

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(128BR)I-1	TAZEWELL	33	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

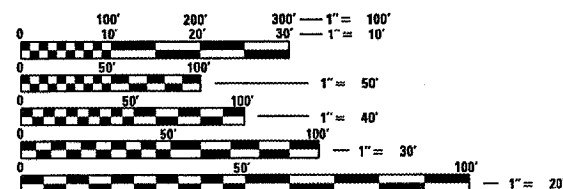
FAP ROUTE 701 (IL 122)
SECTION (128 BR)I-1
TAZEWELL COUNTY
C-94-075-05

INDEX OF SHEETS:

1. COVER SHEET
- 2-3. COMMITMENTS & GENERAL NOTES
- 4-6. SUMMARY OF QUANTITIES
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8. QUANTITIES NOT OTHERWISE SHOWN
9. WIDE LOAD SIGNING
10. BUTT JOINT DETAIL
11. TRAFFIC CONTROL STAGING
12. PLAN AND ELEVATION
13. STAGE CONSTRUCTION DETAIL
- 14-21. BRIDGE REPAIR DETAILS
- 21A-21D. BRIDGE APPROACH PAVEMENT DETAILS
- 22-29. SCOUR MITIGATION PLANS

STANDARDS REQUIRED:

- 420401-05 701101-01 702001-06
515001-02 701106-01 704001-03
630001-07 701201-02 780001-01
631031-06 701306-01 781001-02
631032-03 701321-08



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

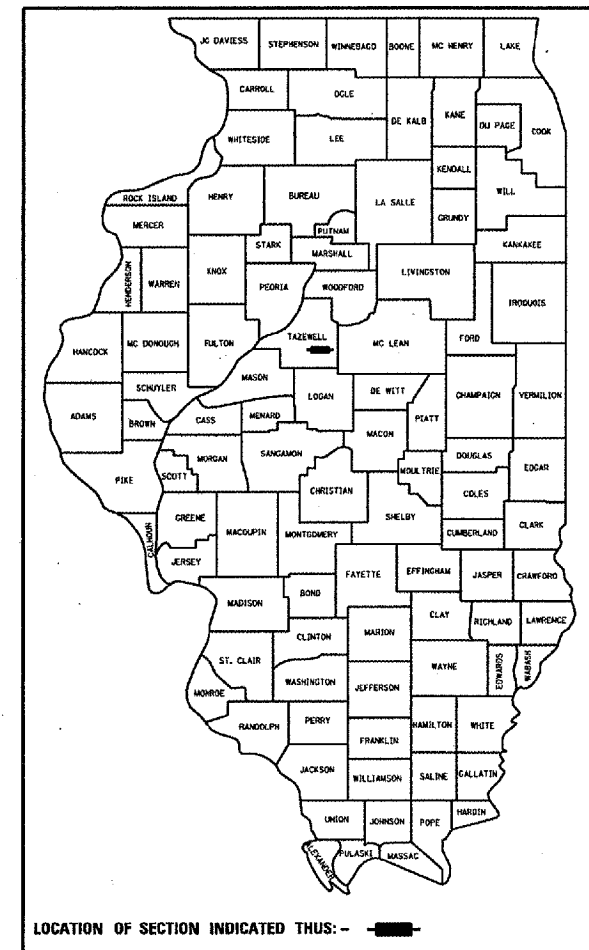
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 68484 CAT. NO. 033065-00D

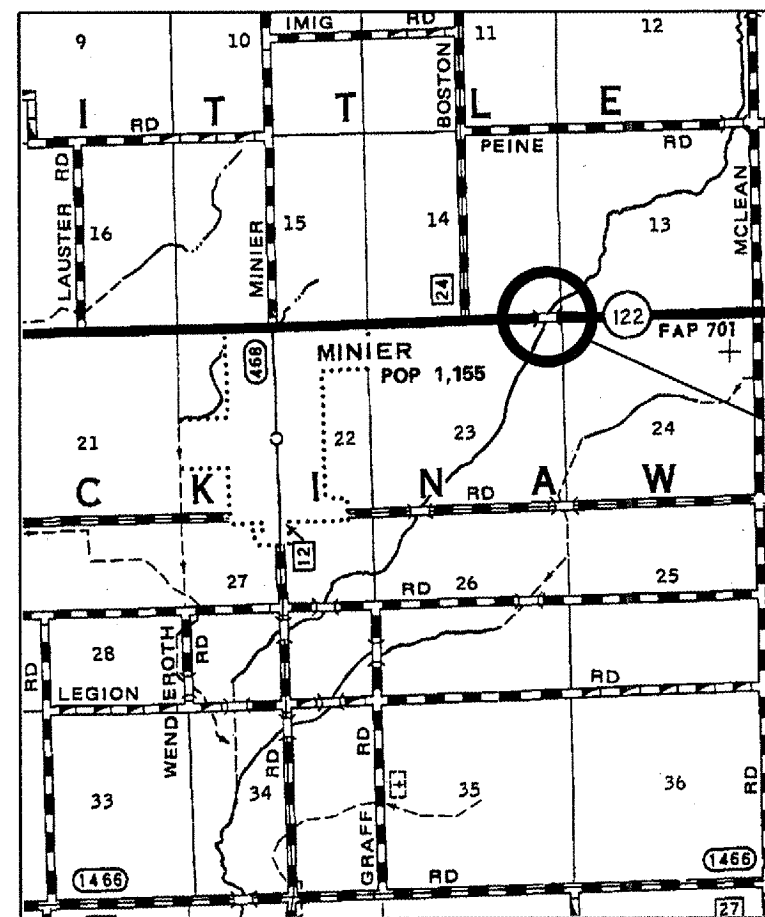
DESIGNER: CLARK JONES
PHONE NO: (309) 671-3452

PROJECT ENGINEER: JIM MILLER
PHONE NO: (309) 671-3451

D-94-066-05



LOCATION OF SECTION INDICATED THUS: -



LOCATION MAP

SCOUR MITIGATION AND DECK BEAM REPLACEMENT
ON STRUCTURE CARRYING IL. 122 OVER SUGAR
CREEK (SN. 090-0058), 1 MILE EAST OF MINIER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Oct 20, 2006*

[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 8, 2006
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

December 8, 2006
[Signature]
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CONTRACT NO. 68484				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	11288R11-1	TAZEWELL	20	2
STA. 77+63.98		TO STA. 78+48.02		
FED. RDW DIST. NO. 4 ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. Any reference to a standard in these plans shall be interpreted to mean the edition, as indicated by the sub-number listed in the index, or the copy of the standard included in these plans.
2. The Engineer and Owner further do not warrant that all utilities have been illustrated on these documents. The Contractor is solely responsible for contacting J.U.L.I.E. for field verification of all utilities on the site prior where section or subsection monuments are encountered. The Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all property markers and monuments until the Owner and an authorized surveyor or agent, have witnessed or otherwise referenced their location.
3. The Contractor shall confine his operations to the area located within the construction limit lines, as shown per plans. Any area disturbed beyond these limits shall be restored to it's original condition at the Contractor's expense.
4. All temporary pavement markings shall be placed in such a manner so as not to interfere with the placement of permanent pavement markings.
5. The thickness of the bituminous 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 the base course on which the bituminous mixture is placed.
6. No vibratory roller will be allowed.
7. Illinois State law requires a 48-hour notice be given to all utilities before digging. Field marking of facilities may also be obtained by calling J.U.L.I.E. and for non-J.U.L.I.E. members, the utility company directly. Agencies known to have facilities within the project area are as follows:

- * CORNBELT ELECTRIC COOPERATIVE, INC.
- * VERIZON
- * MEDIACOM
- * AT&T(SBC) COMMUNICATIONS
- * AMEREN CILCO/IP

8. (Members of J.U.L.I.E. (800-892-0123 are indicated by *, whereas non-members must be notified individually.)

COMMITMENTS

There are no commitments for this project.

UTILITIES - LOCATIONS/INFORMATION ON PLANS

Unless noted otherwise, the location of existing water mains, gas mains, sewers, electric power lines, telephone lines, and other utilities as shown on the plans are based on careful field investigation and the information available, but they are not guaranteed. Some utility connections are shown as future. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

BUTT JOINT CUTTING TIME RESTRICTION

Butt joints shall be milled more than three (3) days prior to placement of the bituminous surface course.

NAME PLATE RELOCATION

Name plates that will be removed as a result of this work shall be relocated on the steel bridge rail, Type SM as directed by the Engineer. The cost of removing and replacing the name plate(s), including all necessary fasteners, will not be measured or paid for seperately, but will be considered as incidental to the contract.

The following mixture requirements are applicable for this project:

MIXTURE USE(S):	SURFACE (1 1/2" LIFT)
AC/PG	PG 64-22
RAP % (MAX)	15%
DESIGN AIR VOIDS	4.2% @ N=50
MIX COMPOSITION (GRADATION MIXTURE)	IL. 9.5 or 12.5
FRICTION AGG	MIXTURE D

Plan quantities for bituminous concrete surface course items are calculated using a unit weight of 112 lb/sq.yd./in.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		COMMITMENTS & GENERAL NOTES <small>SCALE: VERT. DRAWN BY CEJ HORIZ. CHECKED BY DATE 03-24-2006</small>

PLOT DATE MONITOR
 FILE NAME WFL01A
 PLOT SCALE 1/8"=1'-0"
 REFERENCE SHEET

F.A.P. RYE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(128BRII-1	TAZEWELL	29	3
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

1. Plan dimensions and details relative to existing structure (including High Water Elevation) have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. All information shown in each structure's Waterway Information Table was provided by the Illinois Department of Transportation.
3. Commitments are not to be altered without the written approval of all parties to which the commitment was made.
4. The Contractor shall be responsible for diverting the water flow from the construction area of each site. The Contractor may use either method of dewatering as described in the Dewatering Special Provision.
5. During site preparation, areas below the final grade shall be brought to grade by placing compacted layers of Granular Subbase Material, Type C; areas of soft or otherwise unsuitable subgrade soils shall be excavated and replaced with compacted layers of Granular Subbase Material, Type C. Removal and replacement of unsuitable material shall be as directed by the Engineer and will be paid for in accordance to Article 109.04 (Force Account Basis) of the Standard Specifications. An assumed quantity for Granular Subbase Material, Type C, is included as part of each structure's mitigation details.
6. Layout of scour protection systems may be varied in the field to suit ground conditions as directed by the engineer.
7. All areas disturbed during construction shall be graded, fertilized, seeded and mulched as directed by the Engineer. Sections 250 and 251 of the Standard Specifications shall govern this work.
8. It is anticipated that the majority of the scour work will not require highway traffic lane closures. Work which would require extended lane closures shall be done while Standard 701321 is in use. Otherwise, the Contractor is restricted to one-lane daytime only closures in accordance with IDOT Standards 701201 and 701301.
9. GABION ANCHOR STAKE layout shown on plan sheets is for information and estimation purposes only. Actual layout shall be determined in the field by the Contractor and approved by the Engineer and shall conform to the procedures stated in the special provisions.
10. STONE RIPRAP, CLASS A5 is shown in plan details at a nominal 30" thickness, which is the minimum combined thickness of bedding stone and riprap allowed by the Standard Specifications.

COMMITMENTS

There are no commitments for this project.

SCOUR CONSTRUCTION SEQUENCE

1. Install dewatering system and divert water flow from the construction area.
2. Excavate to the lines, grades, contours, and dimensions shown. The prepared area shall be inspected and approved by the Engineer before further work can take place.
3. Install filter fabric on the graded surfaces as shown on the drawings.
4. Install site specific scour countermeasures. See detail sheets for specific installation procedures.
5. Remove dewatering system. Grade and seed ground disturbed during construction.

PLOT DATE * DATES
FILE NAME * SHEET
SCALE * SHEET
REFERENCE * SHEET

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		COMMITMENTS & GENERAL NOTES
SCALE: VERT.		DRAWN BY CEJ CHECKED BY
DATE 03-24-2006		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(128BR11-1	TAZEWELL	29	4
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE

CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE		TOTAL
			X080-2A	SFTY-3N	
			STATE 100% →		
20300100	CHANNEL EXCAVATION	CU YD.	1090		1090
20400800	FURNISHED EXCAVATION	CU YD.	76		76
25000300	SEEDING, CLASS 3	ACRE	0.03		0.03
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	3		3
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	3		3
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	3		3
25100630	EROSION CONTROL BLANKET	SQ. YD.	152		152
28000400	PERIMETER EROSION BARRIER	FOOT	92		92
28100209	STONE RIPRAP, CLASS A5	TON	1165		1165
28200200	FILTER FABRIC	SQ YD	1067		1067
31101900	SUB-BASE GRANULAR MATERIAL, TYPE C	TON	395		395
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	148		148
40600300	AGGREGATE (PRIME COAT)	TON	1		1
40600982	HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SQ YD	160		160
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	37		37
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	168		168
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	36		36
44004400	PAVEMENT REMOVAL (SPECIAL)	SQ YD	168		168
48101200	AGGREGATE SHOULDERS, TYPE B	TON	2		2

PLOT DATE * 00/00/00
 FILE NAME * 000000
 SCALE * 1"=100'
 REFERENCE * 000000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
 SCALE: VERT. _____
 DATE 03-24-2006
 DRAWN BY CEJ
 CHECKED BY _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(128BR1-1	TAZEWELL	29	5
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE

CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE		TOTAL
			X080-2A	SFTY-3N	
			STATE 100% →		
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
50300225	CONCRETE STRUCTURES	CU YD	6		6
50300260	BRIDGE DECK GROOVING	SQ YD	273		273
50300300	PROTECTIVE COAT	SQ YD	294		294
50400105	PRECAST CONCRETE BRIDGE SLAB	SQ FT	299		299
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	2646		2646
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4,640		4,640
50800515	BAR SPLICERS	EACH	88		88
50901050	STEEL RAILING , TYPE SM	FOOT	244		244
51500100	NAME PLATES	EACH	1		1
* 63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	37.5		37.5
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4		4
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4		4
63200305	STEEL PLATE BEAM GUARDRAIL REMOVAL <i>EXISTING</i>	FOOT	125		125
63300205	REMOVAL AND REINSTALLATION OF STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	50		50
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4		4
67100100	MOBILIZATION	LSUM	1		1
70100405	TRAFFIC CONTROL AND PROTECTION STANDARD 701321	EACH	1		1
70104600	TRAFFIC CONTROL AND PROTECTION STANDARD 701306	L SUM	1		1

* SPECIALTY ITEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
 SCALE: VERT. _____
 DATE 03-24-2006
 DRAWN BY CEJ
 CHECKED BY _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(1288R)-1	TAZEWELL	29	6
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE

UNIT	X080-2A	SFTY-3N	TOTAL
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STATE 100% \longrightarrow

CODE NO.	ITEM	UNIT	X080-2A	SFTY-3N	TOTAL
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1
70106700	TEMPORARY RUMBLE STRIP	EACH	12		12
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	176		176
70300200	TEMPORARY PAVEMENT MARKING	FOOT	7040		7040
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2405		2405
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500		500
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	500		500
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	3520		3520
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6		6
78200410	GUARDRAIL MARKERS, TYPE A	EACH	4		4
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4		4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1173		1173
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6		6
X0324744	REMOVAL OF EXISTING PRECAST CONCRETE UNITS	SQ FT	299		299
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	294		294
X0325294	PREFORMED JOINT STRIP SEAL	FOOT	40		40
Z0030255	IMPACT ATTENUATORS, TEMPORARY(FULLY REDIRECTIVE, NARROW),				
	TEST LEVEL 2	EACH		2	2
Z0030320	IMPACT ATTENUATORS, RELOCATE(FULLY REDIRECTIVE), TEST LEVEL 2	EACH		2	2

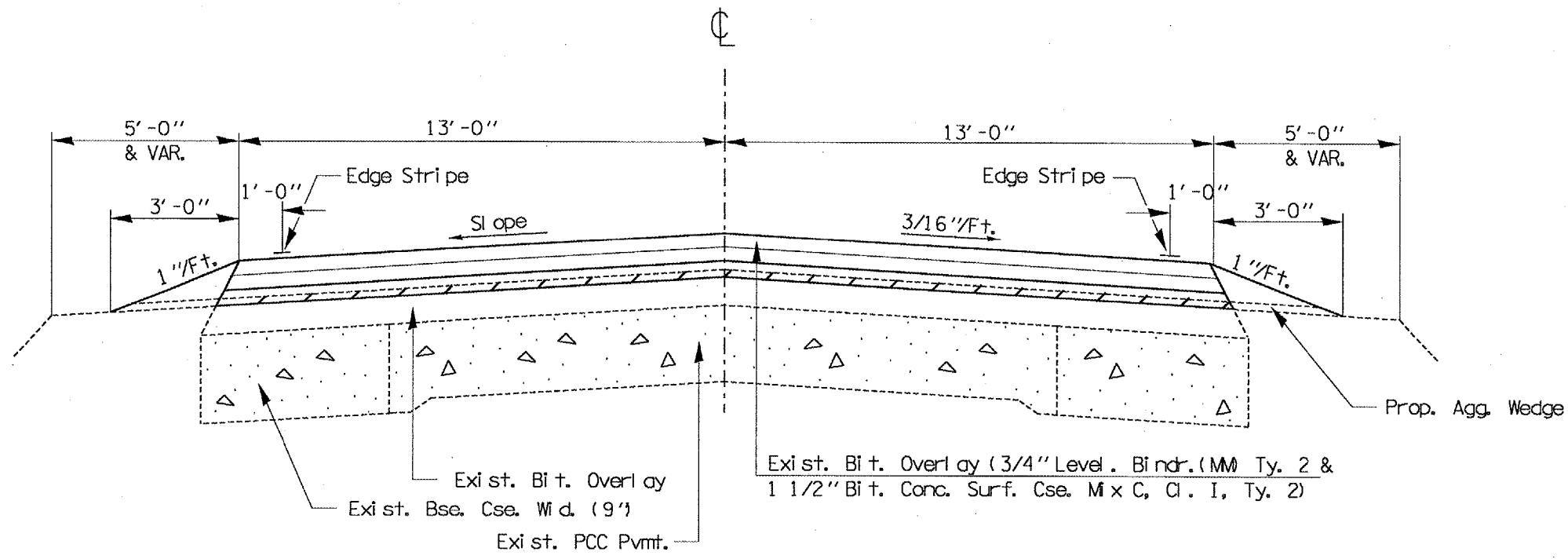
* SPECIALTY ITEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
 SCALE: VERT. DRAWN BY CEJ
 HORIZ. CHECKED BY
 DATE 03-24-2006

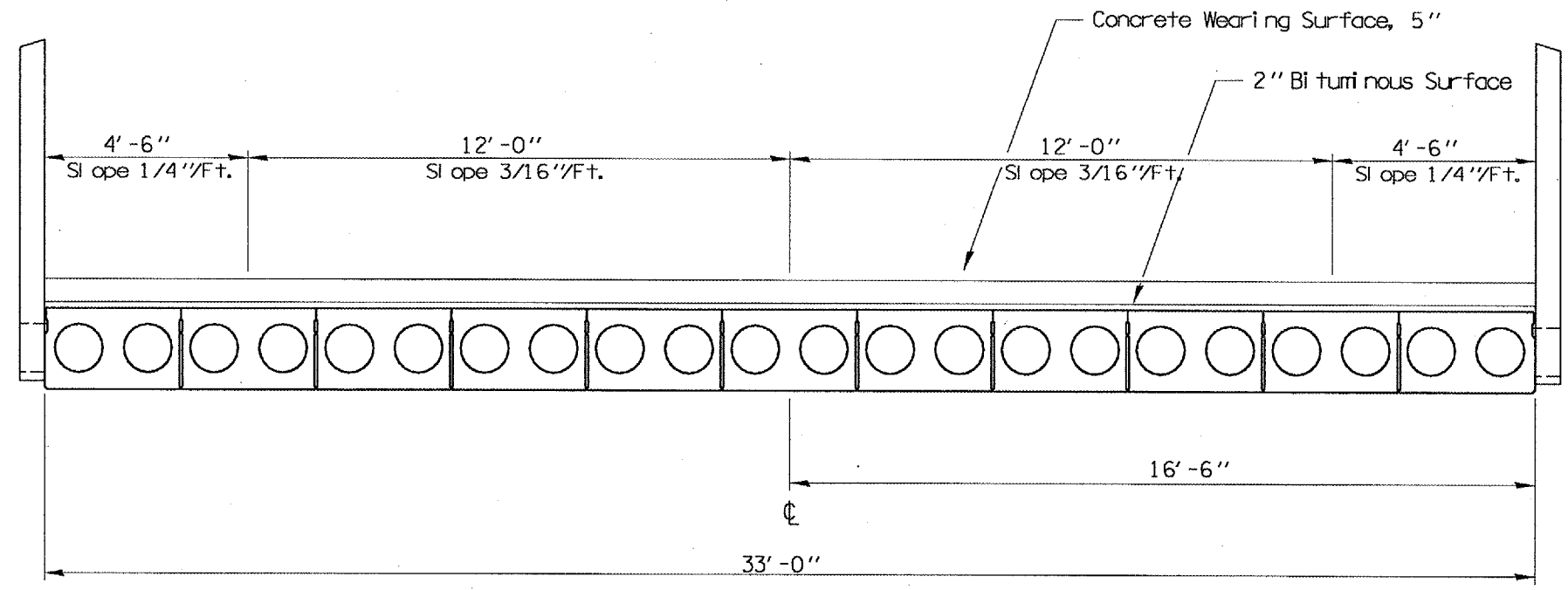
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 PLOT SCALE * SCALE#
 REFERENCE * REF#

CONTRACT NO. 68484				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	1128BR1-1	TAZEWELL	29	7
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		



Existing Typical Section
Sta. 63+10 to 77+64.5
Sta. 78+47 to Sta. 84+00

NOTE: For the proposed typical section off either end of the bridge, consult pages 9 and 21A-D for further details.



STA. 77+64.5 TO STA. 78+47

PLOT DATE * NUMBER * FILE NAME * PLOT SCALE * REFERENCE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: VERT. HORIZ. DATE 03-30-2006

DRAWN BY CEJ CHECKED BY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(120BR11-1	TAZEWELL	29	8
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4		ILLINOIS FED. AID PROJECT		

QUANTITIES NOT OTHERWISE SHOWN

ITEM	UNIT	TOTAL	LOCATION
SEEDING, CLASS 3	ACRE	0.03	JOBSITE
NITROGEN FERTILIZER NUTRIENT	POUND	3	JOBSITE
PHOSPHORUS FERTILIZER NUTRIENT	POUND	3	JOBSITE
POTASSIUM FERTILIZER NUTRIENT	POUND	3	JOBSITE
EROSION CONTROL BLANKET	SQ. YD.	152	JOBSITE

PAVMENT MARKING SCHEDULE

STATION TO STATION		WORK ZONE PAVEMENT MARKING REMOVAL (SQ.FT.)	SHORT TERM PAV'T MARKING (FOOT)	TEMPORARY PAV'T MARKING (FOOT)	EPOXY PAVEMENT MARKERS LINE-4" (EACH)	RAISED REFLECTIVE PAVEMENT MARKERS (EACH)	RAISED REFLECTIVE PAVEMENT MKR. REM. (SQ.YD.)
77+04	79+08	963	153	963			
77+04 RT.	79+08 RT.				209		
77+04 LT.	79+08 LT.				209		
77+04 CL.	79+08 CL.				52	6	6
TOTALS		1116	153	963	470	6	6

PLOT DATE * DATE *
 PLOT SCALE * SCALE *
 PLOT REFERENCE * REF *

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

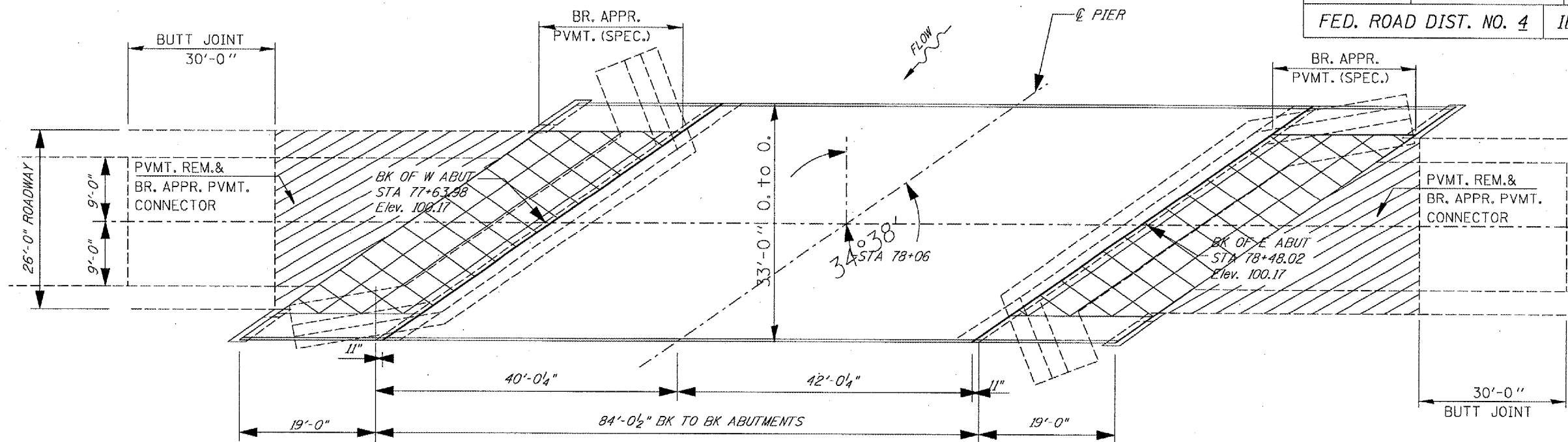
QUANTITIES NOT OTHERWISE SHOWN

SCALE: VERT. DRAWN BY CEJ
 DATE 03-29-2006 CHECKED BY

BENCHMARK: CHISLED SQUARE ON BRIDGE DECK
ON SOUTHWEST CORNER
ELEV = 100.00

EXISTING STRUCTURE: SN 090-0058 IS A 33'-0" WIDE x 84'-0 1/2"
LONG P.C.C. DECK BEAM SUPERSTRUCTURE WITH R.C. CLOSED ABUTMENTS.

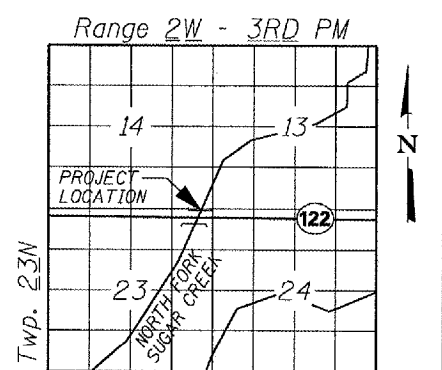
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(128BR)I-1	TAZEWELL	29	9
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	



PLAN

STATION TO STATION		SPBGR TY. A (FOOT)	SPBGR REMOVAL (FOOT)	TRAF. BARR. TERMINAL TYPE 6A (EACH)	TRAF. BARR. TERM. TY. 1 (SPECIAL) (TANGENT) (EACH)	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER, DIRECT APPLIED (EACH)	FURNISHED EMBANKMENT (SEE STD. 630301) (CU.YD.)
76+41 RT	77+34 RT	12.5	88	1	1	1	1	25
76+63 LT	77+56 LT	12.5	88	1	1	1	1	25
78+56 RT	79+49 RT	12.5	88	1	1	1	1	25
78+78 LT	79+71 LT	0	38	1	1	1	1	25
TOTALS		37.5	302	4	4	4	4	100

STATION TO STATION		BIT. CON. SURFACE REMOVAL BUTT JOINT (SQ.YD.)	BITUM. MAT'LS PRIME COAT (GALLON)	ACC. PAVEMENT PRIME COAT (TON)	PAVEMENT REMOVAL (SPECIAL) (SQ.YD.)	BRIDGE APPROACH PAVEMENT (SQ.YD.)	BR. APPR. PAVEMENT CONNECTOR (FLEXIBLE) (SQ.YD.)	BIT. CON. SURF. CSE. SUPERPAVE, MIX D, N50 (TON)
77+04	77+34	87	9	1				7.5
77+34	77+64		11	1	84	84	18	7
78+48	78+78		11	1	84	84	18	7
78+78	79+08	87	9	1				7.5
TOTALS		174	60	4	168	168	36	29



LOCATION SKETCH

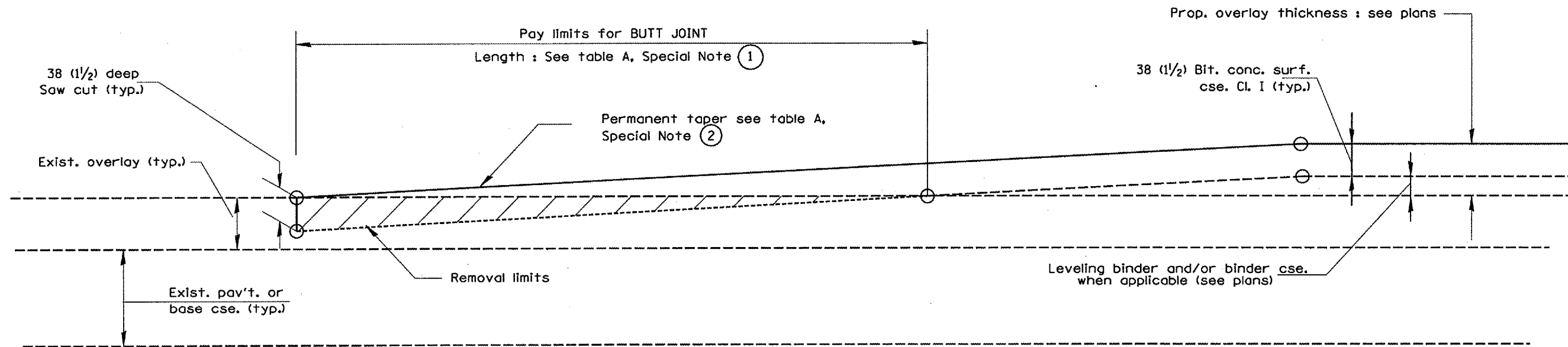
ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL SITE PLAN

SCALE: VERT. _____
HORIZ. _____
DATE 03-29-2006

DRAWN BY CEJ
CHECKED BY _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(1288RD-1	TAZEWELL	24	10
STA. 77+63.98 TO STA. 78+48.02				
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				



CASE 2 : NO BITUMINOUS SURFACE REMOVAL (COLD MILLING)

TABLE A
(LENGTHS AND TAPER RATES)

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	LENGTH OF BUTT JOINT	18.0 m(60')	9.0 m(30')
②	PERMANENT TAPER RATE	1:480	1:240
③	TEMPORARY RAMP TAPER RATE	1:80	1:40
④	TEMPORARY RAMP LENGTH	3.0 m(10')	1.5 m(5')
⑤	LENGTH OF BUTT JOINT	3.0 m(10')	3.0 m(10')

GENERAL NOTES

- The work shall be done in accordance with Article 406.18 and the Special Provision for Butt Joints.
- The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.03 and the Special Provisions for Butt Joints.
- The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.06.

All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BUTT JOINTS

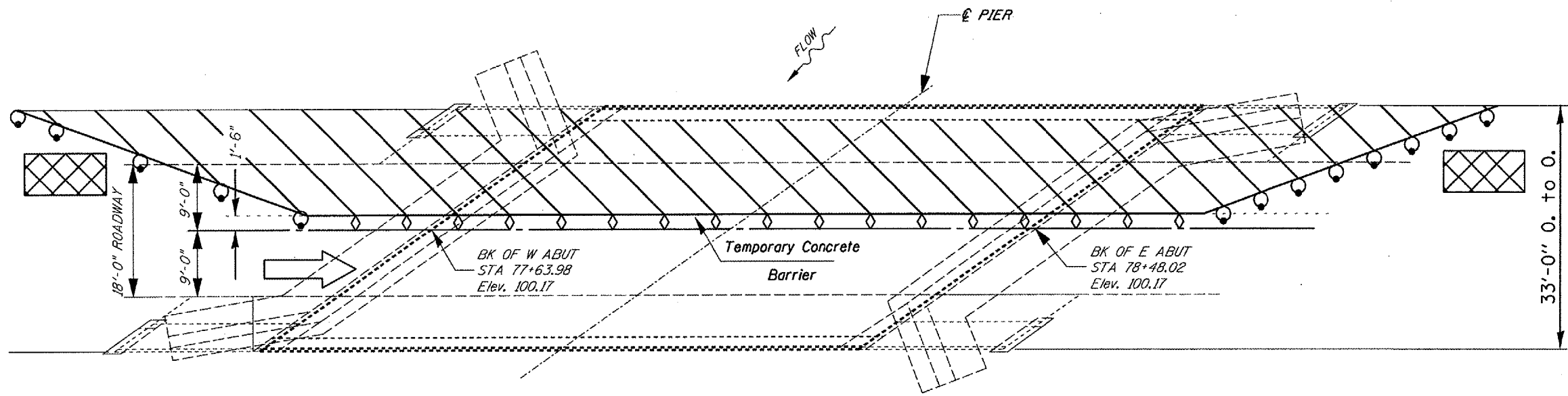
CADD STD NO. 406101-D4 SHEET 1
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
DATE 03-29-2006 CHECKED BY

DATE	REVISIONS	BY
1-1-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
4-1-97	CORRECTION TO DEPTH	J.A.
9-15-05	REVISED DESIGNER NOTE	M.M.A.

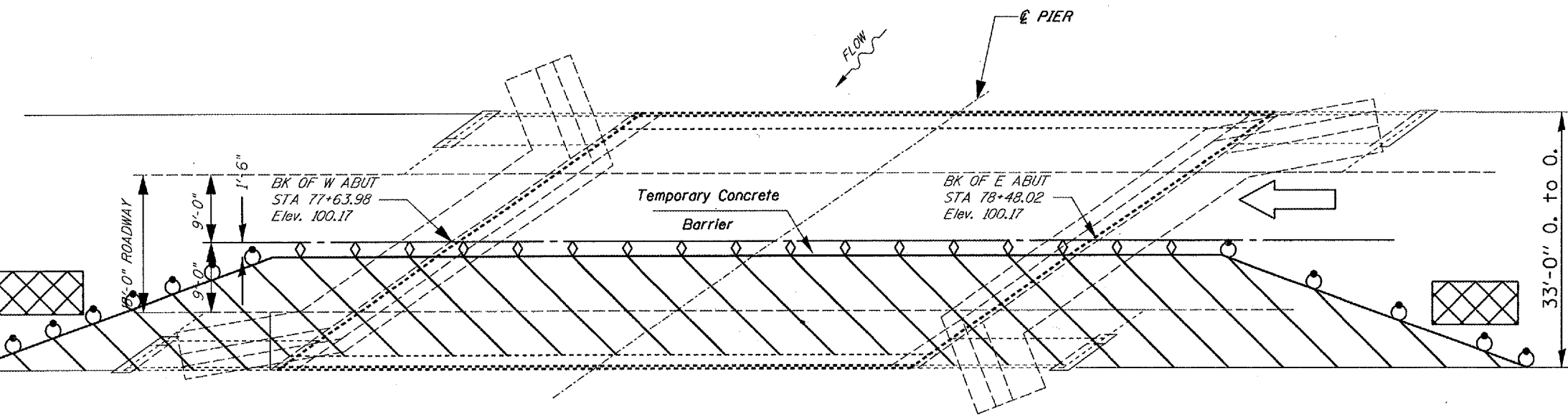
DESIGNER NOTES:
1. Include District Special Provision for Butt Joints & for Bituminous Surface Removal (Cold Milling). Payment for the Butt Joint & temporary ramp. Payment for the Butt Joint & temporary ramp. Payment for the Butt Joint & temporary ramp.
2. The butt joints pay item includes the saw cut & temporary ramp. Payment for the Butt Joint & temporary ramp. Payment for the Butt Joint & temporary ramp.
applies whether or not the project features Bituminous Surface Removal (Cold Milling).

03-29-2006

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(128BRI-1)	TAZEWELL	29	11
STA. 77+63.98		TO STA. 78+48.02		
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				



PLAN
STAGE I



PLAN
STAGE II

Symbols

- Work Area
- Drum w/Steady-Burn Light
- Sign
- Type III Barricade
- Traffic Signal
- Steady Burn Lights and Dbl. Vert. Panels
- Type C Bidirectional Reflector
- Sand Module Impact Attenuator
- Temporary Concrete Barrier
- Induction Loop Detector

NOTES:
Refer to Highway Standard 701321 for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of this standard.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	TRAFFIC STAGING AND CONTROL	

SCALE: VERT. _____
HORIZ. _____
DATE 03-27-2006

DRAWN BY CEJ
CHECKED BY _____

PLOT DATE: _____
FILE NAME: _____
REFERENCE: _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 1
		Tazewell	29	12	10 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract Number: 68484

LOADING HS20-44
No allowance for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi

$f'_c = 5,000$ psi (Concrete Wearing Surface)

$f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi

$f'_{ci} = 4,000$ psi

$f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax strands)

$f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax strands)

PRECAST NON-PRESTRESSED UNITS

$f'_c = 4,500$ psi

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of each fascia beam. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

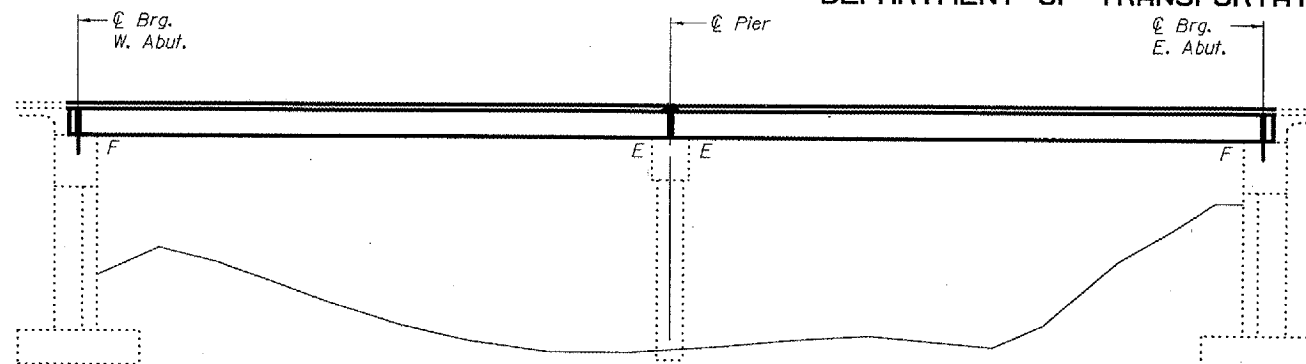
The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Attach new Name plate to the backside of 8" Rail element. Existing name plate is to be removed, cleaned and relocated adjacent to new name plate. Cost included in the cost of Name Plates.

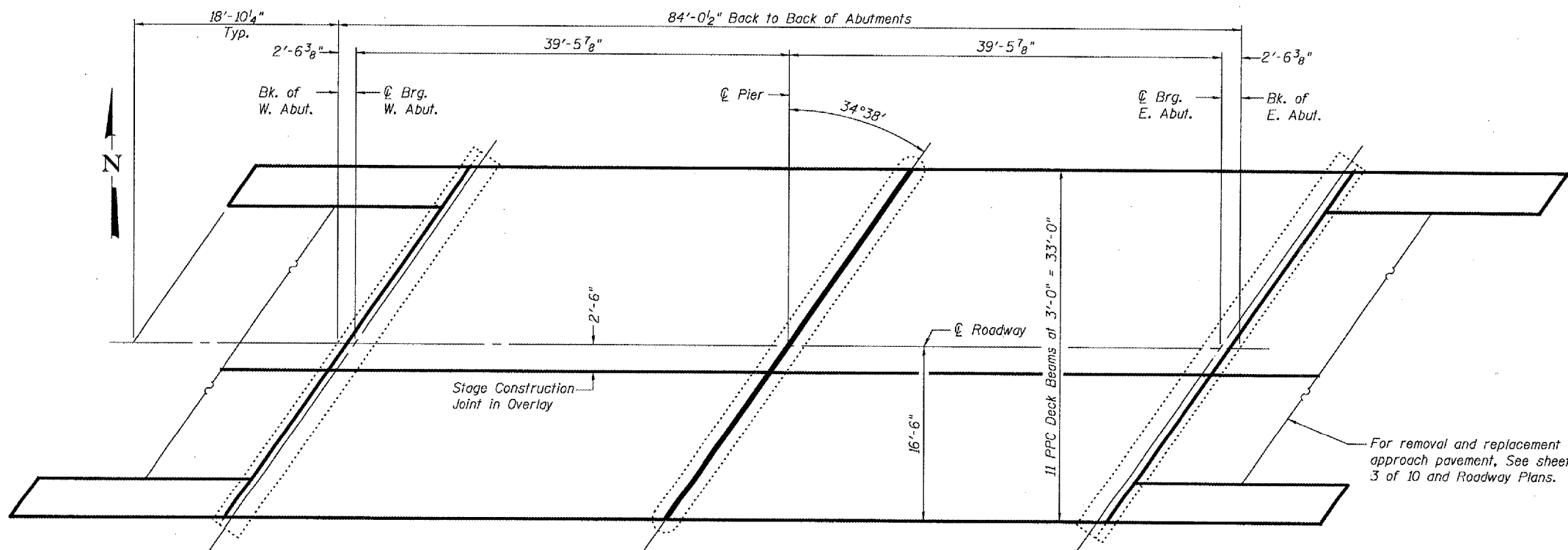
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

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

Reinforcement bars designated (E) shall be epoxy coated.



ELEVATION



PLAN

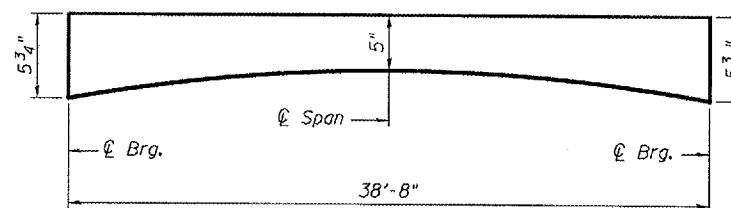
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Strip Seal	Foot	40
Protective Coat	Sq. Yd.	294
Removal of Existing Superstructures	Each	1
PPC Deck Beams (21" Depth)	Sq. Ft.	2646
Reinforcement Bars, Epoxy Coated	Pound	4,640
Steel Rolling, Type SM	Foot	244
Concrete Wearing Surface, 5"	Sq. Yd.	294
Bridge Deck Grooving	Sq. Yd.	273
Name Plates	Each	1
Bar Splicers	Each	88
Removal of Existing Precast Unit	Sq. Ft.	299
Concrete Structures	Cu. Yd.	6.0
Precast Concrete Bridge Slab	Sq. Ft.	299

STATION 78+06
REBUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 701 SEC. (128BR)I
LOADING HS20
STR. NO. 090-0058

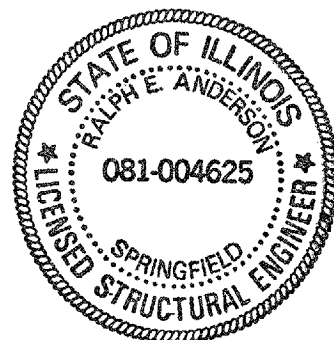
NAME PLATE
(See Std. 515001)

PLAN AND ELEVATION
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058



CONCRETE WEARING SURFACE PROFILE

(Additional 1/4" thickness at ϕ Roadway to account for crown of Roadway.)



Expires: November 30, 2008

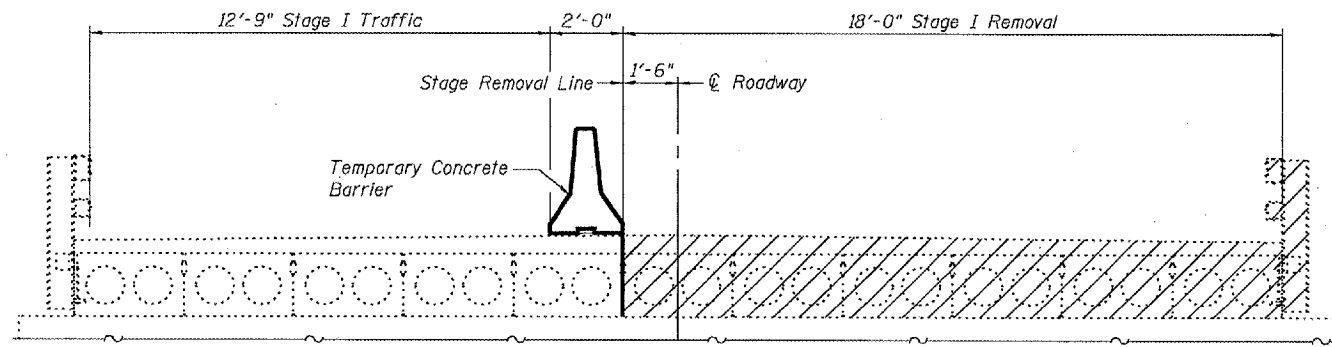
DESIGNED	<i>Pavel John</i>
CHECKED	<i>John A. Morris</i>
DRAWN	<i>PSS</i>
CHECKED	<i>SJB</i>

EXAMINED	<i>John A. Morris</i>	December 8, 2006
PASSED	<i>Ralph E. Anderson</i>	

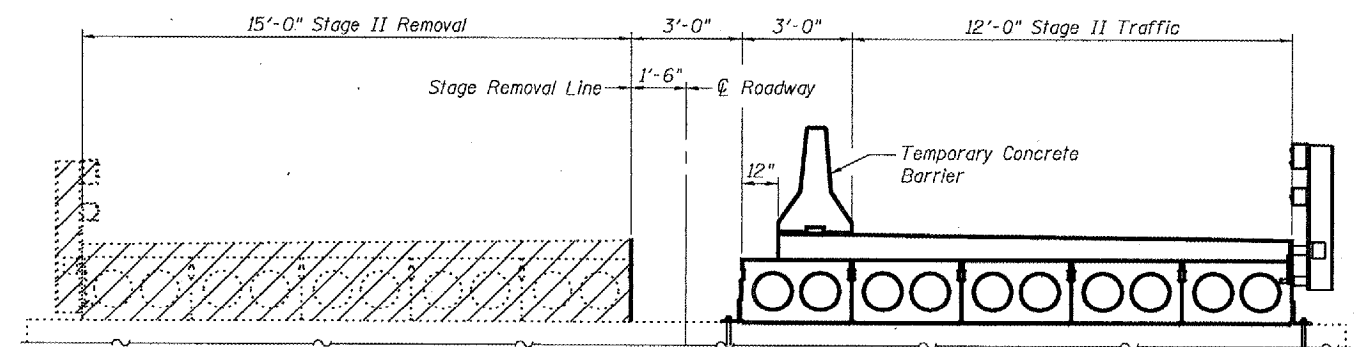
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 10 SHEETS
		Tazewell	29	13	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 68484

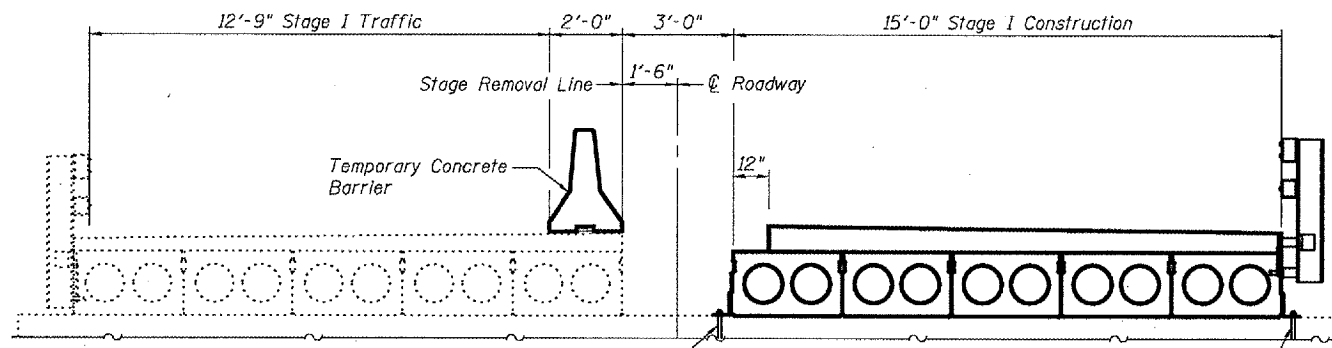


STAGE I REMOVAL

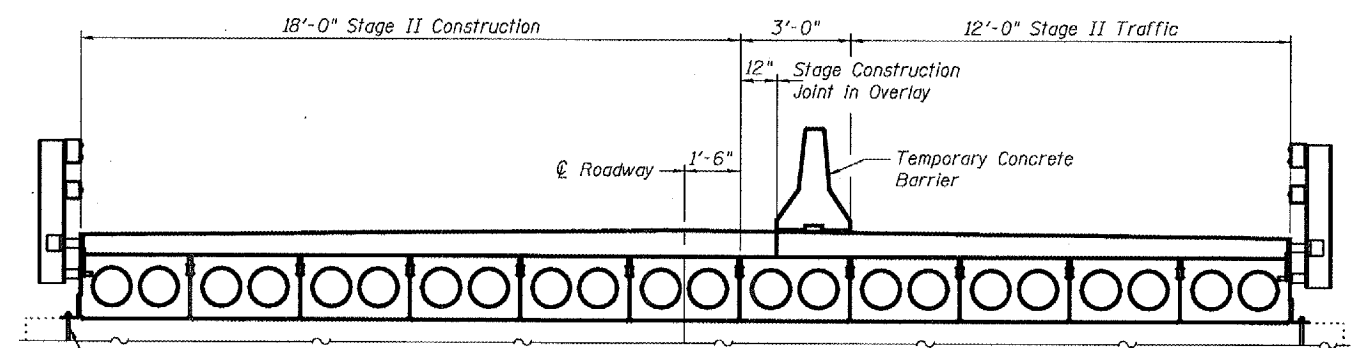


STAGE II REMOVAL

Notes:
All cross-sections are looking East.
Cross Hatched area indicates Removal of Existing Superstructure.
For Temporary Concrete Barrier Details see sheet 9 of 10.



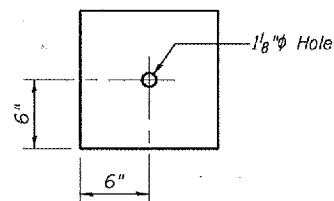
STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

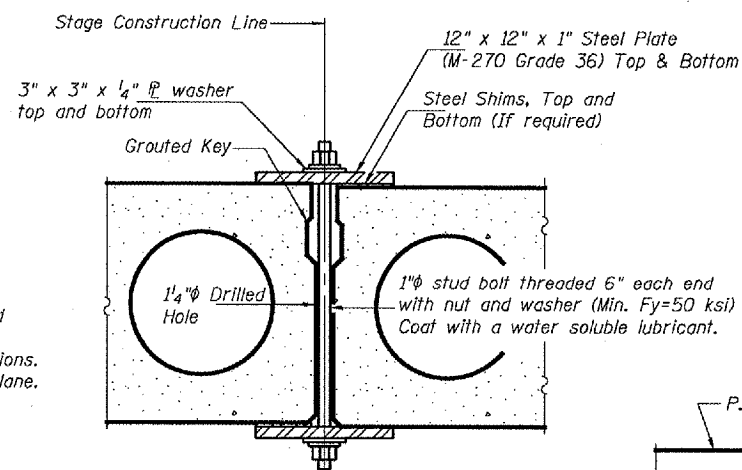
Temporary side retainer at Pier only. Remove angle and burn off anchor bolt flush with cap, grind smooth, and seal with epoxy prior to placement of Stage II PPC Deck beam.

Permanent side retainer at Pier only.

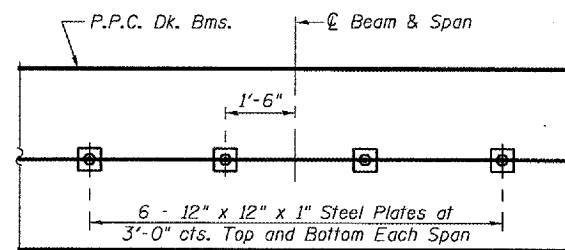


CLAMPING PLATE

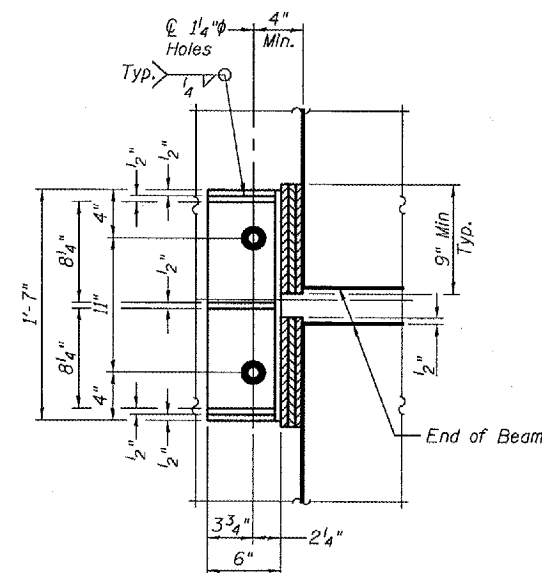
Notes:
Stage construction of Precast Prestressed Concrete Deck Beams shall be according to Article 504.06(d) of the Standard Specifications. See Stage Construction Detail for traffic lane. Cost is included with Precast Prestressed Concrete Deck Beams.



SECTION AT STAGE CONSTRUCTION LINE



PLAN AT STAGE CONSTRUCTION LINE

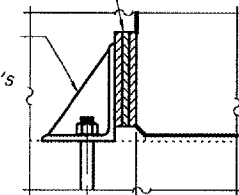


RETAINER ANGLE PLAN

The permanent retainers and hardware shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385.

Steel wedges. Remove after concrete wearing surface has cured.

Retainer angle L8x6x1/2 with 1/2" stiffener PL's



*1" x 12" galv. anchor bolt with 2 1/2" x 2 1/2" x 5/16" washer under nut.

RETAINER ANGLE ELEVATION

*Anchor bolts or approved threaded rod may be placed in drilled holes and grouted in place. Cost of retainer, accessories, and galvanizing are included with Precast Prestressed Concrete Deck Beams.

STAGE CONSTRUCTION DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

DESIGNED	P.S.J.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	P.S.J. S.J.B.

EXAMINED	December 8, 2006
PASSED	John A. Morris ENGINEER OF STRUCTURAL SERVICES Walsh E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

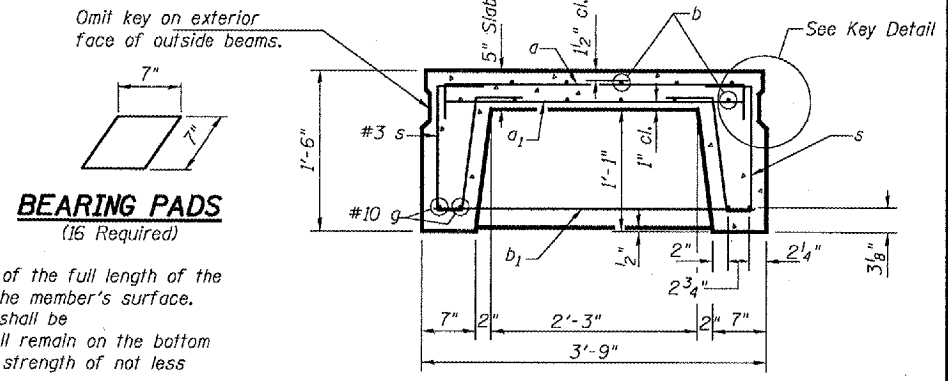
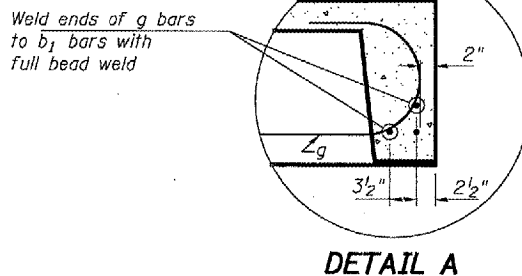
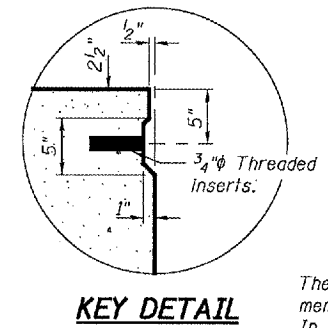
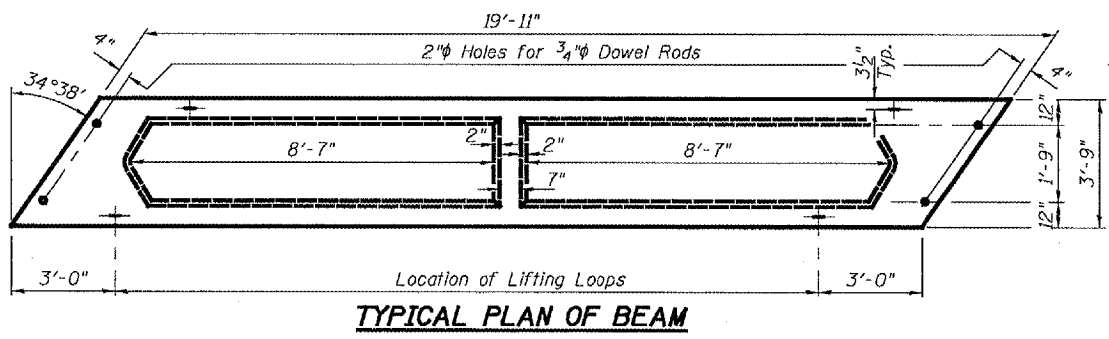
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
Tack welding of stirrups to bottom longitudinal reinforcement bars will not be permitted except as otherwise authorized in writing by the Engineer.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Tazewell	29	14
FED. ROAD DIST. NO. 7		S.D. NO. 10		FED. ROAD PROJECT

SHEET NO. 3
10 SHEETS

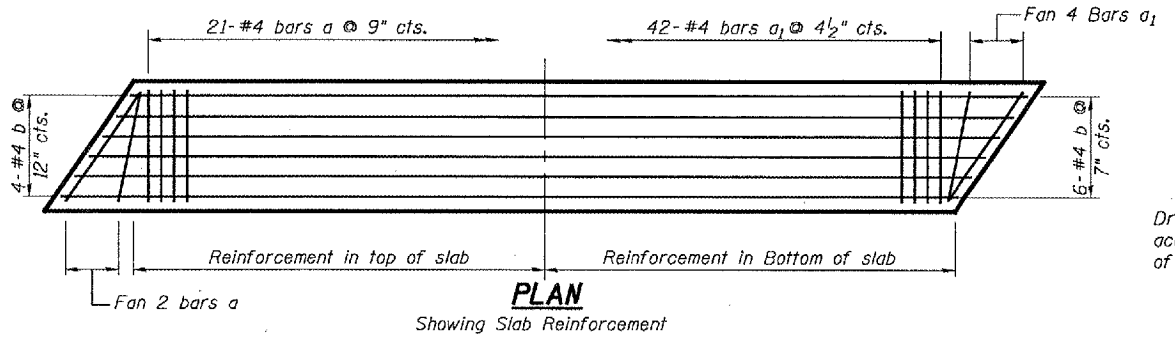
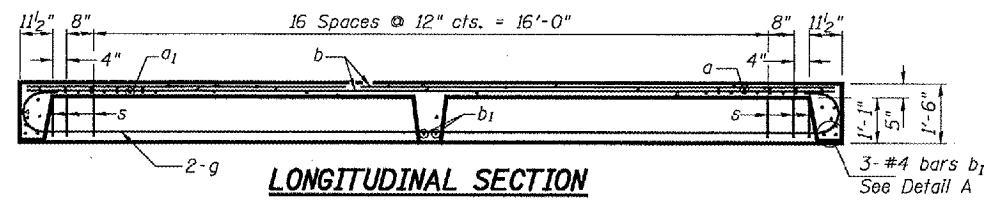
Contract Number: 68484



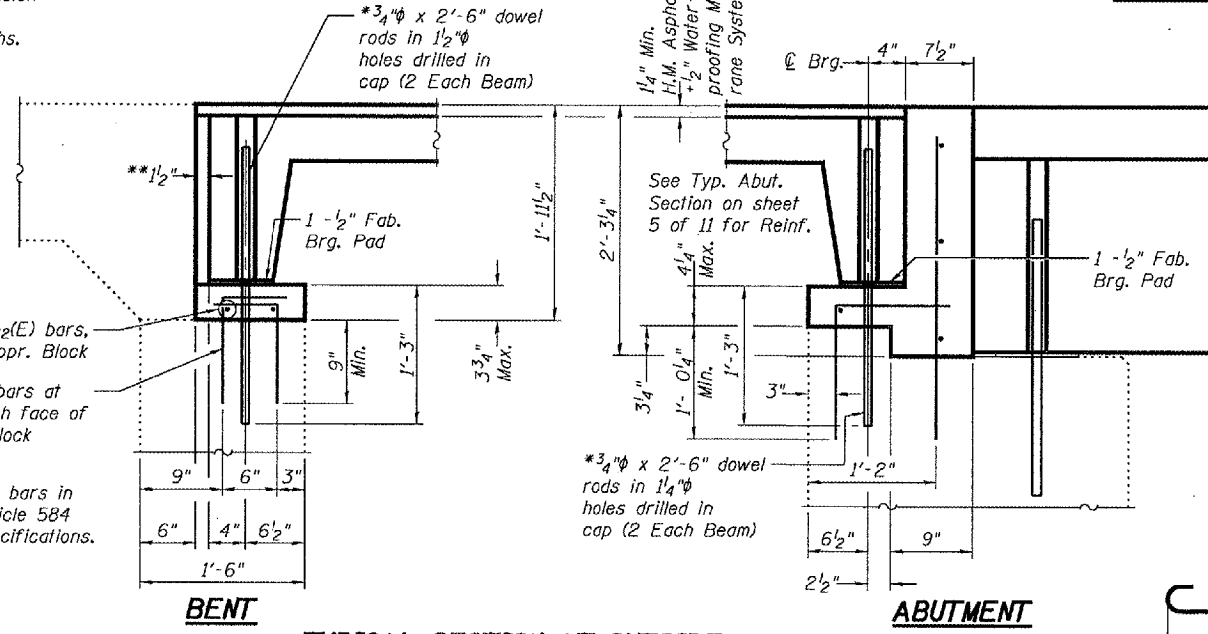
BEARING PADS
(16 Required)

The surface of the member shall not deviate more than 1/1200 of the full length of the member from a straight line connecting the two end points on the member's surface. In addition to State inspection and prior to erection, the beam shall be approved by the resident Engineer at the jobsite. The units shall remain on the bottom supporting forms until the concrete has attained a compressive strength of not less than 3,500 pounds per square inch.

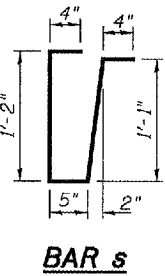
**Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.



Drill and grout $v_2(E)$ bars in accordance with Article 584 of the Standard Specifications.



BAR $v_2(E)$

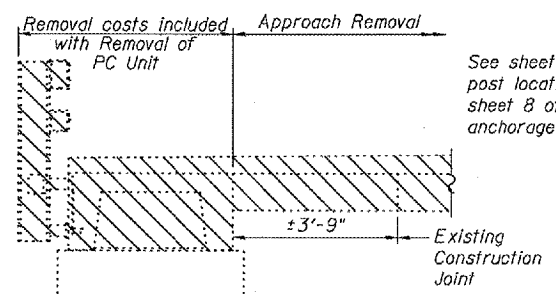
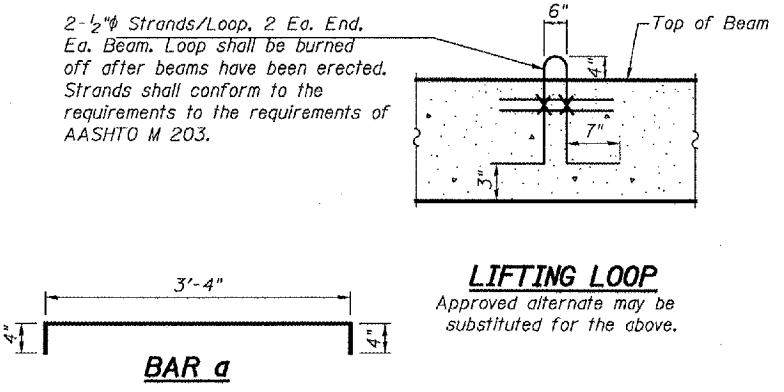


BAR g

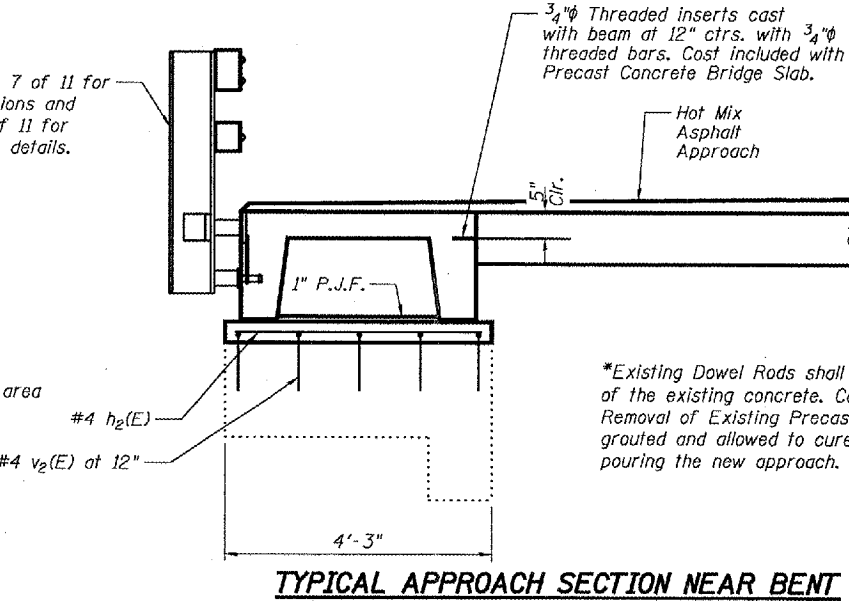
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_2(E)$	8	#4	4'-9"	—
$v_2(E)$	40	#4	1'-6"	L
Precast Concrete Bridge Slab		Sq. Ft.	299	
Reinforcement Bars, Epoxy Coated		Pound	70	
Removal of Existing Precast Unit		Sq. Ft.	299	
Concrete Structures		Cu. Yd.	0.3	

APPROACH DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058



Note:
Hatched area indicates area of approach removal.

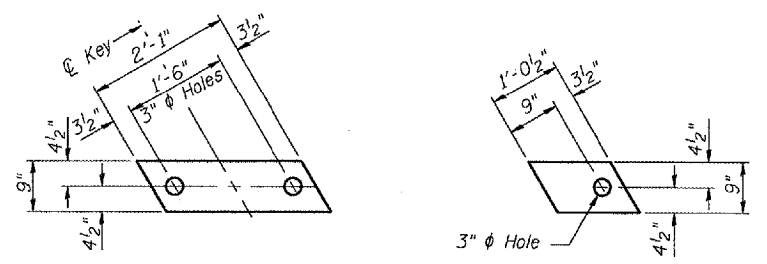


*Existing Dowel Rods shall be burned off flush with the top of the existing concrete. Cost to be included in the cost of Removal of Existing Precast Unit. New Dowel Rods shall be grouted and allowed to cure a minimum of 24 hours prior to pouring the new approach.

DESIGNED	P.S.J.	EXAMINED	December 8, 2006
CHECKED	S.J.B.	EXAMINED	John A. Morris
DRAWN	Drew Christopher	PASSED	Ralph E. Anderson
CHECKED	P.S.J. S.J.B.		

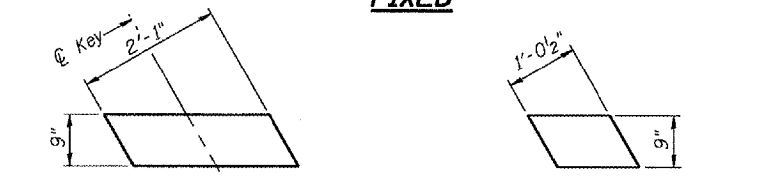
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 4
		Tazewell	29	15	10 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



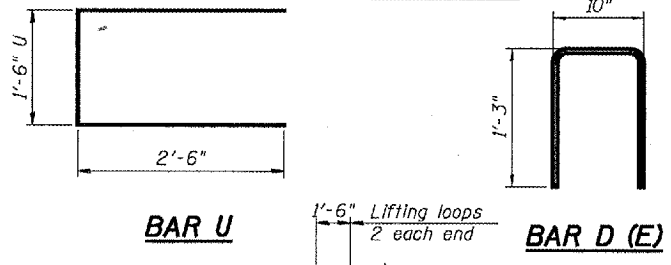
FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

FIXED

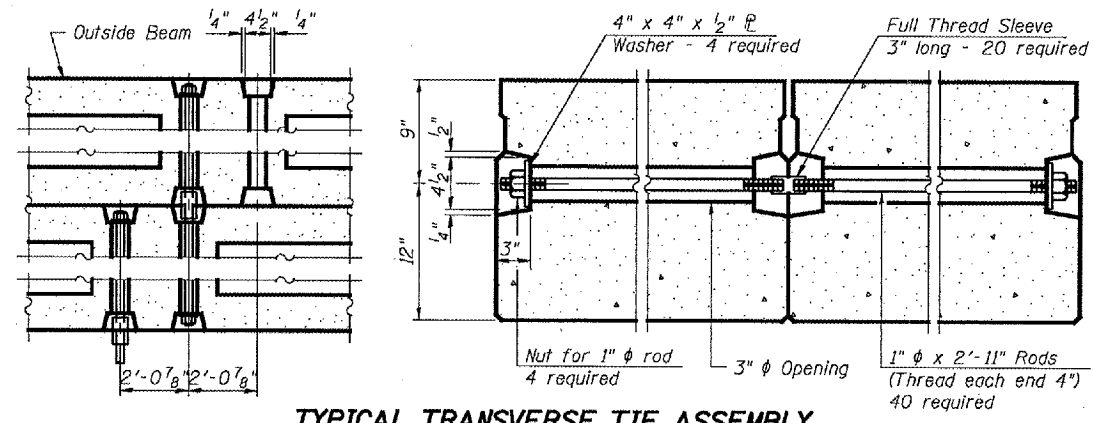


FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

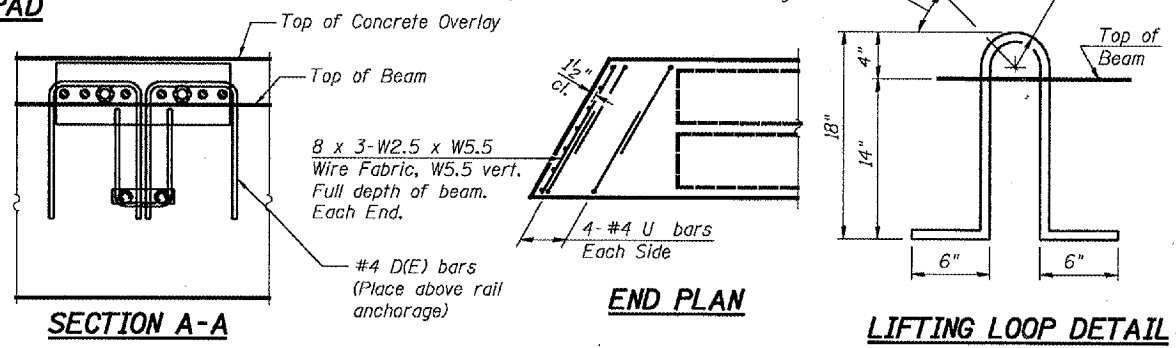
EXPANSION



BAR U **BAR D (E)**



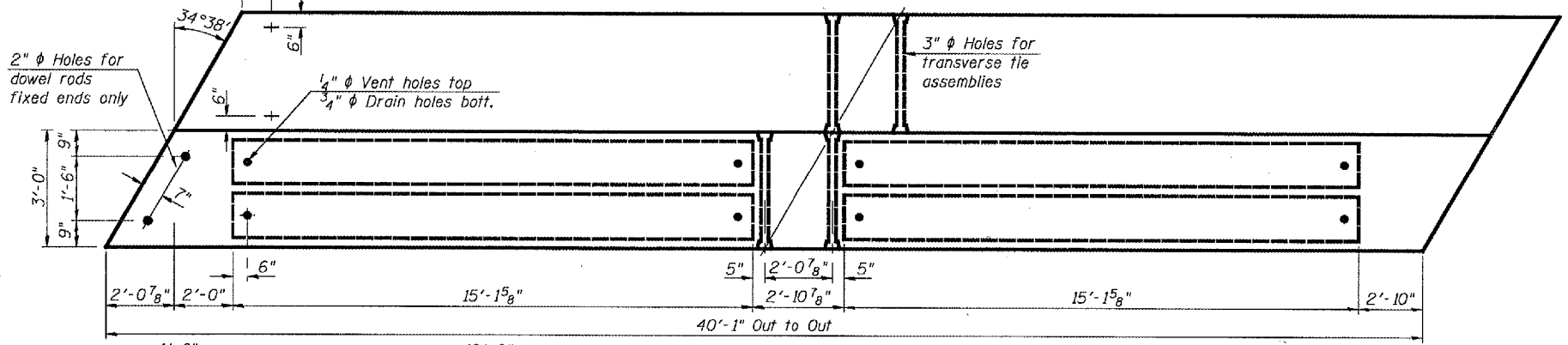
TYPICAL TRANSVERSE TIE ASSEMBLY



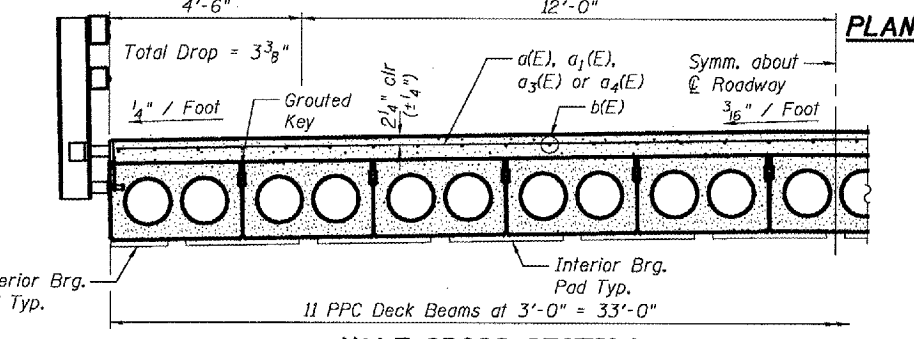
SECTION A-A

END PLAN

LIFTING LOOP DETAIL



PLAN



HALF CROSS SECTION

DESIGNED	P.S.J.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	P.S.J. S.J.B.

December 8, 2006
EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2 - 1/2" φ-270 ksi strands, as shown.

The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

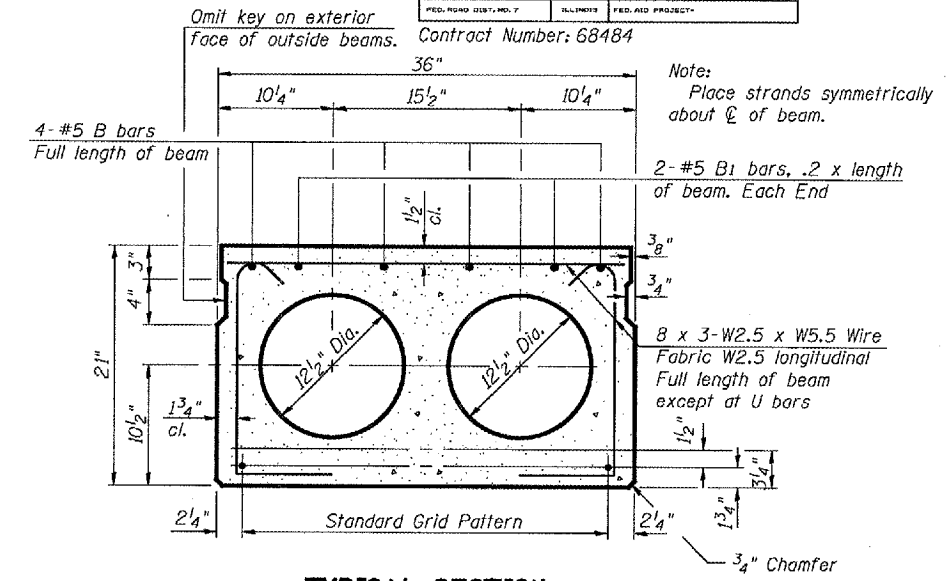
Corrosion Inhibitor, according to Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4000 p.s.i.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

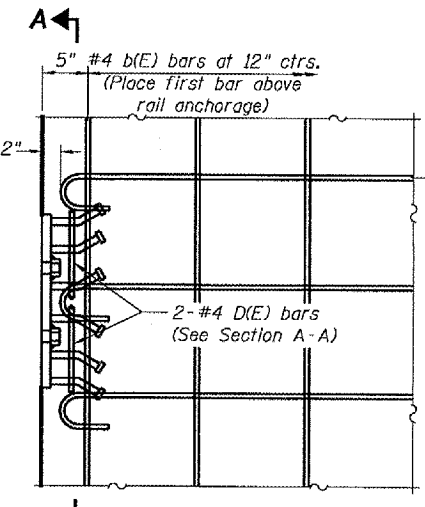
See sheet 7 of 10 for Rail Anchorage Locations.

Non-prestressing steel shall conform to the requirements of ASTM A706 or 60 (IL modified). See Special Provisions.

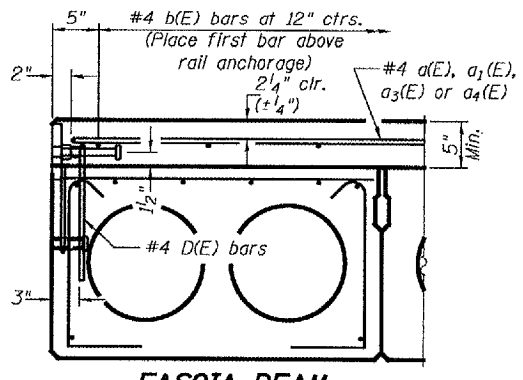


TYPICAL SECTION

1/2" φ Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1 3/4" up, 4-Strands 3/4" up



PARTIAL DECK PLAN AT RAIL ANCHORAGE



FASCIA BEAM

Rail anchorage shall be cast in precast beams. See typical section for dimensions, strand pattern, and bar callouts not shown.

Formwork necessary for the wearing surface may be secured utilizing the bottom rail inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

BILL OF MATERIAL

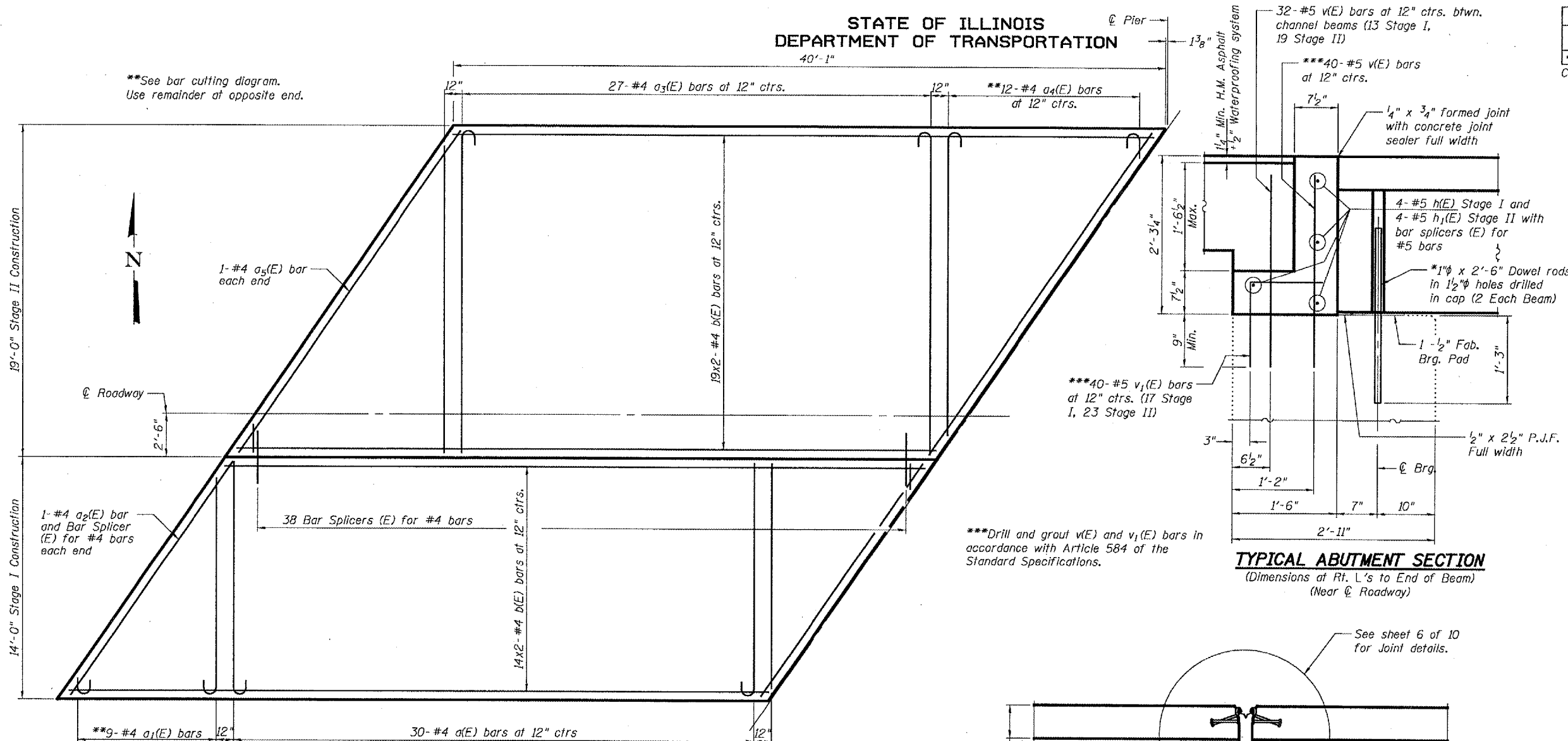
Precast Prestressed Conc. Deck Bms. (21" Depth)	Sq. Ft.	2,646
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DECK BEAM DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

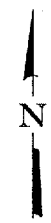
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 5
		Tazewell	29	16	10 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 68484



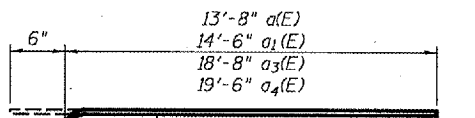
**See bar cutting diagram.
Use remainder at opposite end.



PARTIAL OVERLAY PLAN
(Span 1 Shown, Span 2 Similar)

Note:
Concrete wearing surface to be poured after grouting keys.

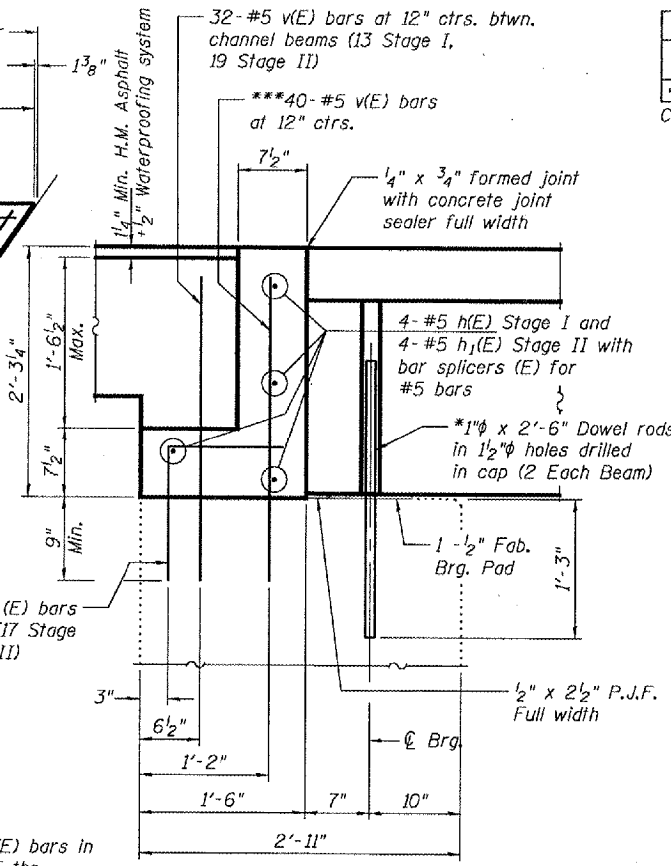
DESIGNED	P.S.J.	December 8, 2006
CHECKED	S.J.B.	EXAMINED <i>John A. Morris</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	Drew Christopher	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	P.S.J. S.J.B.	



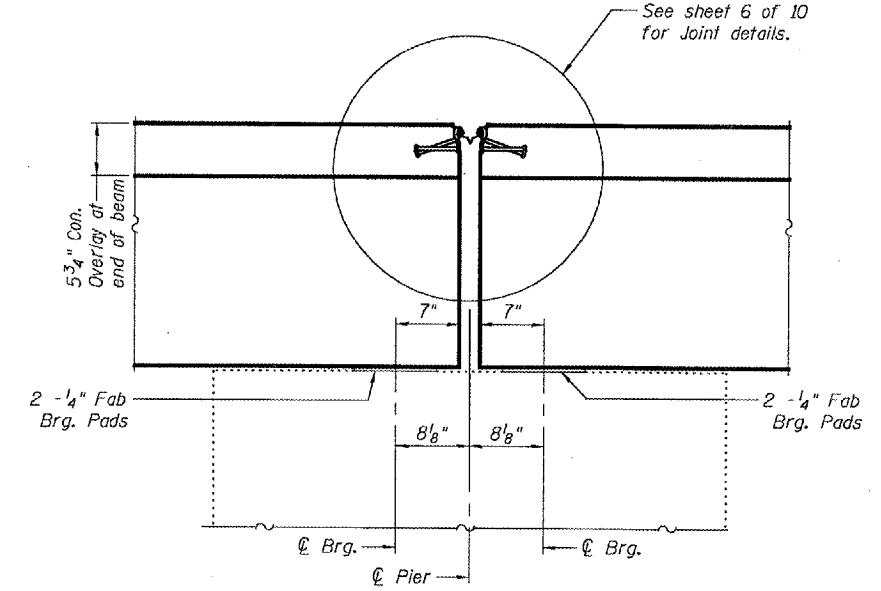
BARS a(E), a1(E), a3(E) and a4(E)

BAR v1(E)

***Drill and grout v(E) and v1(E) bars in accordance with Article 584 of the Standard Specifications.



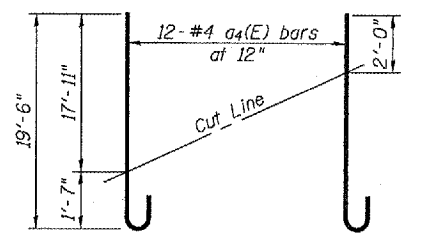
TYPICAL ABUTMENT SECTION
(Dimensions at Rt. L's to End of Beam)
(Near ϕ Roadway)



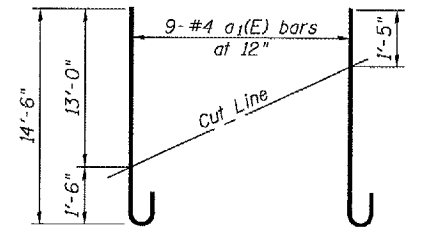
TYPICAL PIER SECTION
(Dimensions at Rt. L's to End of Beam)
(Near ϕ Roadway)

MIN. BAR LAP
#4 = 1'-8"

*Existing Dowel Rods shall be burned off flush with the top of the existing concrete, ground smooth, and sealed with epoxy. Cost to be included in the cost of Removal of Existing Superstructure. New Dowel Rods shall be grouted and allowed to cure a minimum of 24 hours prior to grouting the shear keys.



a4(E) FIELD CUTTING DIAGRAM
Order a4(E) full length. Cut as shown and use remainder of bars in opposite end.



a1(E) FIELD CUTTING DIAGRAM
Order a1(E) full length. Cut as shown and use remainder of bars in opposite end.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	60	#4	14'-2"	C
a1(E)	18	#4	15'-0"	C
a2(E)	4	#4	16'-6"	C
a3(E)	54	#4	19'-2"	C
a4(E)	24	#4	20'-0"	C
a5(E)	4	#4	22'-9"	C
b(E)	132	#4	20'-9"	C
h(E)	8	#5	16'-6"	C
h1(E)	8	#5	22'-9"	C
v(E)	144	#5	2'-9"	L
v1(E)	80	#5	2'-6"	L
Reinforcement Bars, Epoxy Coated		Pound	4,640	
Bar Splicers		Each	88	
Concrete Wearing Surface, 5"		Sq. Yd.	294	
Concrete Structures		Cu. Yd.	5.7	

Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

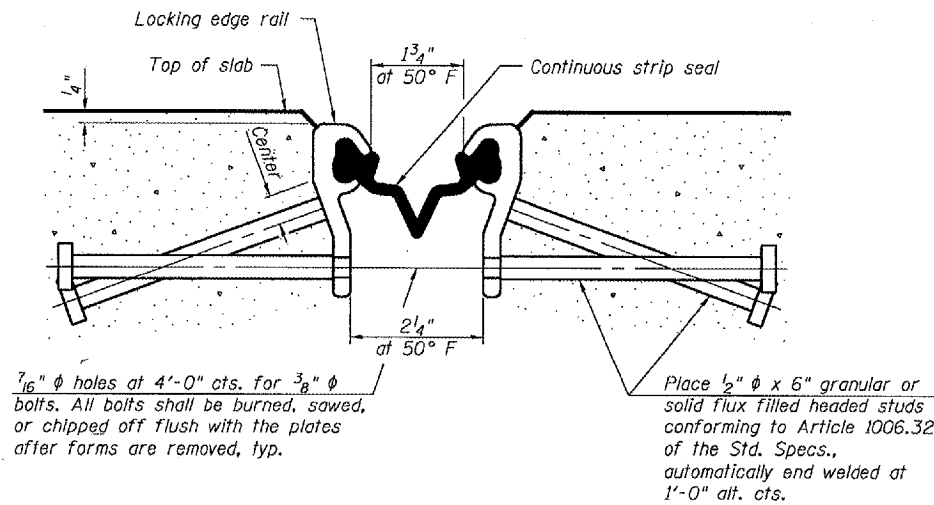
OVERLAY DETAILS AND TYPICAL SECTIONS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 10 SHEETS
		Tazewell	29	17	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 68484

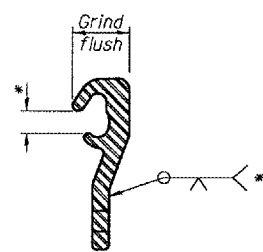
*Omit weld at seal opening.



**SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS**



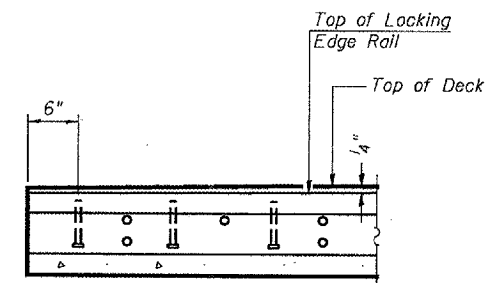
LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints. The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. The inside of the Locking Edge Rail groove shall be free of weld residue.



TYPICAL END TREATMENT

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	40

DESIGNED	P.S.J.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	P.S.J. S.J.B.

EXAMINED	December 8, 2006
PASSED	John A. Morris ENGINEER OF STRUCTURAL SERVICES
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

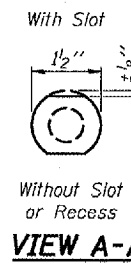
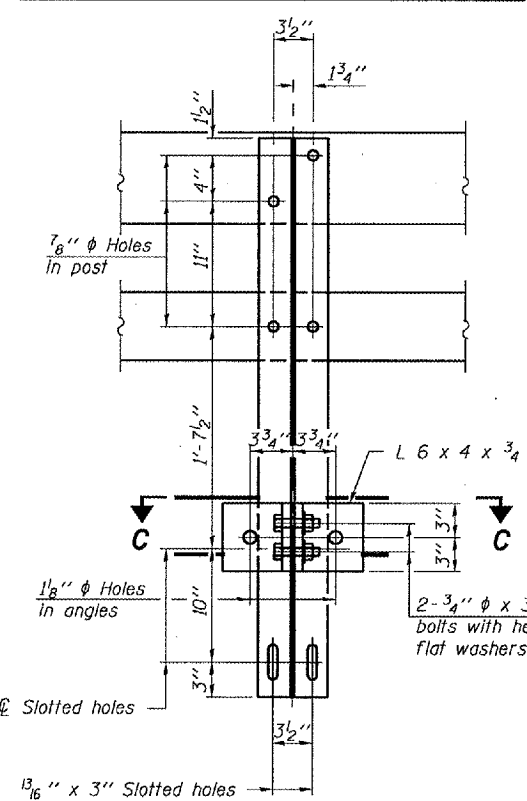
**STRIP SEAL JOINT DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Tazewell	29	18
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
			Contract Number: 68484	

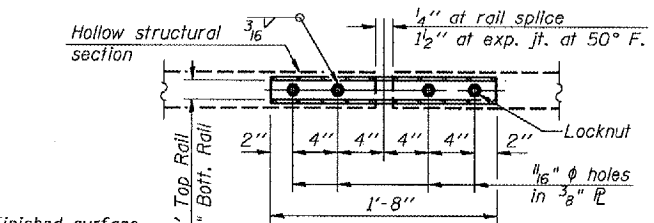
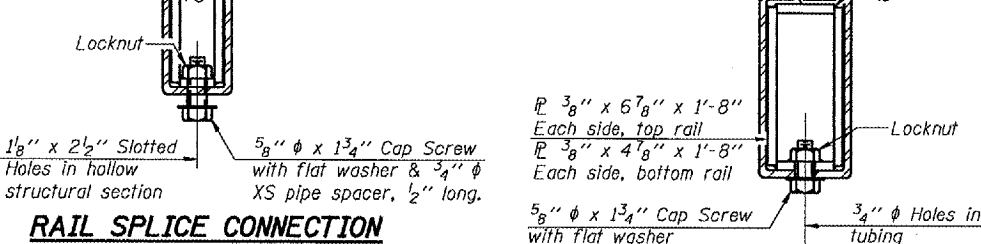
SHEET NO. 7
10 SHEETS

DETAIL OF 3/4" φ ROUND HEAD BOLT



4-3/4" φ x 6" Round Head Bolts
(With slot or approved recess in head) with locknut & flat washer.
7/8" φ holes in hollow structural section may be drilled in the field.

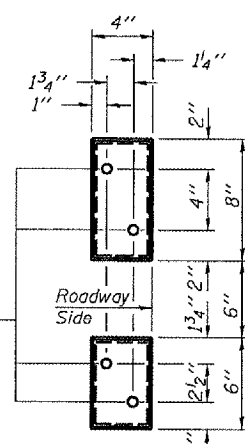
RAIL SPLICE CONNECTION
AT EXPANSION JT.



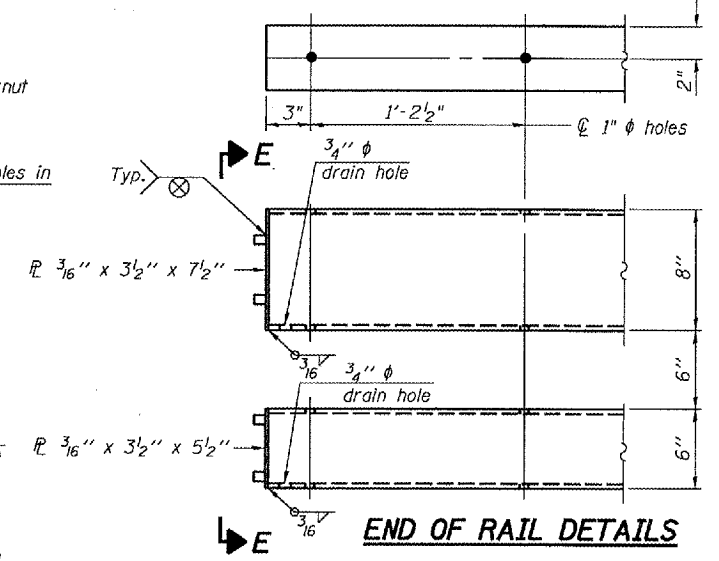
PLAN-BOTT. SPLICE P
TYPICAL

5/8" reduced base welded studs. Provide 4-5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032

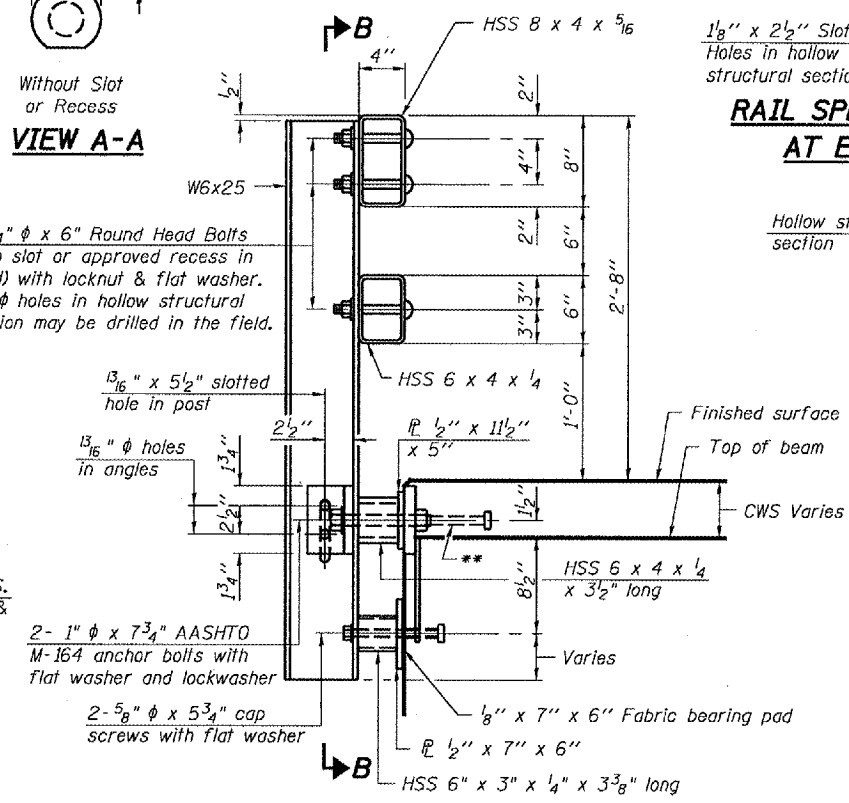
SECTION AT
RAIL SPLICE



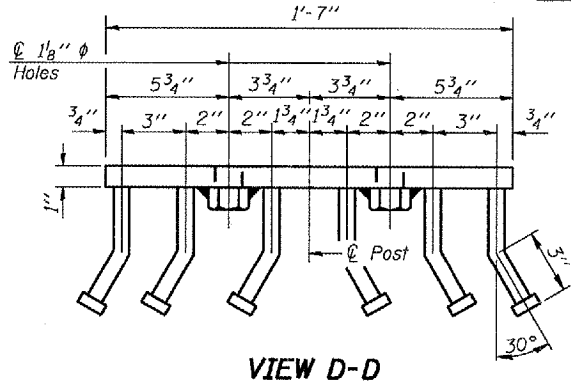
VIEW E-E



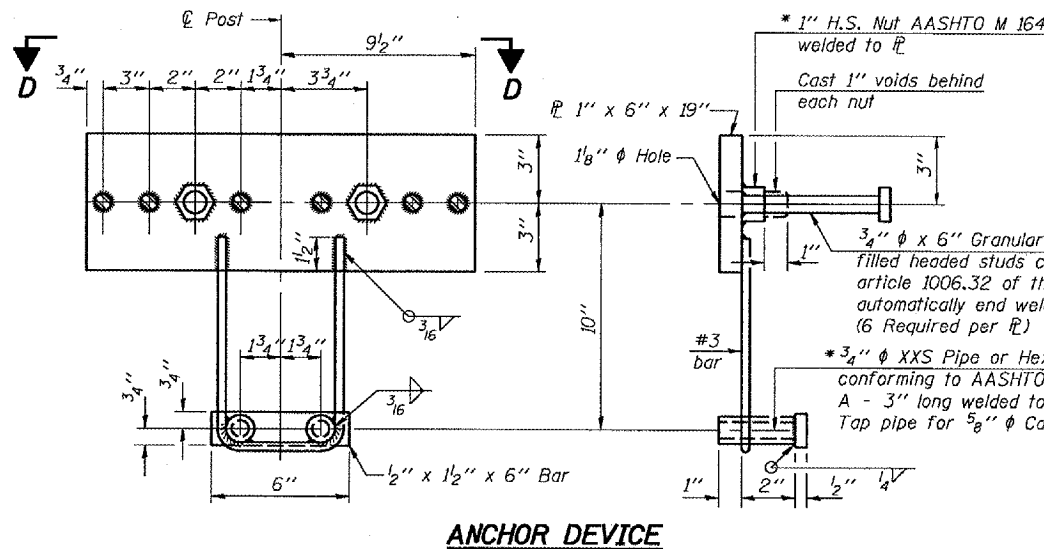
END OF RAIL DETAILS



SECTION AT RAIL POST



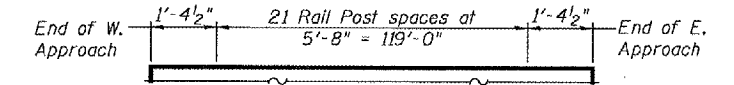
VIEW D-D



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.
Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



RAIL POST SPACING

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	244

STEEL RAILING, TYPE SM
WITH CONCRETE WEARING SURFACE
BRIDGE RAILING DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

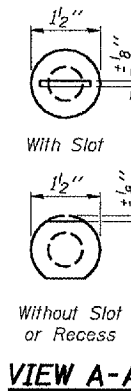
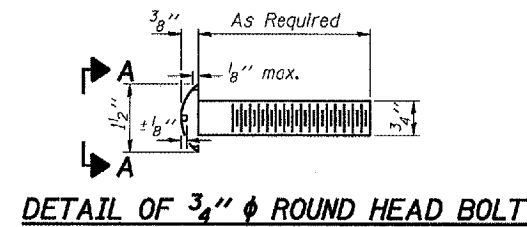
DESIGNED P.S.J.
CHECKED S.J.B.
DRAWN Drew Christopher
CHECKED P.S.J. S.J.B.
R-34CWS

December 8, 2006
EXAMINED John A. Morris
PASSED Ralph E. Anderson

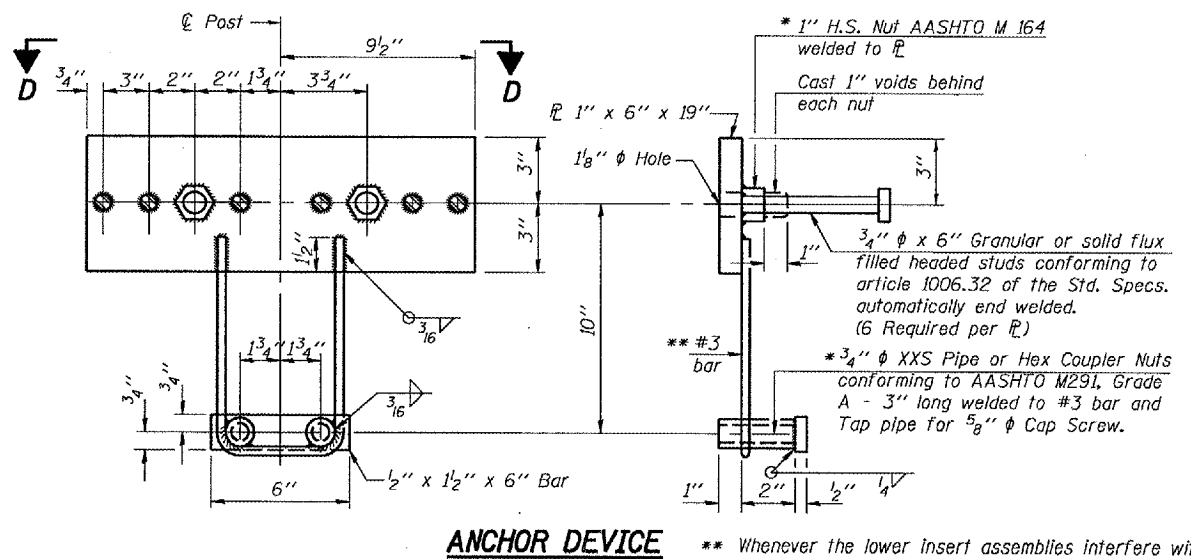
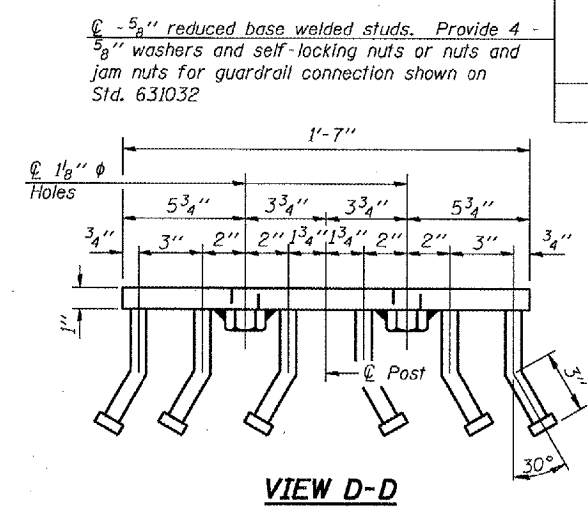
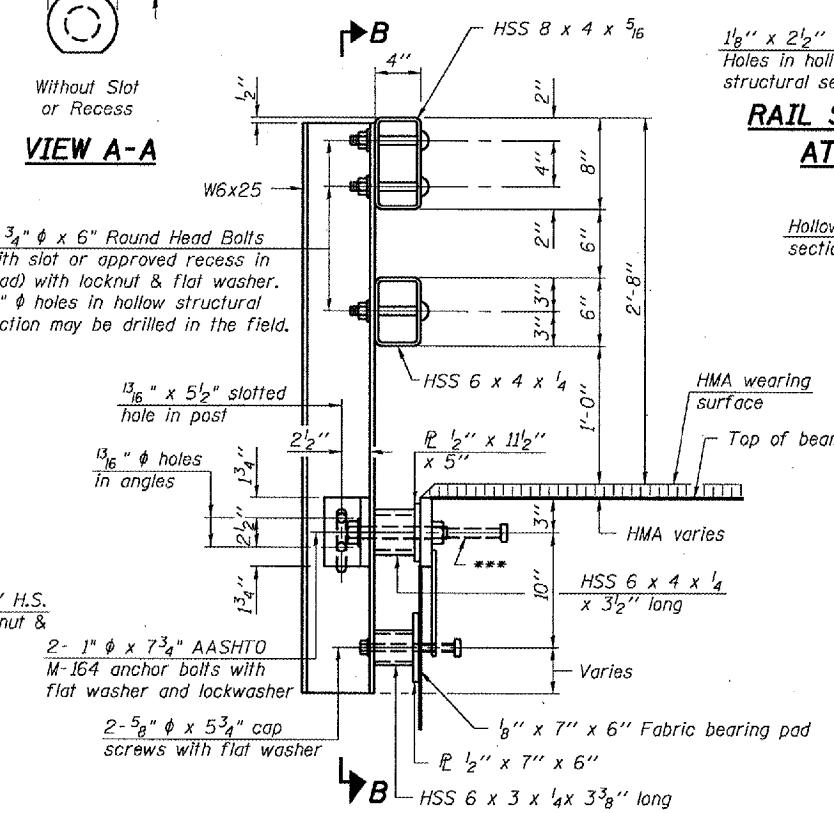
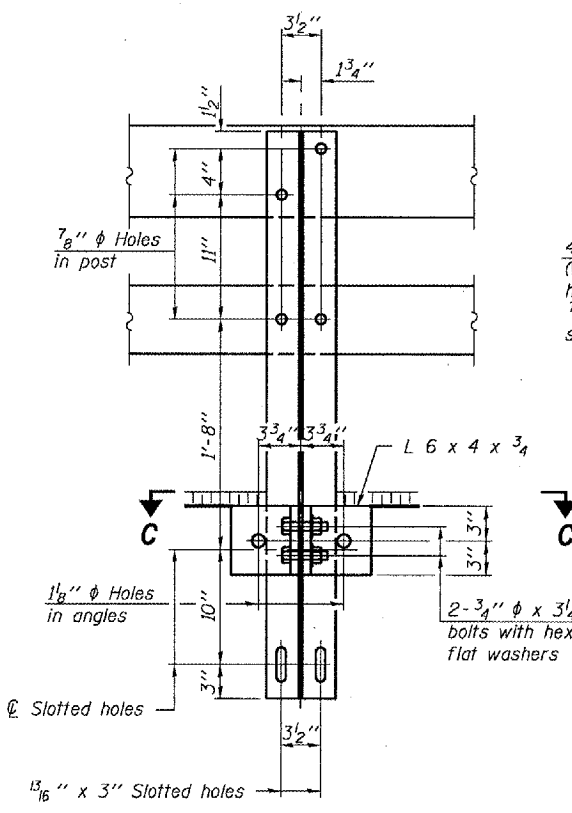
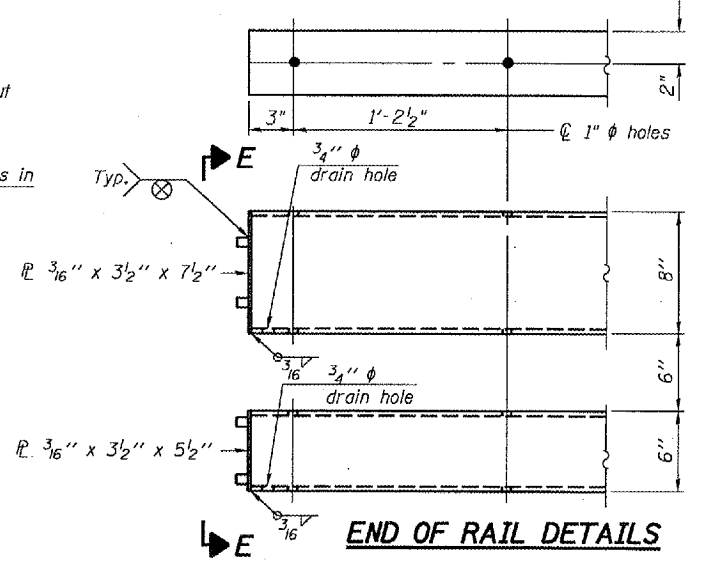
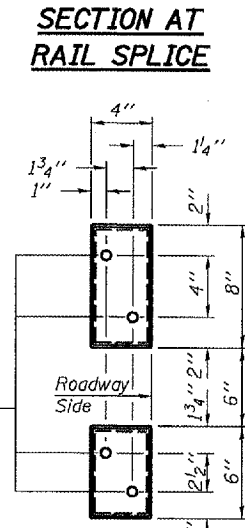
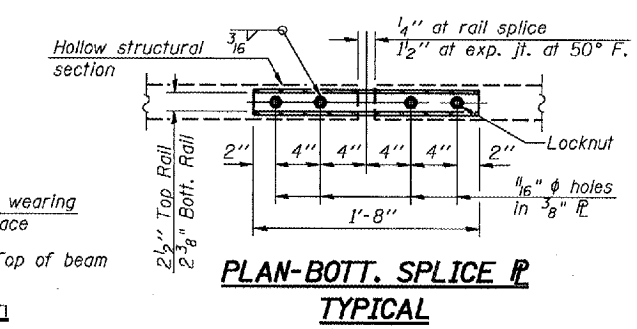
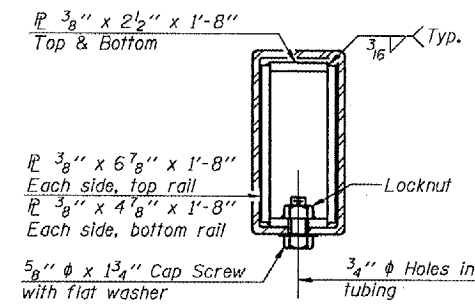
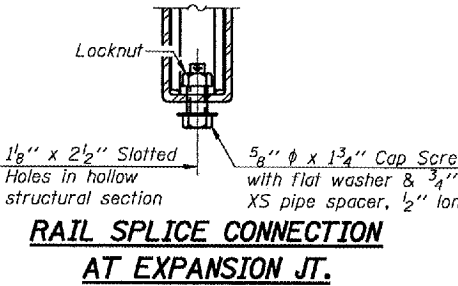
11-1-06 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
		Tazewell	29	19
SHEET NO. 8				
10 SHEETS				
Contract Number: 68484				



4-3/4" ϕ x 6" Round Head Bolts
(With slot or approved recess in head) with locknut & flat washer.
7/8" ϕ holes in hollow structural section may be drilled in the field.



Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.
All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

DESIGNED	P.S.J.	EXAMINED	December 8, 2006
CHECKED	S.J.B.	John A. Morris	ENGINEER OF STRUCTURAL SERVICES
DRAWN	Drew Christopher	Ralph E. Anderson	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	P.S.J. S.J.B.		

APPROACH RAILING DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

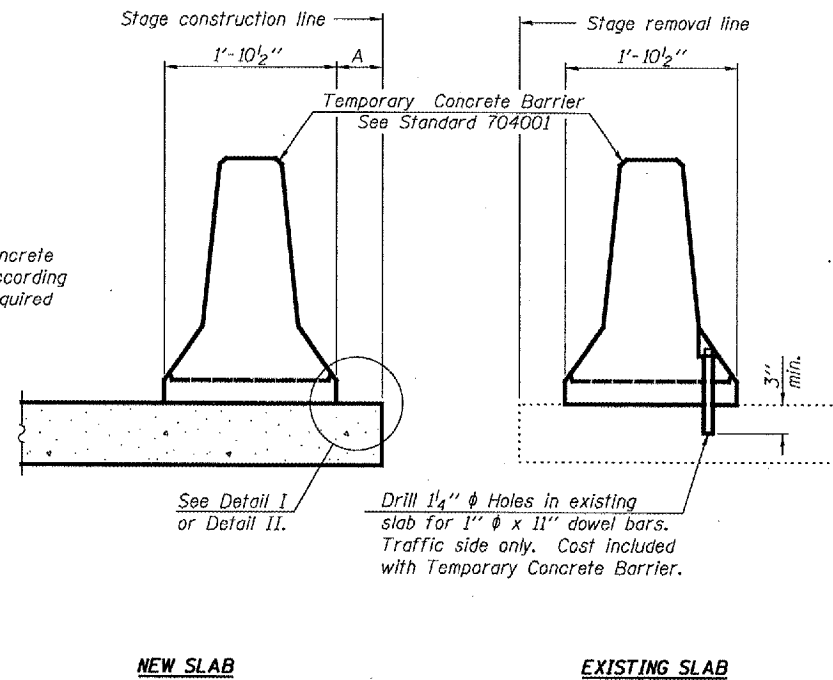
* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

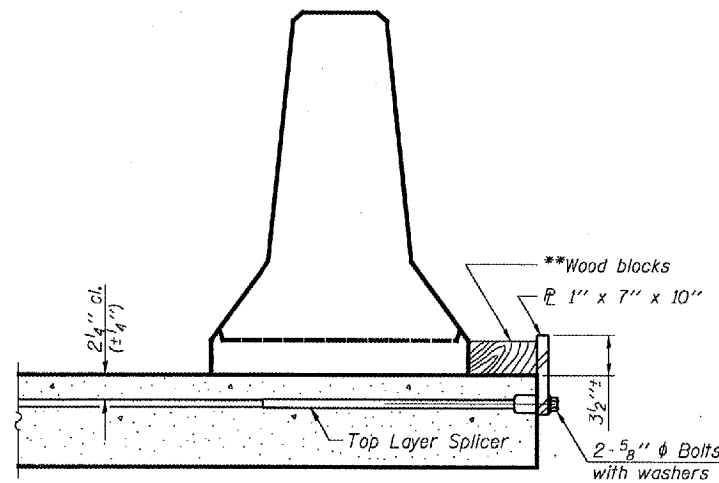
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Tazewell	29	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
10 SHEETS
Contract Number: 68484

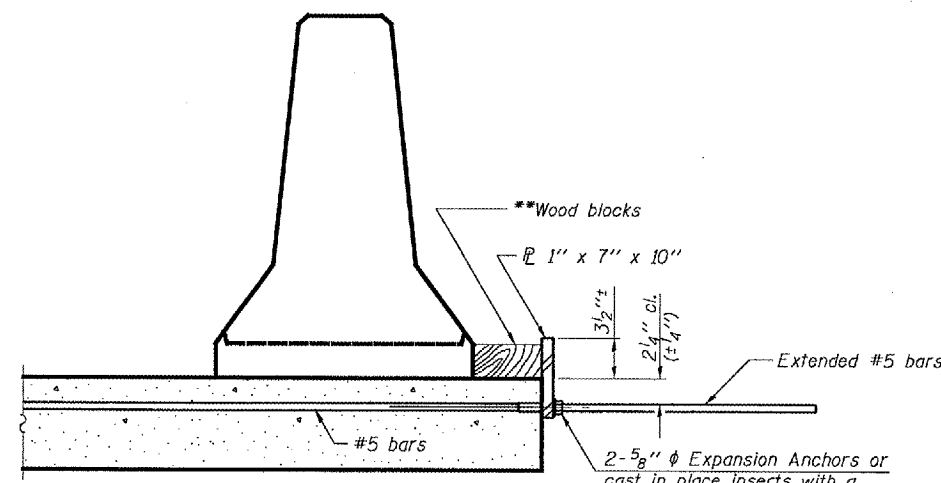
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



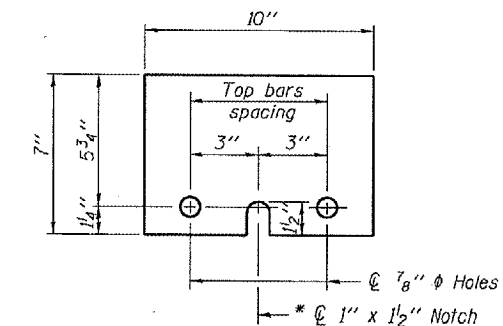
SECTIONS THRU SLAB



DETAIL I



DETAIL II



STEEL RETAINER PLATE 1" x 7" x 10"

* Required only with Detail II

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

DESIGNED	P.S.J.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	P.S.J., S.J.B.

December 8, 2006	
EXAMINED	John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

R-27

11-1-06

TEMPORARY CONCRETE BARRIER
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Tazewell	29	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
10 SHEETS

Contract Number: 68484

NOTES

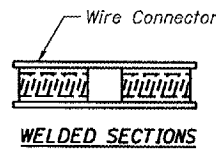
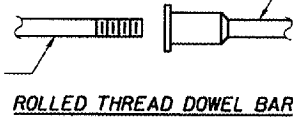
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the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

- ① Minimum Capacity = $1.25 \times f_y \times A_l$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_l$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_l = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

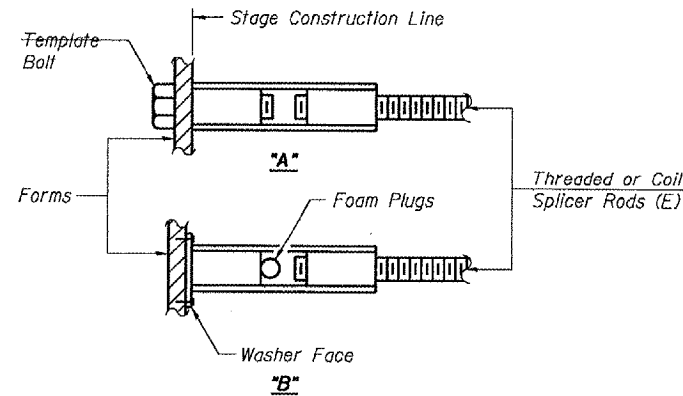
The diameter of this part is equal or larger than the diameter of bar spliced.

The diameter of this part is the same as the diameter of the bar spliced.



BAR SPLICER ASSEMBLY ALTERNATIVES

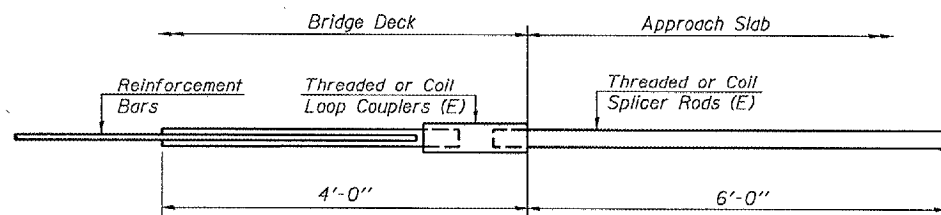
** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

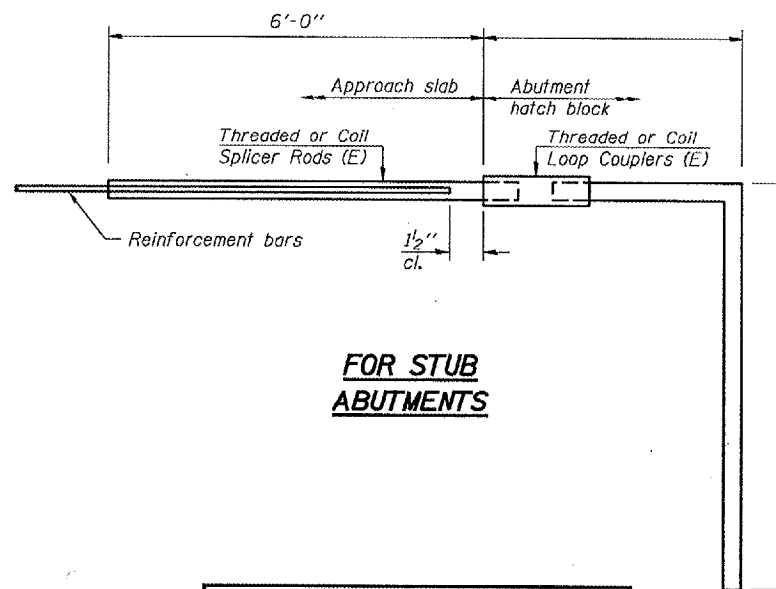
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

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



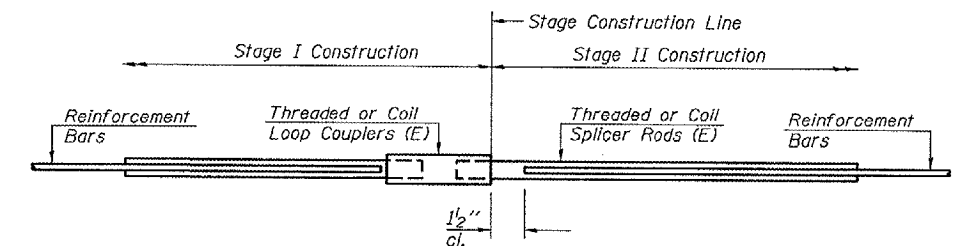
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#4	80	Overlay
#5	8	Hatch Block

DESIGNED	P.S.J.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	P.S.J. S.J.B.

December 8, 2006

EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES

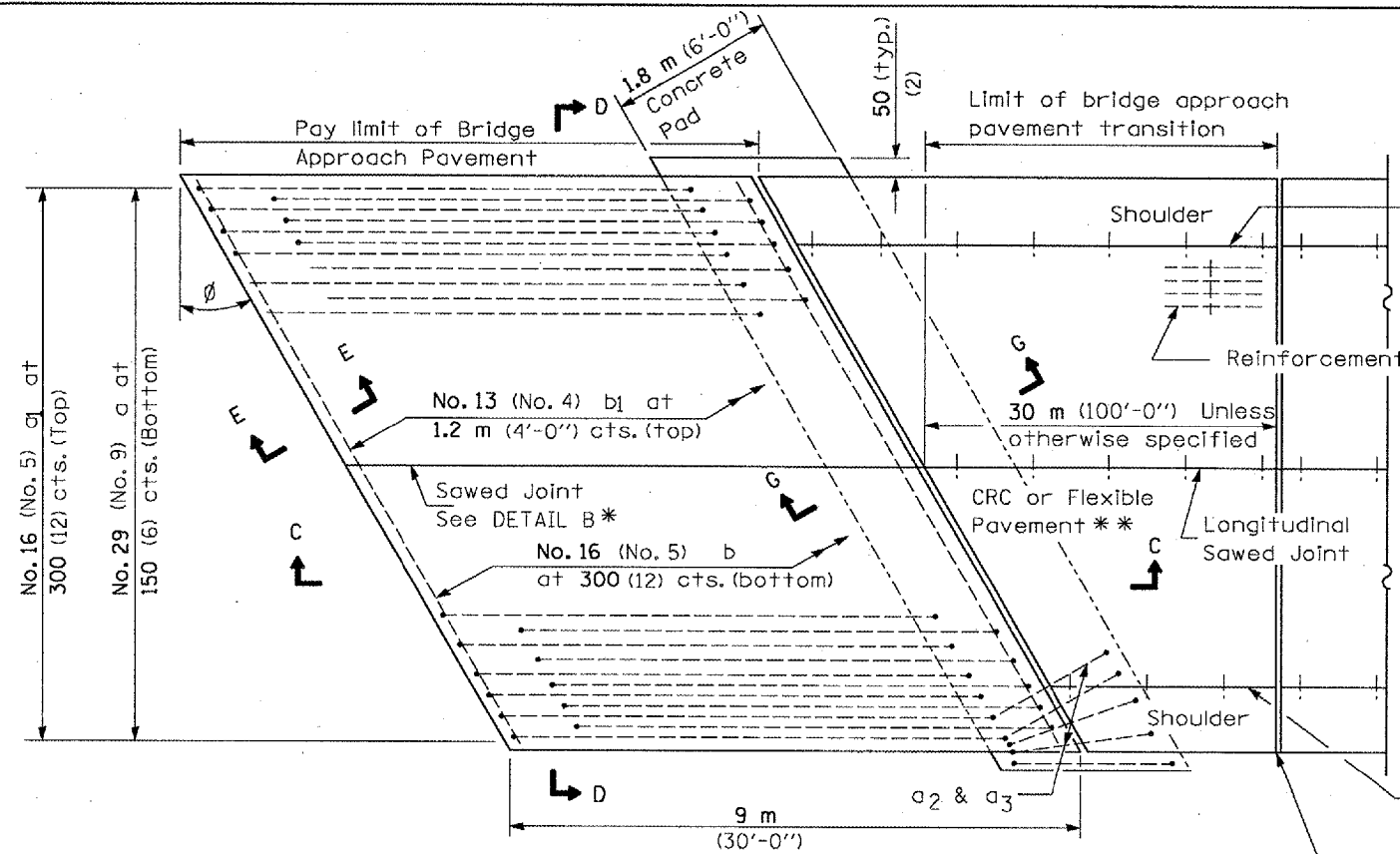
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 11-1-06

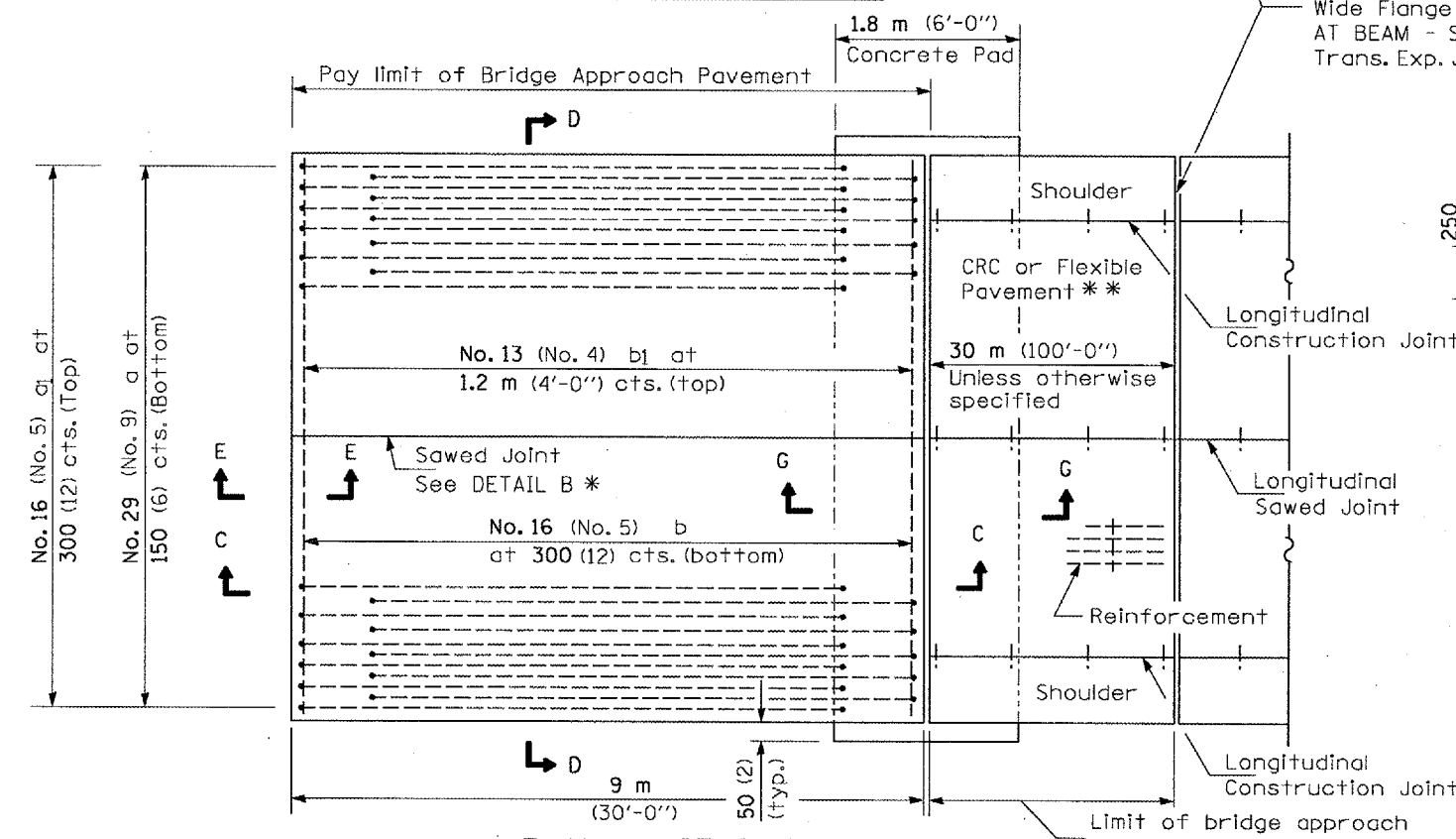
BAR SPLICER DETAILS
IL 122 / SUGAR CREEK
TAZEWELL COUNTY
SN 090-0058

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(1198-3)	TAZEWELL	29	21A
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NEW CONSTRUCTION



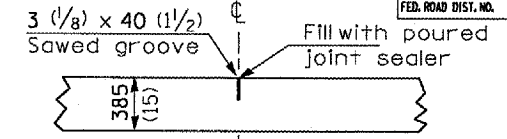
PLAN - WITH SKEW



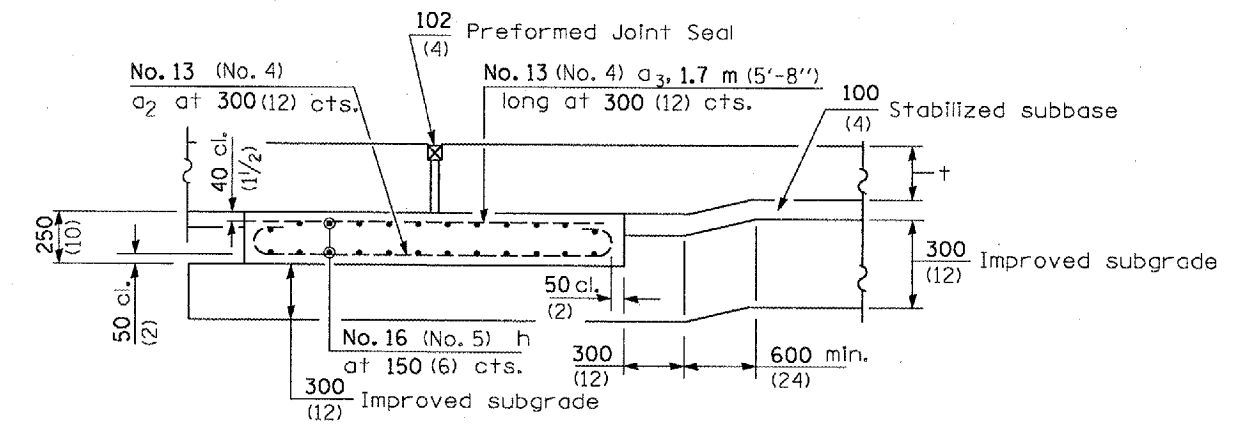
PLAN - WITHOUT SKEW

* Saw ϕ or lane edge if poured two or more lane widths at a time.
 ** Omit Reinforcement, tie bars and Long. sawed Jt. for Flexible Pavement.

Longitudinal Construction Joint



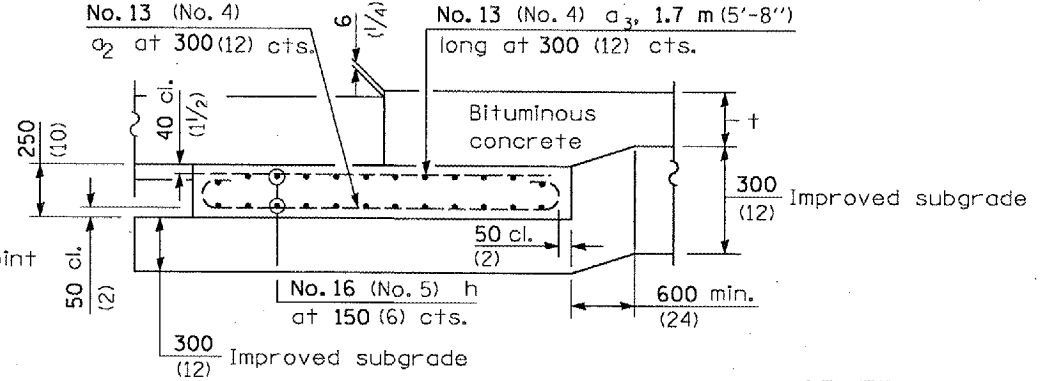
DETAIL B*
(Reinforcement Not Shown)



SECTION G-G - RIGID PAVEMENT
(Showing reinforcement)

Rigid Pavement only:

Wide Flange Beam Terminal Joint (See DETAIL AT BEAM - Standard 421101 or 421106) or 50 (2) Trans. Exp. Joint as detailed on Standard 420001.



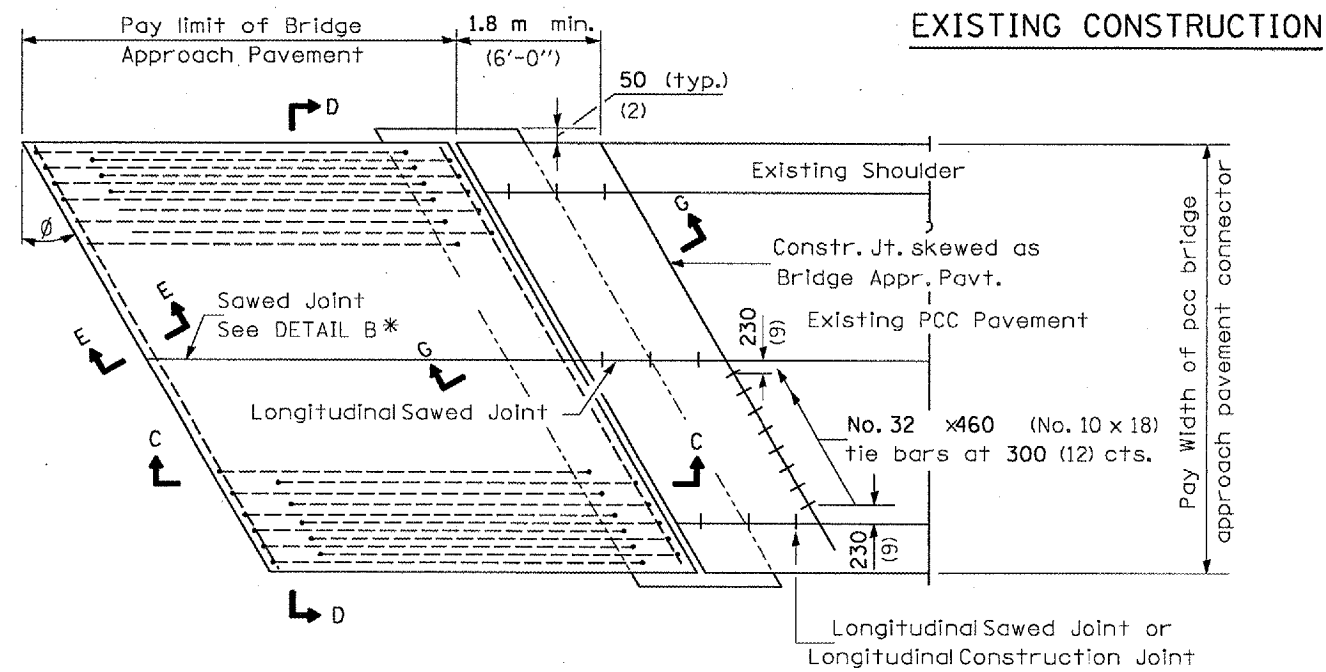
SECTION G-G - FLEXIBLE PAVEMENT
(Showing reinforcement)

GENERAL NOTES

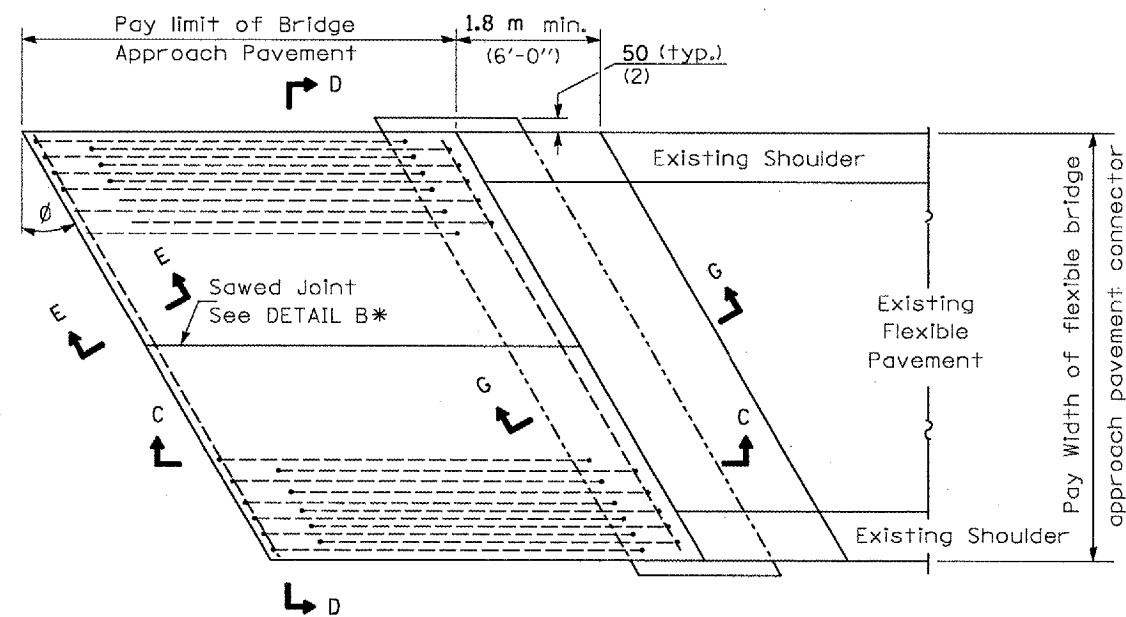
THICKNESS- "t" = Thickness of Pavement.
 See Standard 421001 for reinforcement details not shown.
 See Standard 420001 for joint details not shown.
 All dimensions are in millimeters (inches) unless otherwise shown.

BRIDGE APPROACH PAVEMENT (SPECIAL)

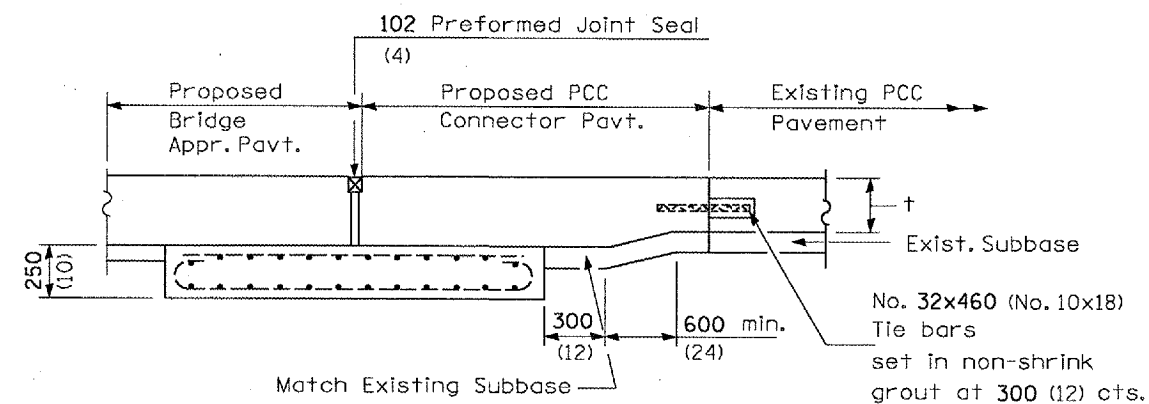
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(119B-31)	TAZEWELL	29	21A
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



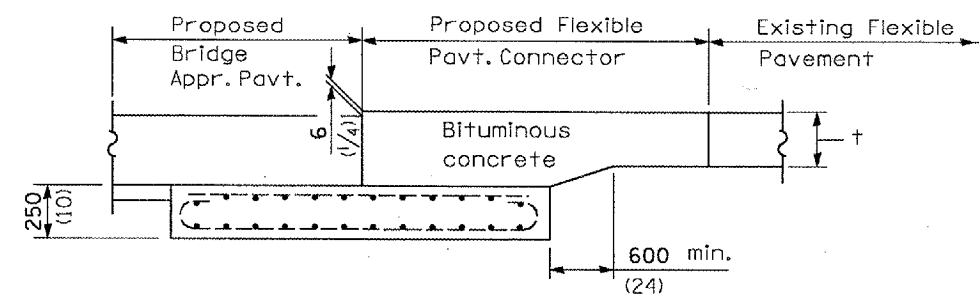
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)



BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)



SECTION G-G - RIGID PAVEMENT

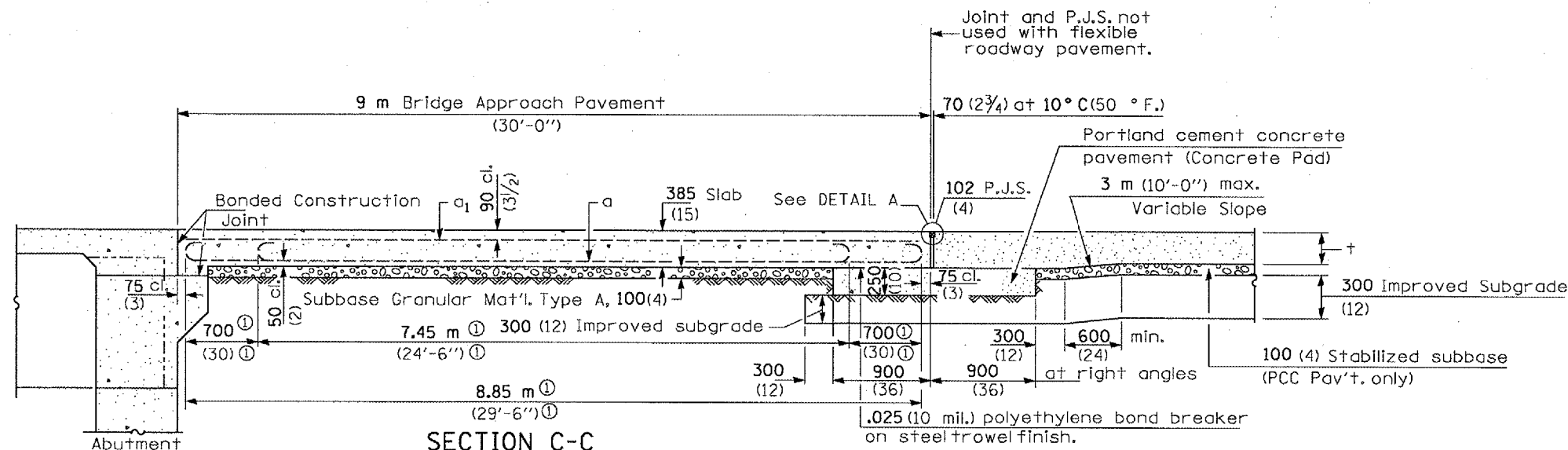


SECTION G-G - FLEXIBLE PAVEMENT

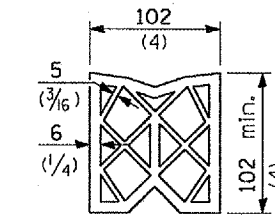
All dimensions are in millimeters (inches) unless otherwise shown.

BRIDGE APPROACH PAVEMENT (SPECIAL)

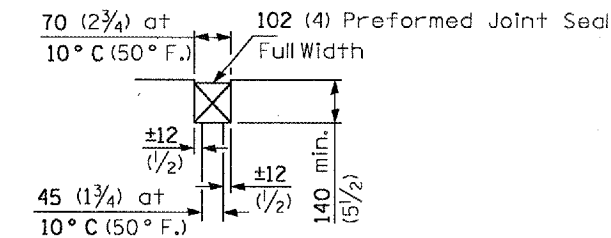
CONTRACT NO. 68484				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(119B-31)	TAZEWELL	29	21C
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



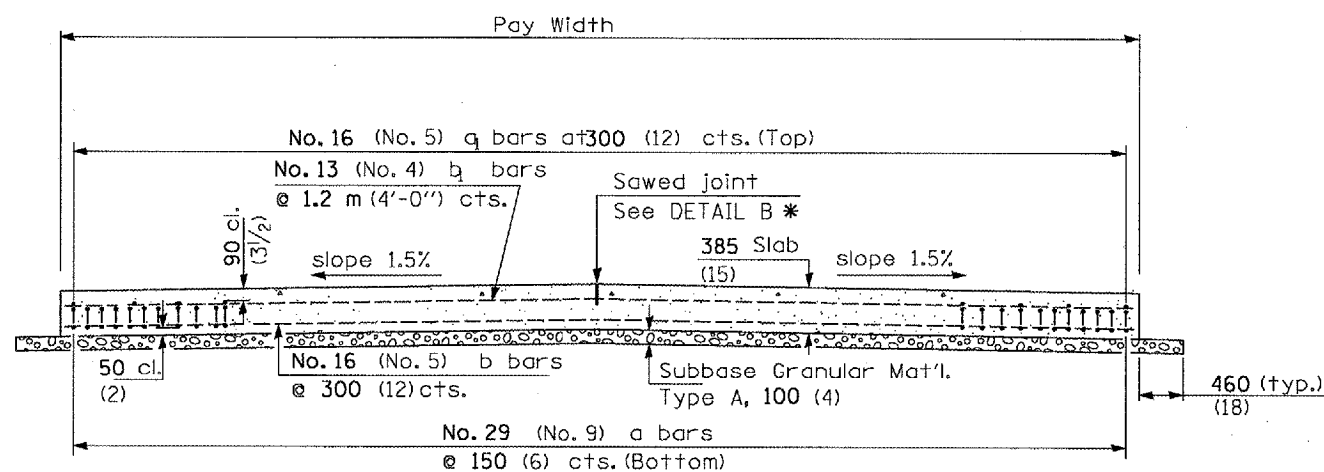
① Stagger No. 29 (No. 9) a bars as shown on plan - full width



PREFORMED JOINT SEAL



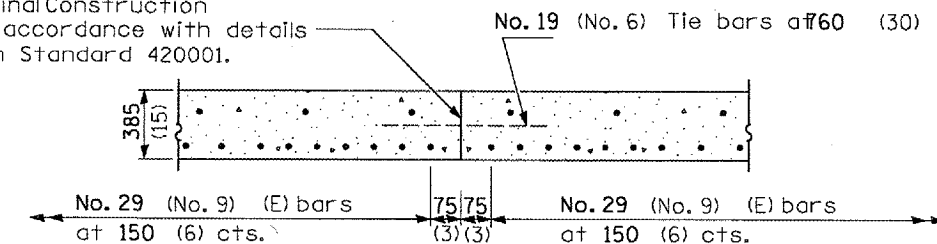
DETAIL A



SECTION D-D

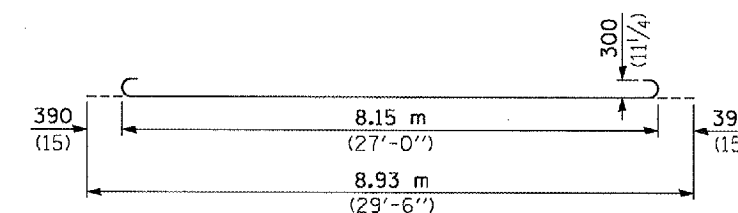
(See Plan for Dimensions not shown)
All reinforcement bars shall be epoxy coated.

Longitudinal Construction Joint in accordance with details shown on Standard 420001.

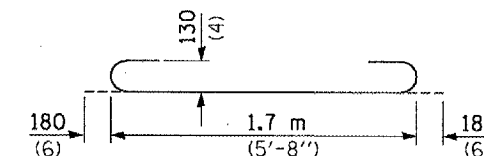


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

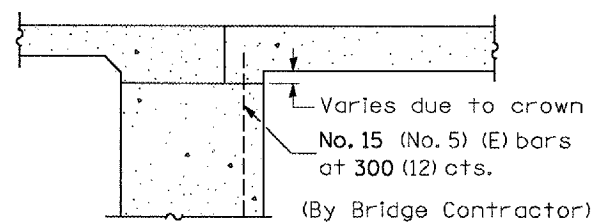
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



BAR a

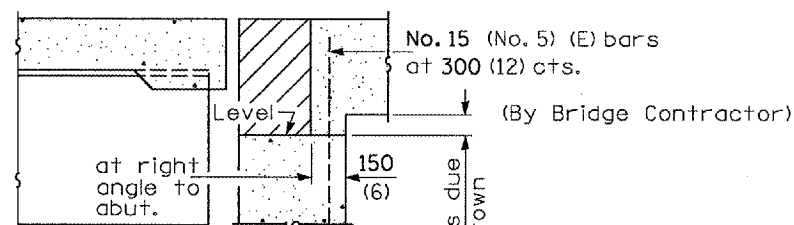


BAR a2



SECTION E-E

(Integral Abutments)



SECTION E-E

(Jointed Abutments)

DESIGN STRESSES

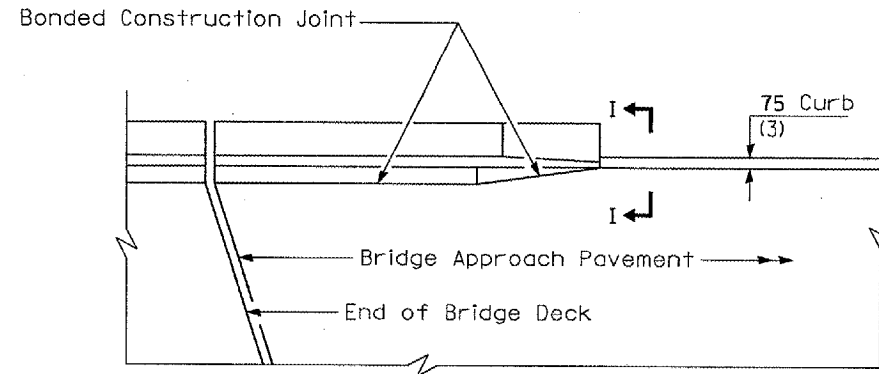
$f_y = 400 \text{ MPa (60,000 p.s.i.)}$
 $f'_c = 24 \text{ MPa (3,500 p.s.i.)}$
 $n = 8.5$

All dimensions are in millimeters (inches) unless otherwise shown.

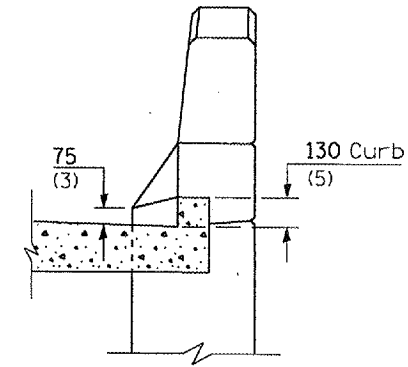
BRIDGE APPROACH PAVEMENT (SPECIAL)

(Sheet 3 of 4)

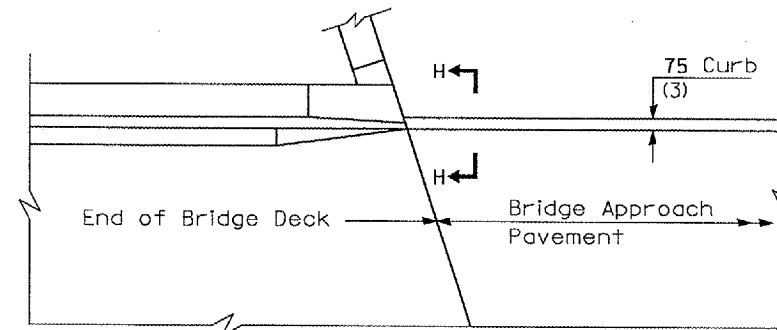
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
701	(119B-31)	TAZEWELL	29	210
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



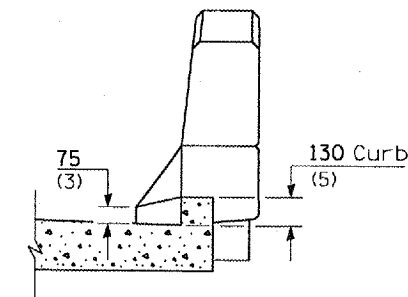
**PARAPET TO CURB TRANSITION
PILE BENT ABUTMENT**



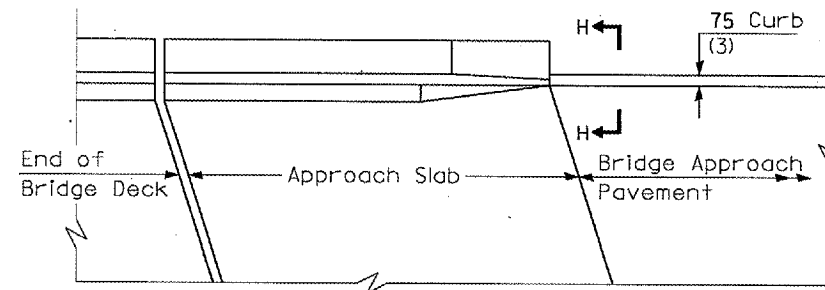
SECTION I - I



**PARAPET TO CURB TRANSITION
INTEGRAL ABUTMENT**



SECTION H - H



**PARAPET TO CURB TRANSITION
VAULTED ABUTMENT**

**BRIDGE APPROACH PAVEMENT
(SPECIAL)**

BENCHMARK: CHISLED SQUARE ON BRIDGE DECK
ON SOUTHWEST CORNER
ELEV = 100.00

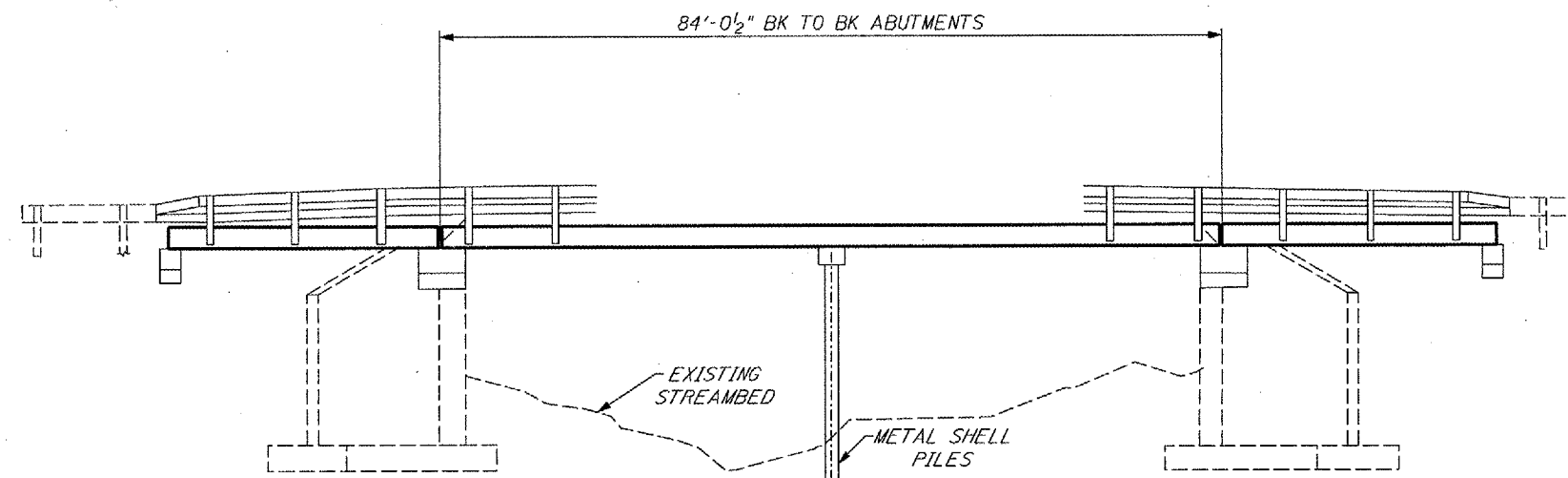
EXISTING STRUCTURE: SN 090-0058 IS A 33'-0" WIDE x 84'-0 1/2"
LONG P.C.C. DECK BEAM SUPERSTRUCTURE WITH R.C. CLOSED ABUTMENTS.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 701	*	TAZEWELL	29	22
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

*(128BR)I-1

INDEX OF SHEETS

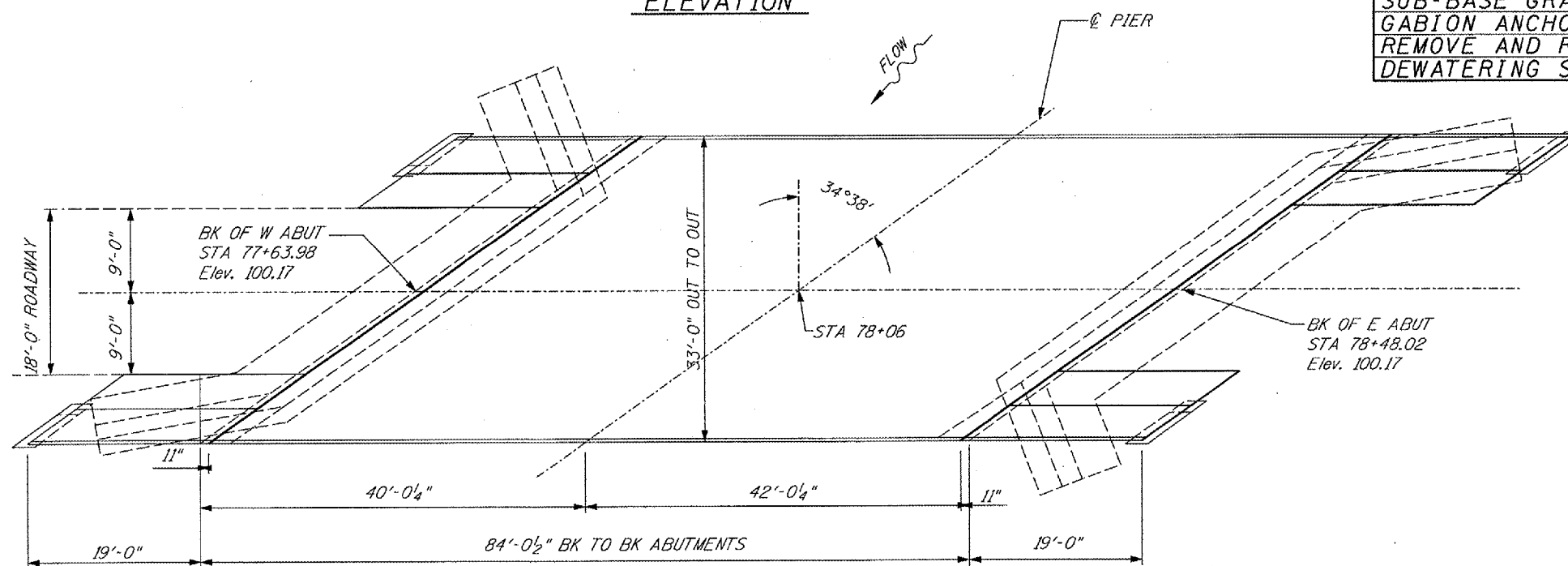
SHEET NUMBER	DESCRIPTION
1	GENERAL PLAN AND PROFILE, SUMMARY OF QUANTITIES, LOCATION MAP
2	R.O.W. PLAN
3	PROPOSED SITE PLAN
4	PROPOSED DIMENSION PLAN
5	SITE PROFILE
6-8	CROSS SECTIONS



ELEVATION

BILL OF MATERIALS

ITEM	UNIT	TOTAL
CHANNEL EXCAVATION	CU YD	1090
PERIMETER EROSION CONTROL BARRIER	FOOT	92
STONE RIP-RAP, CLASS A5	TONS	1165
FILTER FABRIC FOR RIPRAP	SQ YD	1067
GABIONS	CU YD	339
SUB-BASE GRANULAR MATERIAL, TYPE C	TONS	395
GABION ANCHOR STAKES	EACH	103
REMOVE AND REPLACE STEEL PLATE GUARD RAIL, TYPE A	FOOT	50
DEWATERING STRUCTURE NO. 1	EACH	1



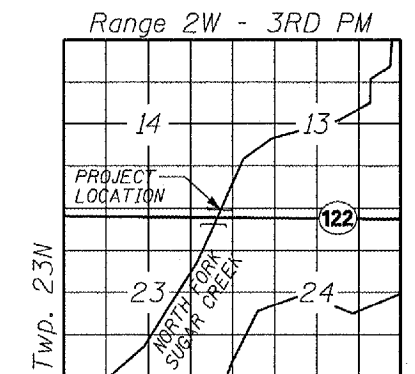
PLAN

EXISTING BRIDGE



WATERWAY/SCOUR INFORMATION

DESIGN FLOOD	100 YRS
DRAINAGE AREA	23.4 SQ MI
FLOW	4,299 CFS
FLOW DEPTH	10.76 FT
REQUIRED OPENING	515 SQ FT
PROVIDED OPENING	842 SQ FT
CONTRACTION SCOUR DEPTH	8 FT

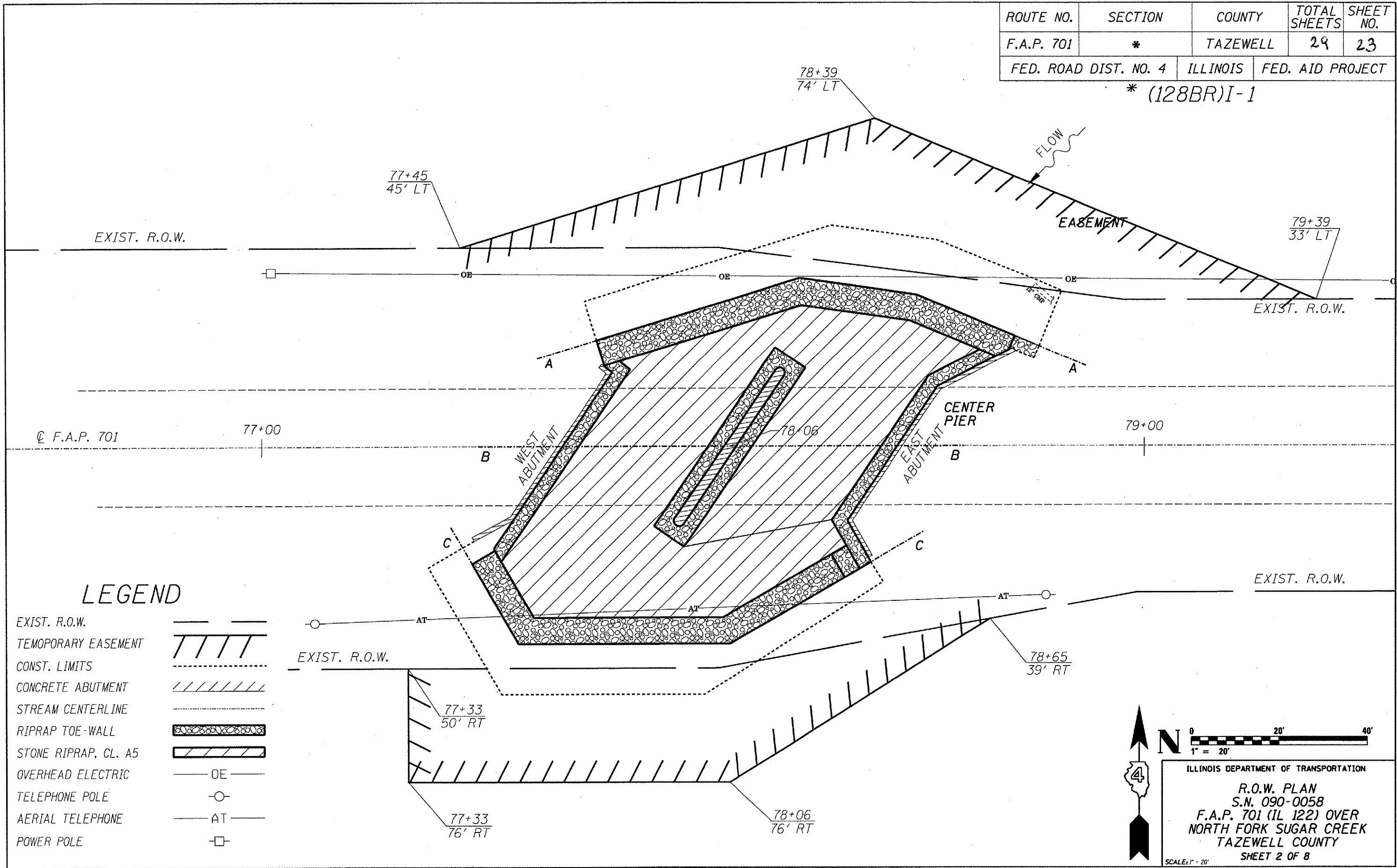


LOCATION SKETCH

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
S.N. 090-0058
F.A.P. 701 (IL 122) OVER
NORTH FORK SUGAR CREEK
TAZEWELL COUNTY
SHEET 1 OF 8

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	29	23
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

*(128BR)I-1



LEGEND

- EXIST. R.O.W.
- TEMPORARY EASEMENT
- CONST. LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- RIPRAP TOE-WALL
- STONE RIPRAP, CL. A5
- OVERHEAD ELECTRIC
- TELEPHONE POLE
- AERIAL TELEPHONE
- POWER POLE

N

0 20' 40'

1" = 20'

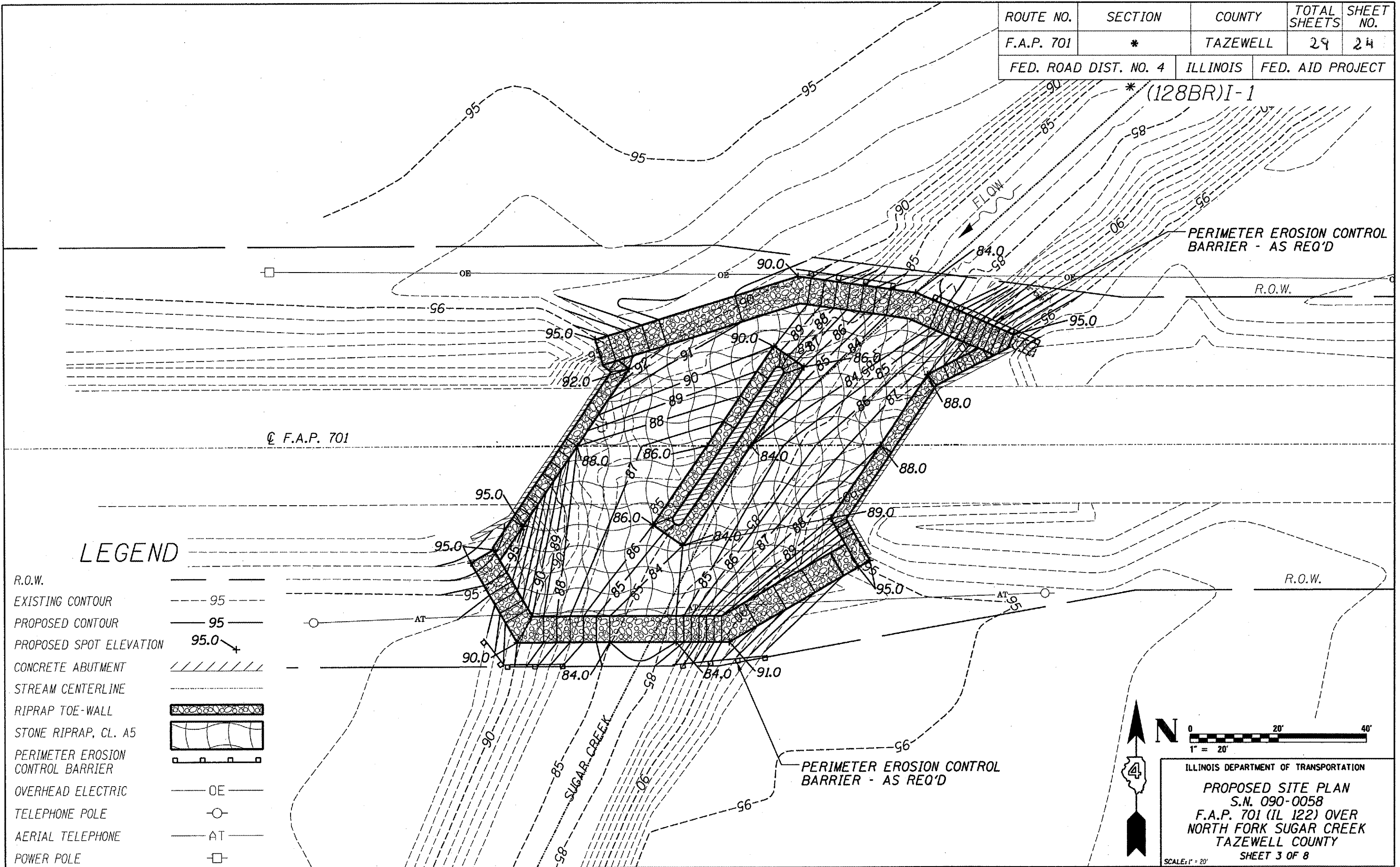
ILLINOIS DEPARTMENT OF TRANSPORTATION

R.O.W. PLAN
S.N. 090-0058
F.A.P. 701 (IL 122) OVER
NORTH FORK SUGAR CREEK
TAZEWELL COUNTY
SHEET 2 OF 8

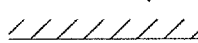
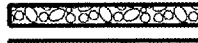
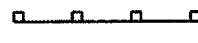
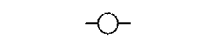
SCALE: 1" = 20'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	29	24
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

(128BR)I-1



LEGEND

- R.O.W. —————
- EXISTING CONTOUR - - - - - 95
- PROPOSED CONTOUR ———— 95
- PROPOSED SPOT ELEVATION 95.0 ↗
- CONCRETE ABUTMENT 
- STREAM CENTERLINE - - - - -
- RIPRAP TOE-WALL 
- STONE RIPRAP, CL. A5 
- PERIMETER EROSION CONTROL BARRIER 
- OVERHEAD ELECTRIC ———— OE ————
- TELEPHONE POLE ———— ○ ————
- AERIAL TELEPHONE ———— AT ————
- POWER POLE ———— □ ————

N

0 20' 40'

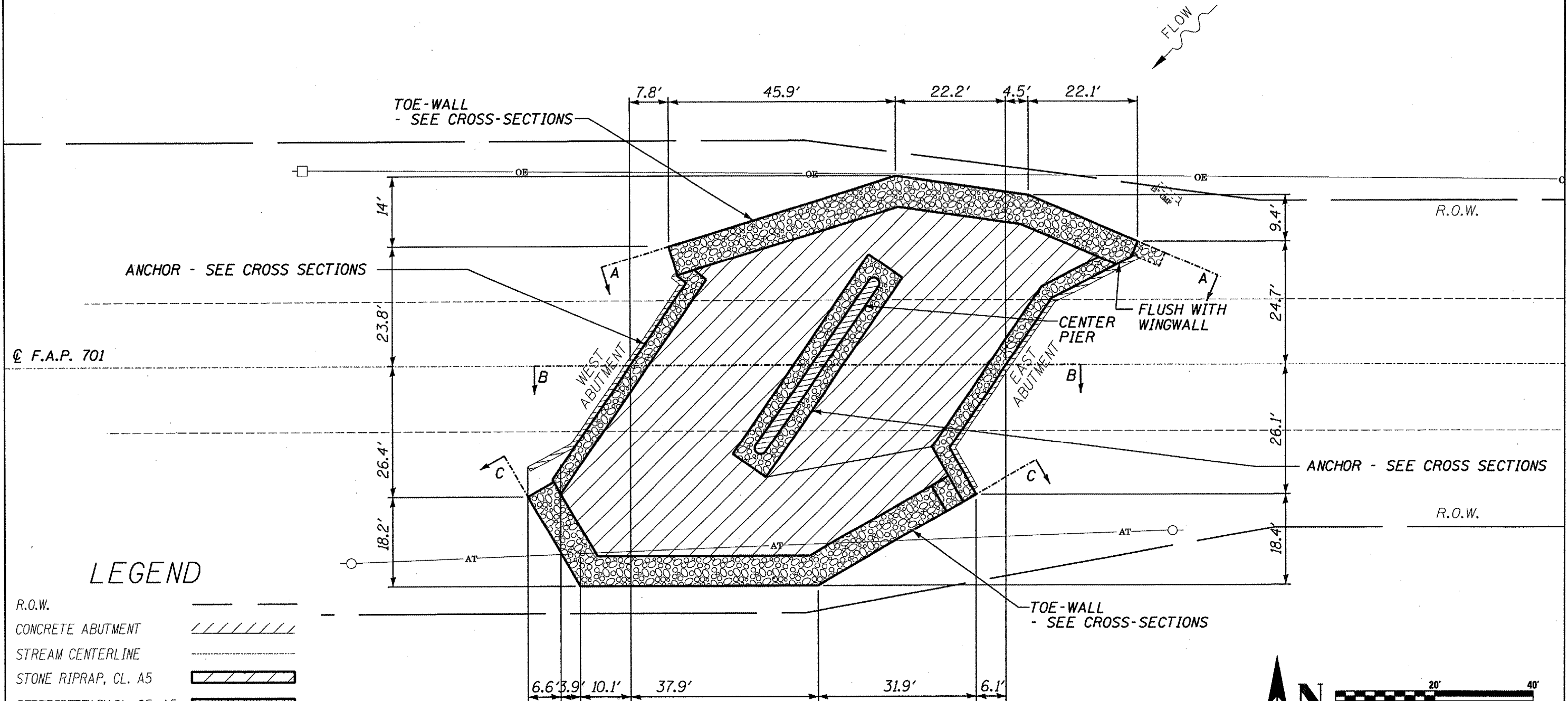
1" = 20'

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED SITE PLAN
S.N. 090-0058
F.A.P. 701 (IL 122) OVER
NORTH FORK SUGAR CREEK
TAZEWELL COUNTY
SHEET 3 OF 8

SCALE: 1" = 20'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	29	25
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	
* (128BR)I-1				



LEGEND

- R.O.W.
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- STONE RIPRAP, CL. A5
- STONE RIPRAP, CL. A5
- OVERHEAD ELECTRIC
- TELEPHONE POLE
- AERIAL TELEPHONE
- POWER POLE

N

4

1" = 20'

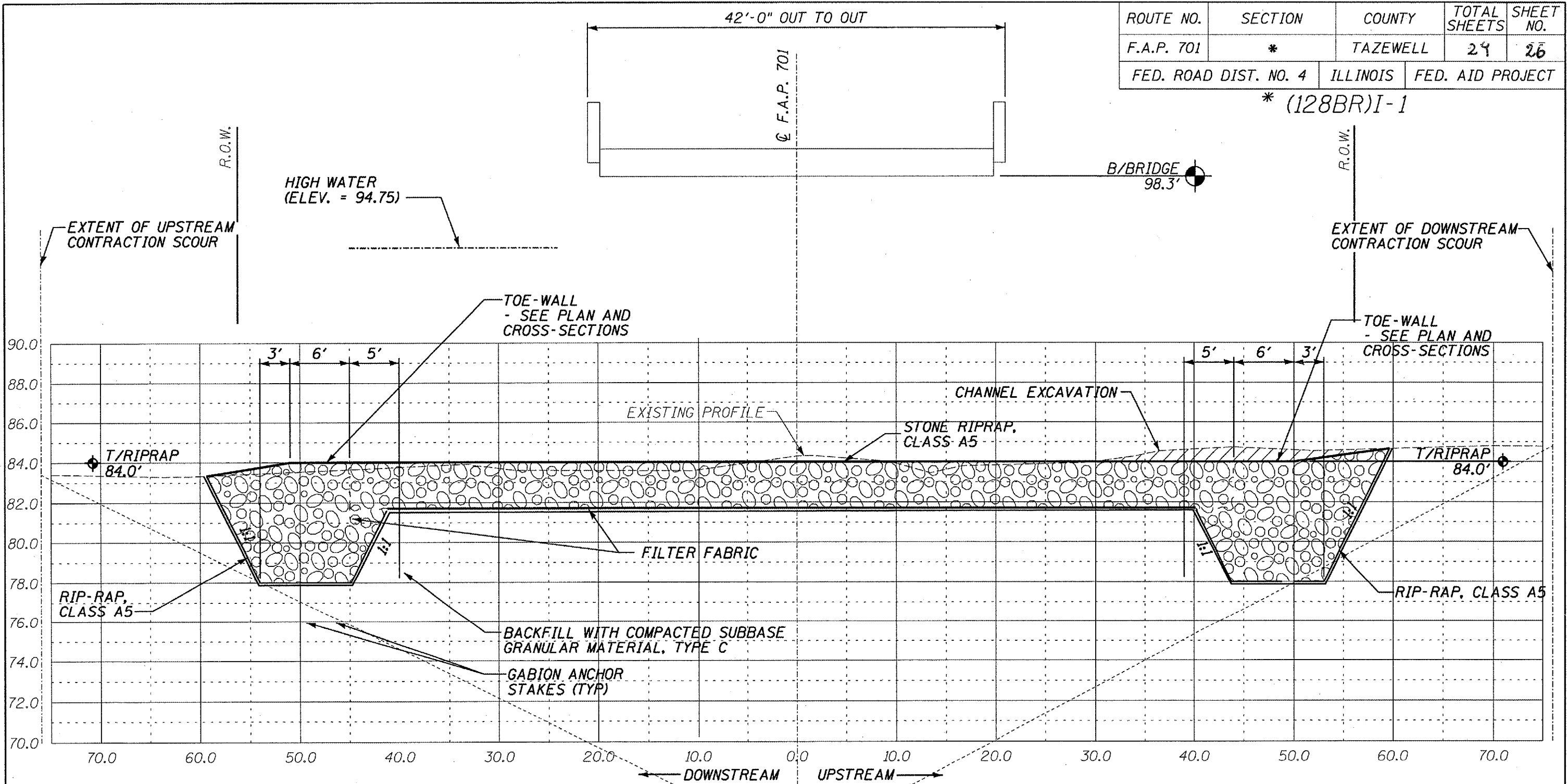
ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED DIMENSION PLAN
S.N. 090-0058
F.A.P. 701 (IL 122) OVER
NORTH FORK SUGAR CREEK
TAZEWELL COUNTY
SHEET 4 OF 8

SCALE: 1" = 20'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	24	26
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (128BR)I-1



CALCULATED OPENING: 76'

MAXIMUM SCOUR CALCULATION:

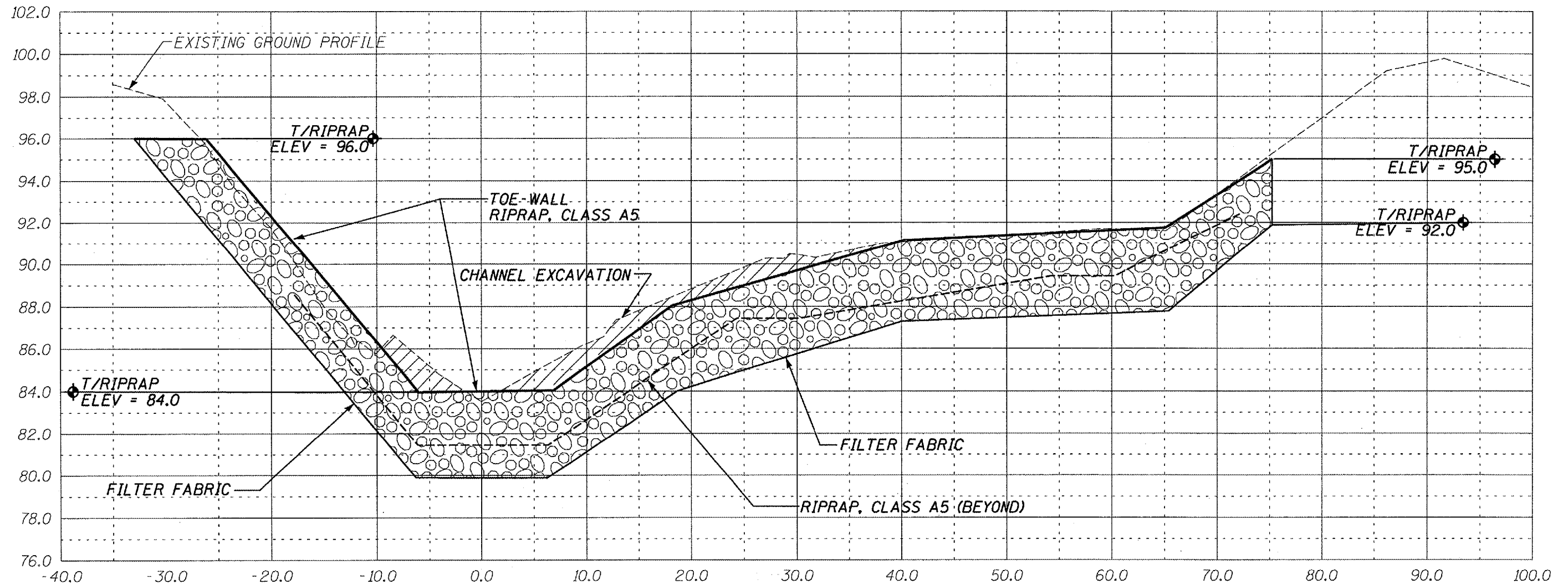
CONTRACTION SCOUR EQUATION	= 8 FT
LOCAL SCOUR EQUATION	= 16 FT
ADJUSTMENT FACTOR FOR TOTAL STREAMBED ARMORING	= 0.7
TOTAL LOCAL SCOUR	= 11.2 FT
TOTAL COMBINED SCOUR	= 19.2 FT

ANTICIPATED DEPTH OF MAXIMUM SCOUR (ELEV = 64.8')

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 090-0058
 F.A.P. 701 (IL 122) OVER
 NORTH FORK SUGAR CREEK
 TAZEWELL COUNTY
 SHEET 5 OF 8
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	29	27
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (128BR)I-1

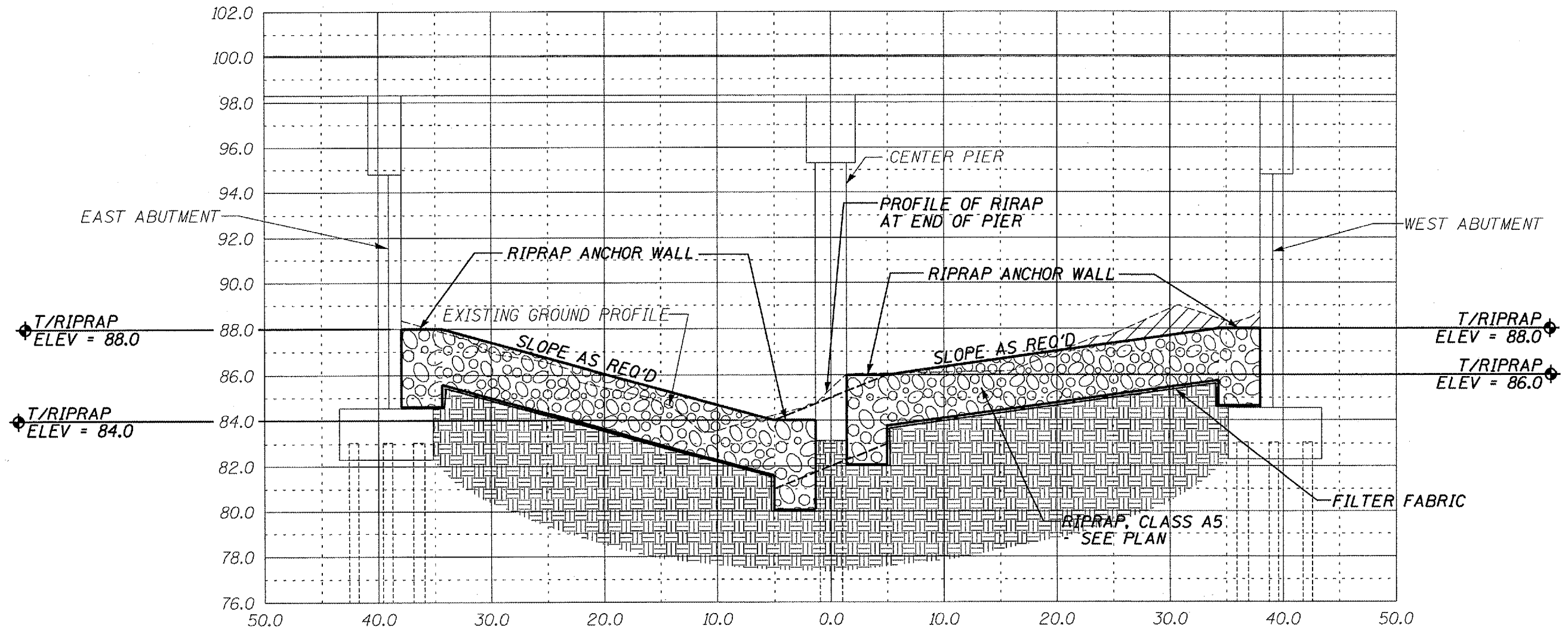


SECTION A-A THROUGH NORTH TOE-WALL

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 090-0058
 F.A.P. 701 (IL 122) OVER
 NORTH FORK SUGAR CREEK
 TAZEWELL COUNTY
 SHEET 6 OF 8
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	29	28
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (128BR)I-1

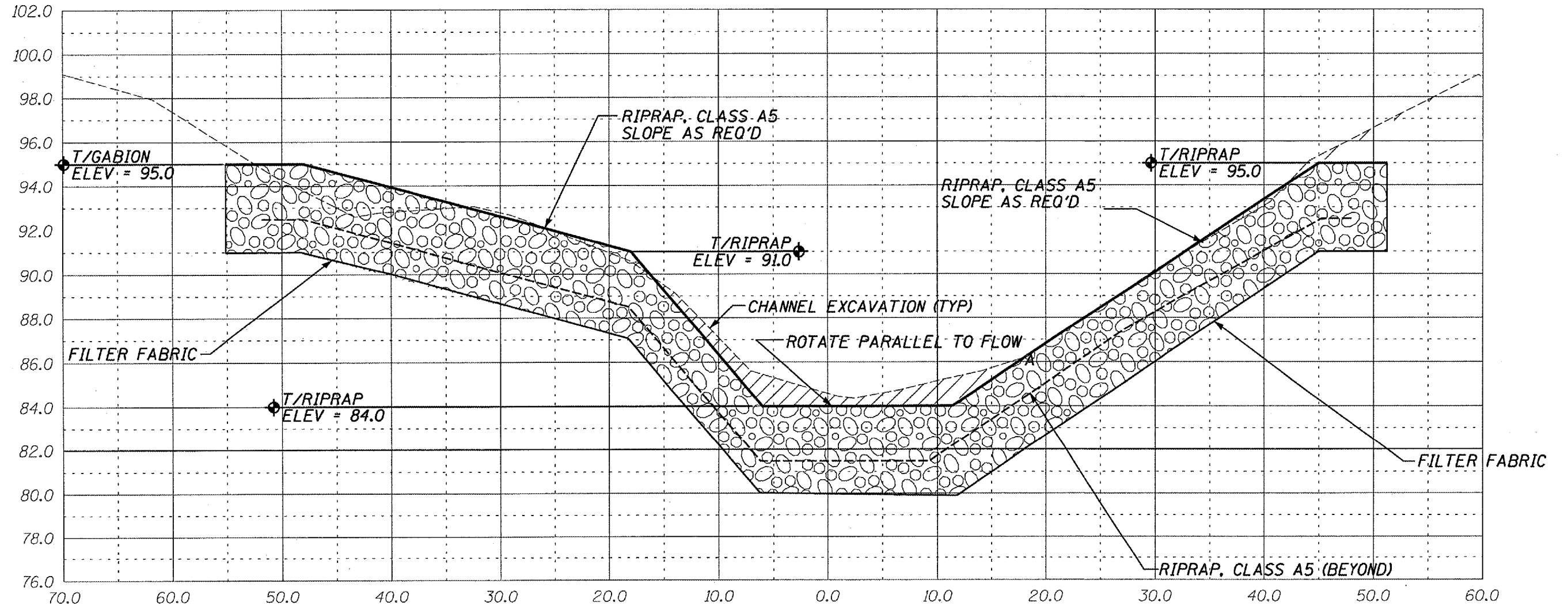


SECTION B-B THROUGH \odot OF F.A.P. 701

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 090-0058
 F.A.P. 701 (IL 122) OVER
 NORTH FORK SUGAR CREEK
 TAZEWELL COUNTY
 SHEET 7 OF 8
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 701	*	TAZEWELL	29	29
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (128BR)I-1



SECTION C-C THROUGH SOUTH TOE-WALL

ILLINOIS DEPARTMENT OF TRANSPORTATION
SITE CROSS SECTION
S.N. 090-0058
F.A.P. 701 (IL 122) OVER
NORTH FORK SUGAR CREEK
TAZEWELL COUNTY
SHEET 8 OF 8
SCALE: VERT. 1" = 5' HORIZ. 1" = 10'