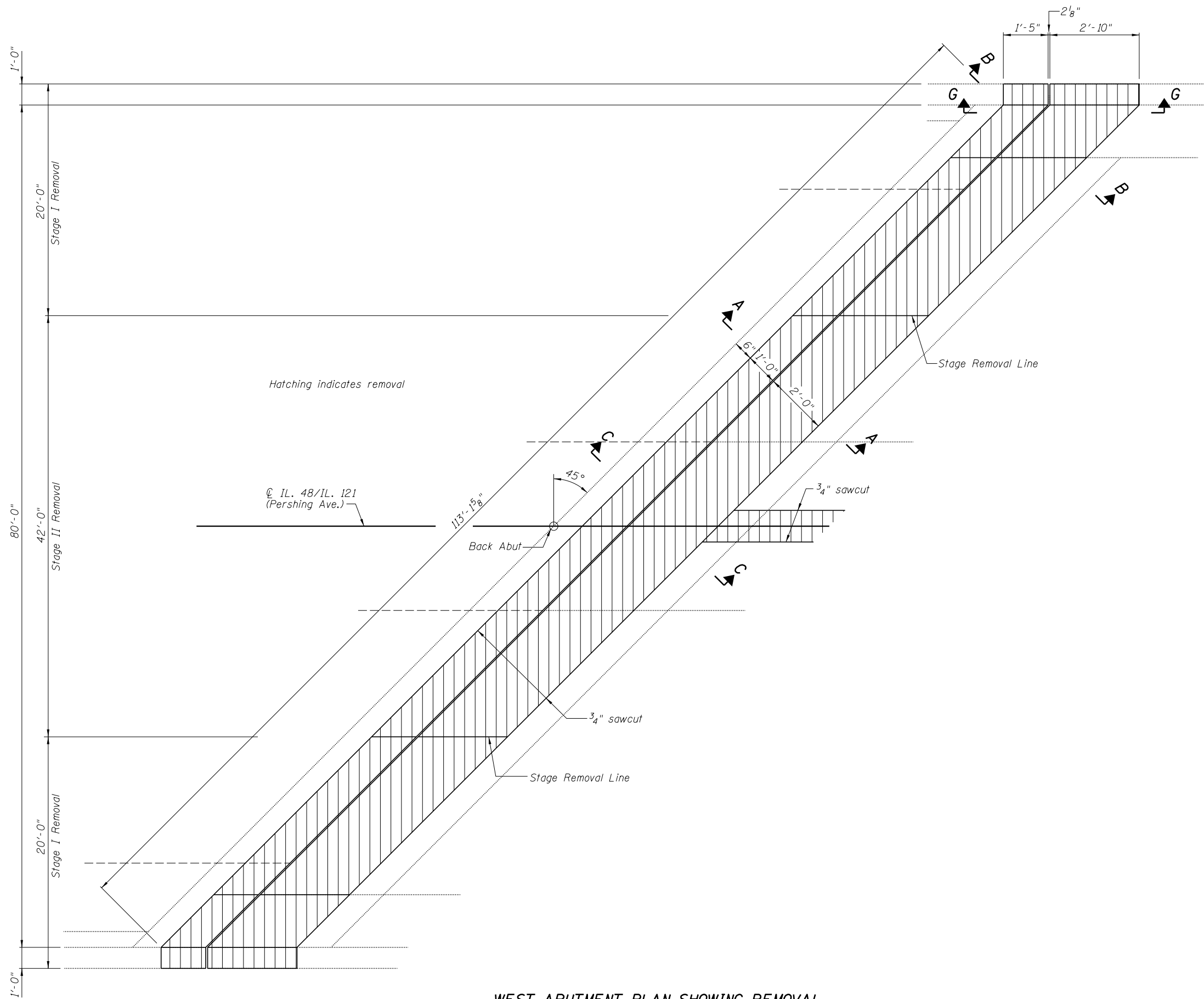


FILE NAME = I:\184\6008 - d7 var var\work\_order\_3 - 11121 resurfacing\CADD\_Structural\planets.dgn



**WEST ABUTMENT PLAN SHOWING REMOVAL**  
*(West abutment shown East abutment similar)*

**CHASTAIN & ASSOCIATES LLC**  
 CONSULTING ENGINEERS  
 184-001397

USER NAME = dbullock  
 PLOT TIME = 4:49:08 PM  
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 CHECKED - ACB  
 DRAWN - RLK  
 CHECKED - JMB

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

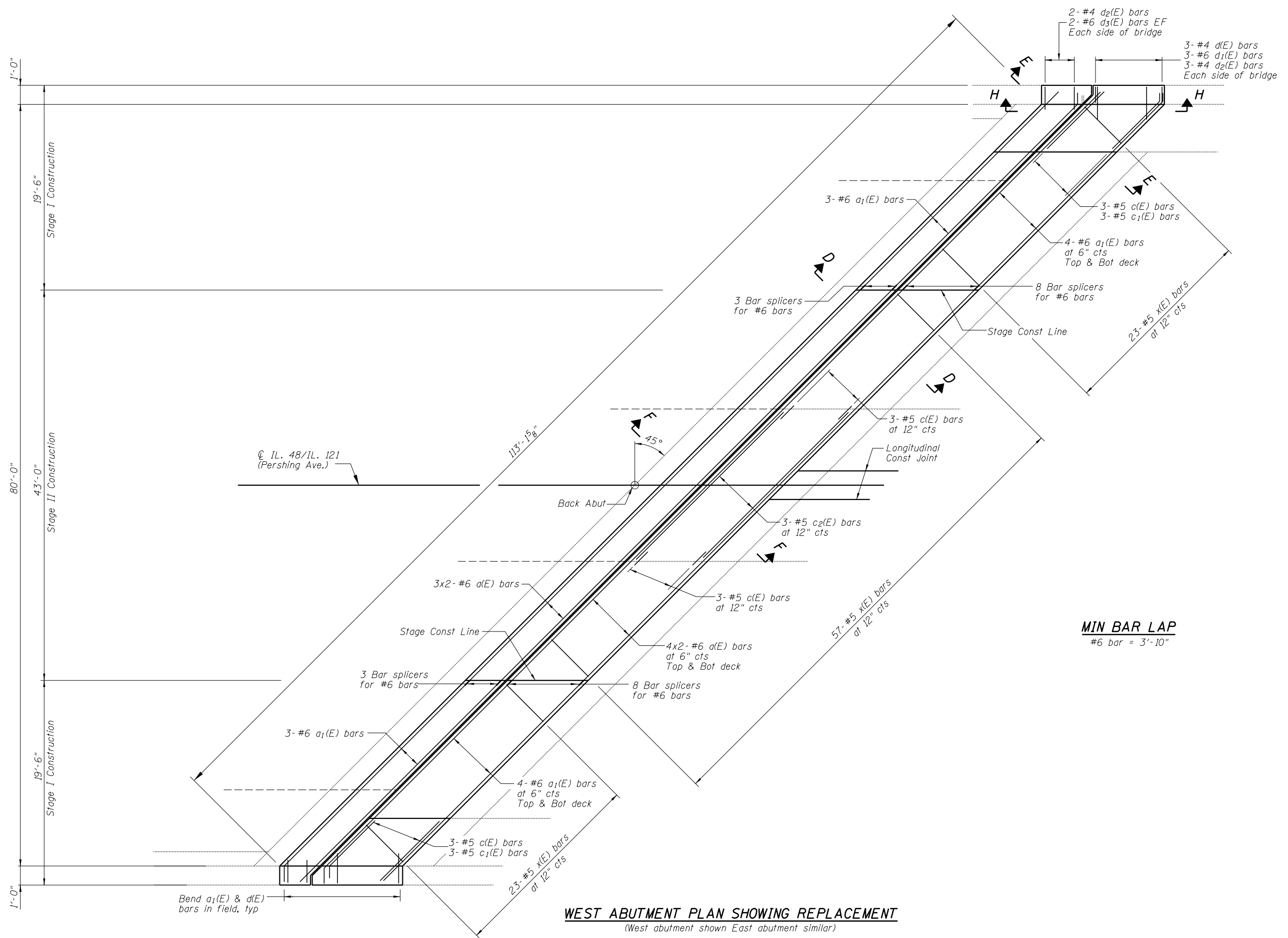
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS**  
**STRUCTURE NO. 058-0050**

SHEET NO. 3 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	101
SN. 058-0050		CONTRACT NO. 74624		
STA.	ILLINOIS FED. AID PROJECT			

FILE NAME = I:\100\6008 - d7 var var-work order 3 - 11121 resurfacing\CADD\Structural\plan01s.dgn



**WEST ABUTMENT PLAN SHOWING REPLACEMENT**  
(West abutment shown East abutment similar)

**MIN BAR LAP**  
#6 bar = 3'-10"

**CHASTAIN & ASSOCIATES LLC**  
CONSULTING ENGINEERS  
184-001397

USER NAME = dbullock  
PLOT TIME = 4:49:08 PM  
PLOT SCALE = 10.0000' / in.  
PLOT DATE = 8/19/2014

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CHECKED - ACB  
DRAWN - RLK  
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REVISED -  
REVISED -  
REVISED -  
REVISED -

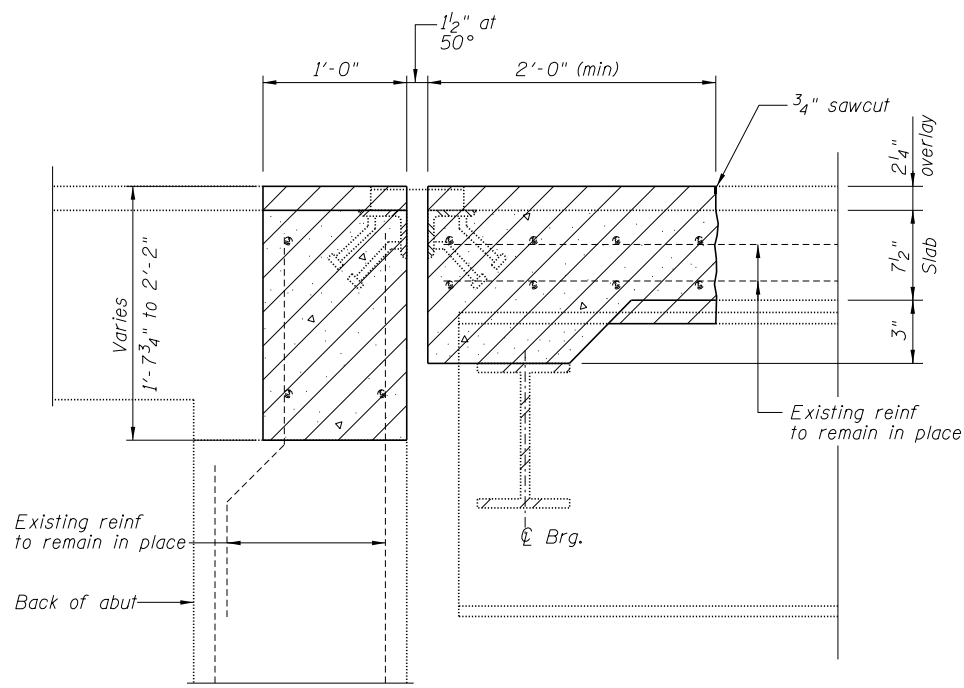
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS**  
**STRUCTURE NO. 058-0050**

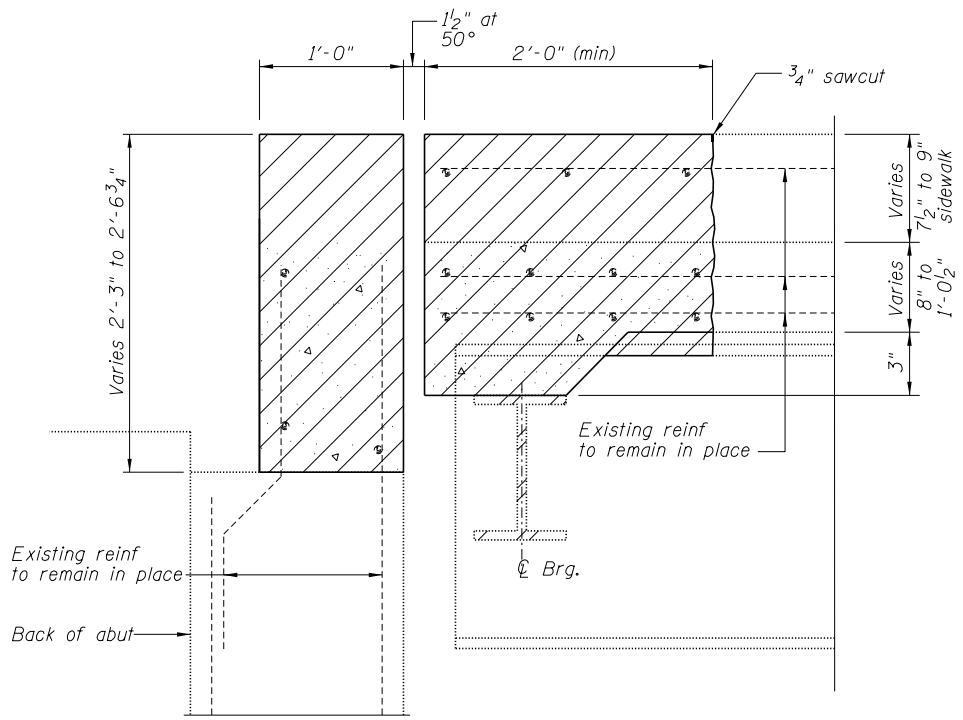
SHEET NO. 4 OF 13 SHEETS

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SN. 058-0050		CONTRACT NO. 74624		
STA.	ILLINOIS FED. AID PROJECT			

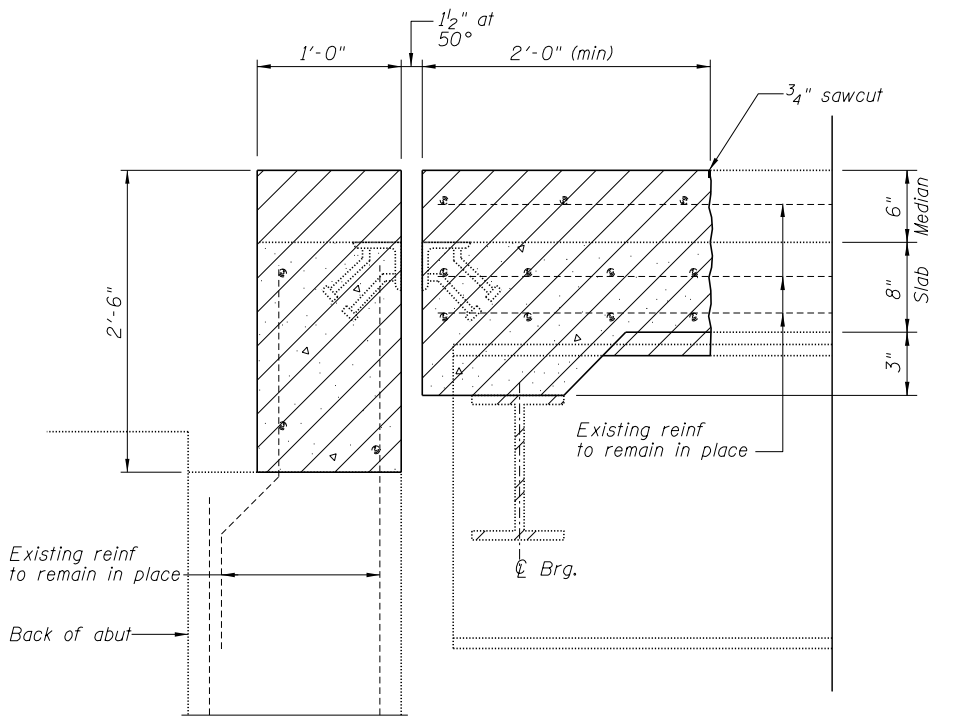
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**SECTION A-A**

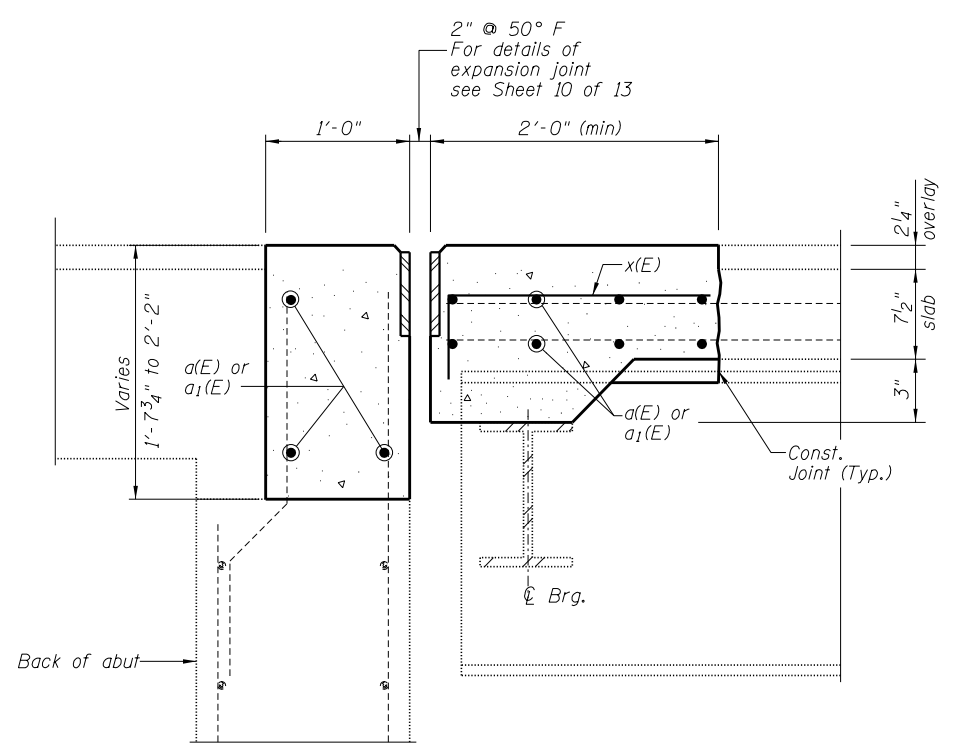


**SECTION B-B**

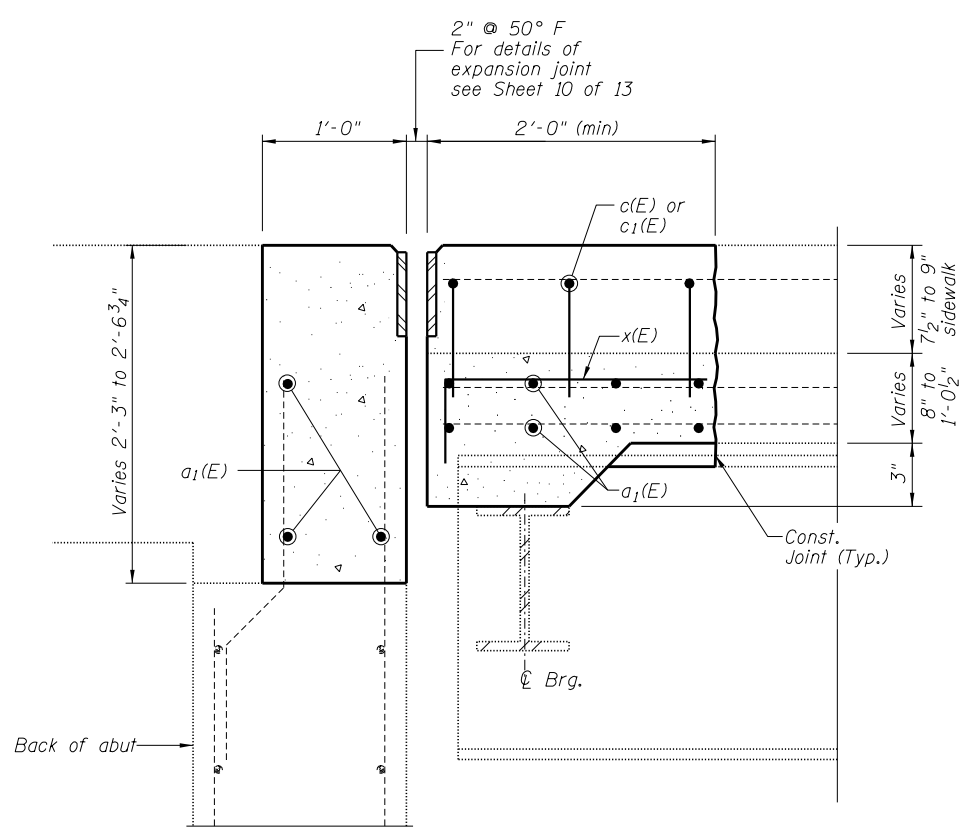


**SECTION C-C**

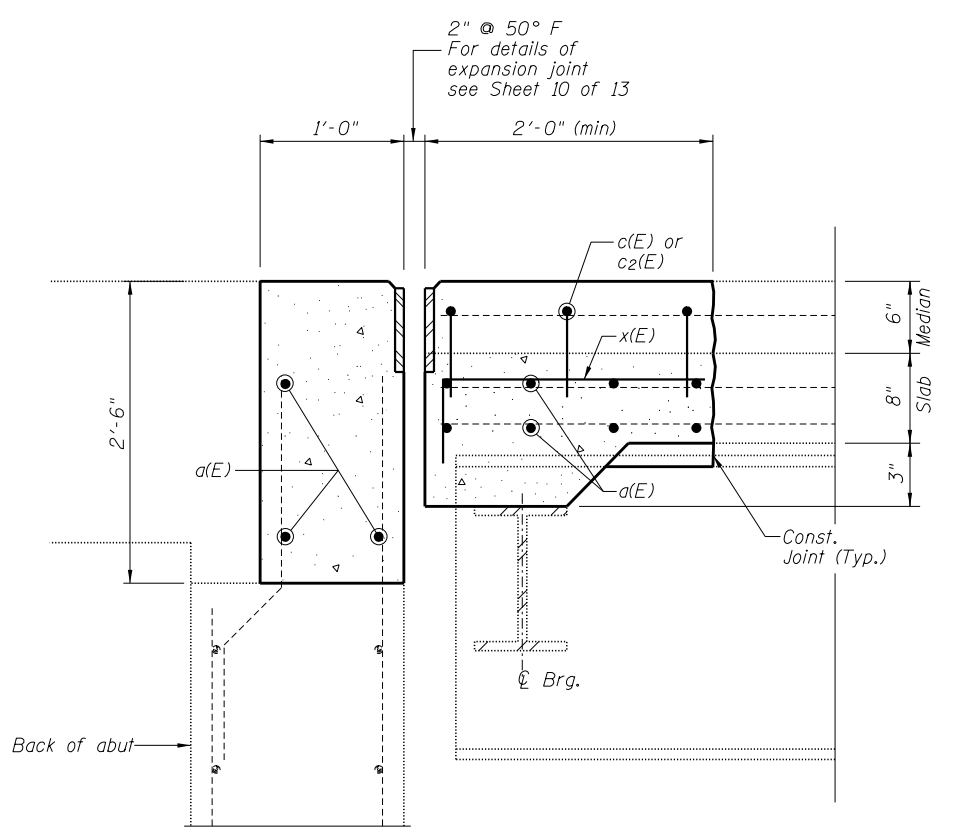
- ⊙ Existing Reinforcement
- Proposed Reinforcement



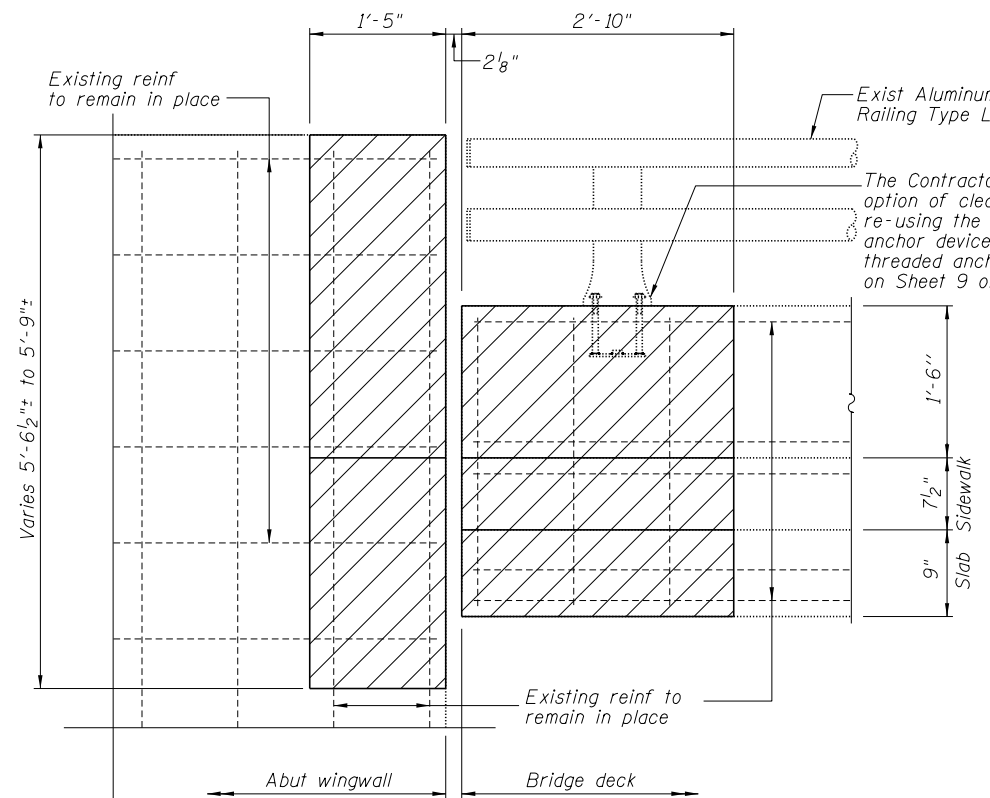
**SECTION D-D**



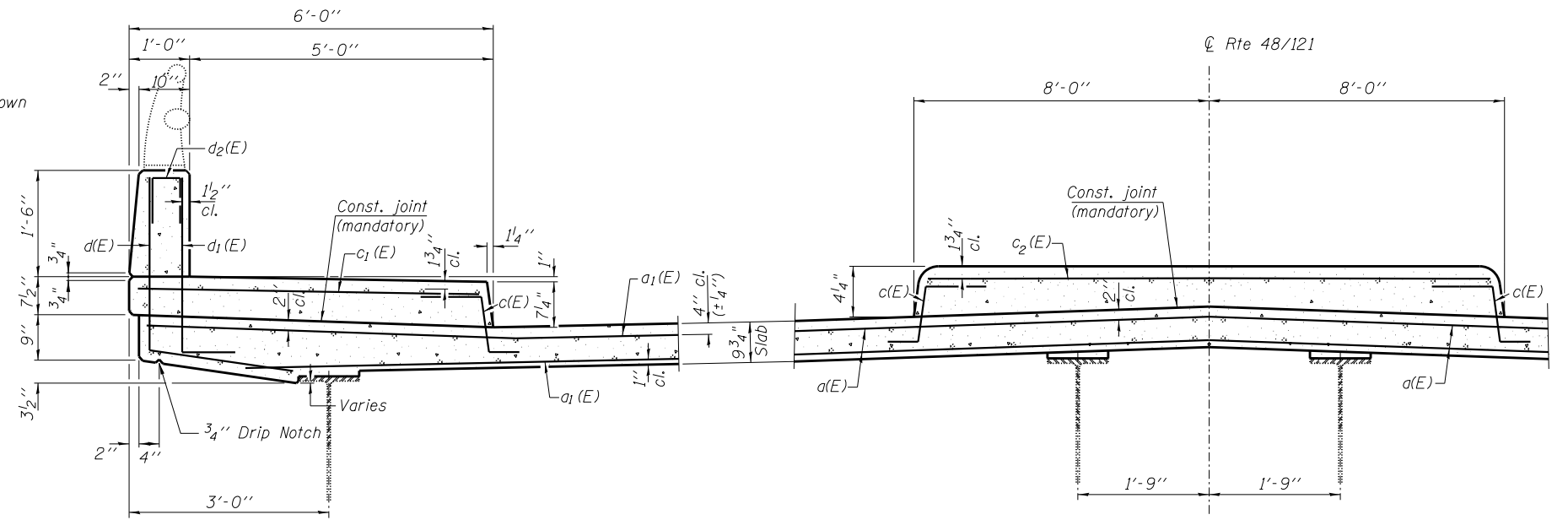
**SECTION E-E**



**SECTION F-F**

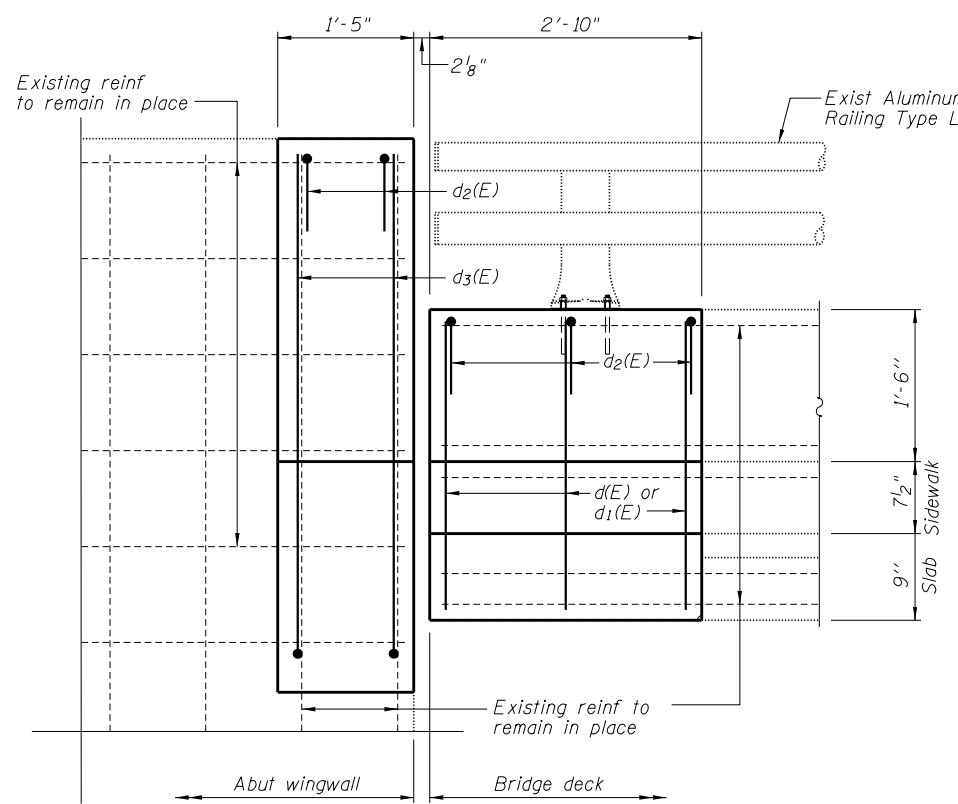


SECTION G-G

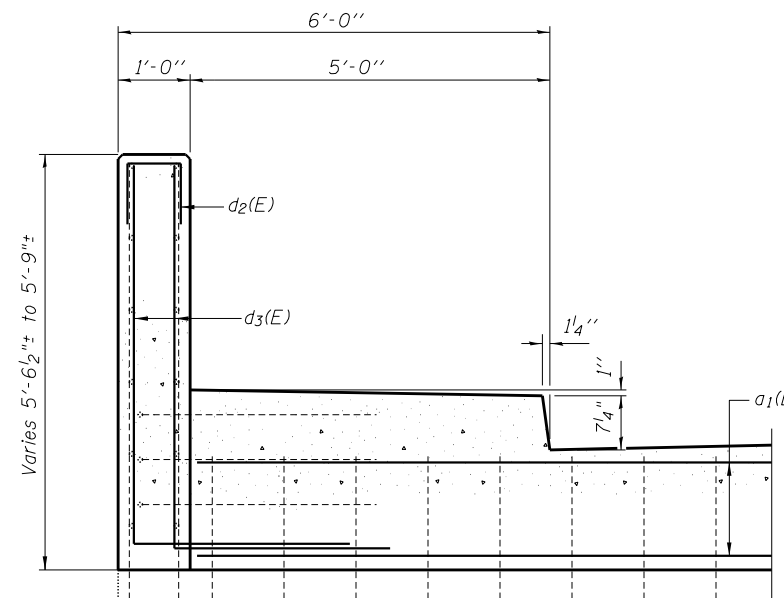


SECTION THRU SIDEWALK

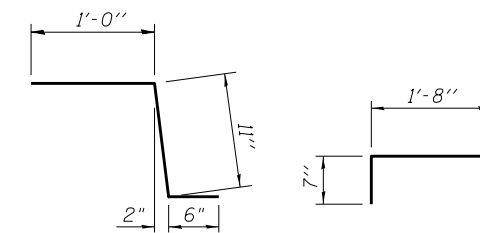
SECTION THRU MEDIAN



SECTION H-H

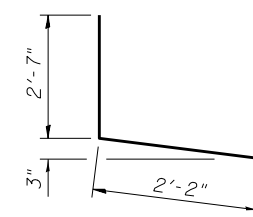


SECTION THRU APPROACH SIDEWALK

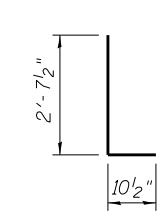


BAR c(E)

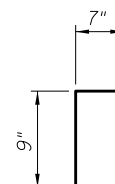
BAR x(E)



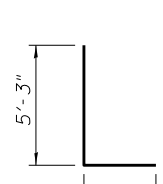
BAR d(E)



BAR d1(E)



BAR d2(E)



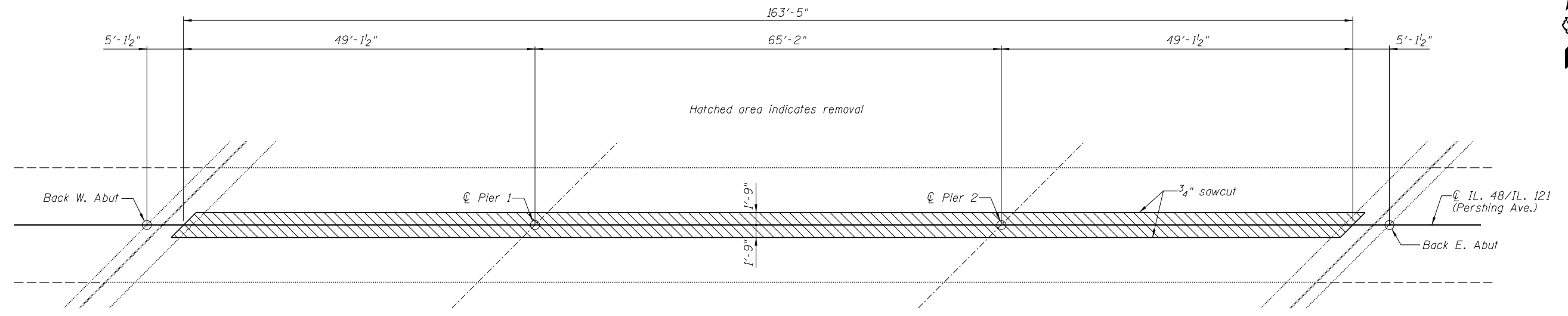
BAR d3(E)

**BILL OF MATERIAL  
(BOTH ABUTMENTS)**

Bar	No.	Size	Length	Shape
a(E)	44	#6	32'-2"	—
a1(E)	44	#6	28'-8"	—
c(E)	24	#5	2'-5"	⌒
c1(E)	12	#5	8'-0"	—
c2(E)	6	#5	21'-8"	—
d(E)	12	#4	4'-9"	L
d1(E)	12	#6	3'-6"	L
d2(E)	20	#4	2'-1"	⌒
d3(E)	16	#6	8'-3"	L
x(E)	206	#5	2'-3"	⌒
Concrete Removal			Cu. Yd.	37.7
Concrete Superstructure			Cu. Yd.	37.7
Reinforcement Bars, Epoxy Coated			Pound	5130

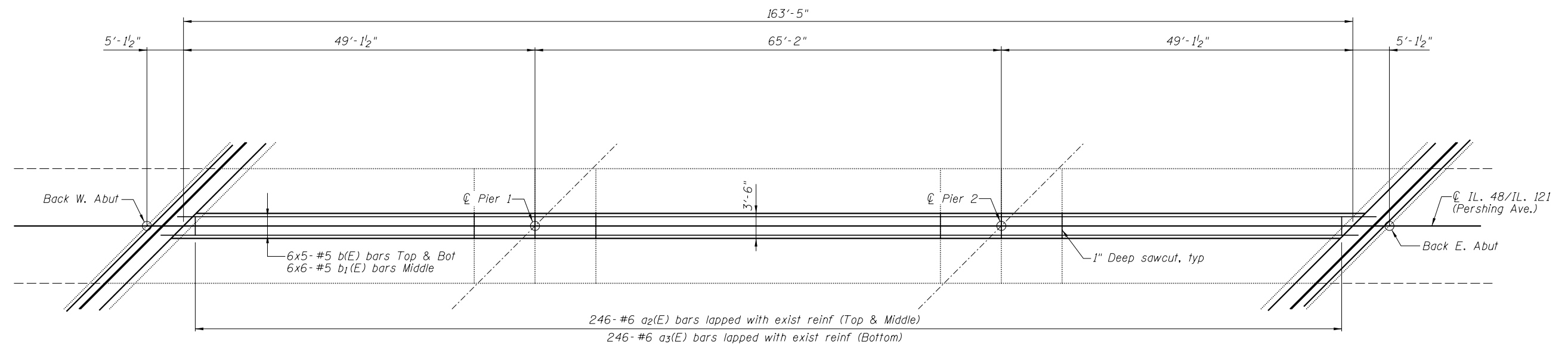
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

FILE NAME = I:\121\resurfacing\CADD\Structural\exp\td1.scdgn



**DECK PLAN SHOWING LONGITUDINAL JOINT REMOVAL - STAGE II**

**MIN BAR LAP**  
#5 bar = 2'-6"



**DECK PLAN SHOWING LONGITUDINAL JOINT RECONSTRUCTION - STAGE II**

Note:  
Hatched areas indicate concrete sections to be saw cut 3/4" prior to the removal of the concrete.  
Existing reinforcement shall be cleaned and incorporated into the new construction.

FILE NAME = I:\101\6008 - d7 var var\work\_order\_3 - 11 121 resurfacing\CADD\Structural\long\stage2.dgn



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PLOT DATE = 8/19/2014	CHECKED - JMB	REVISED -

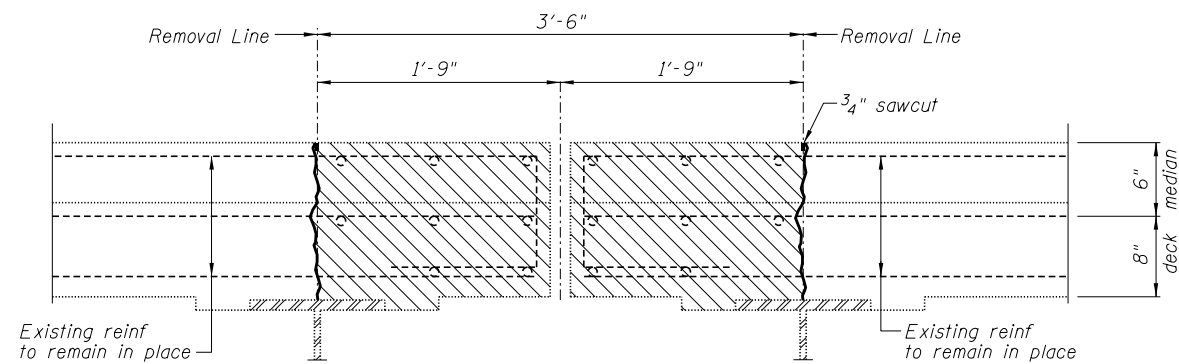
DESIGNED - JMB	REVISED -
CHECKED - ACB	REVISED -
DRAWN - RLK	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

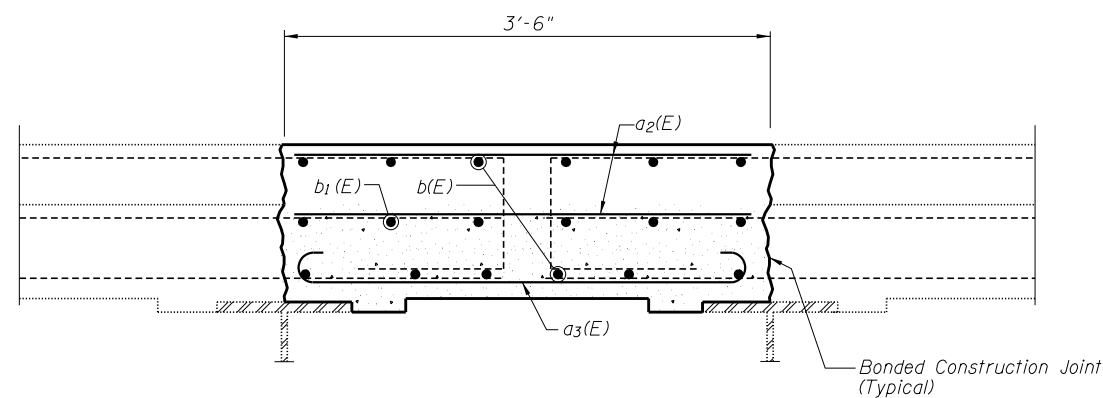
**LONGITUDINAL JOINT REPLACEMENT DETAILS  
STRUCTURE NO. 058-0050**

SHEET NO. 7 OF 13 SHEETS

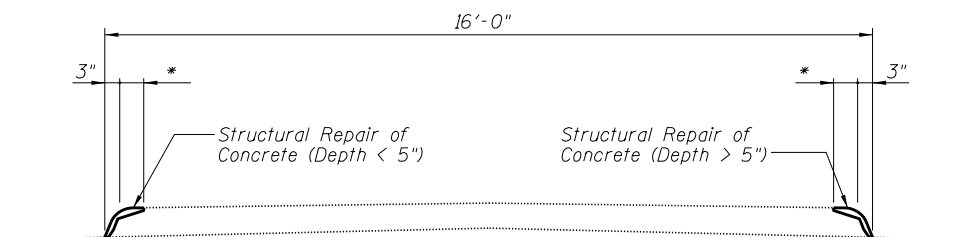
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	105
SN. 058-0050		CONTRACT NO. 74624		
STA.	ILLINOIS FED. AID PROJECT			



**EXISTING MEDIAN LONGITUDINAL JT. CROSS SECTION**



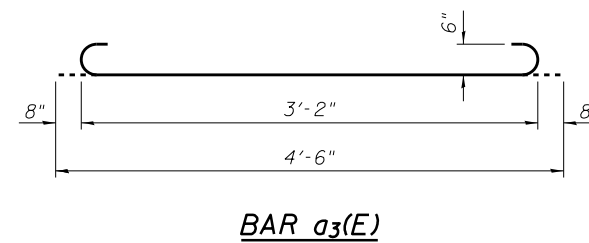
**RECONSTRUCTED MEDIAN LONGITUDINAL JOINT**



Note:  
Quantity of repairs are estimated based on a visual survey and does not limit the amount of repair required as directed by the Engineer.

\* Width as directed by the Engineer.

**BRIDGE MEDIAN REPAIR**  
(Looking West)



**BILL OF MATERIAL**

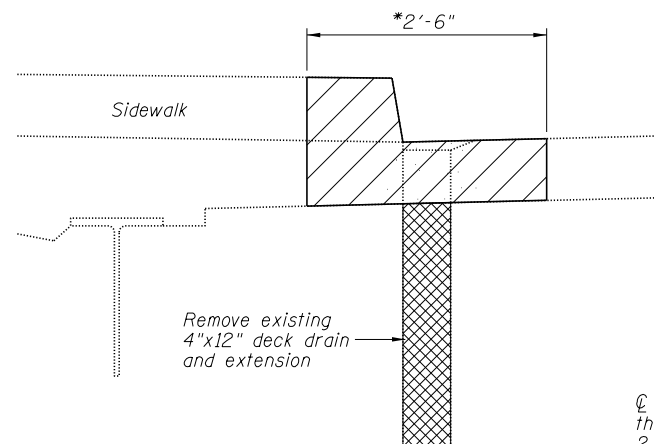
Bar	No.	Size	Length	Shape
a <sub>2</sub> (E)	492	#6	3'-2"	—
a <sub>3</sub> (E)	246	#6	4'-6"	—
b(E)	60	#5	35'-0"	—
b <sub>1</sub> (E)	36	#5	29'-8"	—
Concrete Removal			Cu. Yd.	24.8
Concrete Superstructure			Cu. Yd.	24.8
Reinforcement Bars, Epoxy Coated			Pound	7310
Structural Repair of Concrete (Depth > 5")			Sq. Ft.	338
Structural Repair of Concrete (Depth ≤ 5")			Sq. Ft.	150

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

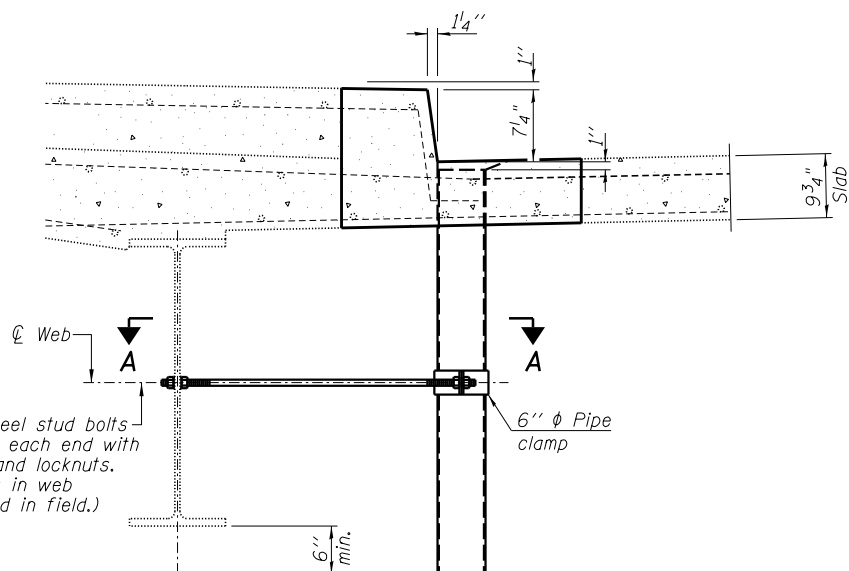
Note:  
Hatched areas indicate concrete sections to be saw cut 3/4" prior to the removal of the concrete. Existing reinforcement shall be cleaned and incorporated into the new construction.

Saw cuts in existing median near piers shall be extended through new median section.

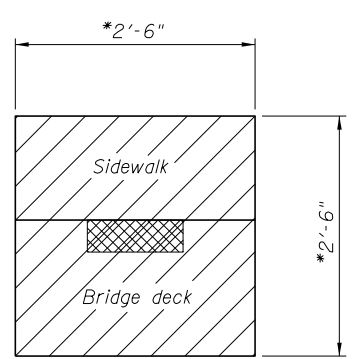
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**SECTION THRU EXISTING FLOOR DRAIN**

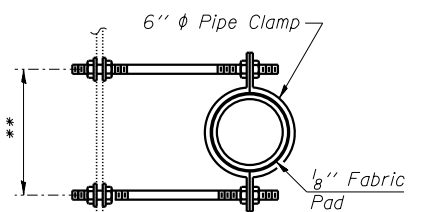


**DRAIN REPLACEMENT DETAIL**



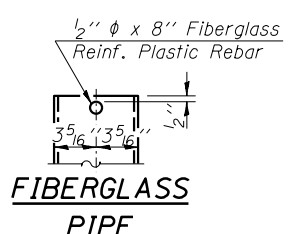
**PLAN AT DECK DRAIN REMOVAL**

\* Concrete removal and replacement dimensions shall be determined by the Engineer based on the extent of deck deterioration of each drain.

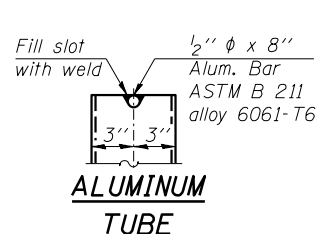


**SECTION A-A**

\*\* Dimension as required by Pipe Clamp

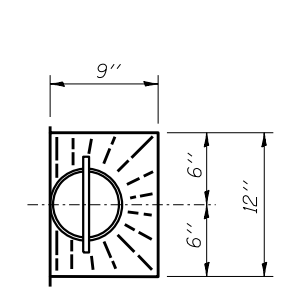


**FIBERGLASS PIPE**

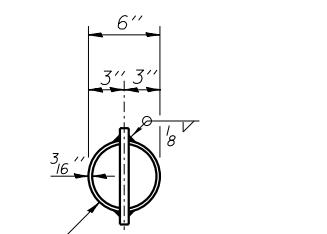


**ALUMINUM TUBE**

**Notes:**  
 The exterior surfaces of the floor drains shall be cleaned and painted as specified in Section 506 of the Standard Specifications.  
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.  
 See Sheet 1 of 13 for floor drain replacement locations.  
 Concrete removal and replacement quantities for floor drains are included in Deck Slab Repair (Full Depth Type II).  
 Existing reinforcement in the removal area shall be cleaned and straightened and incorporated into the new construction.



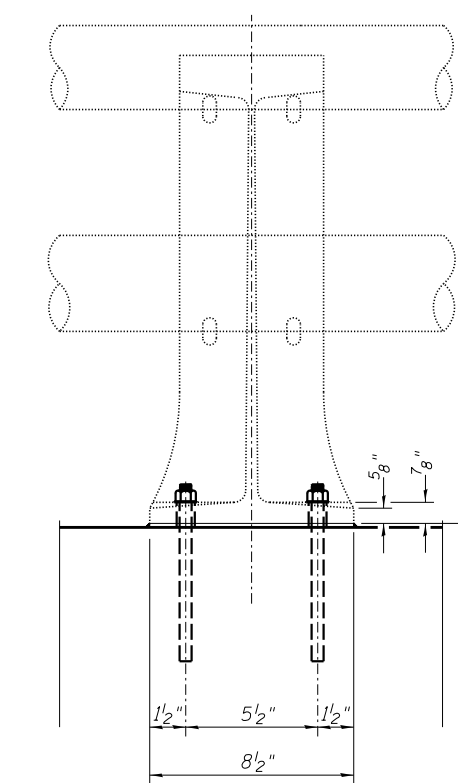
**TOP PLAN**



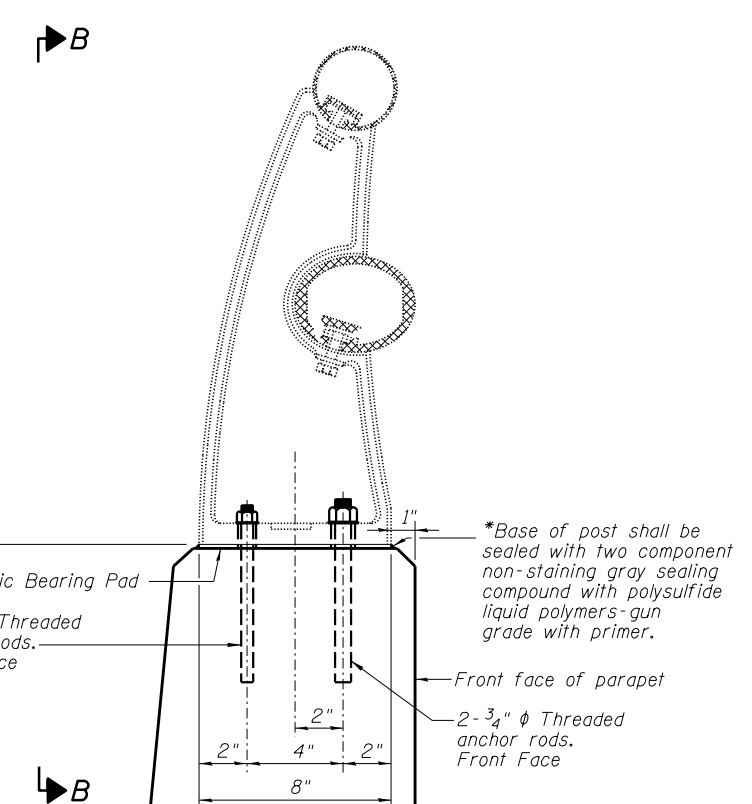
**TOP PLAN**  
 (Showing Aluminum Tube)

**BILL OF MATERIAL**

Item	Unit	Total
Floor Drains	Each	22
Deck Slab Repair (Full Depth Type II)	Sq. Yd.	15.4



**VIEW B-B**



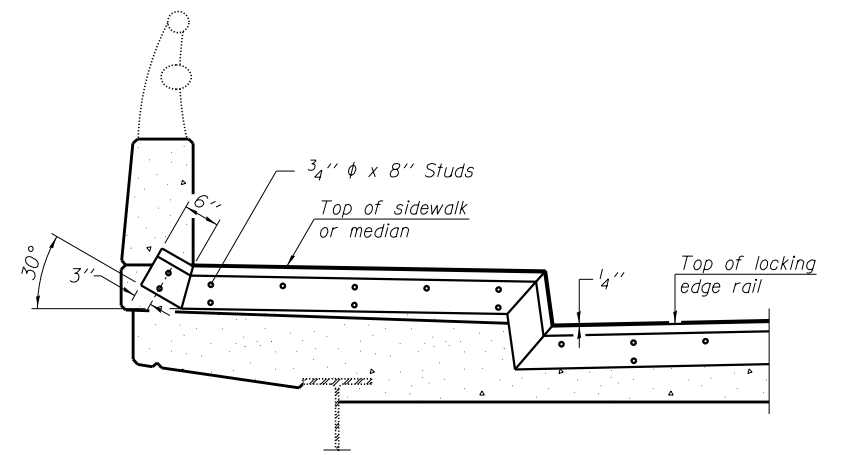
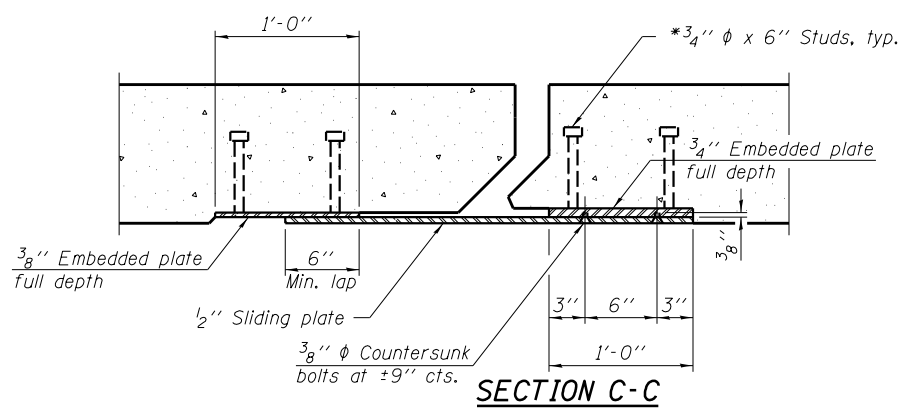
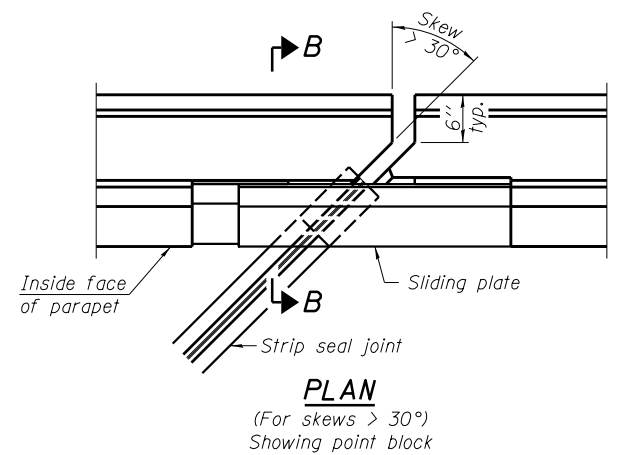
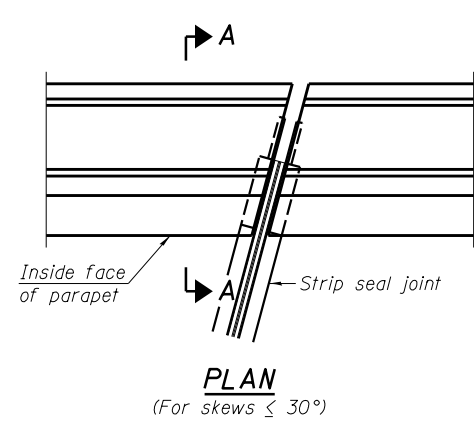
**SECTION A-A**

**RAIL POST DETAILS**

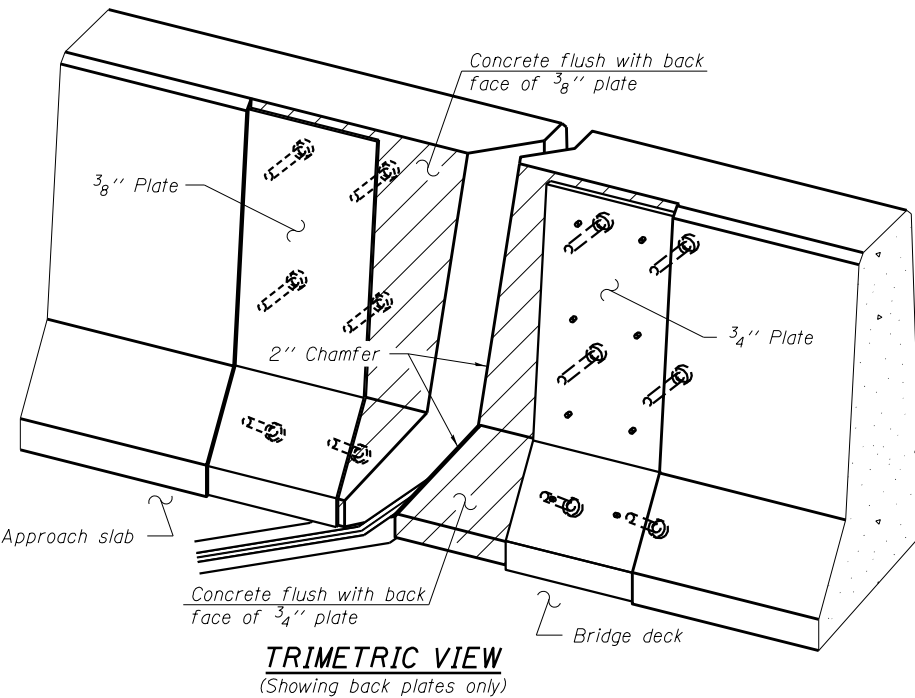
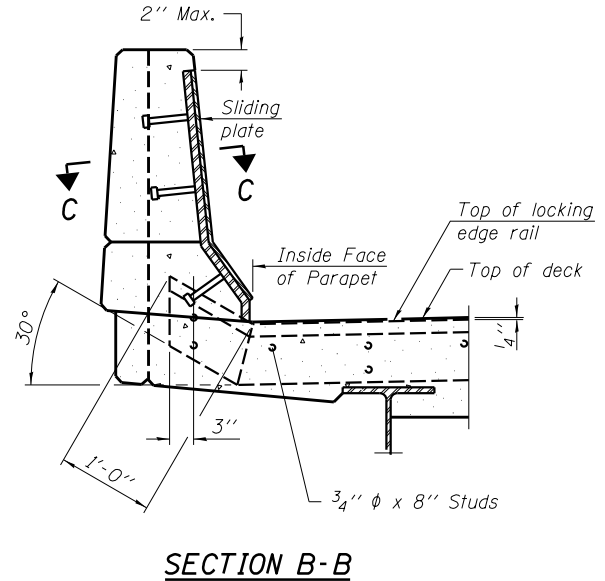
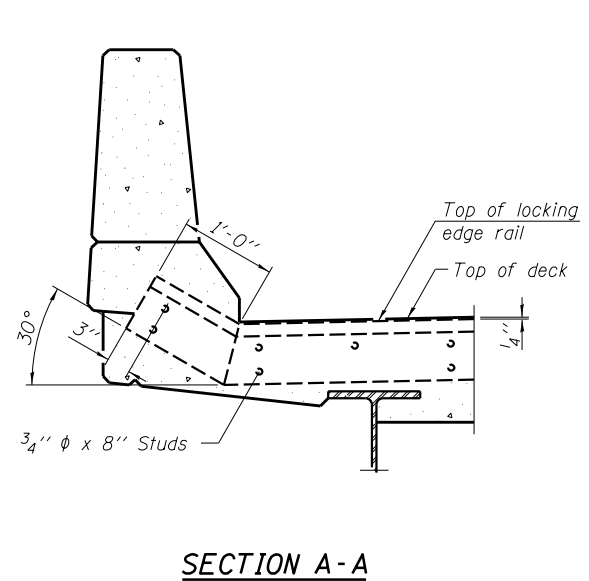
**Notes:**  
 \* Base of post shall be sealed with two component non-staining gray sealing compound with polysulfide liquid polymers-gun grade with primer.  
 \* New Rail Post anchorage devices will be required at each location where posts are connected to new construction when existing anchorage devices cannot be salvaged. Cost shall be included with Concrete Superstructure.  
 The Contractor shall drill and set stainless steel anchor rods (ASTM A193, B7 or equivalent), according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturers specifications.  
 All Posts shall be normal to parapet.  
 Provide 1-1/8 inch and 2-1/16 inch Aluminum Shims for the Posts.  
 Horizontal rail element & rail posts shown are for information only.

FILE NAME = I:\100\6008 - d7 var var-work order 3 - 1121 resurfacing\CADD\Structural\miscdtls.dgn

FILE NAME = I:\100\6008 - d7 var var-work order 3 - 11.121 resurfacing\CADD\Structural\misc\dtds.dgn



**TYPICAL END TREATMENT 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.

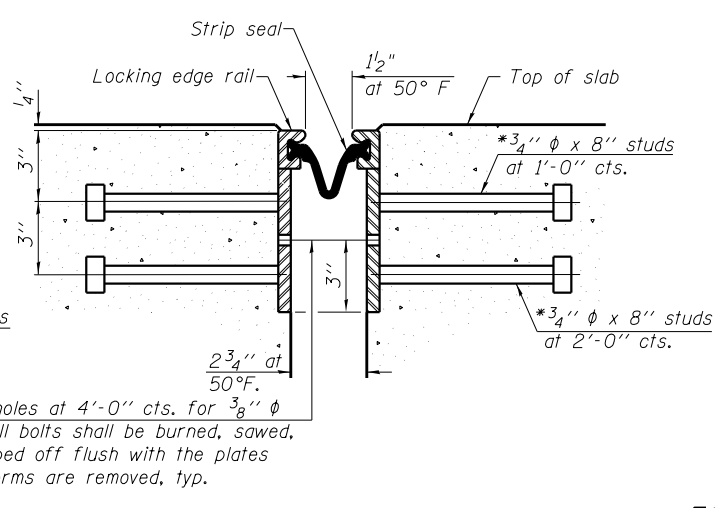
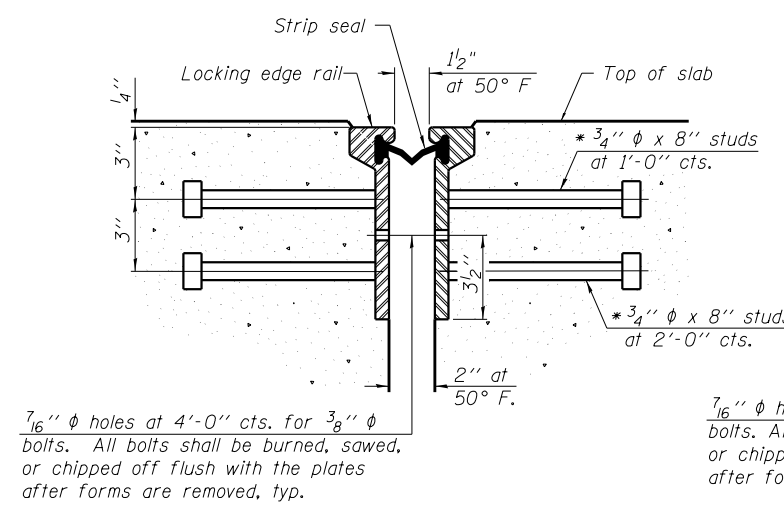


**Notes:**  
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated 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 shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.  
 Parapet plates and anchorage studs for skews > 30 degrees included in the cost of Preformed Joint Strip Seal.

**SECTION A-A**

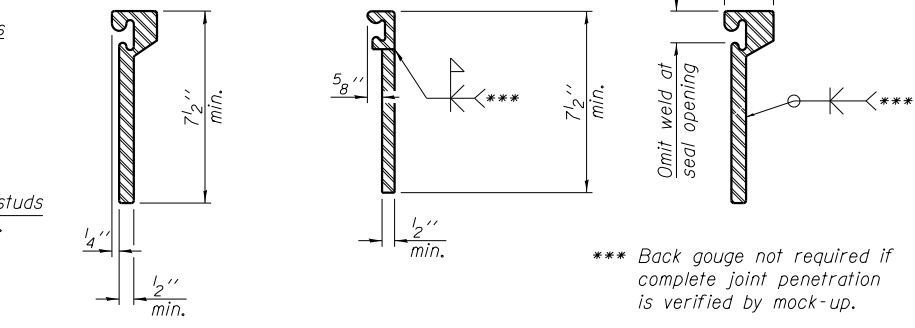
**SECTION B-B**

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



**SECTION THRU ROLLED RAIL JOINT**

**SECTION THRU WELDED RAIL JOINT**



**ROULDED EXTRUDED RAIL WELDED RAIL LOCKING EDGE RAIL SPLICE**

\*\*\* Back gouge not required if complete joint penetration is verified by mock-up.

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

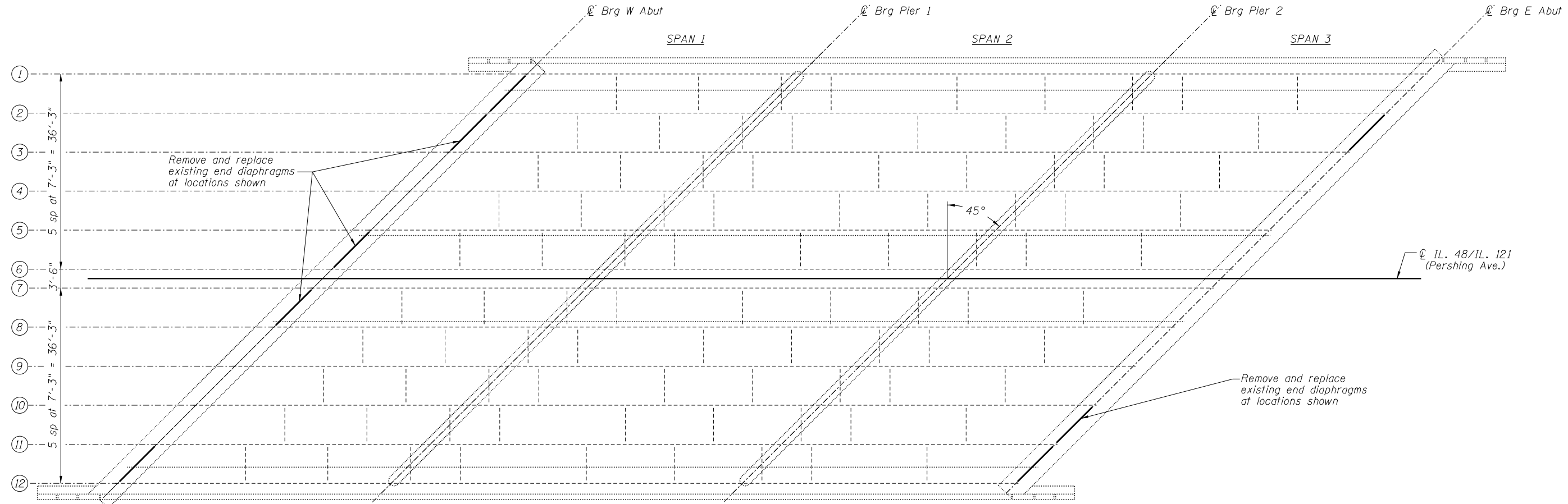
**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

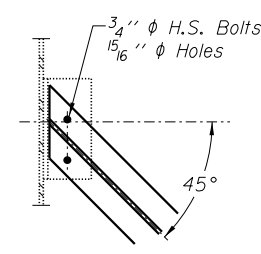
Item	Unit	Total
Preformed Joint Strip Seal	Foot	235

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





**FRAMING PLAN**

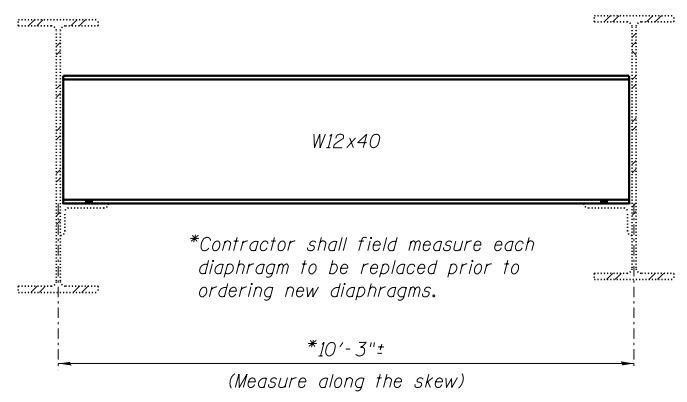


**PLAN**

Note:  
Two hardened washers shall be required over all oversize holes for diaphragms.  
The Contractor shall field drill holes in the new diaphragm using existing connection angles as a template. Cost included with Furnishing and Erecting Structural Steel.

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing & Erecting Structural Steel	Pound	3220
Structural Steel Removal	Pound	3220



**DIAPHRAGM REPLACEMENT DETAIL**  
(8 Required)

FILE NAME = I:\1000\60000 - d7 var var-work order 3 - il 121 resurfacing\CADD\Structural\Framing.dgn



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PLOT TIME = 4:49:13 PM  
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PLOT DATE = 8/19/2014

DESIGNED - JMB  
CHECKED - ACB  
DRAWN - RLK  
CHECKED - JMB

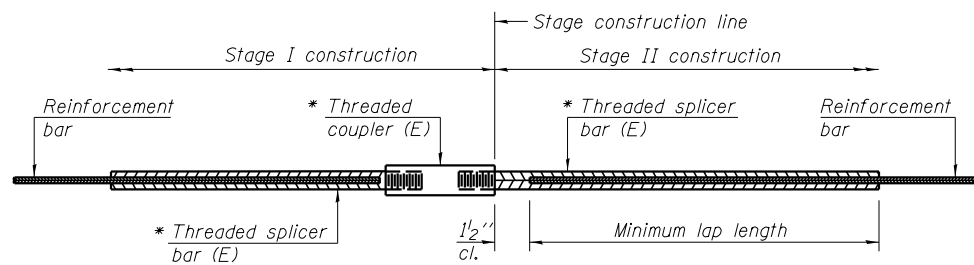
REVISED -  
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REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR DETAILS  
STRUCTURE NO. 058-0050**

SHEET NO. 11 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	109
SN. 058-0050		CONTRACT NO. 74624		
STA.	ILLINOIS FED. AID PROJECT			



**STANDARD BAR SPLICER ASSEMBLY**

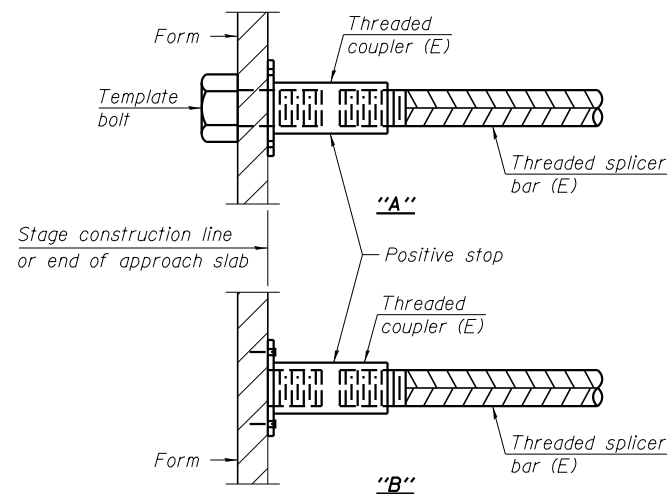
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- 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
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

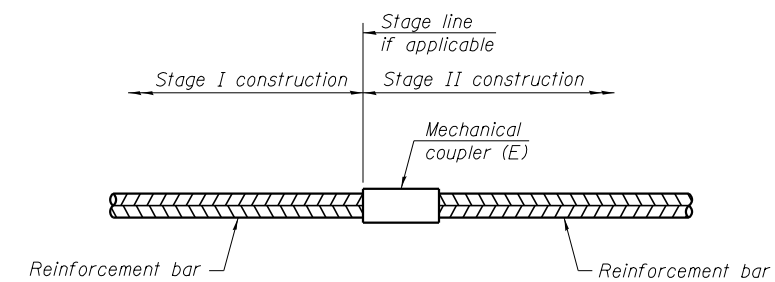
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
West Abutment	#6	22	Table 3
East Abutment	#6	22	Table 3



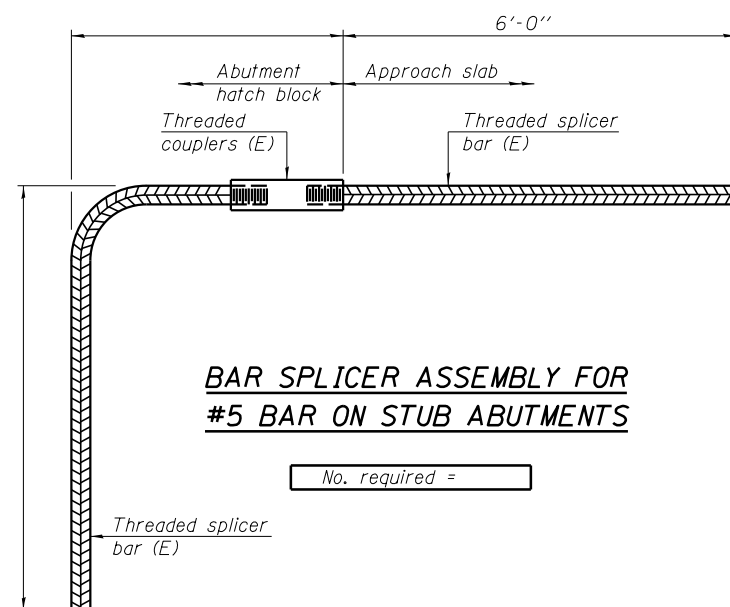
**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

FILE NAME = I:\100\6008 - d7 var var-work order - 3 - 11.121 resurfacing\CADD\Structural\bar-splicer.dgn

BSD-1

8-31-12



USER NAME = dbullock  
 PLOT TIME = 4:49:15 PM  
 PLOT SCALE = 2/8" = 1' / in.  
 PLOT DATE = 8/19/2014

DESIGNED - JMB  
 CHECKED - ACB  
 DRAWN - RLK  
 CHECKED - JMB

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

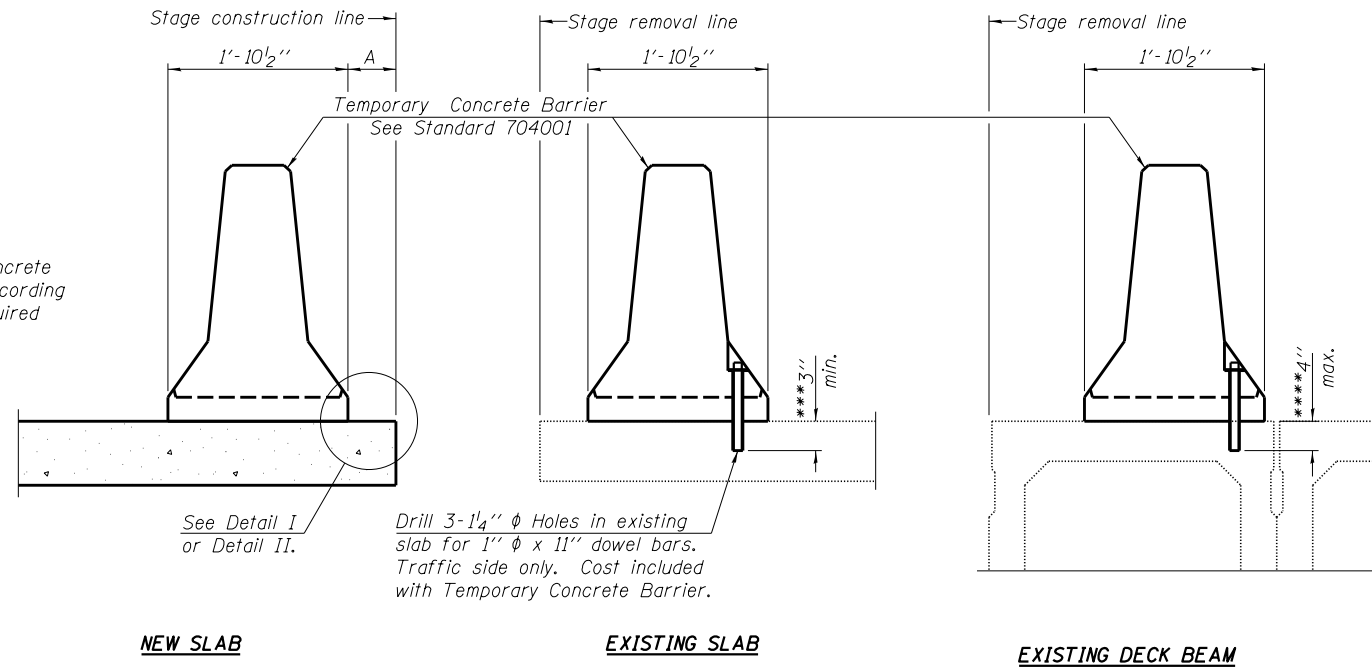
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 058-0050

SHEET NO. 12 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	110
	SN. 058-0050			

CONTRACT NO. 74624  
 ILLINOIS FED. AID PROJECT

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



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

**NOTES**

Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel  $\bar{L}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

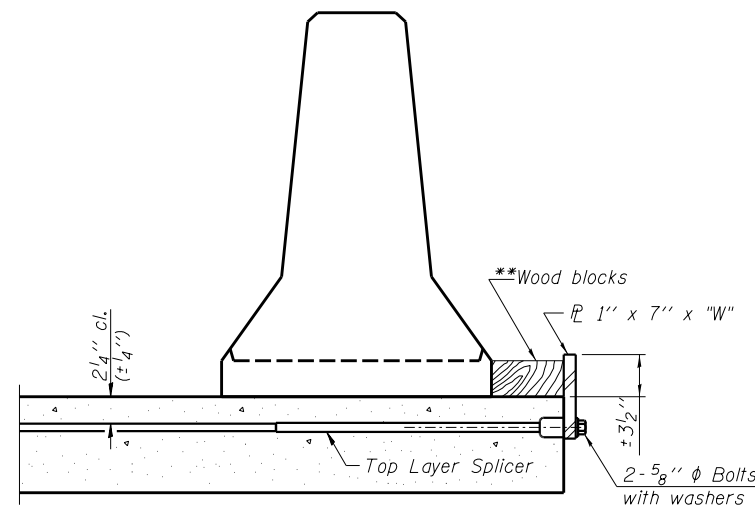
Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel  $\bar{L}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

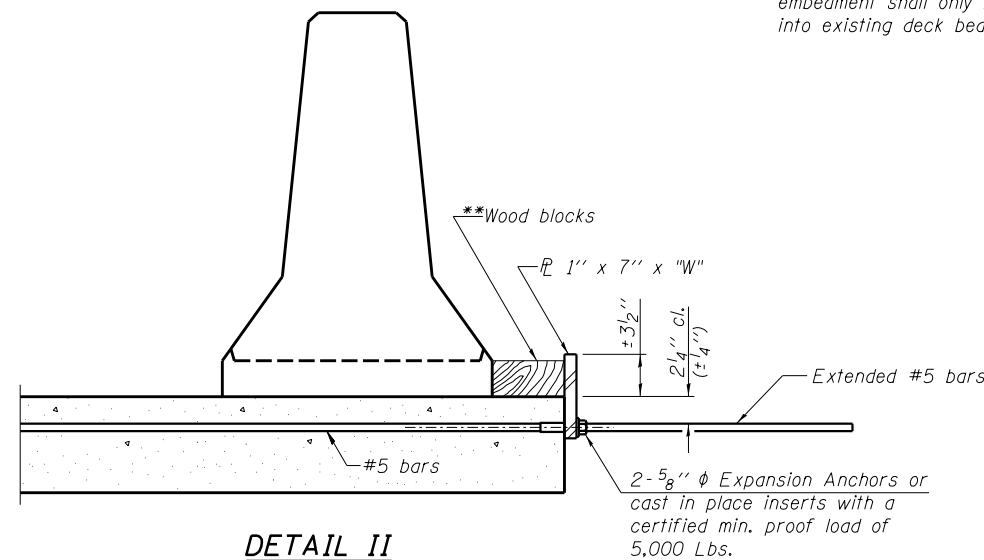
**SECTIONS THRU SLAB OR DECK BEAM**

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

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



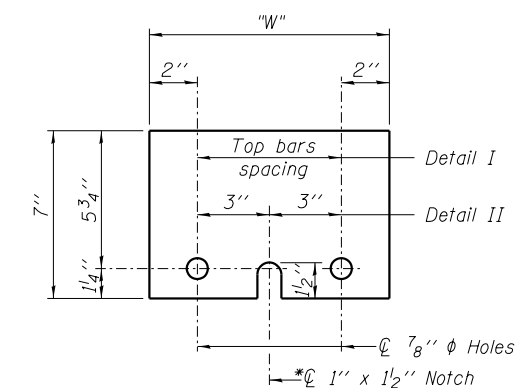
**DETAIL I**



**DETAIL II**

\*\* 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.

"W" = Top bars spacing + 4"



**STEEL RETAINER  $\bar{L}$  1" x 7" x "W"**

\* Required only with Detail II

FILE NAME = I:\dox\6008 - d7 var var-work order 3 - 11 121 resurfacing\CADD\_Structural\tempbarrier.dgn

R-27

7-1-10

**CHASTAIN & ASSOCIATES LLC**  
CONSULTING ENGINEERS  
184-001397

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PLOT SCALE = 2:0.0000 1" / in.  
PLOT DATE = 8/19/2014

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DRAWN - RLK  
CHECKED - JMB

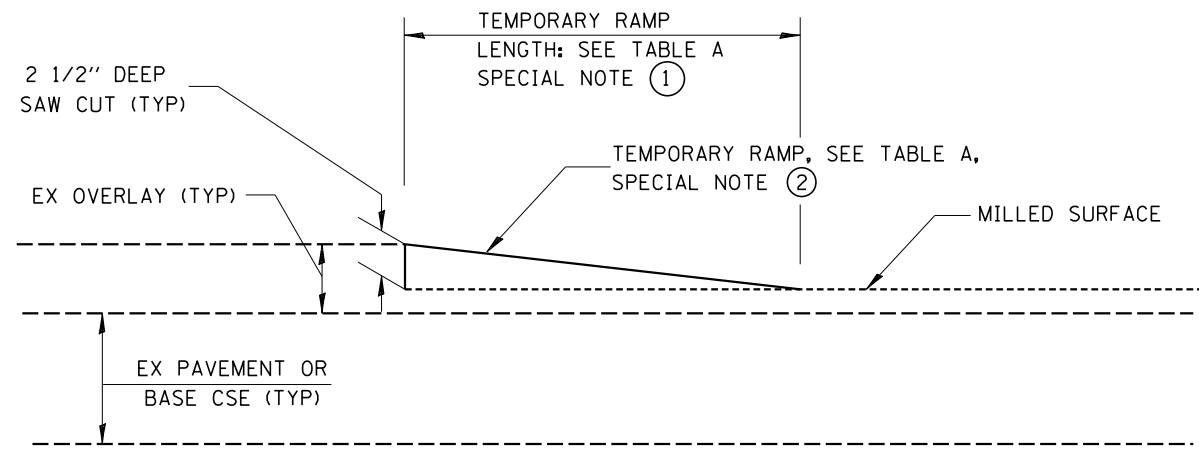
REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 058-0050**

SHEET NO. 13 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	111
SN. 058-0050		CONTRACT NO. 74624		
STA.	ILLINOIS FED. AID PROJECT			



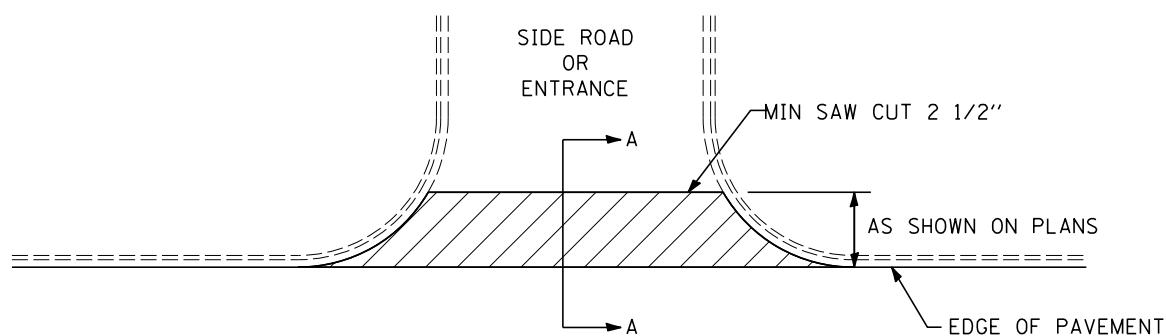
**DETAIL TEMPORARY RAMP**

**TABLE A**  
(LENGTHS AND TAPER RATES)

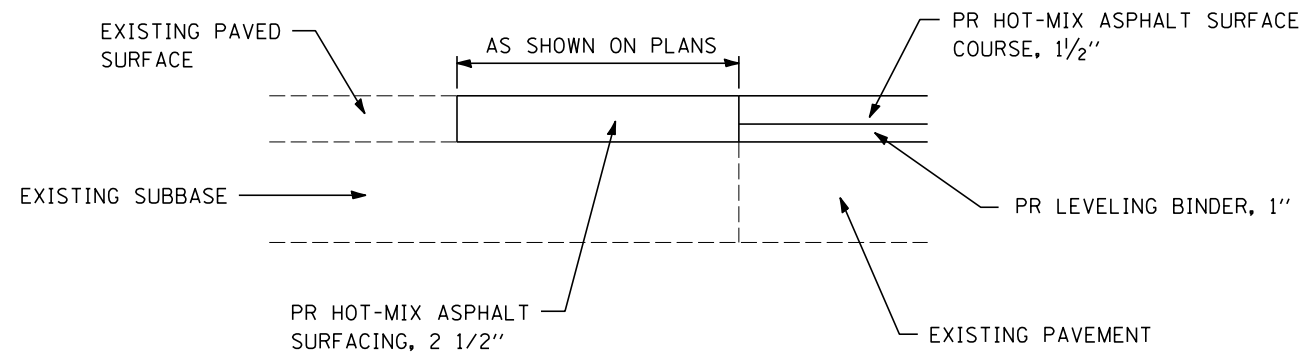
SPECIAL NOTE NUMBER	ELEMENT	RATE/LENGTH
①	TEMPORARY RAMP TAPER RATE	1:40
②	TEMPORARY RAMP LENGTH	8.33'

**GENERAL NOTES**

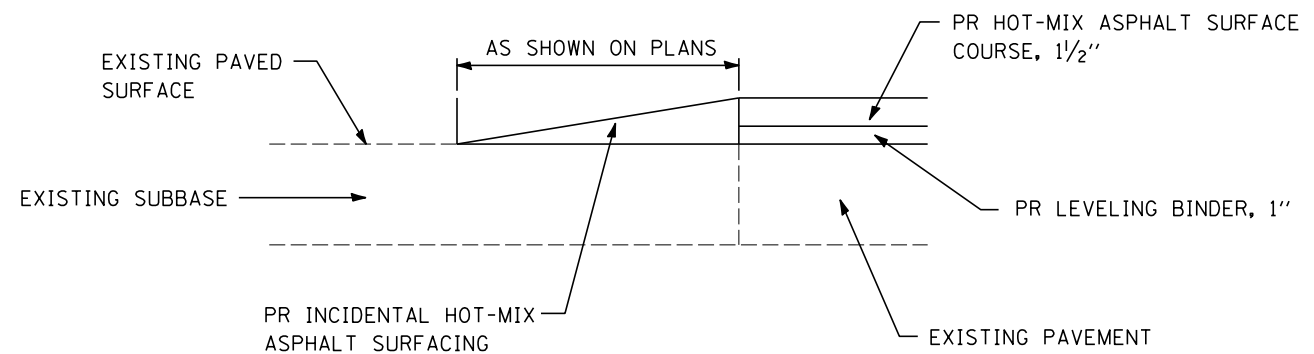
1. THIS WORK SHALL BE DONE IN ACCORDANCE WITH ARTICLE 406.08, AND THE DETAILS IN THE PLANS.
2. THE PAVEMENT SURFACE TO BE REMOVED MAY BE EITHER HOT-MIX ASPHALT OR P.C. CONCRETE. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH ARTICLE 440.04 AND THE DETAILS IN THE PLANS.
3. THE SAW CUT JOINTS SHALL BE PRIMED JUST PRIOR TO THE PLACING OF BITUMINOUS MATERIAL. THIS WORK WILL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF ARTICLE 406.05.



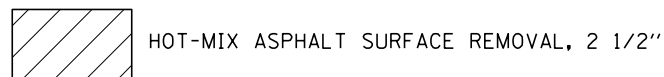
**PLAN - SIDE ROAD AND ENTRANCE IMPROVEMENTS**



**SECTION A-A (SIDE ROAD)**



**SECTION A-A (ENTRANCE)**



FILE NAME =	USER NAME = dbullock	DESIGNED - CAS	REVISED -
\\dot\6008 - d7 var var\work order 3	\\1121 resurfacing\cedd\civil\0774624-sht-des	DRAWN - DLB	REVISED -
Default	PLOT SCALE = 48.0000' / in.	CHECKED - JMB	REVISED -
	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

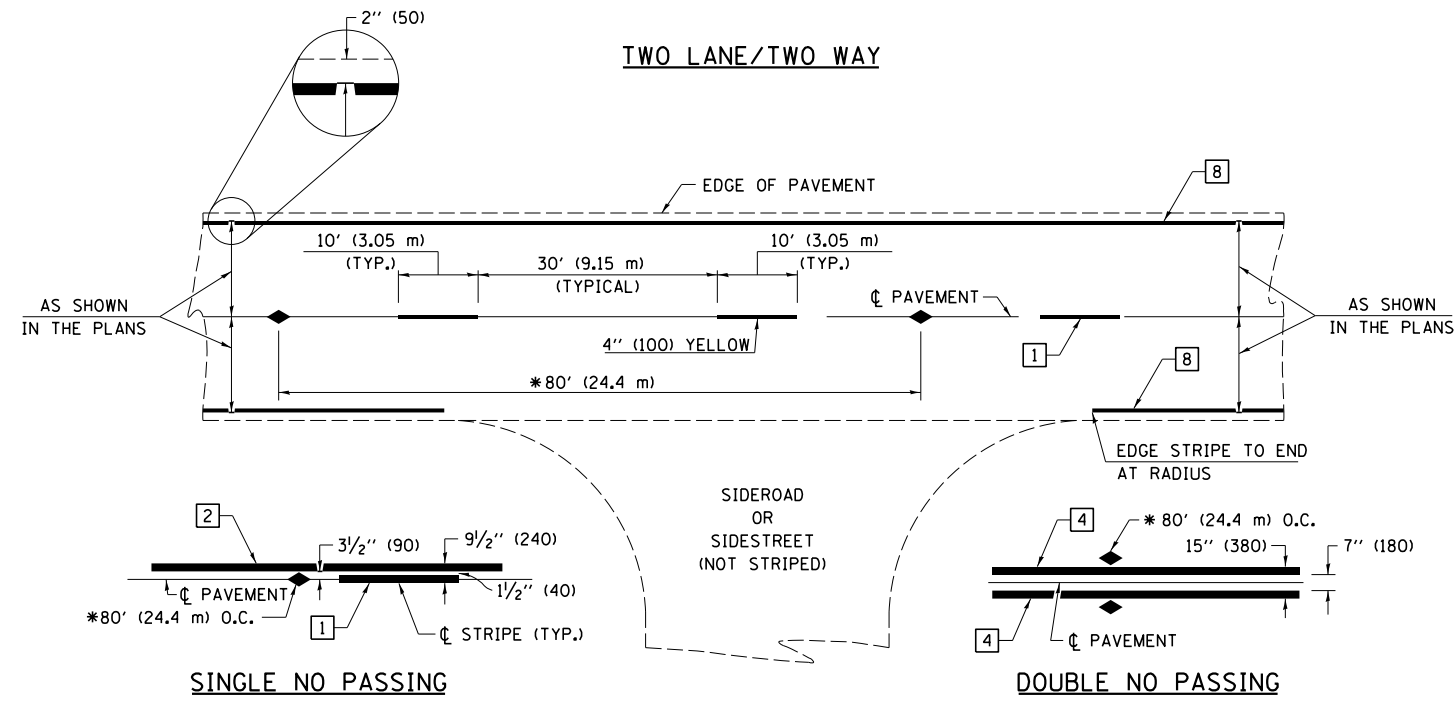
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TEMPORARY RAMP & SIDE ROAD & ENTRANCE IMPROVEMENT DETAILS**  
**FAP 320 (IL 121/L 48)**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	112
<b>CONTRACT NO. 74624</b>				
ILLINOIS FED. AID PROJECT				

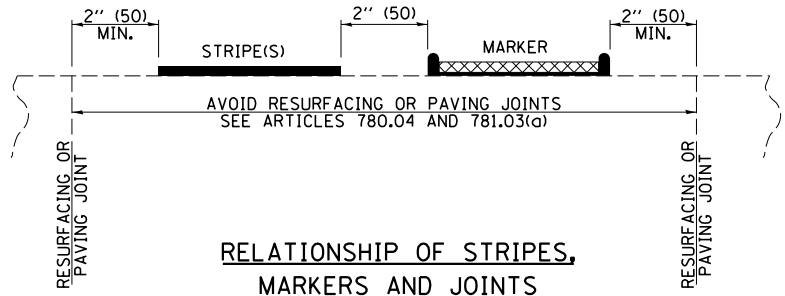




**PAVEMENT MARKING LEGEND**

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE

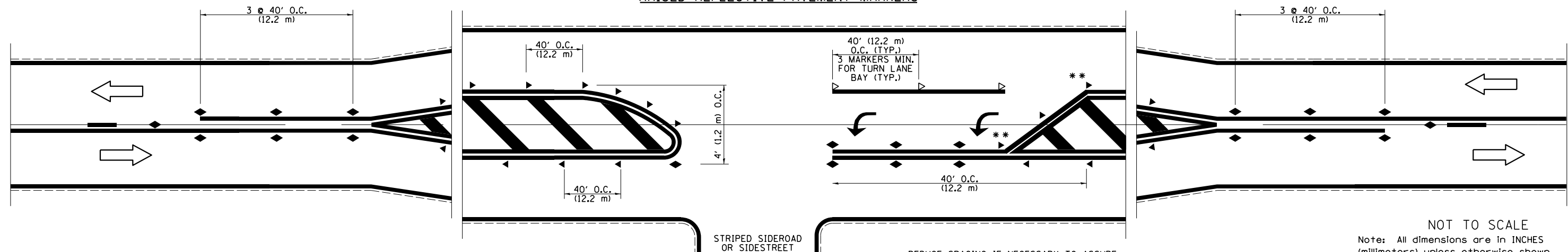
\* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.



**TYPICAL PAVEMENT MARKERS LEGEND**

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

**RAISED REFLECTIVE PAVEMENT MARKERS**



\*\* REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE  
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)**

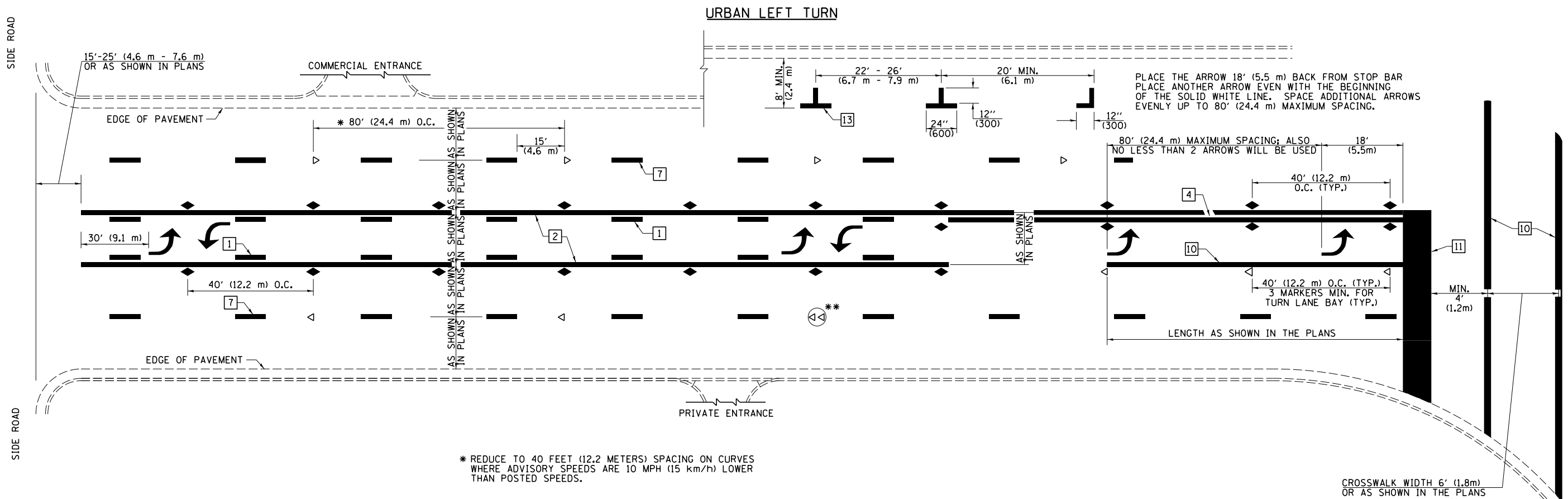
FILE NAME =	USER NAME = dbullock	DESIGNED - CAS	REVISED -
\\dot\6008 - d7 var var\work order 3	\\121 resurfacing\cadd\civil\0774624-sht-des	DRAWN - DLB	REVISED -
Default	PLOT SCALE = 48.0000 ' / in.	CHECKED - JMB	REVISED -
	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARKING MARKING DETAILS  
FAP 320 (IL 121/L 48)**

SCALE: SHEET OF SHEETS STA. TO STA.

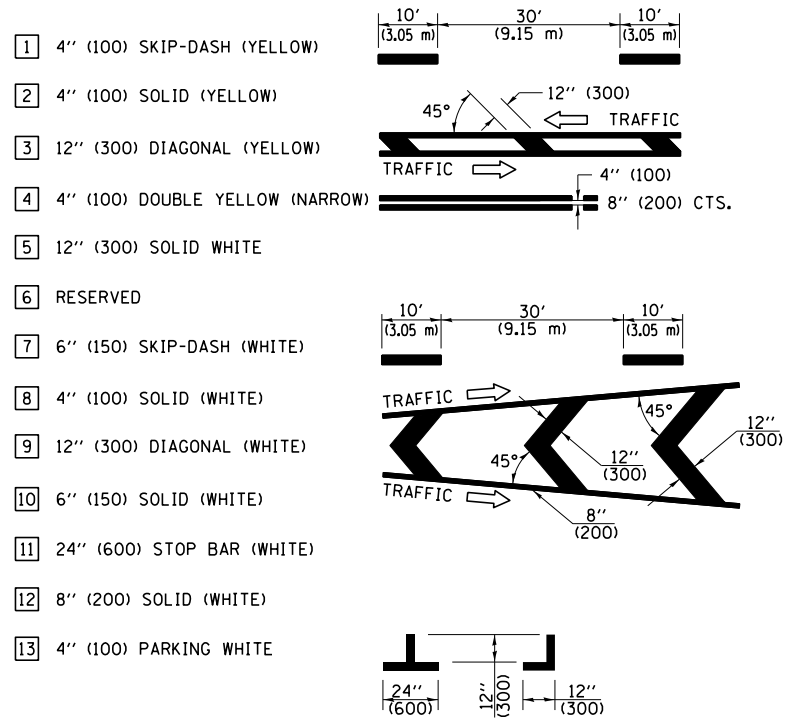
<b>DISTRICT 7 DETAIL NO. 7800001</b>				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	114
CONTRACT NO. 74624				
ILLINOIS FED. AID PROJECT				



PLACE THE ARROW 18' (5.5 m) BACK FROM STOP BAR  
 PLACE ANOTHER ARROW EVEN WITH THE BEGINNING  
 OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS  
 EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING.

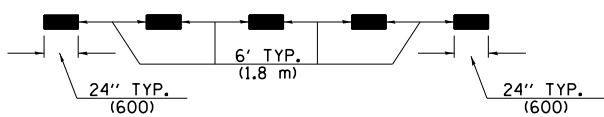
- \* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES  
 WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER  
 THAN POSTED SPEEDS.
- \*\* DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED  
 AND SPACED AS SHOWN IN HIGHWAY STANDARD  
 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED  
 HIGHWAYS.

**PAVEMENT MARKING LEGEND**

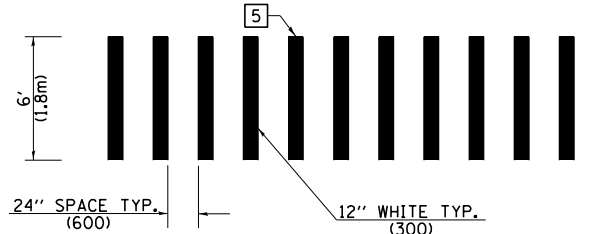


**GENERAL NOTES**

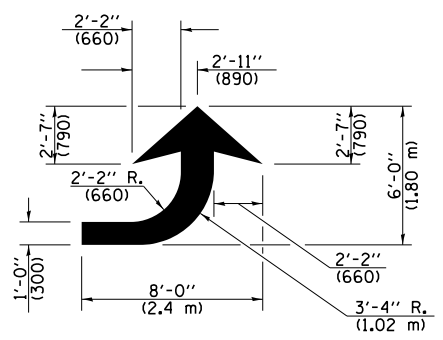
1. TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m)  
 INTERVALS AND SHALL BE EVENLY SPACED BETWEEN  
 BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.  
 USE A MINIMUM OF TWO PAIRS PER BLOCK.
2. THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD  
 GENERALLY START OR END NEAR THE RADIUS POINT OF  
 EACH STREET RETURN EXCEPT WHERE ONE OR BOTH  
 ENDS WOULD INCLUDE STOP BARS.
3. THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD  
 BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK  
 AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM  
 EACH OTHER.
4. USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN  
 LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR  
 SYMBOLS TABLE)
5. LANE LINE EXTENSIONS SHALL BE THE SAME COLOR  
 AND WIDTH AS THE LANE LINE BEING EXTENDED.



**LANE LINE EXTENSIONS**

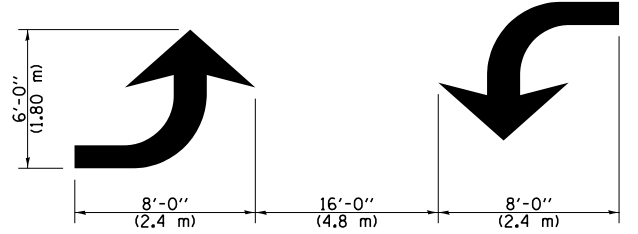


**CROSSWALK DETAIL  
 (DECATUR CITY LIMITS ONLY)**



**LEFT ARROW**

REVERSE FOR RIGHT ARROW  
 AREA = 15.6 SQ. FT. (1.47 m<sup>2</sup>)  
 (WHITE)



**TYPICAL DOUBLE  
 TURN ARROWS (WHITE)**

NOT TO SCALE

Note: All dimensions are in INCHES  
 (millimeters) unless otherwise shown.

**PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS  
 (RURAL & URBAN APPLICATIONS)**

**PAVEMENT MARKING DETAILS  
 FAP 320 (IL 121/L 48)**

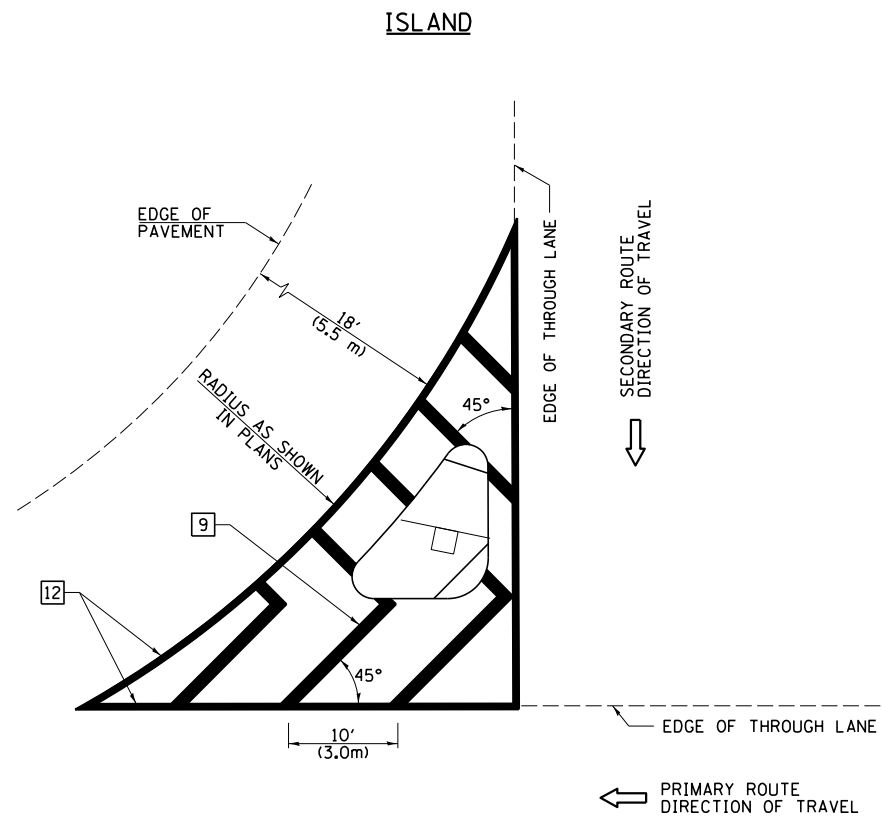
**DISTRICT 7 DETAIL NO. 78000001**

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\\s:\dot\6008 - d7 var var\work order 3	\\121 resurfacing\cedd.civil\0774624-sht-des	DRAWN - DLB	REVISED -
Default	PLOT SCALE = 48.0000' / in.	CHECKED - JMB	REVISED -
	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	115
CONTRACT NO. 74624				
ILLINOIS FED. AID PROJECT				

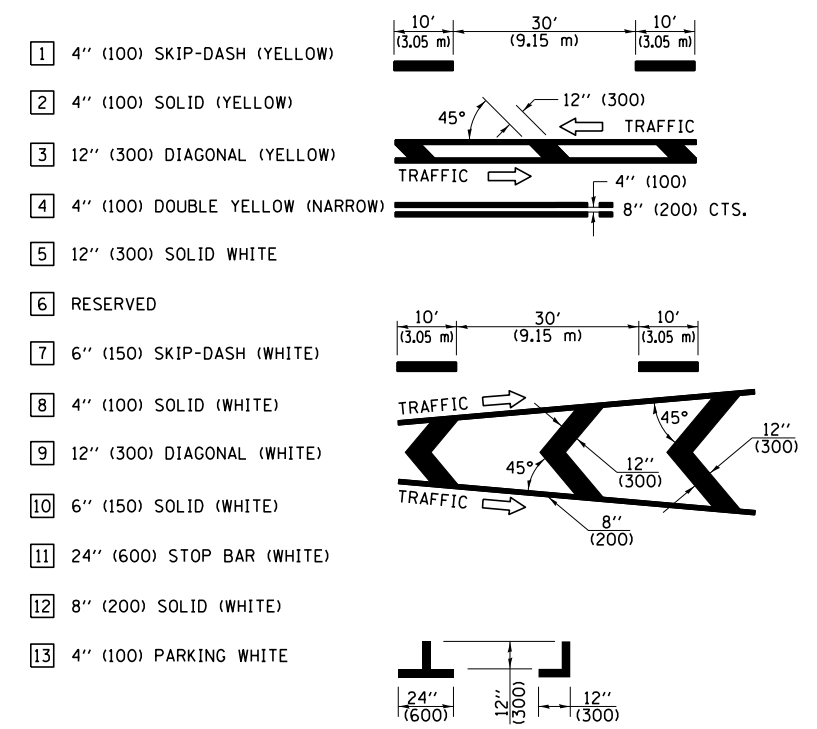


**GENERAL NOTES**

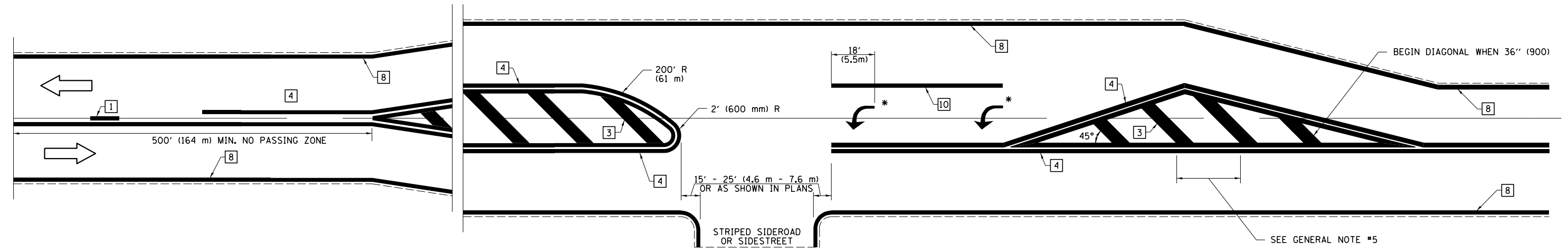
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:
 

< 30 MPH (< 50 km/h)	15' (4.5 m)
30-45 MPH (50-75 km/h)	20' (6.0 m)
> 45 MPH (> 75 km/h)	30' (9.0 m)

**PAVEMENT MARKING LEGEND**



**RURAL LEFT TURN STRIPING**



\* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE  
 Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)**

**DISTRICT 7 DETAIL NO. 7800001**

FILE NAME =	USER NAME = dbullock	DESIGNED - CAS	REVISED -
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Default	PLOT SCALE = 48.0000' / in.	CHECKED - JMB	REVISED -
	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

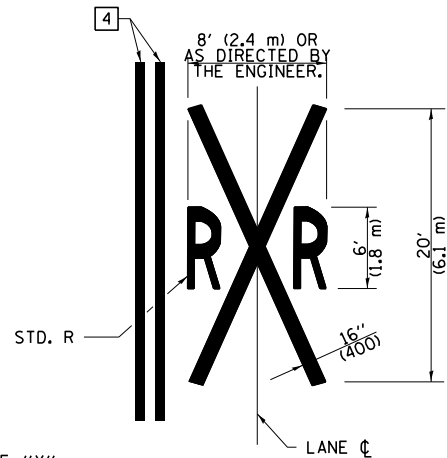
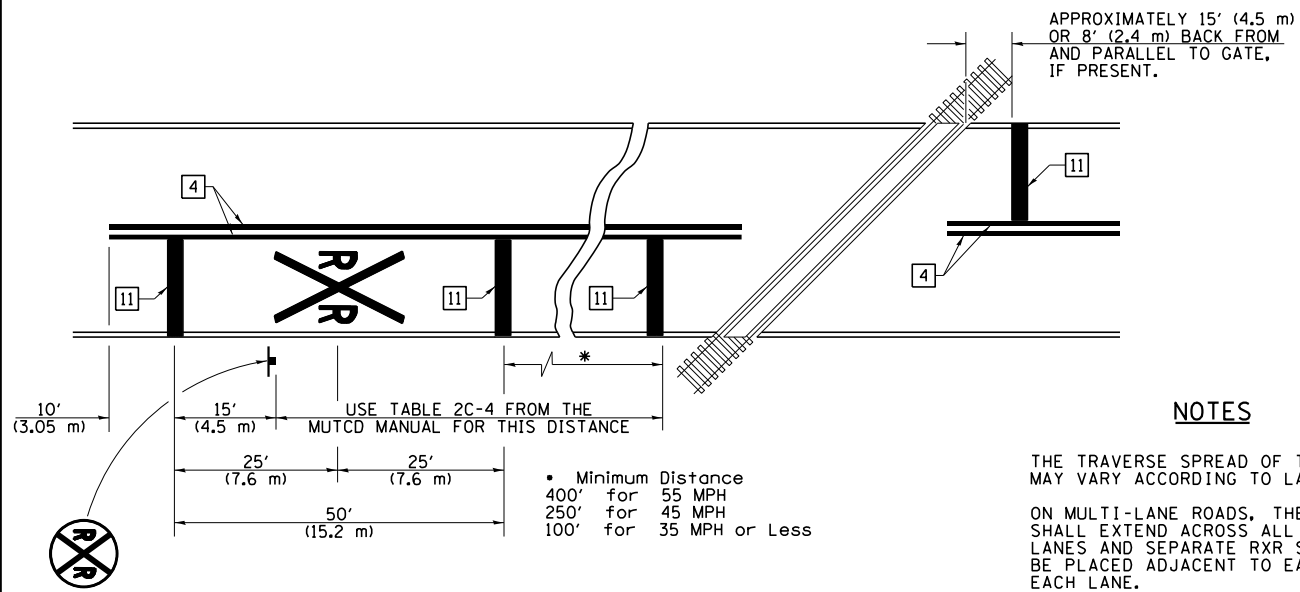
**PAVEMENT MARKING DETAILS  
 FAP 320 (IL 121/L 48)**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	116
CONTRACT NO. 74624				
ILLINOIS FED. AID PROJECT				



PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING



NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

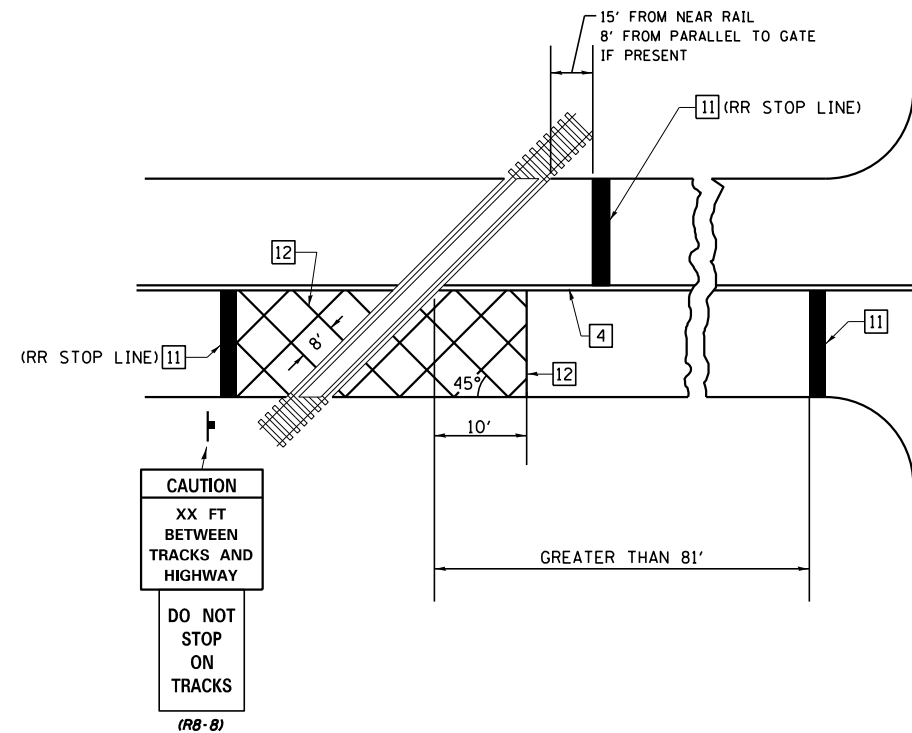
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

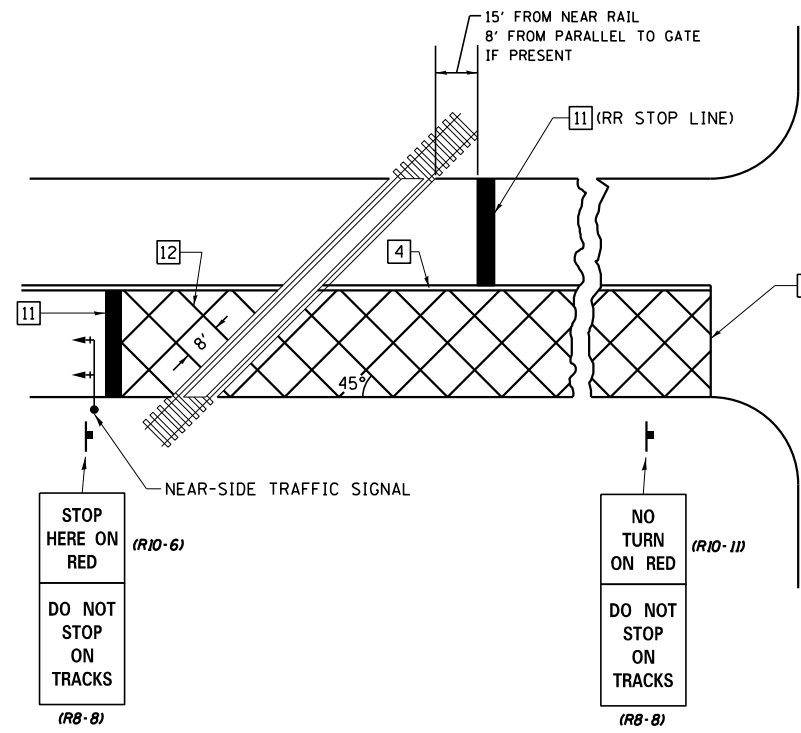
PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
  - 2 4" (100) SOLID (YELLOW)
  - 3 12" (300) DIAGONAL (YELLOW)
  - 4 4" (100) DOUBLE YELLOW (NARROW)
  - 5 12" (300) SOLID WHITE
  - 6 RESERVED
  - 7 6" (150) SKIP-DASH (WHITE)
  - 8 4" (100) SOLID (WHITE)
  - 9 12" (300) DIAGONAL (WHITE)
  - 10 6" (150) SOLID (WHITE)
  - 11 24" (600) STOP BAR (WHITE)
  - 12 8" (200) SOLID (WHITE)
  - 13 4" (100) PARKING WHITE
- 

RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)

DISTRICT 7 DETAIL NO. 7800001

FILE NAME =	USER NAME = dbullock	DESIGNED - CAS	REVISED -
\\s:\dot\6008 - d7 var var\work order 3	\\121 resurfacing\cadd\civil\0774624-sht-des	DRAWN - DLB	REVISED -
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	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

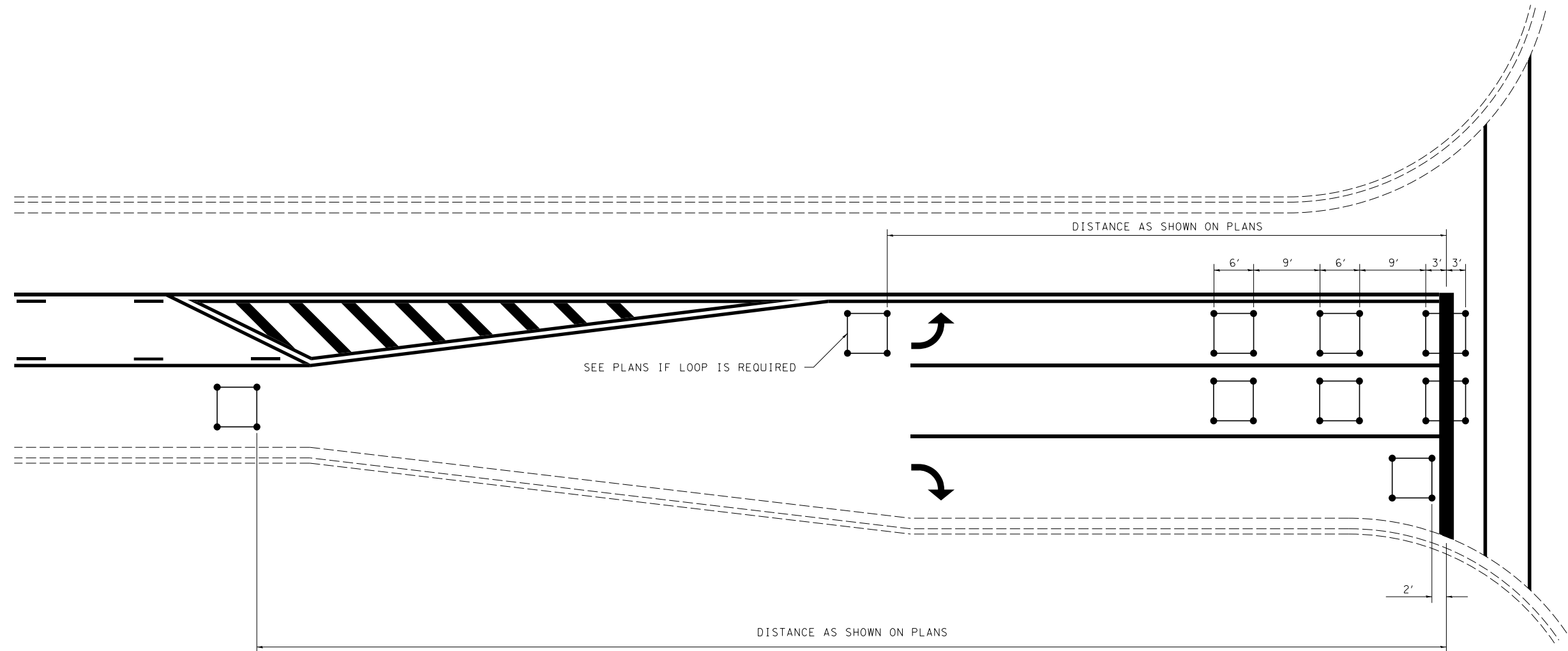
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS  
FAP 320 (IL 121/L 48)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	117
CONTRACT NO. 74624				
ILLINOIS FED. AID PROJECT				

# TYPICAL APPLICATION OF DETECTOR LOOPS



**NOTE:**

1. EACH LOOP SHALL HAVE ITS OWN HOMERUN TO THE GULFBOX/HANDHOLE.
2. LOOPS SHOULD BE CENTERED IN EACH LANE.
3. USE 6' BY 6' LOOPS FOR LANE WIDTHS OF 11' OR GREATER.
4. USE 5' BY 5' LOOPS IF LANE WIDTH IS LESS THAN 11'.

NOT TO SCALE

TYPICAL APPLICATIONS OF DETECTOR LOOPS

**DISTRICT 7 DETAIL NO. 88600100**

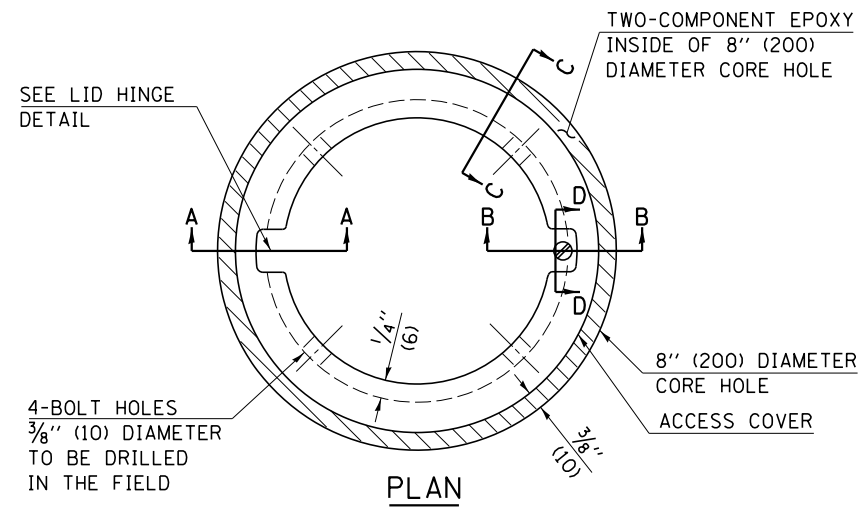
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\\dot\6008 - d7 var var\work order 3	\\121 resurfacing\cedd\civil\0774624-sht-des	DRAWN - DLB	REVISED -
Default	PLOT SCALE = 40.0000' / in.	CHECKED - JMB	REVISED -
	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETECTOR LOOP DETAILS  
FAP 320 (IL 121/L 48)**

SCALE: SHEET OF SHEETS STA. TO STA.

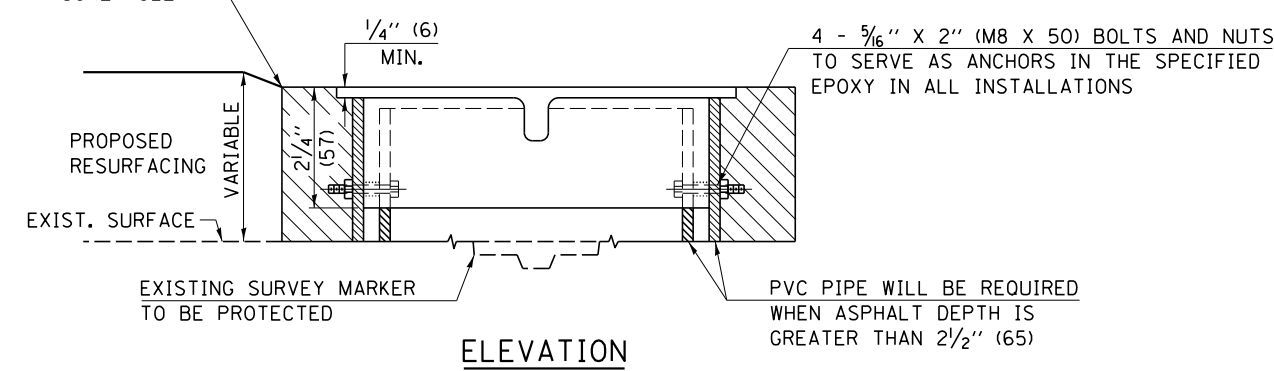
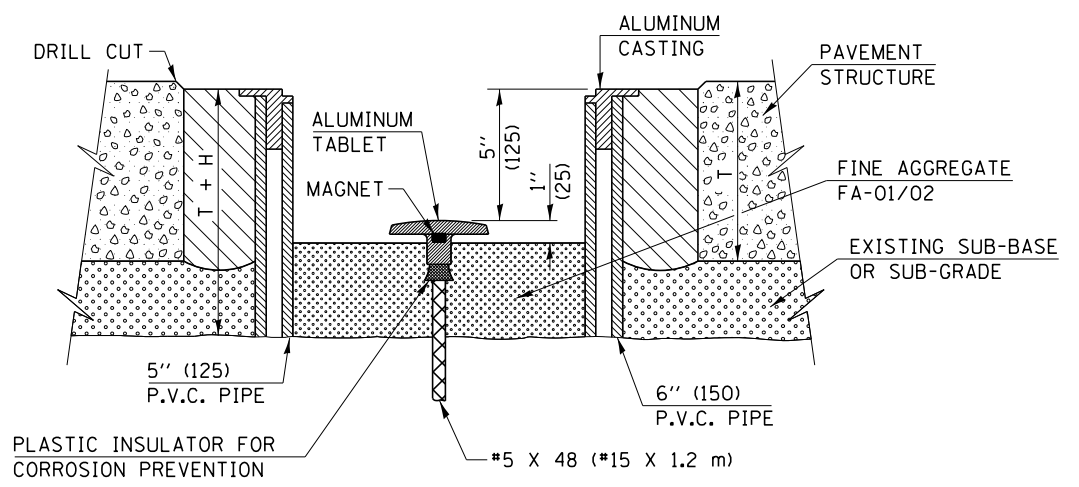
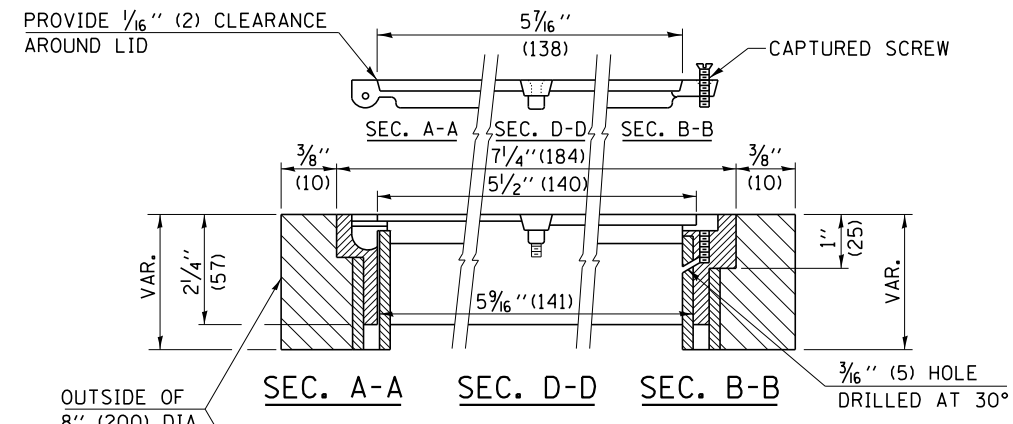
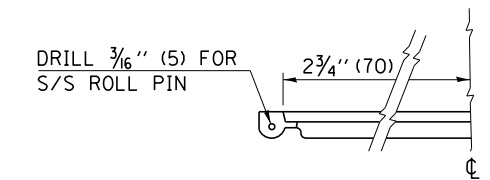
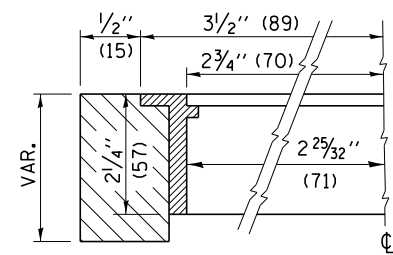
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126)RS-2,135RS-1	MACON	119	118
CONTRACT NO. 74624				
ILLINOIS FED. AID PROJECT				



- LEGEND**
- ALUMINUM CASTING
  - 5" (125) OR 6" (150) P.V.C. PIPE
  - TWO-COMPONENT EPOXY
- T = THICKNESS OF PAVEMENT STRUCTURE
- H = THE THICKNESS OF THE SUB-BASE GRANULAR + 1" (25)

**BILL OF MATERIAL**

ALUMINUM CASTING OF THE DIMENSIONS AND SPECIFICATIONS SHOWN OR OTHER SUBJECT TO ENGINEER'S APPROVAL OF SHOP DRAWINGS, 4 EACH - 5/16" X 2" (M8 X 50) BOLTS WITH NUTS, EPOXY, 5" OR 6" (125 mm OR 150 mm) DIAMETER P.V.C. PIPE, SCHEDULE 40 (WHEN REQUIRED).



**EXISTING SURVEY MARKER**

**PROPOSED SURVEY MARKER**

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = dbullock	DESIGNED - CAS	REVISED -
\\dot\6008 - d7 var var\work order 3	\\1121 resurfacing\cadd\civil\0774624-sht-des	DRAWN - DLB	REVISED -
Default	PLOT SCALE = 48.0000' / in.	CHECKED - JMB	REVISED -
	PLOT DATE = 8/19/2014	DATE - 8/13/14	REVISED -

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

**SURVEY VAULT DETAILS**  
**FAP 320 (IL 121/L 48)**

SCALE: SHEET OF SHEETS STA. TO STA.

**DISTRICT 7 DETAIL NO. Z0070202**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	(126X)RS-2,135RS-1	MACON	119	119
CONTRACT NO. 74624				
ILLINOIS FED. AID PROJECT				