

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1, 104B-2	SALINE	87	1
ILLINOIS CONTRACT NO. 78166				

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 3 - 10

FOR HMA PAVEMENT MIXTURE TABLE INFORMATION, SEE SHEET NO. 11 AND 50

**TRAFFIC DATA**

2015 ADT = 3050 WITH 18.03% TRUCKS

**TOWNSHIPS**

104B-1: GALATIA TOWNSHIP

104B-2: RALEIGH TOWNSHIP

DESIGN DESIGNATION : MINOR ARTERIAL (NON-URBAN)

COORDINATE SYSTEM : ILLINOIS COORDINATE SYSTEM  
EAST ZONE

POSTED SPEED : 104B-1 40 MPH, 104B-2 55 MPH

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

PROJECT MANAGER - DAVID PICHE (618) 549-2171

CONTRACT NO. 78166

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 869 (IL 34)  
SECTIONS 104B-1, 104B-2  
PROJECT STP-E2U2(259)  
STRUCTURE REPLACEMENT  
OVER GASSAWAY BRANCH - 104B-1  
OVER UNNAMED STREAM - 104B-2  
SALINE COUNTY

C-99-021-10

EXISTING SN 083-0026  
STA. 1116+20.00  
53'-0" 5/8" BK TO BK ABUTS, 25° SKEW  
33'-0" CLEAR WIDTH  
33'-0" OUT TO OUT

BEGIN IMPROVEMENTS IL-34 (104B-1)  
STA 1114+85.46

END IMPROVEMENTS IL-34 (104B-1)  
STA 1117+27.95

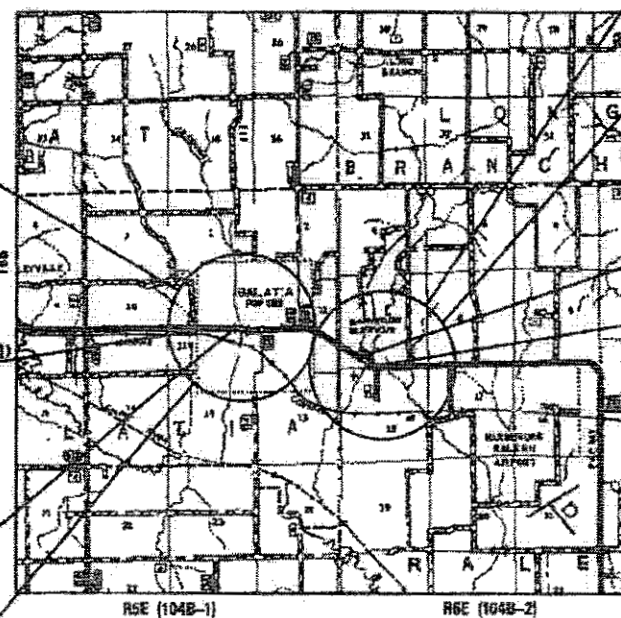
PROPOSED SN 083-0069 (104B-1)  
STA. 1116+20.00  
93'-0" BK TO BK ABUTS, 35° SKEW  
36'-0" CLEAR WIDTH  
39'-2" OUT TO OUT

EXISTING SN 083-0027  
STA. 1119+05.00  
52' 4 1/4" BK TO BK ABUTS, 0° SKEW  
33'-0" CLEAR WIDTH  
33'-0" OUT TO OUT

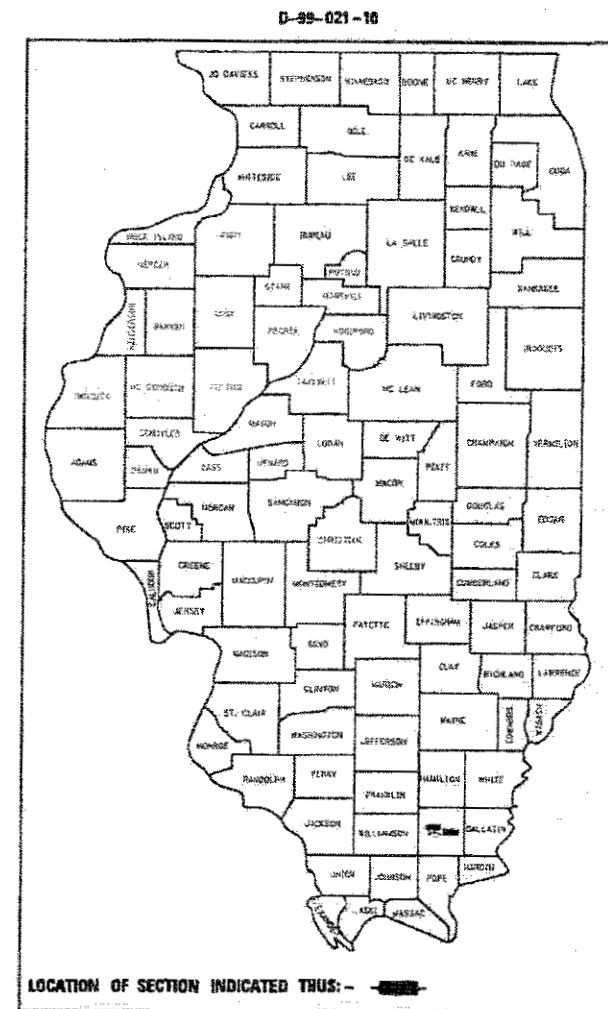
PROPOSED SN 083-0068 (104B-2)  
STA. 1119+05.00  
80'-4" BK TO BK ABUTS, 0° SKEW  
36'-0" CLEAR WIDTH  
39'-2" OUT TO OUT

BEGIN IMPROVEMENTS IL-34 (104B-2)  
STA 11198+20.83

END IMPROVEMENTS IL-34 (104B-2)  
STA 11199+89.17



104B-1:  
GROSS LENGTH: = 242.49 FT. = 0.046 MILES  
NET LENGTH = 242.49 FT. = 0.046 MILES  
104B-2:  
GROSS LENGTH: = 168.34 FT. = 0.032 MILES  
NET LENGTH = 168.34 FT. = 0.032 MILES  
TOTAL:  
GROSS LENGTH: = 410.83 FT. = 0.078 MILES  
NET LENGTH = 410.83 FT. = 0.078 MILES



LICENSED PROFESSIONAL ENGINEER  
JOHN M. HEYEN  
062-058721  
STATE OF ILLINOIS  
SIGNATURE: [Signature]  
DATE SIGNED: 1-13-2018  
LICENSE EXP: 11-30-2019

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
SUBMITTED: Feb 2 20 18  
Jeffrey K. Keiser  
REGION FIVE ENGINEER  
Mar 23 20 18  
[Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT  
Mar 23 20 18  
[Signature]  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 3

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**GENERAL NOTES**

**INDEX OF SHEETS – VOLUME 1  
IL-34 OVER GASSAWAY BRANCH (104B-1)**

SHEET NO.	DESCRIPTION - VOLUME 1
1	COVER SHEET
2	GENERAL NOTES & STANDARDS
3 - 10	SUMMARY OF QUANTITIES
11	TYPICAL SECTIONS
12 - 13	SCHEDULES OF QUANTITIES
14	ALIGNMENT, TIES, & BENCHMARKS
15	REMOVAL PLAN
16	PLAN AND PROFILE SHEET
17	TRAFFIC CONTROL AND STAGING
18	WIDE LOAD DETOUR SIGNING
19	TEMPORARY EROSION CONTROL PLAN
20	PROPOSED RIGHT-OF-WAY
21	DISTRICT 9 STANDARDS
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**INDEX OF SHEETS – VOLUME 2  
IL-34 OVER UNNAMED STREAM (104B-2)**

SHEET NO.	DESCRIPTION VOLUME 2
50	TYPICAL SECTIONS
51 - 52	SCHEDULES OF QUANTITIES
53	ALIGNMENT, TIES, & BENCHMARKS
54	REMOVAL PLAN
55	PLAN AND PROFILE SHEET
56	TRAFFIC CONTROL AND STAGING
57	WIDE LOAD DETOUR SIGNING
58	TEMPORARY EROSION CONTROL PLAN
59	PROPOSED RIGHT-OF-WAY
60	DRAINAGE DETAILS & SCHEDULES
61	DISTRICT 9 STANDARDS
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66 - 87	BRIDGE PLANS

**HIGHWAY STANDARDS**

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
420001-09	PAVEMENT JOINTS
420401-12	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
542401-03	METAL END SECTION FOR PIPE CULVERTS
610001-08	SHOULDER INLET WITH CURB
630001-12	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC / HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-08	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-17	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-07	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNT DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

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

ALL HOT MIX ASPHALT : 2.016 TONS/CU. YD.

ALL AGGREGATE: 2.05 TONS/CU. YD.

RIPRAP: 1.50 TONS/CU. YD.

EARTH: 110 LBS/CU. FT.

2 THE ALGEBRAIC DIFFERENCE BETWEEN THE PAVEMENT AND SHOULDER SLOPES SHALL NOT EXCEED 10%. THE SHOULDER ON THE OUTSIDE OF SUPERELEVATED CURVES SHALL BE FLATTENED ACCORDINGLY.

3 THE THICKNESS OF HOT MIX ASPHALT MIXTURE 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 HOT MIX ASPHALT MIXTURE IS PLACED.

4 IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.

5 TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, OR CONSTRUCTION LIMITS, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.

6 TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING.

7 THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE HMA SURFACE REMOVAL, BINDER COURSE, AND SURFACE COURSE.

8 IF THE CONTRACTOR ELECTS TO USE P.C.C. BASE COURSE WIDENING, SUCH WIDENING SHALL HAVE TACK COAT APPLIED ACCORDING TO SECTION 406, EXCEPT THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WIDENING.

9 FORMS FOR CONCRETE SHOULDER CURB, IF NOT SLIPFORMED AS PER ARTICLE 606.05, SHALL BE OF METAL ONLY, EXCEPT THAT WOOD FORMS MAY BE USED ON SHORT RADIUS CURVES.

10 PROTECTIVE COAT SHALL BE APPLIED TO ALL GUTTER FLAGS, FACE OF CURB, AND MEDIAN SURFACE AS NEEDED ACCORDING TO THE SEASONAL REQUIREMENTS OF ARTICLE 420.18.

11 ATTAINMENT OF PROPER CROWN OR SUPERELEVATION SHALL BE FULLY ACCOMPLISHED WITH THE HOT MIX ASPHALT SURFACE REMOVAL OR HOT MIX ASPHALT BINDER COURSE OR LEVELING BINDER, WHEN SPECIFIED.

12 TRENCH BACKFILL REQUIRED FOR STORM SEWER, SANITARY SEWER, OR WATER MAINS SHALL ONLY BE PLACED UP TO ONE FOOT BELOW THE FINAL GRADE IN AREAS HAVING A PROPOSED GRASS OR SOD SURFACE.

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

14 THE CONTRACTOR SHALL STAMP STATIONING IN THE PROPOSED HOT MIX ASPHALT SURFACE AT 300 FT INTERVALS ON ALTERNATING SIDES OF THE PAVEMENT AND AS DIRECTED BY THE ENGINEER. THE STATION SYMBOL TAMPS USED SHALL BE FURNISHED BY THE CONTRACTOR. THEY SHALL BE 5 1/2 IN. TALL, OF A DESIGN APPROVED BY THE ENGINEER, AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

15 HMA RESURFACING SHALL BE PLACED IN A SEQUENCE THAT WILL MINIMIZE THE TIME THE CENTERLINE EDGE IS EXPOSED TO TRAFFIC. WHEN AT THE END OF A DAY'S OPERATION THE EXPOSED CENTERLINE EDGE IS GREATER THAN 2,000 FT, THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE ADJACENT LANE ON THE FOLLOWING WORK DAY. PRIOR TO WINTER SHUTDOWN, RESURFACING ON ADJACENT LANES IS TO BE BROUGHT UP TO THE SAME ELEVATION.

16 PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

17 THE CENTERLINE PAVEMENT MARKING SHALL BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

18 ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

19 AFTER A LIFT OF HOT MIX ASPHALT HAS BEEN PLACED, THE LANE SHALL REMAIN CLOSED TO TRAFFIC UNTIL THE NEW MAT HAS COOLED TO 150 DEGREES FAHRENHEIT.

20 THERE ARE NO AVAILABLE WASTE SITES ON THE EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS. DISPOSAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

21 REMOVAL OF ABANDON UTILITIES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION

22 COMMITMENTS:

104B-1: TREES THREE (3) INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT WILL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 20.

Prepared By:	<i>[Signature]</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT MATERIALS ENGINEER

FILE NAME = 0978166-shit-gennote  
MODEL = GENERAL NOTES

USER NAME = oster-00605  
PLOT SCALE = 2.0000' / in.  
PLOT DATE = 1/11/2018

DESIGNED - CAD  
DRAWN - JEO  
CHECKED - MH  
DATE - 12/12/2017

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & HIGHWAY STANDARDS  
IL-34 (OVER GASSAWAY BRANCH AND UNNAMED STREAM)

SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1, 104B-2	SALINE	87	2
				CONTRACT NO. 78166
FED. ROAD DIST. NO. ILLINOIS/FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	104-B1	104-B2
				80% FED 20% STATE BRIDGE 0010 RURAL	80% FED 20% STATE BRIDGE 0010 RURAL
20100110	TREE REMOVAL (6 TO 15 UNIT DIAMETER)	UNIT	238	140	98
20100210	TREE REMOVAL (OVER 15 UNIT DIAMETER)	UNIT	400	257	143
20200100	EARTH EXCAVATION	CU YD	515	430	85
20300100	CHANNEL EXCAVATION	CU YD	2,417	1,646	771
20400800	FURNISHED EXCAVATION	CU YD	895	150	745
20600110	GRANULAR EMBANKMENT, SPECIAL	CU YD	35	35	
20800150	TRENCH BACKFILL	CU YD	1.8		1.8
25000200	SEEDING, CLASS 2	ACRE	0.50	0.25	0.25
25000350	SEEDING, CLASS 7	ACRE	0.50	0.25	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	65	28	37
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	20	25
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	20	25
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1.0	0.4	0.6
25100115	MULCH, METHOD 2	ACRE	1.00	0.50	0.50

104B-1: IL 34 OVER GASSAWAY BRANCH  
 104B-2: IL 34 OVER UNNAMED STREAM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	104-B1	104-B2
				80% FED 20% STATE BRIDGE 0010 RURAL	80% FED 20% STATE BRIDGE 0010 RURAL
25100630	EROSION CONTROL BLANKET	SQ YD	2,406	1,045	1,361
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50	21	29
28000305	TEMPORARY DITCH CHECKS	FOOT	60	60	
28000400	PERIMETER EROSION BARRIER	FOOT	1,636	554	1,082
28000510	INLET FILTERS	EACH	2		2
28100105	STONE RIPRAP, CLASS A3	SQ YD	223	197	26
28100107	STONE RIPRAP, CLASS A4	SQ YD	650		650
28100109	STONE RIPRAP, CLASS A5	SQ YD	1,244	1,244	
28200200	FILTER FABRIC	SQ YD	1,997	1,347	650
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	294	137	157
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	204	124	80
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	348	174	174
40600990	TEMPORARY RAMP	SQ YD	60	30	30
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	38	23	15

104B-1: IL 34 OVER GASSAWAY BRANCH  
 104B-2: IL 34 OVER UNNAMED STREAM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	104-B1	104-B2
				80% FED 20% STATE	80% FED 20% STATE
				BRIDGE 0010 RURAL	BRIDGE 0010 RURAL
4200080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	358	238	120
42001300	PROTECTIVE COAT	SQ YD	358	238	120
44000100	PAVEMENT REMOVAL	SQ YD	494	269	225
44004250	PAVED SHOULDER REMOVAL	SQ YD	300	137	163
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	527	222	305
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	310	166	144
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1	
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	266	66	200
50200300	COFFERDAM EXCAVATION	CU YD	130	130	
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	35	35	
50201101	COFFERDAM (TYPE 1)(LOCATION-1)	EACH	1	1	
50201102	COFFERDAM (TYPE 1)(LOCATION-2)	EACH	1	1	
50300100	FLOOR DRAINS	EACH	8	8	

104B-1: IL 34 OVER GASSAWAY BRANCH  
 104B-2: IL 34 OVER UNNAMED STREAM

FILE NAME =	USER NAME = ceter09503
W016-sh1-500-P1.dgn	
MODEL = SUG.PAGE 3	

DESIGNED = CAD	REVISIONS
DRAWN = JEO	REVISIONS
CHECKED = MH	REVISIONS
DATE = 12/12/2017	REVISIONS

DESIGNED = CAD	REVISIONS
DRAWN = JEO	REVISIONS
CHECKED = MH	REVISIONS
DATE = 12/12/2017	REVISIONS

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE:	SHEET NO. 3 OF 8 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1, 104B-2	SALINE	87	5
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 78166	





CODE NO.	ITEM	UNIT	TOTAL QUANTITY	104-B1	104-B2
				80% FED 20% STATE	80% FED 20% STATE
				BRIDGE 0010 RURAL	BRIDGE 0010 RURAL
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	16	8	8
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	8	4	4
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	24	12	12
70300100	SHORT TERM PAVEMENT MARKING	FOOT	412	212	200
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	5,834	3,087	2,747
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	48	24	24
70400100	TEMPORARY CONCRETE BARRIER	FOOT	900.0	487.5	412.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	800.0	412.5	387.5
70600240	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 2	EACH	2	2	

104B-1: IL 34 OVER GASSAWAY BRANCH  
 104B-2: IL 34 OVER UNNAMED STREAM



CODE NO.	ITEM	UNIT	TOTAL QUANTITY	104-B1	104-B2
				80% FED 20% STATE BRIDGE 0010 RURAL	80% FED 20% STATE BRIDGE 0010 RURAL
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2		2
70600340	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 2	EACH	2	2	
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2		2
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	4	4
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	5,834	3,087	2,747
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	3	3
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	42	16	26
* 78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	11	6	5
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	5	3	2
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	2	1	1
X0327979	PAVEMENT MARKING REMOVAL (GRINDING)	SQ FT	1,265	615	650
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	206	80	126
X7015005	CHANGEABLE MESSAGE SIGN	CAL DAY	56	28	28
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	2,178	1,148	1,030

104B-1: IL 34 OVER GASSAWAY BRANCH  
 104B-2: IL 34 OVER UNNAMED STREAM

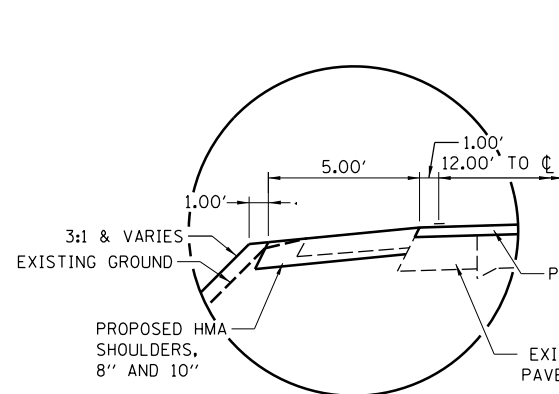
\* SPECIALTY ITEM

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MODEL = S00.PAGE 7	PLOT SCALE = 2.0000' / 1"	CHECKED - MH	REVISED -					SCALE:	SHEET NO. 7 OF 8 SHEETS	STA.	TO STA.	CONTRACT NO. 78166
	PLOT DATE = 3/21/2018	DATE - 12/12/2017	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							

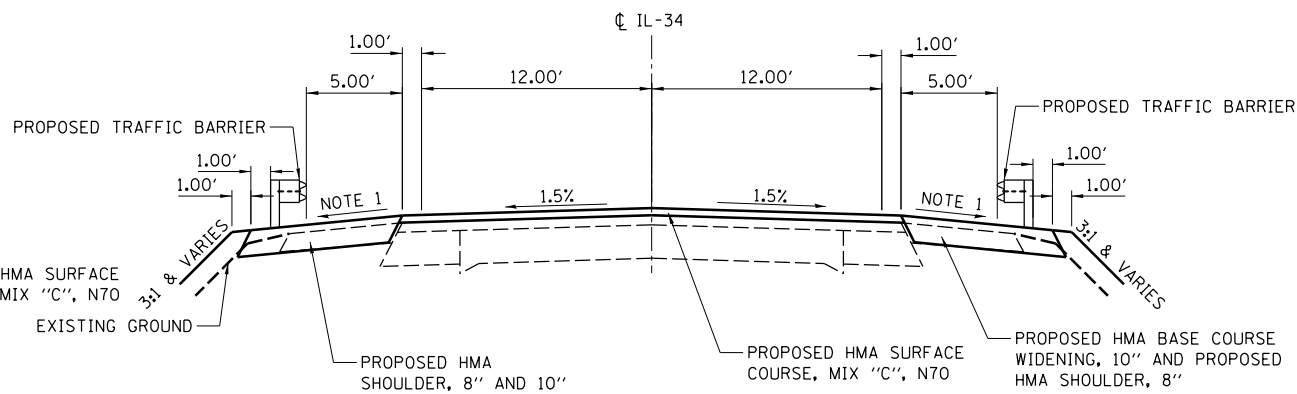
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	104-B1	104-B2
				80% FED 20% STATE BRIDGE OO10 RURAL	80% FED 20% STATE BRIDGE OO10 RURAL
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	84	48	36
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	44	22	22
Z0004552	APPROACH SLAB REMOVAL	SQ YD	376	227	149
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	300	156	144
∅ Z0076600	TRAINEES	HOURL	500	500	
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOURL	500	500	

104B-1: IL 34 OVER GASSAWAY BRANCH  
104B-2: IL 34 OVER UNNAMED STREAM

∅ 0042

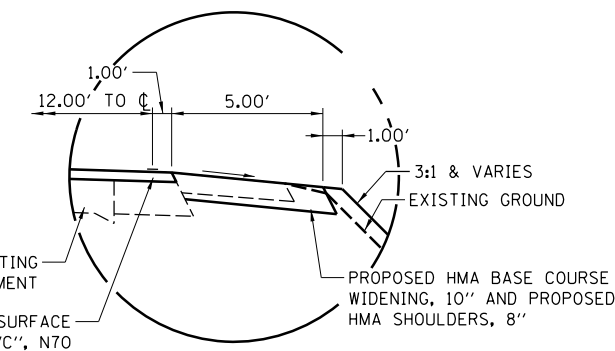


PROPOSED HMA SHOULDER DETAIL  
 LT. STA. 1113+77.32 TO LT. STA. 1114+51.00  
 LT. STA. 1117+61.00 TO LT. STA. 1118+78.52



**PROPOSED IL-34 TYPICAL SECTION**

STA. 1114+85.46 TO STA. 1115+16.48  
 STA. 1115+16.48 TO STA. 1115+44.72 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)  
 STA. 1115+44.72 TO 1116+95.28 - BRIDGE OMISSION  
 STA. 1116+95.28 TO STA. 1117+23.52 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)  
 STA. 1117+23.52 TO STA. 1117+27.95



PROPOSED HMA SHOULDER DETAIL  
 RT. STA. 1113+74.04 TO RT. STA. 1114+78.00  
 RT. STA. 1117+91.00 TO RT. STA. 1118+34.04

**MIXTURE TABLE**

LOCATIONS	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N70
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 70 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5MM
FRICTION AGGREGATE:	C SURFACE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	TBD

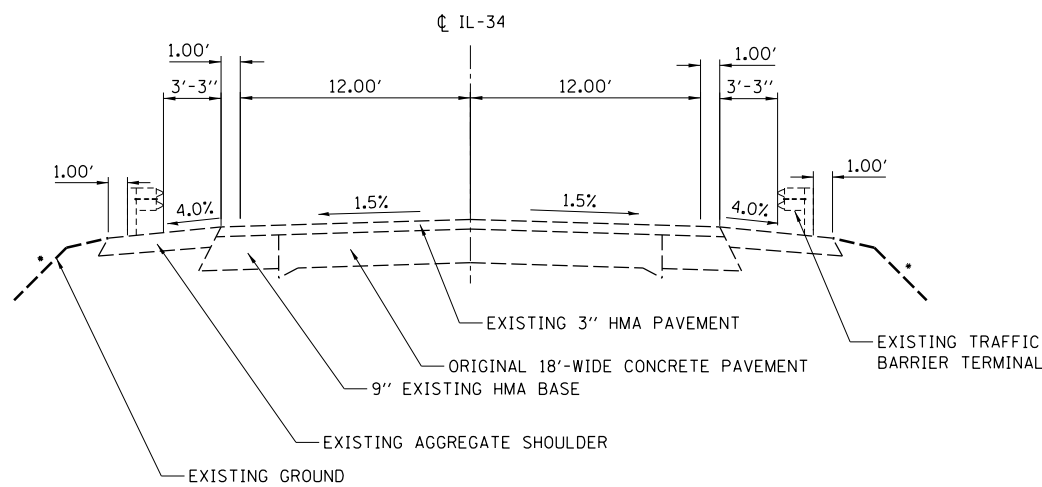
LOCATIONS	HOT-MIX ASPHALT BASE COURSE WIDENING
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE, N70, IL-19.0
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 70 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0MM
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA

LOCATIONS	HOT MIX ASPHALT SHOULDERS (TOP LIFT)
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, N30, IL-9.5L
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5L
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA

LOCATIONS	HOT-MIX ASPHALT SHOULDERS (LOWER LIFTS)
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE, N30, IL-19.0L
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0L
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA

**NOTE 1**

ROTATE SHOULDERS TO MATCH PCC CONNECTOR OVER 25.00'  
 CL STA. 1114+91.48 TO CL STA. 1115+16.48 - TRANSITION PAVED SHOULDER FROM 4.0% CROSS SLOPE TO 2.0% CROSS SLOPE  
 CL STA. 1116+95.28 TO CL STA. 1117+20.28 - TRANSITION PAVED SHOULDER FROM 2.0% CROSS SLOPE TO 4.0% CROSS SLOPE



**EXISTING IL-34 TYPICAL SECTION**

• THE HOT MIX ASPHALT BASE COURSE WIDENING, 10" CONSTRUCTED IN PRE-STAGE I MAY BE INCORPORATED INTO THE FINAL HOT MIX ASPHALT SHOULDERS, 8" DURING STAGE II CONSTRUCTION IF APPROVED BY THE ENGINEER. SUCH CHANGE WILL NOT BE CAUSE FOR ADDITIONAL COMPENSATION BUT THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EARTHWORK SCHEDULE							
LOCATION -VOLUME 1			20200100			20400800	20300100
			A	B	C	D	E
			* EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT, ADJUSTED FOR SHRINKAGE (25%)	** EMBANKMENT	*** EARTHWORK BALANCE EXCESS (+) OR SHORTAGE (-)	CHANNEL EXCAVATION
			CU YD	CU YD	CU YD	CU YD	CU YD
BEGIN STATION	END STATION	OFFSET					
1113+50	1116+00		234	175	166	9	899
1116+00	1118+50		195	145	302	-157	747
<b>TOTAL</b>			<b>430</b>	<b>320</b>	<b>468</b>	<b>-150</b>	<b>1646</b>

**EQUATIONS USED**

**B = A \* 0.75**

**D = B - C**

**NOTES**

\* - CUTS FROM CROSS SECTIONS

\*\* - FILLS FROM CROSS SECTIONS

\*\*\* - A SHORTAGE (-) OF MATERIAL IS FURNISHED EXCAVATION

SEEDING SCHEDULE										
LOCATION			25000200	25000350	25000400	25000500	25000600	25000700	25100115	28000250
			SEEDING, CLASS 2	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2	TEMPORARY EROSION CONTROL SEEDING
			ACRES	ACRES	POUNDS	POUNDS	POUNDS	TONS	ACRES	POUND
BEGIN STATION	END STATION	OFFSET								
1114+08.00	1115+80.70	RT	0.05	0.05	7	5	5	0.1	0.10	5
1113+74.00	1115+64.40	LT	0.04	0.04	5	4	4	0.1	0.08	4
1116+93.44	1118+49.77	RT	0.02	0.02	3	2	2	0.0	0.04	2
1116+59.11	1118+29.97	LT	0.10	0.10	13	9	9	0.2	0.20	10
<b>TOTAL</b>			<b>0.25</b>	<b>0.25</b>	<b>28</b>	<b>20</b>	<b>20</b>	<b>0.4</b>	<b>0.50</b>	<b>21</b>

PAVEMENT SCHEDULE										
LOCATION				35600716	40600290	40600990	40603315	42000080	48203029	48203037
				HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	BITUMINOUS MATERIALS (TACK COAT)	TEMPORARY RAMP	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	HOT-MIX ASPHALT SHOULDERS, 8"	HOT-MIX ASPHALT SHOULDERS, 10"
				SQ YD	POUND	SQ YD	TON	SQ YD	SQ YD	SQ YD
BEGIN STATION	OFFSET	END STATION	OFFSET							
1113+74.04	RT	1116+00.04	RT	78						
1113+77.32	LT	1115+16.48	LT							72
1114+51.00	LT	1115+58.80	LT						29	
1113+74.04	RT	1115+88.20	RT						88	
1114+55.46		1114+60.46				15				
1114+55.46		1115+16.48			78		14.5			
1115+16.48		1115+44.72						119		
1116+51.80	LT	1117+61.00	LT						25	
1116+81.20	RT	1118+34.04	RT						80	
1116+53.37	RT	1118+39.04	RT	59						
1116+95.28		1117+23.52						119		
1117+23.52		1117+57.95			46		8.5			
1117+52.95		1117+57.95				15				
1117+23.52	LT	1118+78.52	LT							94
<b>TOTALS</b>				<b>137</b>	<b>124</b>	<b>30</b>	<b>23</b>	<b>238</b>	<b>222</b>	<b>166</b>

PAVEMENT MARKING SCHEDULE							
LOCATION			78001110	78100100	78200005	78200010	NOTE
			PAINT PAVEMENT MARKING - LINE 4" FOOT	RAISED REFLECTIVE PAVEMENT MARKER EACH	GUARDRAIL REFLECTORS, TYPE A EACH	BARRIER WALL REFLECTORS, TYPE B EACH	
BEGIN STATION	END STATION	OFFSET					
1108+03.44	1120+12.84	CL	767				SOLID YELLOW CL LT
1108+03.44	1120+12.84	CL	767				SOLID YELLOW CL RT
1108+03.14	1120+12.84	RT	768				SOLID WHITE EDGE
1108+03.44	1120+31.63	LT	785				SOLID WHITE EDGE
1114+86.54	1115+73.43	RT			4		ON NEW GUARDRAIL & TERMINALS @25' INTERVAL
1114+59.11	1115+46.01	LT			4		ON NEW GUARDRAIL & TERMINALS @25' INTERVAL
1114+29.57	1118+15.99	RT				6	ON TEMPORARY CONCRETE BARRIER @80' INTERVAL
1115+44.72	1116+95.20	CL		3			
1116+66.57	1117+53.46	LT			4		ON NEW GUARDRAIL & TERMINALS @25' INTERVAL
1116+93.99	1117+80.89	RT			4		ON NEW GUARDRAIL & TERMINALS @25' INTERVAL
<b>TOTALS</b>			<b>3087</b>	<b>3</b>	<b>16</b>	<b>6</b>	

TEMPORARY PAVEMENT MARKING SCHEDULE							
LOCATION			70300100	70300220	70300280	X7030005	NOTE
			SHORT TERM PAVEMENT MARKING FOOT	TEMPORARY PAVEMENT MARKING - LINE 4" FOOT	TEMPORARY PAVEMENT MARKING - LINE 24" FOOT	TEMPORARY PAVEMENT MARKING REMOVAL SQ FT	
BEGIN STATION	END STATION	OFFSET					
1108+03.44	1120+12.84	CL	152				DBL YELLOW
1108+16.88	1120+12.84	RT	32				WHITE EDGE
1108+03.44	1119+89.85	LT	28				WHITE EDGE
1108+03.44	1120+12.84	CL		767			STAGE 1 - 4" WHITE
1108+03.44	1120+12.84	CL		767			STAGE 1 - 4" WHITE
1108+03.14	1120+12.84	RT		768			STAGE 2 - 4" WHITE
1108+03.44	1120+31.63	LT		785			STAGE 2 - 4" WHITE
1107+51±		RT			12		
1119+93±		LT			12		
1108+03.44	1202+65.55	CL				51	SHORT TERM MARKING
1108+16.88	1202+09.25	RT				11	SHORT TERM MARKING
1108+03.44	1202+65.55	LT				9	SHORT TERM MARKING
1108+03.44	1120+12.84					256	TEMP STAGE 1
1108+03.44	1120+12.84					256	TEMP STAGE 1
1108+03.14	1120+12.84					256	TEMP STAGE 2
1108+03.44	1120+31.63					262	TEMP STAGE 2
1107+51±	1107+51±	RT				24	TEMP STOP BAR
1119+93±	1119+93±	LT				24	TEMP STOPBAR
<b>TOTALS</b>			<b>212</b>	<b>3087</b>	<b>24</b>	<b>1148</b>	

EROSION CONTROL SCHEDULE					
LOCATION			28000400	28000305	25100630
			PERIMETER EROSION BARRIER FOOT	TEMPORARY DITCH CHECKS FOOT	EROSION CONTROL BLANKET SY
BEGIN STATION	END STATION				
1114+08.00	1114+70.00	RT	65		
1115+80.70	115+64.40	RT & LT	120		
1116+52.00	1118+50.00	RT & LT	306		
1117+90.00	1118+50.00	LT	63		
1113+74.00	1115+64.40	LT			212
1114+08.00	1115+80.70	RT			263
1116+59.11	1118+29.97	LT			477
1116+93.44	1118+49.77	RT			93
1114+80.00		RT		10	
1115+30.00		RT		10	
1115+80.00		RT		10	
1116+63.00		LT		10	
1117+13.00		LT		10	
1117+63.00		LT		10	
<b>TOTAL</b>			<b>554</b>	<b>60</b>	<b>1045</b>

GUARDRAIL SCHEDULE					
LOCATION			63100167	63100085	78201000
			TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT EACH	TRAFFIC BARRIER TERMINAL, TYPE 6 EACH	TERMINAL MARKER DIRECT APPLIED EACH
BEGIN STATION	END STATION	OFFSET			
1114+85.43	1115+35.53	RT	1		1
1115+35.53	1115+72.32	RT		1	
1114+60.23	1115+10.23	LT	1		
1115+10.23	1115+47.12	LT		1	1
1116+67.68	1117+04.57	LT		1	
1117+04.57	1117+54.57	LT	1		1
1116+92.88	1117+29.77	RT		1	
1117+29.77	1117+79.77	RT	1		1
<b>TOTALS</b>			<b>4</b>	<b>4</b>	<b>4</b>

CONCRETE BARRIER SCHEDULE					
LOCATION			70400100	70400200	X7040125
			TEMPORARY CONCRETE BARRIER FOOT	RELOCATE TEMPORARY CONCRETE BARRIER FOOT	PINNING TEMPORARY CONCRETE BARRIER EACH
BEGIN STATION	END STATION	LOCATION			
1114+29.57	1114+91.48	Stage 1 on 8:1 taper	62.5		
1114+91.48	1117+53.98	Stage 1 on tangent	262.5		48
1117+53.98	1118+41.25	Stage 1 on 12:1 taper	87.5		
1113+78.81	1114+91.37	Stage 2 on 12:1 taper	50		
1117+53.34	1118+65.38	Stage 2 on 12:1 taper	25		
1113+78.81	1114+91.37	Stage 2 on 12:1 taper		62.5	
1114+91.37	1117+53.34	Stage 2 on tangent		262.5	
1117+53.34	1118+65.38	Stage 2 on 12:1 taper		87.5	
<b>TOTALS</b>			<b>487.5</b>	<b>412.5</b>	<b>48</b>

REMOVAL SCHEDULE								
LOCATION			44000100	44004250	40600982	63200310	20004552	X0327979
			PAVEMENT REMOVAL SQ YD	PAVED SHOULDER REMOVAL SQ YD	HMA SURFACE REMOVAL - BUTT JOINT SQ YD	GUARDRAIL REMOVAL FT	APPROACH SLAB REMOVAL SQ YD	PAVEMENT MARKING REMOVAL (GRINDING) SQ FT
BEGIN STATION	END STATION							
1115+16.48	115+62.75		136					
1116+78.61	117+23.52		133					
1113+74.04	1115+99.97			59				
1116+53.37	1118+39.04			78				
1114+55.46	1114+85.46				87			
1117+27.95	1117+57.95				87			
1114+64.94	1115+85.16	LT				121.0		
1114+80.15	1115.99.97	RT				120.0		
1116+40.97	1117+60.47	LT				121.0		
1116+54.67	1117+76.32	RT				122.0		
1115+62.65	1115+92.63						111	
1116+47.18	1116+78.48						116	
1108+03.44	CL LT	1120+12.84	CL LT					155
1108+03.44	CL RT	1120+12.84	CL RT					155
1108+03.14	RT	1120+12.84	RT					154
1108+03.44	LT	1120+31.63	LT					151
<b>TOTALS</b>			<b>269</b>	<b>137</b>	<b>174</b>	<b>484</b>	<b>227</b>	<b>615</b>

TREE REMOVAL SCHEDULE				
LOCATION			20100110	20100210
			TREE REMOVAL (6 TO 15 UNITS) UNIT	TREE REMOVAL (OVER 15 UNITS) UNIT
STATION	OFFSET	LOCATION		
1114+94.78	37.56	RT		46
1115+19.53	37.41	RT	7	
1115+27.01	38.38	RT	7	
1115+38.38	35.28	RT		24
1116+47.71	36.85	LT	12	
1116+48.07	50.84	LT		30
1116+49.66	44.94	LT	9	
1116+57.46	56.34	LT	8	
1116+68.38	50.59	LT	8	
1116+75.03	37.72	LT	8	
1116+75.47	46.28	LT		25
1116+78.46	31.59	RT		27
1116+81.36	37.64	RT		23
1116+84.11	39.48	LT	6	
1116+91.05	42.80	LT	7	
1116+99.25	36.51	LT		42
1117+05.92	43.57	LT	8	
1117+16.22	37.75	LT	6	
1117+20.05	44.31	LT	9	
1117+28.75	44.79	LT	8	
1117+29.80	34.13	LT	8	
1117+39.53	41.40	LT		40
1117+45.48	33.28	LT	7	
1117+47.45	50.29	LT	8	
1117+55.31	42.47	LT	7	
1117+65.59	37.23	LT	7	
<b>TOTAL</b>			<b>140</b>	<b>257</b>

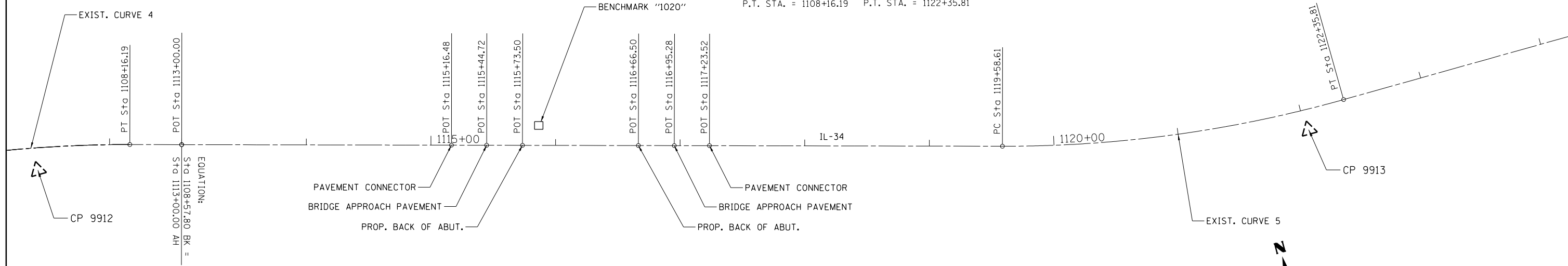
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	PLOT DATE = 1/11/2018	CHECKED - MH	REVISED -
		DATE - 12/12/2017	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES (IL-34 OVER GASSAWAY BRANCH)			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	13
<b>CONTRACT NO. 78166</b>				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

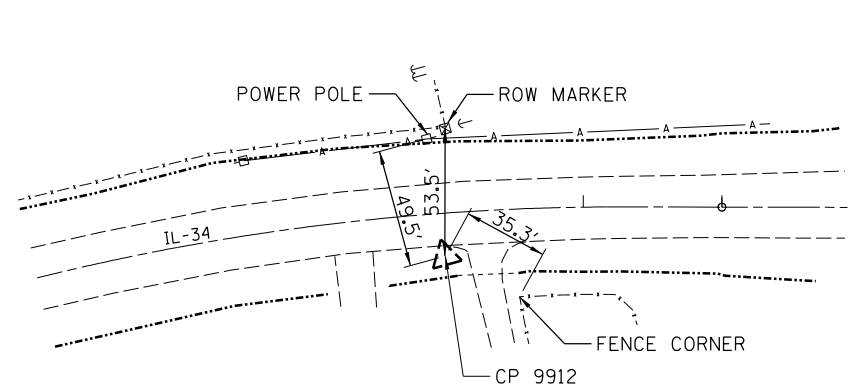
EXIST. CURVE 4 PI STA. = 1106+93.56 $\Delta = 14^\circ 03' 00''$ (RT) D = 5° 41' 59" R = 1,005.22' T = 123.87' L = 246.50' E = 7.60' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 1105+69.69 P.T. STA. = 1108+16.19	EXIST. CURVE 5 PI STA. = 1120+98.09 $\Delta = 15^\circ 48' 00''$ (LT) D = 5° 41' 59" R = 1,005.21' T = 139.49' L = 277.20' E = 9.63' e = ----- T.R. = ----- S.E. RUN = ----- P.C. STA. = 1119+58.61 P.T. STA. = 1122+35.81
--	--



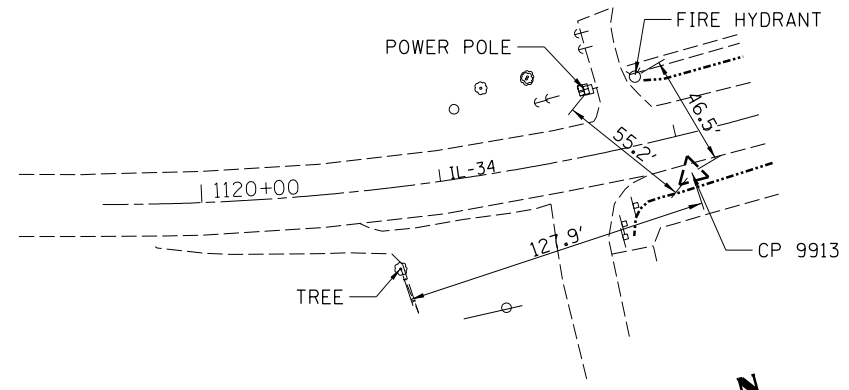
**ALIGNMENT COORDINATES - IL 34**

IL-34	STATION	NORTHING	EASTING
PT	1108+16.19	427809.78	901749.27
POT	1113+00.00	427798.82	901789.41
POT	1115+16.48	427741.79	901998.24
POT	1115+44.72	427734.35	902025.48
POT	1115+73.50	427726.77	902053.25
POT	1116+66.50	427702.27	902142.96
POT	1116+95.28	427694.69	902170.72
POT	1117+23.52	427687.25	902197.97
PC	1119+58.61	427625.32	902424.75

**BENCHMARK "1020"**  
 ELEV. 392.87  
 CUT "□" ON TOP OF NORTHWEST  
 WINGWALL OF STRUCTURE # 083-0026



**CONTROL POINT 9912**  
 STA. 1107+41.04  
 N 427809.25  
 E 901672.68  
 ELEV. 393.70



**CONTROL POINT 9913**  
 STA. 1122+02.82  
 N 427573.85  
 E 902665.41  
 ELEV. 398.98

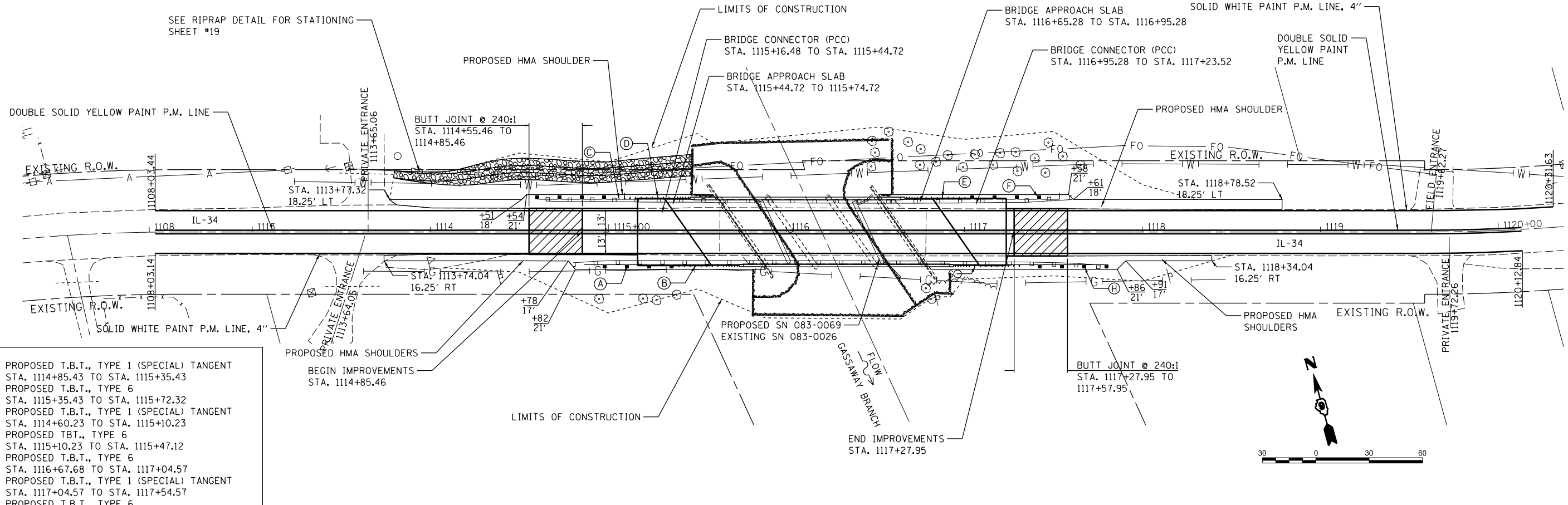


DATE	
BY	
PLAN	
REVISIONS CHECKED	
ALIGNED CHECKED	
NO. CAD FILE NAME	

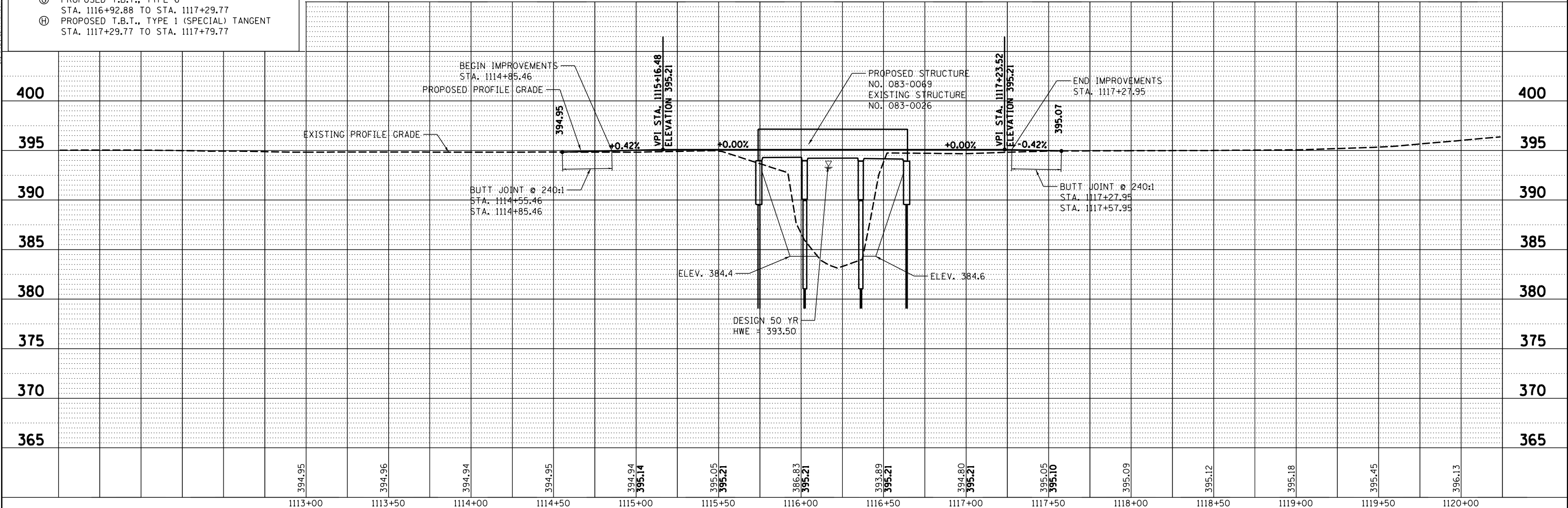
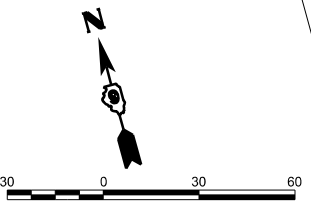


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DATE	
BY	
PROFILE	
REVISIONS CHECKED	
GRADES CHECKED	
NO. STRUCTURE	
NOTATIONS	



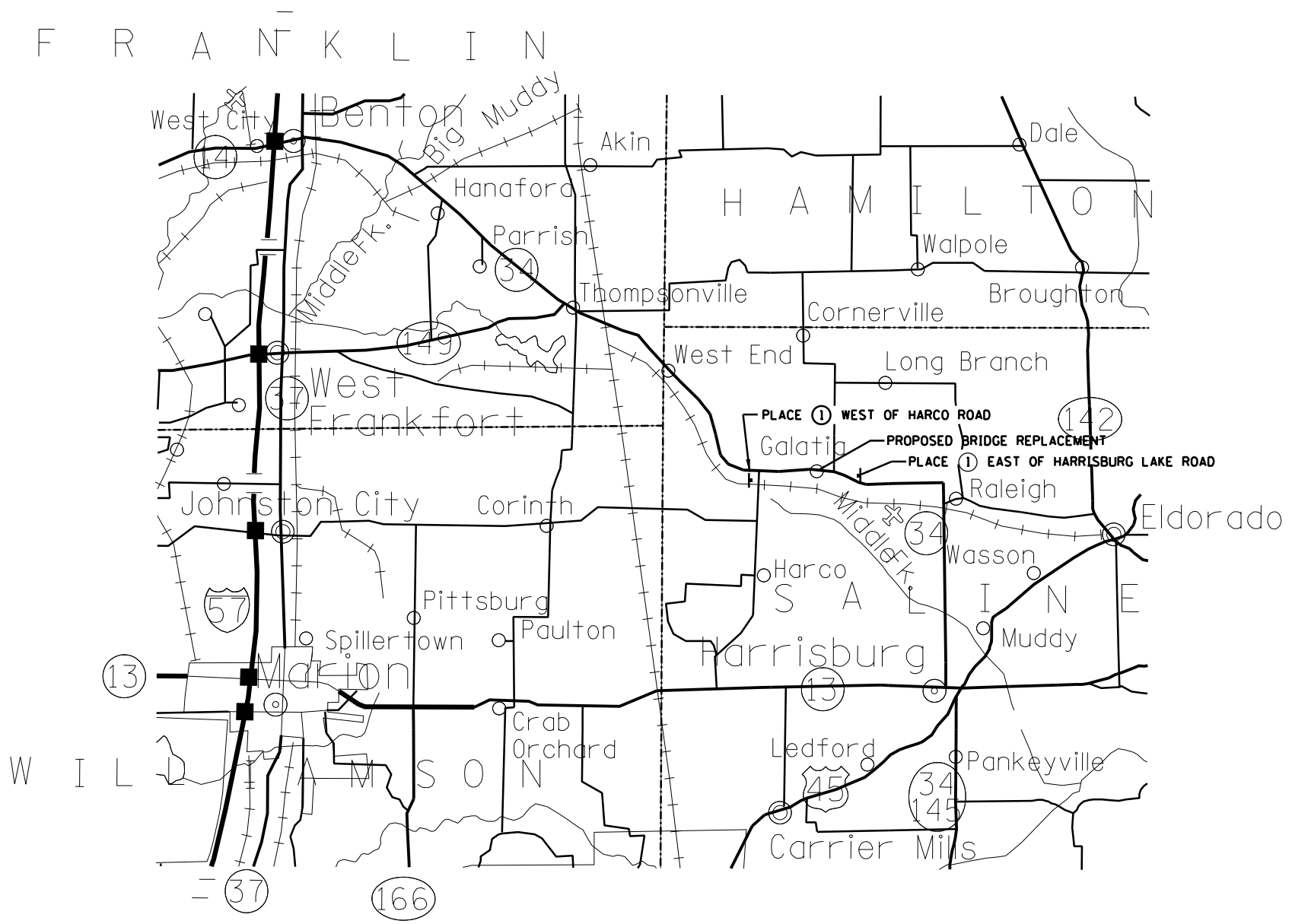
- Ⓐ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT  
STA. 1114+85.43 TO STA. 1115+35.43
- Ⓑ PROPOSED T.B.T., TYPE 6  
STA. 1115+35.43 TO STA. 1115+72.32
- Ⓒ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT  
STA. 1114+60.23 TO STA. 1115+10.23
- Ⓓ PROPOSED T.B.T., TYPE 6  
STA. 1115+10.23 TO STA. 1115+47.12
- Ⓔ PROPOSED T.B.T., TYPE 6  
STA. 1116+67.68 TO STA. 1117+04.57
- Ⓕ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT  
STA. 1117+04.57 TO STA. 1117+54.57
- Ⓖ PROPOSED T.B.T., TYPE 6  
STA. 1116+92.88 TO STA. 1117+29.77
- Ⓗ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT  
STA. 1117+29.77 TO STA. 1117+79.77



FILE NAME = D:\016-sh-t-PnP-R1.dgn	USER NAME = oster00685	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PLAN &amp; PROFILE IL-34 (OVER GASSAWAY BRANCH)</b>		F.A.P. RTE. 869	SECTION 104B-1	COUNTY SALINE	TOTAL SHEETS 87	SHEET NO. 16	
Profile - 20 Scale	PLOT SCALE = 60.0000' / in.	CHECKED - MH	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 78166
	PLOT DATE = 1/11/2018	DATE = 12/12/2017	REVISED -		ILLINOIS FED. AID PROJECT							

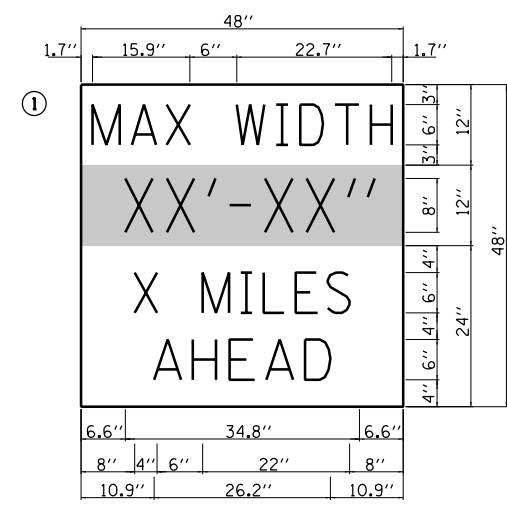






**DETOUR SIGNING PLAN**

**SIGN LEGEND**



**W12-1103**

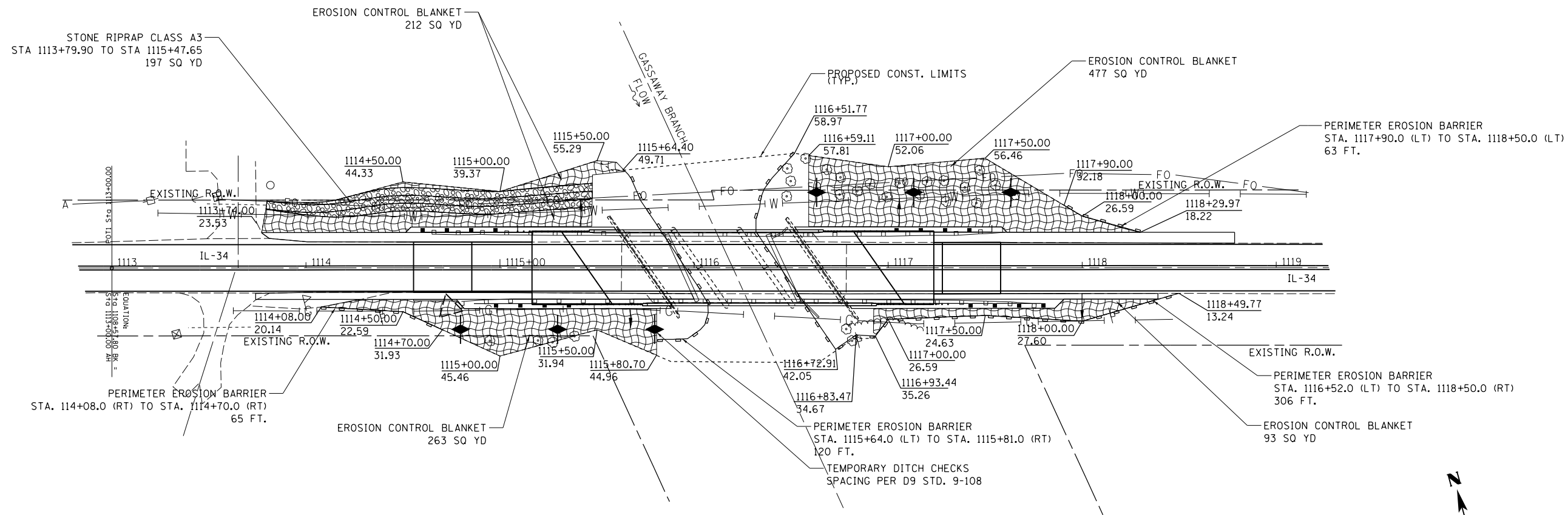
W12-1103 (WIDTH IS 8D):  
 NO BORDER, BLACK ON WHITE;  
 "MAX WIDTH" D;  
 NO BORDER, BLACK ON ORANGE;  
 "XX'-XX'" D;  
 NO BORDER, BLACK ON WHITE;  
 "X MILES" D; "AHEAD" D

**DETOUR NOTES:**





1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-1103 SIGN SHALL BE 10'-7" FOR STAGE 1 AND 11'-0" FOR STAGE 2 FOR BRIDGE OF GASSAWAY BRANCH OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.



FILE NAME = D978166-sh1-detour	USER NAME = oster00605	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>WIDE LOAD DETOUR SIGNING IL-34 (OVER GASSAWAY BRANCH)</b>				F.A.P. RTE. 869	SECTION 104B-1	COUNTY SALINE	TOTAL SHEETS 87	SHEET NO. 18
MODEL = BRIDGE STAGE CONSTRUCTION	PLOT SCALE = 100.0000' / 1"	DRAWN - JEO	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	<b>CONTRACT NO. 78166</b>			
	PLOT DATE = 1/11/2018	CHECKED - MH	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								
		DATE - 12/12/2017	REVISED -										



**EROSION CONTROL LEGEND**

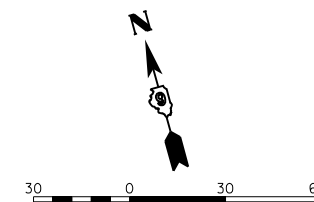
-  EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER
-  DRAINAGE PATTERN DIRECTION
-  TEMPORARY DITCH CHECK

**INTENDED SEQUENCE**

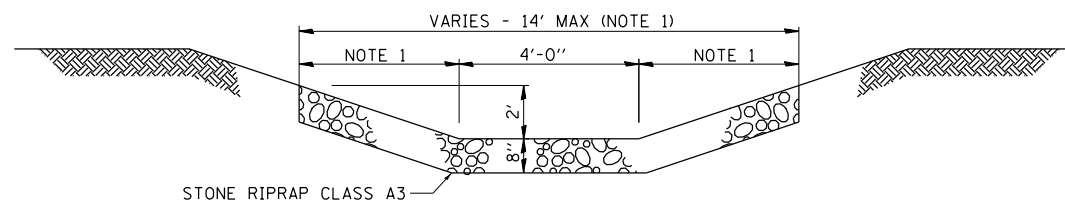
1. PLACEMENT OF PERIMETER EROSION BARRIER PRIOR TO COMMENCEMENT OF ANY WORK. SEE STANDARD 280001.
2. PLACEMENT OF TEMPORARY SEEDING ON GRADED SURFACES NOT HAVING PERMANENT SEEDING APPLIED.
3. PLACEMENT OF EROSION CONTROL BLANKET AFTER FINAL GRADING.
4. ONGOING MAINTENANCE OF EROSION CONTROL ELEMENTS.
5. REMOVE TEMPORARY EROSION CONTROL ELEMENTS AFTER FINAL GRADING AND PERMANENT SEEDING ESTABLISHED AS APPROVED BY THE ENGINEER.

**NOTES**

1. MAJOR GRADING SLOPES ALONG THE PROPOSED ROADWAY ARE 2:1 MAX.
2. SOILS DISTURBANCE SHALL ONLY OCCUR WITHIN THE AREAS SHOWN.
3. RECEIVING WATER FOR DRAINAGE FROM PROJECT IS GASSAWAY BRANCH. GASSAWAY BRANCH IS A TRIBUTARY OF MIDDLE FORK SALINE RIVER.



**IL 34 RIPRAP DETAIL**



**PROPOSED RIPAP PLACEMENT**

STATION 1113+79.90 LT TO 1115+47.65 LT

NOTE 1 - SEE CROSS SECTIONS

FILE NAME = D978166-sh1-eros.dgn	USER NAME = dowd01573	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY EROSION CONTROL PLAN IL-34 (OVER GASSAWAY BRANCH)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
MODEL = Erosion Control	PLOT SCALE = 60.0001" / in.	DRAWN - JEO	REVISED -			869	104B-1	SALINE	87	19	
PLOT DATE = 1/23/2018	DATE = 12/12/2017	CHECKED - MH	REVISED -			CONTRACT NO. 78166					
						SCALE:		SHEET NO. OF SHEETS		STA. TO STA.	
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

FILE NAME = W016-sht-ROW.dgn	USER NAME = oster00605	DESIGNED - CAD	REVISED -
MODEL = 40 scale	PLOT SCALE = 80.0000' / in.	DRAWN - JEO	REVISED -
	CHECKED - MH	DATE - 12/12/2017	REVISED -
	PLOT DATE = 1/11/2018		

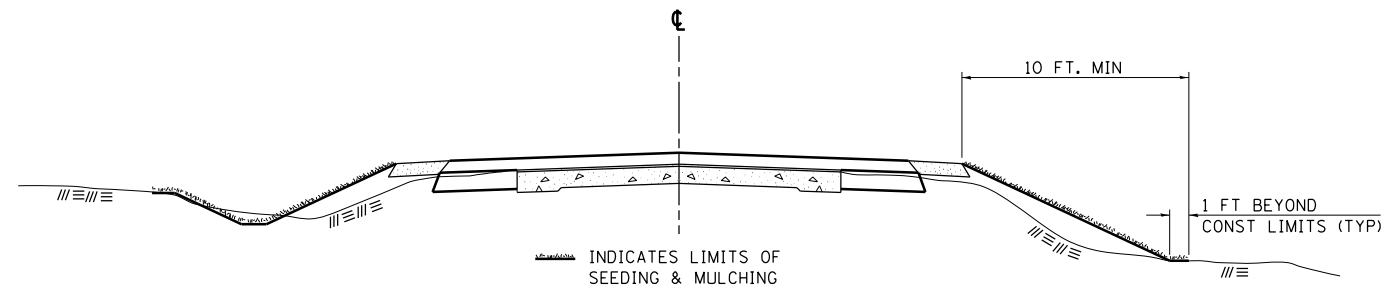
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PROPOSED RIGHT-OF-WAY PLAN  
IL-34 (OVER GASSAWAY BRANCH)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	20
<b>CONTRACT NO. 78166</b>				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

## SEEDING & MULCHING



### GENERAL NOTES

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

ON DETOUR ROADS, SLOPES SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF ANY GIVEN STAGE GRADING. TEMPORARY SEEDING SHALL BE CLASS 7.

FERTILIZER NUTRIENTS SHALL BE APPLIED TO ALL SEEDED AREAS. LIMESTONE SHALL BE APPLIED TO ALL AREAS OF FINAL SEEDING.

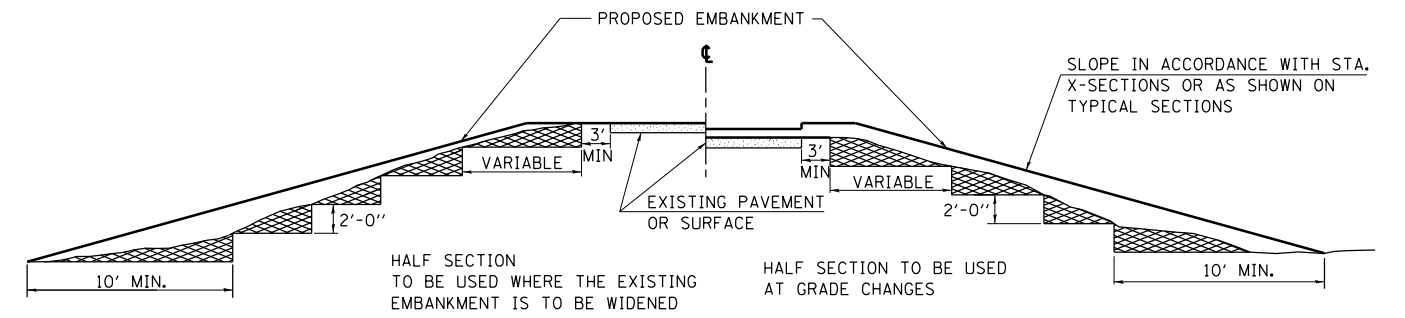
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR ROAD AND BRIDGE CONSTRUCTION.

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

STD. 9-12

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08
REVISED	5-16-13

## TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

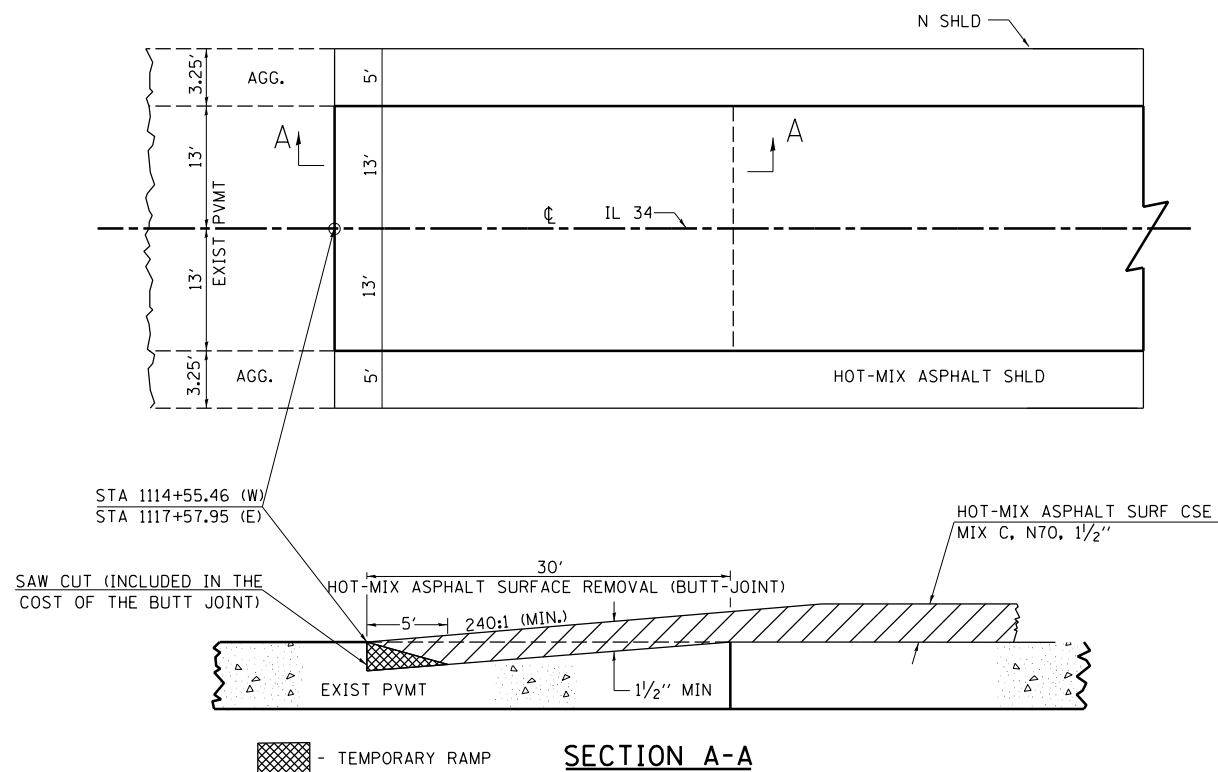


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

STD. 9-16

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08
REVIEWED	5-17-13

## BUTT JOINT

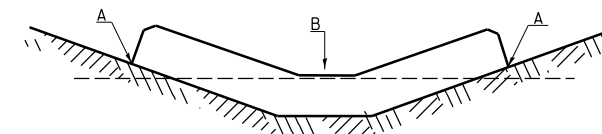


STD. 9-86

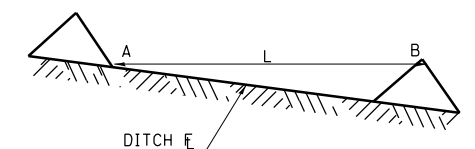
REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	5-17-13
REVISED	02-17-17

## TEMPORARY DITCH CHECKS

### PLACEMENT OF TEMPORARY DITCH CHECK IN DRAINAGE WAY



### SPACING BETWEEN TEMPORARY DITCH CHECKS



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION  
B = THE LOW POINT IN CENTER OF CHECK

STD. 9-108

REVISIONS	
DRAWN	9-01-99
REVISED	10-3-01
RESIZED	5-8-08
REVISED	05-04-10
REVIEWED	5-17-13

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	PLOT DATE = 1/11/2018	CHECKED - MH	REVISED -
		DATE - 12/12/2017	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

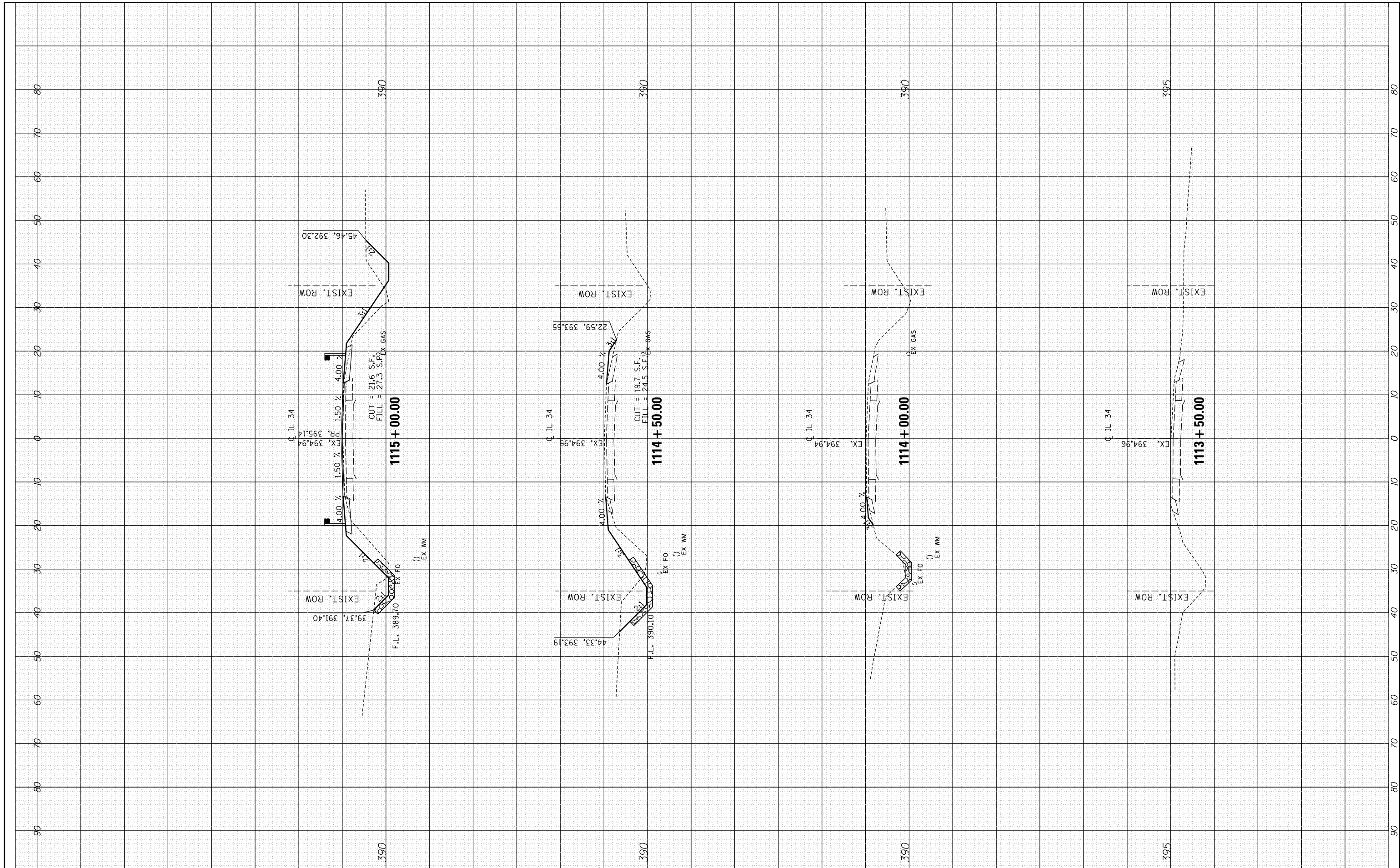
**DISTRICT 9 STANDARDS  
IL-34 (OVER GASSAWAY BRANCH)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	21
CONTRACT NO. 78166				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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

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



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 PLOT DATE = 1/11/2018

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DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

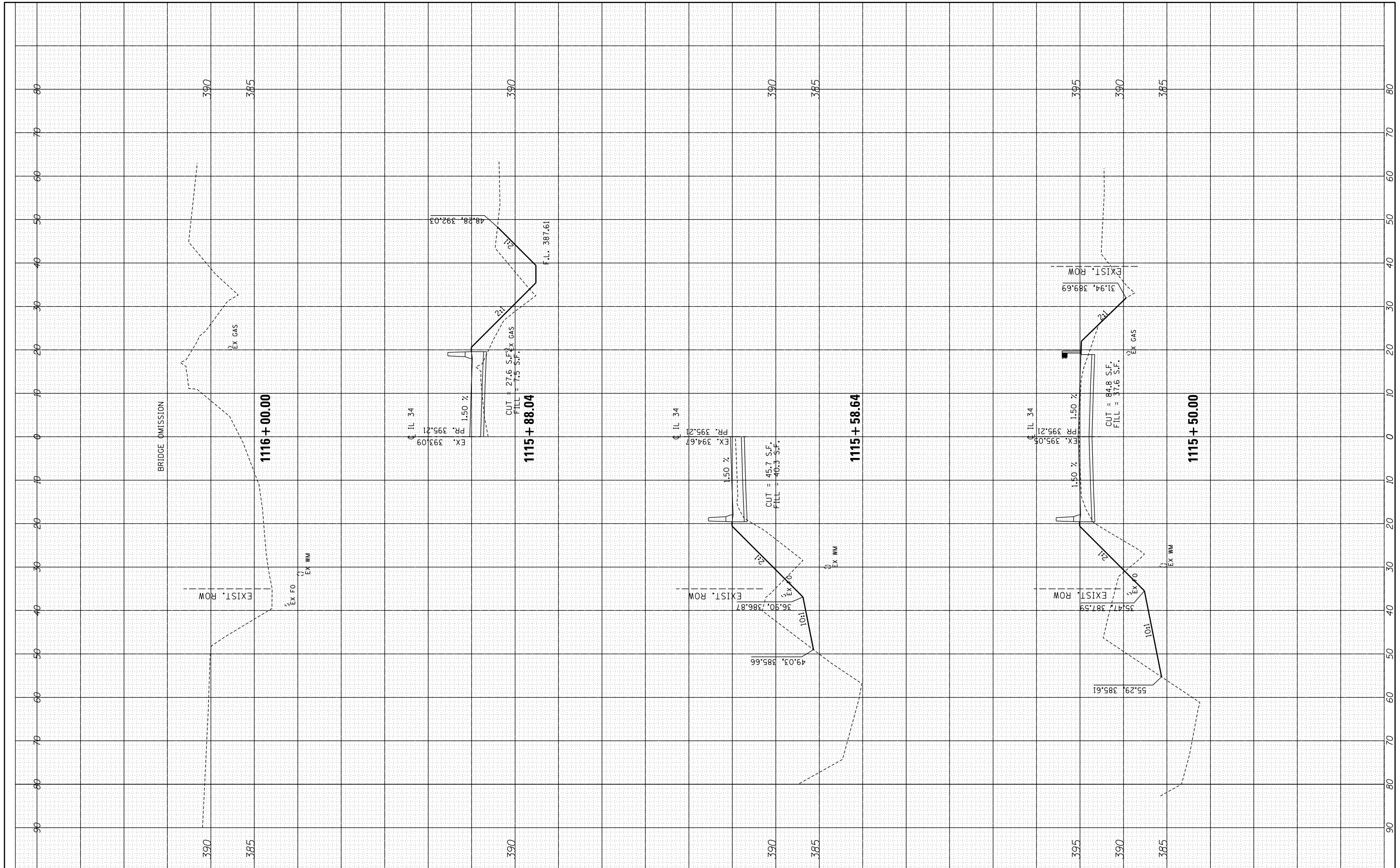
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
IL 34 (OVER GASSAWAY BRANCH)**  
 SCALE: \_\_\_\_\_ SHEET 1 OF 4 SHEETS STA. 1113+50.00 TO STA. 1115+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	22
			CONTRACT NO. 78166	
ILLINOIS FED. AID PROJECT				

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NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		
	AREAS CHECKED		

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



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 PLOT DATE = 1/11/2018

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

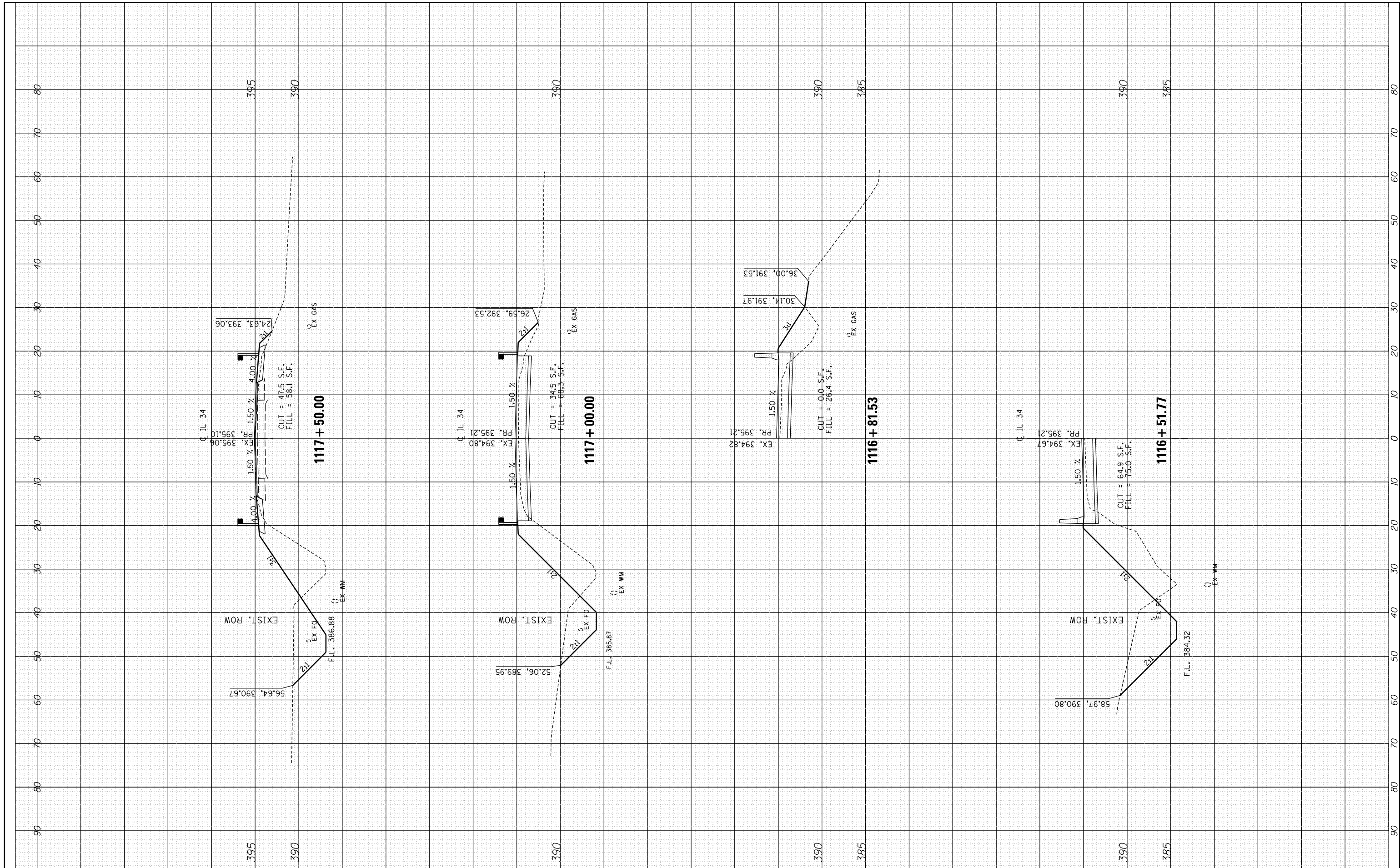
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION  
IL 34 (OVER GASSAWAY BRANCH)**  
 SCALE: \_\_\_\_\_ SHEET 2 OF 4 SHEETS STA. 1115+50.00 TO STA. 1116+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	23
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

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

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



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Default		CHECKED -	REVISD -
		DATE -	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
IL 34 (OVER GASSAWAY BRANCH)**

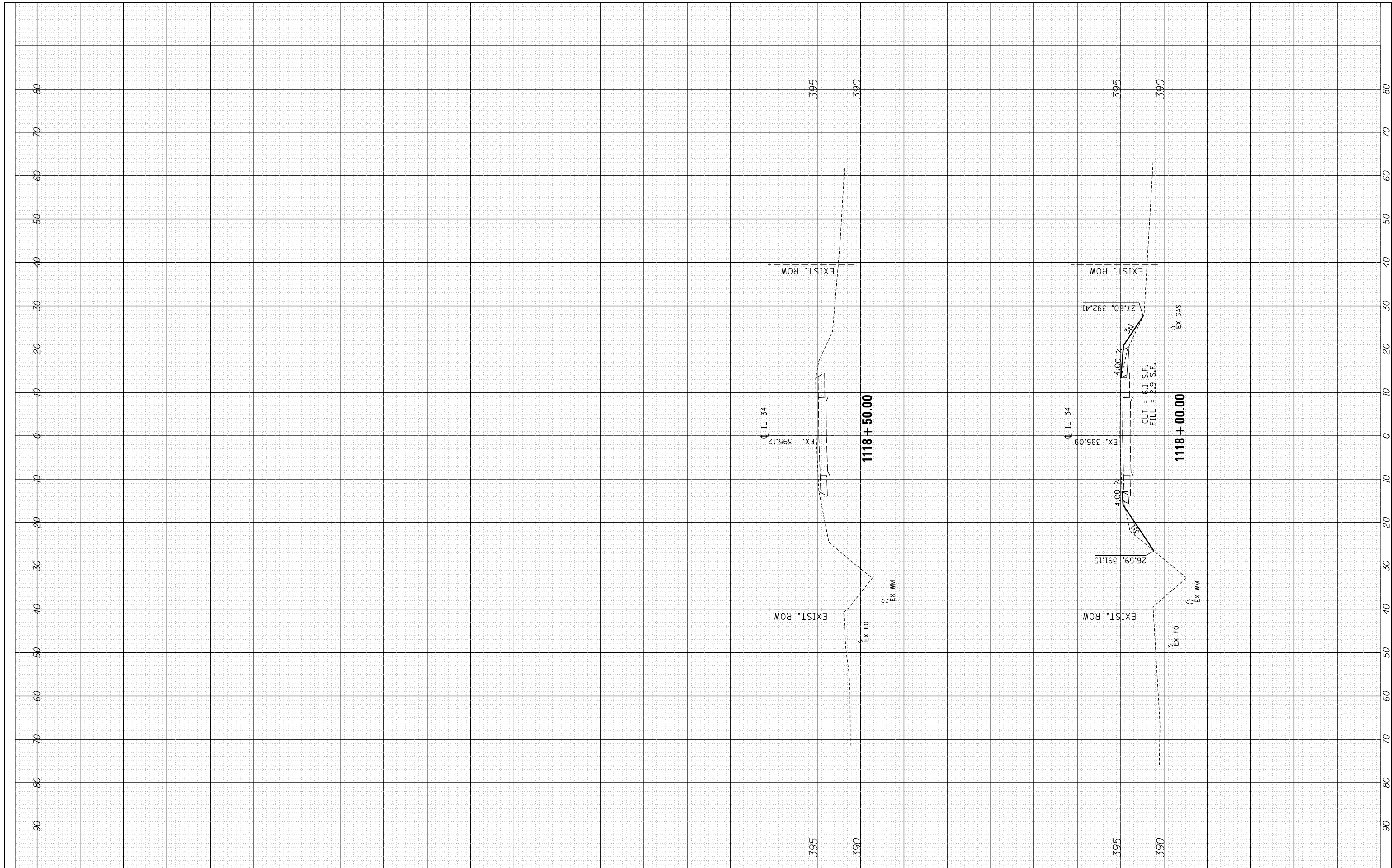
SCALE: \_\_\_\_\_ SHEET 3 OF 4 SHEETS STA. 1116+51.77 TO STA. 1117+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	24
				78166
ILLINOIS FED. AID PROJECT				



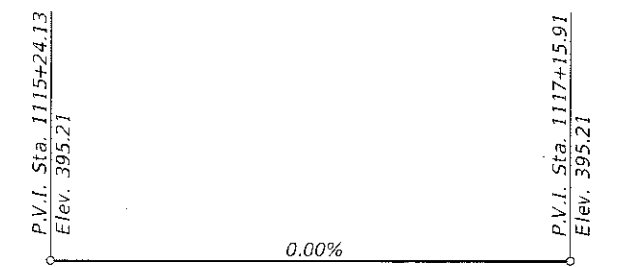
FINL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
NOTE BOOK	TEMPLATE		
AREAS CHECKED			

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



FILE NAME =	USER NAME = oster00605	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS IL 34 (OVER GASSAWAY BRANCH)</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default		CHECKED -	REVISED -		SCALE: _____	SHEET 4	OF 4	SHEETS	STA. 1118+00.00	TO STA. 1118+50.00	ILLINOIS FED. AID PROJECT	
		DATE -	REVISED -									

B.M.#1020: Chiseled □ on top of N.W. Wingwall of Existing Structure No. 083-0026. Elev. 392.865  
 Existing Structure (No. 083-0026):  
 Originally constructed in 1928 and reconstructed in 1976. The original 1928 superstructure was removed, replaced with 21" PPC Deck beams, and the existing closed reinforced concrete abutments were modified. The present structure is a Single Span measuring 53'-0 7/8" back to back of abutments, with an out to out width of 33'-0".  
 Traffic is to be maintained utilizing stage construction.  
 No Salvage.



PROFILE GRADE - IL. ROUTE. 34  
 (Along C of Roadway)

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q50	389.25	365.6	364.2	389.25	5
Q100	389.25	366.1	364.8	389.25	
Q500	389.25	370.5	369.8	389.25	
Design	389.25	365.6	364.2	389.25	
Check	389.25	365.6	364.2	389.25	

WATERWAY INFORMATION

Drainage Area = 5.30 Sq. Mi. Existing & Proposed Low Grade Elev. 394.70 @ Sta. 1105+54

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Ten-Year	10	1759	343	385	392.0	0.1	0.3	392.1	392.3	
Design	50	2897	366	468	393.5	1.6	0.7	395.1	394.2	
Base	100	3412	366	468	394.3	1.4	1.0	395.7	395.3	
Existing Overtopping	38	2738	366	-	393.3	1.4	-	394.7	-	
Proposed Overtopping	58	3055	-	468	393.6	-	1.1	-	394.7	

10 year velocity through existing structure = 5.1 fps  
 10 year velocity through proposed structure = 4.6 fps

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3  
 Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.33  
 Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.79  
 Soil Site Class = D

DESIGN SPECIFICATIONS

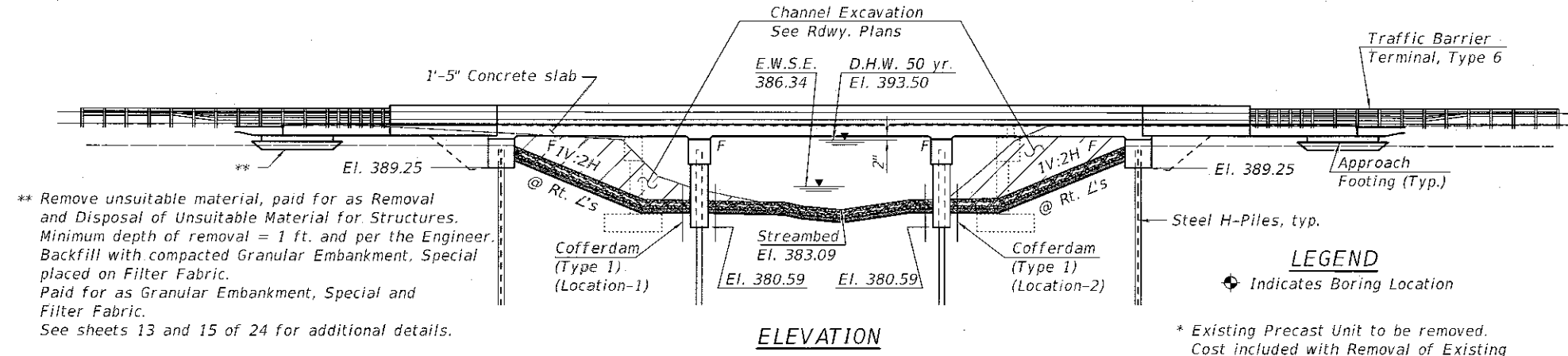
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

LOADING HL-93

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

DESIGN STRESSES

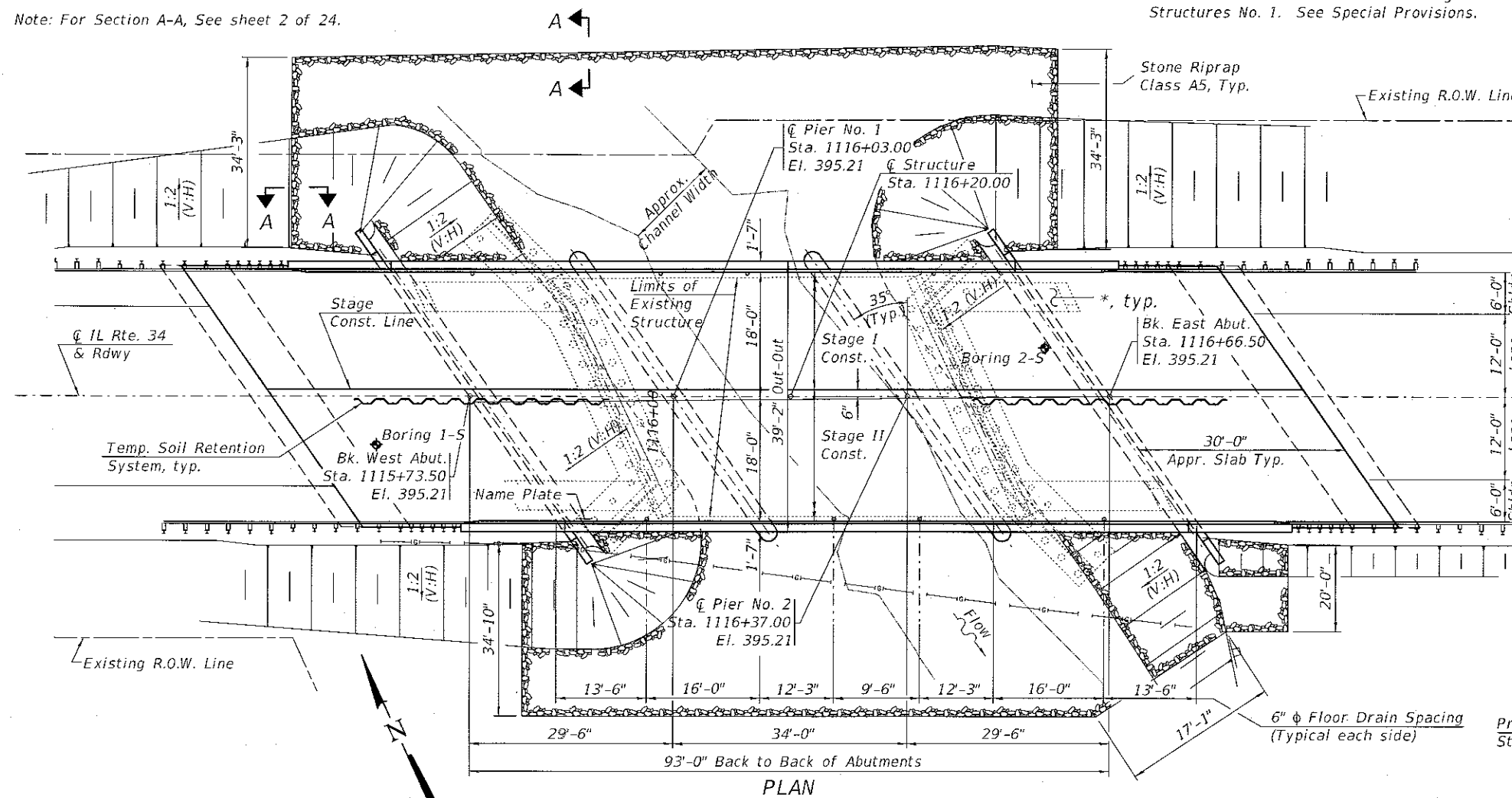
FIELD UNITS  
 f'c = 3,500 psi  
 f'c = 4,000 psi (Superstructure)  
 fy = 60,000 psi (Reinforcement)



\*\* Remove unsuitable material, paid for as Removal and Disposal of Unsuitable Material for Structures. Minimum depth of removal = 1 ft. and per the Engineer. Backfill with compacted Granular Embankment, Special placed on Filter Fabric. Paid for as Granular Embankment, Special and Filter Fabric. See sheets 13 and 15 of 24 for additional details.

\* Existing Precast Unit to be removed. Cost included with Removal of Existing Structures No. 1. See Special Provisions.

Note: For Section A-A, See sheet 2 of 24.

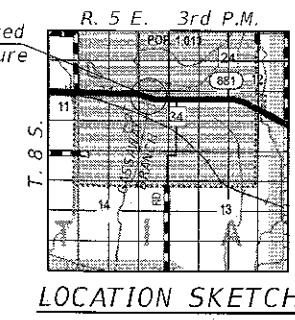


DESIGNED - ADAM W. SCHMIDT  
 CHECKED - Jocky Baker  
 DRAWN - J. ANDREWS  
 CHECKED - A.W.S./ Z.T.B.

EXAMINED - Jaym F. Schiff  
 PASSED - [Signature]  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3/30/2018  
 EXPIRES 11-30-2018

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



GENERAL PLAN & ELEVATION  
 IL. ROUTE 34 OVER GASSAWAY BRANCH  
 F.A.P. ROUTE 869 - SECTION 104B-1  
 SALINE COUNTY  
 STATION 1116+20.00  
 STRUCTURE NO. 083-0069

MODEL: 0830069-78166-001  
 FILE NAME: pw\1104EBID\INTEG\Illinois.gov\FWID\DOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn

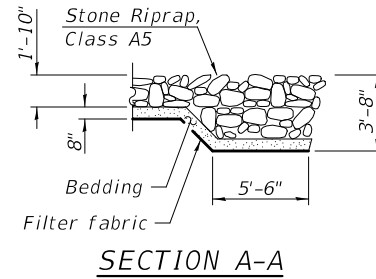
F.A.P. RTE. 869	SECTION 104B-1	COUNTY SALINE	TOTAL SHEETS 87	SHEET NO. 26
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

**INDEX OF SHEETS**

- 1 - General Plan and Elevation
- 2 - General Data
- 3 - Stage Construction Details
- 4 - Temporary Concrete Barrier for Stage Construction
- 5-6 - Top of Slab Elevations
- 7-8 - Top of Approach Slab Elevations
- 9-10 - Superstructure
- 11 - Superstructure Details
- 12-15 - Bridge Approach Slab Details
- 16-17 - Abutments
- 18-20 - Piers
- 21 - HP Pile Details
- 22 - Bar Splicer Assembly and Mechanical Splicer Details
- 23-24 - Soil Boring Logs

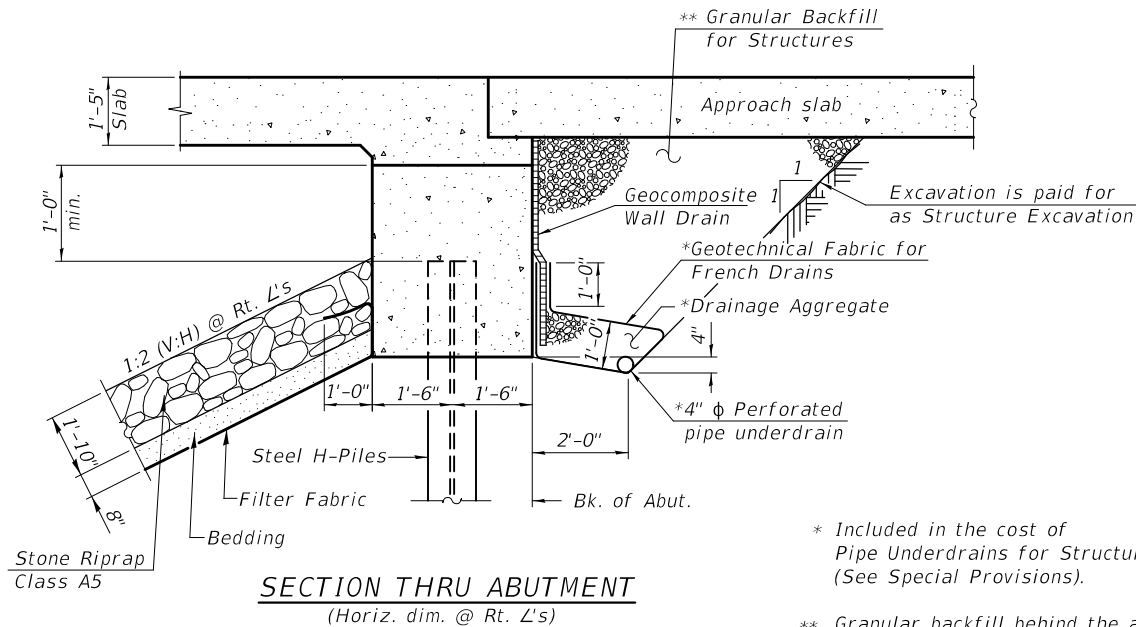
**GENERAL NOTES**

Reinforcement bars designated (E) shall be epoxy coated.  
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
 The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.  
 The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.  
 Slipforming of the parapets is not allowed.



**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. Yd.	1244
Filter Fabric	Sq. Yd.	1244



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

\* Included in the cost of Pipe Underdrains for Structures 4". (See Special Provisions).

\*\* Granular backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.

STATION 1116+20.00  
 BUILT 20\_\_ BY  
 STATE OF ILLINOIS  
 F.A.P. RT. 869 SEC. 104B-1  
 LOADING HL-93  
 STR. NO. 083-0069

**NAME PLATE**  
 See Std. 515001

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Granular Embankment, Special	Cu. Yd.		35	35
Stone Riprap, Class A5	Sq. Yd.			1244
Filter Fabric	Sq. Yd.			1347
Protective Coat	Sq. Yd.	712		712
Removal of Existing Structures No. 1	Each			1
Structure Excavation	Cu. Yd.		66	66
Cofferdam Excavation	Cu. Yd.		130	130
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.		35	35
Cofferdam (Type 1) (Location-1)	Each		1	1
Cofferdam (Type 1) (Location-2)	Each		1	1
Floor Drains	Each	8		8
Concrete Structures	Cu. Yd.		189	189
Concrete Superstructure	Cu. Yd.	227		227
Bridge Deck Grooving	Sq. Yd.	569		569
Concrete Superstructure (Approach Slab)	Cu. Yd.	108		108
Reinforcement Bars, Epoxy Coated	Pound	130,240	17,240	147,480
Bar Splicers	Each	439	172	611
Furnishing Steel Piles HP 14x117	Foot		1860	1860
Driving Piles	Foot		1860	1860
Test Pile Steel HP 14x117	Each		2	2
Name Plates	Each	1		1
Temporary Soil Retention System	Sq. Ft.		424	424
Geocomposite Wall Drain	Sq. Yd.		70	70
Granular Backfill for Structures	Cu. Yd.		80	80
Asbestos Bearing Pad Removal	Each	22		22
Pipe Underdrains for Structures 4"	Foot		156	156

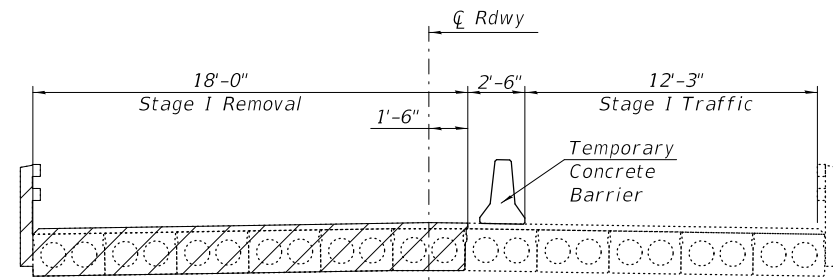
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 3/30/2018 1:11:39 PM

DESIGNED - ADAM W. SCHMIDT	EXAMINED	DATE - MARCH 30, 2018
CHECKED - ZACH T. BULVA	PASSED	REVISOR -
DRAWN - IAN J. ANDREWS		REVISOR -
CHECKED - A.W.S. / Z.T.B.		

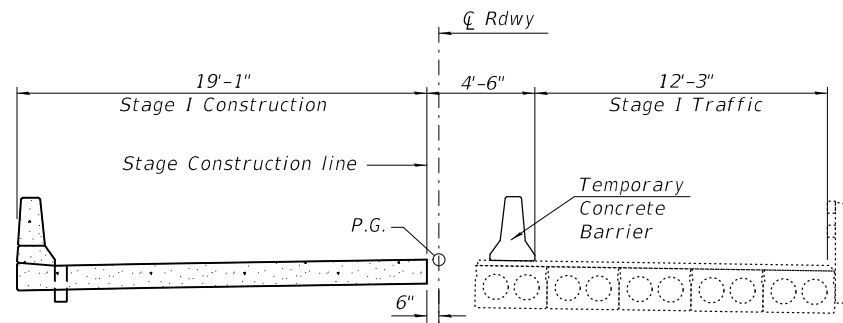
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
 STRUCTURE NO. 083 - 0069**

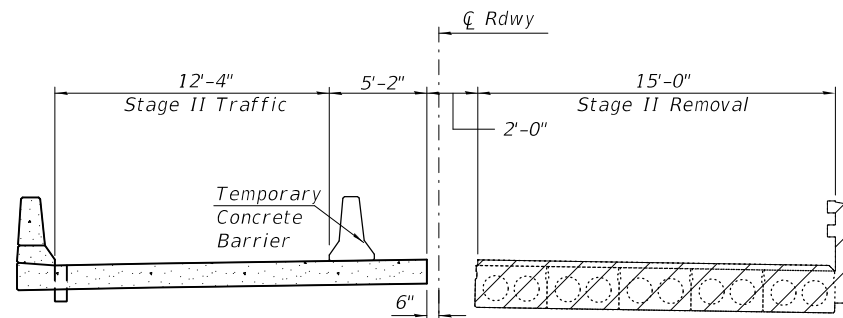
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	27
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				



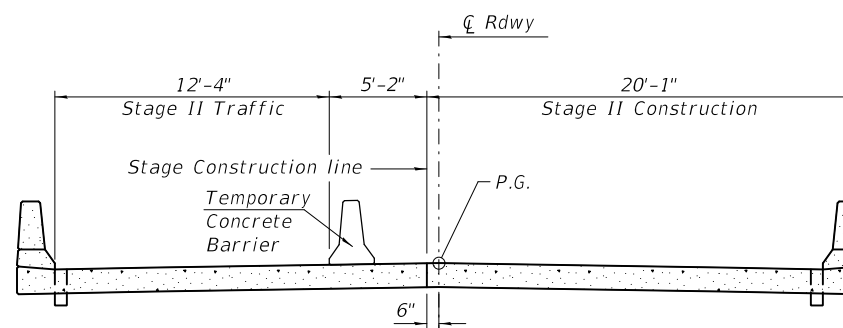
**STAGE I REMOVAL**  
(Looking East)



**STAGE I CONSTRUCTION**  
(Looking East)

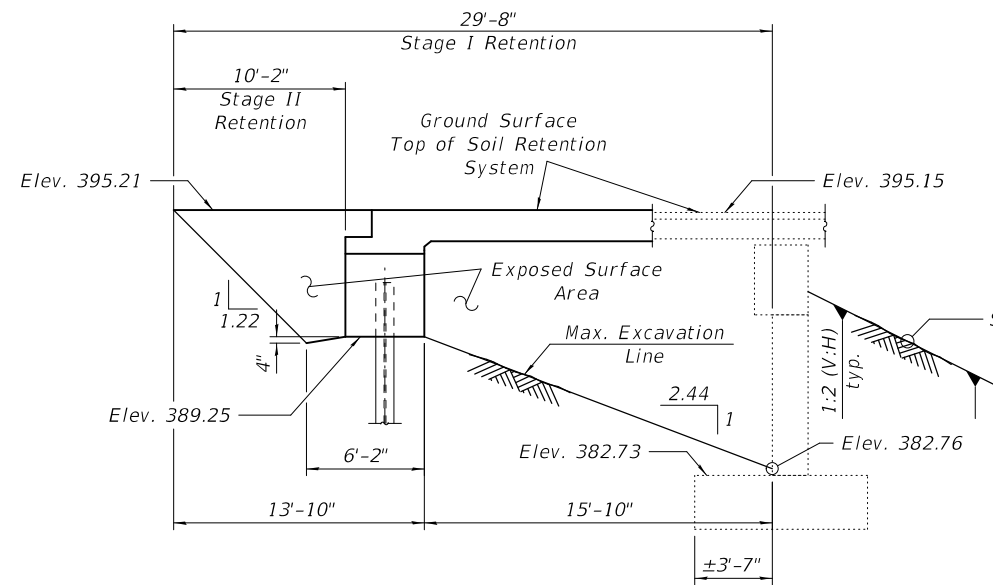


**STAGE II REMOVAL**  
(Looking East)

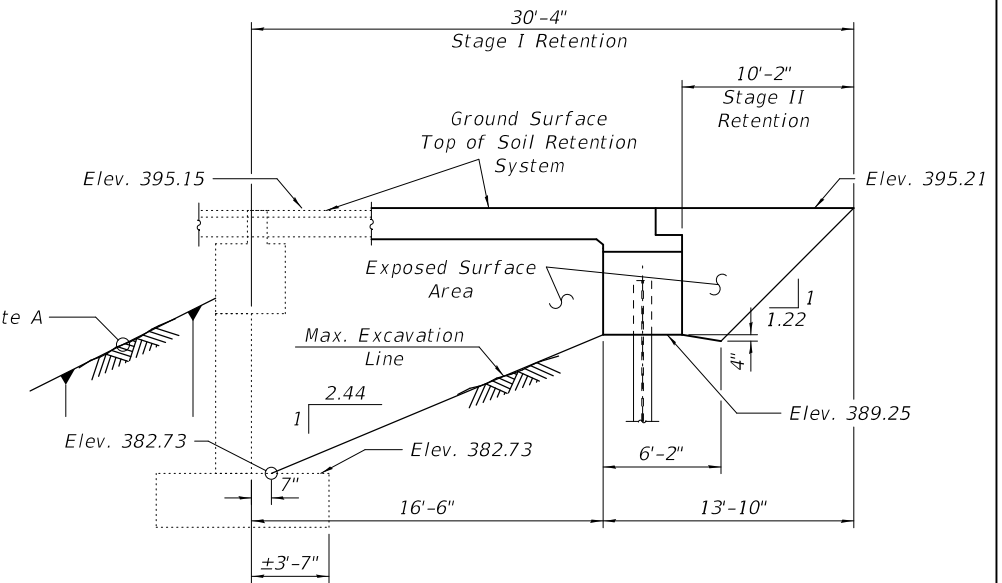


**STAGE II CONSTRUCTION**  
(Looking East)

Note A:  
Slope soil as necessary during staging.  
Cost included in Channel Excavation.  
See Rdwy plans for Quantity of Channel Excavation.



**WEST ABUTMENT TEMPORARY SOIL RETENTION SYSTEM**



**EAST ABUTMENT TEMPORARY SOIL RETENTION SYSTEM**

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	TOTAL
Temporary Soil Retention System	Sq. Ft.	424

Notes:  
For quantity of Temporary Concrete Barrier, see roadway plans.  
Hatched area indicates Removal of Existing Structures No. 1.  
Removal of railing and wearing surface included in Removal of Existing Structures No. 1.  
For details of Temporary Concrete Barrier see Sheet 4 of 24.

MODEL: 0830069-78166-003  
FILE NAME: p:\w\084848\INTEG\illinois.gov\p\WIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

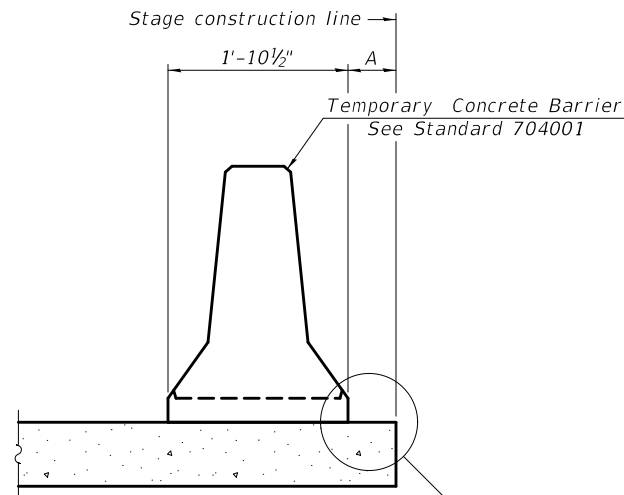
EXAMINED	<i>Joanne F. Jaffe</i> ENGINEER OF BRIDGE DESIGN	DATE -	MARCH 30, 2018
PASSED	<i>Carl Kasper</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	
		REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS  
STRUCTURE NO. 083 - 0069**

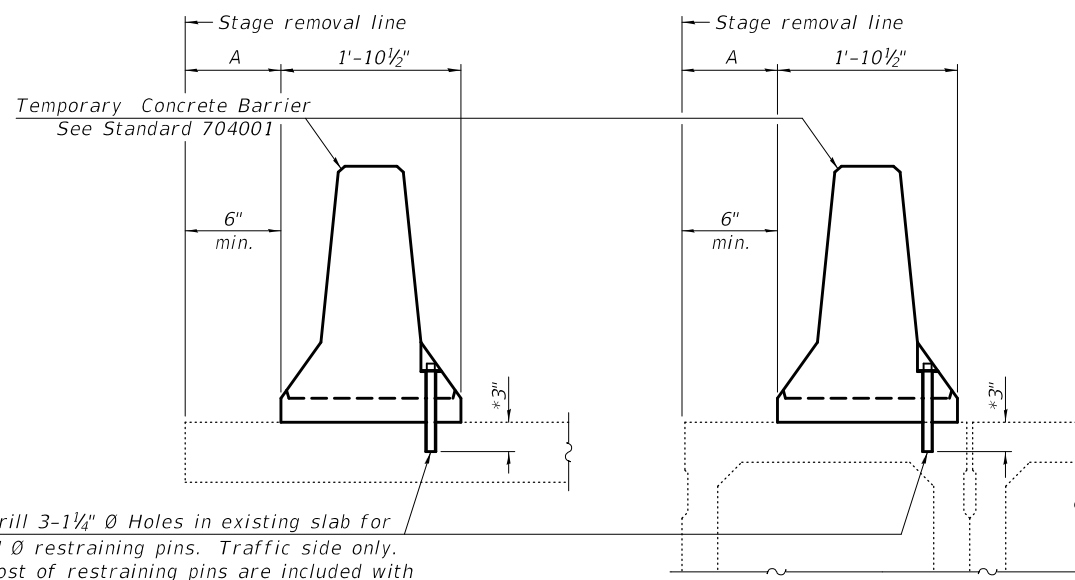
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	28
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

SHEET 3 OF 24 SHEETS



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

NEW SLAB OR NEW DECK BEAM



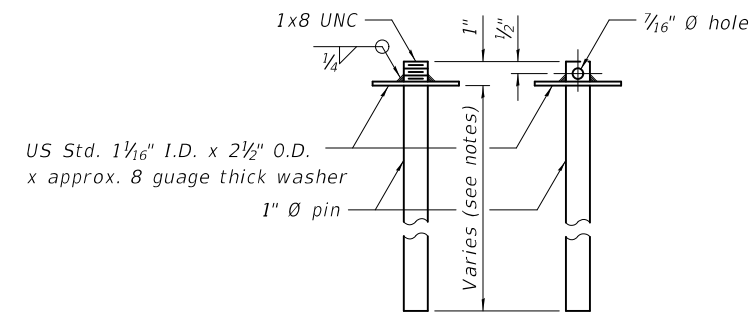
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

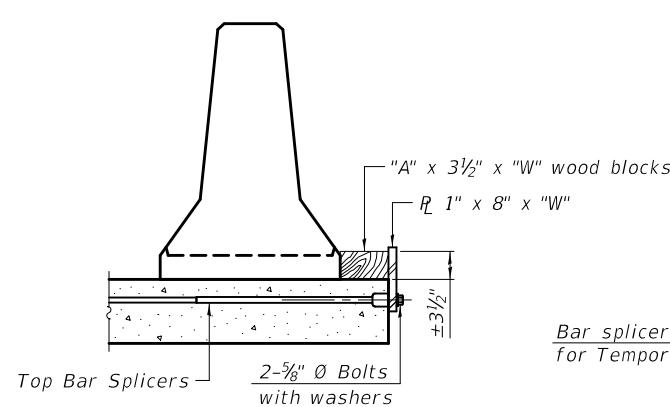
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

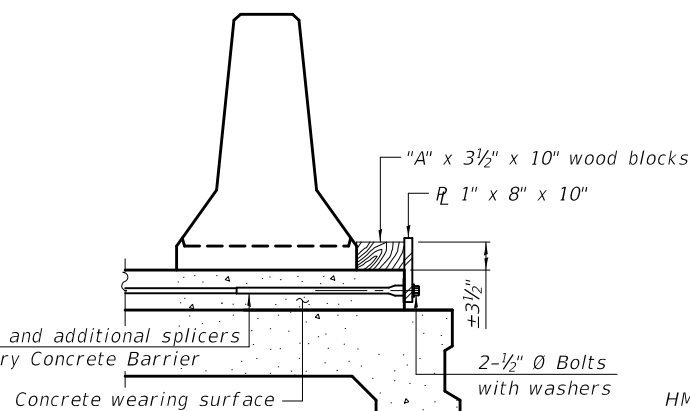


RESTRAINING PIN

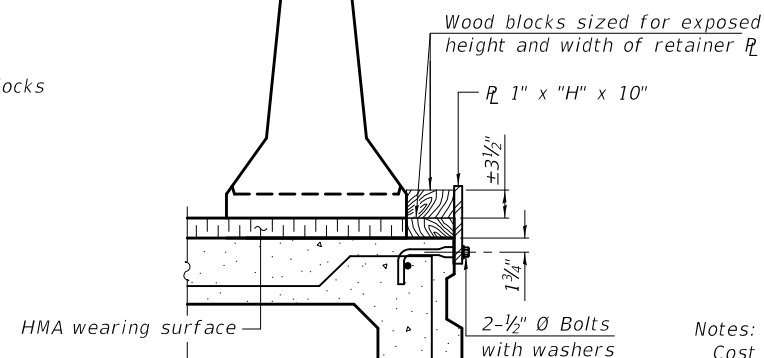


DETAIL I

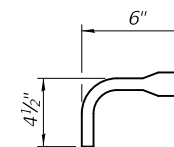
Bar splicers and additional splicers for Temporary Concrete Barrier



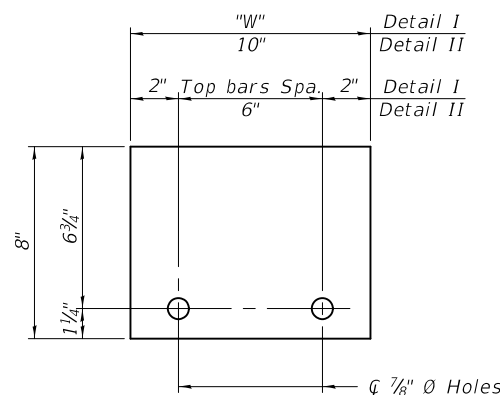
DETAIL II



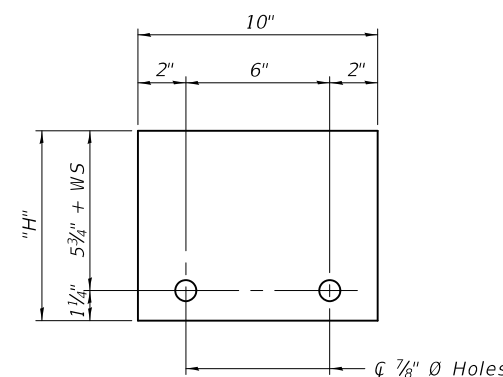
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate center of each temporary concrete barrier.

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

When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6' to accommodate the shear key clamping device.

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

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

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

MODEL: 0830069-78166-004  
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R-27

2-17-2017

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED	<i>Joanne F. J...</i>	DATE -	MARCH 30, 2018
PASSED	<i>Carl...</i>	REVISED -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

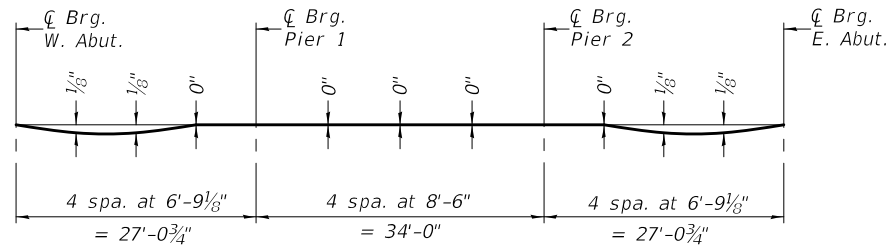
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 083 - 0069

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	29
CONTRACT NO. 78166				

SHEET 4 OF 24 SHEETS

ILLINOIS FED. AID PROJECT

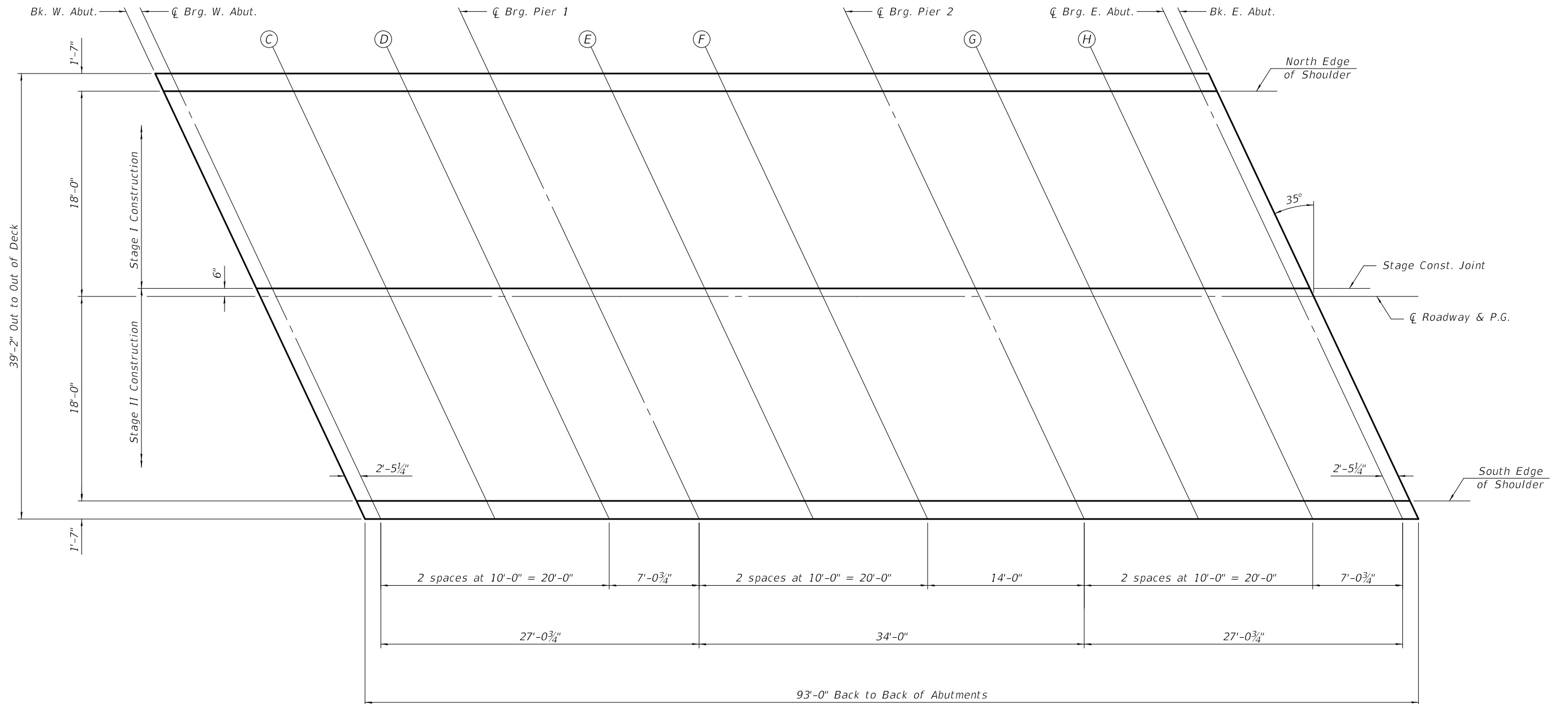


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 6 of 24.



**PLAN**

MODEL: 0830069-78166-005  
FILE NAME: p:\v\084848\INTEG\Illinois\DOT\Documents\Projects\0830069\CADD\Plans\0830069-78166.dgn

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED	<i>Joanne F. J...</i>	DATE -	MARCH 30, 2018
PASSED	<i>Carl...</i>	REVISED -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 083 - 0069**

SHEET 5 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	30
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1115+60.90	-18.00	394.94	394.94
CL Brg. W. Abut.	1115+63.33	-18.00	394.94	394.94
C	1115+73.33	-18.00	394.94	394.95
D	1115+83.33	-18.00	394.94	394.94
CL Brg. Pier 1	1115+90.40	-18.00	394.94	394.94
E	1116+00.40	-18.00	394.94	394.94
F	1116+10.40	-18.00	394.94	394.94
CL Brg. Pier 2	1116+24.40	-18.00	394.94	394.94
G	1116+34.40	-18.00	394.94	394.94
H	1116+44.40	-18.00	394.94	394.95
CL Brg. E. Abut.	1116+51.46	-18.00	394.94	394.94
Bk. E. Abut.	1116+53.90	-18.00	394.94	394.94

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1115+73.15	-0.50	395.20	395.20
CL Brg. W. Abut.	1115+75.59	-0.50	395.20	395.20
C	1115+85.59	-0.50	395.20	395.21
D	1115+95.59	-0.50	395.20	395.21
CL Brg. Pier 1	1116+02.65	-0.50	395.20	395.20
E	1116+12.65	-0.50	395.20	395.21
F	1116+22.65	-0.50	395.20	395.21
CL Brg. Pier 2	1116+36.65	-0.50	395.20	395.20
G	1116+46.65	-0.50	395.20	395.21
H	1116+56.65	-0.50	395.20	395.21
CL Brg. E. Abut.	1116+63.71	-0.50	395.20	395.20
Bk. E. Abut.	1116+66.15	-0.50	395.20	395.20

CL ROADWAY & PG

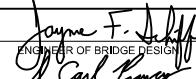

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1115+73.50	0.00	395.21	395.21
CL Brg. W. Abut.	1115+75.94	0.00	395.21	395.21
C	1115+85.94	0.00	395.21	395.22
D	1115+95.94	0.00	395.21	395.21
CL Brg. Pier 1	1116+03.00	0.00	395.21	395.21
E	1116+13.00	0.00	395.21	395.21
F	1116+23.00	0.00	395.21	395.21
CL Brg. Pier 2	1116+37.00	0.00	395.21	395.21
G	1116+47.00	0.00	395.21	395.21
H	1116+57.00	0.00	395.21	395.22
CL Brg. E. Abut.	1116+64.06	0.00	395.21	395.21
Bk. E. Abut.	1116+66.50	0.00	395.21	395.21

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1115+86.10	18.00	394.94	394.94
CL Brg. W. Abut.	1115+88.54	18.00	394.94	394.94
C	1115+98.54	18.00	394.94	394.95
D	1116+08.54	18.00	394.94	394.94
CL Brg. Pier 1	1116+15.60	18.00	394.94	394.94
E	1116+25.60	18.00	394.94	394.94
F	1116+35.60	18.00	394.94	394.94
CL Brg. Pier 2	1116+49.60	18.00	394.94	394.94
G	1116+59.60	18.00	394.94	394.94
H	1116+69.60	18.00	394.94	394.95
CL Brg. E. Abut.	1116+76.67	18.00	394.94	394.94
Bk. E. Abut.	1116+79.11	18.00	394.94	394.94

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DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED		DATE -	MARCH 30, 2018
PASSED		REVISED -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 083 - 0069

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	31
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

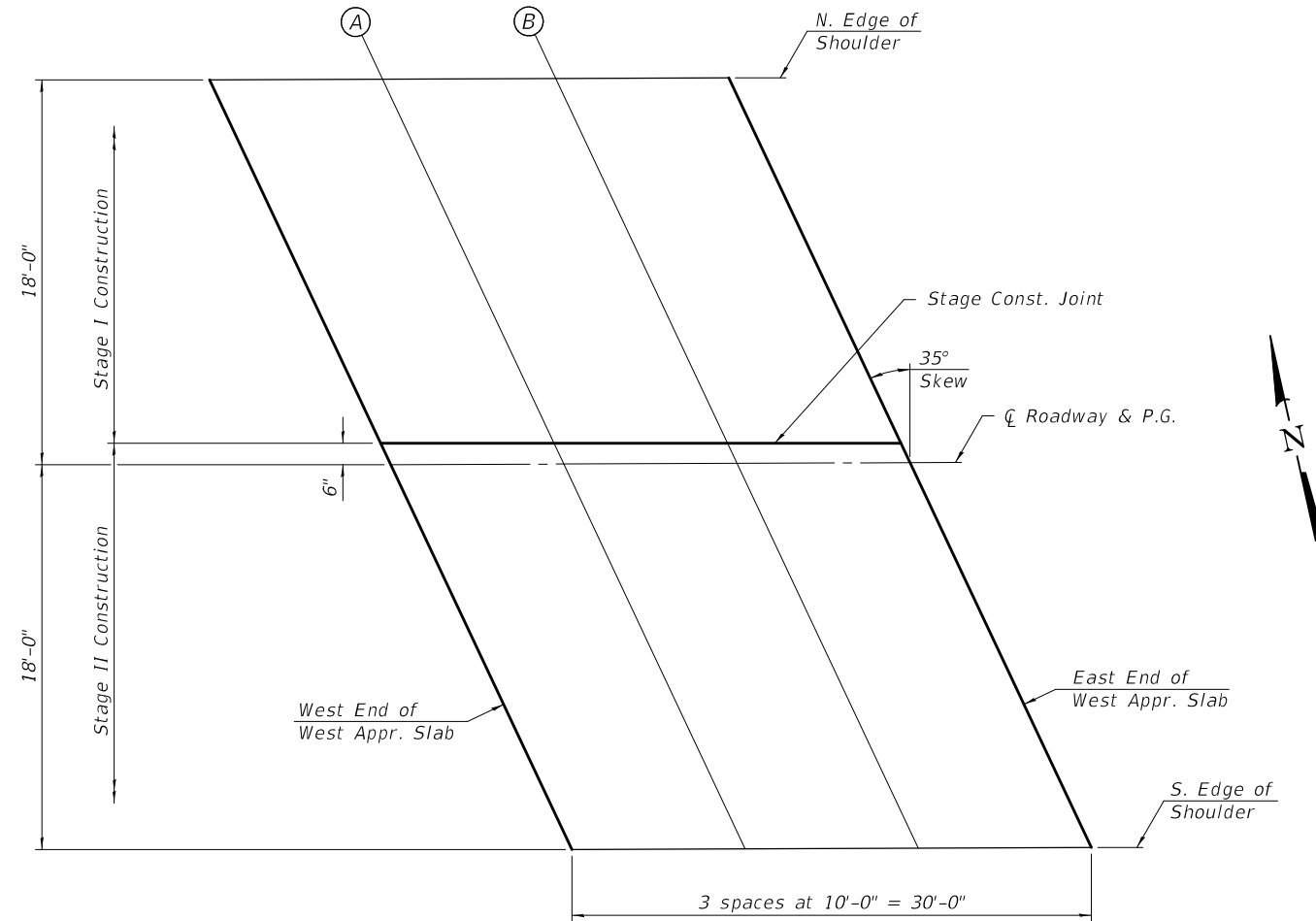
SHEET 6 OF 24 SHEETS

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1115+32.12	-18.00	394.94
A	1115+42.12	-18.00	394.94
B	1115+52.12	-18.00	394.94
E. End of W. Appr. Slab	1115+62.12	-18.00	394.94

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1115+44.37	-0.50	395.20
A	1115+54.37	-0.50	395.20
B	1115+64.37	-0.50	395.20
E. End of W. Appr. Slab	1115+74.37	-0.50	395.20



PLAN

CL ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1115+44.72	0.00	395.21
A	1115+54.72	0.00	395.21
B	1115+64.72	0.00	395.21
E. End of W. Appr. Slab	1115+74.72	0.00	395.21

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1115+57.32	18.00	394.94
A	1115+67.32	18.00	394.94
B	1115+77.32	18.00	394.94
E. End of W. Appr. Slab	1115+87.32	18.00	394.94

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DESIGNED - ADAM W. SCHMIDT	EXAMINED
CHECKED - ZACH T. BULVA	PASSED
DRAWN - IAN J. ANDREWS	
CHECKED - A.W.S. / Z.T.B.	

DATE - MARCH 30, 2018  
 ENGINEER OF BRIDGE DESIGN  
 ENGINEER OF BRIDGES AND STRUCTURES

REVIS	DATE
REVIS	DATE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 083 - 0069  
 SHEET 7 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	32
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

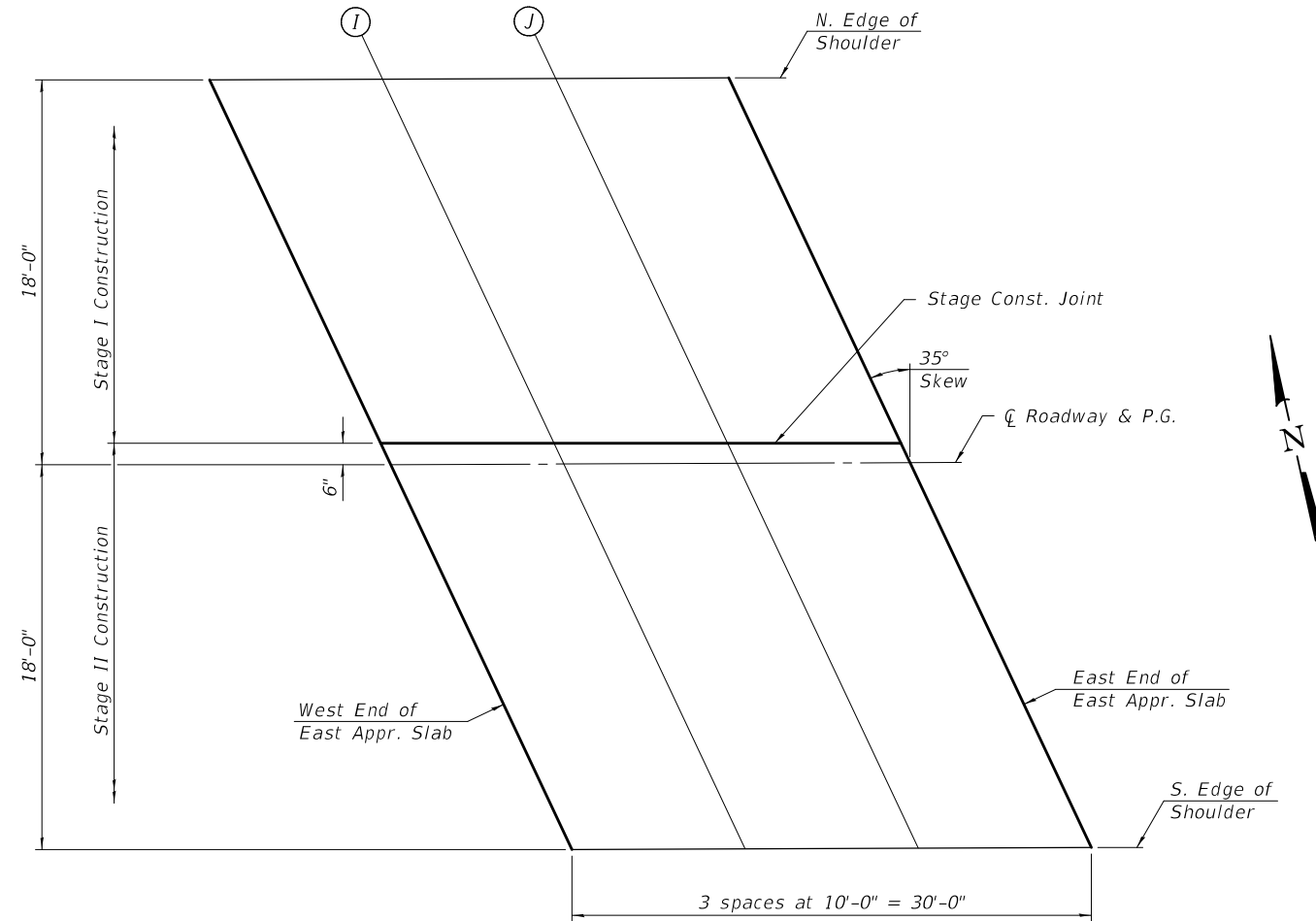


NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1116+52.68	-18.00	394.94
I	1116+62.68	-18.00	394.94
J	1116+72.68	-18.00	394.94
E. End of E. Appr. Slab	1116+82.68	-18.00	394.94

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1116+64.93	-0.50	395.20
I	1116+74.93	-0.50	395.20
J	1116+84.93	-0.50	395.20
E. End of E. Appr. Slab	1116+94.93	-0.50	395.20



PLAN

CL ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1116+65.28	0.00	395.21
I	1116+75.28	0.00	395.21
J	1116+85.28	0.00	395.21
E. End of E. Appr. Slab	1116+95.28	0.00	395.21

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1116+77.88	18.00	394.94
I	1116+87.88	18.00	394.94
J	1116+97.88	18.00	394.94
E. End of E. Appr. Slab	1117+07.88	18.00	394.94

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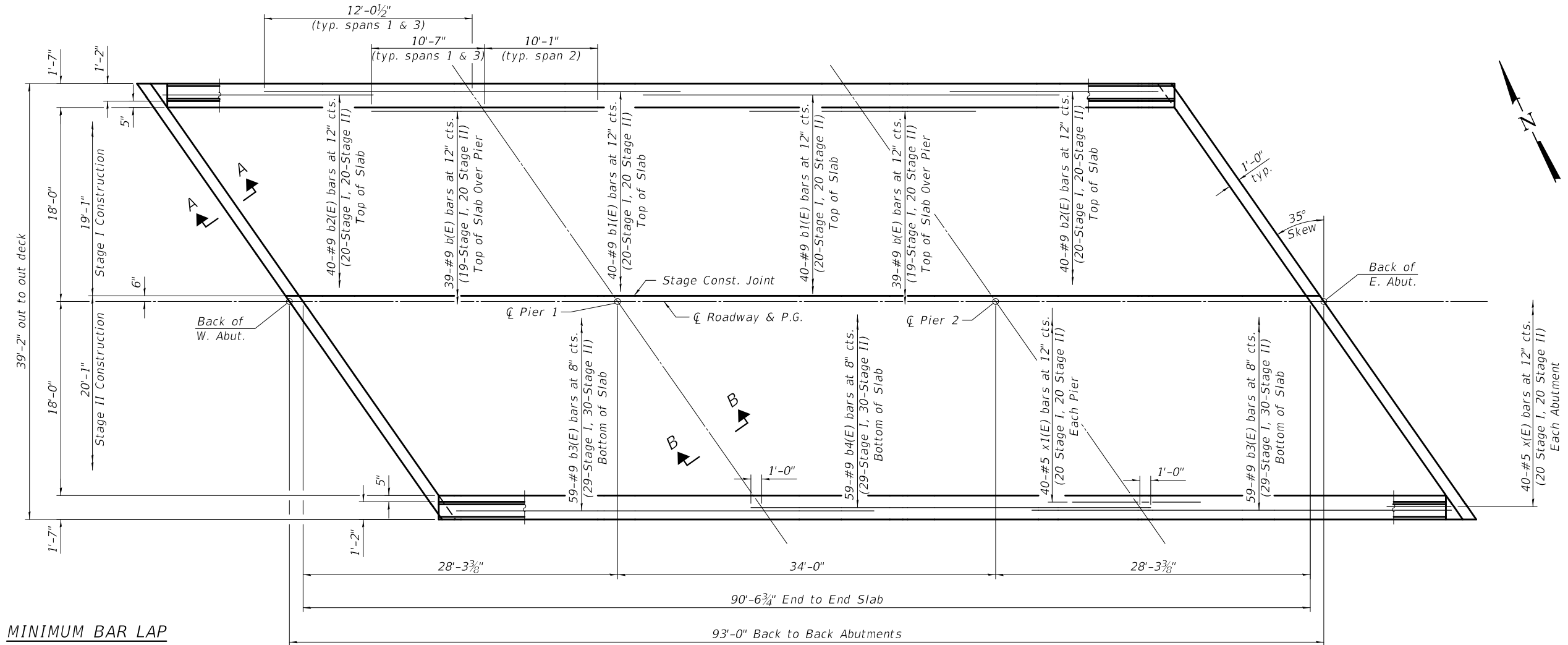
DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED	<i>Jaime F. Joffe</i>	DATE -	MARCH 30, 2018
PASSED	<i>Carl Kasper</i>	REVISED -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 083 - 0069

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	33
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

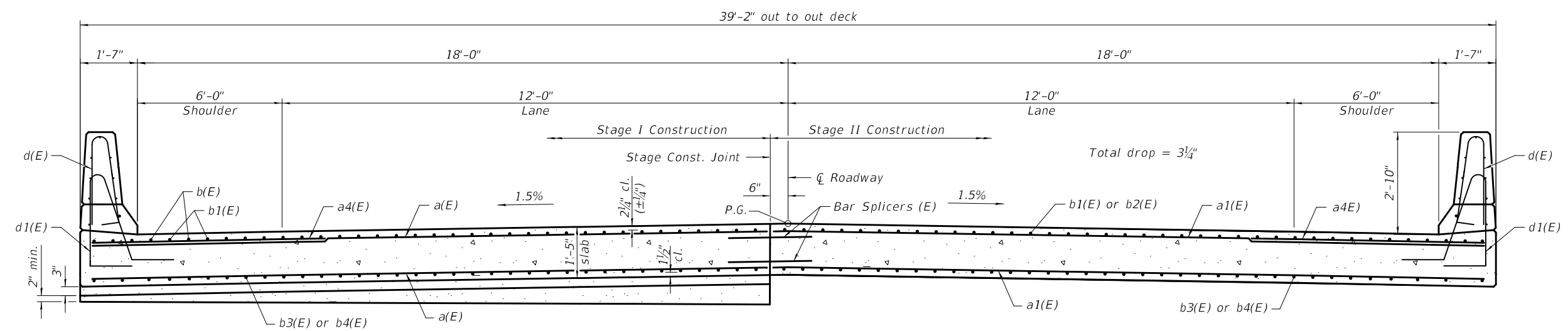


**MINIMUM BAR LAP**

#9 bar = 6'-7" (Top)  
#9 bar = 9'-7" (Bottom)

**PLAN**  
(Showing Longitudinal Reinforcement,  
See sheet 10 of 24 for Transverse Reinforcement)

Notes:  
See sheet 11 of 24 for superstructure details  
and Bill of Material.  
See sheet 10 of 24 for Sections A-A and B-B.



**CROSS SECTION**  
(Looking East)

(Near Pier)

(Near Midspan)

MODEL: 0830069-78166-009  
FILE NAME: p:\w\084EBID\INTEG\Illinois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED	 ENGINEER OF BRIDGE DESIGN	DATE -	MARCH 30, 2018
PASSED		REVISED -	
		REVISED -	

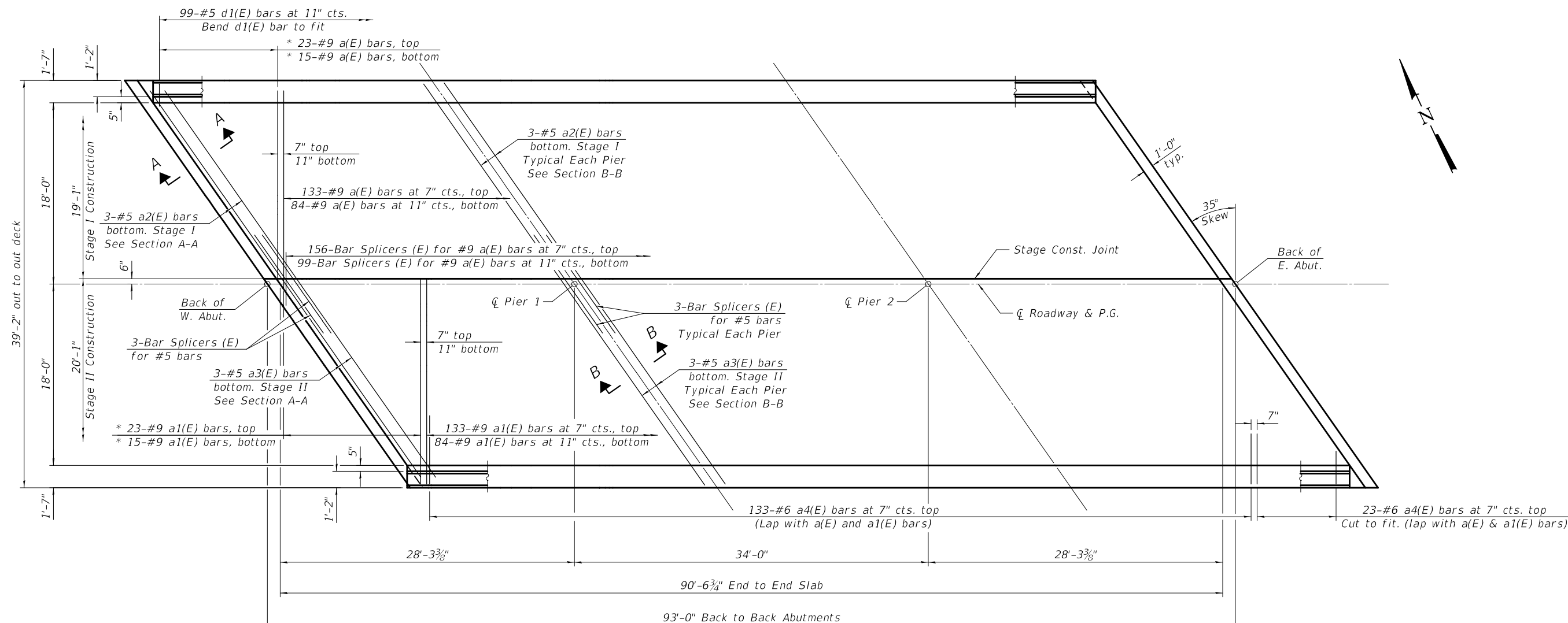
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE**  
**STRUCTURE NO. 083 - 0069**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	34
CONTRACT NO. 78166				

SHEET 9 OF 24 SHEETS

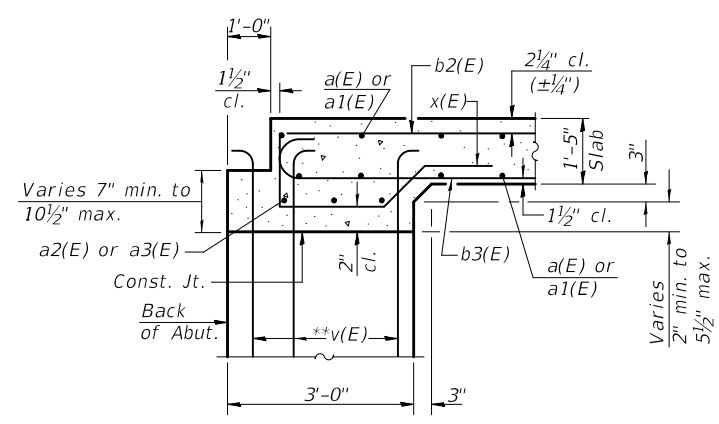
ILLINOIS FED. AID PROJECT



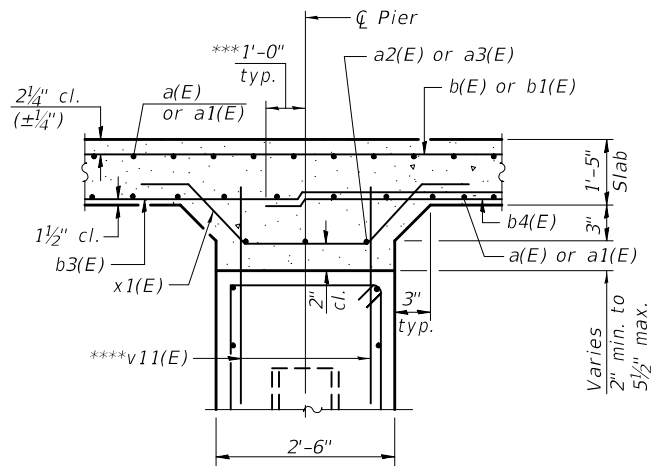
\* Order a(E) and a1(E) bars full length.  
Cut to fit skew and use remainder of bars  
in opposite end.

**PLAN**  
(Showing Transverse Reinforcement,  
See sheet 9 of 24 for Longitudinal Reinforcement)

**MINIMUM BAR LAP**  
#5 bar = 3'-0"



**SECTION A-A**  
Horizontal Dimensions @ Rt. L's to Abutments.  
\*\*v(E) bars billed with abutments.



**SECTION B-B**  
Horizontal Dimensions @ Rt. L's to Pier  
\*\*\*Measured along C Roadway  
\*\*\*\*v11(E) bars billed with piers.

Notes:  
See sheet 9 of 24 for cross-section.  
See sheet 11 of 24 for Superstructure details  
and Bill of Material.  
See sheet 22 of 24 for bar splicer details.

MODEL: 0830069-78166-010  
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DESIGNED - ADAM W. SCHMIDT  
CHECKED - ZACH T. BULVA  
DRAWN - IAN J. ANDREWS  
CHECKED - A.W.S. / Z.T.B.  
3/30/2018 1:11:42 PM

EXAMINED  
PASSED  
DATE - MARCH 30, 2018  
REVISOR -  
REVISION -

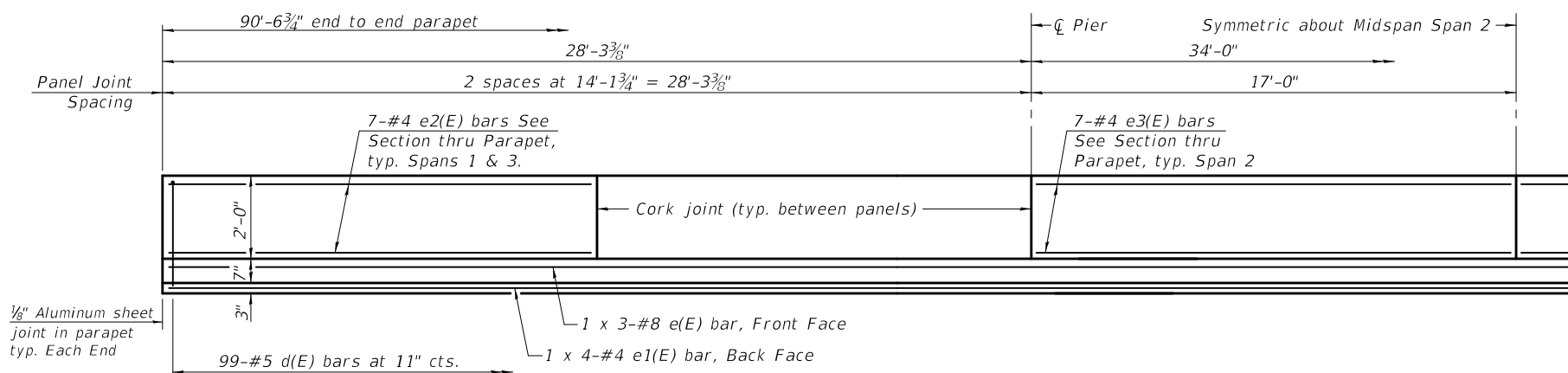
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE  
STRUCTURE NO. 083 - 0069**

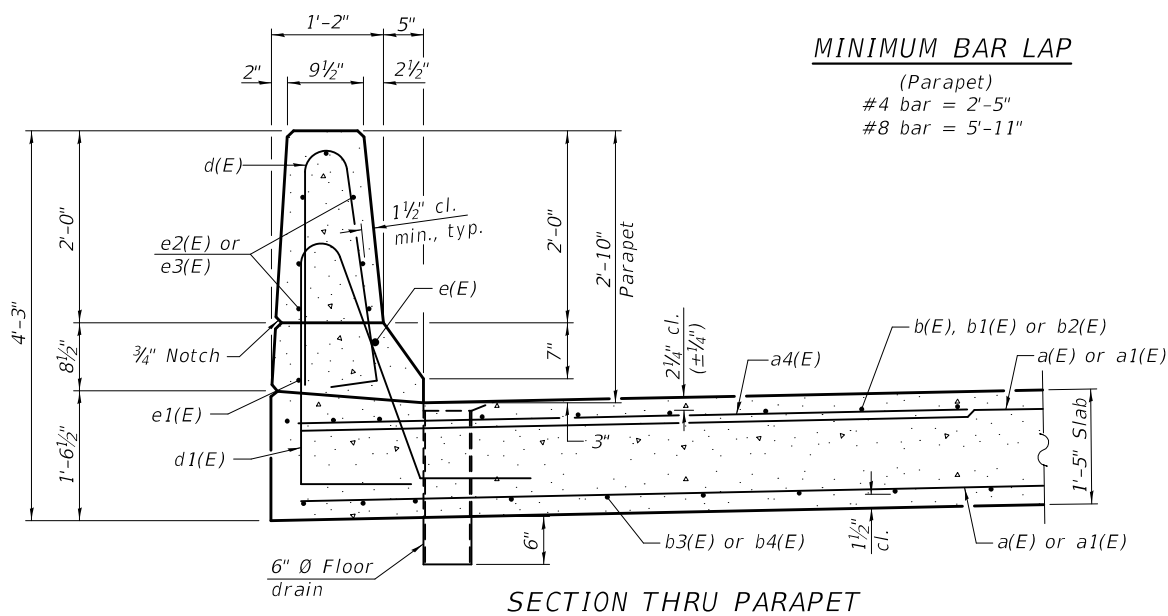
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	35
CONTRACT NO. 78166				

SHEET 10 OF 24 SHEETS

ILLINOIS FED. AID PROJECT



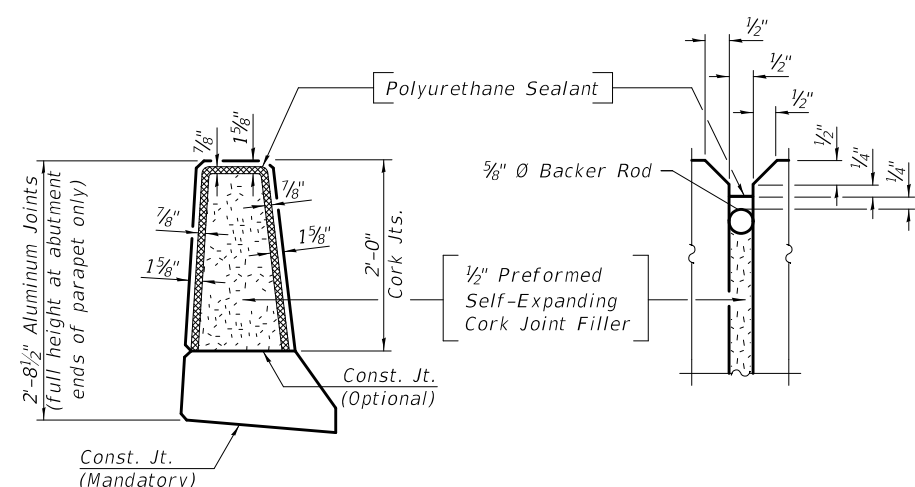
**INSIDE ELEVATION OF PARAPET**



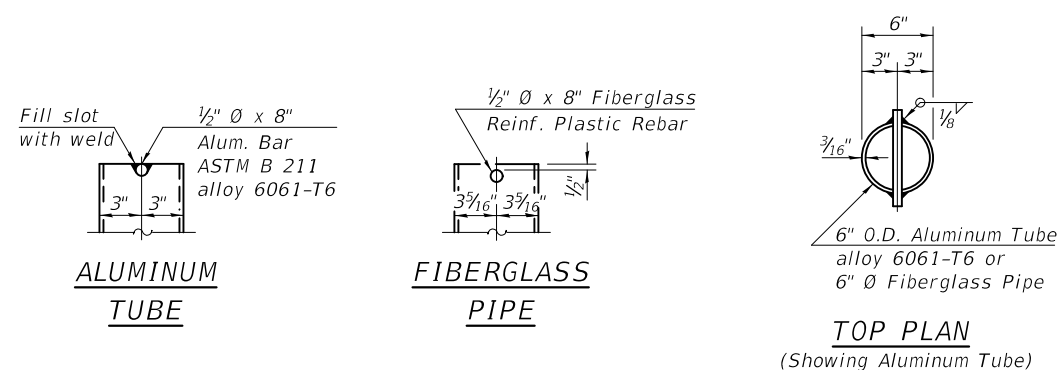
**SECTION THRU PARAPET**

**MINIMUM BAR LAP**

(Parapet)  
 #4 bar = 2'-5"  
 #8 bar = 5'-11"



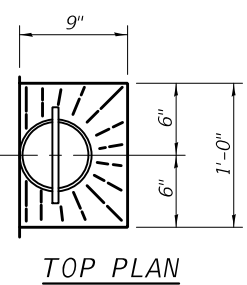
**PARAPET JOINT DETAILS**



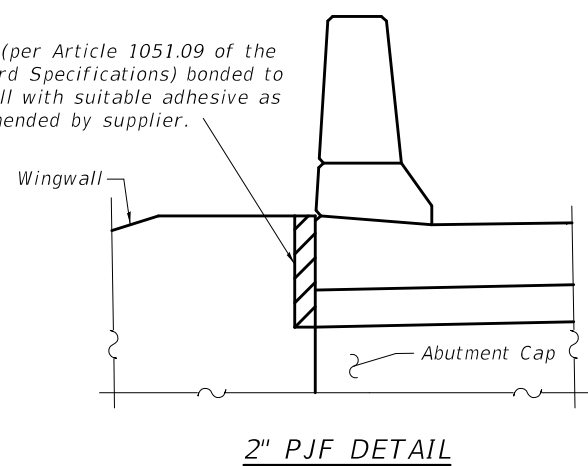
**ALUMINUM TUBE**

**FIBERGLASS PIPE**

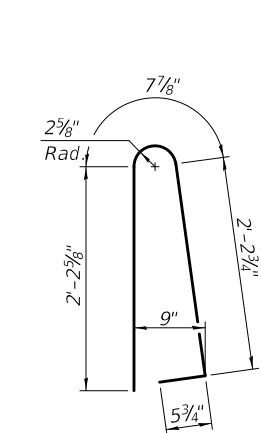
**TOP PLAN (Showing Aluminum Tube)**



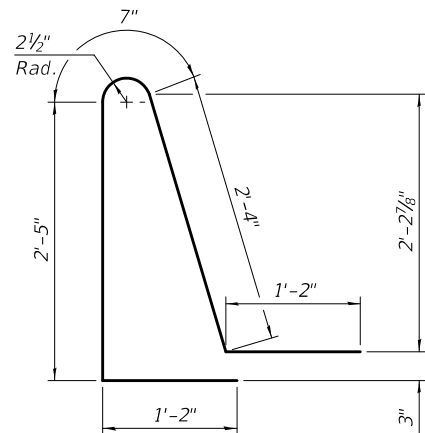
**TOP PLAN**



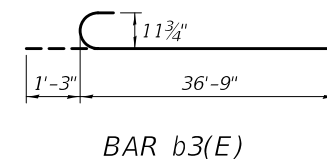
**2" PJF DETAIL**



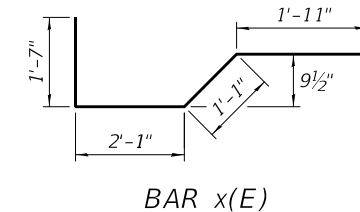
**BAR d(E)**



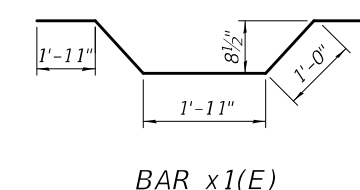
**BAR d1(E)**



**BAR b3(E)**



**BAR x(E)**



**BAR x1(E)**

**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	255	#9	18'-9"	—
a1(E)	255	#9	19'-9"	—
a2(E)	12	#5	22'-10"	—
a3(E)	12	#5	24'-1"	—
a4(E)	312	#6	6'-6"	—
b(E)	78	#9	20'-8"	—
b1(E)	80	#9	32'-4"	—
b2(E)	80	#9	22'-8"	—
b3(E)	118	#9	38'-0"	—
b4(E)	59	#9	36'-0"	—
e(E)	6	#8	34'-0"	—
e1(E)	8	#4	24'-6"	—
e2(E)	56	#4	13'-9"	—
e3(E)	28	#4	16'-8"	—
d(E)	198	#5	5'-7"	U
d1(E)	198	#5	7'-8"	U
x(E)	80	#5	6'-8"	Z
x1(E)	80	#5	7'-9"	Z
Reinforcement Bars, Epoxy Coated			Pound	85,360
Concrete Superstructure			Cu. Yd.	220.4

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

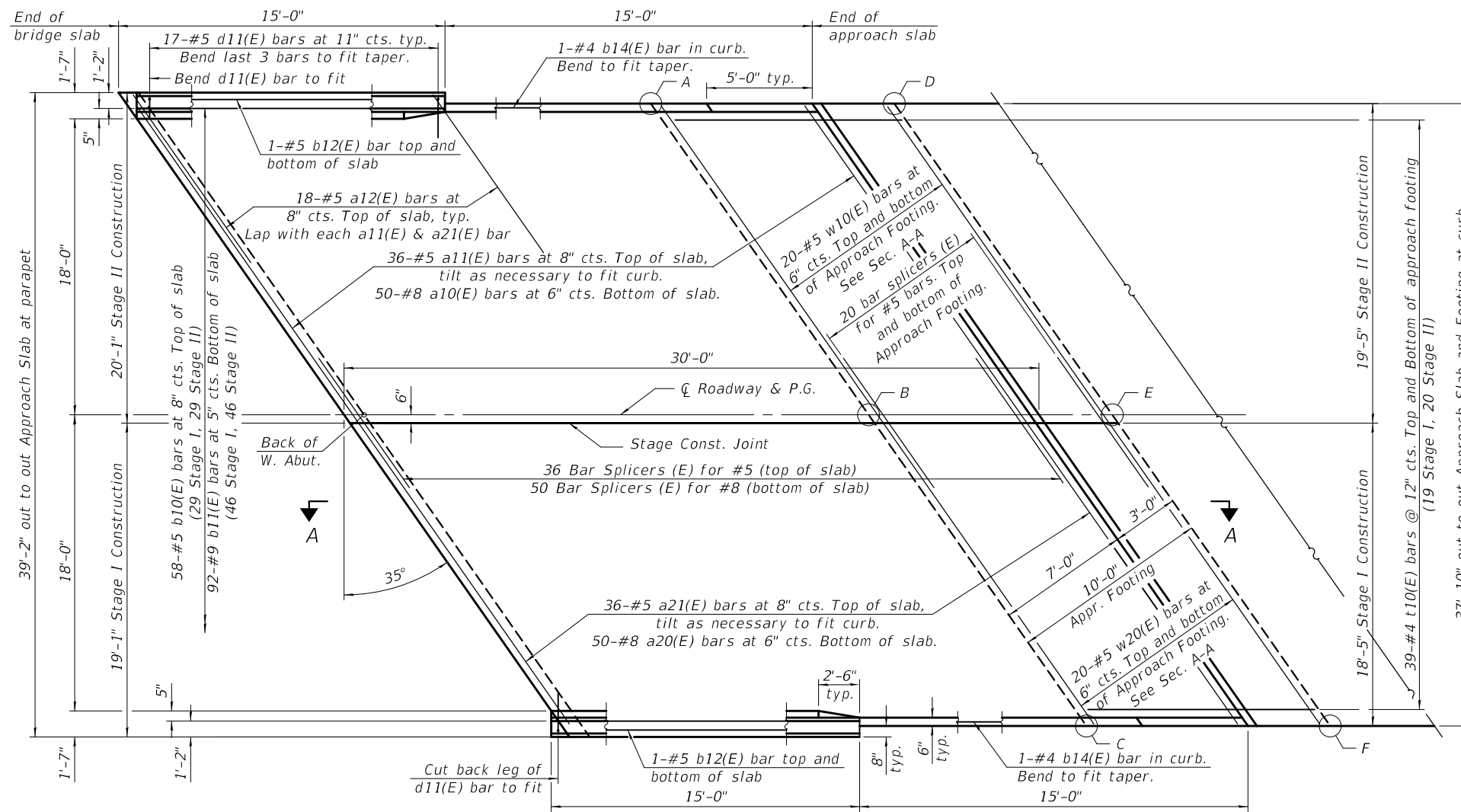
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DESIGNED - ADAM W. SCHMIDT	EXAMINED - <i>Joanne F. Joffe</i>	DATE - MARCH 30, 2018
CHECKED - ZACH T. BULVA	PASSED - <i>Carl K...</i>	REVISOR -
DRAWN - IAN J. ANDREWS	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -
CHECKED - A.W.S./Z.T.B.		

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS  
 STRUCTURE NO. 083 - 0069**

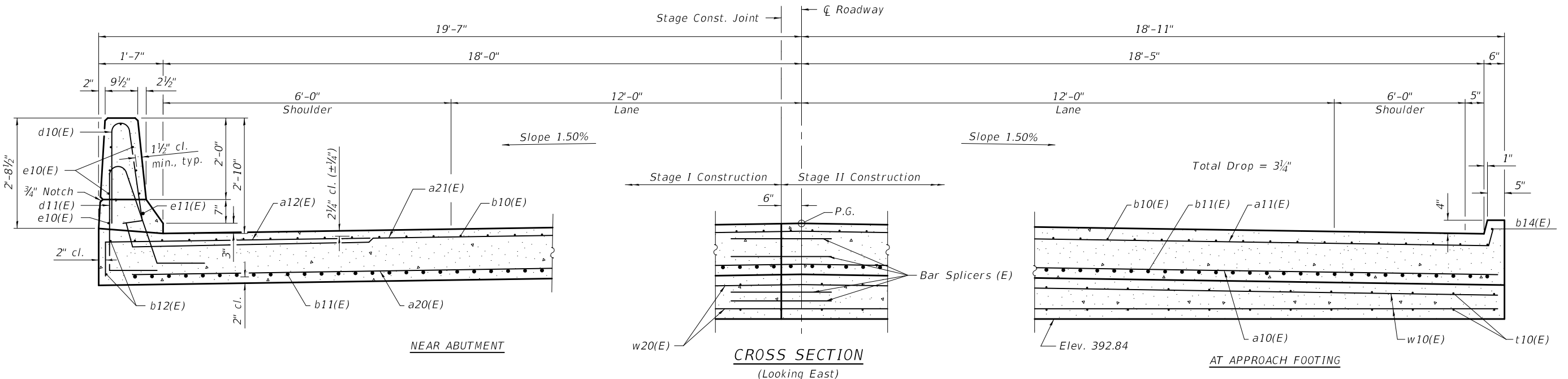
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	36
CONTRACT NO. 78166			ILLINOIS FED. AID PROJECT	



PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point	West Approach	
	Top	Bottom
A	393.68	392.84
B	393.96	392.84
C	393.68	392.84
D	393.68	392.84
E	393.96	392.84
F	393.68	392.84



CROSS SECTION (Looking East)

AT APPROACH FOOTING

BAIA-CIP-34FS-R(>30°) 2-17-2017

(Sheet 1 of 2)

MODEL: 08330069-78166-012  
FILE NAME: p:\w\084848\INTEG\illmod5.gov\p\WIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\08330069\CADD Plans\08330069-78166.dgn

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED	 ENGINEER OF BRIDGE DESIGN	DATE -	MARCH 30, 2018
PASSED		 ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

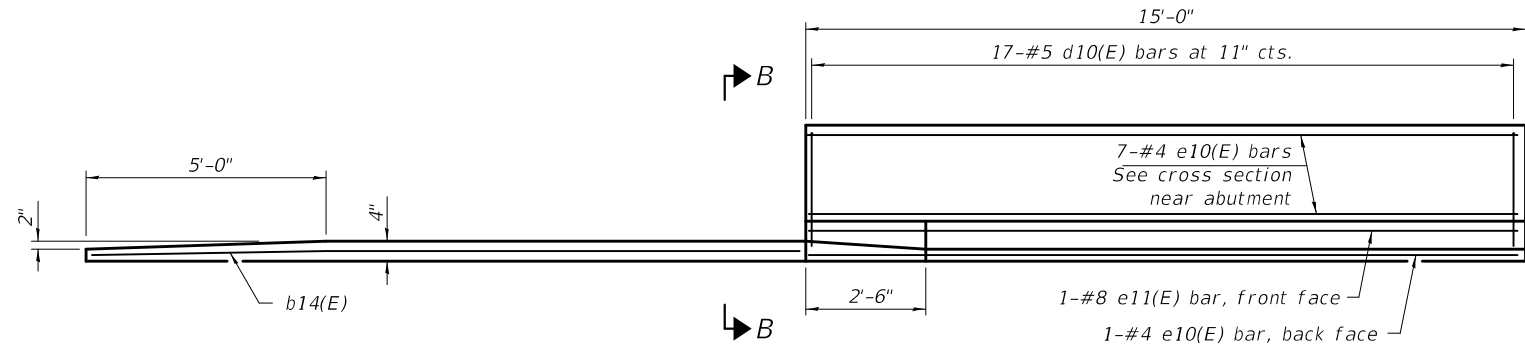
WEST BRIDGE APPROACH SLAB  
STRUCTURE NO. 083 - 0069

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	37
CONTRACT NO. 78166				

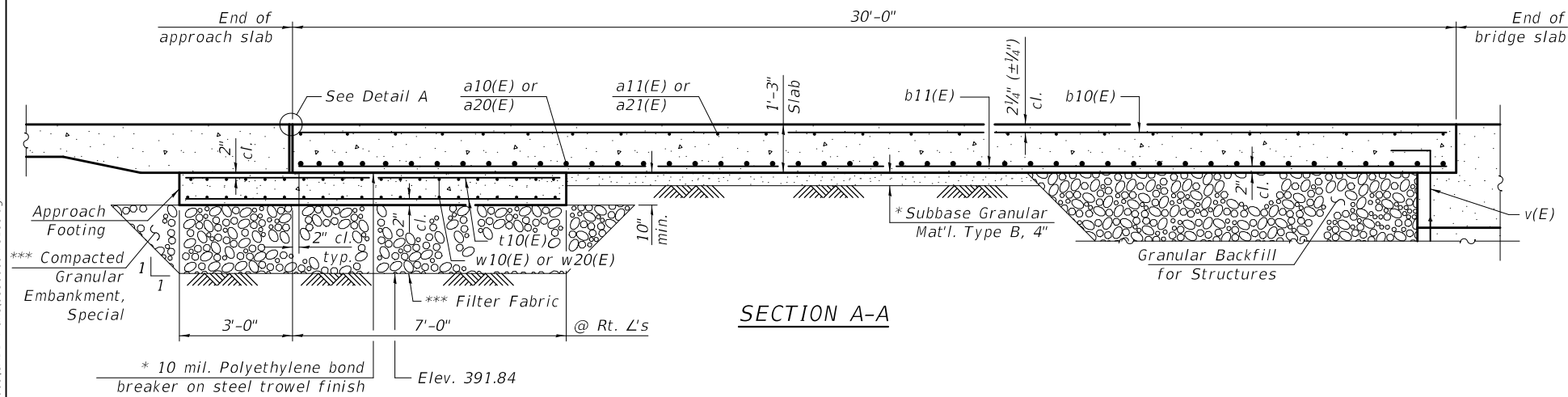
SHEET 12 OF 24 SHEETS

ILLINOIS FED. AID PROJECT

3/30/2018 1:11:43 PM

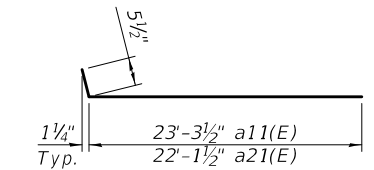
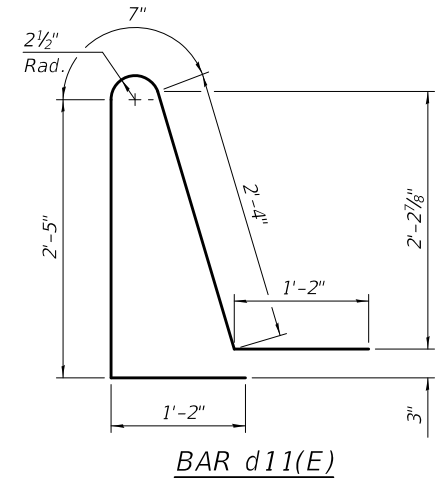
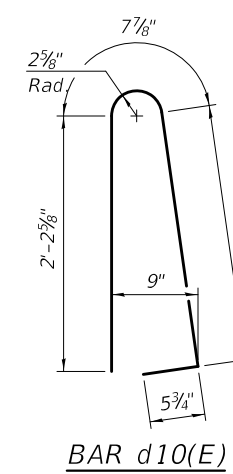


**INSIDE ELEVATION OF PARAPET AND CURB**



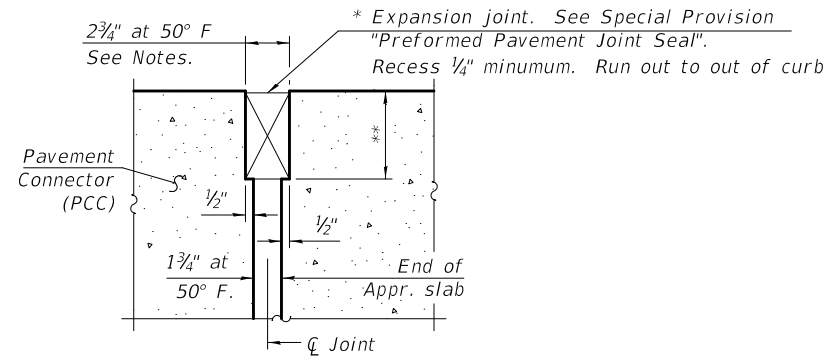
**Notes:**

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.  
 Parapet concrete shall be paid for as Concrete Superstructure.  
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).  
 Approach footing concrete shall be paid for as Concrete Structures.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 24.

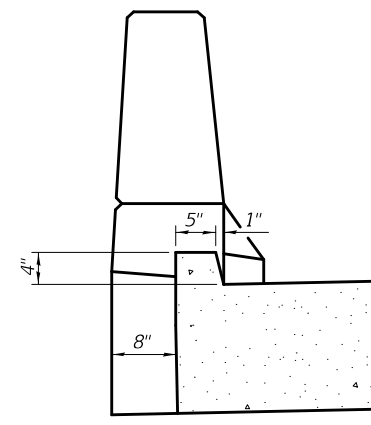


**WEST APPROACH  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a10(E)	50	#8	23'-3"	—
a11(E)	36	#5	23'-9"	—
a12(E)	36	#5	7'-4"	—
a20(E)	50	#8	22'-1"	—
a21(E)	36	#5	22'-7"	—
b10(E)	58	#5	29'-8"	—
b11(E)	92	#9	29'-8"	—
b12(E)	4	#5	14'-8"	—
b14(E)	2	#4	14'-8"	—
d10(E)	34	#5	5'-7"	⤴
d11(E)	34	#5	7'-8"	⤴
e10(E)	16	#4	14'-8"	—
e11(E)	2	#8	14'-8"	—
t10(E)	78	#4	11'-10"	—
w10(E)	40	#5	23'-4"	—
w20(E)	40	#5	22'-1"	—
Granular Embankment, Special			Cu. Yd.	17.5
Filter Fabric			Sq. Yd.	51.5
Concrete Superstructure			Cu. Yd.	3.3
Concrete Superstructure (Approach Slab)			Cu. Yd.	54.0
Concrete Structures			Cu. Yd.	17.0
Reinforcement Bars, Epoxy Coated			Pound	22,440



**DETAIL A**  
(@ Rt. L's)



**VIEW B-B**

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

\*\* Per manufacturer recommendations

\*\*\* See sheet 1 of 24 for additional details about removal and replacement of unsuitable materials.

(Sheet 2 of 2)

MODEL: 0830069-78166-013  
FILE NAME: p:\w\084848\INTEG\illinois.gov\PW\DOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069-78166.dgn

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

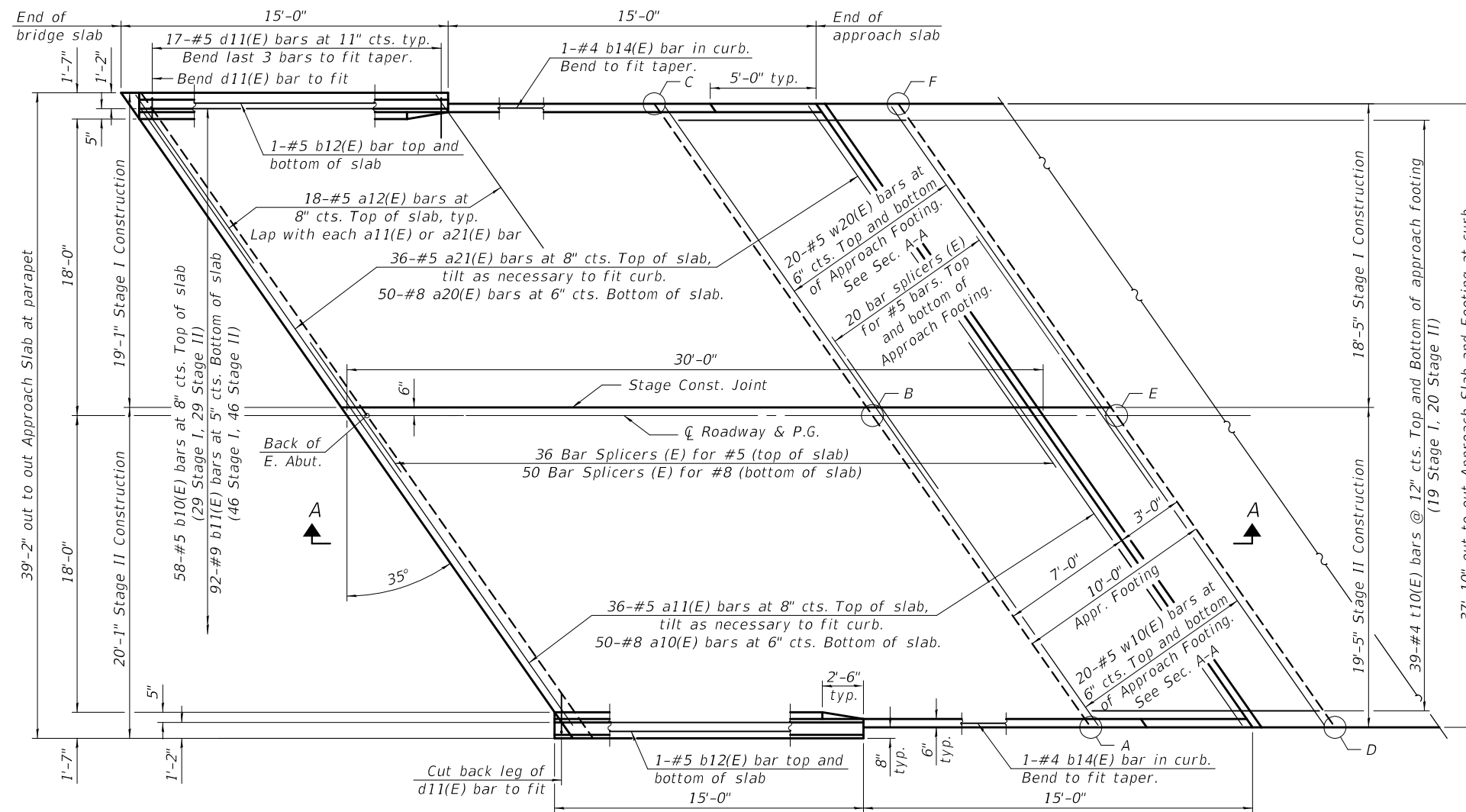
EXAMINED	<i>Joanne F. Joffe</i>	DATE -	MARCH 30, 2018
PASSED	<i>Carl Kasper</i>	REVISOR -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WEST BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 083 - 0069**

SHEET 13 OF 24 SHEETS

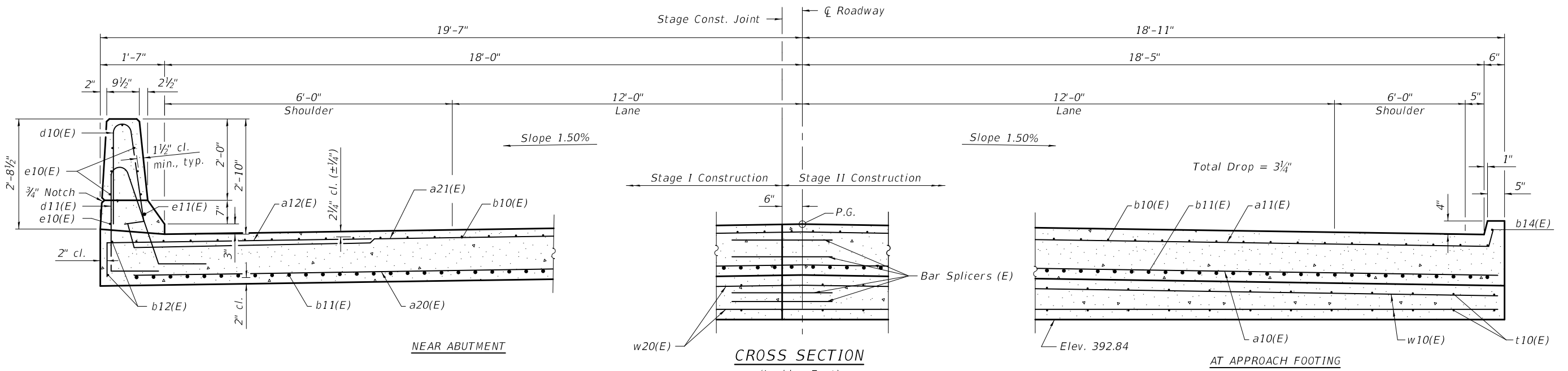
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	38
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				



PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

East Approach		
Point	Top	Bottom
A	393.68	392.84
B	393.96	392.84
C	393.68	392.84
D	393.68	392.84
E	393.96	392.84
F	393.68	392.84



CROSS SECTION (Looking East)

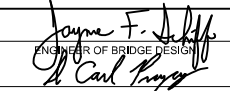
AT APPROACH FOOTING

BAIA-CIP-34FS-R(>30°) 2-17-2017

(Sheet 1 of 2)

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DESIGNED - ADAM W. SCHMIDT  
 CHECKED - ZACH T. BULVA  
 DRAWN - IAN J. ANDREWS  
 CHECKED - A.W.S./Z.T.B.

EXAMINED  
 PASSED  
  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 30, 2018  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EAST BRIDGE APPROACH SLAB  
 STRUCTURE NO. 083 - 0069

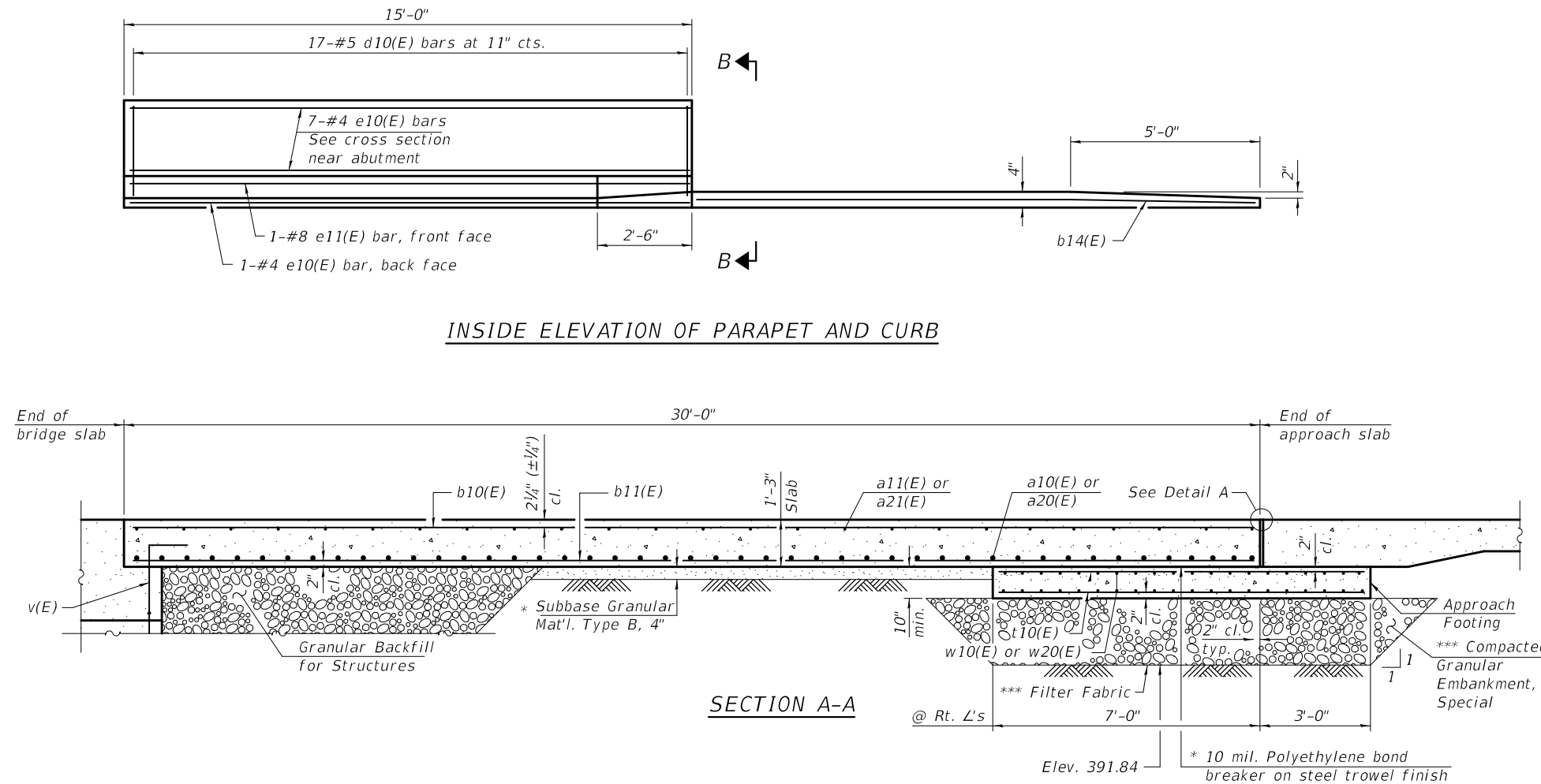
SHEET 14 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	39
CONTRACT NO. 78166				

ILLINOIS FED. AID PROJECT

Notes:

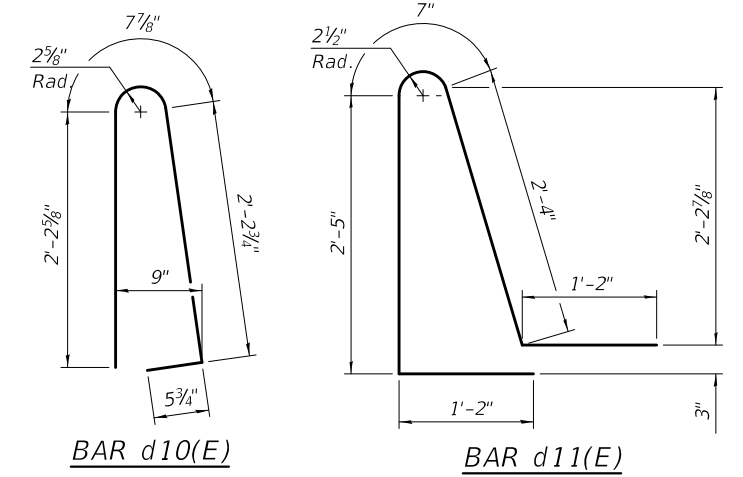
The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.  
 Parapet concrete shall be paid for as Concrete Superstructure.  
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).  
 Approach footing concrete shall be paid for as Concrete Structures.  
 The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 24.



INSIDE ELEVATION OF PARAPET AND CURB

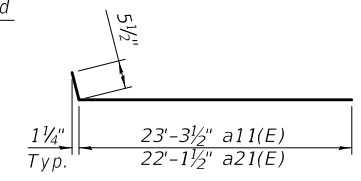
End of bridge slab 30'-0" End of approach slab

SECTION A-A

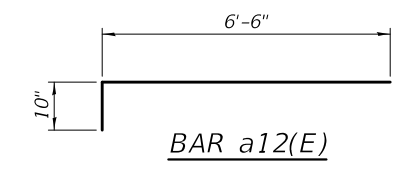


BAR d10(E)

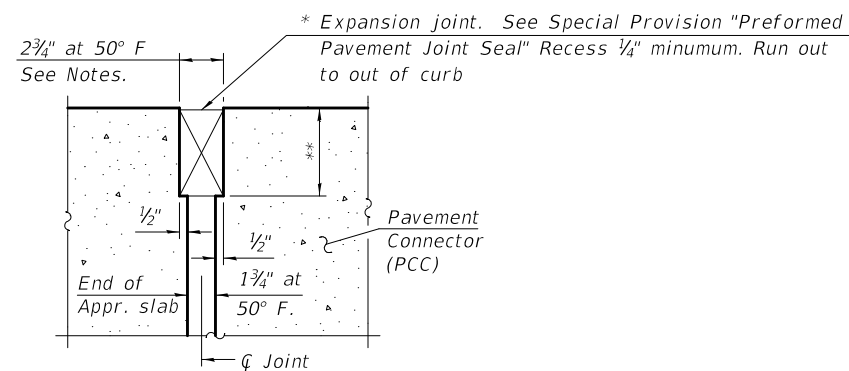
BAR d11(E)



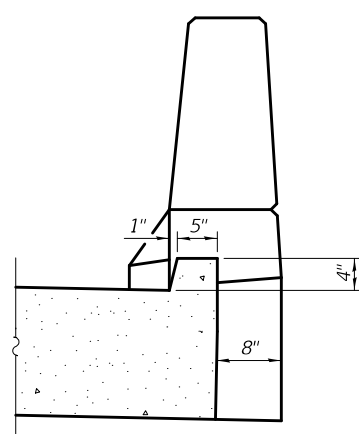
BAR a11(E) & a21(E)



BAR a12(E)



DETAIL A (@ Rt. L's)



VIEW B-B

EAST APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	50	#8	23'-3"	—
a11(E)	36	#5	23'-9"	—
a12(E)	36	#5	7'-4"	—
a20(E)	50	#8	22'-1"	—
a21(E)	36	#5	22'-7"	—
b10(E)	58	#5	29'-8"	—
b11(E)	92	#9	29'-8"	—
b12(E)	4	#5	14'-8"	—
b14(E)	2	#4	14'-8"	—
d10(E)	34	#5	5'-7"	⤴
d11(E)	34	#5	7'-8"	⤴
e10(E)	16	#4	14'-8"	—
e11(E)	2	#8	14'-8"	—
t10(E)	78	#4	11'-10"	—
w10(E)	40	#5	23'-4"	—
w20(E)	40	#5	22'-1"	—
Granular Embankment, Special			Cu. Yd.	17.5
Filter Fabric			Sq. Yd.	51.5
Concrete Superstructure			Cu. Yd.	3.3
Concrete Superstructure (Approach Slab)			Cu. Yd.	54.0
Concrete Structures			Cu. Yd.	17.0
Reinforcement Bars, Epoxy Coated			Pound	22,440

\* Cost included with Concrete Superstructure (Approach Slab).  
 \*\* Per manufacturer recommendations  
 \*\*\* See sheet 1 of 24 for additional details about removal and replacement of unsuitable materials.

(Sheet 2 of 2)

MODEL: 0830069-78166-015 FILE NAME: pw:\VIL084EBID\INTEG\illinois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069-78166.dgn

DESIGNED - ADAM W. SCHMIDT	EXAMINED - <i>Joanne F. Joffe</i>	DATE - MARCH 30, 2018
CHECKED - ZACH T. BULVA	PASSED - <i>Carl Kasper</i>	REVISOR -
DRAWN - IAN J. ANDREWS	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -
CHECKED - A.W.S./Z.T.B.		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

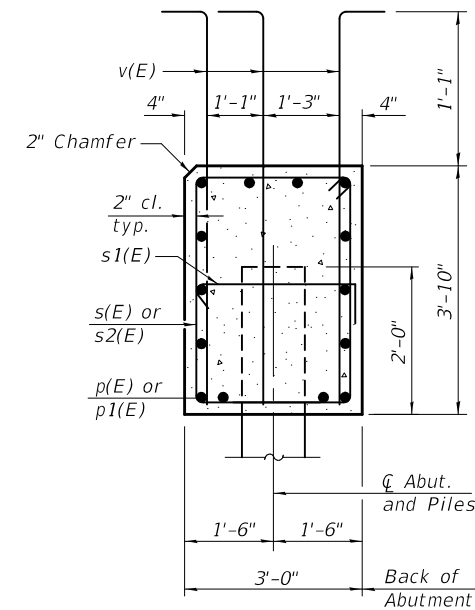
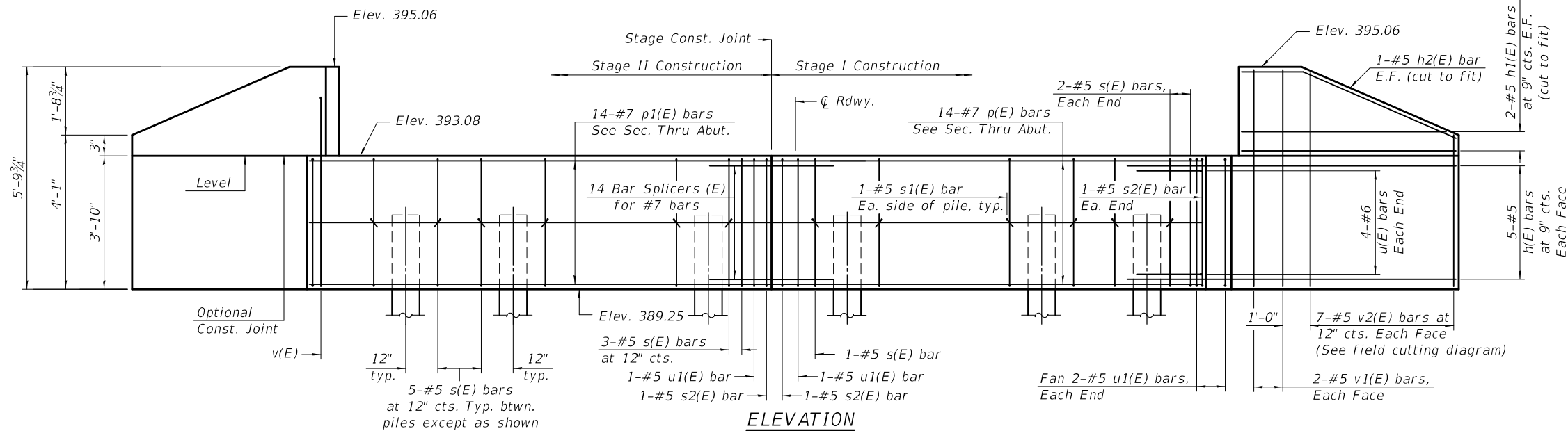
EAST BRIDGE APPROACH SLAB DETAILS  
 STRUCTURE NO. 083 - 0069

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	40
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

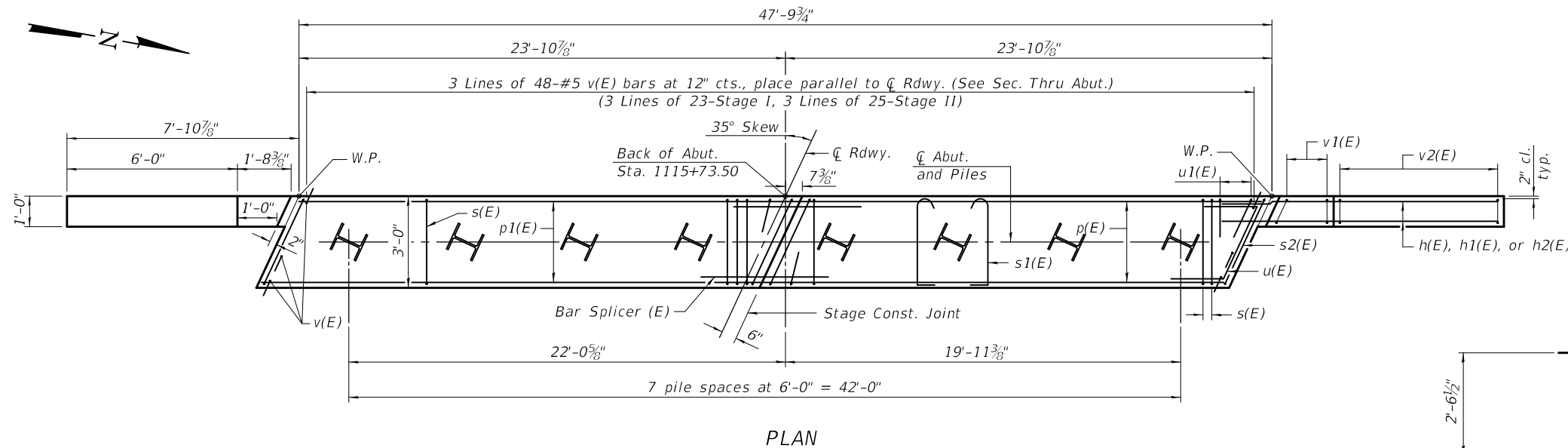
SHEET 15 OF 24 SHEETS

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**SEC. THRU ABUT.**  
Dimensions at right angles to abutment.



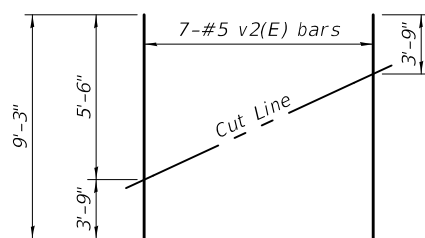
**WEST ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	10'-9"	—
h1(E)	8	#5	7'-5"	—
h2(E)	4	#5	7'-7"	—
p(E)	14	#7	23'-0"	—
p1(E)	14	#7	24'-2"	—
s(E)	38	#5	13'-3"	□
s1(E)	16	#5	3'-8"	□
s2(E)	4	#5	14'-7"	□
u(E)	8	#6	10'-9"	—
u1(E)	6	#5	8'-10"	—
v(E)	144	#5	5'-7"	—
v1(E)	8	#5	5'-6"	—
v2(E)	14	#5	9'-3"	—
Structure Excavation		Cu. Yd.		33
Concrete Structures		Cu. Yd.		23.5
Reinforcement Bars, Epoxy Coated		Pound		3,520
Furnishing Steel Piles HP 14x117		Foot		427
Driving Piles		Foot		427
Test Pile Steel HP 14x117		Each		1

For details of piles see sheet 21 of 24.  
For Bar Splicers see sheet 22 of 24.

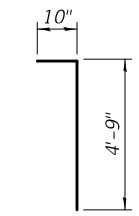
**PILE DATA**

Type: HP 14x117  
Nominal Required Bearing: 929K  
Factored Resistance Available: 511K  
Est. Length: 61'  
No. Production Piles: 7  
No. Test Piles: 1

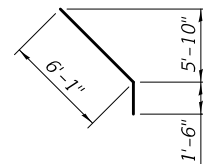


**FIELD CUTTING DIAGRAM**

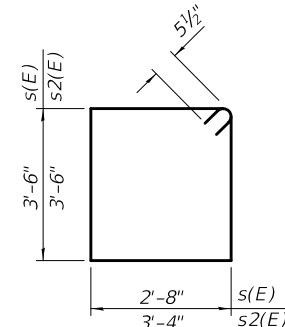
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



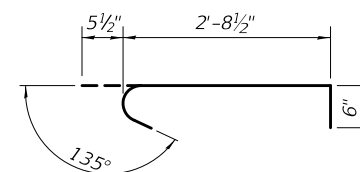
**BAR v(E)**



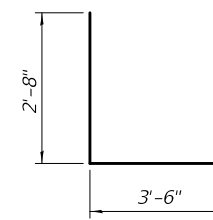
**BAR h2(E)**



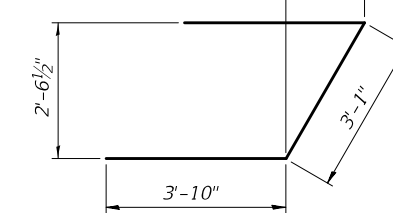
**BAR s(E) & s2(E)**



**BAR s1(E)**



**BAR u1(E)**



**BAR u(E)**

AIS-R 2-17-2017

DESIGNED - ADAM W. SCHMIDT	EXAMINED
CHECKED - ZACH T. BULVA	PASSED
DRAWN - IAN J. ANDREWS	
CHECKED - A.W.S./Z.T.B.	

DATE - MARCH 30, 2018	
REVISOR -	
REVISION -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

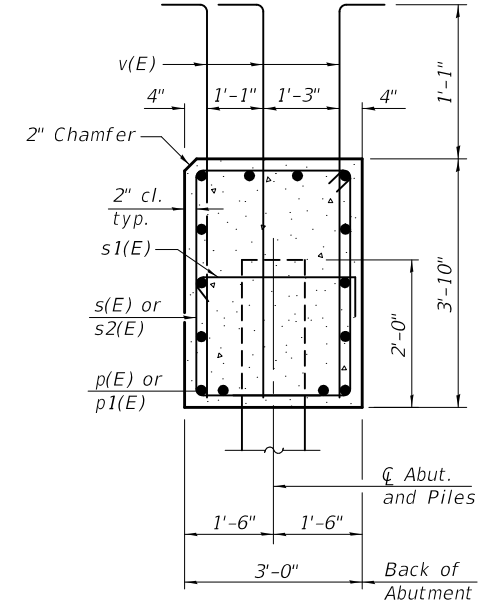
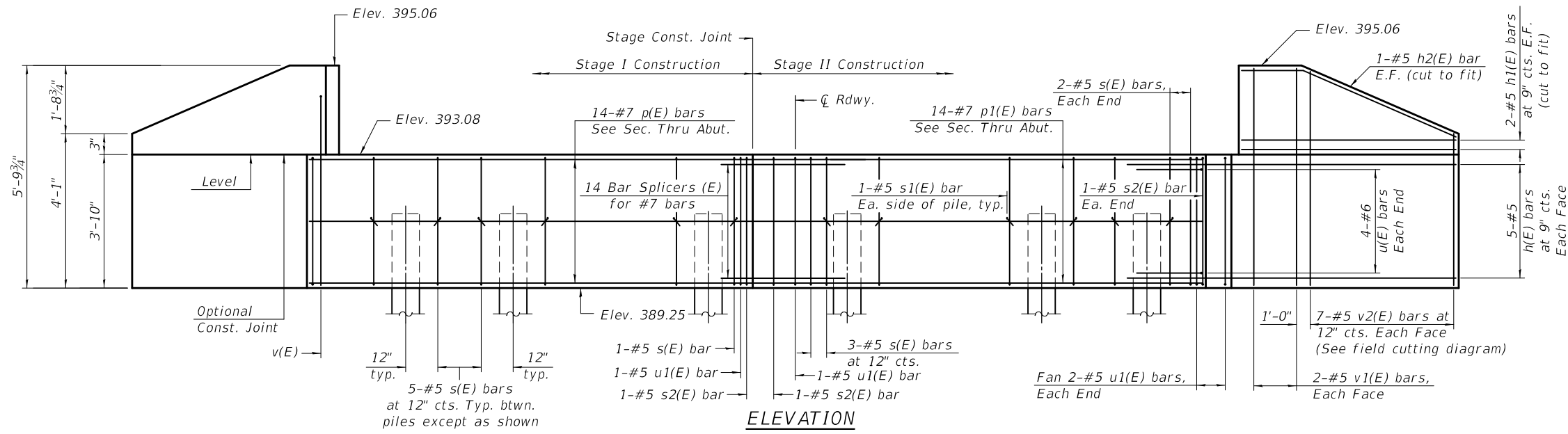
**WEST ABUTMENT  
STRUCTURE NO. 083 - 0069**

SHEET 16 OF 24 SHEETS

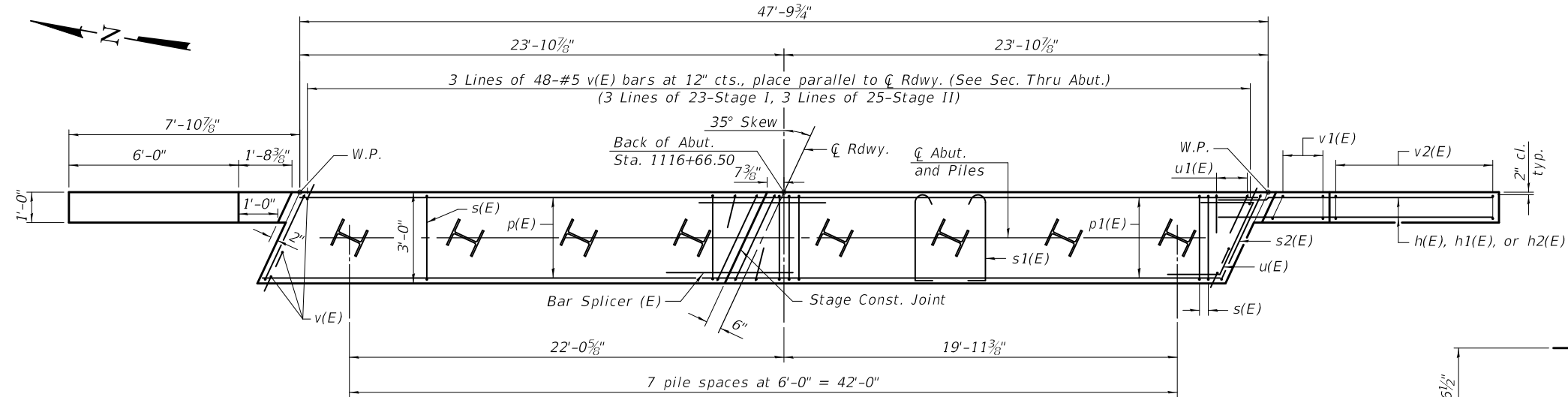
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	41
CONTRACT NO. 78166				

ILLINOIS FED. AID PROJECT

MODEL: 0830069-78166-016  
FILE NAME: p:\w\084848\INTEG\illmois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn  
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**SEC. THRU ABUT.**  
Dimensions at right angles to abutment.



**PLAN**

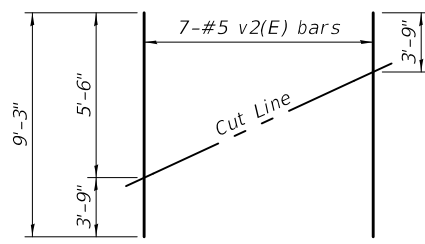
**EAST ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	10'-9"	—
h1(E)	8	#5	7'-5"	—
h2(E)	4	#5	7'-7"	—
p(E)	14	#7	23'-0"	—
p1(E)	14	#7	24'-2"	—
s(E)	38	#5	13'-3"	□
s1(E)	16	#5	3'-8"	□
s2(E)	4	#5	14'-7"	□
u(E)	8	#6	10'-9"	—
u1(E)	6	#5	8'-10"	—
v(E)	144	#5	5'-7"	—
v1(E)	8	#5	5'-6"	—
v2(E)	14	#5	9'-3"	—
Structure Excavation		Cu. Yd.	33	
Concrete Structures		Cu. Yd.	23.5	
Reinforcement Bars, Epoxy Coated		Pound	3,520	
Furnishing Steel Piles HP 14x117		Foot	496	
Driving Piles		Foot	496	

For details of piles see sheet 21 of 24.  
For Bar Splicers see sheet 22 of 24.

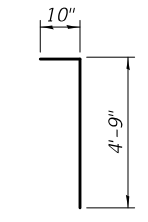
**PILE DATA**

Type: HP 14x117  
Nominal Required Bearing: 929K  
Factored Resistance Available: 511K  
Est. Length: 62'  
No. Production Piles: 8

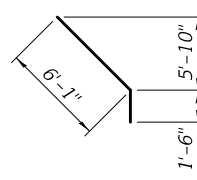


**FIELD CUTTING DIAGRAM**

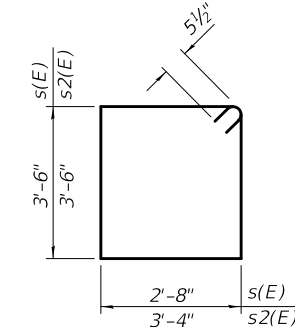
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



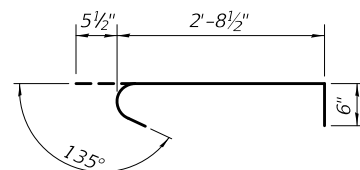
**BAR v(E)**



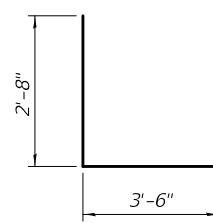
**BAR h2(E)**



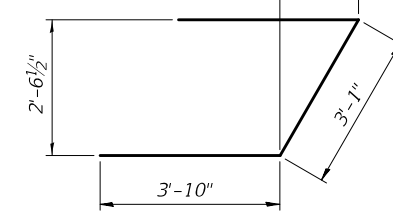
**BAR s(E) & s2(E)**



**BAR s1(E)**



**BAR u1(E)**



**BAR u(E)**

AIS-R 2-17-2017

DESIGNED - ADAM W. SCHMIDT	EXAMINED
CHECKED - ZACH T. BULVA	PASSED
DRAWN - IAN J. ANDREWS	
CHECKED - A.W.S./Z.T.B.	

DATE - MARCH 30, 2018	REVISOR
REVISOR	REVISOR

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

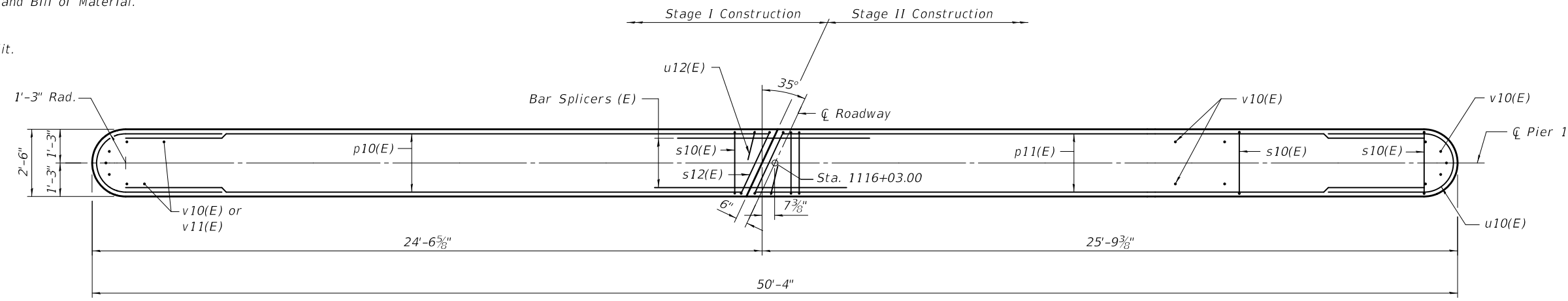
**EAST ABUTMENT  
STRUCTURE NO. 083 - 0069**

SHEET 17 OF 24 SHEETS

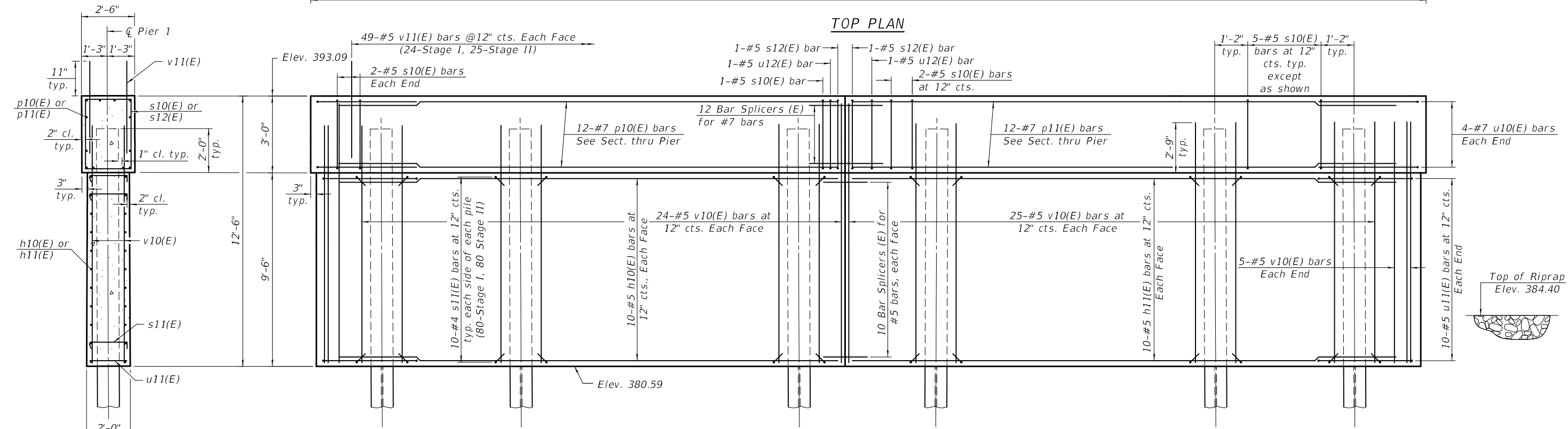
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	42
CONTRACT NO. 78166				

MODEL: 0830069-78166-017  
FILE NAME: p:\w\084848\INTEG\illmois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn  
3/30/2018 1:11:45 PM

Notes:  
 See sheet 20 of 24 for additional pier details and Bill of Material.  
 For details of piles, see sheet 21 of 24.  
 For bar splicer details, see sheet 22 of 24.  
 Cut p10(E), p11(E), h10(E), and h11(E) bars to fit.

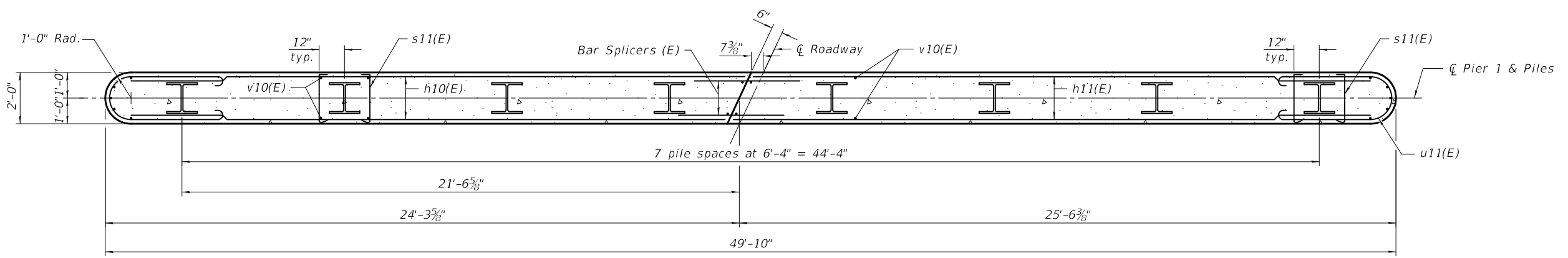


TOP PLAN



ELEVATION  
(Looking East)

SECTION THRU PIER



SECTION THRU WALL

PILE DATA

Type: HP 14x117  
 Nominal Required Bearing: 929K  
 Factored Resistance Available: 493K  
 Est. Length: 62'  
 No. Production Piles: 8

MODEL: 0830069-78166-018  
 FILE NAME: pw:\VIL084EBID\INTEG\illmois.gov\PW\DOT\Documents\Bureau of Bridges and Structures\Projects\0830069\CADD\Plans\0830069-78166.dgn

DESIGNED - ADAM W. SCHMIDT	EXAMINED	DATE - MARCH 30, 2018
CHECKED - ZACH T. BULVA	PASSED	REVISOR
DRAWN - IAN J. ANDREWS		REVISION
CHECKED - A.W.S./Z.T.B.		

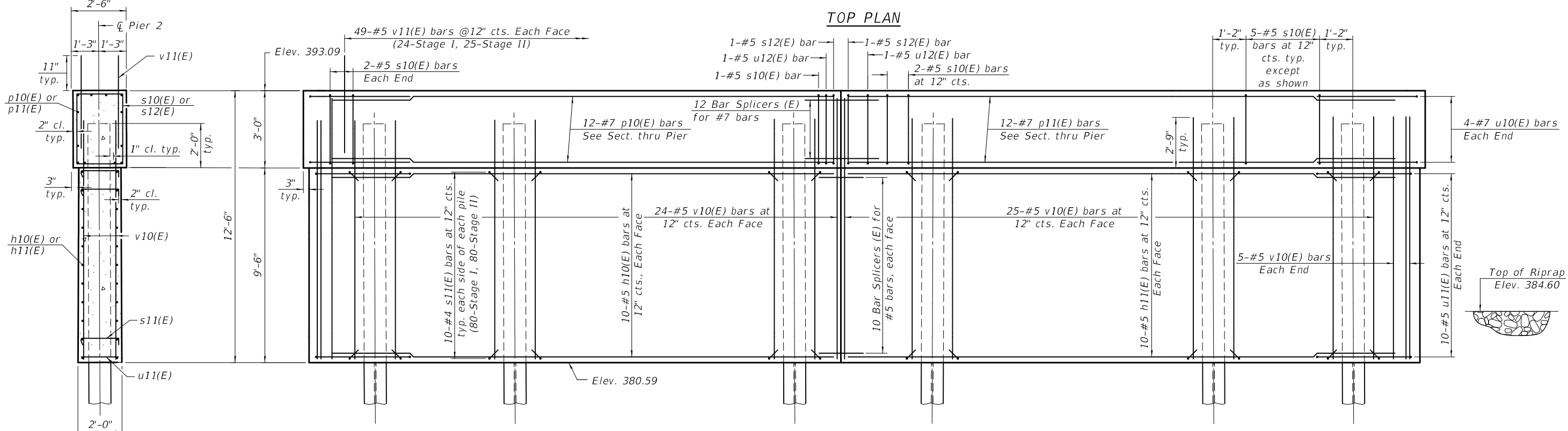
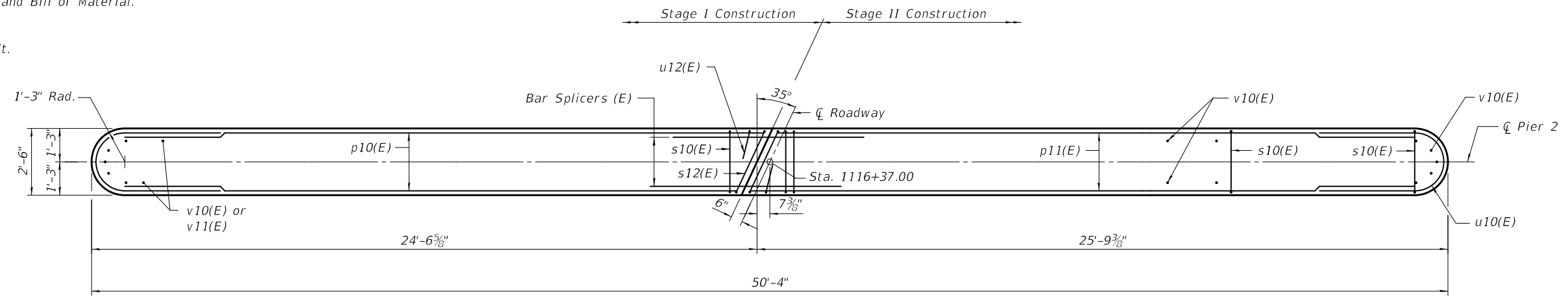
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER 1  
 STRUCTURE NO. 083 - 0069

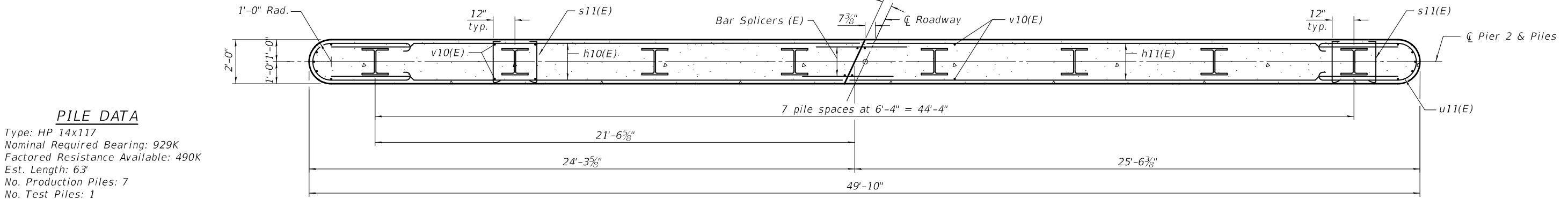
SHEET 18 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	43
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

Notes:  
 See sheet 20 of 24 for additional pier details and Bill of Material.  
 For details of piles, see sheet 21 of 24.  
 For bar splicer details, see sheet 22 of 24.  
 Cut p10(E), p11(E), h10(E) and h11(E) bars to fit.



**SECTION THRU PIER**



**PILE DATA**  
 Type: HP 14x117  
 Nominal Required Bearing: 929K  
 Factored Resistance Available: 490K  
 Est. Length: 63'  
 No. Production Piles: 7  
 No. Test Piles: 1

MODEL: 0830069-78166-019  
 FILE NAME: pw:\VIL084EBID\INTEG\Illinois\DOT\Documents\Projects\0830069\CADD\Plans\0830069-78166.dgn

DESIGNED - ADAM W. SCHMIDT	EXAMINED - <i>Joanne F. J...</i>	DATE - MARCH 30, 2018
CHECKED - ZACH T. BULVA	PASSED - <i>Carl...</i>	REVISOR -
DRAWN - IAN J. ANDREWS		REVISOR -
CHECKED - A.W.S./Z.T.B.		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

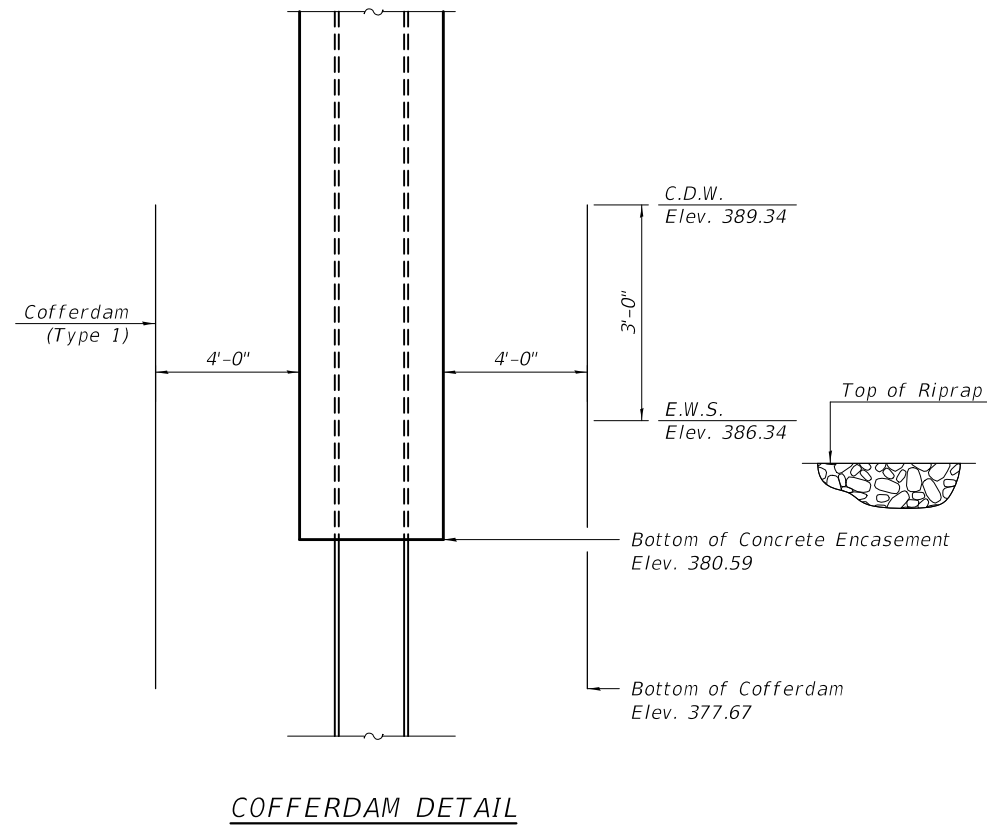
PIER 2  
 STRUCTURE NO. 083 - 0069

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	44
CONTRACT NO. 78166				

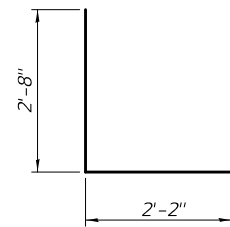
SHEET 19 OF 24 SHEETS

ILLINOIS FED. AID PROJECT

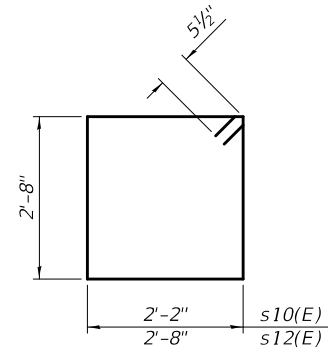
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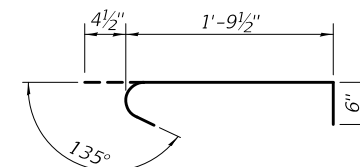
**COFFERDAM DETAIL**



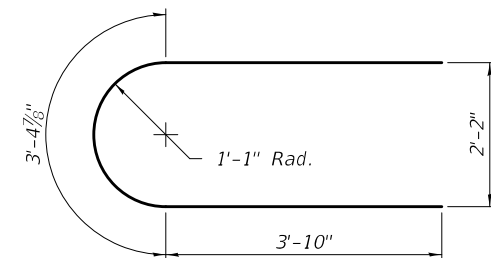
**BAR u12(E)**



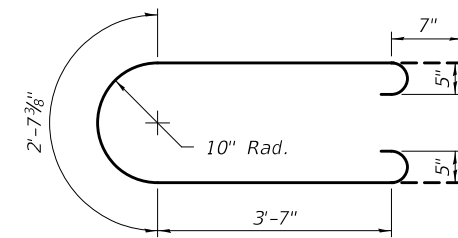
**BAR s10(E) & s12(E)**



**BAR s11(E)**



**BAR u10(E)**



**BAR u11(E)**

**PIER 1  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10(E)	20	#5	23'-8"	—
h11(E)	20	#5	24'-10"	—
p10(E)	12	#7	23'-10"	—
p11(E)	12	#7	25'-1"	—
s10(E)	37	#5	10'-7"	□
s11(E)	160	#4	2'-8"	┌┐
s12(E)	2	#5	11'-7"	□
u10(E)	8	#7	11'-1"	U
u11(E)	20	#5	11'-0"	U
u12(E)	2	#5	7'-6"	U
v10(E)	108	#5	12'-1"	—
v11(E)	98	#5	3'-9"	—
Cofferdam Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	54
Reinforcement Bars, Epoxy Coated			Pound	5,100
Furnishing Steel Piles HP 14x117			Foot	496
Driving Piles			Foot	496
Cofferdam (Type 1) (Location 1)			Each	1

**PIER 2  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10(E)	20	#5	23'-8"	—
h11(E)	20	#5	24'-10"	—
p10(E)	12	#7	23'-10"	—
p11(E)	12	#7	25'-1"	—
s10(E)	37	#5	10'-7"	□
s11(E)	160	#4	2'-8"	┌┐
s12(E)	2	#5	11'-7"	□
u10(E)	8	#7	11'-1"	U
u11(E)	20	#5	11'-0"	U
u12(E)	2	#5	7'-6"	U
v10(E)	108	#5	12'-1"	—
v11(E)	98	#5	3'-9"	—
Cofferdam Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	54
Reinforcement Bars, Epoxy Coated			Pound	5,100
Furnishing Steel Piles HP 14x117			Foot	441
Driving Piles			Foot	441
Test Pile Steel HP 14x117			Each	1
Cofferdam (Type 1) (Location 2)			Each	1

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER DETAILS  
STRUCTURE NO. 083 - 0069**

SHEET 20 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	45
CONTRACT NO. 78166				

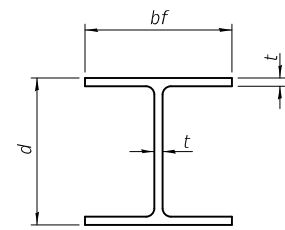
ILLINOIS FED. AID PROJECT

DESIGNED - ADAM W. SCHMIDT  
 CHECKED - ZACH T. BULVA  
 DRAWN - IAN J. ANDREWS  
 CHECKED - A.W.S. / Z.T.B.

EXAMINED  
 PASSED

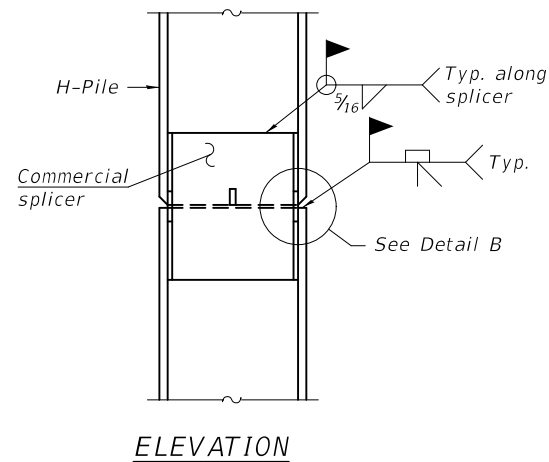
DATE - MARCH 30, 2018

REVISOR OF BRIDGE DESIGN  
 ENGINEER OF BRIDGES AND STRUCTURES

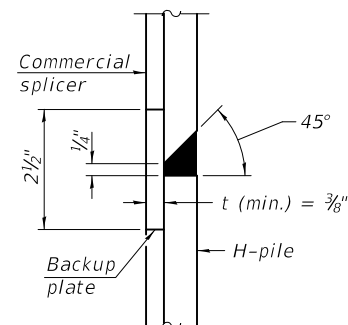


**STEEL PILE TABLE**

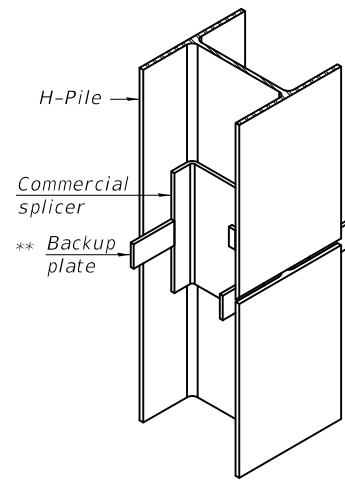
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 3/8"	14 3/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



**ELEVATION**

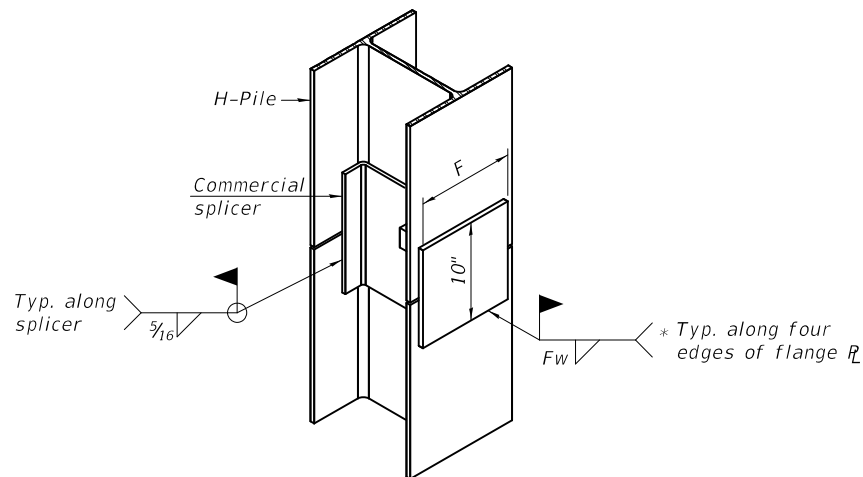


**DETAIL "B"**



**ISOMETRIC VIEW**

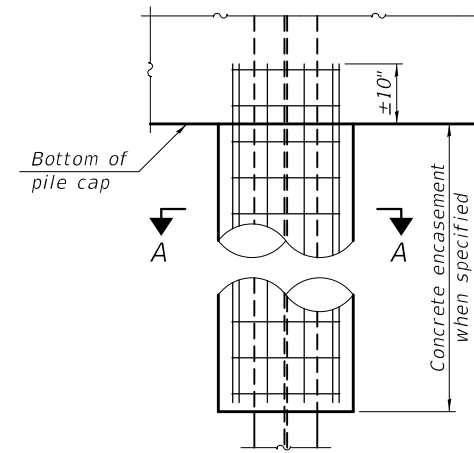
**WELDED COMMERCIAL SPLICE**



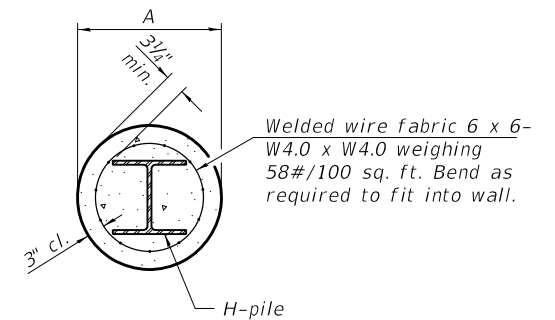
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

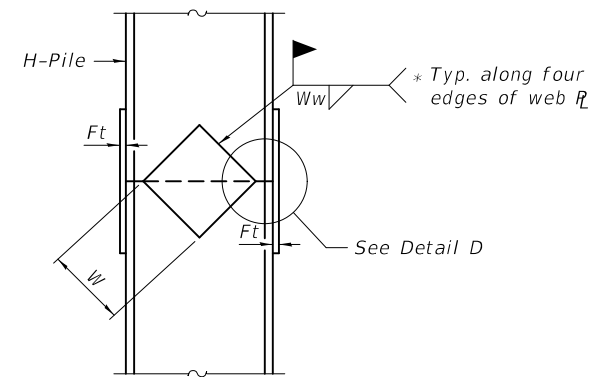


**ELEVATION**

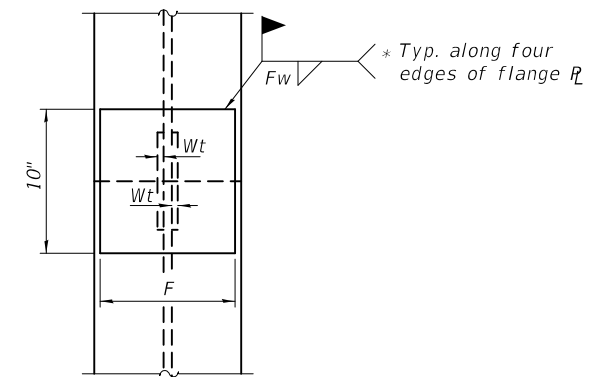


**SECTION A-A**

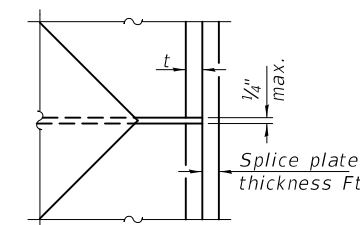
**INDIVIDUAL PILE CONCRETE ENCASUREMENT**  
(Forms for encasement may be omitted when soil conditions permit).



**ELEVATION**



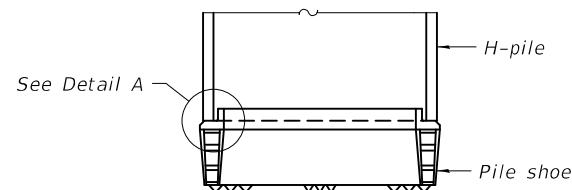
**END VIEW**



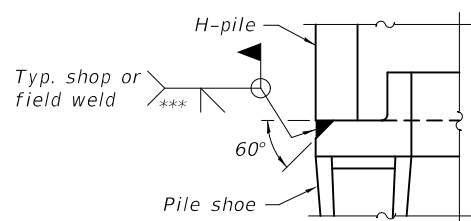
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



**ELEVATION**



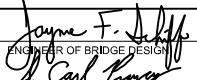
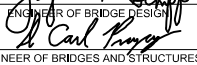
**DETAIL A**

**SHOE ATTACHMENT**

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

F-HP 2-17-2017

DESIGNED - ADAM W. SCHMIDT	EXAMINED
CHECKED - ZACH T. BULVA	PASSED
DRAWN - IAN J. ANDREWS	
CHECKED - A.W.S. / Z.T.B.	

DATE -  
  
 ENGINEER OF BRIDGE DESIGN  
  
 ENGINEER OF BRIDGES AND STRUCTURES

REVISIONS	
REVISION -	
REVISION -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

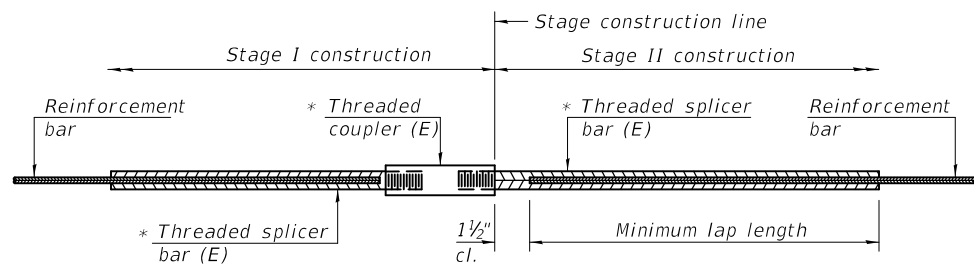
HP PILE DETAILS  
STRUCTURE NO. 083 - 0069

SHEET 21 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	46
CONTRACT NO. 78166				

ILLINOIS FED. AID PROJECT

MODEL: 0830069-78166-021  
FILE NAME: p:\v\084\BID\INTEG\illmod5.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn  
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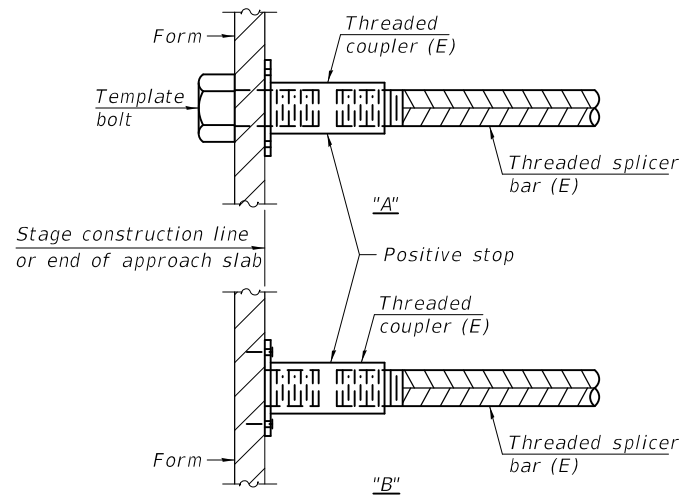


**STANDARD BAR SPLICER ASSEMBLY**

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

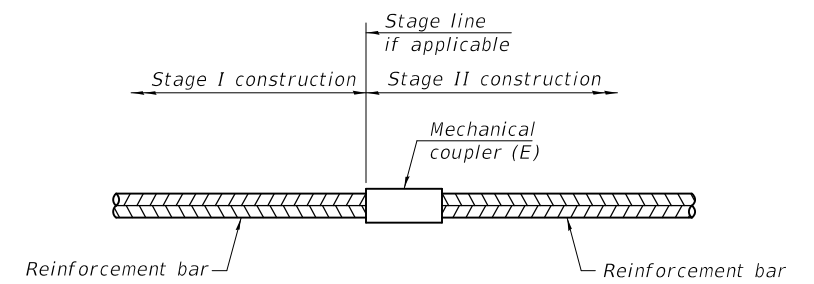
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
W. Abutment	#7	14	5'-0"
E. Abutment	#7	14	5'-0"
Superstructure	#9	255	9'-7"
Superstructure	#5	12	3'-0"
W. Approach	#5	76	3'-7"
W. Approach	#8	50	7'-10"
E. Approach	#5	76	3'-7"
E. Approach	#8	50	7'-10"
Pier 1	#7	12	5'-6"
Pier 1	#5	20	3'-2"
Pier 2	#7	12	5'-6"
Pier 2	#5	20	3'-2"



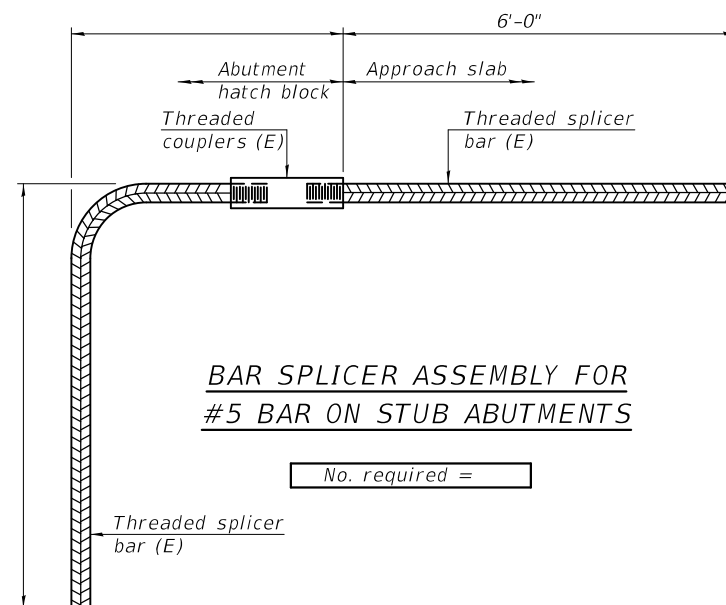
**INSTALLATION AND SETTING METHODS**

"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.

MODEL: 0830069-78166-022  
 FILE NAME: p:\w\1084848\INTEG\illinois.gov\PI\DOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn

BSD-1

2-17-2017

DESIGNED -	ADAM W. SCHMIDT
CHECKED -	ZACH T. BULVA
DRAWN -	IAN J. ANDREWS
CHECKED -	A.W.S. / Z.T.B.

EXAMINED  
 PASSED

*Joanne F. J. [Signature]*  
 ENGINEER OF BRIDGE DESIGN  
*Carl [Signature]*  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE -	MARCH 30, 2018
REVISED -	
REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 083 - 0069**

SHEET 22 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	47
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

Page 1 of 2

**Illinois Department of Transportation**  
Division of Highways  
District Nine Materials

## SOIL BORING LOG

Date 3/16/09

ROUTE FAP 869 DESCRIPTION FAP 869 (IL 34) over Gasaway Branch LOGGED BY Rich Moberly

SECTION 104B-1 LONGITUDE \_\_\_\_\_ LATITUDE \_\_\_\_\_

COUNTY Saline DRILLING METHOD \_\_\_\_\_ HAMMER TYPE \_\_\_\_\_

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Soil Description				D E P T H	B L O W S	U C S	M O I S T
					Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter				
083-0026 1116+20					383.8	383.1						
1-S 1115+60					377.9	380.9						
7.00ft Rt Ground Surface Elev. 394.9												
Asphalt over Concrete												
393.4												
Crushed Limestone Aggregate												
391.4												
Medium to soft, very moist, brown, Silt Loam A-4												
387.9												
Medium, damp to moist, brown mottled grey, Silt Loam A-4												
385.4												
Medium to soft, very moist, brown mottled grey, Silt Loam A-4												
382.9												
Medium, very moist, brown mottled grey, Silty Clay Loam A-4												
377.9												
Very soft, very moist to wet, brown, Sandy Clay Loam with sand seams												
375.4												

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, form 137 (Rev. 11-11)

Page 2 of 2

**Illinois Department of Transportation**  
Division of Highways  
District Nine Materials

## SOIL BORING LOG

Date 3/16/09

ROUTE FAP 869 DESCRIPTION FAP 869 (IL 34) over Gasaway Branch LOGGED BY Rich Moberly

SECTION 104B-1 LONGITUDE \_\_\_\_\_ LATITUDE \_\_\_\_\_

COUNTY Saline DRILLING METHOD \_\_\_\_\_ HAMMER TYPE \_\_\_\_\_

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Soil Description				D E P T H	B L O W S	U C S	M O I S T
					Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter				
083-0026 1116+20					383.8	383.1						
1-S 1115+60					377.9	380.9						
7.00ft Rt Ground Surface Elev. 394.9												
Loose, very moist, brown, Silty Sand with Gravel 62% Sand 15% Silt 6% Clay 17% Gravel (continued)												
351.4												
Stiff, moist, grey, Clay to Silty Clay A7-6												
329.9												
Bottom of hole = 64.8 feet												
Free water observed at 17.0 feet												
Elevation referenced to BM @ NW wingwall; Elev. = 392.9 feet												
To convert "N" values to "N60", multiply by 1.25.												
344.9												
Hard to very dense, damp, grey Conglomerate												
339.9												
Hard, dry, grey, Clay Shale												

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, form 137 (Rev. 11-11)

MODEL: 0830069-78166-023  
FILE NAME: p:\w\084EBID\INTEG\Illinois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0830069\CADD Plans\0830069-78166.dgn

DESIGNED - ADAM W. SCHMIDT	EXAMINED - <i>Joanne F. J. [Signature]</i>	DATE - MARCH 30, 2018
CHECKED - ZACH T. BULVA	PASSED - <i>Carl [Signature]</i>	REVISOR -
DRAWN - IAN J. ANDREWS	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -
CHECKED - A.W.S. / Z.T.B.		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS  
STRUCTURE NO. 083 - 0069**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	48
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				





**Illinois Department of Transportation**  
Division of Highways  
District Nine Materials

### SOIL BORING LOG

Date 3/18/09

ROUTE FAP 869 DESCRIPTION FAP 869 (IL 34) over Gasaway Branch LOGGED BY Rich Moberly

SECTION 104B-1 LONGITUDE \_\_\_\_\_ LATITUDE \_\_\_\_\_

COUNTY Saline DRILLING METHOD \_\_\_\_\_ HAMMER TYPE \_\_\_\_\_

STRUCT. NO. 083-0026  
Station 1116+20

BORING NO. 2-S  
Station 1116+57  
Offset 7.00ft Lt  
Ground Surface Elev. 394.7 ft (ft) (/6") (tsf) (%)

DEPTH	BLOWS	UCS	MOIST	DESCRIPTION	DEPTH	BLOWS	UCS	MOIST
(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
				Asphalt over Concrete				
393.2				Crushed Limestone Aggregate	372.7			
391.7	3	0.8	16	Medium, moist, brown, Silty Loam A-4				
	5							
	1				370.2			
	2	0.6	22	Stiff, moist, grey, Clay A7-6				
	2							
387.7				Soft, very moist, grey, Silty Clay Loam A-4				
	1	0.3	22					
	1							
	1				365.2			
	2	0.4	34	Medium, very moist, grey, Clay to Silty Clay A7-6				
	1							
382.7				Soft to medium, very moist, grey and brown, Silty Clay Loam A-6				
	1	0.5	23					
	1							
	1				360.2			
	1	0.6	22	Very stiff, moist, grey and brown, Clay Loam A-6				
	1							
377.7				Very soft, very moist, brown, Sandy Clay Loam A-4 with Sand seams				
	2	0.2	21					
	4							
375.2					355.2			
	20							

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, form 137 (Rev. 11-11)



**Illinois Department of Transportation**  
Division of Highways  
District Nine Materials

### SOIL BORING LOG

Date 3/18/09

ROUTE FAP 869 DESCRIPTION FAP 869 (IL 34) over Gasaway Branch LOGGED BY Rich Moberly

SECTION 104B-1 LONGITUDE \_\_\_\_\_ LATITUDE \_\_\_\_\_

COUNTY Saline DRILLING METHOD \_\_\_\_\_ HAMMER TYPE \_\_\_\_\_

STRUCT. NO. 083-0026  
Station 1116+20

BORING NO. 2-S  
Station 1116+57  
Offset 7.00ft Lt  
Ground Surface Elev. 394.7 ft (ft) (/6") (tsf) (%)

DEPTH	BLOWS	UCS	MOIST	DESCRIPTION	DEPTH	BLOWS	UCS	MOIST
(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
				Stiff, moist, grey, Silty Clay to Silty Clay Loam A-6 (continued)				
	4	1.7	17					
	6							
					350.2			
				Stiff, moist, grey, Clay A7-6				
	1							
	2	1.2	39					
	3							
					344.7			
	6			Very dense, damp, grey and brown, Conglomerate				
	21							
	40							
					339.7			
				Hard, dry, grey, Clay Shale				
					338.7			
				Bottom of hole = 55.4 feet				
				Free water observed at 44.5 feet				
				Elevation referenced to BM @ NW wingwall; Elev. = 392.9 feet				
				To convert "N" values to "N60", multiply by 1.25.				

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, form 137 (Rev. 11-11)

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3/30/2018 1:11:47 PM

DESIGNED - ADAM W. SCHMIDT  
CHECKED - ZACH T. BULVA  
DRAWN - IAN J. ANDREWS  
CHECKED - A.W.S. / Z.T.B.

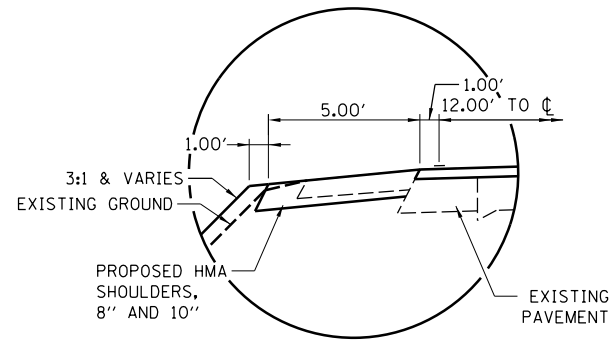
EXAMINED \_\_\_\_\_  
PASSED \_\_\_\_\_  
*Joanne F. J...*  
ENGINEER OF BRIDGE DESIGN  
*Carl...*  
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 30, 2018  
REVISED -  
REVISED -

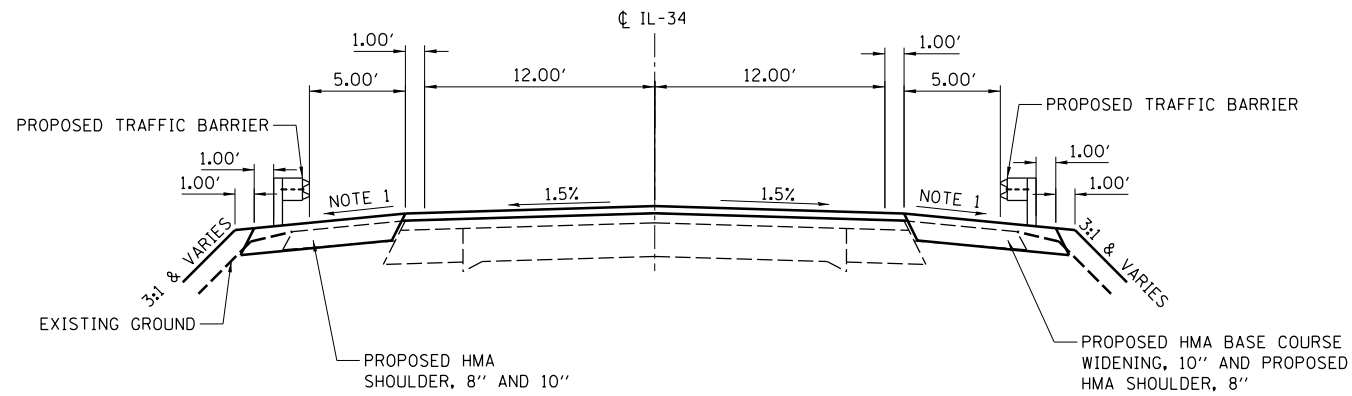
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS  
STRUCTURE NO. 083 - 0069  
SHEET 24 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	49
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

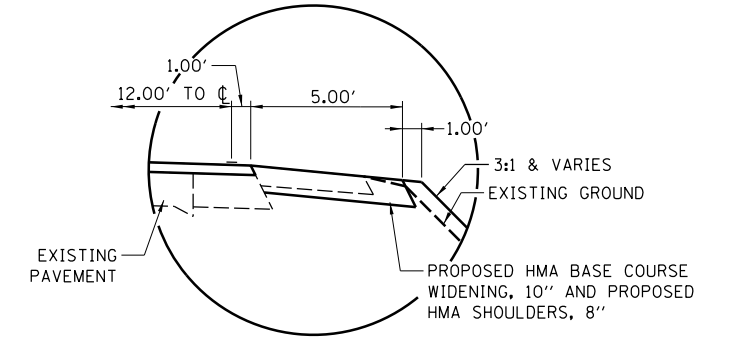


PROPOSED HMA SHOULDER DETAIL  
 LT. STA. 1196+86.00 TO LT. STA. 1197+50.00  
 LT. STA. 1200+75.00 TO LT. STA. 1201+35.00



PROPOSED IL-34 TYPICAL SECTION

STA. 1198+20.83 TO STA. 1198+35.83 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)  
 STA. 1198+35.83 TO STA. 1199+74.17 - BRIDGE OMISSION  
 STA. 1199+74.17 TO STA. 1199+89.17 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)



PROPOSED HMA SHOULDER DETAIL  
 RT. STA. 1196+70.00 TO RT. STA. 1197+38.00  
 RT. STA. 1200+60.00 TO RT. STA. 1201+24.00

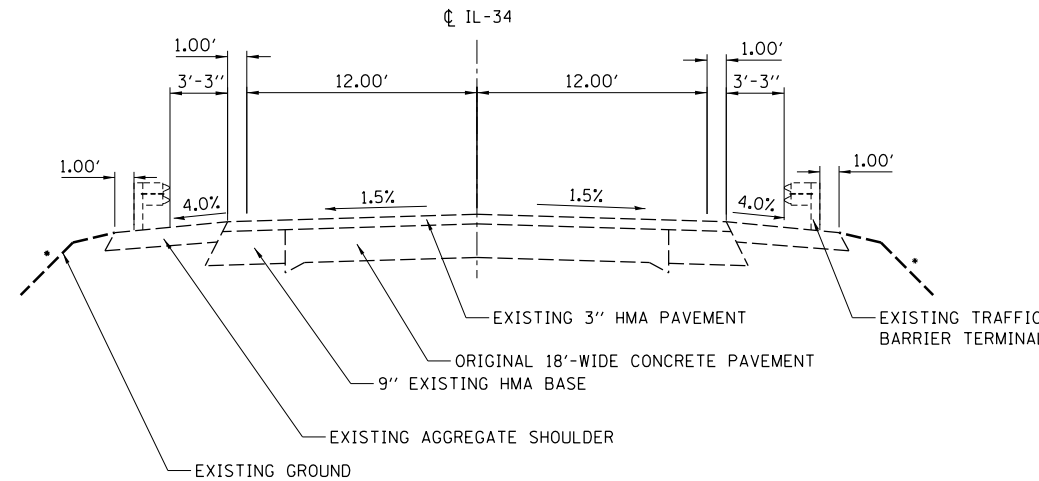
MIXTURE TABLE

LOCATIONS	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N70
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 70 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5MM
FRICTION AGGREGATE:	C SURFACE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	TBD

LOCATIONS	HOT-MIX ASPHALT BASE COURSE WIDENING
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE, N70, IL-19.0
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 70 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0MM
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA

LOCATIONS	HOT MIX ASPHALT SHOULDERS (TOP LIFT)
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, N30, IL-9.5L
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5L
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA

LOCATIONS	HOT-MIX ASPHALT SHOULDERS (LOWER LIFTS)
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE, N30, IL-19.0L
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0L
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA



EXISTING IL-34 TYPICAL SECTION

••THE HOT MIX ASPHALT BASE COURSE WIDENING, 10" CONSTRUCTED IN PRE-STAGE I MAY BE INCORPORATED INTO THE FINAL HOT MIX ASPHALT SHOULDERS, 8" DURING STAGE II CONSTRUCTION IF APPROVED BY THE ENGINEER. SUCH CHANGE WILL NOT BE CAUSE FOR ADDITIONAL COMPENSATION BUT THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

NOTE 1

ROTATE SHOULDERS TO MATCH PCC CONNECTOR OVER 25.00'  
 STA. 1197+95.83 TO STA. 1198+20.83 - TRANSITION PAVED SHOULDER FROM 4.0% CROSS SLOPE TO 2.0% CROSS SLOPE  
 STA. 1199+89.17 TO STA. 1200+14.17 - TRANSITION PAVED SHOULDER FROM 2.0% CROSS SLOPE TO 4.0% CROSS SLOPE

FILE NAME =	USER NAME = oster00685	DESIGNED - CAD	REVISED -
D978166-sh-t-tyr		DRAWN - JEO	REVISED -
MODEL = Typical Section	PLOT SCALE = 10.0000' / in.	CHECKED - MH	REVISED -
	PLOT DATE = 1/11/2018	DATE - 12/12/2017	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS  
 (IL-34 OVER UNNAMED STREAM)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	50
CONTRACT NO. 78166				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



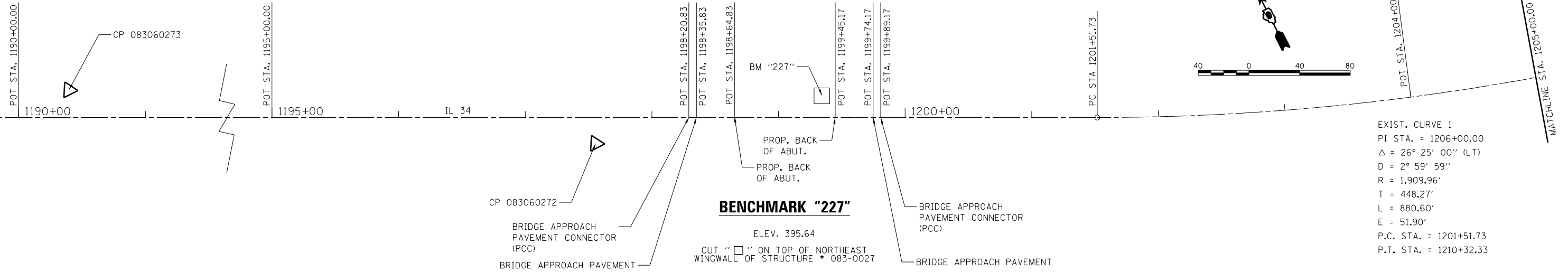
EROSION CONTROL SCHEDULE					
LOCATION			28000400	25100630	28000510
			PERIMETER EROSION BARRIER FOOT	EROSION CONTROL BLANKET SY	INLET FILTERS EACH
BEGIN STATION	END STATION				
1195+50.30	1198+94.00	LT & RT	543		
1199+18.00	1202+58.10	LT & RT	539		
1196+92.70	1198+65.25	LT		270	
1195+54.20	1198+65.25	RT		376	
1199+44.75	1202+47.90	LT		364	
1199+44.75	1201+71.90	RT		351	
1198+23.70		LT			1
1198+23.70		RT			1
<b>TOTAL</b>			<b>1002</b>	<b>1361</b>	<b>2</b>

REMOVAL SCHEDULE										
LOCATION				44000100	44004250	40600982	63200310	X0327979	Z0004552	NOTES
				PAVEMENT REMOVAL SQ YD	PAVED SHOULDER REMOVAL SQ YD	HMA SURFACE REMOVAL - BUTT JOINT SQ YD	GUARDRAIL REMOVAL FT	PAVEMENT MARKING REMOVAL (GRINDING) SQ FT	APPROACH SLAB REMOVAL SQ YD	
BEGIN STATION	END STATION									
1196+86.00	1197+02.06			6						ENTRANCE
1198+20.83	1198+58.26		113							IL-34 PAVEMENT
1199+51.79	1199+89.17		112							IL-34 PAVEMENT
1196+70.00	1198+78.30			85						
1199+49.81	1201+24.00			72						
1197+99.25	1198+29.25					87				
1199+80.75	1200+10.75					87				
1197+56.86	RT 1198+78.31	RT					122.0			
1197+57.03	LT 1198+78.22	LT					121.0			
1199+31.79	RT 1200+52.27	RT					121.0			
1199+31.80	LT 1200+52.19	LT					120.0			
1195+56.75	CL LT 1202+65.75							141		SOLID YELLOW
1195+56.75	CL RT 1202+65.75							141		SOLID YELLOW
1195+56.75	RT 1202+09.25							142		SOLID WHITE
1195+88.75	LT 1202+65.75							226		SOLID WHITE
1198+58.26	1198+78.26								74	
1199+31.79	1199+51.79								75	
<b>TOTALS</b>				<b>225</b>	<b>163</b>	<b>174</b>	<b>484</b>	<b>650</b>	<b>149</b>	

GUARDRAIL SCHEDULE						
LOCATION			63100167	63000001	63100085	78201000
			TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT EACH	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS FOOT	TRAFFIC BARRIER TERMINAL, TYPE 6 EACH	TERMINAL MARKER DIRECT APPLIED EACH
BEGIN STATION	END STATION	OFF SET				
1197+51.44	1198+04.44	RT	1			1
1197+63.94	1198+13.94	LT	1			1
1199+96.06	1200+65.56	RT	1			1
1200+83.56	1201+26.87	LT	1			1
1198+01.44	1198+13.94	RT		12.5		
1199+96.06	1200+08.56	LT		12.5		
1198+13.94	1198+50.83	RT			1	
1198+13.94	1198+50.83	LT			1	
1199+59.17	1199+96.06	RT			1	
1199+59.17	1199+96.06	LT			1	
<b>TOTALS</b>			<b>4</b>	<b>25.0</b>	<b>4</b>	<b>4</b>

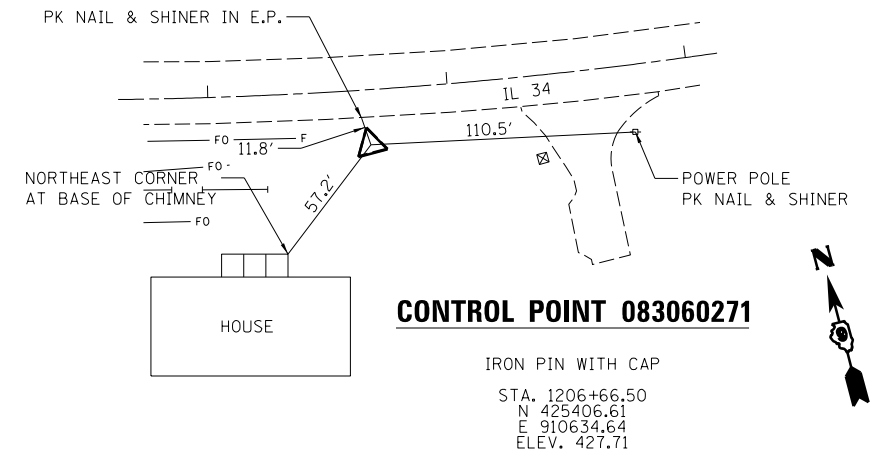
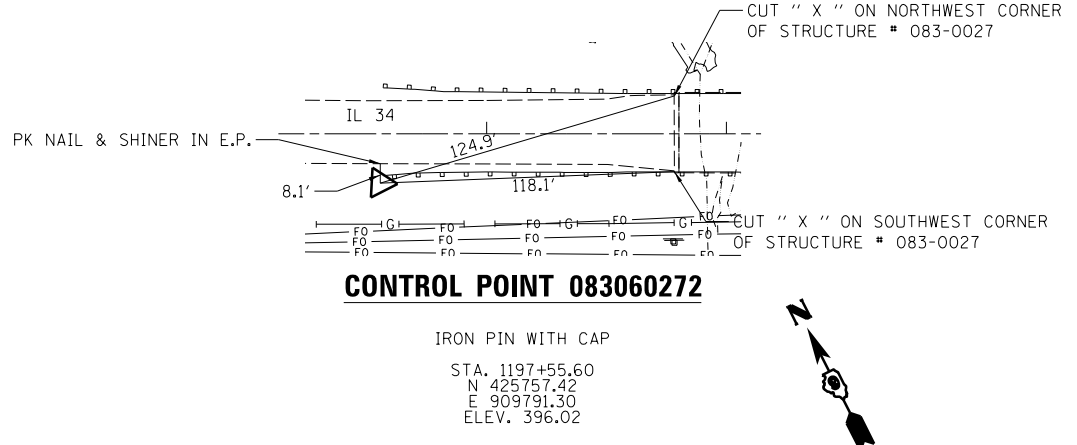
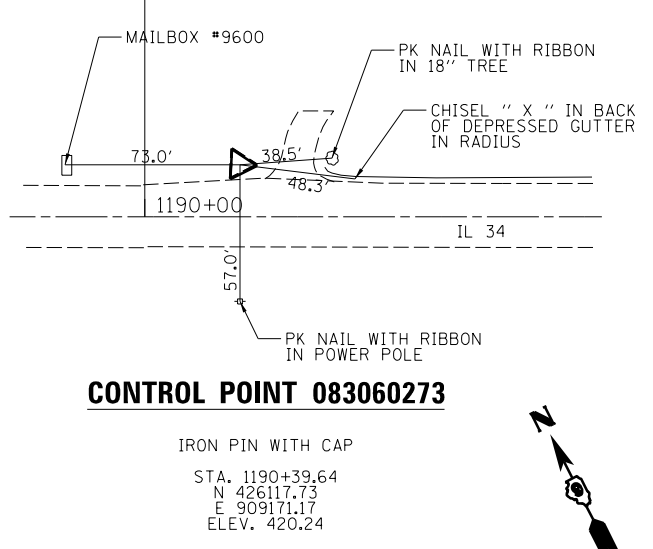
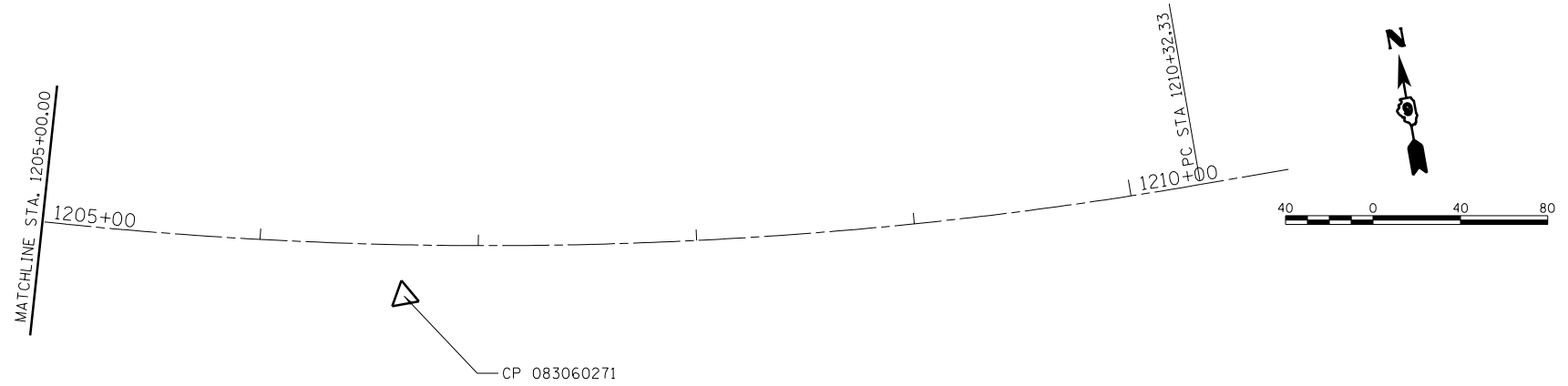
TREE REMOVAL SCHEDULE					
LOCATION			20100110	20100210	
			TREE REMOVAL (6 TO 15 UNITS) UNIT	TREE REMOVAL (OVER 15 UNITS) UNIT	
STATION	OFF SET	LOCATION			
1198+42.43	41.80'	LT.	13		
1198+54.50	49.85'	LT.		23	
1198+63.33	46.75'	LT.	15		
1199+34.10	40.51'	LT.	13		
1199+36.75	33.65'	LT.	11		
1199+42.02	33.65'	LT.	9		
1199+45.11	47.75'	LT.		26	
1199+51.64	48.59'	LT.		36	
1199+78.12	41.99'	LT.		29	
1199+82.66	38.28'	LT.	7		
1199+88.40	37.26'	LT.	6		
1199+94.91	34.69'	LT.		29	
1200+02.75	33.67'	LT.	11		
1200+14.24	31.34'	LT.	6		
1200+23.12	31.70'	LT.	7		
<b>TOTAL</b>			<b>98</b>	<b>143</b>	

CONCRETE BARRIER SCHEDULE					
LOCATION			70400100	70400200	X7040125
			TEMPORARY CONCRETE BARRIER FOOT	RELOCATE TEMPORARY CONCRETE BARRIER FOOT	PINNING TEMPORARY CONCRETE BARRIER EACH
BEGIN STATION	END STATION	LOCATION			
1196+99.06	1197+98.75	Stage 1 on 12:1 taper	100.0		
1197+98.75	1200+11.25	Stage 1 on tangent	212.5		36
1200+11.25	1201+10.94	Stage 1 on 12:1 taper	100.0		
1197+11.58	1197+98.75	Stage 2 on 12:1 taper		87.5	
1197+98.75	1200+11.25	Stage 2 on tangent		212.5	
1200+11.25	1200+98.47	Stage 2 on 12:1 taper		87.5	
<b>TOTALS</b>			<b>412.5</b>	<b>387.5</b>	<b>36</b>



EXIST. CURVE 1  
 PI STA. = 1206+00.00  
 $\Delta = 26^\circ 25' 00''$  (LT)  
 $D = 2^\circ 59' 59''$   
 $R = 1,909.96'$   
 $T = 448.27'$   
 $L = 880.60'$   
 $E = 51.90'$   
 P.C. STA. = 1201+51.73  
 P.T. STA. = 1210+32.33

ALIGNMENT COORDINATES - IL-34			
IL-34	STATION	NORTHING	EASTING
POT	1190+00.00	426116.21	909125.99
POT	1195+00.00	425986.88	909620.88
POT	1198+20.83	425746.36	909858.78
POT	1198+35.83	425739.60	909872.17
POT	1198+64.83	425822.31	909946.87
POT	1199+45.17	425690.33	909969.78
POT	1199+74.17	425677.27	909995.67
POT	1199+89.17	425670.51	910009.06
PC	1201+51.73	425597.26	910154.18
POT	1204+00.00	425500.09	910382.46
PT	1210+32.33	425392.43	911002.63

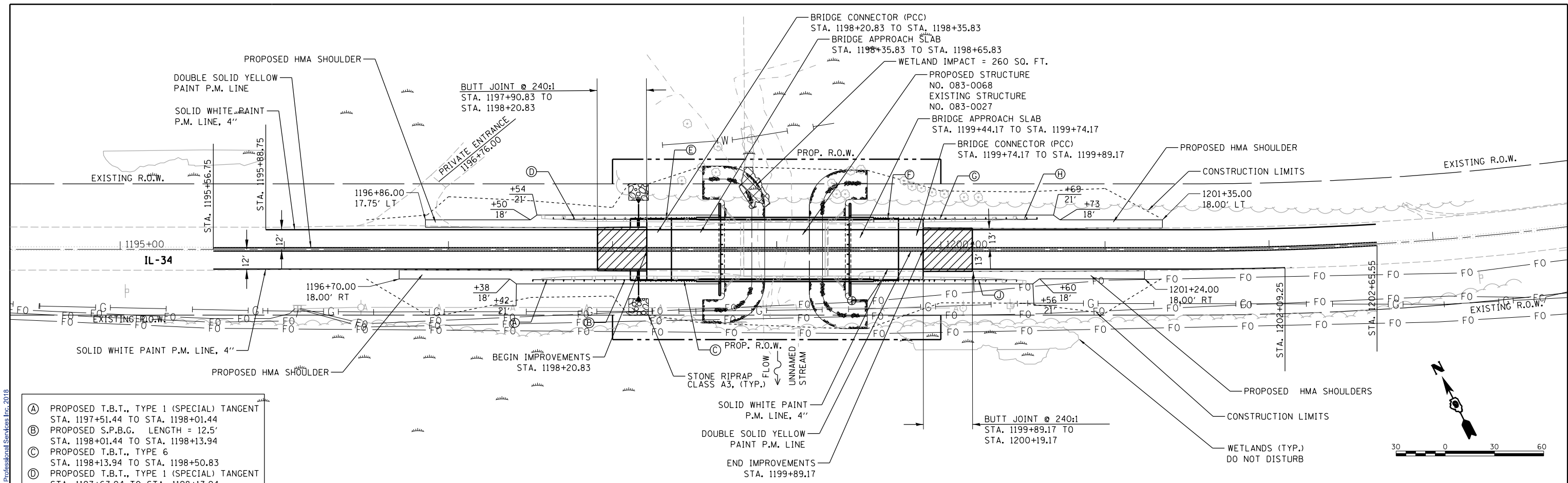




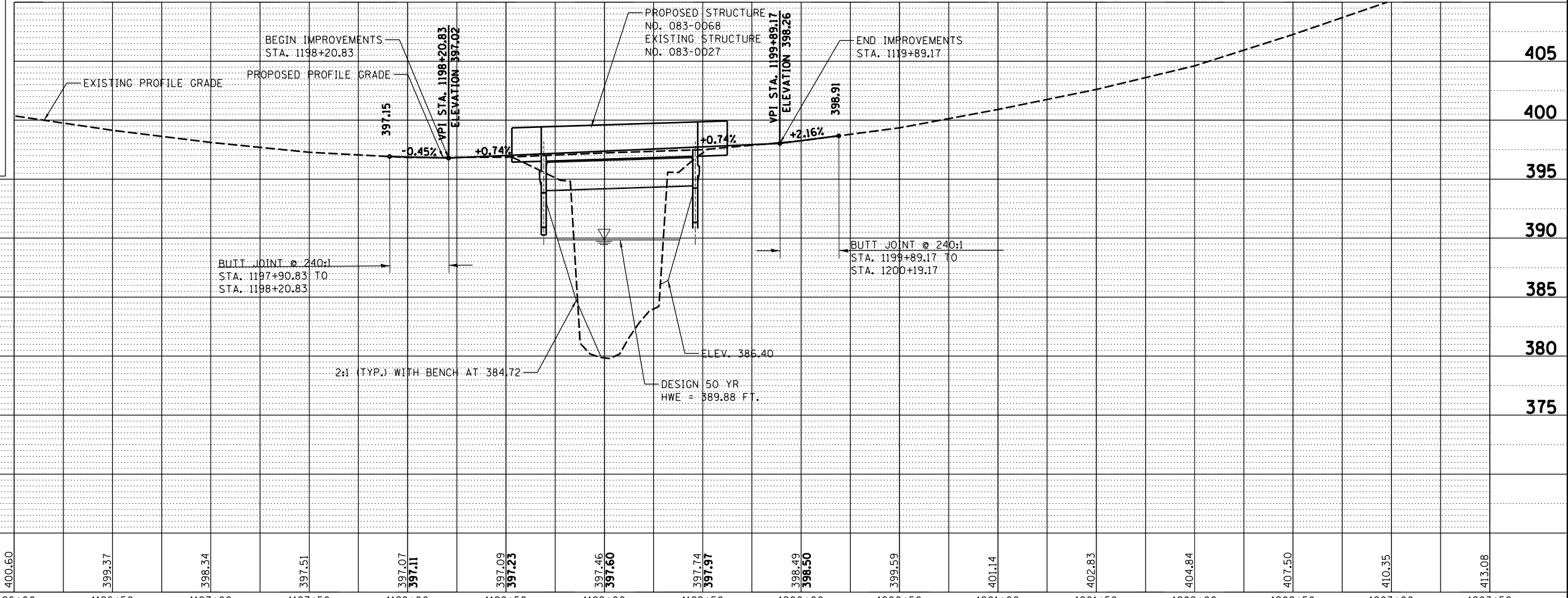
DATE	
BY	
PLAN	
NO.	
REVISIONS	
CHECKED	
DATE	



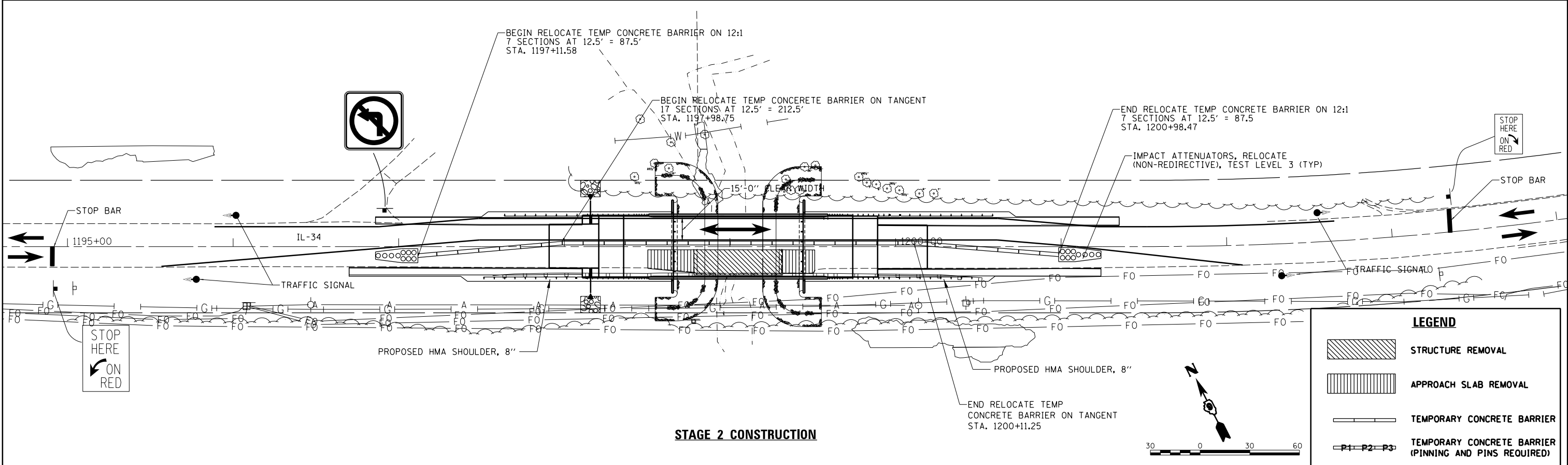
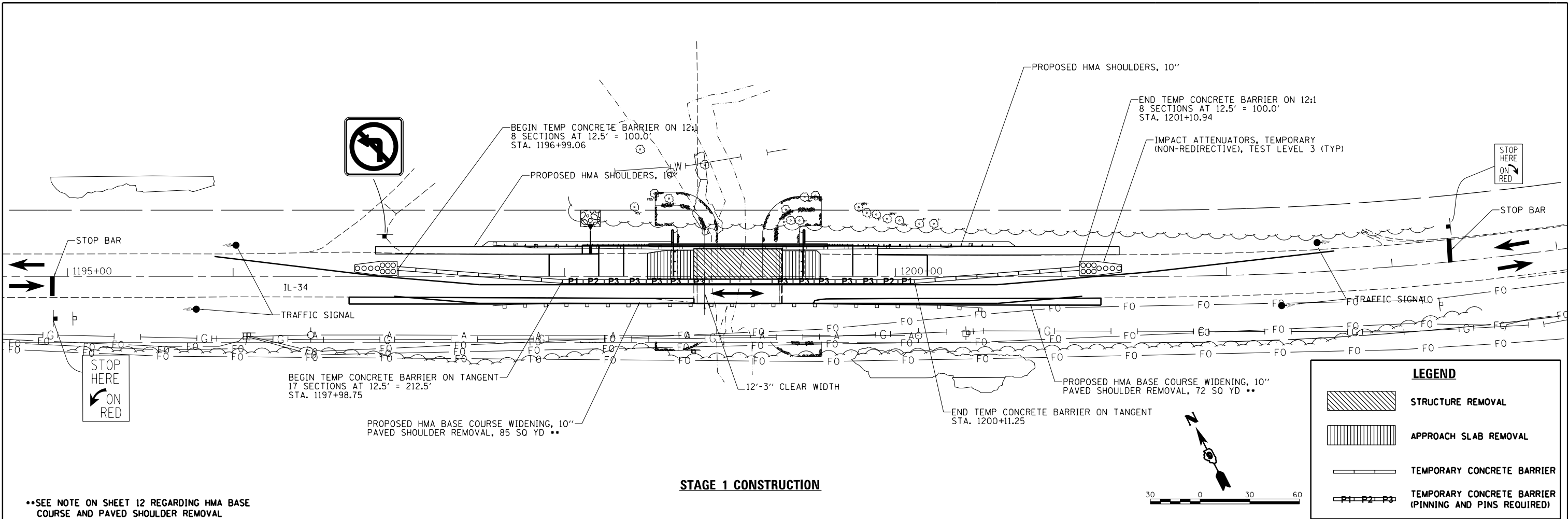
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BY	
PROFILE	
NO.	
REVISIONS	
CHECKED	
DATE	



- (A) PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 1197+51.44 TO STA. 1198+01.44
- (B) PROPOSED S.P.B.G. LENGTH = 12.5' STA. 1198+01.44 TO STA. 1198+13.94
- (C) PROPOSED T.B.T., TYPE 6 STA. 1198+13.94 TO STA. 1198+50.83
- (D) PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 1197+63.94 TO STA. 1198+13.94
- (E) PROPOSED T.B.T., TYPE 6 STA. 1198+13.94 TO STA. 1198+50.83
- (F) PROPOSED T.B.T., TYPE 6 STA. 1199+59.17 TO STA. 1199+96.06
- (G) PROPOSED S.P.G.R. LENGTH = 12.5' STA. 1199+96.06 TO STA. 1200+08.56
- (H) PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 1200+08.56 TO STA. 1200+58.56
- (I) PROPOSED T.B.T., TYPE 6 STA. 1199+59.17 TO STA. 1199+96.06
- (J) PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 1199+96.06 TO STA. 1200+46.06

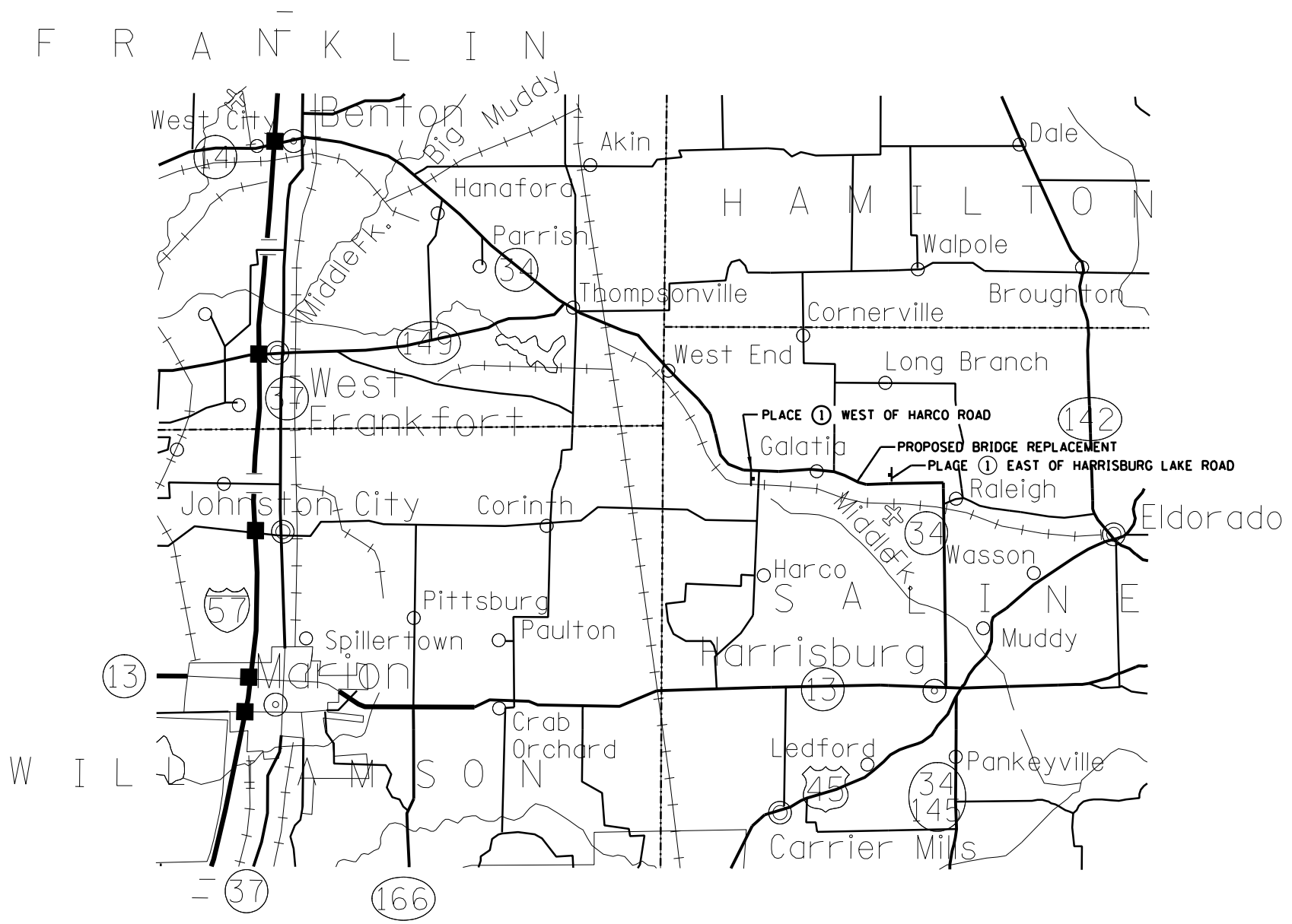


FILE NAME =	USER NAME = oster00685	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>PLAN &amp; PROFILE</b> <b>IL-34 (OVER UNNAMED STREAM)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D978166-sht-plnprf		DRAWN - JEO	REVISED -			869	104B-2	SALINE	87	55	
PLOT SCALE = 60.0000' / in.		CHECKED - MH	REVISED -			CONTRACT NO. 78166					
PLOT DATE = 1/11/2018		DATE - 12/12/2017	REVISED -			ILLINOIS FED. AID PROJECT					



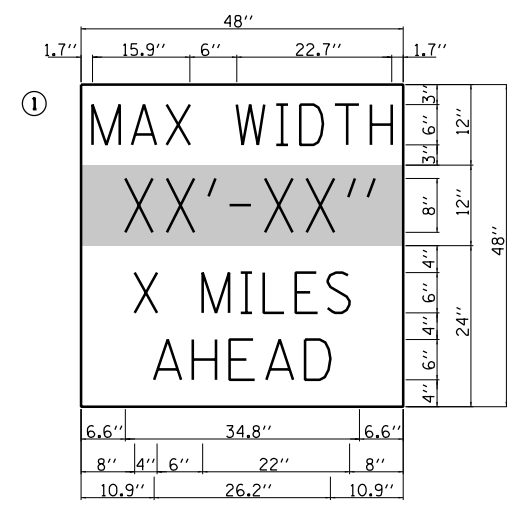
FILE NAME = D978166-sh1-staging	USER NAME = oster00685	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL &amp; STAGING IL-34 (OVER UNNAMED STREAM)</b>				F.A.P. RTE. = 869	SECTION = 104B-2	COUNTY = SALINE	TOTAL SHEETS = 87	SHEET NO. = 56
MODEL = BRIDGE STAGE CONSTRUCTION	PLOT SCALE = 60.0000' / in.	DRAWN - JEO	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	<b>CONTRACT NO. 78166</b>			
PLOT DATE = 1/11/2018	DATE = 12/12/2017	CHECKED - MH	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								
		DATE = 12/12/2017	REVISED -										





**DETOUR SIGNING PLAN**

**SIGN LEGEND**



**W12-1103**

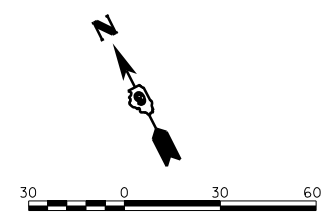
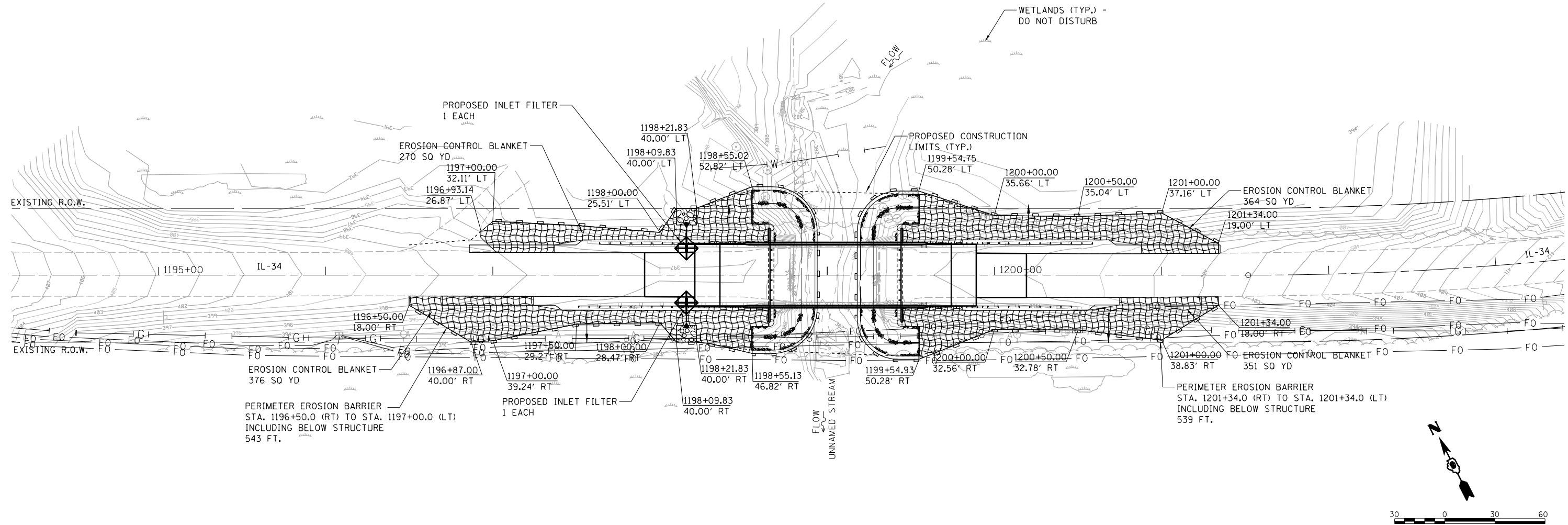
W12-1103 (WIDTH IS 8D):  
 NO BORDER, BLACK ON WHITE;  
 "MAX WIDTH" D;  
 NO BORDER, BLACK ON ORANGE;  
 "XX'-XX'" D;  
 NO BORDER, BLACK ON WHITE;  
 "X MILES" D; "AHEAD" D

**DETOUR NOTES:**

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-1103 SIGN SHALL BE 10'-9" FOR STAGE I AND 13'-6" FOR STAGE II OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.



FILE NAME = D978166-sh1-detour	USER NAME = oster006085	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>WIDE LOAD DETOUR SIGNING IL-34 (OVER UNNAMED STREAM)</b>				F.A.P. RTE. 869	SECTION 104B-2	COUNTY SALINE	TOTAL SHEETS 87	SHEET NO. 57
MODEL = BRIDGE STAGE CONSTRUCTION	PLOT SCALE = 100.0000' / 1"	DRAWN - JEO	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	<b>CONTRACT NO. 78166</b>			
	PLOT DATE = 1/11/2018	CHECKED - MH	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								
		DATE - 12/12/2017	REVISED -										



**EROSION CONTROL LEGEND**

- EROSION CONTROL BLANKET
- INLET FILTER
- PERIMETER EROSION BARRIER
- DRAINAGE PATTERN DIRECTION

**INTENDED SEQUENCE**

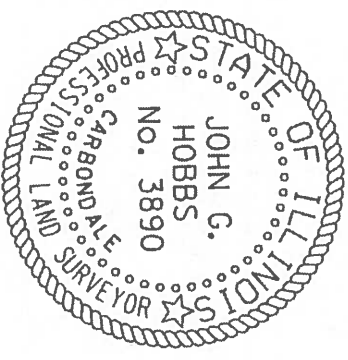
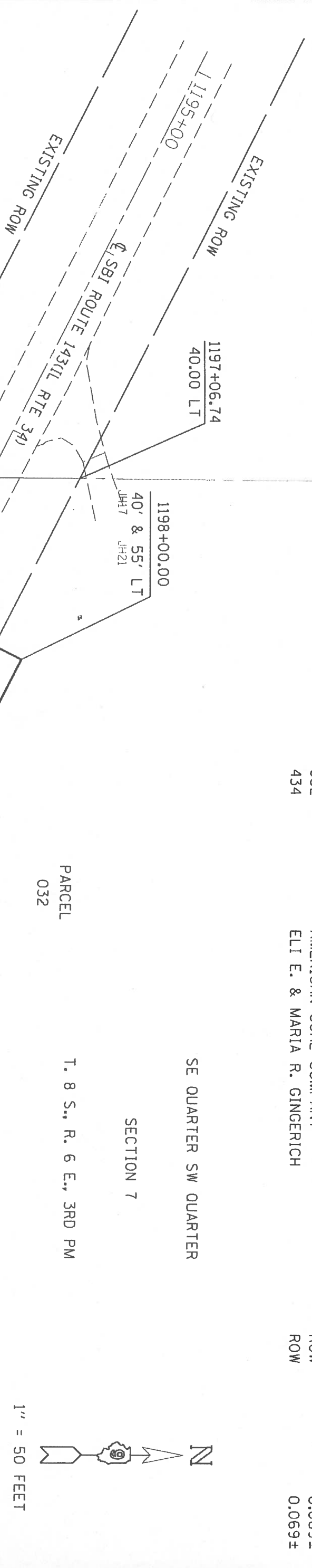
1. PLACEMENT OF PERIMETER EROSION BARRIER PRIOR TO COMMENCEMENT OF ANY WORK. SEE STANDARD 280001.
2. PLACEMENT OF TEMPORARY SEEDING ON GRADED SURFACES NOT HAVING PERMANENT SEEDING APPLIED.
3. PLACEMENT OF EROSION CONTROL BLANKET AFTER FINAL GRADING.
4. ONGOING MAINTENANCE OF EROSION CONTROL ELEMENTS.
5. REMOVE TEMPORARY EROSION CONTROL ELEMENTS AFTER FINAL GRADING AND PERMANENT SEEDING ESTABLISHED AS APPROVED BY THE ENGINEER.

**NOTES**

1. MAJOR GRADING SLOPES ALONG THE PROPOSED ROADWAY ARE 2:1 MAX.
2. SOILS DISTURBANCE SHALL ONLY OCCUR WITHIN THE AREAS SHOWN.
3. RECEIVING WATER FOR DRAINAGE FROM PROJECT IS UNNAMED STREAM. UNNAMED STREAM IS A TRIBUTARY OF MIDDLE FORK SALINE RIVER.

FILE NAME = D978166-sh1-eros.dgn	USER NAME = oster00605	DESIGNED - CAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY EROSION CONTROL PLAN IL-34 (OVER UNNAMED STREAM)</b>	F.A.P. RTE. = 869	SECTION = 104B-2	COUNTY = SALINE	TOTAL SHEETS = 87	SHEET NO. = 58		
MODEL = BRIDGE STAGE CONSTRUCTION	PLOT SCALE = 60.0000' / in.	CHECKED - MH	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	<b>CONTRACT NO. 78166</b>			
PLOT DATE = 1/11/2018	DATE = 12/12/2017	REVISED -	REVISED -			FED. ROAD DIST. NO.   ILLINOIS FED. AID PROJECT						

PARCEL ID	PROPERTY OWNER	PURPOSE	ACREAGE
032	AMERICAN COAL COMPANY	ROW	0.069 ±
434	ELI E. & MARIA R. GINGERICH	ROW	0.069 ±



JOHN G. HOBBS  
 ILLINOIS PROFESSIONAL LAND SURVEYOR  
 Current license expires 11/2018.

This professional service conforms to the current Illinois minimum standards for a boundary survey.

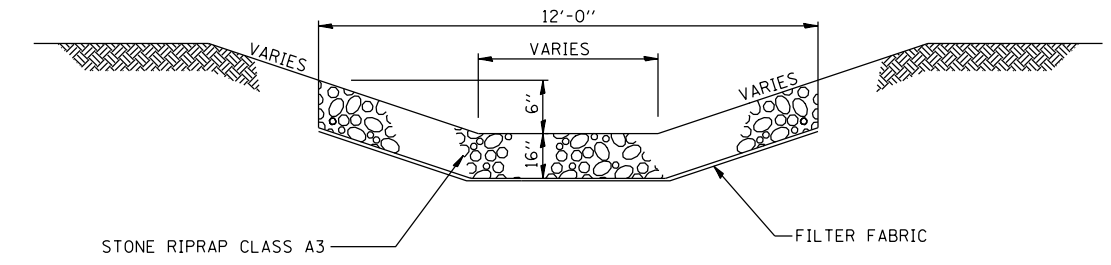
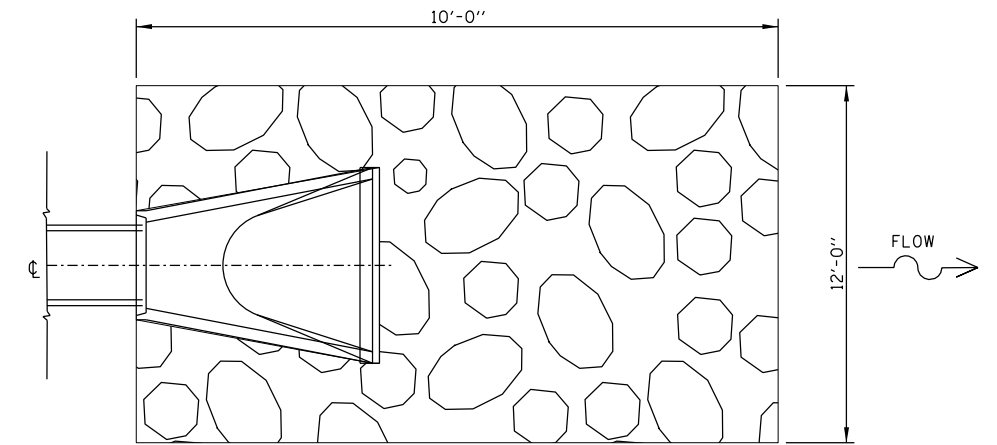
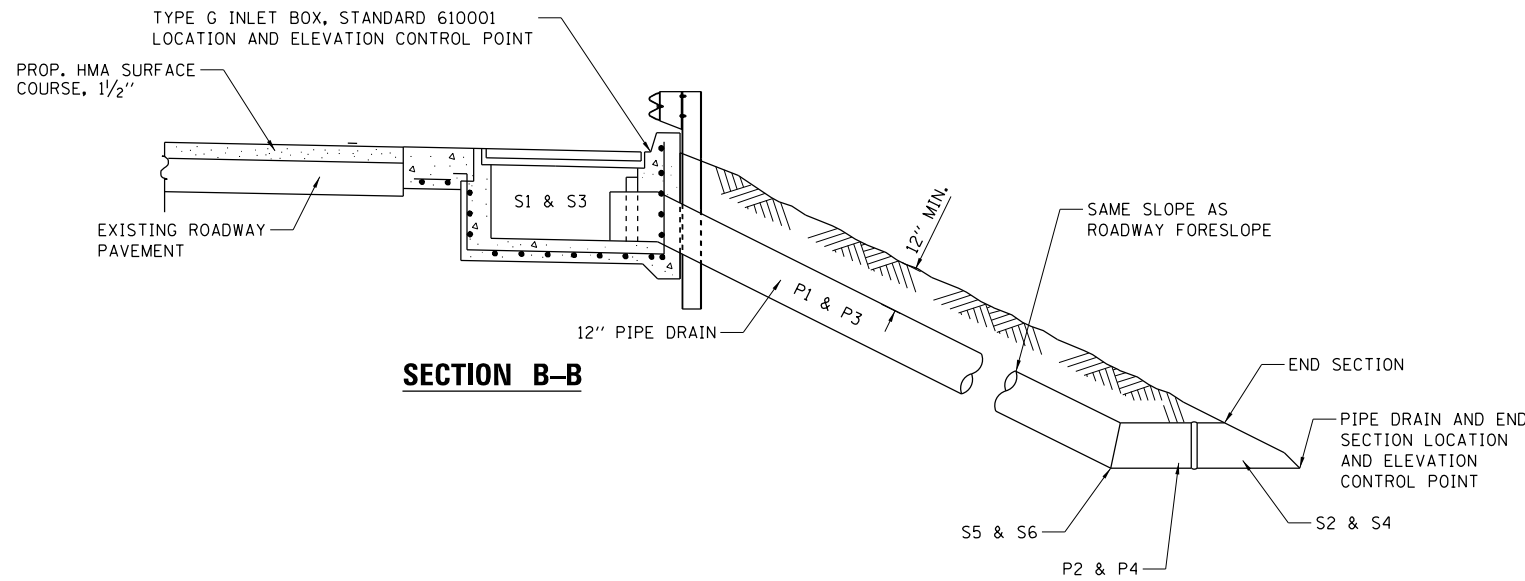
QUARTER QUARTER SECTION LINE

POINT ID	NORTHING	EASTING
JH15	425629.92	910000.71
JH16	425701.34	910036.75
JH17	425791.45	909858.20
JH18	425720.04	909822.16
JH20	425706.65	909815.40
JH21	425904.85	909864.96
JH22	425714.73	910043.51
JH23	425616.53	909993.95

PARCEL 434  
 40' & 55' RT  
 JH18 JH20

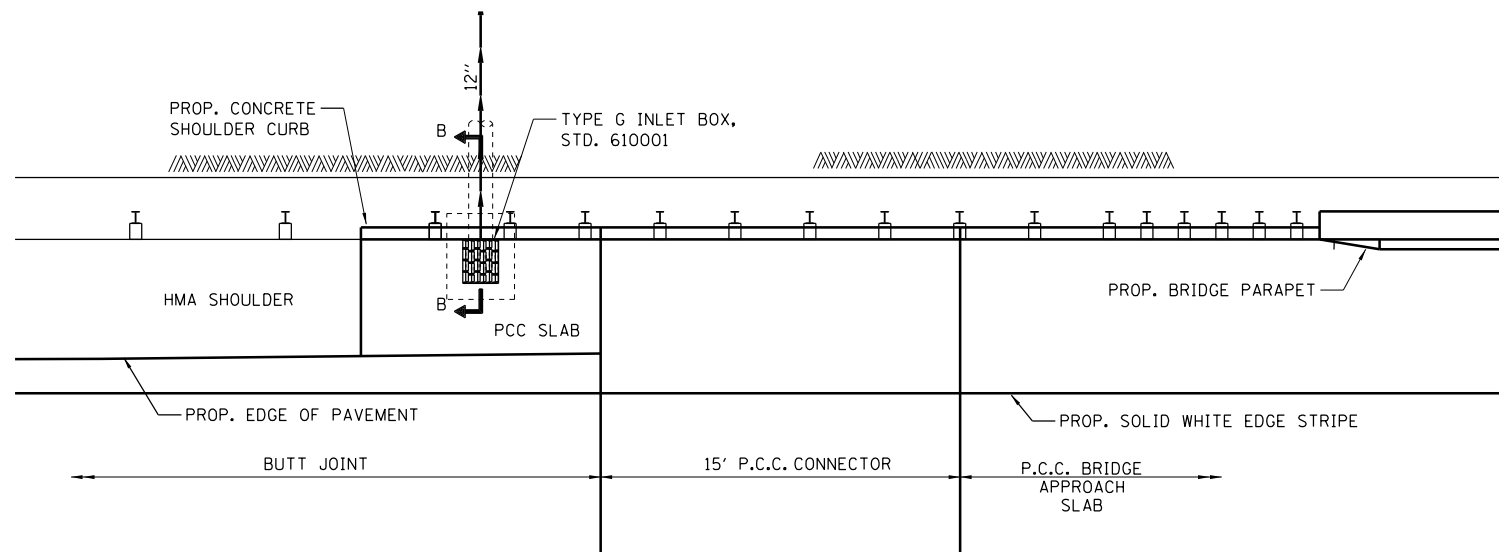
40' & 55' RT  
 JH15 JH23

USER NAME	DESIGNED	REVISION	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RIGHT OF WAY PLANS	SECTION	COUNTY	TOTAL SHEETS
Robbery	JGH	REVISED	DEPARTMENT OF TRANSPORTATION	SN 083-0027 IL RTE 34	1048-2	SALINE	87
3:00 SCALE = 30'000 / 1" = 30'	HT	REVISED		SCALE: 1" = 50'			59
PLOT DATE = 12/12/2017	DATE = 12-11-17	REVISED		OF 1 SHEETS STA 1197+00.00 TO STA 1201+51.73			



**IL RTE 34 STATION 1198 + 15.83 RT AND LT**

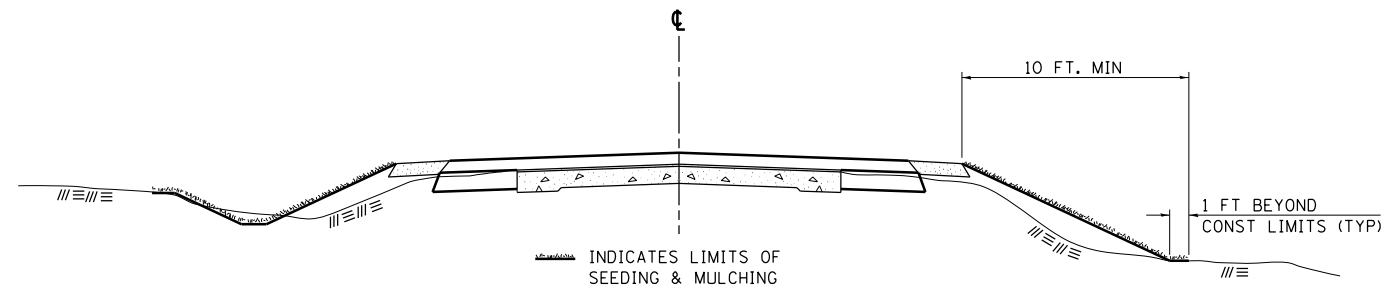
PIPE SCHEDULE						20800150	60100945
LOCATION						TRENCH BACKFILL	PIPE DRAIN 12"
PIPE NUMBER	FROM STRUCTURE S-NUMBER	TO STRUCTURE INV ELEV	TO STRUCTURE S-NUMBER	TO STRUCTURE INV ELEV	PIPE SLOPE %	(CU YD)	(FOOT)
P1	S1	394.00	S5	391.66	50.00%	0.9	6.8
P2	S5	391.66	S2	391.65	0.30%	---	5.0
P3	S3	394.00	S6	391.66	50.00%	0.9	6.8
P4	S6	391.66	S4	391.65	0.30%	---	5.0
<b>TOTAL</b>						<b>1.8</b>	<b>24</b>



**INLET BOX AND PIPE DRAIN DETAIL**

DRAINAGE STRUCTURE SCHEDULE									
LOCATION						28100105	28200200	54213447	61000335
						STONE RIP RAP CLASS A3	FILTER FABRIC	END SECTIONS 12'	TYPE G INLET BOX, STANDARD 610001
						(SQ YD)	(SQ YD)	(EACH)	(EACH)
STR	STATION	OFFSET	SIDE	RIM ELEV	INVERT ELEV				
S1	1198+15.83	18.67'	LT	396.67	394.00				1
S2	1198+15.83	31.47'	LT	---	391.65	13	13	1	
S3	1198+15.83	18.67'	RT	396.67	394.00				1
S4	1198+15.83	31.75'	RT	---	391.65	13	13	1	
S5	1198+15.83	26.00'	LT	---	391.66				
S6	1198+15.83	26.00'	RT	---	391.66				
<b>TOTALS</b>						<b>26</b>	<b>26</b>	<b>2</b>	<b>2</b>

## SEEDING & MULCHING



### GENERAL NOTES

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

ON DETOUR ROADS, SLOPES SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF ANY GIVEN STAGE GRADING. TEMPORARY SEEDING SHALL BE CLASS 7.

FERTILIZER NUTRIENTS SHALL BE APPLIED TO ALL SEEDED AREAS. LIMESTONE SHALL BE APPLIED TO ALL AREAS OF FINAL SEEDING.

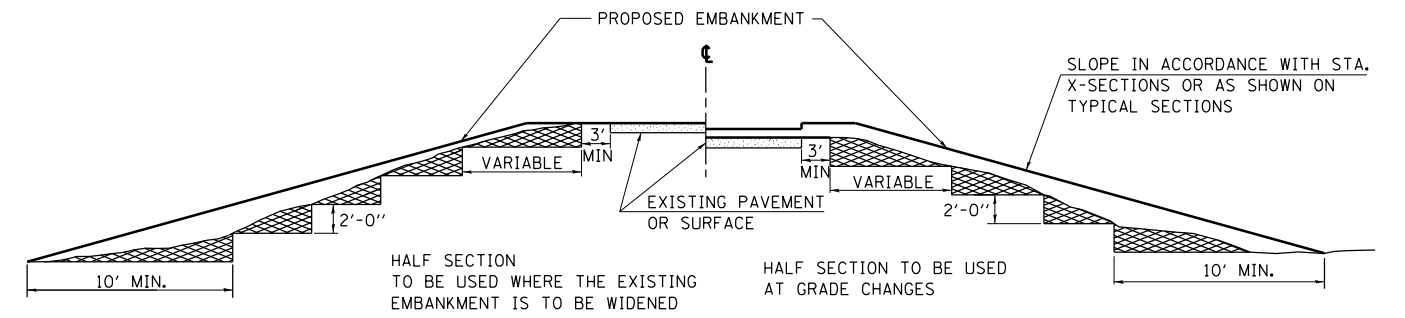
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR ROAD AND BRIDGE CONSTRUCTION.

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

STD. 9-12

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08
REVISED	5-16-13

## TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

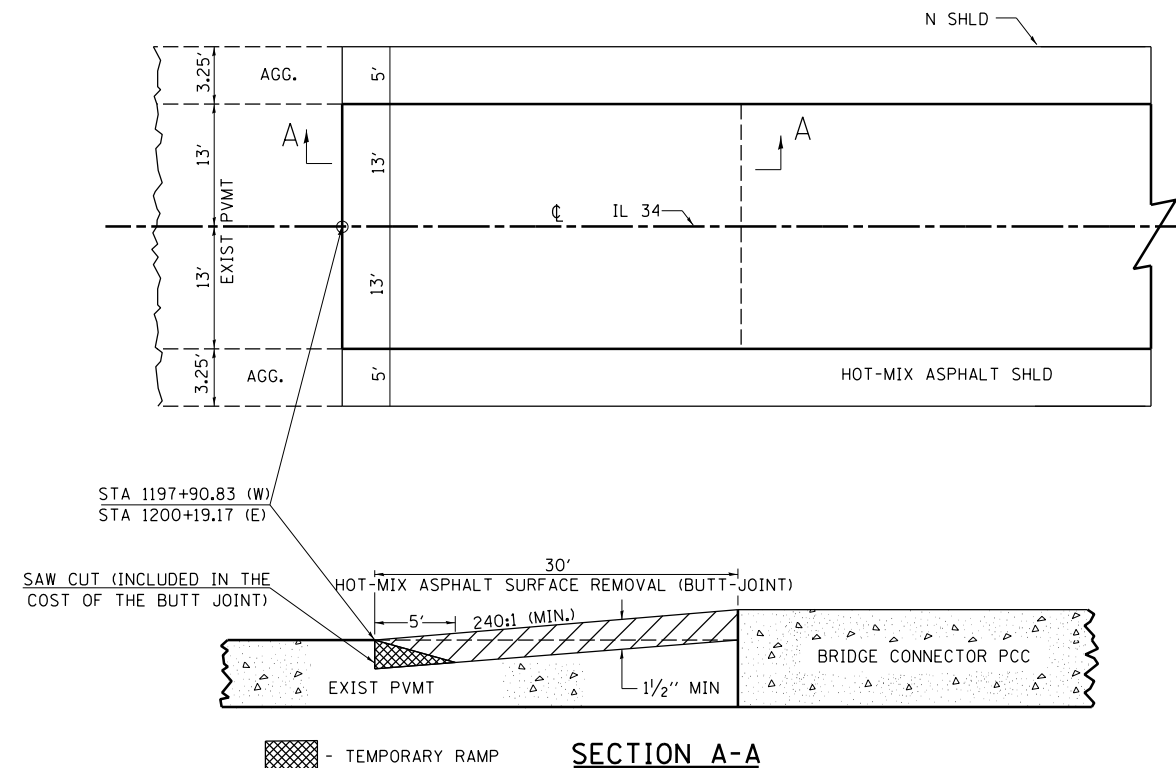


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

STD. 9-16

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08
REVIEWED	5-17-13

## BUTT JOINT



STD. 9-86

REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	5-17-13
REVISED	02-17-17

FILE NAME =	USER NAME = oster00605	DESIGNED - CAD	REVISED -
D978166-sht-standards		DRAWN - JEO	REVISED -
MODEL = Standards - 1	PLOT SCALE = 2.0000' / in.	CHECKED - MH	REVISED -
	PLOT DATE = 1/11/2018	DATE - 12/12/2017	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

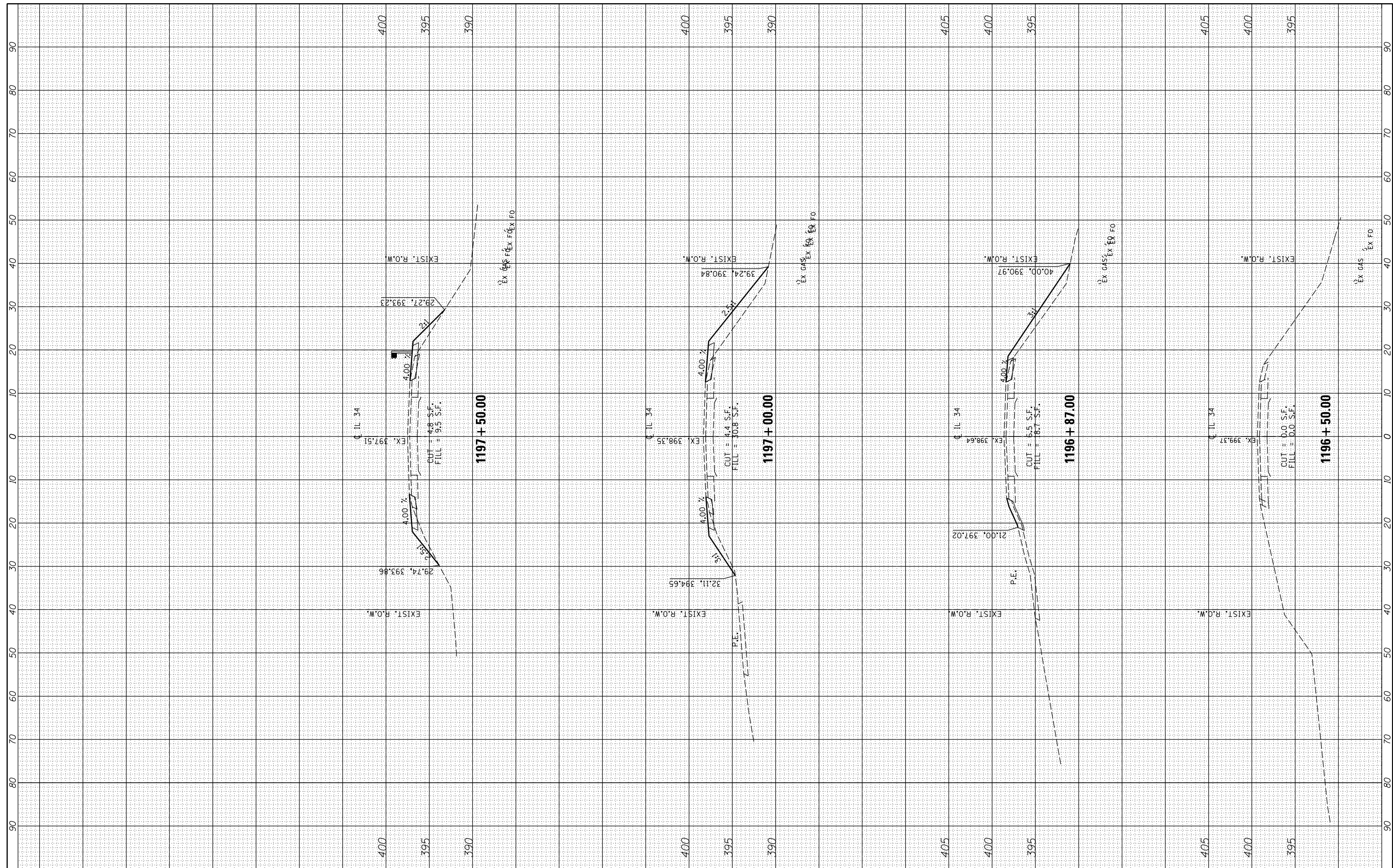
DISTRICT 9 STANDARDS  
IL-34 (OVER UNNAMED STREAM)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	61
CONTRACT NO. 78166				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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

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



FILE NAME =	USER NAME = oster00605	DESIGNED -	REVISED -
I:\08jobs\08H0131\W012-SN083-0027\Unnamed Creek\PHI\CADD\Road\Mod1\C-XS-sht-Final.dgn		DRAWN -	REVISED -
PLOT SCALE = 20.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 1/11/2018		DATE -	REVISED -

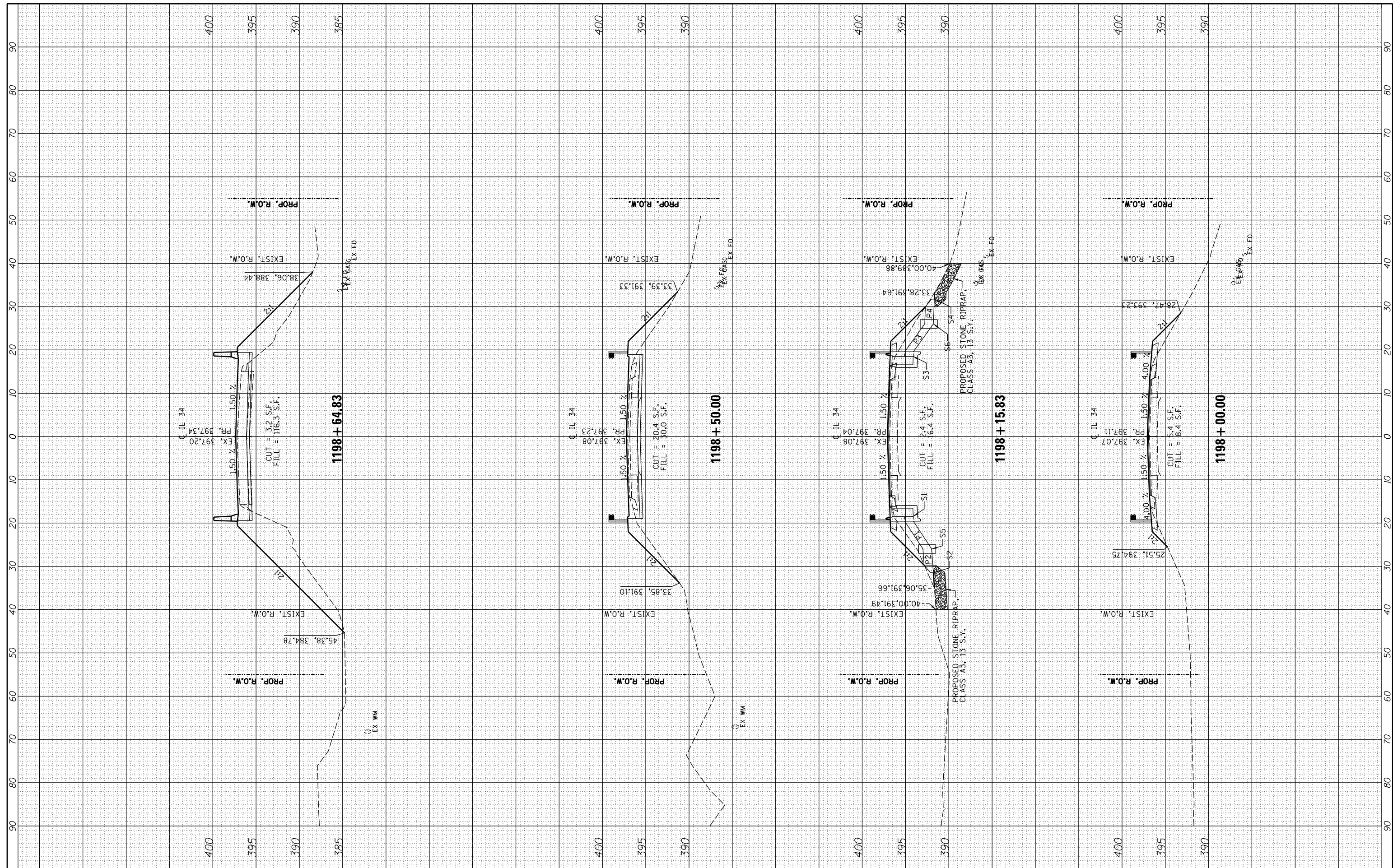
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS IL-34 (OVER UNNAMED STREAM)</b>	
SCALE: 1"=5'V; 1"=10'H	SHEET NO. 1 OF 5 SHEETS
STA. 1195+50.00 TO STA. 1196+86.00	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	62
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

FINL	SURVEYED	DATE
SURVEY	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

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



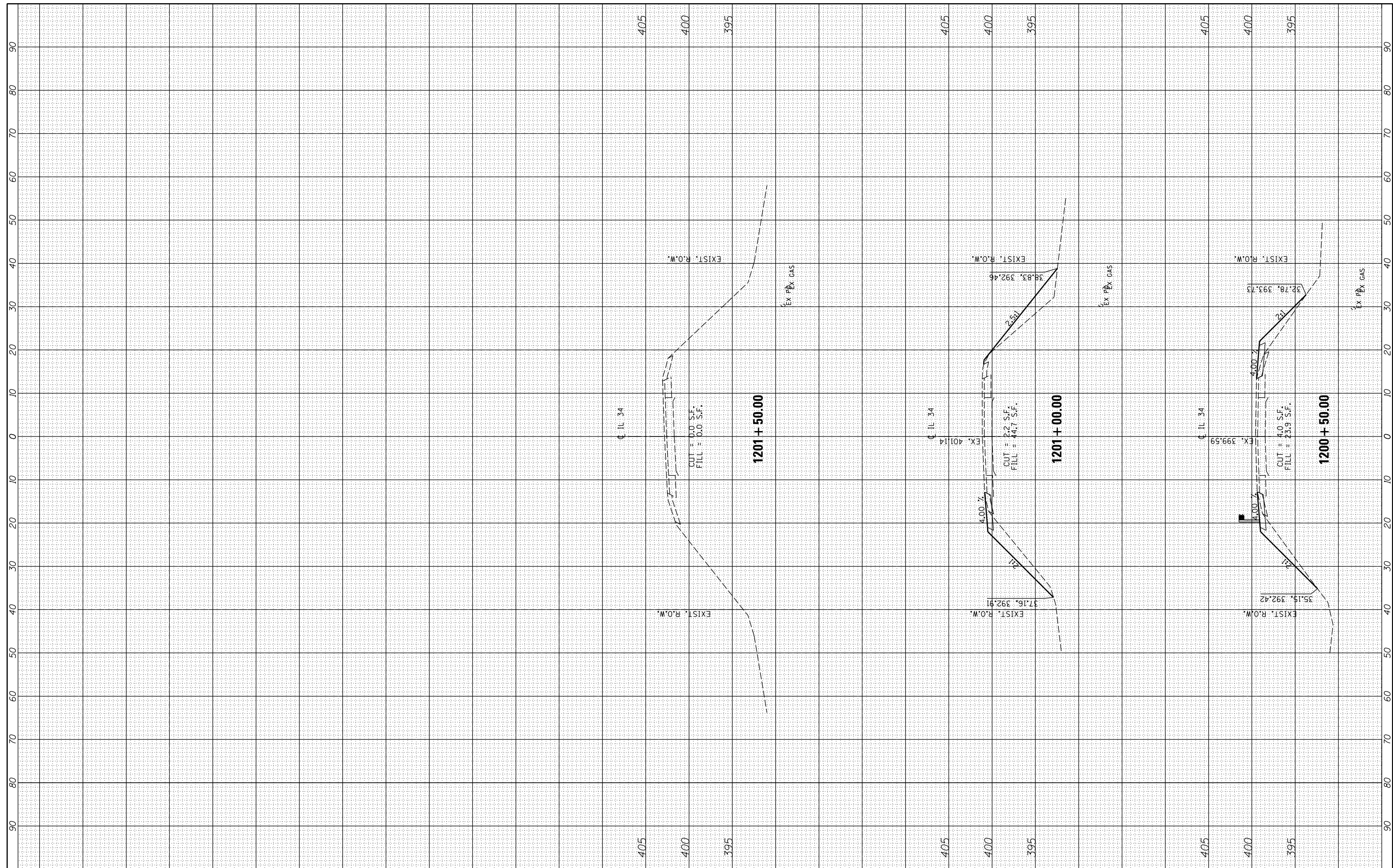
FILE NAME = I:\08_jobs\08H0131\W012-SN083-0027\Unnamed Creek\PH1\CADD\Road\Mod1\C-XS-sht-Final.dgn	USER NAME = oster00605	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS IL-34 (OVER UNNAMED STREAM)</b>			F.A. RTE. = 869	SECTION = 104B-2	COUNTY = SALINE	TOTAL SHEETS = 87	SHEET NO. = 63
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISED -	REVISED -		SCALE: 1"=5'V; 1"=10'H	SHEET NO. 2 OF 5 SHEETS	STA. 1197+00.00 TO STA. 1198+50.00	CONTRACT NO. 78166				
PLOT DATE = 1/11/2018	DATE -	REVISED -	REVISED -		ILLINOIS FED. AID PROJECT							





FINL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



FILE NAME =	USER NAME = oster00605	DESIGNED -	REVISED -
I:\08jobs\08H0131\W012-SN083-0027\Unnamed Creek\PH1\CADD\Road\Mod1\C-XS-sht-Final.dgn		DRAWN -	REVISED -
PLOT SCALE = 20.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 1/11/2018		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS IL-34 (OVER UNNAMED STREAM)</b>	
SCALE: 1"=5'V; 1"=10'H	SHEET NO. 4 OF 5 SHEETS
STA. 1200+50.00 TO STA. 1202+00.00	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	65
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

B.M.#227: Cut "C" on top of N.E. wingwall of Existing Structure No. 083-0027. El. 395.642

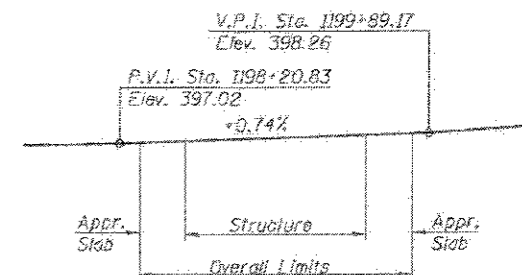
Existing Structure (No. 083-0027):

The original abutments were built 1928 under S.B.J. Rte. 143 Sec. 104B Sta. 1199+05. In 1976 approximately 3'-6" of the top of the original abutment was removed and a new abutment cap was constructed on top of the original abutment wall. The existing superstructure was replaced with 21" PPC Deck Beams with a 3/4" wearing surface. The existing bridge has a back to back of abutment length of 52'-4 1/4", an out to out of deck width of 33'-0" and a zero degree skew.

The structure will be removed and replaced using stage construction. No Salvage

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut. E. Abut.
	389.70 390.27



**PROFILE GRADE - IL. RTE. 34**

**WATERWAY INFORMATION TABLE**

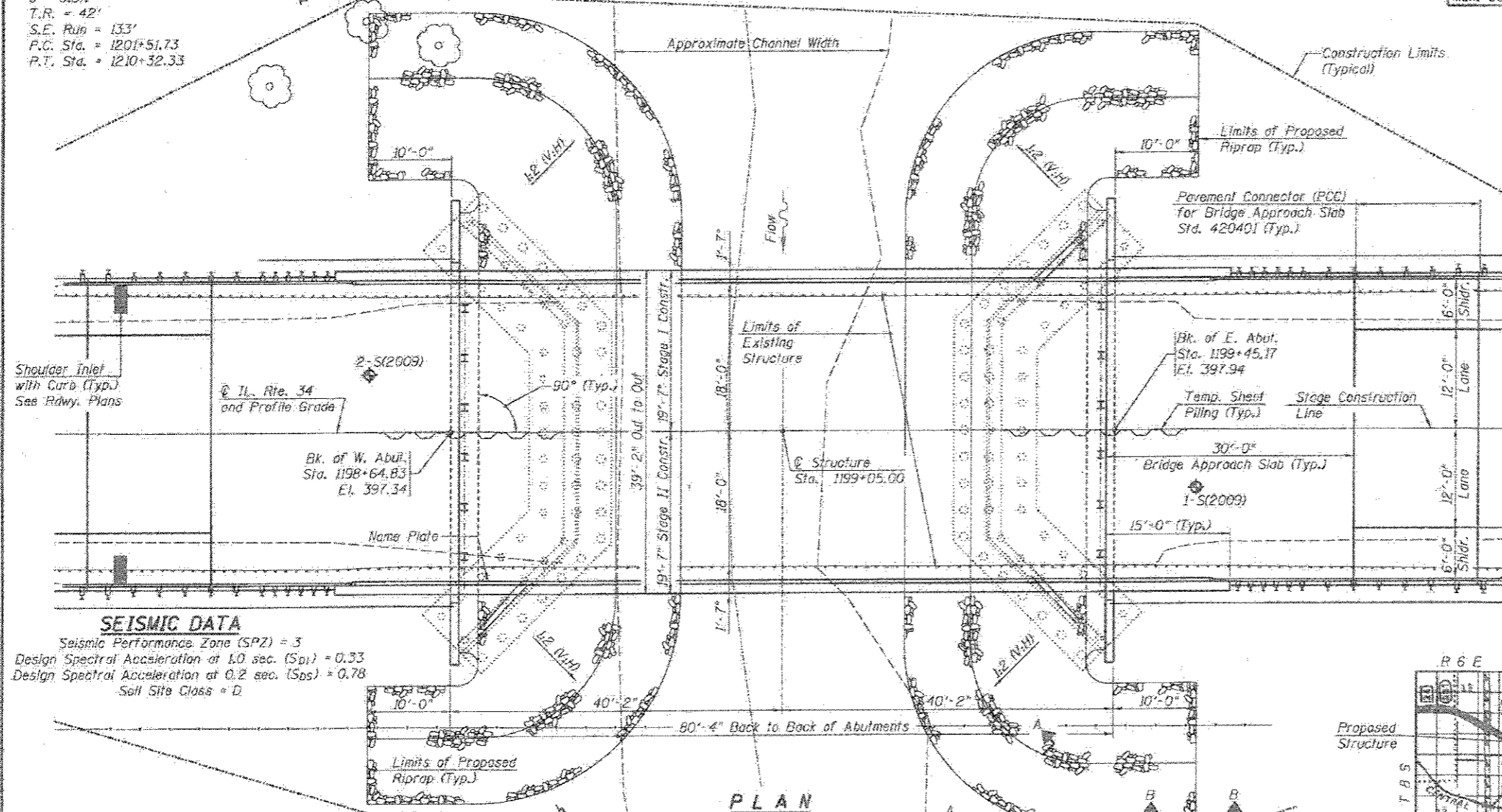
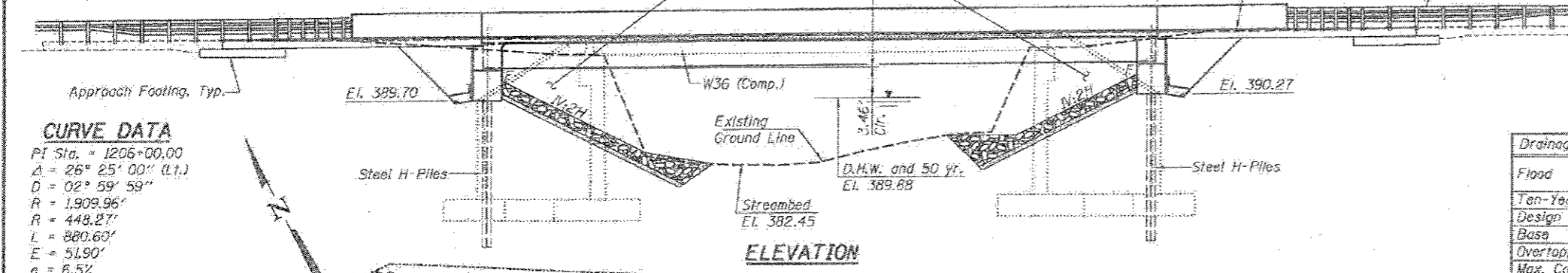
Drainage Area = 6.387 Sq. Mi. Low Grade Elev. 397.08 @ Sta. 1198+29.25

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater Lh. Exist.	Prop.
Ten-Year	10	1002	221.05	226.84	388.51	0.05	0.04	388.56	388.55	
Design	50	1566	289.03	307.22	389.88	0.08	0.03	389.96	389.91	
Base	100	1812	312.84	337.16	390.36	0.09	0.03	390.45	390.39	
Overtopping										
Max. Calc.	500	2444	363.95	404.52	391.39	0.13	0.02	391.52	391.41	

**CURVE DATA**

PI Sta. = 1206+00.00  
 Δ = 26° 25' 00" (L.)  
 D = 02° 59' 59"  
 R = 1,909.96'  
 R = 448.27'  
 L = 880.60'  
 E = 51.90'  
 e = 6.5%  
 T.R. = 42'  
 S.E. Run = 133'  
 P.C. Sta. = 1201+51.73  
 P.T. Sta. = 1210+32.33

**ELEVATION**



**PLAN**

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 3  
 Design Spectral Acceleration at 1.0 sec. (S<sub>1</sub>) = 0.33  
 Design Spectral Acceleration at 0.2 sec. (S<sub>s</sub>) = 0.78  
 Soil Site Class = D

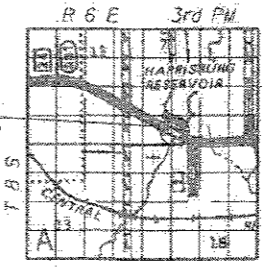
**DESIGN SPECIFICATIONS**

2010 AASHTO LRFD Bridge Design Specifications 5th Edition

**APPROVED**  
 For Structural Adequacy Only  
*[Signature]*  
 Engineer of Bridges & Structures



*[Signature]*  
 SIGNATURE  
 1/12/2018  
 DATE  
 LIC. EXP. DATE: 11/30/2018



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**  
 IL. ROUTE 34 over UNNAMED STREAM  
 F.A.P. ROUTE 869 - SECTION 104B-2  
 SALINE COUNTY  
 STATION 1199+05.00  
 STRUCTURE NO. 083-0068

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

DESIGNED	MNM	REVISION	
CHECKED	TEH	REVISION	
DRAWN	Rad	REVISION	
CHECKED	MNM	REVISION	

USER NAME	DESIGNED	REVISION
DESIGNED - MNM	CHECKED - TEH	REVISION -
CHECKED - MNM	DRAWN - Rad	REVISION -
	CHECKED - MNM	REVISION -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
 STRUCTURE NO. 083-0068  
 SHEET NO. 01 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	66
CONTRACT NO. 78166			ILLINOIS FED. AID PROJECT	

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 3. Bolts 7/8 in.  $\phi$ , holes 15/16 in.  $\phi$ , unless otherwise noted.

Calculated weight of Structural Steel = 76,170 lbs.

All structural steel shall be AASHTO M 270 Grade 50W.

No field welding is permitted except as specified in the contract documents.

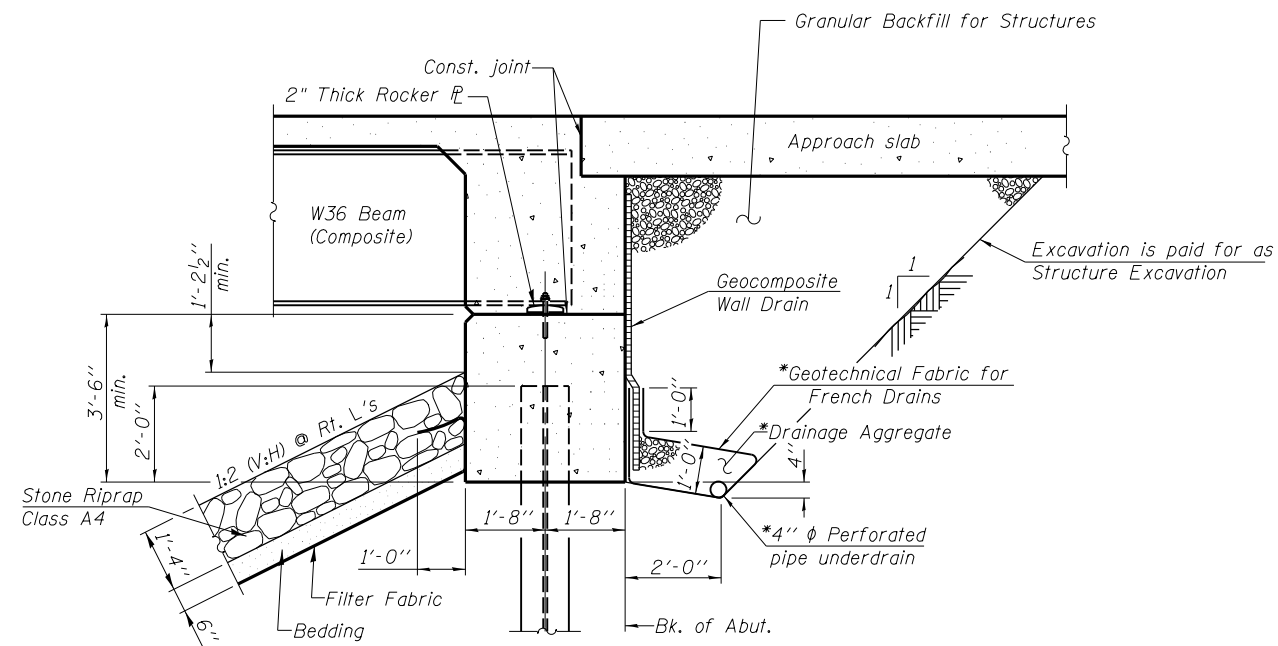
Reinforcement bars designated (E) shall be epoxy coated.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete diaphragm plus 1'-6". Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

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

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Slipforming of parapets is not allowed.

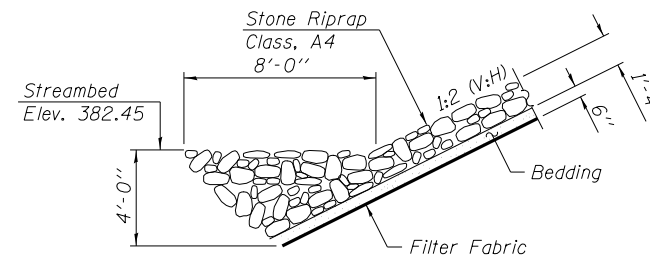


**SECTION THRU INTEGRAL ABUTMENT**  
(Horiz. dim. @ Rt. L's)

\*Included in the cost of Pipe Underdrains for Structures.  
(See Special Provisions)

**Note:**

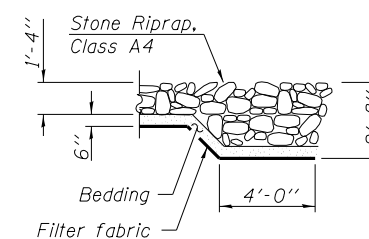
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110).



**SECTION A-A**

STATION 1199+05.00  
BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.P. RT. 869 SEC. 104B-2  
LOADING HL93  
STRUCTURE NO. 083-0068

**NAME PLATE**  
See Std. 515001



**SECTION B-B**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu. Yd.	-	126	126
Stone Riprap, Class A4	Sq. Yd.	-	650	650
Filter Fabric	Sq. Yd.	-	650	650
Removal of Existing Structures No. 2	Each	-	-	1
Structure Excavation	Cu. Yd.	-	200	200
Concrete Structures	Cu. Yd.	-	65.8	65.8
Concrete Superstructure	Cu. Yd.	134.0	-	134.0
Bridge Deck Grooving	Sq. Yd.	523	-	523
Protective Coat	Sq. Yd.	652	-	652
Concrete Superstructure (Approach Slab)	Cu. Yd.	107.6	-	107.6
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Stud Shear Connectors	Each	1386	-	1386
Reinforcement Bars, Epoxy Coated	Pound	69320	8020	77340
Bar Splicers	Each	454	116	570
Furnishing Steel Piles HP12x63	Foot	-	450	450
Driving Piles	Foot	-	450	450
Test Pile Steel HP12x63	Each	-	1	1
Name Plates	Each	1	-	1
Anchor Bolts, 1"	Each	24	-	24
Geocomposite Wall Drain	Sq. Yd.	-	74	74
Pipe Underdrains for Structures 4"	Foot	-	144	144
Asbestos Bearing Pad Removal	Each	22	-	22
Temporary Sheet Piling	Sq. Ft.	-	779	779
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

**INDEX OF SHEETS**

- 1 General Plan
- 2 General Data
- 3 Substructure Layout and Temporary Sheet Piling Details
- 4 Stage Construction Details
- 5 Temporary Concrete Barrier for Stage Construction
- 6-7 Top of Slab Elevations - Bridge Deck
- 8-9 Top of Slab Elevations - Approach Slabs
- 10 Superstructure
- 11 Superstructure Details
- 12 Integral Abutment Diaphragm Details
- 13-14 Bridge Approach Slab Details
- 15 Structural Steel
- 16 Structural Steel Details
- 17 Bearing Details
- 18 West Abutment
- 19 East Abutment
- 20 HP Pile Details
- 21 Bar Splicer Assembly and Mechanical Splicer Details
- 22 Boring Logs

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

LAYOUT	02/22/11
DRAWN	02/22/11
REVIEWED	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

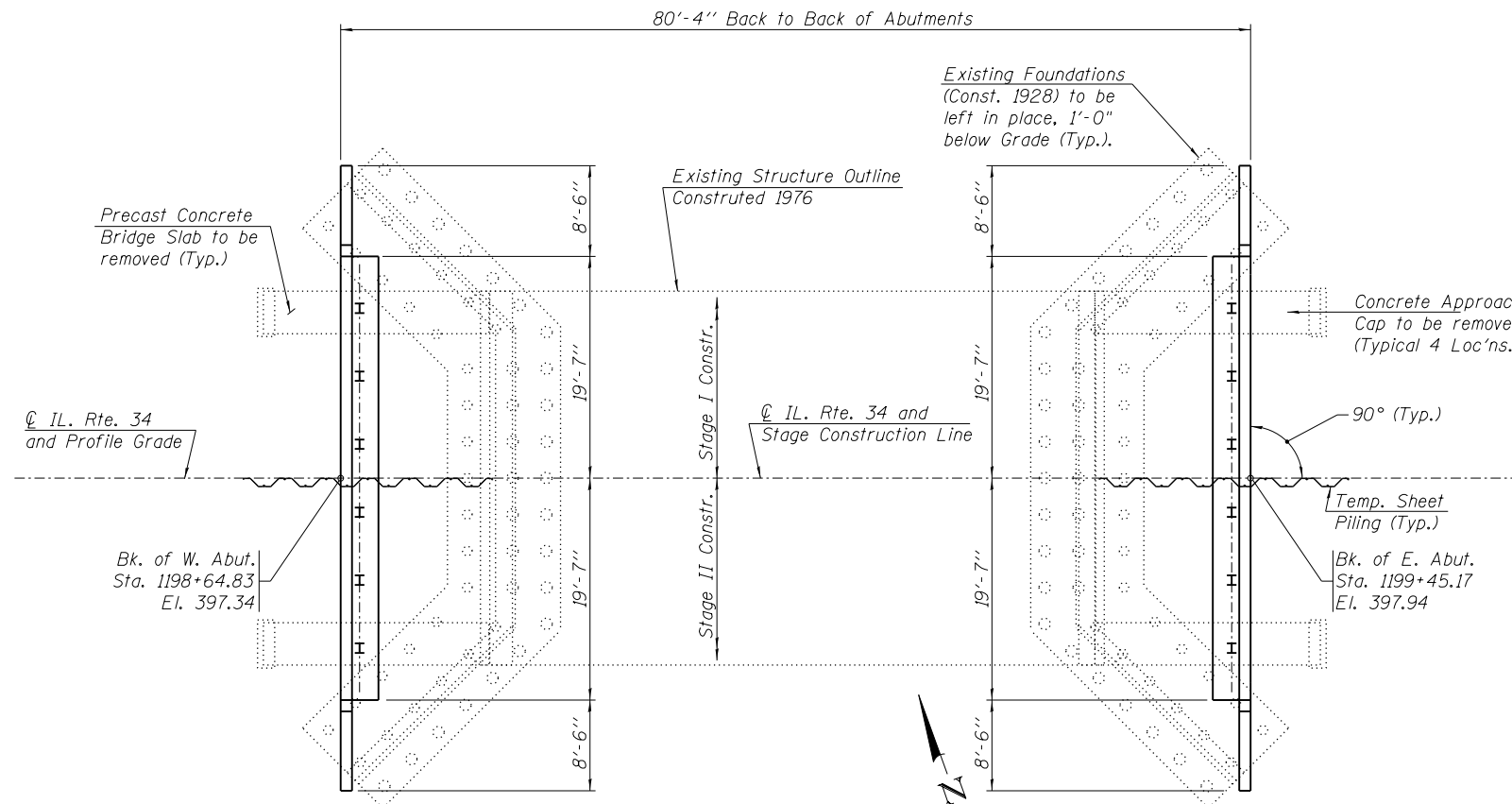
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
STRUCTURE NO. 083-0068**

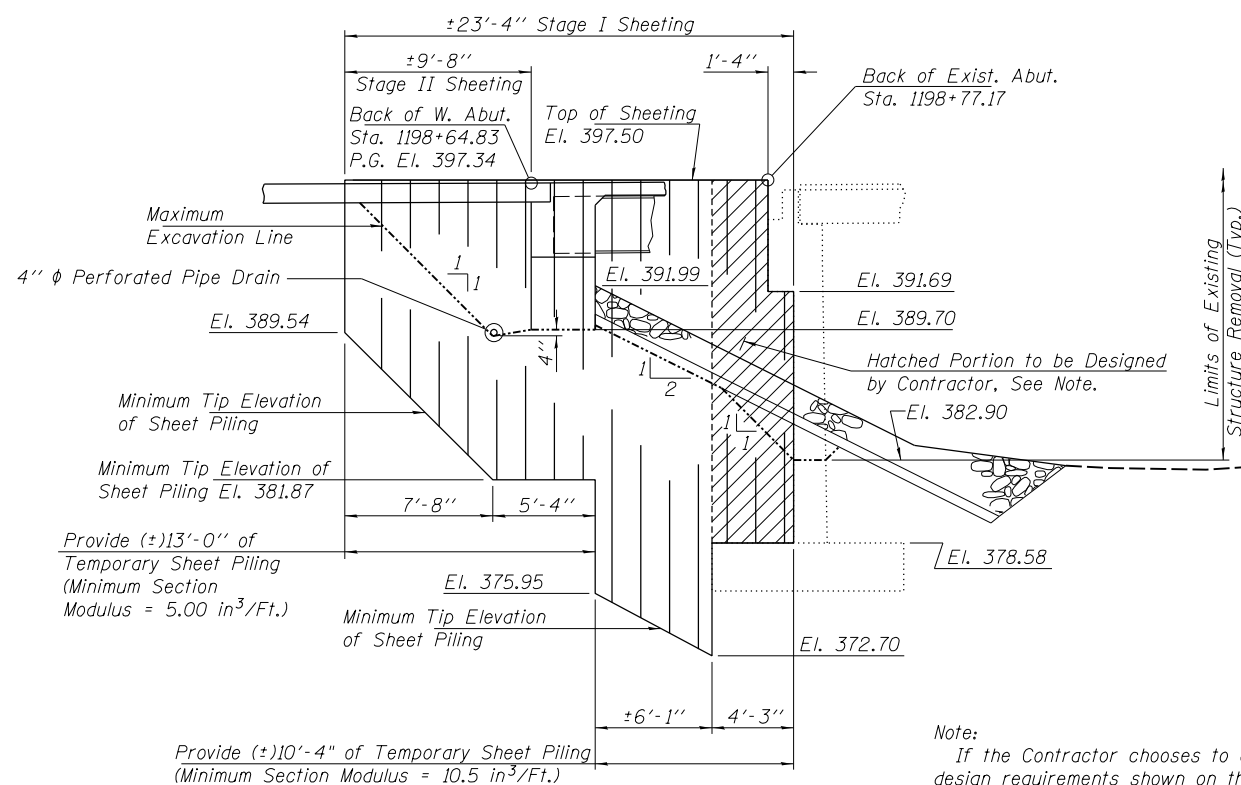
SHEET NO. 02 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	67
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

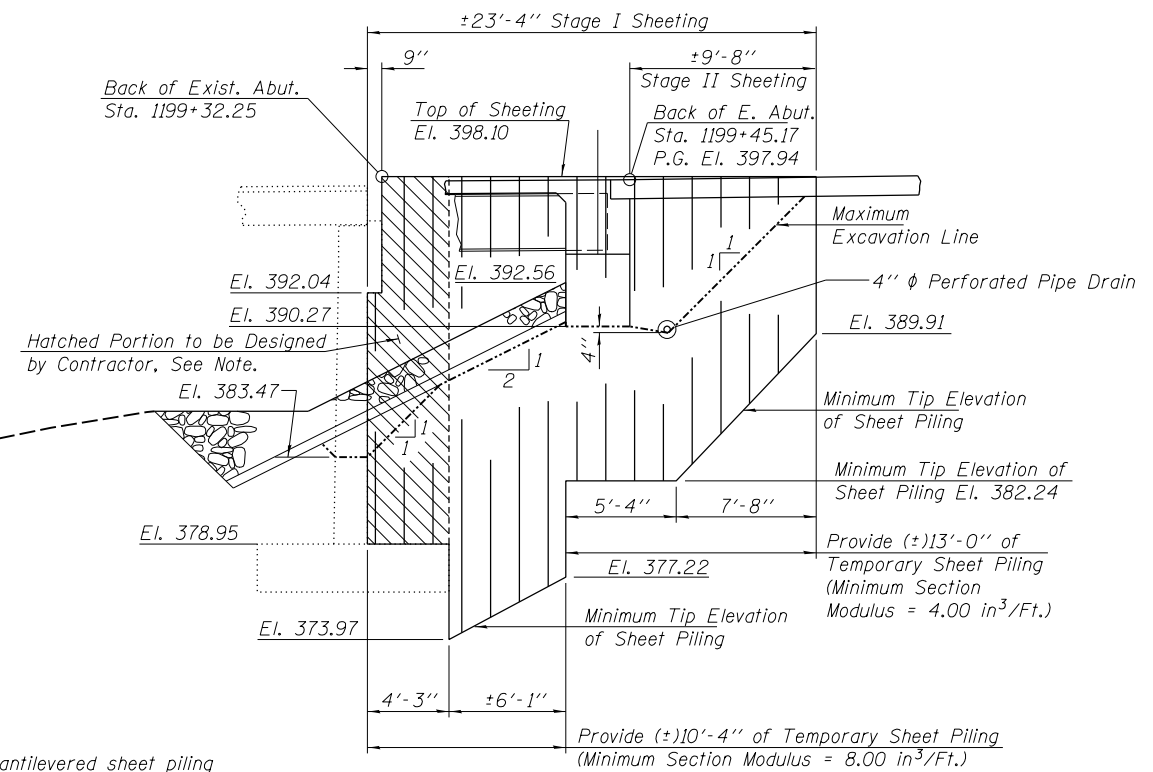
PROFESSIONAL DESIGN FIRM LICENSE #184-001084



**SUBSTRUCTURE LAYOUT**



**TEMPORARY SHEET PILING**  
(West Abutment)



**TEMPORARY SHEET PILING**  
(East Abutment)

Note:  
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.

LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

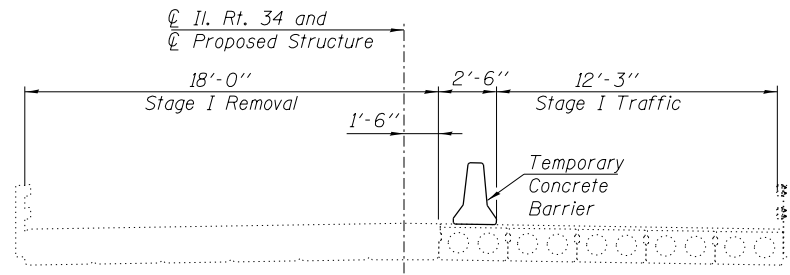
SUBSTRUCTURE LAYOUT & TEMPORARY SHEET PILING DETAILS  
STRUCTURE NO. 083-0068

SHEET NO. 03 OF 22 SHEETS

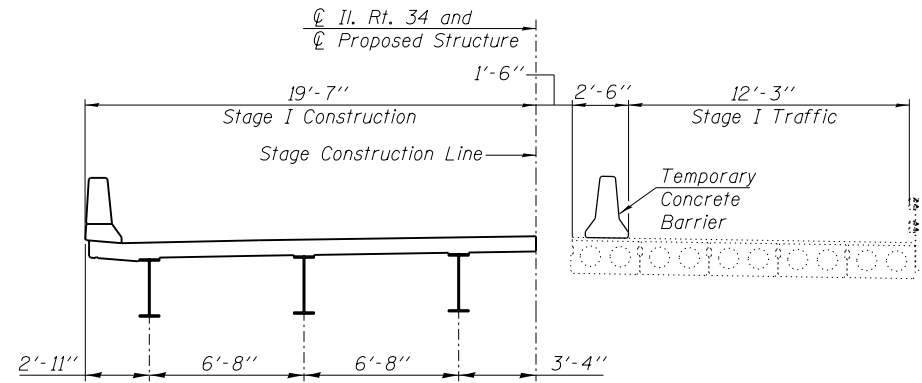
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	68
CONTRACT NO. 78166				

ILLINOIS FED. AID PROJECT

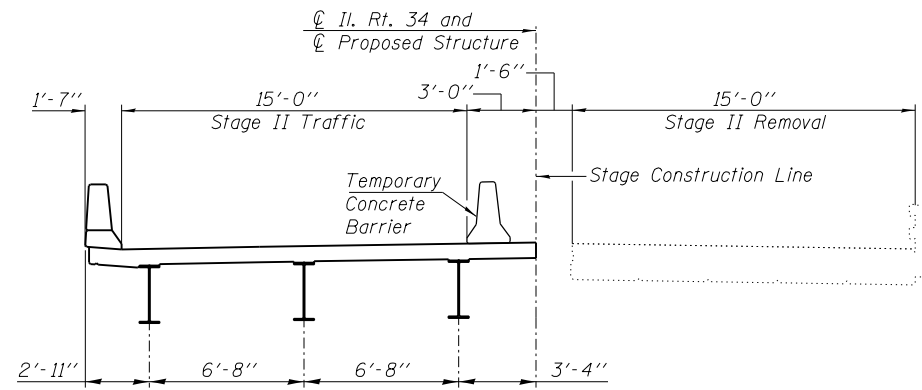
PROFESSIONAL DESIGN FIRM LICENSE #184-001084



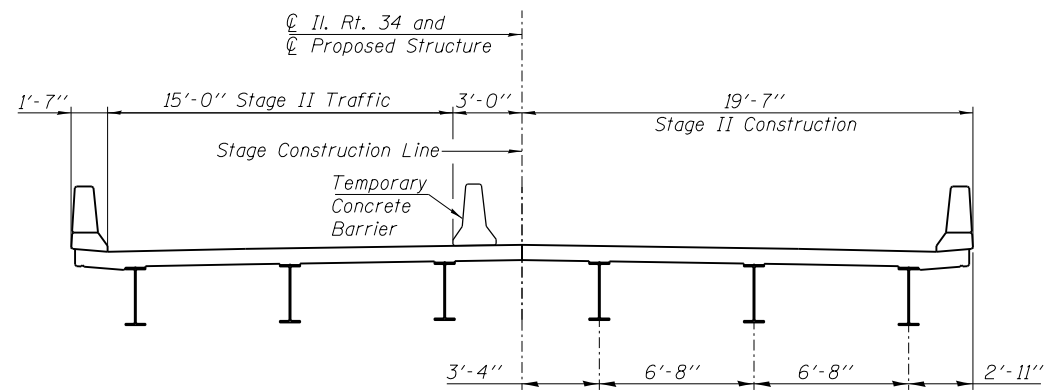
**STAGE I REMOVAL**  
Looking East



**STAGE I CONSTRUCTION**  
Looking East



**STAGE II REMOVAL**  
Looking East



**STAGE II CONSTRUCTION**  
Looking East

Note:  
See Roadway Plans for Temporary Concrete  
Concrete Barrier Quantities.  
See Sheet 5 of 22 for Temporary Concrete  
Barrier Details.

LAYOUT	MNM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MNM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

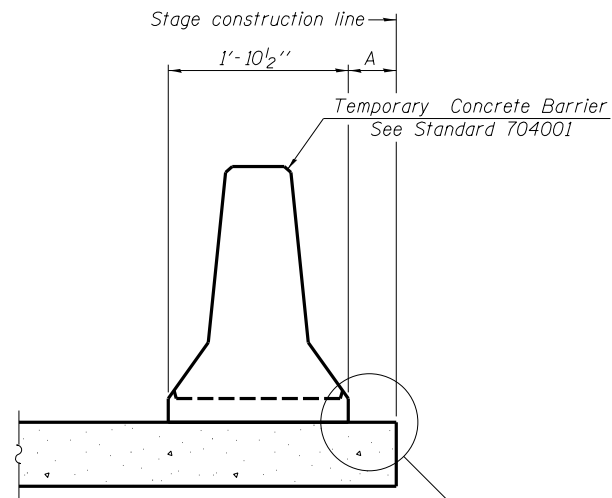
**STAGE CONSTRUCTION DETAILS  
STRUCTURE NO. 083-0068**

SHEET NO. 04 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	69
<b>CONTRACT NO. 78166</b>				

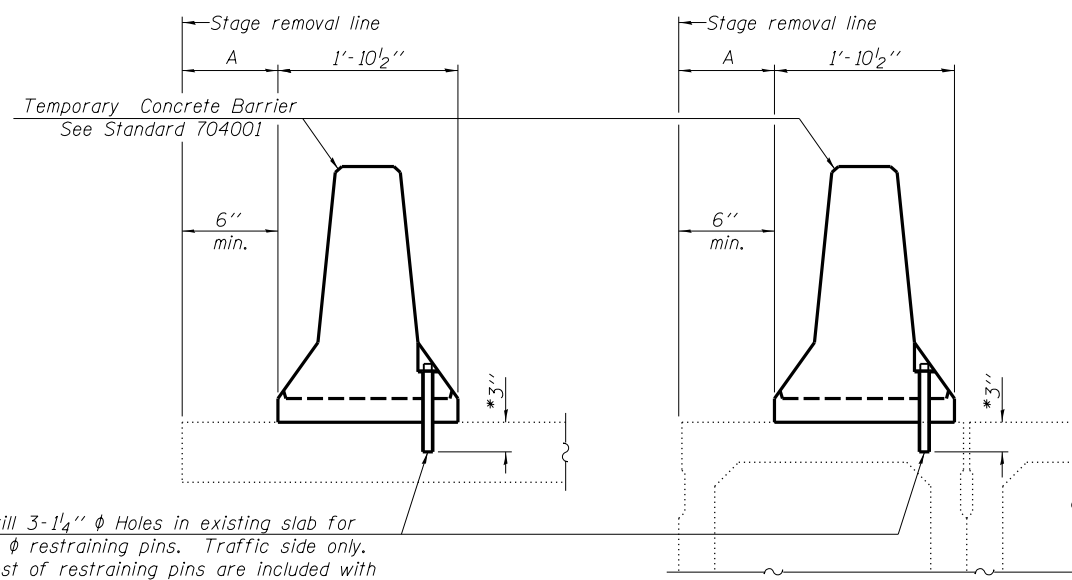
ILLINOIS FED. AID PROJECT

PROFESSIONAL DESIGN FIRM LICENSE #184-001084



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

**NEW SLAB OR NEW DECK BEAM**



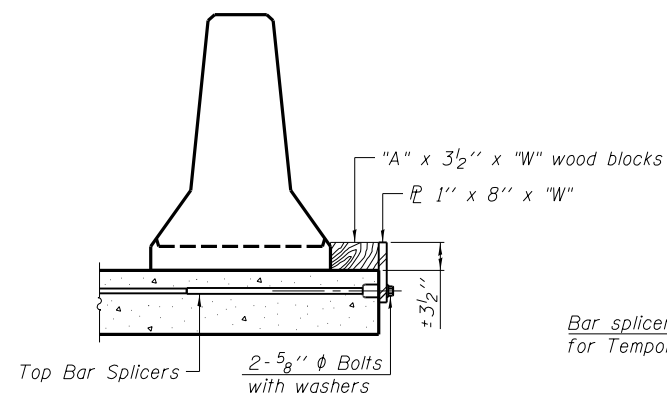
Drill 3-1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

**EXISTING SLAB**

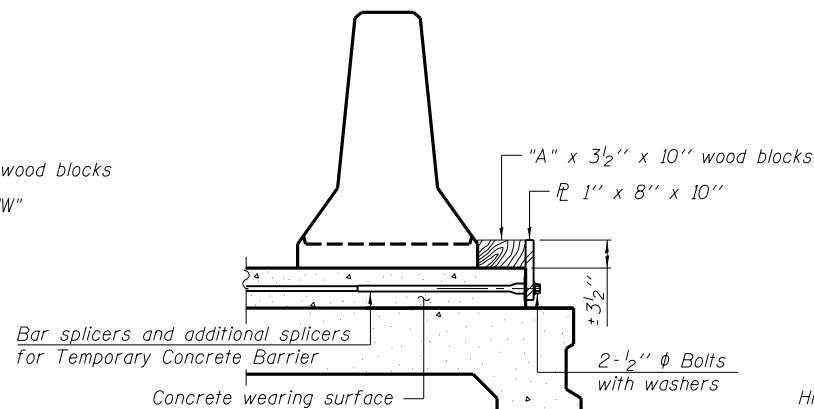
**EXISTING DECK BEAM**

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

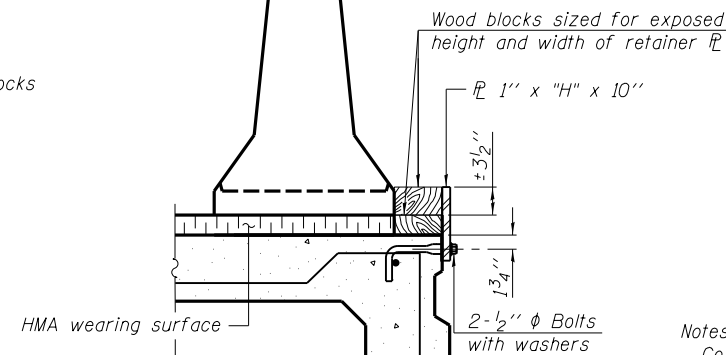
**SECTIONS THRU SLAB OR DECK BEAM**



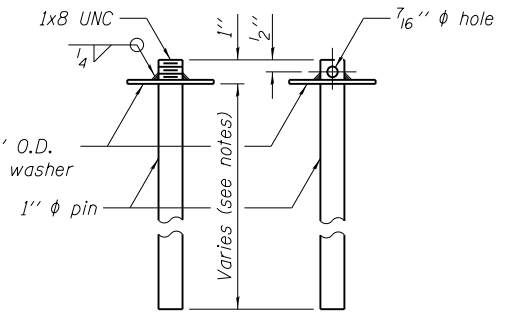
**DETAIL I**



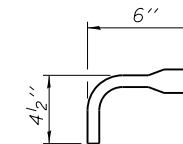
**DETAIL II**



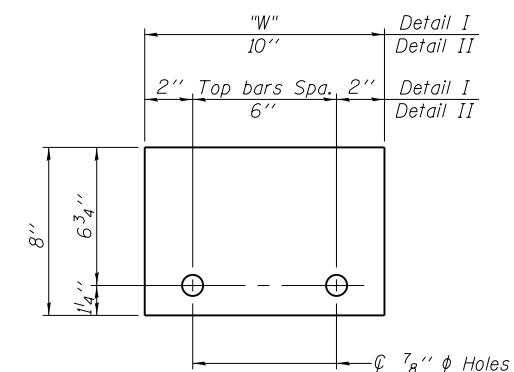
**DETAIL III**



**RESTRAINING PIN**

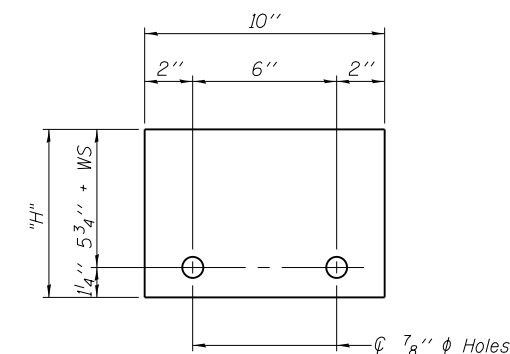


**BAR SPLICER FOR #4 BAR - DETAIL III**



**STEEL RETAINER 1" x 8" x "W"**

(Detail I and II)



**STEEL RETAINER 1" x "H" x 10"**

(Detail III)

**Notes:**  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate  $\phi$  of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1'2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

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

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

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

LAYOUT	MM	02/21/11
DRAWN	ROD	02/22/11
REVIEWED	MM	08/31/11



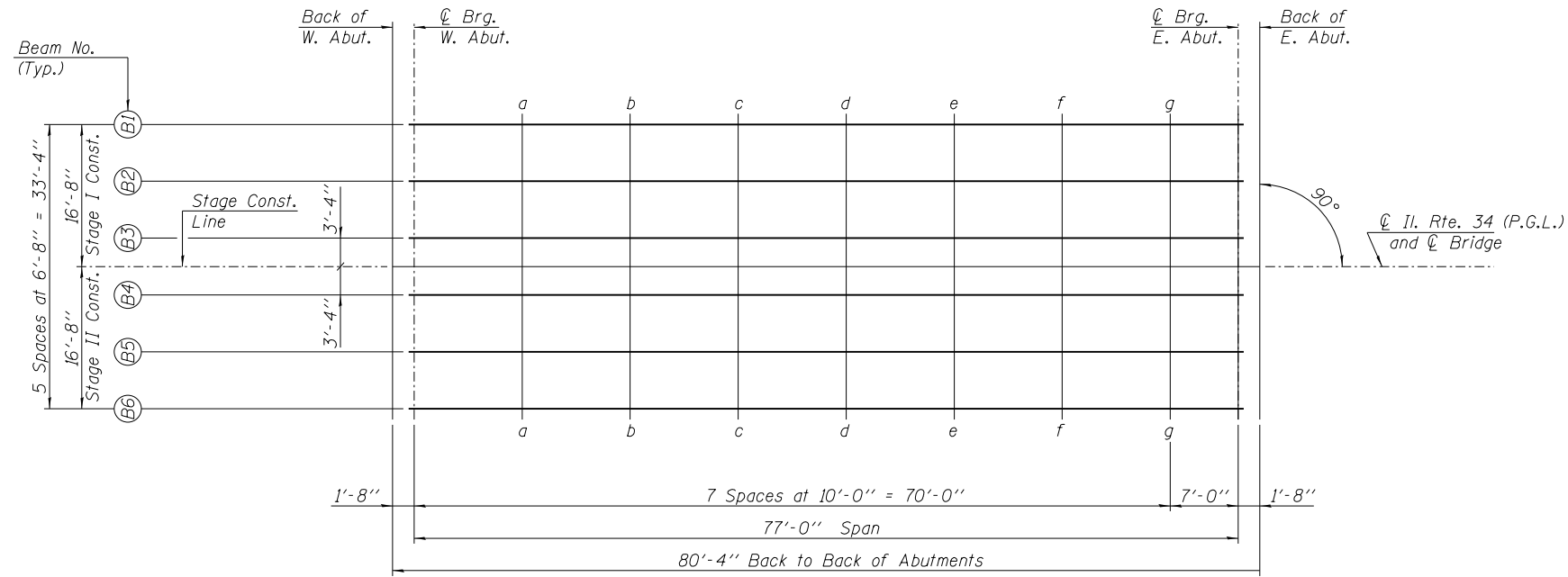
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	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - ROD	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

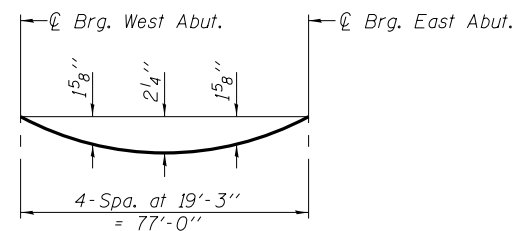
**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 083-0068**

SHEET NO. 05 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	70
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				



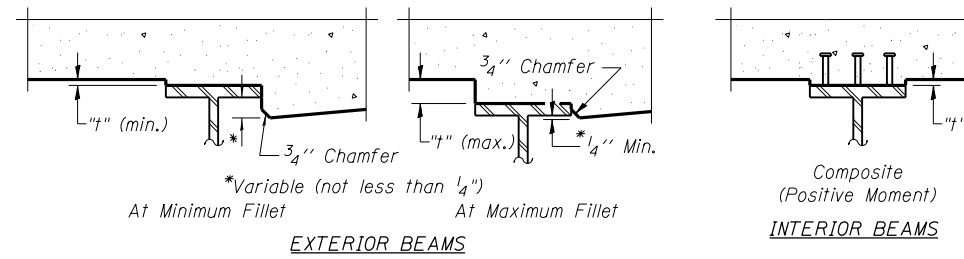
**DIAGRAMMATIC PLAN**



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 7 of 22.



**FILLET HEIGHTS**

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet 7 of 22, minus 8" slab thickness, equals the fillet heights "t" above top flange of beams.

LAYOUT	MNM	02/21/11
DRAWN	Rcd	02/22/11
REVIEWED	MNM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rcd	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 1 OF 2)  
STRUCTURE NO. 083-0068

SHEET NO. 06 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	71
CONTRACT NO. 78166				

ILLINOIS FED. AID PROJECT

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	-16.67	397.06	397.06
☉ Brg. W. Abut	1198+66.50	-16.67	397.08	397.08
a	1198+76.50	-16.67	397.16	397.23
b	1198+86.50	-16.67	397.23	397.37
c	1198+96.50	-16.67	397.30	397.47
d	1199+06.50	-16.67	397.38	397.57
e	1199+16.50	-16.67	397.45	397.61
f	1199+26.50	-16.67	397.53	397.65
g	1199+36.50	-16.67	397.60	397.65
☉ Brg. E. Abut.	1199+43.50	-16.67	397.65	397.65
Bk. E. Abut.	1199+45.17	-16.67	397.66	397.66

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	-10.00	397.19	397.19
☉ Brg. W. Abut	1198+66.50	-10.00	397.21	397.21
a	1198+76.50	-10.00	397.28	397.35
b	1198+86.50	-10.00	397.35	397.49
c	1198+96.50	-10.00	397.43	397.59
d	1199+06.50	-10.00	397.50	397.69
e	1199+16.50	-10.00	397.58	397.73
f	1199+26.50	-10.00	397.65	397.77
g	1199+36.50	-10.00	397.72	397.77
☉ Brg. E. Abut.	1199+43.50	-10.00	397.78	397.78
Bk. E. Abut.	1199+45.17	-10.00	397.79	397.79

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	-3.33	397.29	397.29
☉ Brg. W. Abut	1198+66.50	-3.33	397.31	397.31
a	1198+76.50	-3.33	397.38	397.45
b	1198+86.50	-3.33	397.45	397.59
c	1198+96.50	-3.33	397.53	397.69
d	1199+06.50	-3.33	397.60	397.79
e	1199+16.50	-3.33	397.68	397.83
f	1199+26.50	-3.33	397.75	397.87
g	1199+36.50	-3.33	397.82	397.87
☉ Brg. E. Abut.	1199+43.50	-3.33	397.88	397.88
Bk. E. Abut.	1199+45.17	-3.33	397.89	397.89

**☉ ROADWAY - ☉ BRIDGE & P.G.L. & S.C.L.**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	0.00	397.34	397.34
☉ Brg. W. Abut	1198+66.50	0.00	397.36	397.36
a	1198+76.50	0.00	397.43	397.50
b	1198+86.50	0.00	397.50	397.64
c	1198+96.50	0.00	397.58	397.74
d	1199+06.50	0.00	397.65	397.84
e	1199+16.50	0.00	397.73	397.88
f	1199+26.50	0.00	397.80	397.92
g	1199+36.50	0.00	397.87	397.92
☉ Brg. E. Abut.	1199+43.50	0.00	397.93	397.93
Bk. E. Abut.	1199+45.17	0.00	397.94	397.94

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	3.33	397.29	397.29
☉ Brg. W. Abut	1198+66.50	3.33	397.31	397.31
a	1198+76.50	3.33	397.38	397.45
b	1198+86.50	3.33	397.45	397.59
c	1198+96.50	3.33	397.53	397.69
d	1199+06.50	3.33	397.60	397.79
e	1199+16.50	3.33	397.68	397.83
f	1199+26.50	3.33	397.75	397.87
g	1199+36.50	3.33	397.82	397.87
☉ Brg. E. Abut.	1199+43.50	3.33	397.88	397.88
Bk. E. Abut.	1199+45.17	3.33	397.89	397.89

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	10.00	397.19	397.19
☉ Brg. W. Abut	1198+66.50	10.00	397.21	397.21
a	1198+76.50	10.00	397.28	397.35
b	1198+86.50	10.00	397.35	397.49
c	1198+96.50	10.00	397.43	397.59
d	1199+06.50	10.00	397.50	397.69
e	1199+16.50	10.00	397.58	397.73
f	1199+26.50	10.00	397.65	397.77
g	1199+36.50	10.00	397.72	397.77
☉ Brg. E. Abut.	1199+43.50	10.00	397.78	397.78
Bk. E. Abut.	1199+45.17	10.00	397.79	397.79

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theo. Grade Elevations Adj. for D.L. Deflection
Bk. W. Abut.	1198+64.83	16.67	397.06	397.06
☉ Brg. W. Abut	1198+66.50	16.67	397.08	397.08
a	1198+76.50	16.67	397.16	397.23
b	1198+86.50	16.67	397.23	397.37
c	1198+96.50	16.67	397.30	397.47
d	1199+06.50	16.67	397.38	397.57
e	1199+16.50	16.67	397.45	397.61
f	1199+26.50	16.67	397.53	397.65
g	1199+36.50	16.67	397.60	397.65
☉ Brg. E. Abut.	1199+43.50	16.67	397.65	397.65
Bk. E. Abut.	1199+45.17	16.67	397.66	397.66

LAYOUT	02/21/11
DRAWN	02/22/11
REVIEWED	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 2 OF 2)  
STRUCTURE NO. 083-0068

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	72
CONTRACT NO. 78166				

SHEET NO. 07 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



PROFESSIONAL DESIGN FIRM LICENSE #184-001084

**NORTH EDGE OF SHOULDER**

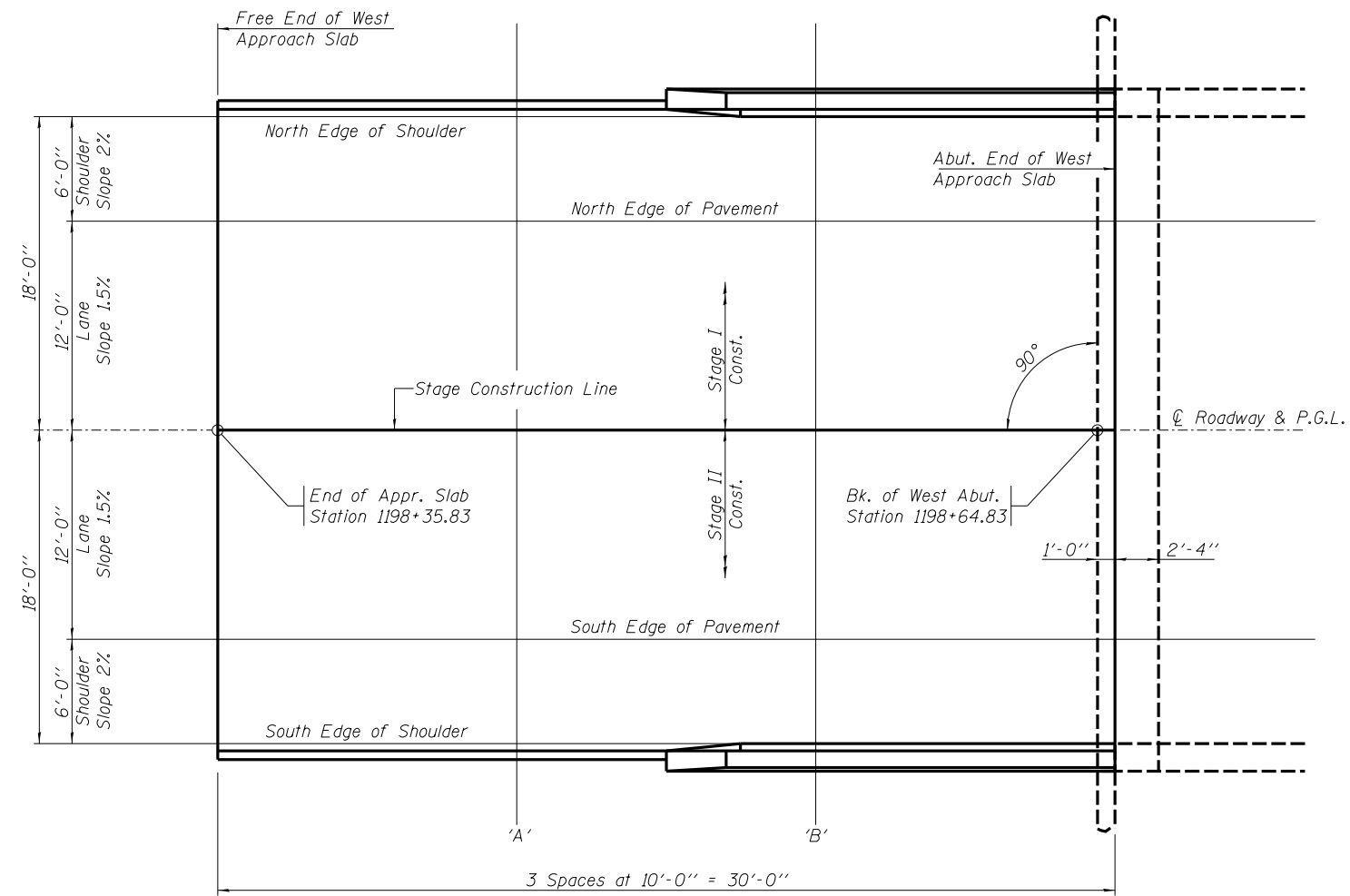
Location	Station	Offset	Theoretical Grade Elevations
Free End of West Appr.	1198+35.83	-18.00	396.83
'A'	1198+45.83	-18.00	396.90
'B'	1198+55.83	-18.00	396.98
Abut. End of West Appr.	1198+65.83	-18.00	397.05

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Free End of West Appr.	1198+35.83	-12.00	396.95
'A'	1198+45.83	-12.00	397.02
'B'	1198+55.83	-12.00	397.10
Abut. End of West Appr.	1198+65.83	-12.00	397.17

**☉ ROADWAY & P.G.L. & S.C.L.**

Location	Station	Offset	Theoretical Grade Elevations
Free End of West Appr.	1198+35.83	0.00	397.13
'A'	1198+45.83	0.00	397.20
'B'	1198+55.83	0.00	397.28
Abut. End of West Appr.	1198+65.83	0.00	397.35

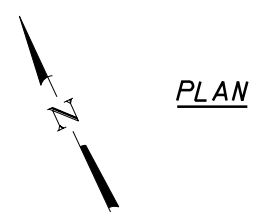


**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Free End of West Appr.	1198+35.83	12.00	396.95
'A'	1198+45.83	12.00	397.02
'B'	1198+55.83	12.00	397.10
Abut. End of West Appr.	1198+65.83	12.00	397.17

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
Free End of West Appr.	1198+35.83	18.00	396.83
'A'	1198+45.83	18.00	396.90
'B'	1198+55.83	18.00	396.98
Abut. End of West Appr.	1198+65.83	18.00	397.05



LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 083-0068**

SHEET NO. 08 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	73
CONTRACT NO. 78166				

ILLINOIS FED. AID PROJECT

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

**NORTH EDGE OF SHOULDER**

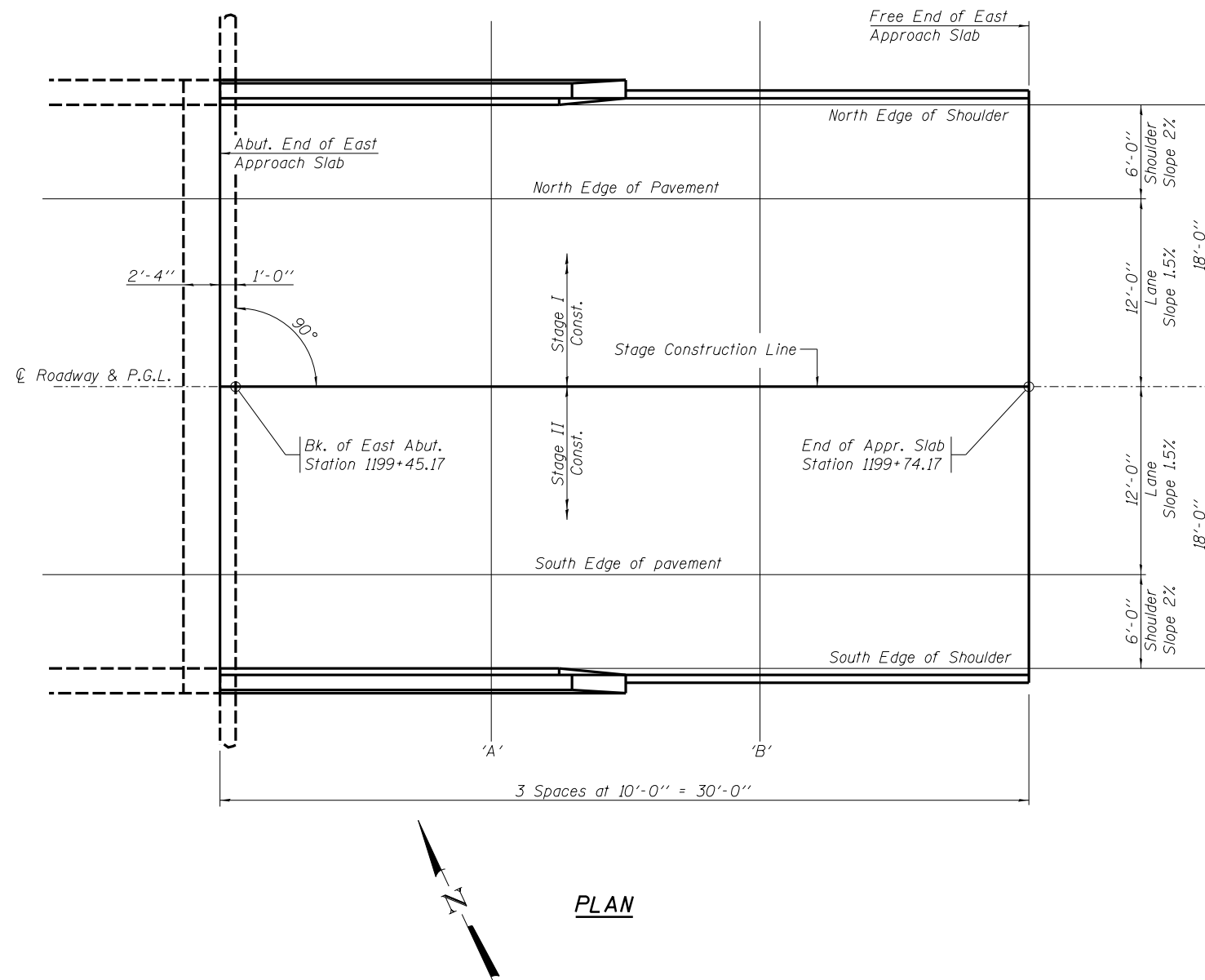
Location	Station	Offset	Theoretical Grade Elevations
Abut. End of East Appr.	1199+44.17	-18.00	397.63
'A'	1199+54.17	-18.00	397.70
'B'	1199+64.17	-18.00	397.78
Free End of East Appr.	1199+74.17	-18.00	397.85

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of East Appr.	1199+44.17	-12.00	397.75
'A'	1199+54.17	-12.00	397.82
'B'	1199+64.17	-12.00	397.90
Free End of East Appr.	1199+74.17	-12.00	397.97

**☉ ROADWAY & P.G.L. & S.C.L.**

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of East Appr.	1199+44.17	0.00	397.93
'A'	1199+54.17	0.00	398.00
'B'	1199+64.17	0.00	398.08
Free End of East Appr.	1199+74.17	0.00	398.15



**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of East Appr.	1199+44.17	12.00	397.75
'A'	1199+54.17	12.00	397.82
'B'	1199+64.17	12.00	397.90
Free End of East Appr.	1199+74.17	12.00	397.97

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of East Appr.	1199+44.17	18.00	397.63
'A'	1199+54.17	18.00	397.70
'B'	1199+64.17	18.00	397.78
Free End of East Appr.	1199+74.17	18.00	397.85

**PLAN**

LAYOUT	MNM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MNM	08/31/11



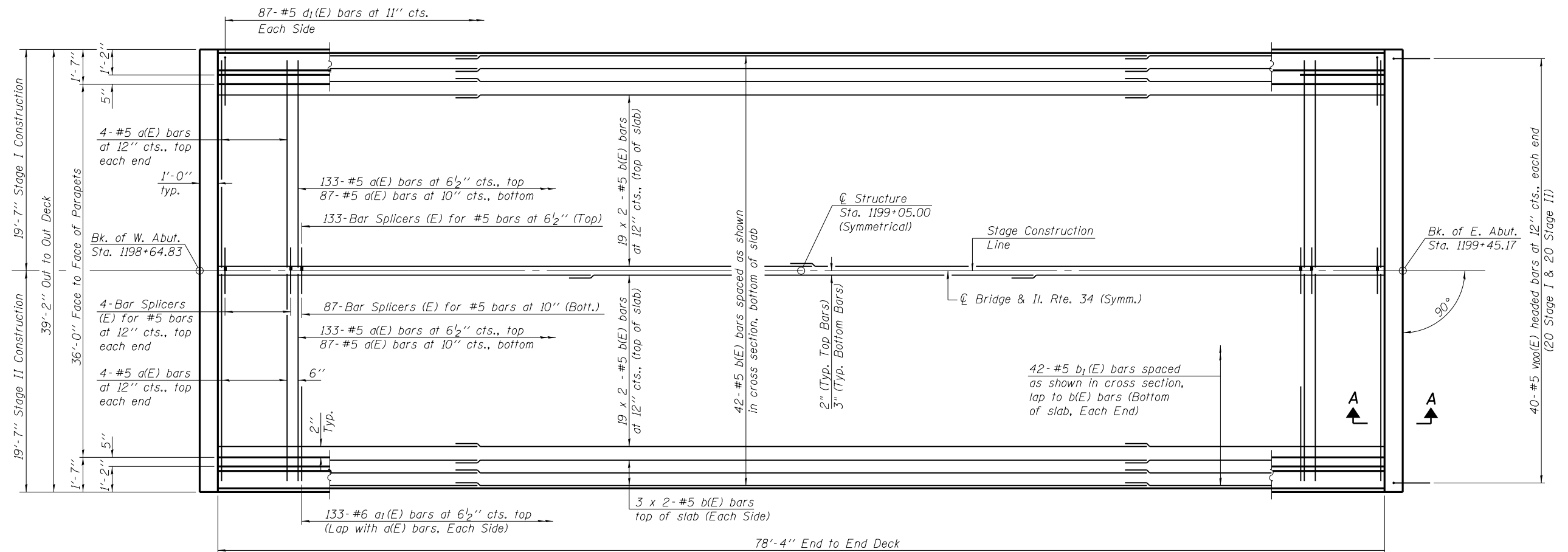
USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF EAST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 083-0068**

SHEET NO. 09 OF 22 SHEETS

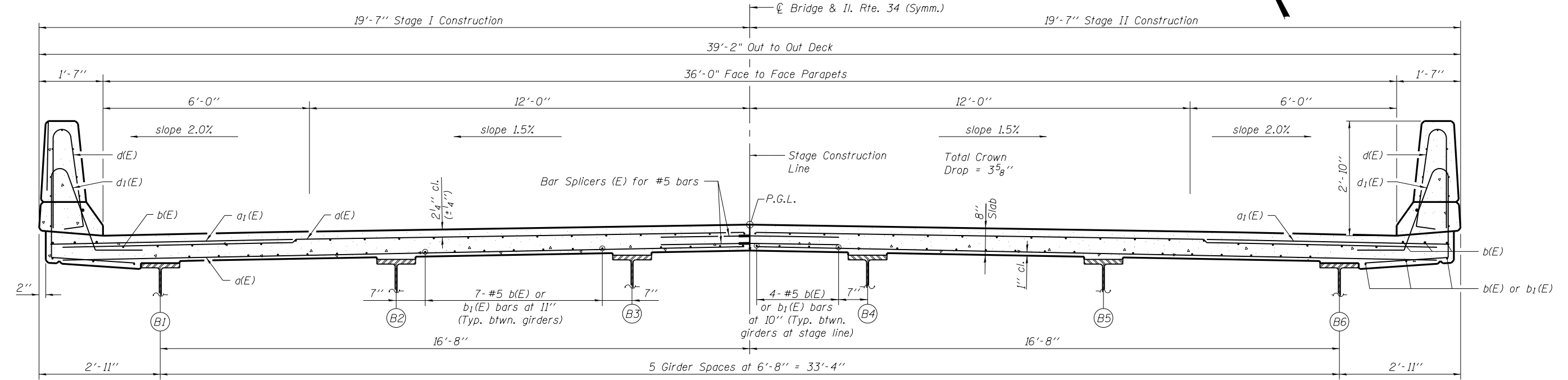
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	74
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				



**PLAN**

**MINIMUM BAR LAP**  
#5 bar = 3'-6"

Notes:  
See Sheet 11 of 22 for superstructure details and Bill of Material.  
Bars indicated thus 19 x 2-#5 etc. indicates 19 lines of bars with 2 lengths per line.  
See Sheet 11 of 22 for parapet reinforcement.  
See Sheet 12 of 22 for Section A-A.



**DECK CROSS SECTION**  
(Looking East)

LAYOUT	JGT	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MNM	08/31/11



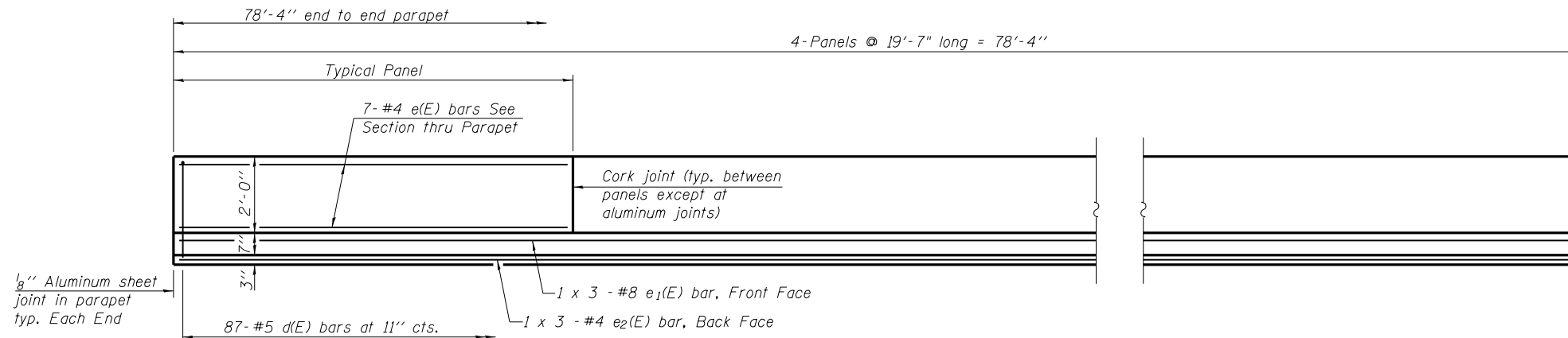
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	CHECKED - MNM	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

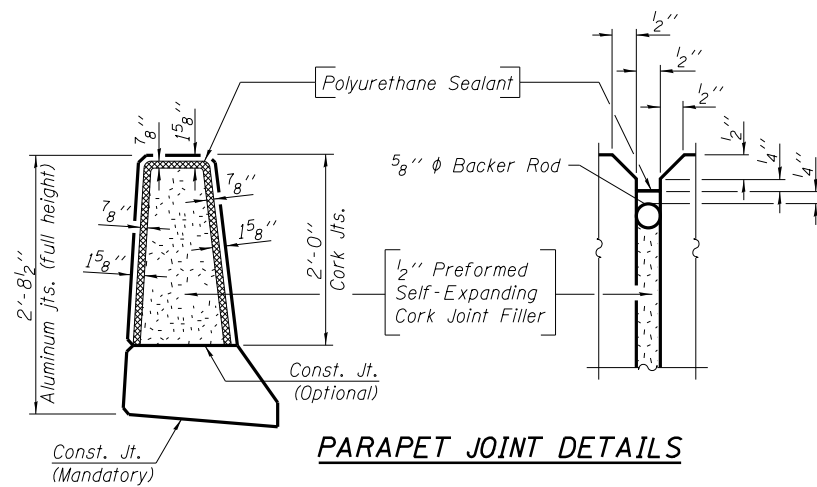
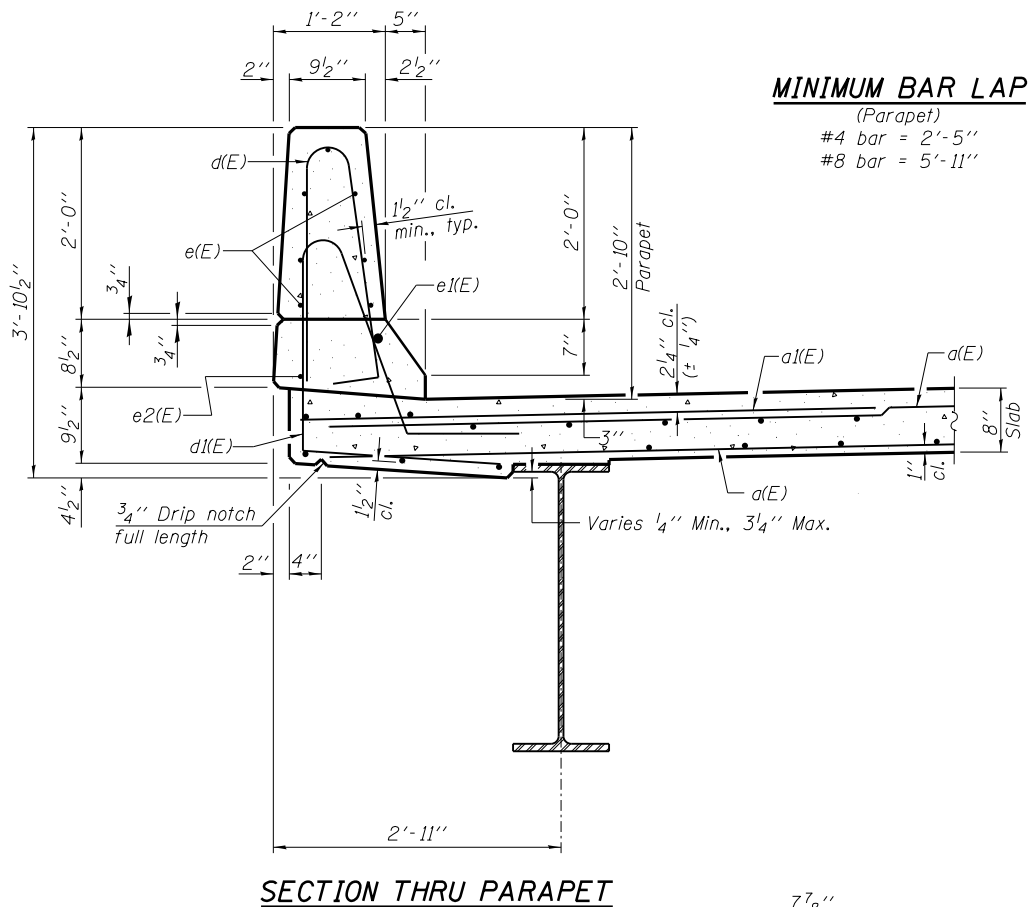
**SUPERSTRUCTURE**  
**STRUCTURE NO. 083-0068**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	75
CONTRACT NO. 78166				

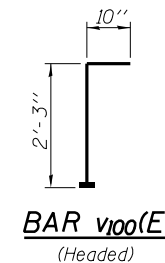
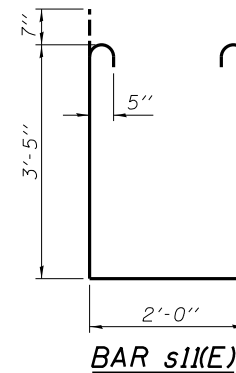
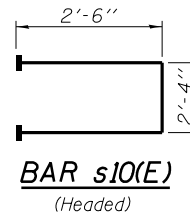
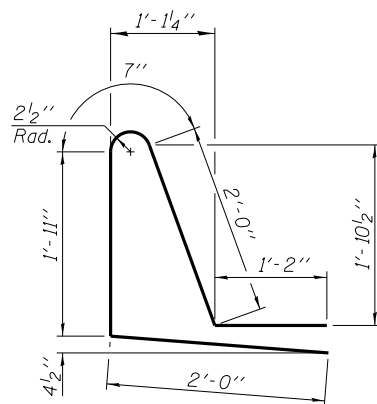
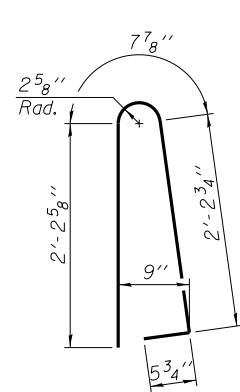
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**INSIDE ELEVATION OF PARAPET**



Notes:  
The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.  
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and color shall be grey.  
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



**SUPERSTRUCTURE  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	456	#5	18'-10"	—
a1(E)	266	#6	6'-6"	—
b(E)	130	#5	40'-9"	—
b1(E)	84	#5	22'-3"	—
d(E)	174	#5	5'-7"	U
d1(E)	174	#5	7'-8"	U
e(E)	56	#4	19'-3"	—
e1(E)	6	#8	30'-0"	—
e2(E)	6	#4	27'-9"	—
m10(E)	16	#6	19'-3"	—
m11(E)	24	#6	6'-3"	—
m12(E)	12	#6	2'-7"	—
m13(E)	36	#5	4'-0"	—
m14(E)	12	#6	3'-0"	—
s10(E)	84	#5	7'-4"	U
s11(E)	72	#5	10'-0"	U
v100(E)	80	#5	3'-1"	L
Reinforcement Bars, Epoxy Coated		Pound	25330	
Concrete Superstructure		Cu. Yds.	127.4	

Bars indicated thus 1 x 3 - #4 etc. indicates 1 line of bars with 3 lengths per line.

LAYOUT	JGT	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MNM	08/31/11



USER NAME =	DESIGNED - JGT	REVISED -
	CHECKED - MNM	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

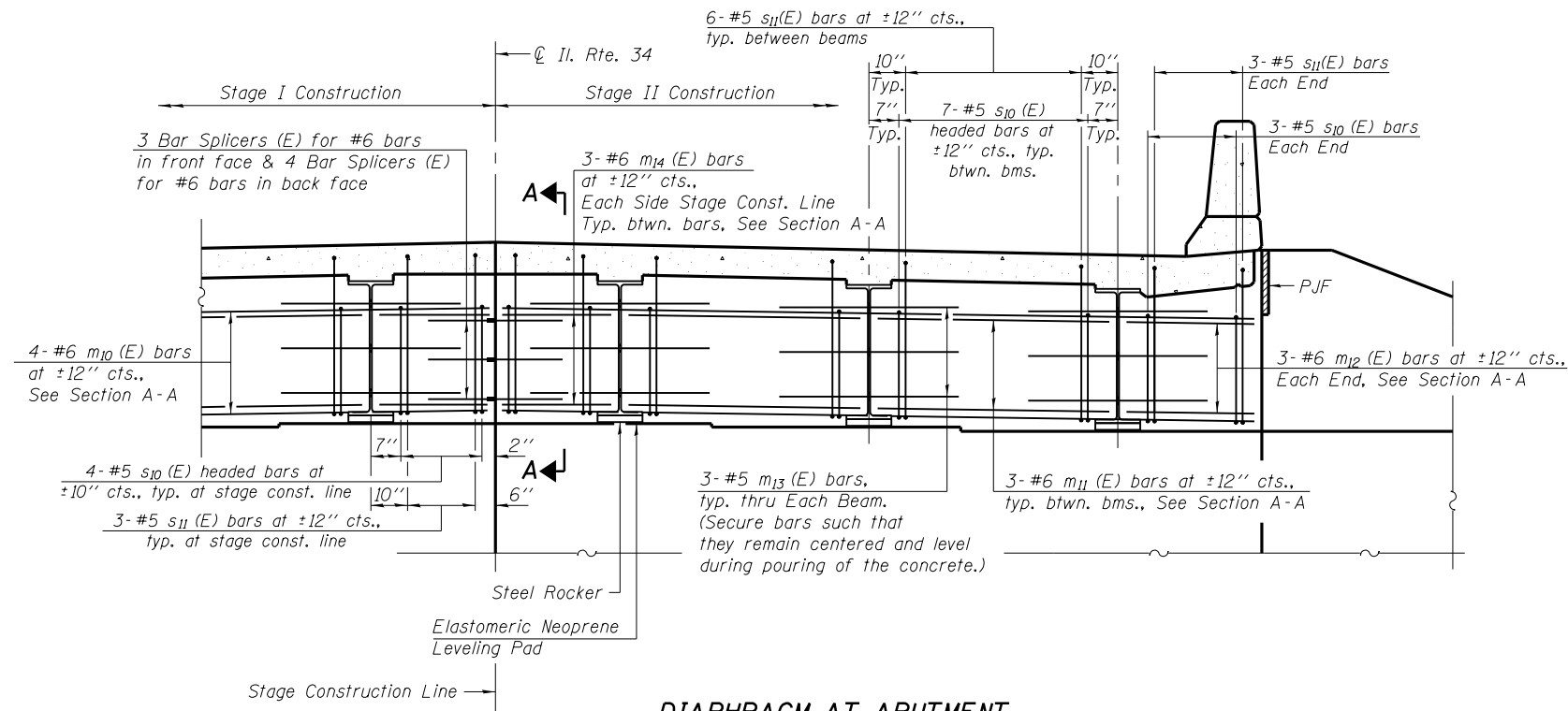
SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 083-0068

SHEET NO. 11 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	76
CONTRACT NO. 78166				

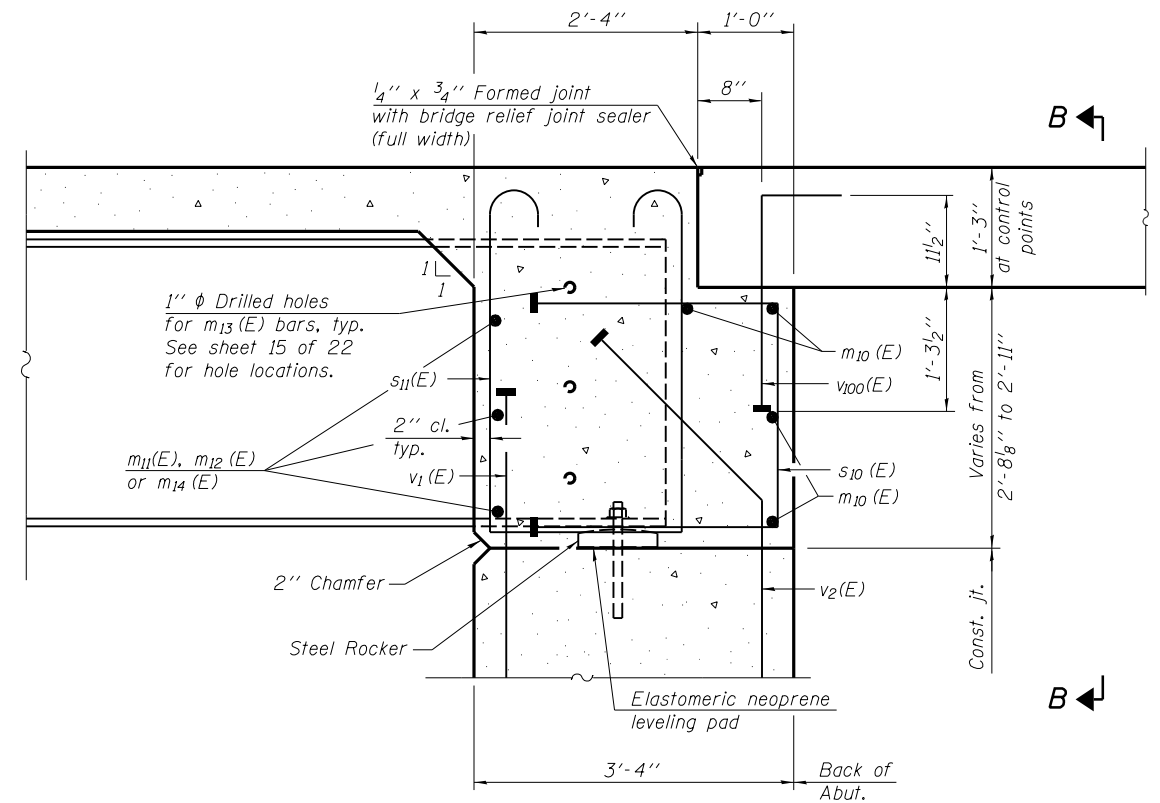
ILLINOIS FED. AID PROJECT

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

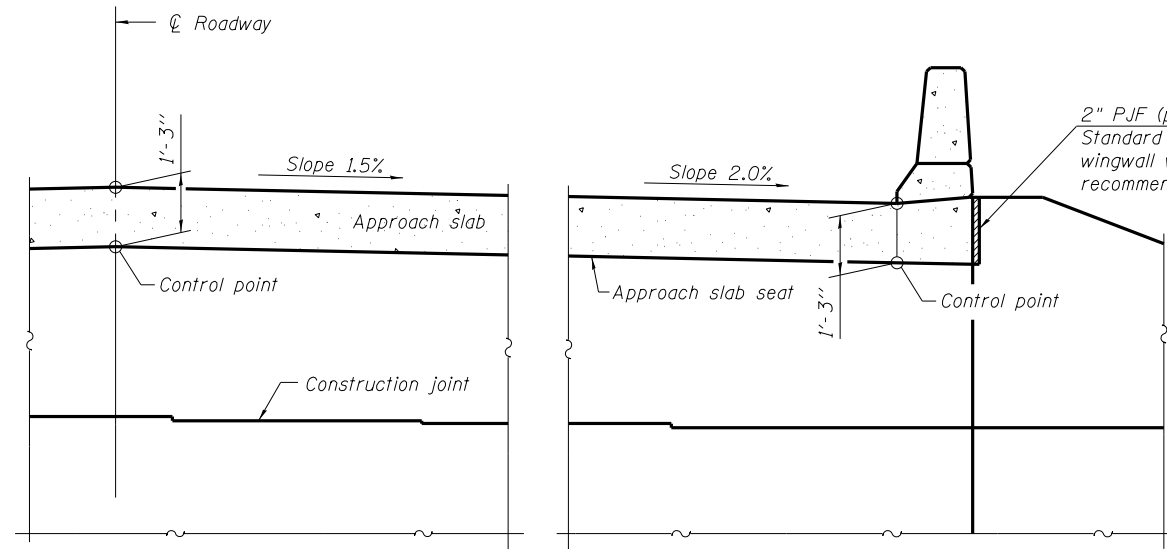


**DIAPHRAGM AT ABUTMENT**

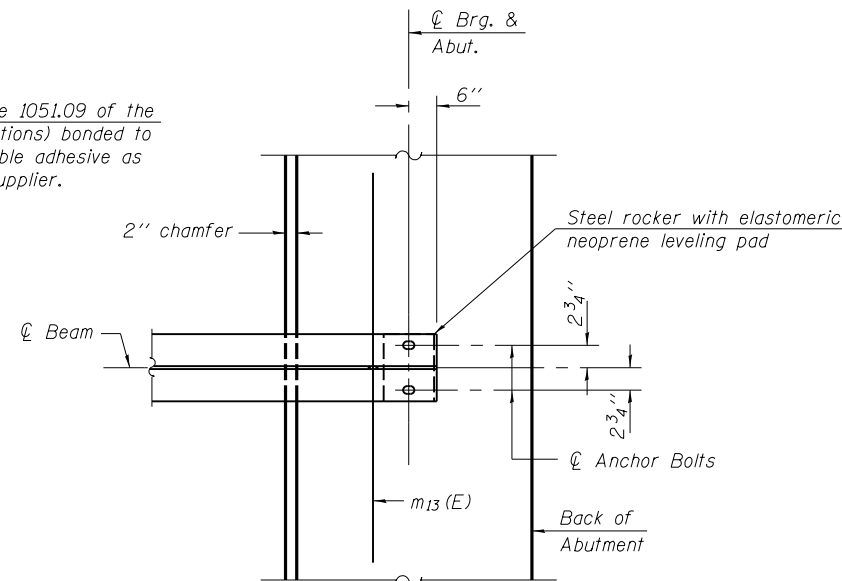
Looking East (East Abutment shown West Abutment similar)



**SECTION A-A**



**SECTION B-B**



**PLAN AT ABUTMENT**

(Showing bottom flange of beam)

Notes:  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 22.  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 22.  
 For details of bars  $s_{10}(E)$ ,  $s_{11}(E)$  and  $v_{100}(E)$  see sheet 11 of 22.  
 The approach slab seat shall have a constant slope determined from the control points shown.  
 For bearing details see sheet 17 of 22.  
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

LAYOUT	JGT	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MNM	08/31/11



USER NAME =	DESIGNED - JGT	REVISED -
	CHECKED - MNM	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INTEGRAL ABUTMENT DIAPHRAGM DETAILS  
STRUCTURE NO. 083-0068**

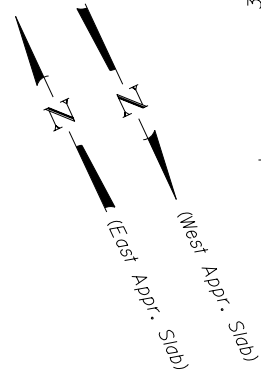
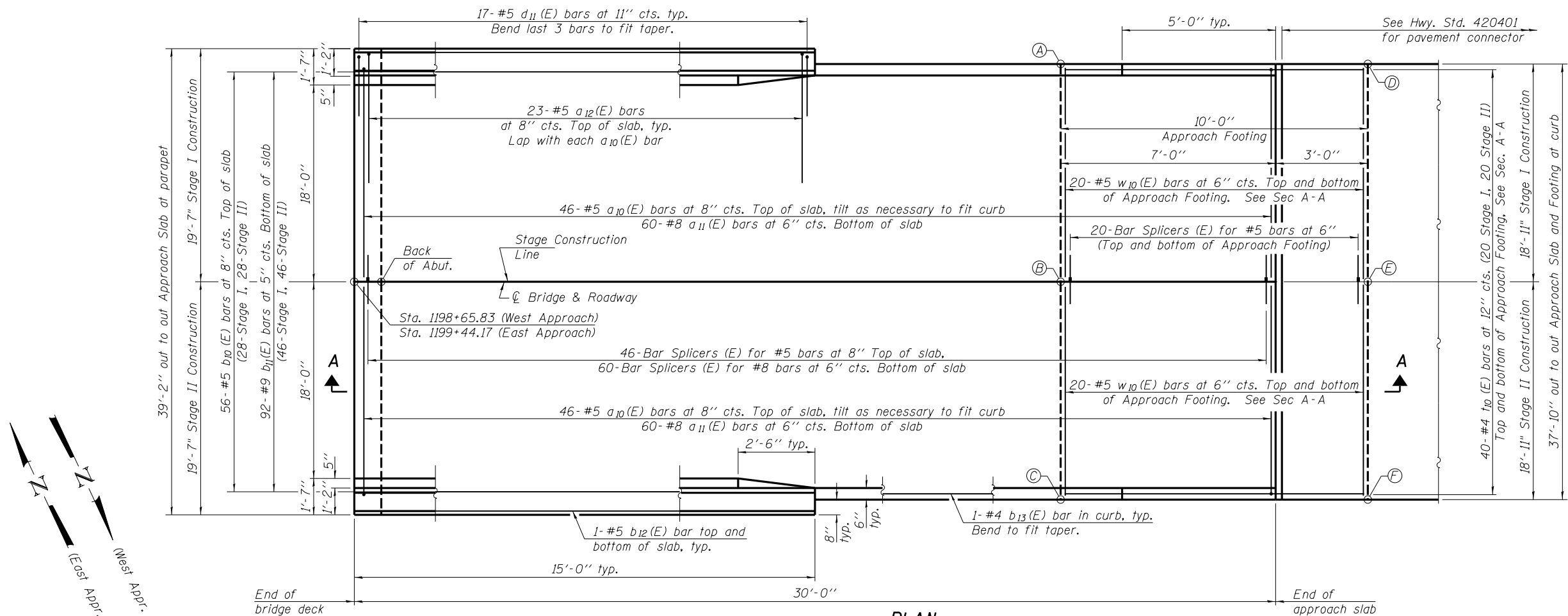
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	77
CONTRACT NO. 78166				

SHEET NO. 12 OF 22 SHEETS

ILLINOIS FED. AID PROJECT

Notes:  
See sheet 14 of 22 for Sections A-A.  
a10(E) and a11(E) bar spacings measured along  $\varnothing$  Rdwy.

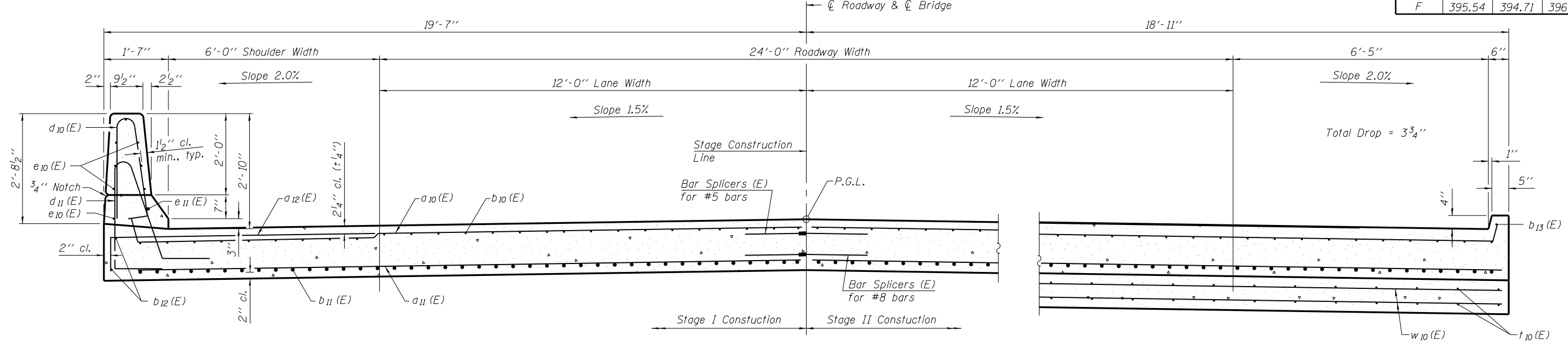
PROFESSIONAL DESIGN FIRM LICENSE #184-001084



**PLAN**  
(East Appr. Shown)  
(West Appr. Opposite Hand)

**TOP AND BOTTOM ELEVATION FOR APPROACH FOOTING**

Point	West Approach		East Approach	
	Top	Bottom	Top	Bottom
A	395.61	394.78	396.53	395.70
B	395.93	395.10	396.85	396.02
C	395.61	394.78	396.53	395.70
D	395.54	394.71	396.60	395.77
E	395.86	395.03	396.92	396.09
F	395.54	394.71	396.60	395.77



**NEAR ABUTMENT**

**CROSS SECTION**  
(Looking East)  
(See Plan for dimensions not shown)

**AT APPROACH FOOTING**

(Sheet 1 of 2)

LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

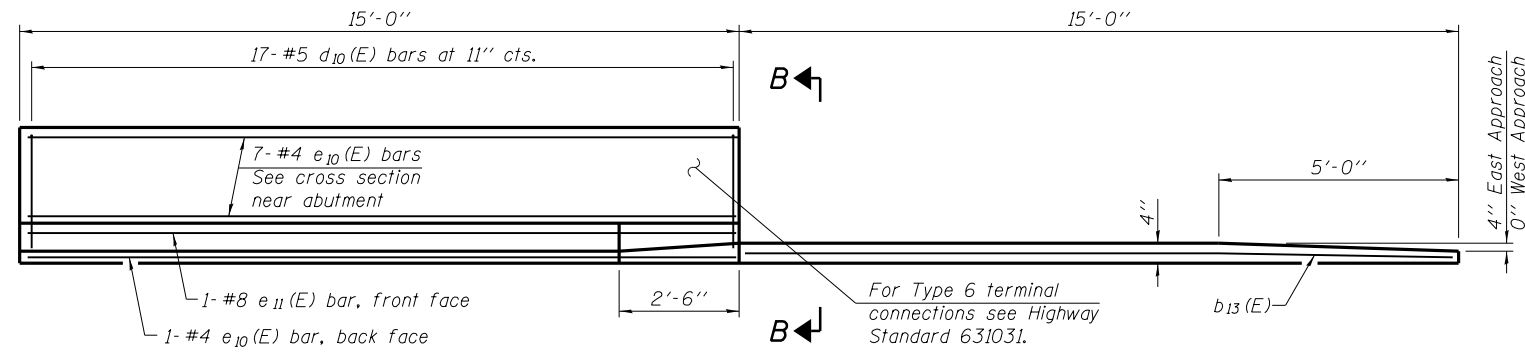
**BRIDGE APPROACH SLAB DETAILS (SHEET 1 OF 2)**  
**STRUCTURE NO. 083-0068**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE	87	78
CONTRACT NO. 78166				

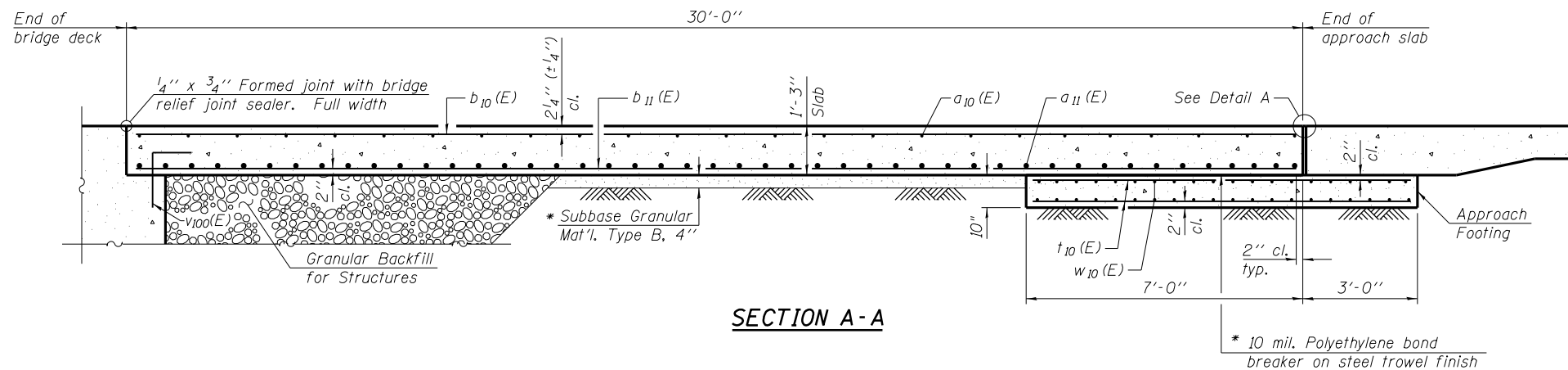
SHEET NO. 13 OF 22 SHEETS

ILLINOIS FED. AID PROJECT

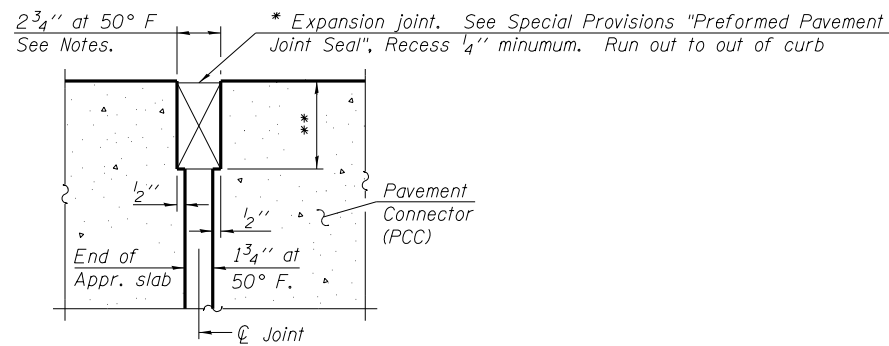
PROFESSIONAL DESIGN FIRM LICENSE #184-001084



**INSIDE ELEVATION OF PARAPET AND CURB**

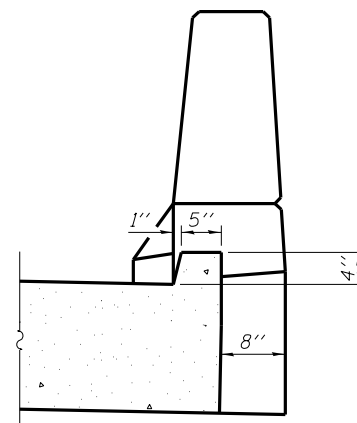


**SECTION A-A**



**DETAIL A**

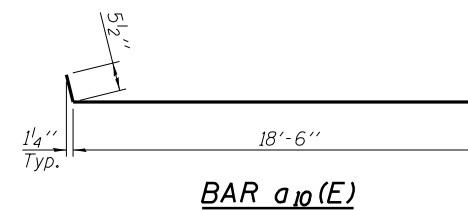
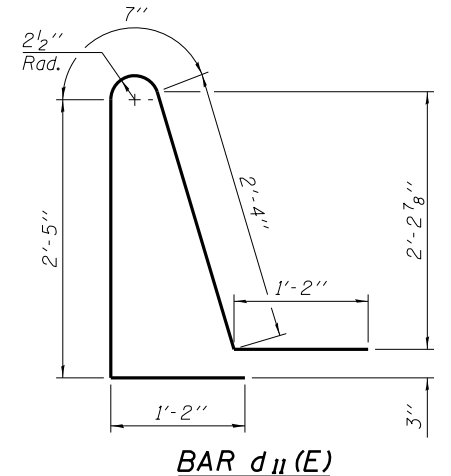
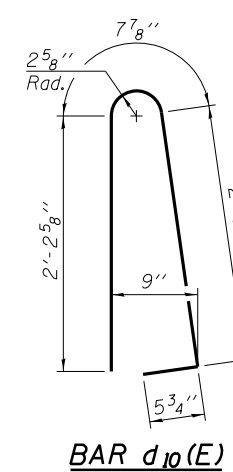
\* Cost included with Concrete Superstructure (Approach Slab).  
 \*\* Per manufacturer recommendations



**VIEW B-B**

**Notes:**

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.  
 Parapet concrete shall be paid for as Concrete Superstructure.  
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).  
 Approach footing concrete shall be paid for as Concrete Structures.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 22.



**TWO APPROACHES  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a <sub>10</sub> (E)	184	#5	19'-0"	┌───┐
a <sub>11</sub> (E)	240	#8	18'-7"	┌───┐
a <sub>12</sub> (E)	92	#5	7'-4"	┌───┐
b <sub>10</sub> (E)	112	#5	29'-8"	┌───┐
b <sub>11</sub> (E)	184	#9	29'-8"	┌───┐
b <sub>12</sub> (E)	8	#5	14'-8"	┌───┐
b <sub>13</sub> (E)	4	#4	14'-8"	┌───┐
d <sub>10</sub> (E)	68	#5	5'-7"	┌───┐
d <sub>11</sub> (E)	68	#5	7'-8"	┌───┐
e <sub>10</sub> (E)	32	#4	14'-8"	┌───┐
e <sub>11</sub> (E)	4	#8	14'-8"	┌───┐
t <sub>10</sub> (E)	160	#4	9'-8"	┌───┐
w <sub>10</sub> (E)	160	#5	18'-7"	┌───┐
			Cu. Yd.	6.6
Concrete Superstructure			Cu. Yd.	107.6
Concrete Superstructure (Approach Slab)			Cu. Yd.	23.4
Concrete Structures			Pound	43990
Reinforcement Bars, Epoxy Coated				

(Sheet 2 of 2)

LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

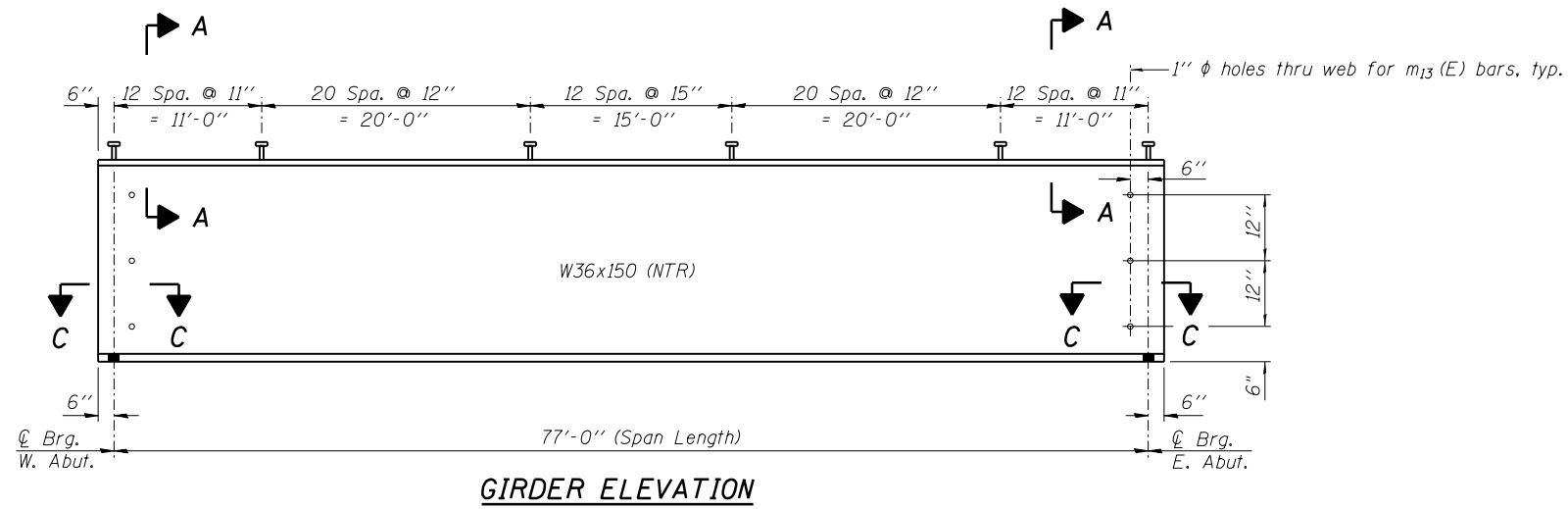
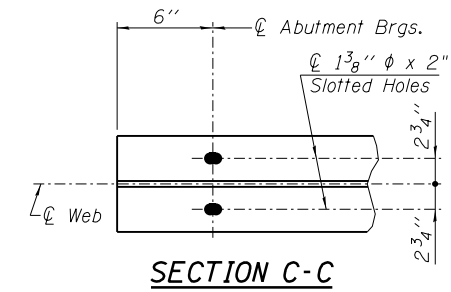
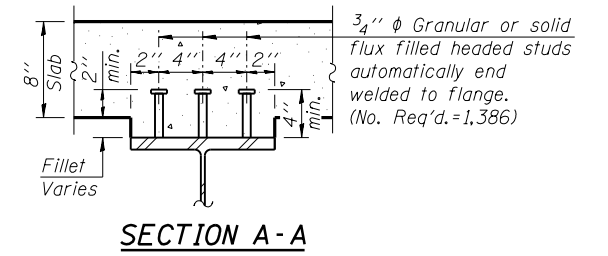
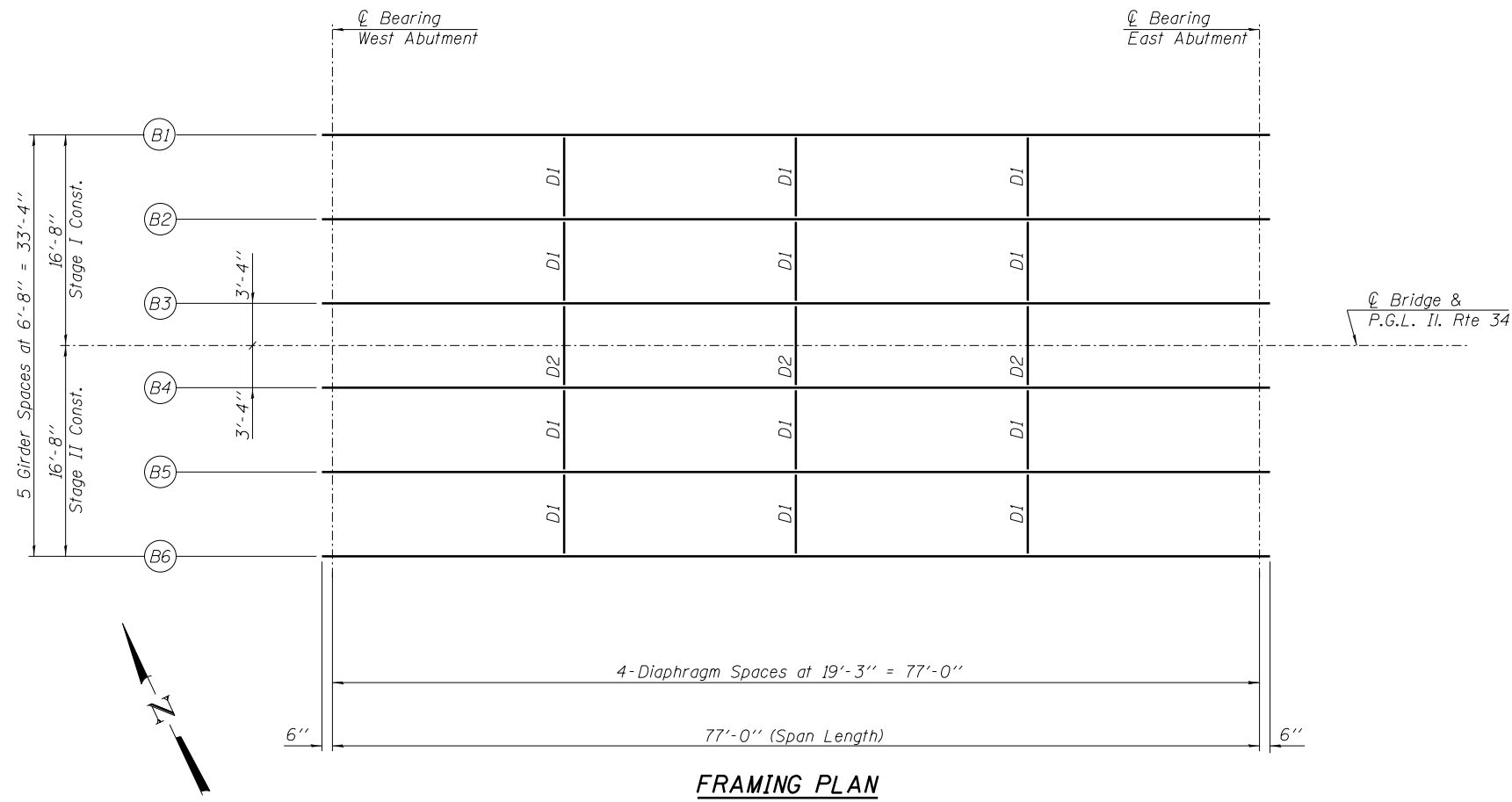
**BRIDGE APPROACH SLAB DETAILS (SHEET 2 OF 2)  
 STRUCTURE NO. 083-0068**

SHEET NO. 14 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	79
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

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**Notes:**  
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.  
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.  
 All beams, connecting angles, connection plates and diaphragms shall conform to the requirements of AASHTO M270 Grade 50W.

LAYOUT	JGT	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MNM	08/31/11



USER NAME =	DESIGNED - JGT	REVISED -
	CHECKED - MNM	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL  
STRUCTURE NO. 083-0068

SHEET NO. 15 OF 22 SHEETS

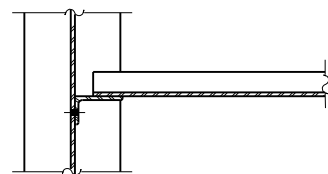
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	80
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				



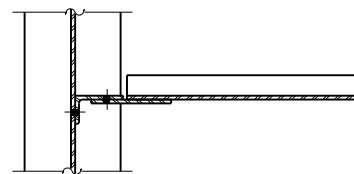
**TOP of BEAM ELEVATIONS TABLE**

For Fabrication Only

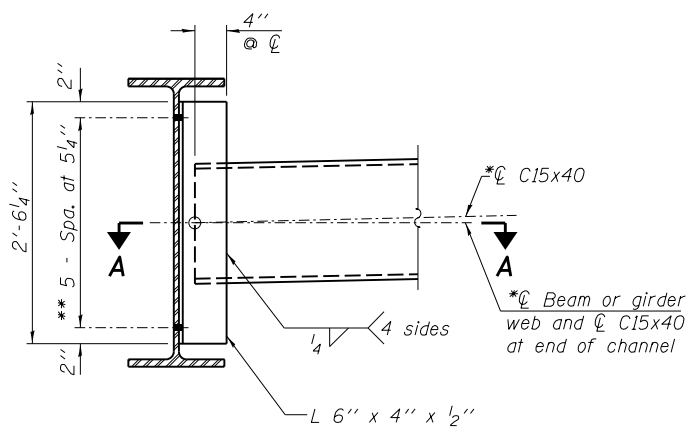
Beam Number	℄ Brg. W. Abut.	℄ Brg. E. Abut.
Beam 1	396.36	396.93
Beam 2	396.49	397.06
Beam 3	396.59	397.16
Beam 4	396.59	397.16
Beam 5	396.49	397.06
Beam 6	396.36	396.93



**SECTION A-A**



**SECTION B-B**



**INTERIOR DIAPHRAGM D1**

(12 Required)

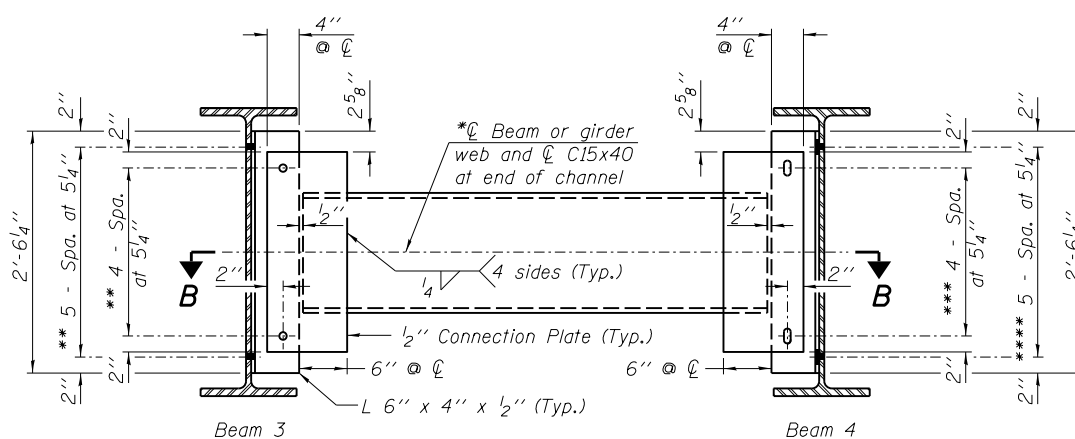
Note:

Two hardened washers required for each set of oversized holes.

\*Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

The alternate, if utilized, shall be provided at no additional cost to the Department.

\*\*3/4" φ HS bolts, 1 5/16" φ holes



**INTERIOR DIAPHRAGM D2**

(3 Required)

\*\* 3/4" φ H.S. Bolts, 1 5/16" φ holes.

\*\*\* 3/4" φ H.S. bolts, 1 3/16" x 1 7/8" vertically slotted holes in connection plate at Beam 4 end of diaphragm assembly and 1 5/16" φ holes in connection angle at Beam 4 end of diaphragm assembly.

\*\*\*\* 3/4" φ H.S. bolts, 1 3/16" x 1 7/8" vertically slotted holes in connection angle leg attached to Beam 4 and 1 5/16" φ holes in Beam 4.

Other notes on Diaphragm D1 pertain.

INTERIOR GIRDER MOMENT TABLE		0.5 Span
$I_s$	(in <sup>4</sup> )	9040
$I_c(n)$	(in <sup>4</sup> )	22553
$I_c(3n)$	(in <sup>4</sup> )	16601
$S_s$	(in <sup>3</sup> )	504
$S_c(n)$	(in <sup>3</sup> )	716
$S_c(3n)$	(in <sup>3</sup> )	648
DC1	(k/')	0.850
M <sub>DC1</sub>	(k)	630
DC2	(k/')	0.150
M <sub>DC2</sub>	(k)	111
DW	(k/')	0.300
M <sub>DW</sub>	(k)	222
LLDF		0.544
$M_{\ell} + IM$	(k)	1059
$M_u$ (Strength I)	(k)	3112
$\phi_r M_n$	(k)	3668
$f_s$ DC1	(ksi)	15.01
$f_s$ DC2	(ksi)	2.06
$f_s$ DW	(ksi)	4.11
$f_s$ (℄+IM)	(ksi)	17.74
$f_s$ (Service II)	(ksi)	44.24
0.95R <sub>n</sub> F <sub>yf</sub>	(ksi)	47.50
V <sub>r</sub>	(k)	24.7

INTERIOR GIRDER REACTION TABLE		Abuts.
LLDF		0.719
R <sub>DC1</sub>	(k)	32.7
R <sub>DC2</sub>	(k)	5.8
R <sub>DW</sub>	(k)	11.6
R <sub>℄</sub>	(k)	63.2
R <sub>IM</sub>	(k)	15.0
R <sub>Total</sub>	(k)	128.3

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

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

M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).

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

M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

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

M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

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

$M_u$  (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75  $M_{\ell} + IM$

$\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
M<sub>DC1</sub> + M<sub>DC2</sub> + M<sub>DW</sub> + 1.3  $M_{\ell} + IM$

0.95R<sub>n</sub>F<sub>yf</sub>: Composite stress capacity for Service II loading according to Article 6.10.4.2 (k.s.i.)

V<sub>r</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

LLDF: Live Load Distribution Factor

Note:  
All beams, connecting angles, connection plates and diaphragms shall conform to the requirements of AASHTO M270 Grade 50W.  
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.

LAYOUT	JGT	02/21/11
DRAWN	Red	02/22/11
REVIEWED	MNM	08/31/11



USER NAME =	DESIGNED - JGT	REVISED -
	CHECKED - MNM	REVISED -
PLOT SCALE =	DRAWN - Red	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

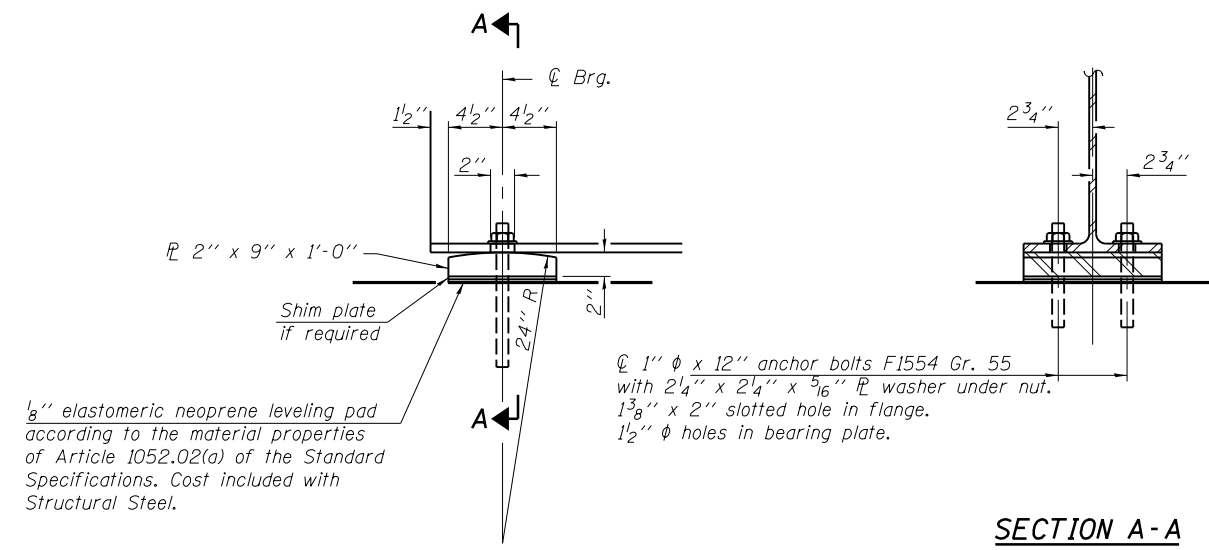
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS  
STRUCTURE NO. 083-0068

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	81
CONTRACT NO. 78166				

SHEET NO. 16 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



**ELEVATION AT ABUTMENT**

**SECTION A-A**

**INTEGRAL ABUTMENT FIXED BEARING DETAILS**

*Notes:*  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Steel members required for the bearing assembly shall be included in the cost of Structural Steel.  
 Anchor bolts shall be according to Article 521.06 of the Standard Specifications.  
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.  
 Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

**BILL OF MATERIAL**

Item	Unit	Total
Anchor Bolts, 1"	Each	24

LAYOUT	JGT	02/21/11
DRAWN	Rcd	02/22/11
REVIEWED	MNM	08/31/11



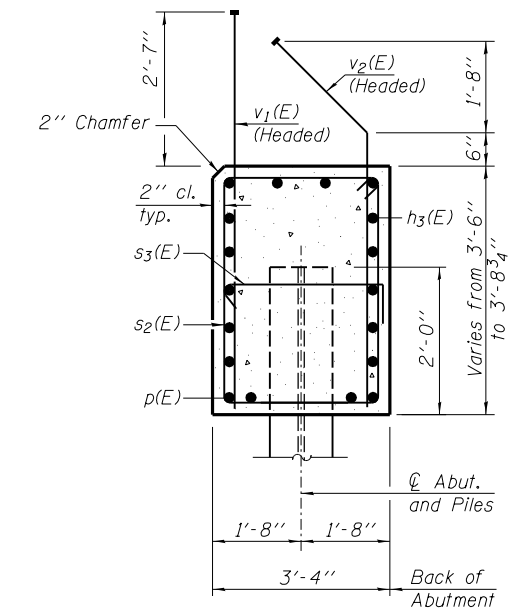
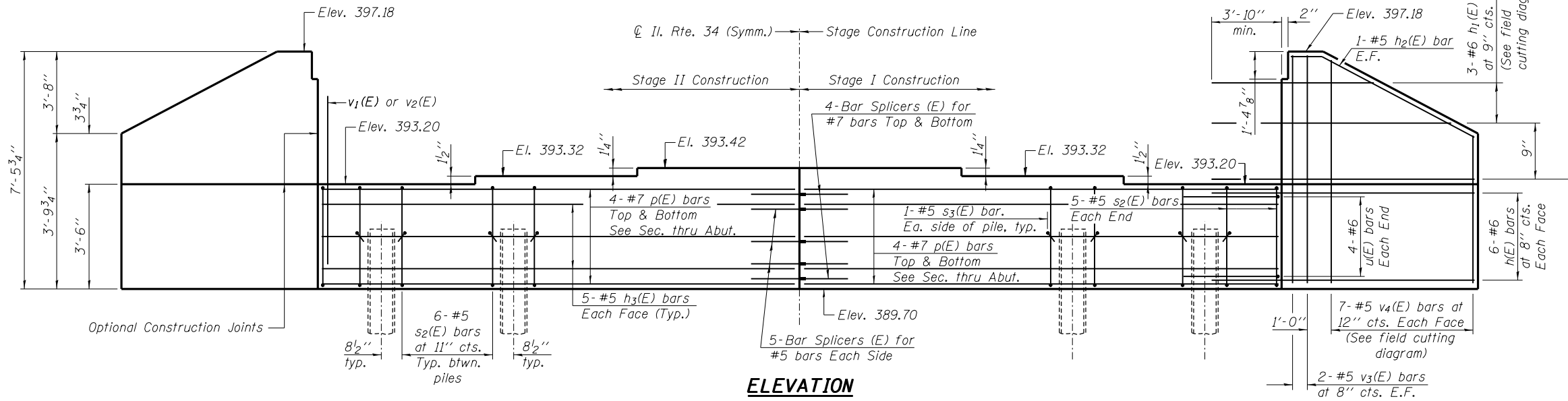
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	CHECKED - MNM	REVISED -
PLOT SCALE =	DRAWN - Rcd	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS  
 STRUCTURE NO. 083-0068**

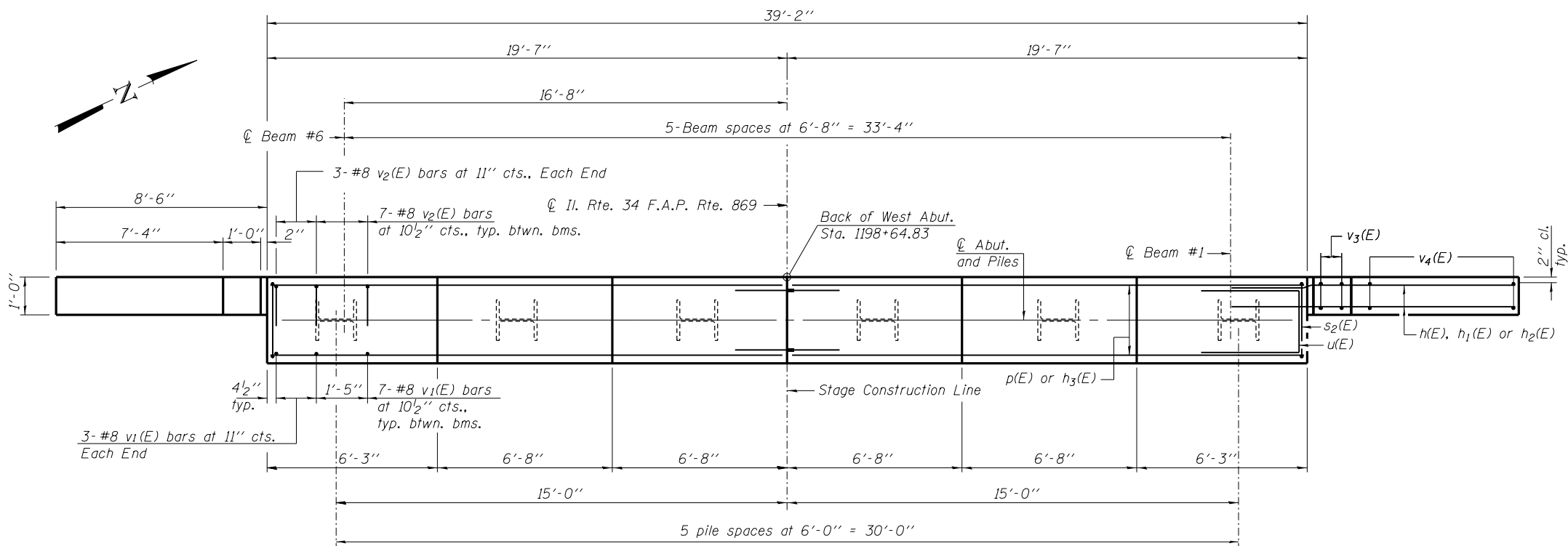
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	82
<b>CONTRACT NO. 78166</b>				

Notes:  
Pour steps monolithically with cap.



**ELEVATION**

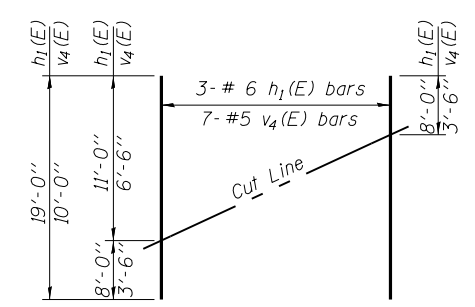
**SEC. THRU ABUT.**



**PLAN**

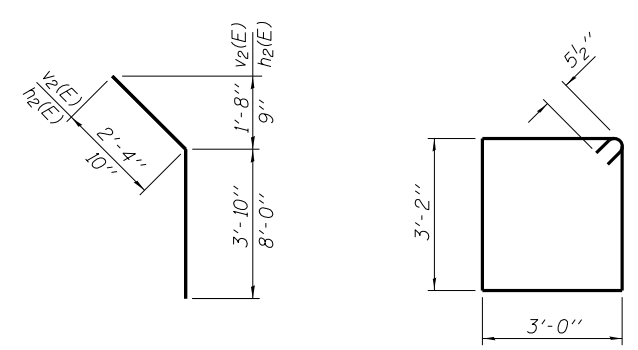
**PILE DATA**

Type: HP 12x63  
Nominal Required Bearing: 497 kips  
Factored Resistance Available: 273 kips  
Est. Length: 40 Feet  
No. Production Piles: 6

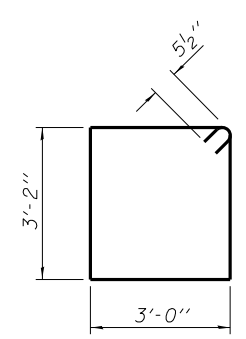


**FIELD CUTTING DIAGRAM**

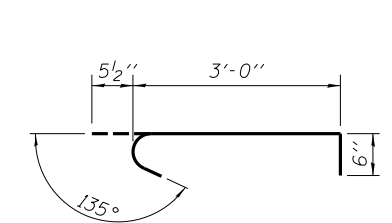
Order  $h_1(E)$  and  $v_4(E)$  full length. Cut as shown and use remainder of bars in opposite face.



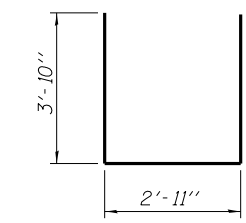
**BARS  $v_2(E)$  &  $h_2(E)$**   
 $v_2(E)$  Headed



**BAR  $s_2(E)$**



**BAR  $s_3(E)$**



**BAR  $u(E)$**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h(E)$	28	#6	12'-2"	—
$h_1(E)$	6	#6	19'-0"	—
$h_2(E)$	4	#5	8'-10"	—
$h_3(E)$	20	#5	19'-3"	—
$p(E)$	16	#7	19'-3"	—
$s_2(E)$	40	#5	13'-3"	□
$s_3(E)$	12	#5	4'-0"	┌
$u(E)$	8	#6	10'-7"	┌
$v_1(E)$	41	#8	5'-11"	—
$v_2(E)$	41	#8	6'-2"	—
$v_3(E)$	8	#5	7'-1"	—
$v_4(E)$	14	#5	10'-0"	—
Structure Excavation	Cu. Yd.		100	
Concrete Structures	Cu. Yd.		21.2	
Reinforcement Bars, Epoxy Coated	Pound		4010	
Furnishing Steel Piles, HP12x63	Foot		240	
Driving Piles	Foot		240	

For details of Bar Splicers, see sheet 21 of 22.  
For details of piles see sheet 20 of 22.  
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



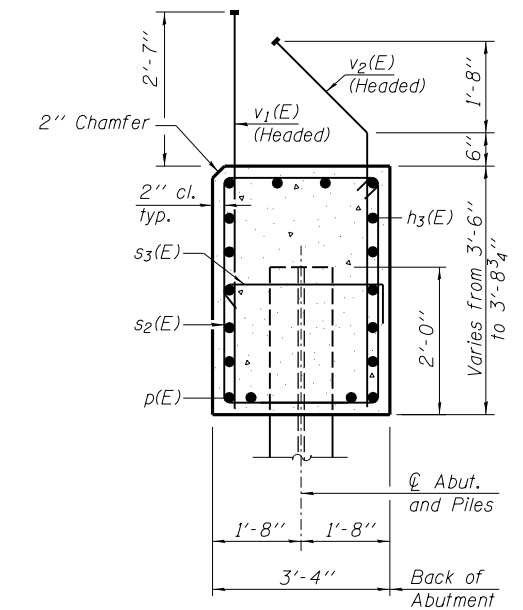
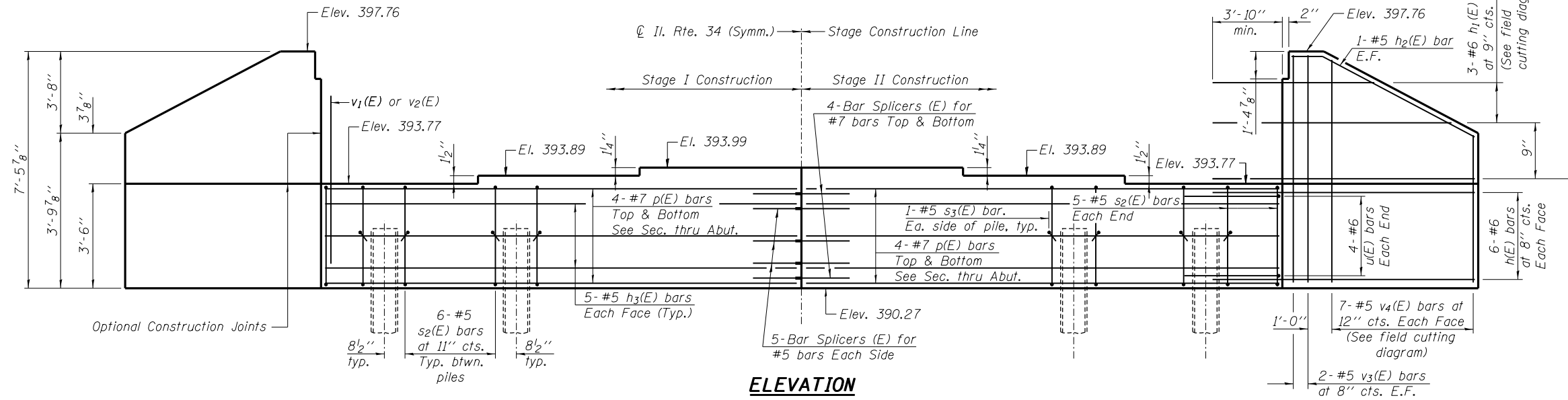
USER NAME =	DESIGNED - MNM	REVISED -
CHECKED - TEH	REVISOR -	
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT  
STRUCTURE NO. 083-0068  
SHEET NO. 18 OF 22 SHEETS

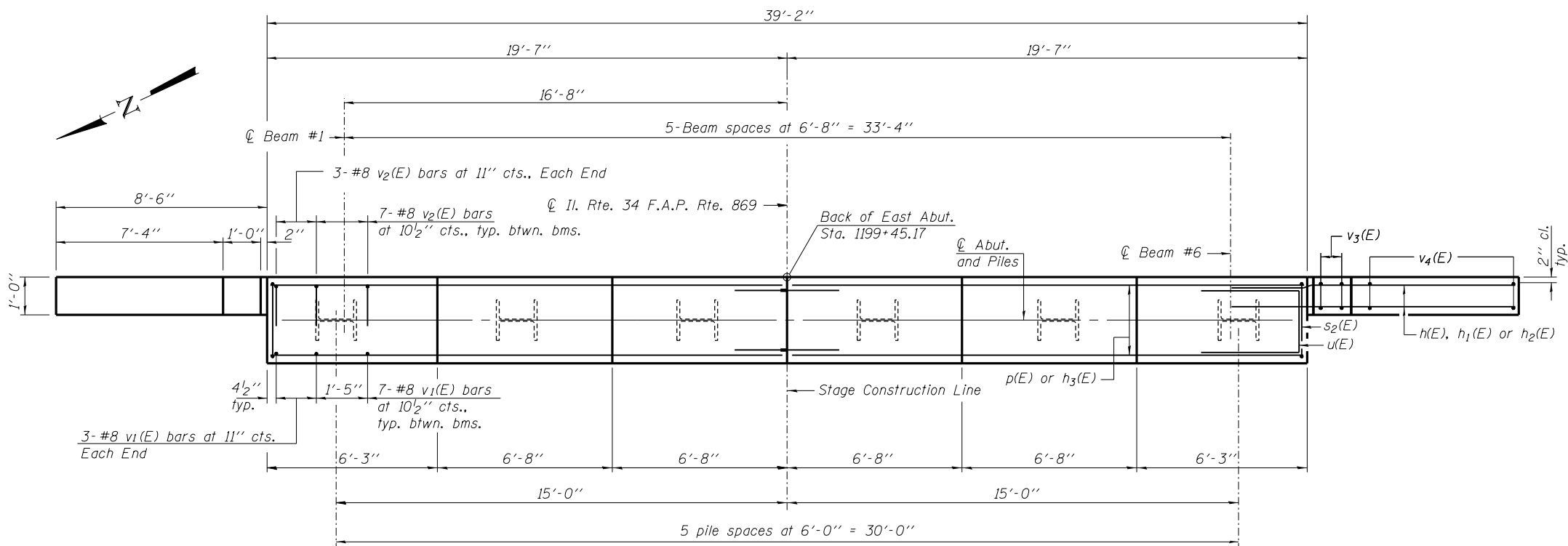
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	83
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

Notes:  
Pour steps monolithically with cap.



**ELEVATION**

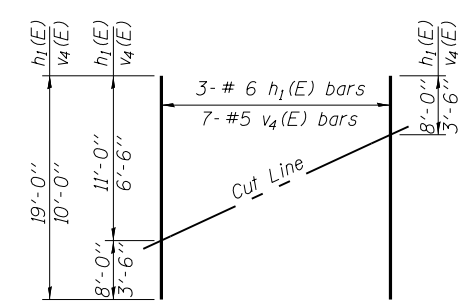
**SEC. THRU ABUT.**



**PLAN**

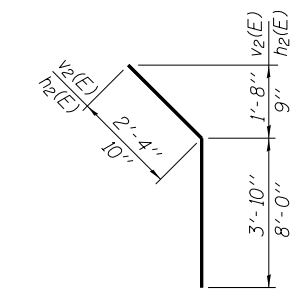
**PILE DATA**

Type: HP 12x63  
Nominal Required Bearing: 497 kips  
Factored Resistance Available: 273 kips  
Est. Length: 42 Feet  
No. Production Piles: 5  
No. Test Piles: 1 (In Stage I Area)

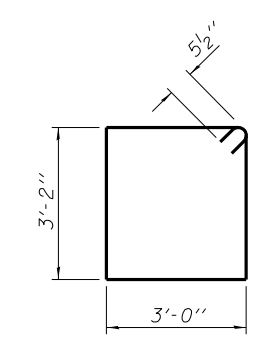


**FIELD CUTTING DIAGRAM**

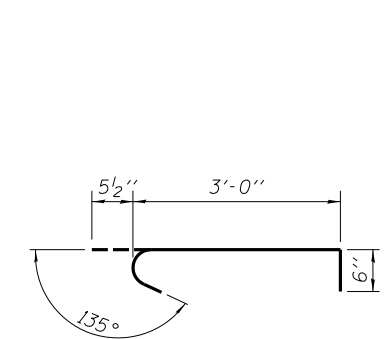
Order h1(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.



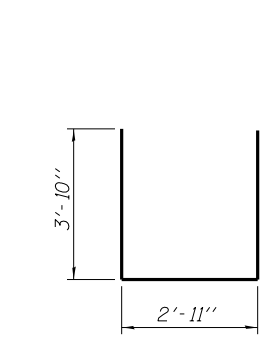
**BARS v2(E) & h2(E)**  
(v2(E) Headed)



**BAR s2(E)**



**BAR s3(E)**



**BAR u(E)**

**BILL OF MATERIAL**

Bar No.	Size	Length	Shape
h(E)	28 #6	12'-2"	—
h1(E)	6 #6	19'-0"	—
h2(E)	4 #5	8'-10"	—
h3(E)	20 #5	19'-3"	—
p(E)	16 #7	19'-3"	—
s2(E)	40 #5	13'-3"	□
s3(E)	12 #5	4'-0"	□
u(E)	8 #6	10'-7"	□
v1(E)	41 #8	5'-11"	—
v2(E)	41 #8	6'-2"	—
v3(E)	8 #5	7'-1"	—
v4(E)	14 #5	10'-0"	—
Structure Excavation	Cu. Yd.	100	
Concrete Structures	Cu. Yd.	21.2	
Reinforcement Bars, Epoxy Coated	Pound	4010	
Furnishing Steel Piles, HP12x63	Foot	210	
Driving Piles	Foot	210	
Test Pile Steel, HP12x63	Each	1	

For details of Bar Splicers, see sheet 21 of 22.  
For details of piles see sheet 20 of 22.  
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



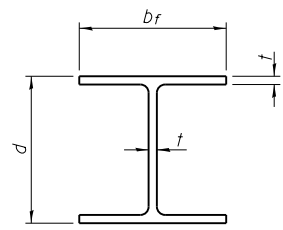
USER NAME =	DESIGNED - MNM	REVISED -
CHECKED - TEH	REVISOR -	
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT**  
**STRUCTURE NO. 083-0068**

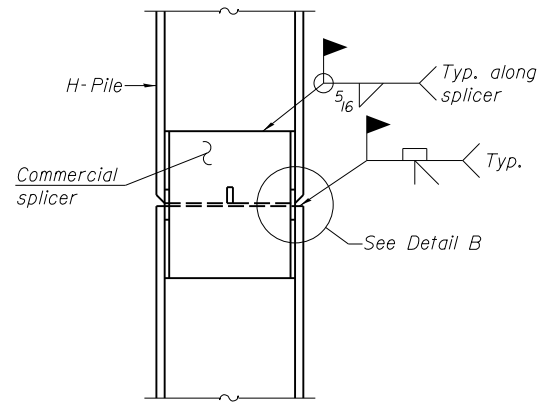
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	84
CONTRACT NO. 78166				

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

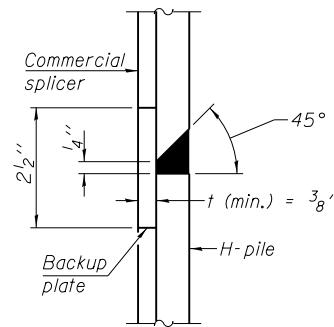


**STEEL PILE TABLE**

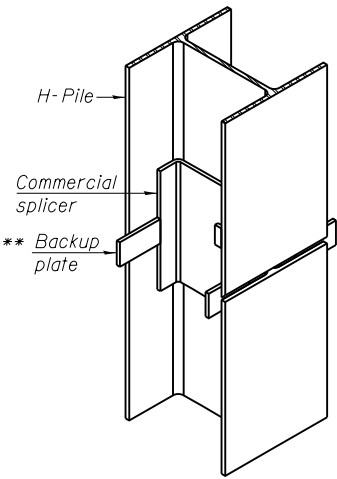
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



**ELEVATION**

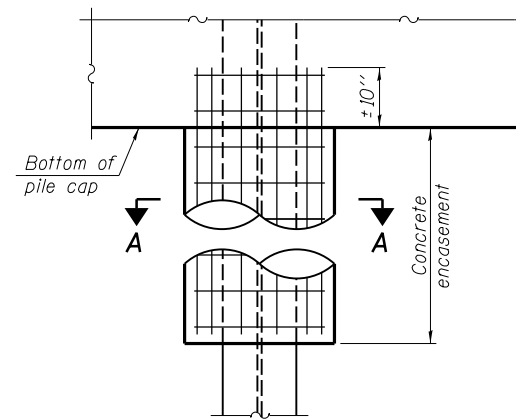


**DETAIL "B"**



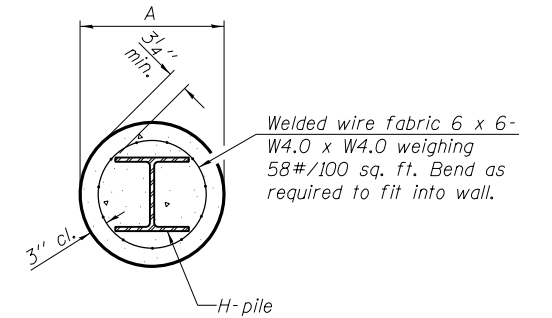
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



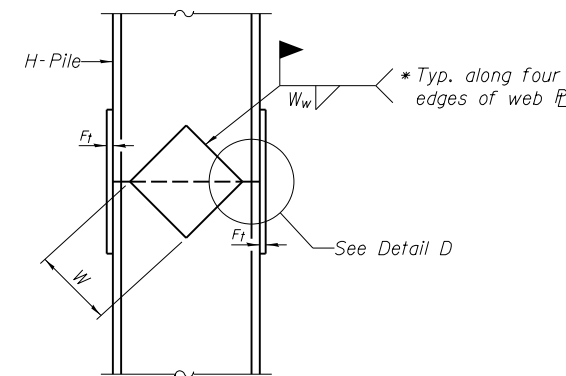
**ELEVATION**

**PILE ENCASEMENT**

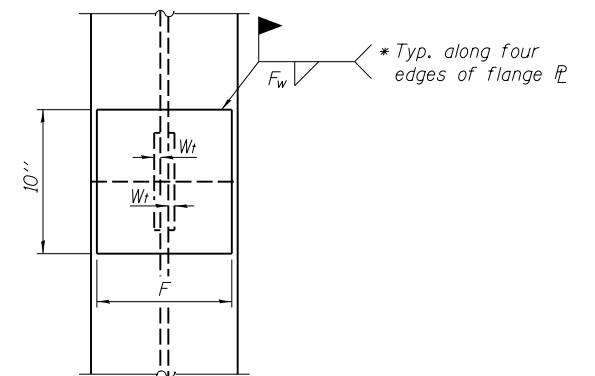


**SECTION A-A**

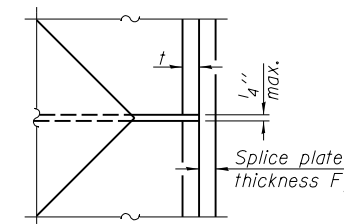
Note:  
Forms for encasement may be omitted when soil conditions permit.



**ELEVATION**



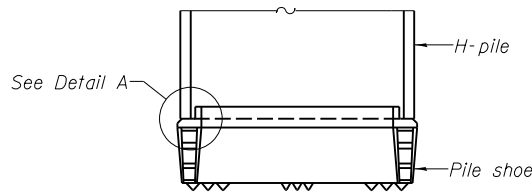
**END VIEW**



**DETAIL D**

**WELDED PLATE FIELD SPLICE**

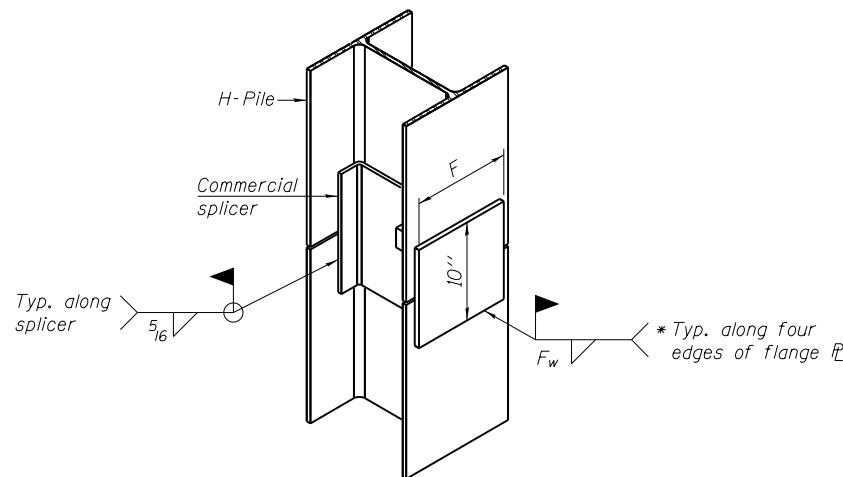
Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



**ELEVATION**

**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

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

LAYOUT	MM	02/21/11
DRAWN	Rod	02/22/11
REVIEWED	MM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rod	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

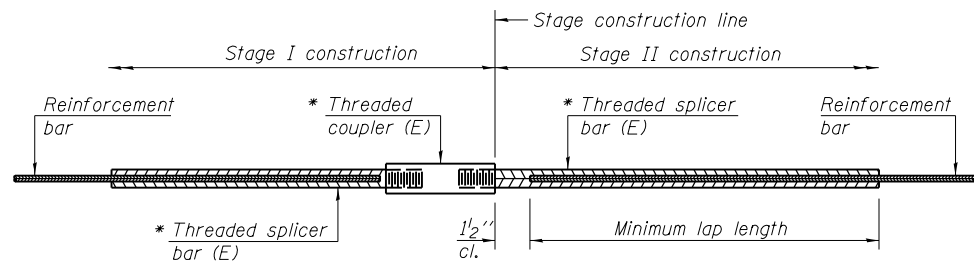
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS  
STRUCTURE NO. 083-0068**

SHEET NO. 20 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	85
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

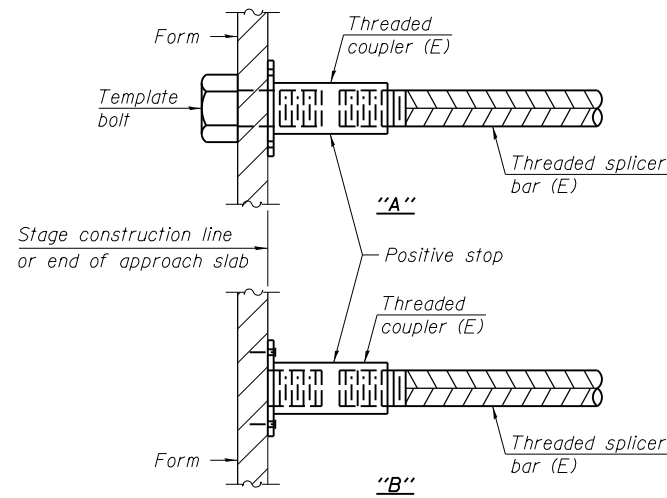


**STANDARD BAR SPLICER ASSEMBLY**

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

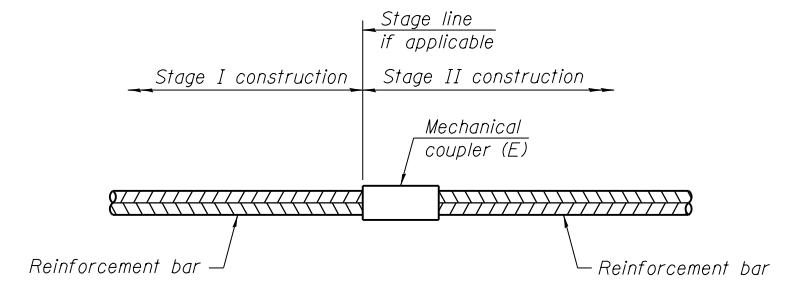
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	228	3'-6"
Diaphragms	#6	14	3'-10"
Appr. Slab	#5	92	3'-0"
Appr. Slab	#8	120	4'-9"
Appr. Slab Footing	#5	80	3'-2"
Abutments	#5	20	3'-2"
Abutments	#7	16	4'-5"



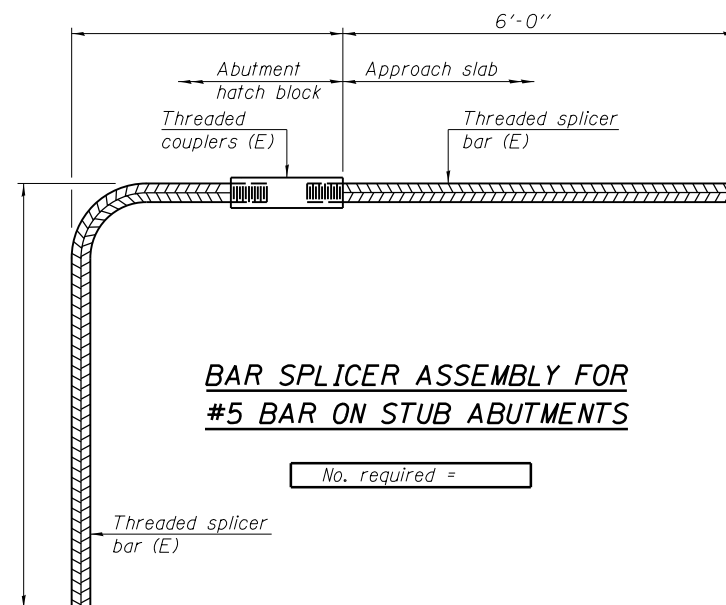
**INSTALLATION AND SETTING METHODS**

"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.

LAYOUT	MM	02/21/11
DRAWN	Rcd	02/22/11
REVIEWED	MM	08/31/11



USER NAME =	DESIGNED - MNM	REVISED -
	CHECKED - TEH	REVISED -
PLOT SCALE =	DRAWN - Rcd	REVISED -
PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY & MECHANICAL SPLICER DETAIL  
STRUCTURE NO. 083-0068

SHEET NO. 21 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-2	SALINE	87	86
CONTRACT NO. 78166				
ILLINOIS FED. AID PROJECT				

