

S.B.I. R.T.C.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	3(I-1)	POPE	17	1
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 78153	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

S.B.I. 34 (IL 34)  
SECTION 3(I-1)

**BRIDGE EXPANSION JOINT REPLACEMENT  
POPE COUNTY**  
C-99-007-10

FOR INDEX OF SHEETS, SEE SHEET NO. 2

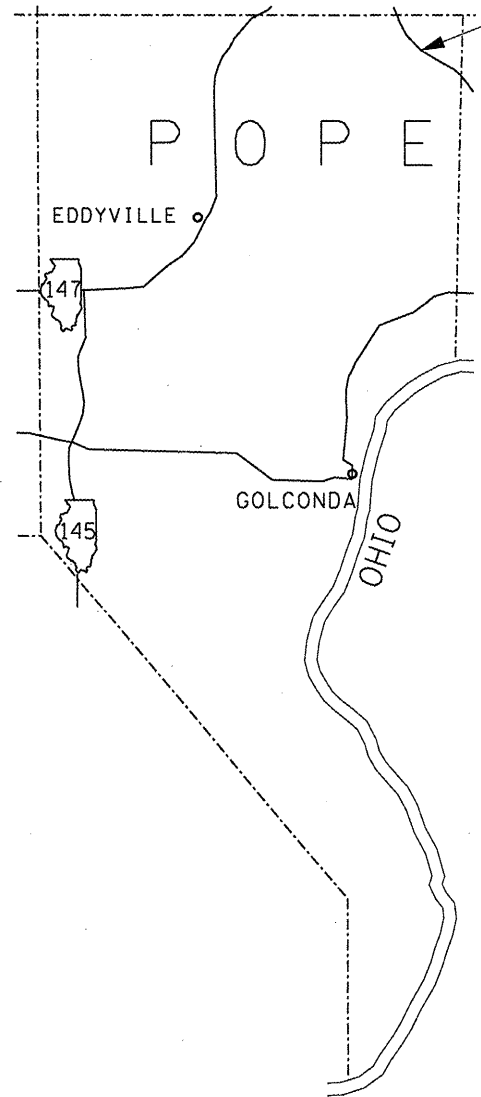
GRAND PIER TOWNSHIP

**TRAFFIC DATA:**

2009 ADT = 2550  
31% TRUCKS

**BRIDGE DATA:**

INVENTORY RATING 25.1  
OPERATING RATING 41.9



IMPROVEMENT LOCATION  
STRUCTURE NO. 076-0001

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

PROJECT ENGINEER Dennis Hillebrenner  
PROJECT MANAGER Richard Brasel

CONTRACT NO. 78153

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Dec 14 20 09  
Mary C. Lomiel  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

January 09 20 10  
Scott E. Stitt P.E./e  
Acting ENGINEER OF DESIGN AND ENVIRONMENT

January 09 20 10  
Christine M. Reed/e  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

## INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, STANDARDS, SIGNATURES
3	GENERAL NOTES
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5	HMA MIX DESIGN, PAVEMENT MARKING
6	GENERAL PLAN AND ELEVATION
7	CONCRETE REMOVAL PLAN, GUARDRAIL, HMA SHOULDERS
8	CONCRETE SUPERSTRUCTURE PLAN
9	CONCRETE REMOVAL & SUPERSTRUCTURE SECTIONS, BILL OF REINFORCEMENT
10	DECK CROSS SECTION NEAR JOINT
11	SECTIONS THRU CURB
12	PREFORMED JOINT STRIP SEAL
13	RAIL POST ANCHOR DEVICES
14	CONCRETE REPAIR AT WEST ABUTMENT
15	BAR SPLICER ASSEMBLY DETAILS
16	STAGE CONSTRUCTION
17	SIDE ROAD TRAFFIC CONTROL

## STANDARDS

**630001-08**

701201-03	LANE CLOSURE, 2L, 2W DAY ONLY
701316-04	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR
701901-01	TRAFFIC CONTROL DEVICES

Prepared By:	<i>Dev. W. Hill</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>James Louis Emery</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>Carrie Nelson</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>Carl Wiley</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>Jim Smother</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>Bryant Stables</i> DISTRICT MATERIALS ENGINEER
Examined By:	<i>Jim Smother</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>Danny Clayton</i> ASSISTANT REGIONAL ENGINEER
Approved By:	<i>Mary C. Davis</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER
	<i>Dec 14 2009</i> DATE

Rev.

FILE NAME =	USER NAME = gautneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwwork\pwwid\GOUTNEYRK\d0156602\78153-shr-pln.dgn	DRAWN -	REVISED -	34			3(1-1)	POPE	17	2	
PLOT SCALE = 24x6x76 3/8 'x' IN.	CHECKED -	REVISED -	CONTRACT NO. 78153							
PLOT DATE = 12/9/2009	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

## GENERAL NOTES

WHILE SIGNAL HEADS ARE MOUNTED IN PLACE, BUT NOT YET IN OPERATION, THEY SHALL BE SECURELY COVERED IN WHITE PLASTIC.

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS MUST APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

ANY TIME THAT HOLES AT EXPANSION JOINTS ARE OPEN, THEY SHALL BE COVERED WITH METAL PLATES CAPABLE OF CARRYING THE FULL WEIGHT OF AN ERRANT VEHICLE. PLATES SHALL BE PLACED DIRECTLY ON THE CONCRETE DECK. PROJECTIONS ABOVE THE ROADWAY SURFACE GREATER THAN 1" ARE NOT PERMITTED EXCEPT FOR HEADS OF BOLTS.

TRAFFIC CONTROL SIGNS SHALL BE PLACED SO THAT THEY DO NOT INTERFERE WITH EXISTING SIGNS OR FLASHING BEACONS. THE DIMENSIONS BETWEEN SIGNS MAY BE MODIFIED SLIGHTLY SO AS TO AVOID CONFLICTS WITH EXISTING SIDE ROADS, COMMERCIAL ENTRANCES, AND PRIVATE ENTRANCES. THE BUREAU OF OPERATIONS SHOULD APPROVE FINAL PLACEMENT OF TRAFFIC CONTROL SIGNING.

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 AT THE UNIT PRICE BID FOR THE WORK.

THE COST OF ANY SAW CUTS MADE TO COMPLETE THE WORK AS DESCRIBED IN PLAN DETAILS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS INVOLVED.

PRIOR TO POURING CONCRETE AT JOINT RECONSTRUCTION, ALL HEAVY OR LOOSE RUST, LOOSE MILL SCALE, OR OTHER LOOSE OR POTENTIALLY DETRIMENTAL FOREIGN MATERIAL SHALL BE REMOVED FROM THE SURFACES IN CONTACT WITH THE NEW CONCRETE. THE REMOVAL SHALL BE ACCOMPLISHED BY METHODS WHICH WILL NOT DAMAGE THE STEEL. THE COST IS INCLUDED WITH "CONCRETE SUPERSTRUCTURE".

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 Gr 60 (IL MODIFIED). SEE SPECIAL PROVISIONS.

EXISTING REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH "CONCRETE REMOVAL".

COST OF REMOVAL OF EXISTING HMA SURFACE IN REMOVAL AREA AND PJS JOINT IS INCLUDED WITH "CONCRETE REMOVAL."

JOINT OPENING SHALL BE ADJUSTED ACCORDING TO ARTICLE 520.04 OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50° F.

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.

CONSTRUCTION OF TEMPORARY SHOULDERS AND GUARDRAIL REPLACEMENT SHALL BE COMPLETED PRIOR TO OPERATION OF TEMPORARY BRIDGE TRAFFIC SIGNALS.

TEMPORARY RUMBLE STRIPS ARE REQUIRED AS SHOWN ON TRAFFIC CONTROL STANDARD 701316.

EXTRA CONES OR BARRELS MAY BE REQUIRED TO CHANNEL TRAFFIC AT COMMERCIAL AND/OR PRIVATE ENTRANCES AS DIRECTED BY THE ENGINEER. ALL TRAFFIC CONTROL DEVICES ARE INCLUDED IN THE COST OF TRAFFIC CONTROL STANDARDS 701201 AND 701316, AND WILL NOT BE PAID FOR SEPARATELY.

HMA SHOULDER SURFACE SHALL BE FLUSH WITH THE SURFACE OF THE ADJACENT DRIVING LANE WHENEVER THE LANE IS OPEN TO TRAFFIC.

BRIDGE RAIL POSTS IN THE CONCRETE REMOVAL AREA SHALL BE REMOVED AND RE-INSTALLED. ALL RAILS SHALL REMAIN CONNECTED TO ALL OTHER POSTS AT ALL TIMES.

COMMITMENTS: NONE

FILE NAME =	USER NAME = gautneyrk	DESIGNED - ---	REVISED - ---	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>		S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 12/9/2009		DATE - ---	REVISED - ---		-----	ILLINOIS FED. AID PROJECT				
					SCALE: -----	SHEET NO. -- OF --- SHEETS		STA. ----- TO STA. -----		

## SUMMARY OF QUANTITIES

CODE NO.	ITEM DESCRIPTION	UNIT	QUANTITY
	FUNDING:	100% STATE	
	COUNTY:	POPE	
	LOCATION:	076-0001	
	ROUTE:	IL 34	
	CONST TYPE CODE:	SFTY-2A	
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	84.3
50102400	CONCRETE REMOVAL	CU YD	8.5
50300225	CONCRETE STRUCTURES	CU YD	0.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	8.9
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1260
50800515	BAR SPLICERS	EACH	18
52000110	PREFORMED JOINT STRIP SEAL	FOOT	78
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	25
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1
63200305	STEEL PLATE BEAM GUARD RAIL REMOVAL	FOOT	25
63304385	TRAFFIC BARRIER TERMINAL REMOVAL, TYPE 1	EACH	1
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100900	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 (SPECIAL)	EACH	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	8.8
70300625	TEMPORARY PAINT PAVEMENT MARKING LINE 4"	FOOT	400
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	476
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1500
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1

*\*Specialty Items*

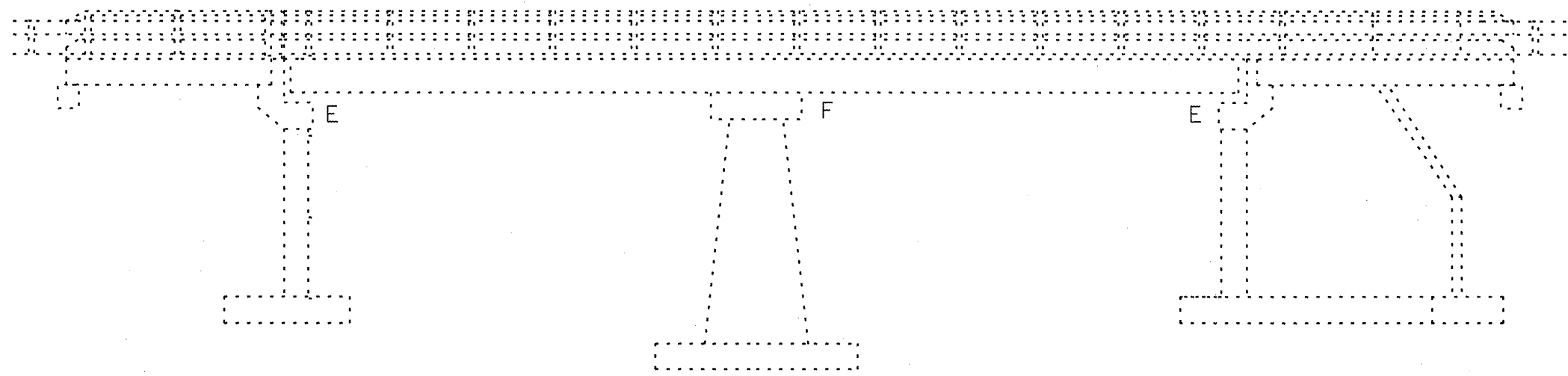
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PLOT DATE = 12/9/2009		DATE -	REVISED -							
						SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 78153 ILLINOIS FED. AID PROJECT		

HOT-MIX ASPHALT MIX DESIGN

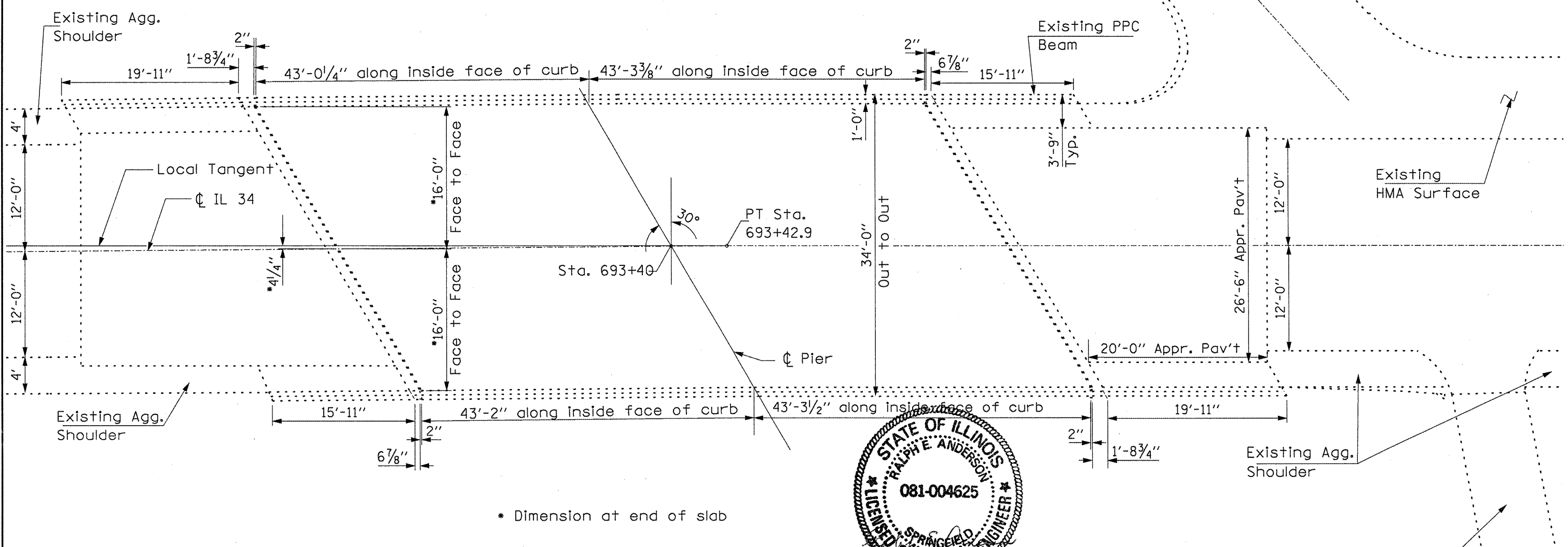
LOCATION:	TEMPORARY HOT MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS
AC/PG:	PG58-22
RAP % (MAX):	50
DESIGN AIR VOIDS:	2.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	HMA SHOULDERS
FRICTION AGGREGATE:	NONE

PAINT PAVEMENT MARKING - LINE 4"

COLOR	QUANTITY (FOOT)
WHITE	400
YELLOW	1100
TOTAL	1500



**ELEVATION**



\* Dimension at end of slab

**PLAN**

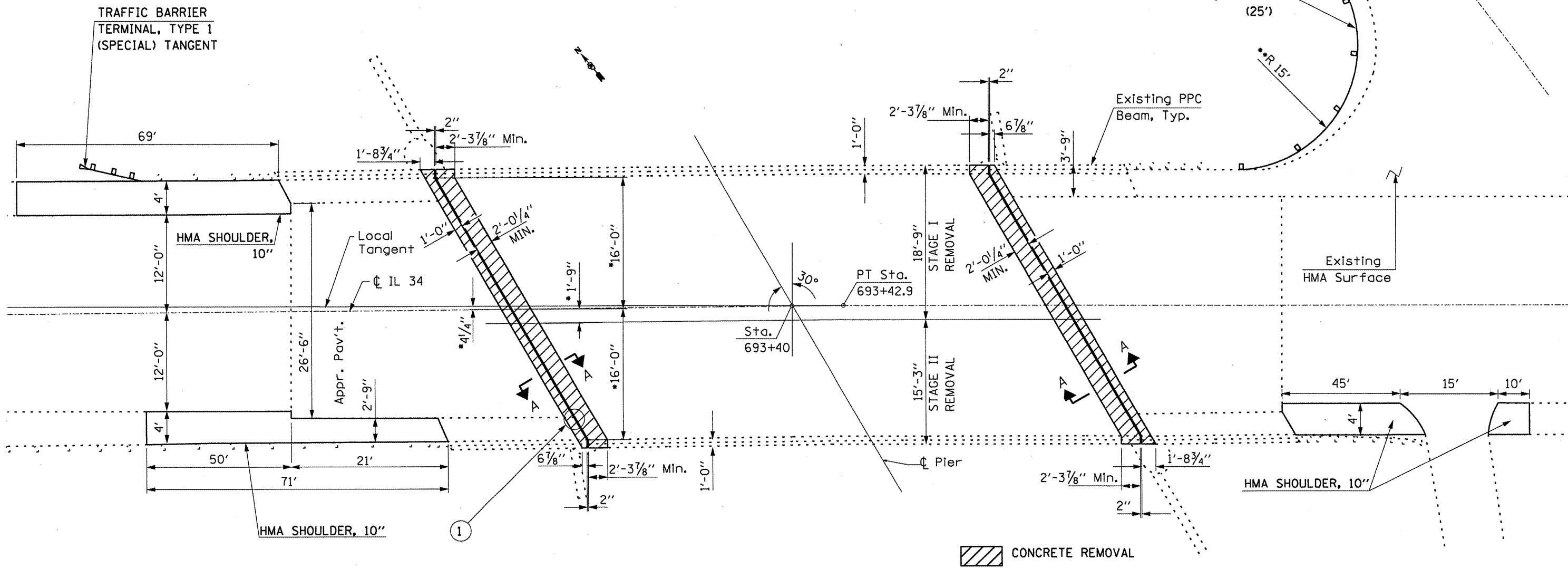


Expires Nov. 30, 2010

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	PLOT DATE = 12/9/2009	CHECKED -	REVISED -							
		DATE -	REVISED -							

- Dimension at end of slab
- \*\* Radius as shown on existing plans. Dimension should be verified in the field before ordering materials.

See Section A-A on Sheet 9 of 17.



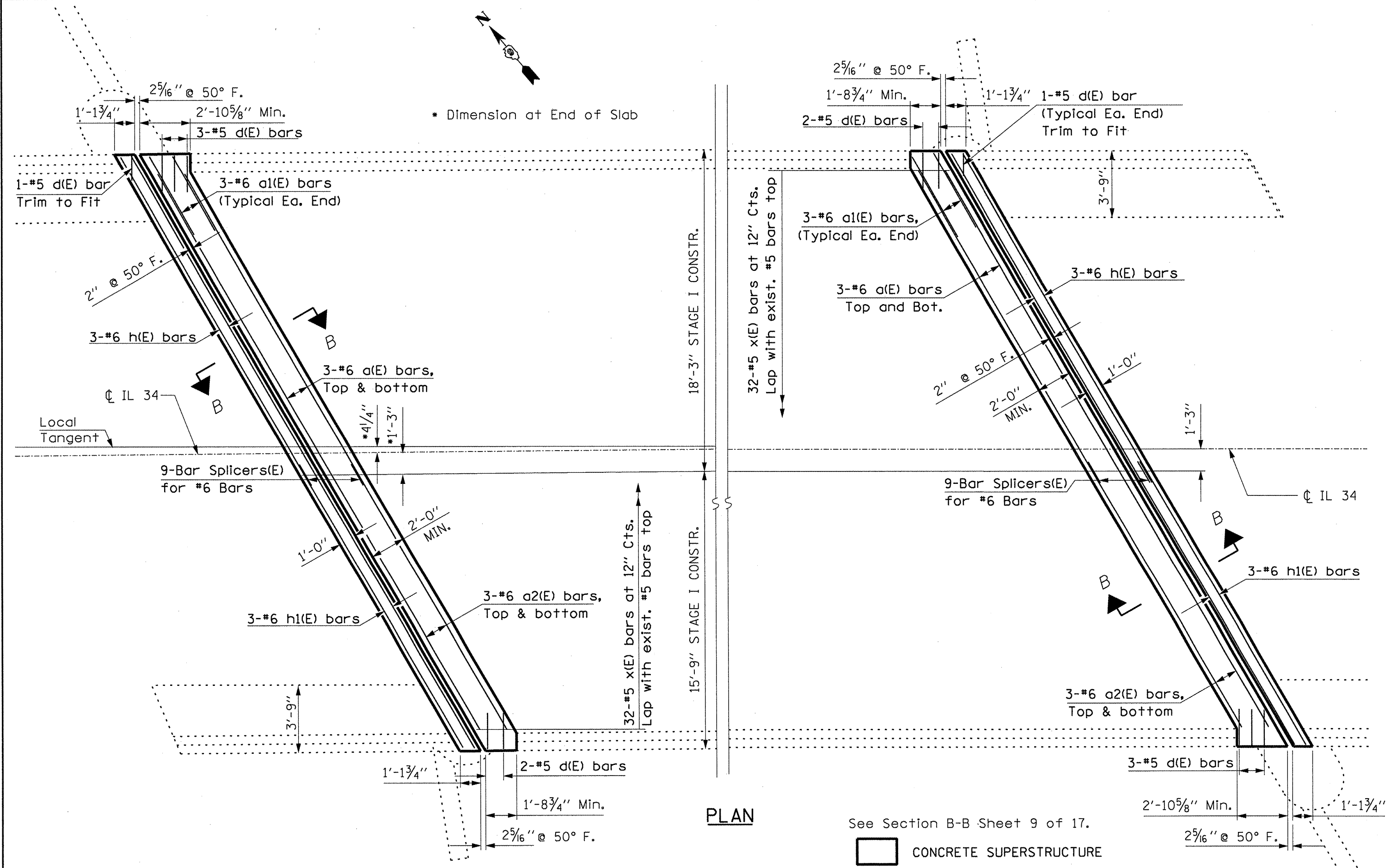
CONCRETE REMOVAL

① CONCRETE REPAIR ON FACE OF BEARING CAP. THE REPAIR SHALL BE IN ACCORDANCE WITH SECTION 503 OF THE STANDARD SPECIFICATIONS AND APPLICABLE PORTIONS OF SPECIAL PROVISION "STRUCTURAL REPAIR OF CONCRETE". PAID FOR AS "CONCRETE STRUCTURES". SEE DETAILS ON SHEET 14 OF 17.

CONCRETE REMOVAL DIMENSIONS ARE BASED ON USE OF THE ROLLED RAIL EXPANSION JOINT. IF THE CONTRACTOR ELECTS TO USE THE WELDED RAIL EXPANSION JOINT, THE OPENING AND DECK DIMENSIONS SHALL BE MODIFIED ACCORDING TO THE DIMENSIONS DETAILED ON SHEET 12 OF 17. REQUIRED MODIFICATIONS SHALL BE MADE AT NO ADDITIONAL COST TO THE STATE.

REMOVE EXISTING STEEL BRIDGE RAIL POST IN CONCRETE REMOVAL AREA. RE-INSTALL WITH NEW ANCHOR DEVICES. ALL MATERIALS, EQUIPMENT, AND LABOR FOR REMOVAL AND RE-INSTALLATION IS INCLUDED WITH "CONCRETE SUPERSTRUCTURE". SEE DETAILS OF ANCHOR DEVICES ON SHEET 13 OF 17.

FILE NAME =	USER NAME = gautneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 12/9/2009	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							



PLAN

See Section B-B Sheet 9 of 17.

CONCRETE SUPERSTRUCTURE

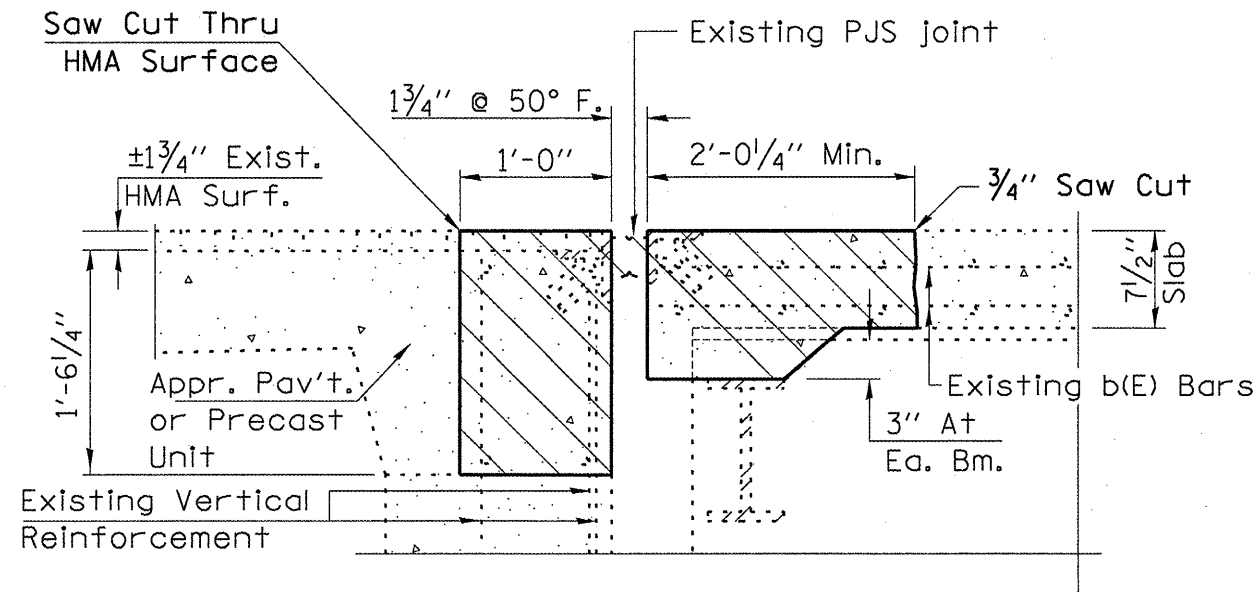
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		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____
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S.B.L. RTE. 34	SECTION 3(I-1)	COUNTY POPE	TOTAL SHEETS 17	SHEET NO. 8
CONTRACT NO. 78153				
ILLINOIS FED. AID PROJECT				



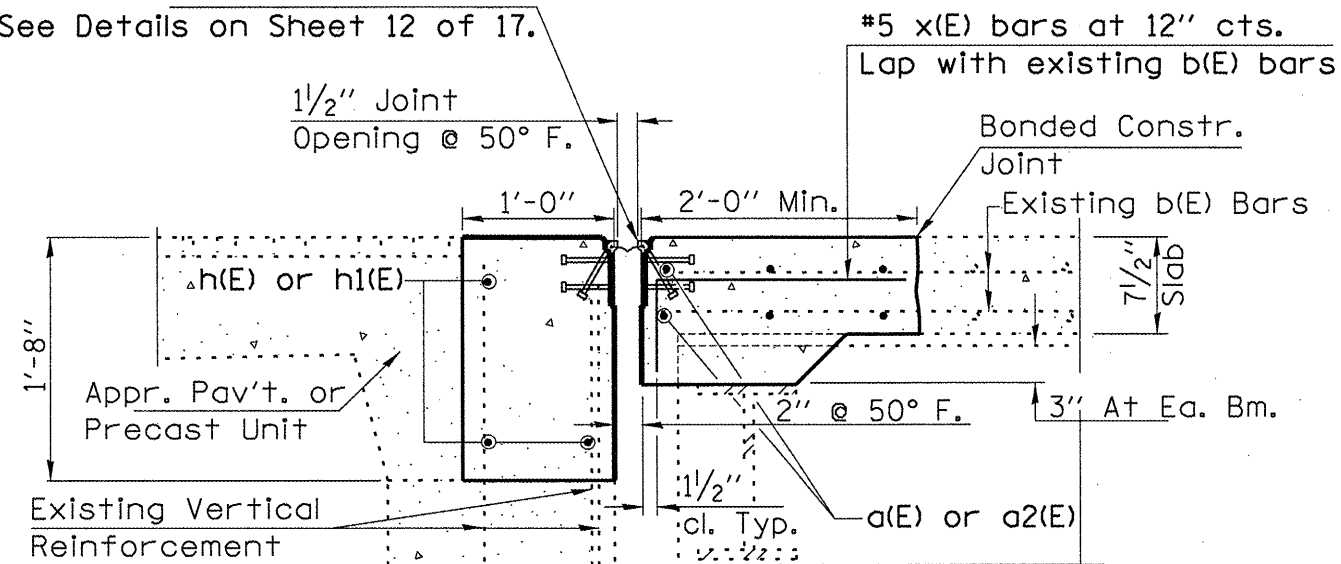


**SECTION A-A**  
**Showing Removal**

(At Right Angle to Abutment)

See Section Thru Curb  
on Sheet 11 of 17.

PREFORMED JOINT STRIP SEAL  
See Details on Sheet 12 of 17.



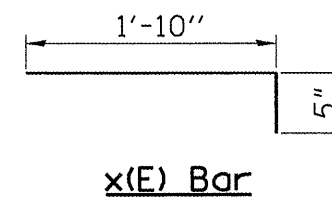
**SECTION B-B**  
**Showing Reinforcement**

(At Right Angle to Abutment)

**BILL OF MATERIAL**  
**JOINT RECONSTRUCTION**

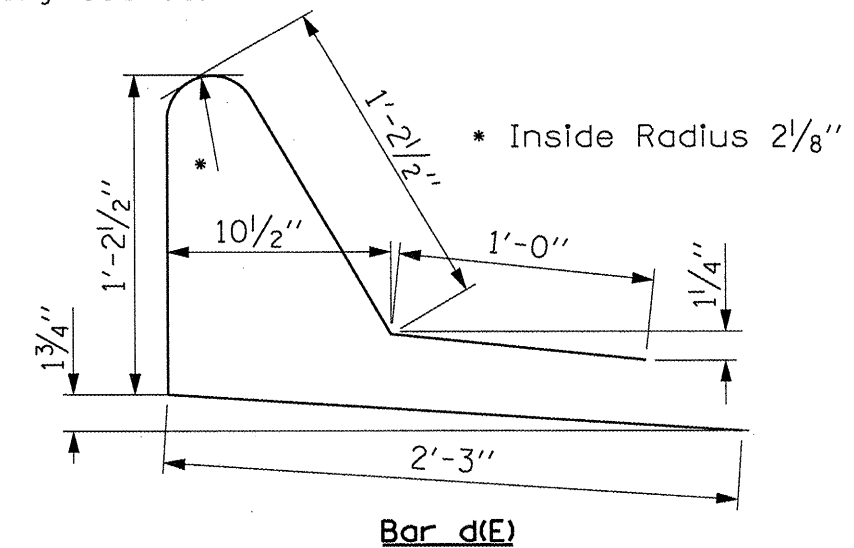
Bar	No.	Size	Length	Shape
a(E)	12	#6	18'-0"	—
a1(E)	12	#6	4'-9"	—
a2(E)	12	#6	15'-7"	—
d(E)	14	#5	5'-8"	⌒
h(E)	6	#6	18'-0"	—
h1(E)	6	#6	15'-7"	—
x(E)	64	#5	2'-3"	⌒
Concrete Removal			Cu. Yd.	8.5
Concrete Superstructure			Cu. Yd.	8.9
Bar Splicers			Each	18
Reinforcement Bars, Epoxy Coated			Pound	1230

Reinforcement bars designated (E) shall be epoxy coated.



**MINIMUM BAR LAPS**

- #5 Bar = 2'-2"
- #6 Bar = 2'-7"

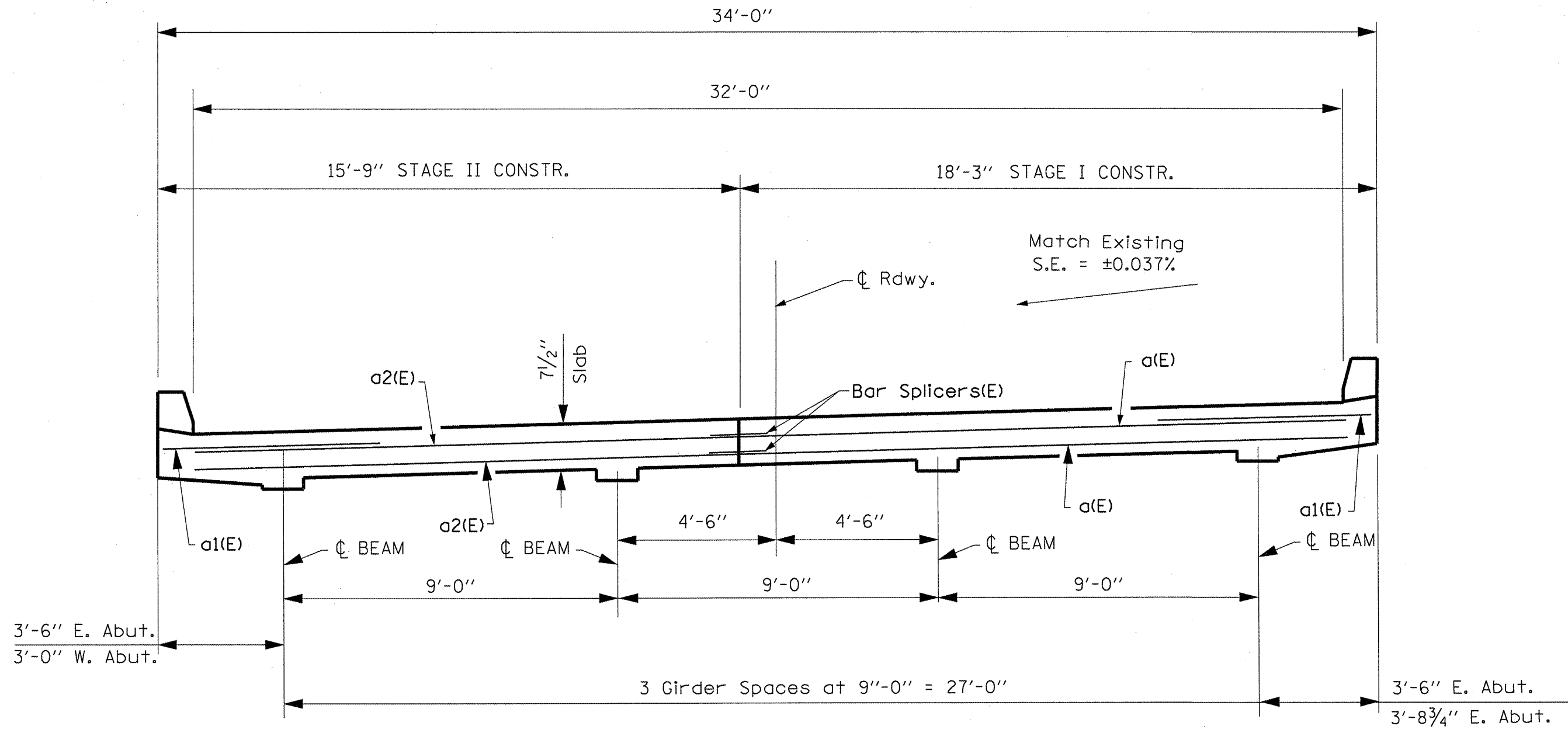


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PLOT DATE = 12/9/2009		DATE -	REVISD -

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

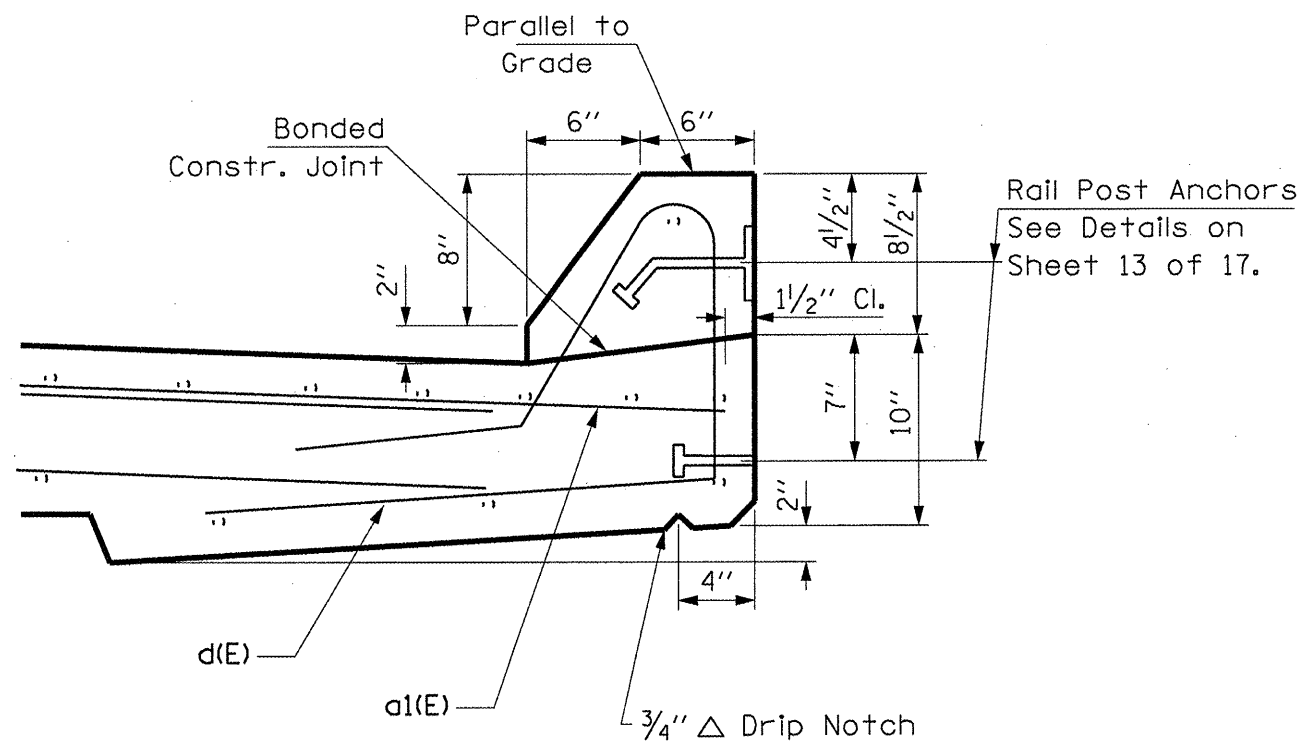
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S.B.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	3(I-1)	POPE	17	9
CONTRACT NO. 78153			ILLINOIS FED. AID PROJECT	

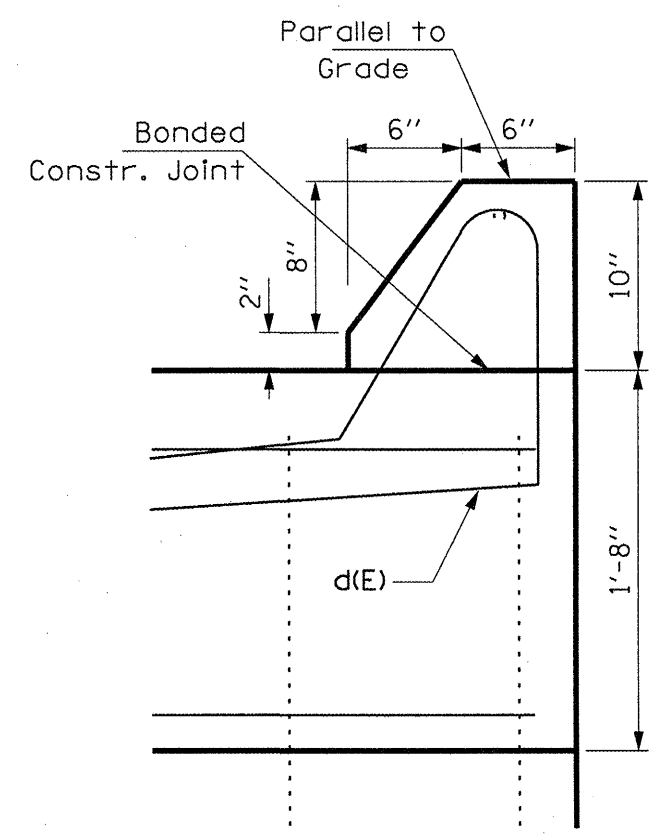


**DECK CROSS SECTION**      See Section Thru Curb on Sheet 11 of 17.  
 (NEAR JOINT, LOOKING WEST)  
 DIMENSIONS AT RIGHT ANGLE TO CENTERLINE OF ROADWAY

FILE NAME = c:\pwwork\pwwork\goutneyrk\d0156602\78153-ahs-pln.dgn	USER NAME = goutneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 12/9/2009	CHECKED -	REVISED -			CONTRACT NO. 78153				
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				



**SECTION THRU CURB  
AT DECK SLAB**



**SECTION THRU CURB  
ADJACENT TO APPROACH BEAM**

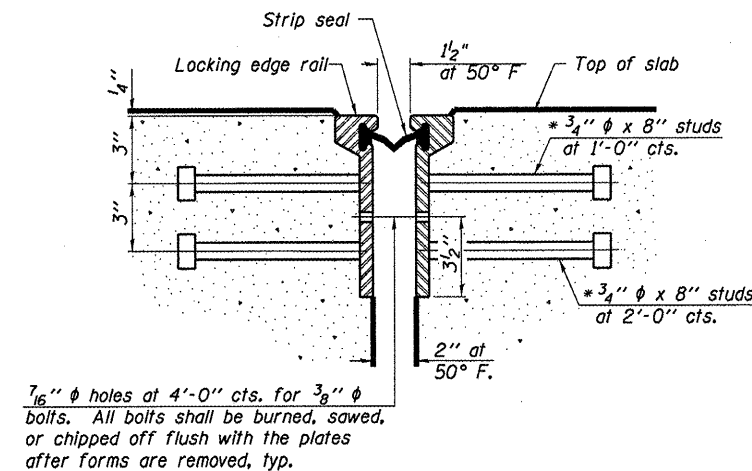
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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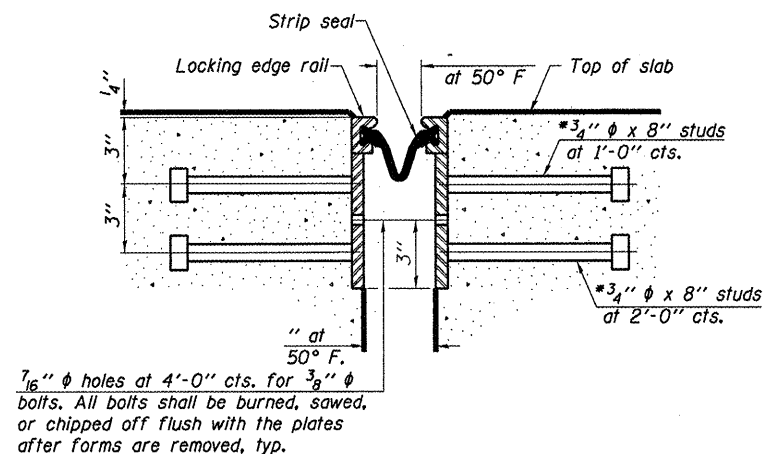
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S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	3(I-1)	POPE	17	11
CONTRACT NO. 78153			ILLINOIS FED. AID PROJECT	

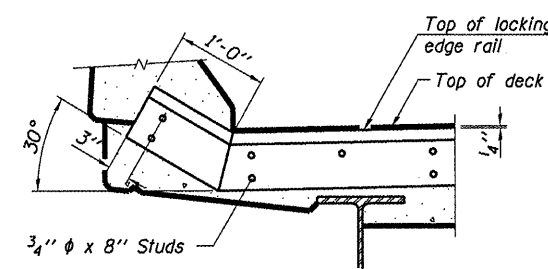
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



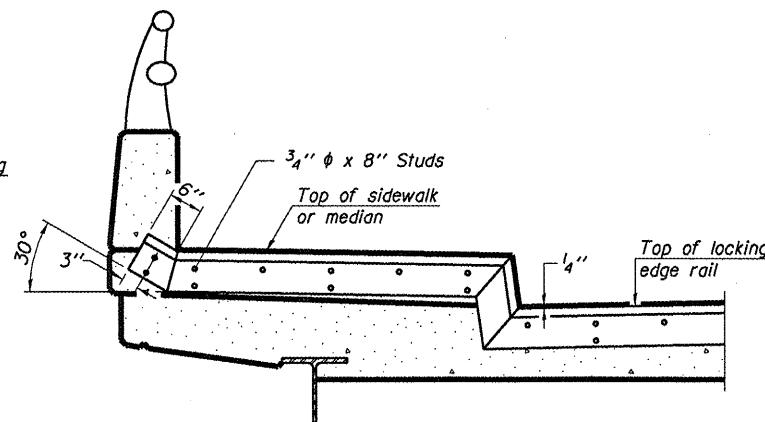
**SECTION THRU ROLLED RAIL JOINT**



**SECTION THRU WELDED RAIL JOINT**



**AT PARAPET**  
See Section A-A for end treatment of skews > 30°.



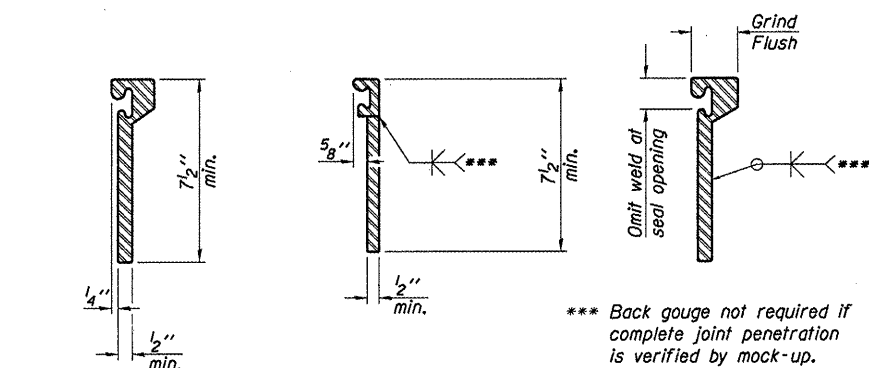
**AT SIDEWALK OR MEDIAN**  
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**TYPICAL END TREATMENTS**

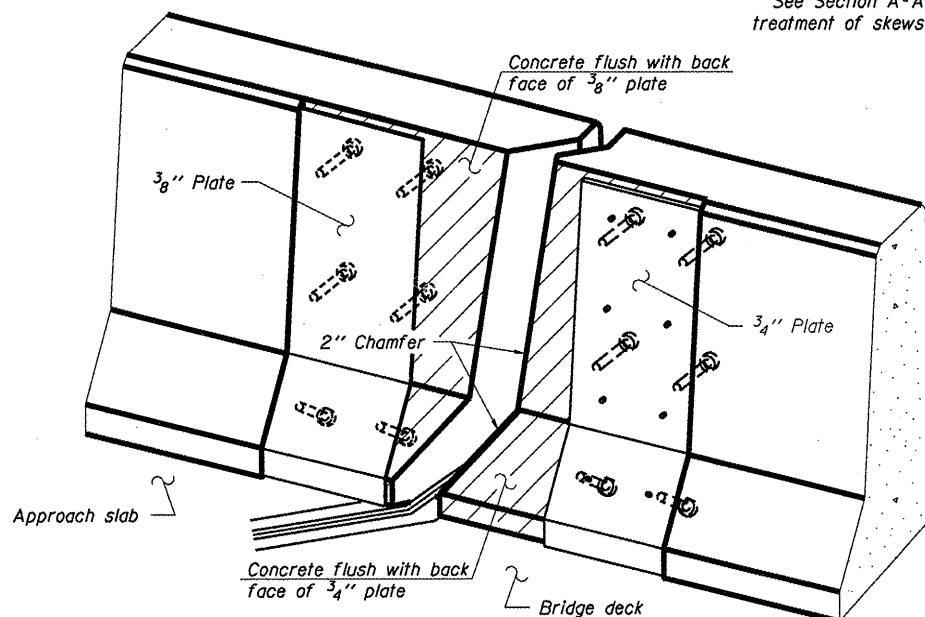
**Notes:**  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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.  
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. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.  
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.  
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.



**ROLLED EXTRUDED RAIL**      **WELDED RAIL**

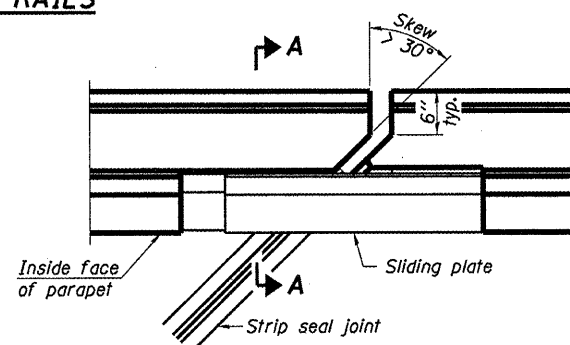
**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.  
Rolled rail shown, welded rail similar.

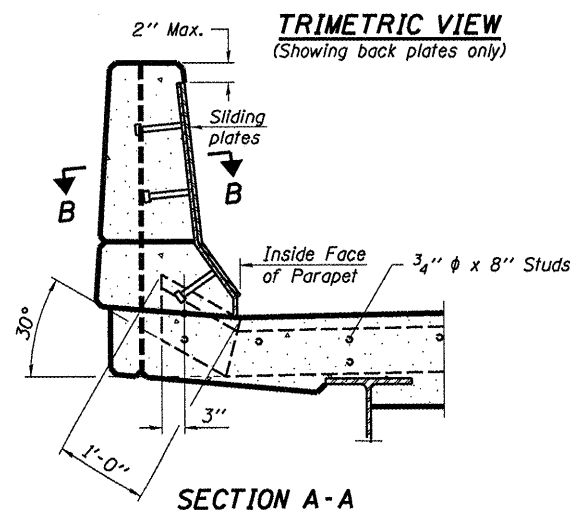


**TRIMETRIC VIEW**  
(Showing back plates only)

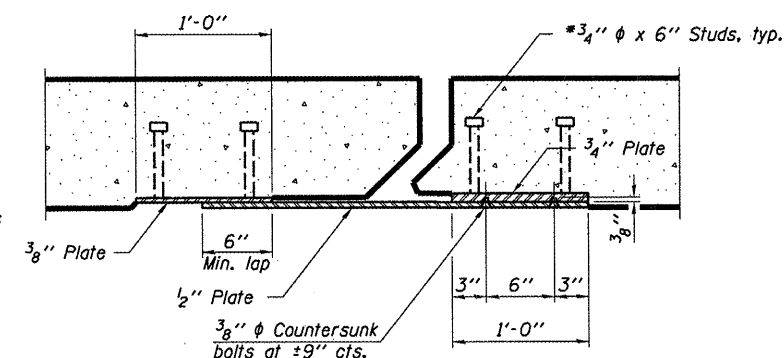
**LOCKING EDGE RAILS**



**PLAN**



**SECTION A-A**



**SECTION B-B**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	78

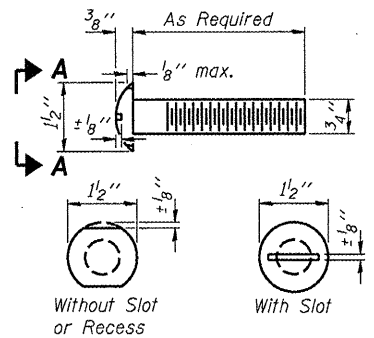
**PREFORMED JOINT STRIP SEAL STRUCTURE NO. 076-0001**

EJ-SSJ 11-1-09  
REVISED PARAPET 12/8/09 RKG

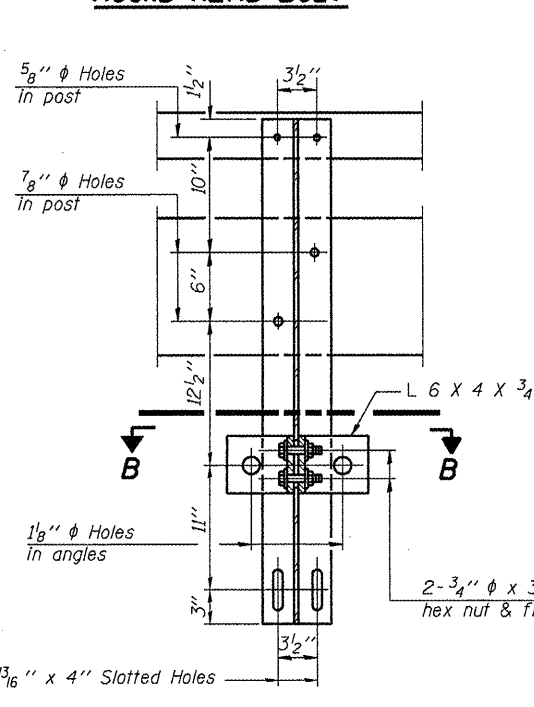
**POINT BLOCK DETAILS**  
(for skews > 30°)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

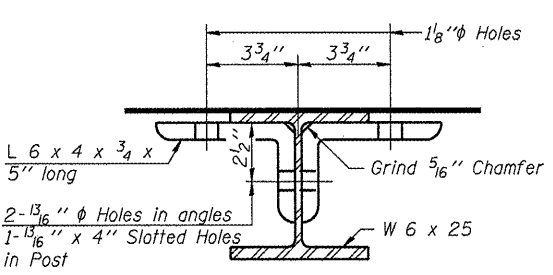
FILE NAME	USER NAME	DESIGNED	REVISED	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca\pwwork\VPWIDOT\GAUTNEYRK\d0156602\78153-shr-p\In.dgn	gautneyrk	---	---	34	3(I)-1	POPE	17	12
PLOT SCALE = 1/4" = 1'-0"	5/8" = 1'-0"	CHECKED	REVISED	CONTRACT NO. 78153				
PLOT DATE = 12/9/2009	DATE	---	---	ILLINOIS FED. AID PROJECT				



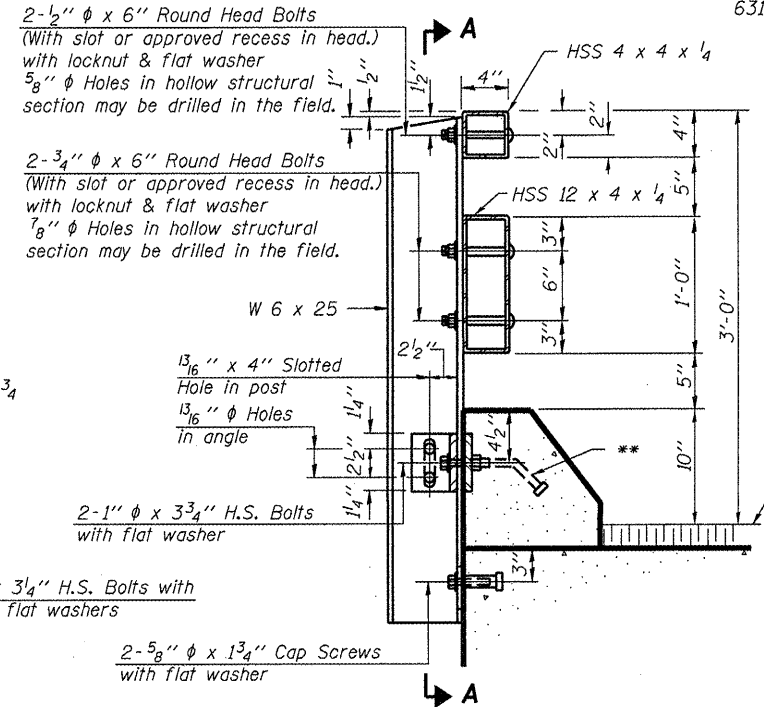
**VIEW A-A  
ROUND HEAD BOLT**



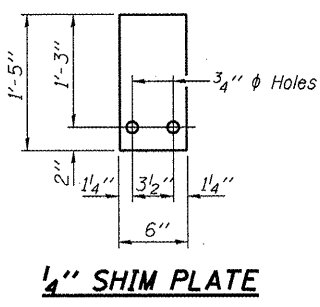
**SECTION A-A**



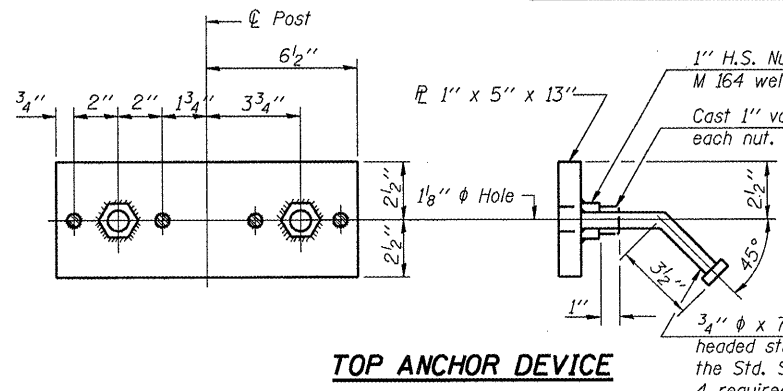
**SECTION B-B**



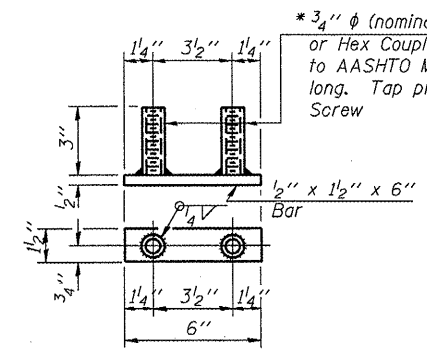
**SECTION AT RAIL POST**



**1/4" SHIM PLATE**



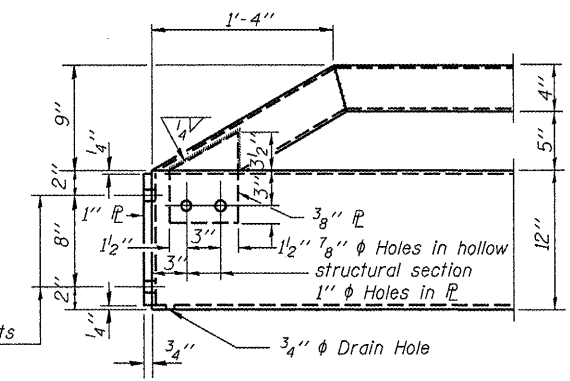
**TOP ANCHOR DEVICE**



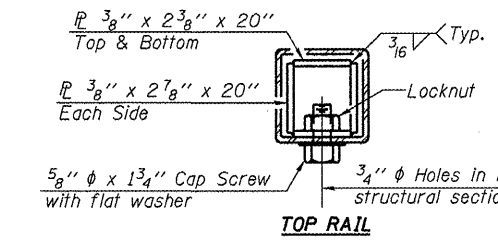
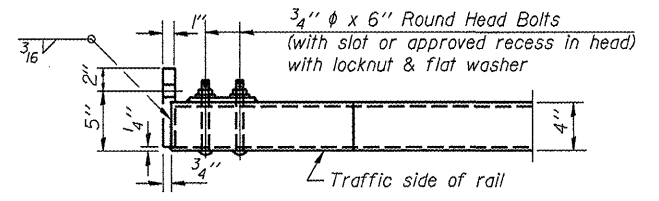
**BOTTOM ANCHOR DEVICE**

1/8"  $\phi$  Holes for 1"  $\phi$  x 4" Round Head Bolts  
Provide 2 flat washers & locknuts for guard rail connection shown on Hwy. Std. 631026 or BLR 27-1.

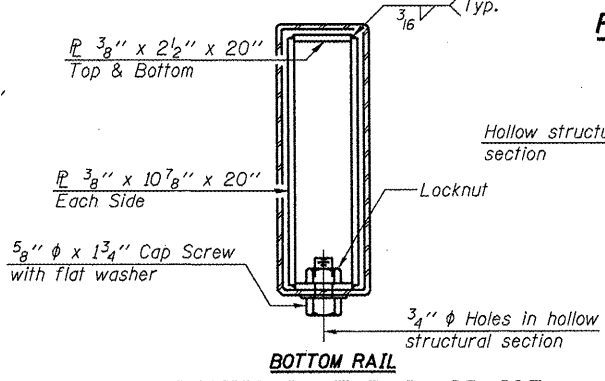
\* Threaded areas shall be plugged or blocked off during casting of beam.



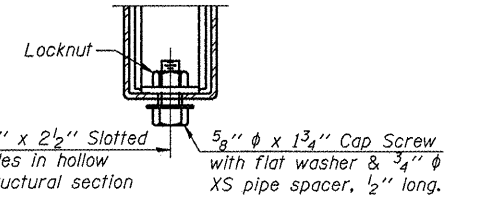
**END OF RAIL DETAILS**



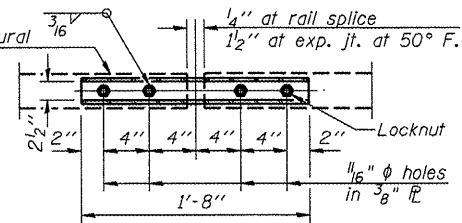
**TOP RAIL**



**SECTIONS AT RAIL SPLICE**



**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R  
TYPICAL**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type T-1	Foot	

FOR INFORMATION ONLY

**STEEL RAILING, TYPE T-1  
STRUCTURE NO.  
076-0001  
(SHOWING ANCHOR  
DEVICES)**

R-24A 11-1-09 (9'-6" Maximum Post Spacing)

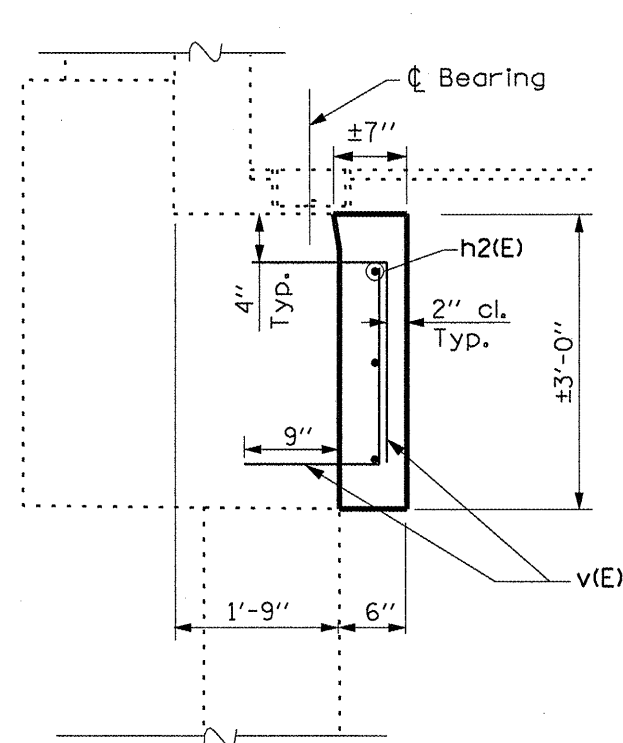
FILE NAME	USER NAME	DESIGNED	REVISED
ca:\pwork\pwidot\GAUTNEYRK\d0156602\76153-sht-pln.dgn	gautneyrk	---	---
		DRAWN	---
		CHECKED	---
		DATE	---

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DEPARTMENT OF TRANSPORTATION**

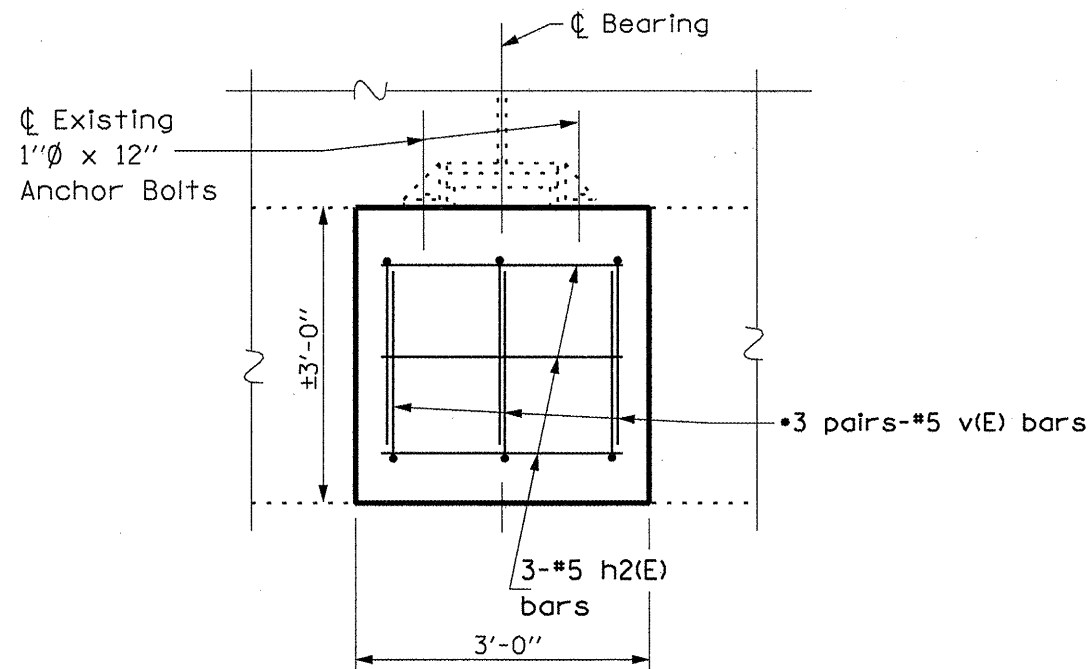
SCALE	SHEET NO.	OF	SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	311-11	POPE	17	13

CONTRACT NO. 78153  
ILLINOIS FED. AID PROJECT



**SECTION**



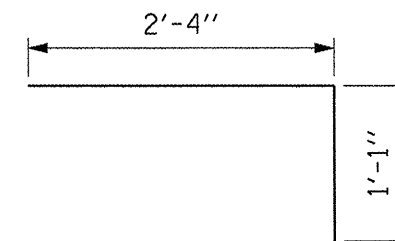
**ELEVATION**

\* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications. Cost included with "Reinforcement Bars, Epoxy Coated".

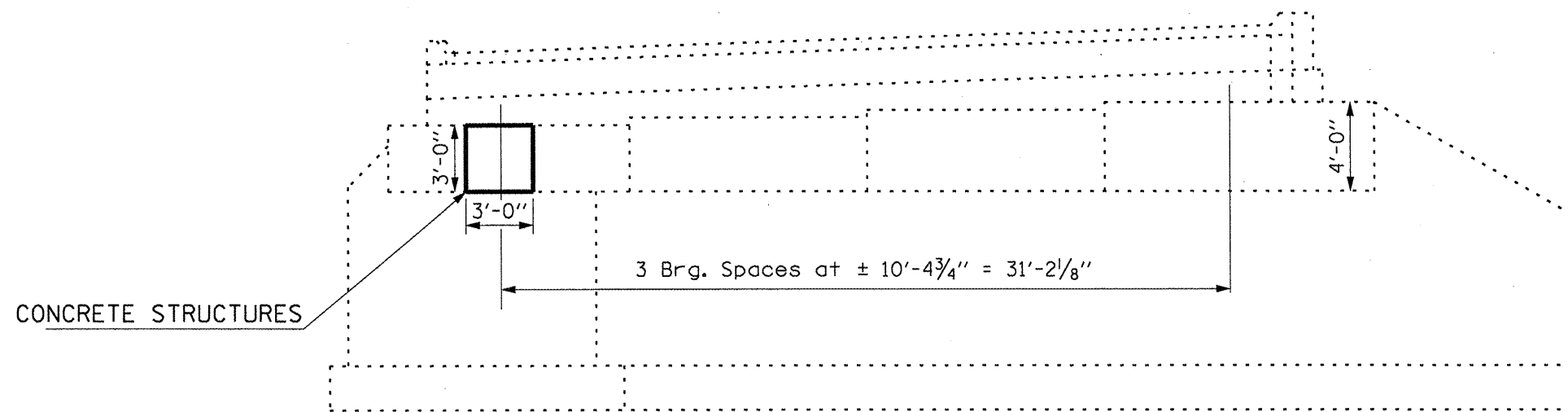
**BILL OF MATERIAL  
CONCRETE REPAIR**

Bar	No.	Size	Length	Shape
h2(E)	3	#5	2'-8"	—
v(E)	6	#5	3'-5"	┌
Concrete Structures			Cu. Yd.	0.2
Reinforcement Bars, Epoxy Coated			Pound	30

Reinforcement bars designated (E) shall be epoxy coated.



**v(E) Bars**

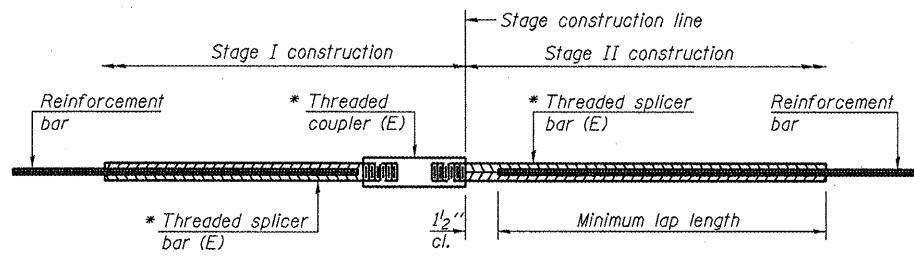


**WEST ABUTMENT ELEVATION**

Dimensions Parallel to Face of Abutment

**CONCRETE REPAIR  
WEST ABUTMENT**

FILE NAME =	USER NAME = gautneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca\pwr\work\p\idat\gautneyrk\d0156602\78	53-shr-pln.dgn	DRAWN -	REVISED -		34	3(1-1)	POPE	17	14
PLOT SCALE = 20000 1" / IN.		CHECKED -	REVISED -		SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 78153		
PLOT DATE = 12/9/2009		DATE -	REVISED -		ILLINOIS FED. AID PROJECT				



**STANDARD BAR SPLICER ASSEMBLY**

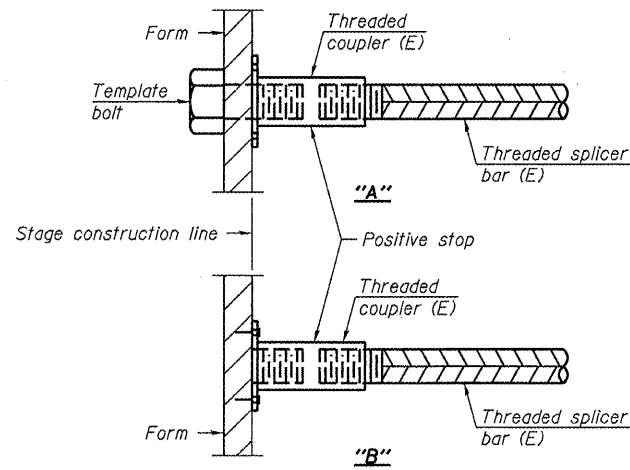
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C

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

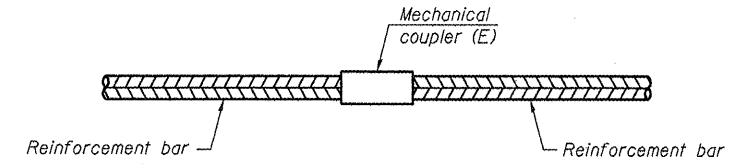
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



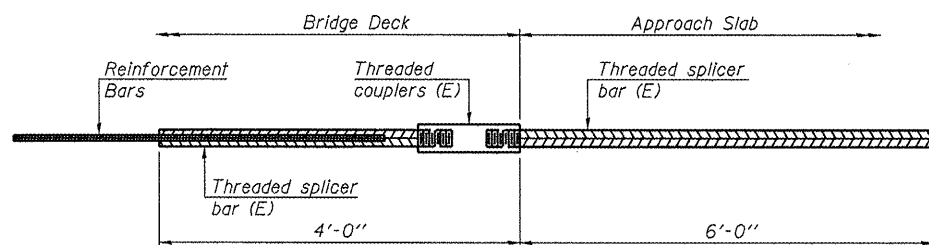
**INSTALLATION AND SETTING METHODS**

"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.



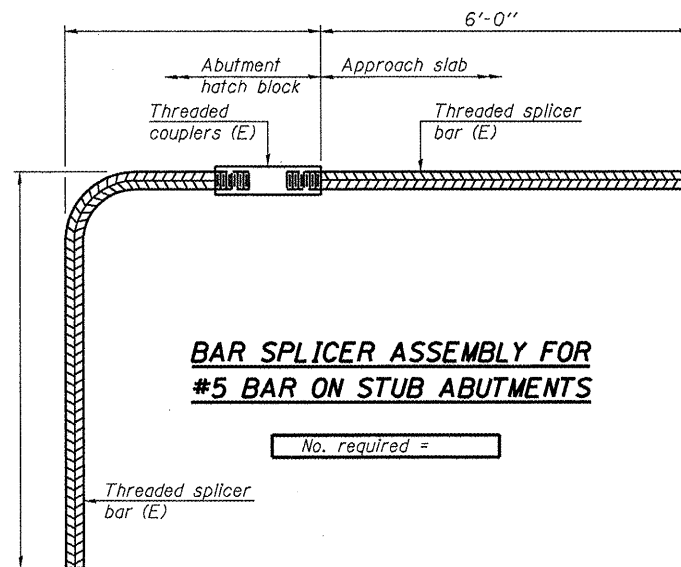
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
STAGE CONSTR. LINE	#6	18



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. 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 special provision for Mechanical Splicers.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS**

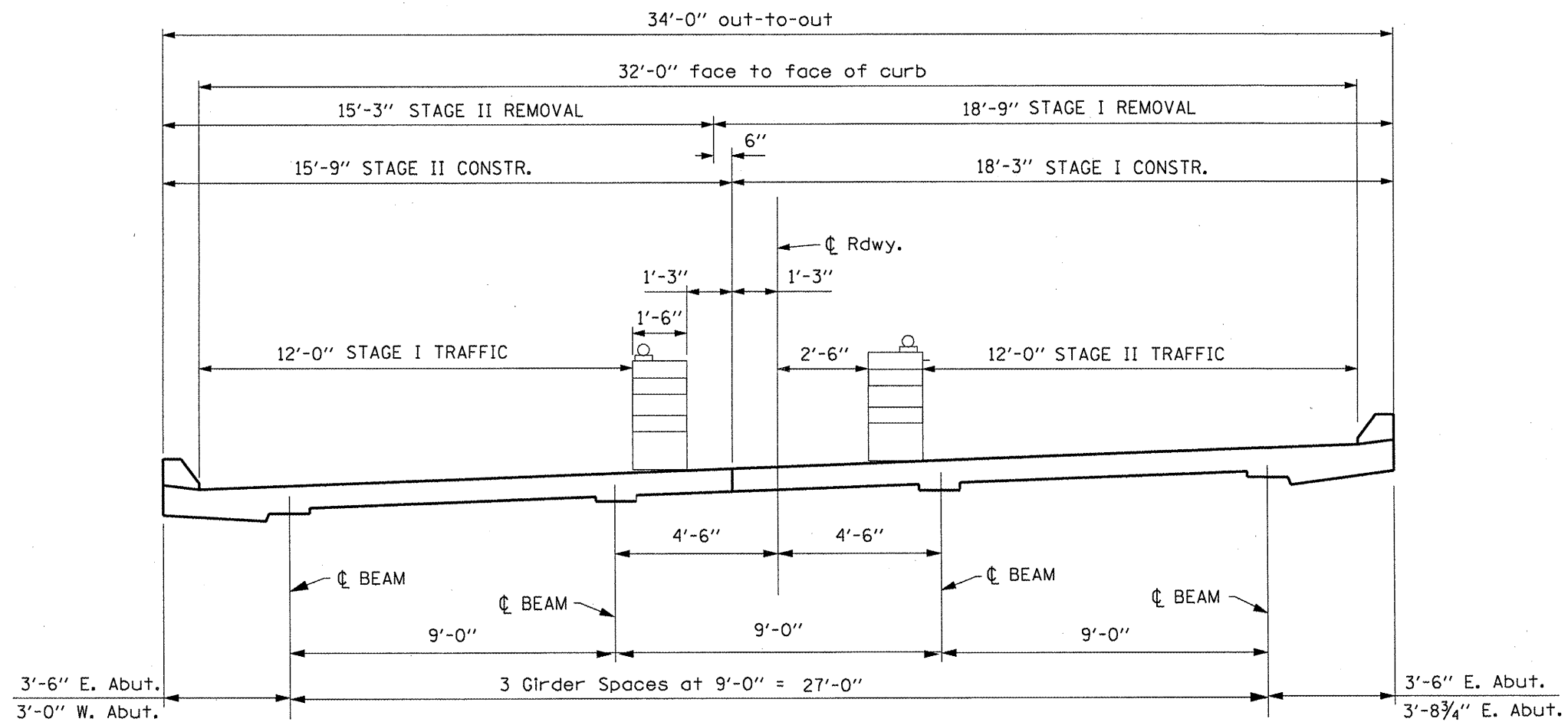
STRUCTURE NO.

076-0001

BSD-1 11-1-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FILE NAME	USER NAME	DESIGNED	REVIS	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pwwork\PIWIDOT\GAUTNEYR\cd0156602\7153-sht-pln.dgn	gautneyrk	---	---	34	3(I-1)	POPE	17	15
PLOT SCALE = 1/8"=1'-0" IN.				SCALE: _____		SHEET NO. _____ OF _____ SHEETS		CONTRACT NO. 78153
PLOT DATE = 12/9/2009				DATE _____		STA. _____ TO STA. _____		ILLINOIS FED. AID PROJECT



**STAGE CONSTRUCTION**

(LOOKING WEST)

DIMENSIONS AT RIGHT ANGLE TO CENTERLINE OF ROADWAY







FILE NAME =	USER NAME = gautneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pwork\pwork\gautneyrk\d8156682\78153-sht-pln.dgn	DRAWN -	REVISED -	34			3(1-1)	POPE	17	16	
PLOT SCALE = 4:8.72 1/2" / IN.	CHECKED -	REVISED -	CONTRACT NO. 78153							
PLOT DATE = 12/9/2009	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

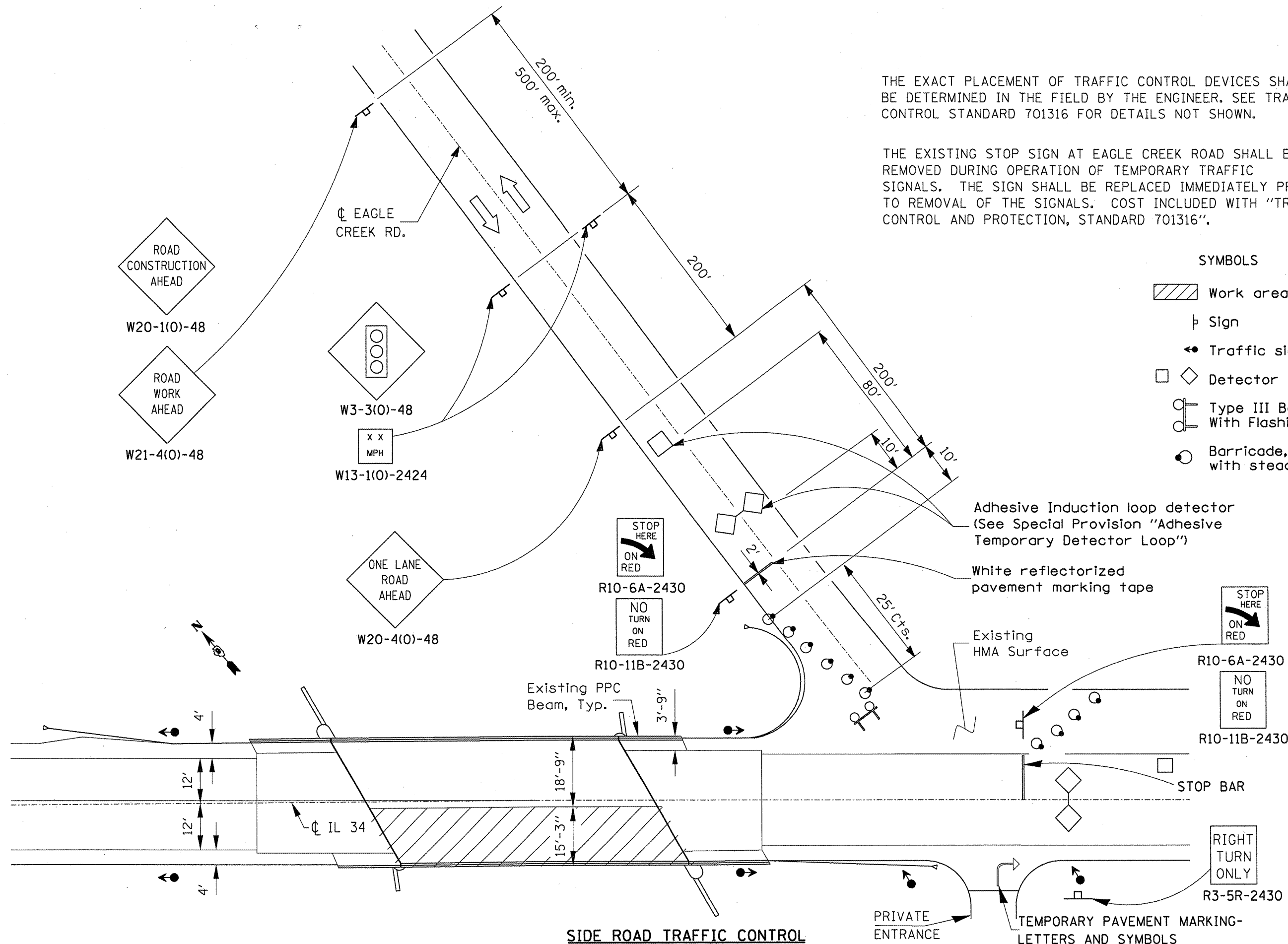


THE EXACT PLACEMENT OF TRAFFIC CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. SEE TRAFFIC CONTROL STANDARD 701316 FOR DETAILS NOT SHOWN.

THE EXISTING STOP SIGN AT EAGLE CREEK ROAD SHALL BE REMOVED DURING OPERATION OF TEMPORARY TRAFFIC SIGNALS. THE SIGN SHALL BE REPLACED IMMEDIATELY PRIOR TO REMOVAL OF THE SIGNALS. COST INCLUDED WITH "TRAFFIC CONTROL AND PROTECTION, STANDARD 701316".

**SYMBOLS**

-  Work area
-  Sign
-  Traffic signal
-  Detector loops
-  Type III Barricade With Flashing Lights
-  Barricade, or drum with steady burning lights



**SIDE ROAD TRAFFIC CONTROL**

PRIVATE ENTRANCE  
TEMPORARY PAVEMENT MARKING- LETTERS AND SYMBOLS

FILE NAME =	USER NAME = gautneyrk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____	S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pwr\work\PIWIDOT\GAUTNEYRK\d0156602\7153-sht-pln.dgn	DRAWN -	REVISED -	34			3(I-1)	POPE	17	17	
PLOT SCALE = 254:29 5/8" 1" / IN.	CHECKED -	REVISED -	CONTRACT NO. 78153							
PLOT DATE = 12/9/2009	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							