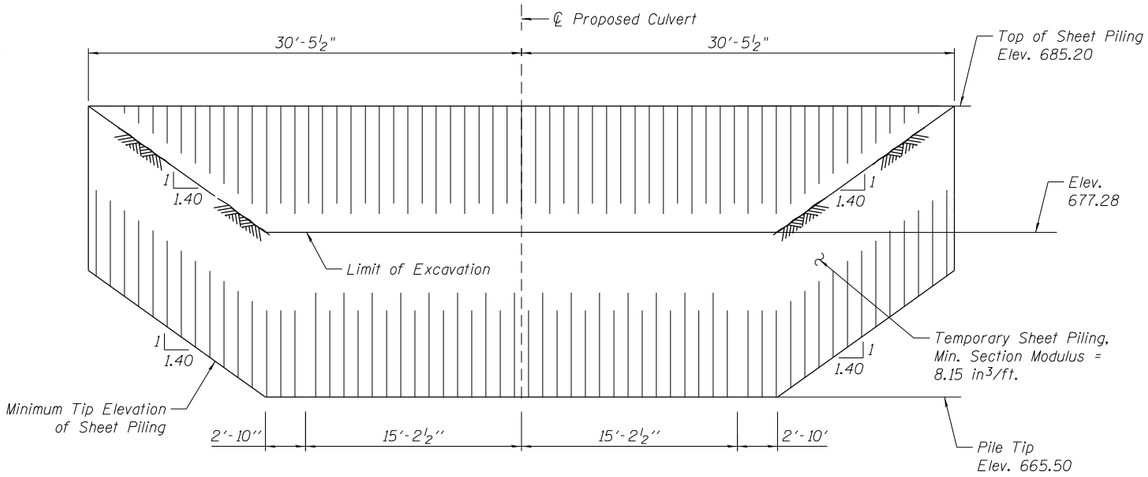
DETAIL A

(at Stage I Construction)

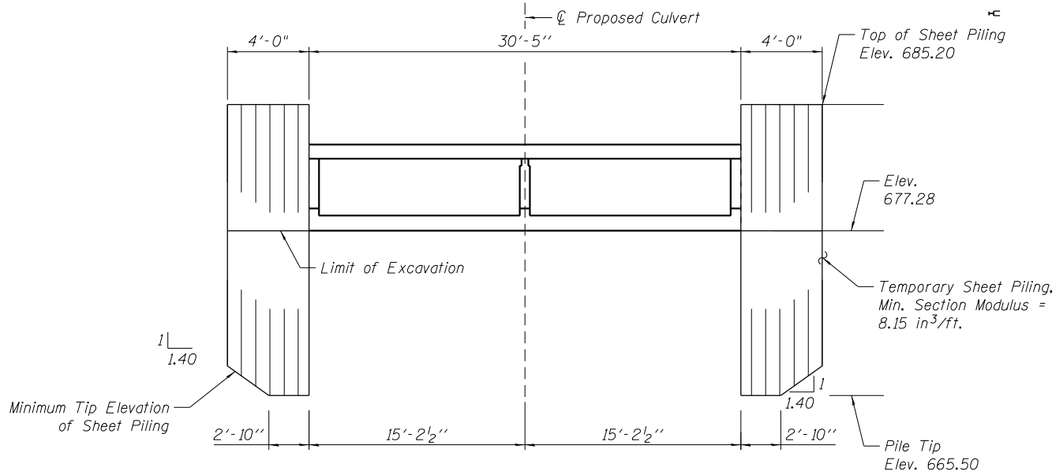
STAGE I CONSTRUCTION

(Horizontal dimension at Rt. ℄'s to ℄ Roadway)

* The Contractor shall submit the design calculation and details for the temprary blocking for review and approval by the Engineer. Cost included in Temporary Sheet Piling.



STAGE I ELEVATION - TEMPORARY SHEET PILING



STAGE I ELEVATION - TEMPORARY SHEET PILING

(Along ℄ of Roadway)

These sheets are to be driven prior to backfilling Stage I construction.

NOTE:

1. If the Contractor chooses to alter the temporary sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

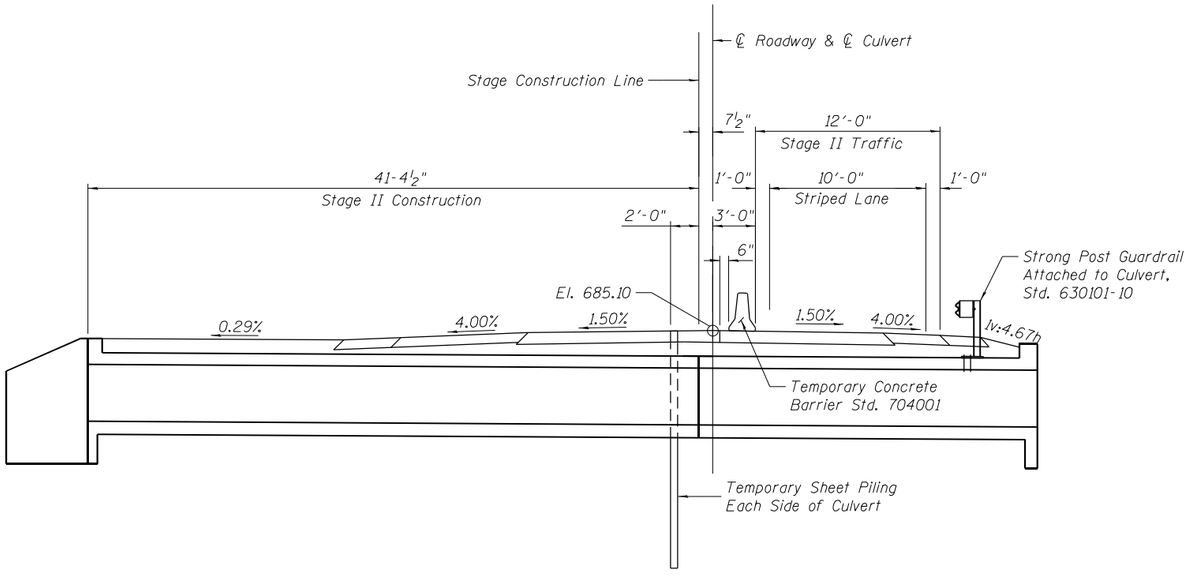
USER NAME = mgopalraj	DESIGNED - SEG	REVISED -	
	CHECKED - JGT	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - DAP	REVISED -	
PLOT DATE = 4/14/2023	CHECKED - JGT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION - TEMPORARY SHEET PILING
STRUCTURE NO. 011-2513

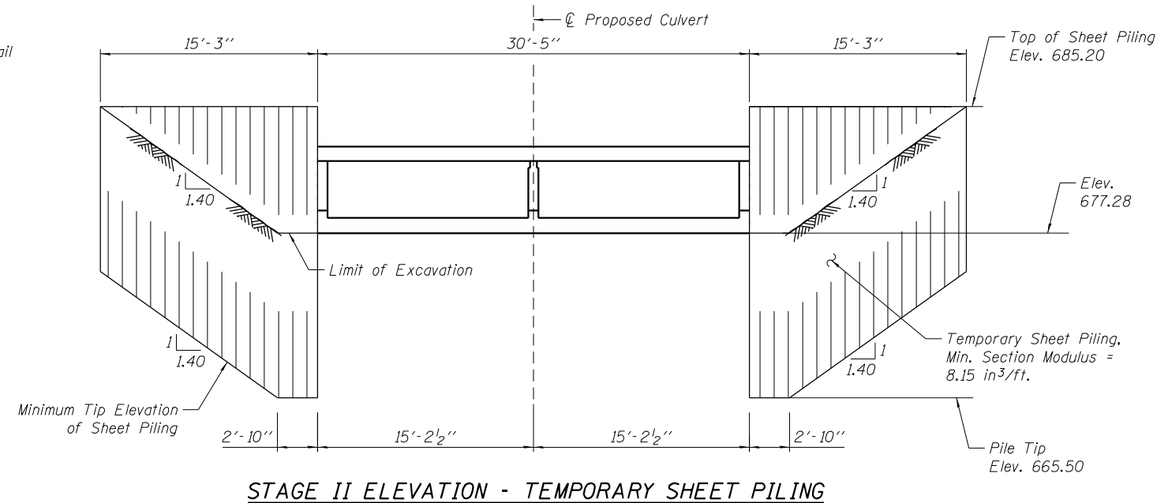
SHEET 3 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	140	43
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		



STAGE II CONSTRUCTION

(Horizontal dimension at Rt. ∢'s to ℄ Roadway)



STAGE II ELEVATION - TEMPORARY SHEET PILING

(Along ℄ of Roadway)

NOTE:

1. If the Contractor chooses to alter the temporary sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

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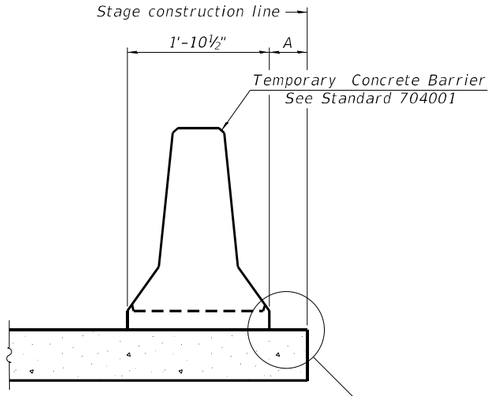
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj | DESIGNED - SEG | REVISED -
CHECKED - JGT | REVISED -
PLOT SCALE = 0:2.0000 ':" / in. | DRAWN - DAP | REVISED -
PLOT DATE = 4/27/2023 | CHECKED - JGT | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

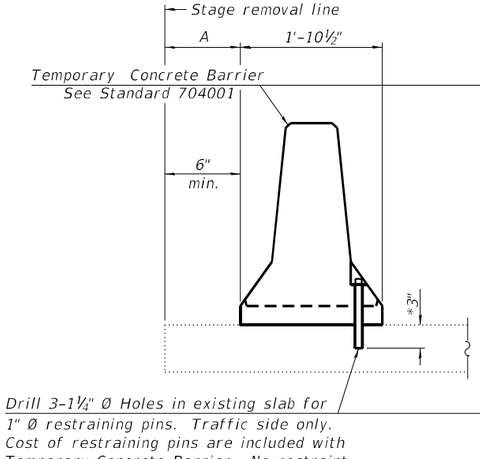
STAGE CONSTRUCTION - TEMPORARY SHEET PILING
STRUCTURE NO. 011-2513
SHEET 4 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	142	44
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



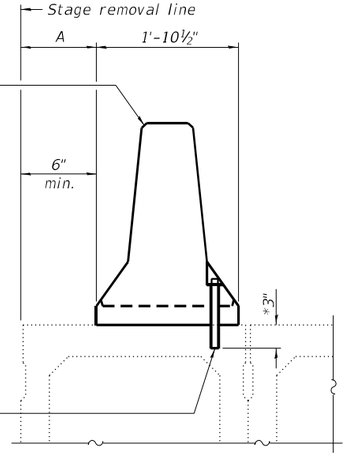
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

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".

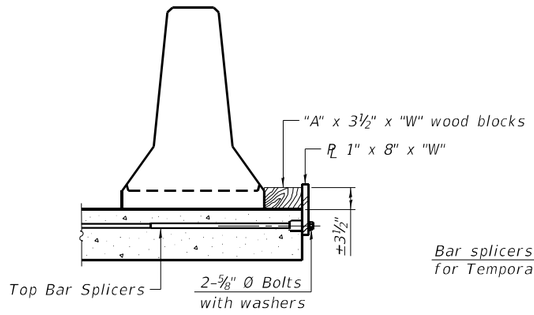
EXISTING SLAB



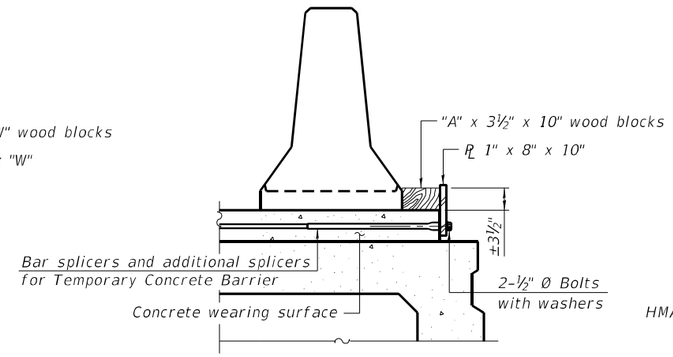
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

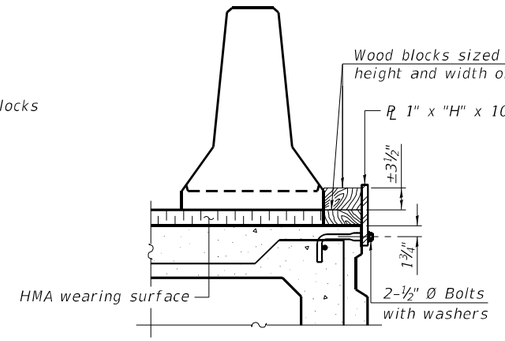
SECTIONS THRU SLAB OR DECK BEAM



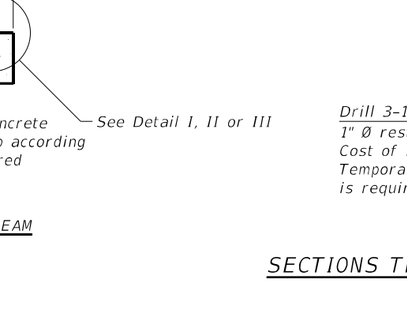
DETAIL I



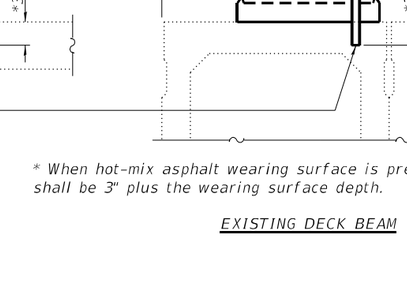
DETAIL II



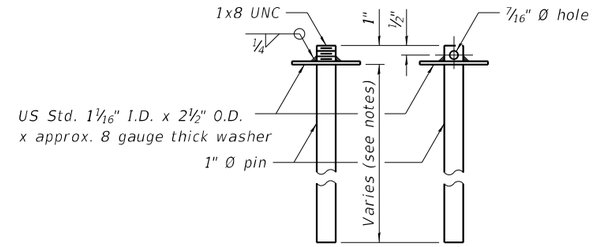
DETAIL III



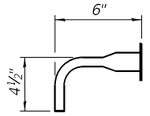
STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



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



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - 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

MODEL: 004
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\21\2-718B21CADData SN 011-7039 (011-2513)\CADsheets\0112513-72984-Box Culvert.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

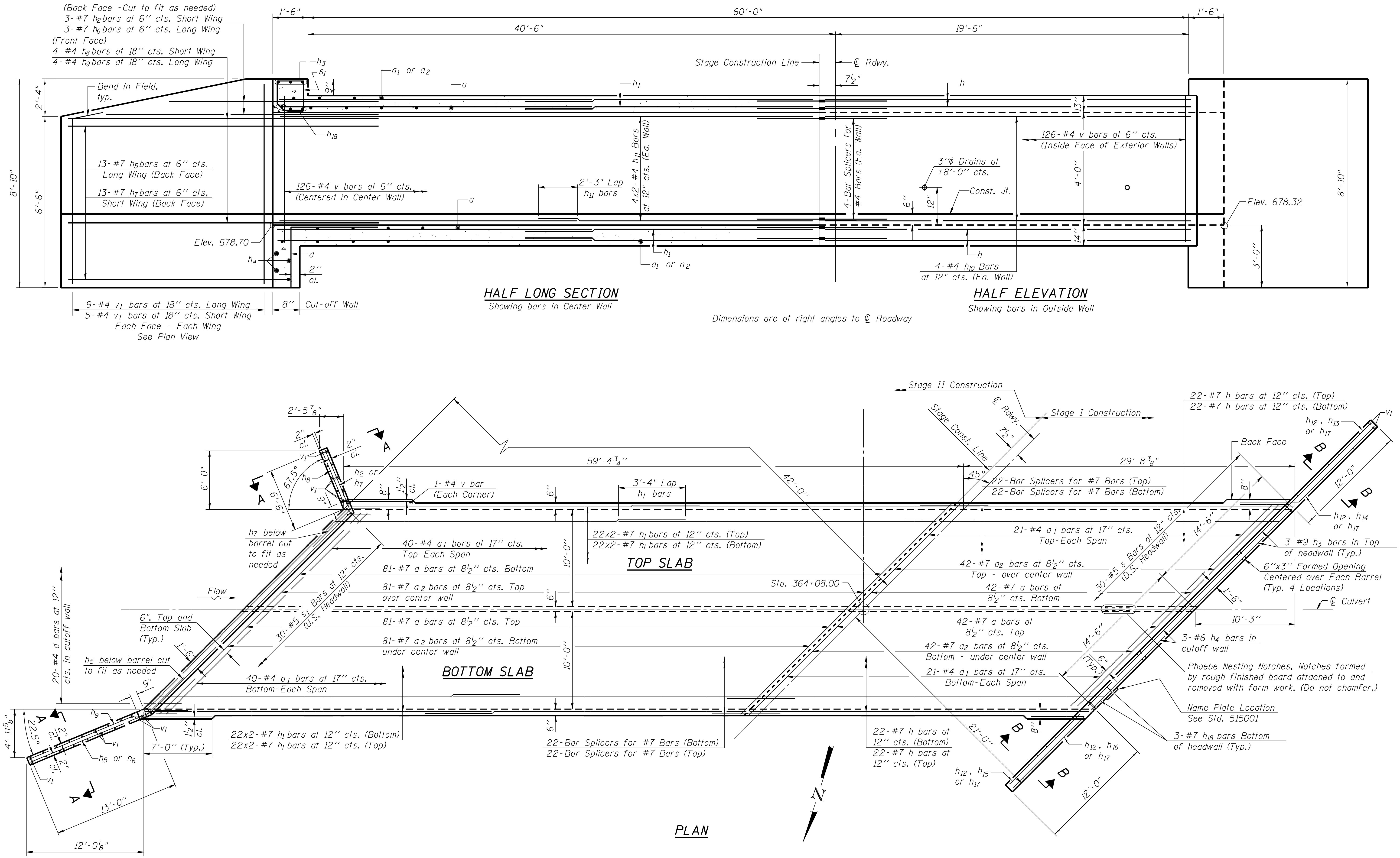
USER NAME = mgopalraj		DESIGNED - SEG		REVISED -	
		CHECKED - JGT		REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.		DRAWN - DAP		REVISED -	
PLOT DATE = 4/27/2023		CHECKED - JGT		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPOARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 011-2513

SHEET 5 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	142	45
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



(Back Face -Cut to fit as needed)
3-#7 h2 bars at 6'' cts. Short Wing
3-#7 h6 bars at 6'' cts. Long Wing
(Front Face)
4-#4 h8 bars at 18'' cts. Short Wing
4-#4 h9 bars at 18'' cts. Long Wing
Bend in Field, typ.
1'-6"
60'-0"
40'-6"
19'-6"
h3
s1
a1 or a2
a
h1
h
Stage Construction Line
℄ Rdwy.
7½"
h18
13-#7 h5 bars at 6'' cts.
Long Wing (Back Face)
13-#7 h7 bars at 6'' cts.
Short Wing (Back Face)
126-#4 v bars at 6'' cts.
(Centered in Center Wall)
2'-3" Lap
h11 bars
4x2-#4 h11 Bars at 12" cts. (Ea. Wall)
4-Bar Splicers for #4 Bars (Ea. Wall)
3''φ Drains at ±8'-0'' cts.
Const. Jt.
126-#4 v bars at 6'' cts.
(Inside Face of Exterior Walls)
Elev. 678.32
Elev. 678.70
h4
d
2'' cl.
4-#4 h10 Bars at 12" cts. (Ea. Wall)
8'-10"
2'-4"
6'-6"
13"
4'-0"
14"
12"
6"
3'-0"
9-#4 v1 bars at 18'' cts. Long Wing
5-#4 v1 bars at 18'' cts. Short Wing
Each Face - Each Wing
See Plan View
8'' Cut-off Wall
HALF LONG SECTION
Showing bars in Center Wall
HALF ELEVATION
Showing bars in Outside Wall
Dimensions are at right angles to ℄ Roadway
2'-5⅞"
2'' cl.
6'-0"
67.5°
6'-9"
h2 or h7
h8
v1
1-#4 v bar (Each Corner)
59'-4¾''
3'-4" Lap
h1 bars
42'-0''
Stage II Construction
Stage I Construction
Stage Const. Line
℄ Rdwy.
29'-8⅜"
45°
22-Bar Splicers for #7 Bars (Top)
22-Bar Splicers for #7 Bars (Bottom)
22-#7 h bars at 12'' cts. (Top)
22-#7 h bars at 12'' cts. (Bottom)
h12, h13 or h17
Back Face
12'-0"
h12, h14 or h17
h7 below barrel cut to fit as needed
40-#4 a1 bars at 17'' cts.
Top-Each Span
22x2-#7 h1 bars at 12'' cts. (Top)
22x2-#7 h1 bars at 12'' cts. (Bottom)
TOP SLAB
81-#7 a bars at 8½'' cts. Bottom
81-#7 a2 bars at 8½'' cts. Top
over center wall
30-#5 s1 Bars at 12" cts. (U.S. Headwall)
21-#4 a1 bars at 17'' cts.
Top-Each Span
42-#7 a2 bars at 8½'' cts.
Top - over center wall
42-#7 a bars at 8½'' cts. Bottom
30-#5 s Bars at 12" cts. (D.S. Headwall)
14'-6"
3-#9 h3 bars in Top of headwall (Typ.)
6''x3'' Formed Opening
Centered over Each Barrel
(Typ. 4 Locations)
Flow
Sta. 364+08.00
10'-0"
1'-6"
10'-3''
℄ Culvert
6", Top and Bottom Slab (Typ.)
20-#4 d bars at 12'' cts. in cutoff wall
h5 below barrel cut to fit as needed
81-#7 a bars at 8½'' cts. Top
81-#7 a2 bars at 8½'' cts. Bottom
under center wall
42-#7 a bars at 8½'' cts. Top
42-#7 a2 bars at 8½'' cts.
Bottom - under center wall
21-#4 a1 bars at 17'' cts.
Bottom-Each Span
3-#6 h4 bars in cutoff wall
40-#4 a1 bars at 17'' cts.
Bottom-Each Span
BOTTOM SLAB
Phoebe Nesting Notches, Notches formed by rough finished board attached to and removed with form work. (Do not chamfer.)
Name Plate Location
See Std. 515001
3-#7 h18 bars Bottom of headwall (Typ.)
9"
h9
22.5°
4'-11⅝"
v1
h5 or h6
7'-0'' (Typ.)
22x2-#7 h1 bars at 12'' cts. (Bottom)
22x2-#7 h1 bars at 12'' cts. (Top)
22-Bar Splicers for #7 Bars (Bottom)
22-Bar Splicers for #7 Bars (Top)
22-#7 h bars at 12'' cts. (Bottom)
22-#7 h bars at 12'' cts. (Top)
21'-0''
h12, h16 or h17
h12, h15 or h17
13'-0"
12'-0⅛"
N
PLAN
A
B

MODEL: 005
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2121-718B\21CADData SN 011-7039 (011-2513)\CADsheets\0112513-72984-Box Culvert.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

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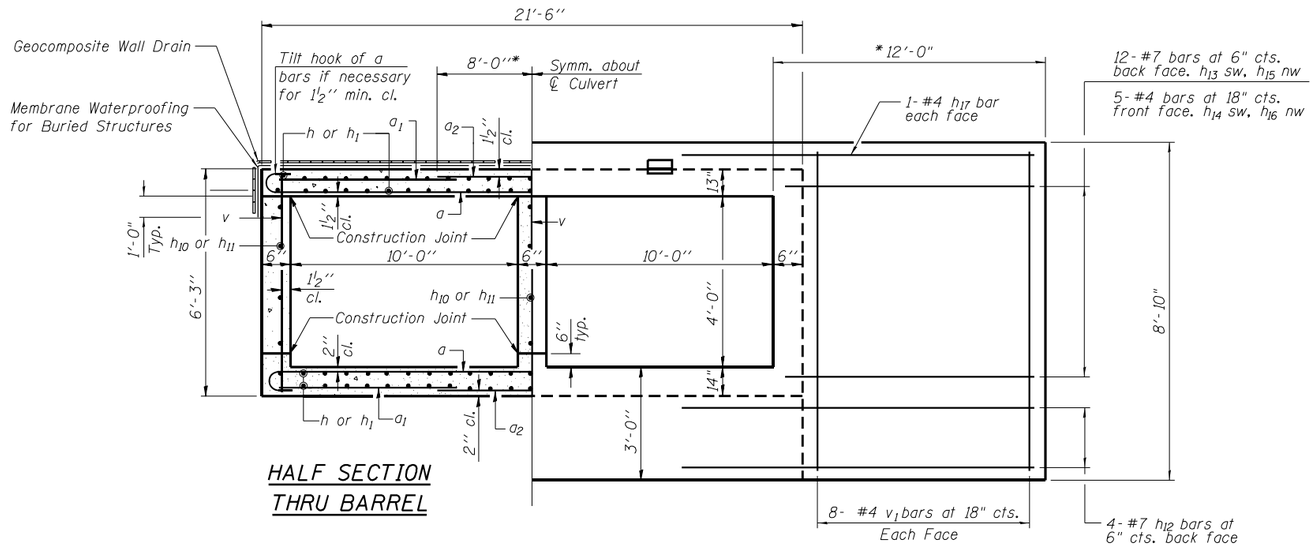
PLOT DATE = 4/27/2023	CHECKED - JGT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 011-2513
SHEET 6 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	142	46
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

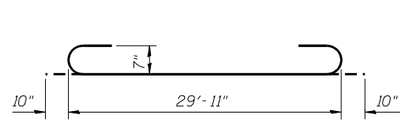


HALF SECTION THRU BARREL

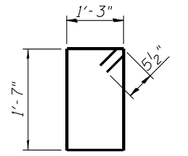
HALF END ELEVATION

* Dimensioned along ℄ Roadway showing southwest wingwall northwest wingwall similar

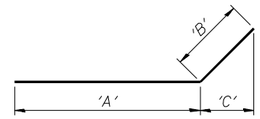
Note:
Geocomposite Wall Drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Membrane Waterproofing System for Buried Structures.



BAR a

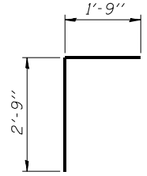


BAR s

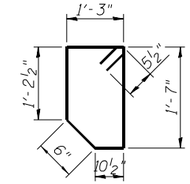


Bar	'A'	'B'	'C'
h_2	6'-0"	3'-0"	1'-1¾"
h_5	14'-3"	3'-0"	2'-9¼"
h_6	13'-3"	3'-0"	2'-9¼"
h_7	6'-6"	3'-0"	1'-1¾"
h_8	5'-9"	7'-0"	2'-8⅛"
h_9	11'-8"	7'-11"	7'-4"
h_{13}	12'-7"	3'-0"	2'-1½"
h_{14}	10'-11"	3'-0"	2'-1½"

BARS h_2, h_5, h_6, h_7 h_8, h_9, h_{13}, & h_{14}



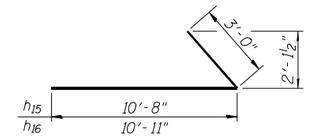
BAR d



BAR s_1

MINIMUM BAR LAP

#4 bar = 1'-4"
#7 bar = 2'-8"



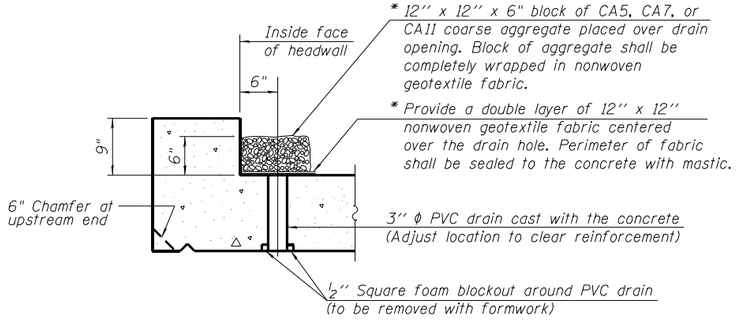
BAR h_{15} or h_{16}

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	246	#7	31'-7"	
a_1	244	#4	8'-9"	
a_2	246	#7	16'-0"	
d	40	#4	4'-6"	
h	88	#7	30'-2"	
h_1	176	#7	30'-5"	
h_2	3	#7	9'-0"	
h_3	6	#9	29'-6"	
h_4	6	#6	30'-6"	
h_5	13	#7	17'-3"	
h_6	3	#7	16'-3"	
h_7	13	#7	9'-6"	
h_8	4	#4	12'-9"	
h_9	4	#4	19'-7"	
h_{10}	12	#4	30'-2"	
h_{11}	24	#4	30'-3"	
h_{12}	8	#7	15'-0"	
h_{13}	12	#7	15'-7"	
h_{14}	5	#7	13'-11"	
h_{15}	12	#7	13'-8"	
h_{16}	5	#7	13'-11"	
h_{17}	4	#4	15'-0"	
h_{18}	6	#7	29'-6"	
s	30	#5	6'-7"	
s_1	30	#5	6'-4"	
v	382	#4	5'-10"	
v_1	60	#4	8'-6"	
Concrete	Box Culverts		Cu. Yd.	199.2
Reinforcement Bars			Pound	51,220

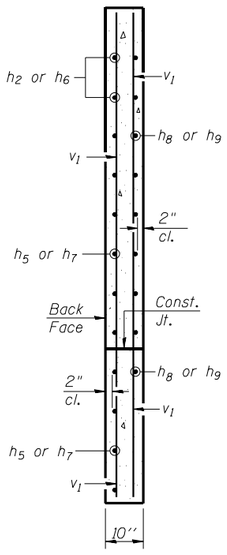
Notes:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

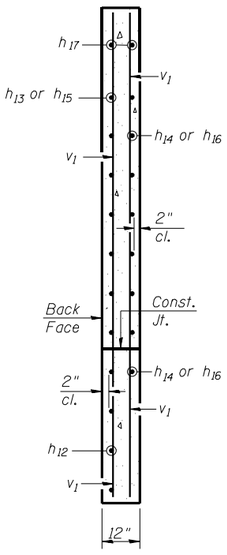


DRAIN DETAIL

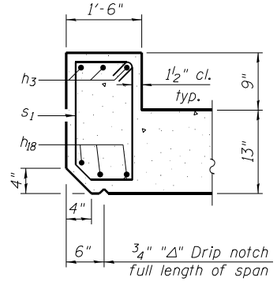
(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



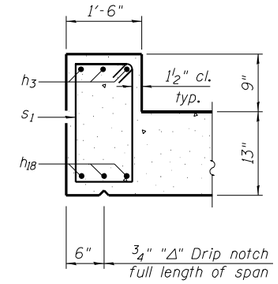
SECTION A-A



SECTION B-B

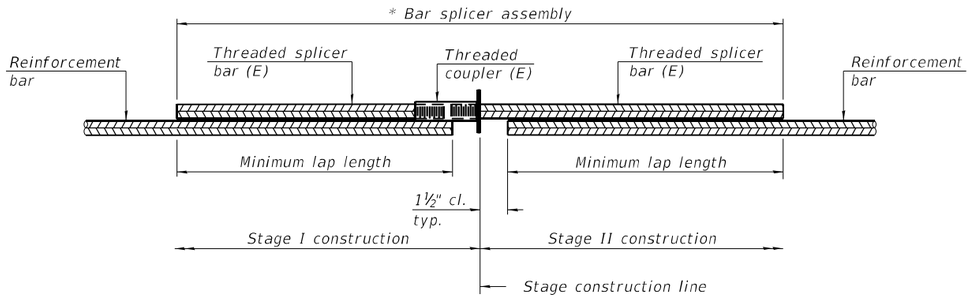


AT UPSTREAM END



AT DOWNSTREAM END

SECTION THRU HEADWALL



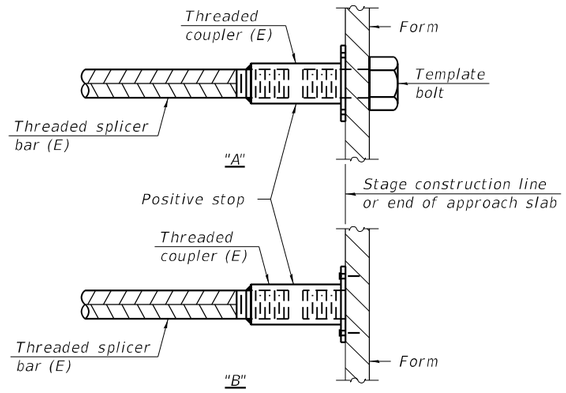
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + 1½" + thread length

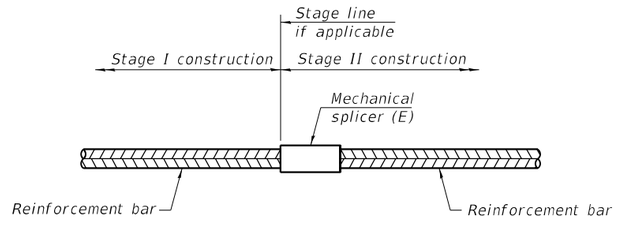
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab (T & B)	#7	44	3'-4''
Bottom Slab (T & B)	#7	44	3'-0''
3 - Barrel Walls	#4	12	2'-3"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 2-1-2023

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mgopalraj	DESIGNED - SEG	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 011-2513
SHEET 8 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	142	48
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 10005-2

MODEL: 007
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2121-7188\21CADData SN 011-7039 (011-2513)\CADsheets\0112513-72984-Box Culvert.dgn

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 10/11/11

ROUTE IL-16 DESCRIPTION over Unnamed Ditch LOGGED BY M. Tappan

SECTION ? LOCATION SW 1/4, SEC. 33, TWP. 11N, RNG. 1W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 011-7039
Station 363+41

BORING NO. 1
Station 363+51
Offset 14.0ft Lt
Ground Surface Elev. 684.5 ft

Surface Water Elev. 681.0(Dry) ft
Stream Bed Elev. 681.0 ft

Groundwater Elev.:
▽ First Encounter 671.5 ft
▽ Upon Completion Dry ft
▼ After ____ Hrs. Plugged ft

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very Dark Gray Moist SILTY CLAY (Fill)		1		
		2 3	1.3 B	25
		1		
		1 1	.70 B	29
	679.50 -5			
Brown and Gray Moist SILTY CLAY (Till)		0		
		2 2	1.0 B	22
		0		
Very Moist		1 2	.60 B	25
	-10			
		0		
Olive Brown and Gray Very Moist		1 2	.60 B	24
	672.00			
Gray Very Moist LOAM (Till) with 6" Seam Wet Dirty Coarse Sand Free Water ▽		0		
		1 1	.40 B	26
	669.50 -15			
Gray Moist CLAY LOAM (Till)		0		
		1 2	1.0 B	11
		1		
		4 5	2.3 B	11
	-20			

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Gray Moist CLAY LOAM (Till) *(continued)*		2		
		4 6	2.3 B	10
		3		
		4 7	2.4 S-13	11
	660.00 -25			
Boring Completed				
Ref. STA to CL of Ex. Structure= 363+41. STA increase to South (SW) Ref. Elev. to Chsld Square on South Headwall = 683.8	-30			
	-35			
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name C:\PROGRAM FILES\BENTLEY\GINT\IL-16 SN 011-7039.GPJ Data Template 26TEMPLT.GDT Date Printed 10/18/11
Latitude 39.21.090N Longitude 89.12.558W Datum NAD83 Job Number D-96-522-05

MODEL: 008
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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

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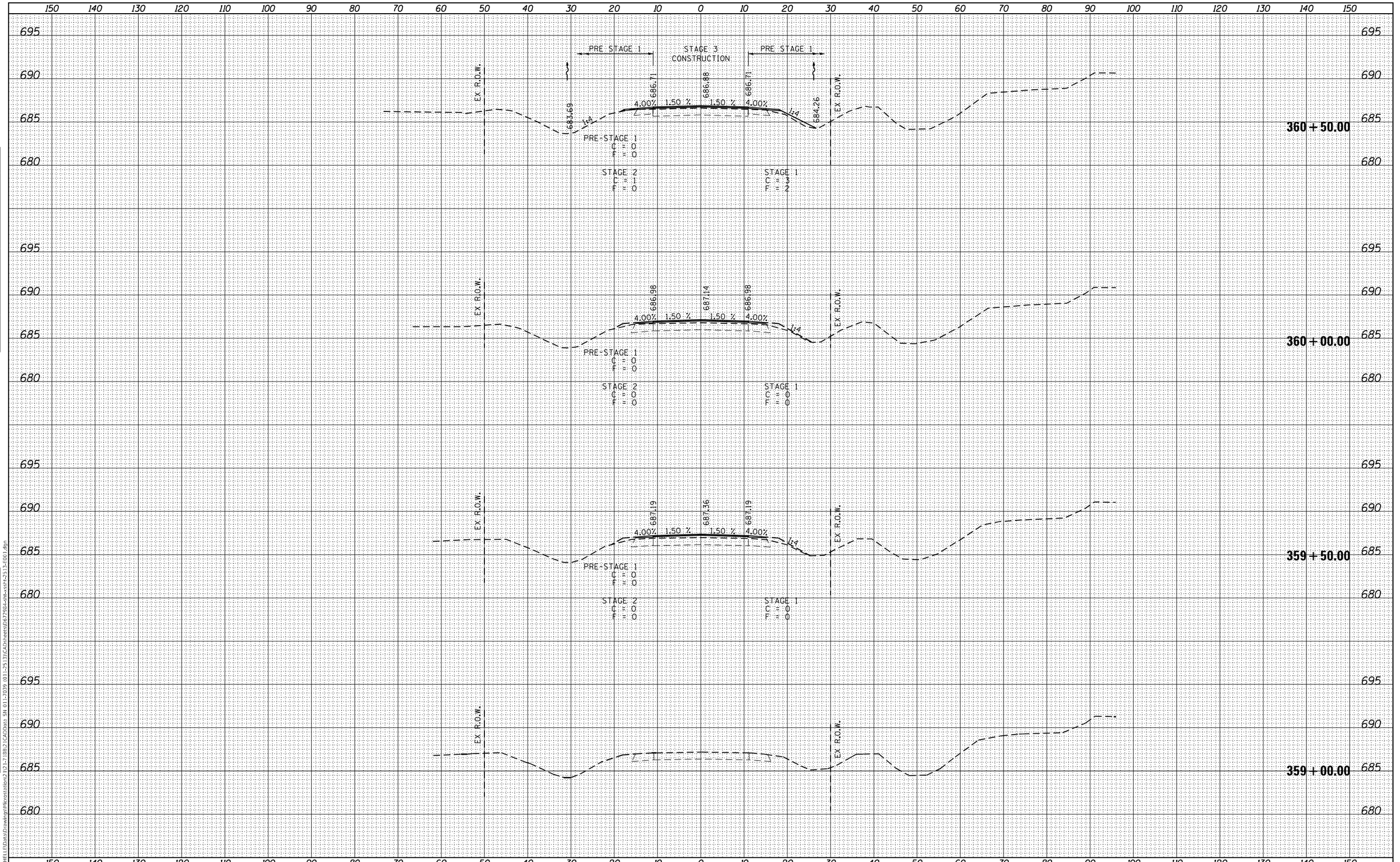
PLOT DATE = 4/27/2023	CHECKED - JGT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG
STRUCTURE NO. 011-2513
SHEET 9 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	CHRISTIAN	142	49
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



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

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

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

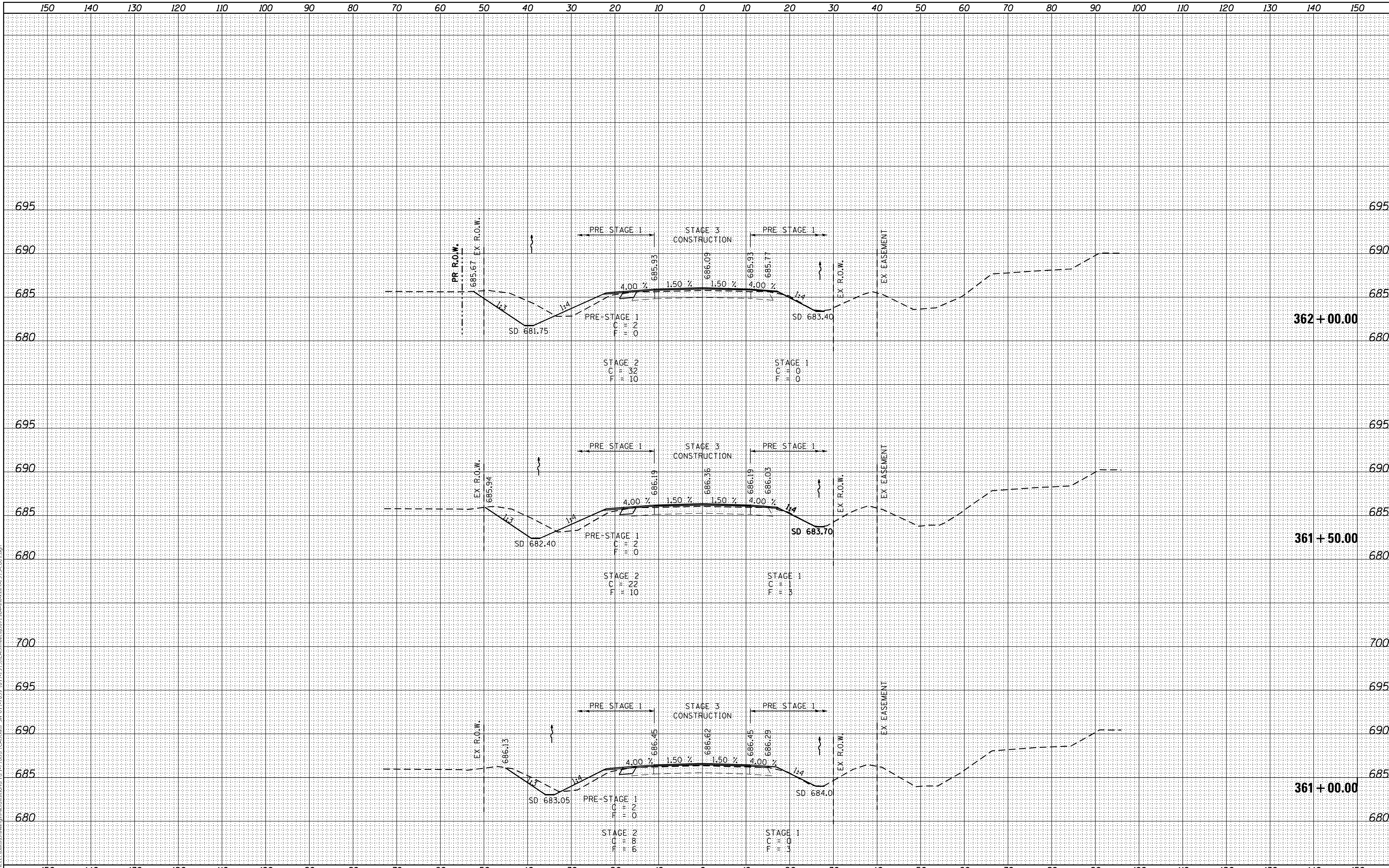
CROSS SECTIONS
IL 16 SN 011–2513

SCALE: | SHEET 1 OF 8 SHEETS | STA. 359+00.00 | TO STA. 360+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	50
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN



FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 4/28/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 011–2513

SCALE: | SHEET 2 OF 8 SHEETS | STA. 361+00.00 TO STA. 362+00.00

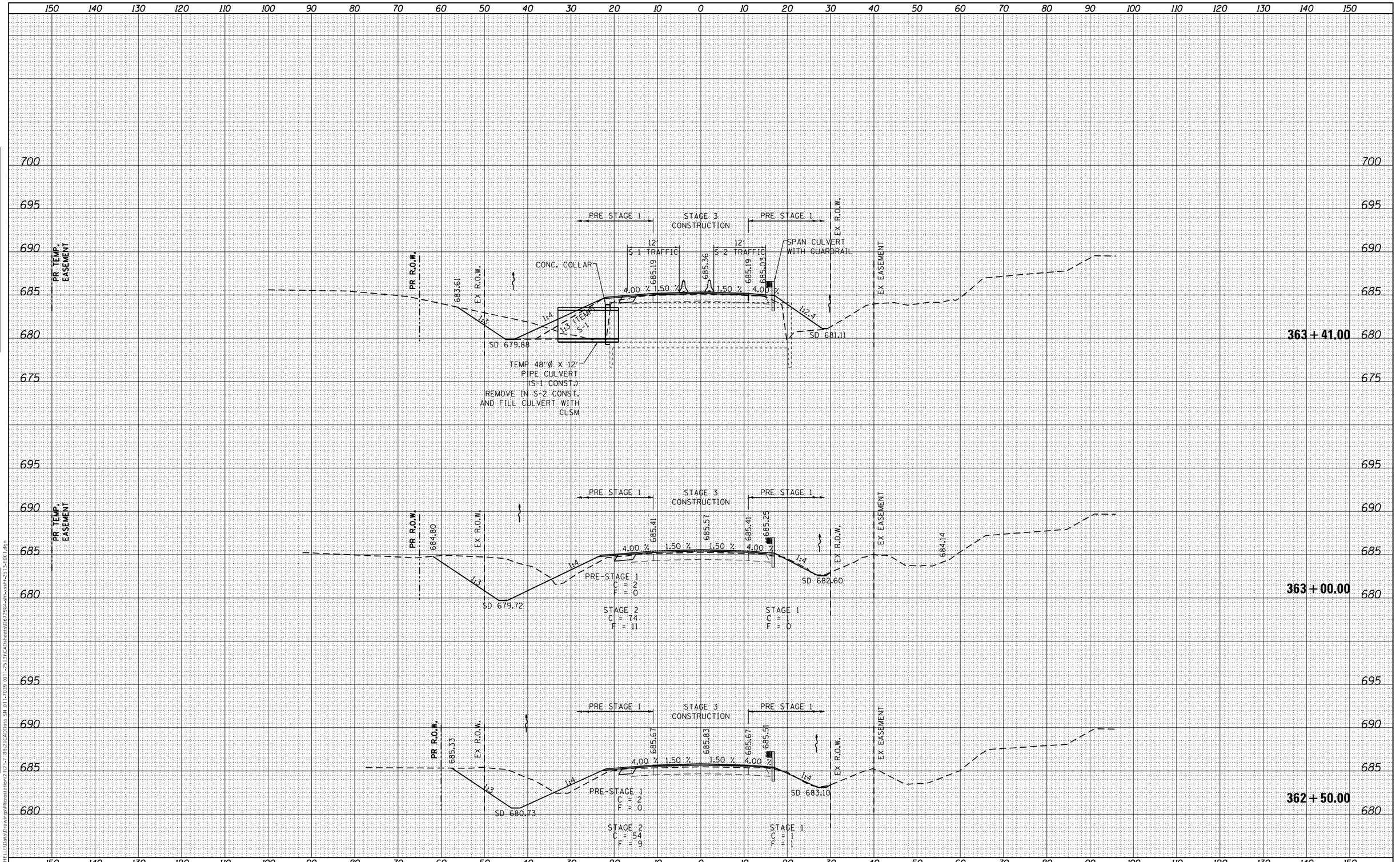
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3): 16(CR)	*	142	51

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN



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

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

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 4/28/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

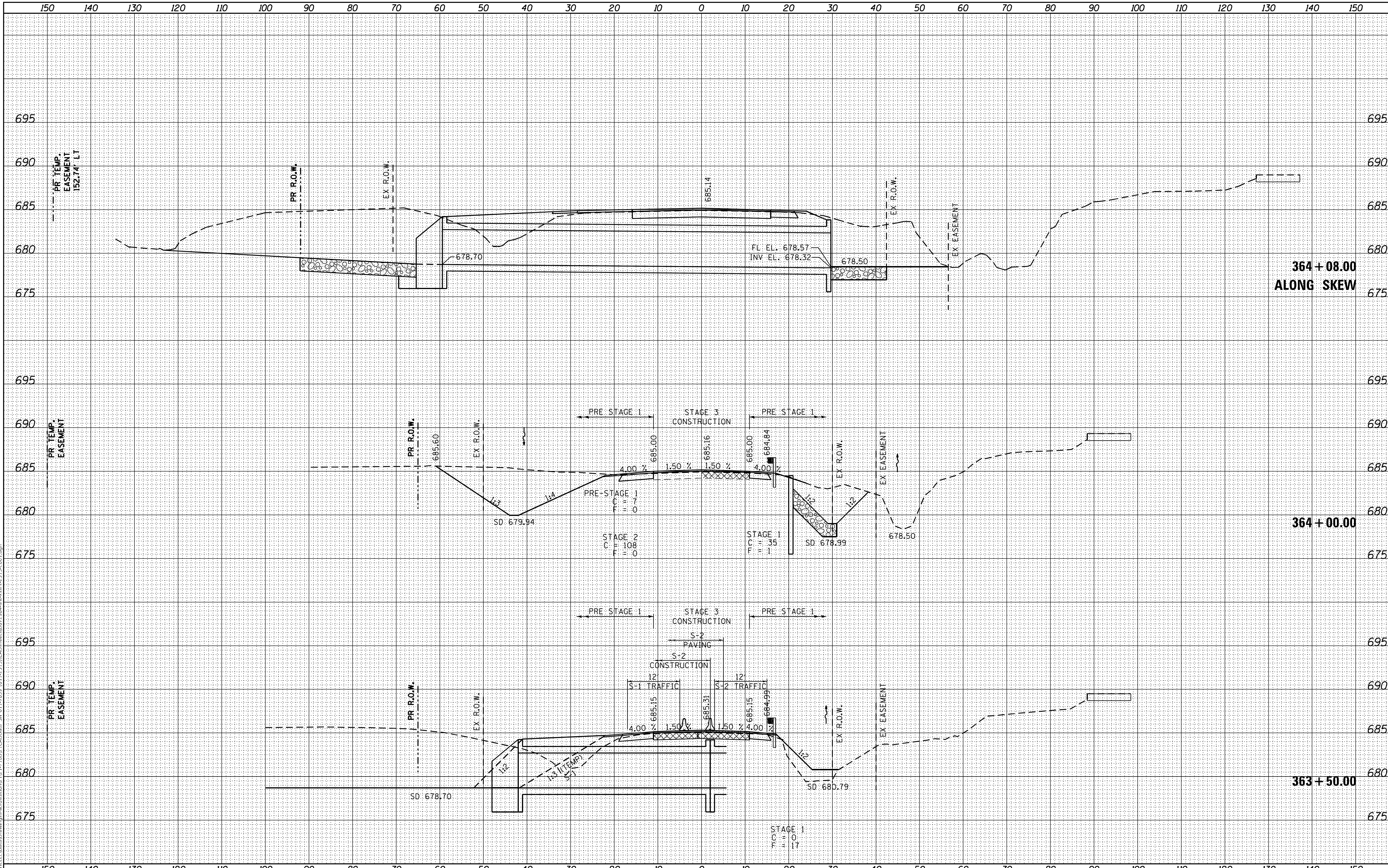
CROSS SECTIONS
IL 16 SN 011–2513

SCALE: | SHEET 3 OF 8 SHEETS | STA. 362+50.00 | TO STA. 363+41.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	52
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN



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

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

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 4/28/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

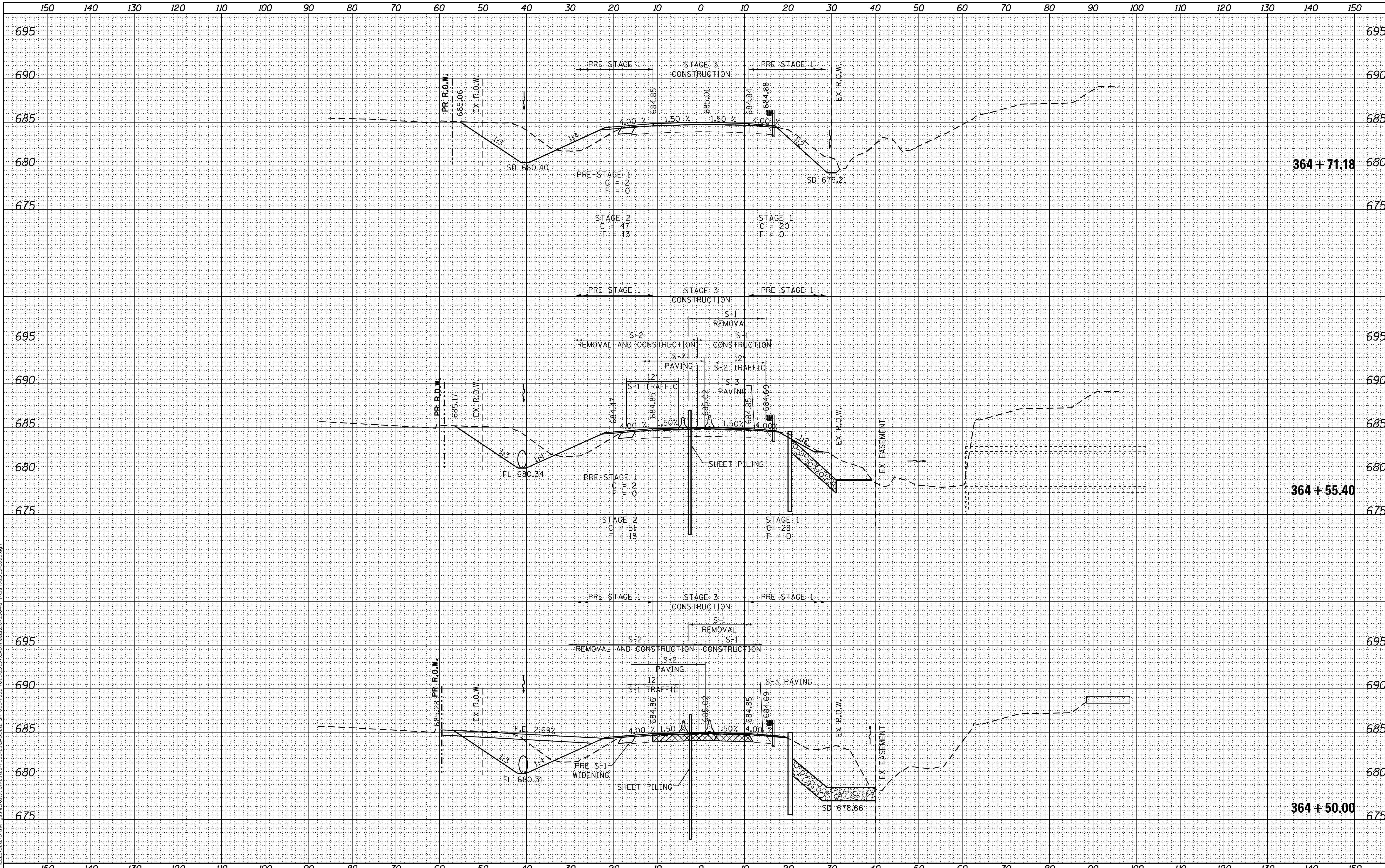
CROSS SECTIONS
IL 16 SN 011–2513

SCALE: | SHEET 4 OF 8 SHEETS | STA. 363+50.00 TO STA. 364+08.00

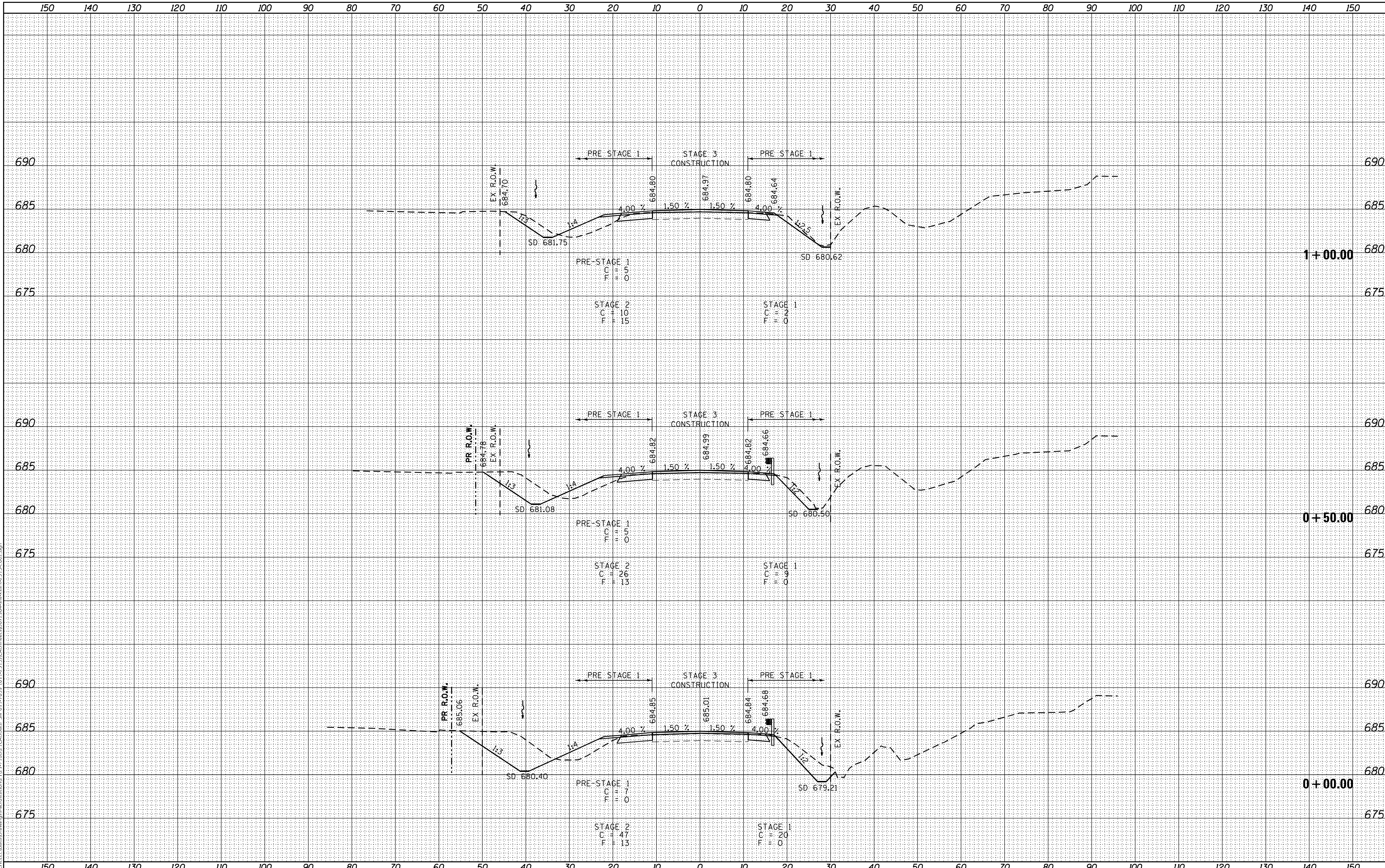
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	53
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN



364 + 71.18
PRE STAGE 1
STAGE 3 CONSTRUCTION
PRE STAGE 1
PR. R.O.W.
685.06
EX R.O.W.
684.85
685.01
684.84
684.68
EX R.O.W.
4.00 %
1.50 %
1.50 %
4.00 %
1:3
1:4
1:2
SD 680.40
SD 679.21
PRE-STAGE 1
C = 2
F = 0
STAGE 2
C = 47
F = 13
STAGE 1
C = 20
F = 0
364 + 55.40
S-1 REMOVAL
S-2 REMOVAL AND CONSTRUCTION
S-1 CONSTRUCTION
S-2 PAVING
12' S-2 TRAFFIC
12' S-1 TRAFFIC
S-3 PAVING
685.17
684.47
684.85
685.02
684.85
684.69
4.00 %
1.50%
1.50%
4.00%
FL 680.34
SHEET PILING
EX EASEMENT
PRE-STAGE 1
C = 2
F = 0
STAGE 2
C = 51
F = 15
STAGE 1
C= 28
F = 0
364 + 50.00
685.28
F.E. 2.69%
684.86
685.02
684.85
684.69
4.00
1.50
1.50%
4.00
S-3 PAVING
FL 680.31
PRE S-1 WIDENING
SHEET PILING
SD 678.66



FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/1/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 011–2513

SCALE: SHEET 6 OF 8 SHEETS STA. 0+00.00 TO STA. 1+00.00

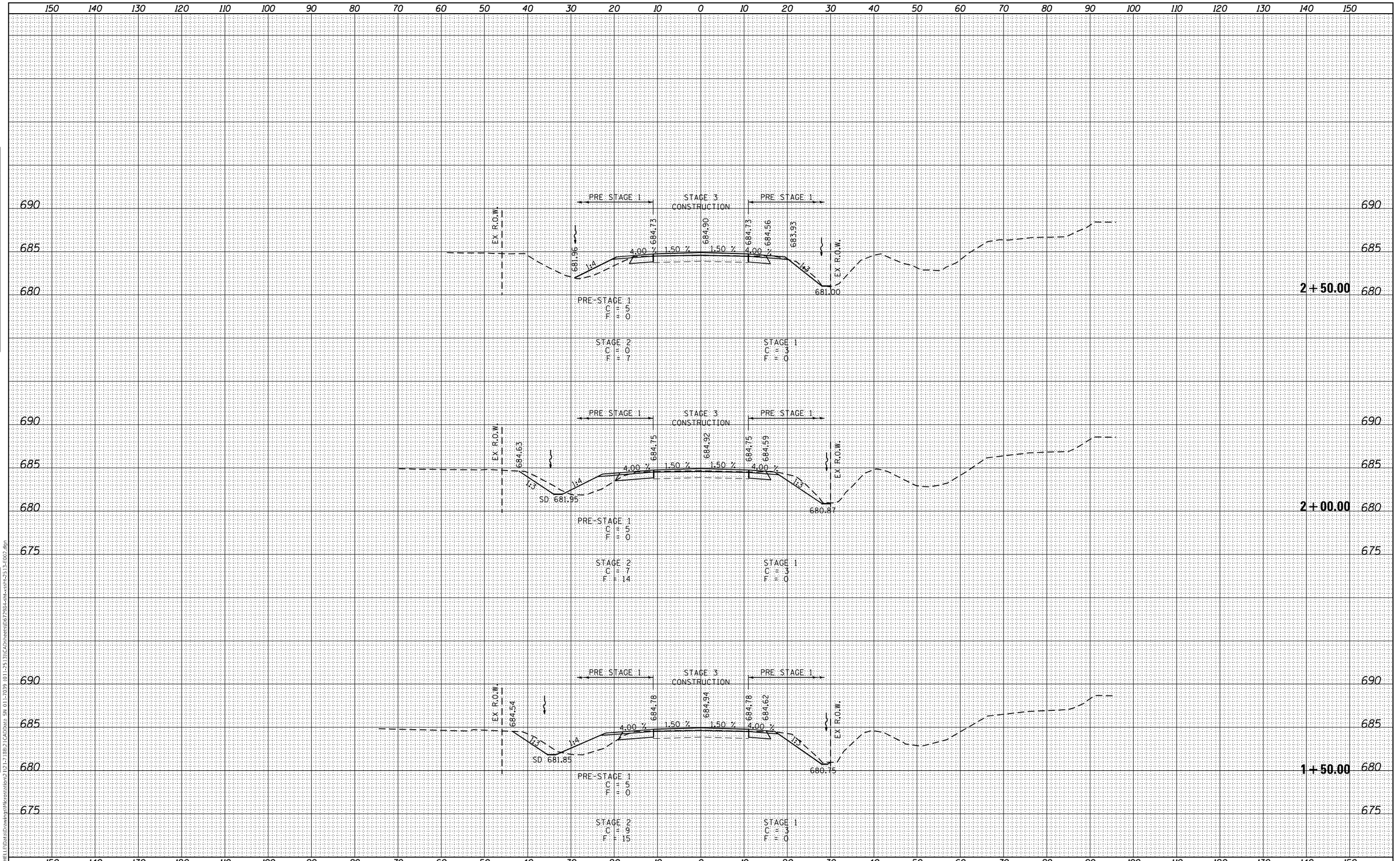
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	55

CONTRACT NO. 72984

ILLINOIS FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)



FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 011-2513

SCALE: | SHEET 7 OF 8 SHEETS | STA. 1+50.00 | TO STA. 2+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	56

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

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

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

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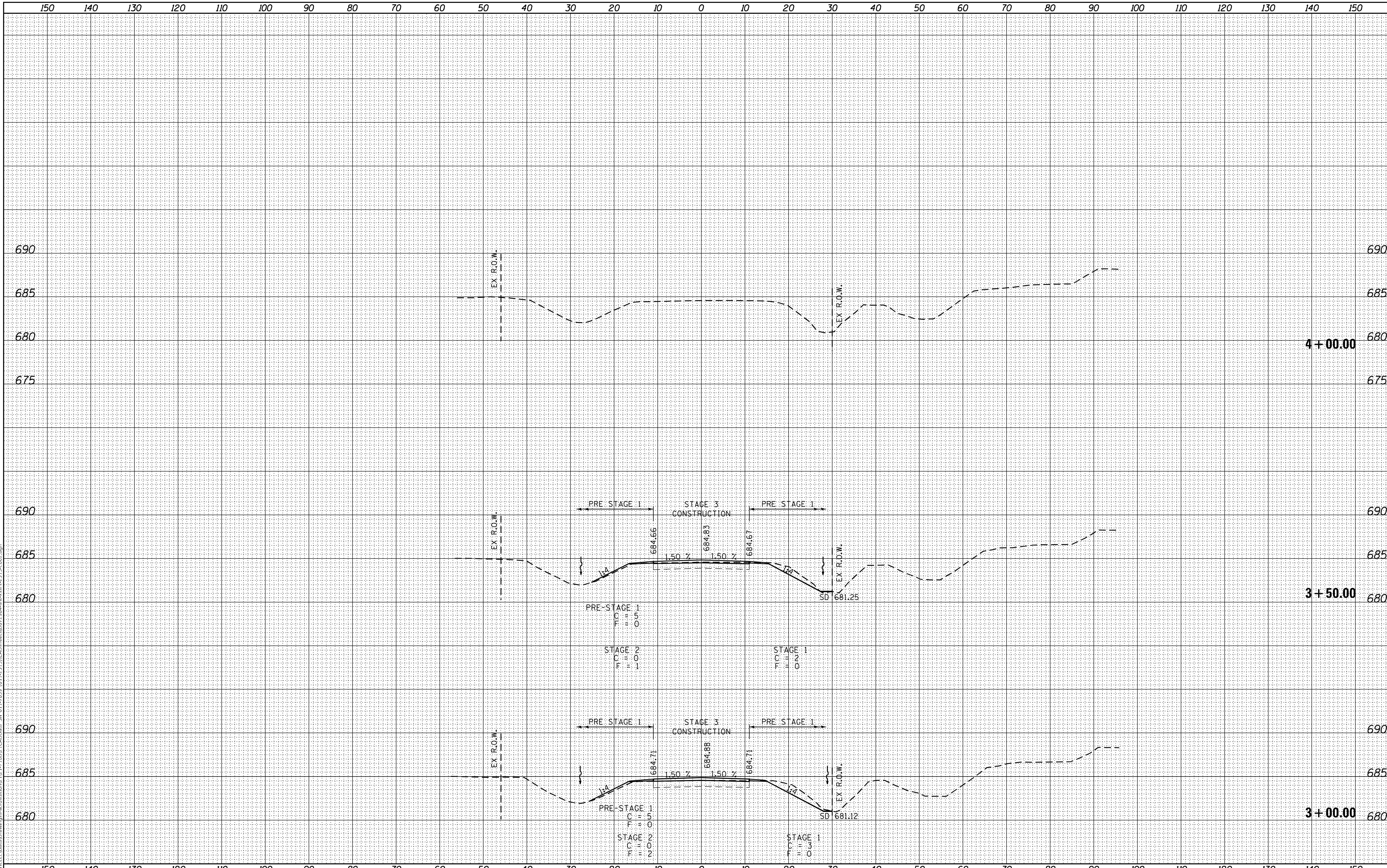


FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 011–2513

SCALE: | SHEET 8 OF 8 SHEETS | STA. 3+00.00 TO STA. 4+00.00

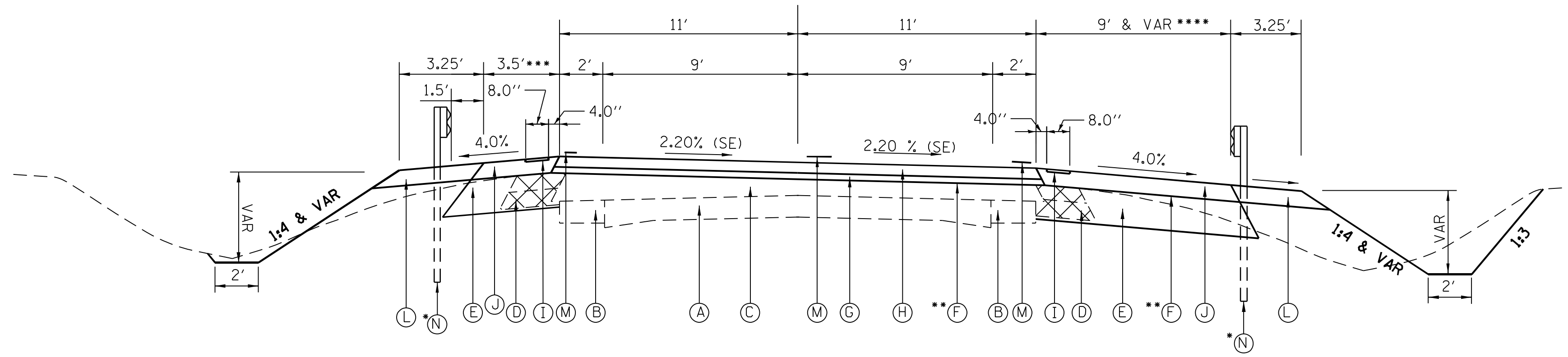
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	57

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)



FAP RTE 325 (IL 16)

*** 5.0′ STA 38+29.51 TO 39+00.00
TRANSITION 5′ TO 3.5′ STA 39+00.00 TO 39+50.00
TRANSITION 3.5′ TO 5′ STA 44+00.00 TO 44+95.00

STA 38+29.51 TO 42+89.50 LT & RT
STA 43+57.50 TO 44+95.00 LT

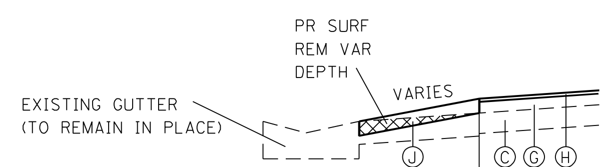
**** 5.0′ sta. 38+29.51 TO STA 39+30.00
TRANSITION 5.0′ TO 9.0′ STA 39+30.00 TO STA 40+30.00

* GUARDRAIL

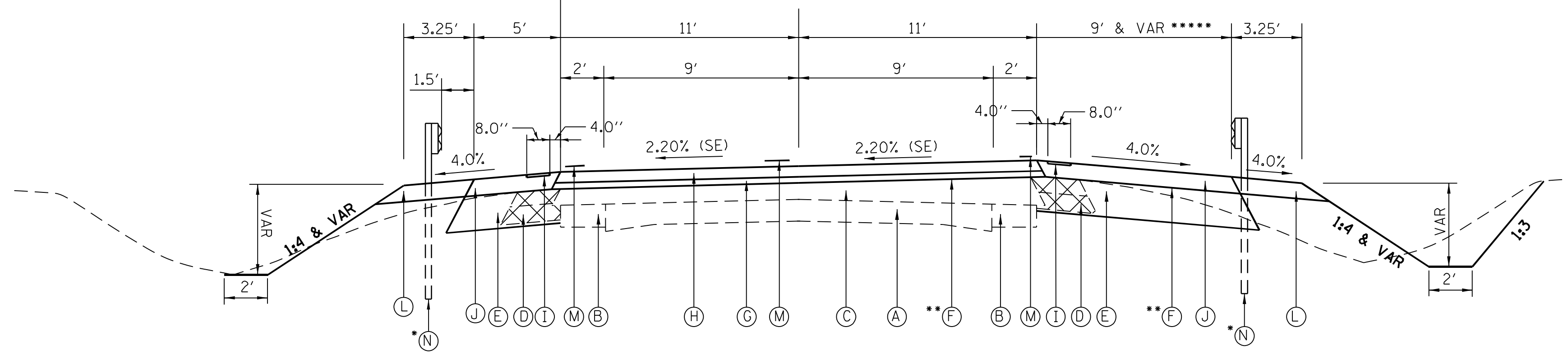
STA 41+89.92 TO 42+89.50 LT & RT
STA 43+57.50 TO 44+19.58 LT & RT

** STAGE I, LT STAGE II, RT

STA 42+00.00 TO 42+89.50
STA 43+57.50 TO 44+50.00



STA 45+00 TO 47+93.91 LT



FAP RTE 325 (IL 16)

STA 43+57.50 TO 47+93.91 RT
STA 44+95.00 TO 47+93.91 LT

***** TRANSITION 9.0′ TO 1.5′ STA 45+72.50 TO STA 47+60.00

LEGEND

- (A) EX PCC PAVEMENT, 9-6-9
- (B) EX PCC BASE COURSE WIDENING, 8″
- (C) EX HMA SURFACE, 6″
- (D) EX HMA SHOULDERS, 8″ & VARIES TBR
- (E) PR HMA BASE COURSE, 8″
- (F) PR HMA BINDER COURSE, IL-19.0, N50, VAR DEPTH
- (G) PR HMA BINDER COURSE IL-9.5 FG, N50, VAR DEPTH 1 1/4″
- (H) PR HMA SURFACE COURSE, MIX "C", N50, 1 1/2″
- (I) PR SHOULDER RUMBLE STRIPS, 8 INCH
- (J) PR HMA SHOULDERS, VAR DEPTH (2 3/4″ MIN)
- (K) PR HMA SHOULDERS, 2 3/4″
- (L) PR AGGREGATE SHOULDERS, TYPE B
- (M) PR PAINT PAVEMENT MARKING LINE, 5″
- (N) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6′ POSTS
- (O) PR STRONG POST GUARDRAIL, ATTACHED TO STRUCTURES
- (P) PR GRANULAR CULVERT BACKFILL
- (R) PR BASE COURSE (OPTION), 8″

MODEL: Default
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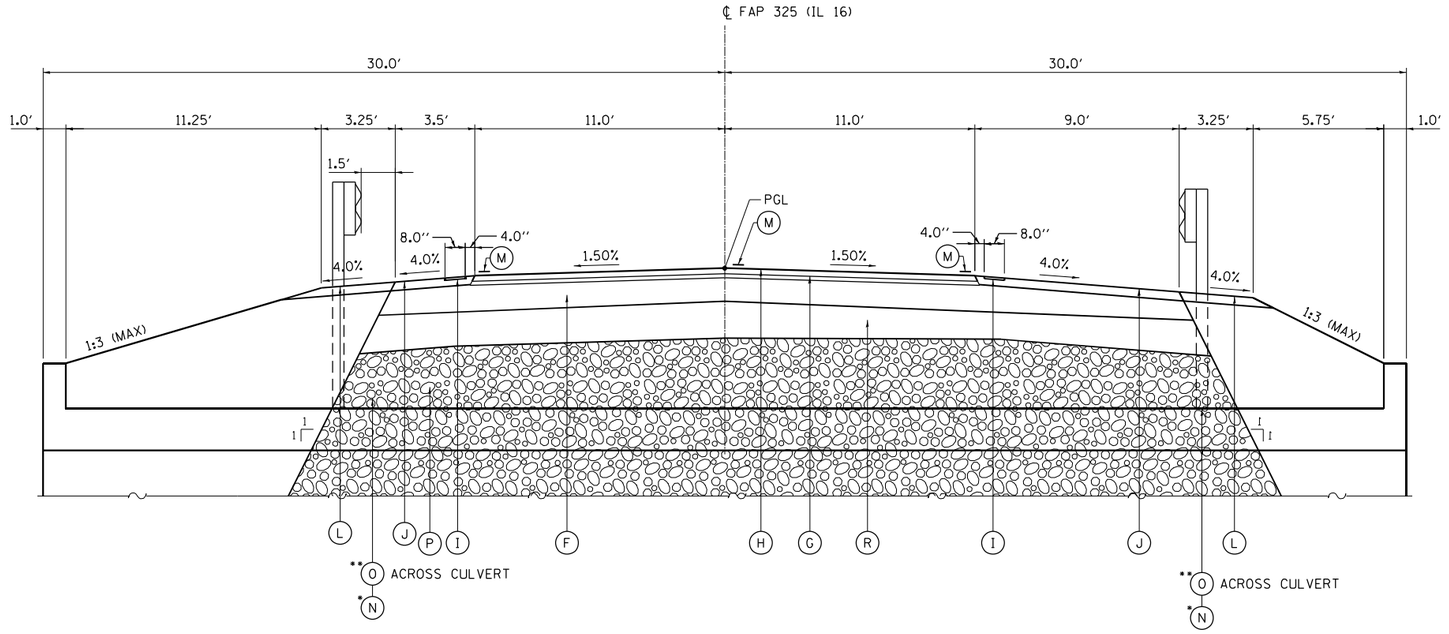
FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS IL 16 SN 068–2509	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - CFC	REVISED -			325	18(B-2, B-3); 16(CR)	*	142	58
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -			CONTRACT NO. 72984				
	PLOT DATE = 5/9/2023	DATE -	REVISED -		SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN



FAP ROUTE 325 (IL 16)

STA 42+89.50 TO STA 43+57.50

* GUARDRAIL

STA LT & RT 42+89.50 TO 43+02.42
STA LT & RT 43+44.58 TO 43+57.50

** STA LT & RT 43+02.42 TO 43+44.58

LEGEND

- (A) EX PCC PAVEMENT, 9-6-9
- (B) EX PCC BASE COURSE WIDENING, 8″
- (C) EX HMA SURFACE, 6″
- (D) EX HMA SHOULDERS, 8″ & VARIES
- (E) PR HMA BASE COURSE, 8″
- (F) PR HMA BINDER COURSE, IL-19.0, N50, VAR DEPTH
- (G) PR HMA BINDER COURSE IL-9.5 FG, N50, VAR DEPTH (3/4″ MIN)
- (H) PR HMA SURFACE COURSE, MIX "C", N50, 1 1/2″
- (I) PR SHOULDER RUMBLE STRIPS, 8 INCH
- (J) PR HMA SHOULDERS, VAR DEPTH (2 3/4″ MIN)
- (K) PR HMA SHOULDERS, 2 3/4″
- (L) PR AGGREGATE SHOULDERS, TYPE B
- (M) PR PAINT PAVEMENT MARKING LINE, 5″
- (N) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6′ POSTS
- (O) PR STRONG POST GUARDRAIL, ATTACHED TO CULVERT
- (P) PR GRANULAR CULVERT BACKFILL
- (R) PR BASE COURSE (OPTION), 8″

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	59
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN

LEGEND

- PR HMA SURFACE REMOVAL - BUTT JOINT
- PR PAVED SHOULDER REMOVAL
- PR HMA SURFACE REMOVAL, VARIABLE DEPTH
- PR PAVEMENT REMOVAL

N

20 0 20 40
SCALE IN FEET

PC Sta 35+29.44
CONC
EX ROW
CONC
GRAVEL ALLEY
CONC
C&G
12"
28"
STA 38+29.51
END PROJECT OMISSION
SEC 18(B-2,B-3); 16(CR)
PR BUTT JOINT
HOUSE
+29.51
16.00' LT
55'
HMA RAMP
OAK ST
+53
PVC (2")
HMA
+84.51
PR LIMITS OF CONSTRUCTION
EX ROW
PR HMA SHLD, VAR DEPTH (2 3/4" MIN)
PR 3.25' AGG SHLD, TYB
+00.00
16.00' LT
+50.00
14.5' LT
5.0'
11.0'
11.0'
5.0'
℄ IL RTE 16
EX CURVE 240
MATCHLINE STA 40+00.00
34
35+00
36
IL RTE 16
37
38
39
AMEREN GAS, PVC (2")
AMEREN GAS
EX ROW
1:25 TAPER ON CURVE
15" CMP TO REMAIN
EX ROW
CONC
RTE 16 GRAIN
RTE 16 GRAIN
ELEVATOR
+29.51
16.00' RT
+30.00
16.00' RT
CE GRAVEL
CE CONC
+86.40
PR 3.25' AGG SHLD, TY B
PR HMA BINDER, CSE IL-9.5 FG, 1 1/4" AND HMA SURFACE COURSE, 'MIX C', N50, 1 1/2"
PR LIMITS OF CONSTRUCTION

EXIST. CURVE 240
PI STA. = 39+15.21
△ = 7° 03' 05" (RT)
D = 0° 54' 54"
R = 6,261.09'
T = 385.77'
L = 770.56'
E = 11.87'
e = 2.20%
T.R. = 35.15'
S.E. RUN = 51.55'
P.C. STA. = 35+29.44
P.T. STA. = 43+00.00

SE TRANSITION:
34+59.92 - 35+46.62, LT
35+30.22 - 35+46.62, RT
42+48.45 - 43+00.00, LT (0.0%)
42+48.45 - 43+00.00, RT (0.0%)

NOTE:
SEE STAGE 1 AND STAGE 2 CONSTRUCTION SHEETS FOR SPECIAL DITCH PROFILES AND BASE COURSE WIDENING, 8" AND HMA SHOULDERS, 6" AND HMA BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH

55' RAMP
HMA SURF REM BUTT-JT
30.0'
SAW CUT 1½"
TAPER RATE = 1:240
HMA SURFACE COURSE 1½"
HMA BINDER COURSE 1¼"
EXISTING OVERLAY
EXISTING PAVEMENT

UPRR

RAMP DETAIL

STA. 38+29.51 TO STA. 38+84.51

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2121-7188\CADData SN 068-0017\c67298d-dht-plbl-0509-001.dgn

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 068-2509

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

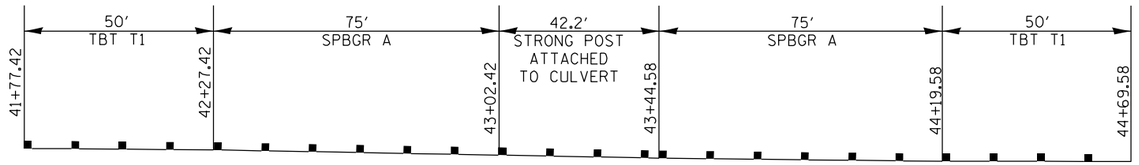
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	60

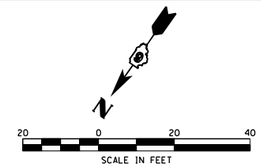
CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

LEGEND

- PR HMA SURFACE REMOVAL - BUTT JOINT
- PR PAVED SHOULDER REMOVAL
- PR HMA SURFACE REMOVAL, VARIABLE DEPTH
- PR PAVEMENT REMOVAL



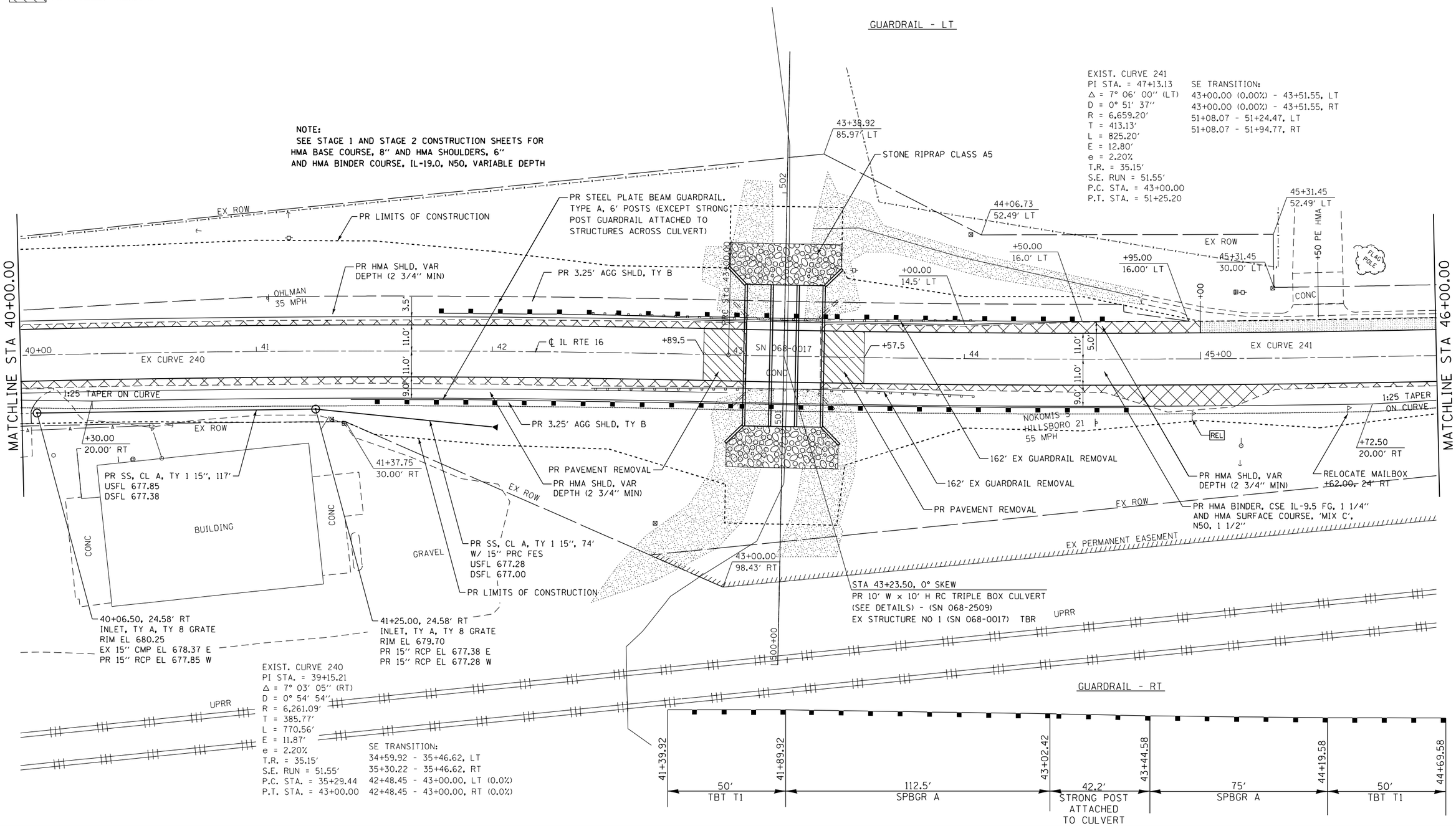


NOTE:
SEE STAGE 1 AND STAGE 2 CONSTRUCTION SHEETS FOR HMA BASE COURSE, 8" AND HMA SHOULDERS, 6" AND HMA BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH

GUARDRAIL - LT

EXIST. CURVE 241
PI STA. = 47+13.13
Δ = 7° 06' 00" (LT)
D = 0° 51' 37"
R = 6,659.20'
T = 413.13'
L = 825.20'
E = 12.80'
e = 2.20%
T.R. = 35.15'
S.E. RUN = 51.55'
P.C. STA. = 43+00.00
P.T. STA. = 51+25.20

SE TRANSITION:
43+00.00 (0.00%) - 43+51.55, LT
43+00.00 (0.00%) - 43+51.55, RT
51+08.07 - 51+24.47, LT
51+08.07 - 51+94.77, RT



EXIST. CURVE 240
PI STA. = 39+15.21
Δ = 7° 03' 05" (RT)
D = 0° 54' 54"
R = 6,261.09'
T = 385.77'
L = 770.56'
E = 11.87'
e = 2.20%
T.R. = 35.15'
S.E. RUN = 51.55'
P.C. STA. = 35+29.44
P.T. STA. = 43+00.00

SE TRANSITION:
34+59.92 - 35+46.62, LT
35+30.22 - 35+46.62, RT
42+48.45 - 43+00.00, LT (0.0%)
42+48.45 - 43+00.00, RT (0.0%)

GUARDRAIL - RT

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/11/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 068-2509

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	61

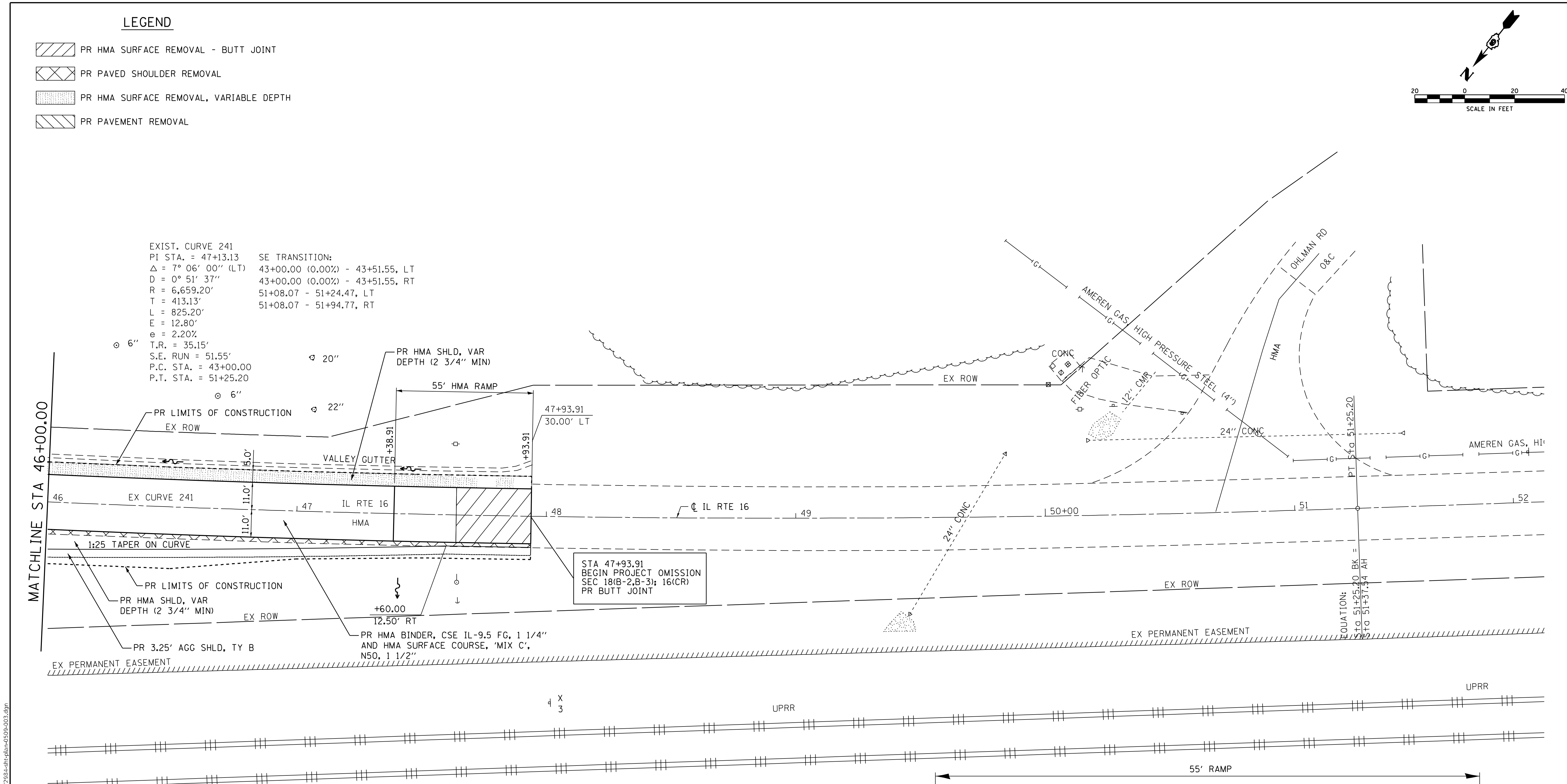
CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT

FEHR GRAHAM PROJECT NUMBER: 10005-2

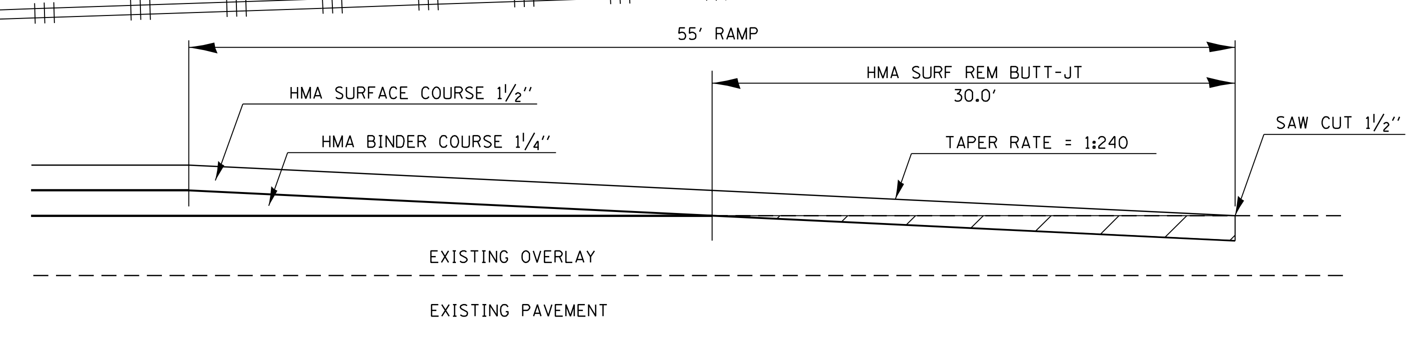
* MONTGOMERY & CHRISTIAN

LEGEND

- PR HMA SURFACE REMOVAL - BUTT JOINT
- PR PAVED SHOULDER REMOVAL
- PR HMA SURFACE REMOVAL, VARIABLE DEPTH
- PR PAVEMENT REMOVAL



NOTE:
SEE STAGE 1 AND STAGE 2 CONSTRUCTION SHEETS FOR HMA BASE COURSE, 8'' AND HMA SHOULDERS, 6'' AND HMA BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH



RAMP DETAIL

STA. 47+38.91 TO STA. 47+93.91

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN IL 16 SN 068-2509	F.A.P. RTE. 325	SECTION 18(B-2, B-3); 16(CR)	COUNTY *	TOTAL SHEETS 142	SHEET NO. 62
		DRAWN - CFC	REVISED -					CONTRACT NO. 72984		
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -		SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		
	PLOT DATE = 5/11/2023	DATE -	REVISED -							

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

PLAN

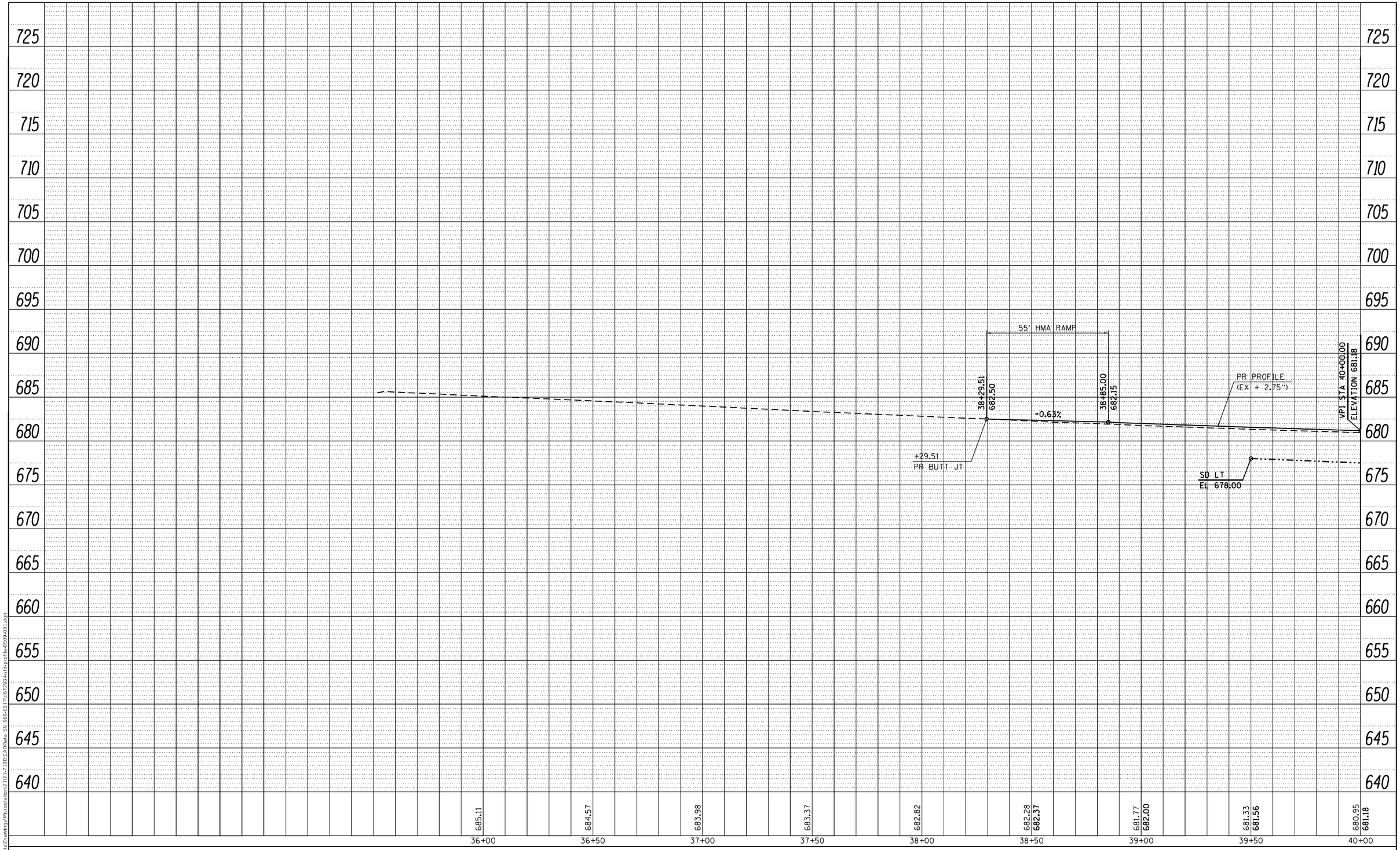
SURVEYED	
PLOTTED	
DRAWN / CHECKED	
NOTE BOOK	
NO.	
CADD FILE NAME	

BY	DATE

PROFILE

SURVEYED	
PLOTTED	
DRAWN / CHECKED	
NOTE BOOK	
NO.	
STRUCTURE NOTATNS CHKD	

BY	DATE



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		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

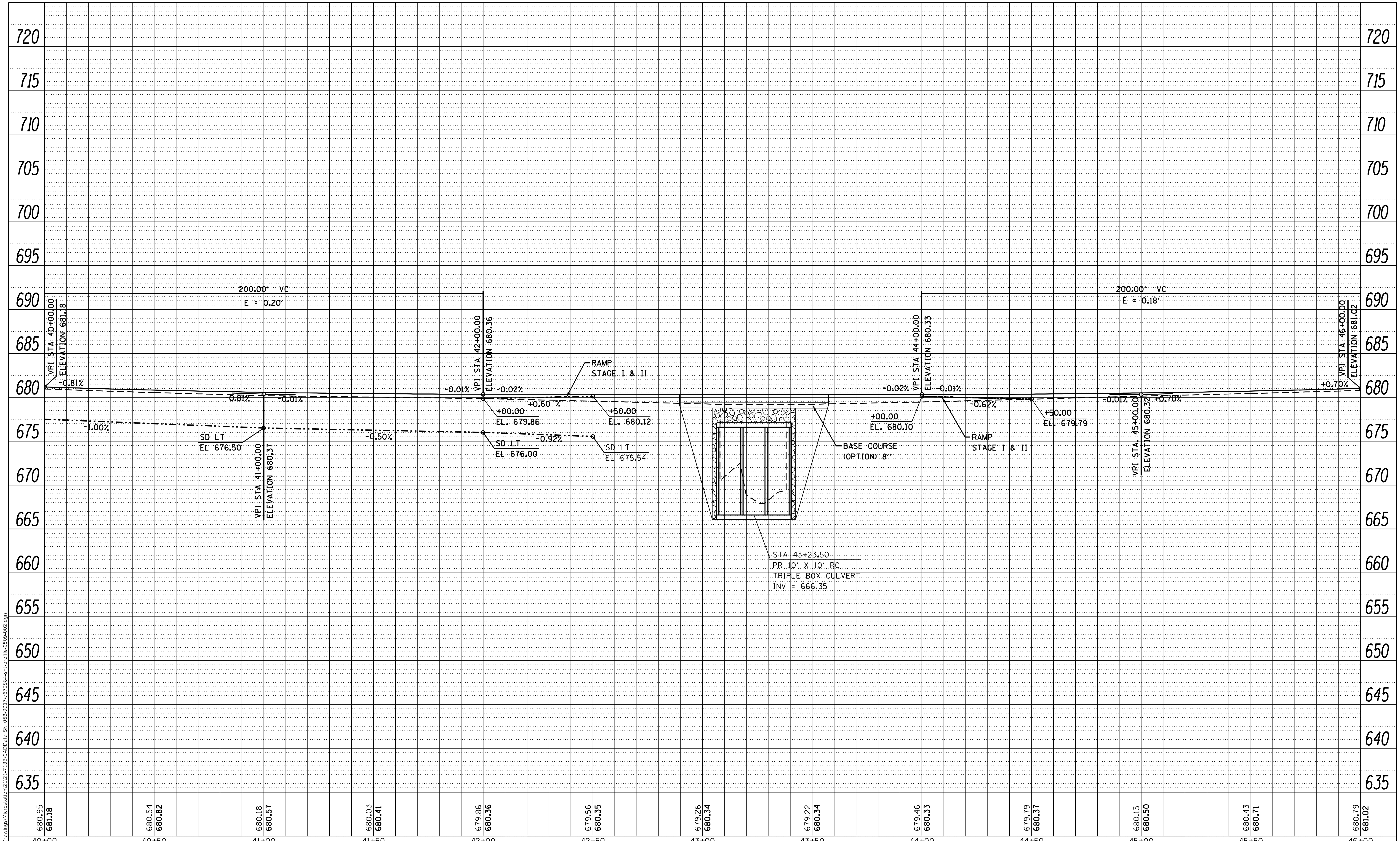
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
IL 16 SN 068-2509

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	63
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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 NOTATIONS CHECKED — BY — DATE

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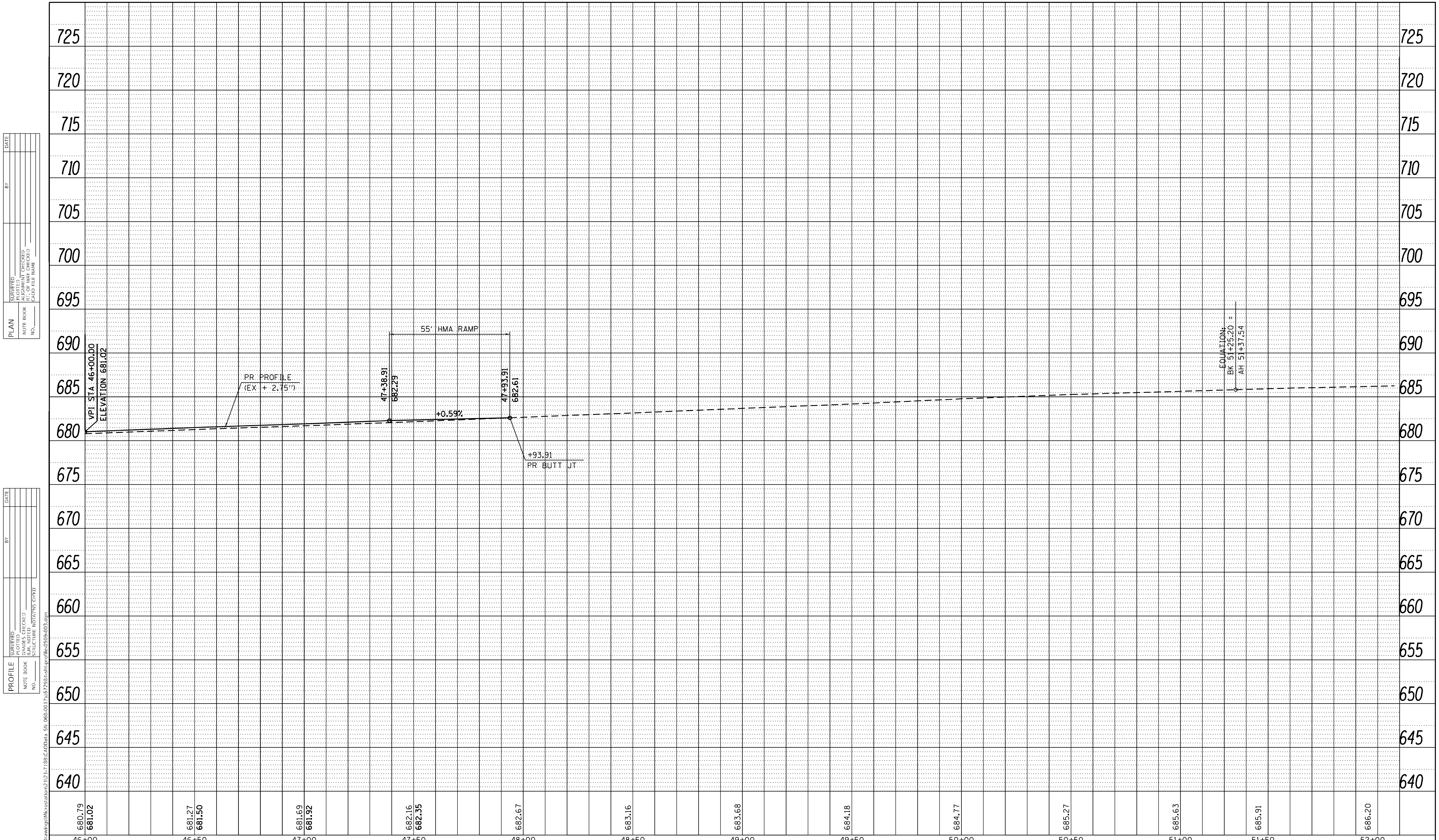
FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROFILE IL 16 SN 068–2509	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - CFC	REVISED -			325	18(B-2, B-3); 16(CR)	*	142	64
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -			CONTRACT NO. 72984				
	PLOT DATE = 5/1/2023	DATE -	REVISED -		SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN



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ILLINOIS DESIGN FIRM NO. 184-003525		DRAWN - CFC	REVISED -	**DEPARTMENT OF TRANSPORTATION**
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -	
	PLOT DATE = 5/1/2023	DATE -	REVISED -	

FEHR GRAHAM PROJECT NUMBER: 10005-2

PROFILE
IL 16 SN 068–2509

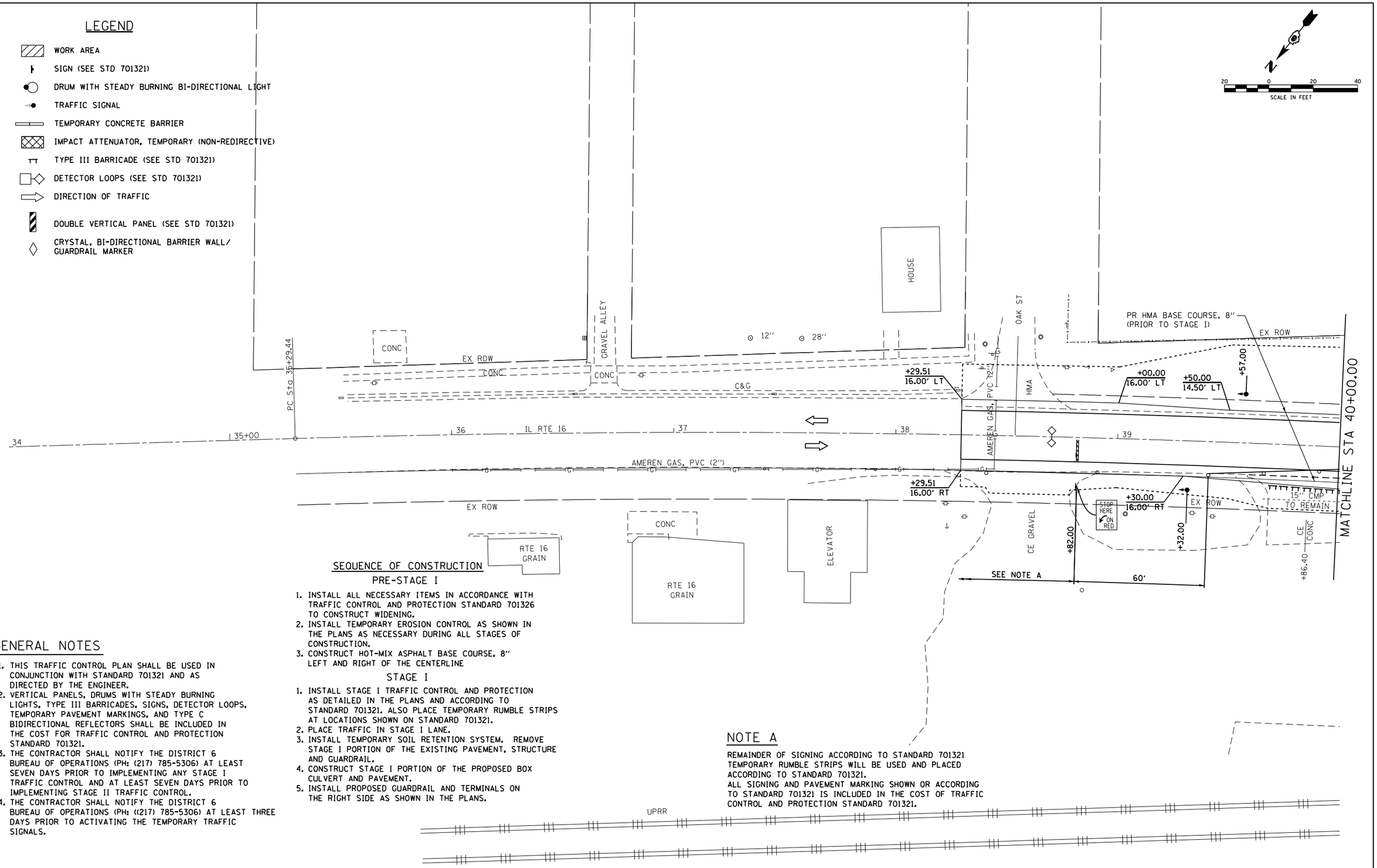
SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	65
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



SEQUENCE OF CONSTRUCTION

PRE-STAGE I

1. INSTALL ALL NECESSARY ITEMS IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701326 TO CONSTRUCT WIDENING.
2. INSTALL TEMPORARY EROSION CONTROL AS SHOWN IN THE PLANS AS NECESSARY DURING ALL STAGES OF CONSTRUCTION.
3. CONSTRUCT HOT-MIX ASPHALT BASE COURSE, 8" LEFT AND RIGHT OF THE CENTERLINE

STAGE I

1. INSTALL STAGE I TRAFFIC CONTROL AND PROTECTION AS DETAILED IN THE PLANS AND ACCORDING TO STANDARD 701321. ALSO PLACE TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
2. PLACE TRAFFIC IN STAGE I LANE.
3. INSTALL TEMPORARY SOIL RETENTION SYSTEM. REMOVE STAGE I PORTION OF THE EXISTING PAVEMENT, STRUCTURE AND GUARDRAIL.
4. CONSTRUCT STAGE I PORTION OF THE PROPOSED BOX CULVERT AND PAVEMENT.
5. INSTALL PROPOSED GUARDRAIL AND TERMINALS ON THE RIGHT SIDE AS SHOWN IN THE PLANS.

GENERAL NOTES

1. THIS TRAFFIC CONTROL PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD 701321 AND AS DIRECTED BY THE ENGINEER.
2. VERTICAL PANELS, DRUMS WITH STEADY BURNING LIGHTS, TYPE III BARRICADES, SIGNS, DETECTOR LOOPS, TEMPORARY PAVEMENT MARKINGS, AND TYPE C BIDIRECTIONAL REFLECTORS SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
3. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS (PH: (217) 785-5306) AT LEAST SEVEN DAYS PRIOR TO IMPLEMENTING ANY STAGE I TRAFFIC CONTROL AND AT LEAST SEVEN DAYS PRIOR TO IMPLEMENTING STAGE II TRAFFIC CONTROL.
4. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS (PH: ((217) 785-5306) AT LEAST THREE DAYS PRIOR TO ACTIVATING THE TEMPORARY TRAFFIC SIGNALS.

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321 TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL
IL 16 SN 068-2509

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	66
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

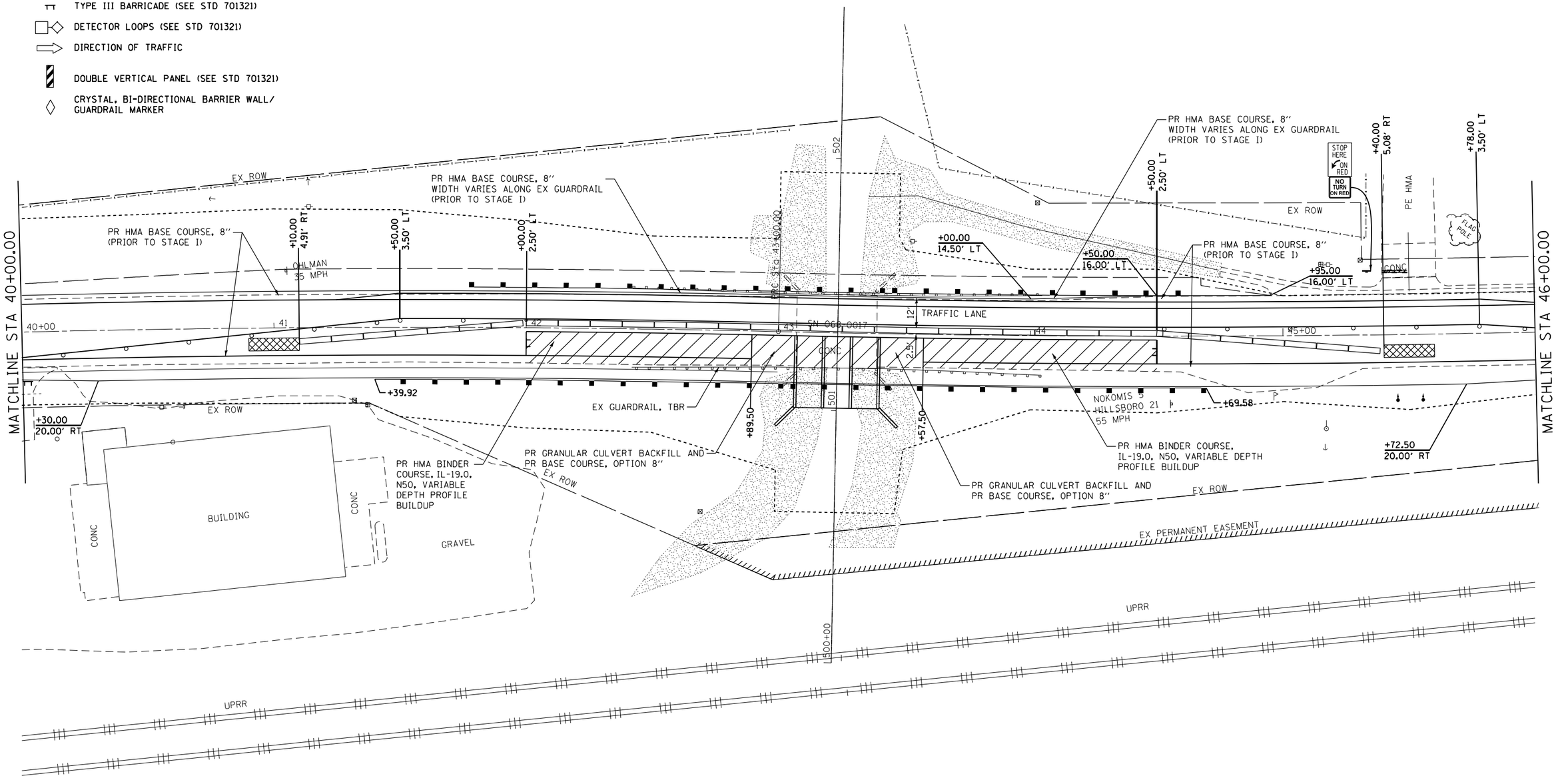
* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

N

20 0 20 40
SCALE IN FEET



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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I TRAFFIC CONTROL IL 16 SN 068-2509
		DRAWN - CFC	REVISED -		
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -		
	PLOT DATE = 5/9/2023	DATE -	REVISED -		SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

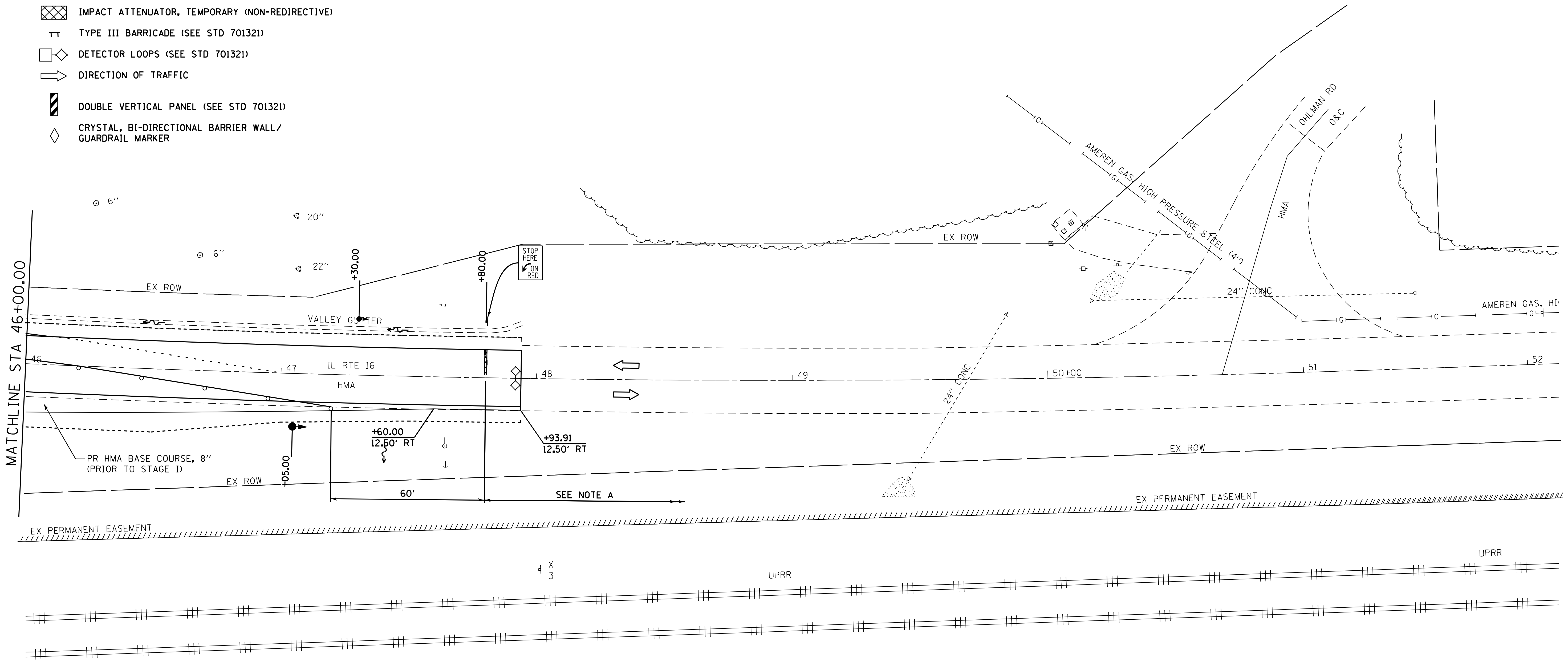
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	67
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I TRAFFIC CONTROL IL 16 SN 068-2509
		DRAWN - CFC	REVISED -		
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -		
	PLOT DATE = 5/9/2023	DATE -	REVISED -		SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

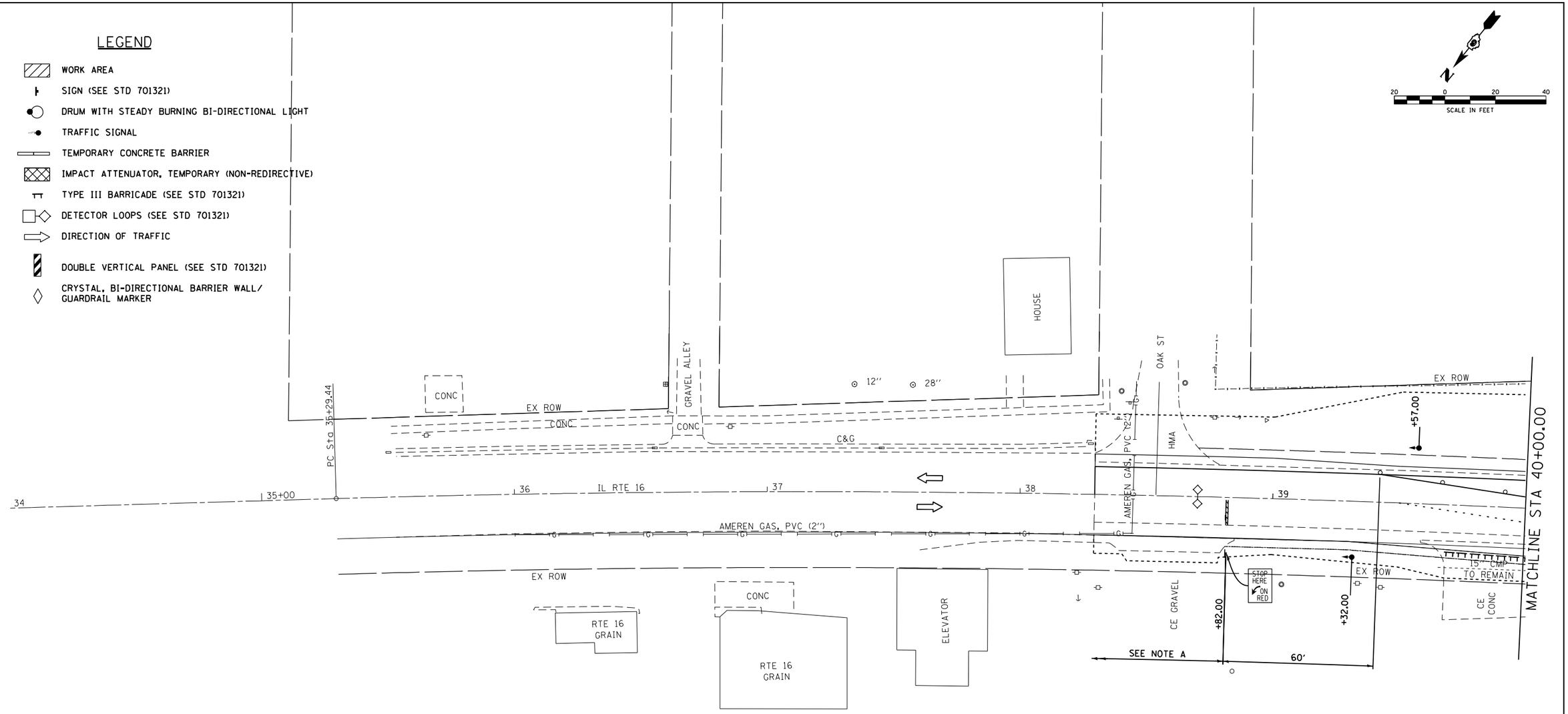
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	68
	CONTRACT NO. 72984			
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



SEQUENCE OF CONSTRUCTION

STAGE II

1. RELOCATE TEMPORARY CONCRETE BARRIER AND OTHER TRAFFIC CONTROL ITEMS IN ACCORDANCE WITH STANDARD 701321 AND STAGE II TRAFFIC CONTROL DETAILS.
2. PLACE TRAFFIC IN STAGE II LANE.
3. REMOVE STAGE II PORTION OF THE EXISTING STRUCTURE, GUARDRAIL AND PAVEMENT.
4. CONSTRUCT STAGE II PORTION OF THE PROPOSED BOX CULVERT, PAVEMENT AND GUARDRAIL.

STAGE III

1. REMOVE TRAFFIC CONTROL ITEMS ASSOCIATED WITH STANDARD 701321. INSTALL SHORT TERM PAVEMENT MARKINGS AND PLACE TRAFFIC IN PERMANENT LANES.
2. PLACE HMA BINDER, SURFACE COURSE AND SHOULDERS IN ACCORDANCE WITH STANDARD 701201.
3. INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH STANDARD 701311.

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 068-2509

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	69
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

N

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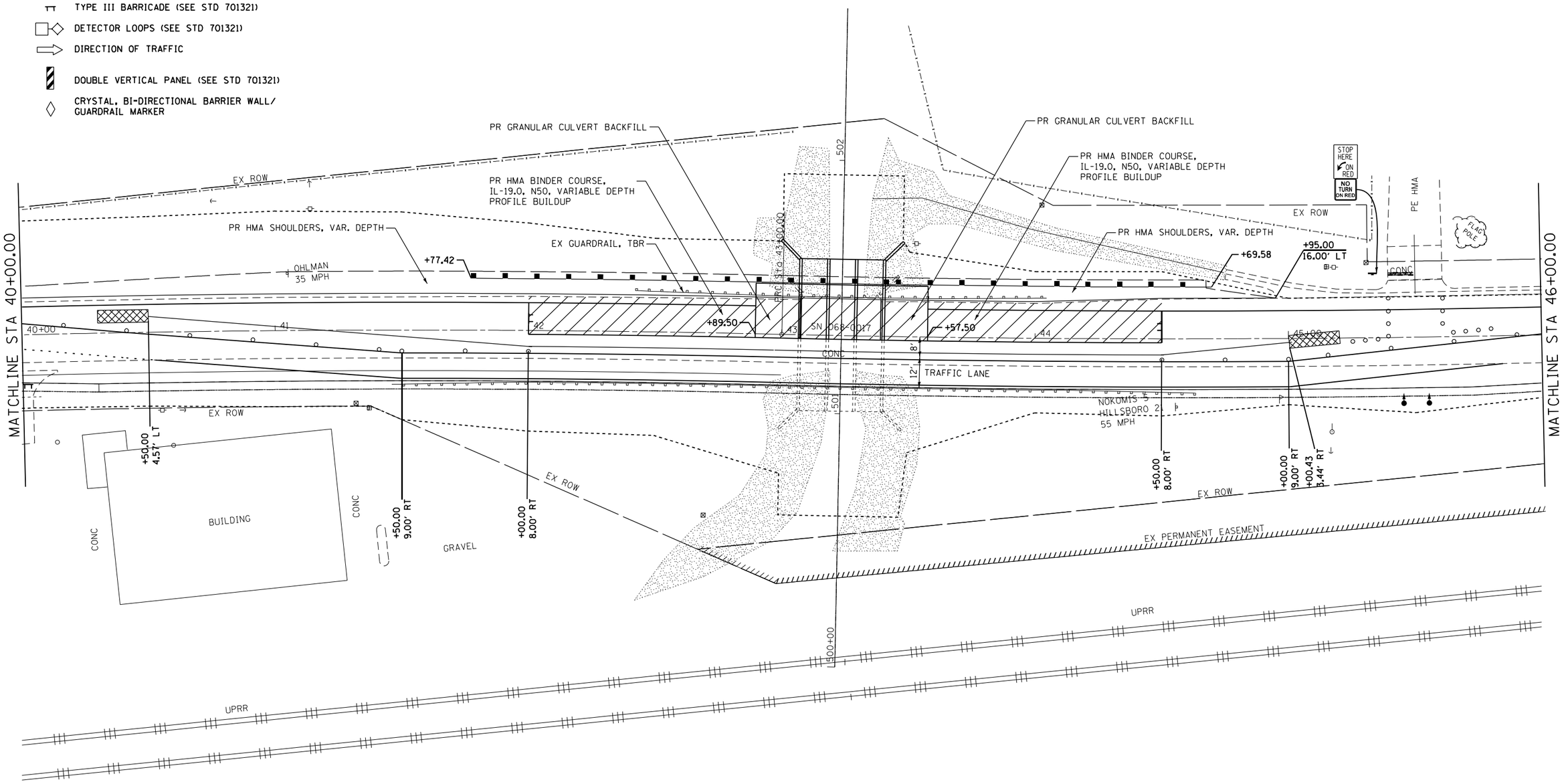
SCALE IN FEET



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		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 068-2509

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	70
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

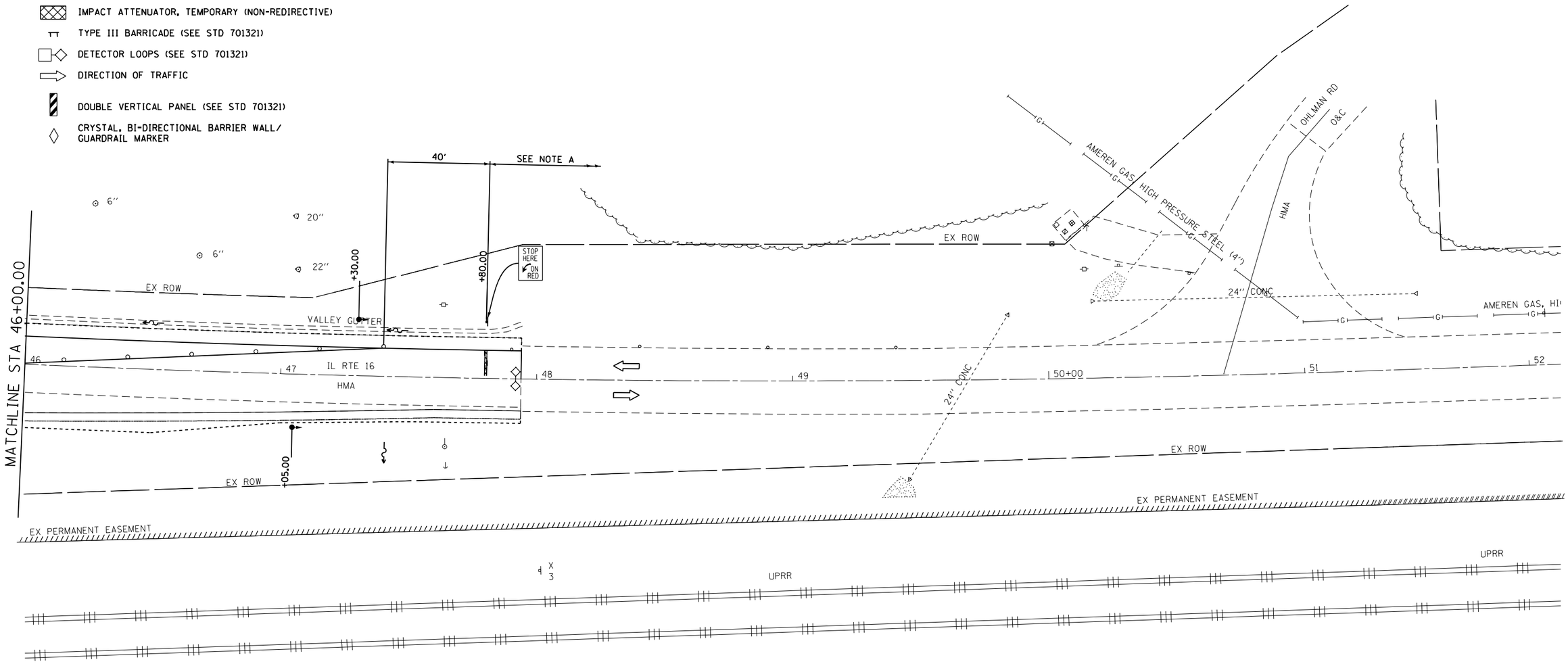
* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

N

20 0 20 40
SCALE IN FEET



NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

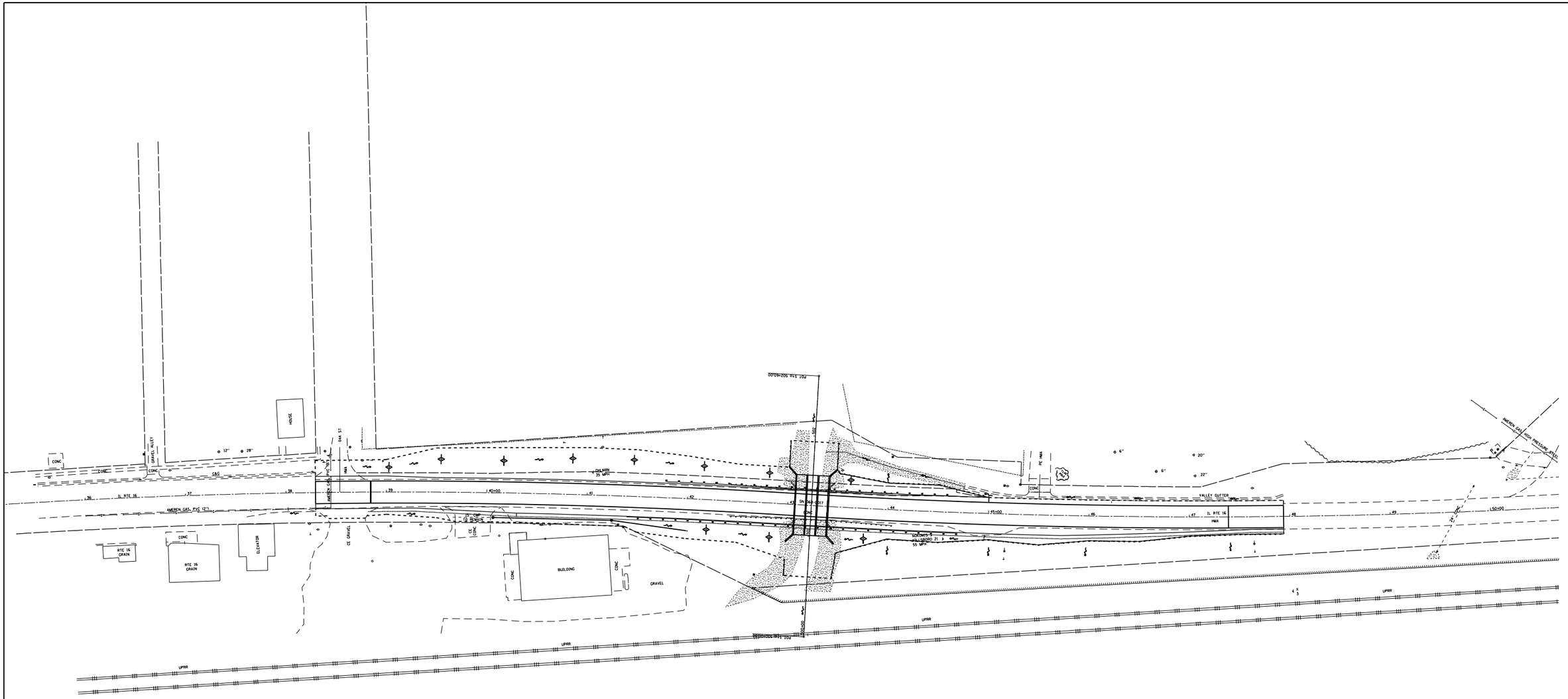
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 068-2509

SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	71
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



LEGEND

TEMPORARY DITCH CHECK (AGGREGATE (EROSION CONTROL))

PERIMETER EROSION BARRIER

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescate	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 100.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/1/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
IL 16 SN 068–2509

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	72
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

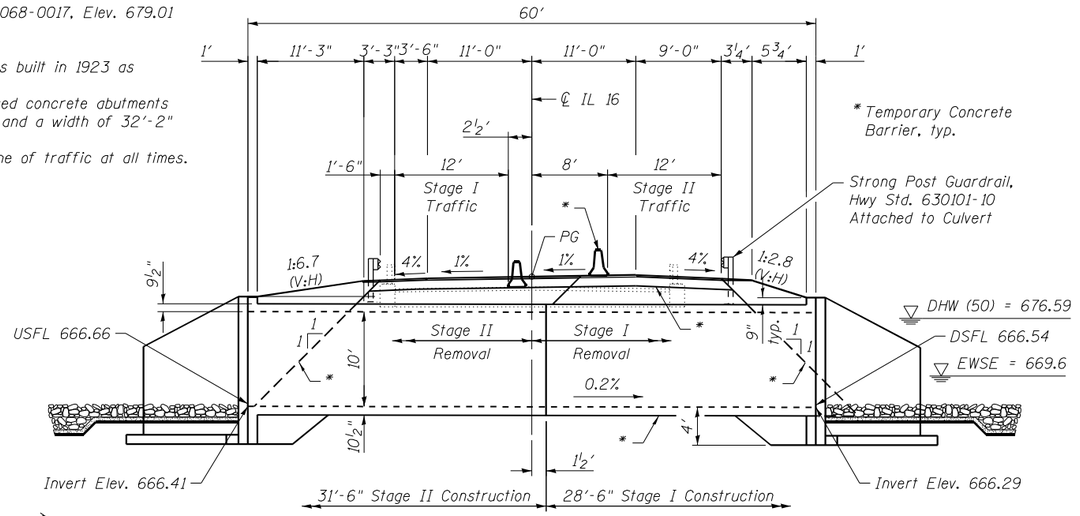
* MONTGOMERY & CHRISTIAN

Benchmark: Chiseled '□' on Northwest wingwall SN 068-0017, Elev. 679.01 at Sta. 43+38.9, 16.39' Rt.

Existing Structure: SN 068-0017 at Sta. 43+23 was built in 1923 as SBI 16, Section 18.
The structure is a single span concrete slab on closed concrete abutments and has a length of 32'-0" back to back abutments and a width of 32'-2" out to out, no skew.
Stage construction will be utilized to maintain one lane of traffic at all times.

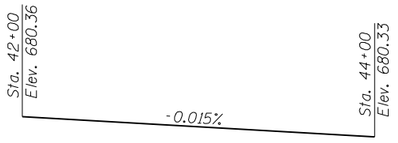
No Salvage.

INDEX OF SHEETS

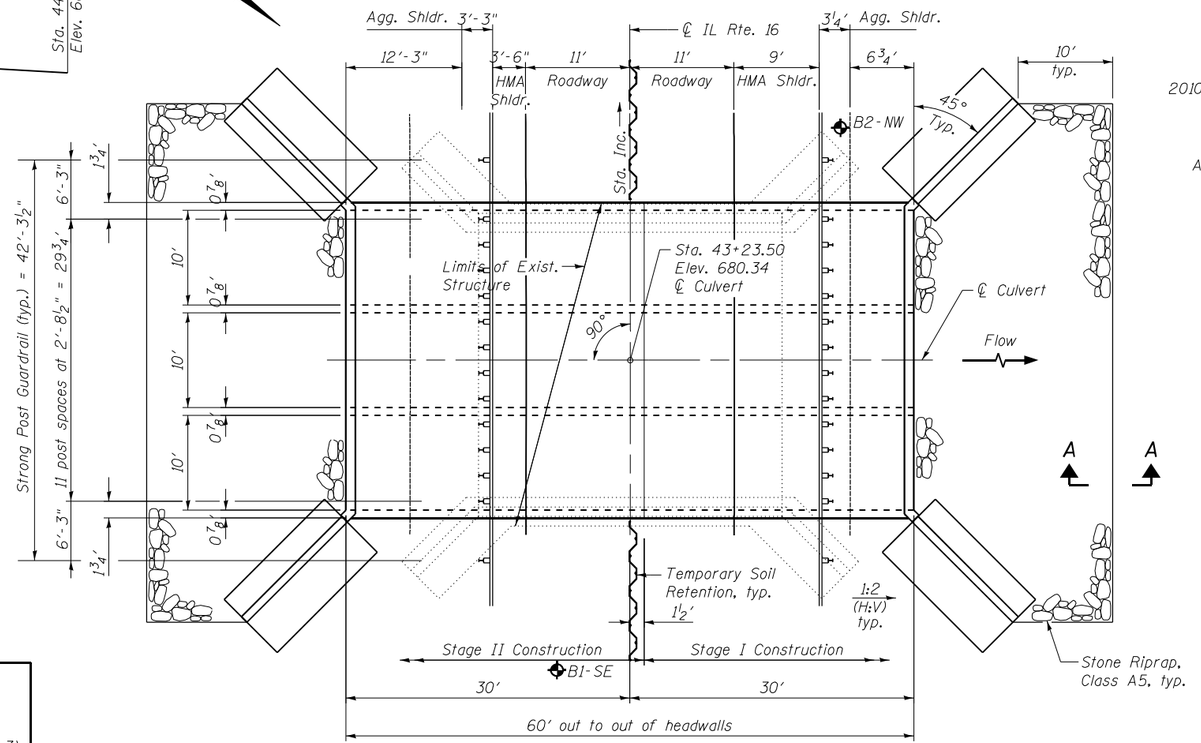


LONGITUDINAL SECTION

* Limits of Granular Culvert Backfill



PROFILE GRADE
(along ℄ IL Rte. 16)



PLAN

CURVE DATA

Δ = 7°06'00" (Lt.)
D = 0°51'37"
T = 413.13'
L = 825.20'
E = 12.80'
R = 6659.20'
S.E. = 2.2%
P.C. = Sta. 43+00.00
P.T. = Sta. 51+25.20
P.I. = Sta. 47+13.13
SE Transition from 43+00.00 (0.00%) to 43+51.55

STATION 43+23.50
BUILT 20___ BY
STATE OF ILLINOIS
F.A.P. RTE. 325 SEC. 18(B-2, B-3)
LOADING HS-93
STR. NO. 068-2509

LETTERING FOR NAME PLATE

See Std. 515001

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I Removal to ensure the remaining portion will not be prematurely damaged.
Reinforcement Bars designated (E) shall be epoxy coated.
Poor foundation material may be encountered under some areas of the culvert. Contact the District Geotechnical Engineer to verify foundation materials meet plan requirements. A quantity for Rock Fill - Foundation has been estimated and included in the plans to be used if the District Geotechnical Engineer determines it is necessary. Rockfill foundation shall be used to fill in areas where the existing foundation has been removed. See Special Provisions for Rock Fill - Foundation.
See Roadway Plans for Temporary Concrete Barrier quantity.

WATERWAY INFORMATION

Drainage Area = 2.0 sq. mi.
Exist. Overtopping Elev. 679.18 @ Sta. 43+23.00
Prop. Overtopping Elev. 680.65 @ Sta. 43+23.00

Flood	Freq. Yr.	Q C.F.S.	Waterway Opening Sq. Ft. Existing	Proposed	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
	10	630	130	250	675.05	0.5	0.5	675.50	675.56
Design	50	1040	170	300	676.59	0.5	0.5	677.09	677.05
Base	100	1230	190	300	677.29	0.8	0.5	678.05	677.74
Overtopping Event (E)	<500 yr.								
Overtopping Event (P)	<500 yr.		Bridge/Weir	Bridge/Weir					
Max. Calc.	500	1690	230/260	300/20	679.71	0.9	1.0	680.59	680.67

10 yr Outlet Velocity from Existing Structure = 4.22 fps
10 yr Outlet Velocity from Proposed Structure = 5.55 fps

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th Edition, with 2010 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

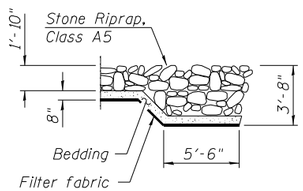
DESIGN STRESSES

FIELD UNITS

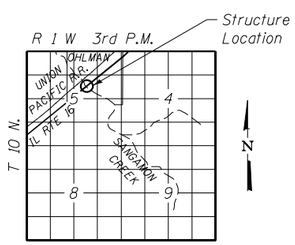
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. Yd.	235
Filter Fabric	Sq. Yd.	235
Removal of Existing Structures No. 1	Each	1
Reinforcement Bars	Pound	44,310
Reinforcement Bars, Epoxy Coated	Pound	890
Bar Splicers	Each	148
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	261.0
Rock Fill - Foundation	Ton	14
Granular Culvert Backfill	Cu. Yd.	213
Temporary Soil Retention System	Sq. Ft.	298
Membrane Waterproofing System for Buried Structures	Sq. Yd.	239
Geocomposite Wall Drain	Sq. Yd.	239
Strong Post Guardrail Attached to Culvert	Foot	85



SECTION A-A



LOCATION SKETCH

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	662.4	662.3

LICENSED STRUCTURAL ENGINEER
MARY COOMBE BLOXDORF
4859
SPRINGFIELD
STATE OF ILLINOIS

ILLINOIS STRUCTURAL NO. 4859
EXPIRES 11/30/2024
DATE 04/28/2023

GENERAL PLAN
IL RTE. 16 OVER SANGAMON CREEK
FAP RTE. 325 SECTION 18(B-2, B-3)
MONTGOMERY COUNTY
STATION 43+23.50
STRUCTURE NO. 068-2509

MODEL: Default
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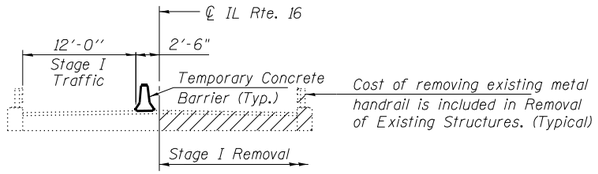
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 16.0000 ' / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

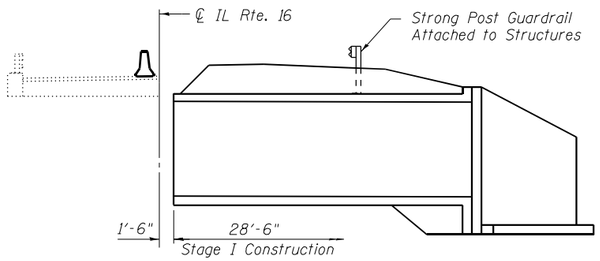
GENERAL PLAN AND ELEVATION
SN 068-2509
SHEET 1 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	73
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



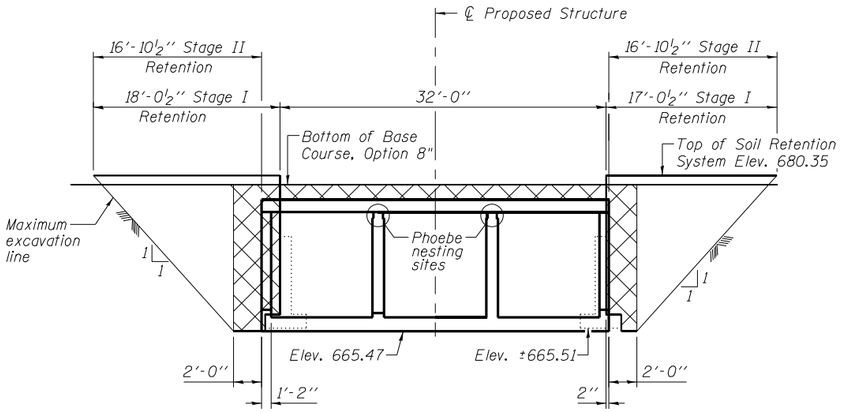
STAGE I REMOVAL

(Looking Southwest)



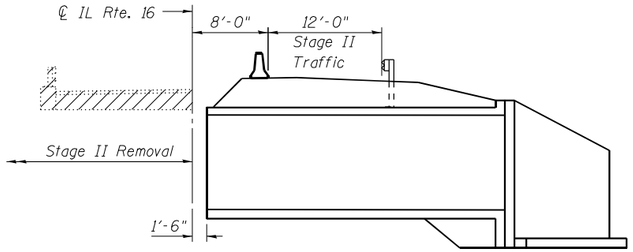
STAGE I CONSTRUCTION

(Looking Southwest)



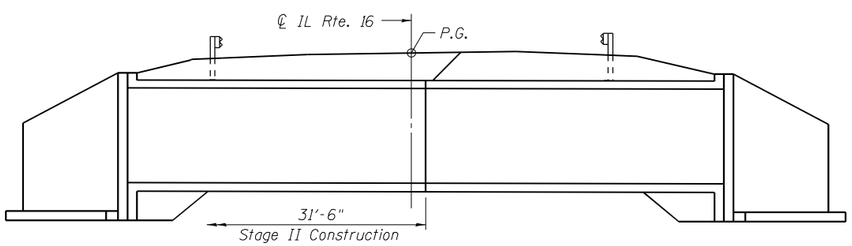
TEMPORARY SOIL RETENTION SYSTEM

(Dimensions along ℄ Roadway) (Looking Downstream)



STAGE II REMOVAL

(Looking Southwest)



STAGE II CONSTRUCTION

(Looking Southwest)

Notes: Cross hatched area indicates Granular Culvert Backfill. See Special Provisions.
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
Hatched area indicates Removal of Existing Structures.
See roadway plans for quantity of Temporary Concrete Barrier.

FEHR GRAHAM
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FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 16:0.0000 ':" / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 068-2509
SHEET 2 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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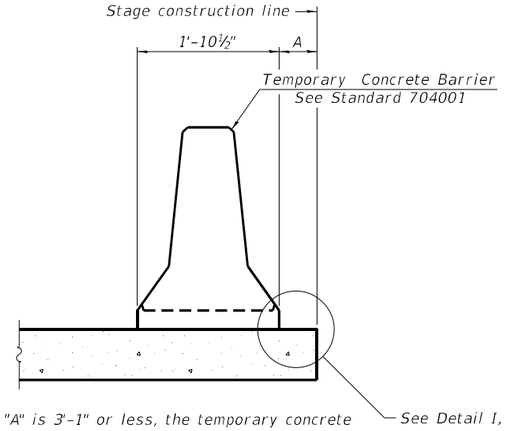
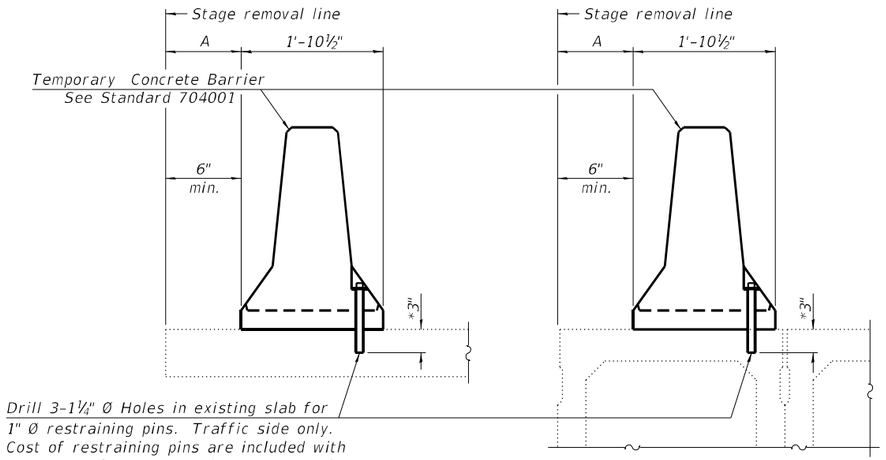
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



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

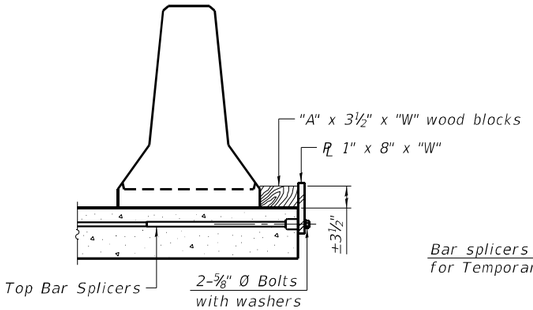


EXISTING SLAB

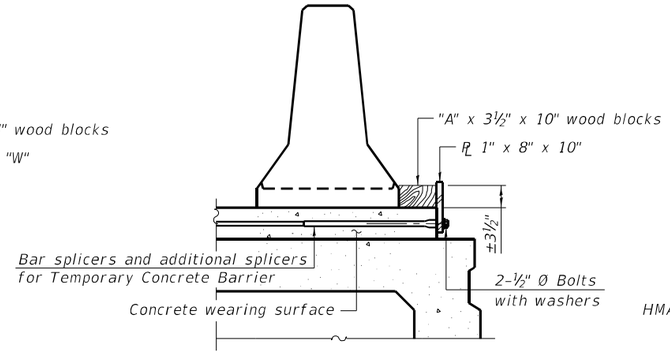
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

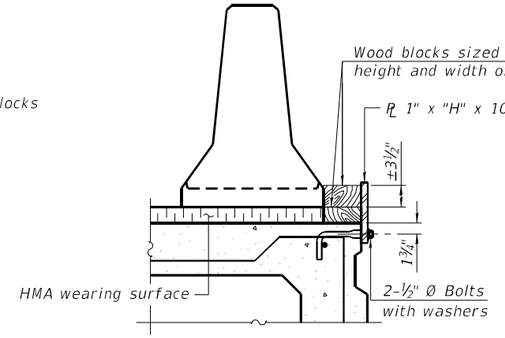
SECTIONS THRU SLAB OR DECK BEAM



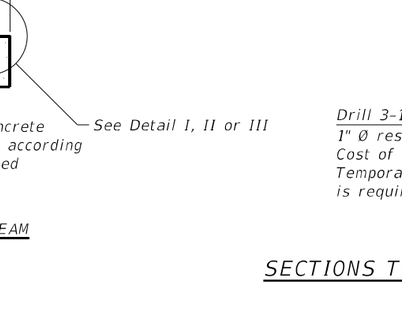
DETAIL I



DETAIL II

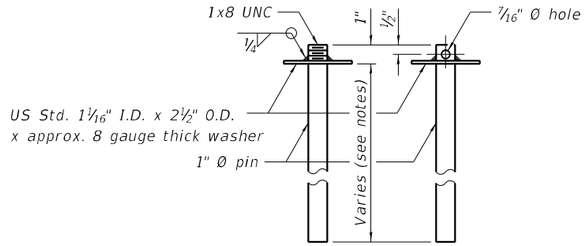


DETAIL III

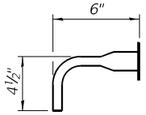


STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)

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



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - 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

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

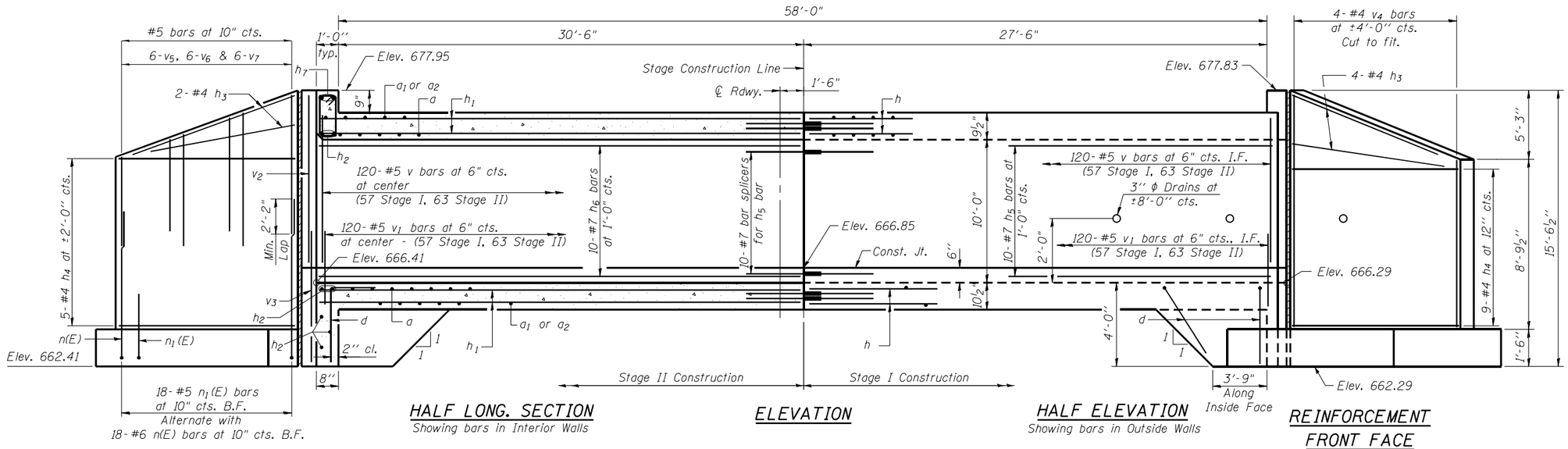
USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 068-2509

SHEET 3 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	75
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



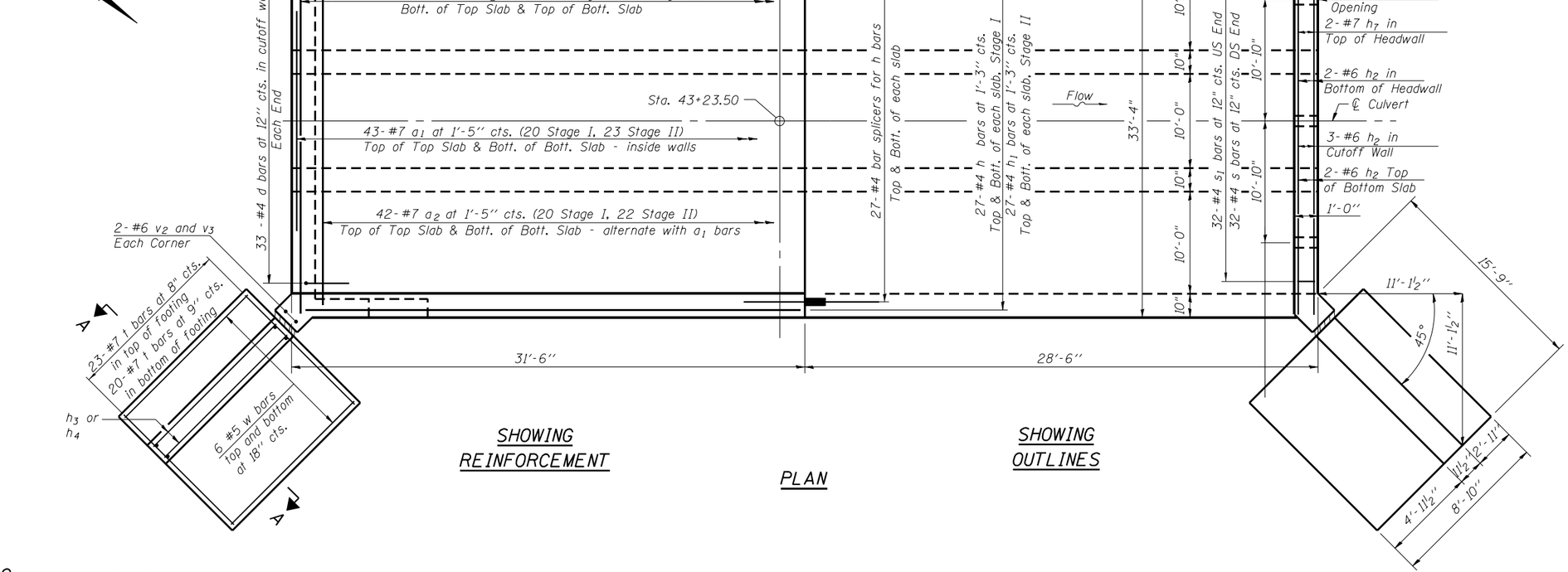
HALF LONG. SECTION
Showing bars in Interior Walls

ELEVATION

HALF ELEVATION
Showing bars in Outside Walls

REINFORCEMENT FRONT FACE

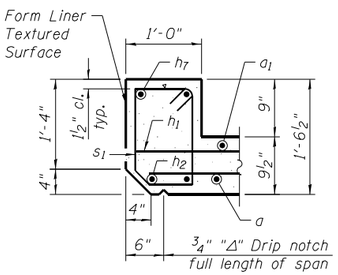
REINFORCEMENT BACK FACE



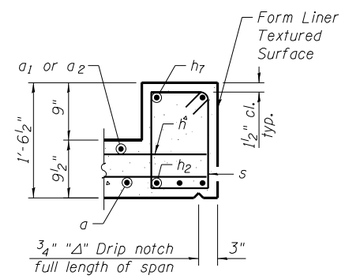
SHOWING REINFORCEMENT

PLAN

SHOWING OUTLINES



SECTION B-B
Upstream End



SECTION C-C
Downstream End

Note:
See sheet 5 of 7 for Sec. A-A, bar details and Bill of Material.

DB-T-0

7-1-10

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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

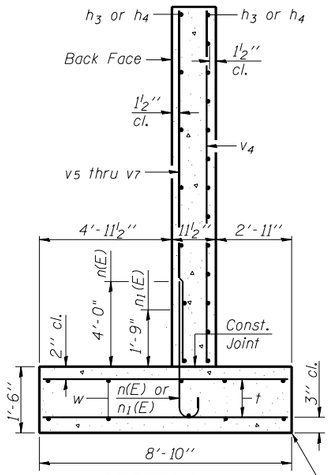
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

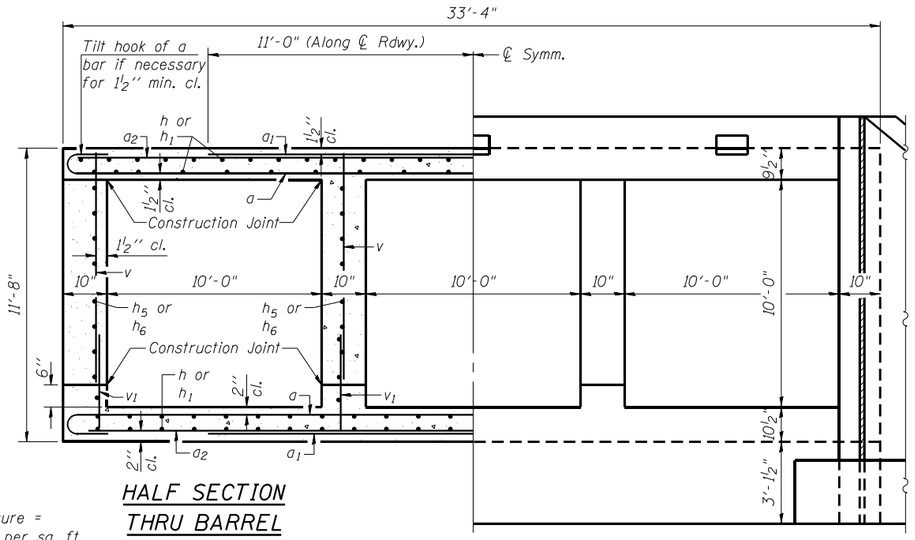
CULVERT DETAILS
STRUCTURE NO. 068-2509
SHEET 4 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	76
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



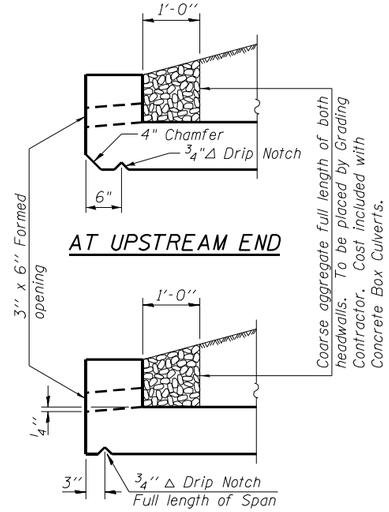
SECTION A-A

Maximum Soil Pressure = 4.83 kips per sq. ft.



HALF SECTION THRU BARREL

HALF END ELEVATION



AT UPSTREAM END

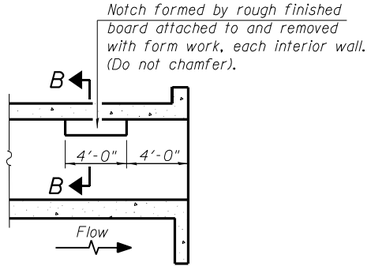
AT DOWNSTREAM END

DRAIN DETAIL

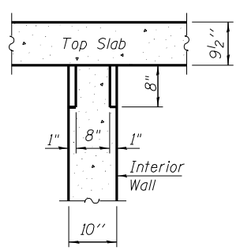
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	170	#7	34'-8"	
a_1	86	#7	22'-0"	
a_2	84	#7	33'-0"	
d	94	#4	5'-6"	
h	108	#4	28'-2"	
h_1	108	#4	31'-2"	
h_2	14	#6	33'-0"	
h_3	24	#4	14'-8"	
h_4	56	#4	14'-6"	
h_5	40	#7	28'-2"	
h_6	40	#7	31'-2"	
h_7	4	#7	33'-0"	
n(E)	72	#6	5'-10"	
n_1(E)	72	#5	3'-6"	
s	32	#4	5'-4"	
s_1	32	#4	5'-2"	
t	172	#7	8'-6"	
v	480	#5	10'-0"	
v_1	480	#5	2'-11"	
v_2	8	#5	10'-8"	
v_3	8	#6	6'-4"	
v_4	16	#4	13'-8"	
v_5	24	#5	8'-8"	
v_6	24	#5	10'-6"	
v_7	24	#5	12'-4"	
w	48	#5	14'-7"	
Concrete Box Culverts		Cu. Yd.	261.0	
Reinforcement Bars, Epoxy Coated		Pound	890	
Reinforcement Bars		Pound	44,310	

Notes:
Reinforcement bars designated (E) shall be epoxy coated.

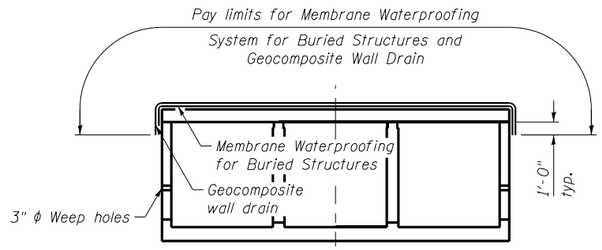


LONGITUDINAL SECTION

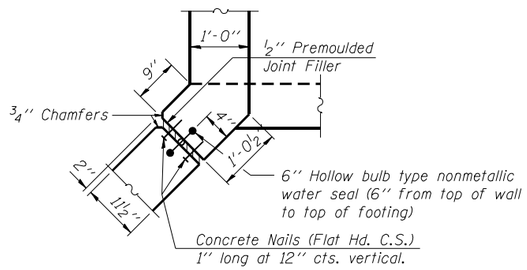


SECTION B-B

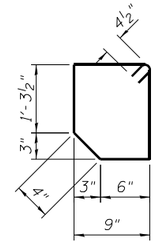
PHOEBE NESTING SITE DETAILS
(Downstream End Only)



MEMBRANE WATERPROOFING



CORNER DETAIL



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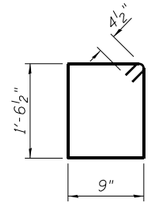

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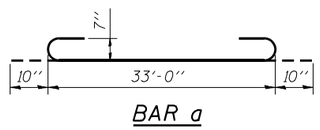

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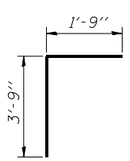

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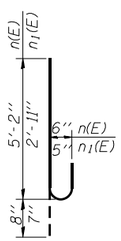

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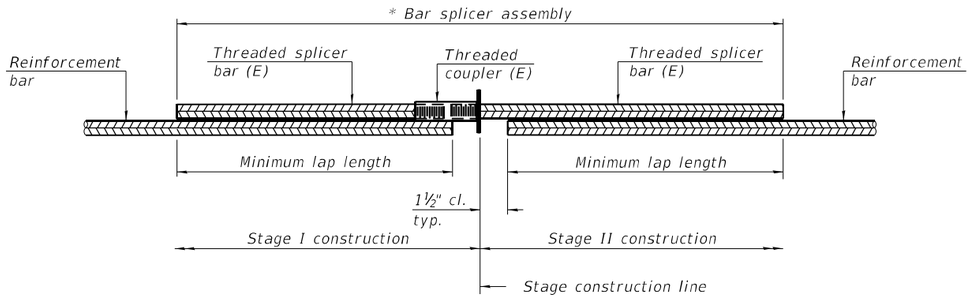
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -			
	CHECKED - MCB	REVISED -			
PLOT SCALE = 16:0.0000 ':" / in.	DRAWN - MMY	REVISED -			
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS
STRUCTURE NO. 068-2509
SHEET 5 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	77
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



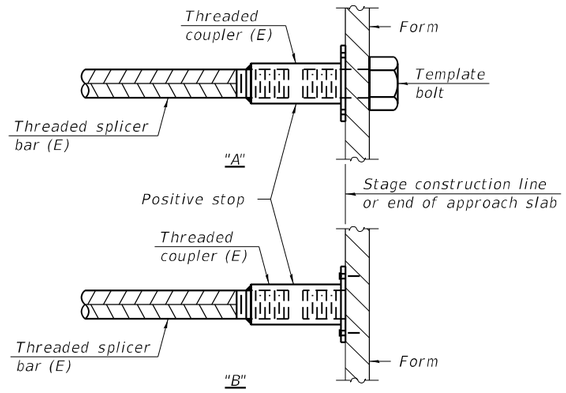
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + 1½" + thread length

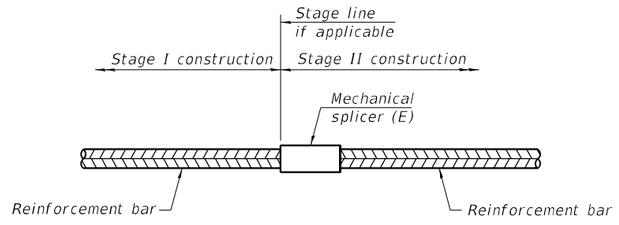
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab	#4	54	1'-9"
Bottom Slab	#4	54	1'-9"
Walls	#7	40	3'-10"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 2-1-2023

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 068-2509
SHEET 6 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	78
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Date 10/27/10

ROUTE FAP 325 DESCRIPTION Culvert carrying IL 16 over Sangamon Creek LOGGED BY M. Tappan

SECTION 18(B-2,B-3) LOCATION NE 1/4, SEC. 5, TWP. 10N, RNG. 1W, 3 PM

COUNTY Montgomery DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 068-2509
Station 43+23.5

BORING NO. 1-SE
Station 42+85
Offset 8.0ft LT
Ground Surface Elev. 679.2 ft

Surface Water Elev. 668.7 ft
Stream Bed Elev. 667.5 ft

Groundwater Elev.:
▽ First Encounter 670.2 ft
▼ Upon Completion Plugged ft
▼ After ____ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
V Dark Gray Moist SILTY CLAY LOAM			
	0		
-5	2 2	1.1 B	25
	0		
670.70	1 2	0.7 S-12	25
Brown and Gray Moist CLAY LOAM ▽ FREE WATER	1		
-10	1 2	0.6 B	21
668.70			
Gray and Brown Moist CLAY LOAM (Till)	0		
	1 2	0.8 B	19
	0		
Brown and Gray V. Moist	0 1	0.4 B	21
-15			
	1		
Moist	5 7	1.6 B	11
	2		
Gray	9 14	4.0 S-12	8
-20			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
658.70			
Gray Dry SANDY CLAY LOAM (Till)	5		
	30 39	10.0 E	6
	7		
	27 47	10.0 E	8
-25			
651.70			
Olive Brown Moist CLAY LOAM (Till)	4		
	9 10	4.9 B	16
-30			
	2		
Brown Moist Clay Loam Till	18 23	7.1 S-12	10
-35			
	5		
Olive Brown	15 24	8.7 S-14	11
Boring Complete 639.20			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Latitude 39D 20.618N Longitude 89D 13.230W Datum NAD83 Job Number 72984

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Date 10/29/10

ROUTE FAP 325 DESCRIPTION Culvert carrying IL 16 over Sangamon Creek LOGGED BY M. Tappan

SECTION 18(B-2,B-3) LOCATION NE 1/4, SEC. 5, TWP. 10N, RNG. 1W, 3 PM

COUNTY Montgomery DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 068-2509
Station 43+23.5

BORING NO. 2-NW
Station 43+65
Offset 23.0ft RT
Ground Surface Elev. 678.8 ft

Surface Water Elev. 668.7 ft
Stream Bed Elev. 667.5 ft

Groundwater Elev.:
▽ First Encounter 662.3 ft
▼ Upon Completion 651.3 ft
▼ After ____ Hrs. Cuttings ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Dk Gray Moist SILTY CLAY (Fill)			
	1		
	2 3	1.1 S-10	16
	1		
Gray Moist Silty Clay Fill	2 2	0.9 B	25
-5			
672.80			
Gray Moist SILTY CLAY (Till)	1		
	2 2	1.3 B	17
	1		
w/Gray Wet Med Sandy Gravel at 10'	1 2	0.9 B	21
-10			
668.30			
Gray and Brown Wet CLAY LOAM (Till)	0		
	0 1	0.3 B	19
	1		
Gray and Brown Moist	5 9	2.9 B	10
-15			
	1		
Gray Moist Clay Loam Till ▽ FREE WATER	4 5	1.9 B	10
	2		
Gray and Brown	8 11	3.2 S-11	8
-20			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
658.30			
Gray Dirty Med SANDY GRAVEL	2		
656.80			
Gray Dry CLAY LOAM (Till)	8 17		
▼	19		
	42 58/5"	12.2 S-10	7
-25			
	5		
	11 17	4.4 S-12	14
-30			
	9		
Brown	20 44	8.7 S-10	12
-35			
	6		
	18 29	10.3 B	11
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name:S:\SOILS\GINT FILES\MONTGOMERY\068-2509 IL 16 OVER SANGAMON CREEK.GPJ Data Template DISTEMPLT.GDT Data Printed 3/21/11
Latitude 39D 20.618N Longitude 89D 13.230W Datum NAD83 Job Number 72984

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Date 10/29/10

ROUTE FAP 325 DESCRIPTION Culvert carrying IL 16 over Sangamon Creek LOGGED BY M. Tappan

SECTION 18(B-2,B-3) LOCATION NE 1/4, SEC. 5, TWP. 10N, RNG. 1W, 3 PM

COUNTY Montgomery DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 068-2509
Station 43+23.5

BORING NO. 2-NW
Station 43+65
Offset 23.0ft RT
Ground Surface Elev. 678.8 ft

Surface Water Elev. 668.7 ft
Stream Bed Elev. 667.5 ft

Groundwater Elev.:
▽ First Encounter 662.3 ft
▼ Upon Completion 651.3 ft
▼ After ____ Hrs. Cuttings ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Gray Dry CLAY LOAM (Till) *(continued)*			
	9		
	26 39	12.0 S-13	12
-45			
	10		
	25 38	1.9 S-12	12
-50			
Olive Brown Moist Clay Loam Till			
-55			
618.80			
-60			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Boring Complete			
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Latitude 39D 20.618N Longitude 89D 13.230W Datum NAD83 Job Number 72984

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

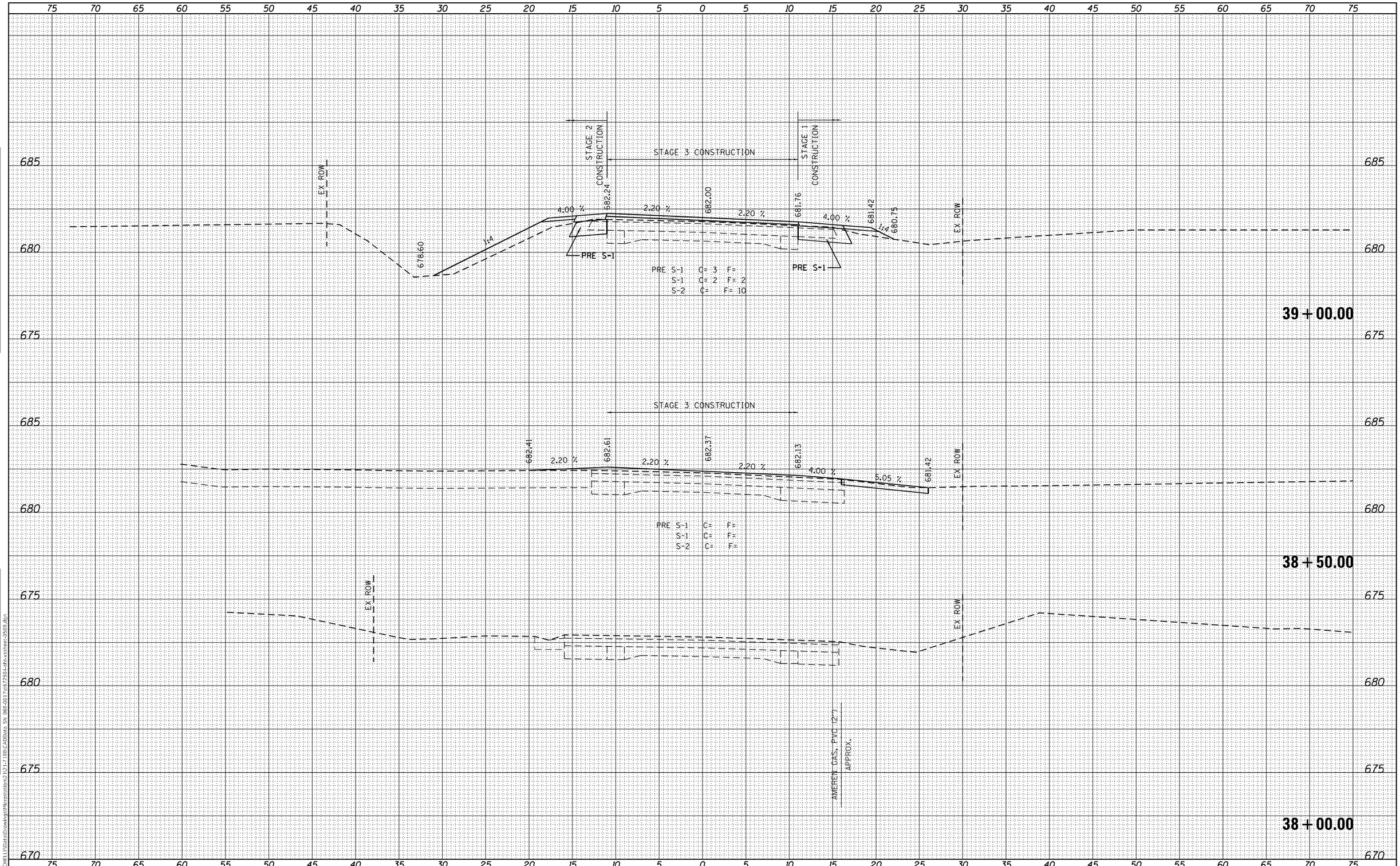
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/27/2023	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 068-2509
SHEET 7 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	79
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



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	AREAS CHECKED	DATE

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	AREAS CHECKED	DATE

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
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PLOT DATE = 5/9/2023	DATE -	REVISED -

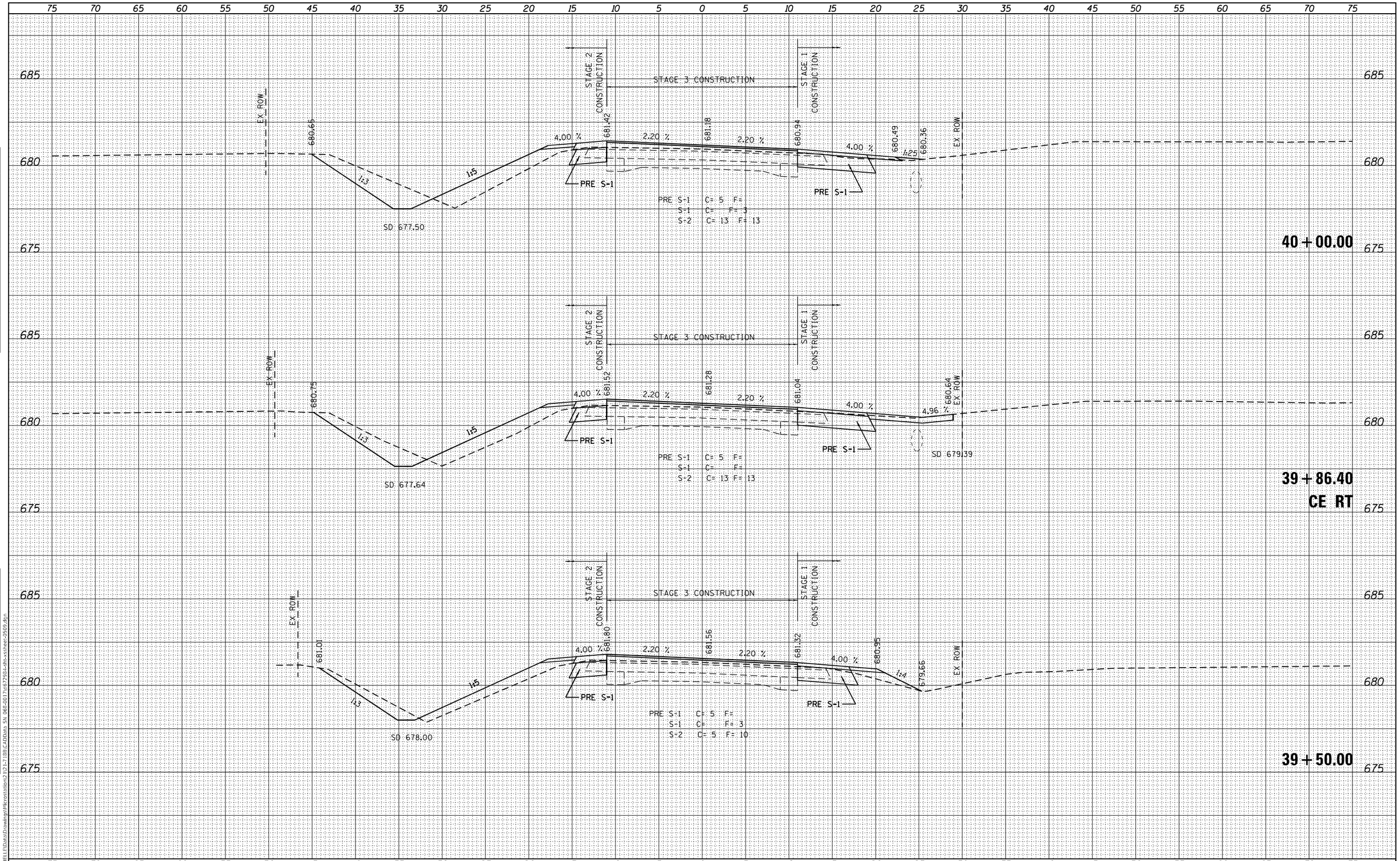
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 1 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	80
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS IL 16 SN 068-2509
		DRAWN - CFC	REVISED -		
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	PLOT DATE = 5/9/2023	DATE -	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	81
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

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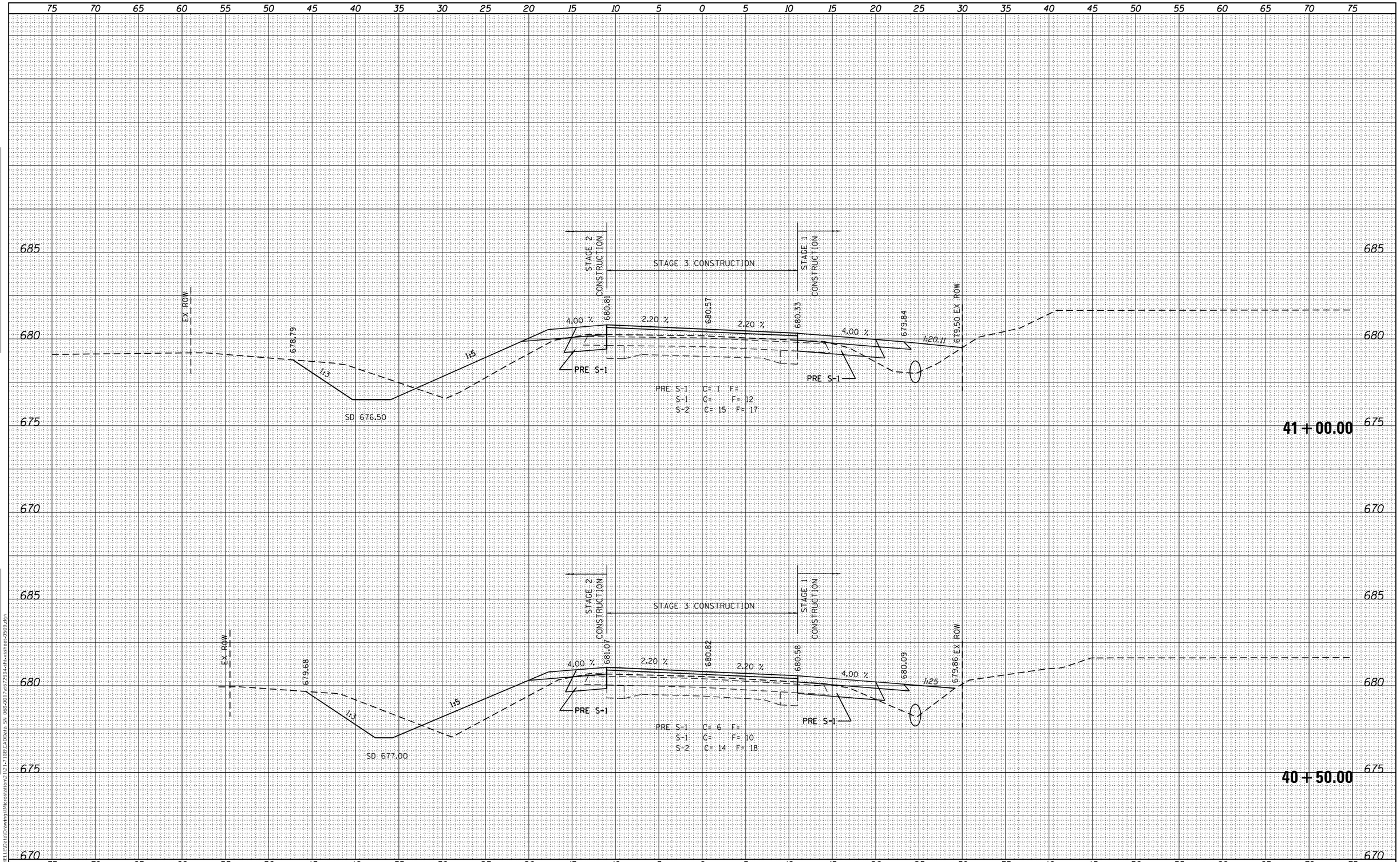

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PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

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

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
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PLOT DATE = 5/9/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

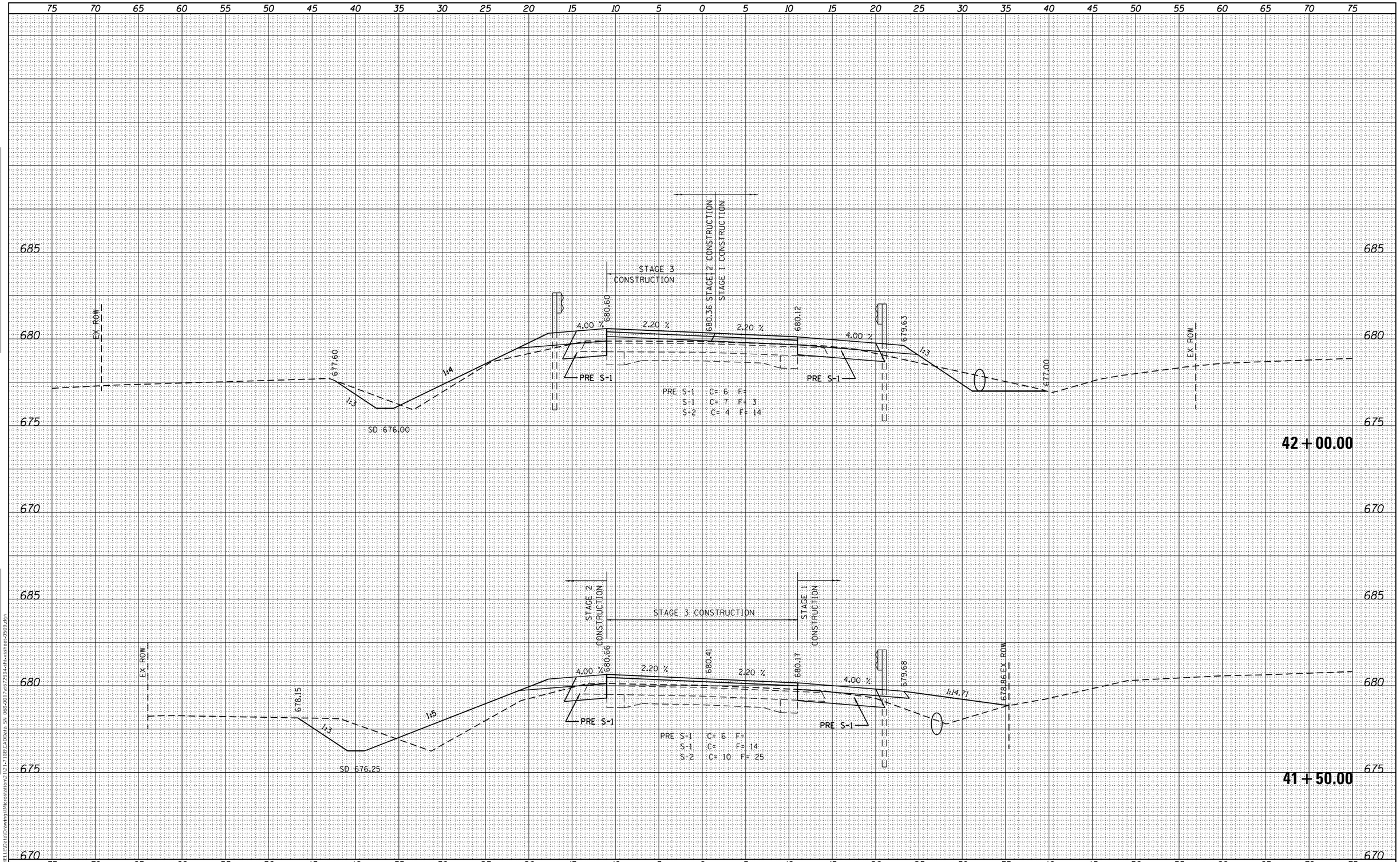
SCALE: | SHEET 3 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	82

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN



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TEMPLATE		
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AREAS CHECKED		

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
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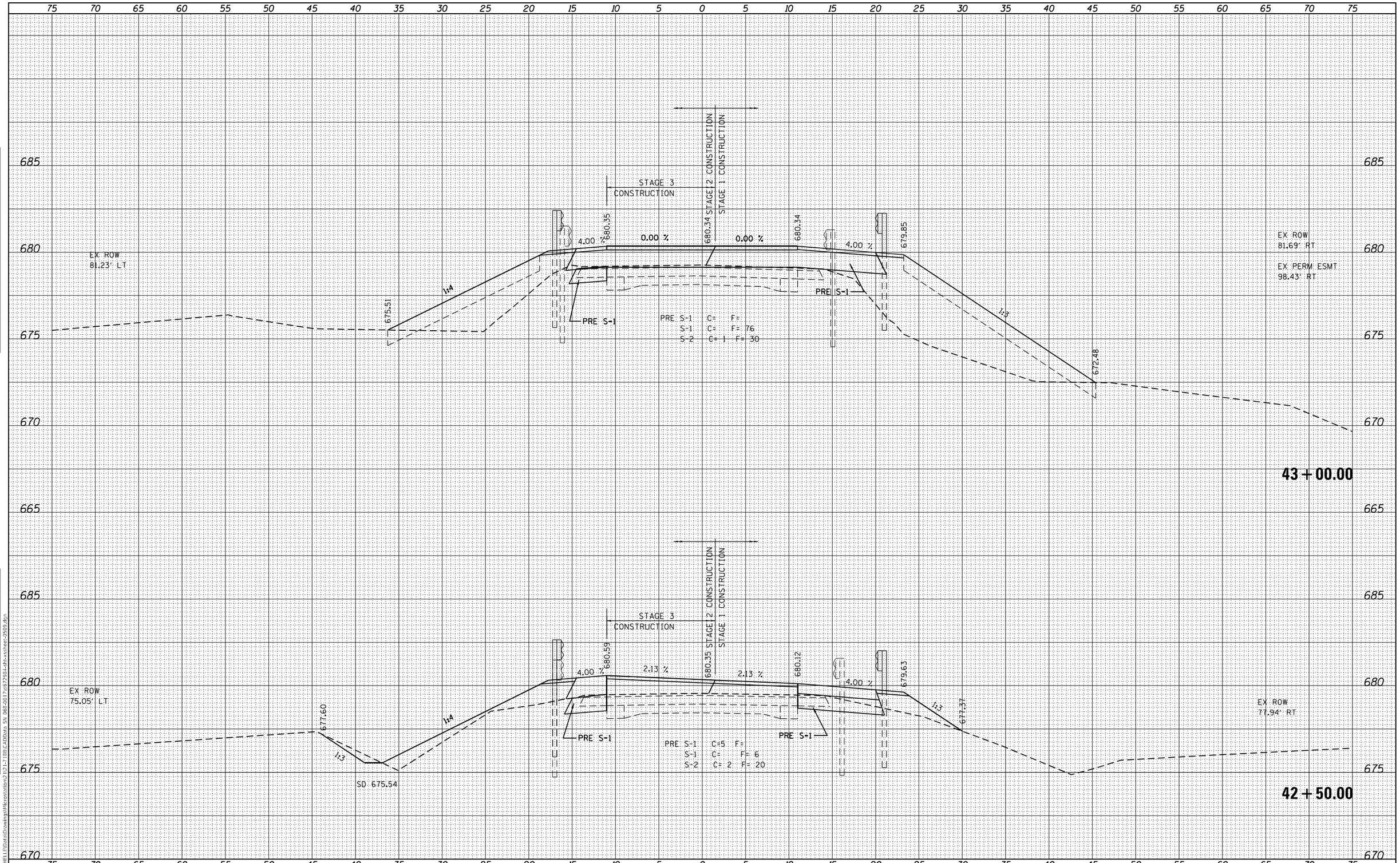
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 4 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16((CR)	*	142	83
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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PLOT DATE = 5/9/2023	DATE -	REVISED -	

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 5 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	84
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN

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

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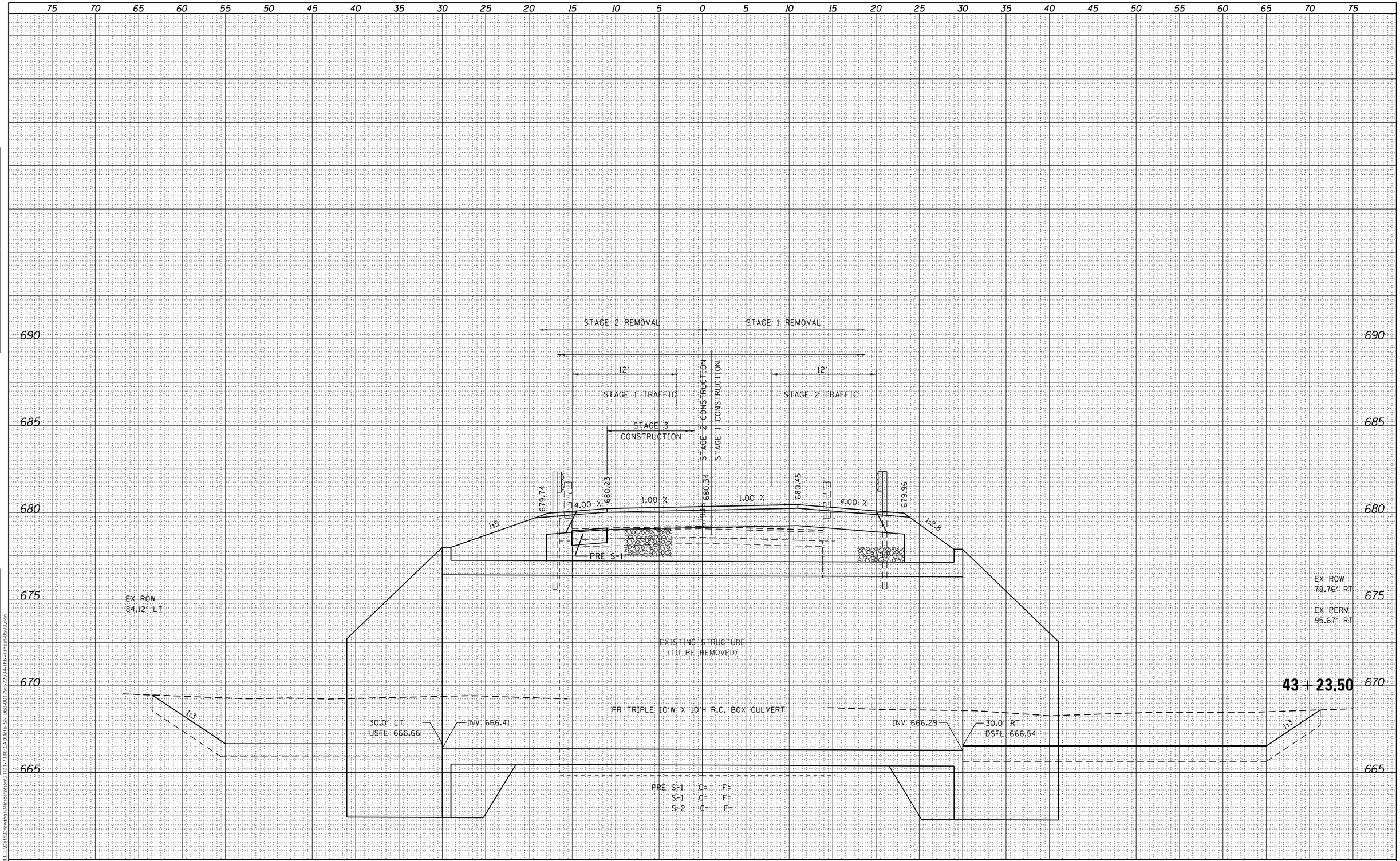

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
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ORIGINAL SURVEY		BY	DATE
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -		REVISED -
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PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB		REVISED -
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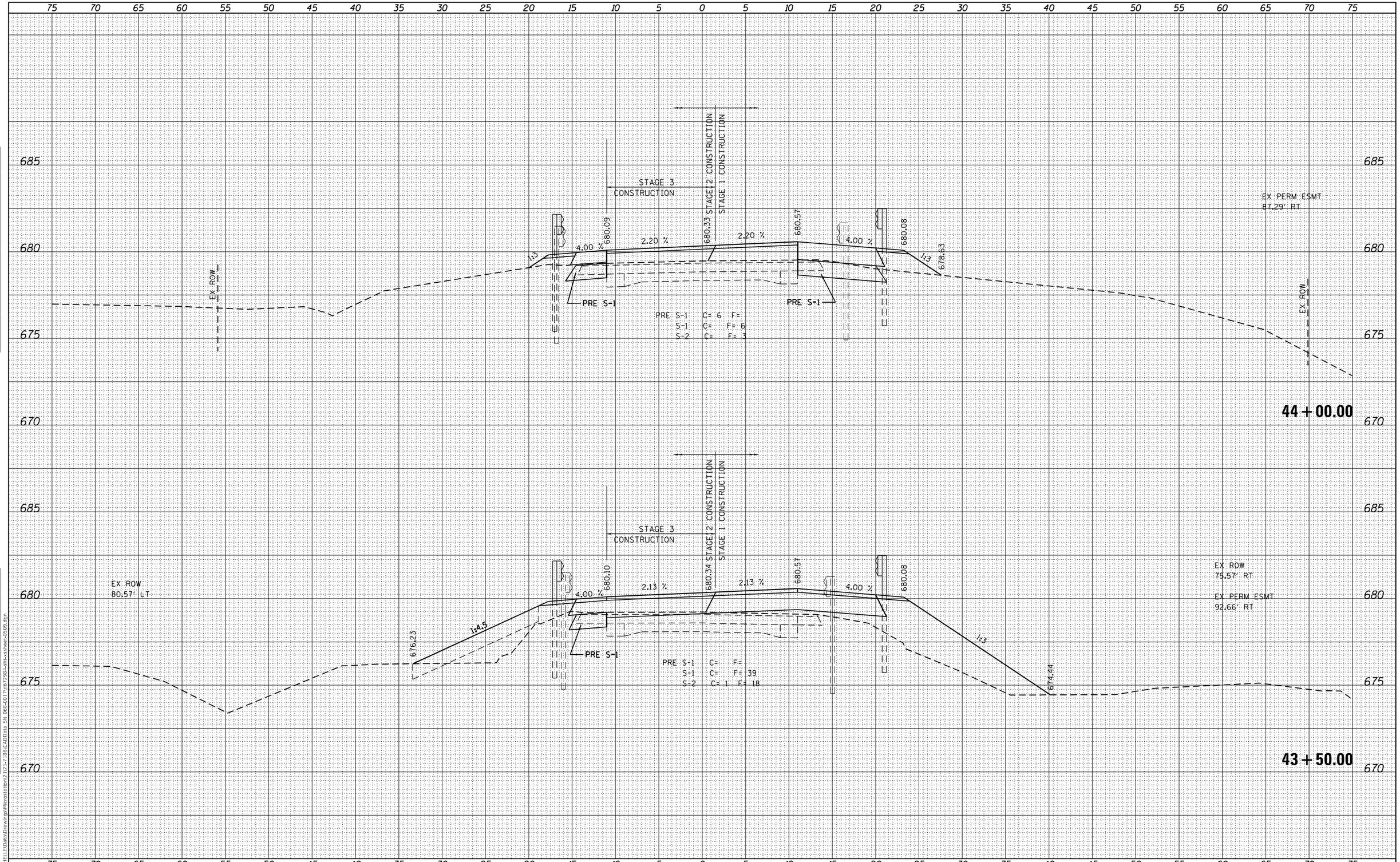
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 6 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	85
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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

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

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -		REVISED -
	DRAWN - CFC		REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB		REVISED -
PLOT DATE = 5/9/2023	DATE -		REVISED -

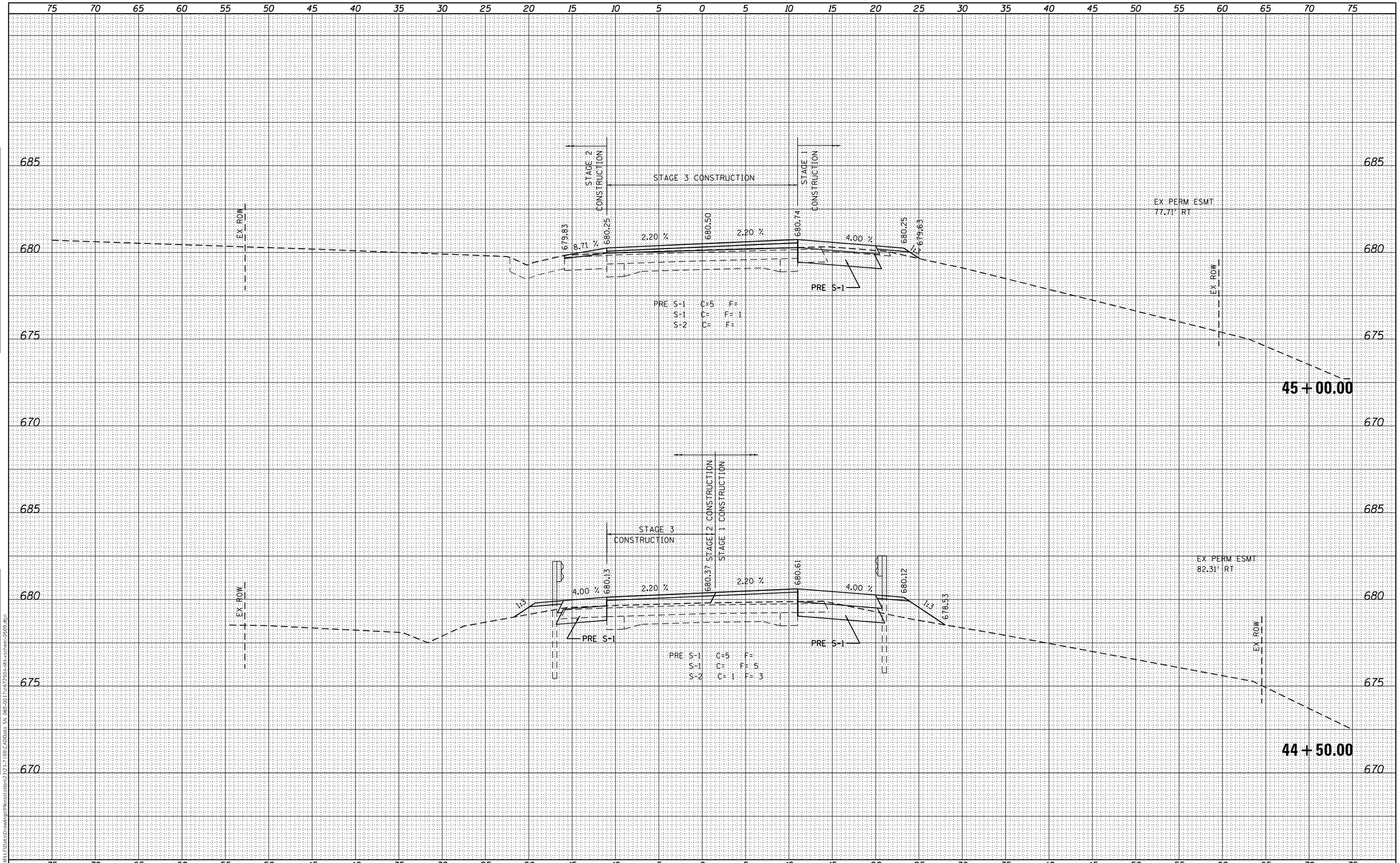
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 7 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	86
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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

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

MODEL: Default
FILE NAME: \\FOCHFILE\Data\Drawings\Microstation\2112-7188\CADData SN 068-0017\c672984-sht-xssheet-0509.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -		REVISED -
	DRAWN - CFC		REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB		REVISED -
PLOT DATE = 5/9/2023	DATE -		REVISED -

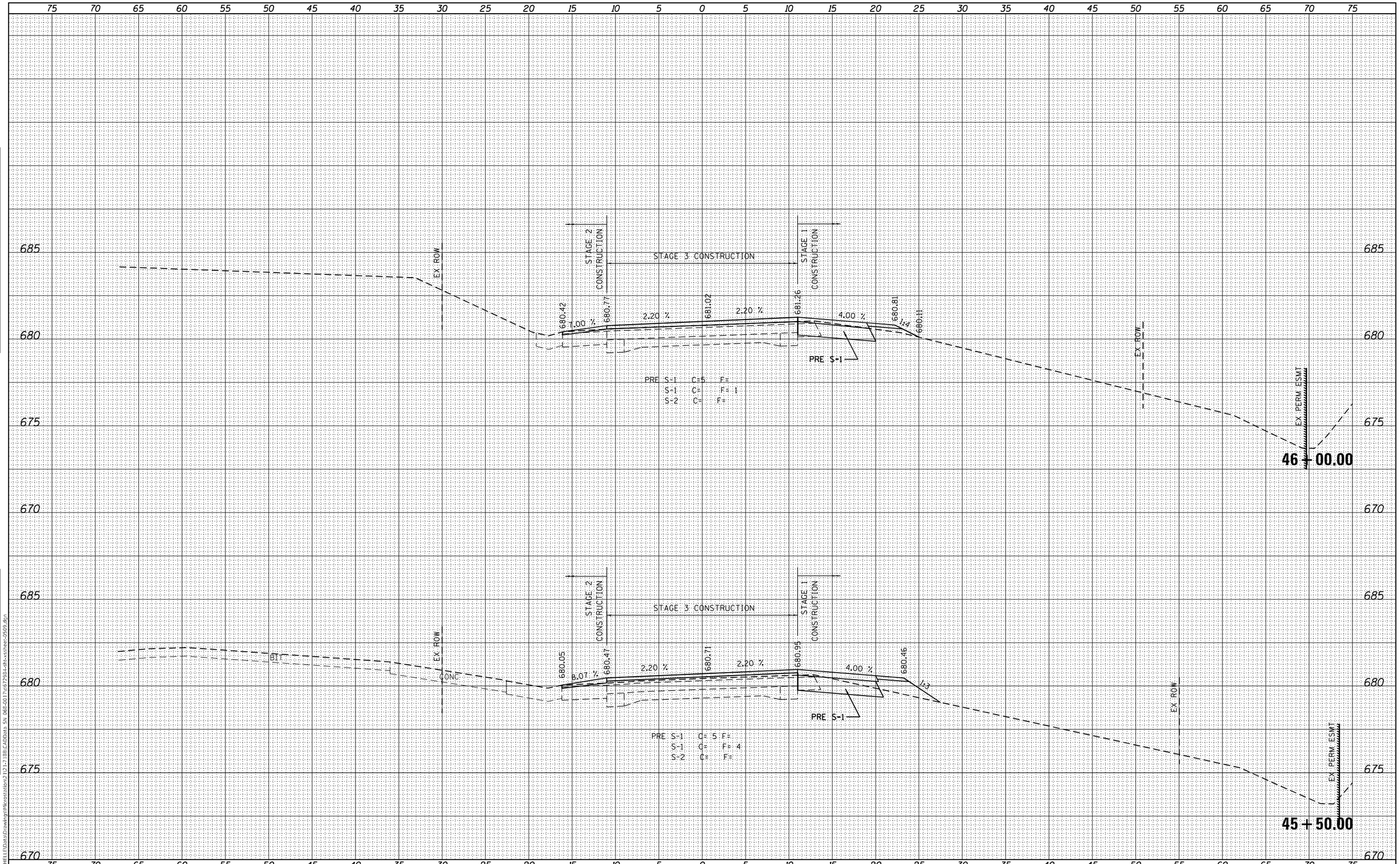
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 8 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	87
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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

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

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/10/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

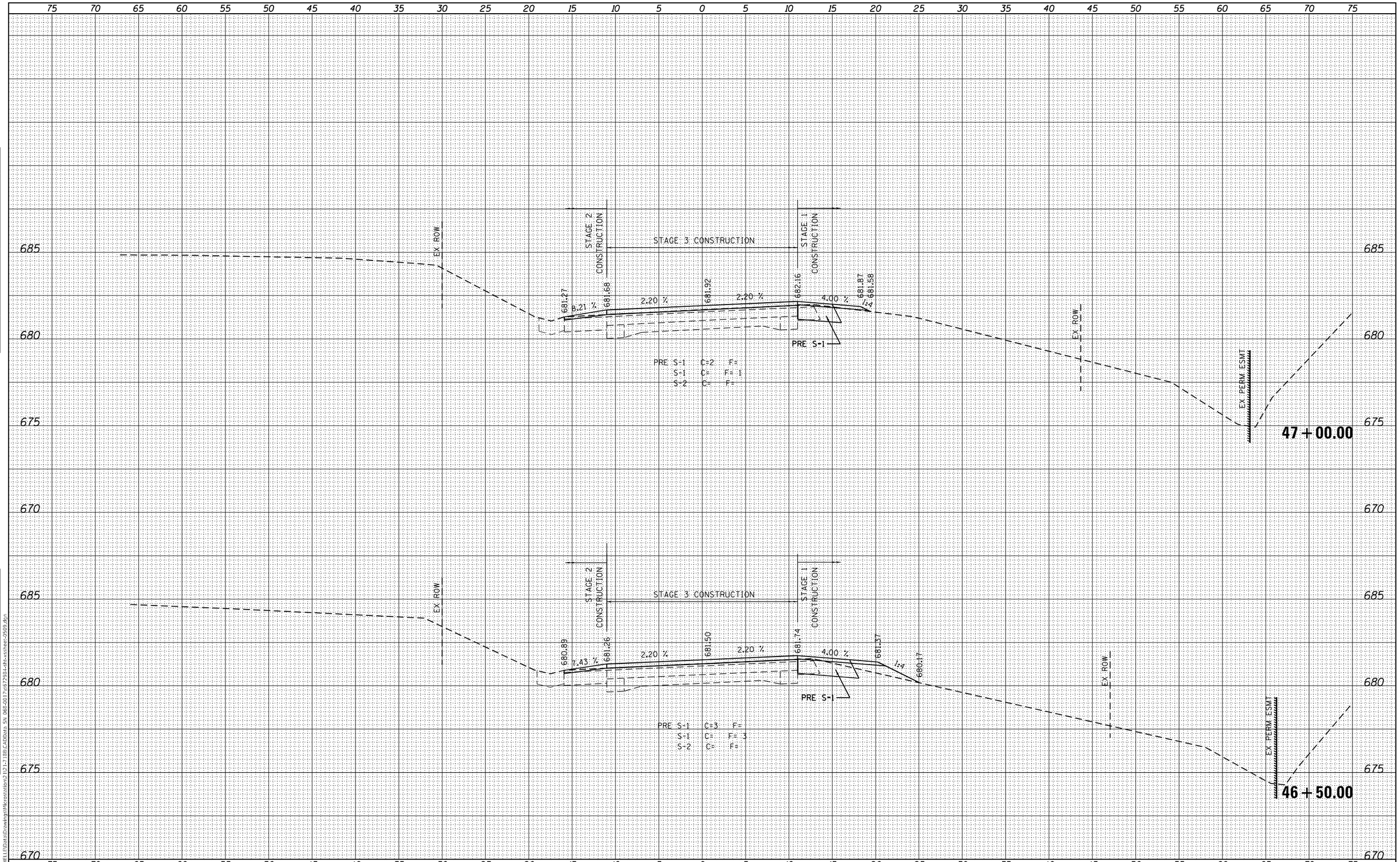
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 9 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	88
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



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

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

MODEL: Default
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USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/9/2023	DATE -	REVISED -	

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 10 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	89

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

FINAL SURVEY	
NOTE BOOK	
NO.	

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	
NOTE BOOK	
NO.	

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

685
680
675
670

EX. ROW

EX. ROW

EX. PERM. ESMT

48 + 00.00

EX. ROW

STAGE 2 CONSTRUCTION

STAGE 3 CONSTRUCTION

STAGE 1 CONSTRUCTION

681.71
8.08 %
682.11
2.20 %
682.35
2.20 %
682.59
4.00 %
682.39
682.05

PRE S-1

PRE S-1 C= F=
S-1 C= F=
S-2 C= F=

EX. ROW

EX. PERM. ESMT

47 + 50.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

MODEL: Default
FILE NAME: \\FOCHELEN\Data\Drawings\Microstation\2112-7188\CADData SN 068-0017\c672984-sht-xssheet-0509.dgn

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

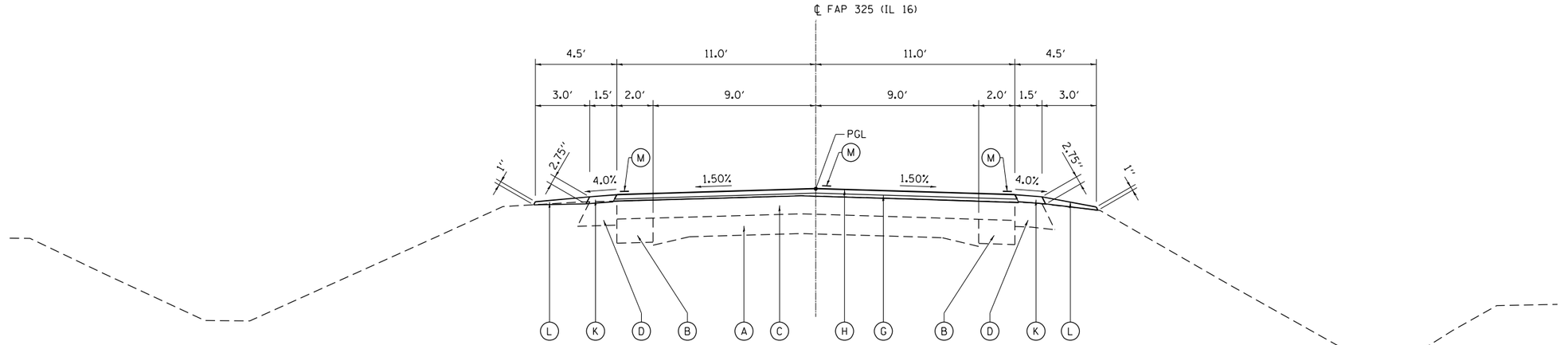
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2509

SCALE: | SHEET 11 OF 11 SHEETS | STA. | TO STA.

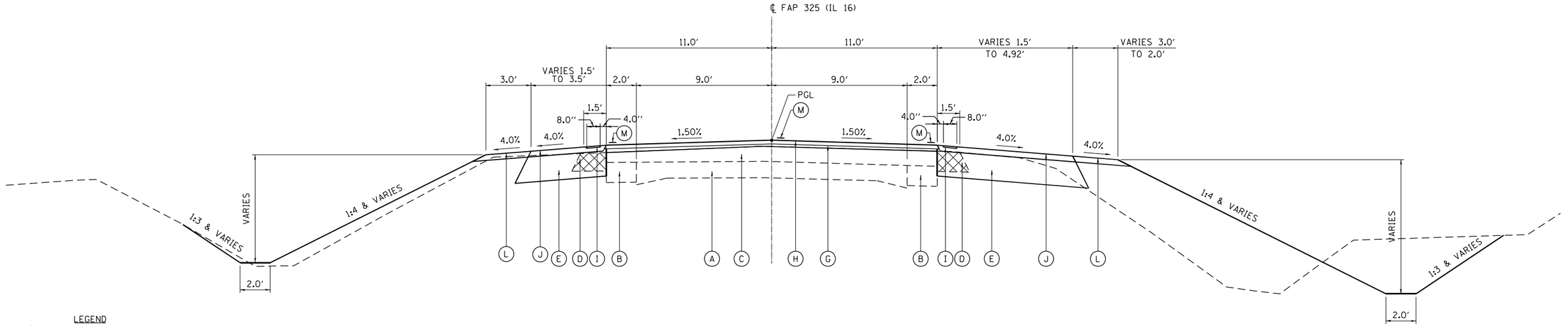
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	90
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



FAP ROUTE 325 (IL 16)

STA 138+00.00 - 138+75.00, LT
STA 147+12.50 - 148+00.00, RT
STA 147+87.50 - 148+00.00, LT



LEGEND

- (A) EX PCC PAVEMENT, 9-6-9
- (B) EX PCC BASE COURSE WIDENING, 8″
- (C) EX HMA SURFACE, 6″
- (D) EX HMA SHOULDERS, 8″ & VARIES
- (E) PR HMA BASE COURSE, 8″
- (F) PR HMA BINDER COURSE, IL-19.0, N50, VAR DEPTH
- (G) PR HMA BINDER COURSE IL-9.5 FG, N50, 1 1/4″
- (H) PR HMA SURFACE COURSE, MIX "C", N50, 1 1/2″
- (I) PR SHOULDER RUMBLE STRIPS, 8 INCH
- (J) PR HMA SHOULDERS, VAR DEPTH (2 3/4″ MIN)
- (K) PR HMA SHOULDERS, 2 3/4″
- (L) PR AGGREGATE SHOULDERS, TYPE B
- (M) PR PAINT PAVEMENT MARKING LINE, 5″
- (N) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 9′ POSTS
- (O) PR STRONG POST GUARDRAIL, ATTACHED TO CULVERT
- (P) PR GRANULAR CULVERT BACKFILL
- (R) PR BASE COURSE, OPTION 8″
- (S) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 9′ POSTS

FAP ROUTE 325 (IL 16)

STA 138+00.00 - 138+92.00, RT
STA 138+75.00 - 139+28.33, LT
STA 146+20.50 - 147+12.50, RT
STA 147+34.17 - 147+87.50, LT

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2121-7.18\CADData SN 068-0016\CADSheets\d672984-cnt4-typical-0508.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -		REVISED -
	DRAWN -	CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -		REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

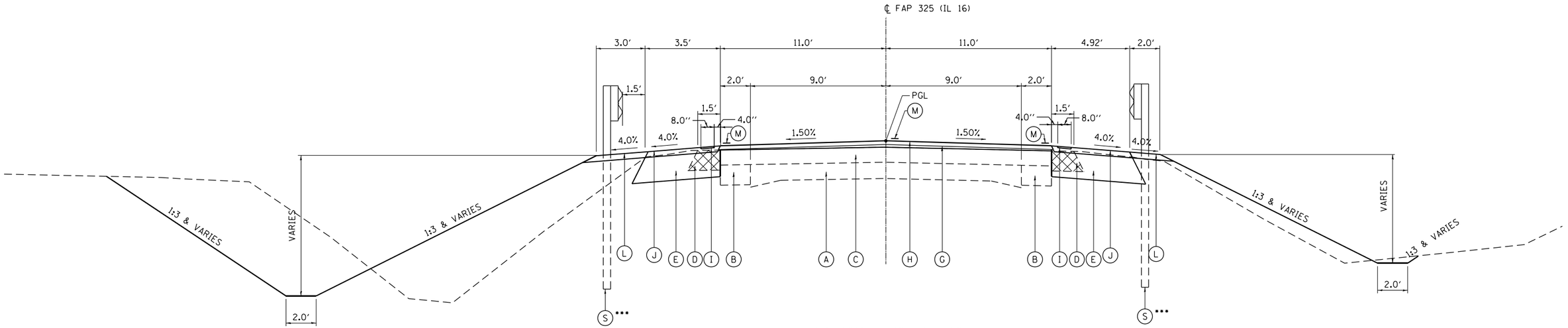
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	91

CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT
* MONTGOMERY & CHRISTIAN

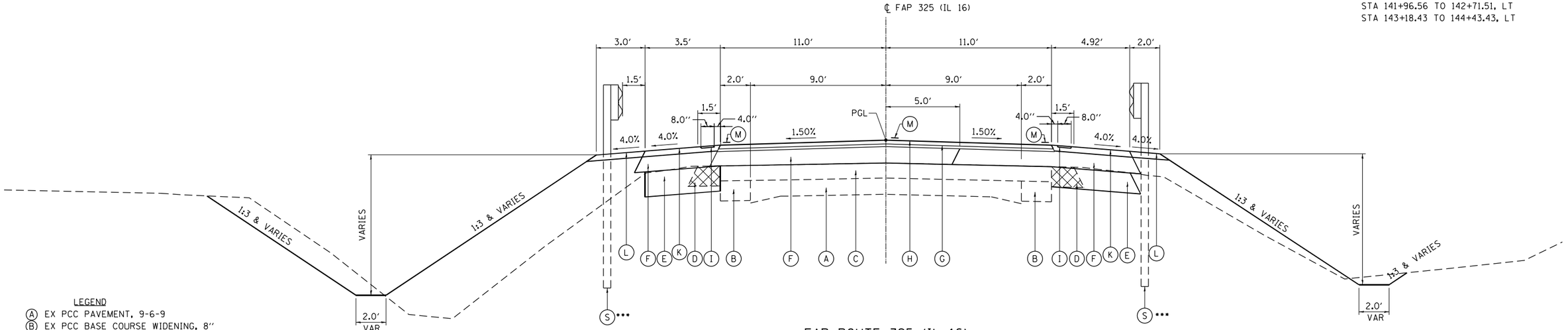


FAP ROUTE 325 (IL 16)

STA 138+92.00 - 141+50.00, RT
STA 139+28.33 - 141+50.00, LT
STA 144+50.00 - 146+20.50, RT
STA 144+50.00 - 147+34.17, LT

GUARDRAIL

••• STA 141+46.56 TO 142+71.51, RT
STA 143+18.43 TO 143+93.43, RT
STA 141+96.56 TO 142+71.51, LT
STA 143+18.43 TO 144+43.43, LT



FAP ROUTE 325 (IL 16)

STA 141+50.00 - 142+60.00
STA 143+28.00 - 144+50.00

LEGEND

- (A) EX PCC PAVEMENT, 9-6-9
- (B) EX PCC BASE COURSE WIDENING, 8″
- (C) EX HMA SURFACE, 6″
- (D) EX HMA SHOULDERS, 8″ & VARIES
- (E) PR HMA BASE COURSE 8″
- (F) PR HMA BINDER COURSE, IL-19.0, N50, VAR DEPTH
- (G) PR HMA BINDER COURSE IL-9.5 FG, N50, 1 1/4″
- (H) PR HMA SURFACE COURSE, MIX "C", N50, 1 1/2″
- (I) PR SHOULDER RUMBLE STRIPS, 8 INCH
- (J) PR HMA SHOULDERS, VAR DEPTH (2 3/4″ MIN)
- (K) PR HMA SHOULDERS, 2 3/4″
- (L) PR AGGREGATE SHOULDERS, TYPE B
- (M) PR PAINT PAVEMENT MARKING LINE, 5″
- (N) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 9′ POSTS
- (O) PR STRONG POST GUARDRAIL, ATTACHED TO CULVERT
- (P) PR GRANULAR CULVERT BACKFILL
- (R) PR BASE COURSE, OPTION 8″
- (S) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 9′ POSTS

MODEL: Default
FILE NAME: \ROCHELLE\Data\Drawings\Microstation\2121-7.18\CADData SN 068-0016\CADsheets\d672984-cnt-typical-0508.dgn

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -		REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN -	CFC	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	MCB	REVISED -	
	PLOT DATE = 5/9/2023	DATE -		REVISED -	

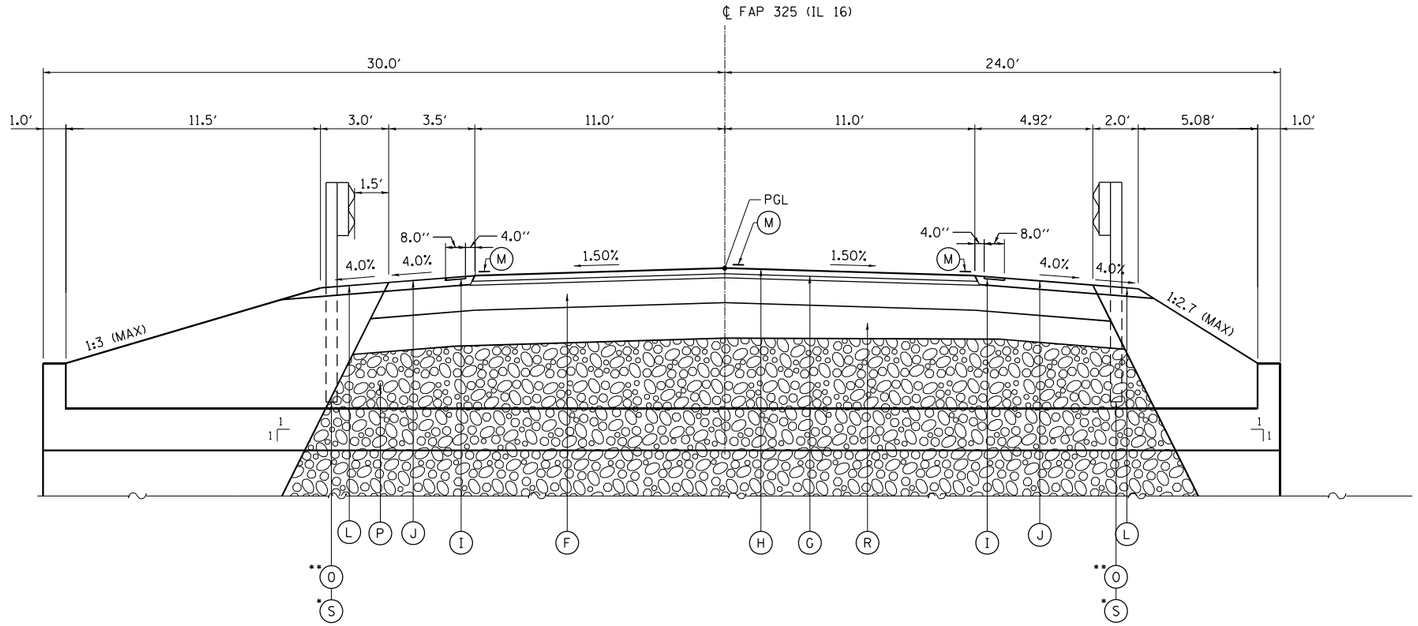
FEHR GRAHAM PROJECT NUMBER: 10005-2

TYPICAL SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	92
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



FAP ROUTE 325 (IL 16)

STA 142+60.00 TO STA 143+28.00

GUARDRAIL

* STA 142+60.00 TO 142+71.56 LT & RT
STA 143+18.43 TO 143+28.00 LT & RT

** STA 142+71.56 TO 143+18.43 LT & RT

LEGEND

- (A) EX PCC PAVEMENT, 9-6-9
- (B) EX PCC BASE COURSE WIDENING, 8″
- (C) EX HMA SURFACE, 6″
- (D) EX HMA SHOULDERS, 8″ & VARIES
- (E) PR HMA BASE COURSE, 8″
- (F) PR HMA BINDER COURSE, IL-19.0, N50, VAR DEPTH
- (G) PR HMA BINDER COURSE IL-9.5 FG, N50, 1 1/4″
- (H) PR HMA SURFACE COURSE, MIX ″C″, N50, 1 1/2″
- (I) PR SHOULDER RUMBLE STRIPS, 8 INCH
- (J) PR HMA SHOULDERS, VAR DEPTH (2 3/4″ MIN)
- (K) PR HMA SHOULDERS, 2 3/4″
- (L) PR AGGREGATE SHOULDERS, TYPE B
- (M) PR PAINT PAVEMENT MARKING LINE, 5″
- (N) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 9′ POSTS
- (O) PR STRONG POST GUARDRAIL, ATTACHED TO CULVERT
- (P) PR GRANULAR CULVERT BACKFILL
- (R) PR BASE COURSE, OPTION 8″
- (S) PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 9′ POSTS

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.0000 ′ / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

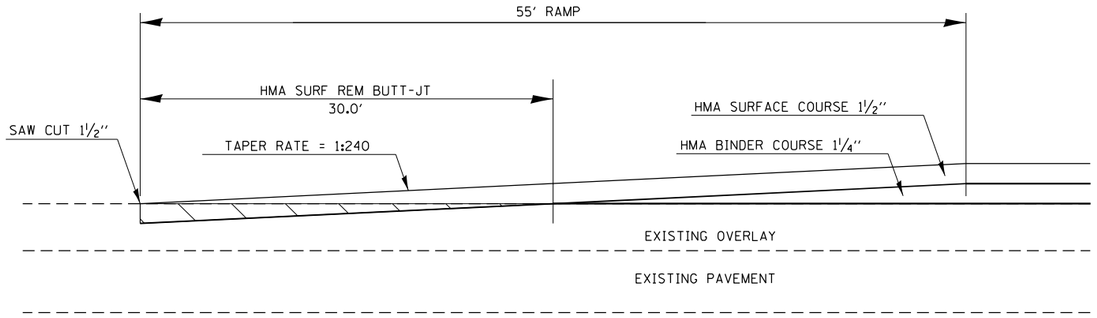
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

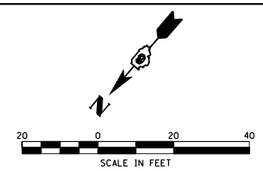
TYPICAL SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	93
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

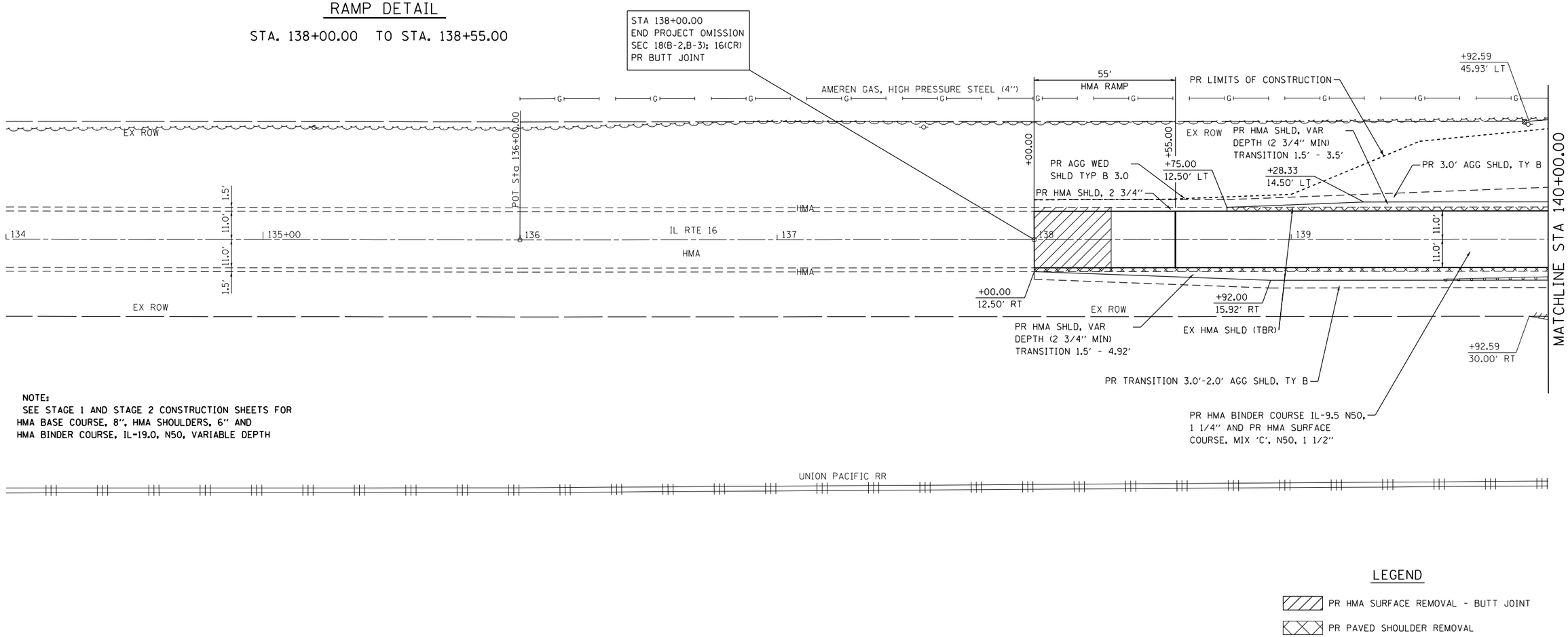
* MONTGOMERY & CHRISTIAN





RAMP DETAIL

STA. 138+00.00 TO STA. 138+55.00



NOTE:
SEE STAGE 1 AND STAGE 2 CONSTRUCTION SHEETS FOR HMA BASE COURSE, 8", HMA SHOULDERS, 6" AND HMA BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH

LEGEND

PR HMA SURFACE REMOVAL - BUTT JOINT

PR PAVED SHOULDER REMOVAL

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

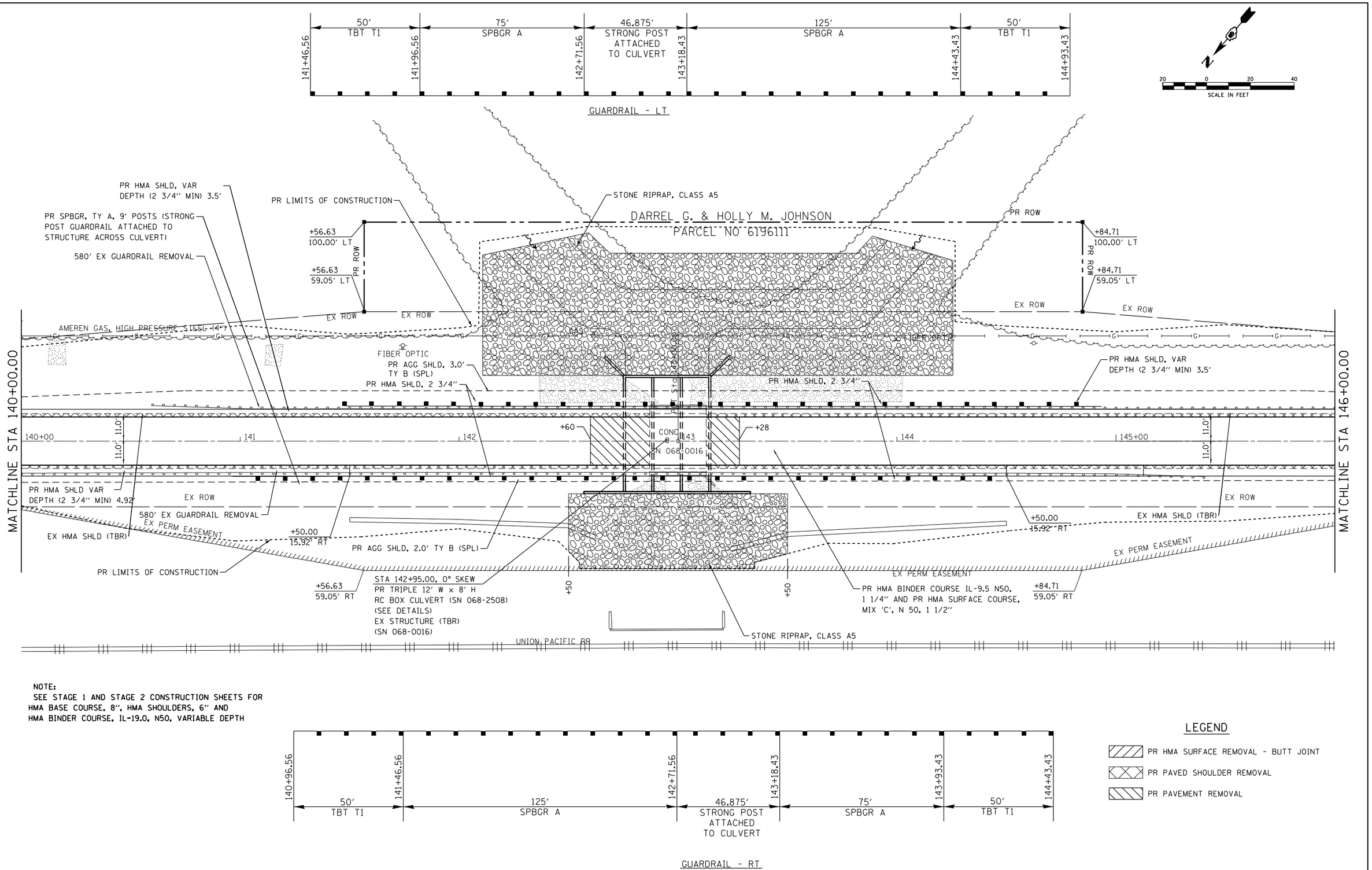
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 068-2508

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	94
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



NOTE:
SEE STAGE 1 AND STAGE 2 CONSTRUCTION SHEETS FOR HMA BASE COURSE, 8", HMA SHOULDERS, 6" AND HMA BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH

GUARDRAIL - RT

LEGEND

- PR HMA SURFACE REMOVAL - BUTT JOINT
- PR PAVED SHOULDER REMOVAL
- PR PAVEMENT REMOVAL

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2121-7188\CADData SN 068-0016\CADsheets\d672984-cnt-qtbn-0508-002.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

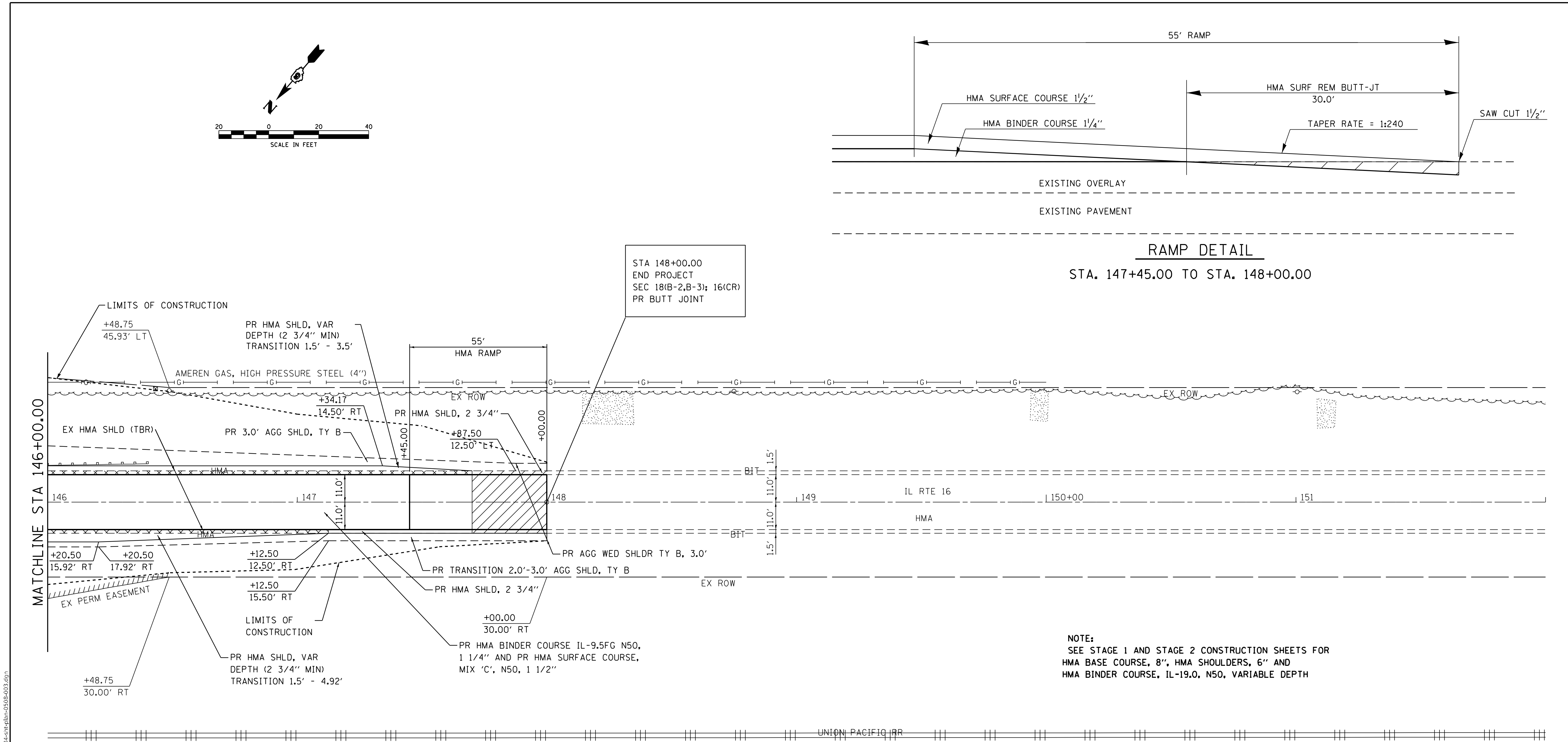
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 068-2508

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	95

CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



RAMP DETAIL

STA. 147+45.00 TO STA. 148+00.00

NOTE:
SEE STAGE 1 AND STAGE 2 CONSTRUCTION SHEETS FOR
HMA BASE COURSE, 8", HMA SHOULDERS, 6" AND
HMA BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH

LEGEND

PR HMA SURFACE REMOVAL - BUTT JOINT

PR PAVED SHOULDER REMOVAL

MODEL: Default
FILE NAME: \\ROCHFILE\Data\Drawings\Microstation\21\21-1788\CAD\Data SN 068-0016\CAD\sheets\d672984-sht-plan-0508-003.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel
PLOT SCALE = 40.000000 ' / in.
PLOT DATE = 5/9/2023

DESIGNED -
DRAWN - CFC
CHECKED - MCB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

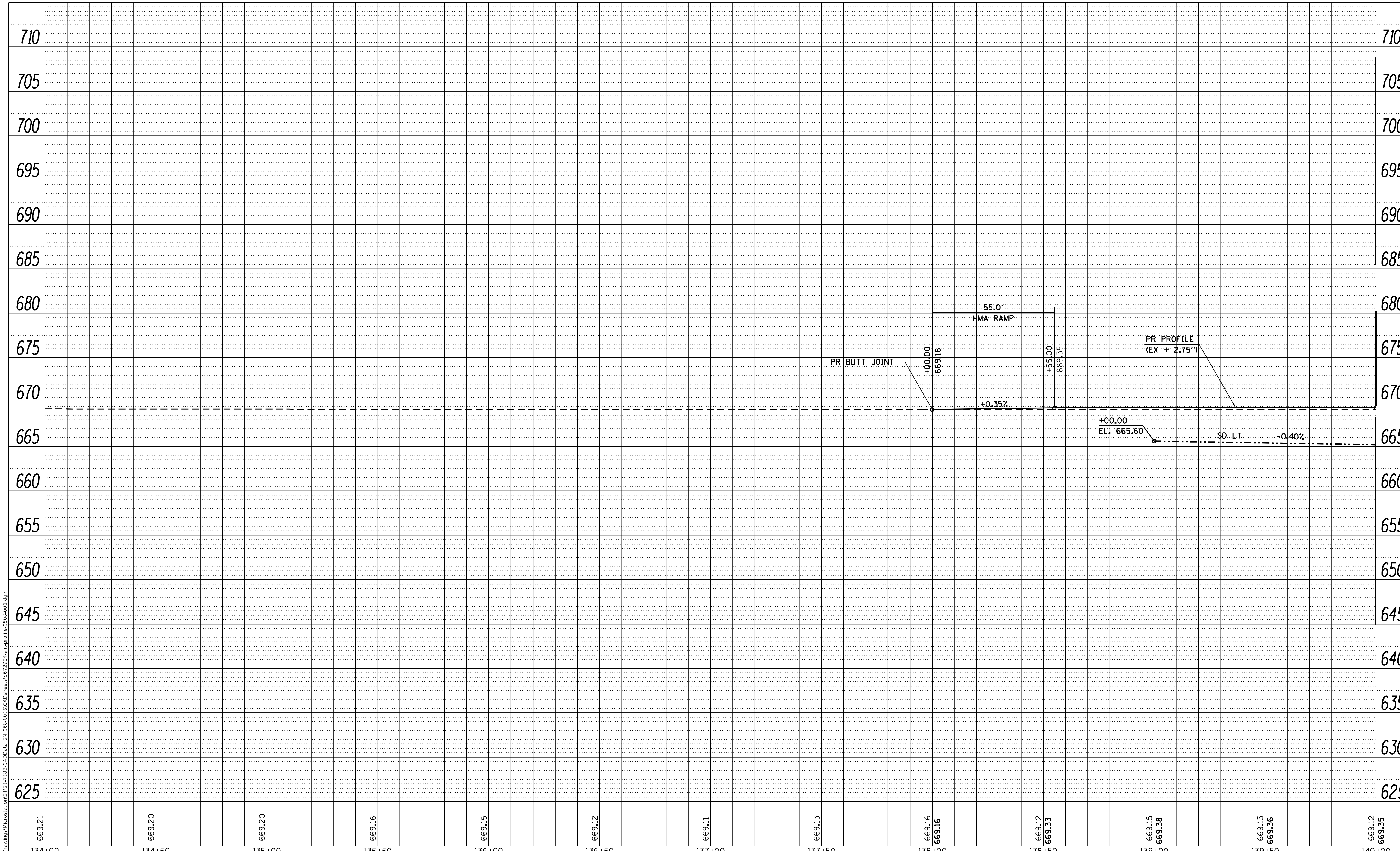
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
IL 16 SN 068-2508

SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	96

CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



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

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 4/7/2023	DATE -	REVISED -	

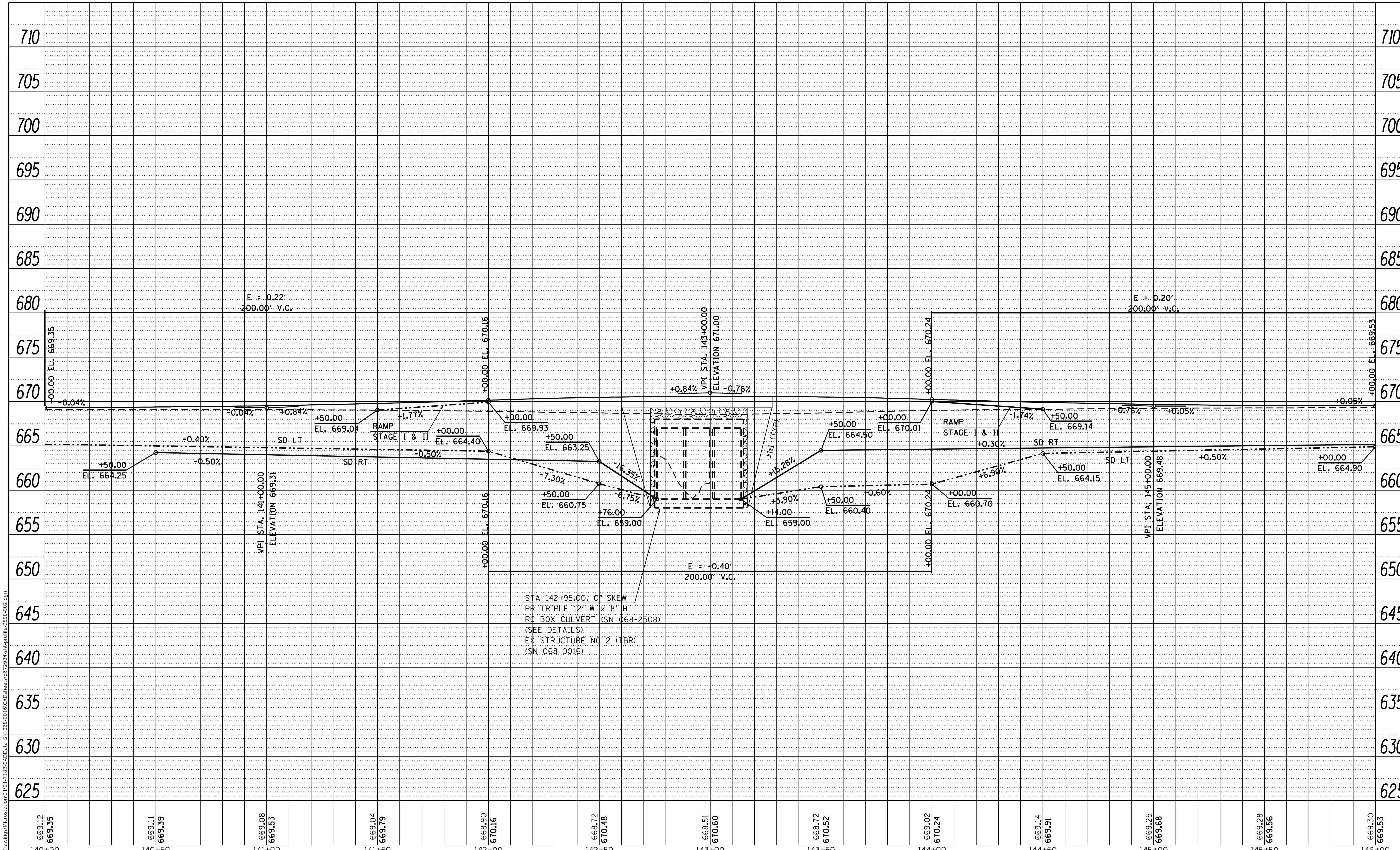
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
IL 16 SN 068–2508

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	97

CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



E = 0.22'
200.00' V.C.
E = 0.20'
200.00' V.C.
E = -0.40'
200.00' V.C.
VPI STA. 141+00.00 ELEVATION 669.31
VPI STA. 143+00.00 ELEVATION 671.00
VPI STA. 145+00.00 ELEVATION 669.48
+00.00 EL. 669.35
+00.00 EL. 670.16
+00.00 EL. 670.24
+00.00 EL. 669.53
+0.84%
-0.76%
-0.04%
+0.84%
+1.77%
-1.74%
-0.76%
+0.05%
RAMP STAGE I & II
+50.00 EL. 669.04
+00.00 EL. 669.93
+00.00 EL. 670.01
+50.00 EL. 669.14
+00.00 EL. 664.40
+50.00 EL. 663.25
+50.00 EL. 664.50
+50.00 EL. 664.25
+00.00 EL. 664.90
SD LT
SD RT
-0.40%
-0.50%
+0.30%
+0.50%
-16.35%
+15.28%
-7.30%
-6.75%
+3.90%
+0.60%
+6.90%
+50.00 EL. 660.75
+76.00 EL. 659.00
+14.00 EL. 659.00
+50.00 EL. 660.40
+00.00 EL. 660.70
+50.00 EL. 664.15
1:1 (TYP)
STA 142+95.00, 0° SKEW
PR TRIPLE 12' W x 8' H
RC BOX CULVERT (SN 068-2508)
(SEE DETAILS)
EX STRUCTURE NO 2 (TBR)
(SN 068-0016)
710 705 700 695 690 685 680 675 670 665 660 655 650 645 640 635 630 625
669.12 669.35
669.11 669.39
669.08 669.53
669.04 669.79
668.90 670.16
668.72 670.48
668.51 670.60
668.72 670.52
669.02 670.24
669.14 669.91
669.25 669.68
669.28 669.56
669.30 669.53
140+00 140+50 141+00 141+50 142+00 142+50 143+00 143+50 144+00 144+50 145+00 145+50 146+00

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/27/2023	DATE -	REVISED -

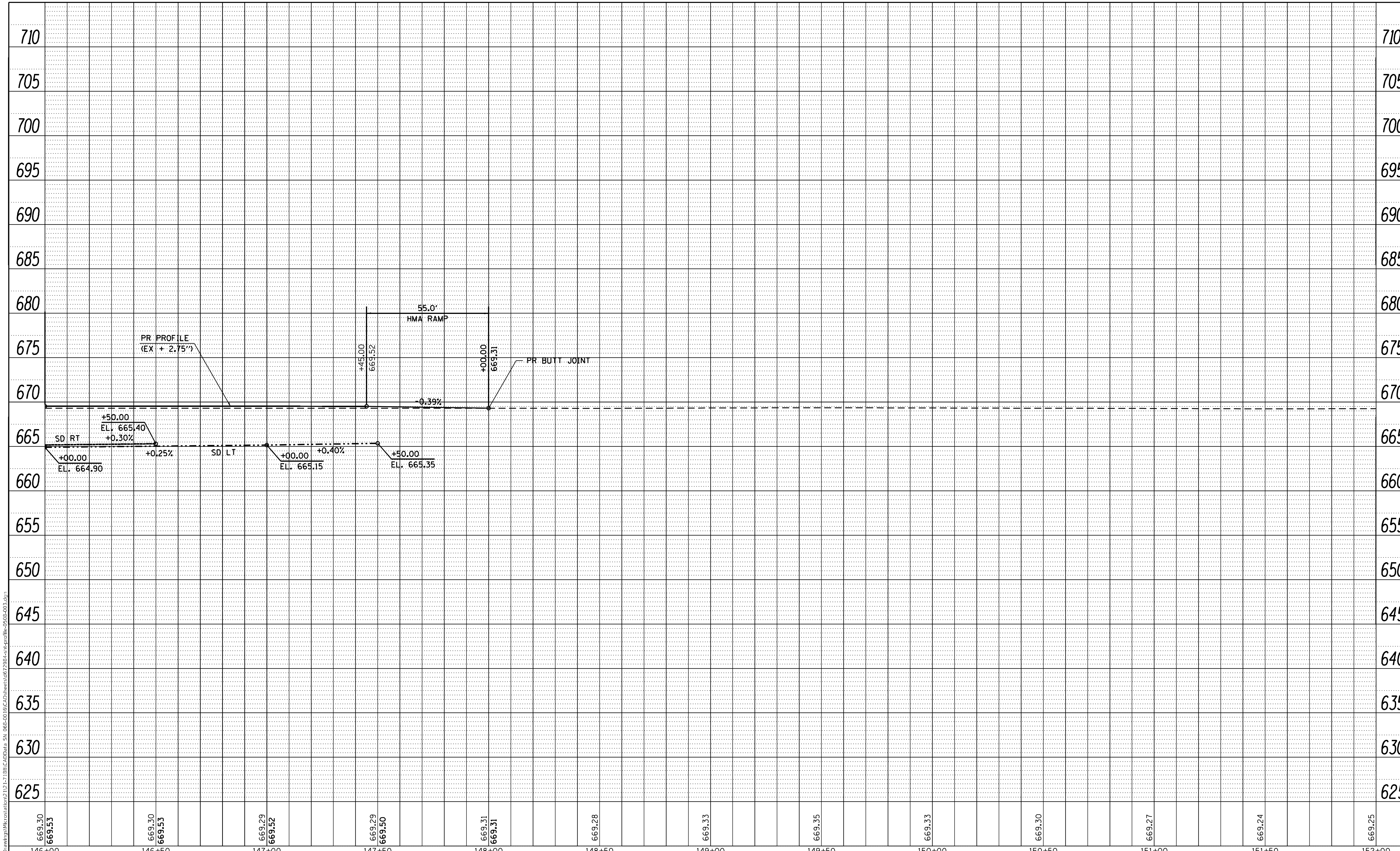
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
IL 16 SN 068-2508

SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	98

CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



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 / BM. NOTED / STRUCTURE NOTATIONS CHKED — BY — DATE

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
IL 16 SN 068-2508

SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	99

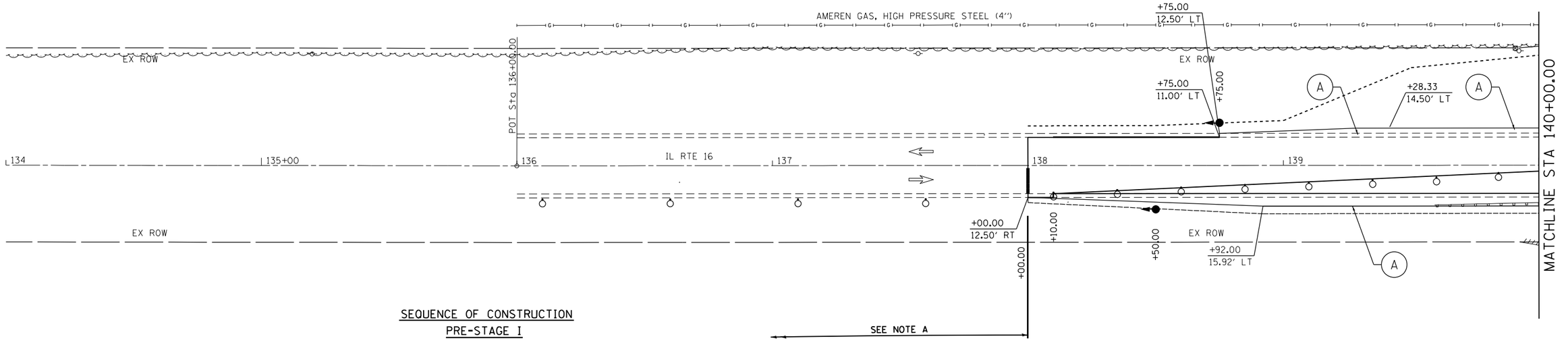
CONTRACT NO. 72984
ILLINOIS | FED. AID PROJECT
* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (FULLY-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

20 0 20 40
SCALE IN FEET

(A) PR HMA BASE COURSE, 8"
(PRIOR TO STAGE I)



GENERAL NOTES

1. THIS TRAFFIC CONTROL PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD 701321 AND AS DIRECTED BY THE ENGINEER.
2. VERTICAL PANELS, DRUMS WITH STEADY BURNING LIGHTS, TYPE III BARRICADES, SIGNS, DETECTOR LOOPS, TEMPORARY PAVEMENT MARKINGS, AND TYPE C BIDIRECTIONAL REFLECTORS SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
3. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS (PH: (217) 785-5306) AT LEAST SEVEN DAYS PRIOR TO IMPLEMENTING ANY STAGE I TRAFFIC CONTROL AND AT LEAST SEVEN DAYS PRIOR TO IMPLEMENTING STAGE II TRAFFIC CONTROL.
4. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS (PH: (217) 785-5306) AT LEAST THREE DAYS PRIOR TO ACTIVATING THE TEMPORARY TRAFFIC SIGNALS.

SEQUENCE OF CONSTRUCTION

PRE-STAGE I

1. INSTALL ALL NECESSARY ITEMS IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701326.
2. INSTALL TEMPORARY EROSION CONTROL AS SHOWN IN THE PLANS AS NECESSARY DURING ALL STAGES OF CONSTRUCTION.
3. CONSTRUCT HMA BASE COURSE, 8" LEFT AND RIGHT OF THE CENTERLINE.

STAGE I

1. INSTALL STAGE I TRAFFIC CONTROL AND PROTECTION AS DETAILED IN THE PLANS AND ACCORDING TO STANDARD 701321. ALSO PLACE TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
2. REMOVE CONFLICTING PAVEMENT MARKINGS, INSTALL TEMPORARY CONCRETE BARRIER, TEMPORARY IMPACT ATTENUATORS, AND TEMPORARY PAVEMENT MARKINGS. PLACE TRAFFIC IN STAGE I LANE.
3. INSTALL SOIL RETENTION SYSTEM. REMOVE STAGE I PORTION OF THE EXISTING PAVEMENT. CONSTRUCT EARTHWORK AND INSTALL TEMPORARY EROSION CONTROL RIGHT STATION 138+00 TO STATION 148+00.
4. CONSTRUCT STAGE I PORTION OF THE PROPOSED BOX CULVERT AND PAVEMENT.
5. INSTALL PROPOSED GUARDRAIL AND TERMINALS ON THE RIGHT SIDE AS SHOWN IN THE PLANS.

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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		DRAWN - CFC	REVISED -	
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -	
	PLOT DATE = 5/9/2023	DATE -	REVISED -	

FEHR GRAHAM PROJECT NUMBER: 10005-2

STAGE I TRAFFIC CONTROL
IL 16 SN 068-2508

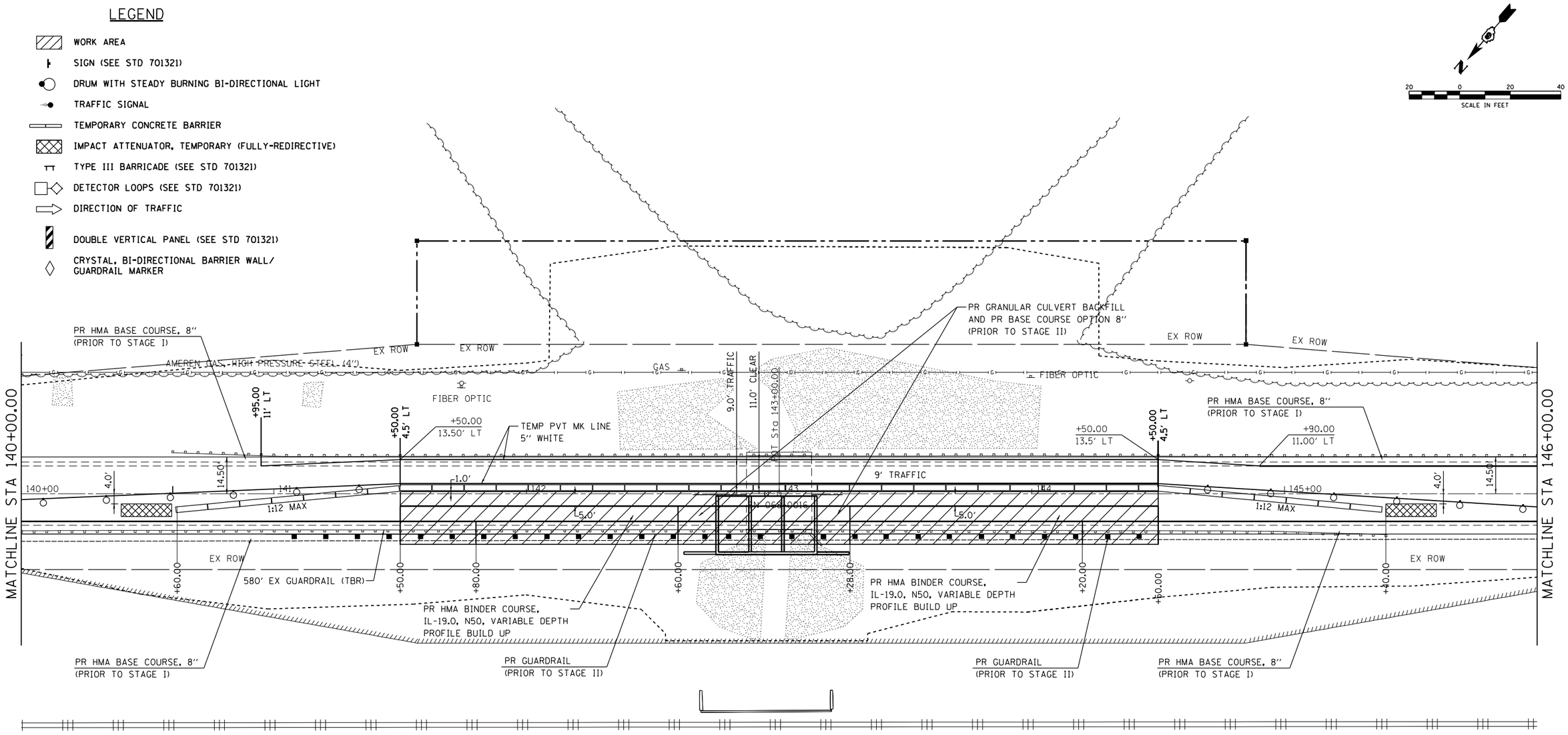
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	100
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (FULLY-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL
IL 16 SN 068-2508

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3): 16(CR)	*	142	101
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN

FEHR GRAHAM PROJECT NUMBER: 10005-2

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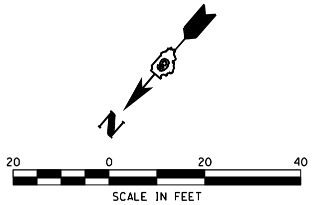
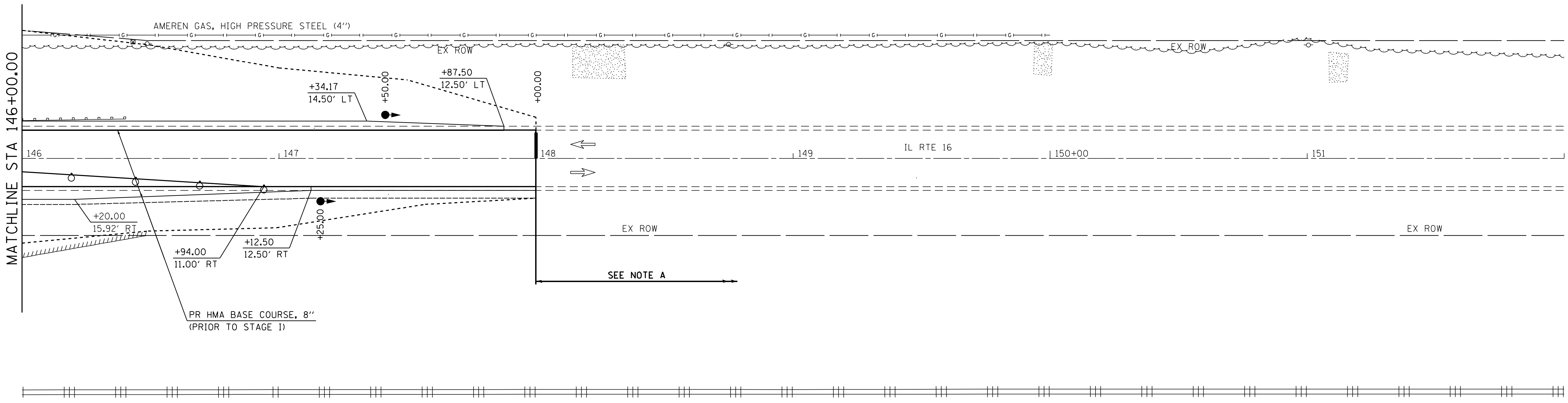
LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (FULLY-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER





NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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 CHK'D — BY — DATE

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		DRAWN - CFC	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -	
	PLOT DATE = 4/7/2023	DATE -	REVISED -	

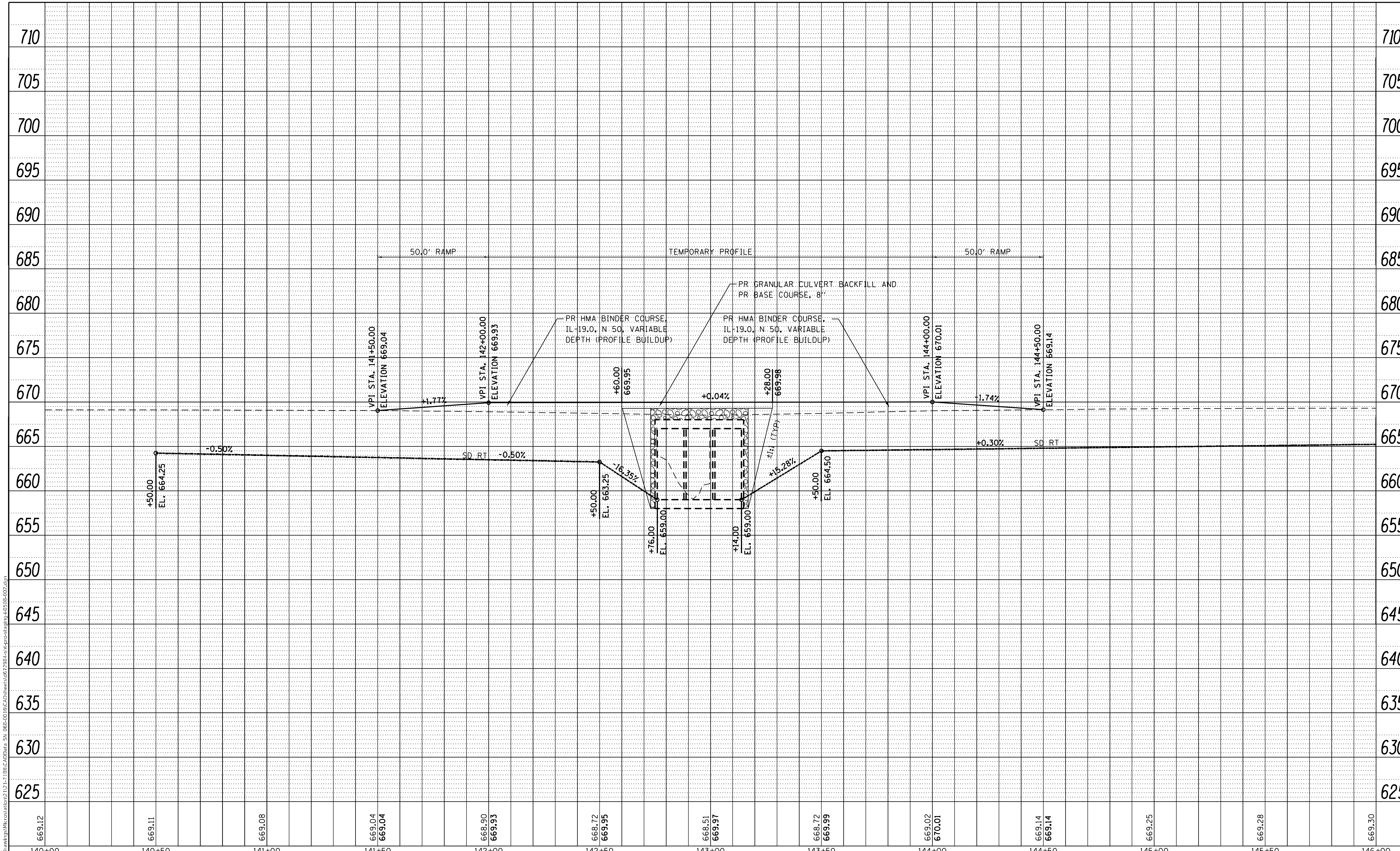
FEHR GRAHAM PROJECT NUMBER: 10005-2

PROFILE STAGE I
IL 16 SN 068–2508

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	103
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



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

PROFILE	
NOTE BOOK NO.	SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHKD

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

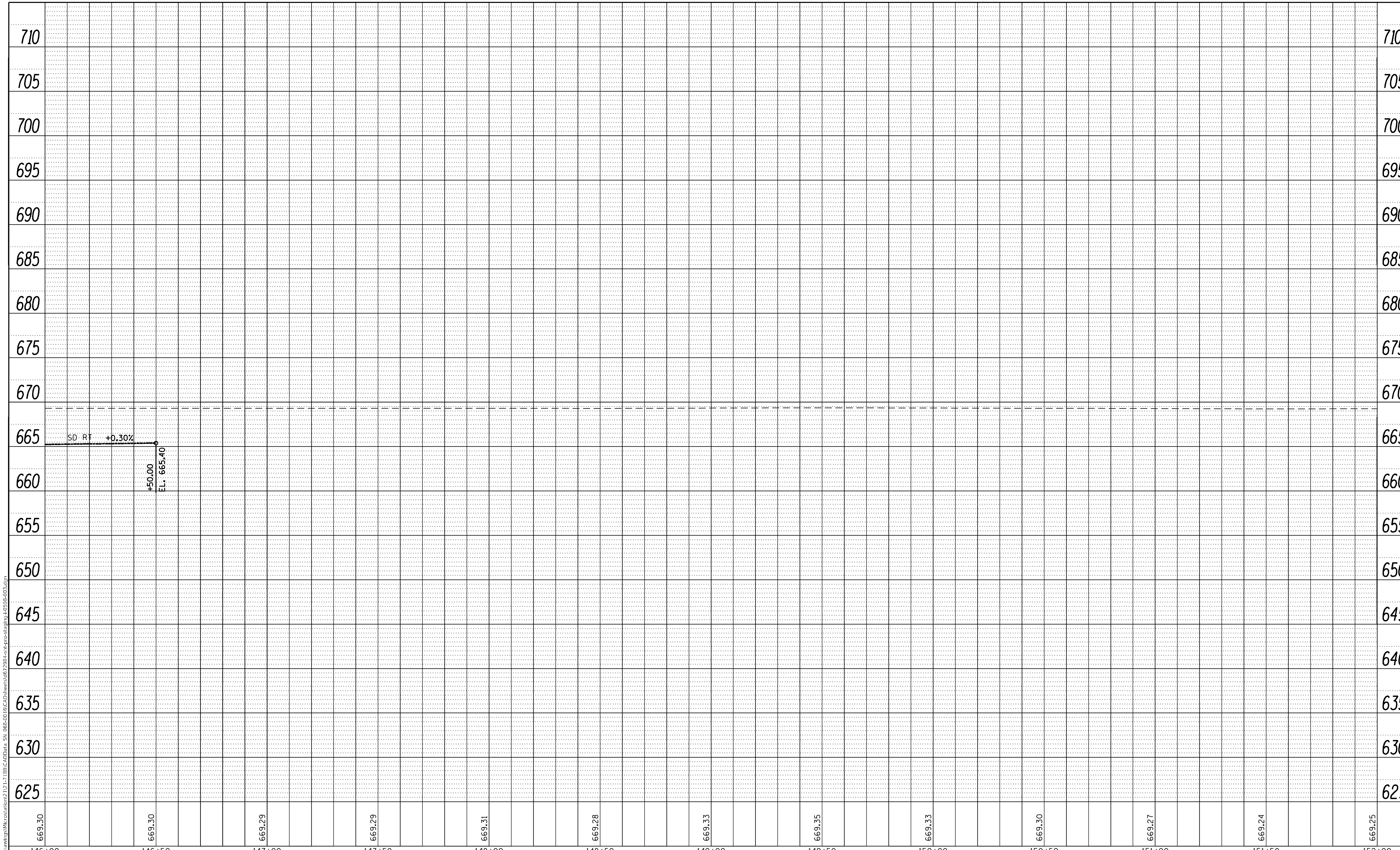
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE STAGE I
IL 16 SN 068–2508

SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	104

CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



PLAN: NOTE BOOK NO. ___ SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.O. WAY CHECKED, CADD FILE NAME — BY — DATE

PROFILE: NOTE BOOK NO. ___ SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NOTATIONS CHK'D — BY — DATE

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE STAGE I
IL 16 SN 068–2508

SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

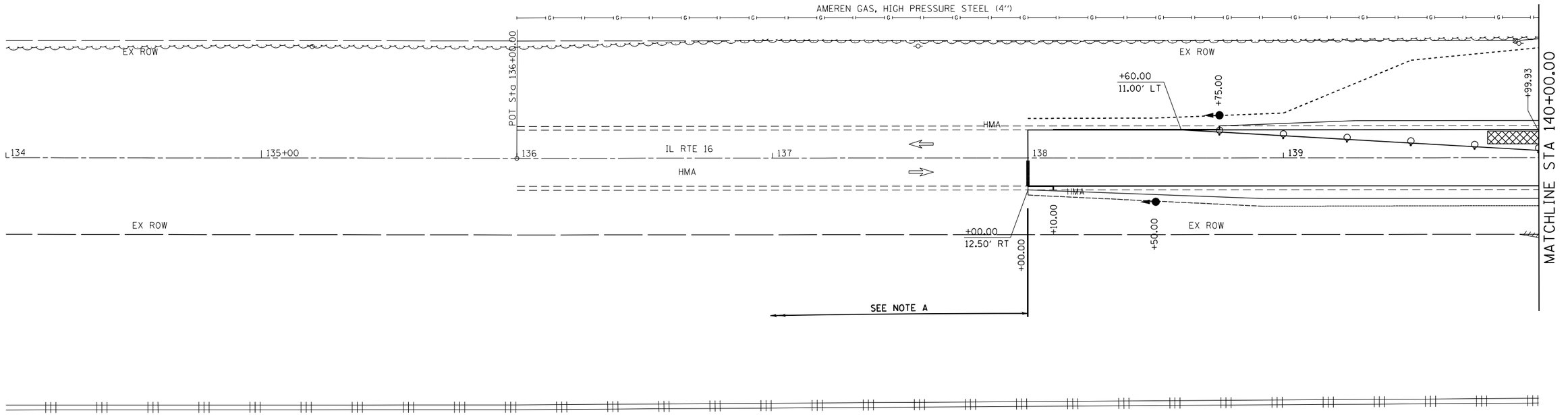
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	105

CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (FULLY-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER

20 0 20 40
SCALE IN FEET



SEQUENCE OF CONSTRUCTION

STAGE II

1. RELOCATE TEMPORARY CONCRETE BARRIER AND OTHER TRAFFIC CONTROL ITEMS IN ACCORDANCE WITH STANDARD 701321 AND STAGE II TRAFFIC CONTROL DETAILS.
2. PLACE TRAFFIC IN STAGE II LANE.
3. REMOVE STAGE II PORTION OF THE EXISTING STRUCTURE, GUARDRAIL AND PAVEMENT.
4. CONSTRUCT STAGE II PORTION OF THE PROPOSED BOX CULVERT, PAVEMENT AND GUARDRAIL.

STAGE III

1. REMOVE TRAFFIC CONTROL ITEMS ASSOCIATED WITH STANDARD 701321. INSTALL SHORT TERM PAVEMENT MARKINGS AND PLACE TRAFFIC IN PERMANENT LANES.
2. PLACE HMA BINDER, SURFACE COURSE AND SHOULDERS IN ACCORDANCE WITH STANDARD 701306.
3. INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH STANDARD 701311.

NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321 TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL
IL 16 SN 068-2508

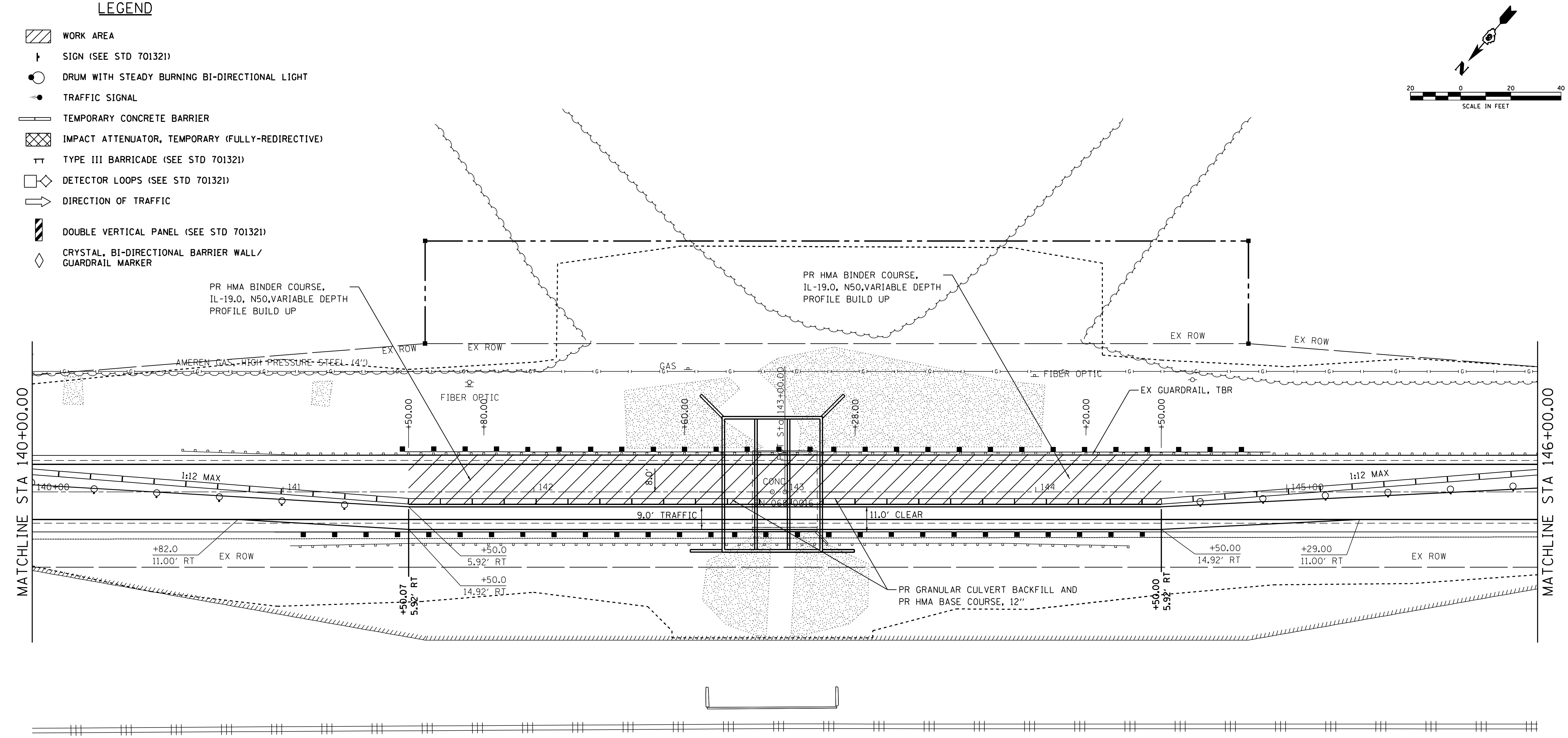
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	106
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (FULLY-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



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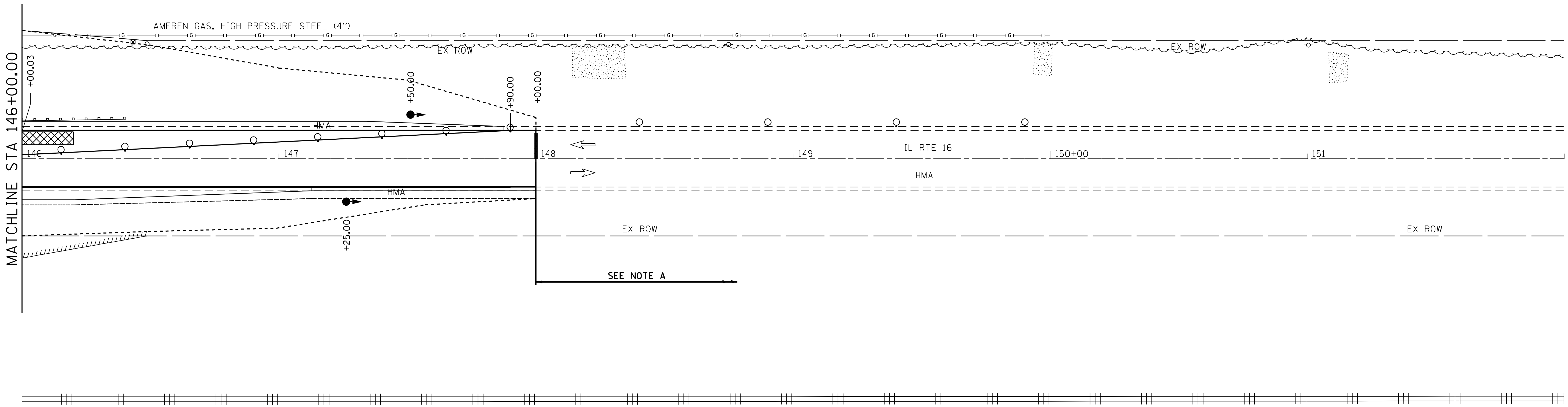
FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE II TRAFFIC CONTROL IL 16 SN 068–2508	F.A.P. RTE. 325 / SECTION 18(B-2, B-3); 16(CR) / COUNTY * / TOTAL SHEETS 142 / SHEET NO. 107
		DRAWN - CFC	REVISED -			CONTRACT NO. 72984
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -			ILLINOIS FED. AID PROJECT
	PLOT DATE = 4/28/2023	DATE	REVISED -		SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.	

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (FULLY-REDIRECTIVE)
- TYPE III BARRICADE (SEE STD 701321)
- DETECTOR LOOPS (SEE STD 701321)
- DIRECTION OF TRAFFIC
- DOUBLE VERTICAL PANEL (SEE STD 701321)
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/ GUARDRAIL MARKER



NOTE A

REMAINDER OF SIGNING ACCORDING TO STANDARD 701321
TEMPORARY RUMBLE STRIPS WILL BE USED AND PLACED ACCORDING TO STANDARD 701321.
ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - CFC	REVISED -	
	PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -	
	PLOT DATE = 4/27/2023	DATE -	REVISED -	

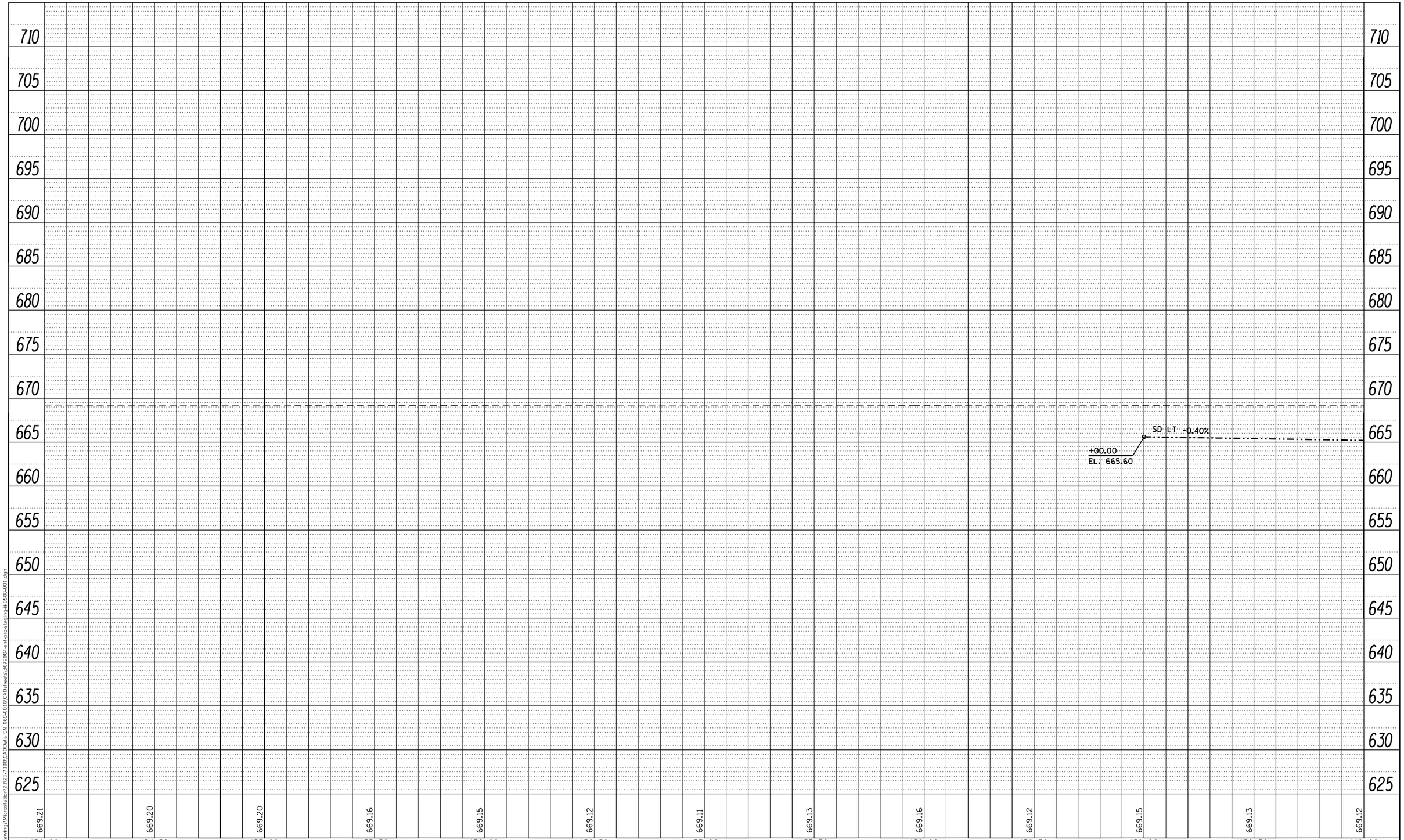
FEHR GRAHAM PROJECT NUMBER: 10005-2

STAGE II TRAFFIC CONTROL
IL 16 SN 068-2508

SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	108

CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



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

PROFILE
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STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

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	DRAWN - CFC	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE STAGE II
IL 16 SN 068-2508

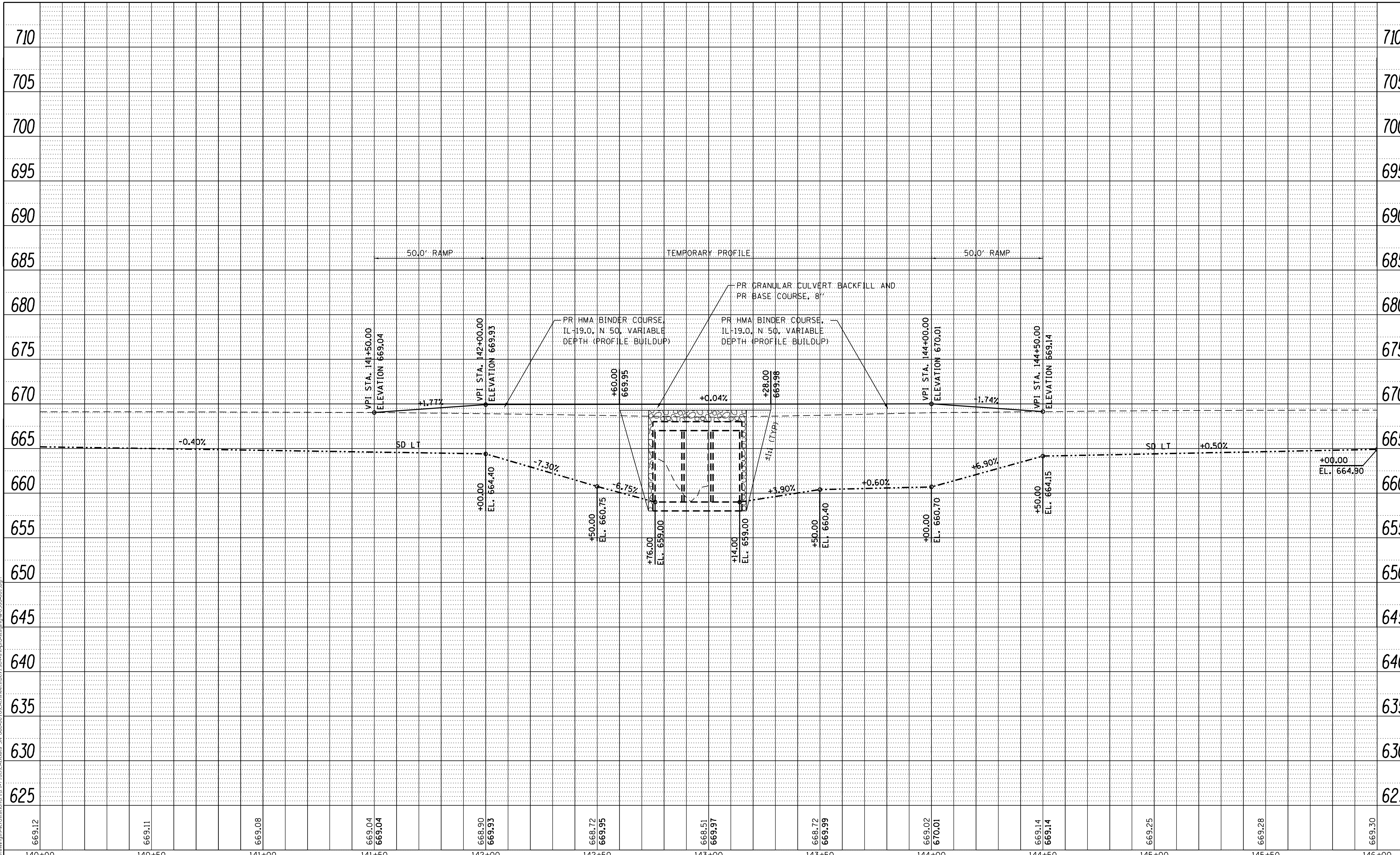
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	109

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN



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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

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PLOT DATE = 4/7/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE STAGE II
IL 16 SN 068–2508

SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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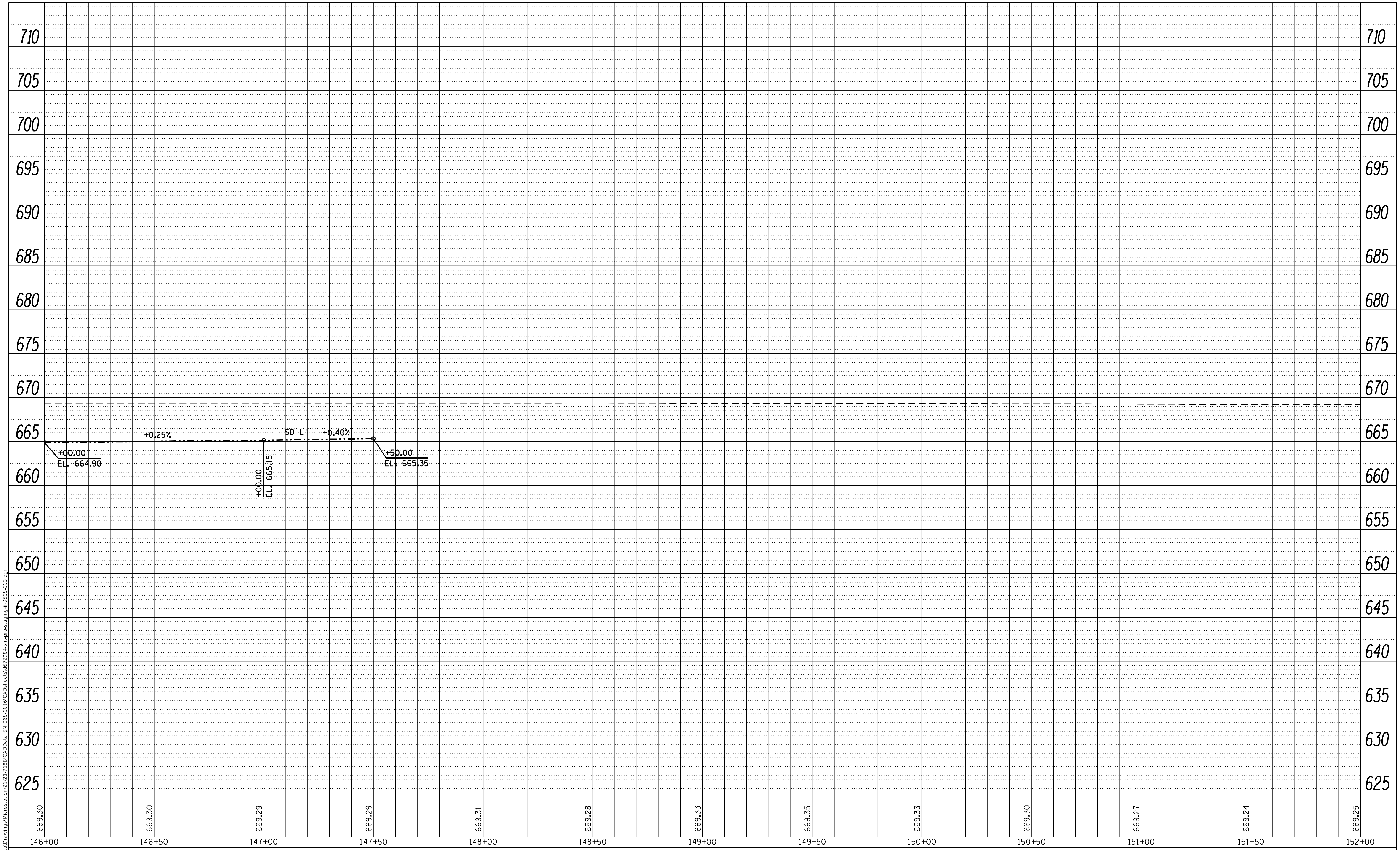
CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



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	PLOT DATE = 4/7/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE STAGE II
IL 16 SN 068–2508

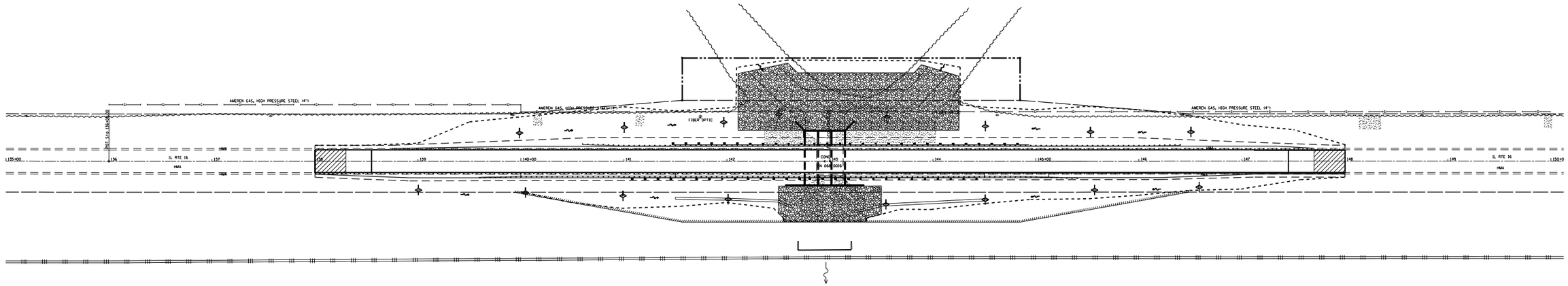
SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	111

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN



LEGEND

TEMPORARY DITCH CHECK (AGGREGATE (EROSION CONTROL))

PERIMETER EROSION BARRIER

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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**EROSION CONTROL PLAN** **IL 16 SN 068-2508**
		DRAWN - CFC	REVISED -		
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	PLOT DATE = 4/27/2023	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	112
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

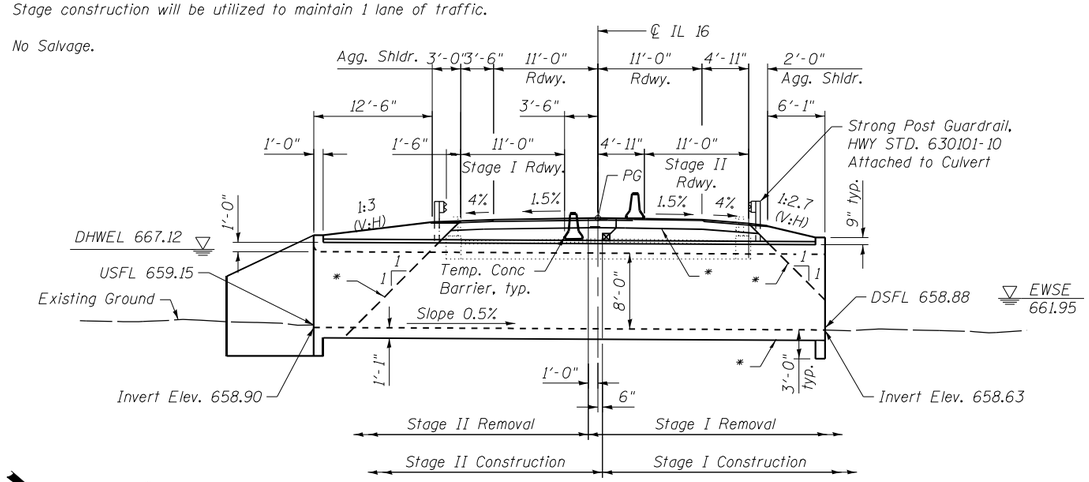
FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

Benchmark: Chiseled square on top N.W. wingwall SN 068-0016, Elev. 668.47

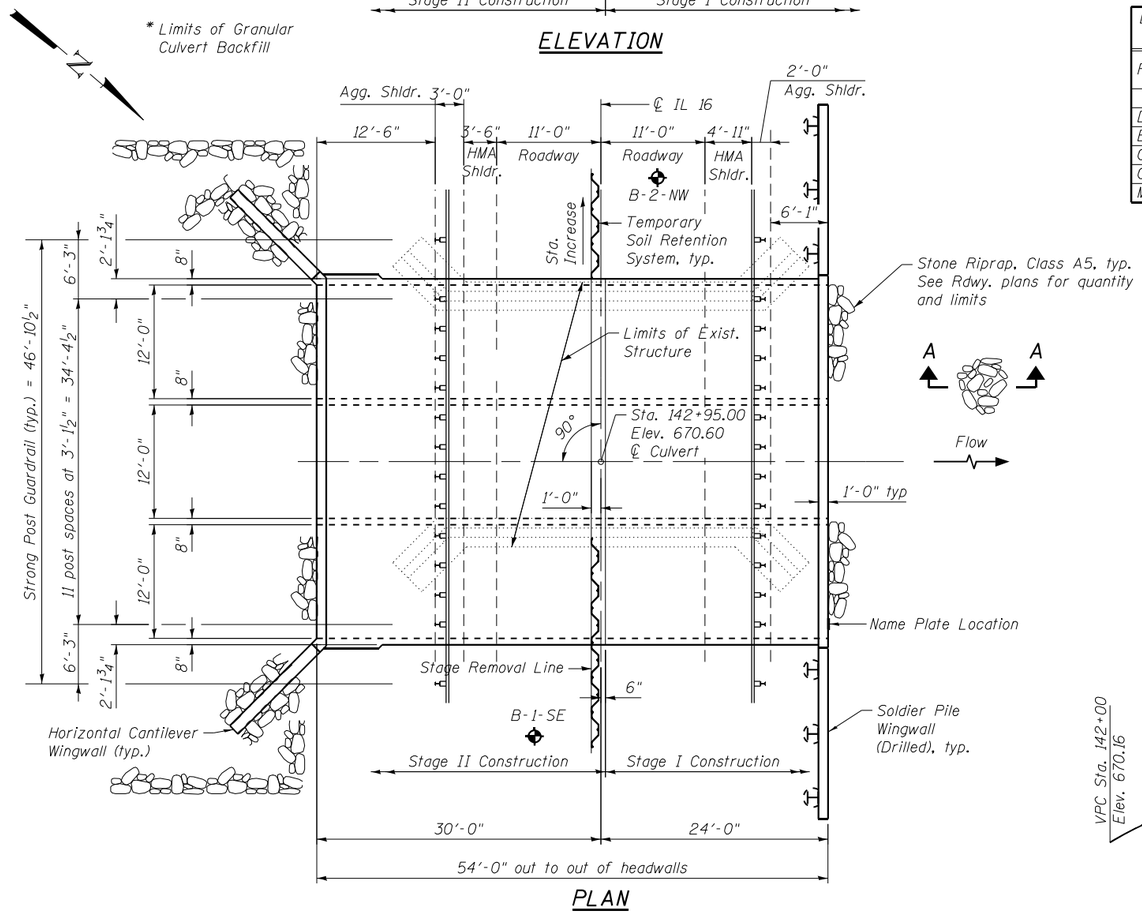
Existing Structure: SN 068-0016 at Sta. 143+00 was built in 1923 as SBI 16, Section 18. The HMA overlay was replaced in 1973 and in 2002 the bridge rail was replaced. The Structure is a single span concrete deck slab on closed abutments, 26'-0" bk. to bk. of abutments and 32'-2" out to out deck, no skew. Stage construction will be utilized to maintain 1 lane of traffic.

No Salvage.



* Limits of Granular Culvert Backfill

ELEVATION



PLAN

INDEX OF SHEETS

GENERAL NOTES

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

Precast option at this location is not allowed.

See Roadway Plans for Temporary Concrete Barrier quantity.

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Soldier Piles)

WATERWAY INFORMATION

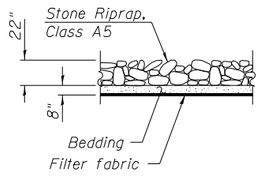
Drainage Area = 1.9 sq. mi. Exist. Overtopping Elev. 668.52 ft. @ Sta. 143+00.00
Prop. Overtopping Elev. 669.11 ft. @ Sta. 137+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	640	124	240	665.88	1.2	0.6	667.11	666.48
Design	50	1080	144/20	290	667.12	1.9	0.7	668.97	667.80
Base	100	1280	144/90	290	667.49	2.0	0.8	669.48	668.29
OVT (E)	<50								
OVT (P)	>100								
Max. Calc.	500	1780	144/180	290	667.99	2.3	1.9	670.33	669.88

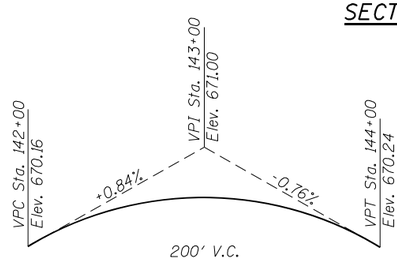
10 yr velocity thru Existing Structure = 6.47 fps
10 yr velocity thru Proposed Structure = 4.07 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	656.15	655.85

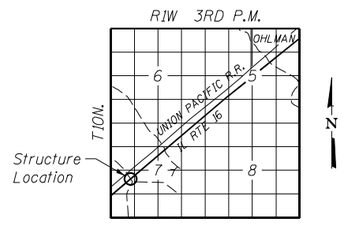


SECTION A-A



PROFILE GRADE

(along ℄ IL Rte. 16)



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 2	Each	1
Reinforcement Bars	Pound	40,060
Bar Splicers	Each	160
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	243.2
Granular Culvert Backfill	Cu. Yd.	143
Temporary Soil Retention System	Sq. Ft.	381
Membrane Waterproofing System for Buried Structures	Sq. Yd.	247
Geocomposite Wall Drain	Sq. Yd.	269
Strong Post Guardrail Attached to Culvert	Foot	94
Furnishing Soldier Piles (HP Section)	Foot	272
Drilling and Setting Soldier Piles (in soil)	Cu. Ft.	892
Untreated Timber Lagging	Sq. Ft.	461
Stud Shear Connectors	Each	78

STATION 142+95.00
BUILT 20___ BY
STATE OF ILLINOIS
F.A.P. RTE. 325 SEC. 18(B-2, B-3)
LOADING HL-93
STR. NO. 068-2508

NAME PLATE

See Std. 515001

LICENSED STRUCTURAL ENGINEER
MARY COOMBE BLOXDORF
4859
SPRINGFIELD
STATE OF ILLINOIS

ILLINOIS STRUCTURAL NO. 4859
EXPIRES 11/30/24
DATE: 04/19/2023

GENERAL PLAN
IL 16 OVER TRIBUTARY TO THE SOUTH FORK OF THE SANGAMON RIVER
FAP 325 SECTION 18(B-2, B-3)
MONTGOMERY COUNTY
STATION 142+95.00
STRUCTURE NO. 068-2508

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FEHR GRAHAM
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ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

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	CHECKED - MCB	REVISED -	
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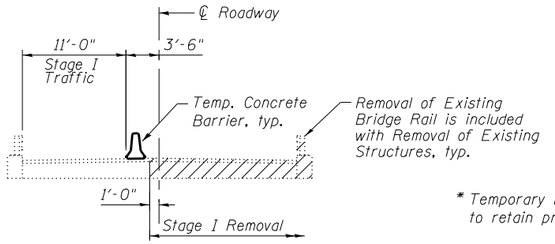
PLOT DATE = 4/18/2023	CHECKED - MCB/AMC	REVISED -	

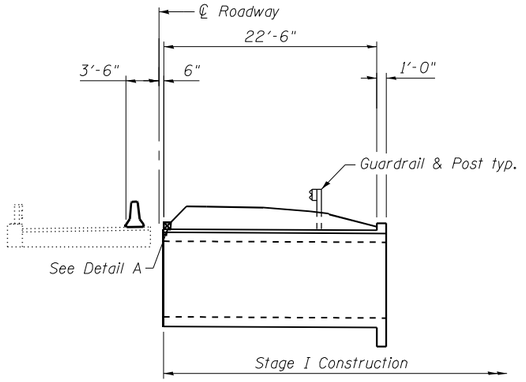
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 068-2508
SHEET 1 OF 10 SHEETS

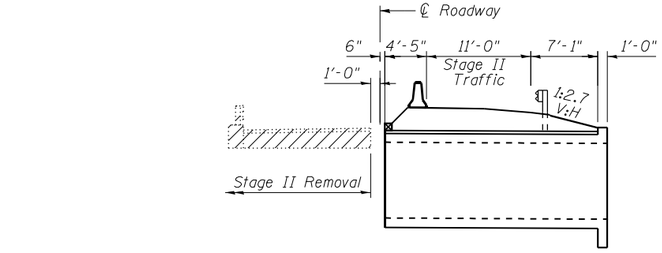
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	113
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



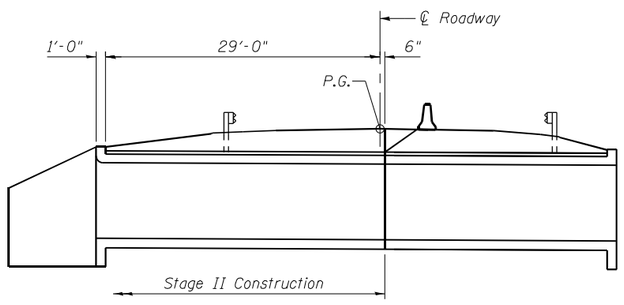
STAGE I REMOVAL



STAGE I CONSTRUCTION

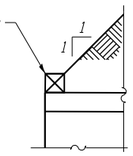


STAGE II REMOVAL



STAGE II CONSTRUCTION

* Temporary blocking at Stage Line to retain proposed backfill

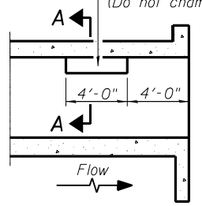


DETAIL A

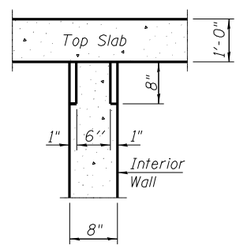
(at Stage I Construction)

* The Contractor shall submit the design calculations and details for the temporary blocking for review and approval by the Engineer. Cost included in Temporary Soil Retention System.

Notch formed by rough finished board attached to and removed with form work, each interior wall. (Do not chamfer).



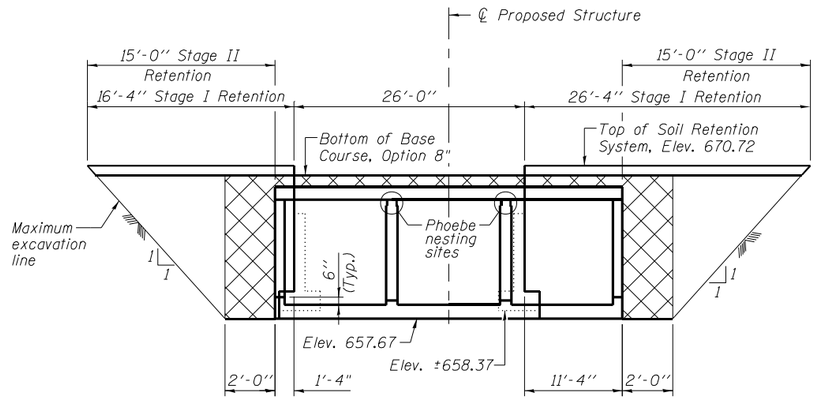
LONGITUDINAL SECTION



SECTION A-A

PHOEBE NESTING SITE DETAILS

(Downstream End Only)



TEMPORARY SOIL RETENTION SYSTEM

Notes:

Cross hatched area indicates Granular Culvert Backfill. See Special Provisions.

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

All staging cross sections are looking West.

For quantity of Temporary Concrete Barrier, see roadway plans.

Hatched area indicates Removal of Existing Structures.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopaliraj	DESIGNED - AMC	REVISED -	
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PLOT DATE = 4/18/2023	CHECKED - MCB/AMC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 068-2508
SHEET 2 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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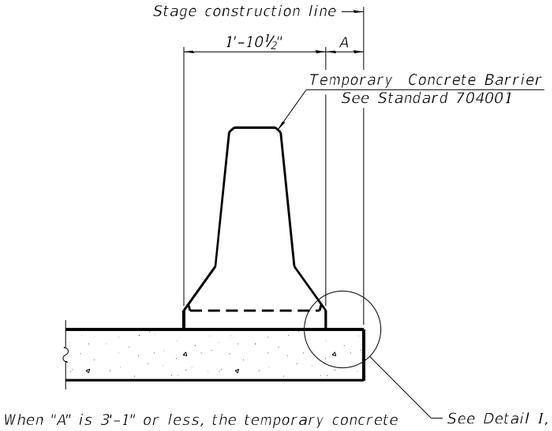
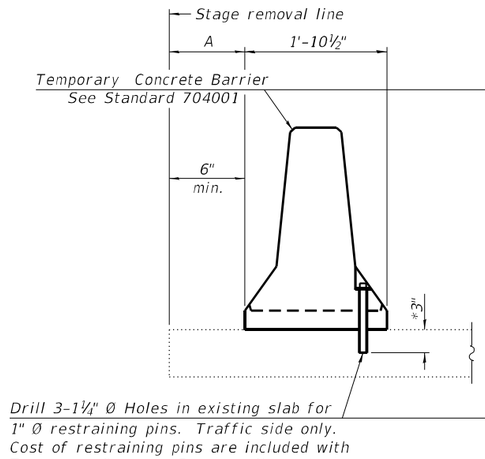
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



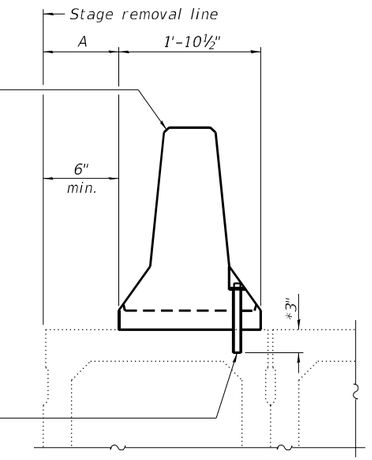
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

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".

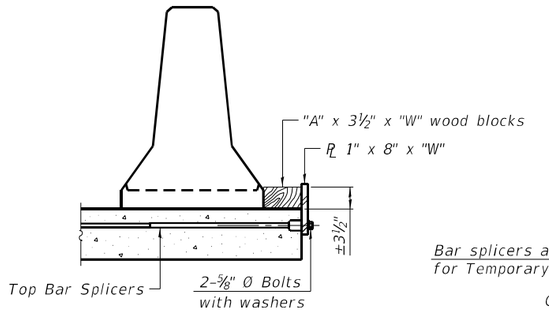
EXISTING SLAB



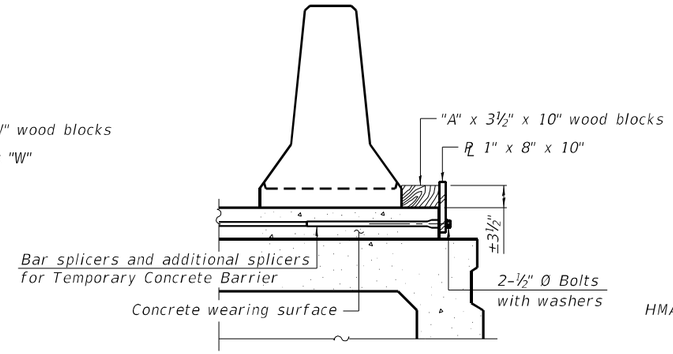
* When hot-mix asphalt wearng surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

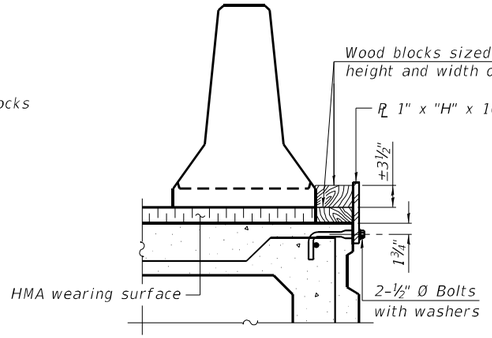
SECTIONS THRU SLAB OR DECK BEAM



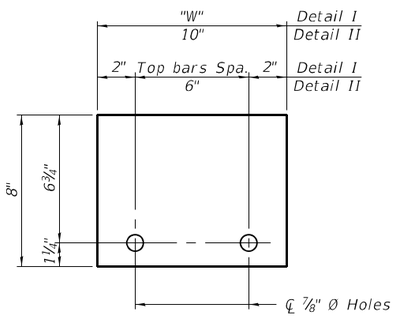
DETAIL I



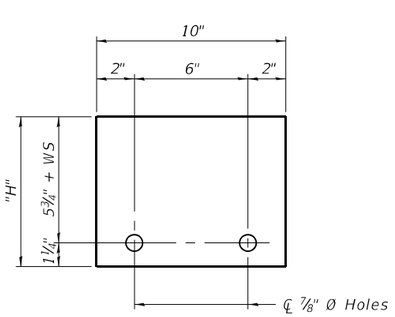
DETAIL II



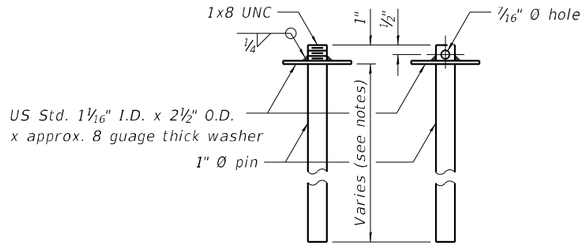
DETAIL III



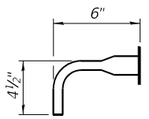
STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



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



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - 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.

R-27

2-17-2017

MODEL: Default
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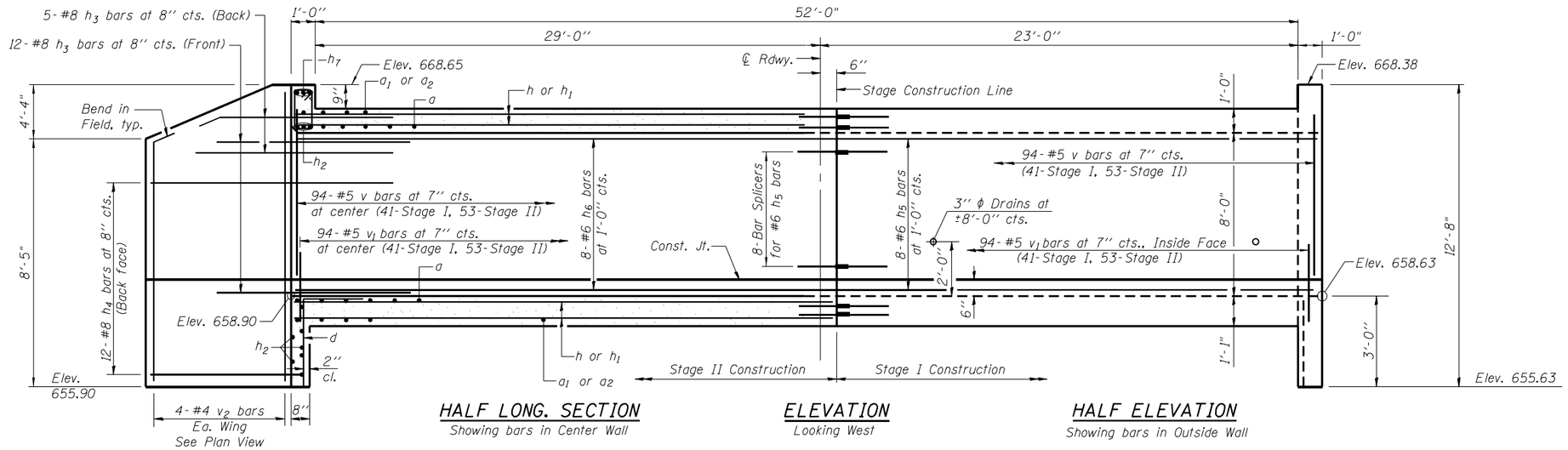
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj | DESIGNED - AMC | REVISED -
CHECKED - MCB | REVISED -
PLOT SCALE = 0:2.0000 ':" / in. | DRAWN - MMY | REVISED -
PLOT DATE = 4/18/2023 | CHECKED - MCB/AMC | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 068-2508
SHEET 3 OF 10 SHEETS

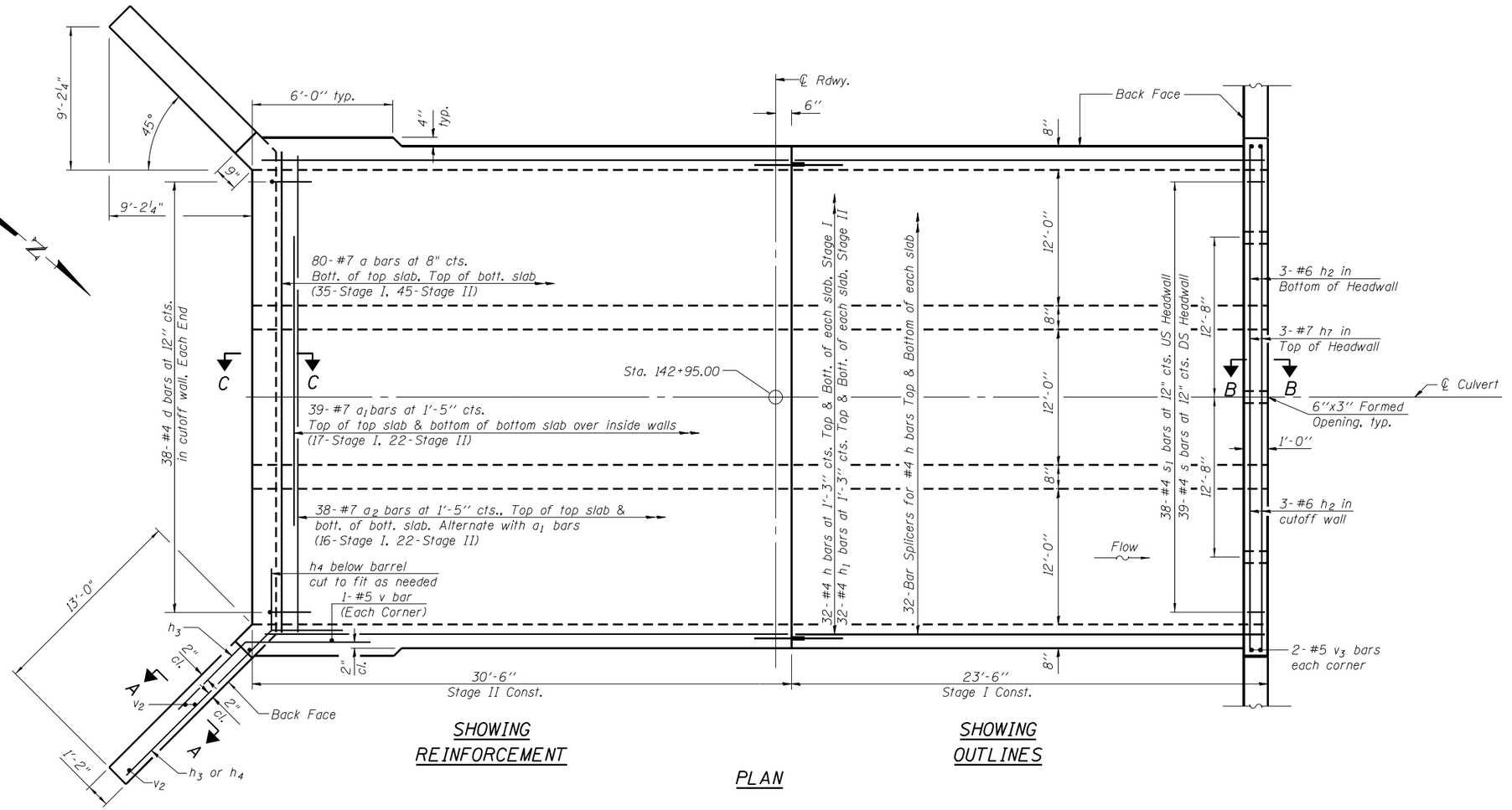
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	115
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



HALF LONG. SECTION
Showing bars in Center Wall

ELEVATION
Looking West

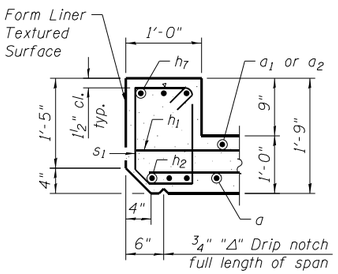
HALF ELEVATION
Showing bars in Outside Wall



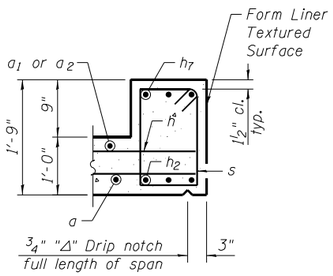
SHOWING REINFORCEMENT

SHOWING OUTLINES

PLAN



SECTION B-B
Upstream End



SECTION C-C
Downstream End

Note:
See sheet 5 of 9 for Sec. A-A, bar details and Bill of Material.

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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT DETAILS STRUCTURE NO. 068-2508
	CHECKED - MCB	REVISED -		
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - MMY	REVISED -		SHEET 4 OF 10 SHEETS
PLOT DATE = 4/27/2023	CHECKED - MCB/AMC	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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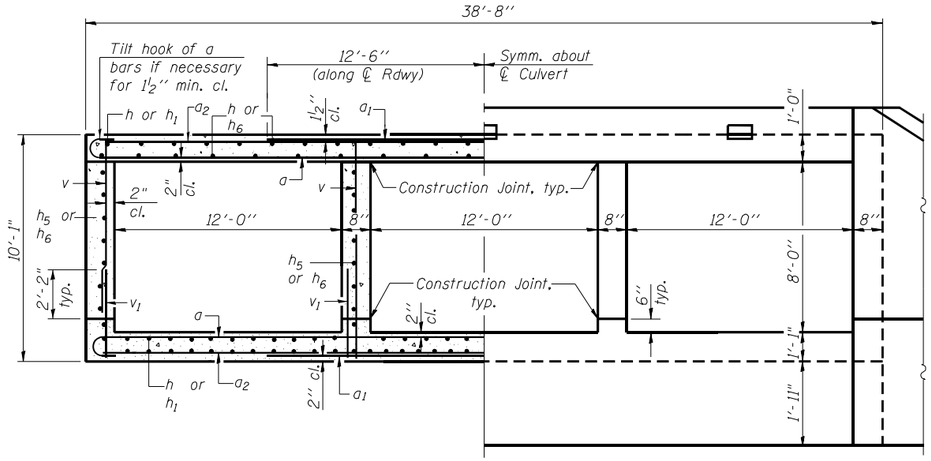
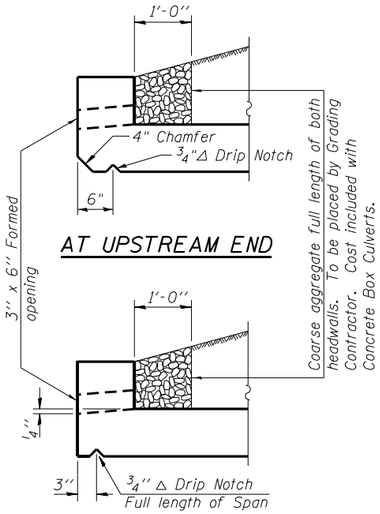
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

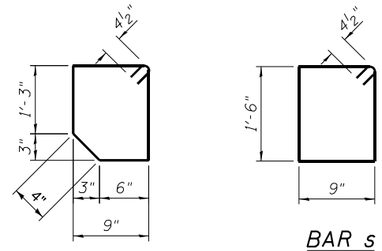


HALF SECTION THRU BARREL

HALF END ELEVATION



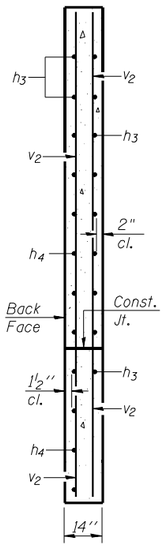
DRAIN DETAIL



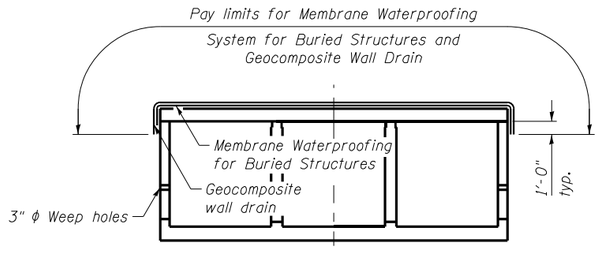
Notes:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

BILL OF MATERIAL

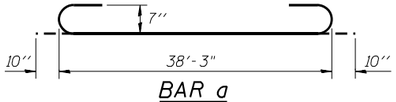
Bar	No.	Size	Length	Shape
a	160	#7	39'-11"	
a1	78	#7	25'-0"	
a2	76	#7	38'-3"	
d	76	#4	4'-5"	
h	128	#4	22'-10"	
h1	128	#4	29'-10"	
h2	12	#6	38'-3"	
h3	34	#8	8'-0"	
h4	24	#8	16'-0"	
h5	32	#6	23'-2"	
h6	32	#6	30'-2"	
h7	6	#7	38'-3"	
h8	52	#5	17'-8"	
s	39	#4	5'-3"	
s1	38	#4	5'-4"	
v	380	#5	8'-2"	
v1	376	#5	3'-4"	
v2	8	#4	12'-5"	
v3	80	#5	12'-5"	
Concrete Box Culverts		Cu. Yd.	243.2	
Reinforcement Bars		Pound	40,060	
Membrane Waterproofing System for Buried Structures		Sq. Yd.	247	
Furnishing Soldier Piles (HP Section)		Foot	272	
Drilling and Setting Soldier Piles (In soil)		Cu. Ft.	892	
Untreated Timber Lagging		Sq. Ft.	461	
Geocomposite Wall Drain		Sq. Yd.	269	
Stud Shear Connectors		Each	78	
Bar Splicers		Each	160	



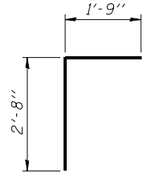
SECTION A-A



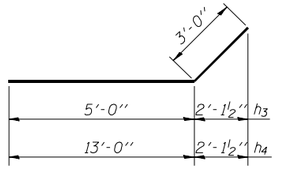
MEMBRANE WATERPROOFING



BAR a



BAR d



BARS h3 & h4

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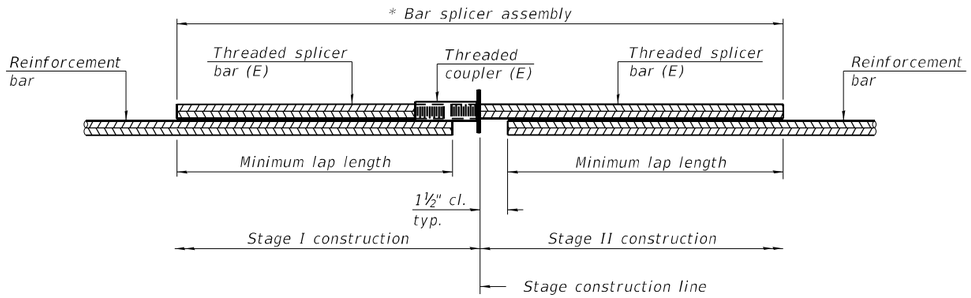
	PLOT DATE = 4/18/2023	CHECKED - MCB/AMC	REVISED -	

FEHR GRAHAM PROJECT NUMBER: 10005-2

CULVERT DETAILS
STRUCTURE NO. 068-2508
SHEET 5 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	117
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	



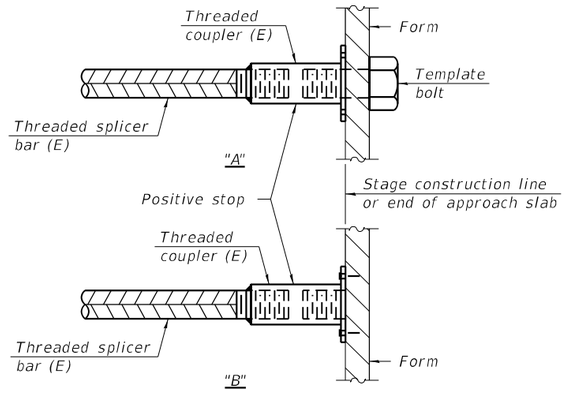
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + 1½" + thread length

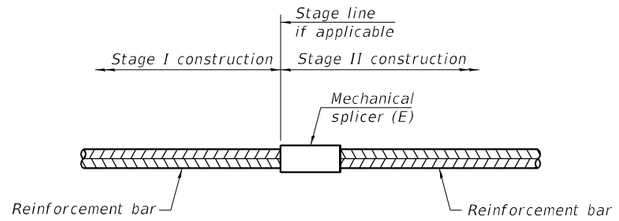
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab	#4	64	1'-9"
Bottom Slab	#4	64	1'-9"
Walls	#6	32	3'-4"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 2-1-2023

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ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

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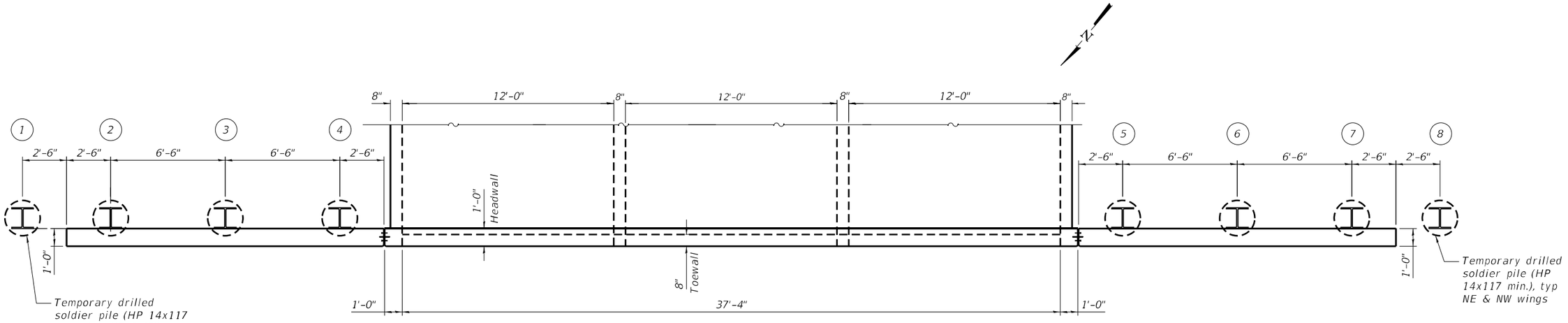
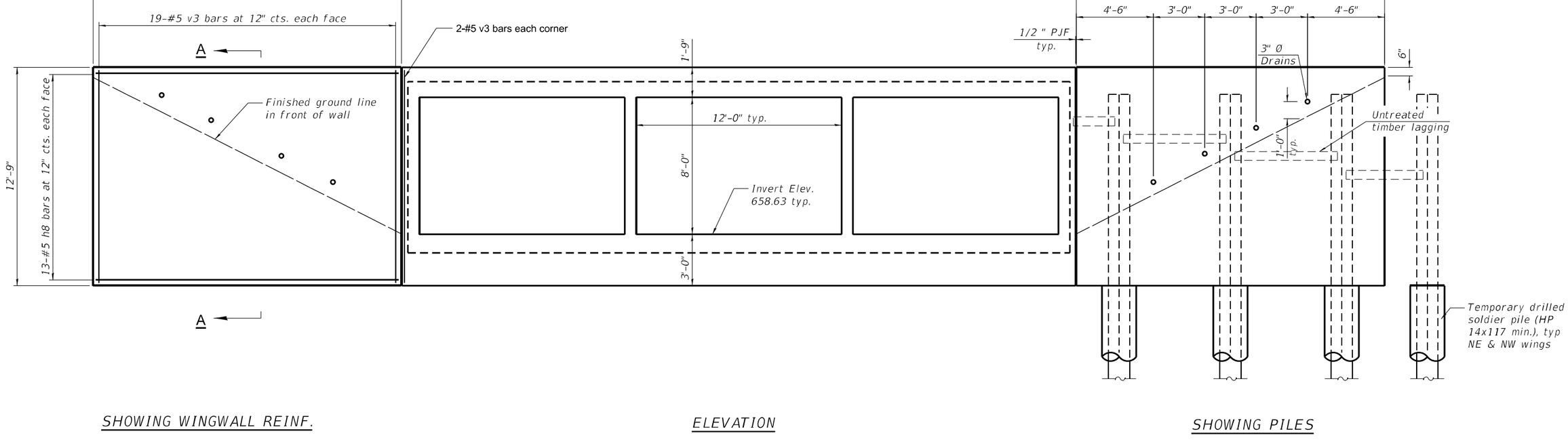
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 068-2508
SHEET 6 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	118
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			



PLAN



SHOWING WINGWALL REINF.

ELEVATION

SHOWING PILES

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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

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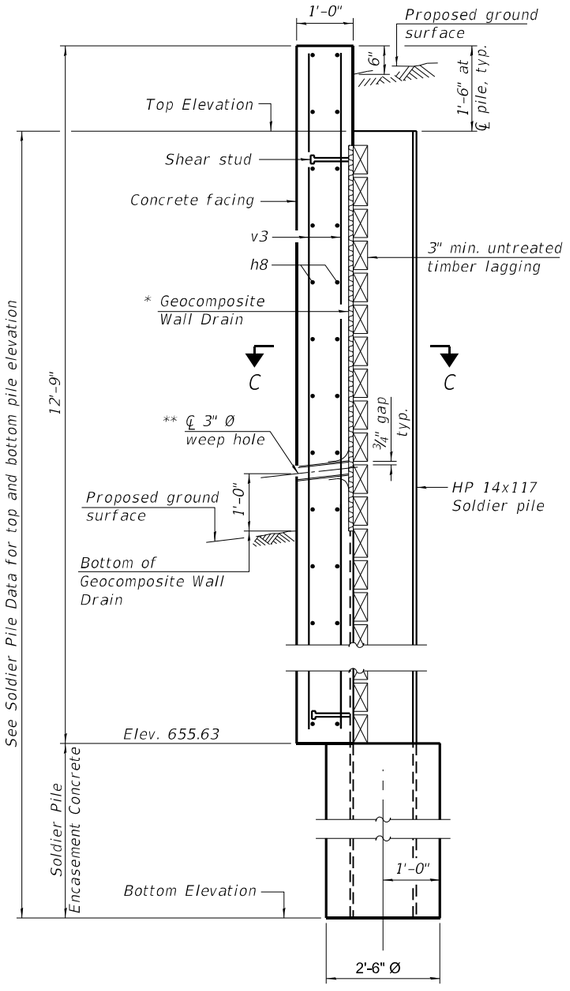
PLOT DATE = 4/18/2023	CHECKED - MCB/AMC	REVISED -	

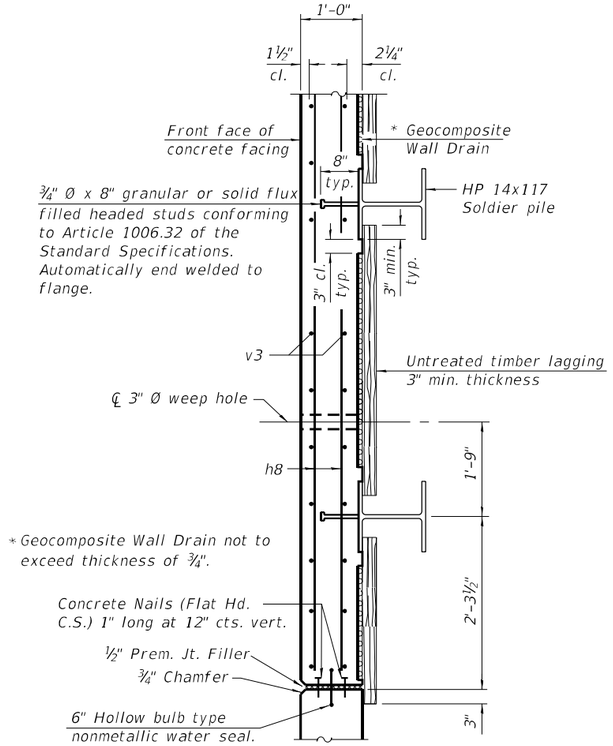
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH WINGWALL DETAILS
STRUCTURE NO. 068-2508
SHEET 7 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	119
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



SECTION A-A



SECTION C-C

SOLDIER PILE WINGWALL CONSTRUCTION SEQUENCE

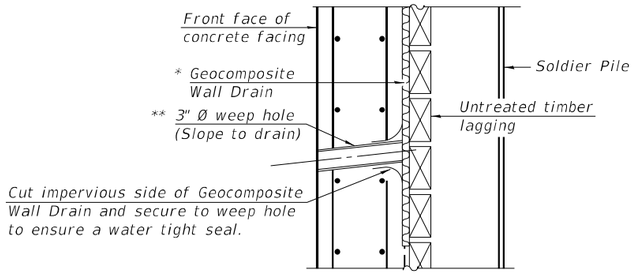
1. Construct concrete box culvert.
2. Drill soldier piles (may be completed prior to completing construction of box culvert).
3. Install timber lagging.
4. Place and compact backfill behind wingwall to top of timber lagging.
5. Install shear stud connectors.
6. Place reinforcement and form concrete wall face.
7. Cast concrete wingwall facing.
8. Remove temporary soldier pile and timber lagging outside limits of the wingwall.
9. Place remainder of backfill to proposed ground surface elevations on both sides of wall (backfill front side of wall as much as possible before backfilling is completed).

Notes:

The temporary soldier pile is required to facilitate backfilling of the wingwall prior to casting the concrete face. The temporary soldier pile shall conform to the construction requirements for permanent soldier piles except material for the temporary soldier pile may be new or used. After the concrete face has been allowed to cure, the temporary soldier pile shall be removed 2 ft below streambed along with the adjacent timber lagging. Cost of removing and disposing temporary soldier pile and timber lagging shall be included in the cost of Concrete Box Culverts.

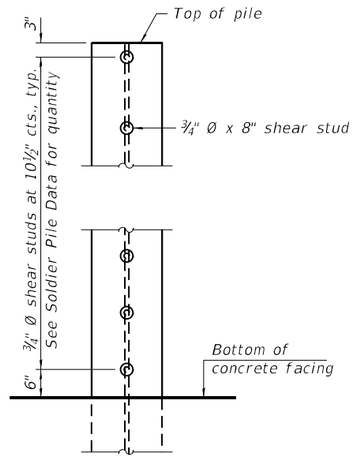
In order to minimize excessive deflection and/or stresses in the soldier piles, compaction equipment used within 4 ft of the back face of the timber lagging shall be limited to lightweight mechanical tampers, rollers, or vibratory systems.

The Contractor is responsible for the design and performance of the timber lagging using no less than a 3 inch nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.



WEEP HOLE DRAIN DETAIL

** Cost of the weep hole drain and connection to the Geocomposite Wall Drain are included in the cost of Concrete Box Culverts.



SHEAR STUD DETAIL

(Elevation of pile shown)

SOLDIER PILE DATA

Soldier Pile	Pile Size	Top Elevation	Bottom Elevation	Total Height (Ft.)	Number of Shear Studs
1	HP 14x117 min.	666.88	632.88	34'-0"	
2	HP 14x117	666.88	632.88	34'-0"	13
3	HP 14x117	666.88	632.88	34'-0"	13
4	HP 14x117	666.88	632.88	34'-0"	13
5	HP 14x117	666.88	632.88	34'-0"	13
6	HP 14x117	666.88	632.88	34'-0"	13
7	HP 14x117	666.88	632.88	34'-0"	13
8	HP 14x117 min.	666.88	632.88	34'-0"	

SP-ZS-DETAILS 2-17-2017

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH WINGWALL DETAILS
STRUCTURE NO. 068-2508
SHEET 8 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	120
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

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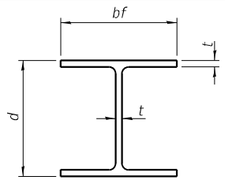
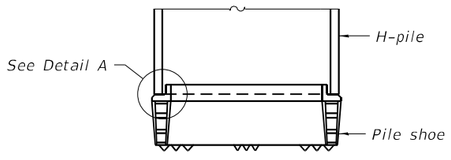
FEHR GRAHAM PROJECT NUMBER: 10005-2

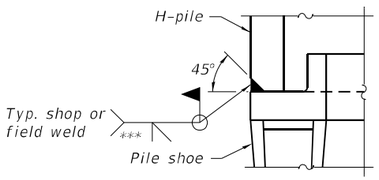


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



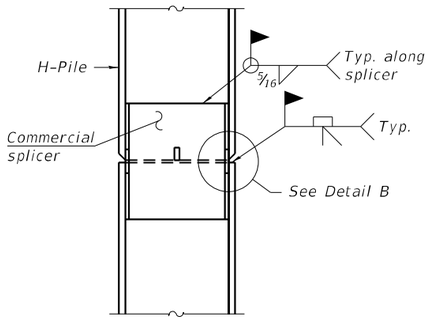
ELEVATION



DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



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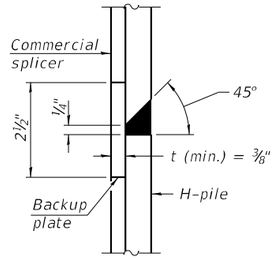
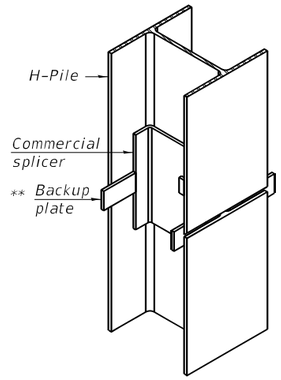
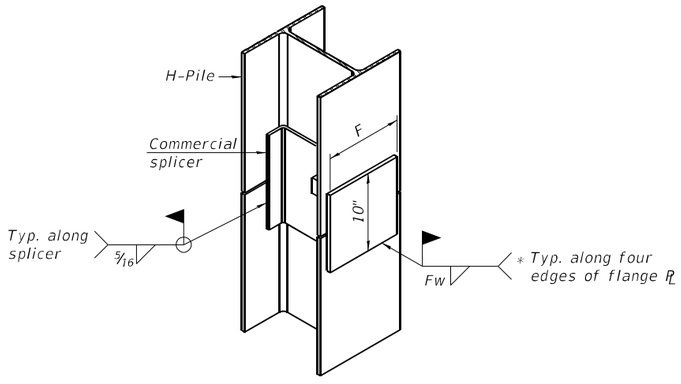


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



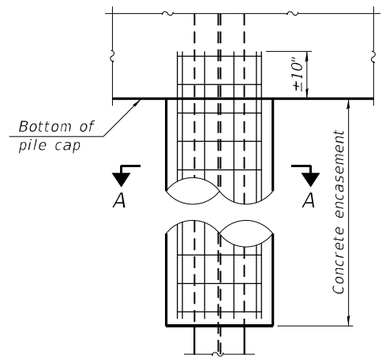
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

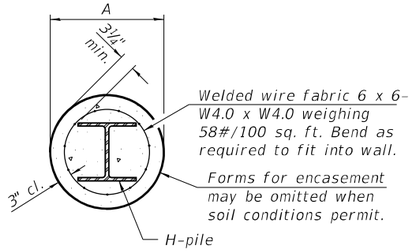
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



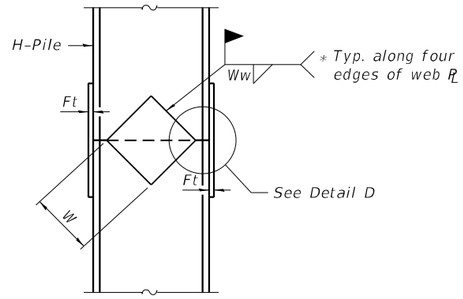
ELEVATION



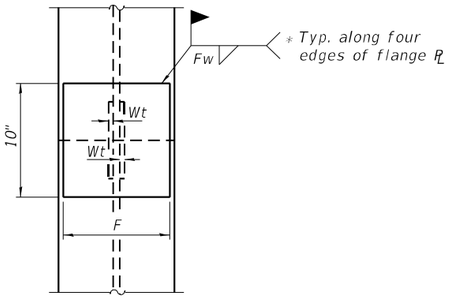
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

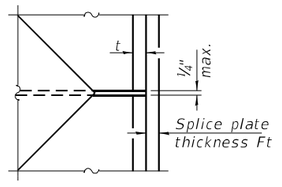
(when specified)



ELEVATION



END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	11/16"	7¾"	⅝"	½"
x73	12½"	⅝"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅝"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	9/16"	5¼"	½"	⅜"
x42	8"	⅝"	9/16"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	7/16"	4¼"	½"	⅜"

WELDED PLATE FIELD SPLICE

F-HP 2-1-2023

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - MG	REVISED -	
PLOT DATE = 4/18/2023	CHECKED - MCB/AMC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 068-2508
SHEET 9 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	120a
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 10005-2

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Date 10/28/10

ROUTE FAP 325 DESCRIPTION Culvert carrying IL 16 over Trib to S. Fork of Sangamon River LOGGED BY M. Tappan

SECTION 18(B-2, B-3) LOCATION SW 1/4, SEC. 7, TWP. 10N, RNG. 1W, 3 PM

COUNTY Montgomery DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 068-2508
Station 142+95

BORING NO. 1-SE
Station 142+66
Offset 7.0ft LT
Ground Surface Elev. 669.0 ft

Surface Water Elev. 660.5 ft
Stream Bed Elev. 659.4 ft

Groundwater Elev.:
▽ First Encounter 655.0 ft
▼ Upon Completion Washed ft
▼ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Black to Brown and Gray Moist SILTY CLAY (Fill)			
	1		
-5	2 2	1.1	25
		B	
663.50			
Brown and Gray Moist LOAM to CLAY LOAM	0		
	1 2	0.7 B	18
	0		
-10	1 1	0.6 B	21
658.00			
Brown and Olive Gray Moist CLAY LOAM (Till)	0		
	1 2	0.9 B	21
656.00			
Gray Wet Med SANDY GRAVEL FREE WATER ▽	0		
	2		
-15	3		
	0		
	2		
Gray Fine SANDY GRAVEL	3		
	2		
Gray Med to Coarse SAND w/ some Pea Gravel	7		
-20	6		
Washed			
Gray Wet Med SANDY GRAVEL FREE WATER *(continued)*	2		
Gray Coarse SANDY GRAVEL Washed	6 6		
	7		
-25	6 9		
641.50			
Gray Moist CLAY LOAM (Till) Washed			
	7		
	21 43	9.7 S-12	9
-30			
	7		
	21 39	10.0 S-12	9
634.00			
Boring Complete			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name:S:\SOILS\JOINT FILES\MONTGOMERY\068-0508 IL 16 OVER TRIB TO SOUTH FORK OF SANGAMON RIVER.GPJ Data Template:DISTEMPLT.GDT Date Printed:3/21/11
Latitude 39D 15' 05"N Longitude 89D 14' 58"W Datum NAD83 Join Number 72984

Illinois Department of Transportation
Division of Highways
District 6

SOIL BORING LOG

Date 10/28/10

ROUTE FAP 325 DESCRIPTION Culvert carrying IL 16 over Trib to S. Fork of Sangamon River LOGGED BY M. Tappan

SECTION 18(B-2, B-3) LOCATION SW 1/4, SEC. 7, TWP. 10N, RNG. 1W, 3 PM

COUNTY Montgomery DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 068-2508
Station 142+95

BORING NO. 2-NW
Station 143+25
Offset 6.0ft RT
Ground Surface Elev. 669.0 ft

Surface Water Elev. 660.5 ft
Stream Bed Elev. 659.4 ft

Groundwater Elev.:
▽ First Encounter 655.0 ft
▼ Upon Completion Washed ft
▼ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Dk Gray Moist SILTY CLAY (Fill)			
	0		
	1	0.9	20
-5	2	B	
663.50			
Dk Gray Moist SILTY CLAY	0		
	0	0.6	27
	2	B	
661.00			
Brown and Gray Moist LOAM to CLAY LOAM	0		
	1	0.9	22
-10	2	B	
	0		
	1	0.5	20
Lt Blue Gray Moist LOAM TO CLAY LOAM	1	B	
655.50			
Gray Fine to Med SAND ▽ FREE WATER	0		
	1		
-15	3		
	0		
	2		
Gray Med Sandy Gravel	4		
	6		
Gray Fine to Med Sand WASHED	8		
-20	7		
Gray Fine to Med SAND FREE WATER *(continued)*	1		
Gray Med Sandy Gravel WASHED	4 9		
	25		
Gray V Fine Sand WASHED	21		
-25	23		
641.00			
Gray Moist CLAY LOAM (Till)	8		
	15 16	7.2 S-14	9
-30			
	16		
	21 45	9.6 S-13	9
634.00			
Boring Complete			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name:S:\SOILS\JOINT FILES\MONTGOMERY\068-0508 IL 16 OVER TRIB TO SOUTH FORK OF SANGAMON RIVER.GPJ Data Template:DISTEMPLT.GDT Date Printed:3/21/11
Latitude 39D 15' 05"N Longitude 89D 14' 58"W Datum NAD83 Join Number 72984

MODEL: Default
FILE NAME: \\ROCHELLE\Data\Drawings\Microstation\2012\718B\CADData SN 068-0016\CADsheets\0680508-72984-010-borings.dgn

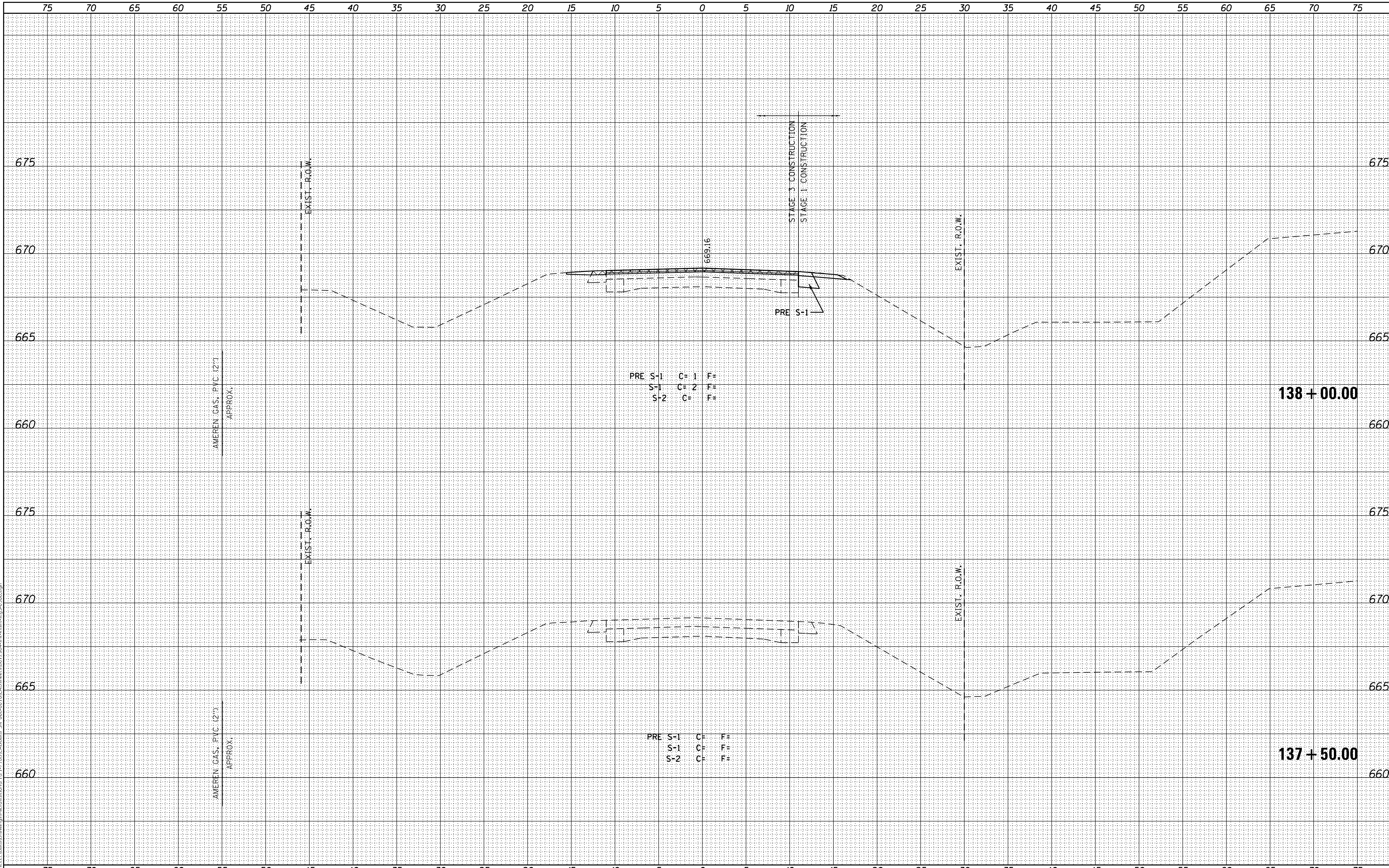
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mgopalraj	DESIGNED - AMC	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - MMY	REVISED -	
PLOT DATE = 4/18/2023	CHECKED - MCB/AMC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 068-2508
SHEET 10 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	MONTGOMERY	142	121
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		



FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS IL 16 SN 068–2508
		DRAWN - CFC	REVISED -		
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -		
	PLOT DATE = 5/9/2023	DATE -	REVISED -		SCALE: SHEET 1 OF 13 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR	*	142	122
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN

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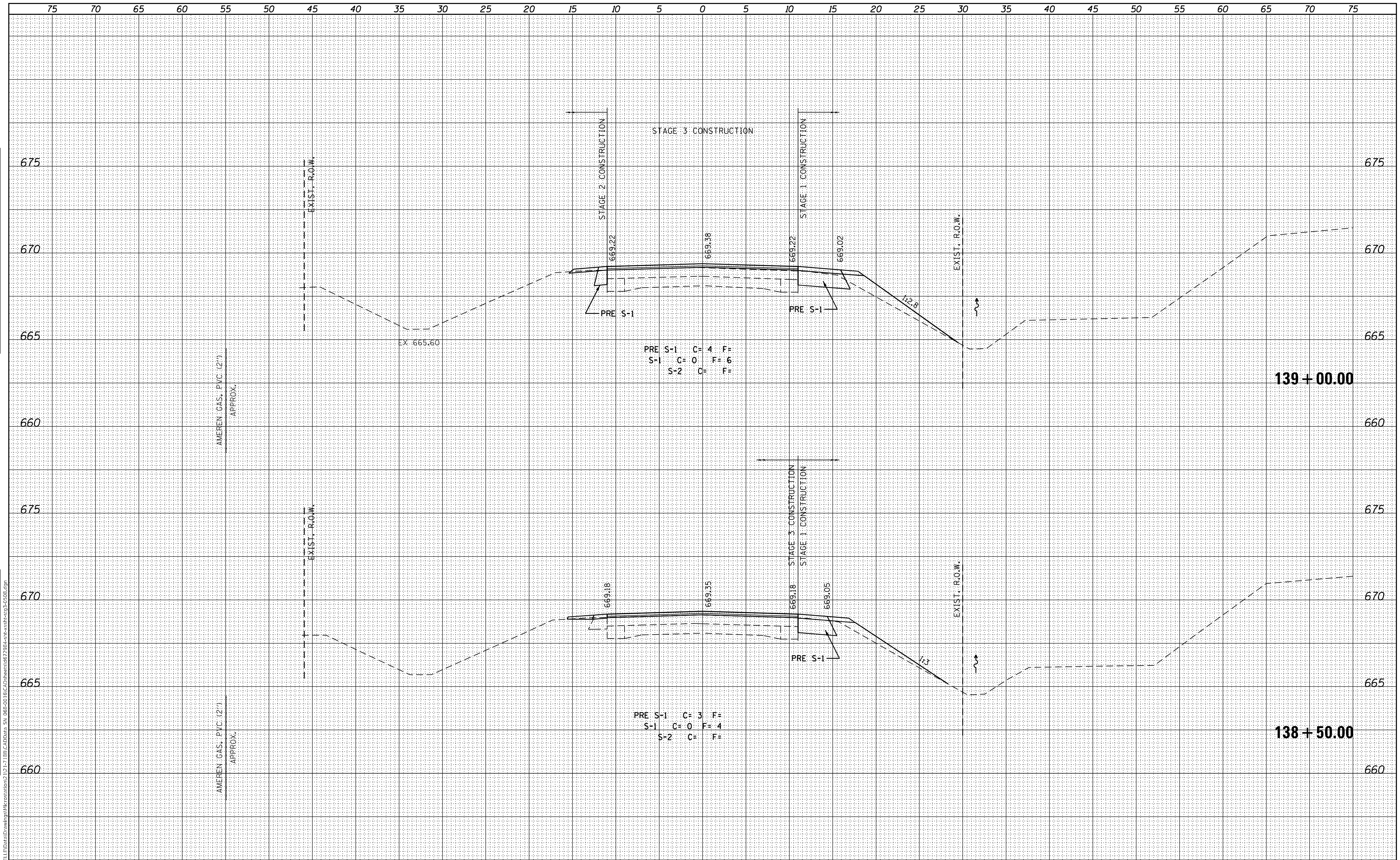
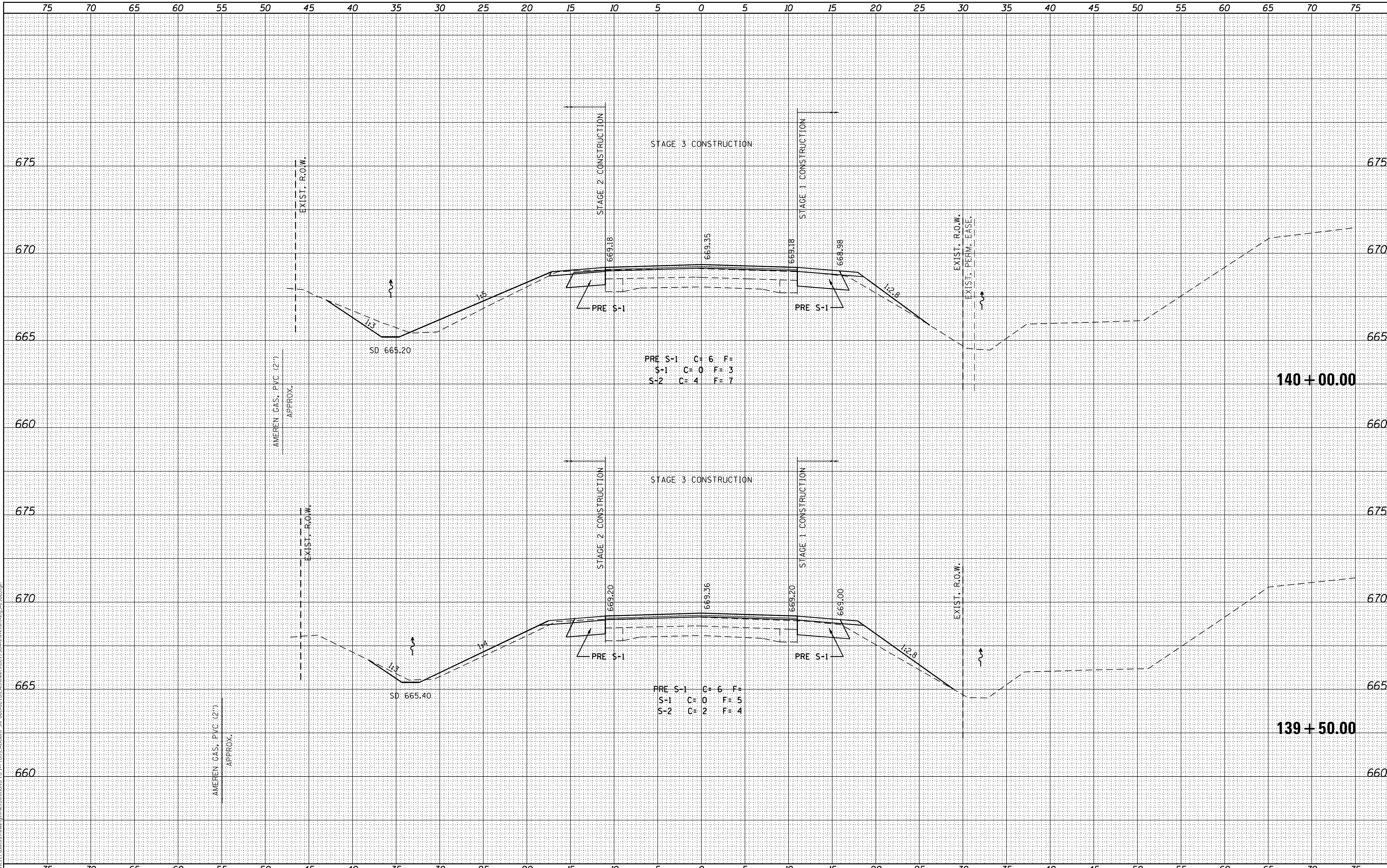


FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS IL 16 SN 068–2508
		DRAWN - CFC	REVISED -		
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -		
	PLOT DATE = 5/9/2023	DATE -	REVISED -		SCALE: SHEET 2 OF 13 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	123
CONTRACT NO. 72984				
ILLINOIS FED. AID PROJECT				

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN



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

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

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/9/2023	DATE -	REVISED -	

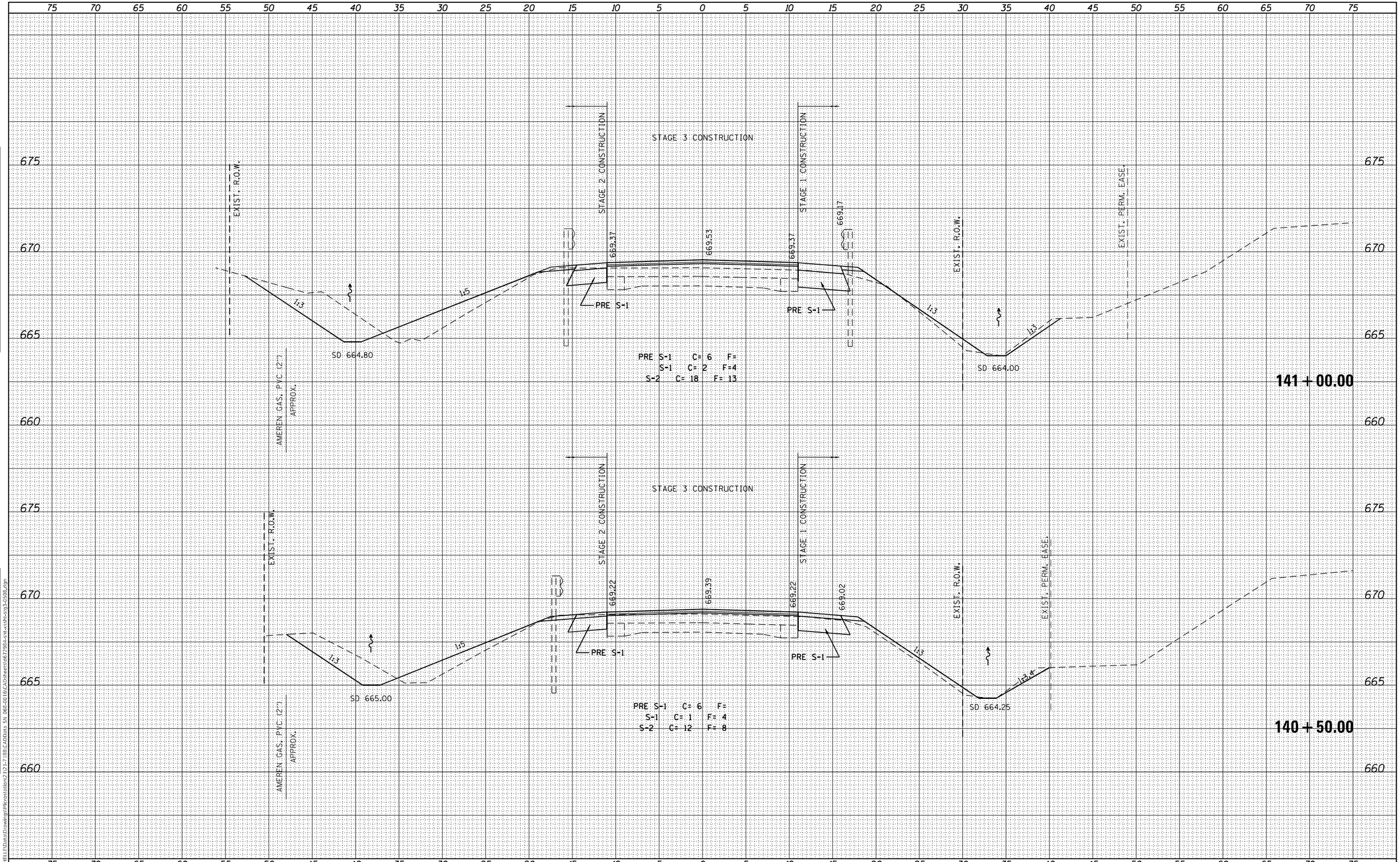
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068–2508

SCALE: | SHEET 3 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	124
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



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SURVEYED		
PLOTTED		
NOTE BOOK		
TEMPLATE		
AREAS		
NO.	AREAS CHECKED	

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

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

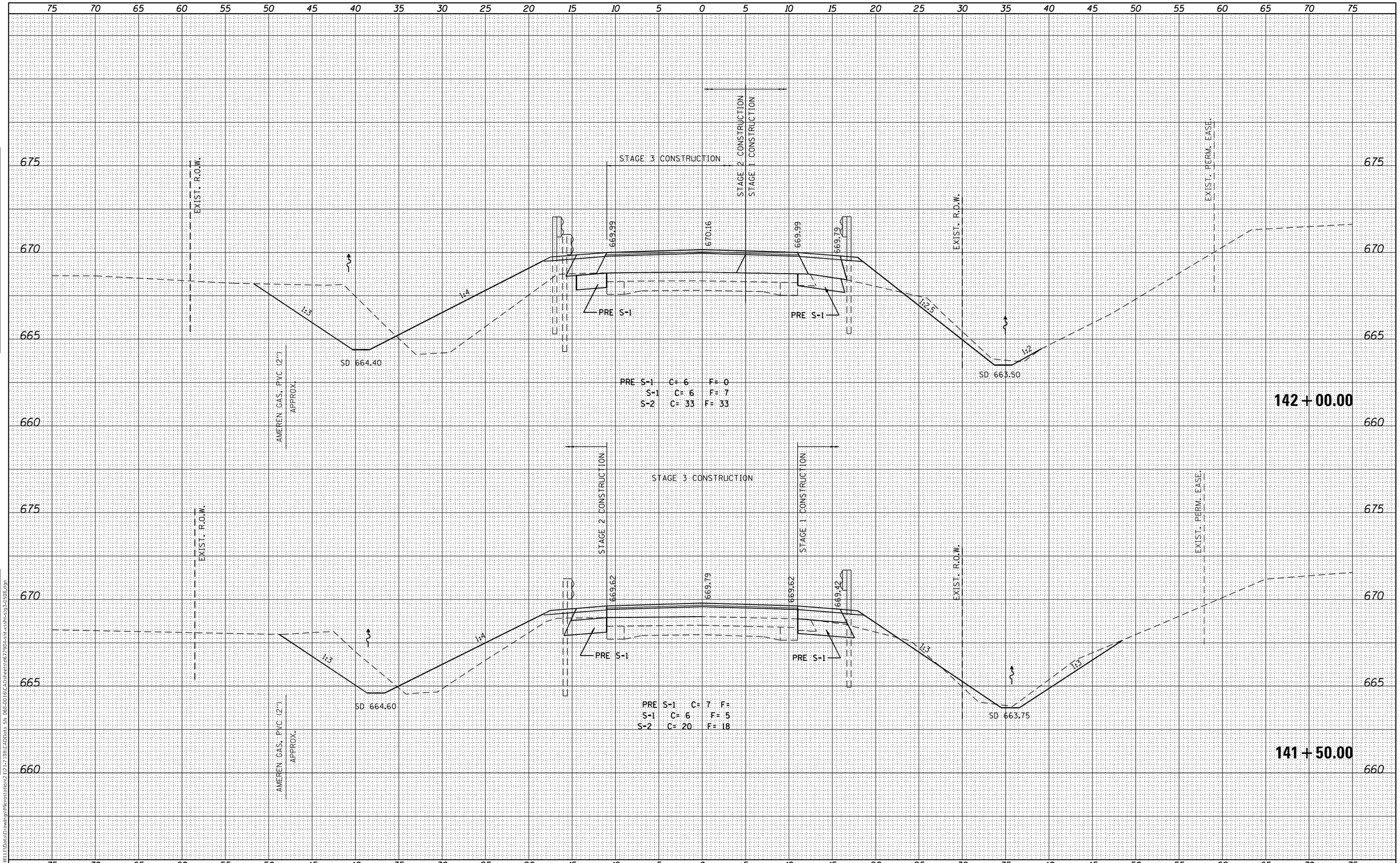
SCALE: | SHEET 4 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	125

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN



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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
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PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

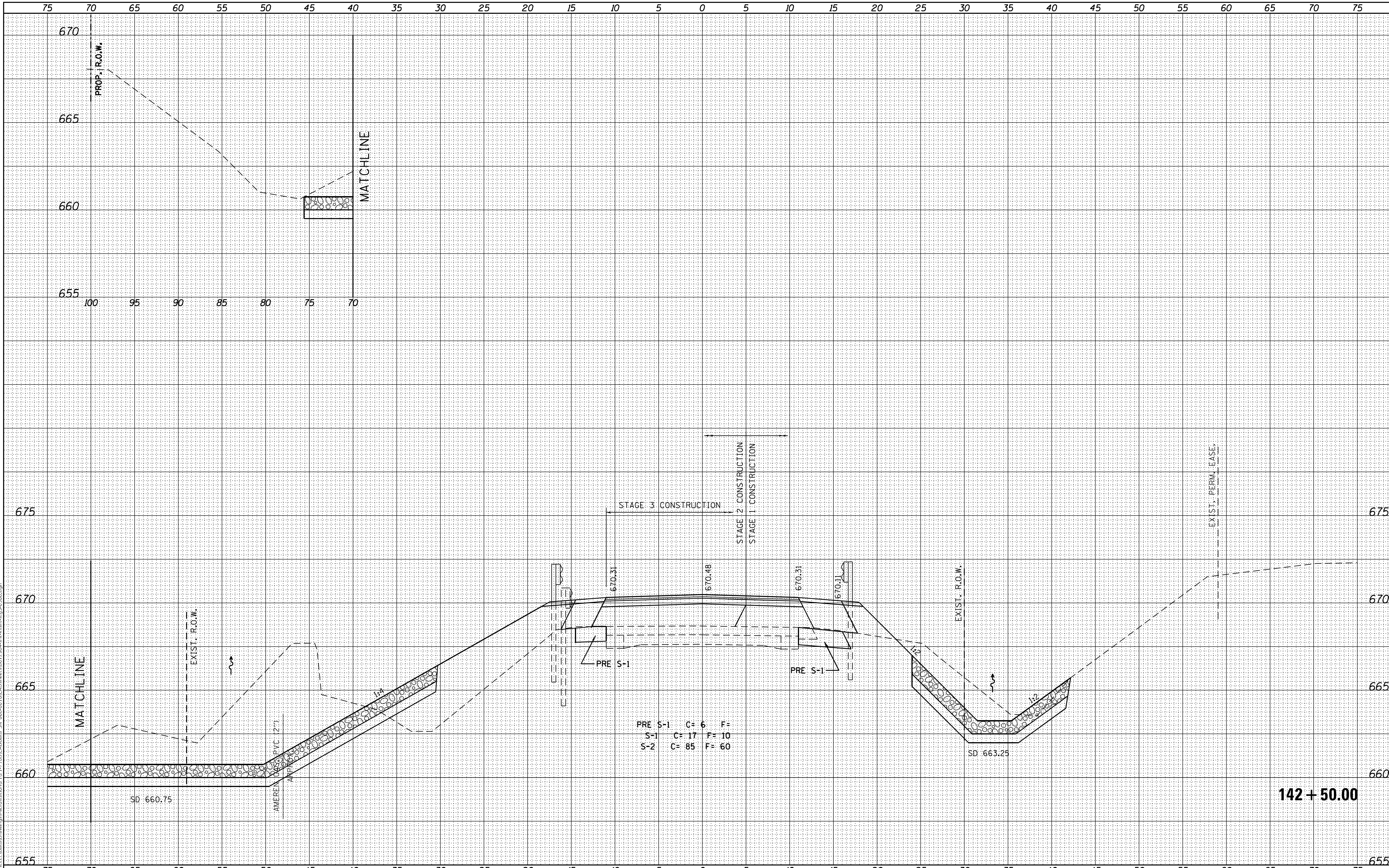
SCALE: | SHEET 5 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	126

CONTRACT NO. 72984

ILLINOIS | FED. AID PROJECT

* MONTGOMERY & CHRISTIAN



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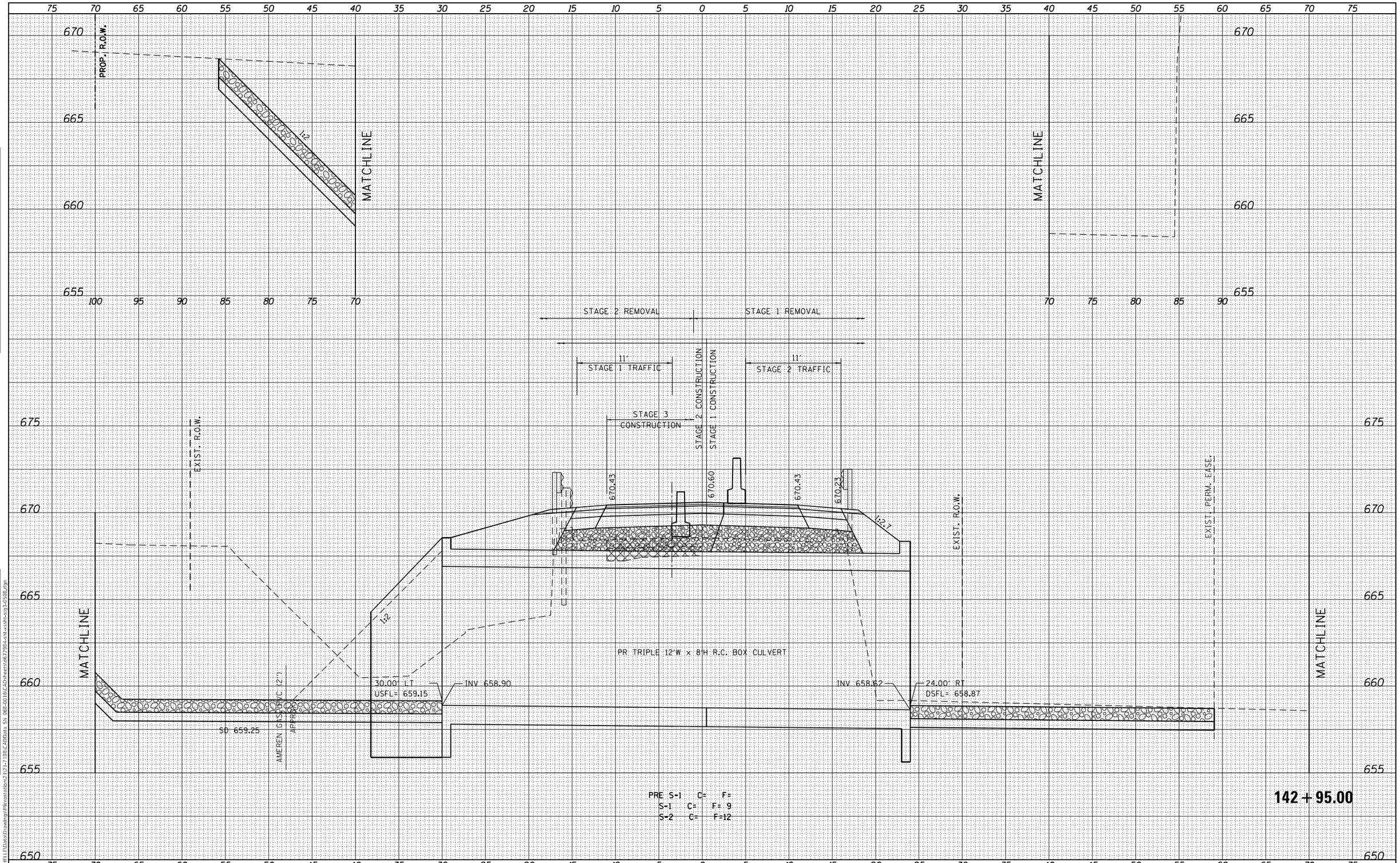
FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS IL 16 SN 068–2508
		DRAWN - CFC	REVISED -		
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -		
	PLOT DATE = 5/9/2023	DATE -	REVISED -		SCALE: SHEET 6 OF 13 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	127
CONTRACT NO. 72984				
ILLINOIS FED. AID PROJECT				

FEHR GRAHAM PROJECT NUMBER: 10005-2

* MONTGOMERY & CHRISTIAN



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PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS	
AREAS CHECKED	
NO.	

BY	DATE

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

BY	DATE

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -		REVISED -
	DRAWN - CFC		REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB		REVISED -
PLOT DATE = 5/16/2023	DATE -		REVISED -

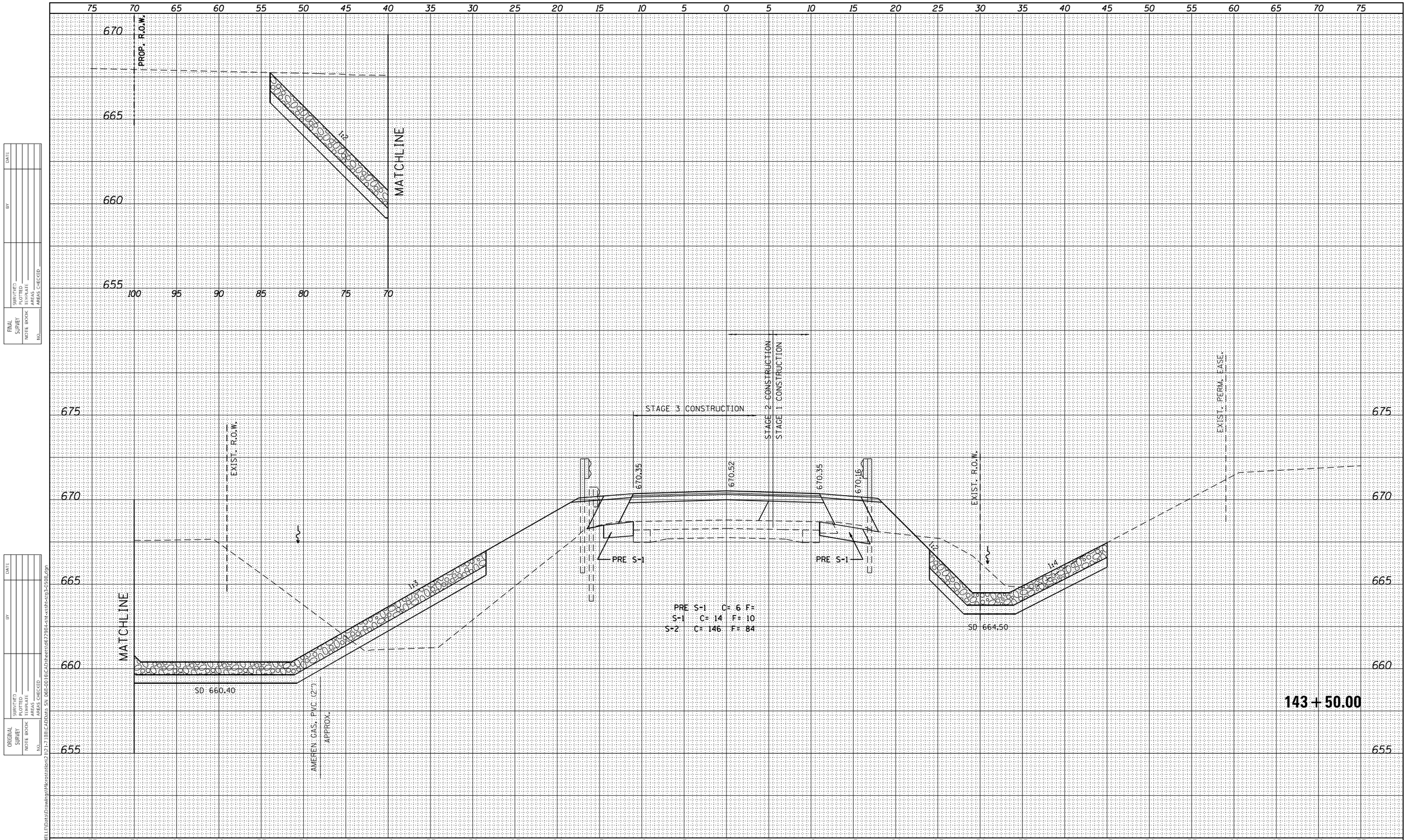
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 7 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	128
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



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NO.	

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	
NOTE BOOK	
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	BY	DATE
SURVEYED		
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

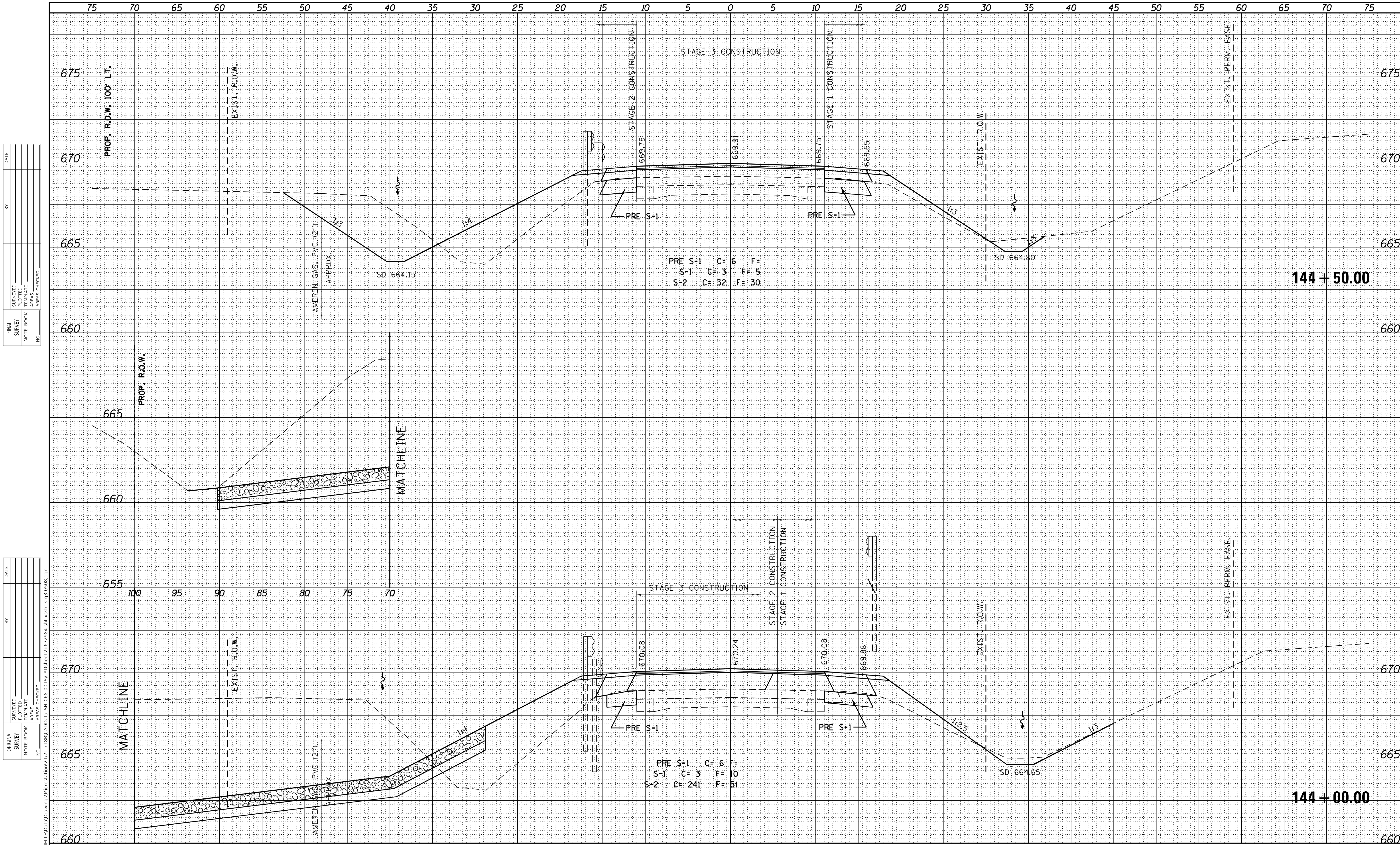
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 8 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	129
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -	
	DRAWN - CFC	REVISED -	
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -	
PLOT DATE = 5/9/2023	DATE -	REVISED -	

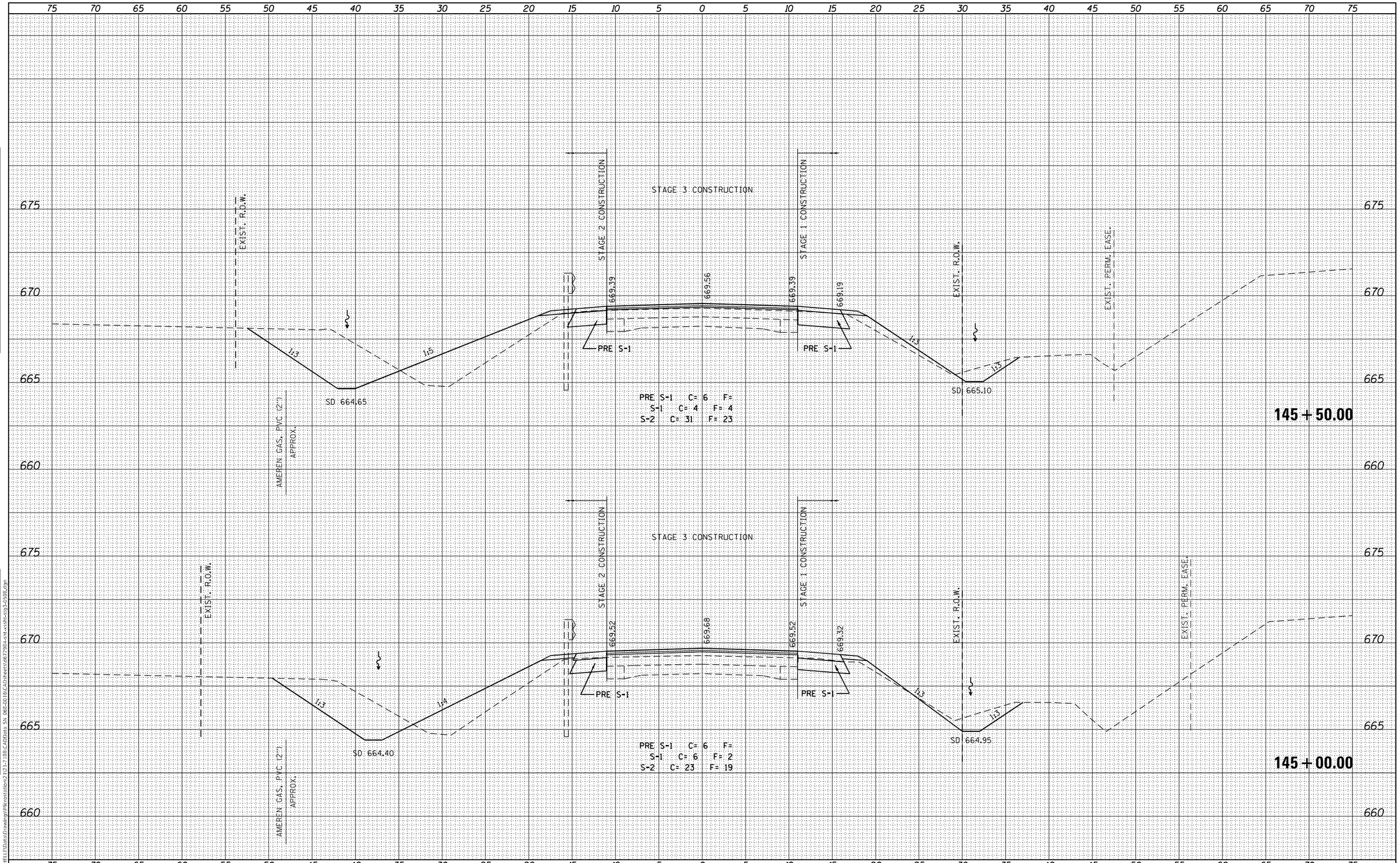
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068–2508

SCALE: SHEET 9 OF 13 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	130

CONTRACT NO. 72984
ILLINOIS FED. AID PROJECT
* MONTGOMERY & CHRISTIAN



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

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

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

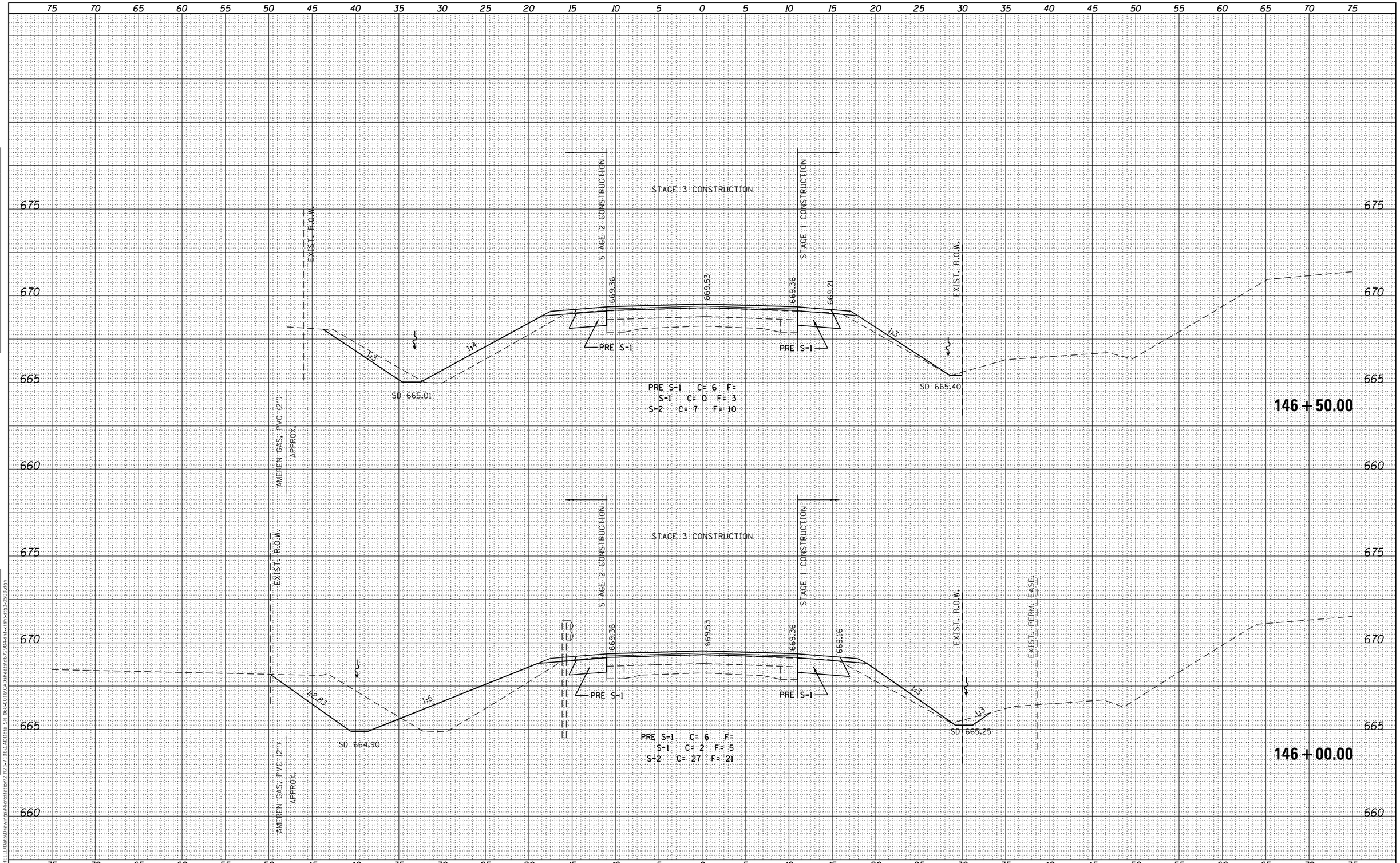
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 10 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	131
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN



FINAL SURVEY

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

ORIGINAL SURVEY

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

MODFI: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

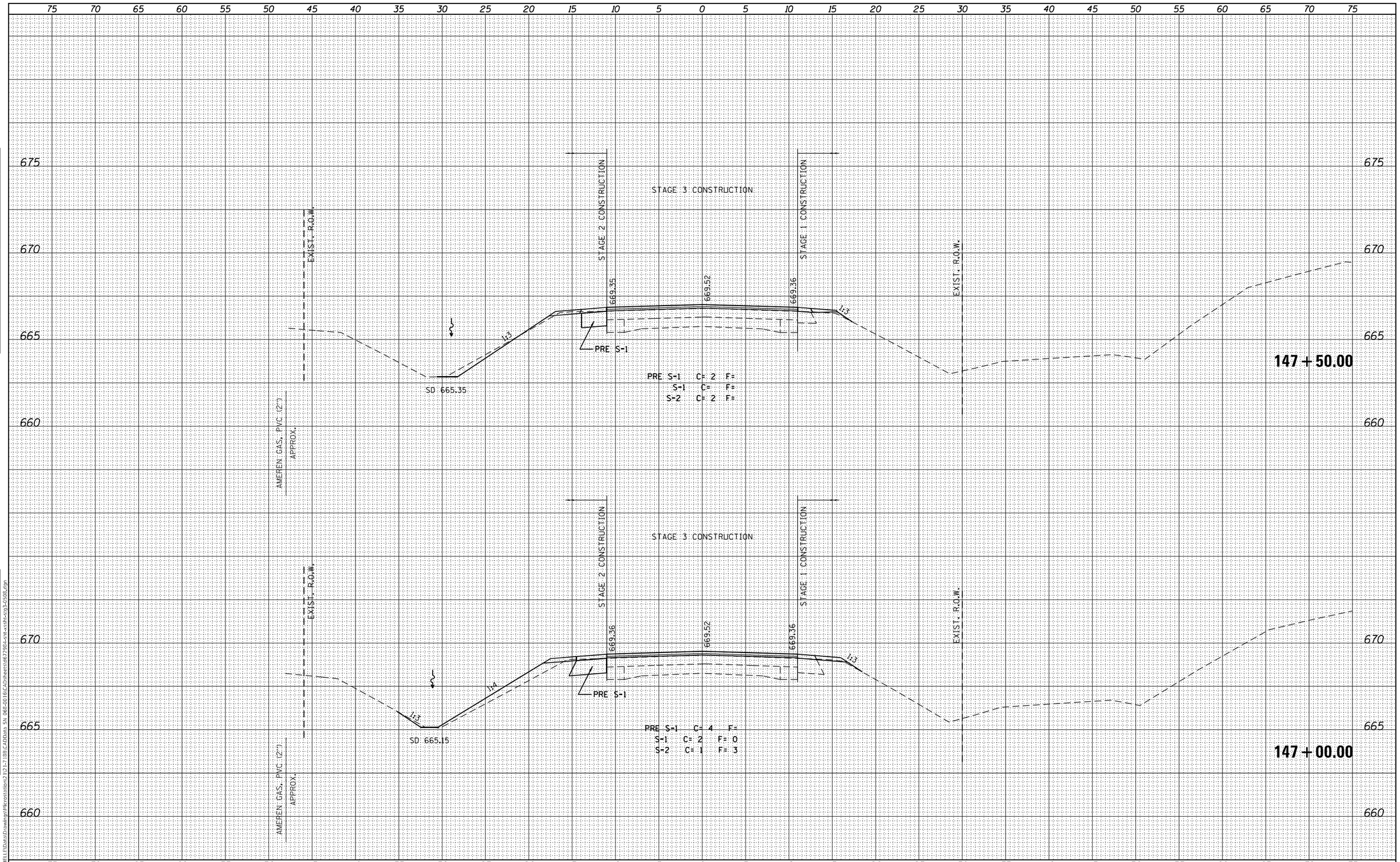
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 11 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	132
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



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

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

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2

USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 5/9/2023	DATE -	REVISED -

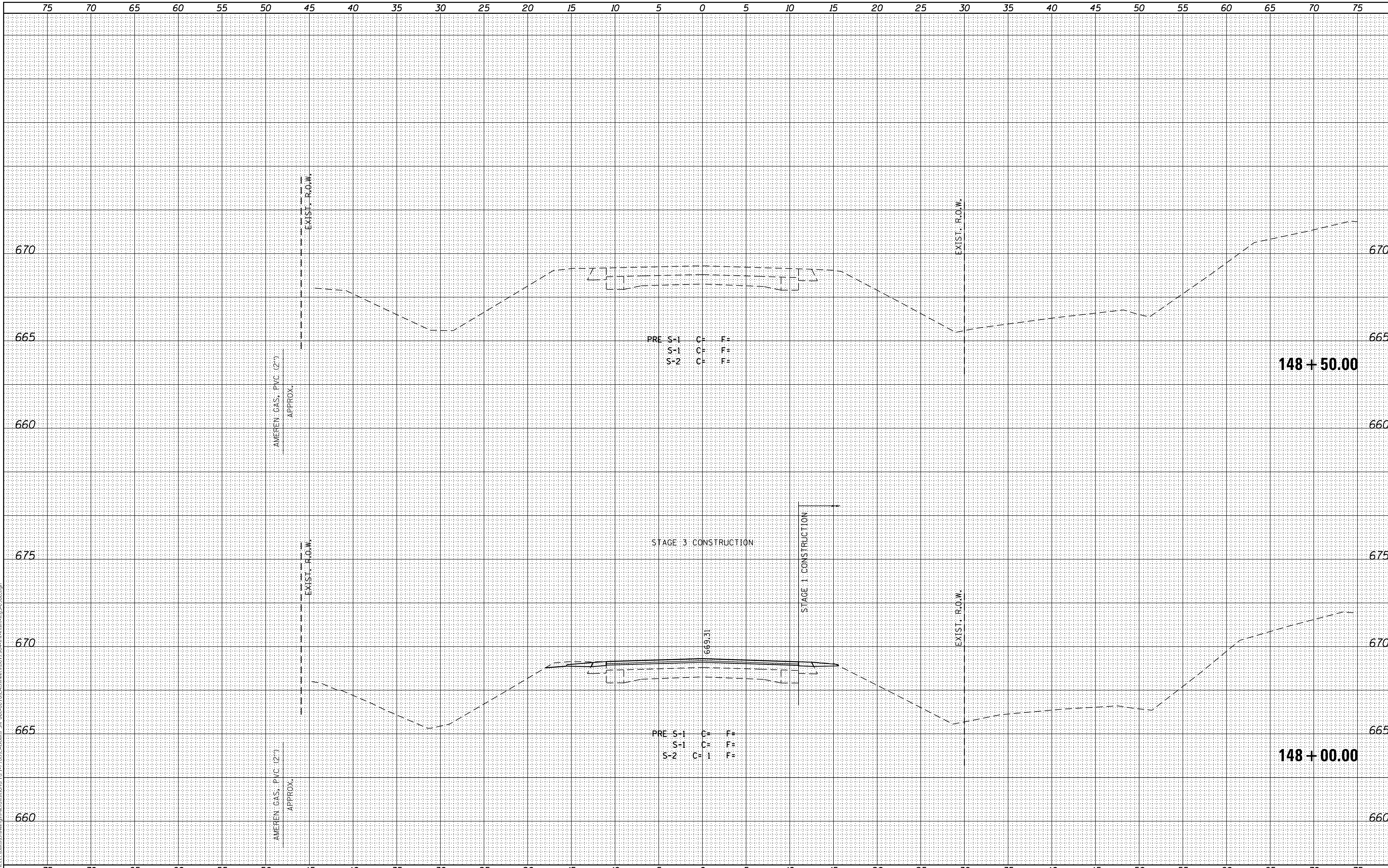
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068-2508

SCALE: | SHEET 12 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	133
		CONTRACT NO. 72984		
		ILLINOIS	FED. AID PROJECT	

* MONTGOMERY & CHRISTIAN



FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = mescatel	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
	PLOT DATE = 5/9/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 16 SN 068–2508

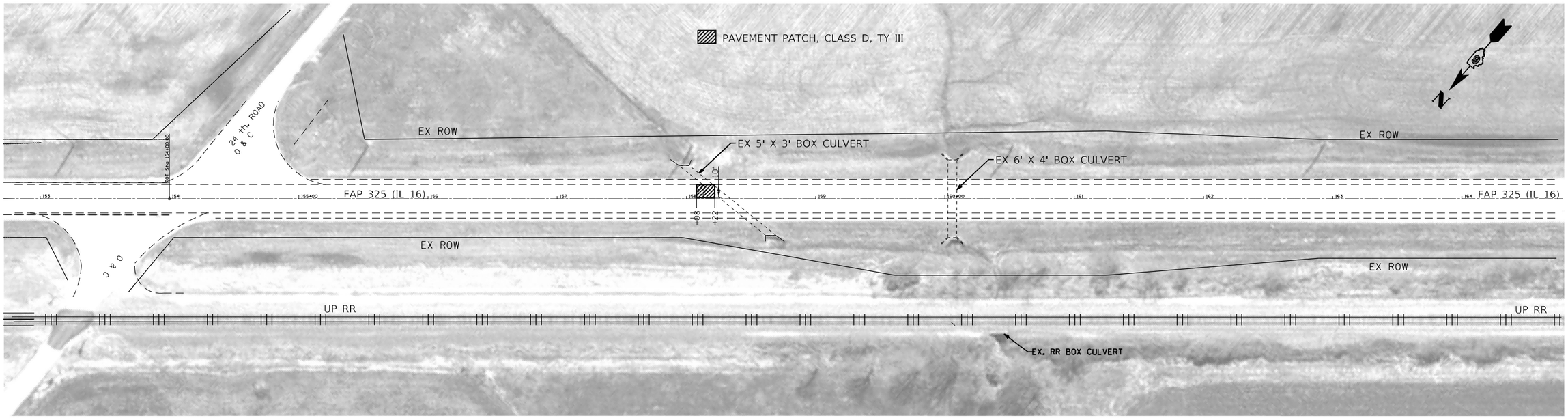
SCALE: SHEET 13 OF 13 SHEETS STA. TO STA.

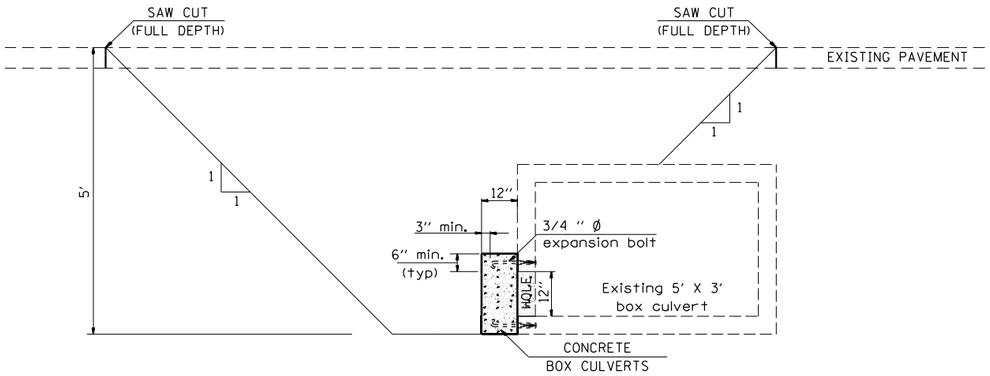
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	134

CONTRACT NO. 72984

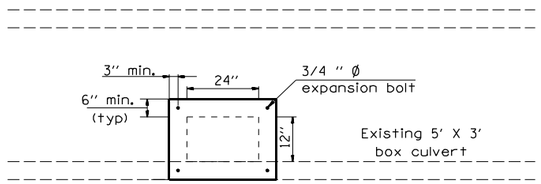
ILLINOIS FED. AID PROJECT

* MONTGOMERY & CHRISTIAN

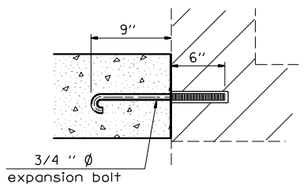




SECTION VIEW



ELEVATION VIEW



Expansion Bolt Detail

Notes:

1. Expansion bolts shall consist of self drilling expansion shields and ¾" Ø hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete. Minimum Certified Proof Load - 4,080 lbs.
2. Use minimum of 1 (one) expansion bolt at each corner.

NOTES:

1. THE EXISTING CULVERT HAS A HOLE IN THE NORTH FACE APPROXIMATELY 26 FEET FROM THE EAST HEADWALL.
2. TRAFFIC SHALL BE CONTROLLED WITH HIGHWAY STANDARD 701201.
3. THE CONTRACTOR SHALL SAW CUT THE PAVEMENT FULL DEPTH AS SHOWN ON THE DETAIL.
4. PAVEMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH SECTION 440 OF THE STANDARD SPECIFICATIONS.
5. THE EDGES OF THE HOLE SHALL BE SAW CUT TO SQUARE OFF THE OPENING PRIOR TO PLUGGING THE HOLE.
6. THE CONTRACTOR SHALL INSTALL EXPANSION BOLTS AS SHOWN.
7. CONCRETE BOX CULVERTS SHALL BE PLACED AS SHOWN TO SEAL OFF THE HOLE IN THE CULVERT.
8. CONTROLLED LOW-STRENGTH MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 1019 OF THE STANDARD SPECIFICATIONS.
9. THE CONTRACTOR SHALL PLACE PAVEMENT PATCHING, TYPE III IN ACCORDANCE WITH SECTION 442 OF THE STANDARD SPECIFICATIONS.

USER NAME = Christopher.Siefert	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 80.000000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

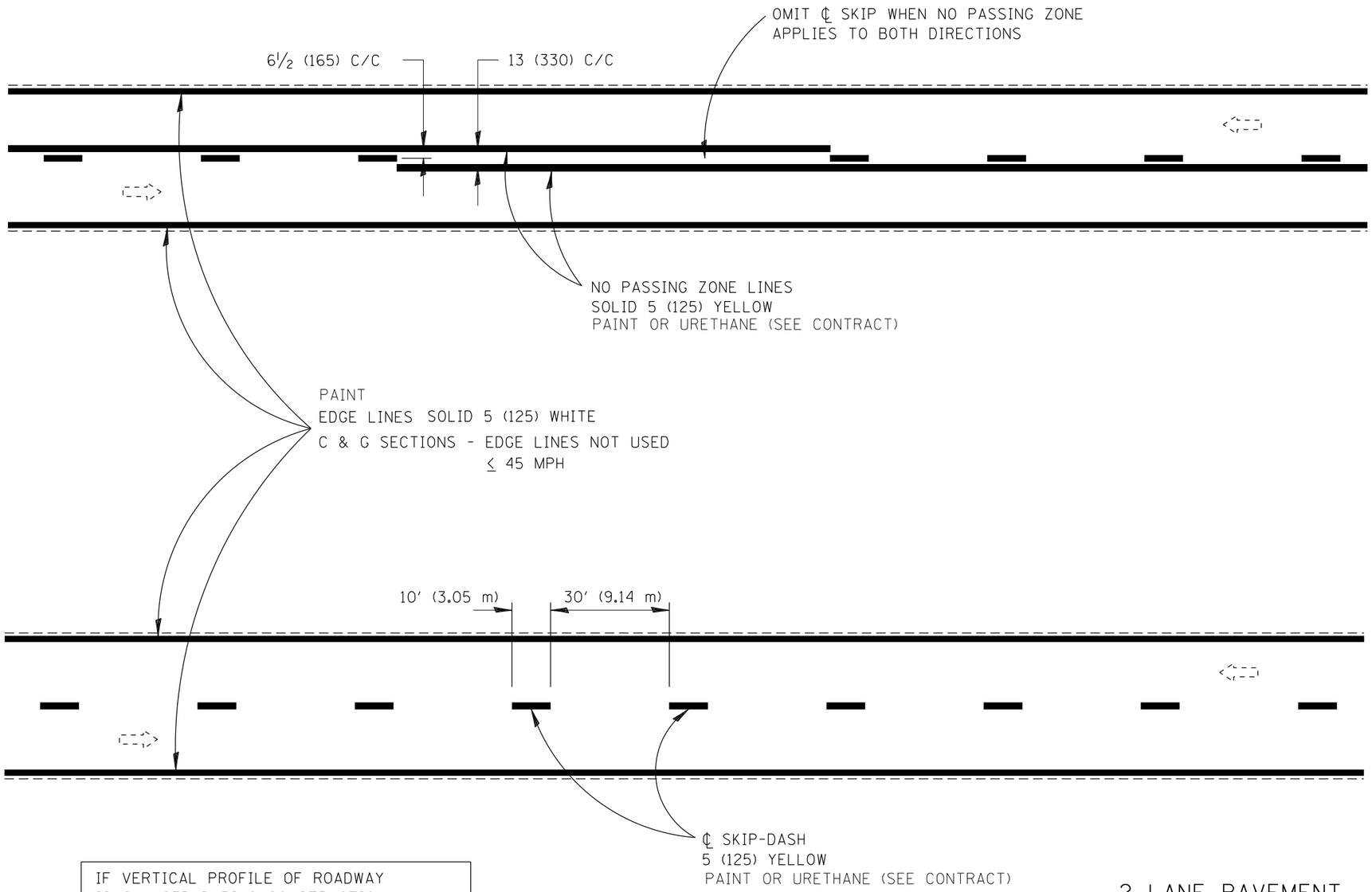
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT REPAIR
SN 068-7076

SCALE: 1"-80' | SHEET 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	135
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN



IF VERTICAL PROFILE OF ROADWAY IS CHANGED DURING CONSTRUCTION, "NO PASSING ZONES" ARE TO BE FIELD VERIFIED BY THE BUREAU OF OPERATIONS. THE RESIDENT ENGINEER SHALL NOTIFY THE BUREAU OF OPERATIONS 14 DAYS PRIOR TO PERMANENT PAVEMENT MARKINGS.

2 LANE PAVEMENT

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

USER NAME = Christopher.Siefert	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 80.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

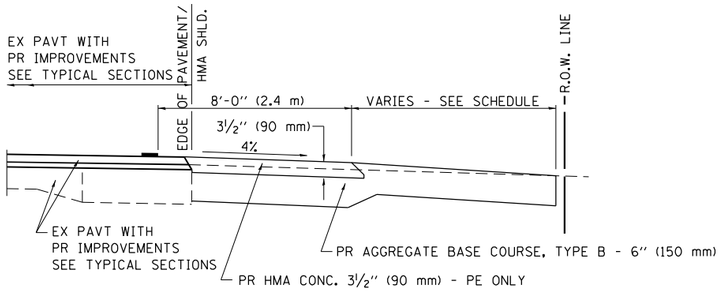
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
PAVEMENT MARKING

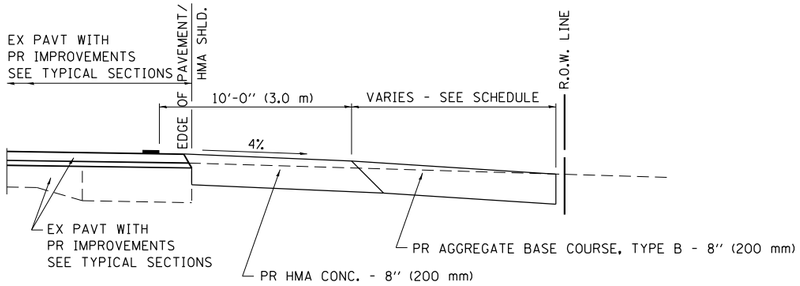
SCALE: | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	136
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

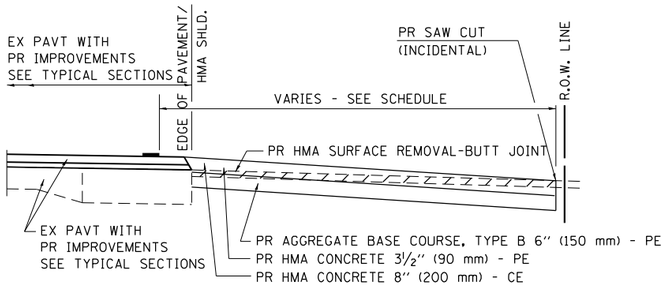
* MONTGOMERY & CHRISTIAN



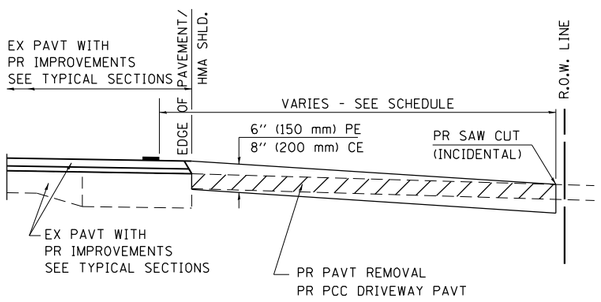
SECTION A-A FOR EX EARTH/AGGREGATE FE & PE



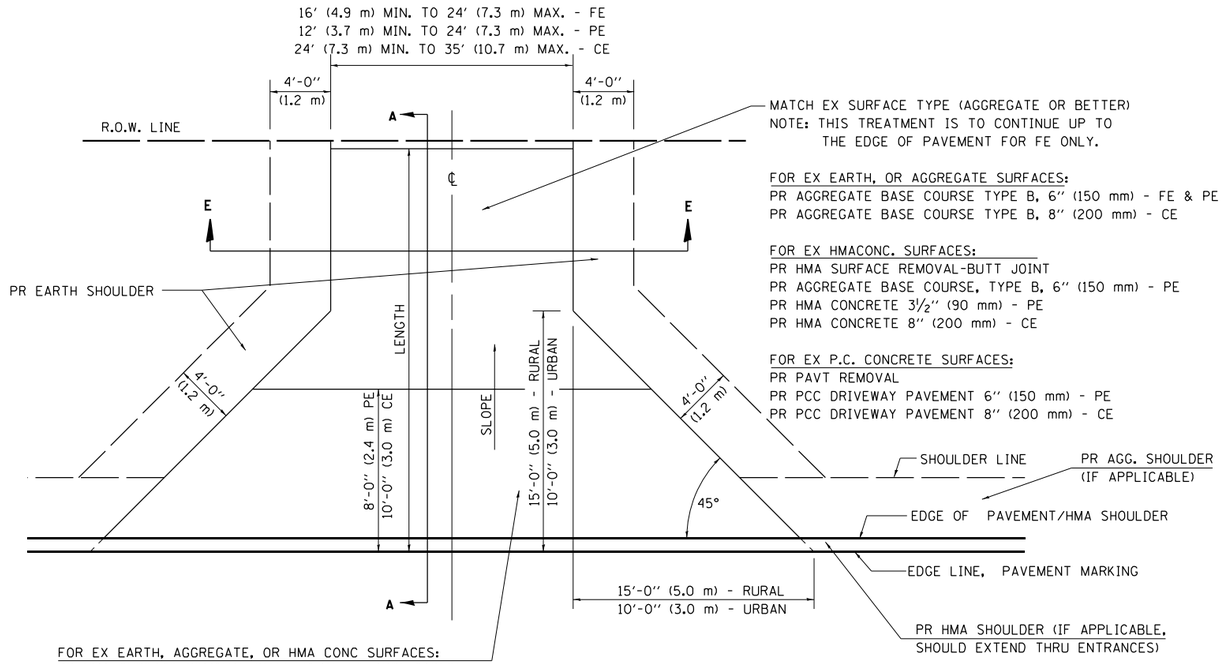
SECTION A-A FOR EX EARTH/AGGREGATE CE



SECTION A-A FOR EX HMA PE & CE



SECTION A-A FOR EX P.C. CONC. PE & CE



FOR EX EARTH, AGGREGATE, OR HMA CONC SURFACES:
PR HMA SURFACE REMOVAL-BUTT JOINT (IF APPLICABLE)
PR AGGREGATE BASE COURSE TYPE B 6" (150 mm) - FE
PR AGGREGATE BASE COURSE TYPE B, 6" (150 mm) &
PR HMA CONCRETE 3½" (90 mm) - PE
PR HMA CONCRETE 8" (200 mm) - CE

FOR P.C. CONCRETE SURFACES:
PR PAVT REMOVAL
PR PCC DRIVEWAY PAVT 6" (150 mm) - PE
PR PCC DRIVEWAY PAVT 8" (200 mm) - CE

GENERAL NOTES:

THE RESIDENT ENGINEER WILL DETERMINE THE EXACT TYPE OF IMPROVEMENT TO BE COMPLETED FOR ALL ENTRANCES, SIDEROADS AND MAILBOX TURNOUTS ON THIS PROJECT.

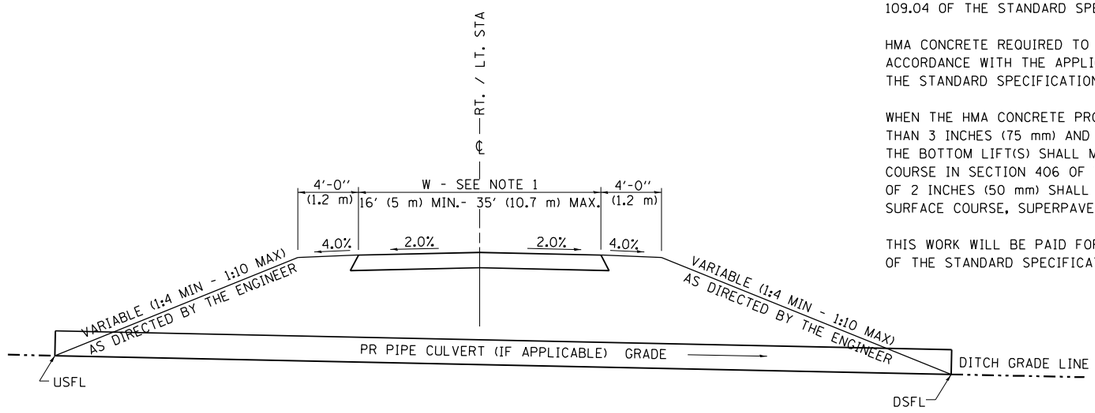
THE PLAN DETAILS AND SCHEDULES SHOULD BE USED AS A GUIDE FOR THE ENGINEER TO IMPLEMENT THE FINAL DESIGN. THE ENGINEER MAY DECIDE TO SALVAGE PORTIONS OF THE EXISTING ENTRANCE PAVEMENT STRUCTURE; THEREFORE, REDUCING PAY ITEM QUANTITIES. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR THIS REDUCTION IN QUANTITIES.

ANY WORK THE ENGINEER REQUIRES WHICH IS NOT COVERED BY A PAY ITEM CONTAINED IN THE PLANS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

HMA CONCRETE REQUIRED TO CONSTRUCT THE ENTRANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 406 AND 408 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

WHEN THE HMA CONCRETE PROPOSED FOR THE IMPROVEMENT IS THICKER THAN 3 INCHES (75 mm) AND REQUIRE PLACEMENT IN MORE THAN ONE LIFT. THE BOTTOM LIFT(S) SHALL MEET THE REQUIREMENTS OF HMA BASE COURSE IN SECTION 406 OF THE STANDARD SPECIFICATIONS AND THE TOP LIFT OF 2 INCHES (50 mm) SHALL MEET THE REQUIREMENTS OF HMA CONCRETE SURFACE COURSE, SUPERPAVE.

THIS WORK WILL BE PAID FOR IN ACCORDANCE WITH SECTIONS 351, 358, 408, 423 AND 440 OF THE STANDARD SPECIFICATIONS.



SECTION E - E ENTRANCE TYPICAL SECTION

NOTE 1: WIDTH OF ENTRANCE MAY BE INCREASED AT THE PIPE CULVERT DUE TO THE DITCHLINE BEING LOCATED IN THE ENTRANCE FLARE AREA.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = Christopher.Siefert	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

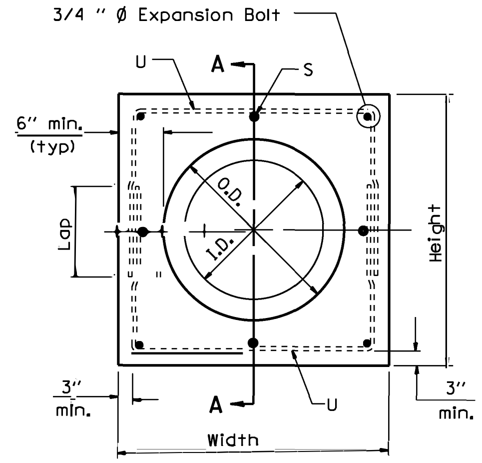
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
ENTRANCE

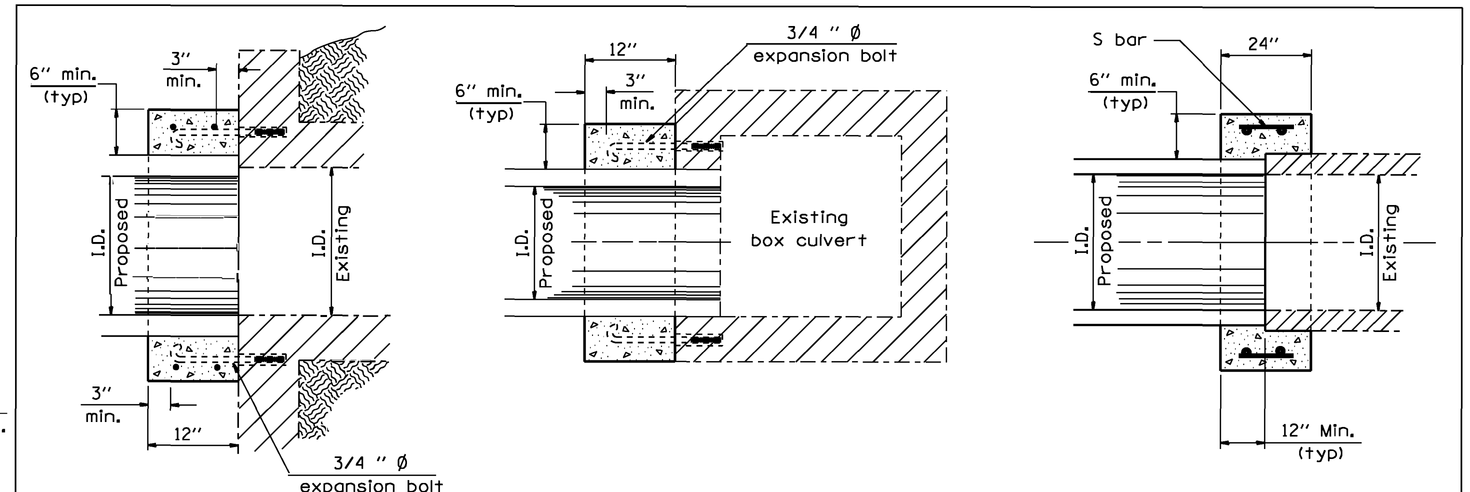
SCALE: | SHEET 2 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	137
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN



PIPE CULVERT EXTENSION COLLAR

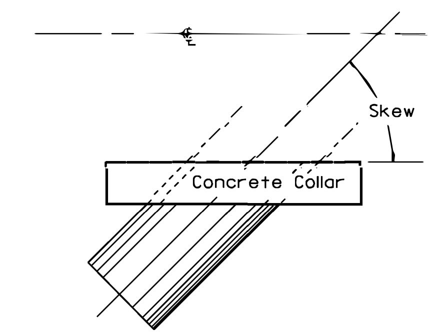


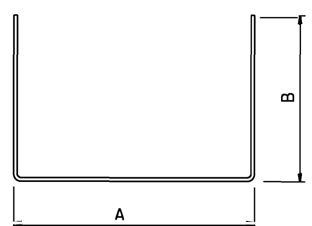
Section Type A
(Box end extension)

Section Type B
(Pipe in side extension)

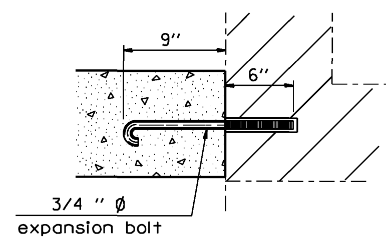
Section Type C
(Pipe end to pipe end extension
No expansion bolts required)

Section A - A





#4 U - bar



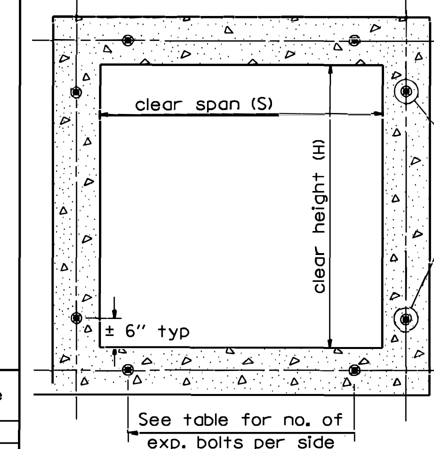
Expansion Bolt Detail

Notes:

1. Expansion bolts shall consist of self drilling expansion shields and ¾" Ø hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete. Minimum Certified Proof Load - 4,080 lbs.

2. Use minimum of 1 (one) expansion bolt at each corner.

BOX CULVERT POURED IN PLACE EXTENSION



Section Thru Barrel

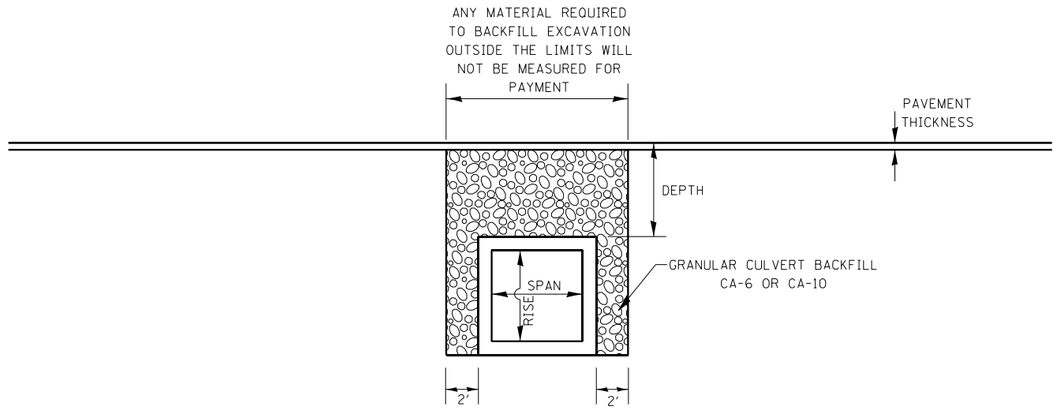
EXPANSION BOLTS REQUIRED
FOR CULVERT EXTENSIONS

H or S	No. Expansion Bolts Req'd. Per Side			
	Extension ≦ 15ft		Extension > 15ft	
	No.	Spacing	No.	Spacing
24"	*	*	*	*
30"	2	18"	2	18"
36"	2	24"	2	24"
48"	3	18"	3	18"
60"	4	16"	3	24"
72"	5	15"	4	20"
84"	5	18"	4	24"
96"	6	17"	5	21"
108"	6	19"	5	24"
120"	7	18"	6	21"
132"	8	17"	6	24"
144"	8	19"	7	22"

Note: Number of expansion bolts in table based on non-skewed culverts.

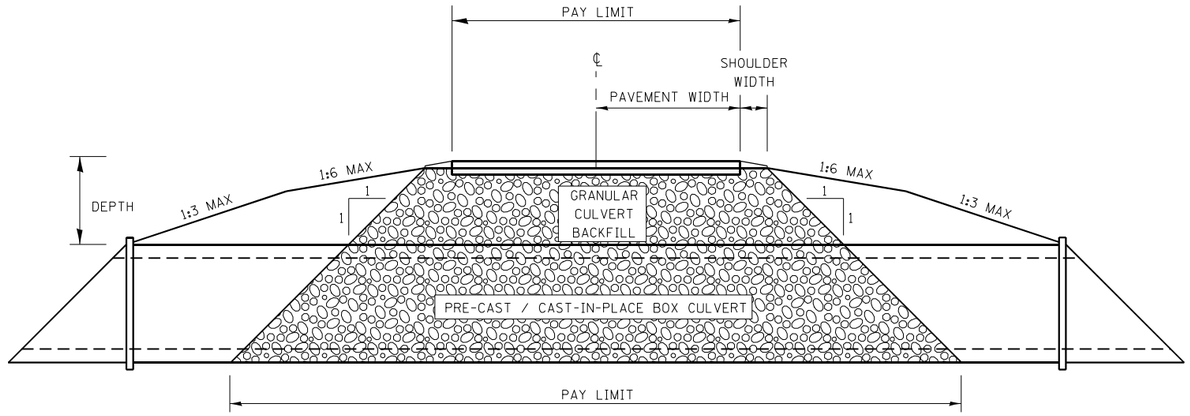
* Use minimum 1 (one) expansion bolt in each corner.

Station	Section Type	Skew	Existing Culvert	Proposed Culvert		Collar		Reinforcement Bars										Expansion Bolts 3/4 "	Class SI Concrete Collar
								S bar			U bar						lb		
			Size	I.D.	O.D.	Height	Width	No.	Size	Length	No.	Size	A	B	Lap	Length		Each	yd^3
Lt Sta 363+41.00	A	0°	8'-4"	48"		5'-8"	9'-6"				4	#4	9'-0"	3'-10"	2	2'-6"	45	18	2.9
																Total	45	18	2.9



- DEPTH OF FILL ≥ 2 FT & ≤ 8 FT
- DEPTH OF FILL ≤ SPAN OF LARGEST BOX CONFIGURATION

PROFILE GRANULAR BACKFILL DETAIL FOR EXISTING ALIGNMENTS & CONSTRUCTION



NOTE:
SEE SHEET 24 FOR ADDITIONAL DETAILS.

CROSS SECTION GRANULAR BACKFILL DETAIL FOR EXISTING ALIGNMENTS & CONSTRUCTION

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = Christopher.Siefert	DESIGNED -	REVISED -
	DRAWN - CFC	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

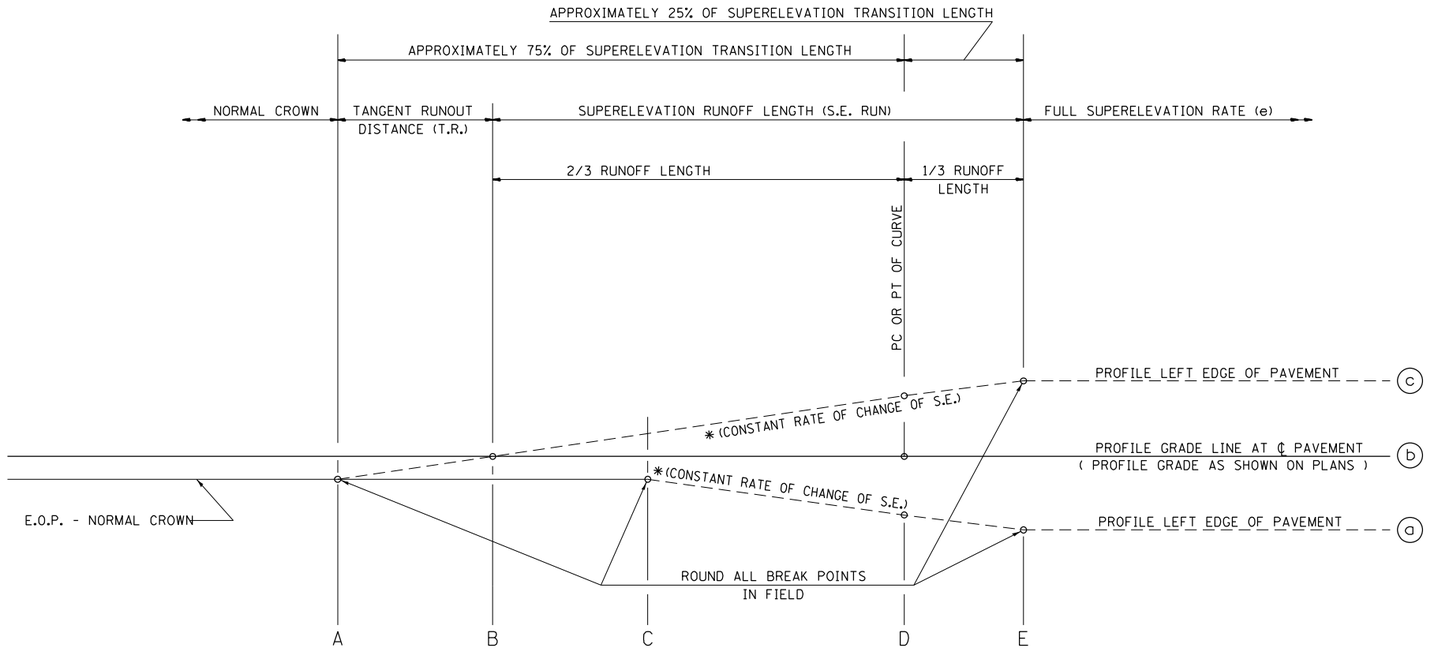
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
GRANULAR BACKFILL

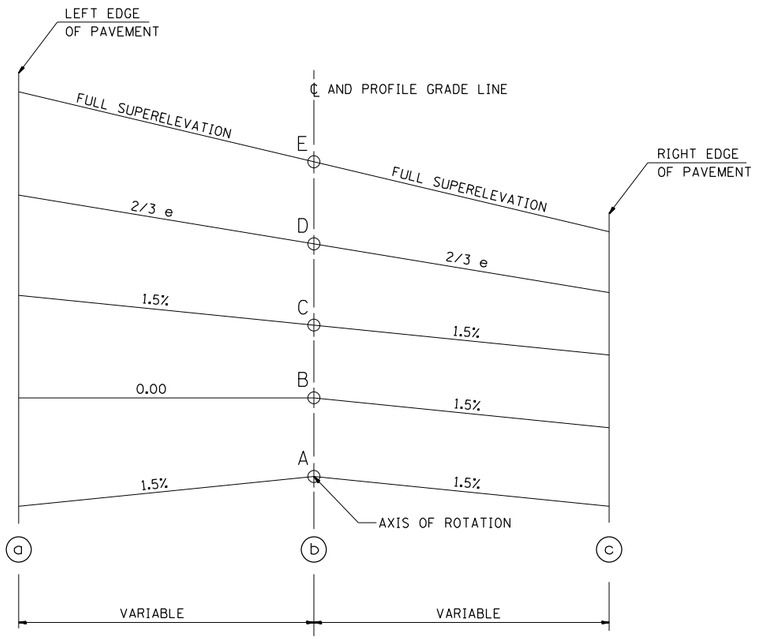
SCALE: | SHEET 4 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	139
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

* MONTGOMERY & CHRISTIAN



TYPICAL PROFILE - S.E. TRANSITION



TYPICAL CROSS SECTION - S.E. TRANSITION

SEE PLANS FOR CURVE DATA INFORMATION

CURVE DATA
P.I. STA=
Δ=
R=
T=
L=
E=
e= SUPERELEVATION RATE IN PERCENT
T.R.= TANGENT RUNOUT DISTANCE
S.E. RUN= SUPERELEVATION RUNOFF LENGTH
P.C. STA=
P.T. STA=

TABLE OF SUPERELEVATION BREAK POINT LOCATIONS

CURVE NO.	e	A	B	C	D	E	TRANSITION
240	2.2%	34+59.92	34+95.07	35+12.25	35+29.44	35+46.62	TRANS. IN
		*	*	*	*	*	TRANS. OUT
241	2.2%	*	*	*	*	*	TRANS. IN
		51+94.77	51+59.56	51+42.44	51+25.20	51+08.07	TRANS. OUT

*NOTE: SEE SUPERELEVATION DEVELOPMENT FOR REVERSE CURVES SHEET

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

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PLOT SCALE = 40.000000 ' / in.	CHECKED - MCB	REVISED -
PLOT DATE = 4/7/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

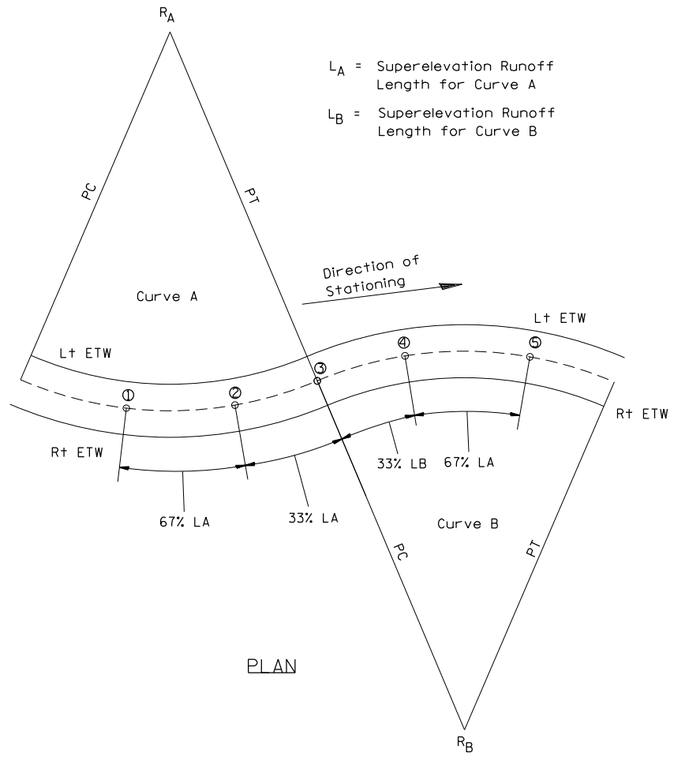
MISCELLANEOUS DETAILS
SUPER ELEVATION TRANSITIONS

SCALE: | SHEET 5 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	140
		CONTRACT NO. 72984		
	ILLINOIS	FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

* MONTGOMERY & CHRISTIAN

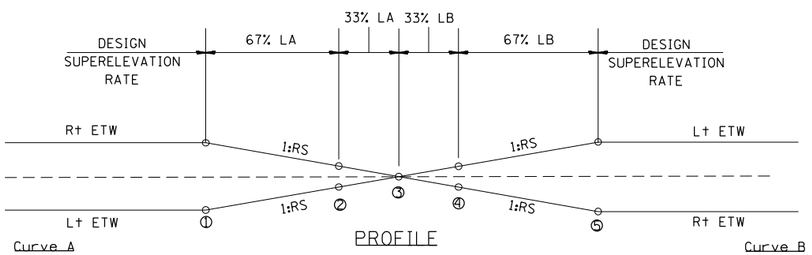


PLAN

L_A = Superelevation Runoff Length for Curve A

L_B = Superelevation Runoff Length for Curve B

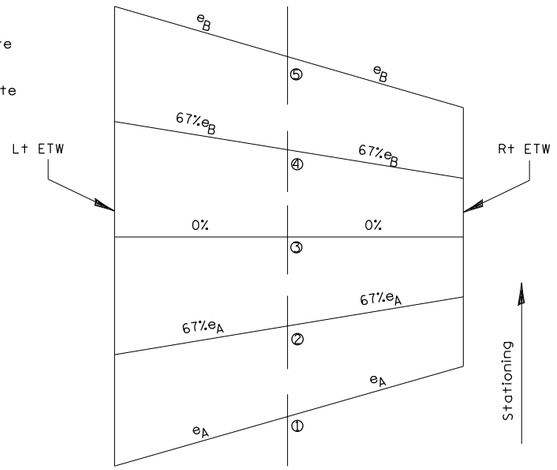
TABLE OF SUPERELEVATION BREAK POINT LOCATIONS					
REVERSE CURVES	1	2	3	4	5
240 - 241	42+48.45	42+82.82	43+00.00	43+17.18	43+51.55



PROFILE

e_A = Design Superelevation Rate for Curve A

e_B = Design Superelevation Rate for Curve B



CROSS SECTIONS

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USER NAME = Christopher.Siefert	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.000000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/7/2023	DATE -	REVISED -	

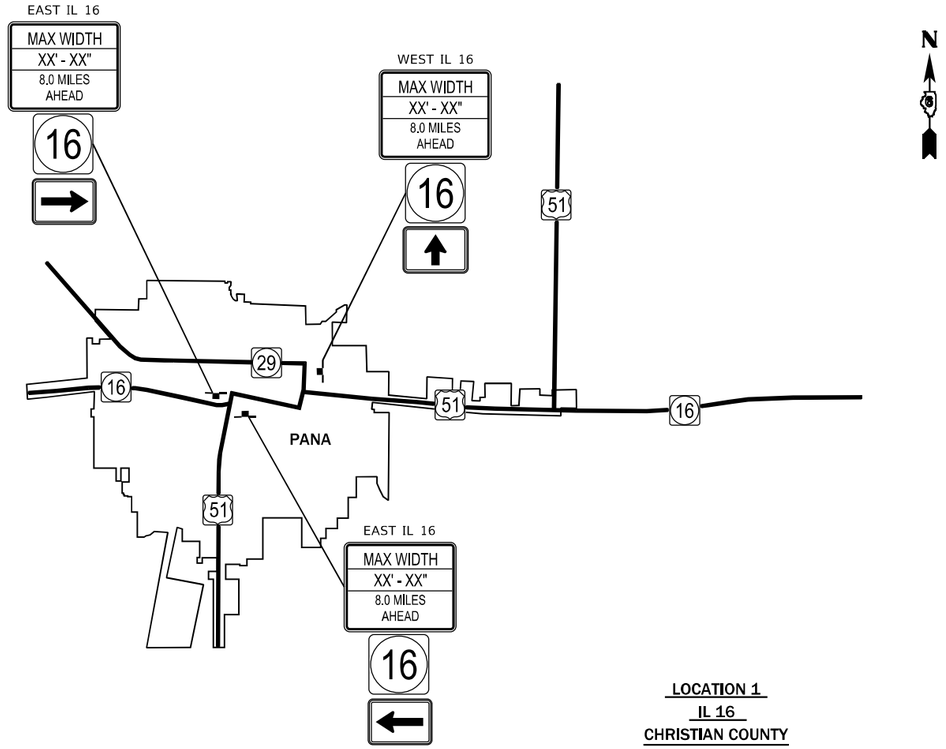
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
SUPER ELEVATION REVERSE CURVE

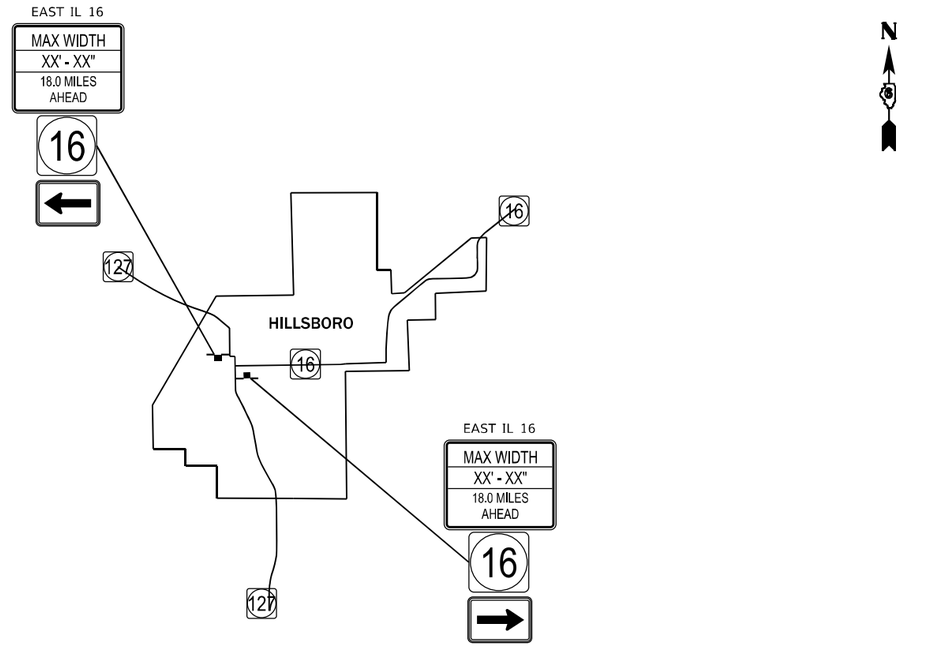
SCALE: | SHEET 6 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	141
		CONTRACT NO. 72984		
	ILLINOIS FED. AID PROJECT			

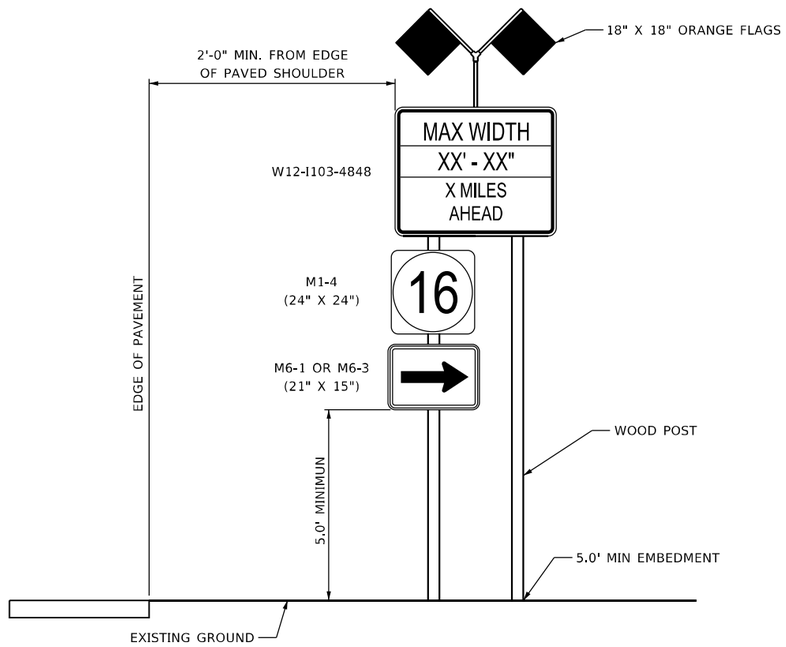
* MONTGOMERY & CHRISTIAN



LOCATION 1
IL 16
CHRISTIAN COUNTY



LOCATION 2
IL 16
MONTGOMERY COUNTY



WIDTH RESTRICTION SIGN

XX' - XX" WIDTH AND X MILES ARE VARIABLE

MODEL: Default
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FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = Christopher.Siefert	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 4/7/2023	DATE -	REVISED -

FEHR GRAHAM PROJECT NUMBER: 10005-2 (15-1027F)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
WIDTH RESTRICTION SIGN PLACEMENT

SCALE: | SHEET 7 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	18(B-2, B-3); 16(CR)	*	142	142
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

* MONTGOMERY & CHRISTIAN