

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	1

CONTRACT NO. 98566

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 331 (IL ROUTE 13WB)

SECTION 5B-3

PROJECT: *ACBRF-0331(046)*

C-99-067-03

JACKSON COUNTY

BRIDGE REPLACEMENT OVER
PILES FORK CREEK

D-99-001-98

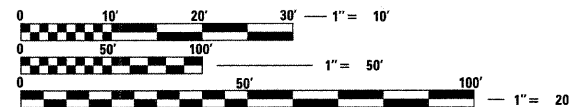


FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

TOWNSHIP: CARBONDALE

HIGHWAY CLASSIFICATION

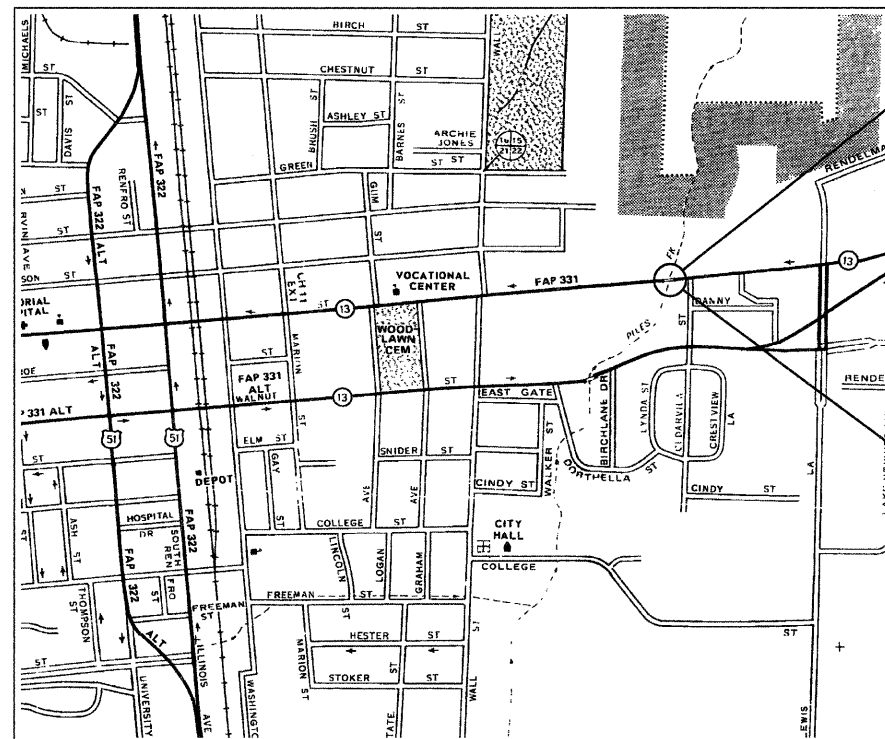
F.A.P. RTE 331 - IL RTE. 13
ADT = 21,530 (2003) : 29,000 (2023)
DHV : 2900 (2023)
FUNCTIONAL CLASS : OTHER PRINCIPAL ARTERIAL
DESIGN SPEED : 30 MPH
POSTED SPEED : 30 MPH



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 EXCAVATORS
1-800-892-0123 Website: <http://julie1call.com/>

CONTRACT NO. 98566



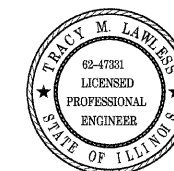
BEGIN SECTION 5B-3
STA. 85 + 86.20

PROPOSED BOX CULVERT DESIGN
STA. 86 + 40.00
TRIPLE 12'-0" x 12'-0" x 93'-3"
REINFORCED CONCRETE BOX
CULVERT - 28° LEFT AHEAD SKEW
STRUCTURE NO. 039-2026

END SECTION 5B-3
STA. 86 + 93.80

LOCATION MAP

GROSS LENGTH = 107.60 FT.
NET LENGTH = 107.60 FT.



Tracy M. Lawless 3-15-06
TRACY M. LAWLESS
FREEBURG, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 02-47331
EXPIRES NOV. 30, 2007

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8-5-08 20
Man C. Romo
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 3, 2008
Eric E. Harn
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

October 3, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

PROJECT ENGINEER: DAVID PICHE (618) 549-2171 CENTREX (217) 782-4554

COUNTY: JACKSON

SECTION 5B-3

ROUTE: FAP 331 (IL 13WB)

SUMMARY OF QUANTITIES

URBAN - JACKSON COUNTY
 FUNDING: HBP:
 80% FEDERAL
 20% STATE
 CONSTRUCTION TYPE CODE
 X028-2A

CODE NO.	ITEM	UNIT	QUANTITIES
20200100	EARTH EXCAVATION	CU YD	125
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	300
20400100	BORROW EXCAVATION	CU YD	141
20700220	POROUS GRANULAR EMBANKMENT	CU YD	700
25000115	SEEDING, CLASS 1B	ACRE	0.2
25000350	SEEDING, CLASS 7	ACRE	0.2
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	32
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	24
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	24
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.4
25100115	MULCH, METHOD 2	ACRE	0.2
25100630	EROSION CONTROL BLANKET	SQ YD	550
* 28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	160
28000400	PERIMETER EROSION BARRIER	FOOT	334
28100101	STONE RIPRAP, CLASS A1	SQ YD	450
28100107	STONE RIPRAP, CLASS A4	SQ YD	575
28200200	FILTER FABRIC	SQ YD	575
31100100	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	405
35650500	BASE COURSE WIDENING 10"	SQ YD	207
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	48
40600855	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N105	TON	37
40600990	TEMPORARY RAMP	SQ YD	7
40603575	POLYMERIZED HOT MIX ASPHALT SURFACE COURSE, MIXTURE "E", N105	TON	37
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	527
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	59
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	1674
44000100	PAVEMENT REMOVAL	SQ YD	570
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	252
44000600	SIDEWALK REMOVAL	SQ FT	1114
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200300	COFFERDAM EXCAVATION	CU YD	480
50202901	COFFERDAM (LOCATION - 1)	EACH	1
50202902	COFFERDAM (LOCATION - 2)	EACH	1
50202903	COFFERDAM (LOCATION - 3)	EACH	1
50202904	COFFERDAM (LOCATION - 4)	EACH	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	92,530
50800515	BAR SPLICERS	EACH	279
50901720	BICYCLE RAILING	FOOT	173
51200956	FURNISHING METAL SHELL PILES 12" X 0.179"	FOOT	2310
51202305	DRIVING PILES	FOOT	2310
51203200	TEST PILE METAL SHELLS	EACH	1
* 51205200	TEMPORARY SHEET PILING	SQ FT	830
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	626.6

* SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES

URBAN - JACKSON COUNTY
 FUNDING: HBP:
 80% FEDERAL
 20% STATE
 CONSTRUCTION TYPE CODE
 X028-2A

CODE NO.	ITEM	UNIT	QUANTITIES
54215424	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 24"	EACH	1
54215430	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 30"	EACH	1
54215436	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 36"	EACH	1
550A0050	STORM SEWER, CLASS A, TYPE 1 12"	FOOT	40
550A0160	STORM SEWER, CLASS A, TYPE 1 36"	FOOT	44
55100500	STORM SEWER REMOVAL 12"	FOOT	45
55101600	STORM SEWER REMOVAL 36"	FOOT	49
60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	1
60500040	REMOVING MANHOLES	EACH	1
60500060	REMOVING INLETS	EACH	1
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	420
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8
67100100	MOBILIZATION	L SUM	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
70102670	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601, SPECIAL	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	24
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1919
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	715
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	150
** 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	380
** 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2
* Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2
* Z0030340	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2	EACH	1
* XX003503	FLARED END SECTION REMOVAL	EACH	1
XX006640	STORM SEWERS, (WATER MAIN REQUIREMENTS) TYPE 1, 30"	FOOT	48
* 70104600	CHANGEABLE MESSAGE SIGN	CAL MO	8

* SEE SPECIAL PROVISIONS
 ** SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

FAP ROUTE 331
 SECTION 5B-3
 JACKSON COUNTY

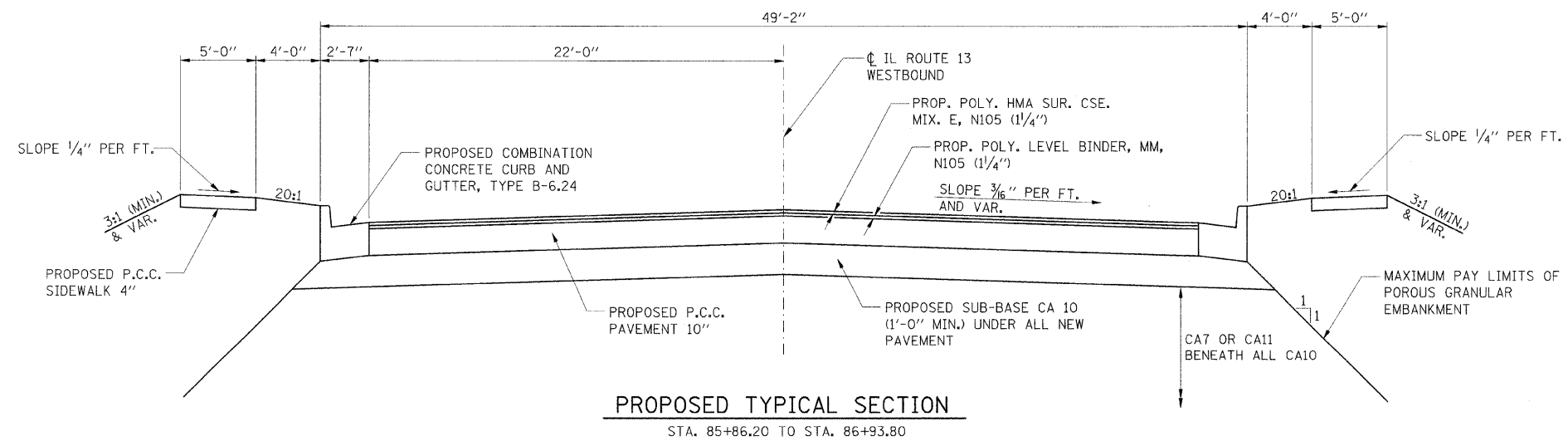
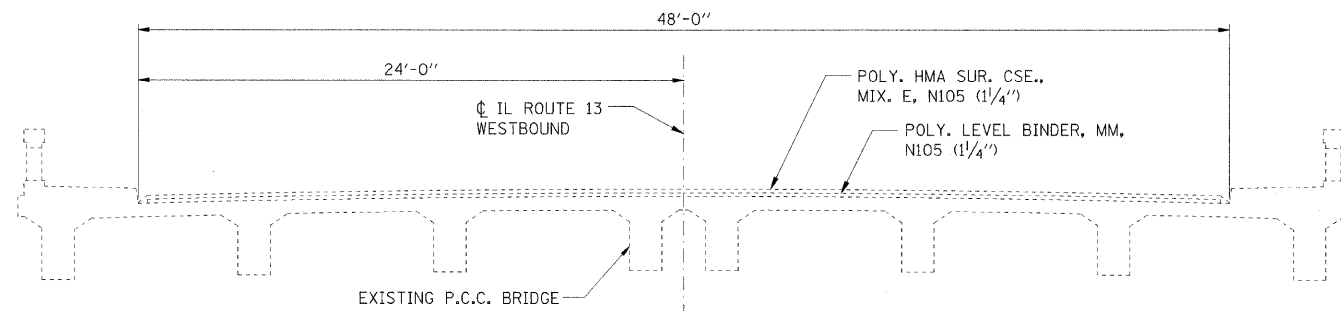
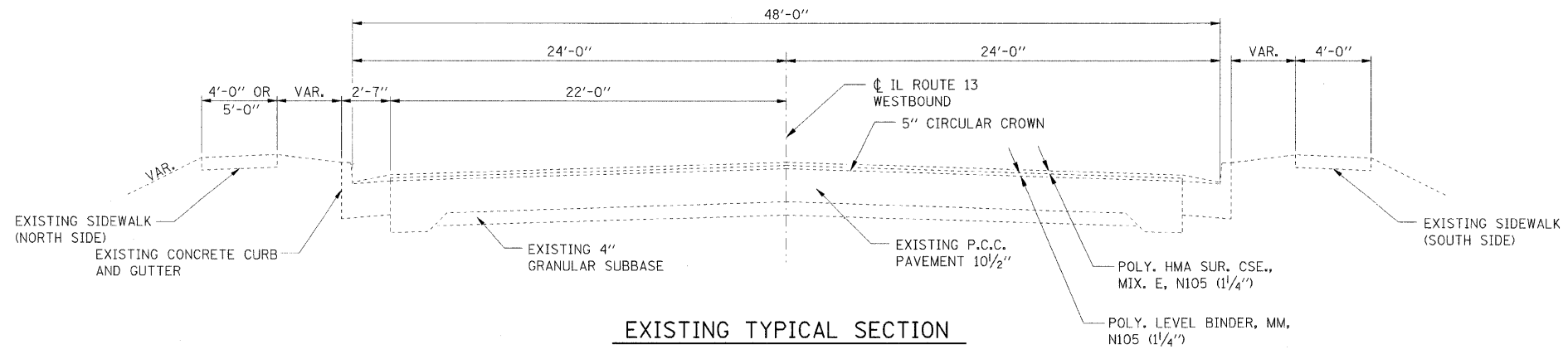
DRAWN BY: J. NIEDERHOFER

Rev.

PLAN
 DATE
 SHEET NO.
 TOTAL SHEETS
 DRAWN BY
 CHECKED BY
 IN CHARGE
 DATE

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	4
STA. 85+86.20		TO STA. 86+93.60		

CONTRACT NO. 98566



DATE	BY	REVISIONS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

FAP ROUTE 331
SECTION 5B-3
JACKSON COUNTY

DRAWN BY: J. NIEDERHOFER

PLOT DATE: 6/09/08

98566/ATYPICAL/SECTION039-21026.DGN

MIXTURE REQUIREMENTS

LOCATIONS	BASE COURSE WIDENING	HMA BINDER COURSE (LEVEL BINDER)	HMA SURFACE COURSE
MIXTURE USE(S):	BASE CSE WID, 10"	POLY HMA BINDER CSE, MIX B, N105, IL-12.5	POLY SURF CSE, MIX E, N105
AC/PG:	PG64-22	SBS PG76-22	SBS PG76-22
RAP % (MAX.):	10	0	0
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN	4.0%, 105 GYRATION DESIGN	4.0%, 105 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0	IL-12.5mm (MAXIMUM AGGREGATE SIZE SHALL BE CA 13)	IL-9.5mm OR IL-12.5mm
FRICITION AGGREGATE:	NONE	NONE	E SURFACE

PAVING SCHEDULE

LOCATION	SUB GRAN MAT A (TON)	PCC PAVEMENT 10" (SQ YD)	BASE CSE WID 10" (SQ YD)	COMB CC&G TB-6.24 (FOOT)	PCC SIDEWALK (SQ FT)	BITUM MAT (PR CT) (GALLON)	POLY LEVEL BIND MM N105 (TON)	POLY HMA SURF CSE E N105 (TON)	PCC DRIVEWAY PAV'T 8" (SQ YD)
STAGE I LT. STA. 85+86.20 TO LT. STA. 86+93.80 LT. STA. 84+83.83 TO LT. STA. 87+41.52	180	219	207						
STAGE II RT. STA. 85+86.20 TO RT. STA. 86+93.80 RT. STA. 85+46.00 TO RT. STA. 87+09.00	225	308		108	815				
POST STAGE II LT. STA. 84+85.40 TO LT. STA. 84+92.70 LT. STA. 85+41.30 TO LT. STA. 85+47.40 LT. STA. 85+81.90 TO LT. STA. 87+40.00 LT. STA. 84+83.80 TO LT. STA. 85+49.10 LT. STA. 85+80.70 TO LT. STA. 87+41.60 LT. STA. 85+35.40 TO LT. STA. 85+94.30 STA. 85+86.20 TO STA. 86+93.80 LT. STA. 85+64.57				82 171 59*	37 31 791	48	37	37	59
TOTAL	405	527	207	420	1674	48	37	37	59

* DEPRESSED CURB SECTION

TRAFFIC CONTROL SCHEDULE

LOCATION	TEMP CONC BARRIER (FOOT)	RELOCATE TEMP CONC BARRIER (FOOT)	IMPACT ATTENUATORS (NON-REDIRECTIVE) TL2	
			TEMPORARY (EACH)	RELOCATE (EACH)
STAGE I RT. STA. 85+85.00 TO LT. STA. 87+34.69 LT. STA. 87+35.69 TO LT. STA. 87+57.19	150		1	
STAGE II LT. STA. 85+85.00 TO LT. STA. 87+34.91 LT. STA. 85+85.00 TO RT. STA. 87+34.69 RT. STA. 87+35.19 TO RT. STA. 87+57.19 LT. STA. 87+35.91 TO LT. STA. 87+57.41	150	150	1	1
TOTAL	300	150	2	1

SCHEDULE OF DRAINAGE STRUCTURES

LOCATION	DESCRIPTION	LID OR GRATE	OUTLET INVERT
65.0' LT., STA. 87+02.60	END SECTION 24"		381.50
62.5' LT., STA. 86+40.70	END SECTION 30"		380.50
65.9' RT., STA. 85+81.50	END SECTION 36"		379.84
23.0' LT., STA. 87+27.60	INLETS TY A T3F&G	389.25	386.50(N)

STORM SEWER SCHEDULE

LOCATION	DIAMETER	LENGTH
23.8' LT. STA. 87+27.60 TO 64.0' LT. STA. 87+27.50	12"	40
62.0' LT. STA. 85+92.60 TO 62.5' LT. STA. 86+40.00	30"	48
63.9' RT. STA. 85+37.70 TO 65.9' RT. STA. 85+81.50	36"	44

REMOVAL SCHEDULE

LOCATION	COMB CURB GUTTER REM (FOOT)	PAVEMENT REMOVAL (SQ YD)	SIDEWALK REMOVAL (SQ FT)	WORK ZONE PVMT MRK REMOVAL (SQ FT)	STORM SEWER REMOVAL (FOOT)	REMOVE MANHOLES (EACH)	REMOVE INLETS (EACH)
STAGE I LT. STA. 84+83.83 TO LT. STA. 85+47.30 LT. STA. 85+86.40 TO LT. STA. 86+30.55 LT. STA. 86+74.60 TO LT. STA. 87+41.60 LT. STA. 85+86.20 TO LT. STA. 86+17.87 LT. STA. 86+62.13 TO LT. STA. 86+93.80 LT. STA. 84+82.70 TO LT. STA. 84+92.70 LT. STA. 85+41.30 TO LT. STA. 85+51.60 LT. STA. 85+80.00 TO LT. STA. 86+33.20 LT. STA. 86+74.9 TO LT. STA. 87+41.6 LT. STA. 84+85 TO STA. 85+85 RT. STA. 84+85 TO STA. 88+20 LT. STA. 86+95 TO STA. 92+00 61.5' LT. STA. 87+05.00 TO 23.5' LT. STA. 87+28.70 - 12"Ø 64.0' RT. STA. 85+40.2	64 45 79	78 78	40 42 213 334	10 30 44	45	1	
STAGE II RT. STA. 85+86.20 TO RT. STA. 86+17.87 RT. STA. 86+62.13 TO RT. STA. 86+93.80 RT. STA. 85+86.20 TO RT. STA. 86+05.20 RT. STA. 86+48.90 TO RT. STA. 86+93.80 RT. STA. 85+46.00 TO RT. STA. 86+05.00 RT. STA. 86+46.90 TO RT. STA. 87+09.00 RT. STA. 84+85 TO STA. 88+20 LT. STA. 85+85 TO STA. 90+11 RT. STA. 88+20 TO STA. 92+70 63.4' RT. STA. 85+42.60 TO 51.7' RT. STA. 85+90.30 - 36"Ø 23.5' LT. STA. 87+28.7	19 45	78 78	236 249	112 141 40	49		1
POST STAGE II C. E. LT. STA. 85+64.57 STA. 84+85 TO STA. 88+52 STA. 85+85 TO STA. 90+94 STA. 88+52 TO STA. 92+00 LT. STA. 84+83.83 TO LT. STA. 87+41.52		51		123 203 12			
TOTAL	252	570	1114	715	94	1	1

EARTHWORK

LOCATION	*EARTH EXCAVATION (CU YD)	EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE (CU YD)	**EMBANKMENT (CU YD)	BORROW EXCAVATION (CU YD)
84+83 to 87+44	125	94	235	141
TOTAL	125	94	235	141

* CUTS FROM CROSS SECTIONS
** FILLS FROM CROSS SECTIONS

SEEDING SCHEDULE

LOCATION	SEEDING CLASS 1B (AC)	FERTILIZER NUTRIENTS			AGRICULTURAL GROUND LIMESTONE (Ton)	MULCH METH 2 (ACRE)
		NITROGEN (LB)	PHOSPHORUS (LB)	POTASSIUM (LB)		
LT. STA. 84+83 TO LT. STA. 87+44	0.1	16	12	12	0.2	0.1
RT. STA. 85+46 TO RT. STA. 86+88	0.1	16	12	12	0.2	0.1
TOTAL	0.2	32	24	24	0.4	0.2

EROSION CONTROL

LOCATION	TEMP EROS CONTR SEED (LB)	PERIMETER EROSION BARRIER (FOOT)	EROSION CONTROL BLANKET (SQ YD)
RT. STA. 85+34 TO RT. STA. 85+86	40	90	
LT. STA. 85+79 TO LT. STA. 86+52	40	77	
RT. STA. 86+16 TO RT. STA. 87+12	40	125	
LT. STA. 86+95 TO LT. STA. 87+38	40	42	
RT. STA. 85+37 TO RT. STA. 86+94			230
LT. STA. 85+82 TO LT. STA. 87+41			320
TOTAL	160	334	550

MARKING SCHEDULE

LOCATION	TEMP PVT MK LINE 4"	PAINT PVT MK LINE 4"	SHORT TERM PVT MK
	WHITE	WHITE	WHITE
STAGE I STA. 84+85 TO STA. 88+20 STA. 85+85 TO STA. 90+11	335 423		
STAGE II STA. 85+85 TO STA. 87+35 STA. 85+85 TO STA. 90+94 STA. 84+85 TO STA. 88+52 STA. 88+52 TO STA. 92+00	150 607 368 36		
POST STAGE II STA. 85+86.20 TO STA. 86+93.80 STA. 84+85 TO STA. 92+00 STA. 84+85 TO STA. 92+70		180 200	24
TOTAL	1919	380	24

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

FAP ROUTE 331
SECTION 5B-3
JACKSON COUNTY

DRAWN BY: J. NIEDERHOFER

PLOT DATE: 06/09/08

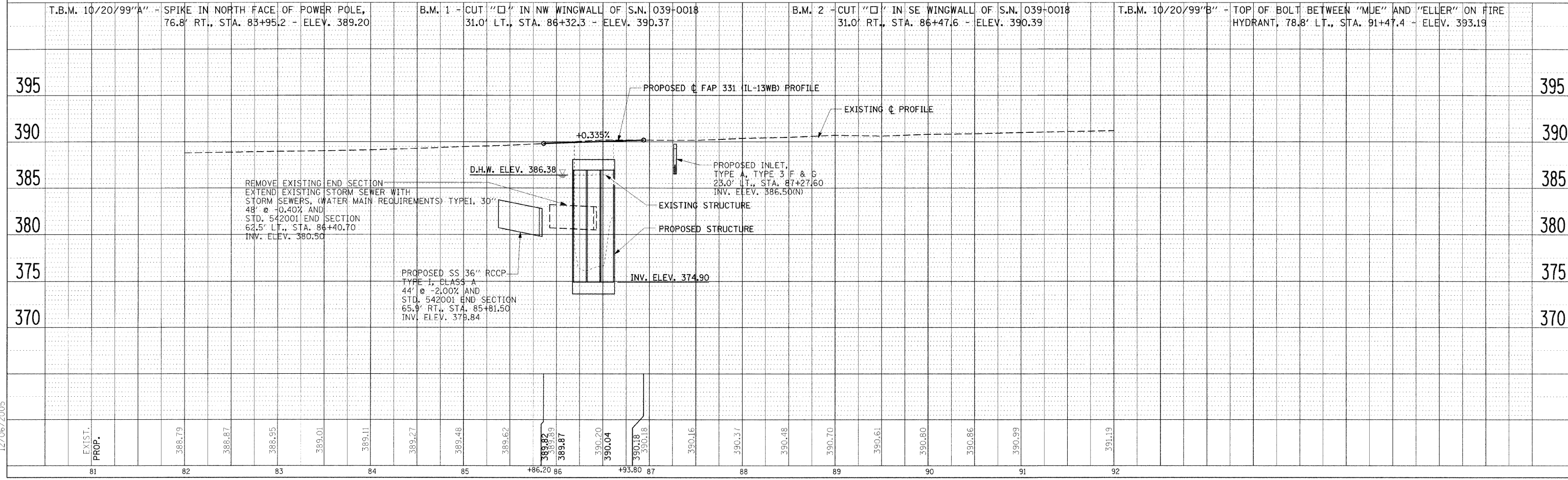
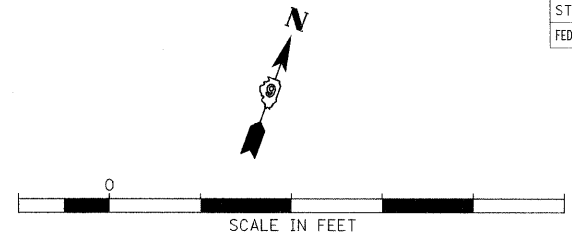
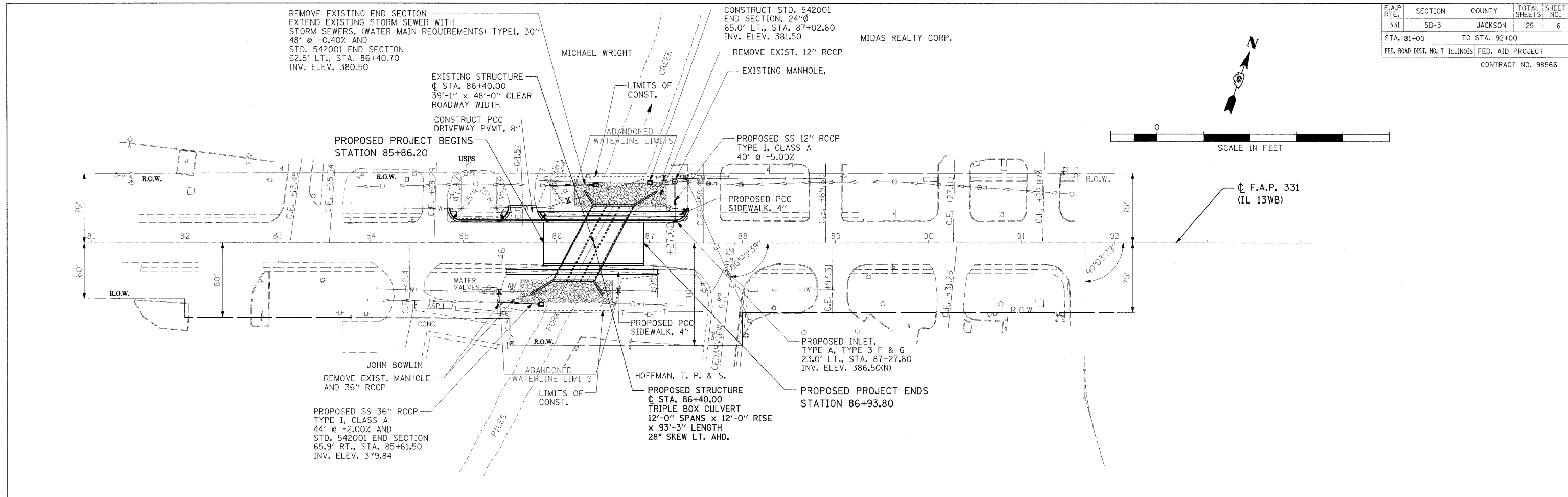
REVISIONS	
NAME	DATE

DATE: _____
BY: _____
PLAN NO.: _____
REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____
29. _____
30. _____
31. _____
32. _____
33. _____
34. _____
35. _____
36. _____
37. _____
38. _____
39. _____
40. _____
41. _____
42. _____
43. _____
44. _____
45. _____
46. _____
47. _____
48. _____
49. _____
50. _____
51. _____
52. _____
53. _____
54. _____
55. _____
56. _____
57. _____
58. _____
59. _____
60. _____
61. _____
62. _____
63. _____
64. _____
65. _____
66. _____
67. _____
68. _____
69. _____
70. _____
71. _____
72. _____
73. _____
74. _____
75. _____
76. _____
77. _____
78. _____
79. _____
80. _____
81. _____
82. _____
83. _____
84. _____
85. _____
86. _____
87. _____
88. _____
89. _____
90. _____
91. _____
92. _____
93. _____
94. _____
95. _____
96. _____
97. _____
98. _____
99. _____
100. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	6
STA. 81+00		TO STA. 92+00		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 98566				

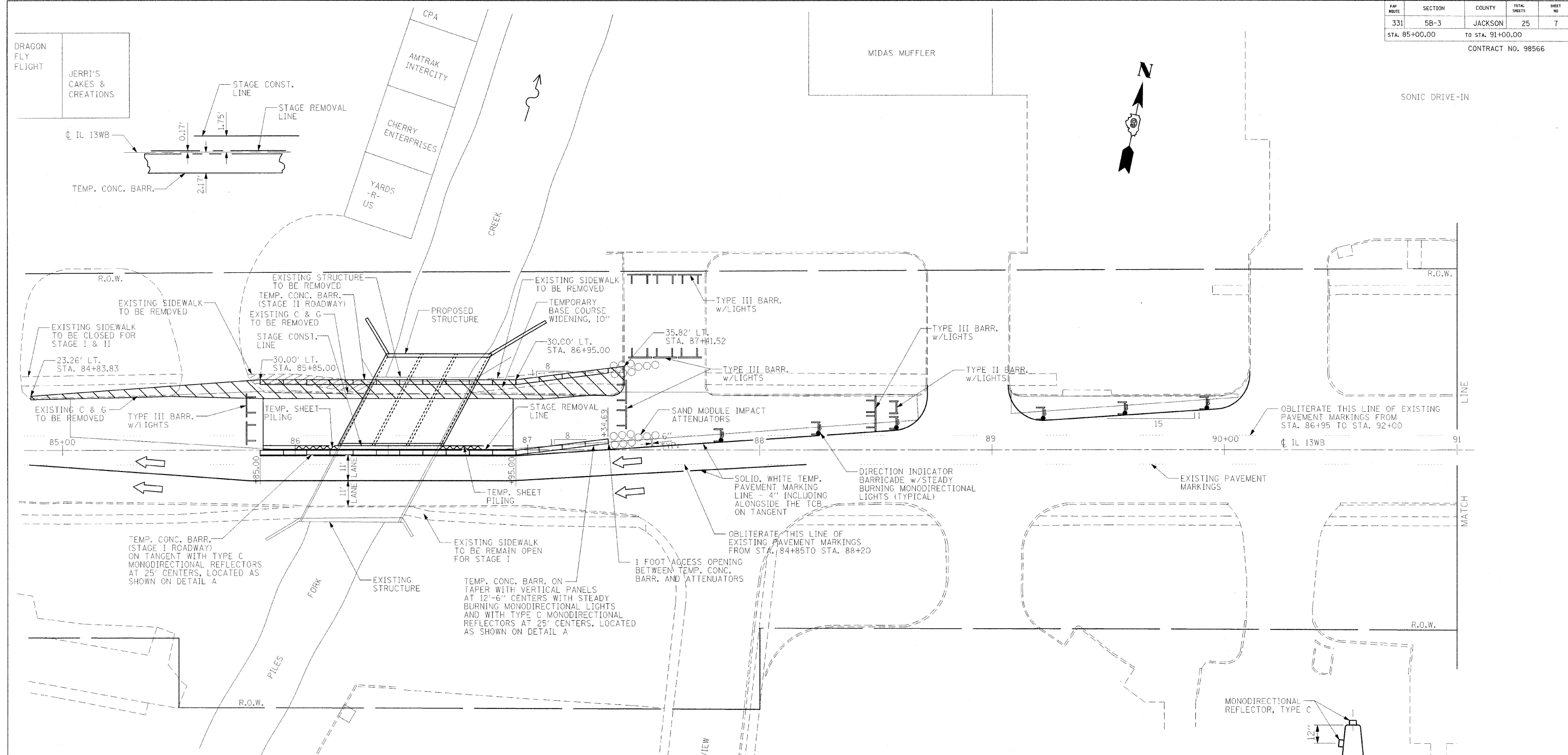
PLAN	DESIGNED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTARIS 3110		
	NO. _____		

PROFILE	DESIGNED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTARIS 3110		
	NO. _____		



12/06/2005

STA. 81+00 TO STA. 92+00 PLAN AND PROFILE OF ROADWAY IL ROUTE 13WB OVER PILES FORK CREEK



DATE	BY

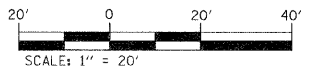
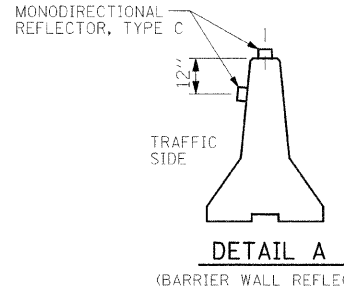
SUGGESTED SEQUENCE OF CONSTRUCTION

- PRE-STAGE I**
1. ERECT SIGNING AS REQUIRED FOR STAGE I AND STAGE II CONSTRUCTION IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND TRAFFIC CONTROL AND PROTECTION STANDARDS 701601 AND 701801, AND COVER UNTIL BARRIER PLACEMENT BEGINS.
- STAGE I**
1. SAW-CUT EXISTING PAVEMENT ALONG STAGE REMOVAL LINE AND ENDS OF PROPOSED PROJECT LIMITS.
 2. SAW-CUT EXISTING HMA OVERLAY AND STRUCTURE ALONG STAGE REMOVAL LINE OVER THE EXISTING CONSTRUCTION JOINT IN EXISTING BRIDGE.
 3. IMPLEMENT STAGE I TRAFFIC CONTROL BY PLACING TEMPORARY CONCRETE BARRIERS, IMPACT ATTENUATORS AND BARRICADES TO ROUTE TWO-LANE, ONE-WAY TRAFFIC OVER THE SOUTH PORTION OF THE EXISTING STRUCTURE.
 4. REMOVE NORTH PORTION OF EXISTING PAVEMENT AND INSTALL TEMPORARY SHEET PILING.
 5. REMOVE NORTH PORTION OF EXISTING BRIDGE.
 6. CONSTRUCT NORTH PORTION OF PROPOSED REINFORCED CONCRETE BOX CULVERT AND POROUS GRANULAR EMBANKMENT.
 7. CONSTRUCT NORTH SIDE OF PROPOSED PAVEMENT (WITHOUT CURB AND GUTTER).
 8. REMOVE EXISTING SIDEWALK AND CURB AND GUTTER WITHIN LIMITS SHOWN ALONG NORTH SIDE OF ROADWAY AND CONSTRUCT TEMPORARY HMA BASE COURSE AS SHOWN.
 9. PLACE TEMPORARY CONCRETE BARRIERS ALONG NORTH EDGE OF TEMPORARY HMA BASE COURSE AND IMPACT ATTENUATORS AS SHOWN.

ILLINOIS LIQUOR MART

STAGE I
SEE STANDARD 701601

NOTE: COST OF ALL SIGNS, BARRICADES, VERTICAL PANELS, STEADY BURNING MONODIRECTIONAL LIGHTS AND TYPE C MONODIRECTIONAL REFLECTORS INCLUDED IN TRAFFIC CONTROL AND PROTECTION STANDARD 701601 (SPECIAL).

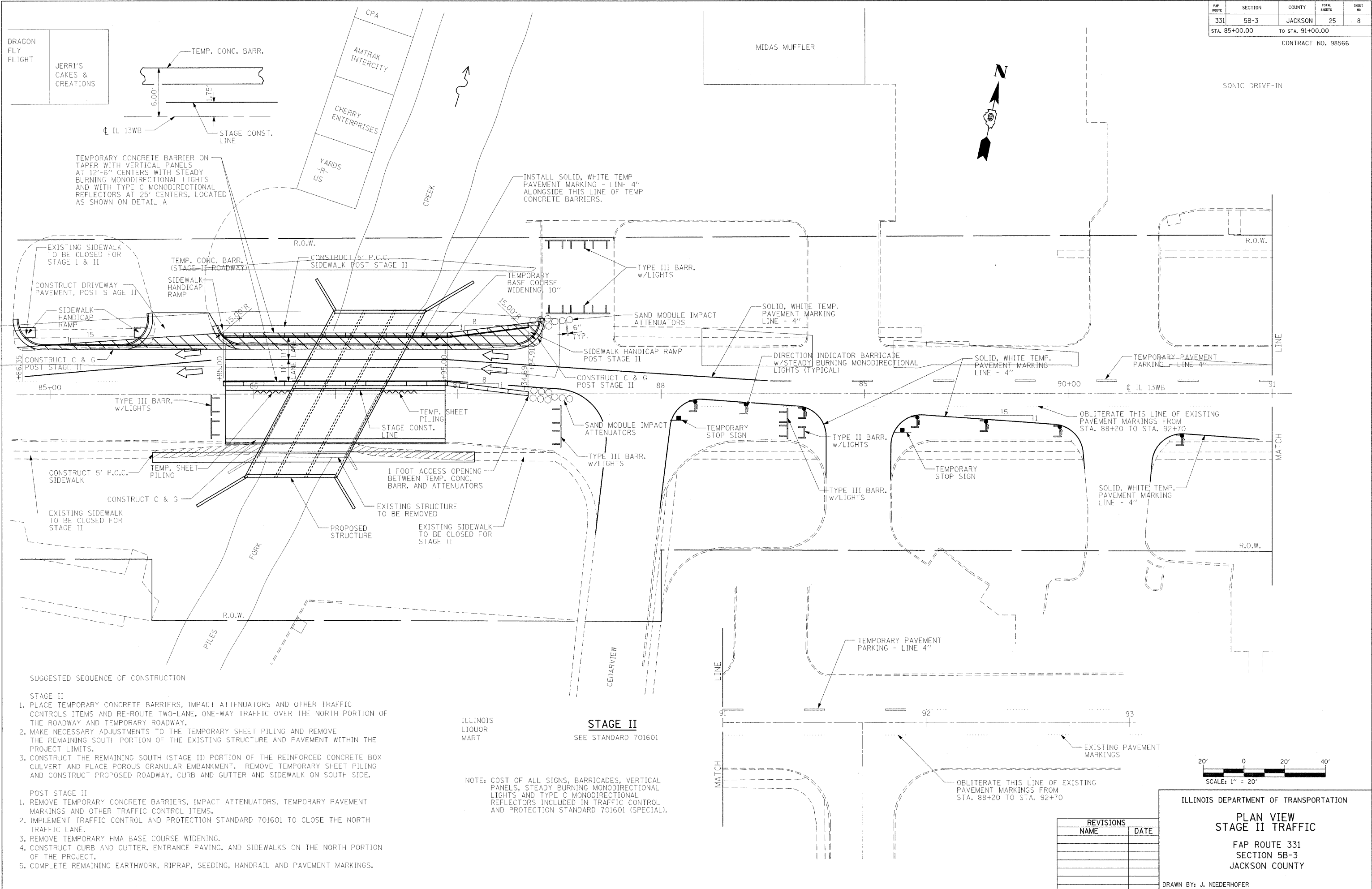


ILLINOIS DEPARTMENT OF TRANSPORTATION
**PLAN VIEW
 STAGE I TRAFFIC**
 FAP ROUTE 331
 SECTION 5B-3
 JACKSON COUNTY

REVISIONS	
NAME	DATE

DRAWN BY: J. NIEDERHOFER
 PLOT DATE: 06/09/08

98566/7/ROADWAY/STAGING/03-2026.DGN



DATE	BY	REVISIONS

SUGGESTED SEQUENCE OF CONSTRUCTION

- STAGE II**
1. PLACE TEMPORARY CONCRETE BARRIERS, IMPACT ATTENUATORS AND OTHER TRAFFIC CONTROL ITEMS AND RE-ROUTE TWO-LANE, ONE-WAY TRAFFIC OVER THE NORTH PORTION OF THE ROADWAY AND TEMPORARY ROADWAY.
 2. MAKE NECESSARY ADJUSTMENTS TO THE TEMPORARY SHEET PILING AND REMOVE THE REMAINING SOUTH PORTION OF THE EXISTING STRUCTURE AND PAVEMENT WITHIN THE PROJECT LIMITS.
 3. CONSTRUCT THE REMAINING SOUTH (STAGE II) PORTION OF THE REINFORCED CONCRETE BOX CULVERT AND PLACE POROUS GRANULAR EMBANKMENT. REMOVE TEMPORARY SHEET PILING AND CONSTRUCT PROPOSED ROADWAY, CURB AND GUTTER AND SIDEWALK ON SOUTH SIDE.
- POST STAGE II**
1. REMOVE TEMPORARY CONCRETE BARRIERS, IMPACT ATTENUATORS, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL ITEMS.
 2. IMPLEMENT TRAFFIC CONTROL AND PROTECTION STANDARD 701601 TO CLOSE THE NORTH TRAFFIC LANE.
 3. REMOVE TEMPORARY HMA BASE COURSE WIDENING.
 4. CONSTRUCT CURB AND GUTTER, ENTRANCE PAVING, AND SIDEWALKS ON THE NORTH PORTION OF THE PROJECT.
 5. COMPLETE REMAINING EARTHWORK, RIPRAP, SEEDING, HANDRAIL AND PAVEMENT MARKINGS.

ILLINOIS LIQUOR MART
STAGE II
SEE STANDARD 701601

NOTE: COST OF ALL SIGNS, BARRICADES, VERTICAL PANELS, STEADY BURNING MONODIRECTIONAL LIGHTS AND TYPE C MONODIRECTIONAL REFLECTORS INCLUDED IN TRAFFIC CONTROL AND PROTECTION STANDARD 701601 (SPECIAL).



ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAN VIEW
STAGE II TRAFFIC

F&P ROUTE 331
SECTION 5B-3
JACKSON COUNTY

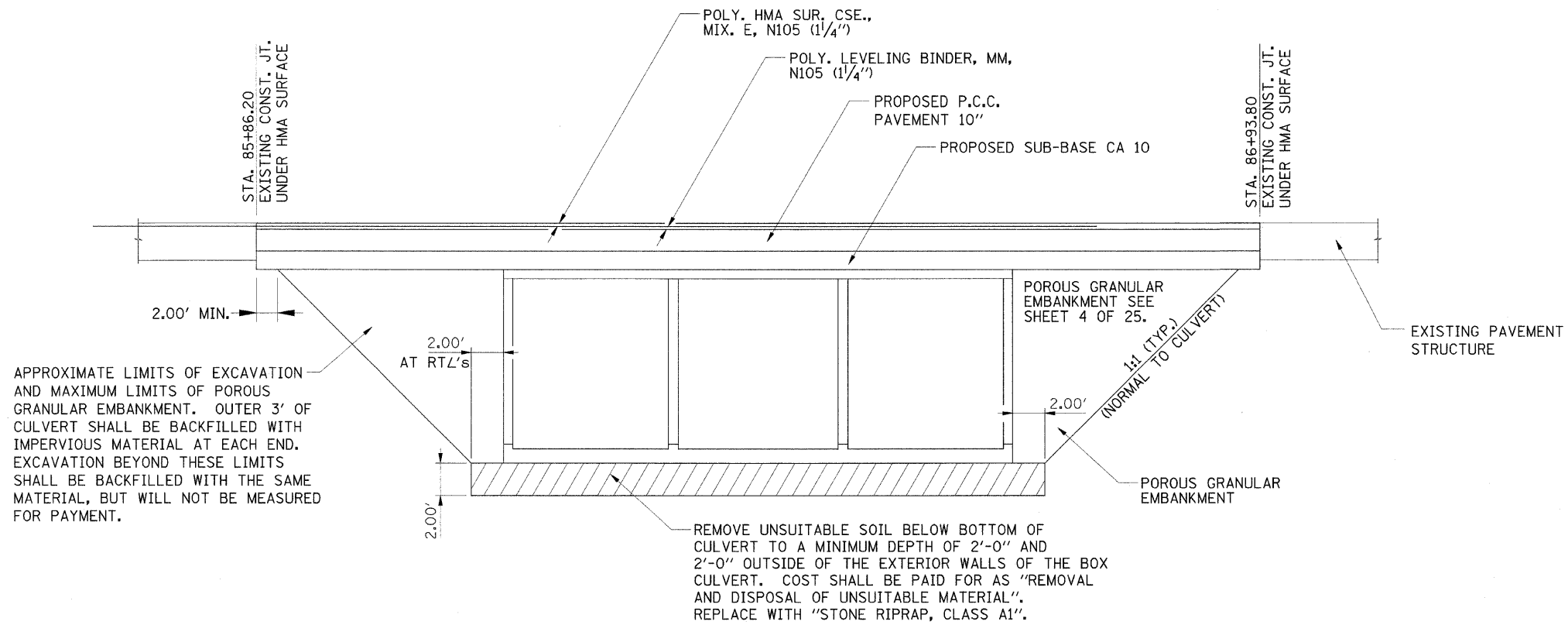
DRAWN BY: J. NIEDERHOFER
PLOT DATE: 06/09/08

REVISIONS	
NAME	DATE

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	9
STA. 85+86.20		TO STA. 86+93.60		

CONTRACT NO. 98566

PLAN	DATE
NO.	
BY	
CHECKED	
DESIGNED	
NOTED	
APP. FILE NAME	



APPROXIMATE LIMITS OF EXCAVATION AND MAXIMUM LIMITS OF POROUS GRANULAR EMBANKMENT. OUTER 3' OF CULVERT SHALL BE BACKFILLED WITH IMPERVIOUS MATERIAL AT EACH END. EXCAVATION BEYOND THESE LIMITS SHALL BE BACKFILLED WITH THE SAME MATERIAL, BUT WILL NOT BE MEASURED FOR PAYMENT.

**DETAIL FOR PAVEMENT REPLACEMENT
AND EXCAVATION AND BACKFILL TYPES
AND LIMITS**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

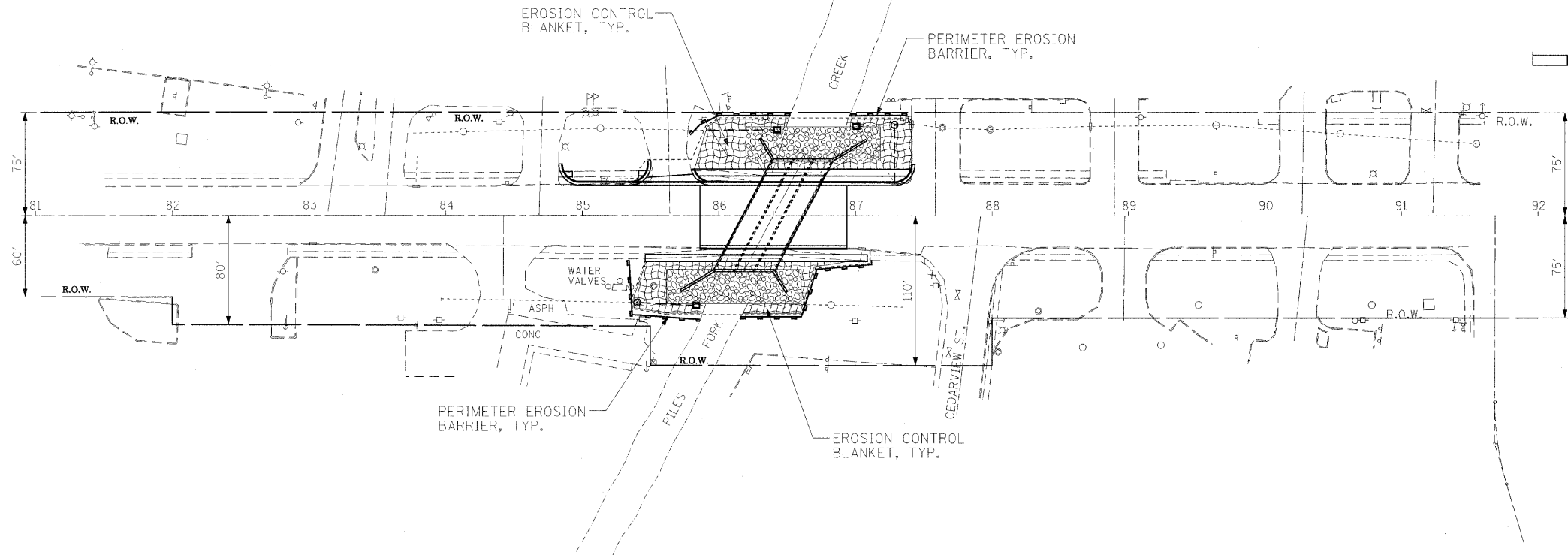
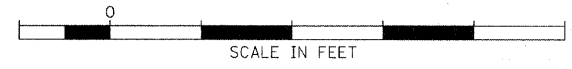
CONSTRUCTION DETAILS

FAP ROUTE 331
SECTION 5B-3
JACKSON COUNTY

DRAWN BY: J. NIEDERHOFER

PLOT DATE: 06/09/08

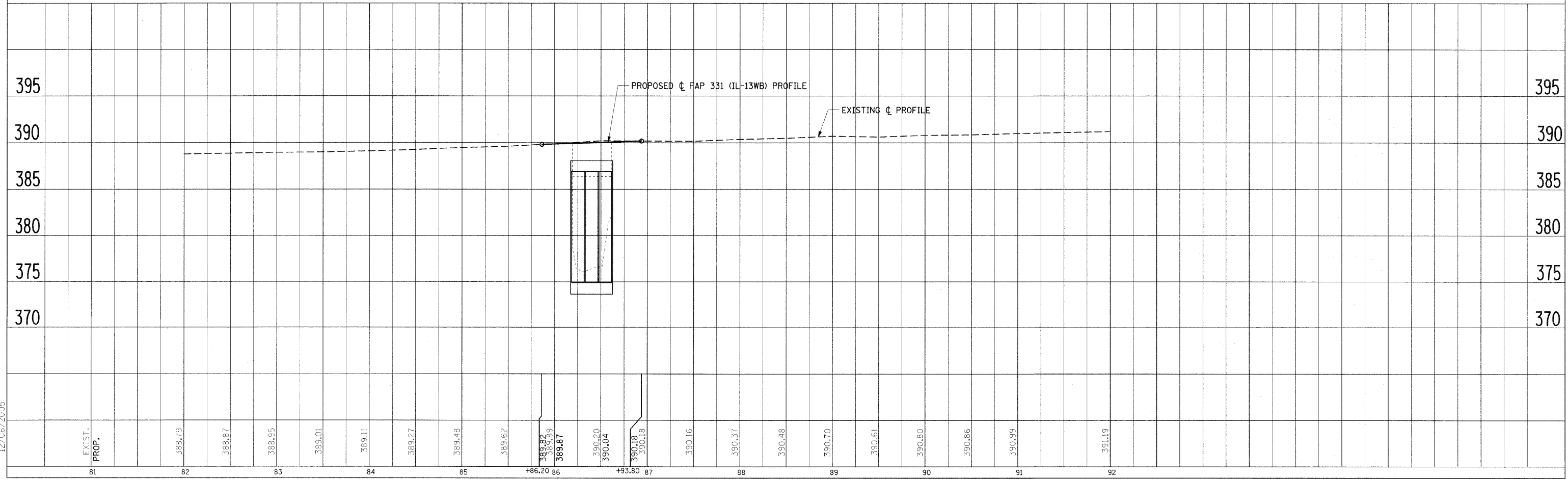
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	10
STA. 81+00		TO STA. 92+00		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 98566				



CL FAP 331 (IL 13WB)

PLAN	DESIGNED	BY	DATE
	NOTED		
	CHECKED		
	DATE		

PROFILE	DESIGNED	BY	DATE
	NOTED		
	CHECKED		
	DATE		



12/06/2005

STA. 81+00 TO STA. 92+00

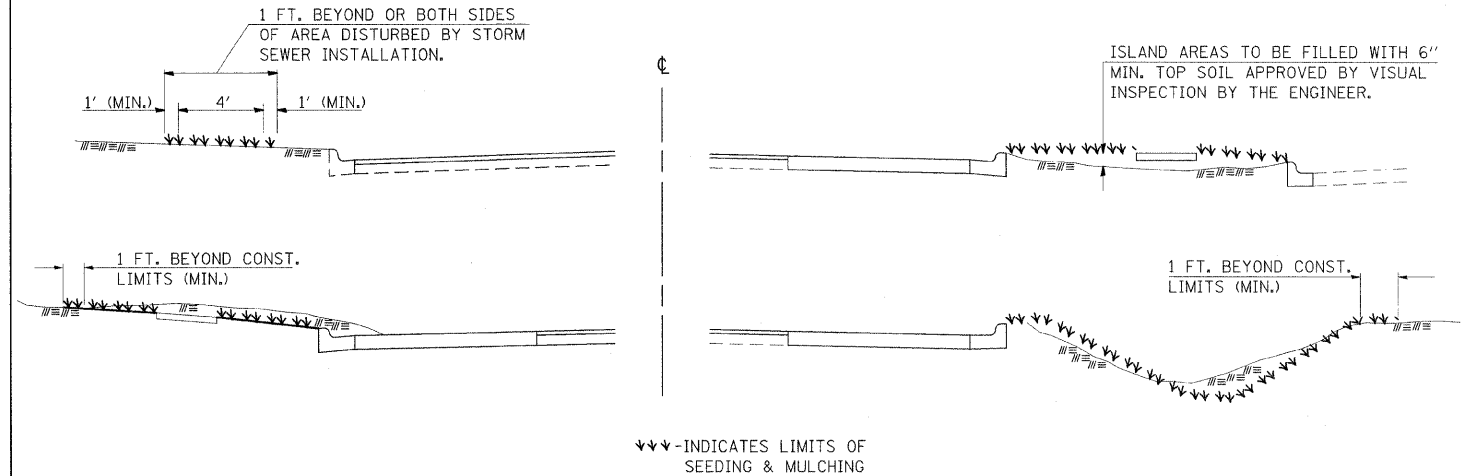
EROSION CONTROL PLAN OF ROADWAY IL ROUTE 13WB OVER PILES FORK CREEK

FAP 331 SECTION 5B-3 JACKSON COUNTY, ILLINOIS

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	11

STA. 85+86.20 TO STA. 86+93.60
CONTRACT NO. 98566

SEEDING & MULCHING



GENERAL NOTES

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

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

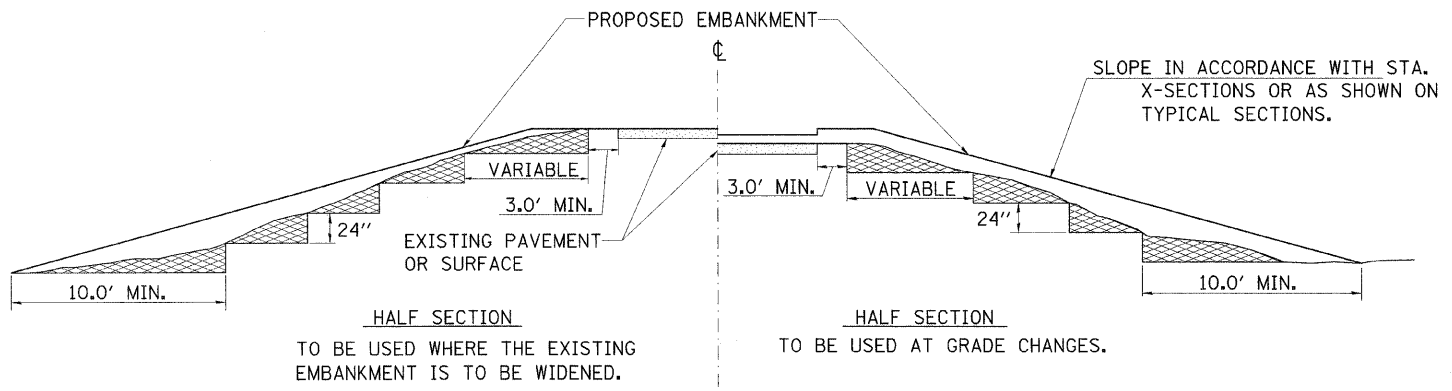
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

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

REVISIONS	DATE
DRAWN	6-15-89
REVISED	8-16-94
REVISED	
REVISED	

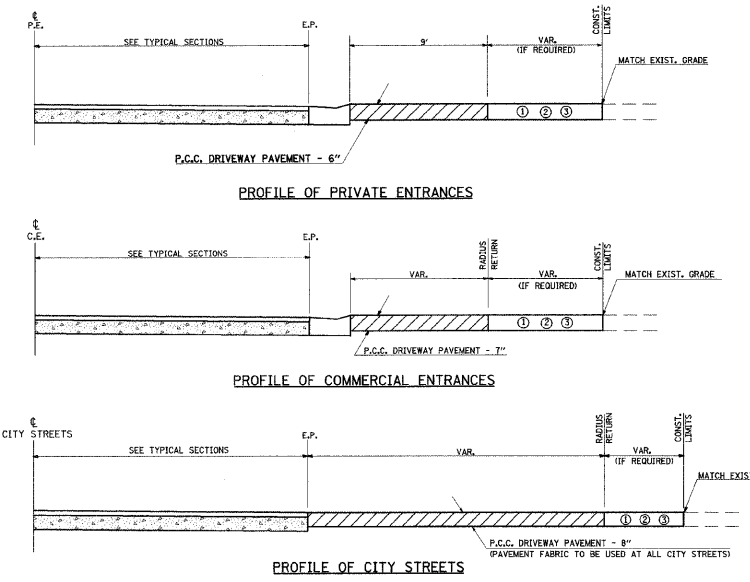
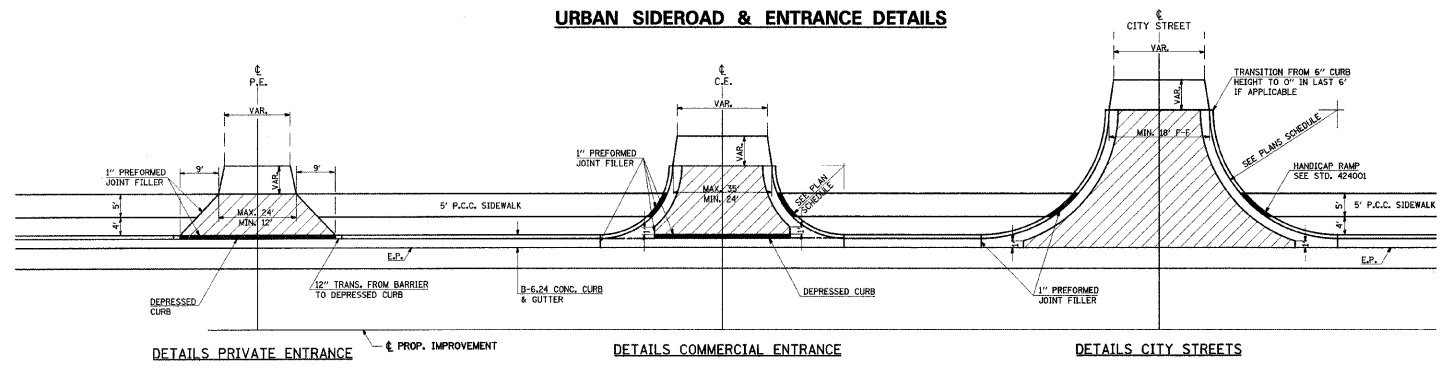
STD. 9-52

DATE	BY	REVISIONS



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

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

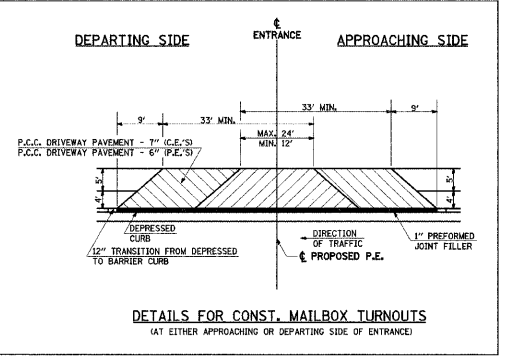


GENERAL NOTES

- SEE PLAN SCHEDULES FOR DIMENSIONS AND QUANTITIES.
- SEE CROSS SECTIONS FOR PROPOSED PROFILE OF SIDEROAD AND ENTRANCES.
- IN GENERAL, WIDTH TRANSITION TAPER RATES ARE TO BE 5% FOR ENTRANCES, AND 10% FOR CITY STREETS.
- THE SAWING OF ALL JOINTS IN PCC DRIVEWAY PAVEMENT AT ALL LOCATIONS DESIGNATED BY THE ENGINEER, SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PCC DRIVEWAY PAVEMENT.

LEGEND

- EXISTING AGGREGATE SURFACE: CONSTRUCT AGGREGATE SURFACE C&E, TYPE A WEDGE TO MATCH EXISTING GRADE. USE 6" MIN. 18" MIN. FOR CITY STREETS! THICKNESS FOR ANY REQUIRED WIDENING.
- EXISTING BITUMINOUS SURFACES: USE 2" MIN. BITUMINOUS RESURFACING ON 4" MIN. 6" MIN. FOR CITY STREETS! AGGREGATE BASE COURSE.
- EXISTING CONCRETE SURFACE: P.C.C. DRIVEWAY PAVEMENT 5" P.E.'S; P.C.C. DRIVEWAY PAVEMENT 7" C.E.'S; P.C.C. DRIVEWAY PAVEMENT 8" CITY STREETS

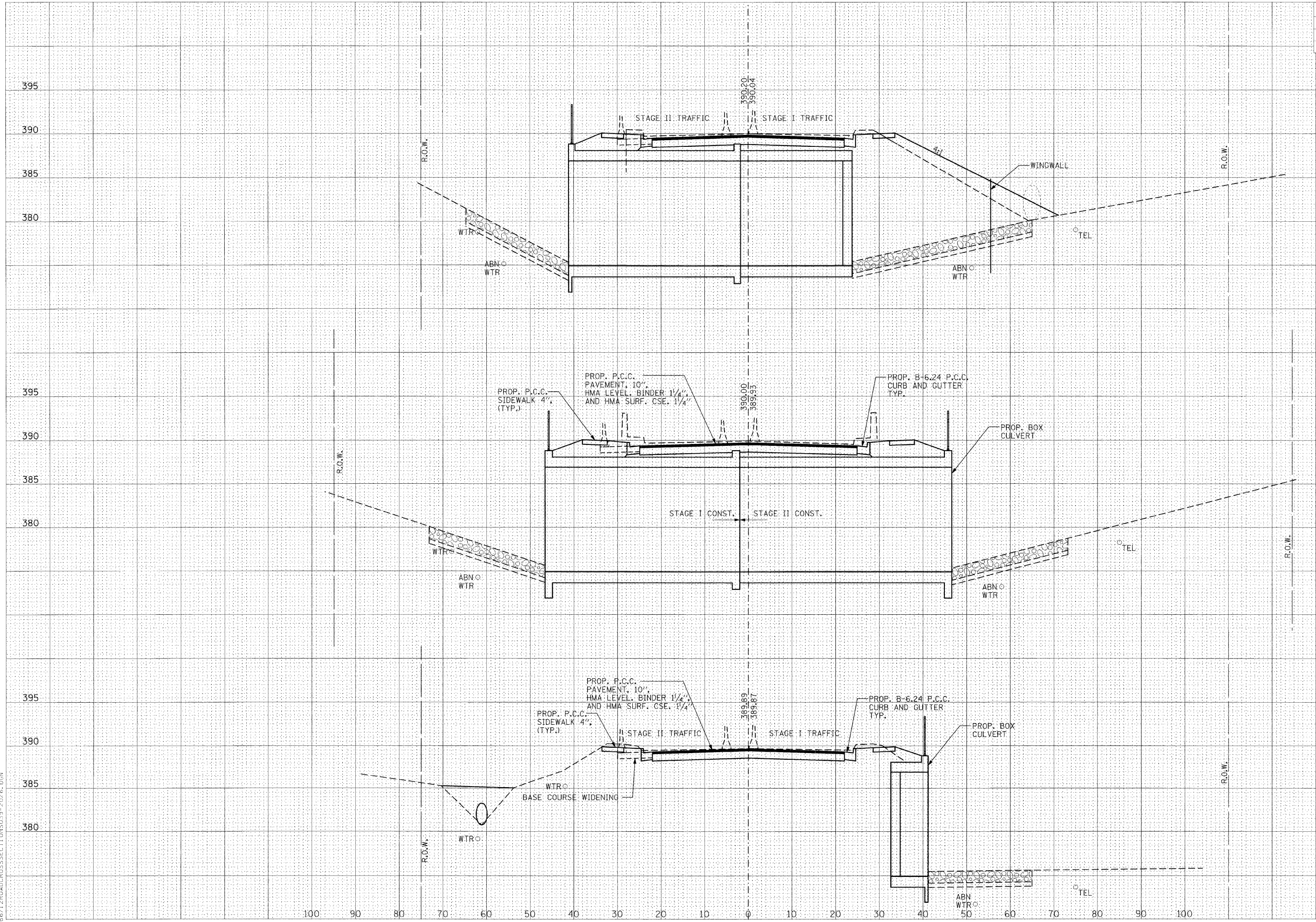


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT STANDARDS
FAP ROUTE 331
SECTION 5B-3
JACKSON COUNTY
DRAWN BY: J. NIEDERHOFER

PLOT DATE: *DATE-TIME*

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	13
STA. 86+00		TO STA. 86+50		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 98566		



C=4
F=85
86
+
50

C=0
F=52
ALONG SKEW
86
+
18

C=15
F=42
86
+
00

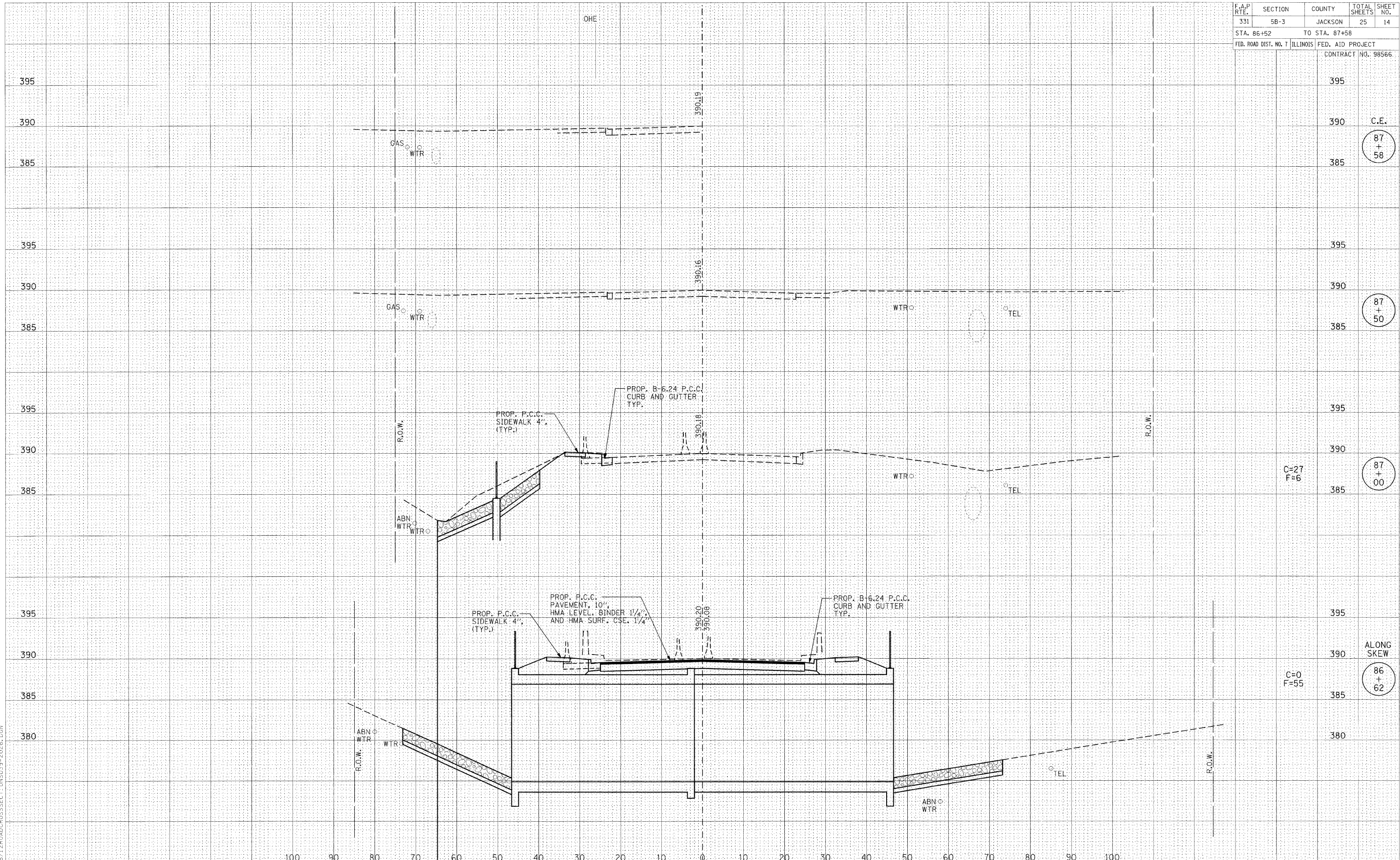
CROSS SECTIONS OF ROADWAY IL ROUTE 13WB OVER PILES FORK CREEK

DATE	BY
DATE	BY
DATE	BY
DATE	BY

DATE	BY
DATE	BY
DATE	BY
DATE	BY

985566/12ROADCROSSSECTION039-2026.DGN

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	5B-3	JACKSON	25	14
STA. 86+52 TO STA. 87+58			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 98566				



CROSS SECTIONS OF ROADWAY IL ROUTE 13WB OVER PILES FORK CREEK

BY	DATE

BY	DATE

98566/12ROADCROSSSECT.DWG 039-2026.DGN

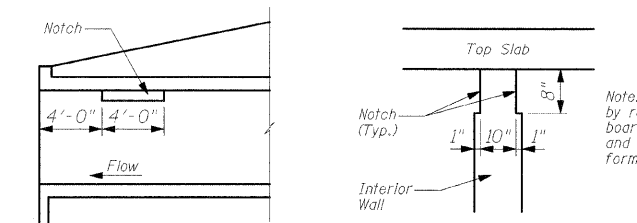
Bench mark - Square cut on northwest wingwall of existing Structure No. 039-0018. 31' Lt. of Sta. 86+32.3 - Elev. 390.37

Existing Structure: S.N 039-0018 (Westbound Illinois Route 13) built in 1947 as a single span pile supported closed abutment structure, 44'-3" back-to-back abutments. Superstructure is a T-beam girder slab 58'-4" out-to-out on a 28° ahead left skew.

Traffic to be maintained utilizing stage construction.

No Salvage.

The vertical reinforcement in the existing abutment walls is located near face of the concrete closest to the stream. Therefore, due caution must be exercised by the Contractor when removing the top slab of the bridge. Bracing of the abutment walls or excavation behind the walls may be necessary to prevent sudden collapse.



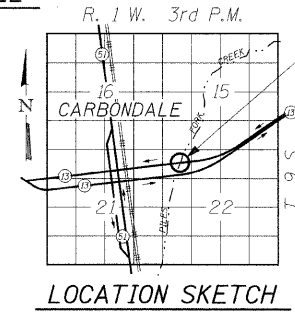
LONGITUDINAL SECTION
PHOEBE NESTING SITE NOTCH DETAIL
(Downstream end only of Interior Walls)

WATERWAY INFORMATION

Drainage Area = 6.81 Sq. Mi.		Low Grade Elev. 389.90 @ Sta. 81+50.00				
Road	Freq. Yr.	C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater E.I.
Design	50	2435	319.21	402.50	386.38	1.26
Base	100	2772	319.21	415.10	386.73	1.27
Overtopping						
Max. Calc.	500	3565	319.21	432.00	388.04	1.77

STA. 86+40.00
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. 331 - SECTION 5B-3
LOADING HS20
STR. NO. 039-2026

NAME PLATE
(See State Standard 515001 for details)

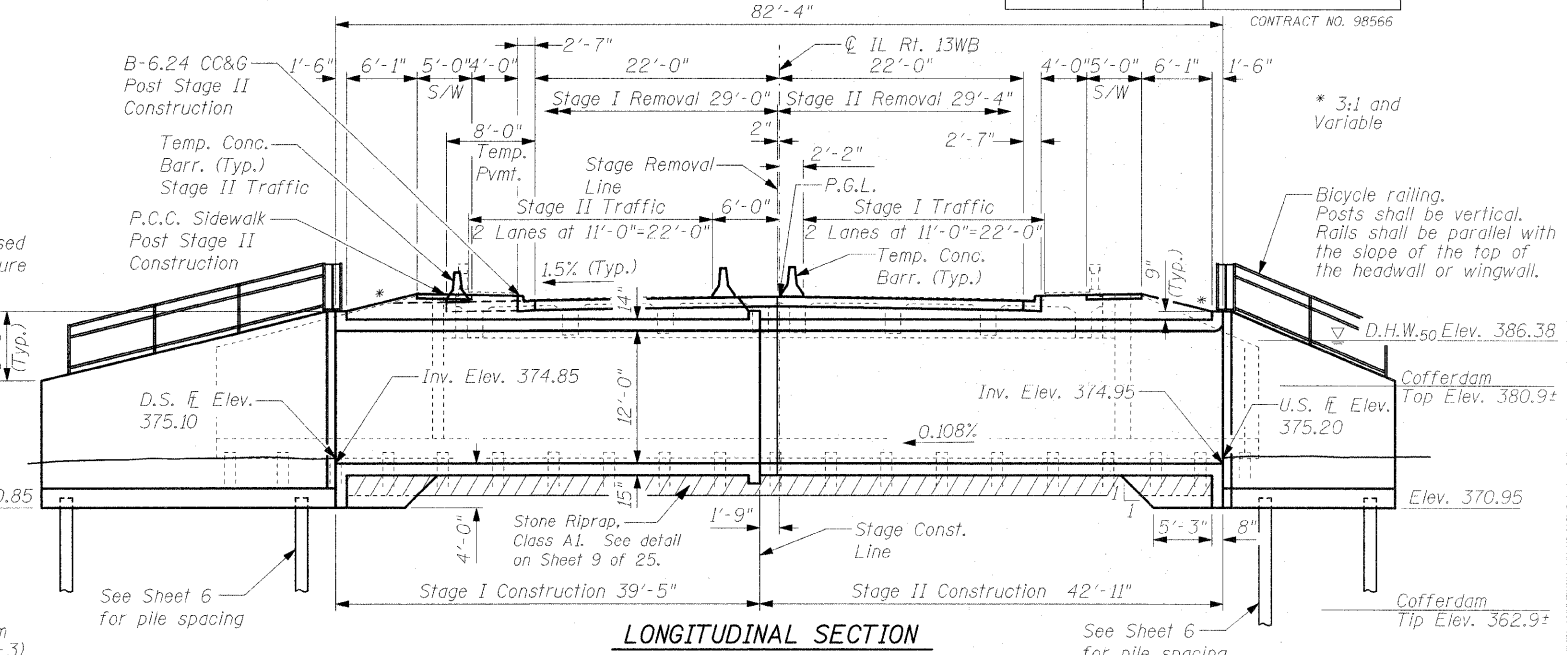


LOCATION SKETCH
Elev. 370.85

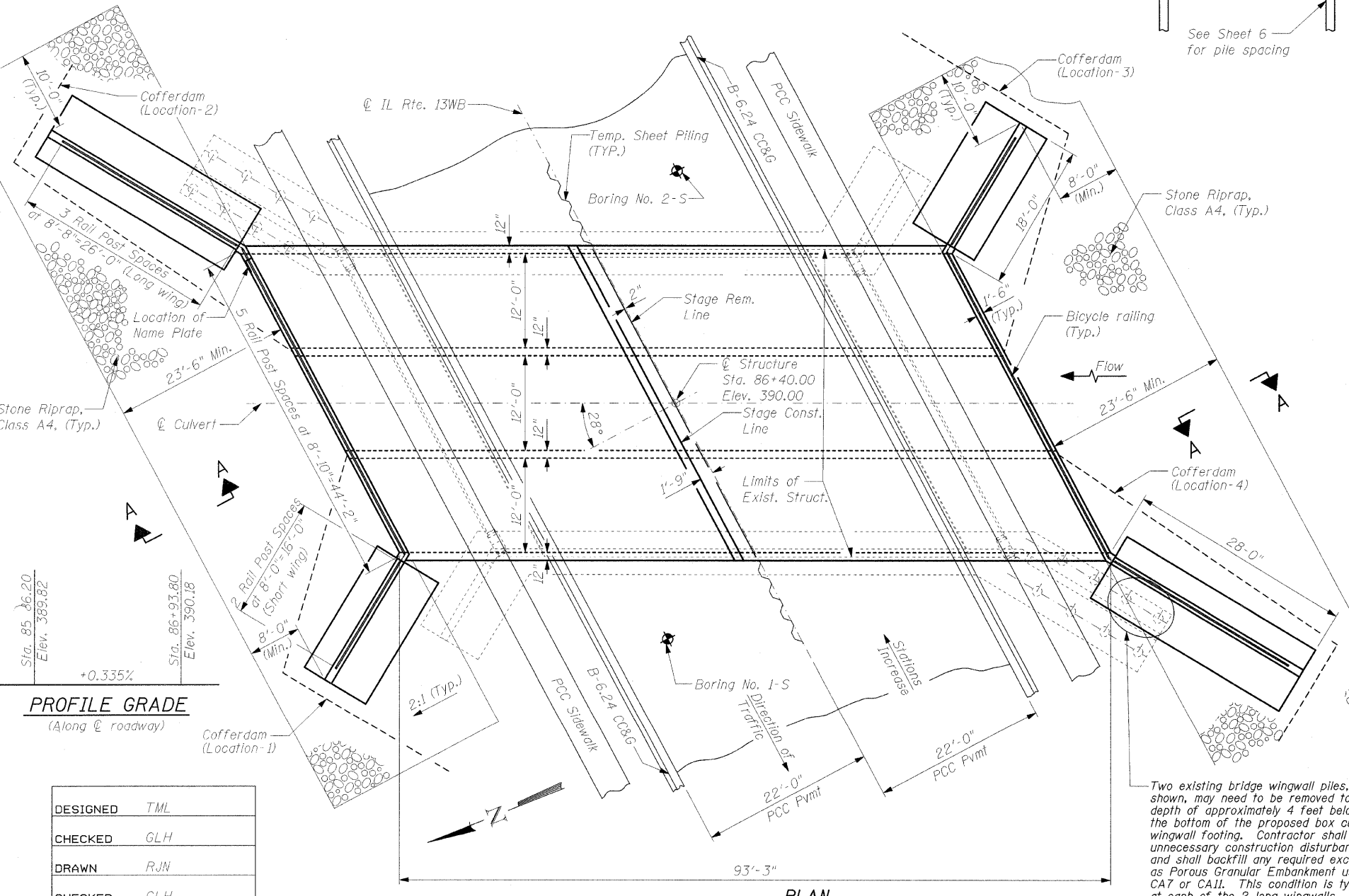
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
FAP 331	5B-3	JACKSON	25	15	11 SHEETS

CONTRACT NO. 98566



LONGITUDINAL SECTION
Looking East
Dimensions are at right angles to C Roadway



PLAN

PROFILE GRADE
(Along C roadway)

DESIGNED	TML
CHECKED	GLH
DRAWN	RJN
CHECKED	GLH

BILL OF MATERIALS (CULVERT ONLY)

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu Yd	300
Porous Granular Embankment	Cu Yd	700
Stone Riprap, Class A1	Sq Yd	450
Stone Riprap, Class A4	Sq Yd	575
Removal of Existing Structures	Each	1
Cofferdam Excavation	Cu Yd	480
Cofferdam (Location - 1)	Each	1
Cofferdam (Location - 2)	Each	1
Cofferdam (Location - 3)	Each	1
Cofferdam (Location - 4)	Each	1
Reinforcement Bars, Epoxy Coated	Pound	92530
Furnishing Metal Shell Piles 12" X 0.179"	Foot	2310
Driving Piles	Foot	2310
Test Pile Metal Shells	Each	1
Name Plates	Each	1
Concrete Box Culverts	Cu Yd	626.6
Bar Splicers	Each	279
Bicycle Railing	Foot	173
Filter Fabric	Sq Yd	575
Temporary Sheet Piling	Sq Ft	830

GENERAL NOTES

A precast concrete box culvert alternate will not be allowed at this site.

See Note 3 on Sheet 2 of 25 for cautions to the Contractor to restrict or minimize the creation of channel obstructions during construction operations.

Remove unsuitable soil below bottom of Culvert to a minimum depth of 2'-0" and 2'-0" outside of the exterior walls of the box Culvert. Cost shall be paid for as "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL". Replace with "STONE RIPRAP, CLASS A1". See detail on Sheet 9 of 25.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

The Stage Removal Line is coincident with a construction joint in the existing structure beneath the wearing surface.

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

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

All construction joints shall be bonded.

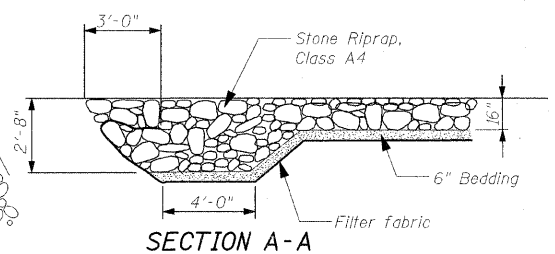
Exposed edges shall be beveled 3/4" unless otherwise noted.

The back face of the culvert and wingwalls shall be waterproofed according to Article 503.18 of the Standard Specifications.

The spread footings and walls of the existing abutments shall be removed according to Section 501 of the Standard Specifications. In the area within 12 inches of the proposed box culvert to a depth of 24 inches minimum below bottom of the proposed box culvert, except as noted. Backfill with Porous Granular Embankment.

Cost of any excavation, except unsuitable material below bottom slab and Cofferdam Excavation, included with Removal of Existing Structures.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.



SECTION A-A

DESIGN SPECIFICATIONS

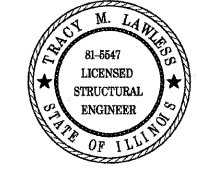
A.A.S.H.T.O. 2002 17th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinf.)

LOADING HS20-44

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



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Tracy M. Lawless
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

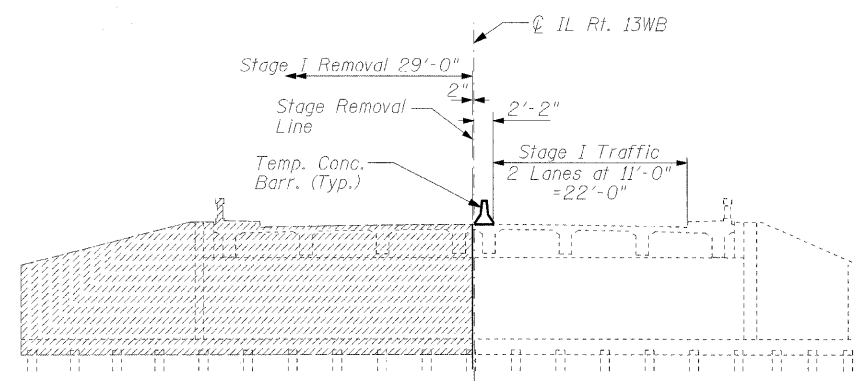
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 331	5B-3	JACKSON	25	16

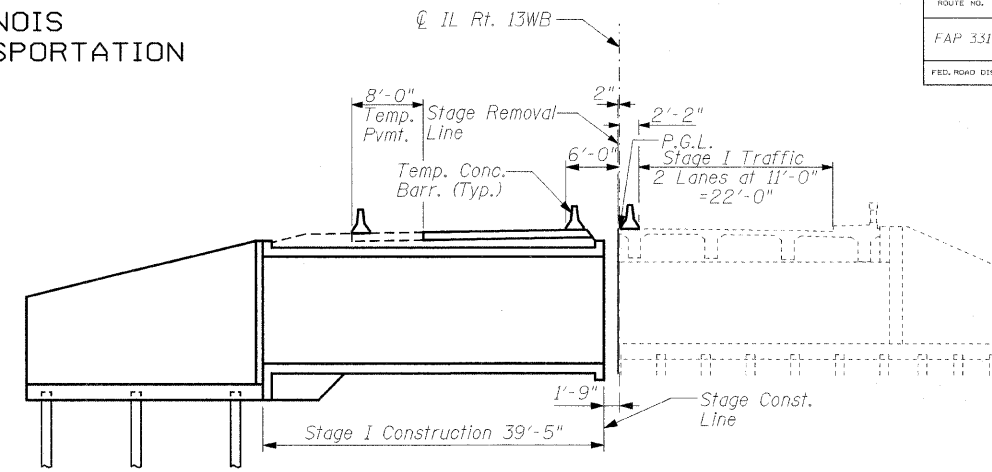
SHEET NO. 2

11 SHEETS

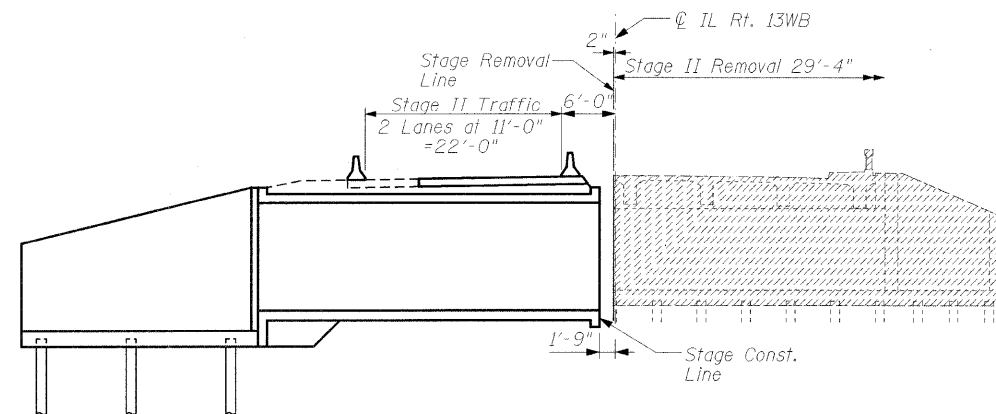
CONTRACT NO. 98566



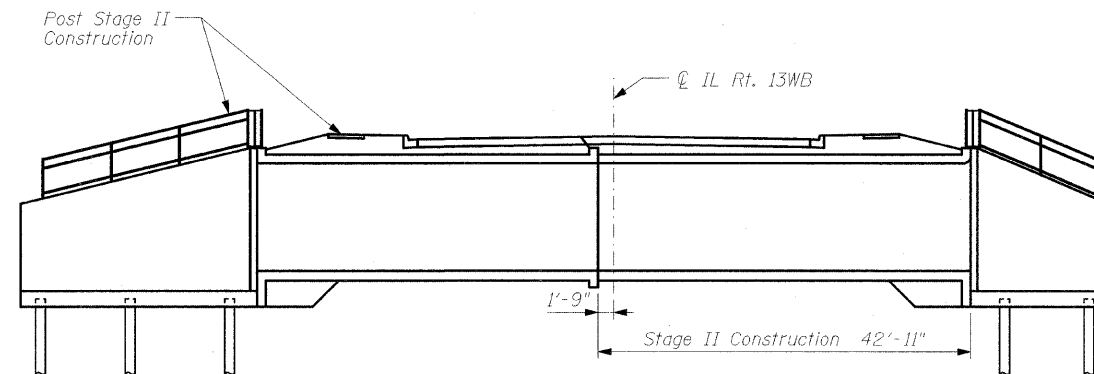
STAGE I REMOVAL
Looking East



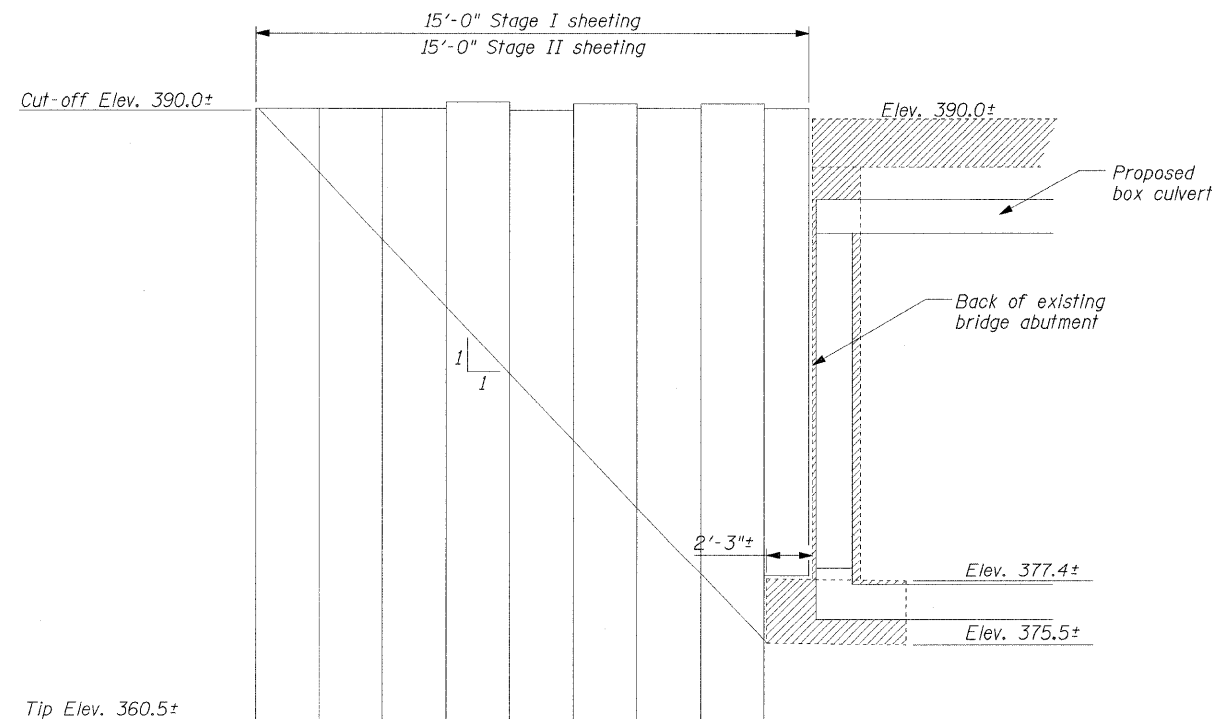
STAGE I CONSTRUCTION
Looking East



STAGE II REMOVAL
Looking East



STAGE II CONSTRUCTION
Looking East



TEMPORARY SHEET PILING

NOTES

Hatched areas indicate "Removal of Existing Structures".

For quantities of Temporary Concrete Barrier, see roadway plans.

All dimensions are at right angles to the centerline of the roadway.

For detail of Temporary Concrete Barrier, see Sheet 3.

Minimum temporary sheet pile Section Modulus = 18.0 in³/ft and F_y = 39,000 psi.

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

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

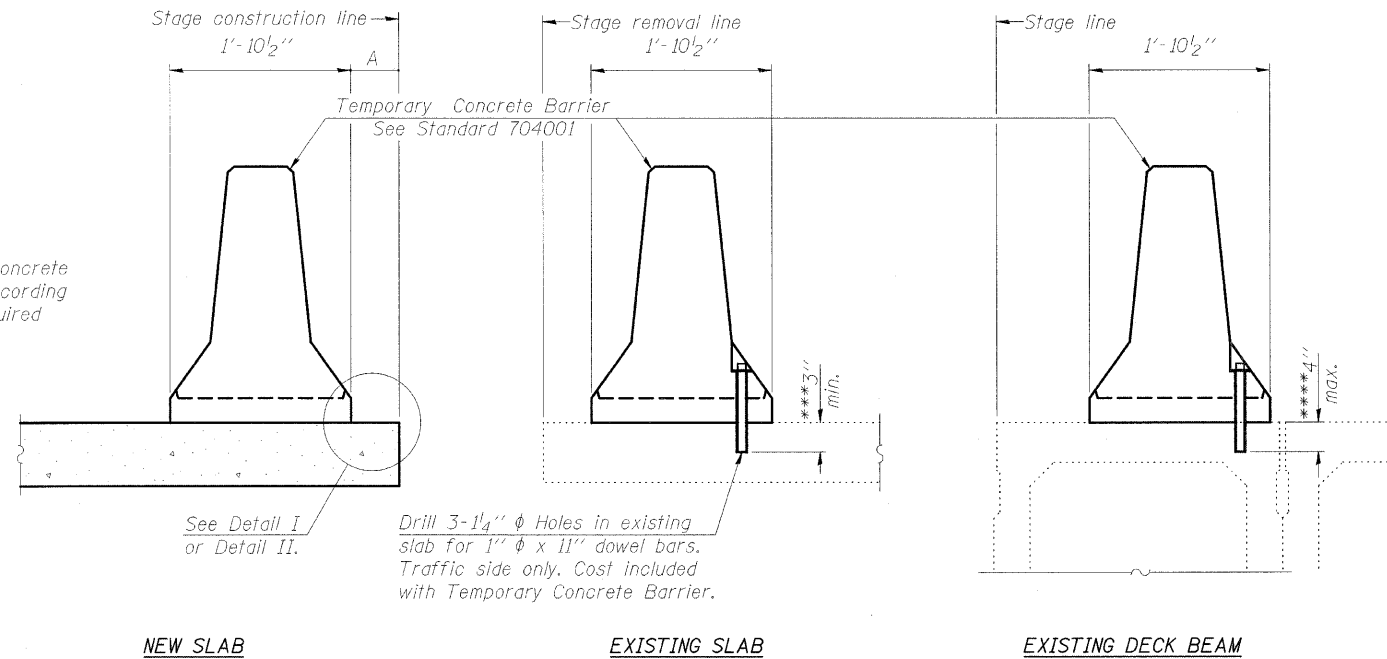
DESIGNED	TML
CHECKED	GLH
DRAWN	RJN
CHECKED	GLH

R-27 4-30-97

CONSTRUCTION STAGING PLANS
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
FAP 331	5B-3	JACKSON	25	17	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 98566		



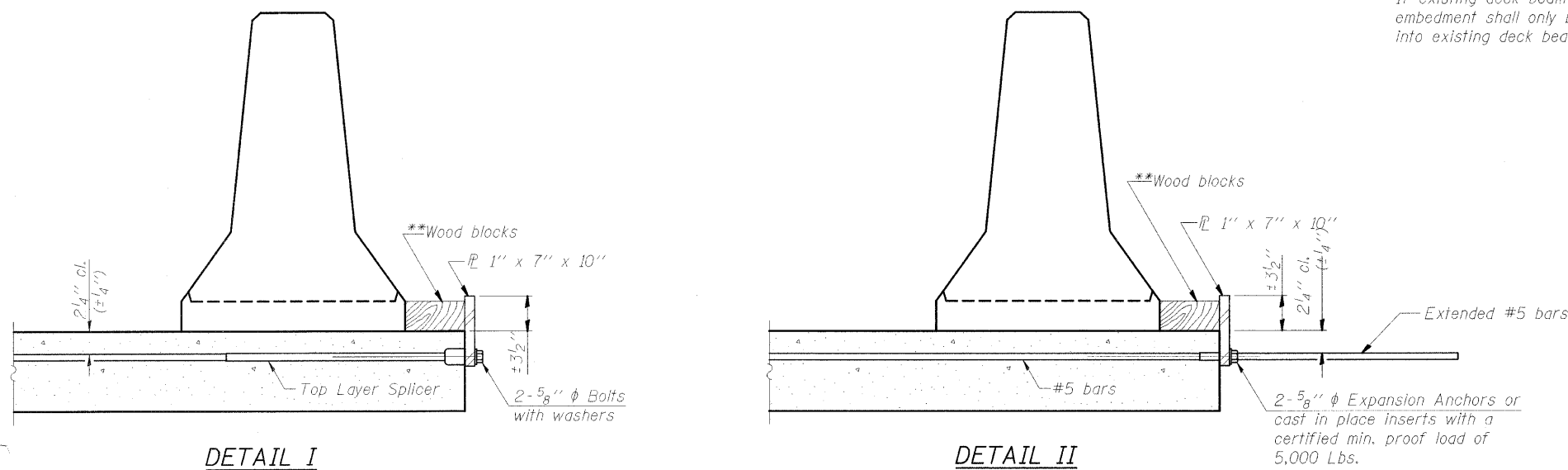
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

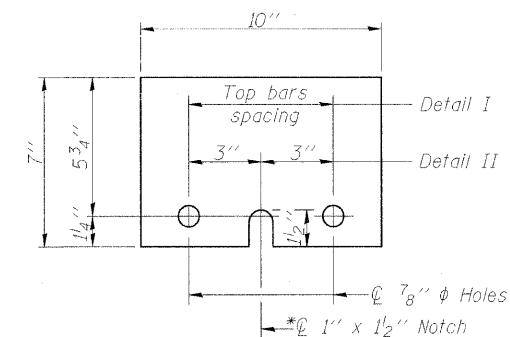
NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" 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.



STEEL RETAINER \bar{P} 1" x 7" x 10"

*Required only with Detail II

**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.

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

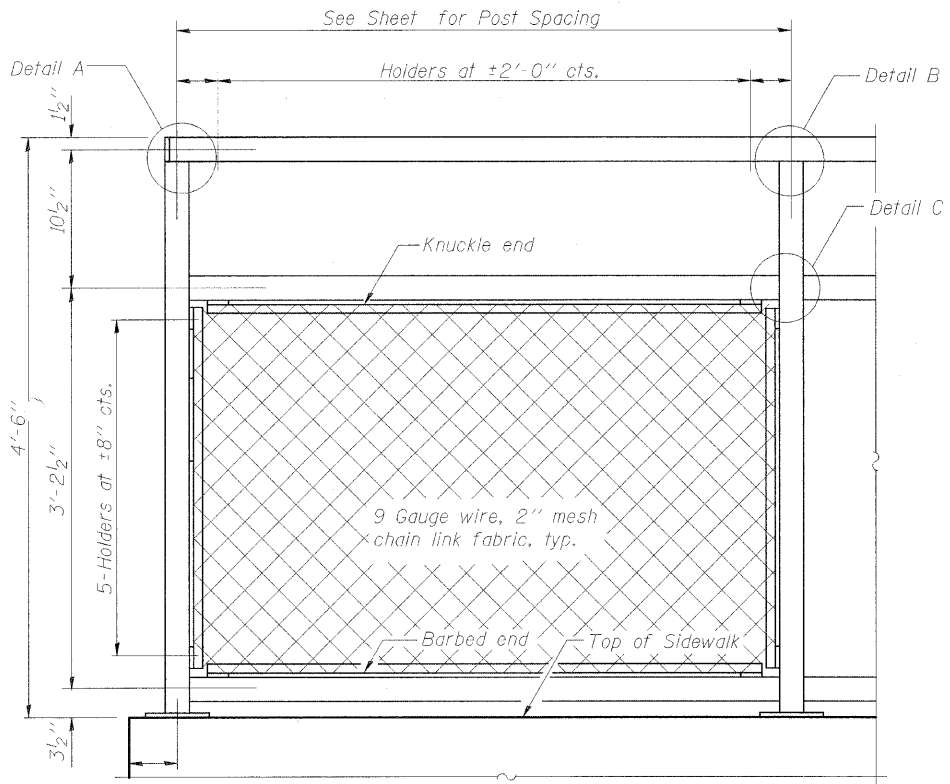
R-27

5-16-08

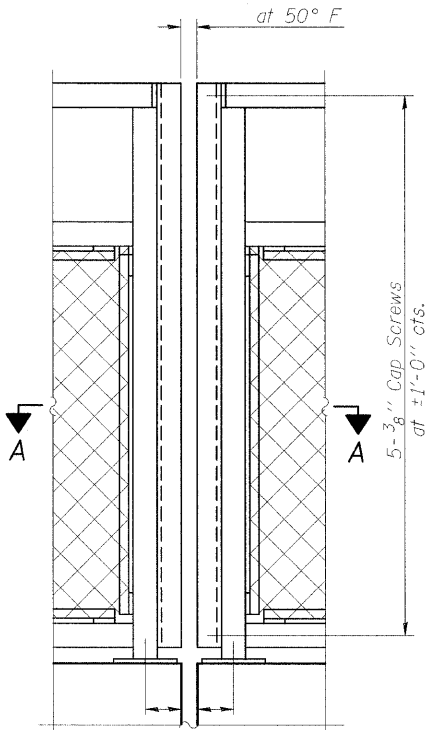
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

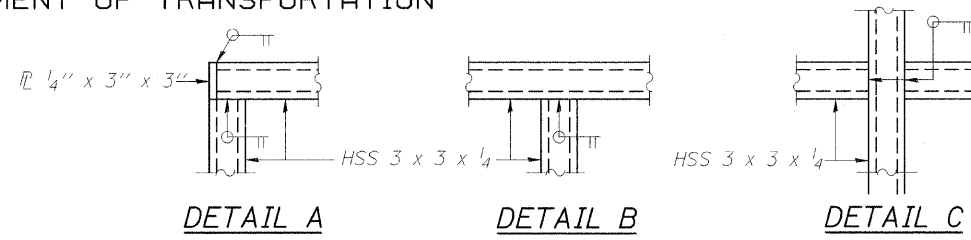
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
FAP 331	5B-3	JACKSON	25	18	11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -		CONTRACT NO. 98566



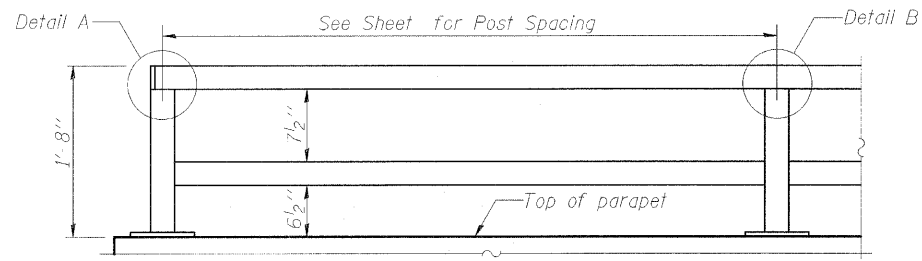
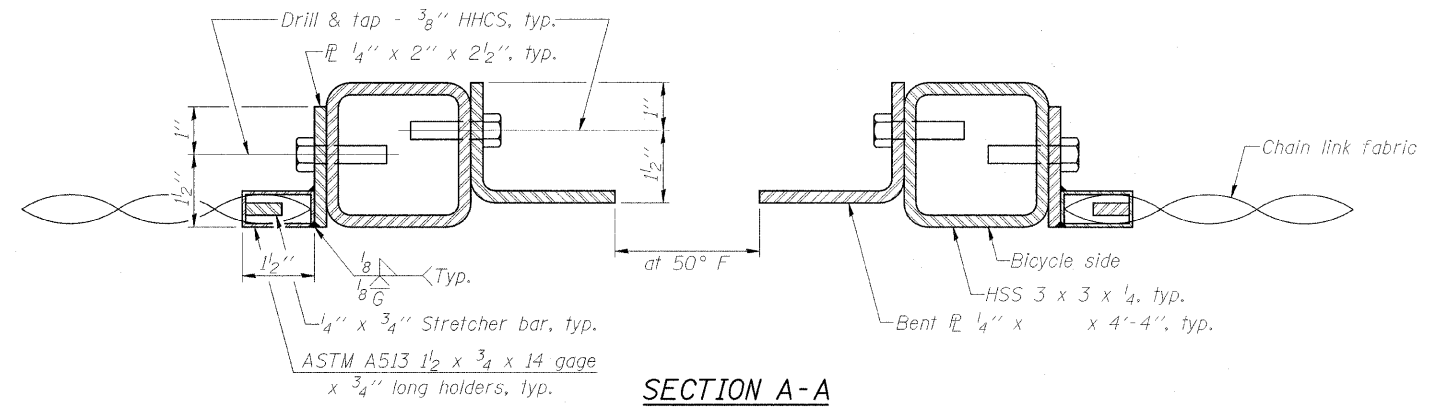
BICYCLE RAILING



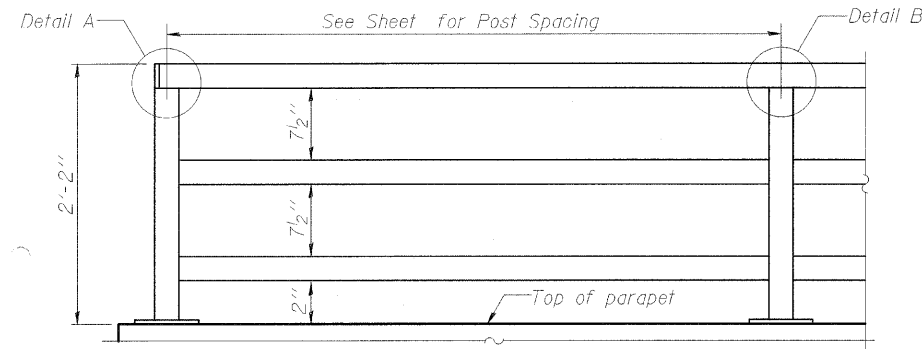
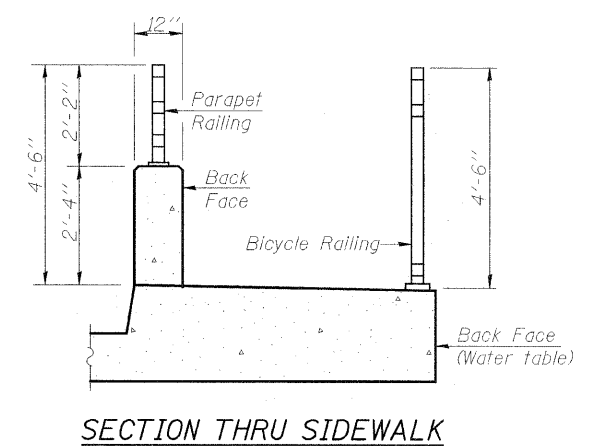
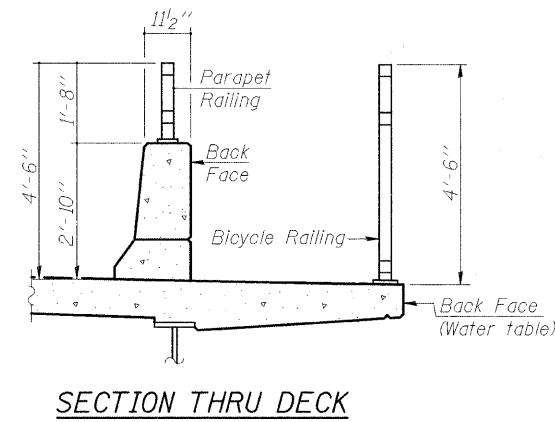
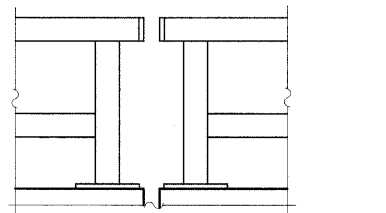
BICYCLE RAILING



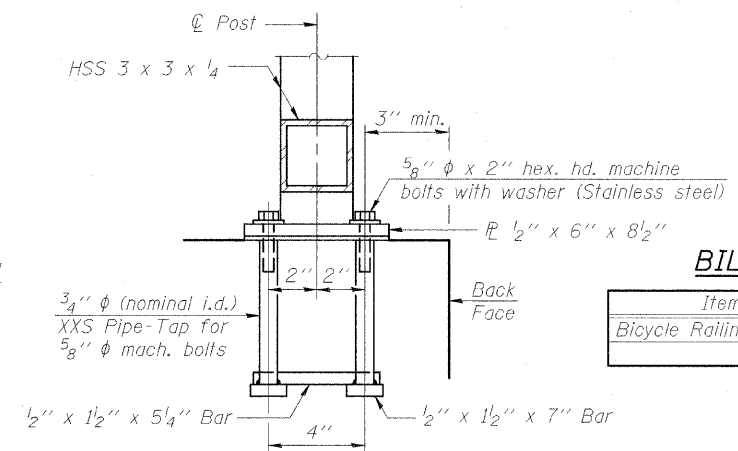
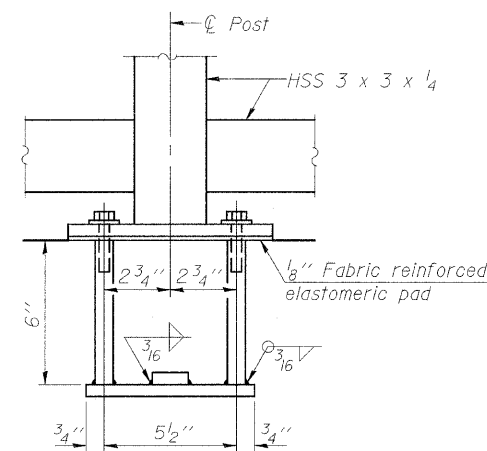
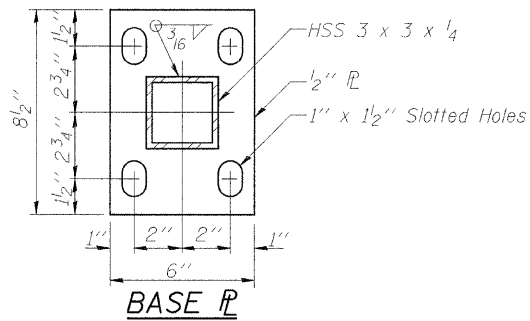
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



PARAPET RAILING ELEVATION
(Inside Face of Two Element Rail)

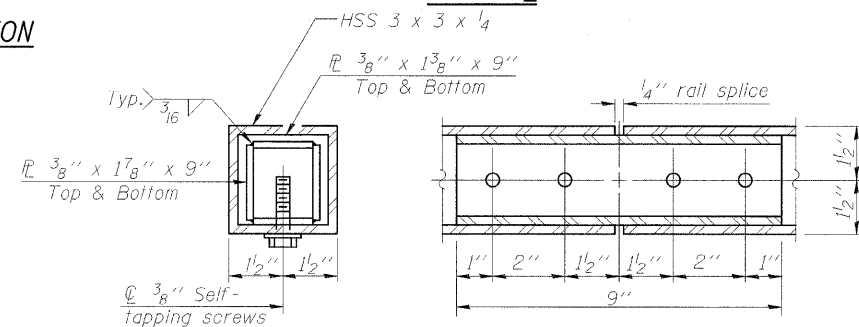


PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)



BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	173



RAIL SPLICE

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BICYCLE RAILING
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

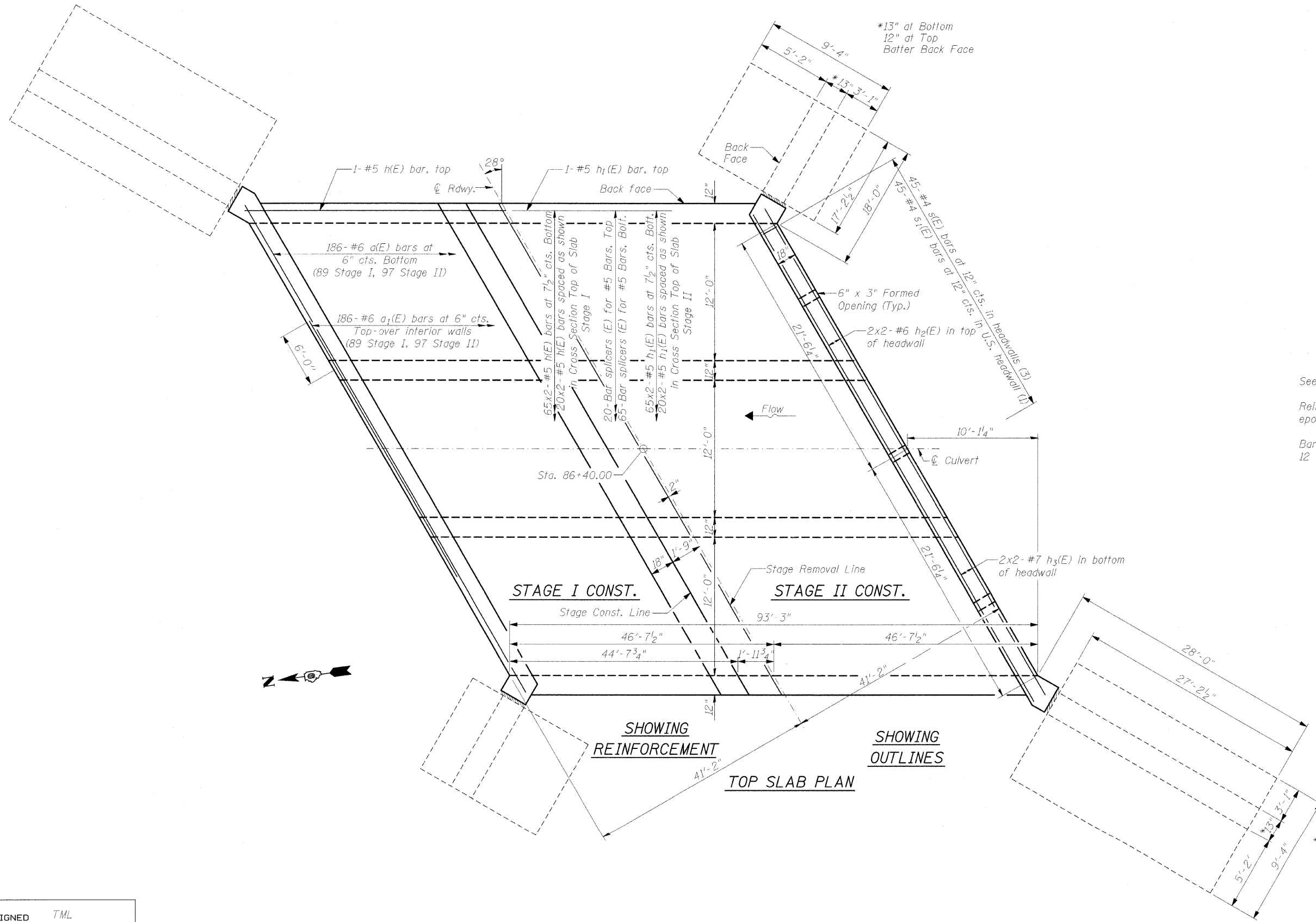
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 11 SHEETS
FAP 331	5B-3	JACKSON	25	19	
FED. ROAD DIST. NO. 7	S.I. DIST. NO.	FED. AID PROJECT-	CONTRACT NO. 98566		

MIN. BAR LAP

- Barrel
 #4 - 1'-4"
 #5 - 1'-8"
 #6 - 2'-0"
 #7 - 2'-9"
- Wingwalls
 #4 - 1'-8"
 #5 - 2'-2"
 #6 - 2'-7"

NOTES

- See Sheets 6 & 7 of 11 for wingwall details
- Reinforcement bars designated (E) shall be epoxy coated.
- Bars indicated thus, 12x4-#5 etc., indicates 12 lines of bars with 4 lengths per line.



DESIGNED	TML
CHECKED	GLH
DRAWN	RJN
CHECKED	GLH

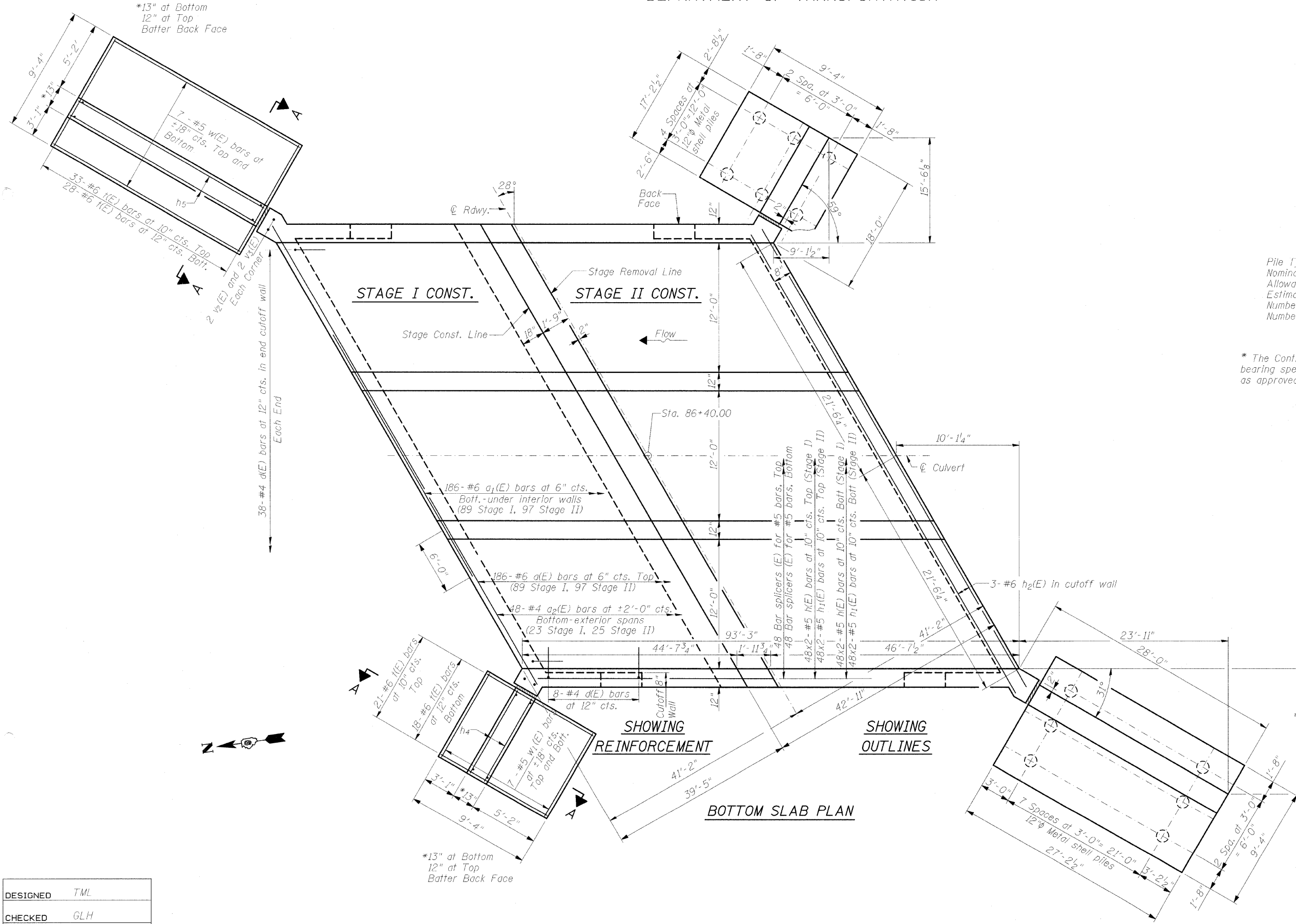
DB-T-L 4-30-99

PLAN - TOP SLAB
 ILLINOIS ROUTE 13WB OVER
 PILES FORK CREEK
 FAP ROUTE 331 - SEC. 5B-3
 JACKSON COUNTY
 STATION 86+40.00
 STRUCTURE NO. 039-2026

12/06/2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 11 SHEETS
FAP 331	5B-3	JACKSON	25	20	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 98566



MIN. BAR LAP

- Barrel
 #4 - 1'-4"
 #5 - 1'-8"
 #6 - 2'-0"
 #7 - 2'-9"
- Wingwalls
 #4 - 1'-8"
 #5 - 2'-2"
 #6 - 2'-7"

PILE DATA

Pile Type and Size:	Metal Shell - 12" x 0.179"
Nominal Required Bearing:	96 kips
Allowable Resistance Available:	32 kips
Estimated Length:	30 feet
Number of Production Piles:	77
Number of Test Piles:	1*

* The Contractor shall drive test piles to 110% of the nominal required bearing specified in a production location at the northeast wingwall as approved by the Engineer before ordering the remainder of piles.

NOTES

- See Sheet 1 of 11 for note regarding possible need for the removal of a portion of two existing bridge wingwall piles whose location may interfere with the construction of proposed wingwall. This condition is typical for each long wingwall.
- See Sheets 6 & 7 of 11 for wingwall details
- Reinforcement bars designated (E) shall be epoxy coated.
- Bars indicated thus, 12x4-#5 etc., indicates 12 lines of bars with 4 lengths per line.

DESIGNED	TML
CHECKED	GLH
DRAWN	RJN
CHECKED	GLH

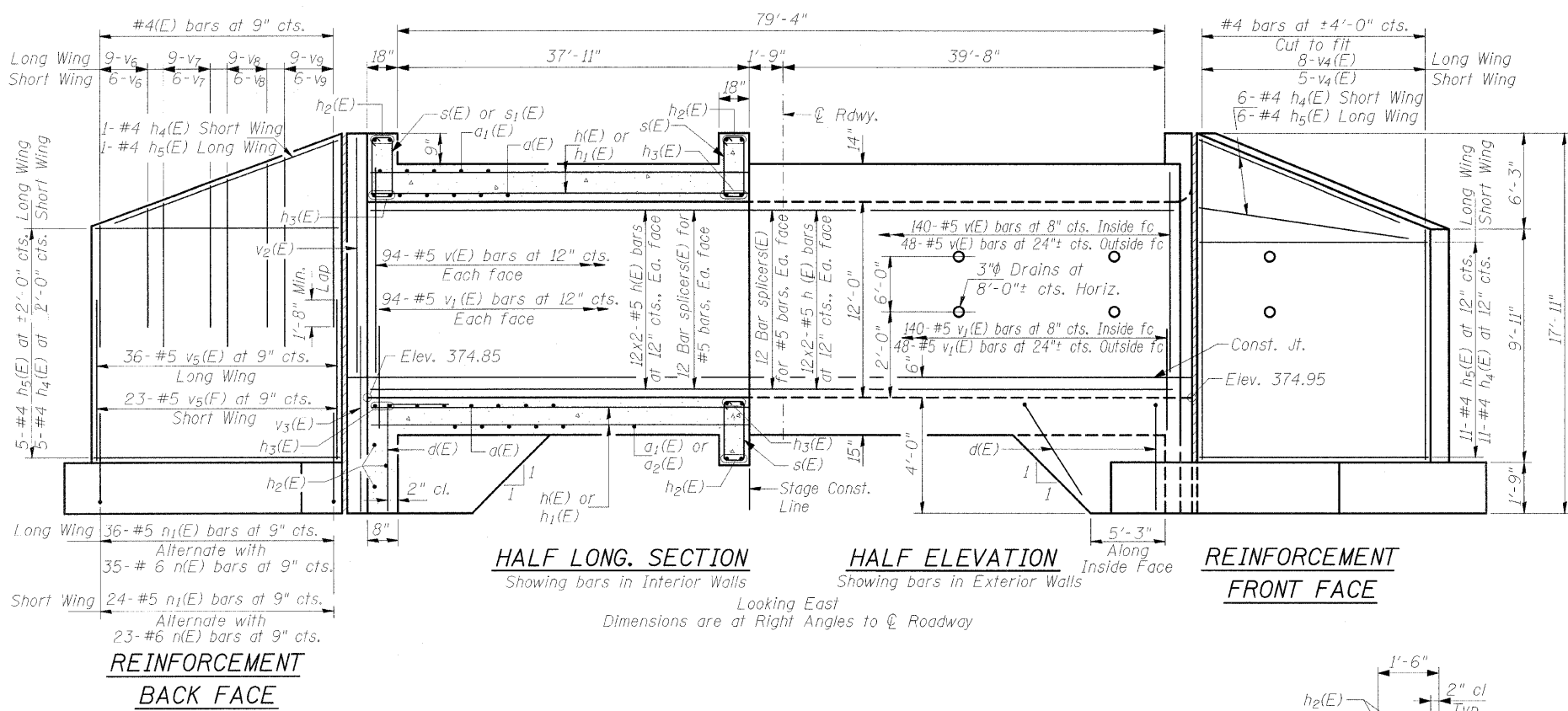
DB-T-L 4-30-99

PLAN - BOTTOM SLAB
 ILLINOIS ROUTE 13WB OVER
 PILES FORK CREEK
 FAP ROUTE 331 - SEC. 5B-3
 JACKSON COUNTY
 STATION 86+40.00
 STRUCTURE NO. 039-2026

98566/20bottomslabplan039-2026.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 11 SHEETS
FAP 331	5B-3	JACKSON	25	21	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 98566

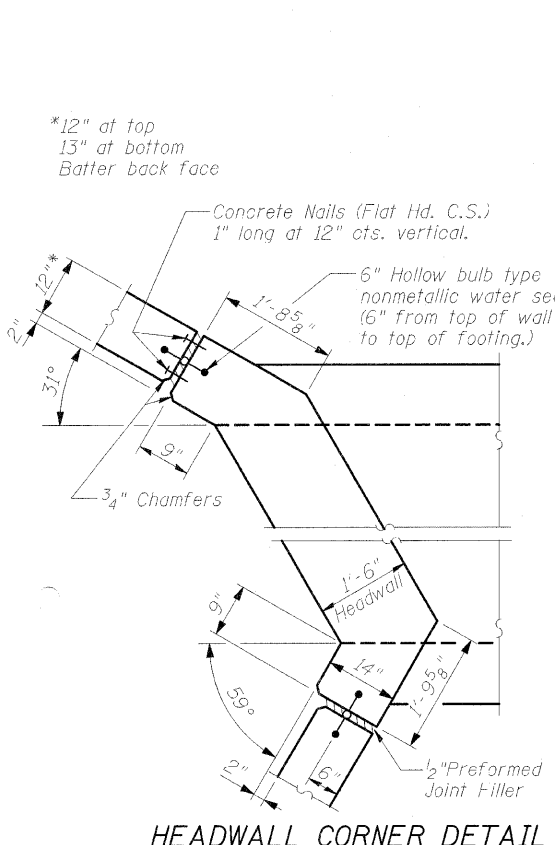


HALF LONG. SECTION
Showing bars in Interior Walls

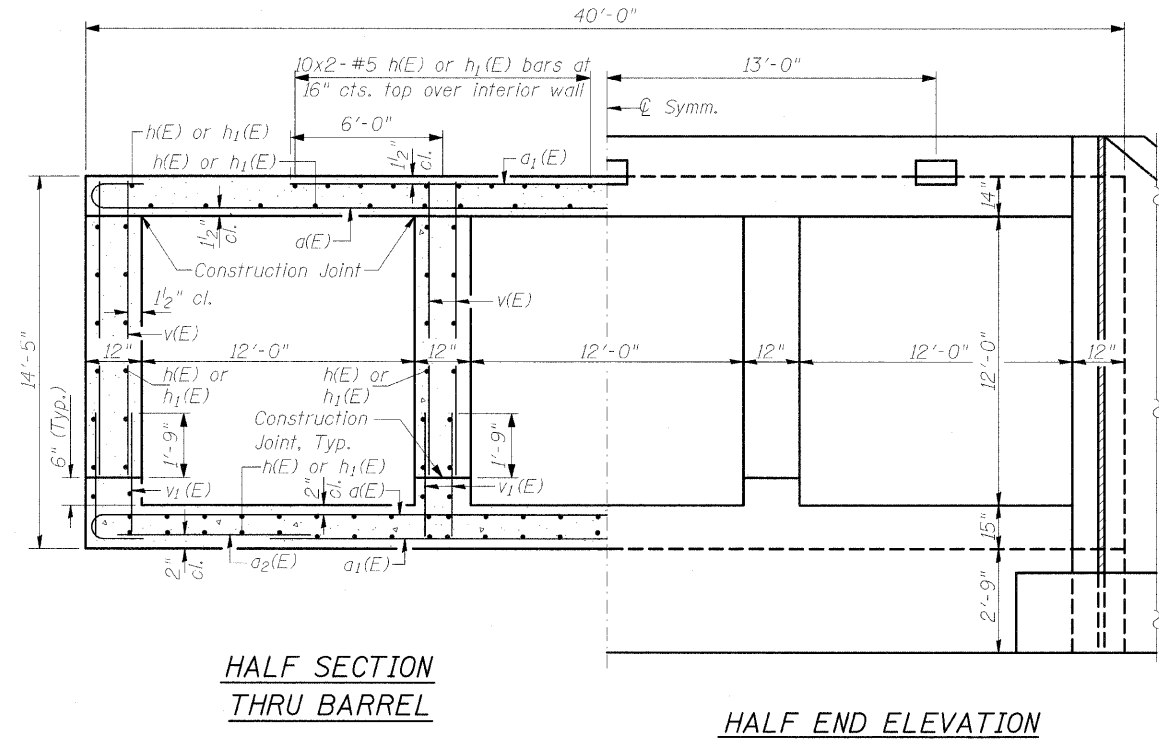
HALF ELEVATION
Showing bars in Exterior Walls

REINFORCEMENT FRONT FACE

Looking East
Dimensions are at Right Angles to ϕ Roadway

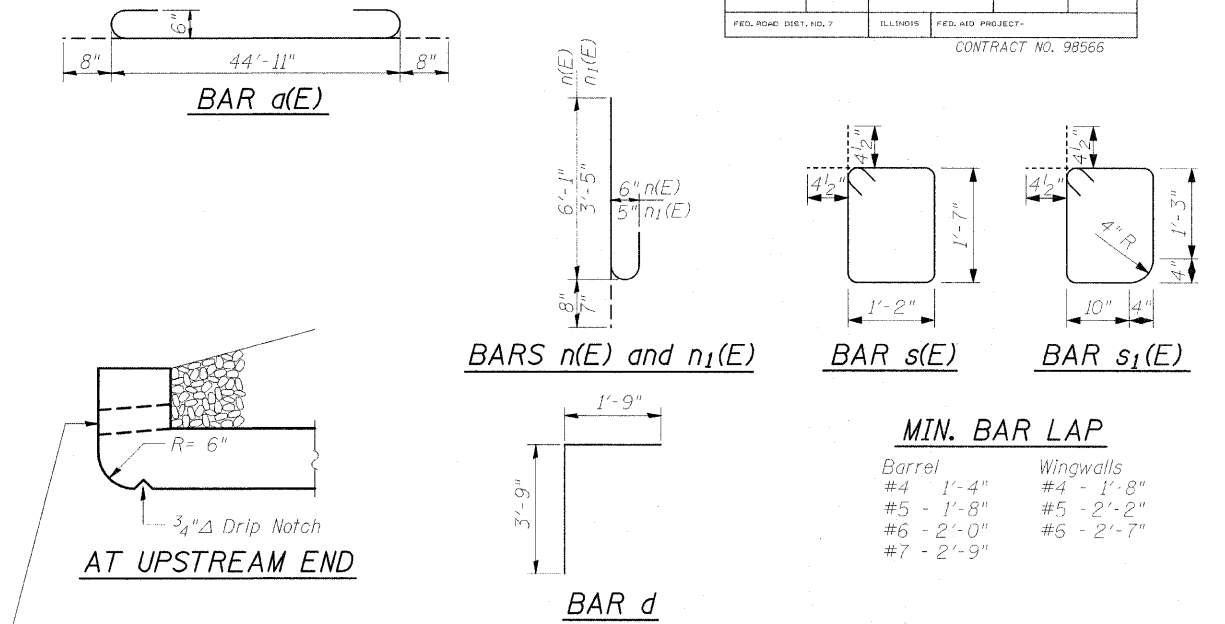


HEADWALL CORNER DETAIL



HALF SECTION THRU BARREL

HALF END ELEVATION



AT UPSTREAM END

AT DOWNSTREAM END

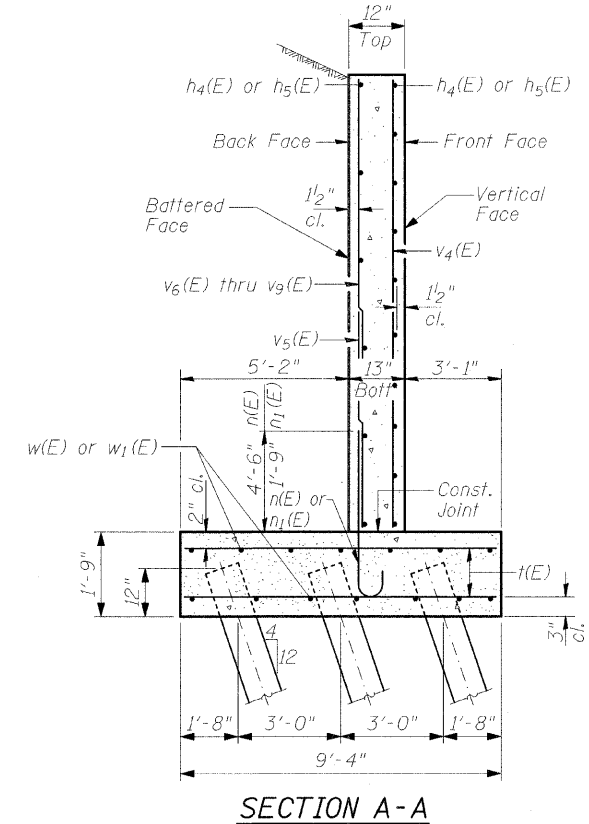
HEADWALL DRAIN DETAIL

MIN. BAR LAP

Barrel	Wingwalls
#4 - 1'-4"	#4 - 1'-8"
#5 - 1'-8"	#5 - 2'-2"
#6 - 2'-0"	#6 - 2'-7"
#7 - 2'-9"	

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	372	#6	46'-3"	U
a1(E)	372	#6	26'-9"	U
a2(E)	96	#4	8'-8"	U
d(E)	108	#4	5'-6"	L
h(E)	558	#5	23'-1"	U
h1(E)	558	#5	25'-1"	U
h2(E)	28	#6	23'-6"	U
h3(E)	24	#7	23'-6"	U
h4(E)	46	#4	17'-0"	U
h5(E)	46	#4	27'-0"	U
n(E)	116	#6	6'-9"	U
n1(E)	120	#5	4'-0"	U
s(E)	135	#4	6'-3"	U
s1(E)	45	#4	6'-1"	U
t(E)	200	#6	9'-1"	U
v(E)	656	#5	12'-6"	U
v1(E)	656	#5	3'-4"	U
v2(E)	8	#5	13'-3"	U
v3(E)	8	#5	6'-8"	U
v4(E)	26	#4	15'-9"	U
v5(E)	118	#5	7'-3"	U
v6(E)	30	#4	5'-11"	U
v7(E)	30	#4	7'-6"	U
v8(E)	30	#4	9'-1"	U
v9(E)	30	#4	10'-7"	U
w(E)	28	#5	26'-10"	U
w1(E)	28	#5	16'-10"	U
Concrete Box Culverts	Cu. Yd.		626.6	
Reinforcement Bars, Epoxy Coated	Pound		92530	
Bar Splicers(F)	Each		279	



SECTION A-A

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

Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

CULVERT DETAILS
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

12/06/2005

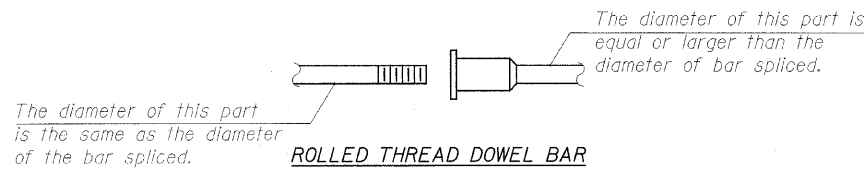
DESIGNED	TML
CHECKED	GLH
DRAWN	RJN
CHECKED	GLH
DB-T-L	4-30-99

NOTES

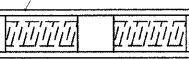
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_1$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_1$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_1 = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

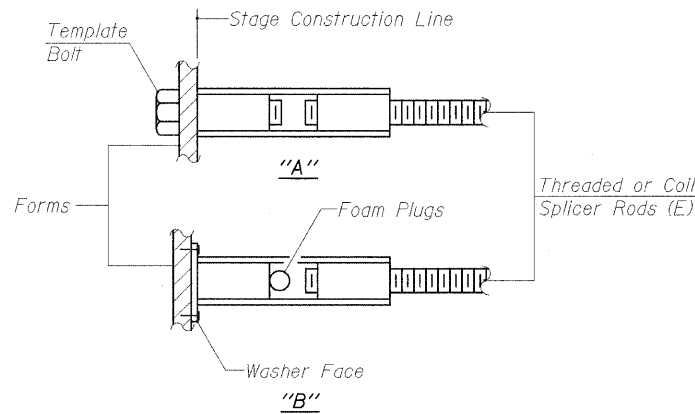


Wire Connector



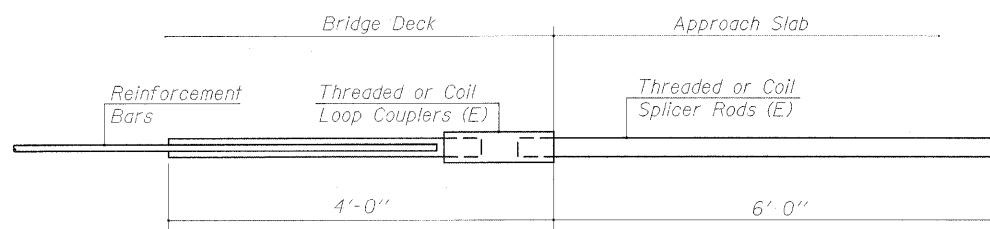
BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

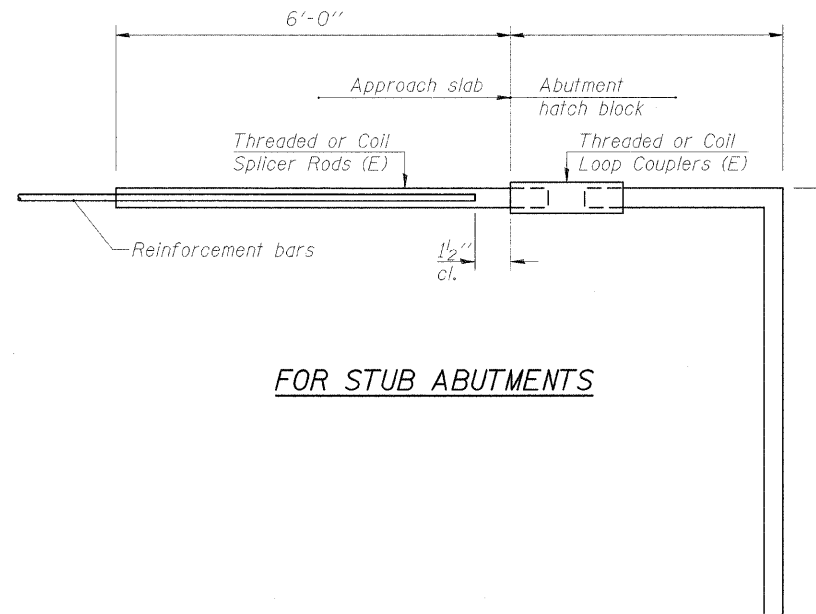


INSTALLATION AND SETTING METHODS

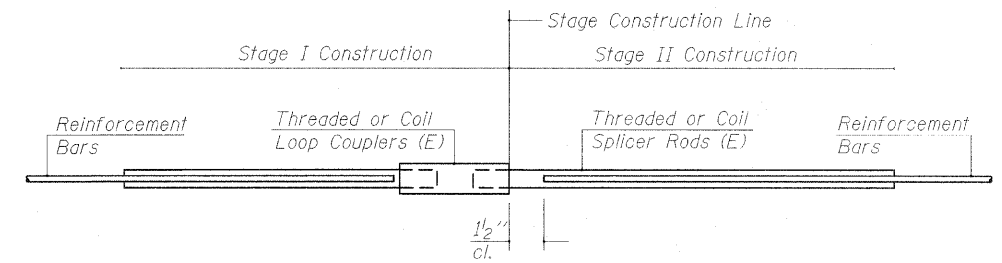
"A" :Set bar splicer assembly by means of a template bolt.
"B" :Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



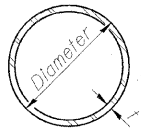
STANDARD

Bar Size	No. Assemblies Required	Location
#5	22	Top of top slab
#5	65	Bottom of top slab
#5	48	Each face, bottom slab
#5	24	Each Exterior wall
#5	24	Each Interior wall

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	

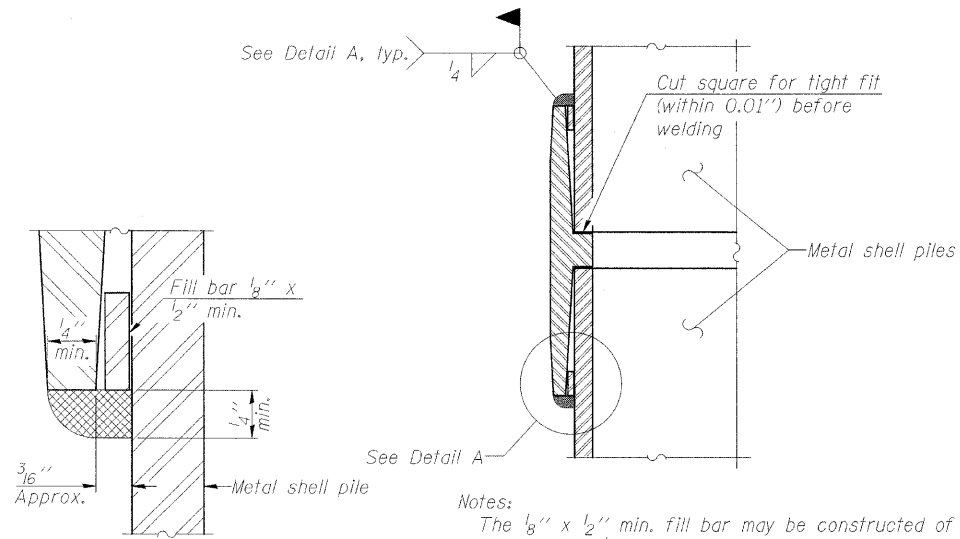
Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	



METAL SHELL PILE TABLE

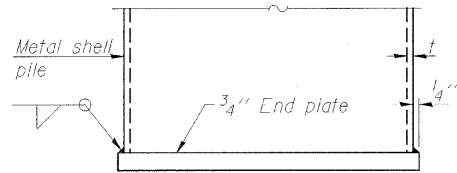
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



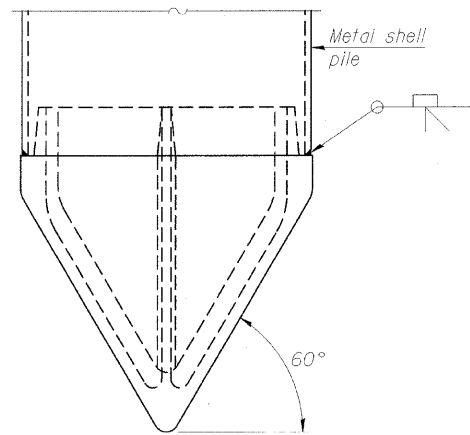
DETAIL A

Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



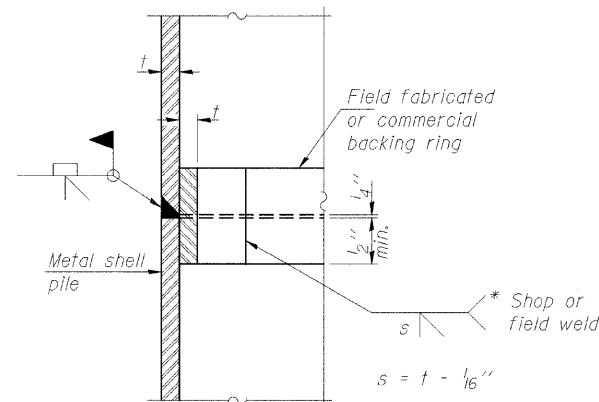
END PLATE ATTACHMENT



Note A:
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have lapped leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

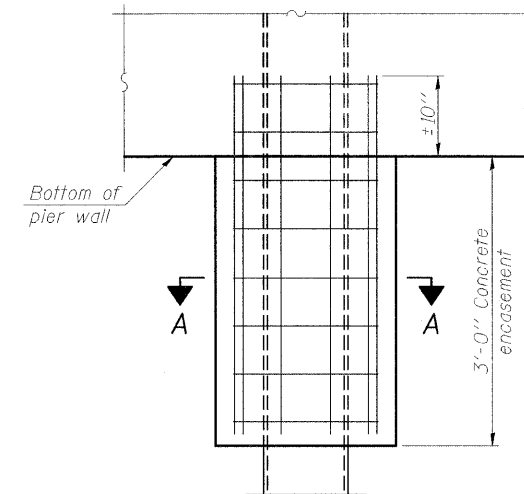
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

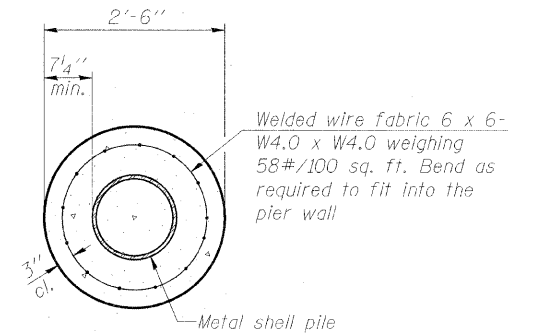


COMPLETE PENETRATION WELD SPLICE

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



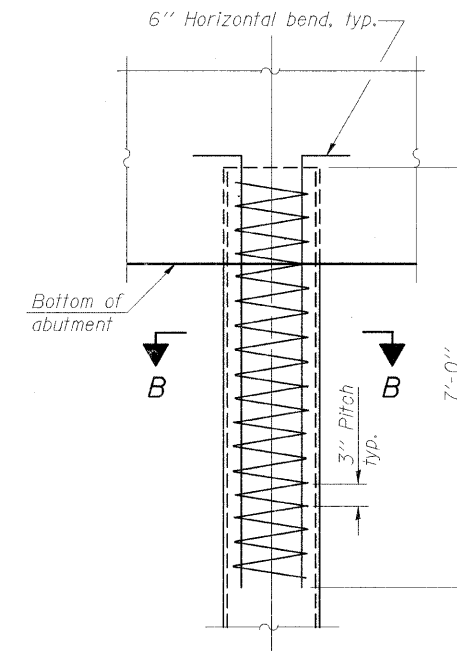
ELEVATION



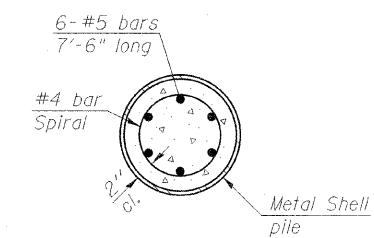
SECTION A-A

Note: Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT AT PIERS



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

DESIGNED -	200
CHECKED -	EXAMINED
DRAWN -	PASSED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES

F-MS 5-16-08

Note: The metal shell piles shall be according to ASTM A 252 Grade 3.

PILE DETAILS
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 331	5B-3	JACKSON	25	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 98566	

SHEET NO. 10
11 SHEETS

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 2

Route: FAP 331 (ILL 13) Structure Number: 039-0018 Date: 10/06/1999

Section 5B-3 Bored By: Bryan Keller

County: Jackson Location: ECL Carbondale Checked By: R Moberly

Boring No 1-S
Station 86+12
Offset 15' LT CL
Ground Surface 389.8 Ft

DEPTH	BLOW	Qu	W%	Soil Description	DEPTH	BLOW	Qu	W%	
388.8				Concrete Pavement					
387.8				Crushed Aggregate					
	1			Stiff, moist, grey, Silty Loam A-4		3	1.7S	22	
	3						5	1.4B	18
	2						6		
	5.0	1		Stiff, moist, grey, Silty Loam A-4		2			
	3	1.5S	21				2	1.4B	18
	3						4		
	2			Stiff, moist, grey, Silty Loam A-4		1			
	3	1.1S	23				3	1.5B	19
	2						3		
380.3	10.0	WH		Medium, moist, grey, Silty Loam A-4 with Clay layers	35.0	1			
	2	0.8S	27			2	2.3B	34	
	2			Soft, very moist, grey, Silty Loam A-4		2			
	WH					3	2.1S	32	
	WH	0.4B	27			5			
375.3	15.0	WH		Stiff, moist, brown mottled grey, Clay A-6 with Sand seams	40.0	1			
	1	1.4B	27			3	2.1S	33	
	1			Stiff, moist, brown mottled grey, Silty Clay A7-6					
	2	1.2B	27						
	2								
370.3	20.0	WH		Soft, very moist, grey, Clay to Silty Clay A7-6	45.0	1			
	1	0.3B	31			4	1.8S	34	
	1			Very stiff, moist, brown, Clay A7-6					
	2								
	5	2.1B	19						
	5			Very stiff, moist, brown, Clay A7-6					
	5								
	25.0	1			50.0	3			

Surf Wat Elev: 376.2
Ground Water Elevation when Drilling 375.4
At Completion 352.4
At: Hrs:

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

Sheet 2 of 2
Date: 10/06/1999

Route: FAP 331 (ILL 13)
Section: 5B-3
County: Jackson

Boring No: 1-S
Station: 86+12
Offset: 15' LT CL
Ground Surface: 389.8 Ft

DEPTH	BLOW	Qu	W%	Soil Description	DEPTH	BLOW	Qu	W%
	6	3.1S	24	Stiff, moist, grey, Silty Clay A7-6 with Sand seams		3	1.8B	17
	9					4		
				Very stiff, moist, grey, Clay A7-6				
	55.0	2		Stiff, moist, grey, Clay A7-6	310.3	1		
	5	3.7S	22			2	1.6B	20
	10					3		
NOTES								
Free water observed at 15.0 feet								
Elevation referenced to Bench Mark #1; Elevation = 390.37 ft.								
	60.0	3		NOTE: To convert "N" values to "N60" multiply by 1.25				
	5	2.5S	26			7		
				Hard, dry, grey, Sandstone				
	65.0	2		Auger refusal at 90.5 ft	302.3			
	5	2.1B	22					
	7							
				Hard, dry, grey, Sandstone				
				Cored 90.5 to 95.5 feet Recovery = 97 % RQD = 72 %				
	70.0	1		Stiff, moist, grey, Clay A7-6	90.0	100/0.5"		
	4	1.5B	23					
	4							
				Hard, dry, grey, Sandstone and Clay Shale Cored 95.5 to 98.0 feet Recovery = 1% RQD = 0%	299.3			
				Bottom of hole = 98.0 feet	294.3			
	315.3			Bottom of hole = 98.0 feet	291.8			
	75.0	3			100.0			

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

BORING LOGS
ILLINOIS ROUTE 13WB OVER
PILES FORK CREEK
FAP ROUTE 331 - SEC. 5B-3
JACKSON COUNTY
STATION 86+40.00
STRUCTURE NO. 039-2026

