11-06-2015 LETTING ITEM 070

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	1
	ILLINOIS	CONTRACT NO. 94698		

D-97-041-05

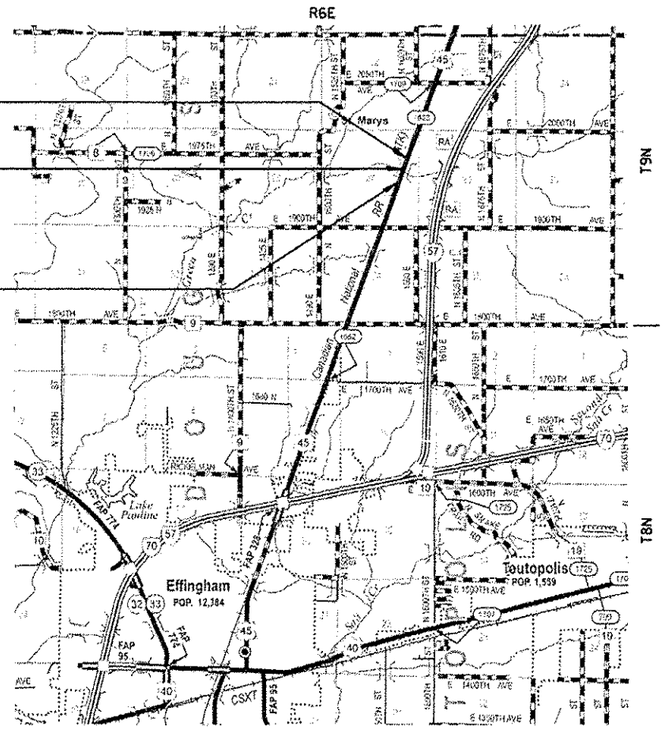
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR LIST OF ILLINOIS DOT HIGHWAY STANDARDS, SEE SHEET NO. 2

PROPOSED
HIGHWAY PLANS

FAS ROUTE 1652 (US 45)
SECTION (13BY) B-1
PROJECT ACRS-1652 (001)
C-97-082-05
BRIDGE REPLACEMENT OVER GREEN CREEK
EFFINGHAM COUNTY

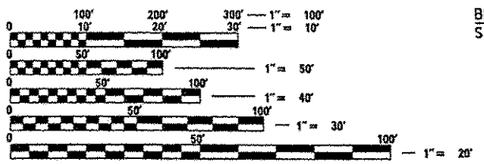
LOCATION OF SECTION INDICATED THUS: –



GROSS LENGTH = 798.52 FT. = 0.151 MILE
NET LENGTH = 798.52 FT. = 0.151 MILE

DESIGN DESIGNATION

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR
DESIGN SPEED: 60 MPH
POSTED SPEED: 55 MPH
ADT 3,550 (2013)
PV 92.1%
SU 4.3%
MU 3.6%



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

DISTRICT 7 NO. – (217) 342-3951
PROJECT ENGINEER – MARK DAUGHERTY
PROJECT MANAGER

CONTRACT NO. 94698

CEC Cummins Engineering Corporation
Civil and Structural Engineering

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 13 20 15
Roger L. Driskell /ddd
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Oct 2 20 15
John D. Baranzelli, P.E. /ddd
ENGINEER OF DESIGN AND ENVIRONMENT
Oct 2 20 15
Omer Osman, P.E. /ddd
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

MICHAEL D. CUMMINS 43244 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Michael D. Cummins 8/12/15
ILLINOIS PROFESSIONAL NO. 43244
(Expires 11/30/15)

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGE
542401-01	METAL END SECTIONS FOR PIPE CULVERTS
606201-02	TYPE B GUTTER (INLET, OUTLET, ENTRANCE)
630001-10	STEEL PLATE BEAM GUARD RAIL
630101-09	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630201-06	PCC/MHA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARD RAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL TYPE 2
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAIL
666001-01	RIGHT OF WAY MARKERS
701006-05	OFF ROAD OPERATIONS 2L 2W, 15FT TO 24" FROM PAVEMENT EDGE
701011-04	OFF ROAD MOVING OPERATIONS 2L 2W, DAY ONLY,
701201-04	LANE CLOSURE 2L 2W, DAY ONLY
701301-04	LANE CLOSURE 2L 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L 2W, MOVING OPERATIONS DAY ONLY
701321-14	LANE CLOSURE 2L 2W, BRIDGE REPAIR BARRIER
701326-04	LANE CLOSURE 2L 2W, PAVEMENT WIDENING
701901-04	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1½" UNLESS OTHERWISE NOTED.

2. THE THICKNESS OF HMA MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA MIXTURE IS PLACED.

3. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITIONS AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

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

HOT-MIX ASPHALT	112 LBS/SQ YD/1" THICKNESS
AGGREGATE	2.05 TONS/CU YD
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.05 LB/SQ FT
FOG COAT	0.025 LB/SQ FT
ON AGGREGATE SURFACE	0.25 LB/SQ FT

5. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

6. ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2 (SPECIAL) ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.

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

9. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.

10. THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE INITIAL OPENING OF THE COMPLETED STRUCTURE TO TWO LANE TRAFFIC, HMA SURFACE REMOVAL, PRIME COAT, AND HMA SURFACE COURSE.

11. SHORT TERM PAVEMENT MARKING ON MILLED SURFACES SHALL BE PAINT.

12. THE CONTRACTORS SHALL PROVIDE INTERNET ACCESSIBILITY TO THE HMA PLANT QUALITY CONTROL LAB SO THAT HMA PLANT REPORTS CAN BE EMAILED TO THE DISTRICT HEADQUARTERS. THIS WORK SHALL BE INCLUDED IN THE COST OF ALL HOT-MIX ASPHALT ITEMS.

13. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC AND THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OR COVERED.

14. AGGREGATE SURFACE COURSE TYPE B SHALL BE CRUSHED STONE OR CRUSHED CONCRETE.

15. THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

LOCATION	US 45	US 45
MIXTURE USE:	BASE COURSE	SURFACE COURSE
AC/PG:	PG 64-22	PG 64-22
RAP% (MAX):	25%	10%
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0	IL-9.5
FRICTION AGGREGATE:	N/A	MIXTURE "D"

COMMITMENTS

THERE ARE NO COMMITMENTS

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.4	DESIGNED - NAK	REVISED -
	FILE NAME = D794698-sht-gennote.dgn	DRAWN - AJH	REVISED -
	PLOT SCALE = 2.2828 ' / in.	CHECKED - NAK	REVISED -
	PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) 8-1	EFFINGHAM	53	2
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES				CONSTRUCTION CODE					
				80% FEDERAL 20% STATE					
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 025-2023					
				0011					
20100500	TREE REMOVAL, ACRES	ACRE	0.30	0.30					
20101000	TEMPORARY FENCE	FOOT	600	600					
20200100	EARTH EXCAVATION	CU YD	420	420					
20300100	CHANNEL EXCAVATION	CU YD	281	281					
20400800	FURNISHED EXCAVATION	CU YD	1,115	1,115					
20700220	POROUS GRANULAR EMBANKMENT	CU YD	1,220	1,220					
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	60	60					
28000400	PERIMETER EROSION BARRIER	FOOT	1,695	1,695					
28000500	INLET AND PIPE PROTECTION	EACH	1	1					
28100107	STONE RIPRAP, CLASS A4	SQ YD	71	71					
28100109	STONE RIPRAP, CLASS A5	SQ YD	248	248					
28200200	FILTER FABRIC	SQ YD	319	319					
31101400	SUB-BASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	342	342					
35101400	AGGREGATE BASE COURSE, TYPE B	TON	23	23					

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-soquidgn	DRAWN - SJS	REVISED -
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PLOT DATE = 8/12/2015	DATE - 10/8/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	3
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES				CONSTRUCTION CODE					
				80% FEDERAL 20% STATE					
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 025-2023					
				0011					
35501332	HOT-MIX ASPHALT BASE COURSE, 12"	SQ YD	1,396	1,396					
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	80	80					
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	362	362					
40600990	TEMPORARY RAMP	SQ YD	27	27					
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	34	34					
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	14	14					
44000100	PAVEMENT REMOVAL	SQ YD	236	236					
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	403	403					
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	42	42					
44000400	GUTTER REMOVAL	FOOT	530	530					
44004250	PAVED SHOULDER REMOVAL	SQ YD	395	395					
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	81	81					
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1					
50105220	PIPE CULVERT REMOVAL	FOOT	46	46					

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(IJBY) B-1	EFFINGHAM	53	4
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	SUMMARY OF QUANTITIES			CONSTRUCTION CODE					
				80% FEDERAL 20% STATE					
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 025-2023					
				0011					
50800105	REINFORCEMENT BARS	POUND	61,530	61,530					
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,350	1,350					
50800515	BAR SPLICERS	EACH	256	256					
51500100	NAME PLATES	EACH	1	1					
54003000	CONCRETE BOX CULVERTS	CU YD	382.5	382.5					
60600095	CLASS SI CONCRETE (OUTLET)	CU YD	6.5	6.5					
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	587.5	587.5					
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	5	5					
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1					
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	7	7					
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6					
67100100	MOBILIZATION	L SUM	1	1					
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1					
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1					

* SPECIALTY ITEM

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(1JBY) B-1	EFFINGHAM	53	5
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	SUMMARY OF QUANTITIES			CONSTRUCTION CODE					
				80% FEDERAL 20% STATE					
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 025-2023					
				0011					
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1					
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4	4					
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1					
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	120	120					
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2,170	2,170					
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	748	748					
70400100	TEMPORARY CONCRETE BARRIER	FOOT	462.5	462.5					
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	387.5	387.5					
70500100	TEMPORARY STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	350	350					
70500500	TEMPORARY STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	50	50					
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2					
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2					
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,579	1,579					
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9	9					

* SPECIALTY ITEM

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4
FILE NAME = D794698-sht-sqq.dgn
PLOT SCALE = 20.0000 ' / in.
PLOT DATE = 8/12/2015

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DATE - 10/8/2012

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	6
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 80% FEDERAL 20% STATE SN 025-2023 0011					
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	9	9					
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	6					
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	876	876					
	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	44	44					
	70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6					
	X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	28	28					
	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.6	0.6					
	X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	96	96					
	X7050167	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	2	2					
	Z0028462	GEOTEXTILE RETAINING WALL	SQ FT	184	184					
	Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	785	785					

* SPECIALTY ITEM

CEC Cummins Engineering Corporation — Civil and Structural Engineering

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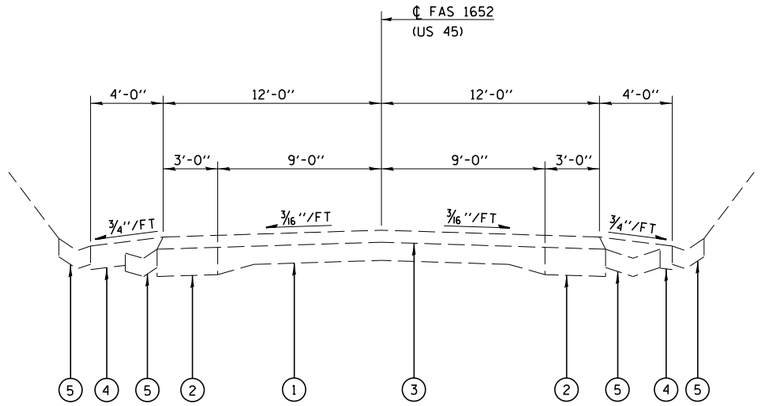
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

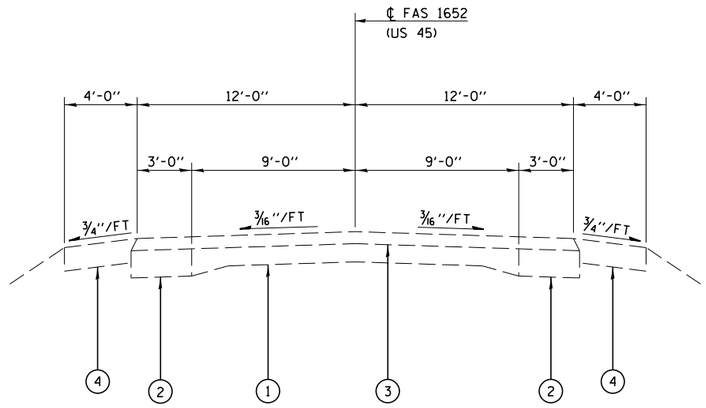
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	7
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL CROSS SECTION

STA 258+25.78 TO STA 259+08
RT STA 259+08 TO STA 260+34
RT STA 263+20 TO STA 266+24.30



EXISTING TYPICAL CROSS SECTION

LT STA 259+08 TO STA 260+34
STA 260+34 TO STA 261+88
STA 262+31 TO STA 263+20
LT STA 263+20 TO STA 266+24.30

BRIDGE OMISSION:
STA 261+88 TO STA 262+31

LEGEND

1. EXISTING PCC PAVEMENT 9''-6''-9''
2. EXISTING PCC BASE COURSE 9''
3. EXISTING HMA SURFACE
4. EXISTING HMA SHOULDER
5. EXISTING CONCRETE GUTTER
6. PAVED SHOULDER REMOVAL
7. PAVEMENT REMOVAL
8. PROPOSED HMA SURFACE COURSE 1 1/2''
9. PROPOSED HMA SURFACE REMOVAL 1 1/2''
10. PROPOSED HMA BASE COURSE 12''
11. PROPOSED HMA BASE COURSE WIDENING 12''
12. PROPOSED EMBANKMENT
13. PROPOSED PAVEMENT MARKING LINE
14. PROPOSED SUB-BASE GRANULAR MATERIAL TY B 6''
15. PROPOSED STEEL PLATE BEAM GUARDRAIL 6' POSTS
16. PROPOSED GUTTER REMOVAL
17. PROPOSED HMA SHOULDER 8''

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
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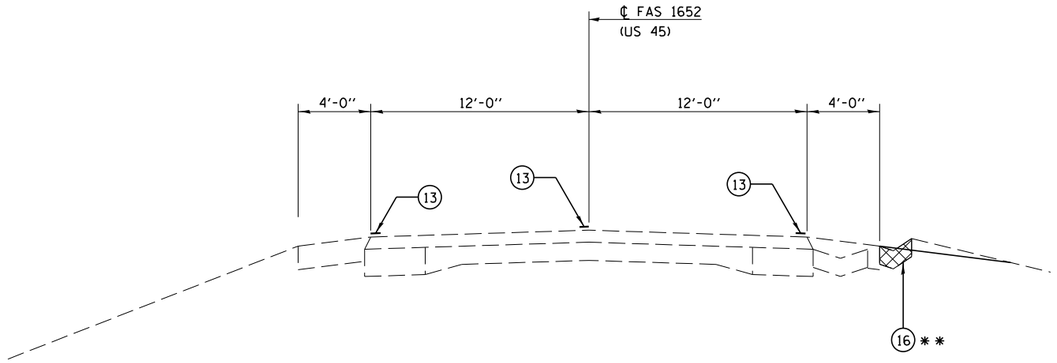
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	8
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



** CONSTRUCT GUTTER TRANSITION AND GUTTER OUTLET TYPE 1
FOR TYPE A CUTTER RT. STA. 258+25.75 TO STA. 258+76.30

CONSTRUCT GUTTER TRANSITION AND GUTTER OUTLET TYPE 1
FOR TYPE A CUTTER RT. STA. 265+73.70 TO STA. 266+24.30

PROPOSED TYPICAL CROSS SECTION

LT STA 259+16.30 TO STA 259+66.00
RT STA 258+25.78 TO STA 259+25.00
LT STA 264+52.00 TO STA 266+23.40

PROPOSED TYPICAL CROSS SECTION

LT STA 259+66.00 TO STA 260+06.70
RT STA 259+25.00 TO STA 259+64.40
LT STA 263+08.80 TO STA 264+52.00
RT STA 265+20.35 TO STA 266+24.30

LEGEND

1	EXISTING PCC PAVEMENT 9''-6''-9''
2	EXISTING PCC BASE COURSE 9''
3	EXISTING HMA SURFACE
4	EXISTING HMA SHOULDER
5	EXISTING CONCRETE GUTTER
6	PAVED SHOULDER REMOVAL
7	PAVEMENT REMOVAL
8	PROPOSED HMA SURFACE COURSE 1 1/2''
9	PROPOSED HMA SURFACE REMOVAL 1 1/2''
10	PROPOSED HMA BASE COURSE 12''
11	PROPOSED HMA BASE COURSE WIDENING 12''
12	PROPOSED EMBANKMENT
13	PROPOSED PAVEMENT MARKING LINE
14	PROPOSED SUB-BASE GRANULAR MATERIAL TY B 6''
15	PROPOSED STEEL PLATE BEAM GUARDRAIL 6' POSTS
16	PROPOSED GUTTER REMOVAL
17	PROPOSED HMA SHOULDER 8''

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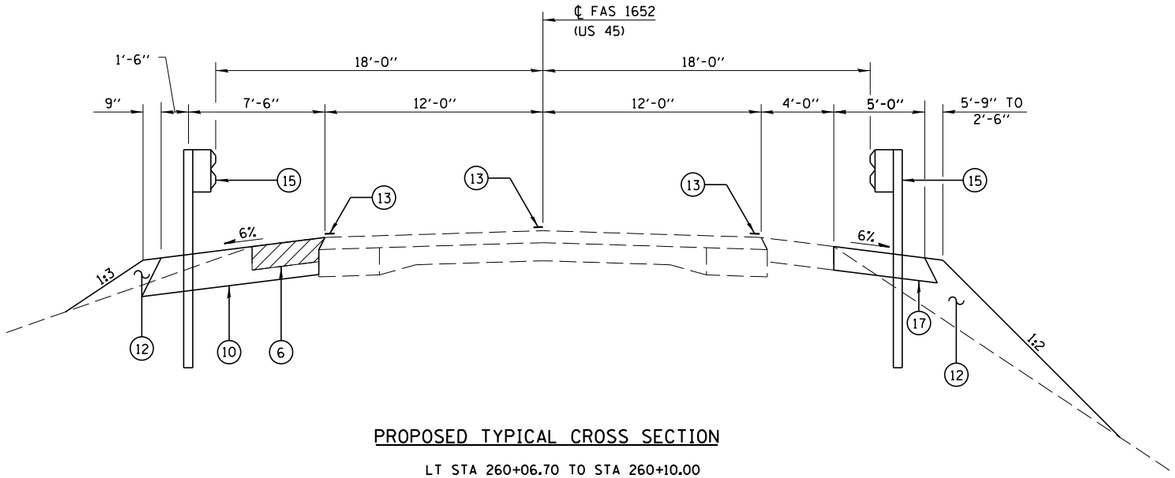
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

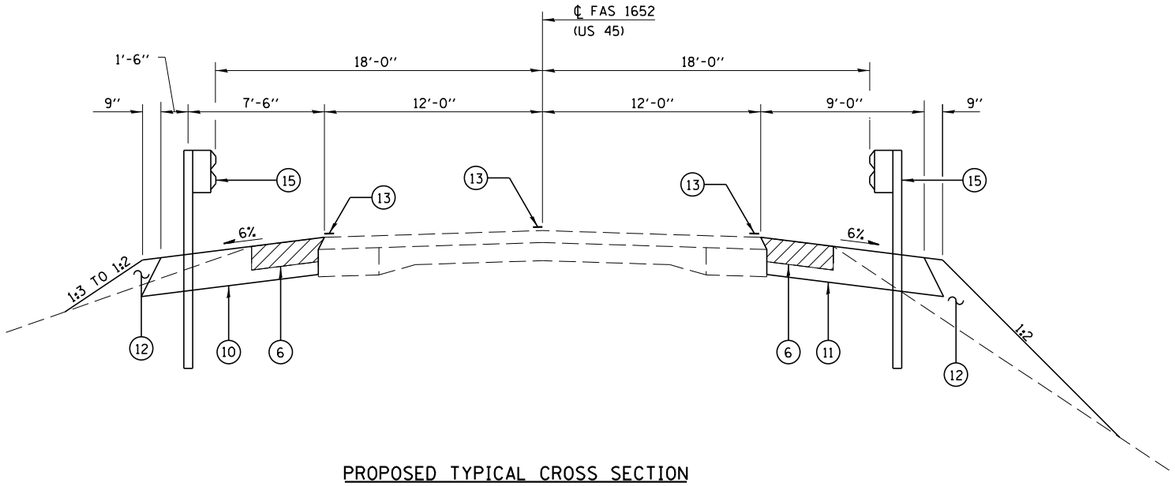
TYPICAL CROSS SECTIONS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	9
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL CROSS SECTION

LT STA 260+06.70 TO STA 260+10.00
RT STA 259+64.40 TO STA 260+10.00
RT STA 264+13.00 TO STA 265+20.35



PROPOSED TYPICAL CROSS SECTION

STA 260+10.00 TO STA 261+35.00
STA 262+86.00 TO STA 263+06.00

LEGEND

(1)	EXISTING PCC PAVEMENT 9''-6''-9''
(2)	EXISTING PCC BASE COURSE 9''
(3)	EXISTING HMA SURFACE
(4)	EXISTING HMA SHOULDER
(5)	EXISTING CONCRETE GUTTER
(6)	PAVED SHOULDER REMOVAL
(7)	PAVEMENT REMOVAL
(8)	PROPOSED HMA SURFACE COURSE 1 1/2''
(9)	PROPOSED HMA SURFACE REMOVAL 1 1/2''
(10)	PROPOSED HMA BASE COURSE 12''
(11)	PROPOSED HMA BASE COURSE WIDENING 12''
(12)	PROPOSED EMBANKMENT
(13)	PROPOSED PAVEMENT MARKING LINE
(14)	PROPOSED SUB-BASE GRANULAR MATERIAL TY B 6''
(15)	PROPOSED STEEL PLATE BEAM GUARDRAIL 6' POSTS
(16)	PROPOSED GUTTER REMOVAL
(17)	PROPOSED HMA SHOULDER 8''

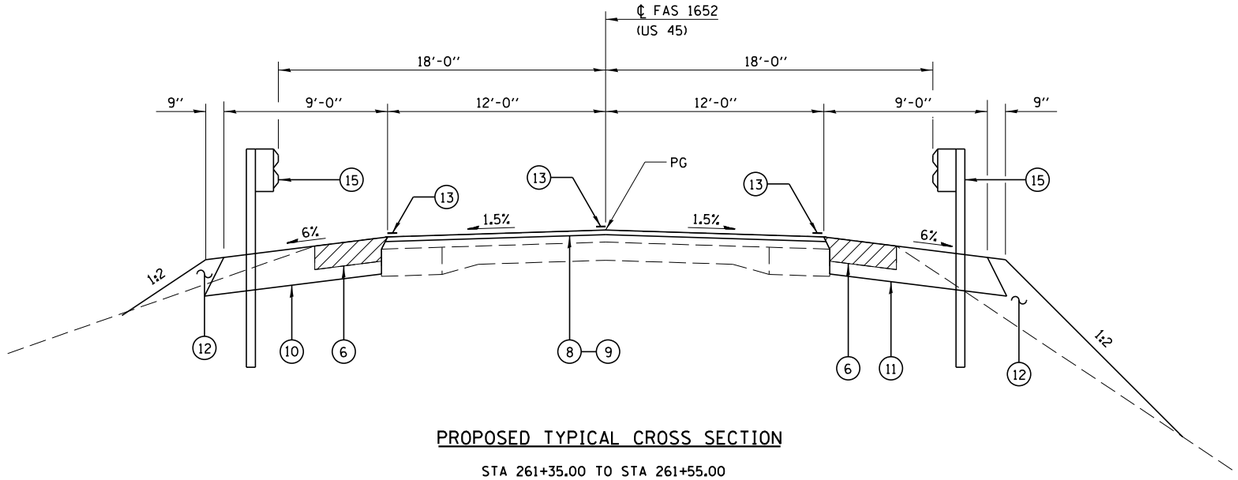
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -	
FILE NAME = D794698-sht-typ.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 8.3333 '/ in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

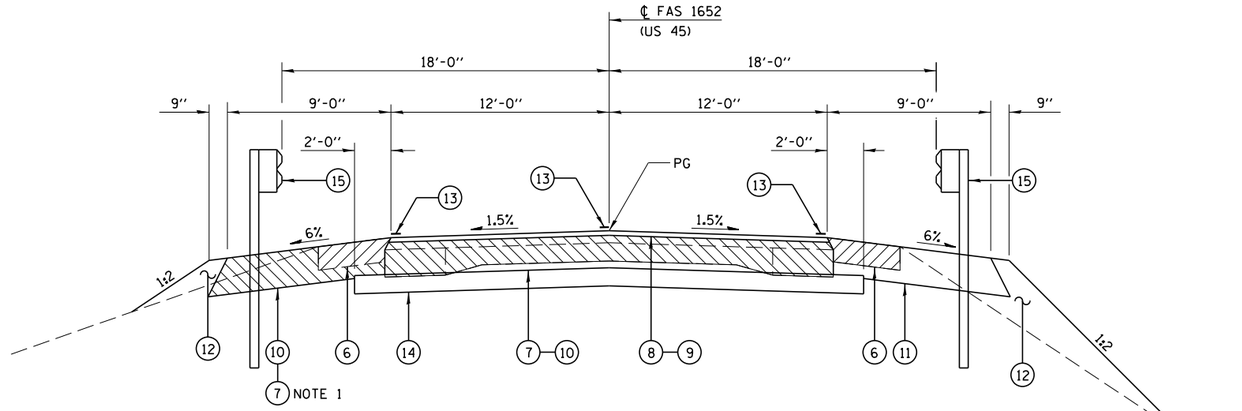
TYPICAL CROSS SECTIONS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	10
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL CROSS SECTION

STA 261+35.00 TO STA 261+55.00
STA 262+65.00 TO STA 262+86.00



PROPOSED TYPICAL CROSS SECTION

STA 261+55.00 TO STA 262+65.00

NOTE 1: REMOVE HMA BASE COURSE CONSTRUCTED TO CARRY STAGE 1 TRAFFIC DURING STAGE 2 CONSTRUCTION.

LEGEND

1	EXISTING PCC PAVEMENT 9''-6''-9''
2	EXISTING PCC BASE COURSE 9''
3	EXISTING HMA SURFACE
4	EXISTING HMA SHOULDER
5	EXISTING CONCRETE GUTTER
6	PAVED SHOULDER REMOVAL
7	PAVEMENT REMOVAL
8	PROPOSED HMA SURFACE COURSE 1 1/2''
9	PROPOSED HMA SURFACE REMOVAL 1 1/2''
10	PROPOSED HMA BASE COURSE 12''
11	PROPOSED HMA BASE COURSE WIDENING 12''
12	PROPOSED EMBANKMENT
13	PROPOSED PAVEMENT MARKING LINE
14	PROPOSED SUB-BASE GRANULAR MATERIAL TY B 6''
15	PROPOSED STEEL PLATE BEAM GUARDRAIL 6' POSTS
16	PROPOSED GUTTER REMOVAL
17	PROPOSED HMA SHOULDER 8''

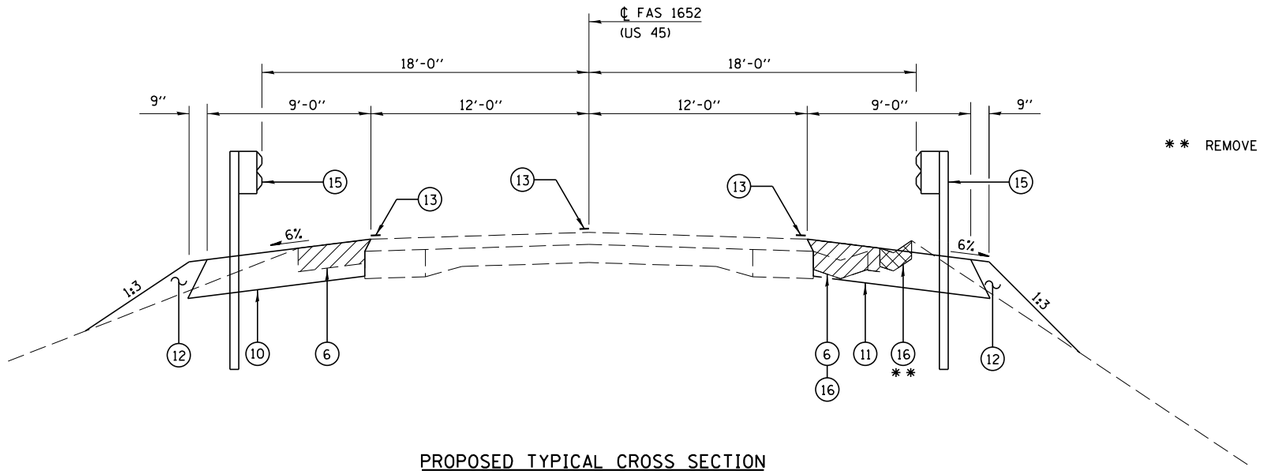
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-typ.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 8.3333 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	11
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



** REMOVE EXISTING GUTTER RT STA 263+06 TO STA 264+13

PROPOSED TYPICAL CROSS SECTION

LT STA 263+06.00 TO STA 263+08.80
RT STA 263+06.00 TO STA 264+13.00

LEGEND

1	EXISTING PCC PAVEMENT 9''-6''-9''
2	EXISTING PCC BASE COURSE 9''
3	EXISTING HMA SURFACE
4	EXISTING HMA SHOULDER
5	EXISTING CONCRETE GUTTER
6	PAVED SHOULDER REMOVAL
7	PAVEMENT REMOVAL
8	PROPOSED HMA SURFACE COURSE 1 1/2''
9	PROPOSED HMA SURFACE REMOVAL 1 1/2''
10	PROPOSED HMA BASE COURSE 12''
11	PROPOSED HMA BASE COURSE WIDENING 12''
12	PROPOSED EMBANKMENT
13	PROPOSED PAVEMENT MARKING LINE
14	PROPOSED SUB-BASE GRANULAR MATERIAL TY B 6''
15	PROPOSED STEEL PLATE BEAM GUARDRAIL 6' POSTS
16	PROPOSED GUTTER REMOVAL
17	PROPOSED HMA SHOULDER 8''

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-typ.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 8.3333 '/ in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	12
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EARTHWORK

LOCATION		EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
		CU YD	CU YD	CU YD	CU YD
LT STA 259+19	TO STA 265+00	125	95	125	-30
RT STA 258+25	TO STA 266+25	275	210	1,230	-1,020
ENTRANCE RT STA 259+42.4		20	15	0	15
ENTRANCE RT STA 262+62.15		0	0	80	-80
TOTAL		420	320	1,435	-1,115

SHRINKAGE = 25%
FURNISHED EXCAVATION = 1.115 CU YD

SEEDING, CLASS 2 (SPECIAL)

LOCATION		AREA SQ FT	QTY ACRE
LT STA 259+50	TO STA 266+00	6,470	0.15
RT STA 258+25	TO STA 259+25	880	0.02
RT STA 259+60	TO STA 266+25	18,730	0.43
TOTAL			0.6

TEMPORARY EROSION CONTROL SEEDING

LOCATION		AREA SQ FT	QTY POUNDS
LT STA 259+50	TO STA 266+00	6,470	15
RT STA 258+25	TO STA 259+25	880	2
RT STA 259+60	TO STA 266+25	18,730	43
TOTAL			60

PERIMETER EROSION BARRIER

LOCATION		QTY FOOT
LT STA 259+50	TO STA 261+76	235
LT STA 262+43	TO STA 265+00	262
RT STA 258+25	TO STA 259+25	290
RT STA 259+60	TO STA 261+76	246
RT STA 262+43	TO STA 262+50	105
RT STA 262+67	TO STA 266+25	557
TOTAL		1,695

INLET AND PIPE PROTECTION

LOCATION	QTY EACH
RT STA 263+03	1
TOTAL	1

STONE RIPRAP, CLASS A4

LOCATION		STONE RIPRAP, CLASS A4	FILTER FABRIC
		SQ YD	SQ YD
RT STA 258+59	TO STA 258+75	27.56	27.56
RT STA 265+61	TO STA 265+90	43.44	43.44
TOTAL		71.00	71.00

SUB-BASE GRANULAR MATERIAL, TYPE B 6"

LOCATION		WIDTH FOOT	QTY SQ YD
STAGE 1			
STA 261+55	TO STA 262+65	11	134.44
STAGE 2			
STA 261+55	TO STA 262+65	17	207.78
TOTAL			342.22

HOT-MIX ASPHALT BASE COURSE, 12"

LOCATION		WIDTH FOOT	QTY SQ YD
PRE-STAGE 1			
LT STA 259+66.00	TO STA 260+20.00	7.5	45.00
LT STA 260+20.00	TO STA 260+23.00	7.5 TO 9	2.75
LT STA 260+23.00	TO STA 264+52.00	9	429.00
LT STA 264+52.00	TO STA 264+62.20	5' TO 0'	2.83
STAGE 1			
RT STA 260+10.00	TO STA 264+13.00	9.0	403.00
RT STA 261+55.00	TO STA 262+65.00	19.5	238.33
STAGE 2			
LT STA 261+55.00	TO STA 262+65.00	22.5	275.00
TOTAL			1,395.91

AGGREGATE SURFACE COURSE, TYPE B

LOCATION	WIDTH FOOT	QTY TON
STAGE 1		
RT STA 263+00.00	16 to 10	79.45
TOTAL		79.45

BITUMINOUS MATERIALS (PRIME COAT)

LOCATION		WIDTH FOOT	QTY POUND
STA 261+35	TO STA 262+86	24	181.20
STA 259+42		54.5-33.5	149.27
STA 263+00		16	31.20
TOTAL			361.67

TEMPORARY RAMP

LOCATION		WIDTH FOOT	QTY SQ YD
STA 261+35	TO STA 261+40	24	13.33
STA 262+81	TO STA 262+86	24	13.33
TOTAL			26.66

HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70

LOCATION		WIDTH FOOT	QTY TON
STA 261+35	TO STA 262+86	24	33.82
TOTAL			33.82

AGGREGATE BASE COURSE TYPE B

LOCATION	WIDTH FOOT	QTY TON
STA 259+42	54.5-33.5	22.67
TOTAL		22.67

INCIDENTAL HOT-MIX ASPHALT SURFACING

LOCATION	WIDTH FOOT	QTY TON
STA 259+42	54.5-33.5	11.15
STA 263+00	16	2.33
TOTAL		13.48

HOT-MIX ASPHALT SHOULDERS, 8"

LOCATION		WIDTH FOOT	QTY SQ YD
STAGE 1			
RT STA 259+64.40	TO STA 260+10.00	9.2' TO 5'	35.97
RT STA 264+13.00	TO STA 264+88.25	5'	41.81
RT STA 264+88.25	TO STA 264+98.25	5' TO 0'	2.78
TOTAL			80.56

TREE REMOVAL, ACRES

LOCATION		QTY ACRE
STAGE 1		
RT STA 259+50.00	TO STA 261+90.00	0.23
STAGE 2		
LT STA 261+50.00	TO STA 262+80.00	0.07
TOTAL		0.30

PAVEMENT REMOVAL

LOCATION		WIDTH FOOT	QTY SQ YD
STAGE 1			
RT STA 261+55.00	TO STA 261+88.75	17.5	65.63
RT STA 262+31.25	TO STA 262+65.00	17.5	65.63
STAGE 2			
LT STA 261+55.00	TO STA 261+88.75	14	52.50
LT STA 262+31.25	TO STA 262+65.00	14	52.50
TOTAL			236.26

HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"

LOCATION		WIDTH FOOT	QTY SQ YD
STA 261+35	TO STA 262+86	24	402.67
TOTAL			402.67

DRIVEWAY PAVEMENT REMOVAL

LOCATION		WIDTH FOOT	QTY SQ YD
STA 259+20	TO STA 259+65	46 - 33.5	42.18
TOTAL			42.18

GUTTER REMOVAL

LOCATION		QTY FOOT
RT STA 258+25.00	TO STA 260+37.00	212.00
RT STA 263+06.00	TO STA 266+24.30	318.30
TOTAL		530.30

PAVED SHOULDER REMOVAL

LOCATION		WIDTH FOOT	QTY SQ YD
LT STA 259+66.00	TO STA 264+52.00	4	216.00
RT STA 260+10.00	TO STA 264+13.00	4	179.11
TOTAL			395.11

PIPE CULVERT REMOVAL

LOCATION	QTY FOOT
RT STA 262+56.00	46
TOTAL	46

CLASS SI CONCRETE (OUTLET)

LOCATION		QTY CU YD
STAGE 1		
RT STA 258+25.78	TO STA 258+68.85	3.25
RT STA 265+79.90	TO STA 266+24.30	3.28
TOTAL		6.53

PIPE CULVERTS, CLASS D, TYPE 1 18"

LOCATION		QTY FOOT
STAGE 1		
RT STA 9+25.00		44
TOTAL		44

STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS

LOCATION		QTY FOOT
STAGE 1		
RT STA 260+19.80	TO STA 262+19.80	200.0
RT STA 263+73.76	TO STA 264+36.25	62.5
STAGE 2		
LT STA 260+75.00	LT STA 264+00.00	325.0
TOTAL		587.5

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

LOCATION		QTY EACH
STAGE 1		
RT STA 262+19.80	TO STA 262+69.80	1
RT STA 263+23.76	TO STA 263+73.76	1
RT STA 264+36.25	TO STA 264+86.25	1
STAGE 2		
LT STA 260+25.00	LT STA 260+75.00	1
LT STA 264+00.00	LT STA 264+50.00	1
TOTAL		5

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED

LOCATION		QTY EACH
STAGE 1		
RT STA 259+70.25	TO STA 260+19.80	1
TOTAL		1

GUARDRAIL MARKERS, TYPE A

LOCATION		QTY EACH
STAGE 1		
RT STA 260+19.80	TO STA 262+19.80	3
RT STA 263+73.76	TO STA 264+36.25	1
STAGE 2		
LT STA 260+75.00	LT STA 264+00.00	5
TOTAL		9

TERMINAL MARKER - DIRECT APPLIED

LOCATION		QTY EACH
STAGE 1		
RT STA 259+70.25		1
RT STA 262+69.80		1
RT STA 263+23.76		1
RT STA 264+86.25		1
STAGE 2		
LT STA 260+25.00		1
LT STA 264+50.00		1
TOTAL		6

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

LOCATION		QTY EACH
STAGE 1		
LT STA 259+58.97	TO STA 260+08.97	1
LT STA 264+09.01	TO STA 264+59.01	1
TOTAL		2

TEMPORARY STEEL PLATE BEAM GUARD RAIL, TYPE A

LOCATION		QTY FOOT
STAGE 1		
LT STA 260+08.97	LT STA 261+84.01	175.0
LT STA 262+34.01	LT STA 264+09.01	175.0
TOTAL		350.0

TEMPORARY STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES

LOCATION		QTY FOOT
STAGE 1		
LT STA 261+84.01	LT STA 262+34.01	50.0
TOTAL		50.0

SHORT-TERM PAVEMENT MARKING

LOCATION		QTY FOOT
FINAL PHASE		
INITIAL OPENING		
STA 258+28.75	TO STA 265+28.25	72
HMA SURFACE REMOVAL		
STA 261+35.00	TO STA 262+86.00	16
BITUMINOUS MATERIALS (PRIME COAT)		
STA 261+35.00	TO STA 262+86.00	16
HMA SURFACE COURSE		
STA 261+35.00	TO STA 262+86.00	16
TOTAL		120

WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION		QTY SQ FT
STAGE 2		
LT STA 259+88.72	TO STA 264+43.25	151.51
RT STA 258+38.75	TO STA 265+43.25	234.83
FINAL PHASE		
LT STA 259+18.50	TO STA 265+45.25	208.92
RT STA 260+17.10	TO STA 264+01.75	128.22
STA 258+28.75	TO STA 265+28.25	24.00
TOTAL		747.48

PAINT PAVEMENT MARKING - LINE 4"

LOCATION		QTY FOOT
FINAL PHASE		
SOLID WHITE EDGE LINE		
LT STA 258+28.75	TO STA 265+28.25	699.50
RT STA 258+28.75	TO STA 265+28.25	699.50
YELLOW SKIP DASH		
STA 258+28.75	TO STA 265+28.25	180.00
TOTAL		1,579.00

RAISED REFLECTIVE PAVEMENT MARKER

LOCATION		QTY EACH
FINAL PHASE		
STA 258+28.75	TO STA 265+28.25	9
TOTAL		9

TEMPORARY PAVEMENT MARKING - LINE 4"

LOCATION		QTY FOOT
STAGE 1		
SOLID WHITE EDGE LINE		
LT STA 259+88.72	TO STA 264+43.25	454.53
RT STA 258+38.75	TO STA 265+43.25	704.50
STAGE 2		
SOLID WHITE EDGE LINE		
LT STA 259+18.50	TO STA 265+45.25	626.75
RT STA 260+17.10	TO STA 264+01.75	384.65
TOTAL		2,170.43

PAVEMENT MARKING REMOVAL

LOCATION		QTY SQ FT
STAGE 1		
EDGE LINE		
LT STA 259+88.72	TO STA 264+43.25	454.53
CENTERLINE SKIP DASH		
STA 258+28.75	TO STA 260+00.00	16.67
STA 264+00.00	TO STA 266+03.25	20.00
STAGE 2		
EDGE LINE		
RT STA 260+17.10	TO STA 264+01.75	384.65
TOTAL		875.85

TEMPORARY CONCRETE BARRIER

LOCATION			QTY FOOT
STAGE 1			
STA 259+79.12	TO STA 261+28.75	12:1 TAPER	150.0
STA 261+28.75	TO STA 262+91.25	TANGENT	162.5
STA 262+91.25	TO STA 264+40.75	12:1 TAPER	150.0
TOTAL			462.5

RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION			QTY FOOT
STAGE 2			
STA 260+16.48	TO STA 261+28.75	12:1 TAPER	112.5
STA 261+28.75	TO STA 262+91.25	TANGENT	162.5
STA 262+91.25	TO STA 264+03.50	12:1 TAPER	112.5
TOTAL			387.5

IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3

LOCATION	QTY EACH
STAGE 1	
STA 259+79.12	1
STA 264+40.75	1
TOTAL	2

IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3

LOCATION	QTY EACH
STAGE 2	
STA 260+16.48	1
STA 264+03.50	1
TOTAL	2

FURNISHING AND ERECTING RIGHT OF WAY MARKERS

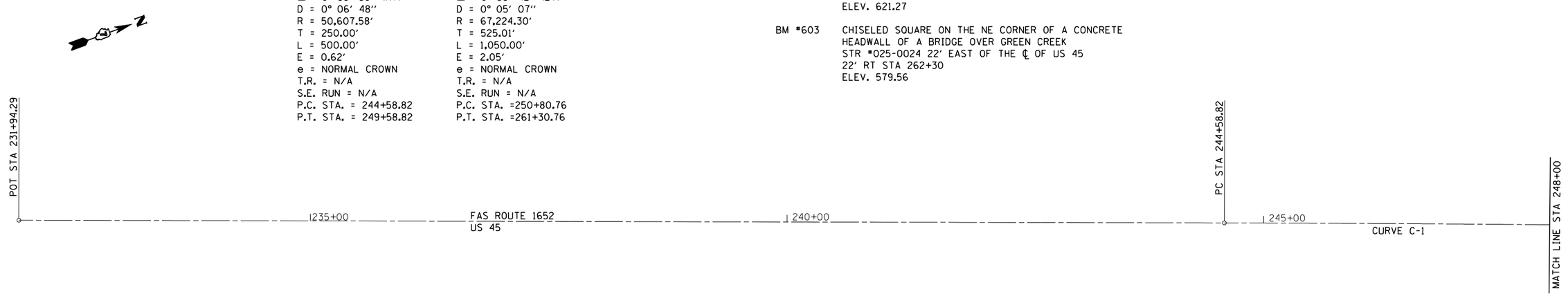
LOCATION		QTY EACH
33' RT	STA 257+00.00	1
90' RT	STA 260+50.00	1
90' RT	STA 261+30.76	1
90' RT	STA 263+25.00	1
60' RT	STA 263+50.00	1
60' RT	STA 266+00.00	1
43' RT	STA 267+00.00	1
TOTAL		7

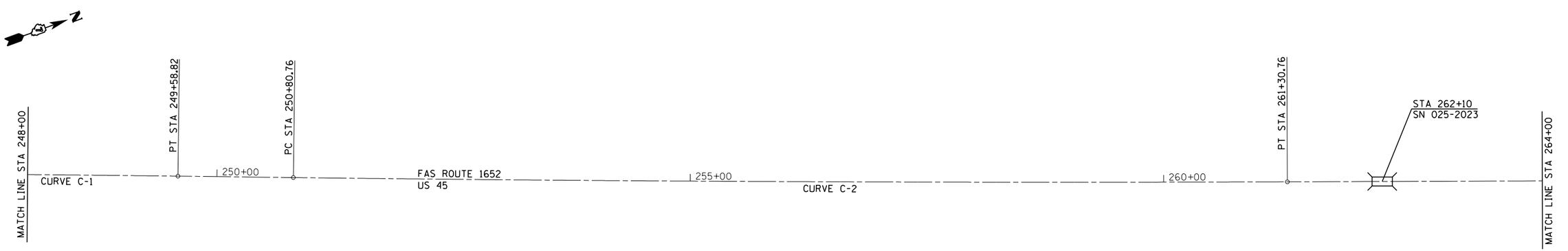
CURVE C-1
PI STA. = 247+08.82
Δ = 0° 33′ 58″ (RT)
D = 0° 06′ 48″
R = 50,607.58′
T = 250.00′
L = 500.00′
E = 0.62′
e = NORMAL CROWN
T.R. = N/A
S.E. RUN = N/A
P.C. STA. = 244+58.82
P.T. STA. = 249+58.82

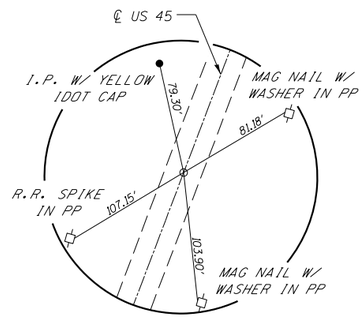
CURVE C-2
PI STA. = 256+05.77
Δ = 0° 53′ 42″ (LT)
D = 0° 05′ 07″
R = 67,224.30′
T = 525.01′
L = 1,050.00′
E = 2.05′
e = NORMAL CROWN
T.R. = N/A
S.E. RUN = N/A
P.C. STA. =250+80.76
P.T. STA. =261+30.76

BM #602 R.R. SPIKE IN PP 55′ W OF THE ℄ OF US 45
±2200′ NORTH OF COUNTY RD 1900N
56′ LT STA 249+90
ELEV. 621.27

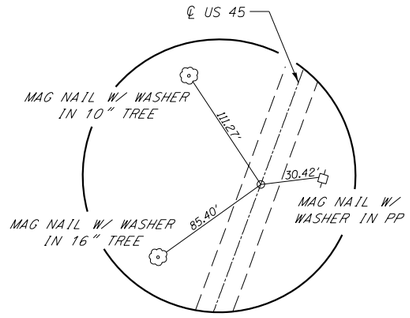
BM #603 CHISELED SQUARE ON THE NE CORNER OF A CONCRETE HEADWALL OF A BRIDGE OVER GREEN CREEK
STR #025-0024 22′ EAST OF THE ℄ OF US 45
22′ RT STA 262+30
ELEV. 579.56



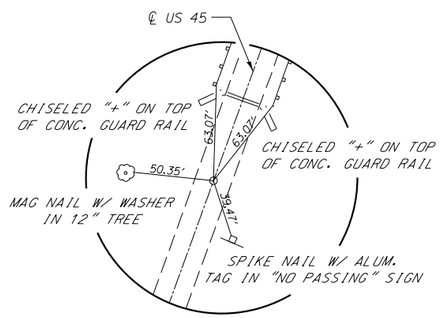




PC STA 250+80.76
MAG NAIL WITH WASHER



PI STA 256+05.77
MAG NAIL WITH WASHER



PT STA 261+30.76
MAG NAIL WITH WASHER

COORDINATE DATA;

POT STA 231+94.29	N	917,839.43
	E	932,958.39
PC STA 244+58.82	N	919,026.04
	E	933,395.42
PI STA 247+08.82	N	919,260.64
	E	933,481.82
PT STA 249+58.82	N	919,494.37
	E	933,570.53
PC STA 250+80.76	N	919,608.38
	E	933,613.80
PI STA 256+05.77	N	920,099.22
	E	933,800.11
PT STA 261+30.76	N	920,592.91
	E	933,978.72

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-ali.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -

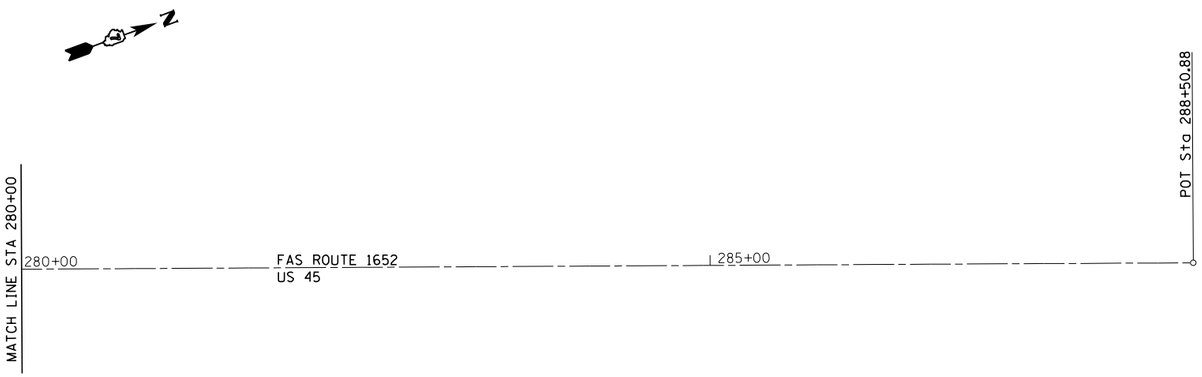
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

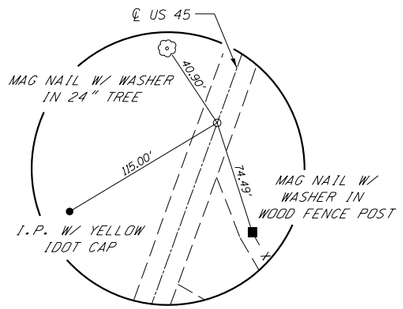
ALIGNMENT, CROSS TIES AND BENCH MARKS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	15
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BM #604 CHISELED SQUARE ON THE SE CORNER OF A BOX CULVERT 38' EAST OF THE ℄ OF US 45 ±1300' NORTH OF GREEN CREEK 38' RT STA 274+40 ELEV. 603.31

BM #605 CHISELED SQUARE ON THE SE CORNER OF THE EAST HEADWALL OF A BOX CULVERT 28' EAST OF THE ℄ OF US 45 ±2500' SOUTH OF COUNTY RD 2050N 28' RT STA 286+60 ELEV. 626.29





PI STA 273+95.21
MAG NAIL WITH WASHER

COORDINATE DATA:

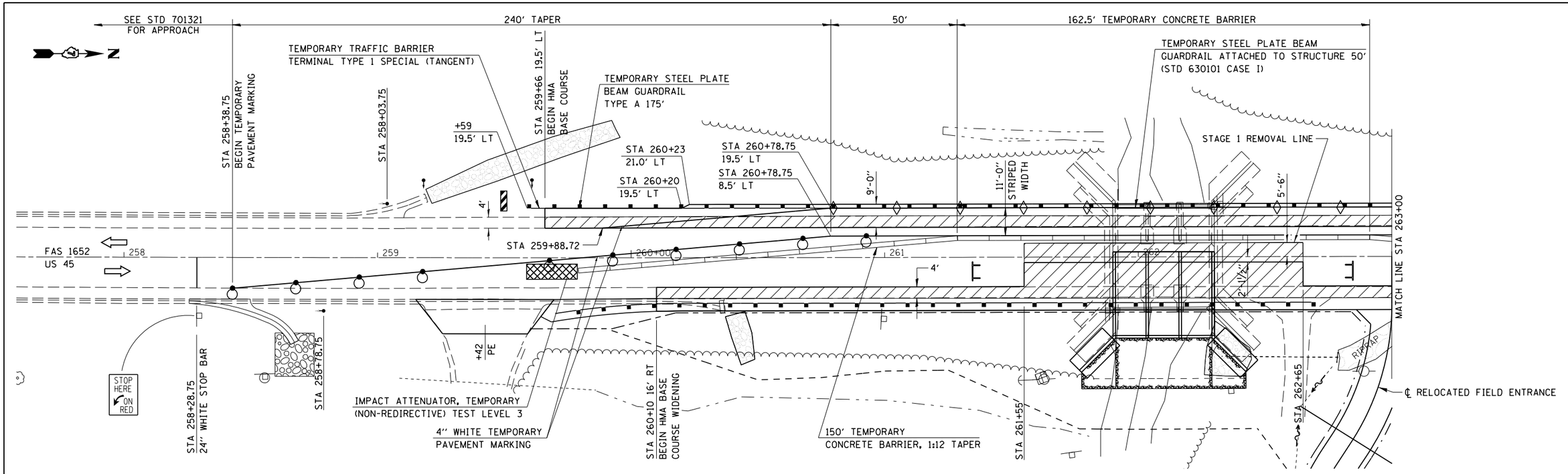
PI STA 273+95.21	N	921,781.95
	E	934,408.90
POT STA 288+50.88	N	923,151.76
	E	934,901.42

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.4	DESIGNED - NAK	REVISED -
	FILE NAME = D794698-sht-ali.dgn	DRAWN - AJH	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - NAK	REVISED -
	PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, CROSS TIES AND BENCH MARKS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	16
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SEQUENCE OF OPERATIONS

PRE-STAGE 1

1. REMOVE EXISTING PAVED SHOULDER LEFT STA. 259+66 TO STA. 264+52 AND CONSTRUCT HMA BASE COURSE 12"
2. CONSTRUCT RELOCATED FIELD ENTRANCE RT STA 263+00
3. INSTALL TEMPORARY GUARDRAIL AND TERMINALS LEFT STA. 259+59 TO STA. 264+59
4. INSTALL ADVANCE WARNING SIGNS, TEMPORARY BRIDGE TRAFFIC SIGNALS, AND TEMPORARY DETECTOR LOOPS

STAGE 1

1. REMOVE CONFLICTING PAVEMENT MARKINGS AND PLACE TRAFFIC IN THE STAGE 1 LANE
2. INSTALL TEMPORARY CONCRETE BARRIER, TEMPORARY IMPACT ATTENUATORS, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES AS SHOWN IN THE PLANS
3. REMOVE STAGE 1 PORTION OF THE EXISTING STRUCTURE AND PAVEMENT AND CONSTRUCT STAGE 1 PORTION OF THE PROPOSED BOX CULVERT.
4. CONSTRUCT STAGE 1 PORTION OF ROADWAY ALONG EAST SIDE INCLUDING GUTTER REMOVAL, PAVED SHOULDER REMOVAL, HMA BASE COURSE 12", HMA SHOULDER, STEEL PLATE BEAM GUARDRAIL AND TRAFFIC BARRIER TERMINALS.

GENERAL NOTES

1. SEE STANDARD 701321 FOR DETAILS OF TRAFFIC CONTROL AND PROTECTION NOT SHOWN
2. TEMPORARY RUMBLE STRAPS SHALL BE INSTALLED ON EACH APPROACH AS SHOWN ON STANDARD 701321
3. REMOVE EXISTING CENTERLINE PAVEMENT MARKINGS STA 258+28.75 TO STA 260+50 AND STA 263+50 TO STA 266+03.25
4. REMOVE EXISTING EDGE LINE STA 259+88.72 TO STA 264+43.25.
5. TEMPORARY ACCESS SHALL BE PROVIDED TO THE EXISTING FIELD ENTRANCE AT STA 262+65 RT FROM THE NORTH END BEHIND TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL COORDINATE WITH THE LANDOWNER. COST WILL BE INCLUDED WITH TRAFFIC CONTROL.
6. THE TANGENT SECTION OF TEMPORARY CONCRETE BARRIER SHALL BE PINNED TO THE PAVEMENT WITH 3 PINS IN THE TRAFFIC SIDE OF EACH BARRIER SECTION

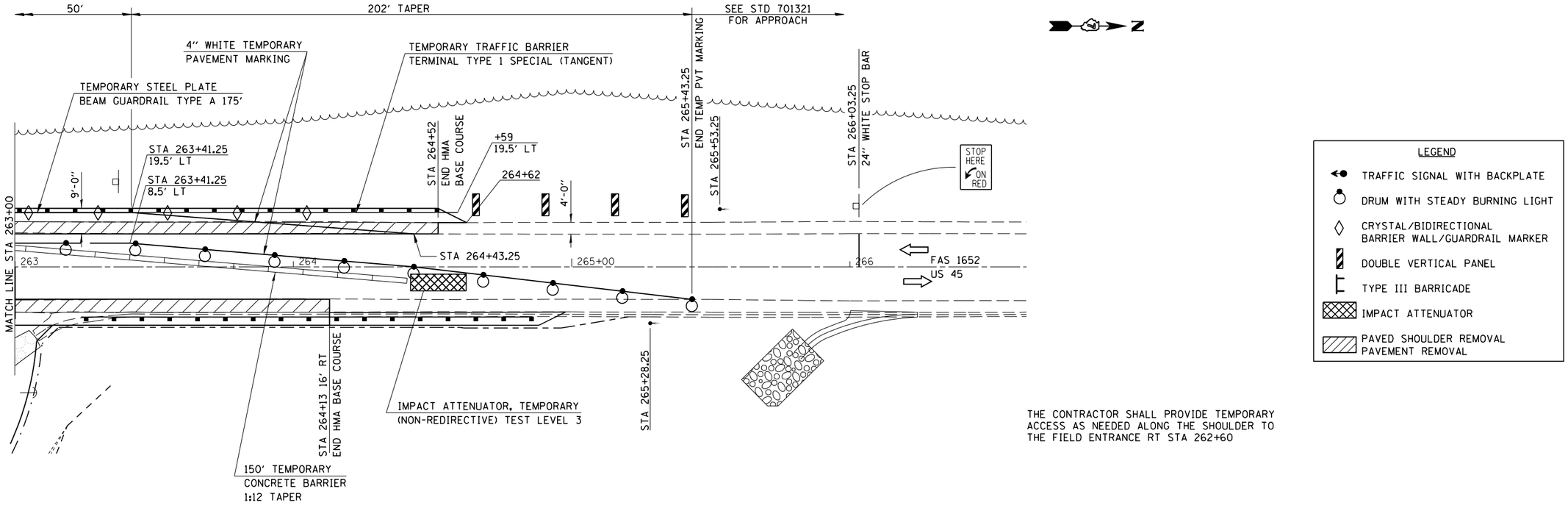
LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- CRYSTAL/BIDIRECTIONAL BARRIER WALL/GUARDRAIL MARKER
- DOUBLE VERTICAL PANEL
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PAVED SHOULDER REMOVAL PAVEMENT REMOVAL

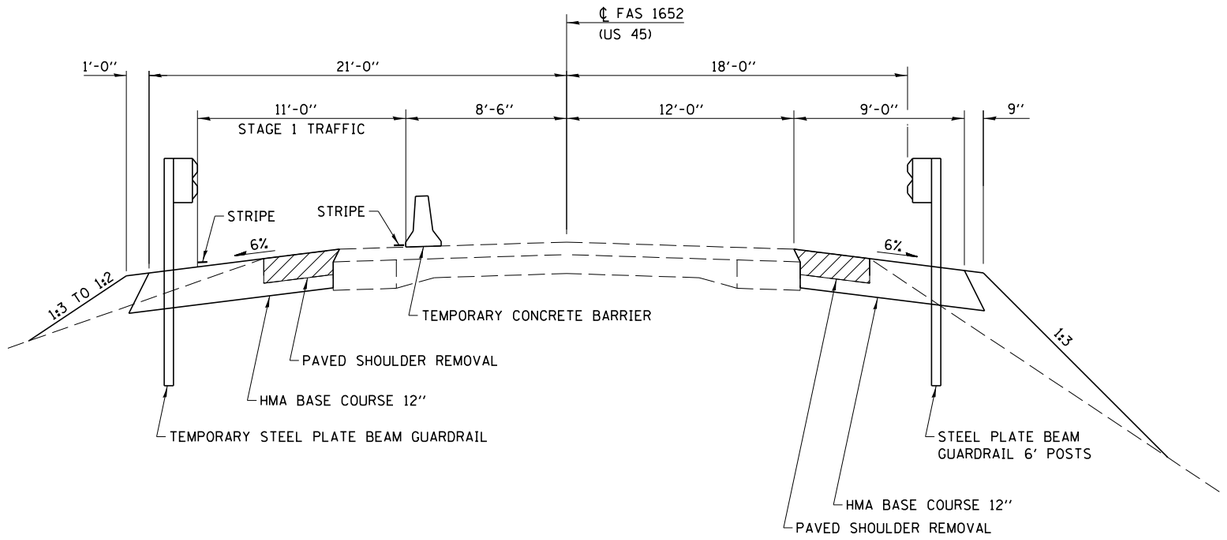
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
FILE NAME = D794698-sht-stage.dgn	DRAWN - AJH	REVISED -	MAINTENANCE OF TRAFFIC STAGE 1 CONSTRUCTION
PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	17
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

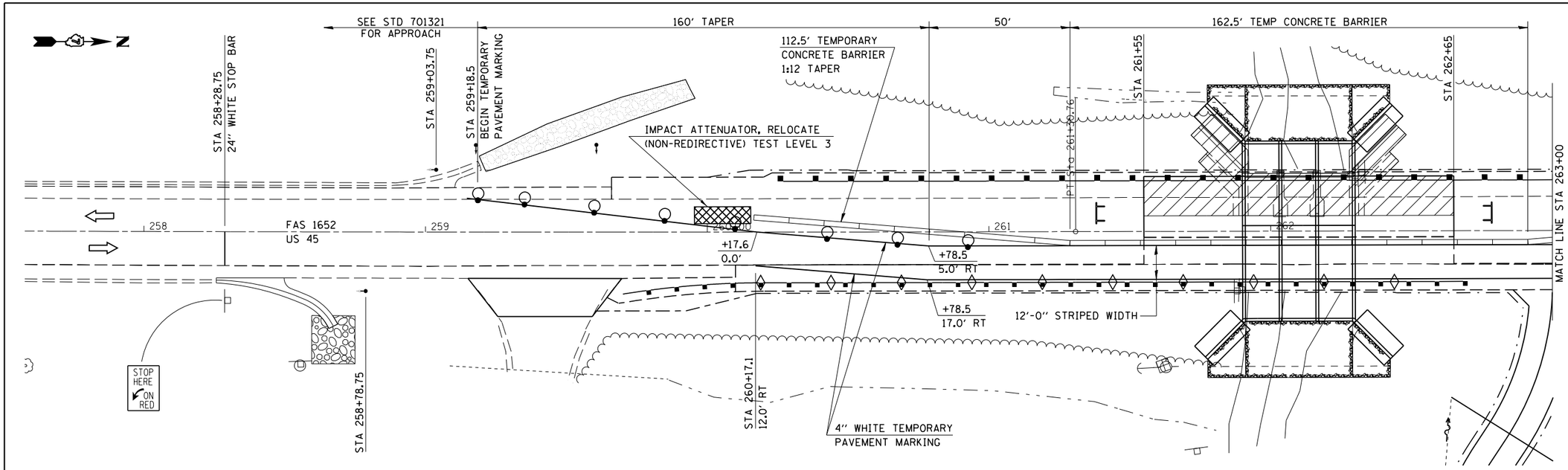


THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS AS NEEDED ALONG THE SHOULDER TO THE FIELD ENTRANCE RT STA 262+60



STAGE 1 TYPICAL CROSS SECTION

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.4 FILE NAME = D794698-sht-stage.dgn PLOT SCALE = 40.0000 ' / in. PLOT DATE = 8/12/2015	DESIGNED - NAK DRAWN - AJH CHECKED - NAK DATE - 11/21/2011	REVISED - REVISED - REVISED - REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**MAINTENANCE OF TRAFFIC** **STAGE 1 CONSTRUCTION**	F.A.S. RTE. 1652	SECTION (13BY) B-1
						COUNTY EFFINGHAM	TOTAL SHEETS 53
						SHEET NO. 18	CONTRACT NO. 94698
						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT



SEQUENCE OF OPERATIONS

STAGE 2

1. REMOVE CONFLICTING PAVEMENT MARKINGS AND PLACE TRAFFIC IN THE STAGE 2 LANE
2. RELOCATE TEMPORARY CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATORS; INSTALL TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES AS SHOWN IN THE PLANS
3. REMOVE STAGE 2 PORTION OF THE EXISTING STRUCTURE AND PAVEMENT AND CONSTRUCT STAGE 2 PORTION OF THE PROPOSED BOX CULVERT.
4. CONSTRUCT HMA BASE COURSE 12" STA. 261+55 TO STA. 262+65
5. CONSTRUCT EARTHWORK ALONG WEST SIDE, HMA SHOULDER AND INSTALL STEEL PLATE BEAM GUARDRAIL AND TRAFFIC BARRIER TERMINALS.

STAGE 3

1. REMOVE TRAFFIC CONTROL DEVICES, INSTALL SHORT-TERM PAVEMENT MARKINGS, AND PLACE TRAFFIC IN PERMANENT LANES
2. CONSTRUCT HMA SURFACE COURSE; INSTALL PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS.

GENERAL NOTES

1. SEE STANDARD 701321 FOR DETAILS OF TRAFFIC CONTROL AND PROTECTION NOT SHOWN
2. REMOVE EXISTING EDGE LINE STA 260+30.20 TO STA 263+92.95
3. THE TANGENT SECTION OF TEMPORARY CONCRETE BARRIER SHALL BE PINNED TO THE PAVEMENT WITH 3 PINS IN THE TRAFFIC SIDE OF EACH BARRIER SECTION

LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- CRYSTAL/BIDIRECTIONAL BARRIER WALL/GUARDRAIL MARKER
- DOUBLE VERTICAL PANEL
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PAVED SHOULDER REMOVAL PAVEMENT REMOVAL

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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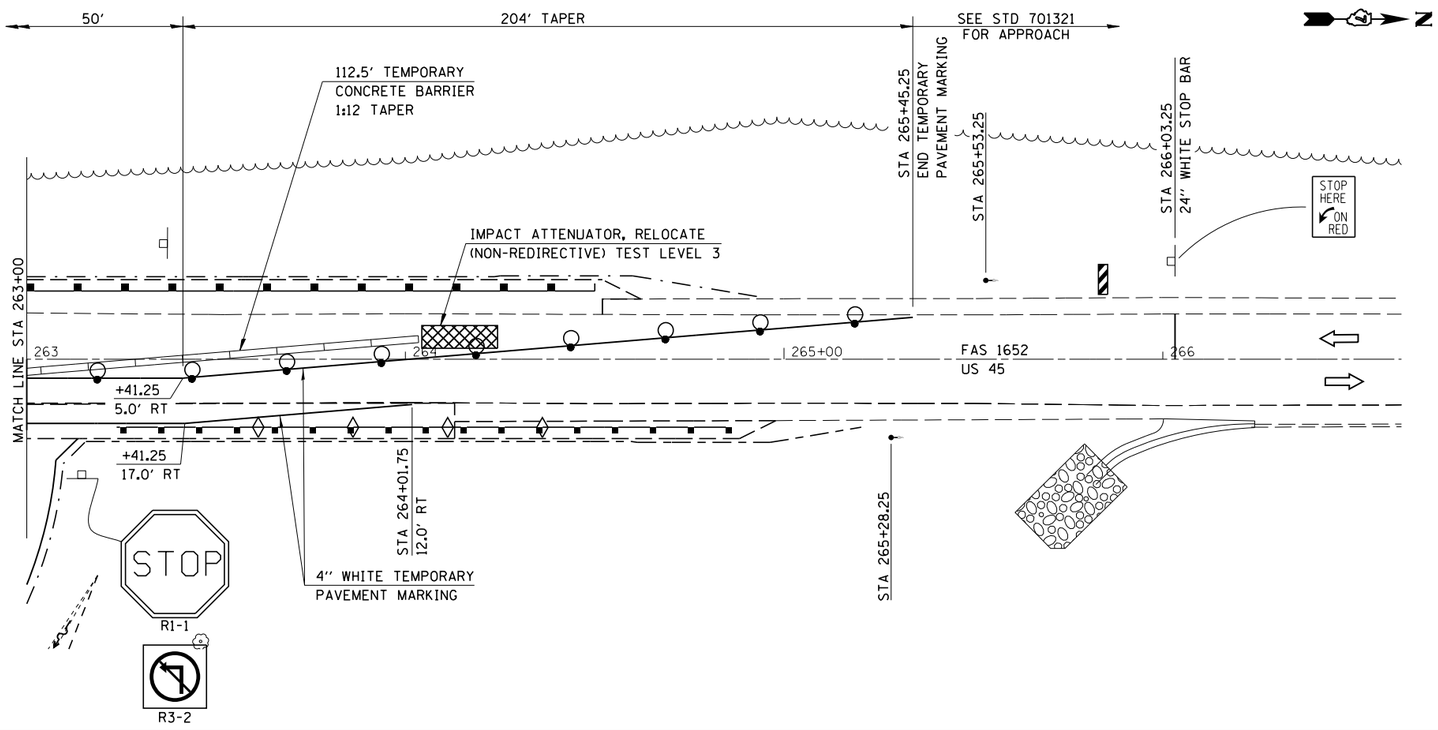
PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

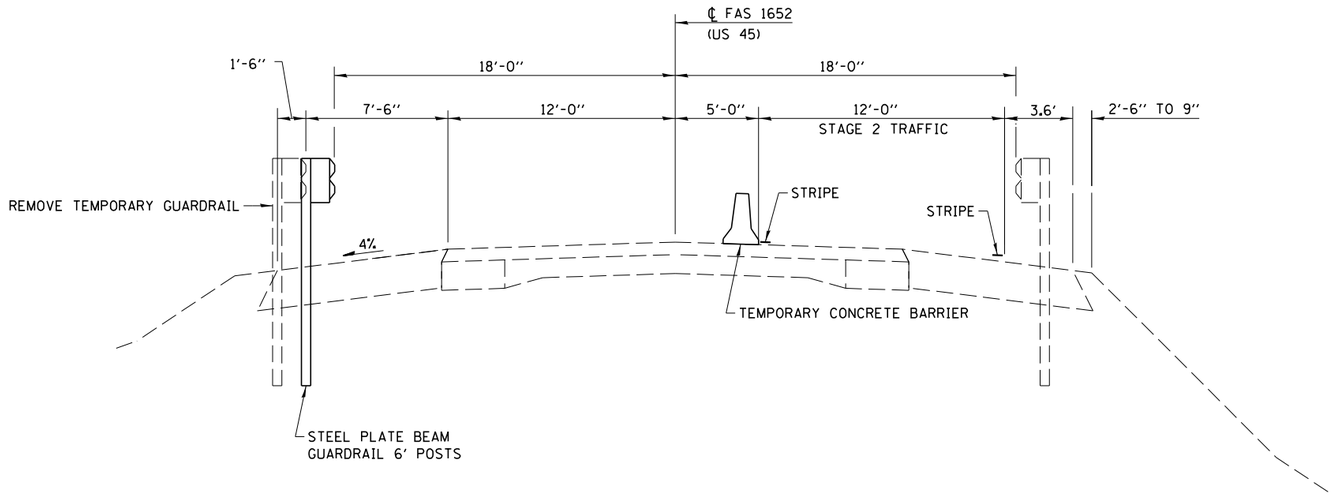
MAINTENANCE OF TRAFFIC
STAGE 2 CONSTRUCTION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	19
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- CRYSTAL/BIDIRECTIONAL BARRIER WALL/GUARDRAIL MARKER
- DOUBLE VERTICAL PANEL
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PAVED SHOULDER REMOVAL / PAVEMENT REMOVAL



STAGE 2 TYPICAL CROSS SECTION

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.4	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC STAGE 2 CONSTRUCTION
	FILE NAME = D794698-sht-stage.dgn	DRAWN - AJH	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -		
	PLOT DATE = 8/12/2015	DATE - 11/21/2011	REVISED -		

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	20
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEC 27, T9N, R6E, 3RD PM

EXISTING S.N. 025-0024
3 SPANS @ 12'-0" (NORTH TO SOUTH)
ON CLOSED ABUTMENTS AND SOLID
WALL PIERS SUPPORTING 1 SPAN @ 24'-0"
(EAST TO WEST) ON CLOSED ABUTMENTS
STATION 262+10; SKEW = 0°
EXISTING STRUCTURE TO BE REMOVED

STA 262+10 PROP. STRUCTURE NO. 025-2023
CAST IN PLACE CONCRETE BOX CULVERT
3 @ 12' X 12' ; SKEW = 0°
US INVERT ELEV. = 562.25
DS INVERT ELEV. = 561.95

BEGIN SECTION (13BY) B-1
STA 258+25.78

CONSTRUCTION LIMITS

TEMPORARY FENCE

EDGE OF EARTH SHOULDER

EX EASEMENT

EXISTING ROW LINE

RIPRAP

EDGE OF HMA BASE CSE 12"

15" CMP

259+00

261+30.76 PT

262+86 BUTT JOINT

+66 19.5'

+23 21.0'

4'
12'
12'
4'

257 258 259 FAS ROUTE 1652 (US 45) 260+00 261 262

12' 12' 9'

MATCH LINE STA 263+00

+25.8 +49.8

A

+10 21'

261+35 BUTT JOINT

18" CLAY TRR

RIPRAP

EXISTING ROW LINE

257+00 33' RT

+42 PE

48" RCP

EX 48" CMP TO REMAIN

SEE SHEET 26 FOR SECTION A-A

STEPS

OUTLET FOR TYPE B GUTTER (STD 606201)

PR POW

EDGE OF EARTH SHOULDER

BENCHMARK: 603
CHISELED SQUARE ON THE NORTHEAST CORNER OF A CONCRETE HEADWALL OF STR. 025-0024.
STATION 262+30 22' RT.; ELEVATION 579.56.

260+50 90' RT

CONSTRUCTION LIMITS

261+30.76 90' RT

CHANNEL EXCAVATION
THE CHANNEL SHALL BE EXCAVATED WITHIN THE LIMITS OF THE PROPOSED STRUCTURE THEN TAPER TO MATCH THE EXISTING CHANNEL AT THE RIGHT OF WAY LINE AND EASEMENT LINE

CHANNEL EXCAVATION= 281 CU YD

EXISTING ℄ PROFILE

130.00' V.C.

VPC STA 261+35 ELEV = 582.10

PROPOSED ℄ PROFILE

VPI STA 262+00 ELEV = 579.97

VPT STA 262+65 ELEV = 579.61

STA 262+86 ELEV = 579.50

-3.28% -0.54%

100 YR H.W.E. = 573.5
50 YR H.W.E. = 572.8

577.00 -14.89% +00.00 EL. 572.12 -4.20%

STA 261+31 ELEV = 582.23

564.77

	600	595	590	585	580	575	570	565	560
EXISTING	599.25	598.47	597.69	596.90	596.10	595.30	594.46	593.62	592.77	591.93	591.08	590.28	589.48	588.72	587.96	587.20	586.36	585.53	584.75	584.00	583.25	582.59	581.93	581.36	580.84	580.40	580.08	579.83	579.66	579.54	579.43
PROPOSED		598.47																					581.94	581.34	580.84	580.41	580.07	579.81	579.64	579.53	

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

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

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

CEC Cummins Engineering Corporation
Civil and Structural Engineering

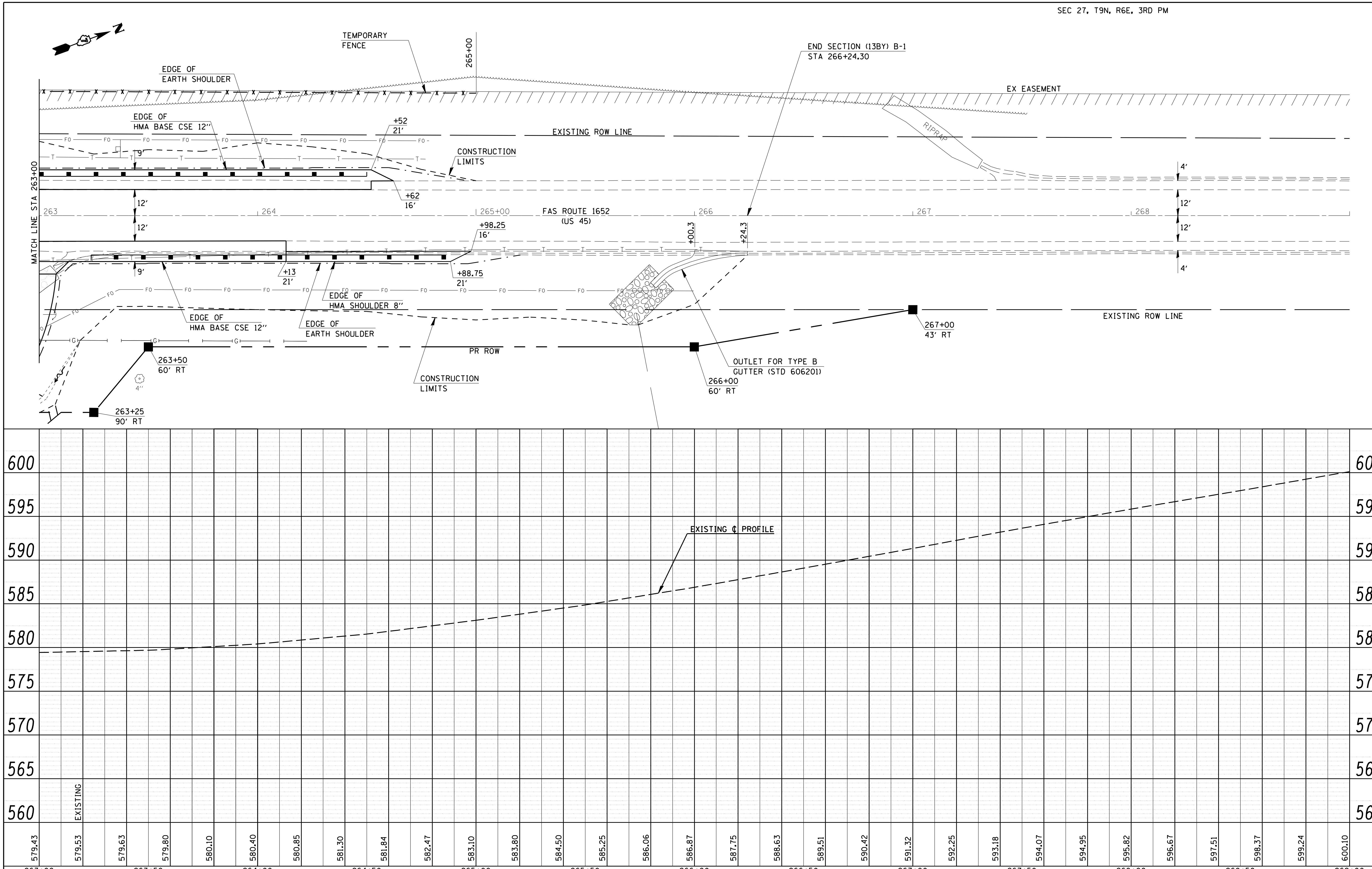
JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-plan.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE US 45

SCALE: | SHEET NO. OF SHEETS | STA. 257+00 TO STA. 263+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	21
		CONTRACT NO. 94698		
	ILLINOIS FED. AID PROJECT			



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PROFILE — NOTE BOOK NO. — SURVEYED — PLOTTED — GRADES CHECKED — B.M. NOTED — STRUCTURE NOTAT'NS CH'KD — BY — DATE

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -	
FILE NAME = D794698-sht-plan.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

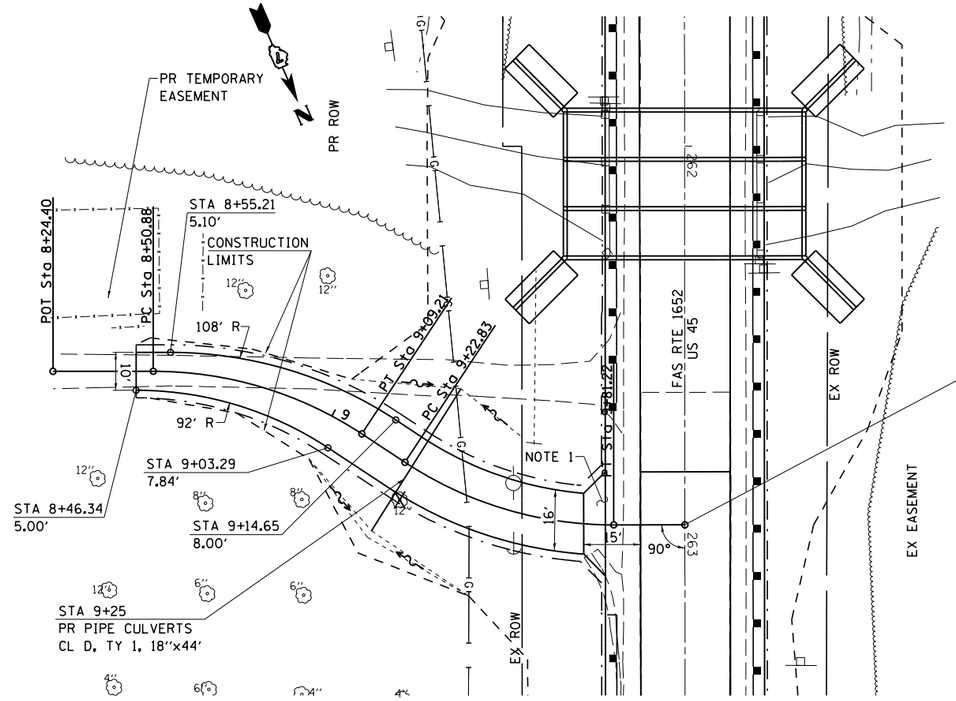
PLAN & PROFILE US 45

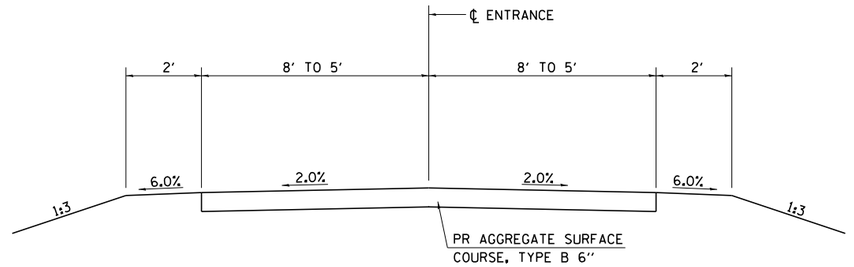
SCALE: | SHEET NO. OF SHEETS | STA. 263+00 TO STA. 269+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	22

CONTRACT NO. 94698

ILLINOIS | FED. AID PROJECT





PROPOSED TYPICAL CROSS SECTION

NOTE 1: CONSTRUCT INCIDENTAL HMA SURFACING 3" ON AGGREGATE BASE COURSE TYPE B 6" FROM EDGE OF SHOULDER TO END OF ENTRANCE FLARES.

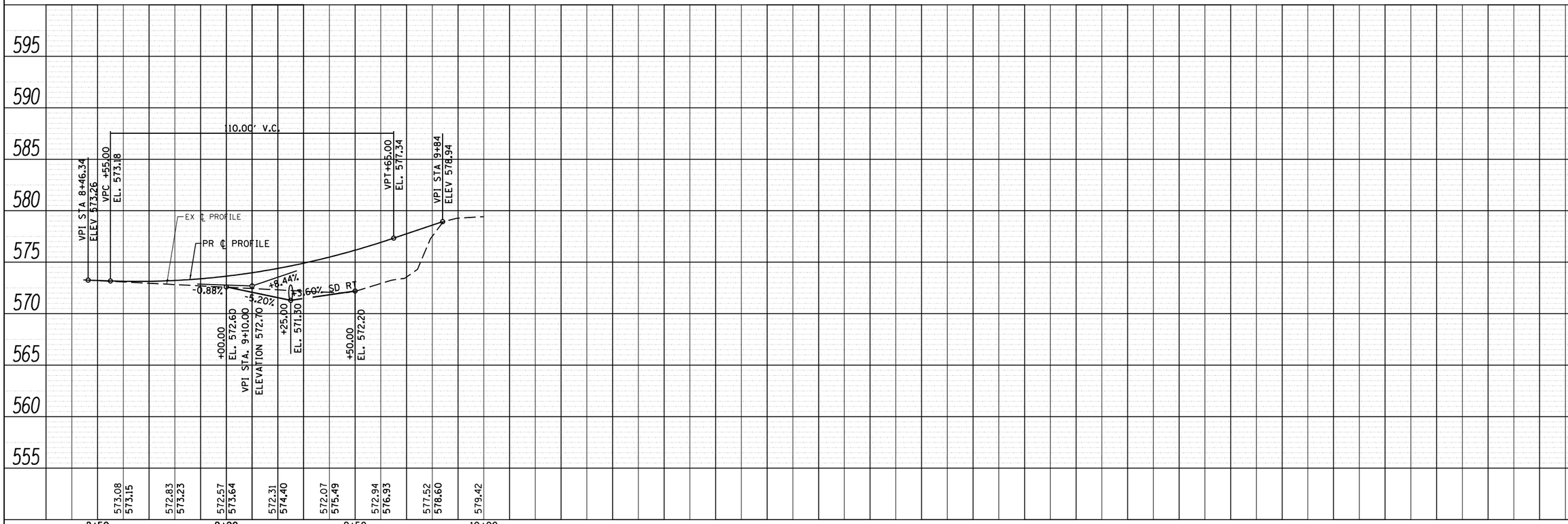
PROP. CURVE FE101
PI STA. = 8+80.90
Δ = 33° 25' 00" (RT)
D = 57° 17' 45"
R = 100.00'
T = 30.02'
L = 58.32'
E = 4.41'
e = NORMAL CROWN
T.R. = -----
S.E. RUN = -----
P.C. STA = 8+50.88
P.T. STA = 9+09.21

PROP. CURVE FE102
PI STA. = 9+52.88
Δ = 33° 27' 16" (LT)
D = 57° 17' 45"
R = 100.00'
T = 30.05'
L = 58.39'
E = 4.42'
e = NORMAL CROWN
T.R. = -----
S.E. RUN = -----
P.C. STA = 9+22.83
P.T. STA = 9+81.22

FE			
CONTROL POINT	STATION	COORDINATES	
		NORTHING	EASTING
P.O.T	8+24.40	920657.07	934179.33
P.C.	8+50.88	920666.10	934154.43
P.I.	8+80.90	920676.33	934126.21
P.T.	9+09.21	920700.41	934108.29
P.C.	9+22.83	920711.34	934100.16
P.I.	9+52.88	920735.45	934082.22
P.T.	9+81.22	920745.67	934053.96
P.O.T	10+00.00	920752.06	934036.30

PLAN: SURVEYED; PLOTTED; CROSS CHECKED; ALIGNMENT CHECKED; RT. OF WAY CHECKED; CADD FILE NAME; NOTE BOOK; NO.; BY; DATE

PROFILE: SURVEYED; PLOTTED; CROSS CHECKED; BAR. NOTED; STRUCTURE NOTATNS CHKD; NOTE BOOK; NO.; BY; DATE



CEC Cummins Engineering Corporation
Civil and Structural Engineering

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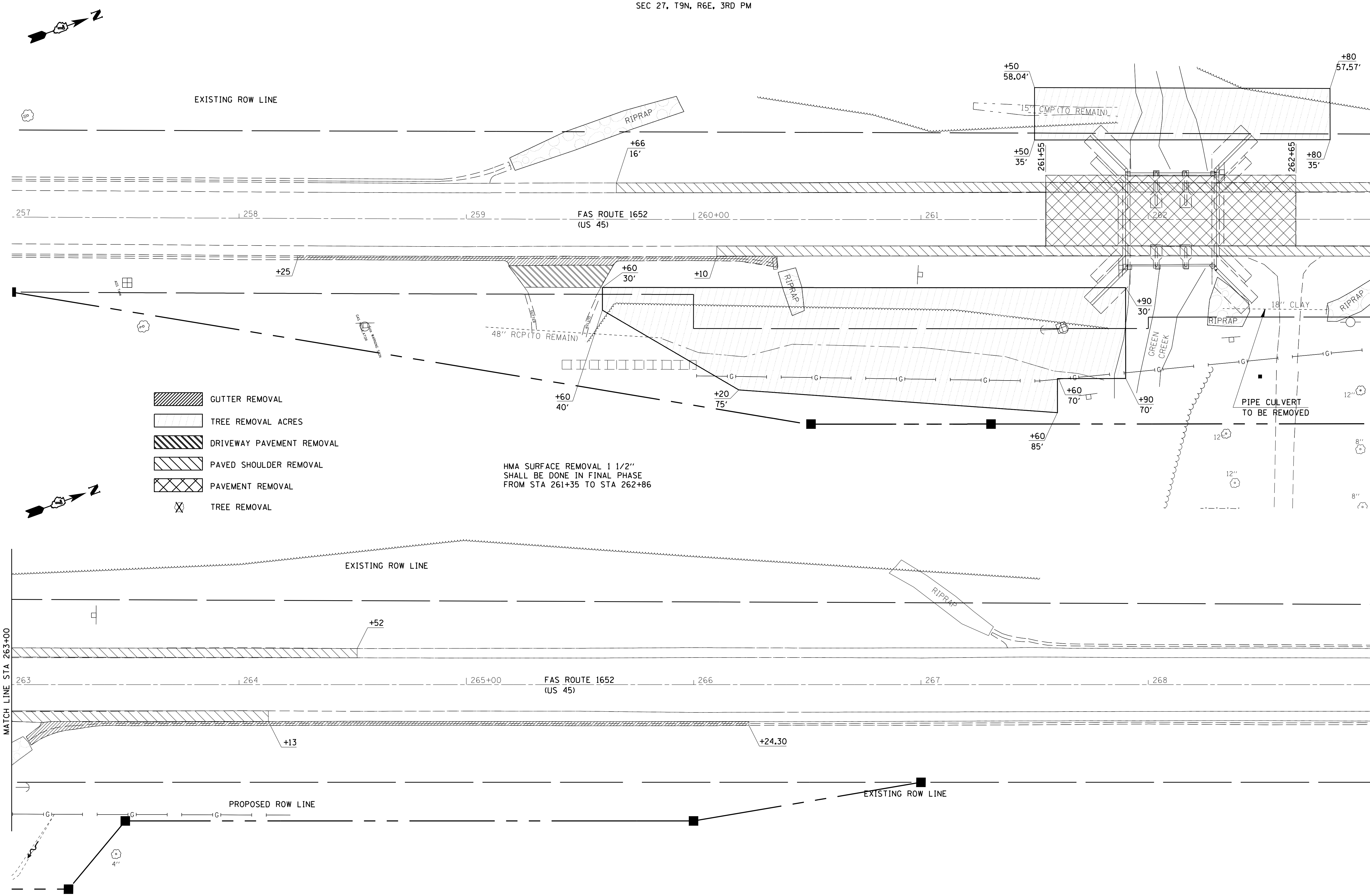
FILE NAME = D794698-sht-ent.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 11/23/11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD ENTRANCE PLAN & PROFILE

SCALE: | SHEET NO. OF SHEETS | STA. 8+24.40 TO STA. 10+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	52	23
		CONTRACT NO. 94698		
	ILLINOIS FED. AID PROJECT			



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PROFILE | SURVEYED | PLOTTED | GRADES CHECKED | B.M. NOTED | STRUCTURE NOTAT'NS CH'KD | NOTE BOOK | NO. | BY | DATE

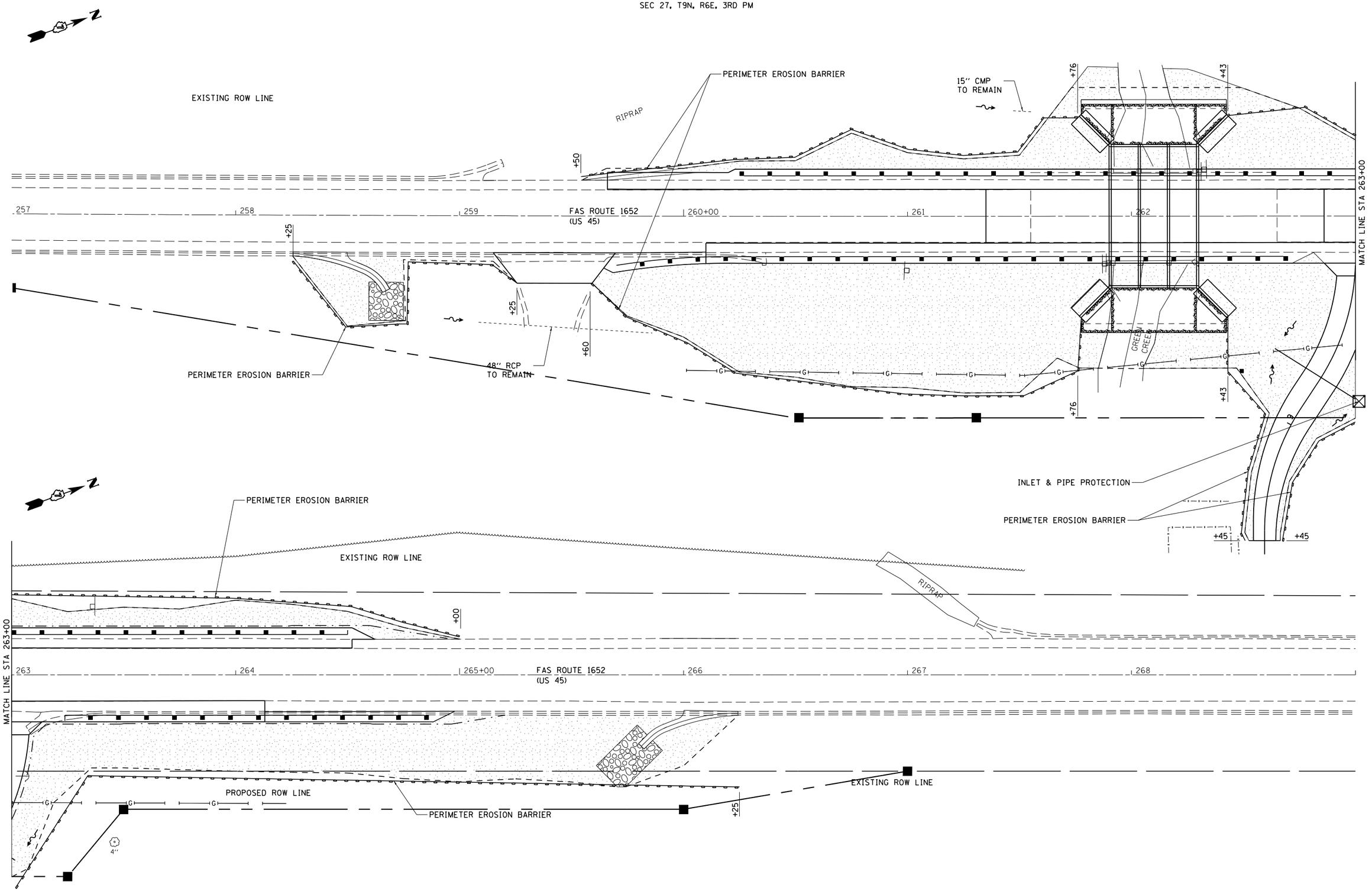
CEC Cummins Engineering Corporation	JOB = 2223.4	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
Civil and Structural Engineering	FILE NAME = $FILES$	DRAWN - AJH	REVISED -	
	PLOT SCALE = $SCALE$	CHECKED - NAK	REVISED -	
	PLOT DATE = $DATE$	DATE - 11/23/11	REVISED -	

REMOVAL PLAN

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	24
		CONTRACT NO. 94698		
	ILLINOIS FED. AID PROJECT			

SEC 27, T9N, R6E, 3RD PM



PLAN
SURVEYED
PLOTTED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS SECT. CHECKED
R.M. NOTED
STRUCTURE NO.
BY
DATE

JOB = 2223.4	DESIGNED - NAK	REVISED -	
FILE NAME = D794698-sht-erosion.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 11/29/2011	REVISED -	

CEC Cummins Engineering Corporation
Civil and Structural Engineering

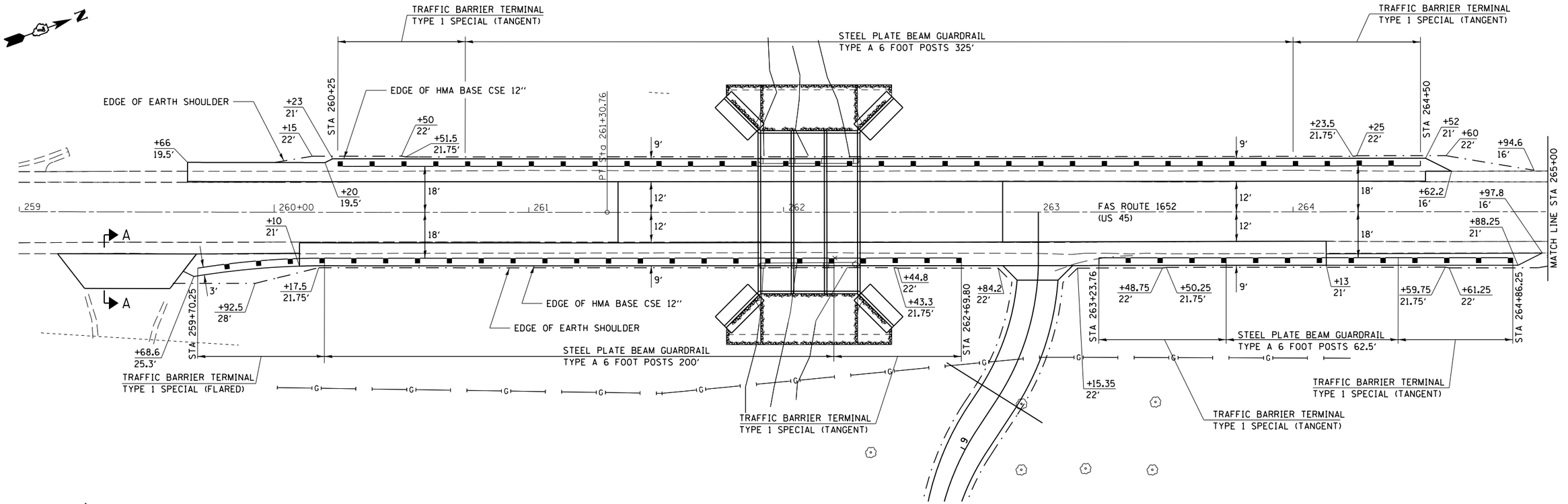
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

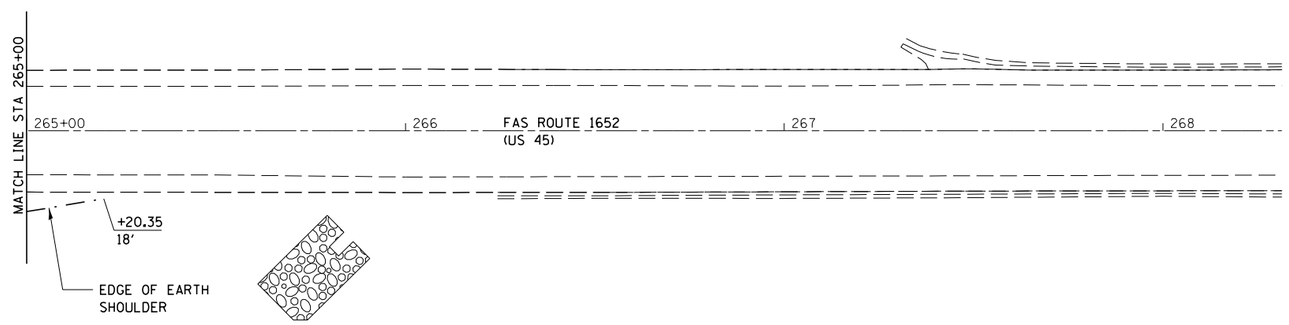
EROSION CONTROL PLAN

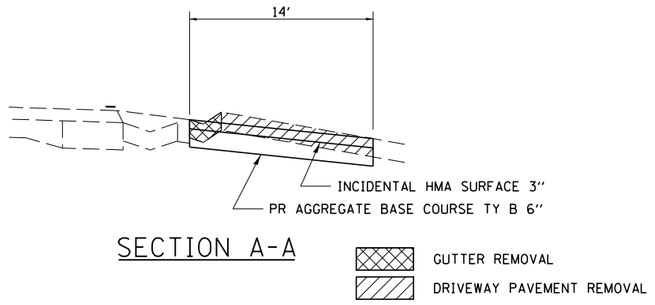
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	25
		CONTRACT NO. 94698		
		ILLINOIS FED. AID PROJECT		

SEC 27, T9N, R6E, 3RD PM







SECTION A-A

PLAN: SURVEYED, PLOTTED, CROSS CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, CROSS CHECKED, BM. NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK, NO., BY, DATE

CEC Cummins Engineering Corporation
Civil and Structural Engineering

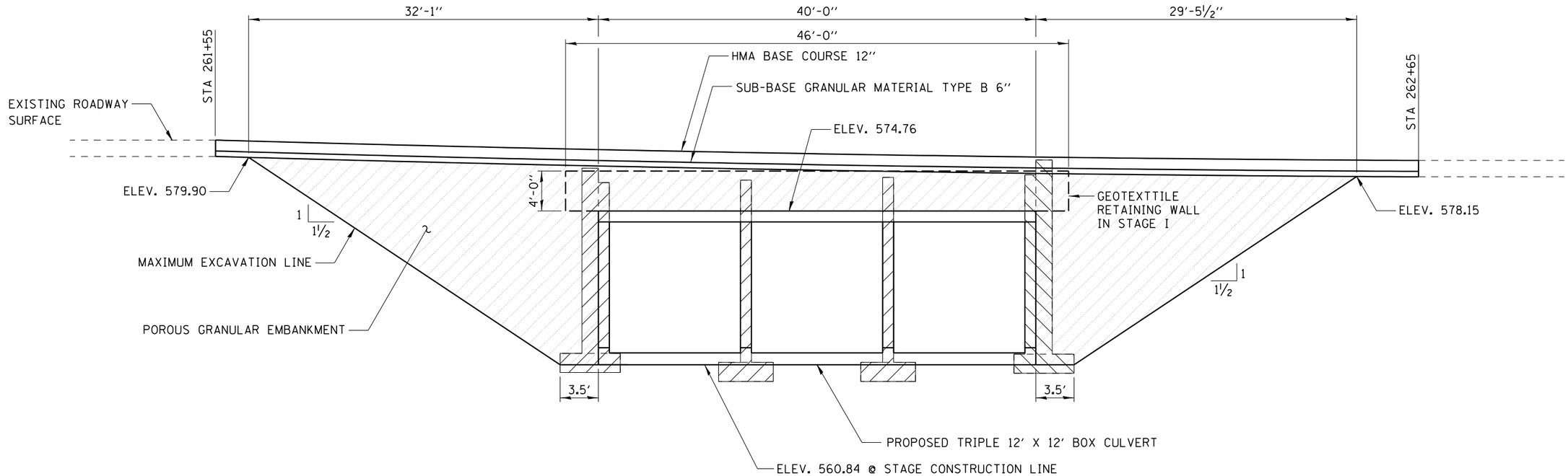
JOB = 2223.4	DESIGNED - NAK	REVISED -	
FILE NAME = D794698-sht-rail.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 12/2/11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL & SHOULDER LAYOUT

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	26
		CONTRACT NO. 94698		
	ILLINOIS	FED. AID PROJECT		



CULVERT BACKFILL

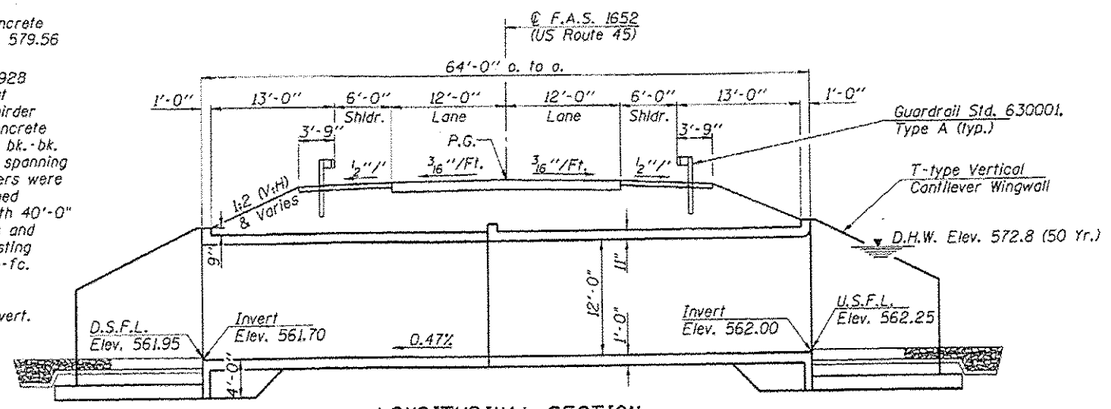
CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.4	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT BACKFILL	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME = D794698-sht-CulvertBackfill.dgn	DRAWN - AJH	REVISED -			1652	(13BY) B-1	EFFINGHAM	53	27
	PLOT SCALE = 10.0000 ' / in.	CHECKED - NAK	REVISED -		SHEET NO. OF SHEETS			CONTRACT NO. 94698		
	PLOT DATE = 8/12/2015	DATE - 12/2/11	REVISED -			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

B.M. #603 Chiseled Square on the N.E. corner of concrete headwall S.N. 025-0024, 22' Rt. Sta. 262+30. Elev. 579.56

Existing Structure: SN 025-0024, originally built in 1928 and reconstructed in 1951 as SBI 25, Section 13BY at Sta. 262+10. The original structure is a R.C. thru girder single span bridge on timber pile supported closed concrete abutments. The original thru girders spanned 43'-0" bk.-bk. from North to South supporting a concrete deck slab spanning 24'-0" o.-o. from East to West. The R.C. thru girders were partially removed and the original structure was widened on the East and West with a three span R.C. slab with 40'-0" bk.-bk. closed concrete abutments on spread footings and solid wall concrete piers on spread footings. The existing structure has a clear roadway width of 39'-0" fc.-to-fc. and a concrete deck measuring 41'-0" o.-to-o. The existing structure will be removed and replaced, in stages, with a triple 12'x12' cast-in-place box culvert.

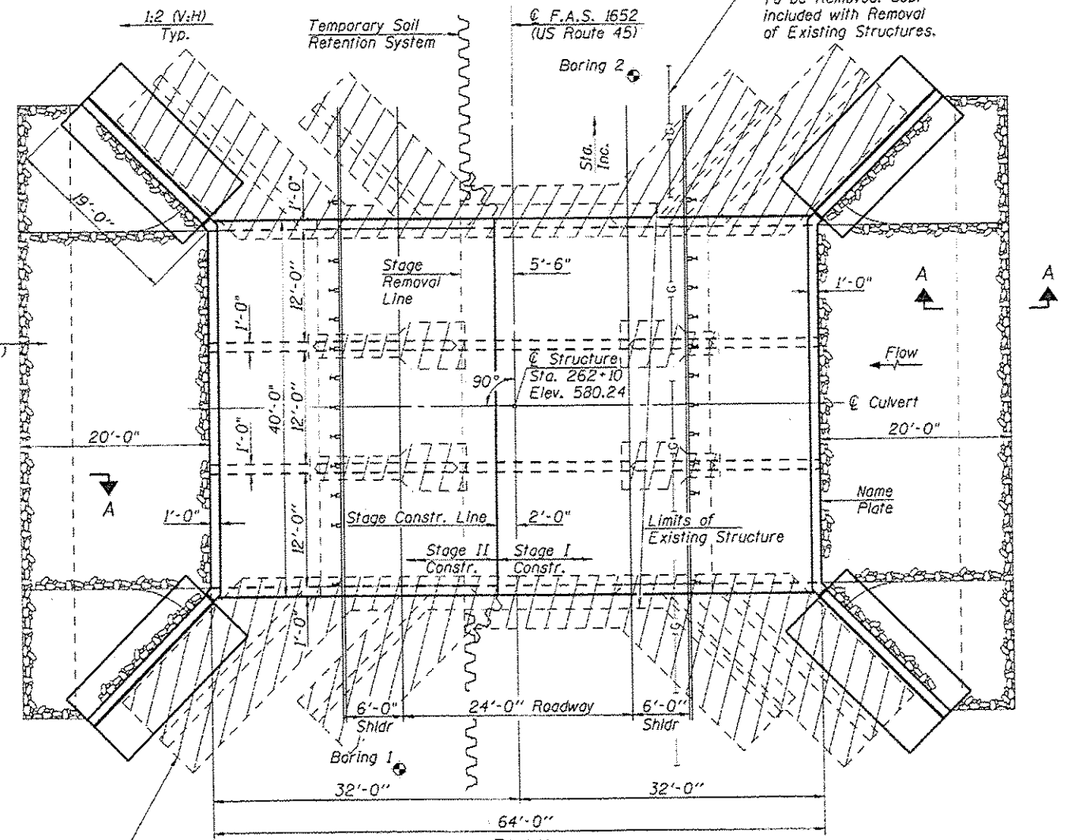
Traffic shall be maintained at all times utilizing Stage Construction.

No Salvage.



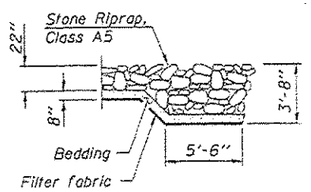
LONGITUDINAL SECTION

(Looking North)



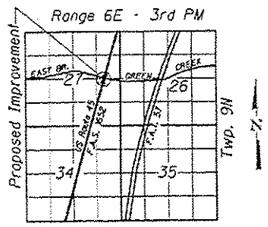
PLAN

Hatched Areas indicate that the Existing Footings are to be completely removed. Cost included with Removal of Existing Structures.

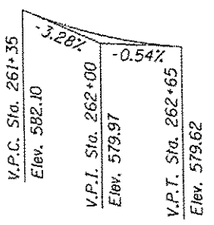


SECTION A-A

Stone Riprap Class A5 (Typ.)

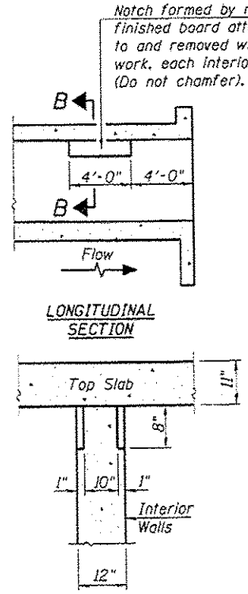


LOCATION SKETCH



PROFILE GRADE

(along ℄ F.A.S. Rte. 1652)



SECTION B-B

PHOEBE NESTING SITE DETAILS

(Downstream End Only)

STATION 262+10
BUILT 20 BY
STATE OF ILLINOIS
F.A.S. RTE. 1652
SEC. (13BY)B-1
LOADING HL-93
STR. NO. 025-2023

NAME PLATE

See Std. 515001

INDEX OF SHEETS

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	DS	US
	557.7	558.0

DESIGN SPECIFICATIONS

2010 AASHTO Bridge Design Specifications with 2010 Interims

LOADING HL-93

Allow 50#/Sq. Ft. for future wearing surface

DESIGN STRESSES

f'_c = 3,500 psi

f_y = 60,000 psi (Reinforcement)

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. 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 1 removal to ensure the remaining portion will not be prematurely damaged.
4. Precast culvert alternate will not be permitted.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Stone Riprap, Class A5	Sq. Yd.	248
Filter Fabric	Sq. Yd.	248
Removal of Existing Structures	Each	1
Concrete Box Culverts	Cu. Yd.	382.5
Reinforcement Bars	Pound	61530
Temporary Soil Retention System	Sq. Ft.	785
Name Plates	Each	1
Bar Splicers	Each	256
Reinforcement Bars, Epoxy Coated	Pound	1350
Geotextile Retaining Wall	Sq. Ft.	184
Temporary Steel Plate Beam Guard Rail, Attached to Structures	Foot	50

WATERWAY INFORMATION

Drainage Area = 9.4 sq. mi. Low Grade Elev. 579.42 @ Sta. 263+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	1847	233	313	570.7	0.9	0.2	571.6	570.9
Design	50	2966	308	389	572.8	1.4	0.7	574.2	573.5
Base	100	3468	333	414	573.5	1.7	0.9	575.2	574.4
Overtopping	500	4695	405	-	575.5	4.0	-	579.5	-
Max. Calc.	500	4695	405	432	575.5	4.0	2.0	579.5	577.5

10 year velocity through existing bridge = 7.93 fps
10 year velocity through proposed culvert = 5.90 fps

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
MICHAEL D. CUMMINS
4822
SPRINGFIELD
STATE OF ILLINOIS

8/12/15

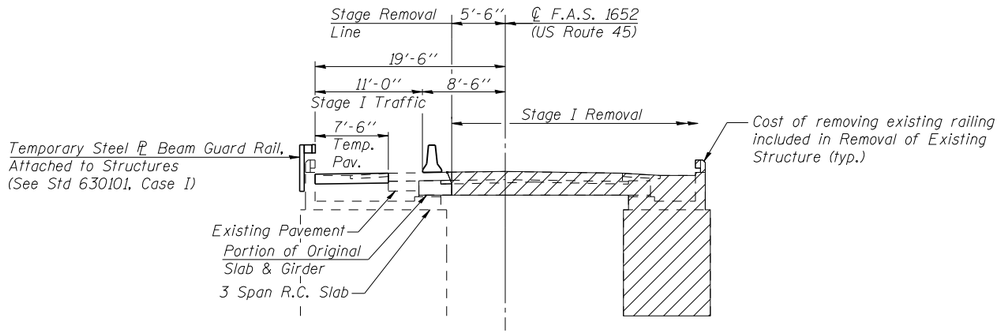
(Expires 11/30/2016)

GENERAL PLAN & ELEVATION
US ROUTE 45 OVER EAST BRANCH GREEN CREEK
F.A.S. ROUTE 1652 SECTION (13BY)B-1
EFFINGHAM COUNTY
STATION 262+10
STRUCTURE NO. 025-2023

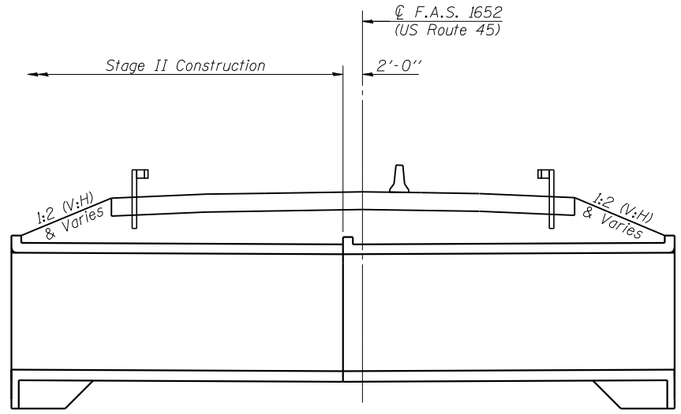
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED A.A.N.
FILE = 0252023-94698-001-2223.4gpe.dgn	CHECKED R.K. & M.D.C.
DATE = 8/11/2015	DRAWN S.J.S.
	CHECKED A.A.N. & M.D.C.

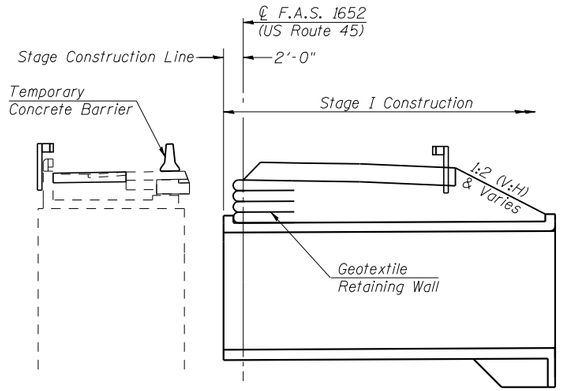
Sheet	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1 of 9	1652	(13BY)B-1	EFFINGHAM	53	28
			CONTRACT NO. 94698		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



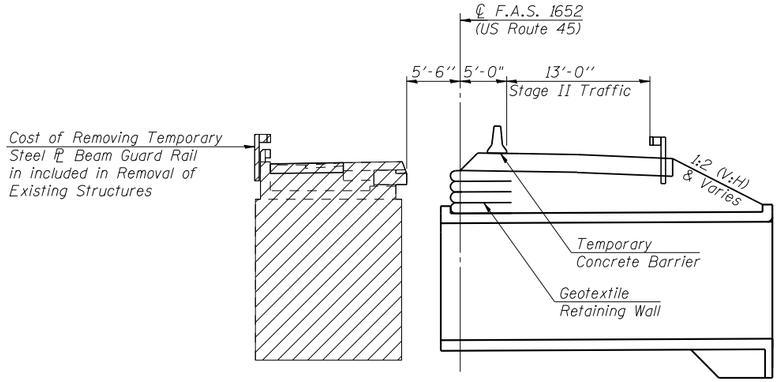
STAGE I REMOVAL



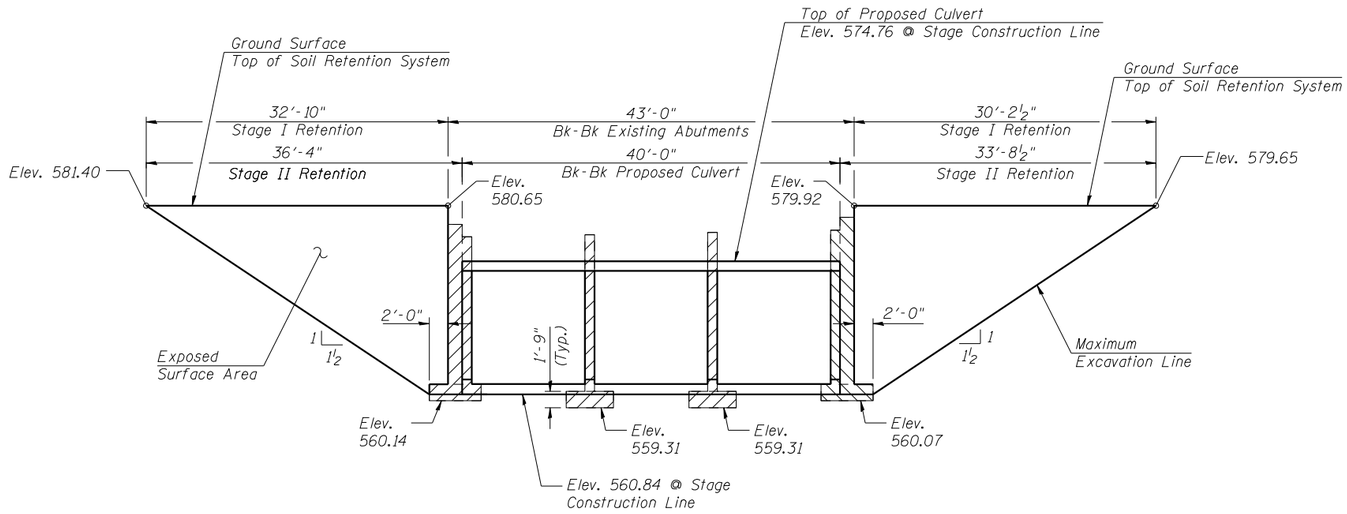
STAGE II CONSTRUCTION



STAGE I CONSTRUCTION



STAGE II REMOVAL



TEMPORARY SOIL RETENTION SYSTEM

(Looking West)

Notes:

1. All staging sections are Looking North
2. See Roadway Plans for Quantity of Temporary Concrete Barrier.
3. Hatched areas indicate Removal of Existing Structures.
4. 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.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Temporary Soil Retention System	Sq. Ft.	785
Temporary Steel ℄ Beam Guard Rail, Attached to Structures	Foot	50

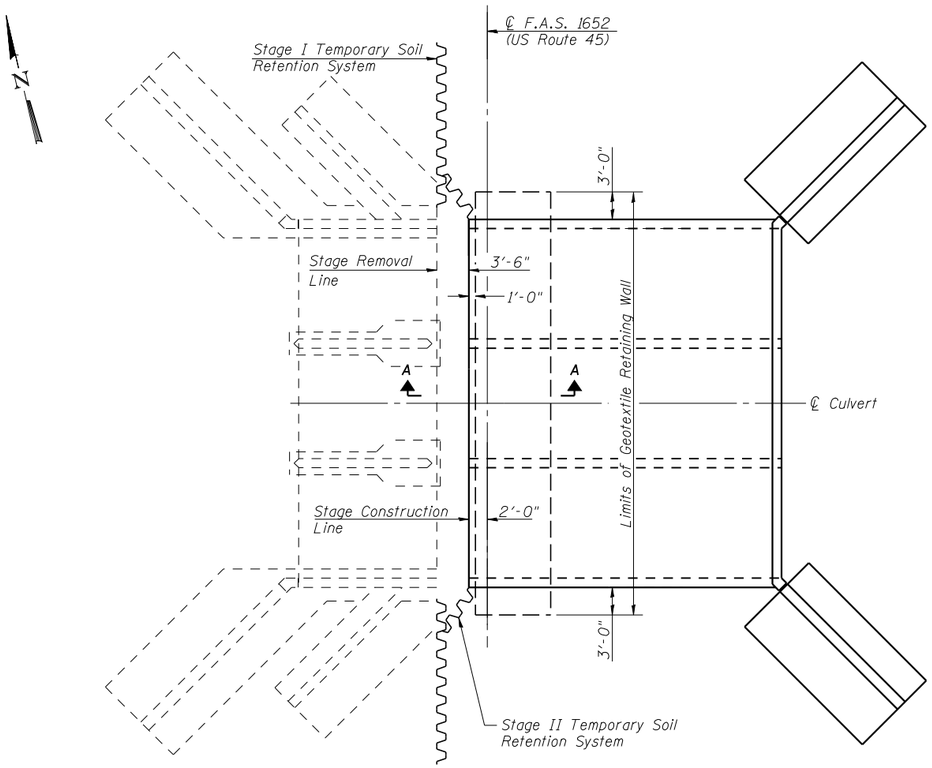
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 025-2023

CEC Cummins Engineering Corporation
Civil and Structural Engineering

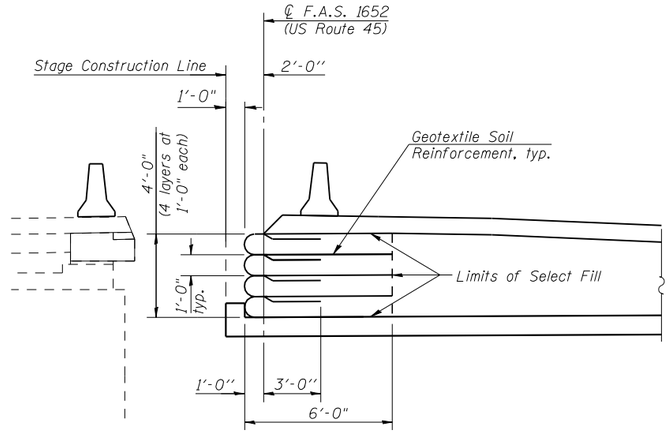
JOB = 2223.4	DESIGNED	A.A.N.
FILE = 0252023-94698-002-003-2223.4stage.dgn	CHECKED	R.K. & M.D.C.
DATE = 9/8/2015	DRAWN	S.J.S.
	CHECKED	A.A.N. & M.D.C.

Sheet 2 of 9

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY)B-1	EFFINGHAM	53	29
		CONTRACT NO. 94698		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



PLAN



SECTION A-A

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Geotextile Retaining Wall	Sq. Ft.	184

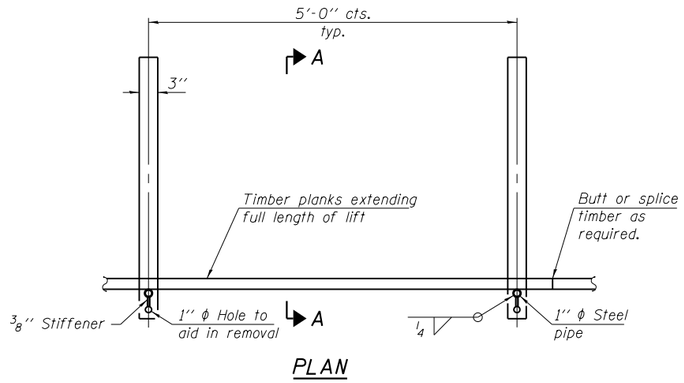
GEOTEXTILE RETAINING WALL
STRUCTURE NO. 025-2023

CEC Cummins Engineering Corporation
Civil and Structural Engineering

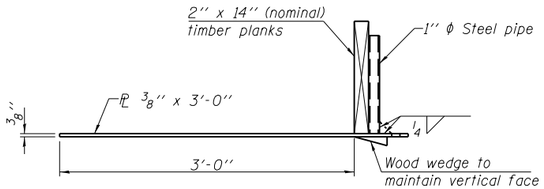
JOB = 2223.4		DESIGNED	A.A.N.
FILE = 0252023-94698-002-003-2223.4stage.dgn		CHECKED	R.K. & M.D.C.
DATE = 9/8/2015		DRAWN	S.J.S.
		CHECKED	A.A.N. & M.D.C.

Sheet 3 of 9

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY)B-1	EFFINGHAM	53	30
		CONTRACT NO. 94698		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



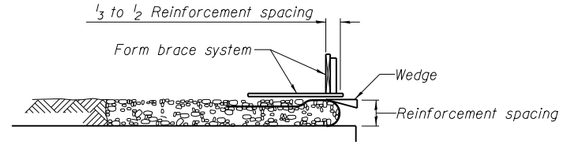
PLAN



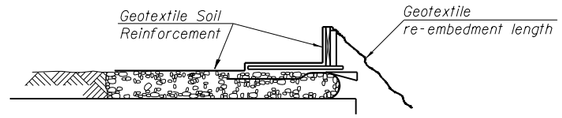
SECTION A-A

Note:
This is a suggested detail, the Contractor is responsible for the design of the form brace system to be used.

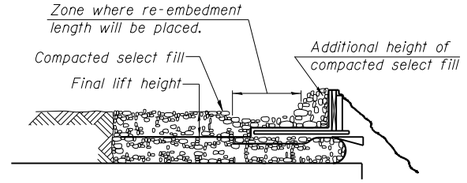
TEMPORARY GEOTEXTILE FORM BRACE DETAIL



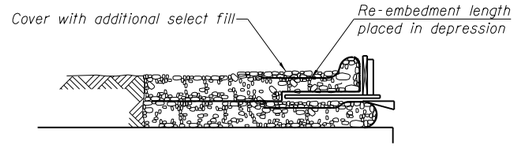
1. Place form brace system on completed reinforcement level; back from the finished fabric face a distance of 1/3 to 1/2 the geotextile reinforcement spacing.



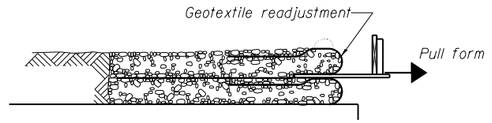
2. Position fabric so that the required geotextile re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.



3. Compact select fill material in lifts to final lift height, create (±3'') depression in zone where re-embedment length will be located and place additional height of compacted select fill against form brace.



4. Fold geotextile re-embedment length back over form brace into zone where depression was made in select fill and place additional select fill (±3'') to embed geotextile and bring to final lift height.



5. Pull form brace outward allowing geotextile face to slightly readjust to form tight round face level with plan reinforcement spacing.

TEMPORARY GEOTEXTILE WALL CONSTRUCTION SEQUENCE

Note:
The geotextile soil reinforcement shall have a minimum allowable tensile strength (T min.) of 30 lb./in. as determined by the procedure described in the Special Provision. The computations supporting the determination of (T min.) shall be submitted to the engineer for approval.

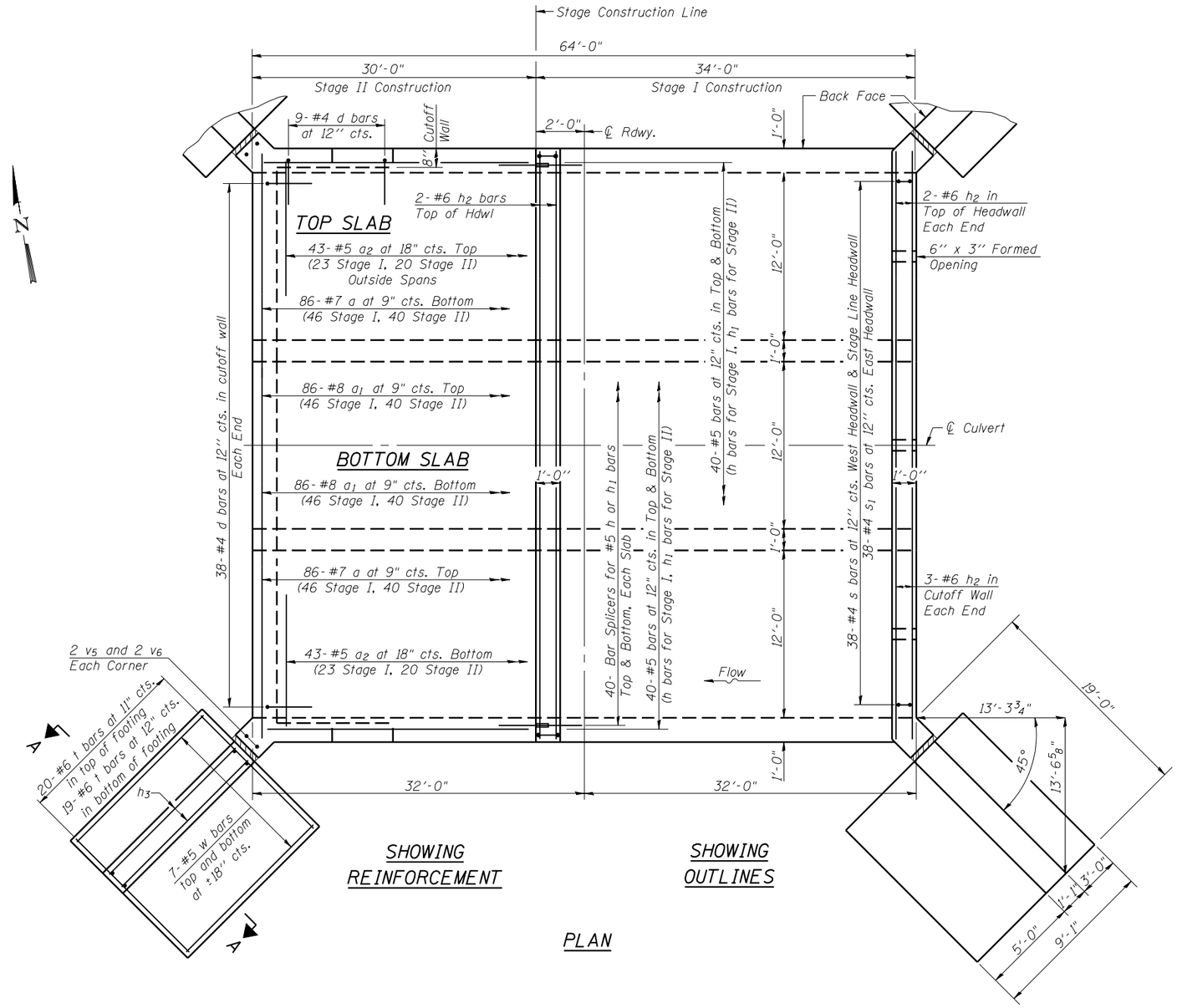
GEOTEXTILE RETAINING WALL STRUCTURE NO. 025-2023

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED A.A.N.
FILE = 0252023-94698-004-2223.4geotextilewall.dgn	CHECKED R.K. & M.D.C.
DATE = 8/12/2015	DRAWN S.J.S.
	CHECKED A.A.N. & M.D.C.

Sheet 4 of 9

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY)B-1	EFFINGHAM	53	31
		CONTRACT NO. 94698		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

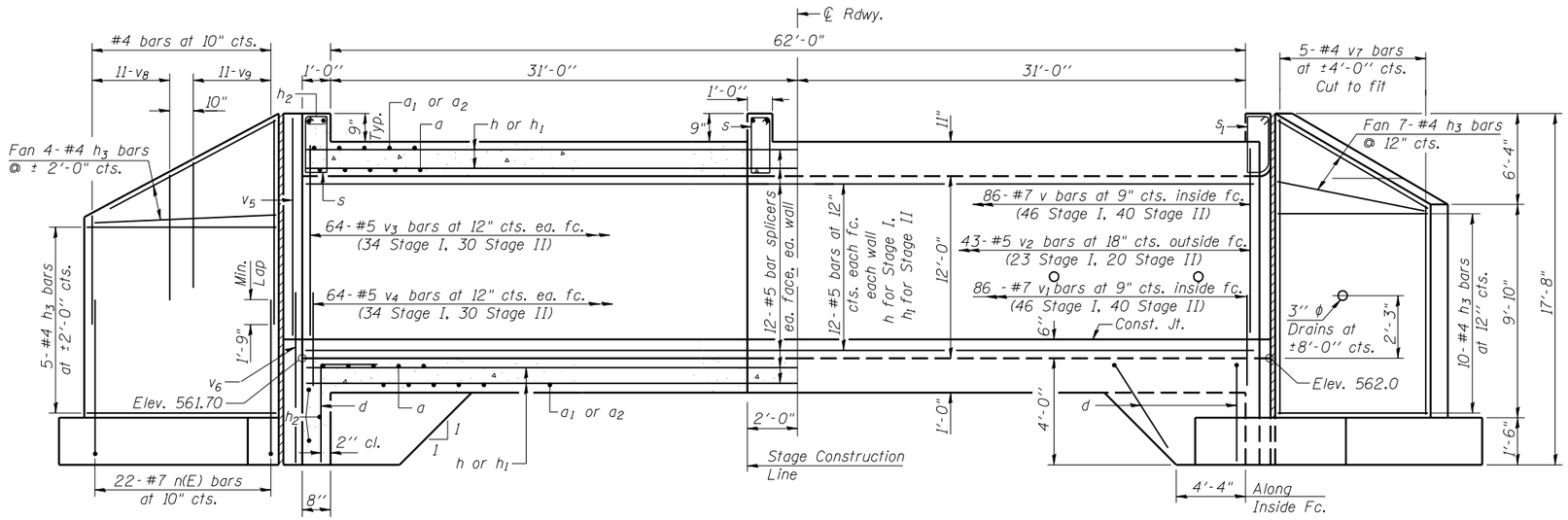


Note: See Sheet 6 of 9 for Section A-A.

CULVERT DETAILS
STRUCTURE NO. 025-2023

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.4	DESIGNED A.A.N.
	FILE = 0252023-94698-005-006-2223.4culvert.dgn	CHECKED R.K. & M.D.C.
	DATE = 9/8/2015	DRAWN S.J.S.
		CHECKED A.A.N. & M.D.C.

Sheet 5 of 9	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1652	(13BY)B-1	EFFINGHAM	53	32
			CONTRACT NO. 94698		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

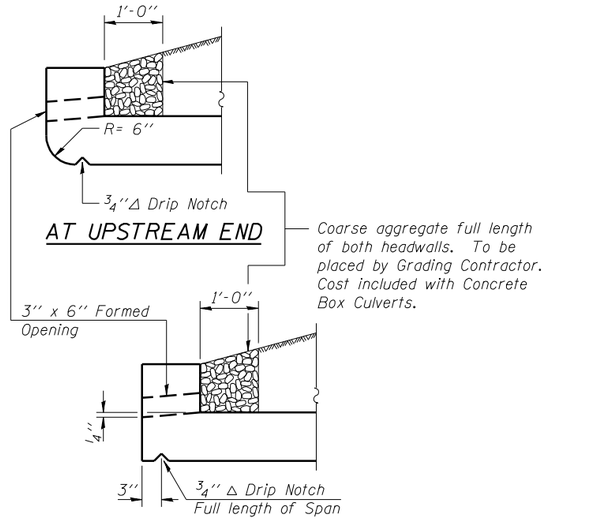


REINFORCEMENT BACK FACE

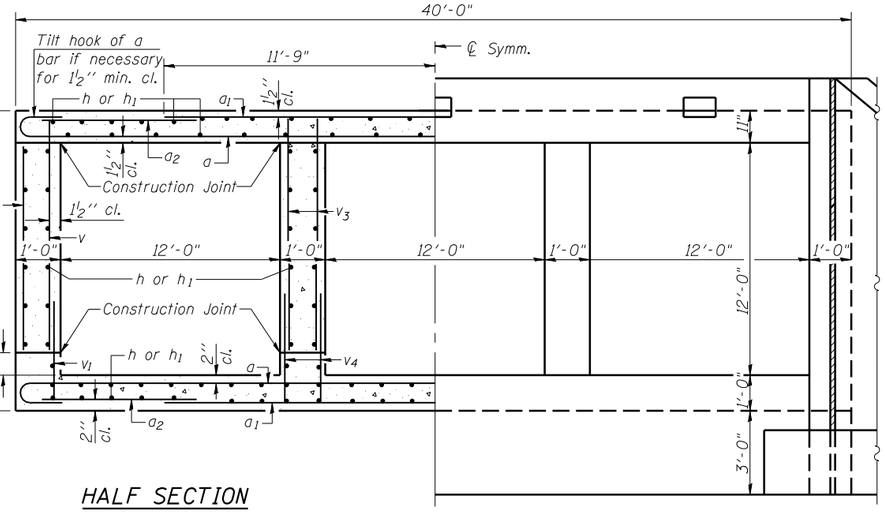
HALF LONG. SECTION
Showing bars in Center Wall

HALF ELEVATION
Showing bars in Outside Wall

REINFORCEMENT FRONT FACE

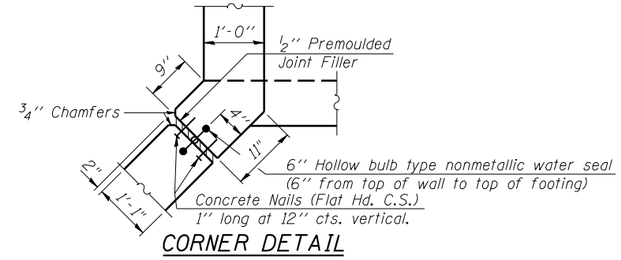


DRAIN DETAIL

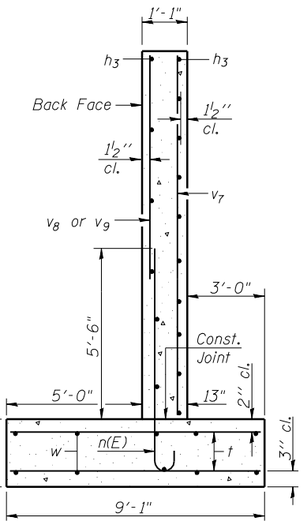


HALF SECTION THRU BARREL

HALF END ELEVATION



CORNER DETAIL

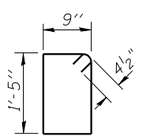


SECTION A-A

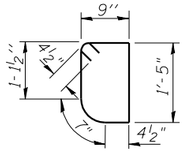
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	172	#7	41'-5"	
a_1	172	#8	23'-6"	
a_2	172	#5	9'-10"	
d	112	#4	5'-6"	
h	256	#5	33'-9"	
h_1	256	#5	29'-9"	
h_2	12	#6	39'-9"	
h_3	104	#4	17'-10"	
n(E)	88	#7	7'-6"	
t	156	#6	8'-9"	
v	172	#7	12'-1"	
v_1	172	#7	3'-7"	
v_2	86	#5	11'-2"	
v_3	256	#5	12'-1"	
v_4	256	#5	3'-3"	
v_5	8	#5	12'-10"	
v_6	8	#5	6'-3"	
v_7	20	#4	15'-10"	
v_8	44	#4	9'-0"	
v_9	44	#4	12'-6"	
w	56	#5	17'-10"	
s	76	#4	5'-1"	
s_1	38	#4	5'-0"	
Concrete Box Culverts			Cu. Yd.	382.5
Reinforcement Bars, Epoxy Coated			Pound	1350
Reinforcement Bars			Pound	61530

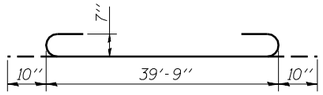
CULVERT DETAILS
STRUCTURE NO. 025-2023



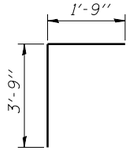
BAR s



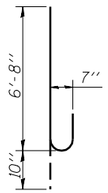
BAR s_1



BAR a



BAR d



BARS n(E)

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Max. Applied Service Soil Pressure under footing $Q_{max.}$ = 3408 psf.

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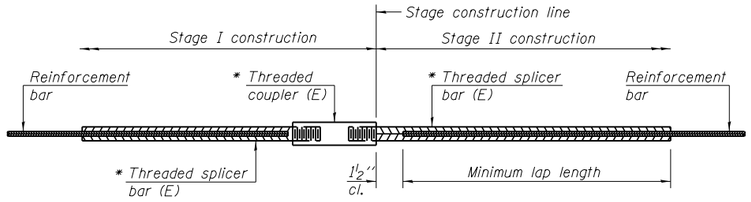
JOB = 2223.4		DESIGNED	A.A.N.
FILE = 0252023-94698-005-006-2223.4culvert.dgn		CHECKED	R.K. & M.D.C.
DATE = 9/8/2015		DRAWN	S.J.S.
		CHECKED	A.A.N. & M.D.C.

Sheet 6 of 9

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY)B-1	EFFINGHAM	53	33
		CONTRACT NO. 94698		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

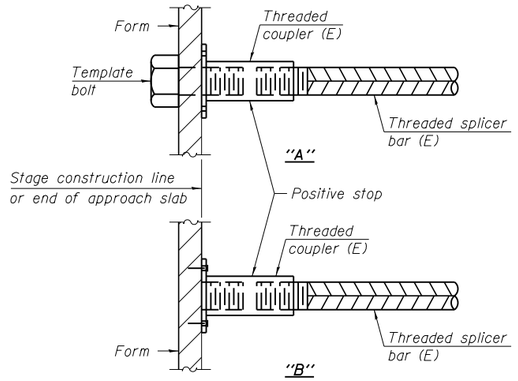


STANDARD BAR SPLICER ASSEMBLY

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

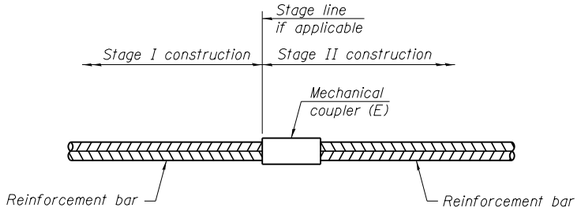
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab	#5	80	2'-7"
Bottom Slab	#5	80	2'-7"
Walls	#5	96	2'-7"



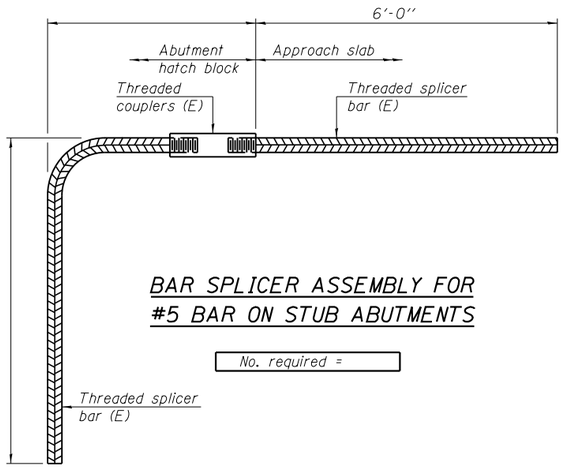
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. 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.

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 025-2023

BSD-1 6-8-15

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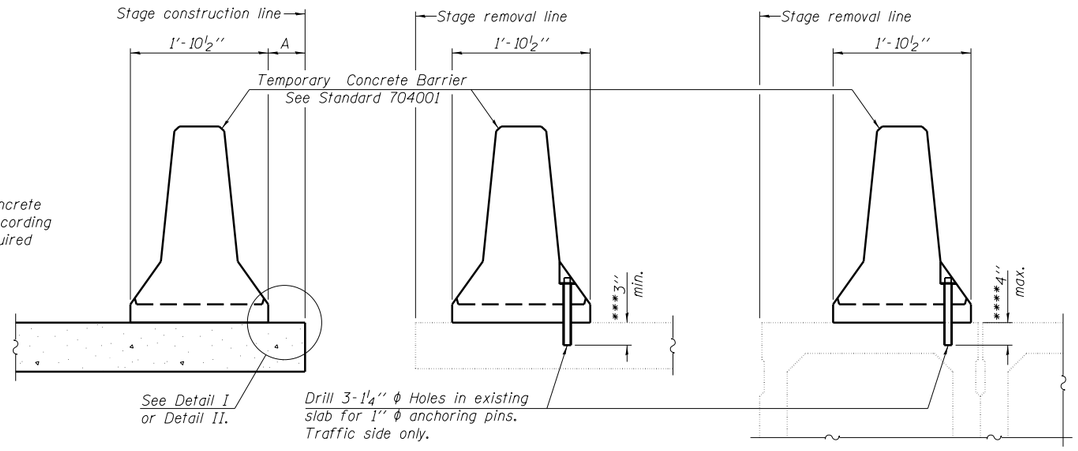
JOB = 2223.4	DESIGNED	A.A.N.	
FILE = 0252023-94698-007-2223.4barspl.dgn	CHECKED	R.K. & M.D.C.	
DATE = 8/12/2015	DRAWN	S.J.S.	
	CHECKED	A.A.N. & M.D.C.	

Sheet 7 of 9	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1652	(13BY)B-1	EFFINGHAM	53	34
			CONTRACT NO. 94698		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

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



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

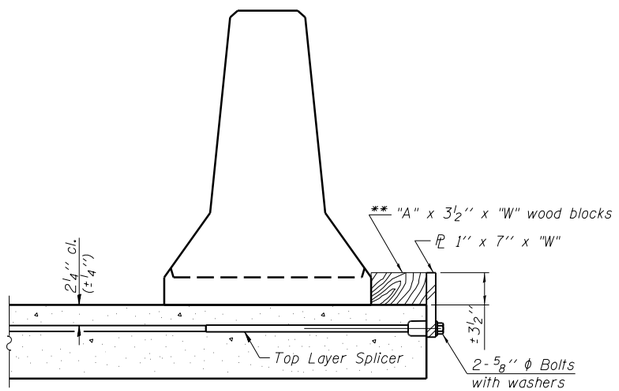
Cost of retainer assembly is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

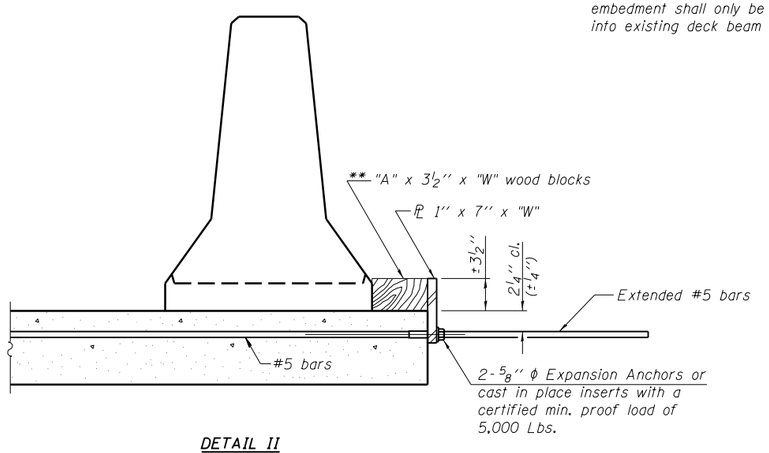
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

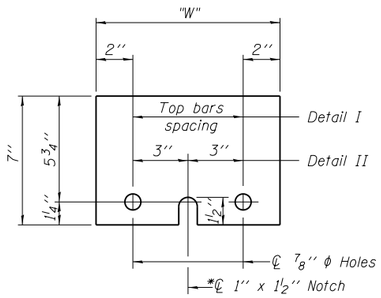
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER ℄ 1" x 7" x "W"

* Required only with Detail II

RETAINER ASSEMBLY

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 025-2023

R-27 1-12-15

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4		DESIGNED	A.A.N.
FILE = 0252023-94698-008-2223.4barrier.dgn		CHECKED	R.K. & M.D.C.
DATE = 8/12/2015		DRAWN	S.J.S.
		CHECKED	A.A.N. & M.D.C.

Sheet 8 of 9

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY)B-1	EFFINGHAM	53	35
		CONTRACT NO. 94698		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/5/08

ROUTE FAS 1652 (US 45) DESCRIPTION Green Creek LOGGED BY E. Sandschafer

SECTION (13BY)B-1 LOCATION NE 1/4, SEC. 27, TWP. 9 N, RNG. 6 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 025-0024
Station 262+10

BORING NO. 1
Station 261+72
Offset 12.50ft Lt
Ground Surface Elev. 580.79 ft

Surface Water Elev. 564.94 ft
Stream Bed Elev. 563.40 ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 144 Hrs. 556.2 ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
7 1/2" asphalt shoulder. 580.19				
Soft, very damp, brown, SILTY CLAY.		2		
		2	0.3	25
		2	B	
576.29	-5	1		
Medium, damp, brown, SILTY LOAM.		2	0.6	17
		2	PP	
573.79		0		
Soft to medium, damp, brown, CLAY LOAM.		2	0.5	13
		2	B	
571.29	-10	0		
Soft, very damp, red/brown/black, LOAM.		1	0.3	15
		2	B	
		0		
		0	0.3	20
		2	B	
566.29	-15	2		
Very stiff, damp, gray to brown, CLAY LOAM TILL.		3	2.5	11
		4	B	
		7		
		10	2.7	11
		13	B	
560.79	-20	6		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard, very moist, brown to gray, CLAY LOAM TILL.		12	8.4	10
		17	S	
		9		
		13	8.2	10
		50/2"	S	
	-25	12		
No recovery this trip - possible cobble in sampler shoe.		17		
		19		
		8		
		9	4.7	9
		13	B	
	-30	7		
		11	4.6	9
		14	B	
	-35	7		
		11	5.0	10
544.79		15	B	
Extent of exploration.				
Benchmark: BM 603 chiseled square on NE corner of existing bridge, Sta 262+30, 22' Rt = 579.56' elevation. Provided by Program Development.	-40			

Latitude W 88 deg 30.638 min., Longitude N 39 deg 11.882 min., Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/5/08

ROUTE FAS 1652 (US 45) DESCRIPTION Green Creek LOGGED BY E. Sandschafer

SECTION (13BY)B-1 LOCATION NE 1/4, SEC. 27, TWP. 9 N, RNG. 6 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 025-0024
Station 262+10

BORING NO. 2
Station 262+45
Offset 12.80ft Rt
Ground Surface Elev. 579.56 ft

Surface Water Elev. 564.94 ft
Stream Bed Elev. 563.40 ft

Groundwater Elev.:
First Encounter 557.6 ft
Upon Completion 546.1 ft
After 144 Hrs. 568.7 ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
5 1/2" asphalt shoulder. 579.06				
Stiff, damp, brown, SILTY CLAY.		4		
		4	1.5	13
		5	PP	
575.06	-5	3		
Soft to medium, damp, gray, SANDY LOAM.		3	0.5	19
		3	B	
		2		
		3	0.7	15
		5	S	
570.06	-10	1		
Medium, damp, brown marbled gray, CLAY LOAM.		2	0.6	20
		3	B	
		0		
		1	0.2	20
		2	B	
565.06	-15	8		
Hard, very moist, gray, CLAY LOAM TILL.		12	7.7	10
		17	S	
562.56		5		
Hard, very moist, gray, CLAY TILL.		8	5.0	14
		15	B	
560.06	-20	11		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard, very moist, gray, SANDY CLAY TILL. *(continued)*		17	8.2	8
		20	S	
557.56		7		
Hard to very stiff, damp, gray, CLAY LOAM TILL.		12	5.6	10
		15	B	
	-25	7		
		10	5.3	10
		15	B	
		6		
		10	4.4	11
		12	B	
	-30	6		
		8	3.7	12
		12	B	
	-35	5		
		8	3.1	11
543.56		12	B	
Extent of exploration.				
Benchmark: BM 603 chiseled square on NE corner of existing bridge, Sta 262+30, 22' Rt = 579.56' elevation. Provided by Program Development.	-40			

Latitude W 88 deg 30.633 min., Longitude N 39 deg 11.894 min., Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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)

SOIL BORING LOGS
STRUCTURE NO. 025-2023

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED A.A.N.
FILE = 0252023-94698-009-2223.4borings.dgn	CHECKED R.K. & M.D.C.
DATE = 8/12/2015	DRAWN S.J.S.
	CHECKED A.A.N. & M.D.C.

Sheet 9 of 9

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY)B-1	EFFINGHAM	53	36
		CONTRACT NO. 94698		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
PAGE NOS.		
NO.	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

600

595

590

EX ESMT

EX ROW

PR ROW

TEL

C= 0
F= 0

MATCH EXISTING ROADWAY
RT STA 258+25

258 + 25.00

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

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Civil and Structural Engineering

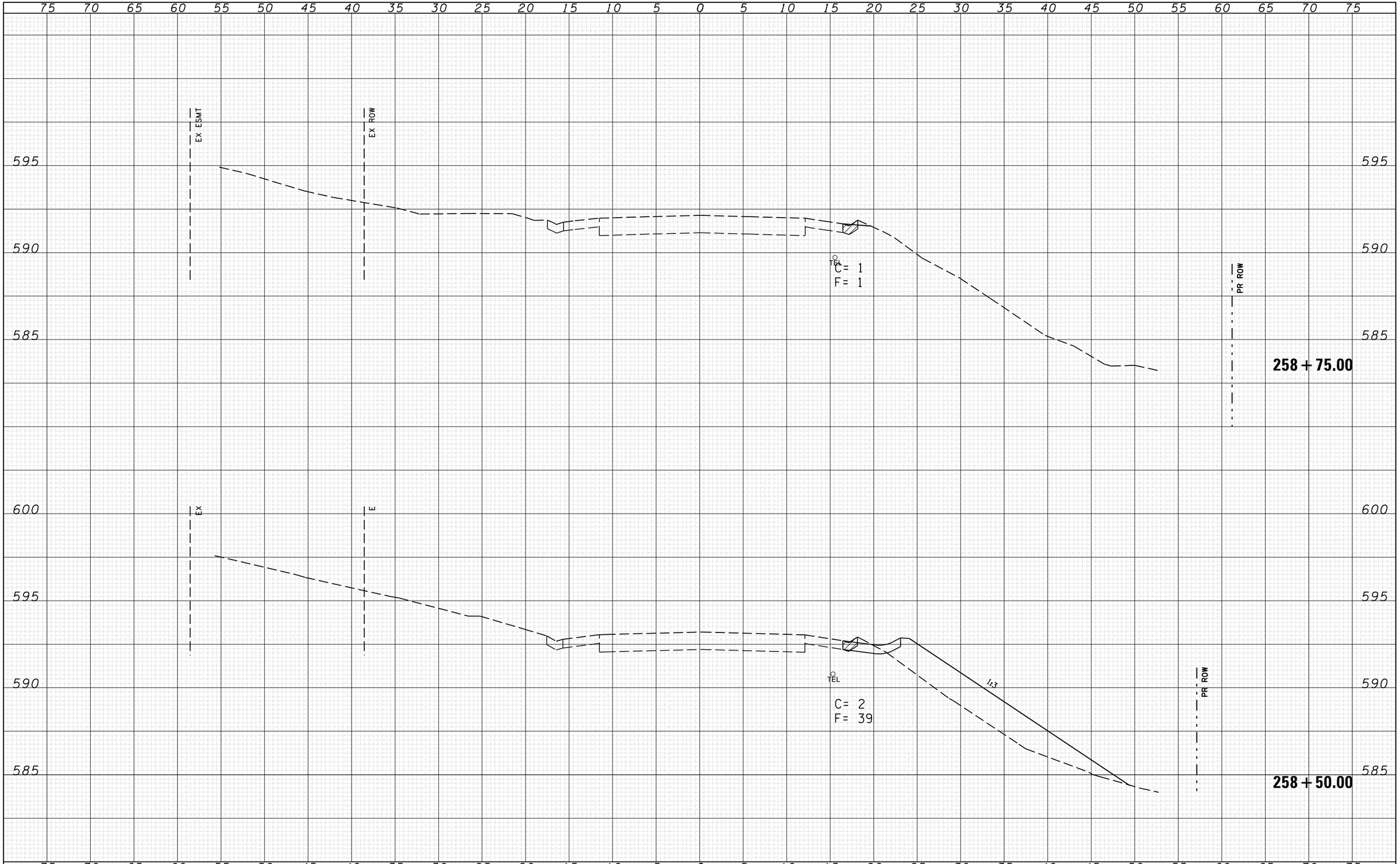
JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	37
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

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JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	38
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

590

EX ROW

FO

TEL

TEL

C= 0
F= 0

PE 6.04 %

ENT C= 11
F= 0

EX ROW

FO

590

259 + 25.00

595

590

585

EX ESMT

EX ROW

TEL

TEL

C= 1
F= 1

EX ROW

FO

PR ROW

595

590

585

259 + 00.00

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

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.4	DESIGNED - NAK	REVISED -
	FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
	PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
	PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	39
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

590

585

EX ESMT

EX ROW

TEL

FO

1:4

-6.0%

C= 3
F= 1

EX ROW

259 + 75.00

595

590

585

EX ESMT

EX ROW

MATCH EXISTING ROADWAY
LT STA 259+50

C= 0
F= 0

C= 0
F= 0

PE 1.77 %

ENT C= 10
F= 0

EX ROW

PR ROW

259 + 50.00

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

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

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Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -	
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -	

STATE OF ILLINOIS
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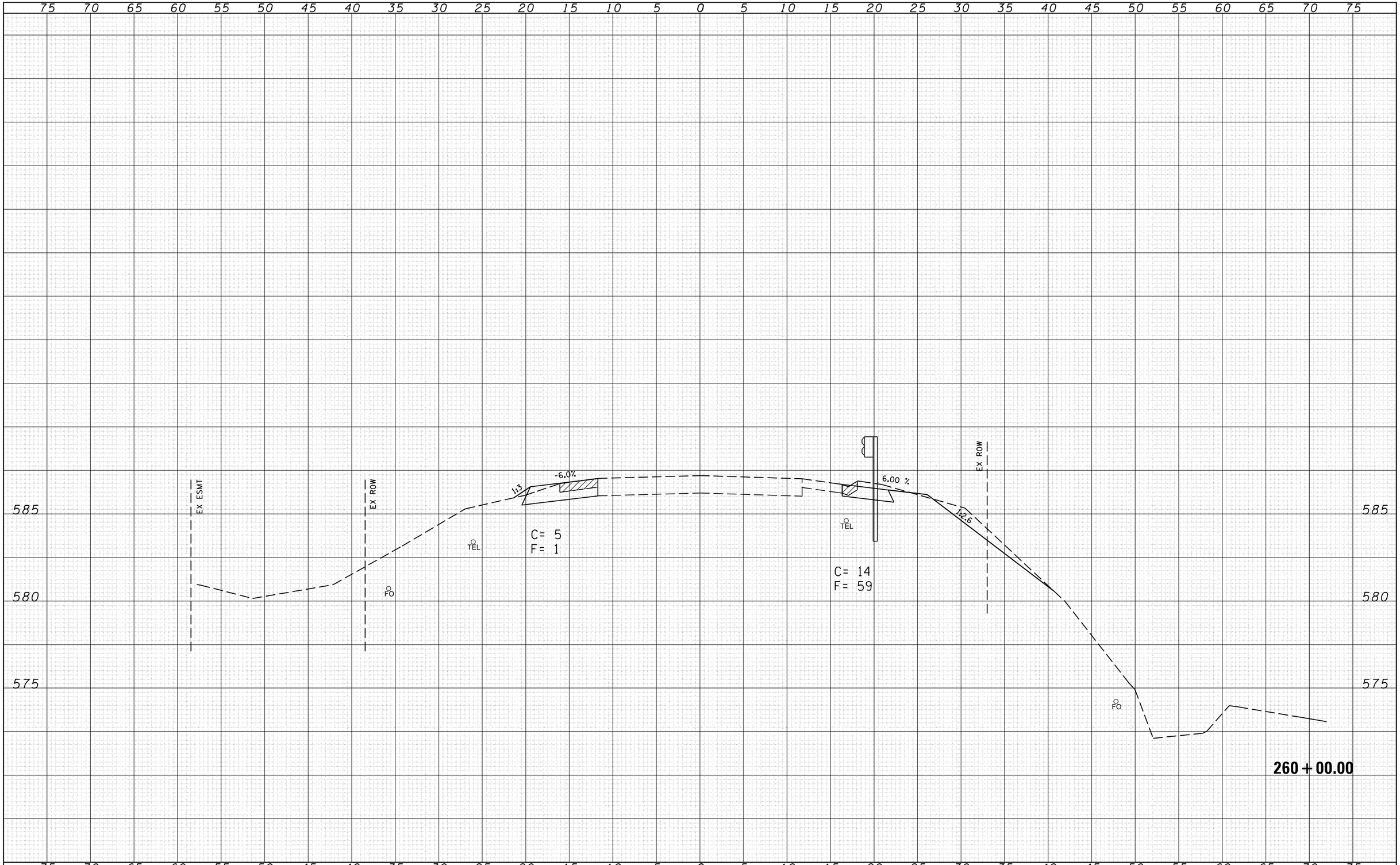
CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	40
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
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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FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -	
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -	

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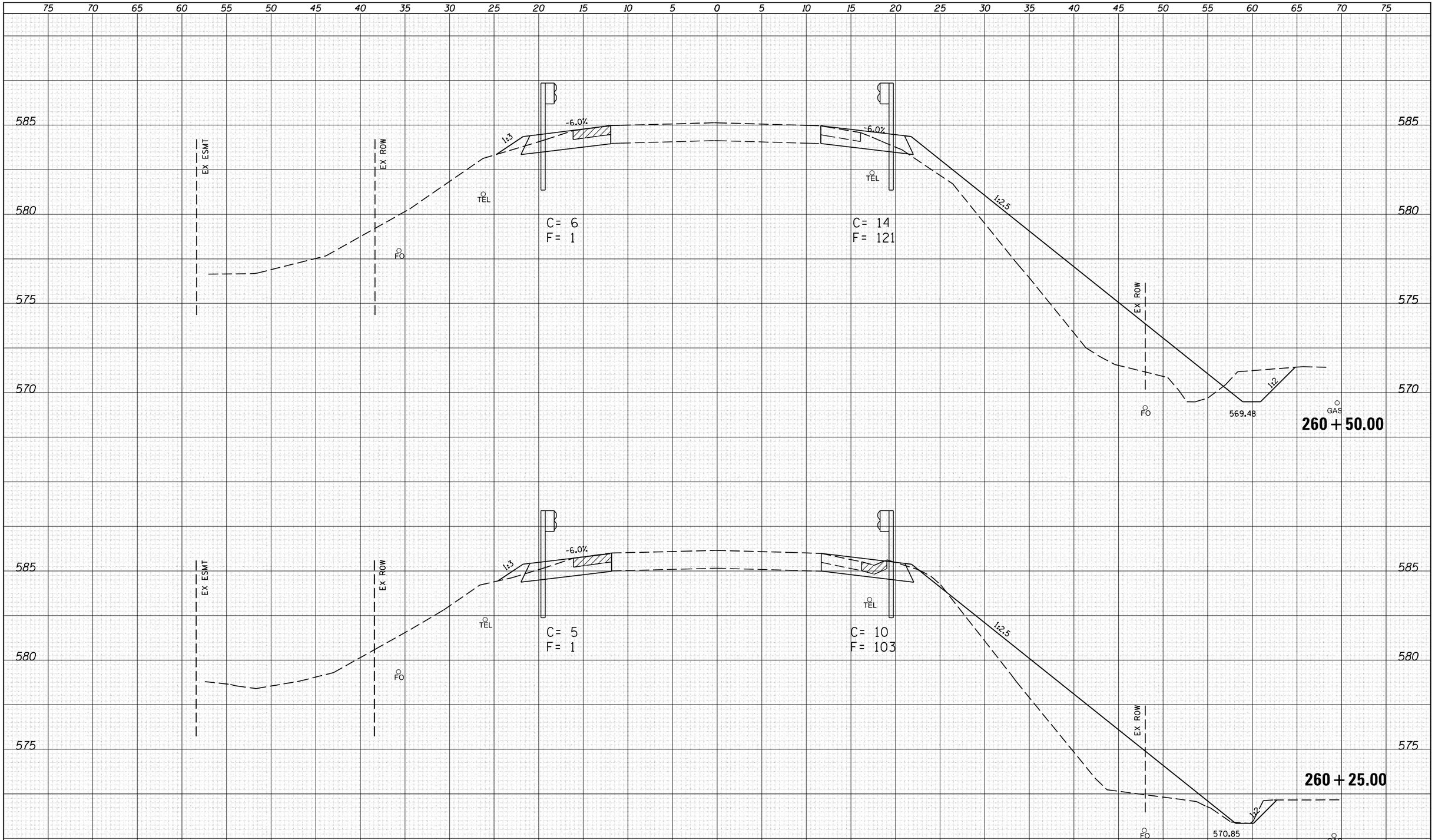
CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	41
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

JOB = 2223.4	DESIGNED - NAK	REVISED -	
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - TJD	REVISED -	
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -	

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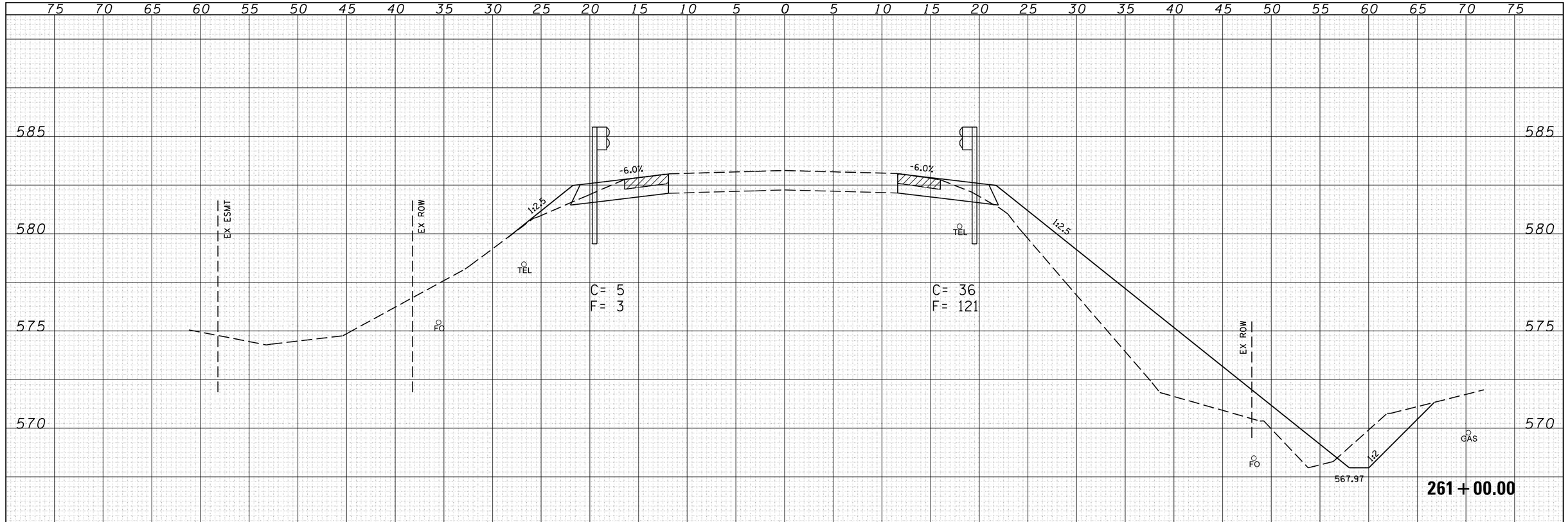
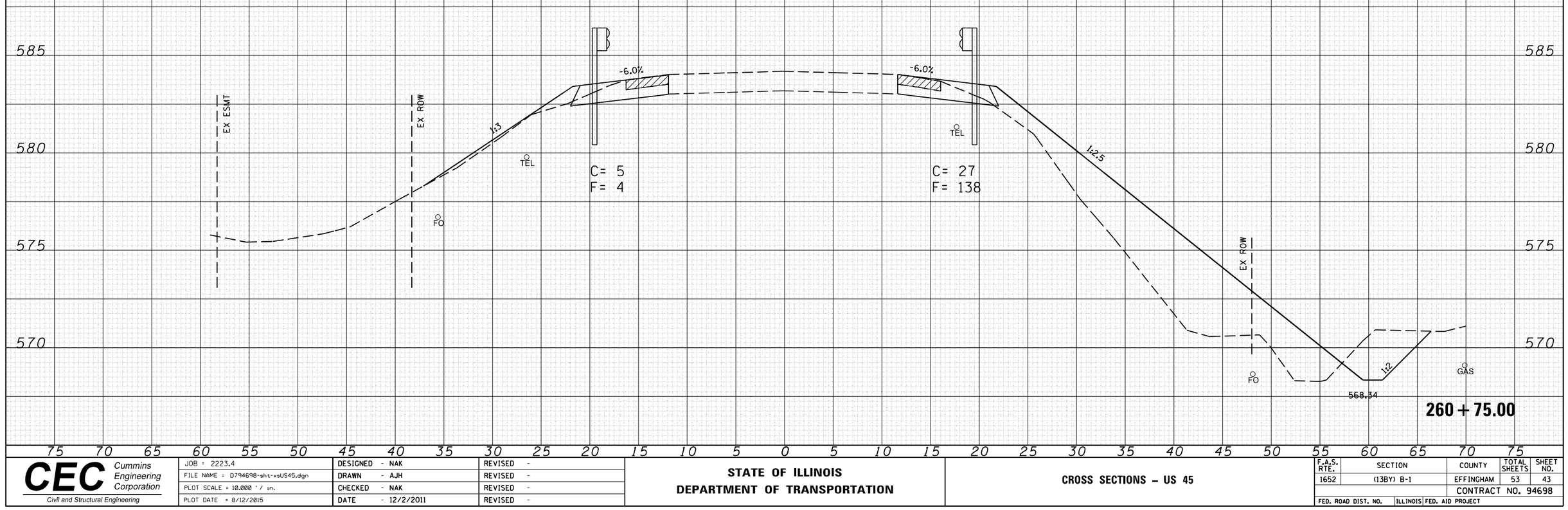
CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	42
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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



CEC Cummins Engineering Corporation
Civil and Structural Engineering

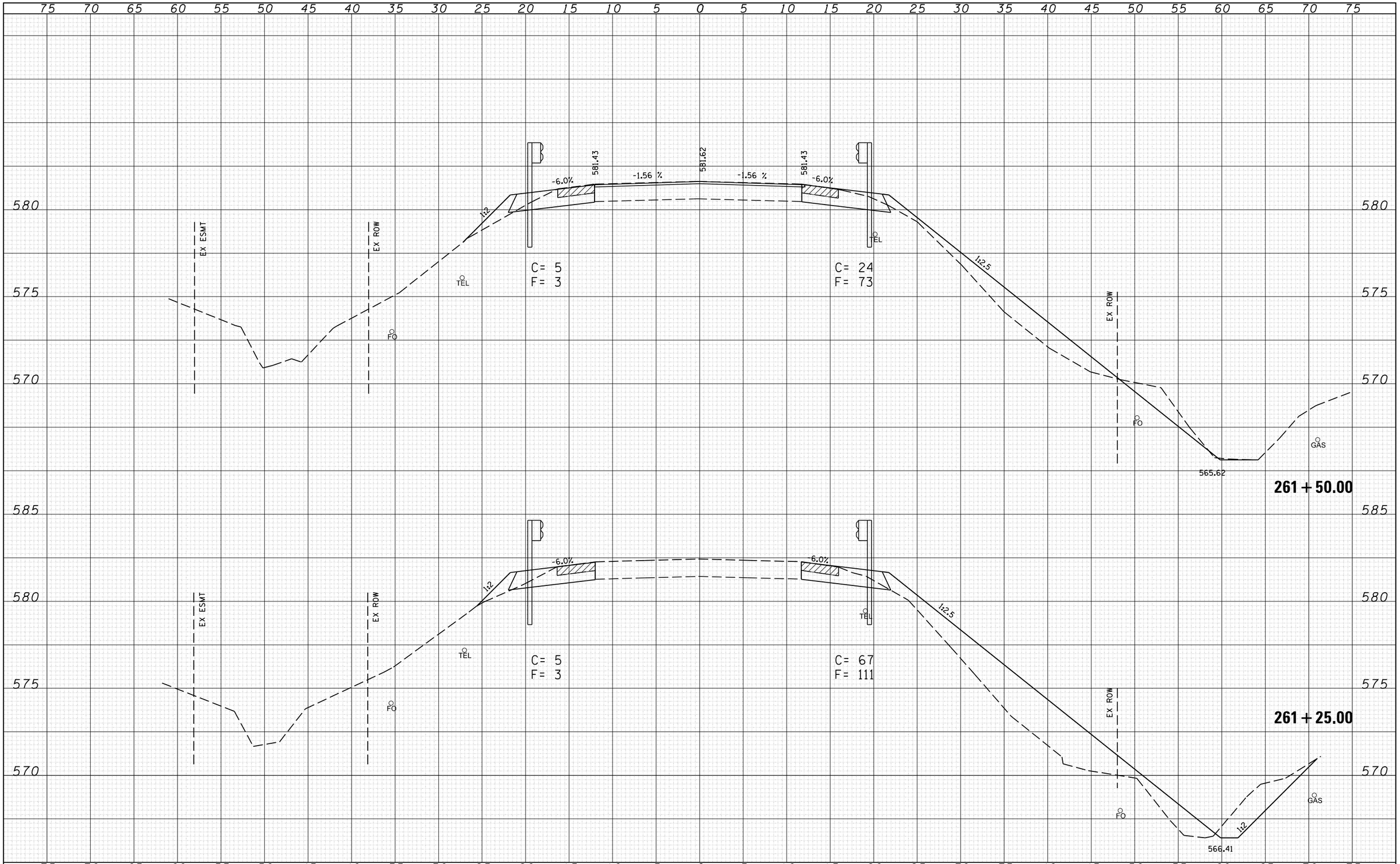
JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	43
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



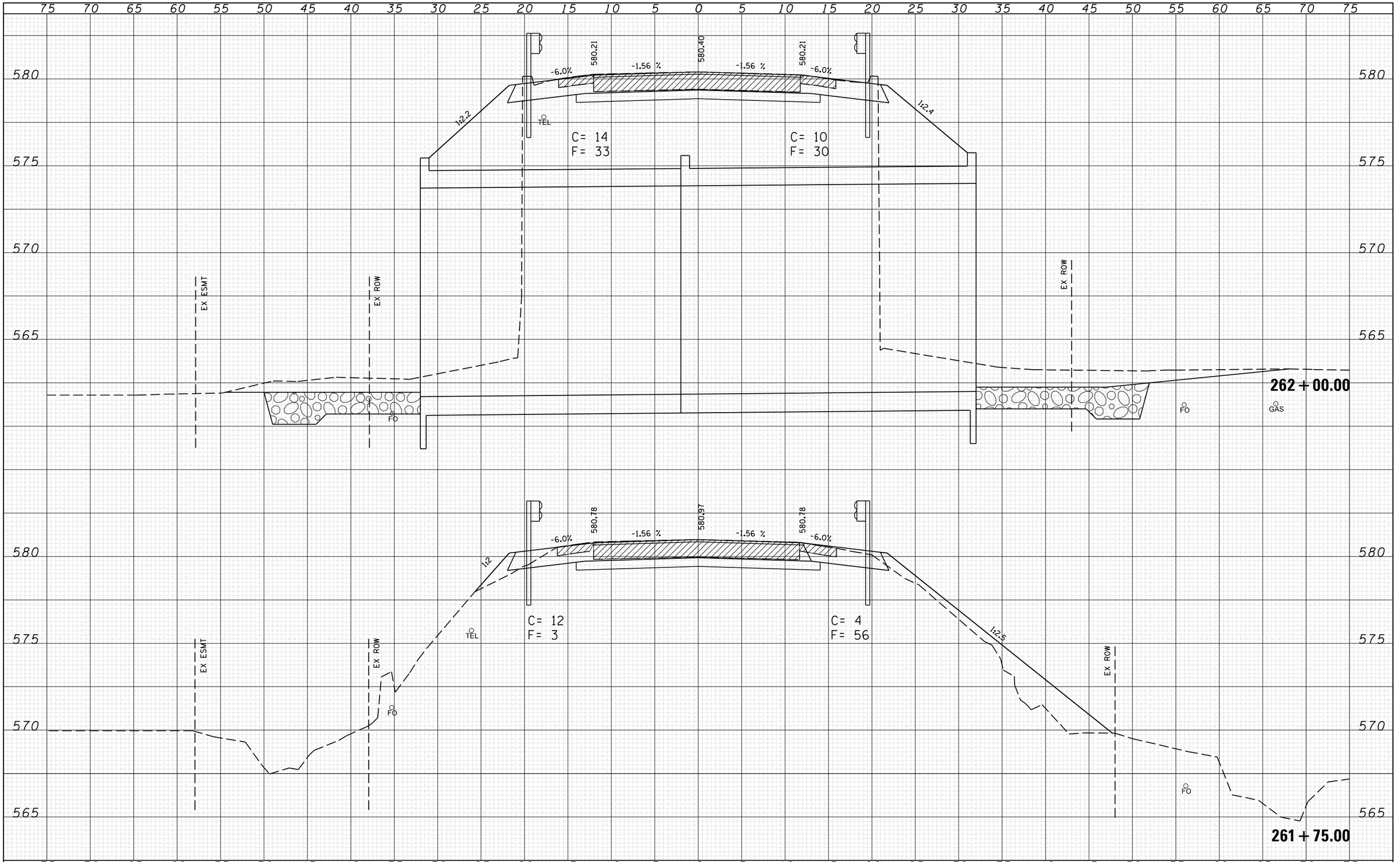
ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.4	DESIGNED - NAK	REVISED -
	FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
	PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
	PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	44
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY

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

ORIGINAL SURVEY

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

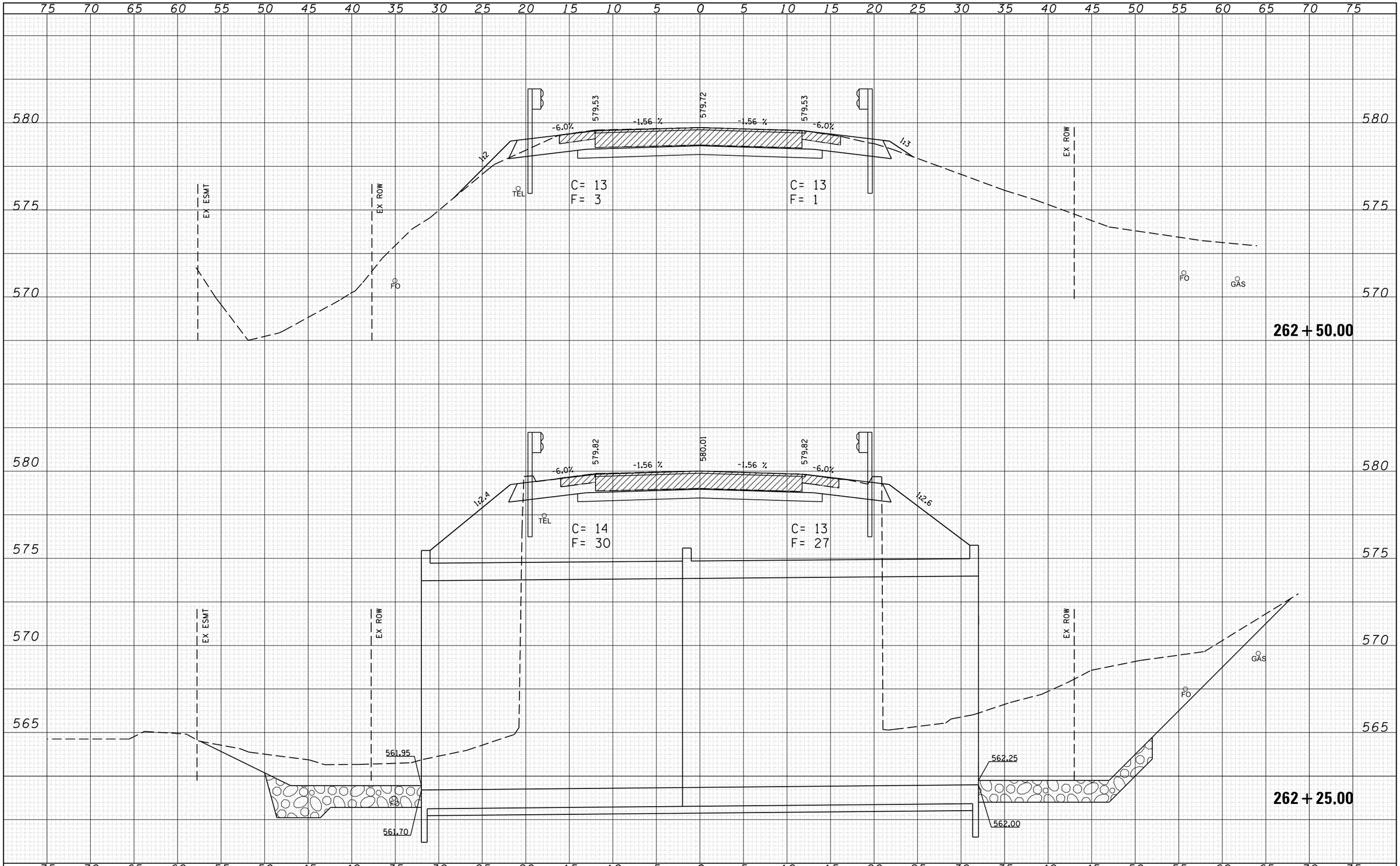
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	45
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

CEC Cummins Engineering Corporation
Civil and Structural Engineering

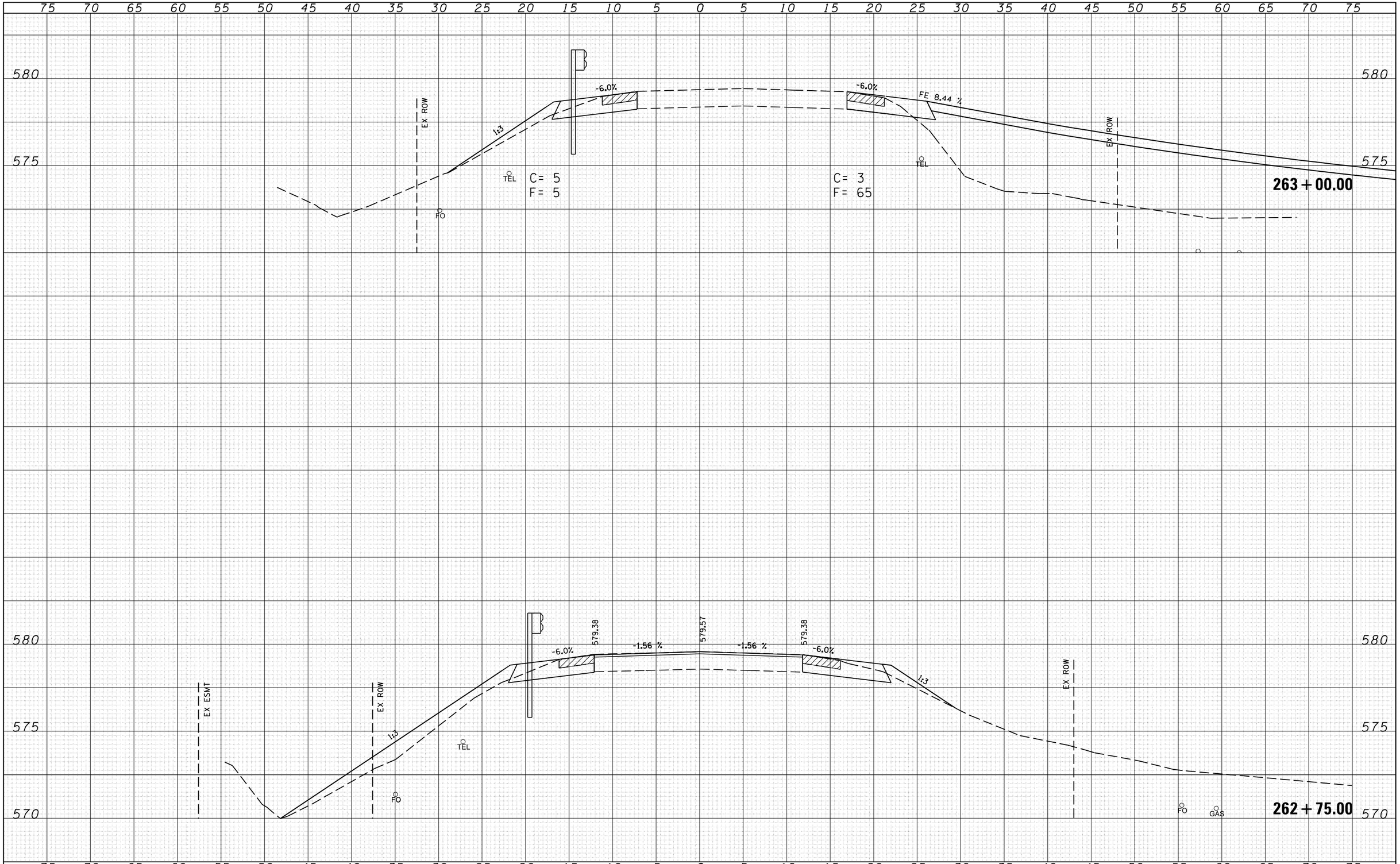
JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	46
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	47
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

580

575

EX ESMT

EX ROW

1:3

6.0%

TEL

FO

C= 6
F= 3

6.0%

TEL

C= 3
F= 21

1:3

EX ROW

PR ROW

263 + 75.00

580

575

EX ESMT

EX ROW

1:3

-6.0%

TEL

FO

C= 6
F= 3

-6.0%

TEL

C= 5
F= 22

1:3

EX ROW

PR ROW

263 + 50.00

580

575

EX ESMT

EX ROW

1:3

-6.0%

TEL

FO

C= 5
F= 2

6.0 %

TEL

C= 3
F= 32

1:3

EX ROW

263 + 25.00

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

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				

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

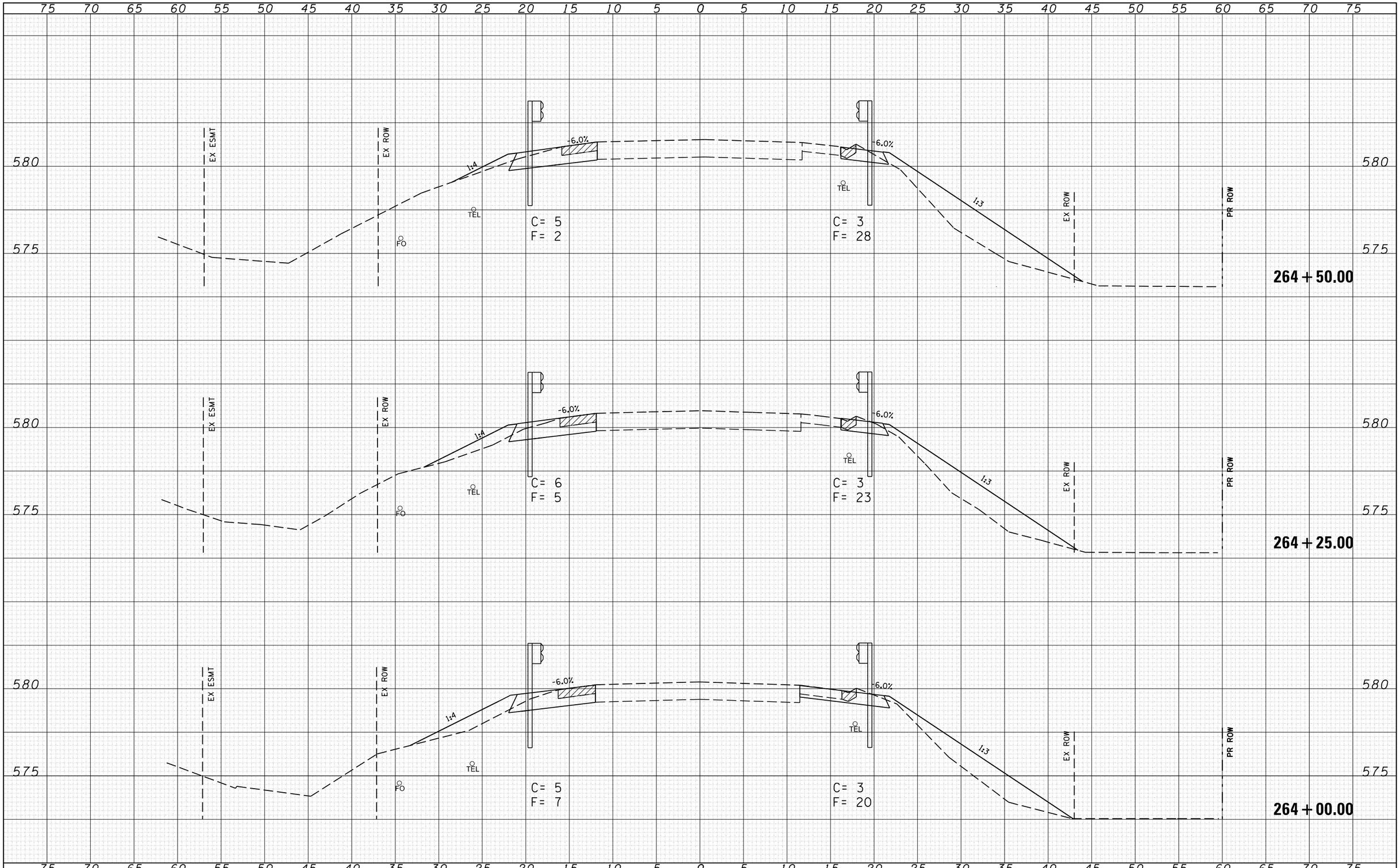
CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	48
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

CEC Cummins Engineering Corporation
Civil and Structural Engineering

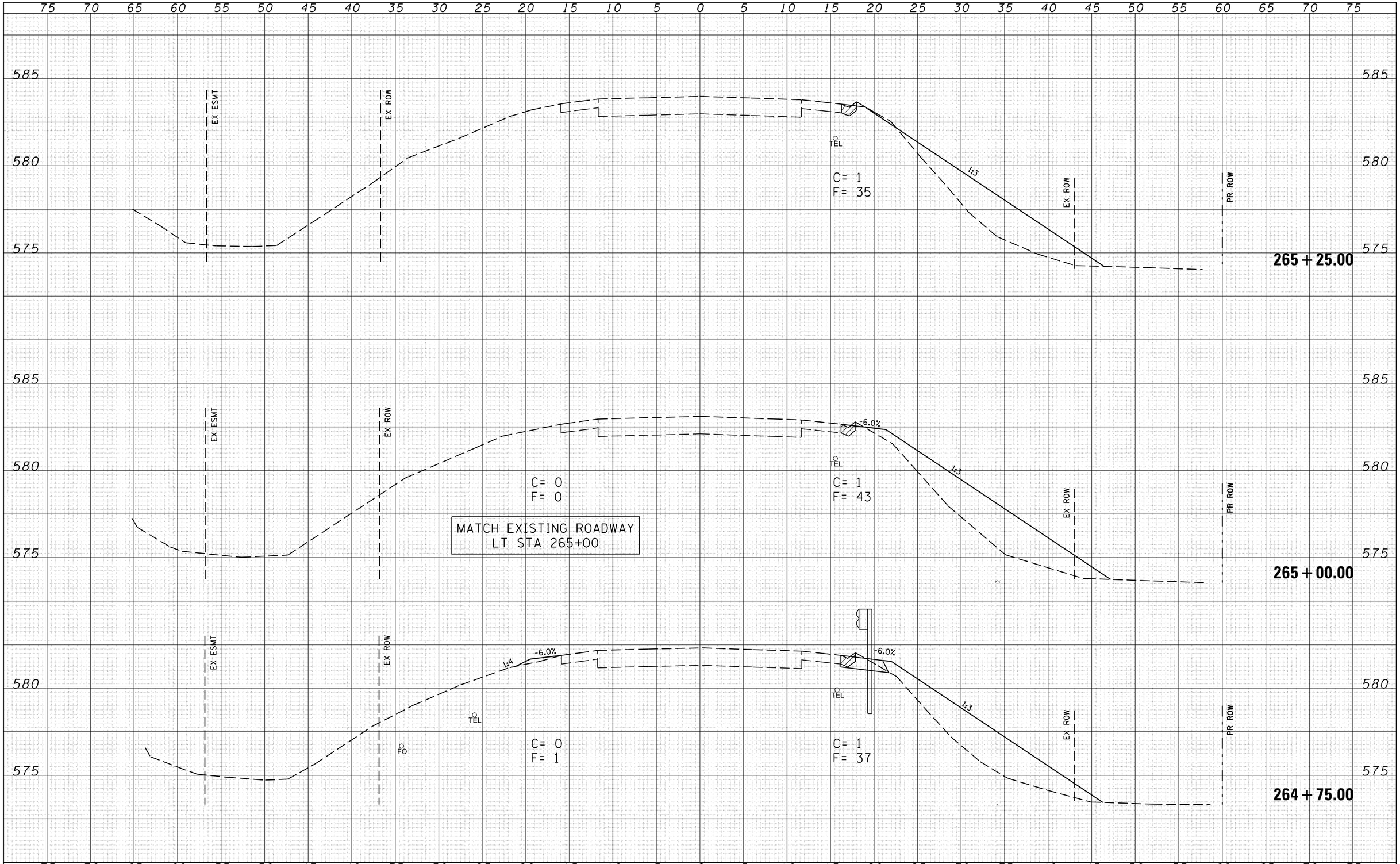
JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	49
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

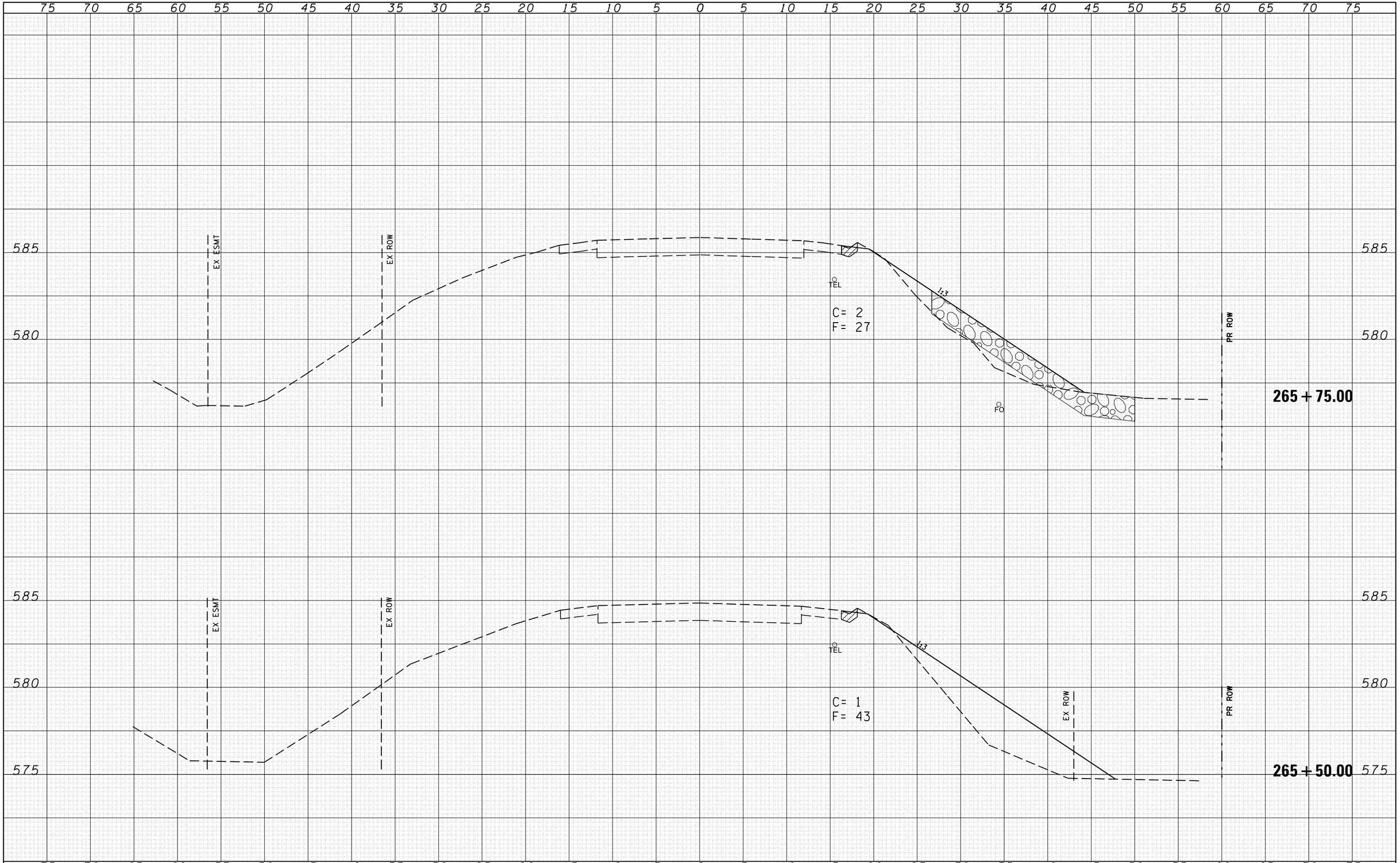


ORIGINAL SURVEY	DATE
	BY
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
NOTE BOOK	
NO.	AREAS CHECKED

CEC Cummins Engineering Corporation — Civil and Structural Engineering			
JOB = 2223.4	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -	CROSS SECTIONS – US 45
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	50
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

JOB = 2223.4	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -	DEPARTMENT OF TRANSPORTATION
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -	CROSS SECTIONS – US 45
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -	

CEC Cummins Engineering Corporation
Civil and Structural Engineering

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	51
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	DATE
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

590 585 580

EX ESMT

EX ROW

C= 0
F= 0

MATCH EXISTING ROADWAY
RT STA 266+25

EX ROW

PR ROW

266 + 25.00

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

585 580

EX ESMT

EX ROW

TEL

1:3

C= 1
F= 47

EX ROW

PR ROW

266 + 00.00

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

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.4	DESIGNED - NAK	REVISED -
FILE NAME = D794698-sht-xsUS45.dgn	DRAWN - AJH	REVISED -
PLOT SCALE = 10.000 ' / in.	CHECKED - NAK	REVISED -
PLOT DATE = 8/12/2015	DATE - 12/2/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – US 45

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	52
		CONTRACT NO. 94698		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

CEC Cummins Engineering Corporation
Civil and Structural Engineering

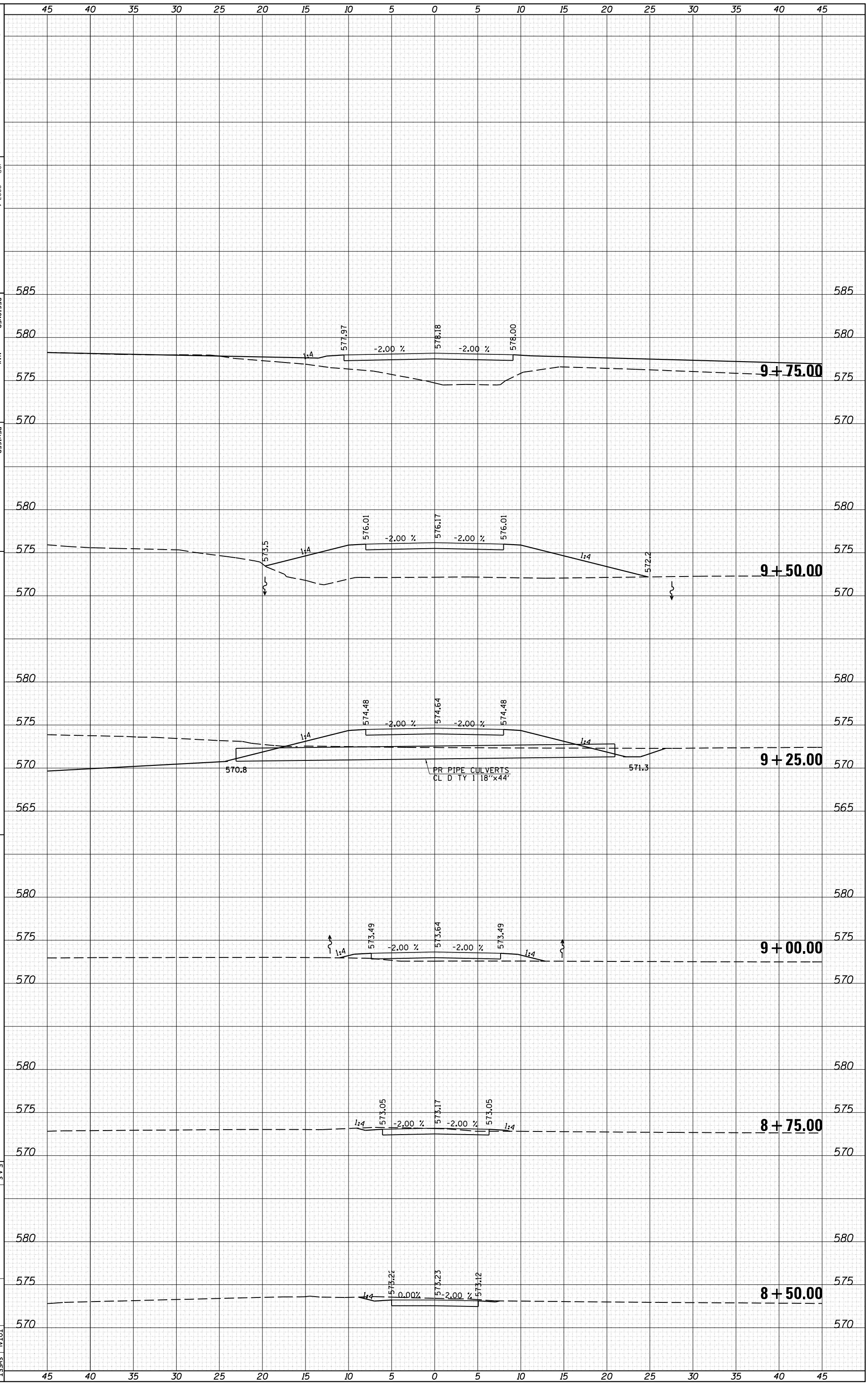
JOB = 2223.4
FILE NAME = D794698-sht-xsFE.dgn
PLOT SCALE = 10.0000 ' / in.
PLOT DATE = 8/12/2015

DESIGNED	-	NAK
DRAWN	-	TJD
CHECKED	-	NAK
DATE	-	12/2/2011

REVISED	-	
REVISED	-	
REVISED	-	
REVISED	-	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD ENTRANCE CROSS SECTIONS



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1652	(13BY) B-1	EFFINGHAM	53	53

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

CONTRACT NO. 94698