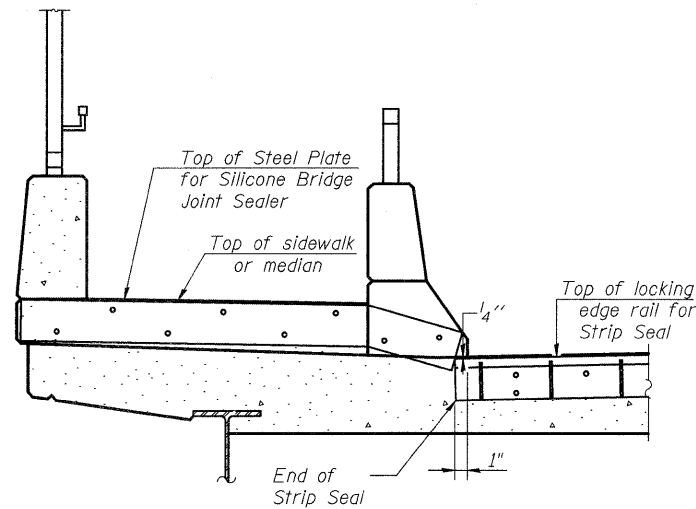


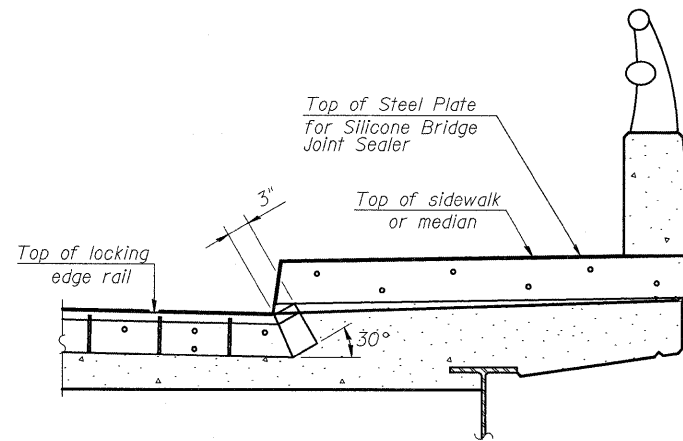
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	ROCK ISLAND	246	201	12 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

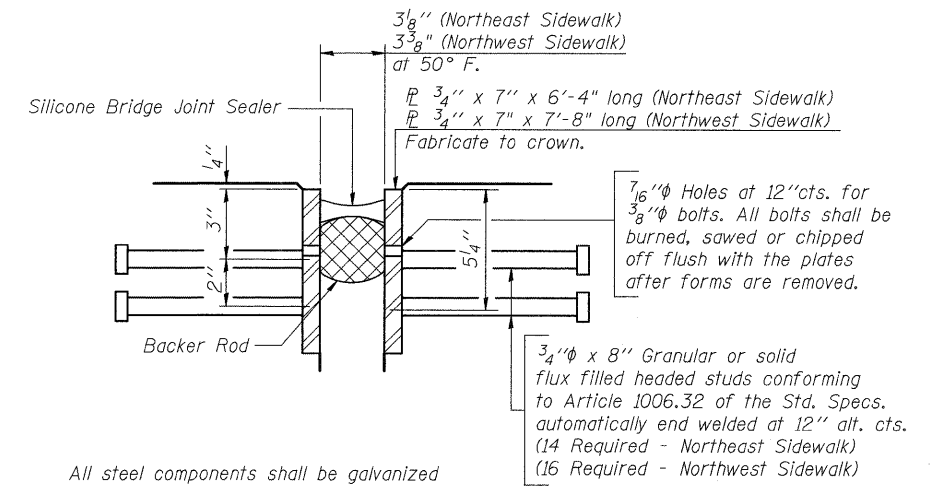
* 81 (1-2, 1, 2-2) RS-1 & M



AT NORTHEAST SIDEWALK



AT NORTHWEST SIDEWALK

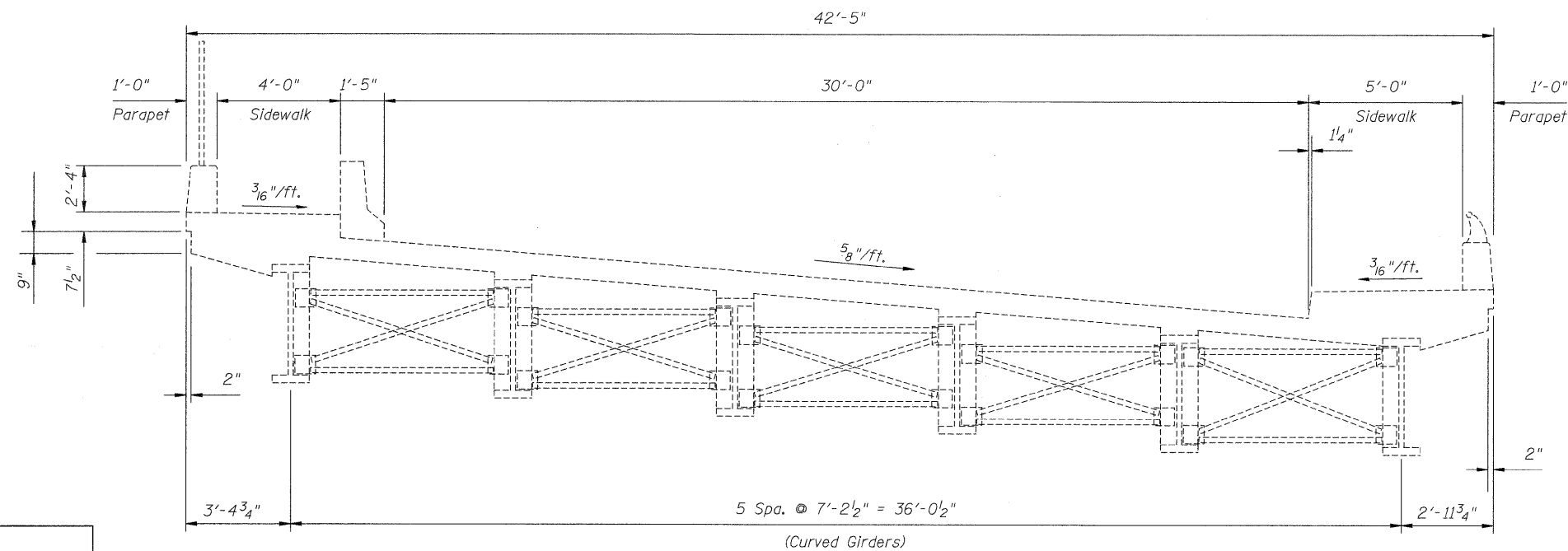


All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Assembly shown, including material and labor required to fabricate and install Steel Rails shall be included in cost of Silicone Bridge Joint Sealer.

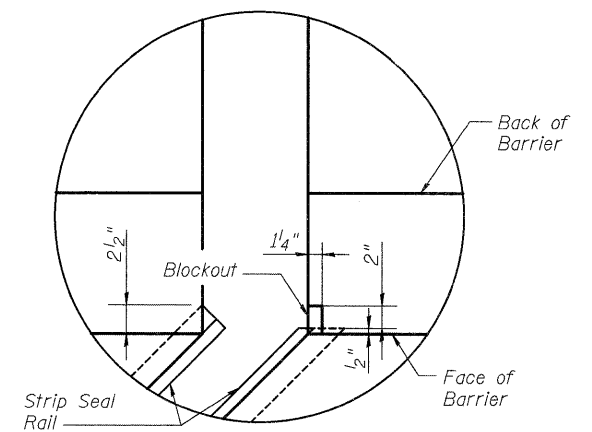
SECTION THROUGH SIDEWALK JOINT

(North Abutment)



CROSS SECTION

(Looking South)



**NORTHEAST BARRIER
STRIP SEAL BLOCKOUT**

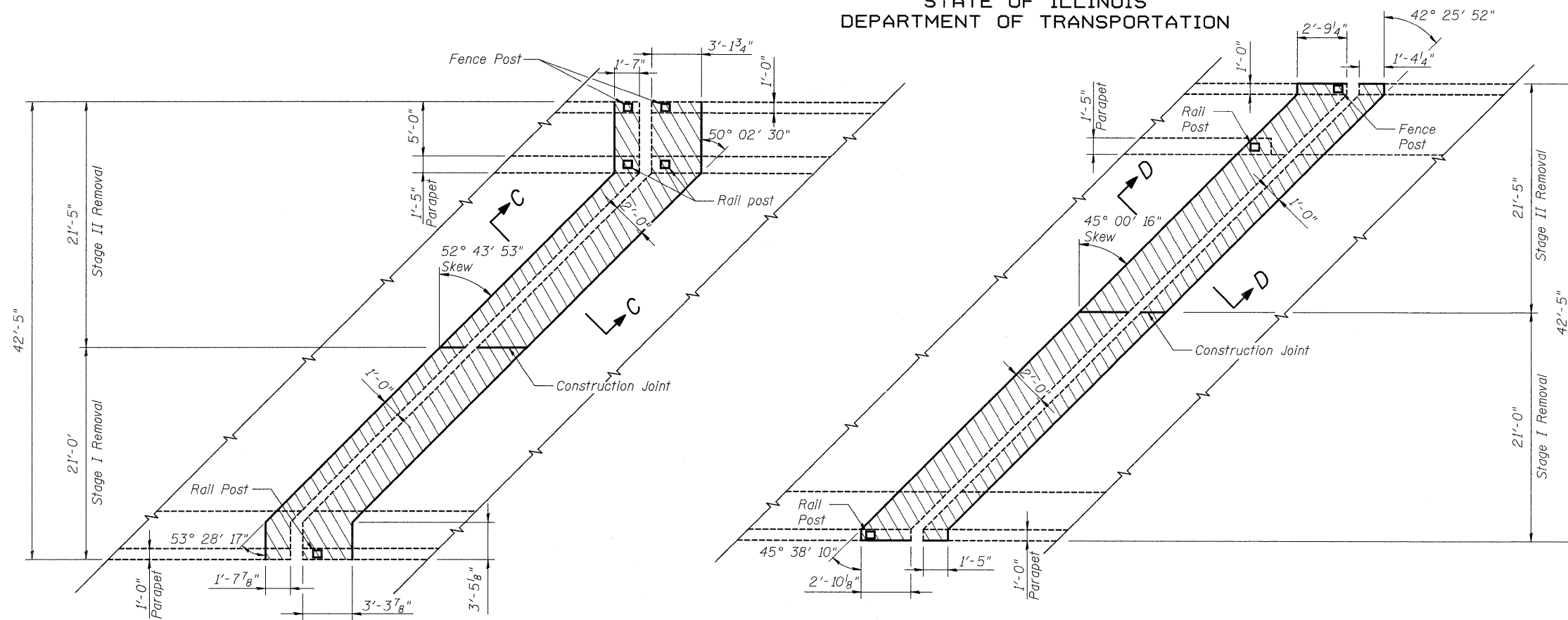
DESIGNED	DFM
CHECKED	CTH
DRAWN	EBS
CHECKED	DFM

BRIDGE REPAIR DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	ROCK ISLAND	246	202	12 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

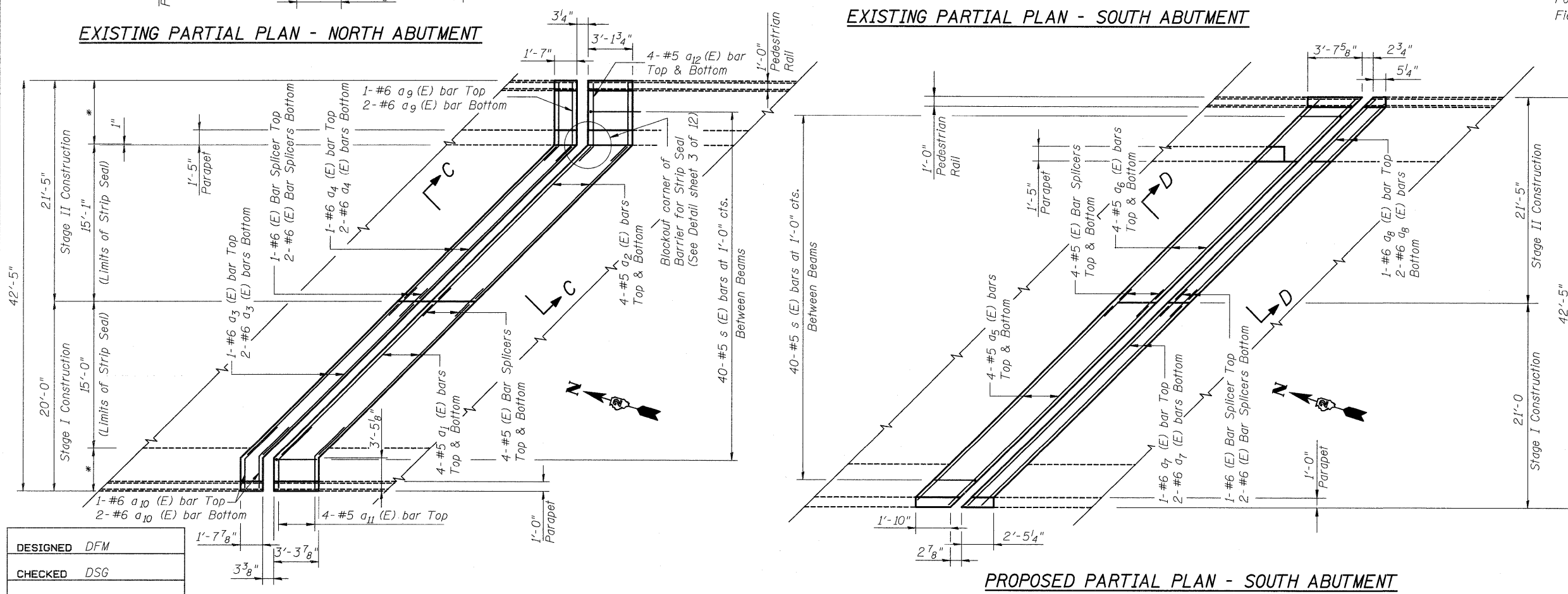
* 81 (1-2, 1, 2-2) RS-1 & M



BILL OF MATERIAL

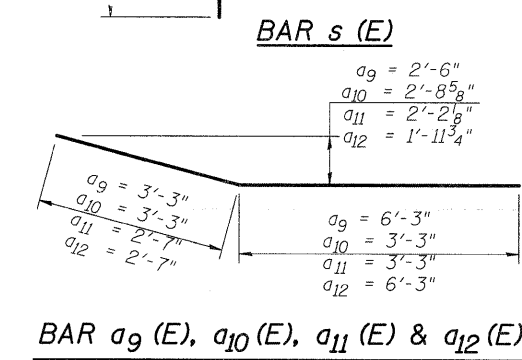
BAR	NO.	SIZE	LENGTH	SHAPE
a ₁ (E)	8	#5	28'-6"	—
a ₂ (E)	8	#5	23'-5"	—
a ₃ (E)	3	#6	28'-7"	—
a ₄ (E)	3	#6	23'-6"	—
a ₅ (E)	8	#5	29'-1"	—
a ₆ (E)	8	#5	29'-0"	—
a ₇ (E)	3	#6	29'-0"	—
a ₈ (E)	3	#6	28'-10"	—
a ₉ (E)	3	#6	9'-6"	—
a ₁₀ (E)	3	#6	6'-6"	—
a ₁₁ (E)	8	#5	5'-10"	—
a ₁₂ (E)	8	#5	8'-10"	—
s (E)	80	#5	2'-3"	—
Reinforcement Bars Epoxy Coated			Pound	1800
Concrete Removal			Cu. Yd.	17.6
Concrete Superstructure			Cu. Yd.	17.6
Bar Splicer			Each	22

For rail and fence post details see sheet 8 of 12.
For bar splicer assembly details see sheet 10 of 12.
For Sections C-C & D-D see sheet 5 of 12.
For parapet reinforcement see sheets 6 of 12 and 7 of 12.
Field cut new bars as required at edge of removal area.



LEGEND

- Concrete Removal
- Concrete Superstructure



DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

PROPOSED PARTIAL PLAN - NORTH ABUTMENT

PROPOSED PARTIAL PLAN - SOUTH ABUTMENT

* Limits of Silicone Bridge Joint Sealer and Steel Sliding Plates.
See sheet 3 of 12 for Details.

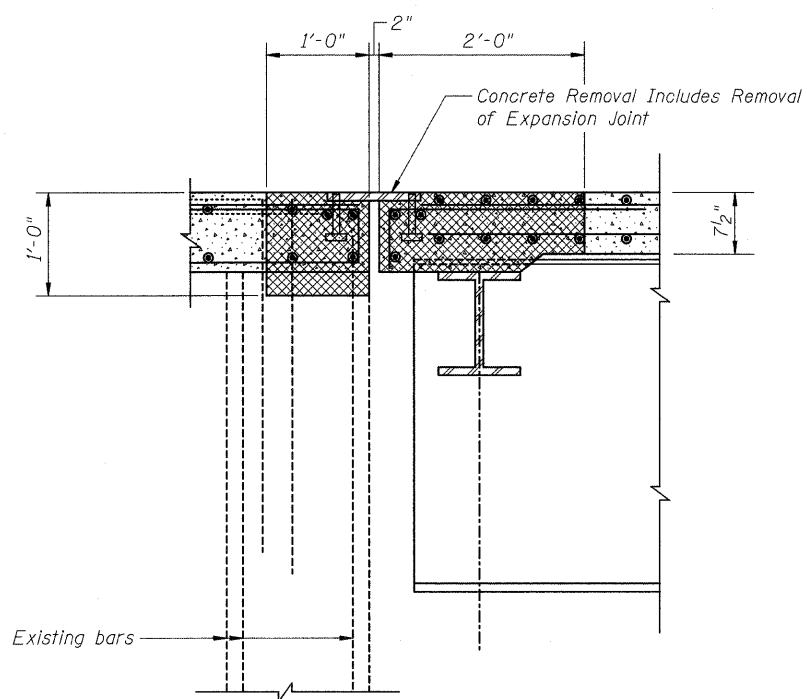
JOINT RECONSTRUCTION DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

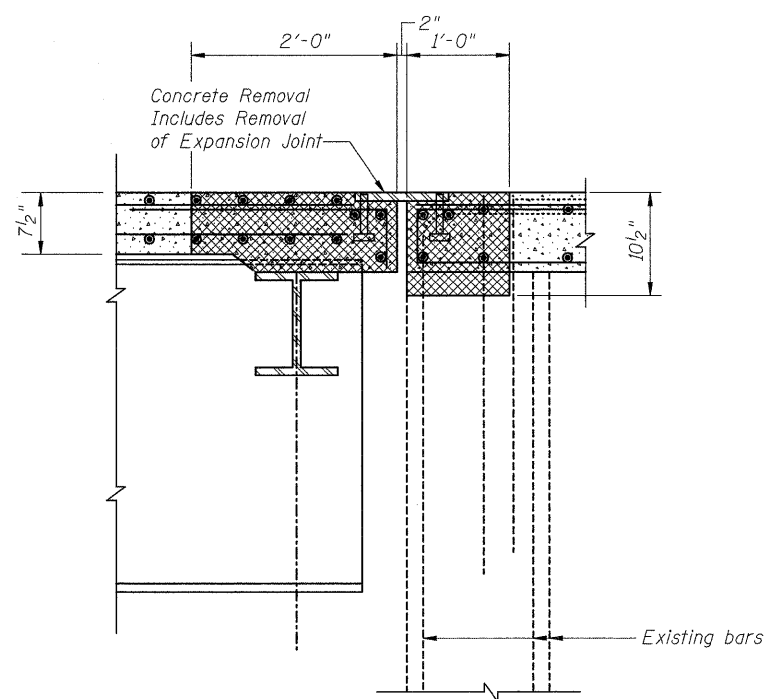
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	ROCK ISLAND	246	203
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
12 SHEETS

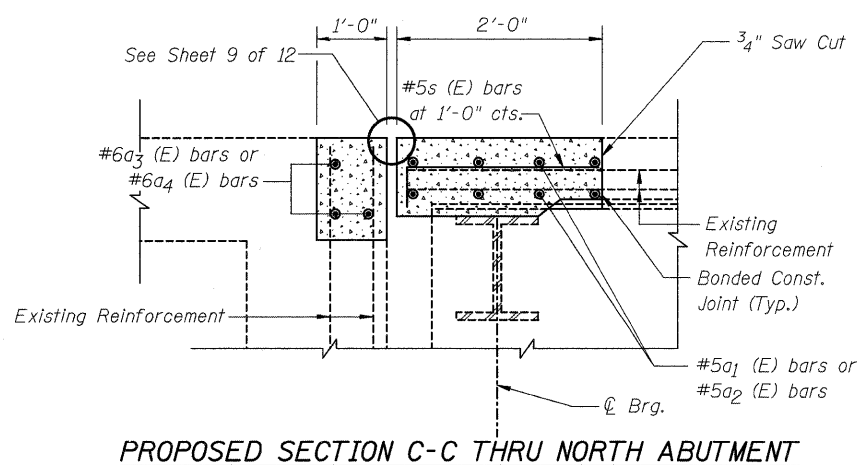
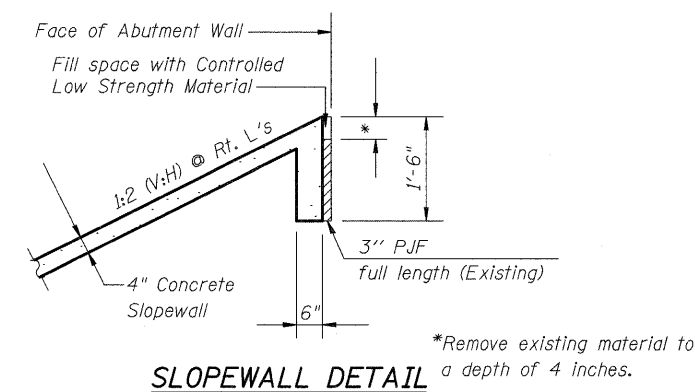
* 81 (1-2, 1, 2-2) RS-1 & M



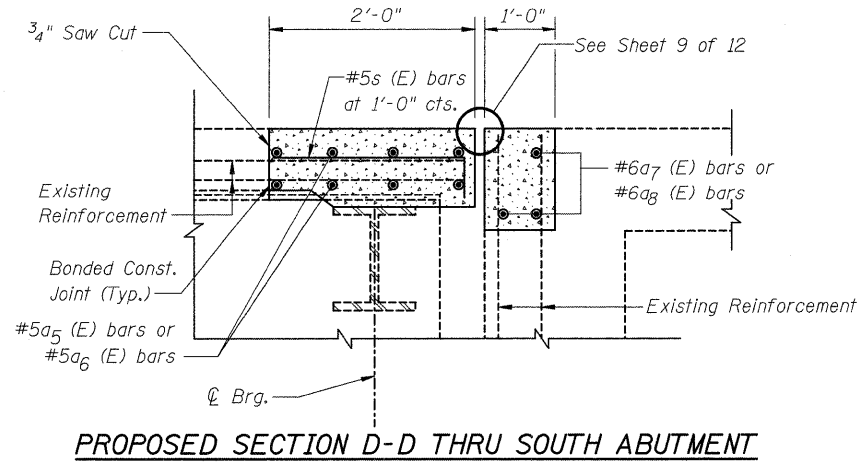
EXISTING SECTION C-C THRU NORTH ABUTMENT



EXISTING SECTION D-D THRU SOUTH ABUTMENT



PROPOSED SECTION C-C THRU NORTH ABUTMENT



PROPOSED SECTION D-D THRU SOUTH ABUTMENT

Concrete Removal

Dimensions are based on a Rolled Rail Strip Seal Joint. If the contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on sheet 9 of 12.

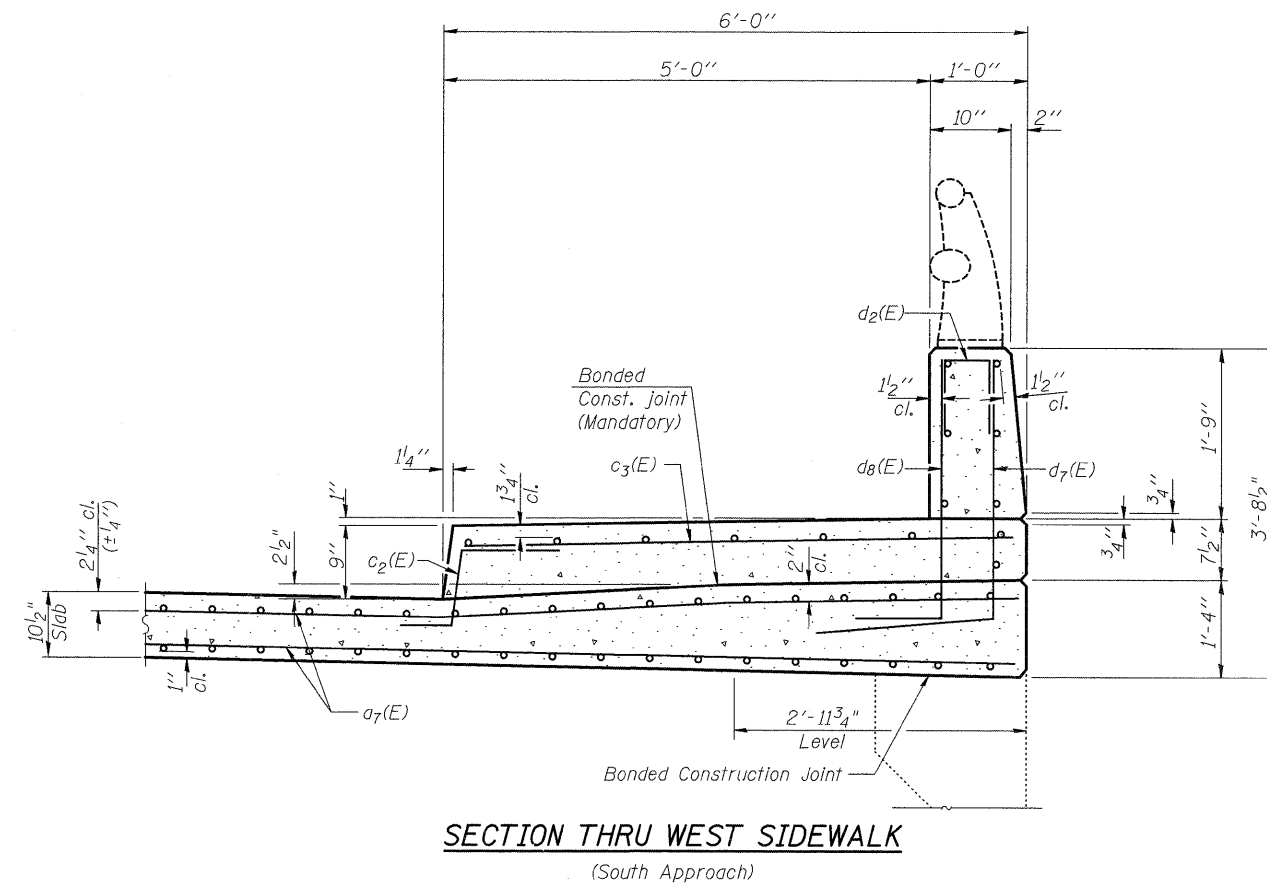
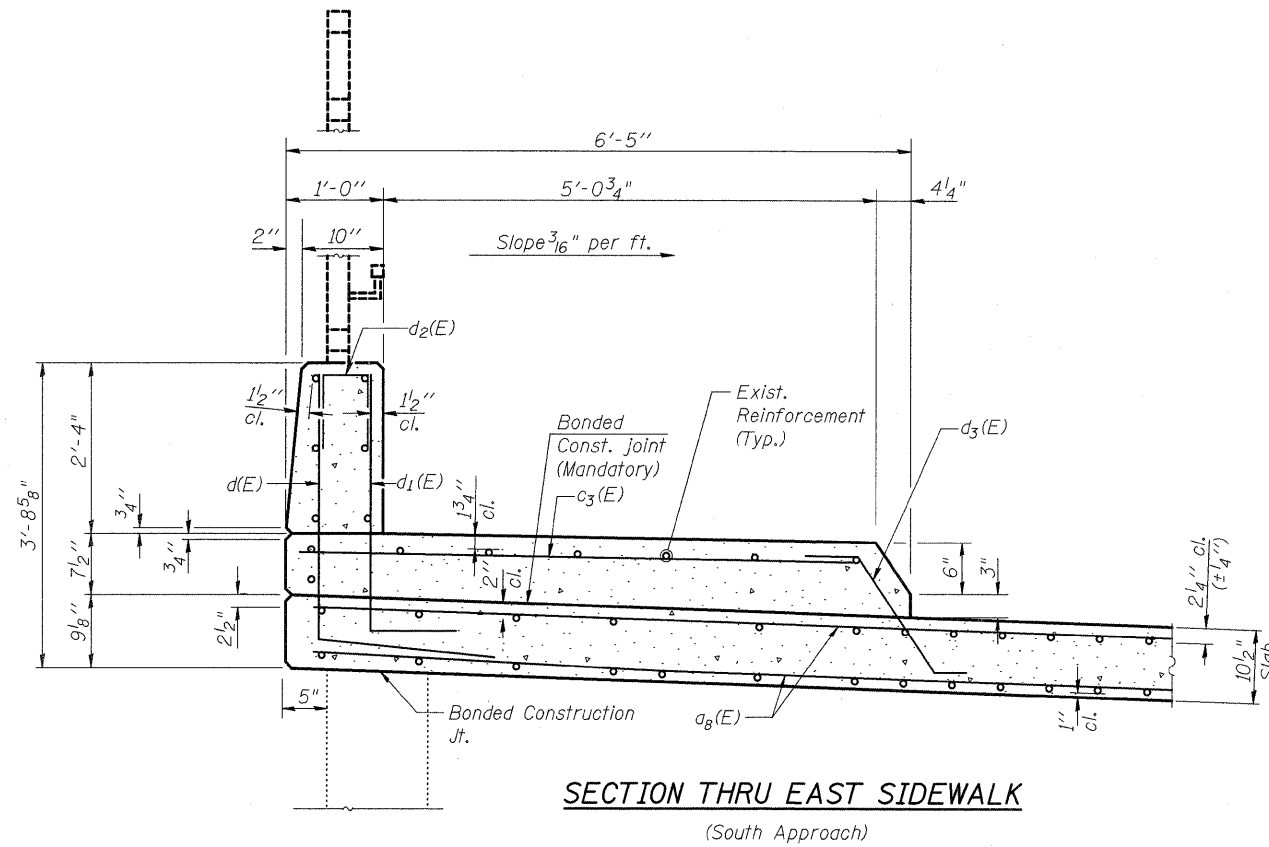
DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

JOINT RECONSTRUCTION DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	ROCK ISLAND	246	205	12 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

* 81 (1-2, 1, 2-2) RS-1 & M



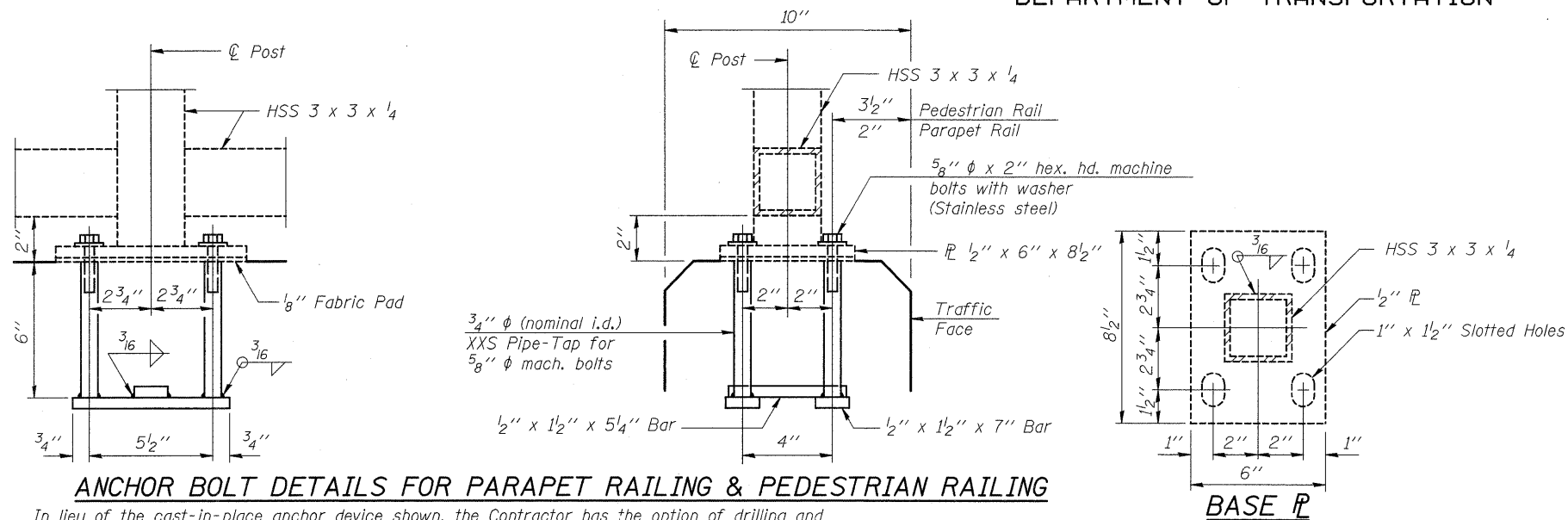
DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

APPROACH AND SUPERSTRUCTURE DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

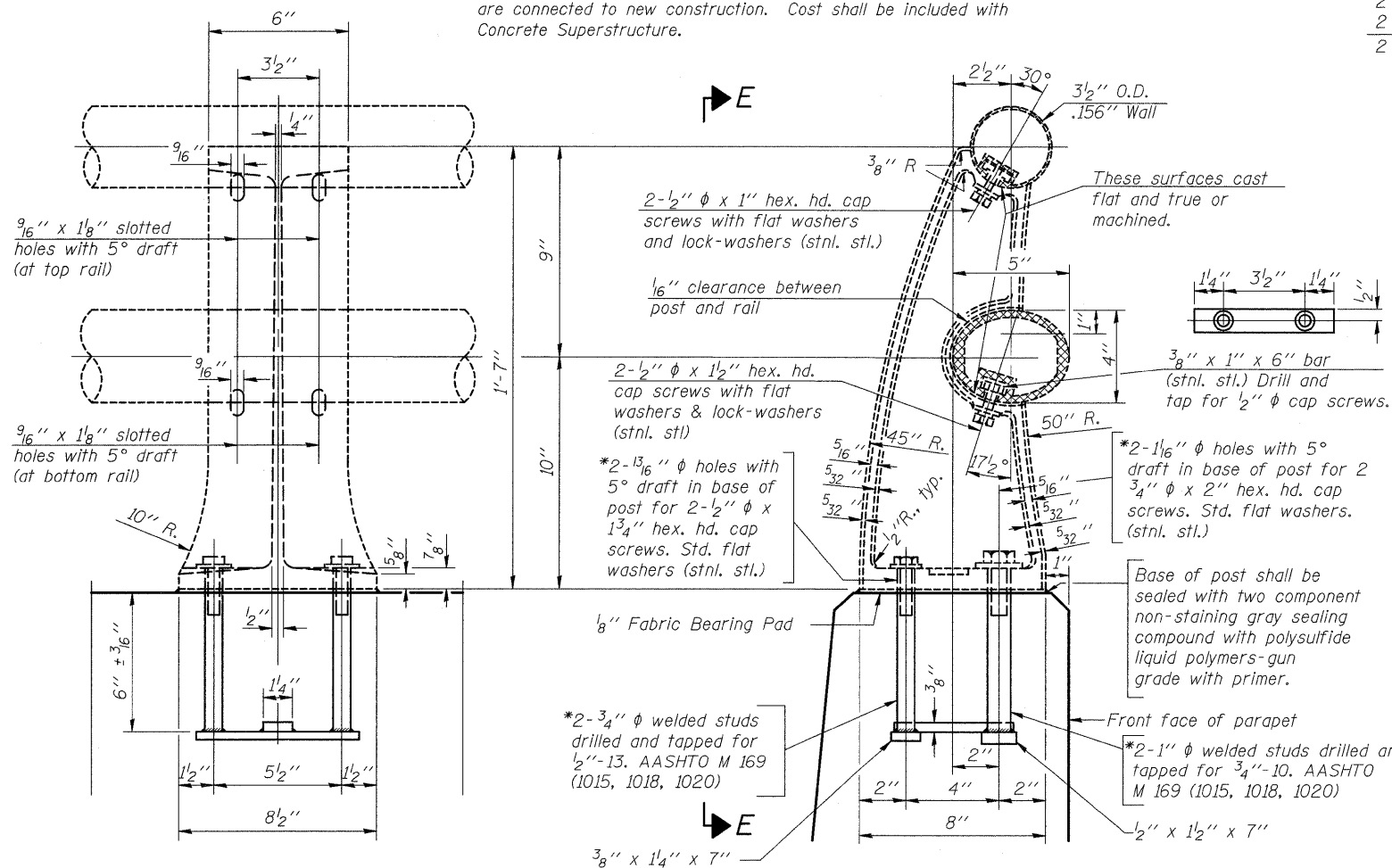
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	ROCK ISLAND	246	206
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
12 SHEETS



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

New Anchor Bolts will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.

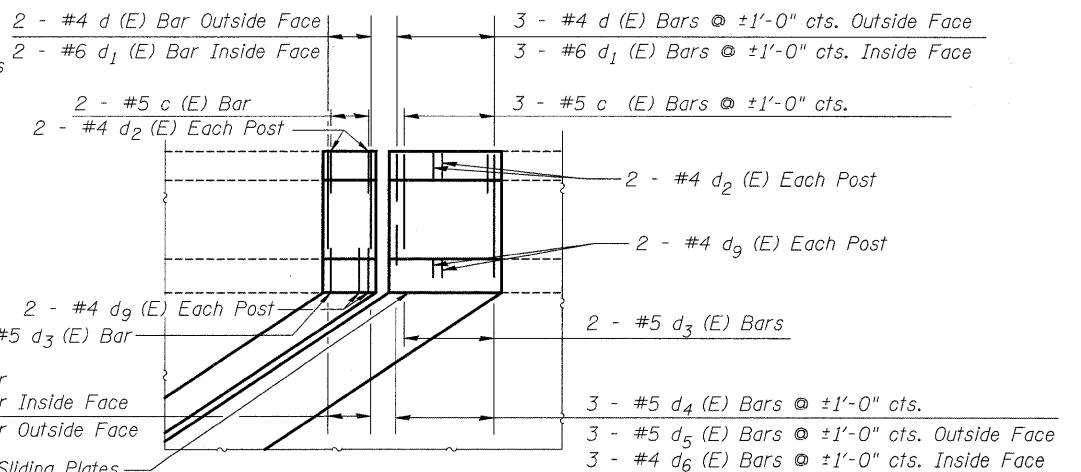
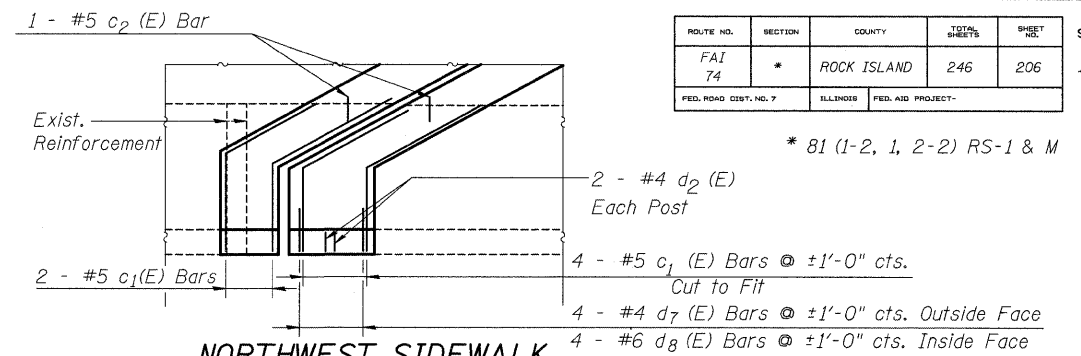


VIEW E-E

SECTION THROUGH RAIL

RAIL POST DETAILS

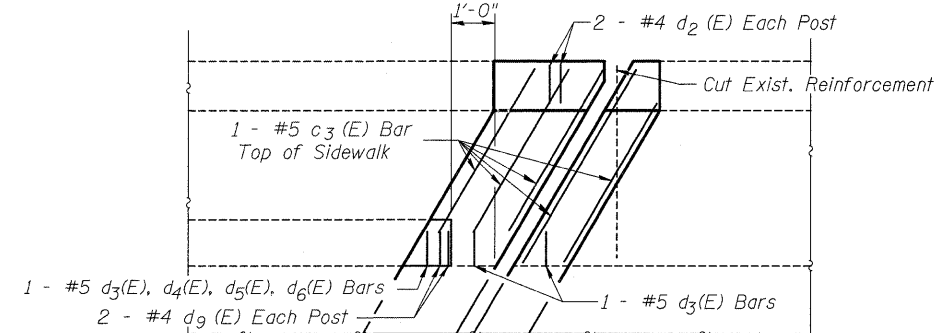
*In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications. New railpost anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.



Install Sliding Plates (see sheet 9 of 12)

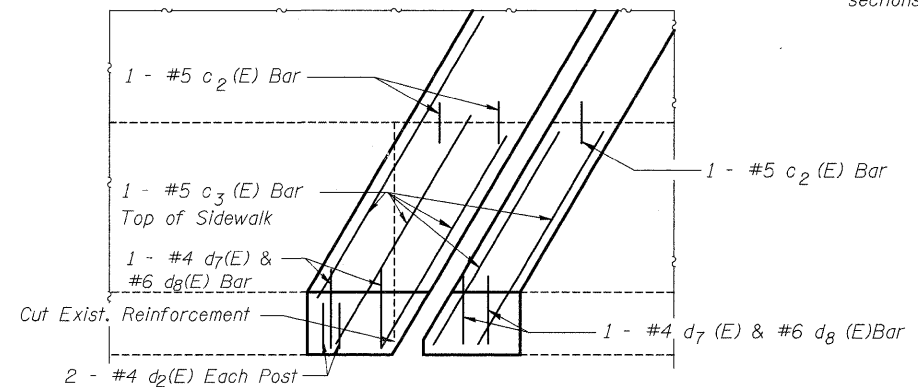
NORTHEAST SIDEWALK

(All Exist. Reinforcement not shown)



SOUTHEAST SIDEWALK

(All Exist. Reinforcement not shown)



SOUTHWEST SIDEWALK

(All Exist. Reinforcement not shown)

See sheets 6 & 7 of 12 for sections through Sidewalks.

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

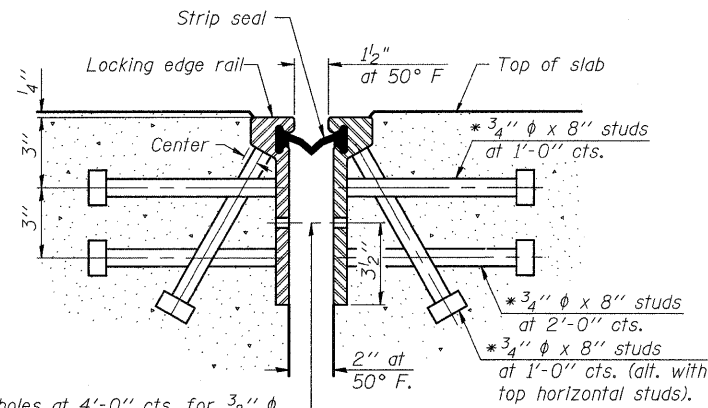
RAILING AND MISCELLANEOUS DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
FAI 74	*	ROCK ISLAND	246	207	12 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

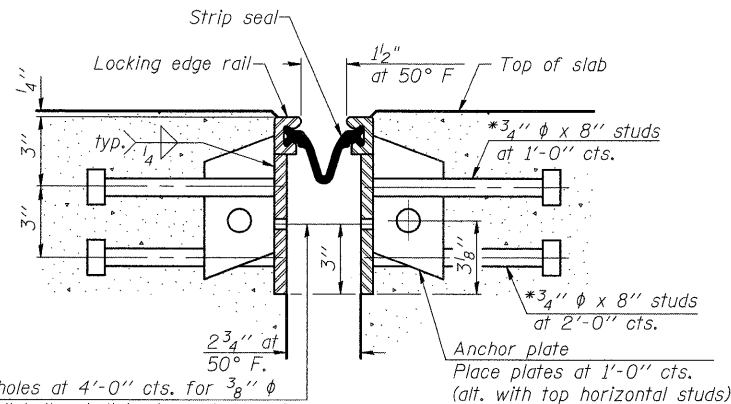
* 81 (1-2, 1, 2-2) RS-1 & M

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



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.

SECTION THRU
ROLLED RAIL JOINT



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.

SECTION THRU
WELDED RAIL JOINT

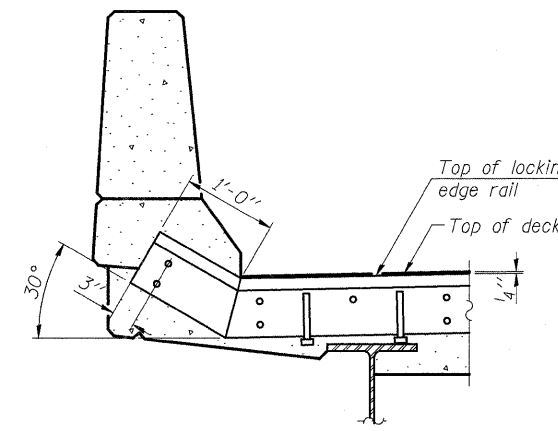
Notes:

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.

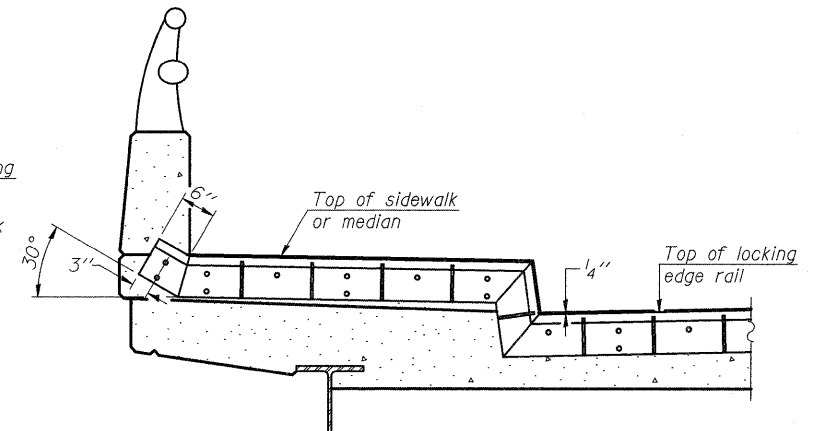
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and 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. 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.

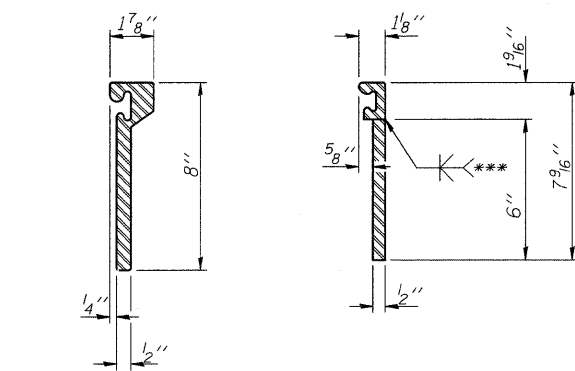


AT PARAPET

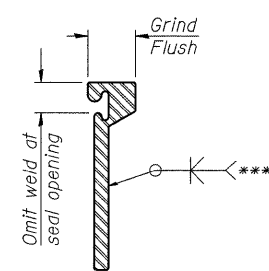


AT SIDEWALK OR MEDIAN

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.



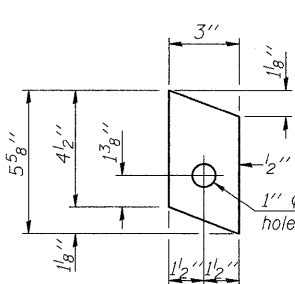
ROLLED
EXTRUDED RAIL WELDED RAIL



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

LOCKING EDGE
RAIL SPLICE

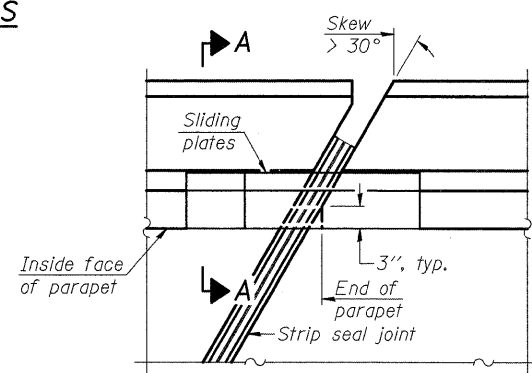
The inside of the locking edge rail groove shall be free of weld residue.



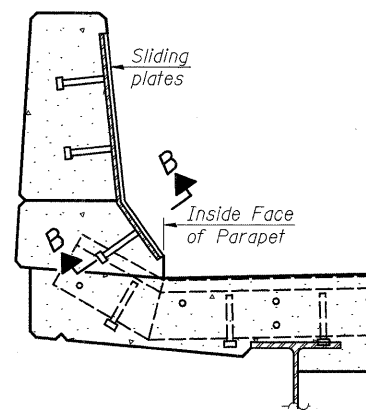
ANCHOR PLATE
(for welded rail)

TYPICAL END TREATMENTS

LOCKING EDGE RAILS

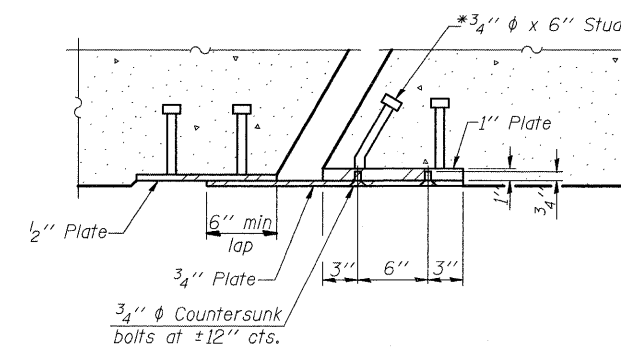


PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	123

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

EJ-SSJ

10-1-08

EXPANSION JOINT DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAI 74	*	ROCK ISLAND	246	208	12 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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

Where f_y = Yield strength of lapped reinforcement bars in ksi.

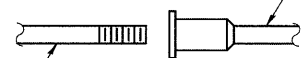
A_s = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

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'-2"	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

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.

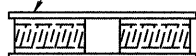


ROLLED THREAD DOWEL BAR



** ONE PIECE

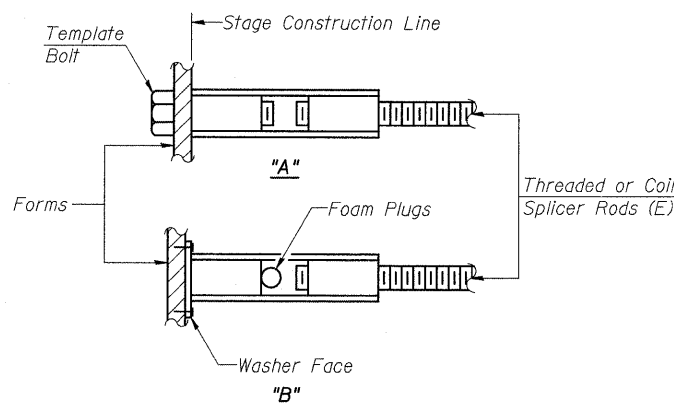
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

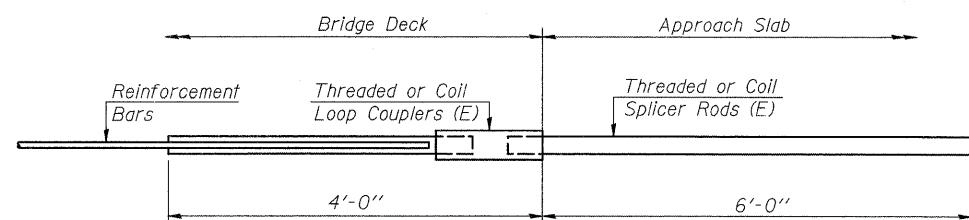


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

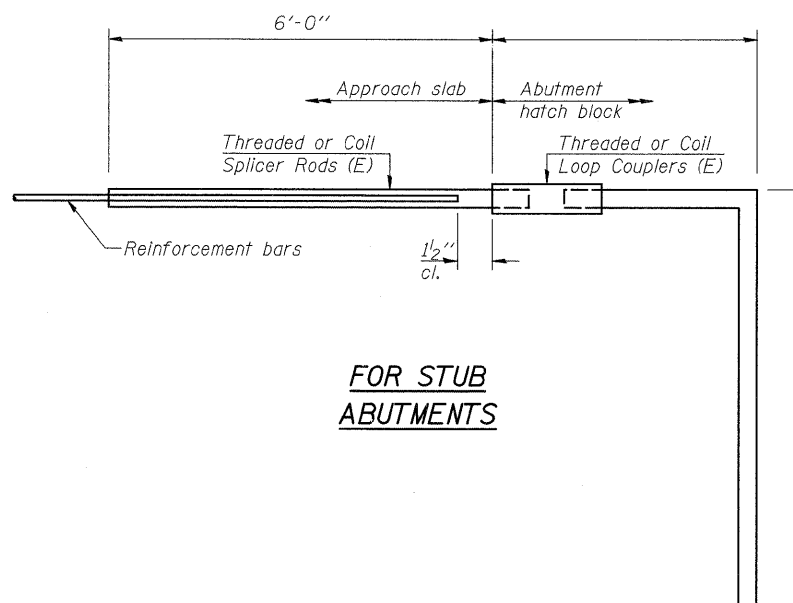
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



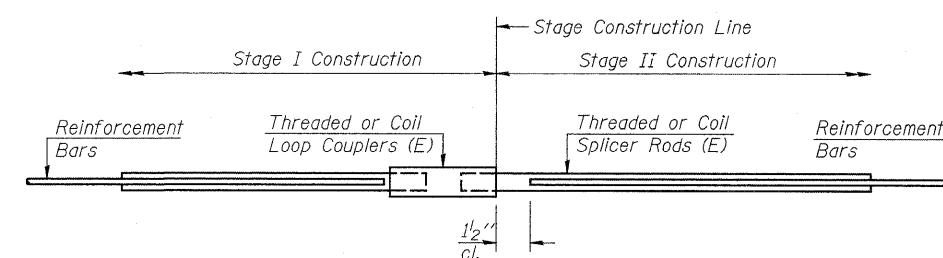
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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
#5	8	Bridge Deck at South Abutment
#5	8	Bridge Deck at North Abutment
#6	3	South Abutment Backwall
#6	3	North Abutment Backwall

DESIGNED DFM
CHECKED DSG
DRAWN EBS
CHECKED DFM

BSD-1

10-1-08

BAR SPLICER ASSEMBLY DETAILS
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

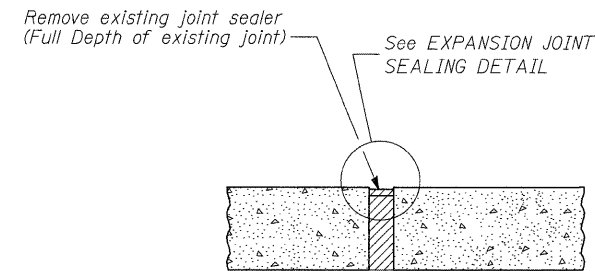
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
FAI 74	*	ROCK ISLAND	246	209	12 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

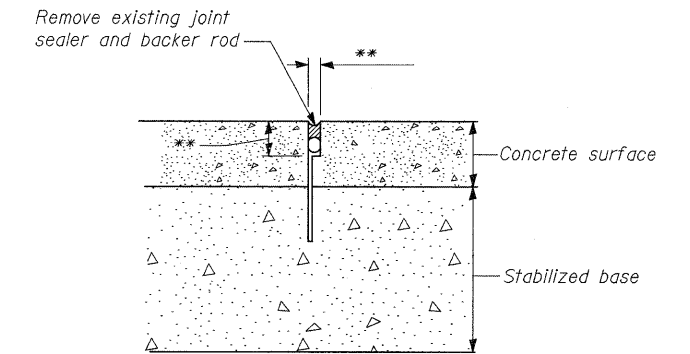
* 81 (1-2, 1, 2-2) RS-1 & M

BILL OF MATERIAL

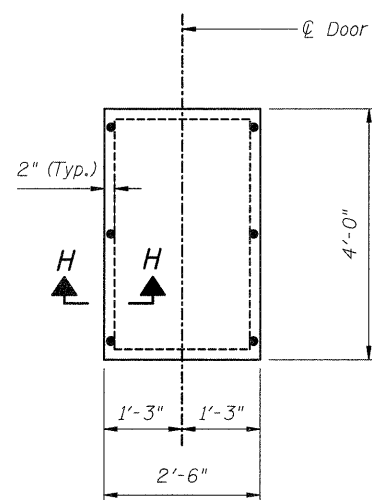
ITEM	NORTH ABUTMENT	SOUTH ABUTMENT	TOTAL
Access Door	1	1	2



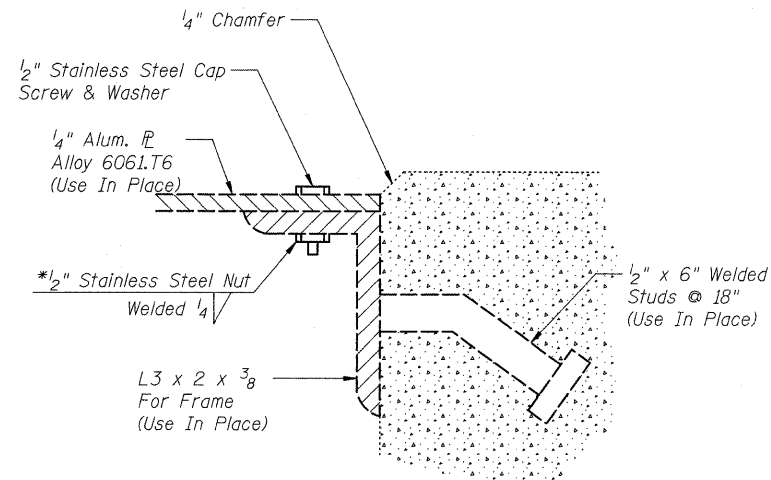
EXISTING EXPANSION JOINT



TRANSVERSE CONTRACTION JOINT



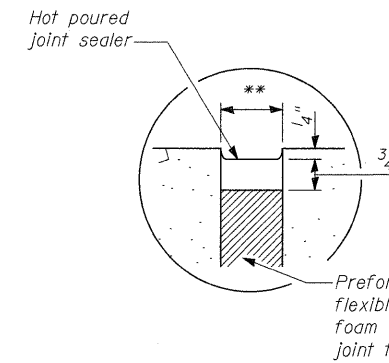
DOOR ELEVATION



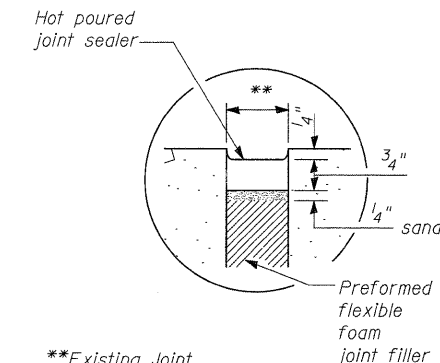
SECTION H-H

* Replace existing nuts with nuts matching new bolts. Field Weld.
Install cap screw and washer. Total 6 locations for each access door.

ACCESS DOOR DETAILS



EXPANSION JOINT SEALING DETAIL



APPROACH PAVEMENT JOINT DETAILS

Concrete Removal

Location for joint sealer shown on sheet 1 of 12 is approximate. Approach pavement joint final locations will be determined by Resident Engineer during construction. Actual repair locations shall be shown on as-built plans. Contractor will be paid for the quantity furnished. Joint sealer shall be placed in accordance with the Special Provision.

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

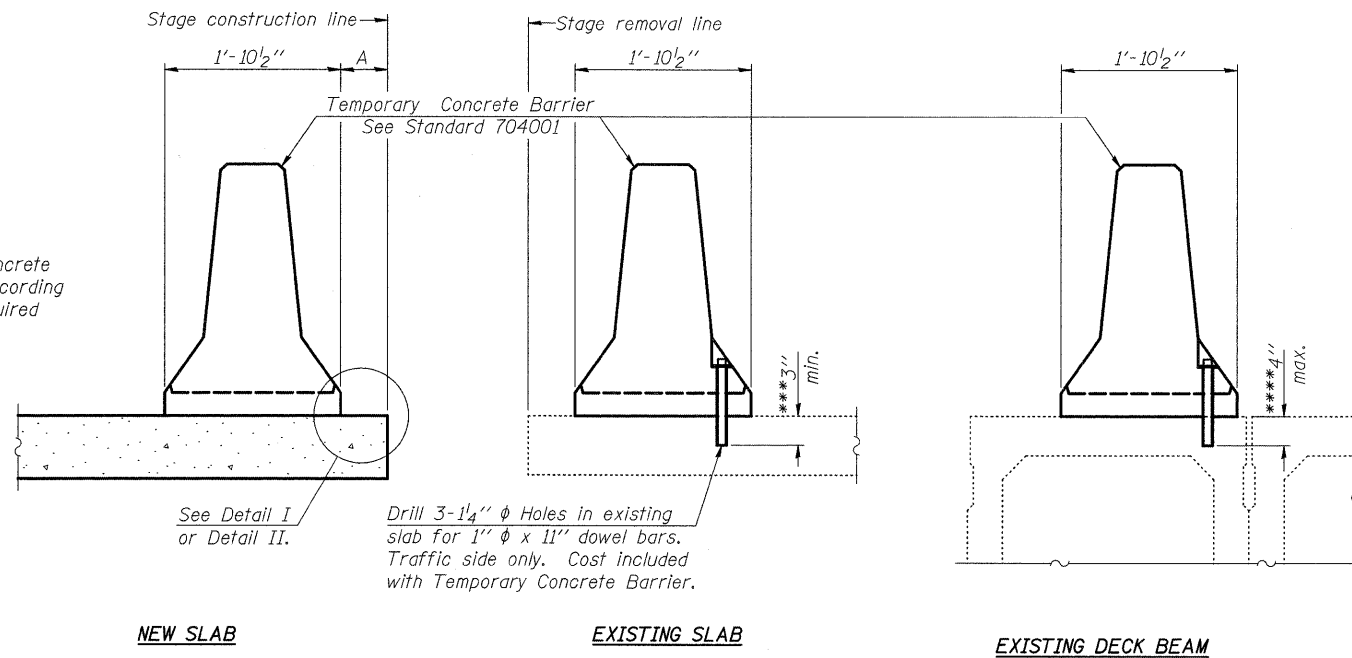
**ACCESS DOOR AND
APPROACH PAVEMENT JOINT DETAILS**
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
FAI 74	*	ROCK ISLAND	246	210	12 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

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 OR DECK BEAM

NOTES

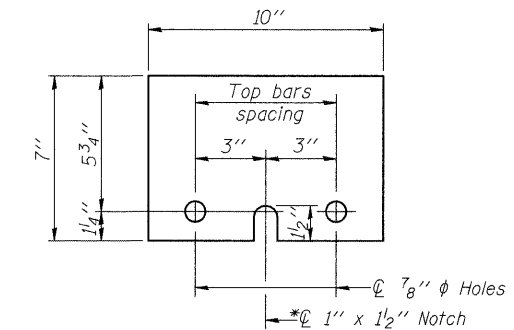
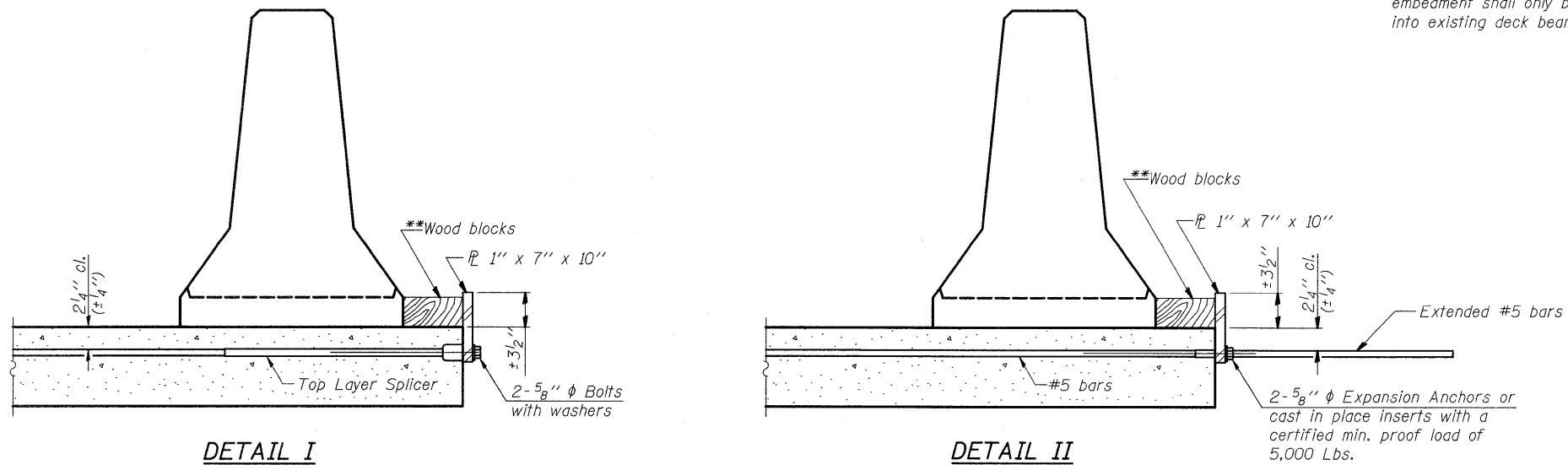
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x 10" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

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



STEEL RETAINER PL 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.

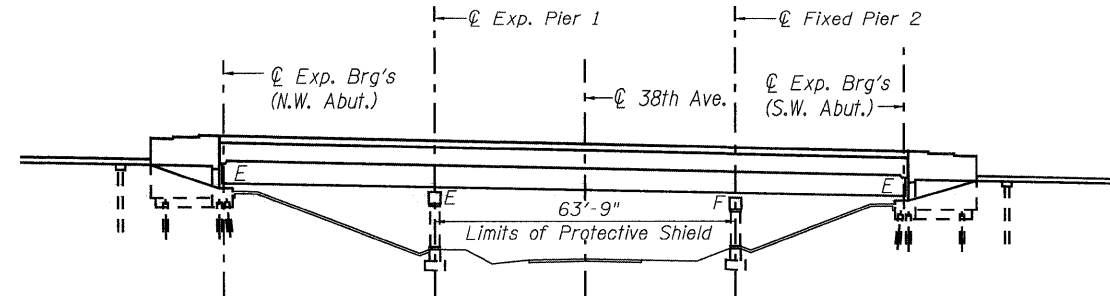
DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
N.B. 27TH ST. OVER F.A.I. 74
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0108

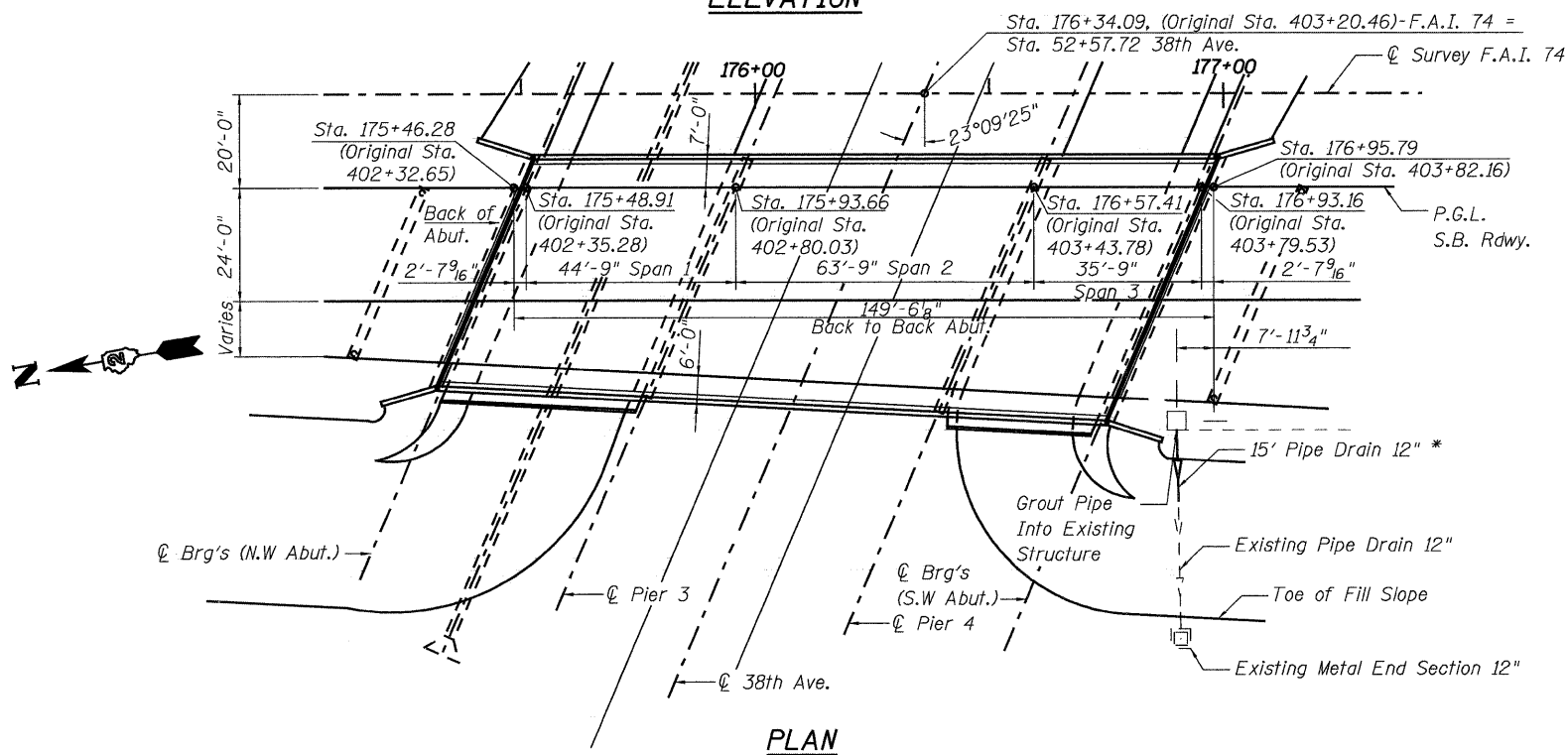
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	ROCK ISLAND	246	211	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

* 81 (1-2, 1, 2-2) RS-1 & M



ELEVATION



PLAN

GENERAL NOTES

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

Existing reinforcement bars extending into the removal areas 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.

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

Reinforcement bars designated (E) shall be epoxy coated.

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 materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for work.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and all other loose, potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that can not be removed by grinding 4 in. deep shall be identified and reported to the bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

The existing structural steel coating contains lead. The contractor shall take appropriate precautions to deal with the presence of lead on this project.

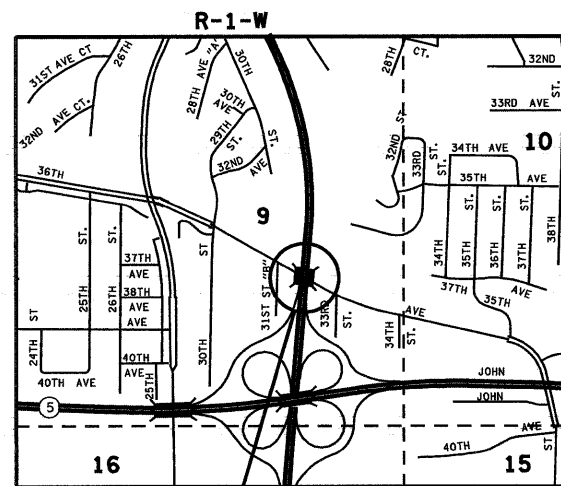
Quantities of Deck Slab Repair (Full Depth, Type I), Deck Slab Repair (Full Depth, Type II) and Deck Slab Repair (Partial) are approximated. Locations will be determined by the Resident Engineer following removal of the 2" Concrete Overlay. Actual repair locations shall be shown on the as-built plans. Contractor will be paid for the quantities furnished.

Joint openings shall be adjusted according to article 520.04 of the standard specifications when the deck is poured of an ambient temperature other than 50° F.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymerized HMA surface Course Mix "E", N70	TON	862
Concrete Removal	CU. YD.	16.6
Concrete Superstructure	CU. YD.	16.6
Reinforcement Bars, Epoxy Coated	POUND	2230
Bar Splicers	EACH	22
Protective Shield	SQ. YD.	354
Waterproofing Membrane System	SQ. YD.	799.2
Bridge Deck Scarification	SQ. YD.	793.1
Preformed Joint Strip Seal	FOOT	114
Structural Repair of Concrete (Depth > 5")	SQ. FT.	18
Deck Slab repair (Full Depth, Type I)	SQ. YD.	47.5
Deck Slab repair (Full Depth, Type II)	SQ. YD.	47.5
Deck Slab repair (Partial)	SQ. YD.	10
Pipe Drain 12"	FOOT	15
Diamond Grinding (Bridge Section)	SQ. YD.	799.2

* Quantity of pipe drain 12" is approximate. Field inspection of existing pipe drain shall be done before replacement to ensure remainder of pipe is adequate. Replacement quantity of pipe drain 12" may be adjusted by Resident Engineer based on inspection of remaining pipe. Removal of existing pipe, backfill, installation of new pipe & grouting of inlet is included in pipe drain 12".



LOCATION PLAN

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

STATE OF ILLINOIS
DAVID
F. MAXWELL
081-005455
ST. LOUIS, MO.
LICENSED STRUCTURAL ENGINEER

David F. Maxwell

David F. Maxwell, S.E.
Reg. No. 081-005455

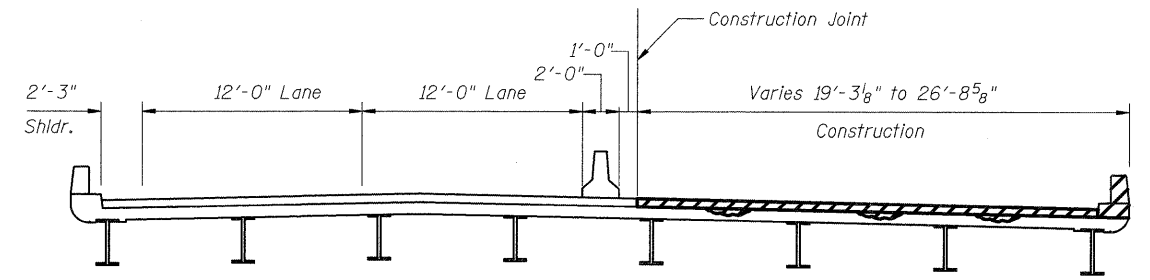
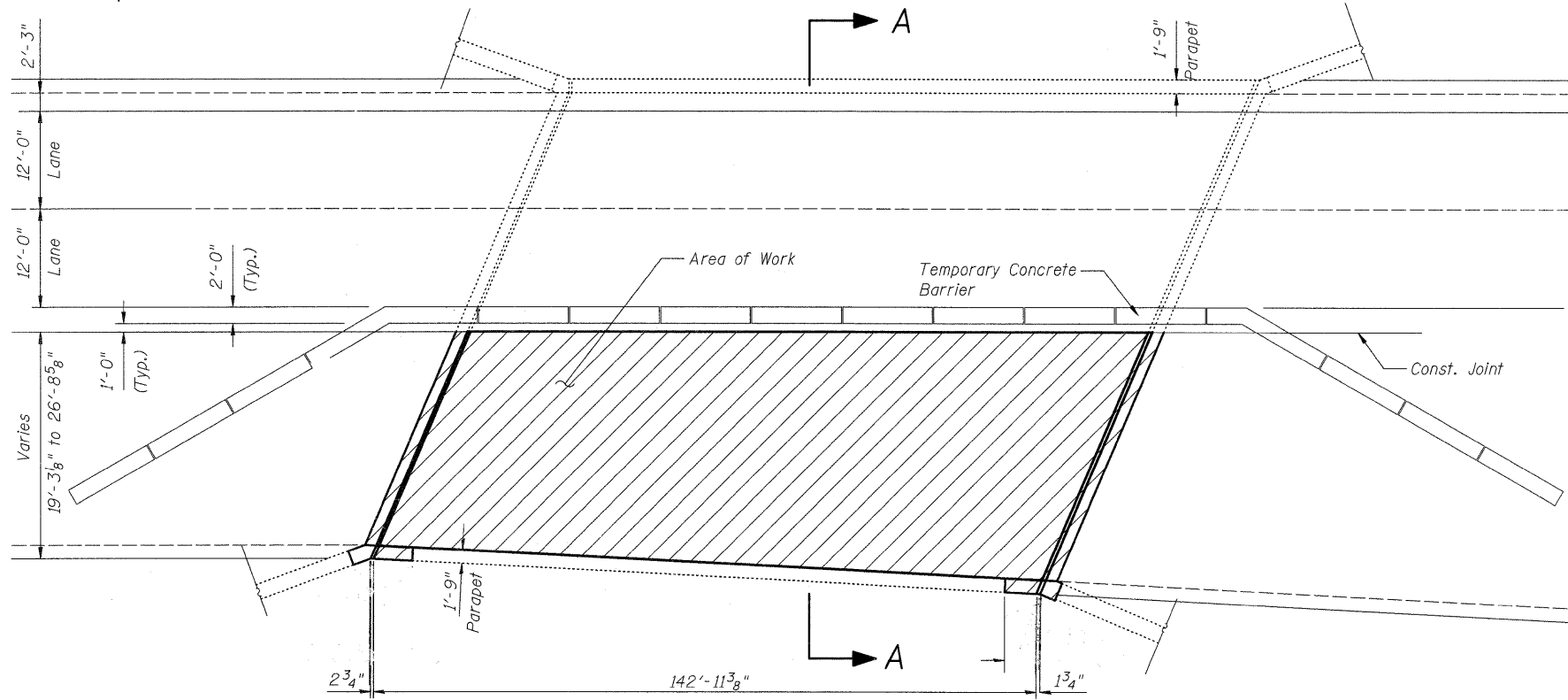
Date: 9/10/08
My registration expires November 30, 2010

PLAN AND ELEVATION
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	ROCK ISLAND	246	212	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

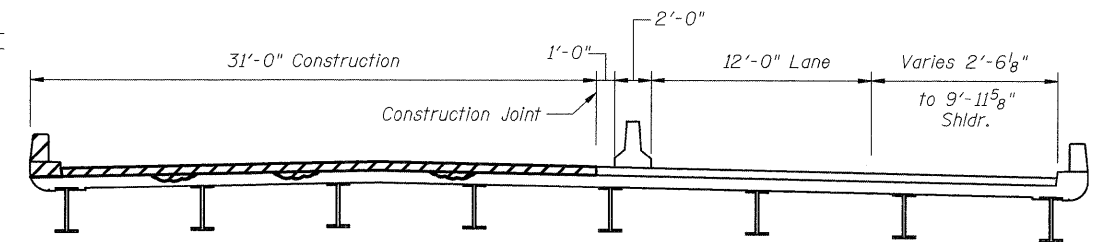
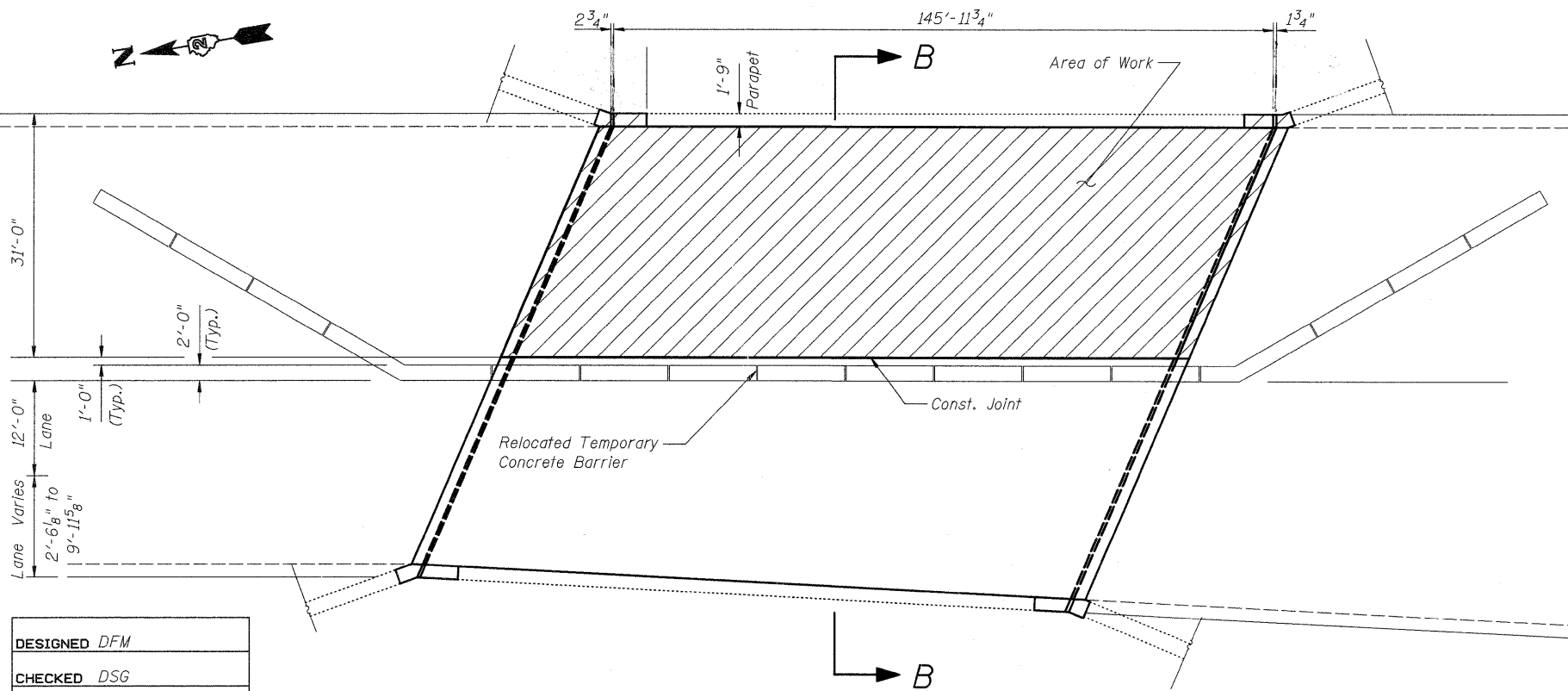


SECTION A-A

STAGE I CONSTRUCTION

- * Install temporary concrete barrier as shown.
- Move traffic to Stage I traffic lanes.
- Sawcut concrete wearing surface and remove.
- Replace bridge joints, repair deck, repair North Abutment and Southwest drain.
- Install new wearing surface & waterproofing membrane.

* For temporary concrete barrier details, see sheet 10 of 11.



SECTION B-B

STAGE II CONSTRUCTION

- * Relocate temporary concrete barrier as shown.
- Move traffic to Stage II traffic lanes.
- Remove concrete wearing surface.
- Replace bridge joints, repair deck and North Abutment.
- Install new wearing surface & waterproofing membrane.
- Remove temporary concrete barrier.

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

STAGING PLAN
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

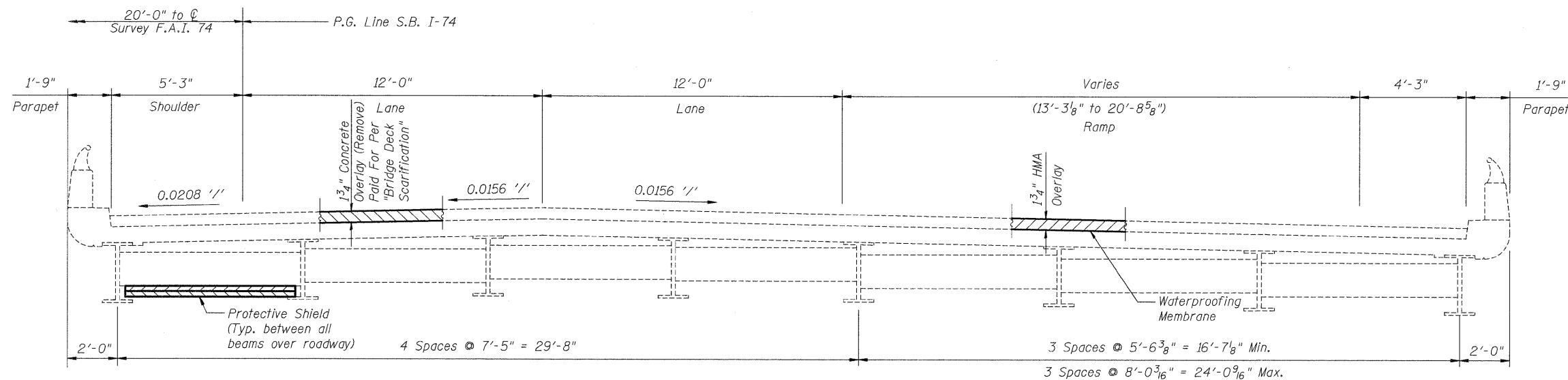
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
FAI 74	#	ROCK ISLAND	246	213	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymerized HMA Surface Course Mix "E", N90	TON	86.2
Protective Shield	SQ.YD.	354
Waterproofing Membrane System	SQ.YD.	799.2
Bridge Deck Scarification	SQ.YD.	793.1



CROSS SECTION
(Looking South)

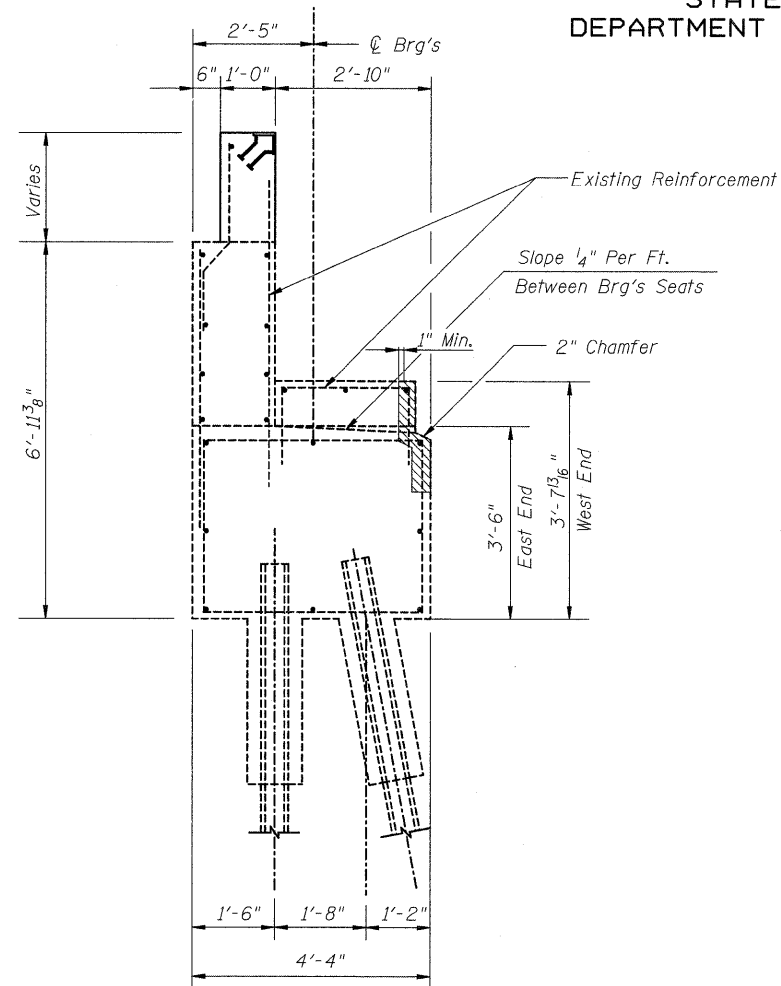
DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

BRIDGE REPAIR DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
FAI 74	*	ROCK ISLAND	246	214	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M



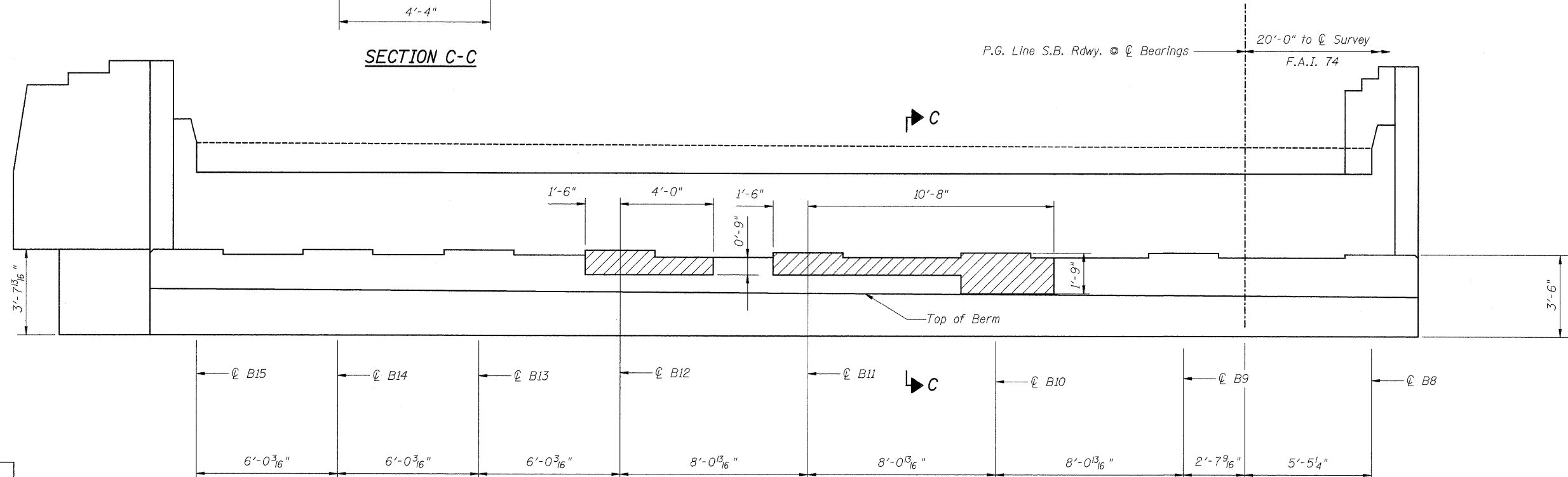
SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth > 5")	SQ.FT.	18

Note:
Minimum depth of repair shall be 1" below exposed reinforcing steel.

Structural Repair of Concrete (Depth > 5")



NORTH ABUTMENT ELEVATION
(Looking North)

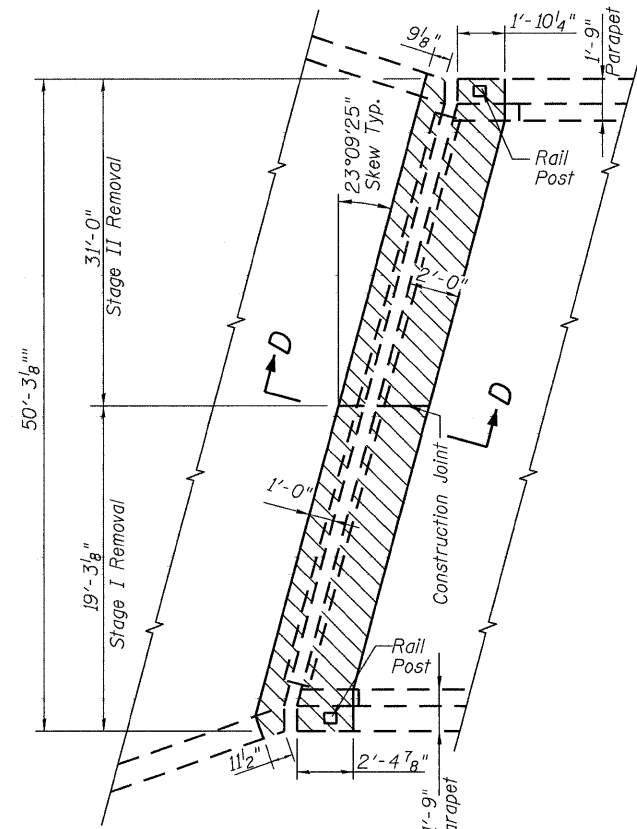
BRIDGE REPAIR DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

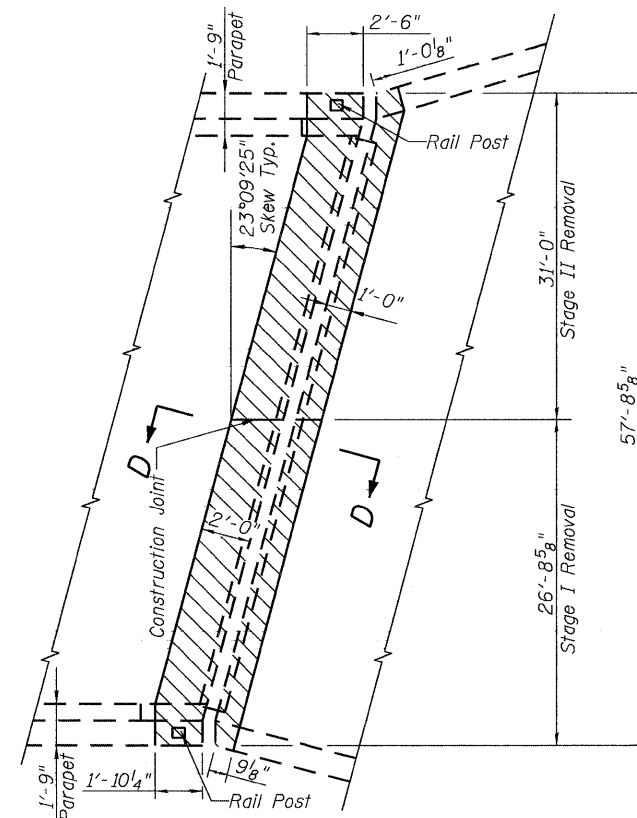
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
FAT 74	*	ROCK ISLAND	246	215	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

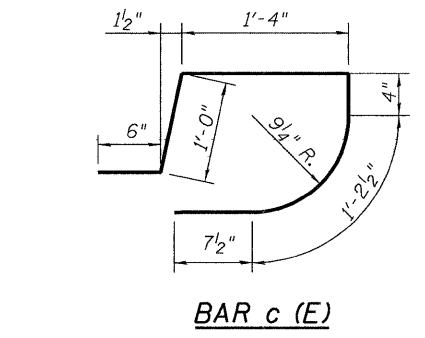
* 81 (1-2, 1, 2-2) RS-1 & M



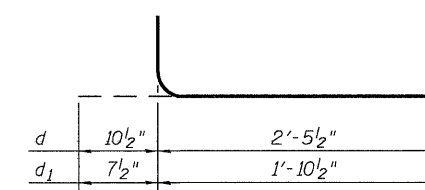
EXISTING PARTIAL PLAN - NORTH ABUTMENT



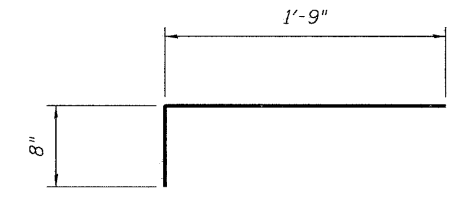
EXISTING PARTIAL PLAN - SOUTH ABUTMENT



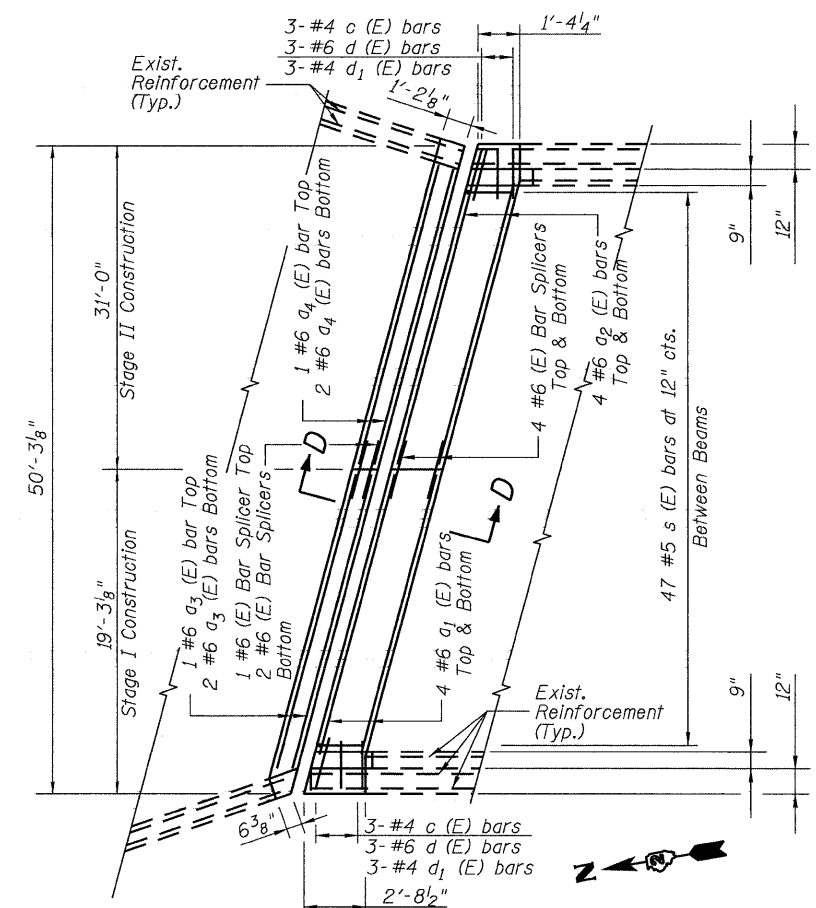
BAR c (E)



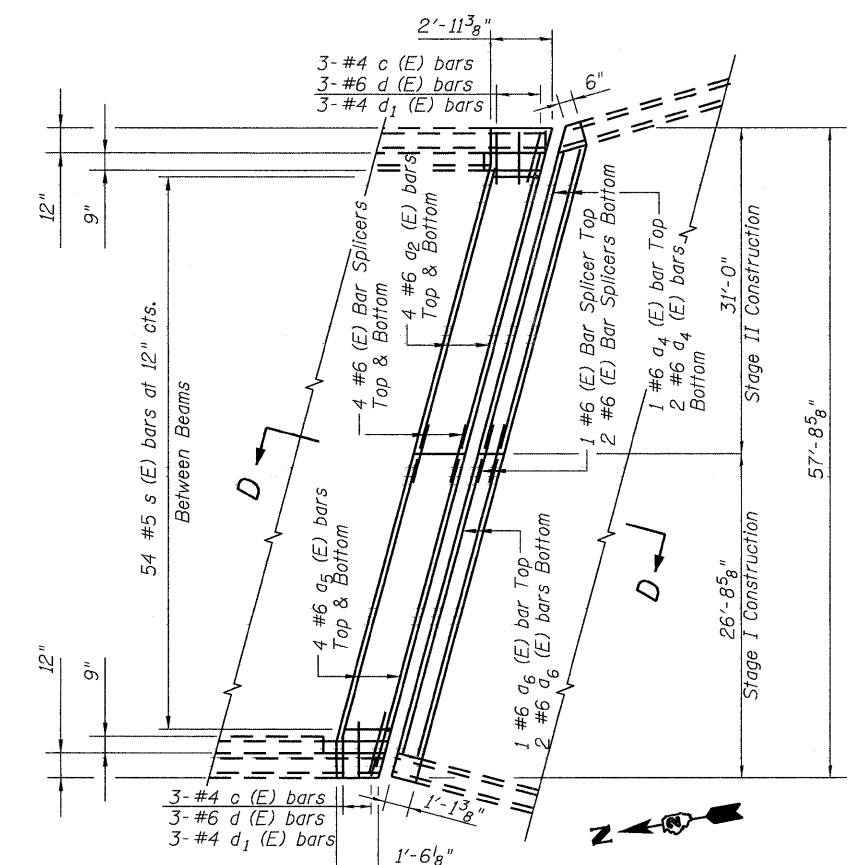
BAR d & d1 (E)



BAR s (E)



PROPOSED PARTIAL PLAN - NORTH ABUTMENT



PROPOSED PARTIAL PLAN - SOUTH ABUTMENT

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a ₁ (E)	8	#6	19'-3"	—
a ₂ (E)	16	#6	32'-6"	—
a ₃ (E)	3	#6	19'-3"	—
a ₄ (E)	6	#6	32'-6"	—
a ₅ (E)	8	#6	27'-4"	—
a ₆ (E)	3	#6	27'-5"	—
c (E)	12	#4	5'-0"	⌋
d (E)	12	#6	3'-4"	┌
d ₁ (E)	12	#4	2'-6"	┌
s (E)	101	#5	2'-5"	┌
Reinforcement Bars Epoxy Coated			Pound	2230
Concrete Removal			Cu. Yd.	16.6
Concrete Superstructure			Cu. Yd.	16.6
Bar Splicer			Each	22

For bar splicer assembly details see sheet 9 of 11.

For Section D-D, see sheet 6 of 11.

For rail post details see sheet 11 of 11.

LEGEND

- Concrete Removal
- Concrete Superstructure

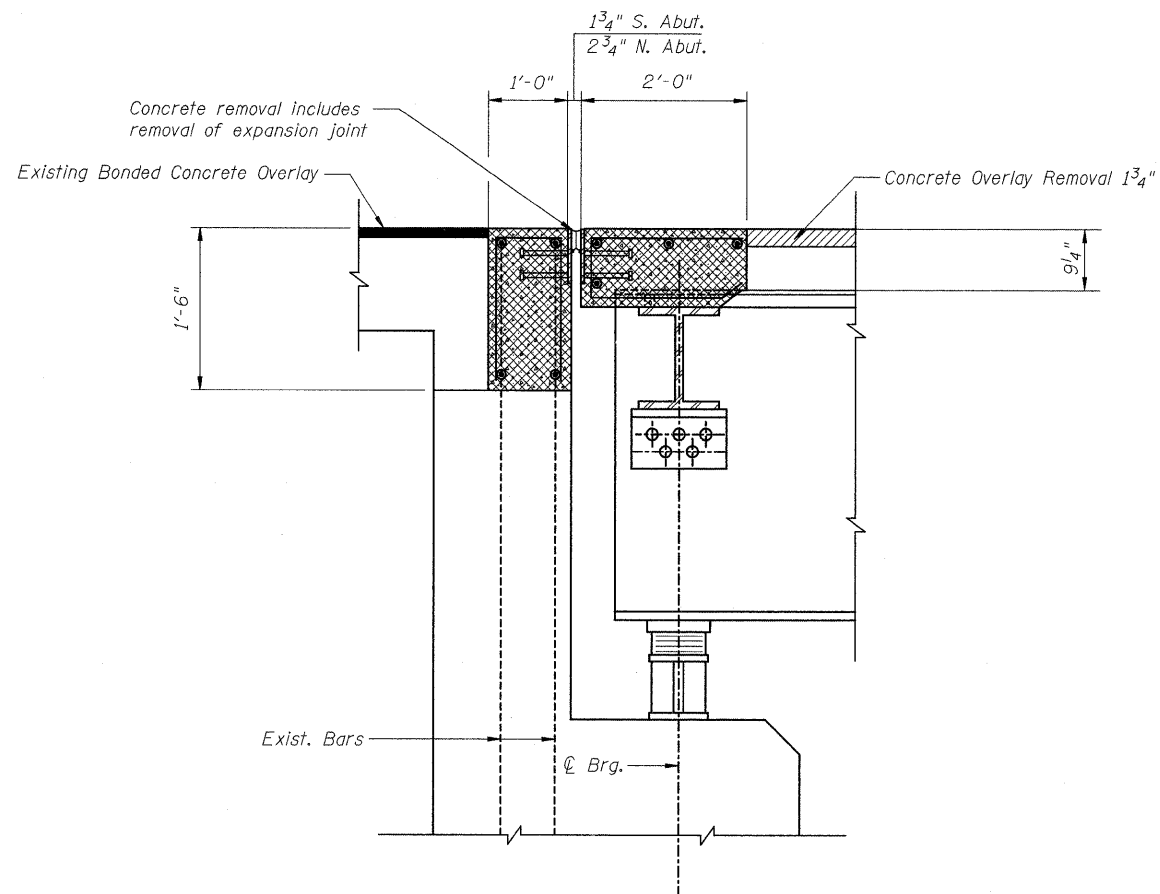
JOINT RECONSTRUCTION DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
FAI 74	#	ROCK ISLAND	246	216	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

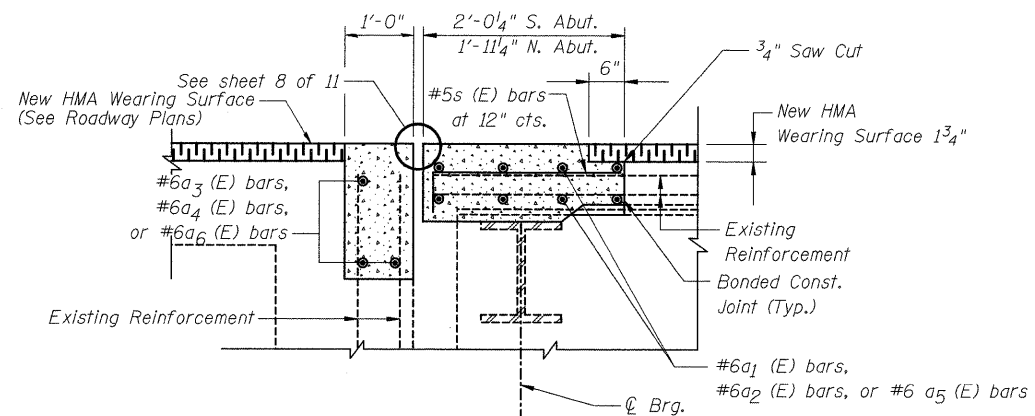
* 81 (1-2, 1, 2-2) RS-1 & M



EXISTING SECTION D-D THRU ABUTMENT
(North & South Abutment)

LEGEND

- Concrete Removal
- Bridge Deck Scarification



PROPOSED SECTION D-D THRU ABUTMENT
(North & South Abutment)

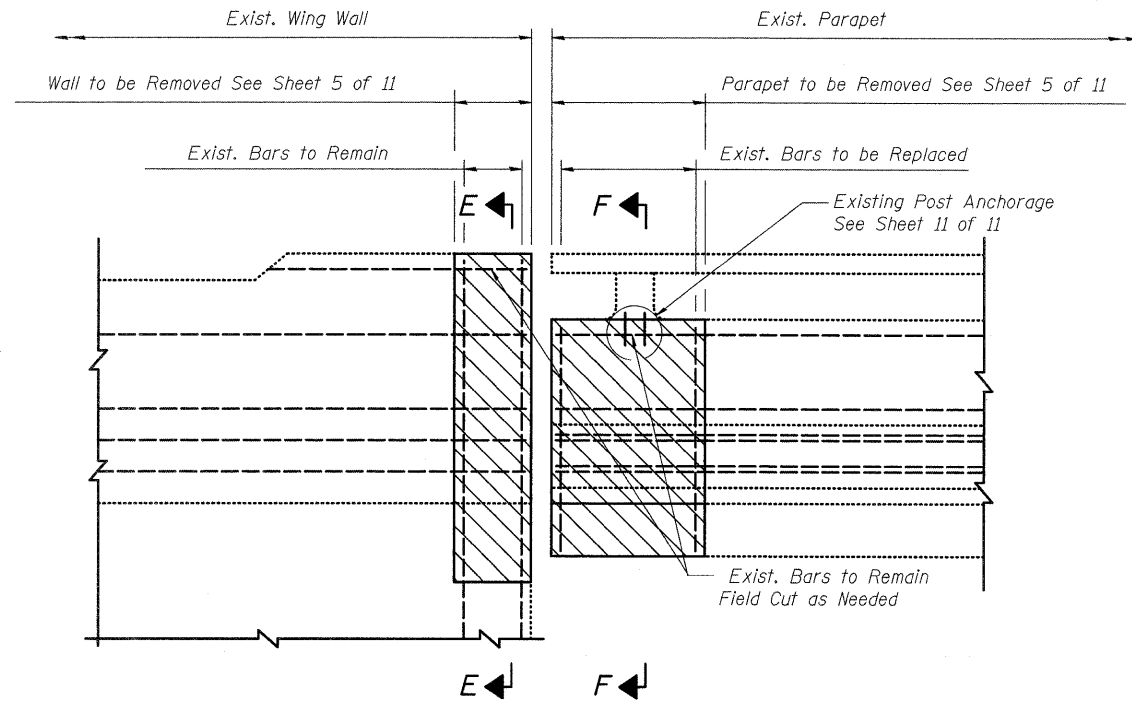
DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

JOINT RECONSTRUCTION DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

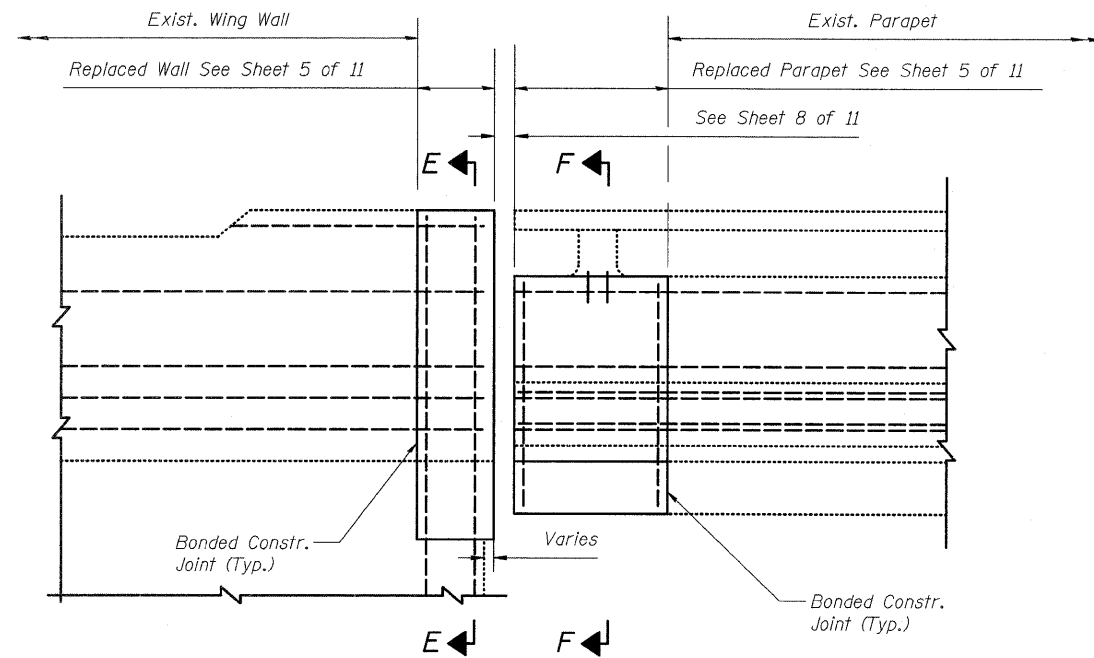
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAI 74	SECTION #	COUNTY ROCK ISLAND	TOTAL SHEETS 246	SHEET NO. 217	SHEET NO. 7 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-			

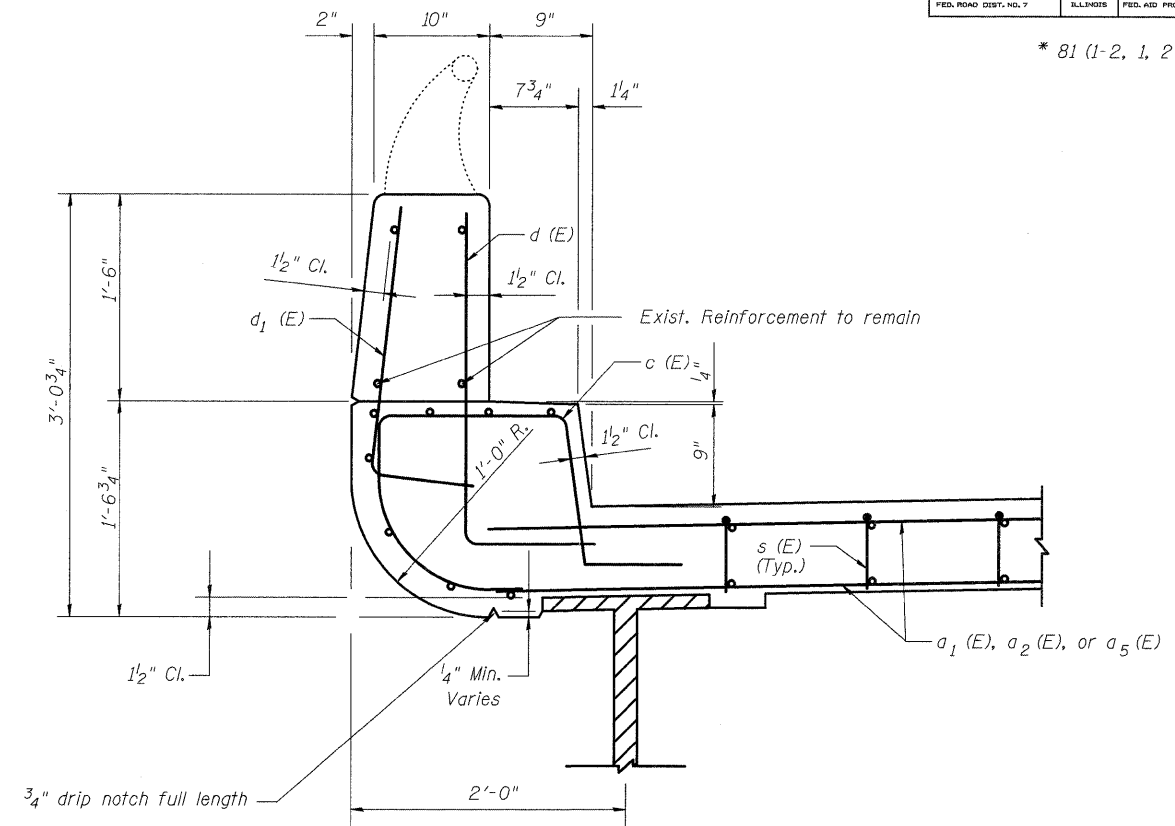
* 81 (1-2, 1, 2-2) RS-1 & M



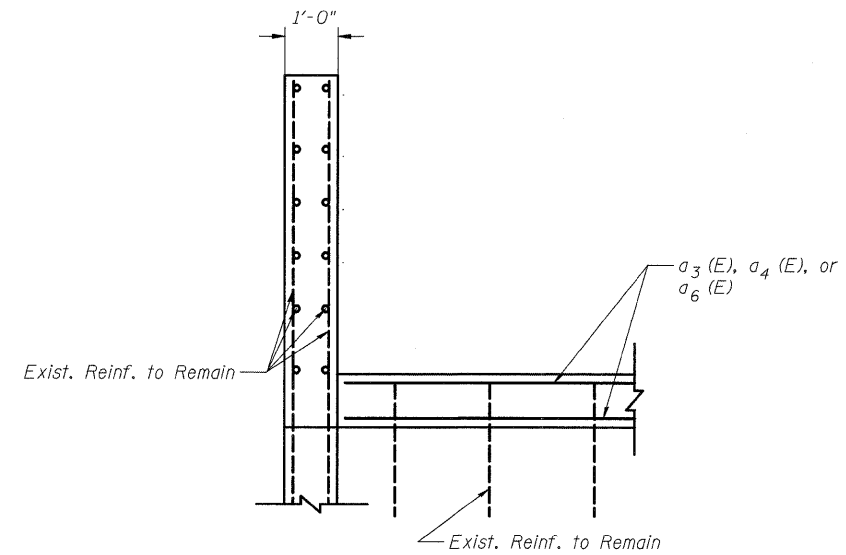
ELEVATION OF CONCRETE REMOVAL THRU PARAPET AND WING WALL



ELEVATION OF CONCRETE REPLACEMENT THRU PARAPET AND WING WALL



SECTION F-F THRU BRIDGE DECK PARAPET



SECTION E-E THRU ABUTMENT BACKWALL AND WING WALL

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal areas shall be saw cut 3/4" prior to the removal of concrete.

PARAPET AND RETAINING WALL DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

* 81 (1-2, 1, 2-2) RS-1 & M

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

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

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.

ROLLED THREAD DOWEL BAR



** ONE PIECE

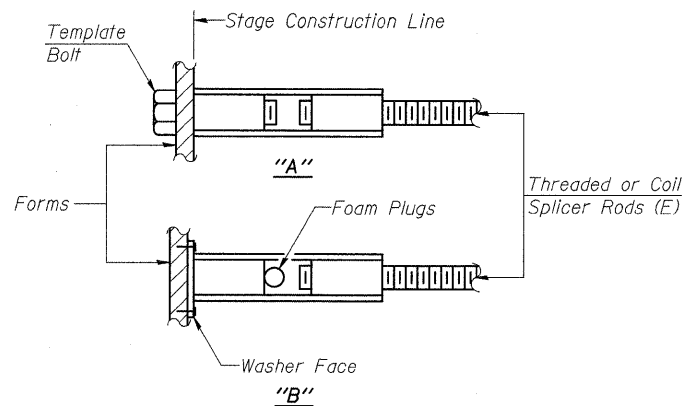
Wire Connector



WELDED SECTIONS

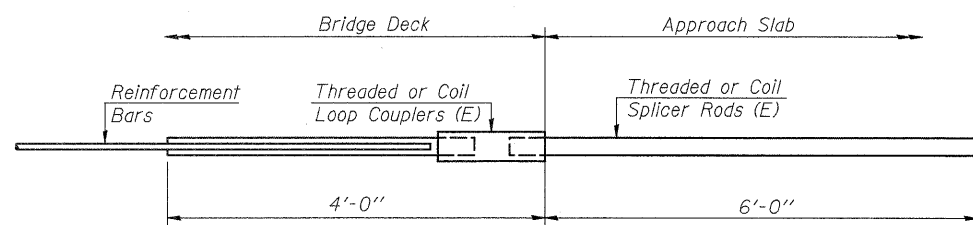
BAR SPLICER ASSEMBLY ALTERNATIVES

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

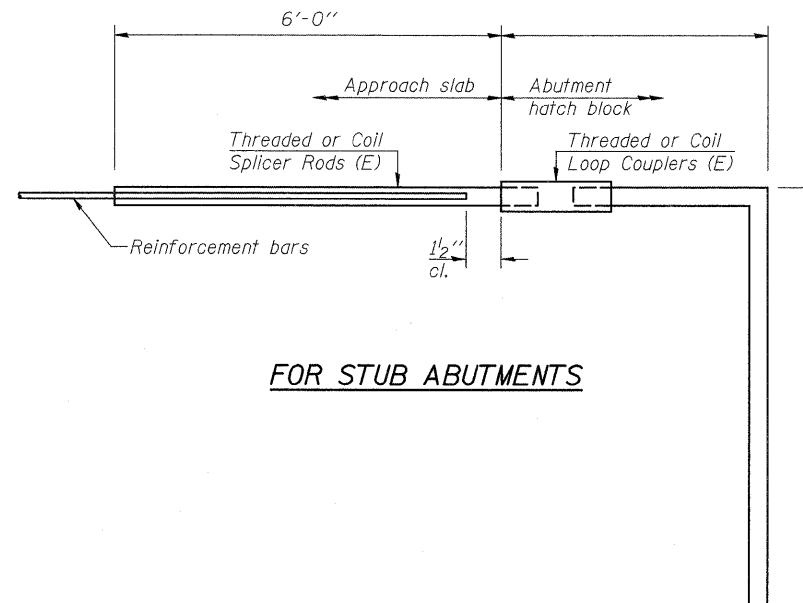


INSTALLATION AND SETTING METHODS

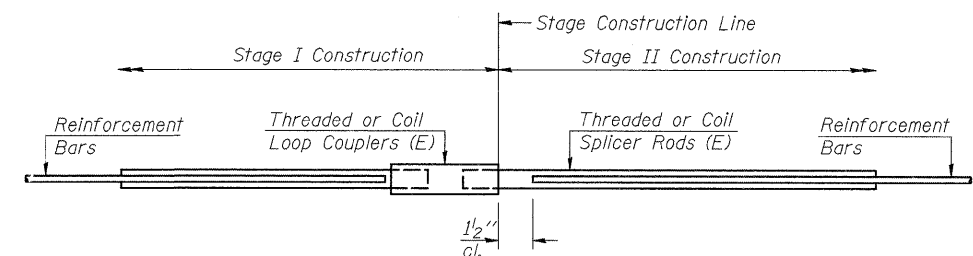
"A" :Set bar splicer assembly by means of a template bolt.
"B" :Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

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

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

Bar Size	No. Assemblies Required	Location
#5	8	Bridge Deck at South Abutment
#5	8	Bridge Deck at North Abutment
#6	3	South Abutment Backwall
#6	3	North Abutment Backwall

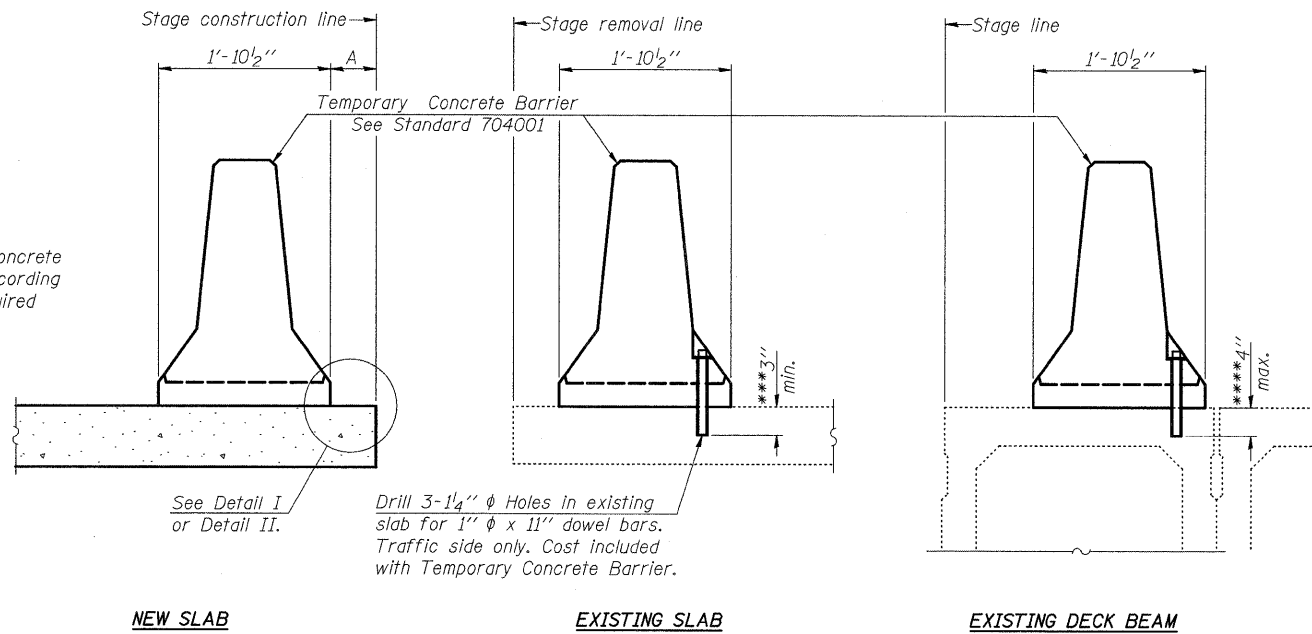
DESIGNED DFM
CHECKED DSG
DRAWN EBS
CHECKED DFM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAI 74	*	ROCK ISLAND	246	220	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

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".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES

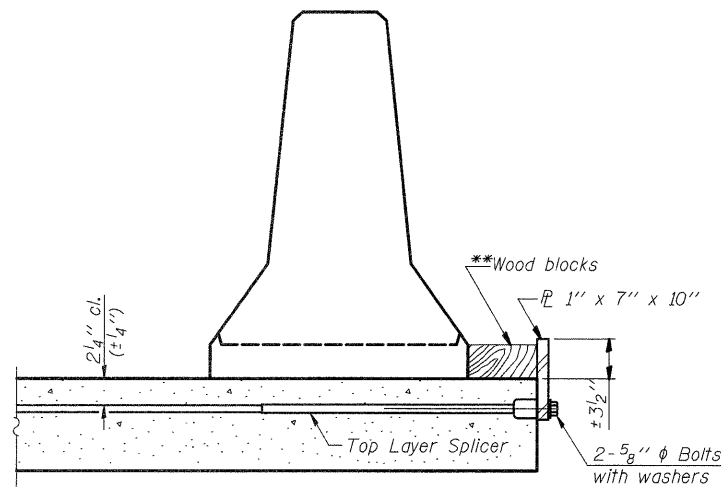
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

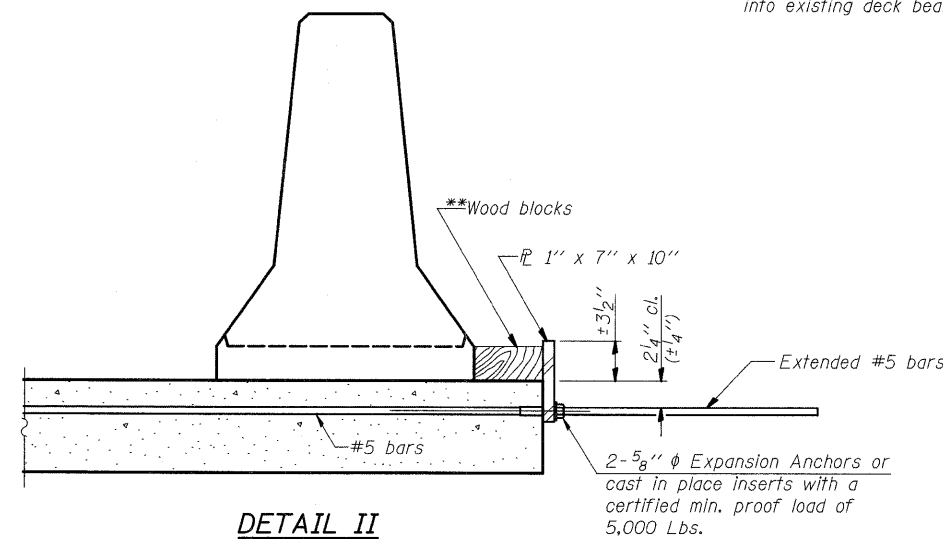
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

***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.

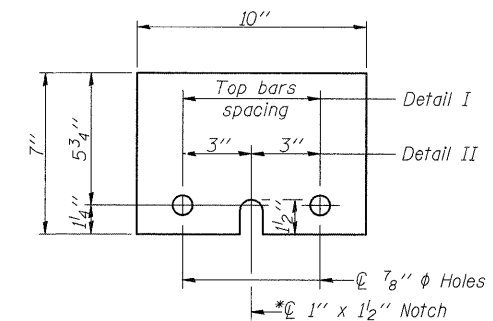


DETAIL I



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.



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

*Required only with Detail II

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

R-27

5-16-08

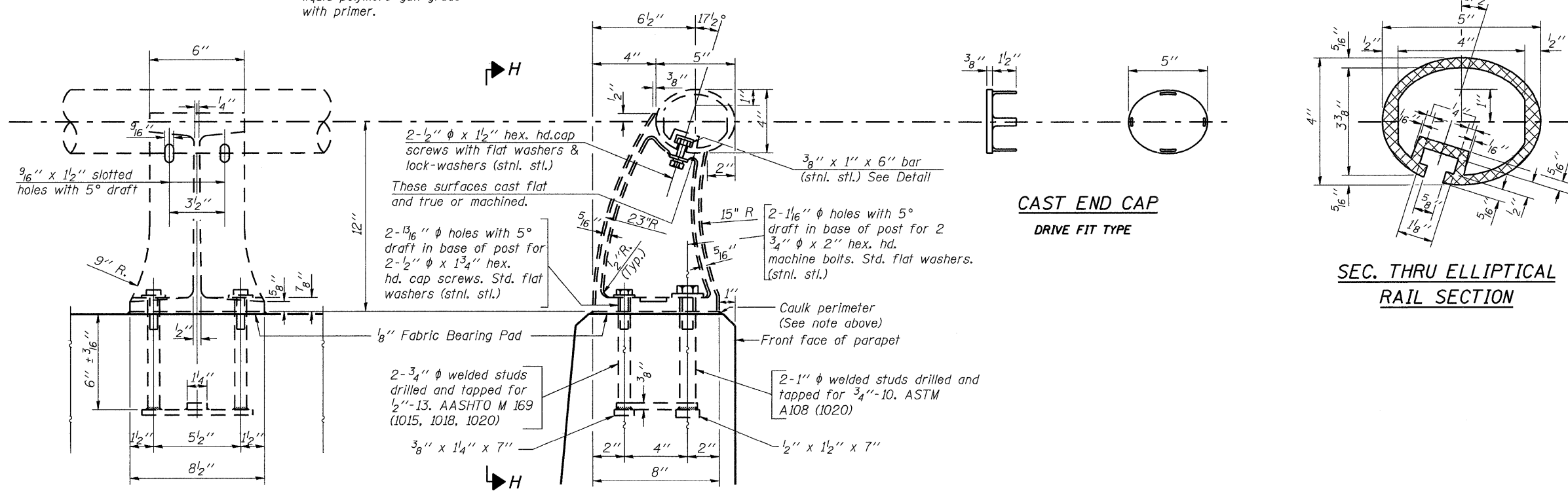
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	ROCK ISLAND	246	221
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		11 SHEETS

* 81 (1-2, 1, 2-2) RS-1 & M

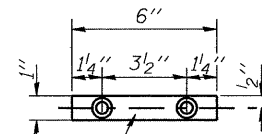
NOTE:
Seal perimeter of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers-gun grade with primer.



VIEW H-H

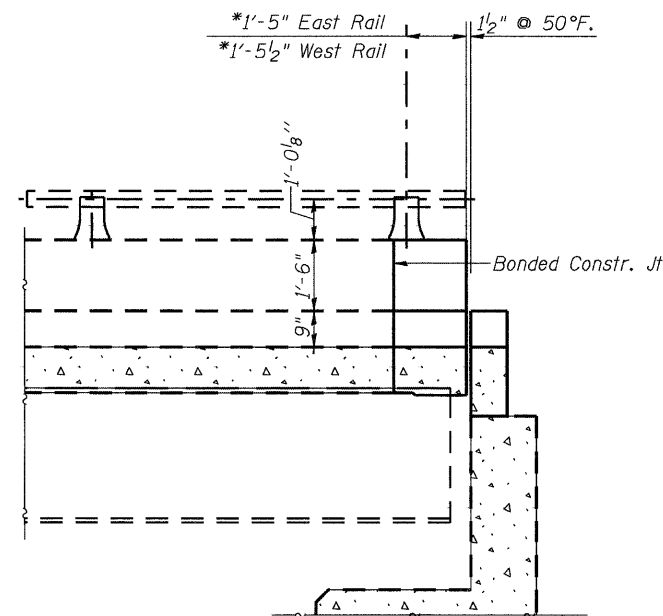
SECTION G-G

RAIL POST DETAILS

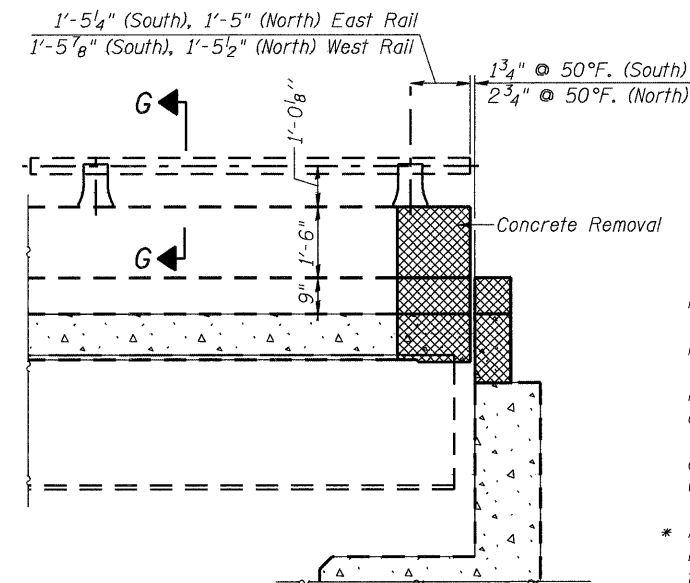


1" x 3/8" Bar 6" Lg. (Stnl. Stl.)
Drill & tap 2 holes 1/2"-13

CLAMP BAR



INSIDE VIEW AT PROPOSED ABUTMENT



INSIDE VIEW AT EXISTING ABUTMENT

Notes:

For concrete removal limits See Sheet 5 of 11.

Remove and reuse railing, including posts and anchors, where concrete removal affects existing rail posts. Cost included with Concrete Superstructure. If anchors are damaged during construction, they shall be replaced and are included with Concrete Removal.

* Actual distance varies. New joints are skewed through parapet. Length of rail shall be adjusted as detailed with a flush cut and the cast end cap shall be reused.

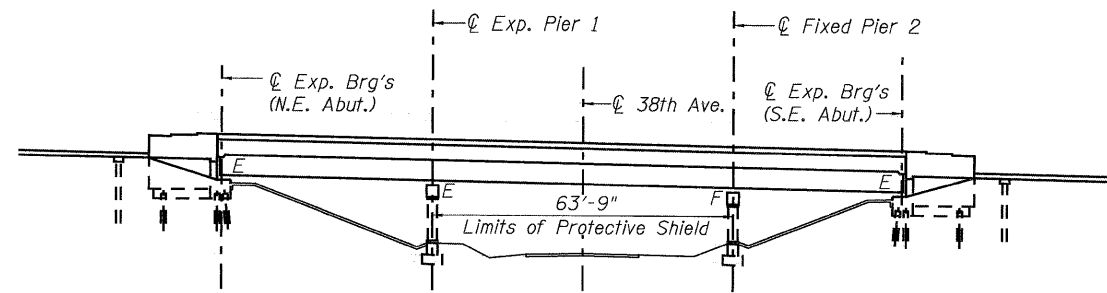
DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

RAILING DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0109

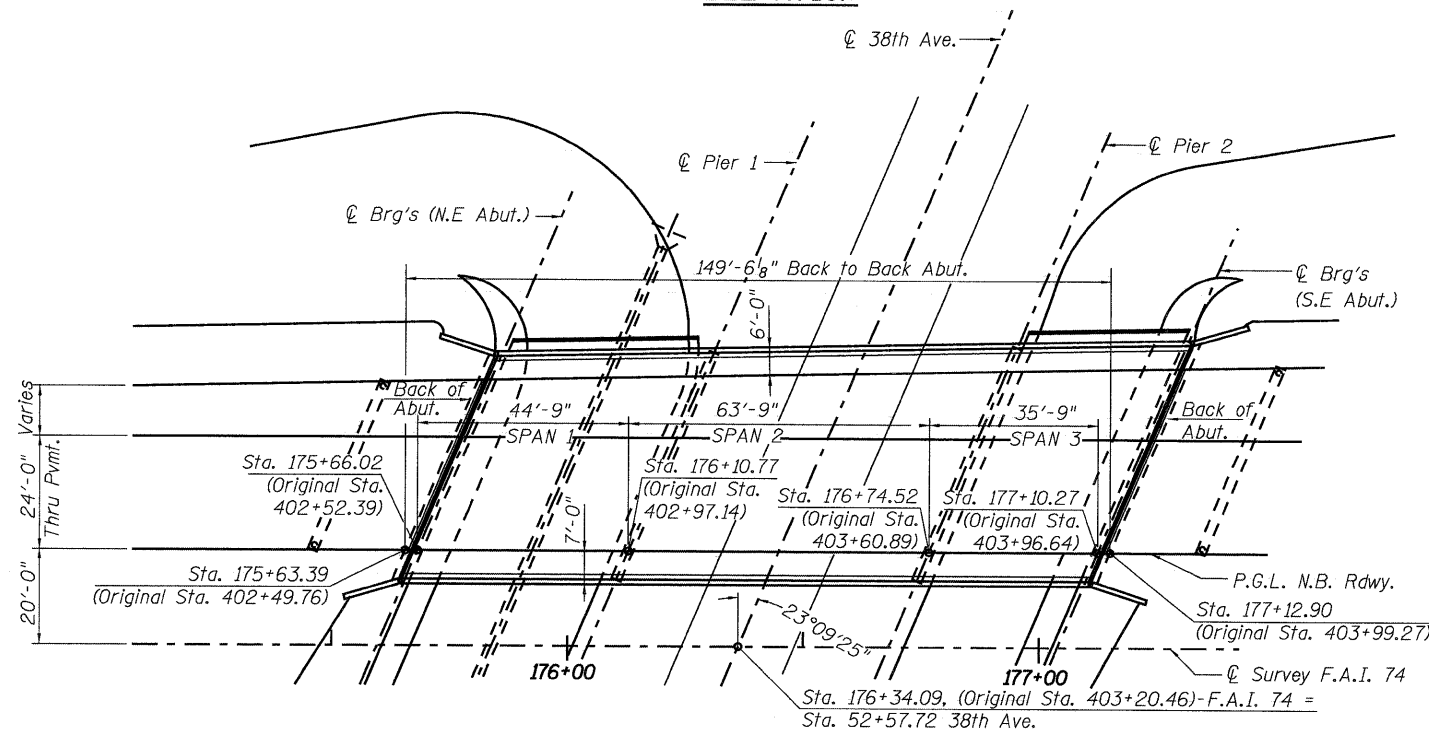
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAI 74	*	ROCK ISLAND	246	222
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		11 SHEETS

* 81 (1-2, 1, 2-2) RS-1 & M



ELEVATION



PLAN

GENERAL NOTES

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

Existing reinforcement bars extending into the removal areas 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.

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

Reinforcement bars designated (E) shall be epoxy coated.

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 materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for work.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and all other loose, potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

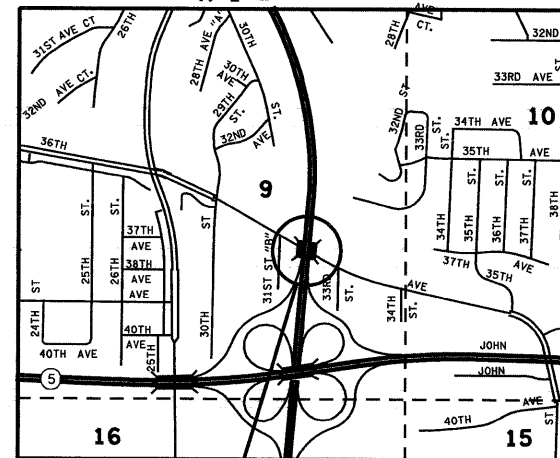
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that can not be removed by grinding, in. deep shall be identified and reported to the bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

The existing structural steel coating contains lead. The contractor shall take appropriate precautions to deal with the presence of lead on this project.

Quantities of Deck Slab Repair (Full Depth, Type I), Deck Slab Repair (Full Depth, Type II) and Deck Slab Repair (Partial) are approximated. Locations will be determined by the Resident Engineer following removal of the 2" Concrete Overlay. Actual repair locations shall be shown on the as-built plans. Contractor will be paid for the quantities furnished.

Joint openings shall be adjusted according to article 520.04 of the standard specifications when the deck is poured of an ambient temperature other than 50° F.

R-1-W



LOCATION PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymerized HMA surface Course Mix "E", N70	TON	66.6
Concrete Removal	CU. YD.	15.8
Concrete Superstructure	CU. YD.	15.8
Reinforcement Bars, Epoxy Coated	POUND	2080
Bar Splicers	EACH	22
Protective Shield	SQ. YD.	330
Waterproofing Membrane System	SQ. YD.	746.2
Bridge Deck Scarification	SQ. YD.	740.5
Preformed Joint Strip Seal	FOOT	107
Structural Repair of Concrete (Depth > 5")	SQ. FT.	27
Deck Slab repair (Full Depth, Type I)	SQ. YD.	70
Deck Slab repair (Full Depth, Type II)	SQ. YD.	70
Deck Slab repair (Partial)	SQ. YD.	20
Diamond Grinding (Bridge Section)	SQ. YD.	746.2

STATE OF ILLINOIS
DAVID F. MAXWELL
081-005455
ST. LOUIS, MO.
LICENSED STRUCTURAL ENGINEER

David F. Maxwell

David F. Maxwell, S.E. Reg. No. 081-005455

Date: 9/10/08

My registration expires November 30, 2018.

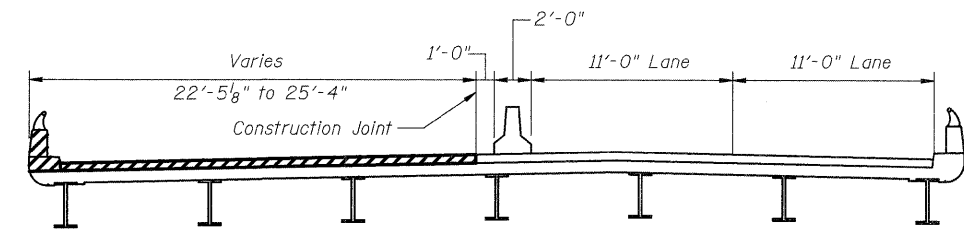
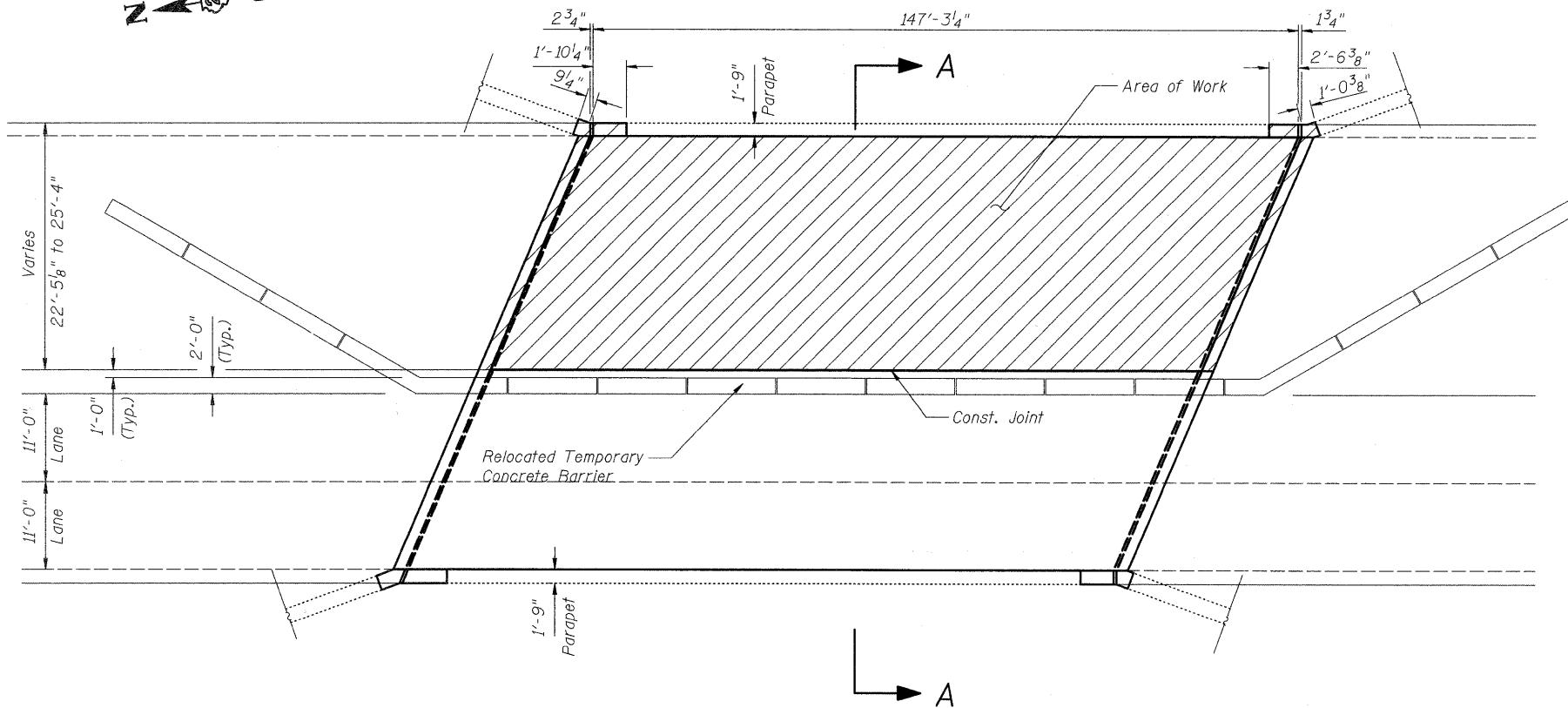
PLAN AND ELEVATION
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	ROCK ISLAND	246	223	11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

* 81 (1-2, 1, 2-2) RS-1 & M

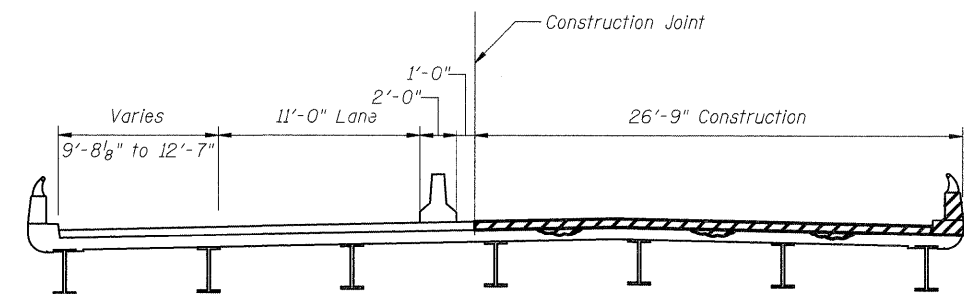
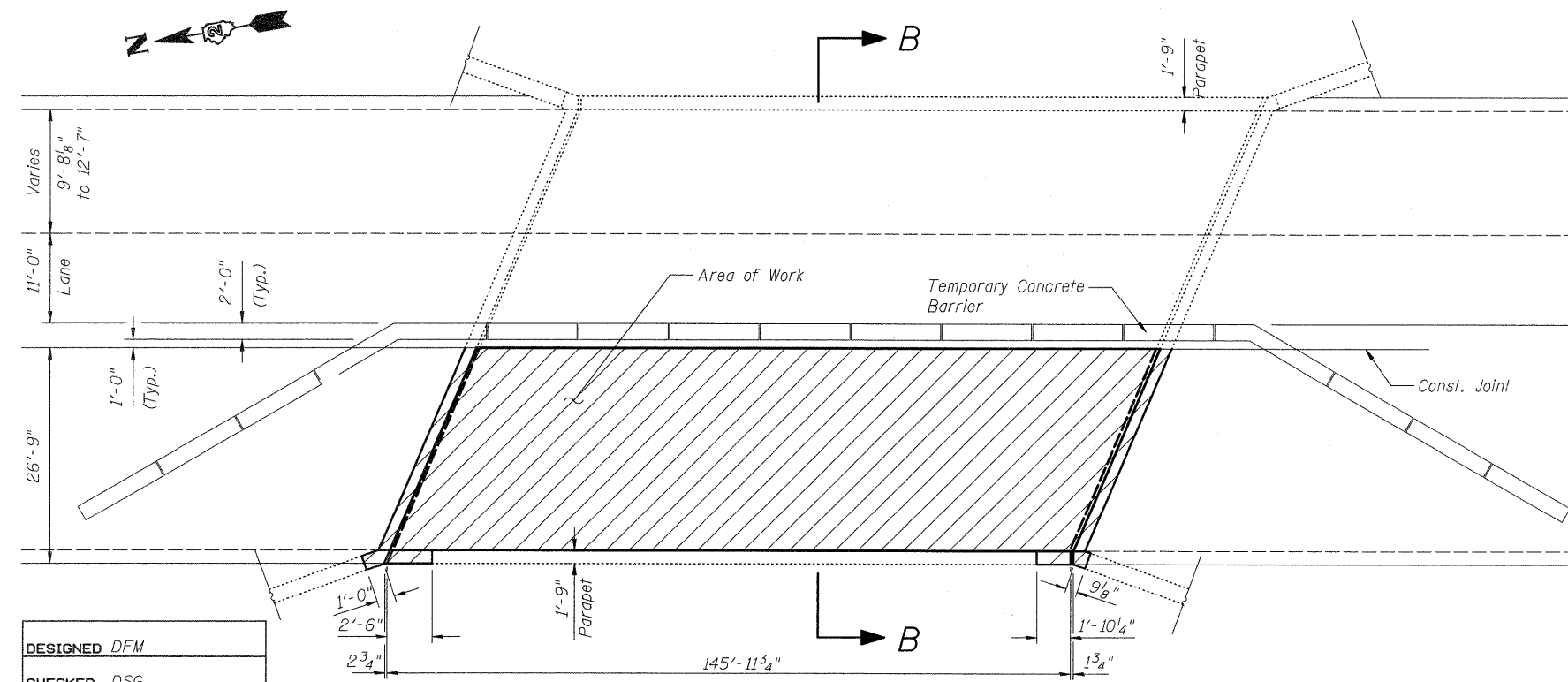


SECTION A-A

STAGE I CONSTRUCTION

- Install temporary concrete barrier as shown. *
- Move traffic to Stage I traffic lanes.
- Sawcut concrete wearing surface and remove.
- Replace bridge joints and repair deck and North Abutment.
- Install new wearing surface & waterproofing membrane.

* For temporary concrete barrier details, see sheet 10 of 11.



SECTION B-B

STAGE II CONSTRUCTION

- Relocate temporary concrete barrier as shown. *
- Move traffic to Stage II traffic lanes.
- Remove concrete wearing surface.
- Replace bridge joints and repair deck and North Abutment.
- Install new wearing surface & waterproofing membrane.
- Remove temporary concrete barrier.

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

STAGING PLAN
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

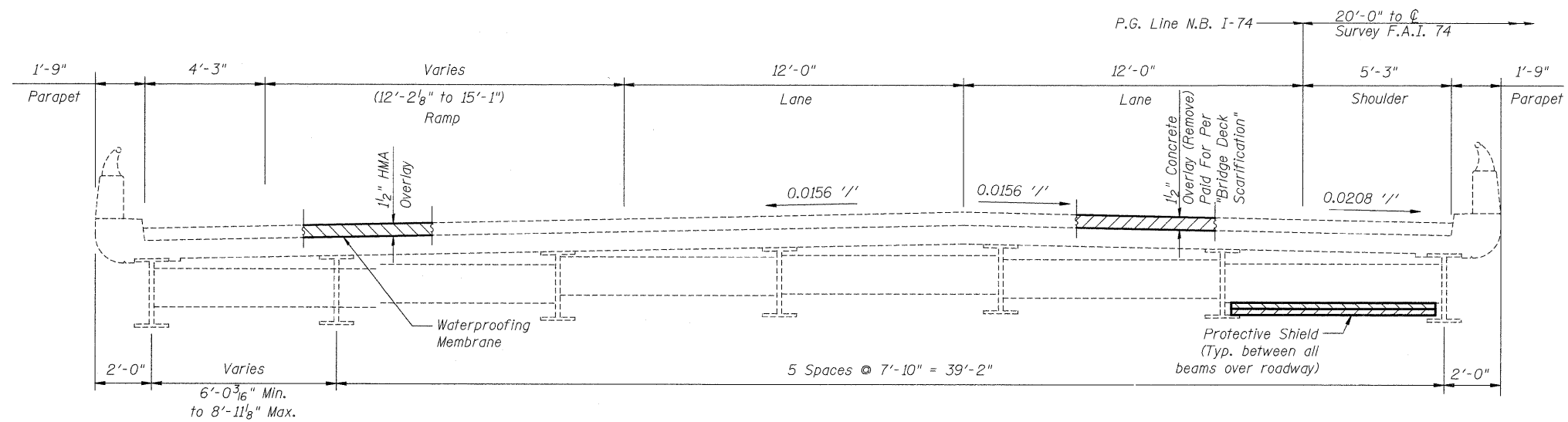
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 11 SHEETS
FAI 74	*	ROCK ISLAND	246	224	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymerized HMA Surface Course Mix "E", N90	TON	66.6
Protective Shield	SQ.YD.	330
Waterproofing Membrane System	SQ.YD.	746.2
Bridge Deck Scarification	SQ.YD.	740.5



CROSS SECTION
(Looking South)

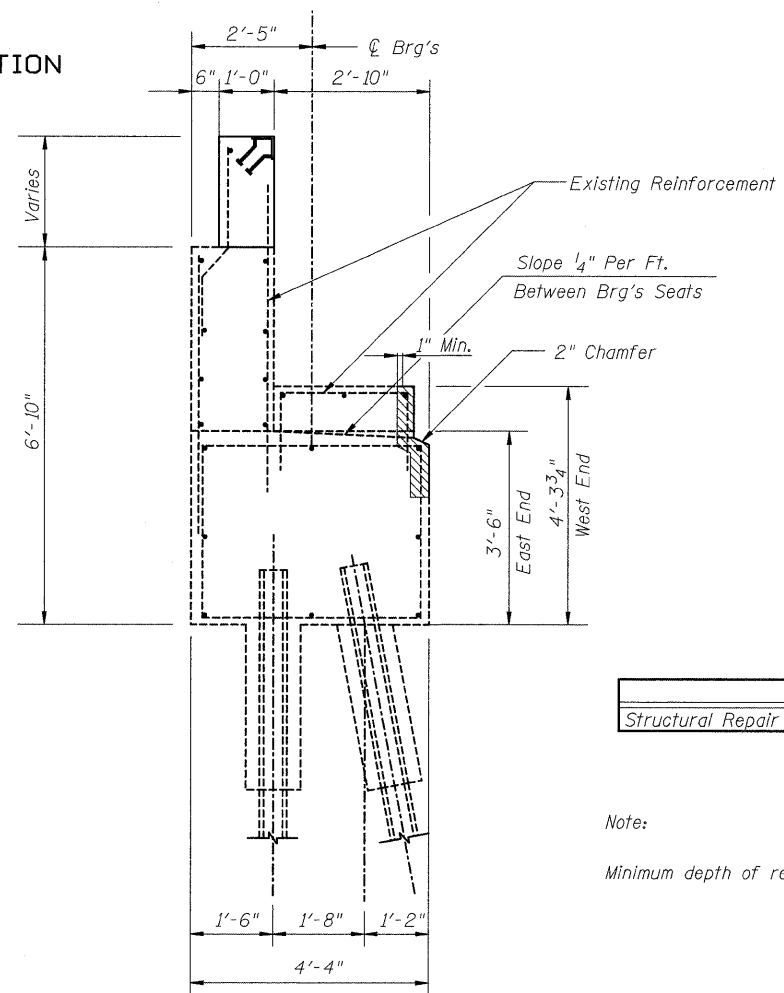
DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

BRIDGE REPAIR DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAI 74	SECTION *	COUNTY ROCK ISLAND	TOTAL SHEETS 246	SHEET NO. 225	SHEET NO. 4 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M



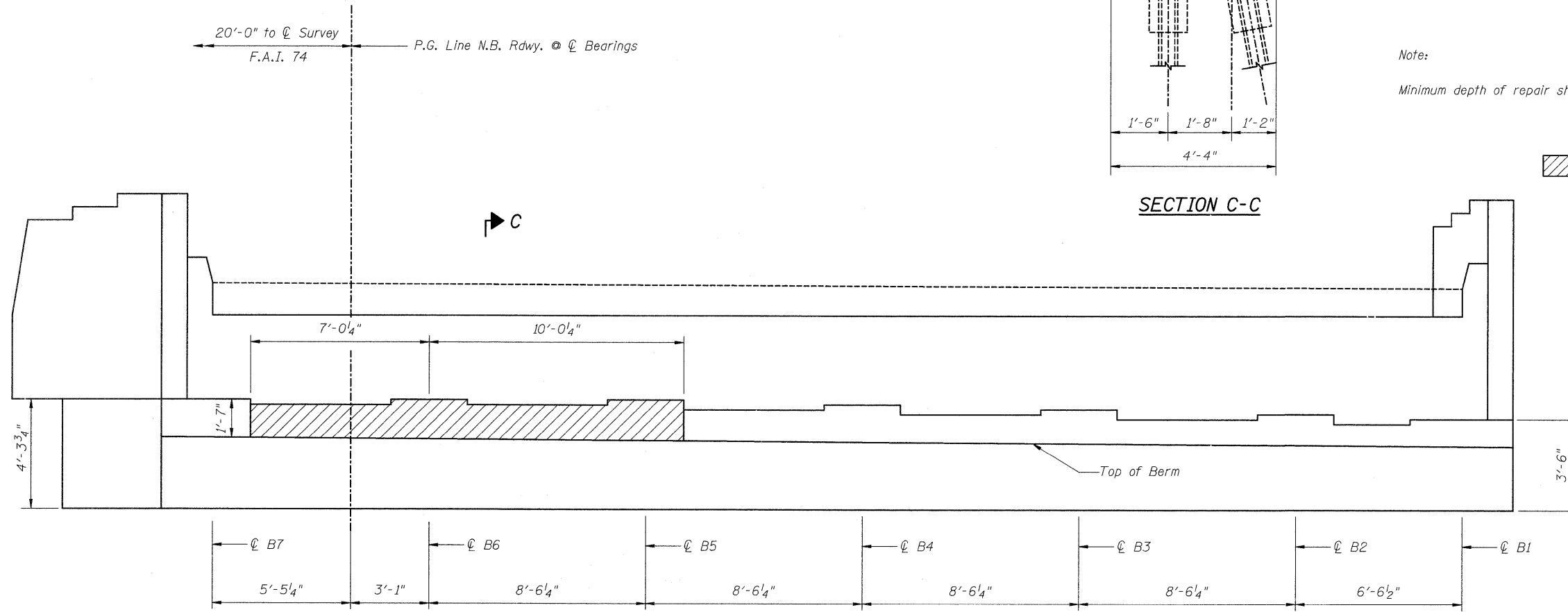
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth > 5")	SQ.FT.	27

Note:

Minimum depth of repair shall be 1" below exposed reinforcing steel.

Structural Repair of Concrete (Depth > 5")



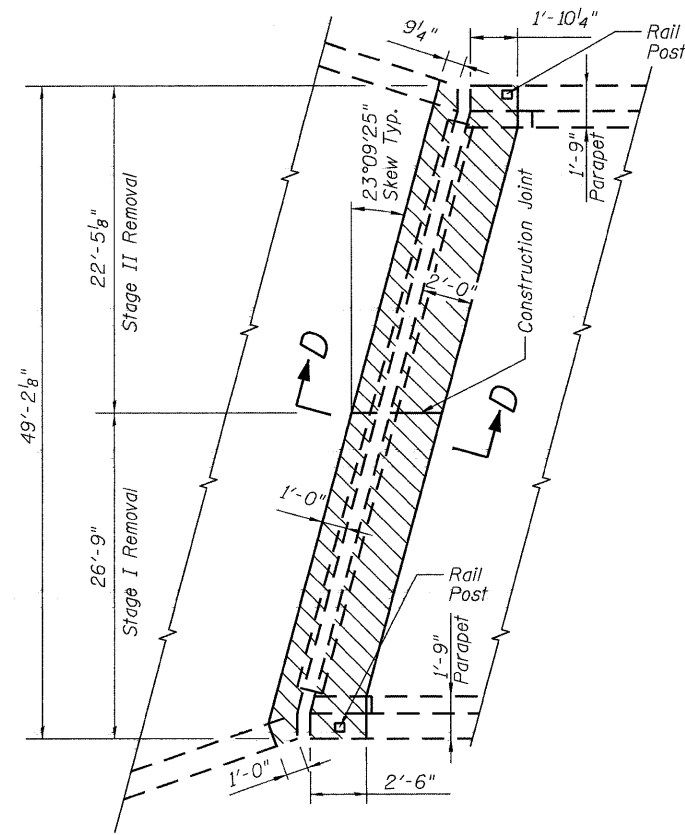
NORTH ABUTMENT ELEVATION
(Looking North)

DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

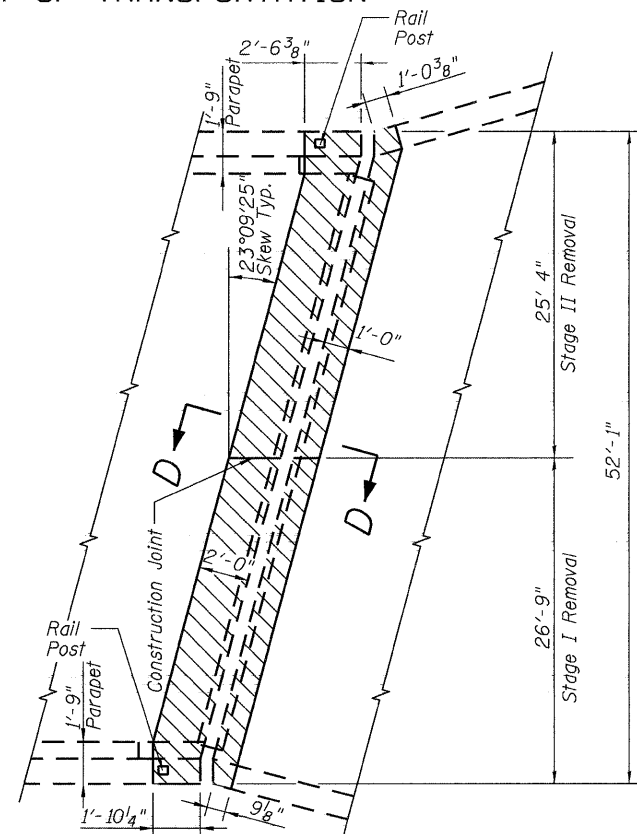
BRIDGE REPAIR DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

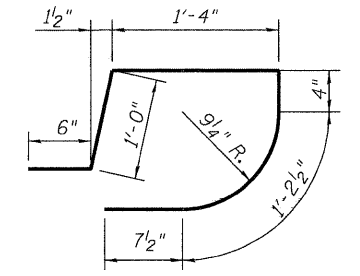
ROUTE NO. FAI 74	SECTION *	COUNTY ROCK ISLAND	STATE DISTRICT 246	SHEET NO. 226	SHEET NO. 5 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-	



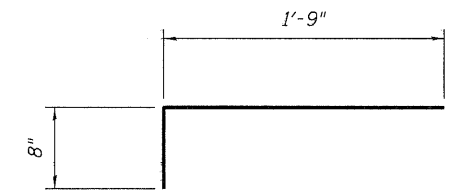
EXISTING PARTIAL PLAN - NORTH ABUTMENT



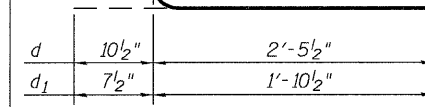
EXISTING PARTIAL PLAN - SOUTH ABUTMENT



BAR c (E)



BAR s (E)



BAR d & d₁ (E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a ₁ (E)	16	#6	27'-6"	
a ₂ (E)	8	#6	23'-2"	
a ₃ (E)	6	#6	27'-5"	
a ₄ (E)	3	#6	23'-2"	
a ₅ (E)	8	#6	26'-4"	
a ₆ (E)	3	#6	26'-4"	
c (E)	12	#4	5'-0"	U
d (E)	12	#6	3'-4"	
d ₁ (E)	12	#4	2'-6"	
s (E)	94	#5	2'-5"	
Reinforcement Bars Epoxy Coated			Pound	2080
Concrete Removal			Cu. Yd.	15.8
Concrete Superstructure			Cu. Yd.	15.8
Bar Splicer			Each	22

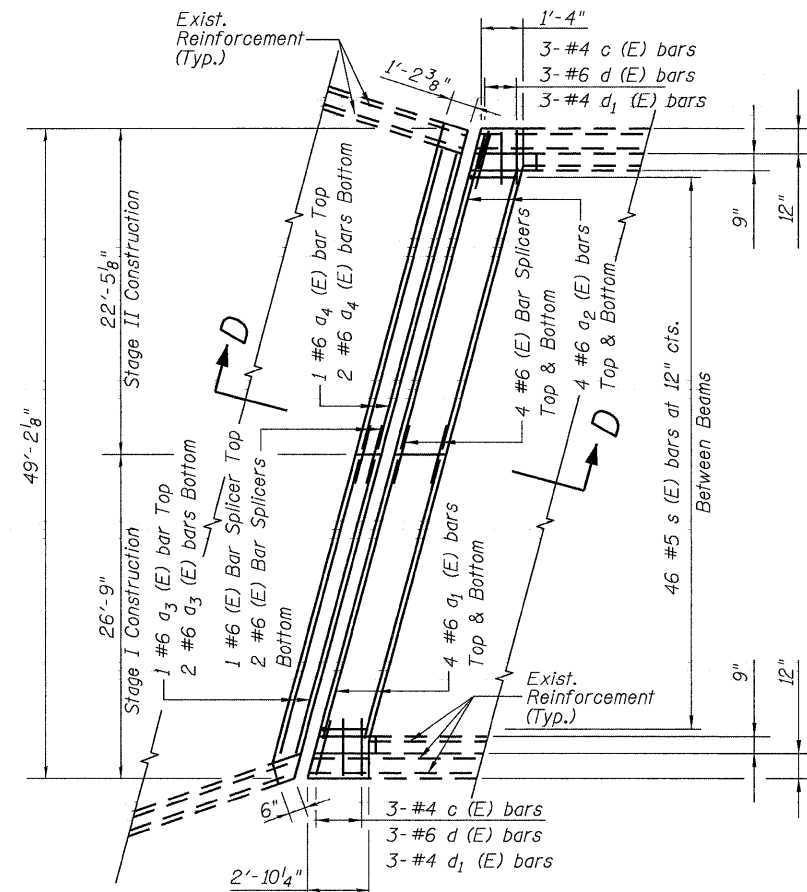
For bar splicer assembly details see sheet 9 of 11.

For Section D-D, see sheet 6 of 11.

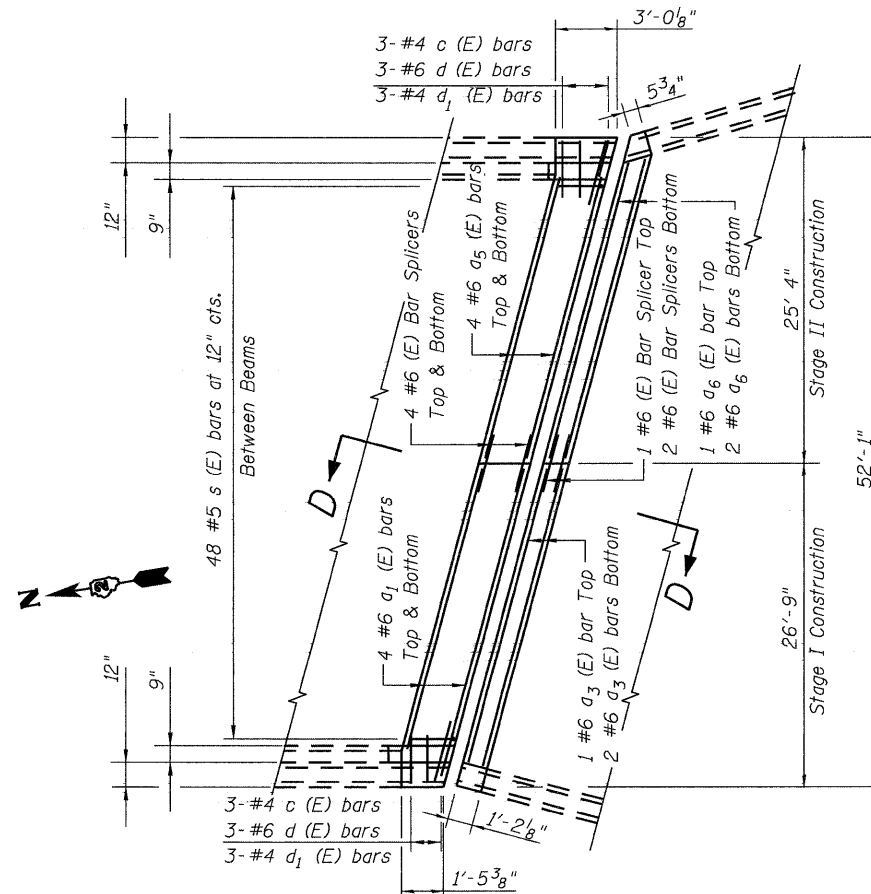
For rail post details see sheet 11 of 11.

LEGEND

- Concrete Removal
- Concrete Superstructure



PROPOSED PARTIAL PLAN - NORTH ABUTMENT



PROPOSED PARTIAL PLAN - SOUTH ABUTMENT

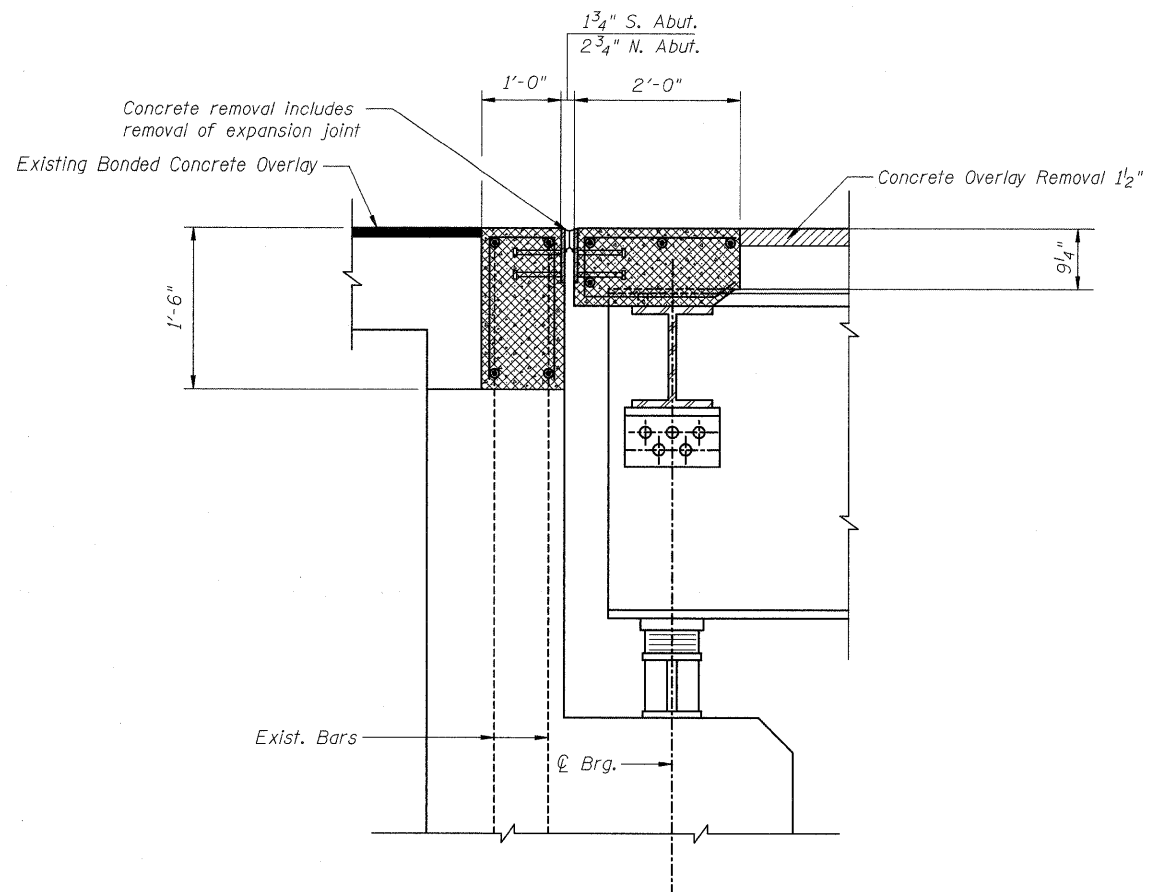
DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

JOINT RECONSTRUCTION DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
FAI 74	*	ROCK ISLAND	246	227	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

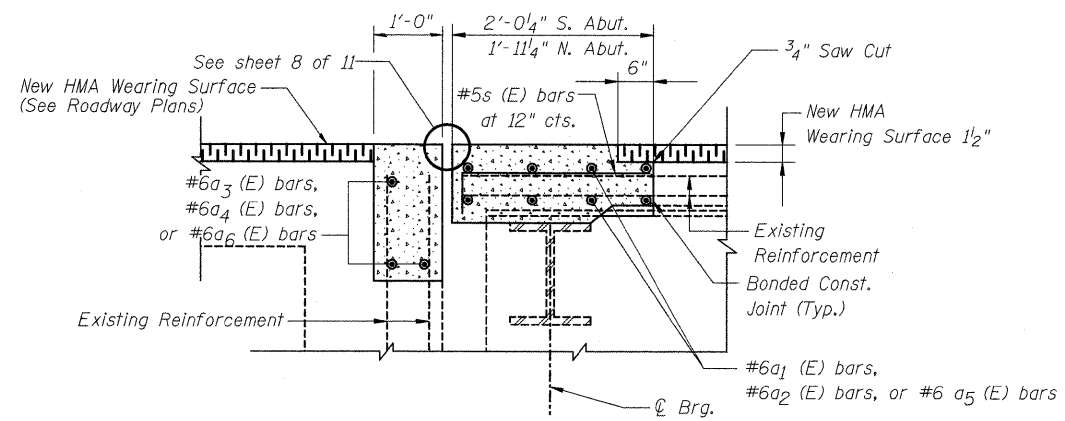
* 81 (1-2, 1, 2-2) RS-1 & M



EXISTING SECTION D-D THRU ABUTMENT
(North & South Abutment)

LEGEND

- Concrete Removal
- Bridge Deck Scarification



PROPOSED SECTION D-D THRU ABUTMENT
(North & South Abutment)

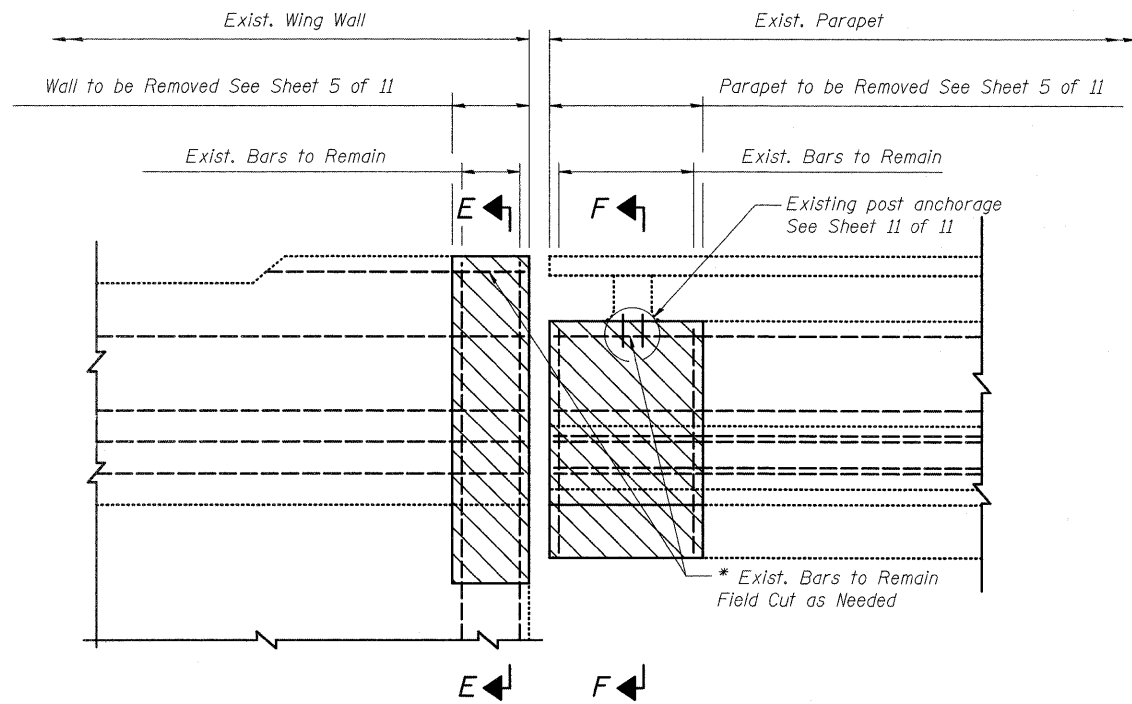
DESIGNED	DFM
CHECKED	DFM
DRAWN	EBS
CHECKED	DFM

BRIDGE REPAIR DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

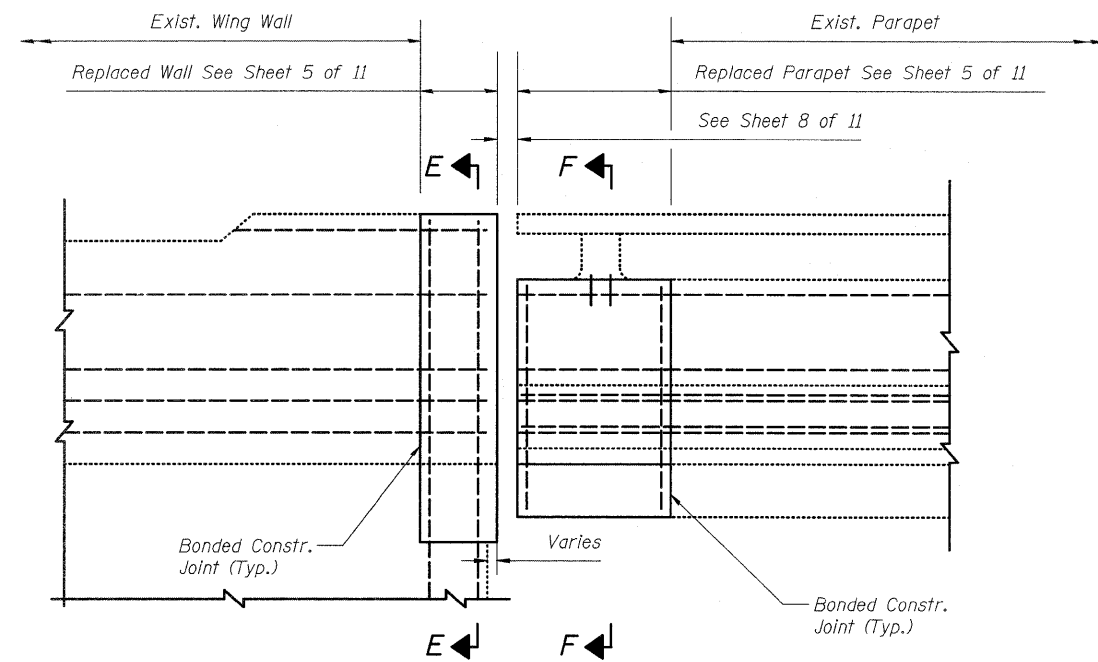
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAI 74	SECTION *	COUNTY ROCK ISLAND	TOTAL SHEETS 246	SHEET NO. 228	SHEET NO. 7 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			

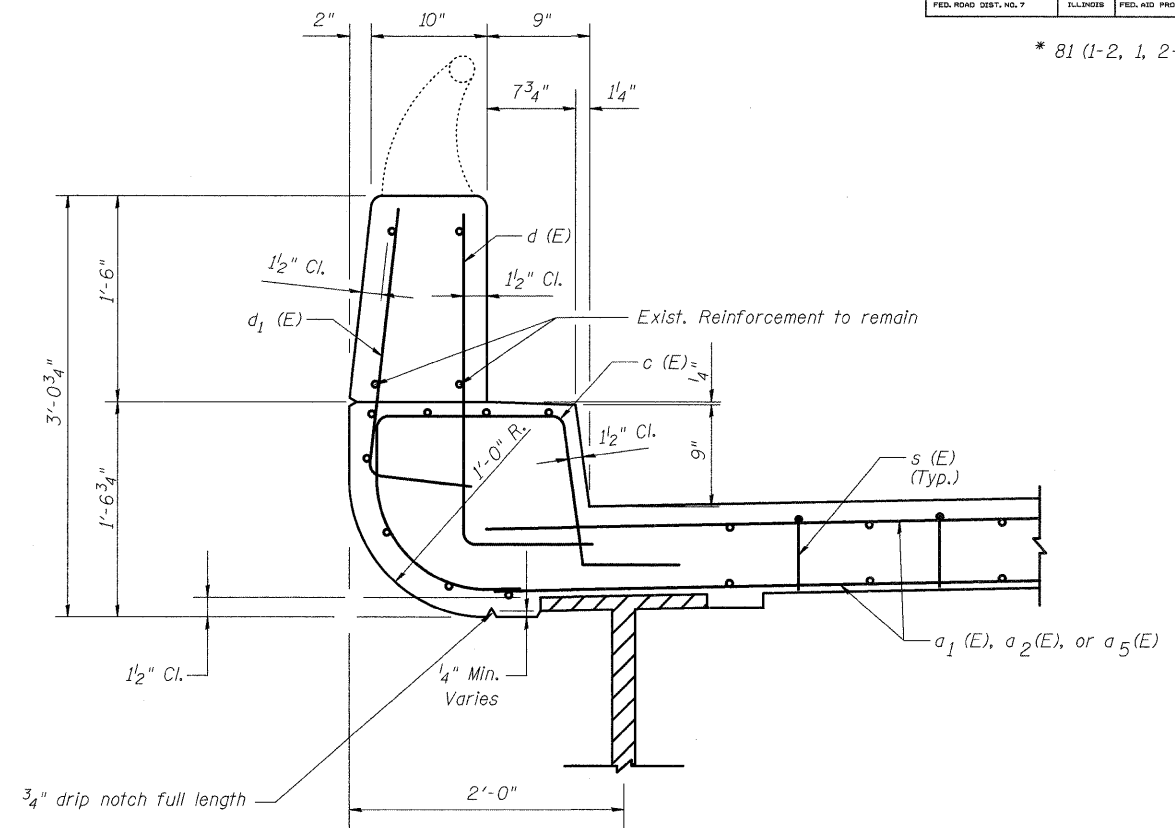
* 81 (1-2, 1, 2-2) RS-1 & M



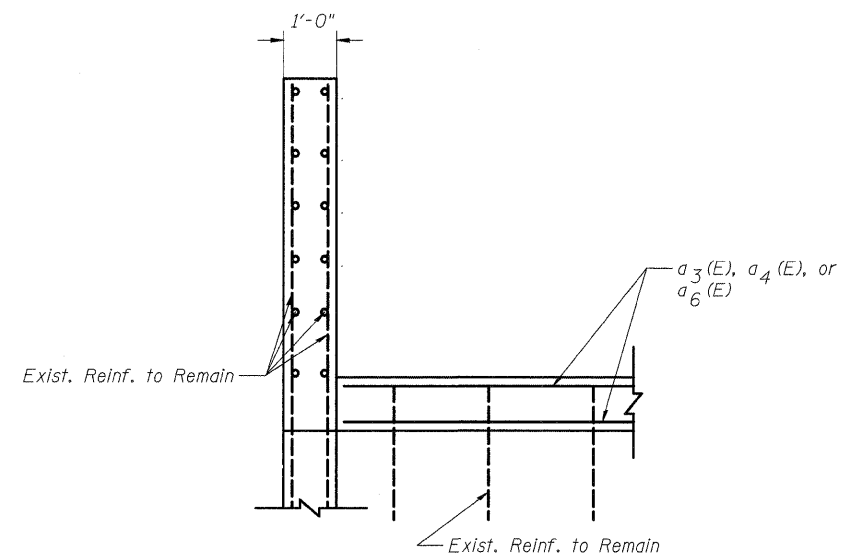
ELEVATION OF CONCRETE REMOVAL THRU PARAPET AND WING WALL



ELEVATION OF CONCRETE REPLACEMENT THRU PARAPET AND WING WALL



SECTION F-F THRU BRIDGE DECK PARAPET



SECTION E-E THRU ABUTMENT BACKWALL AND WING WALL

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

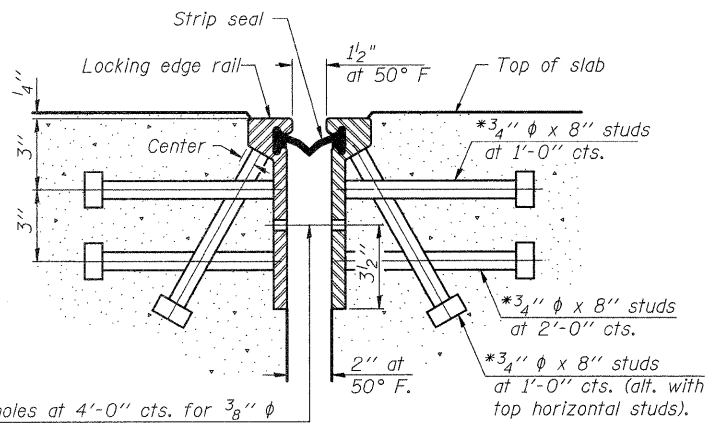
Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal areas shall be saw cut 3/4" prior to the removal of concrete.

PARAPET AND RETAINING WALL DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

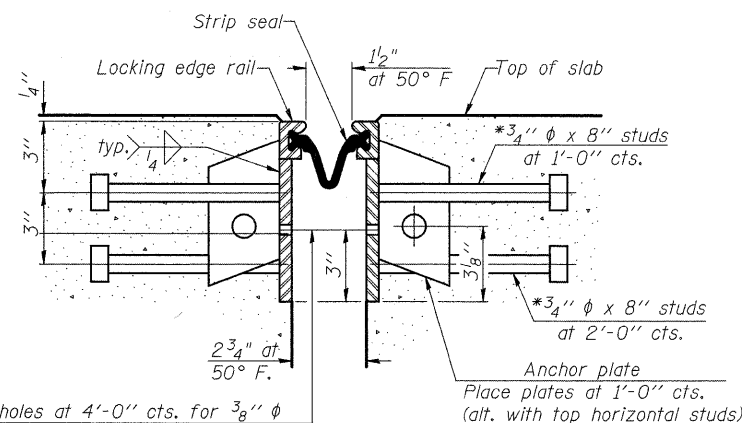
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
FAI 74	*	ROCK ISLAND	246	229	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

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



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.

SECTION THRU ROLLED RAIL JOINT



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.

SECTION THRU WELDED RAIL JOINT

Notes:

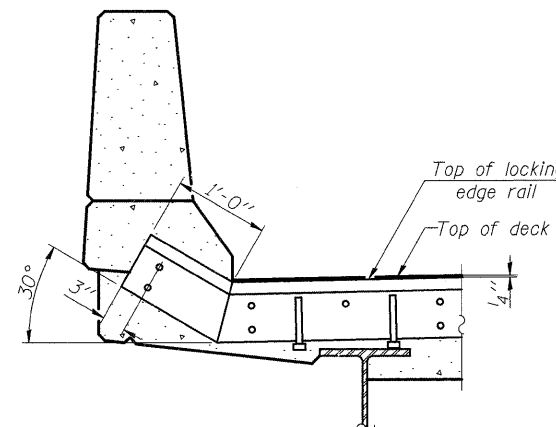
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 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.

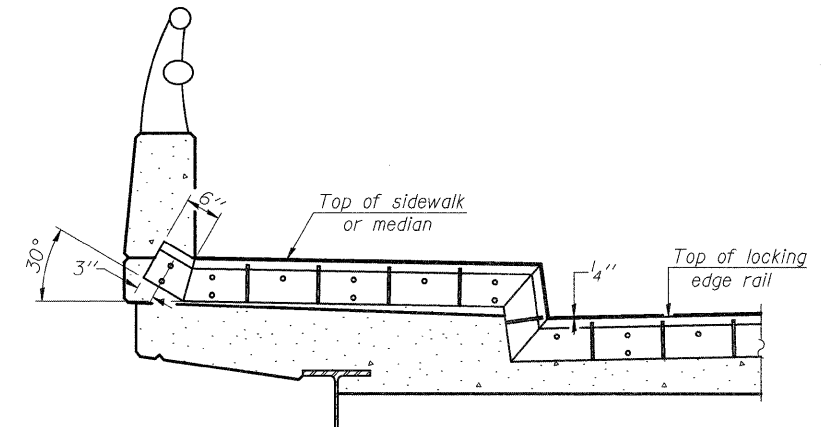
The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according 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.

* 81 (1-2, 1, 2-2) RS-1 & M

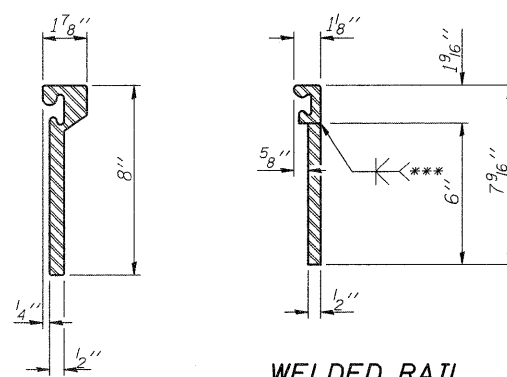


AT PARAPET



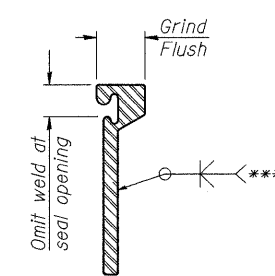
AT SIDEWALK OR MEDIAN

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.

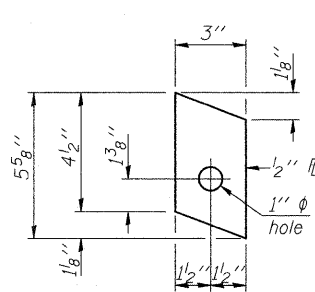


ROLLED EXTRUDED RAIL

WELDED RAIL



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

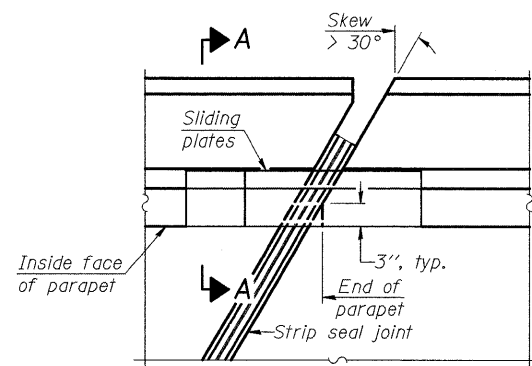


ANCHOR PLATE
(for welded rail)

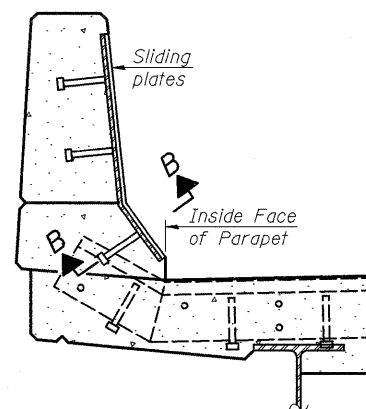
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS



PLAN

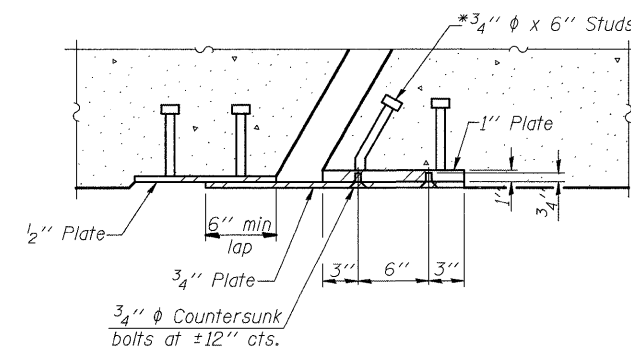


SECTION A-A

POINT BLOCK DETAILS

(for skews > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	107

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

EJ-SSJ

5-16-08

PREFORMED JOINT STRIP SEAL
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

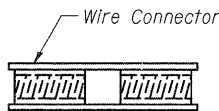
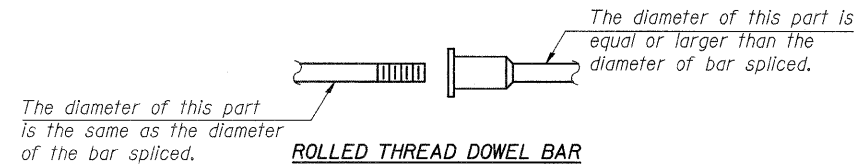
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
FAI 74	#	ROCK ISLAND	246	230	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

NOTES

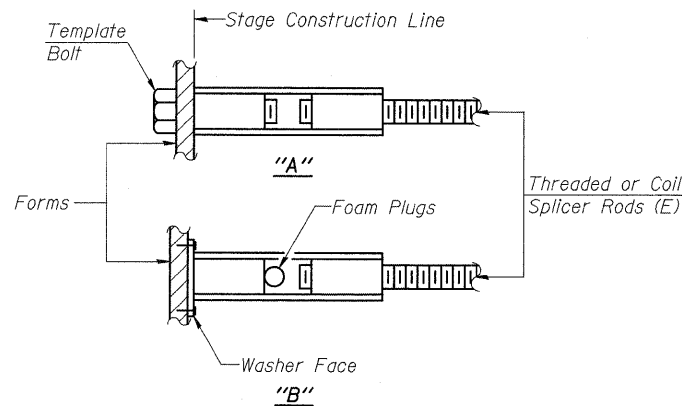
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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 = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete



BAR SPLICER ASSEMBLY ALTERNATIVES

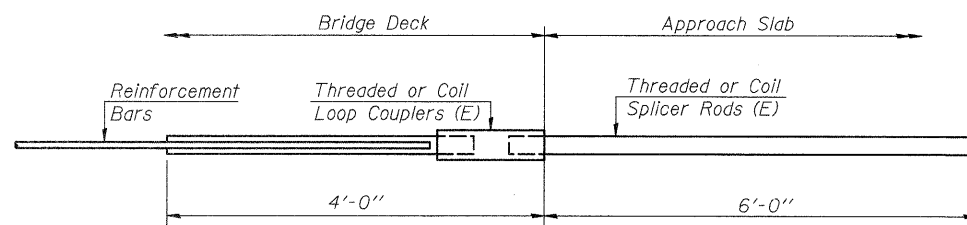
**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

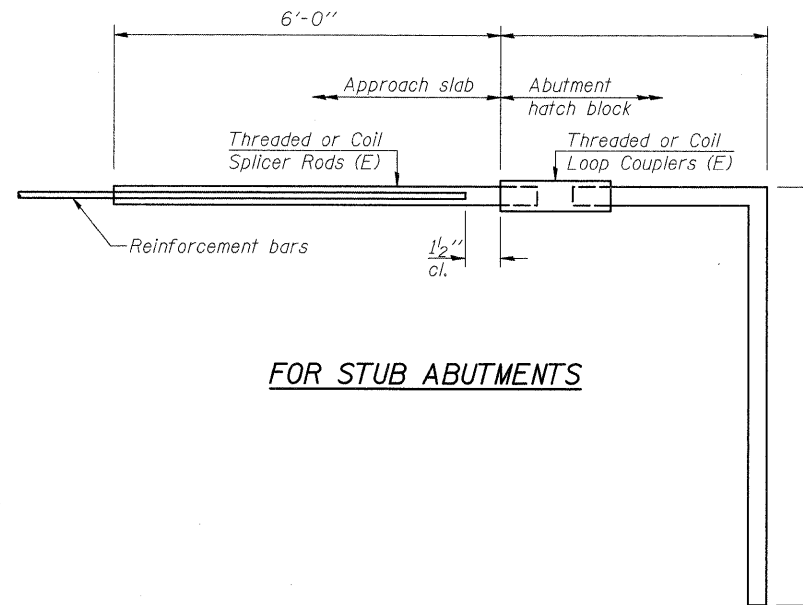
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

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



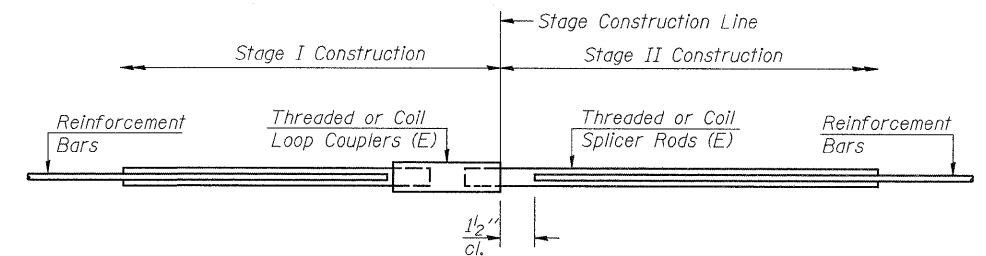
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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
#5	8	Bridge Deck at South Abutment
#5	8	Bridge Deck at North Abutment
#6	3	South Abutment Backwall
#6	3	North Abutment Backwall

DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

BSD-1

5-16-08

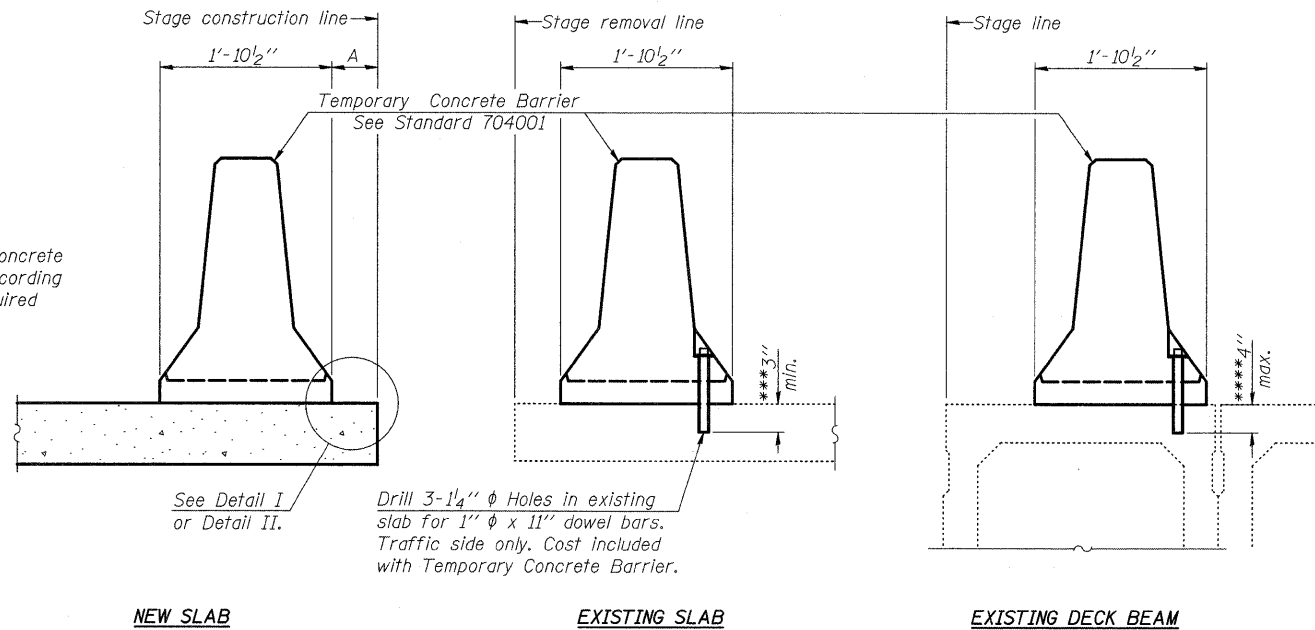
BAR SPLICER ASSEMBLY DETAILS
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAI 74	SECTION #	COUNTY ROCK ISLAND	TOTAL SHEETS 246	SHEET NO. 231	SHEET NO. 10 11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-			

* 81 (1-2, 1, 2-2) RS-1 & M

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".

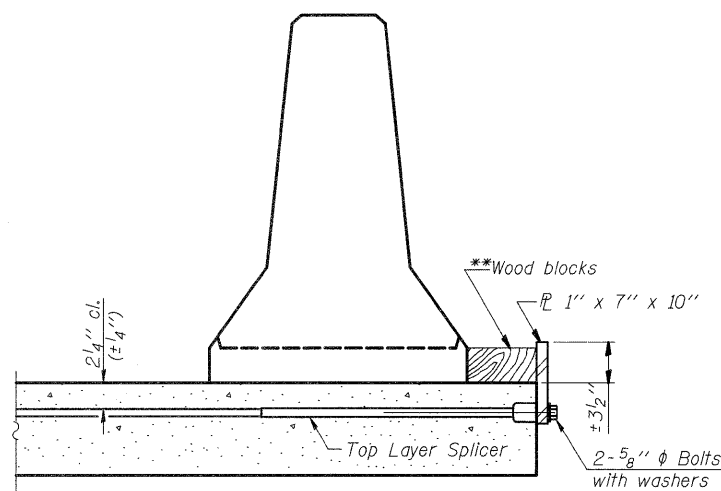


NOTES

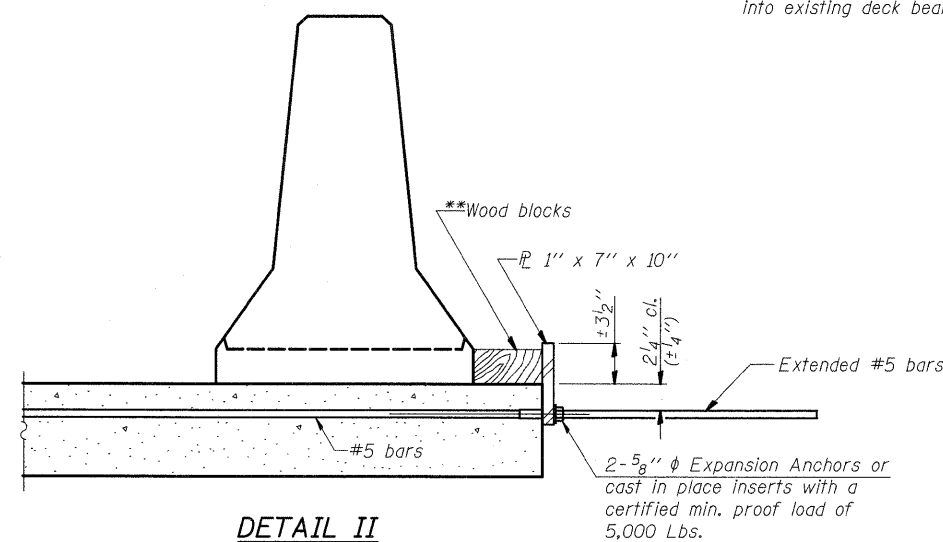
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTIONS THRU SLAB OR DECK BEAM

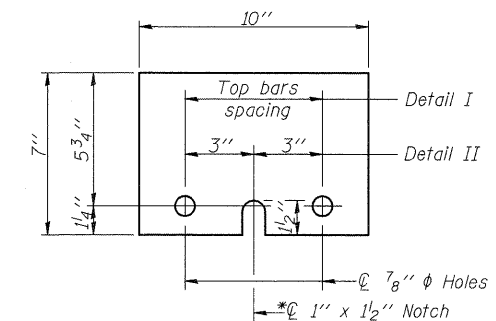
- ***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- ***If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER \bar{L} 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.

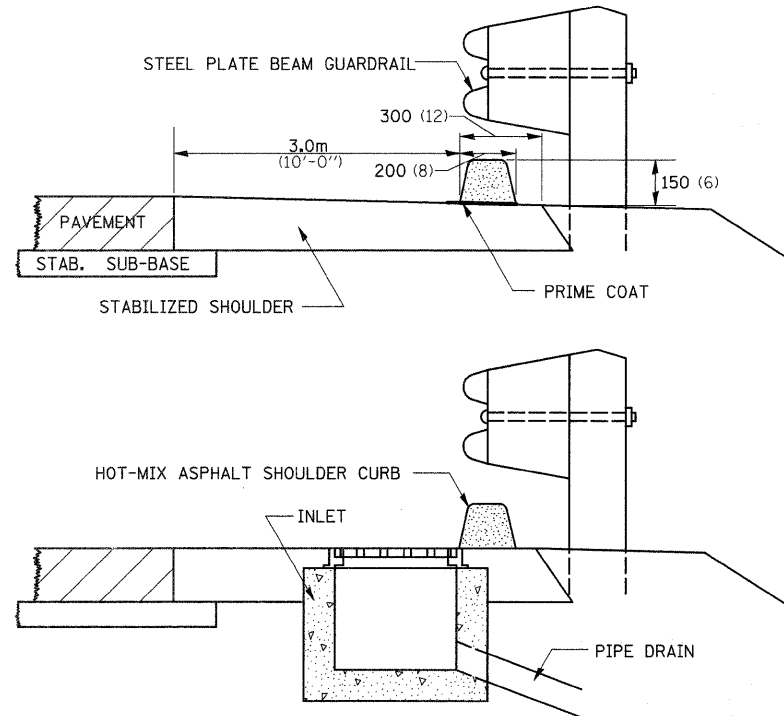
DESIGNED	DFM
CHECKED	DSG
DRAWN	EBS
CHECKED	DFM

R-27

5-16-08

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A.I. 74 (OVER 38TH AVE.)
ROCK ISLAND COUNTY
STRUCTURE NO. 081-0110**

HOT-MIX ASPHALT SHOULDER CURB



CURB DETAIL

GENERAL NOTES

THIS WORK SHALL BE DONE AS SPECIFIED UNDER SECTION 661 OF THE STANDARD SPECIFICATIONS FOR HOT-MIX ASPHALT CURB.

THE METAL PIPES AND INLETS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.

THE BITUMINOUS MATERIALS PRIME COAT SHALL BE CONSIDERED INCLUDED TO THE HOT-MIX ASPHALT SHOULDER CURBS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

REVISED - 11-01-07

HOT-MIX ASPHALT SHOULDER CURB 10.4

DETAILS FOR CURB & GUTTER REPLACEMENT AT INLET

CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, STANDARD 606001 AND THIS DRAWING.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT. A HOLE 40 (1 1/2) IN DIAMETER AND 225 (9) DEEP SHALL BE DRILLED IN THE EXISTING CONCRETE CURB AS SHOWN. A 32x450 (1 1/4 X 18) SMOOTH DOWEL BAR SHALL BE GROUTED IN THE HOLE LONGITUDINALLY.

JOINTS OF A TYPE SIMILAR TO THAT IN THE UNDERLYING PAVEMENT (EXPANSION OR CONTRACTION) SHALL BE INSTALLED IN THE CONCRETE CURB IN ALIGNMENT WITH THE JOINTS IN THE PAVEMENT.

INLETS ARE NOT TO BE INCLUDED IN THE MEASUREMENT FOR CURB AND GUTTER REPLACEMENT.

THE PROPOSED CONFIGURATION OF THE CURB AND GUTTER SHALL MATCH THAT REMOVED.

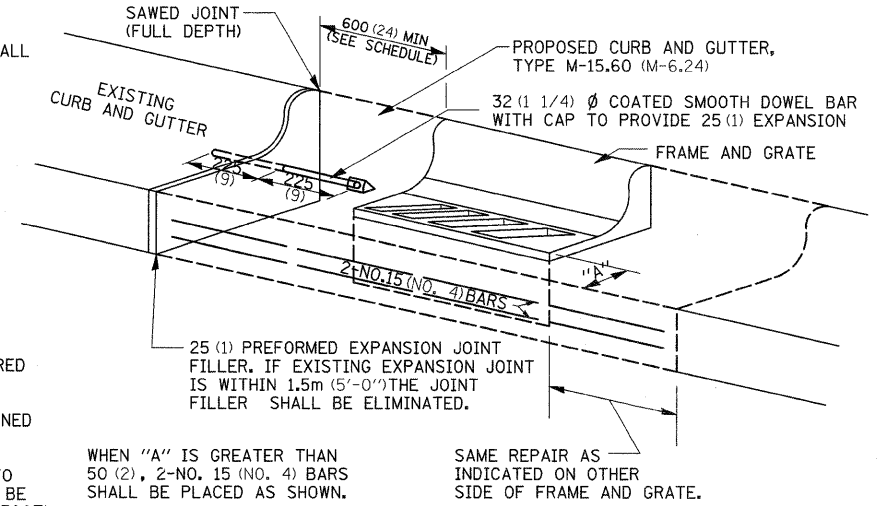
THE CONCRETE REQUIRED BETWEEN THE EDGE OF PAVEMENT AND FRAME AND GRATE SHALL BE CONSIDERED INCIDENTAL TO THE CURB AND GUTTER.

THE LOCATION OF THE DOWEL BAR SHALL BE DETERMINED BY THE ENGINEER.

THE COST OF ALL MATERIALS AND LABOR REQUIRED TO INSTALL THE JOINTS AND BARS IN THE CURBS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER METER (FOOT) FOR COMBINATION CURB AND GUTTER.

ALL EXISTING TIE BARS IN EDGE OF PAVEMENT SLAB THRU REPLACEMENT AREA SHALL BE CUT OFF.

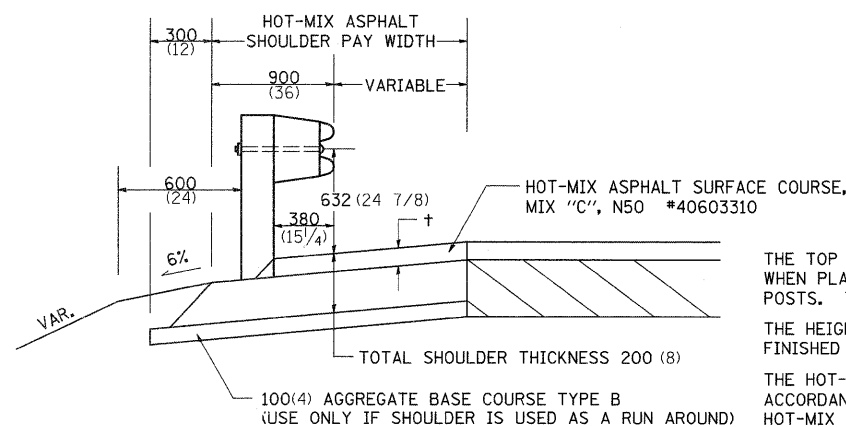
REVISED - 5-4-94



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DETAILS FOR CURB & GUTTER REPLACEMENT AT INLET 17.4

DETAIL OF HOT-MIX ASPHALT SHOULDER AT GUARD RAIL



† = SEE TYPICAL SECTIONS FOR THICKNESS

GENERAL NOTES

THE TOP LIFT SHALL NOT BE PLACED BEHIND THE GUARDRAIL POSTS. WHEN PLACING THE TOP LIFT THE RAIL MUST BE REMOVED FROM THE POSTS. THE POST SHALL NOT BE REMOVED.

THE HEIGHT OF THE GUARD RAIL SHALL BE SET 632 (24 7/8) FROM THE FINISHED SURFACE.

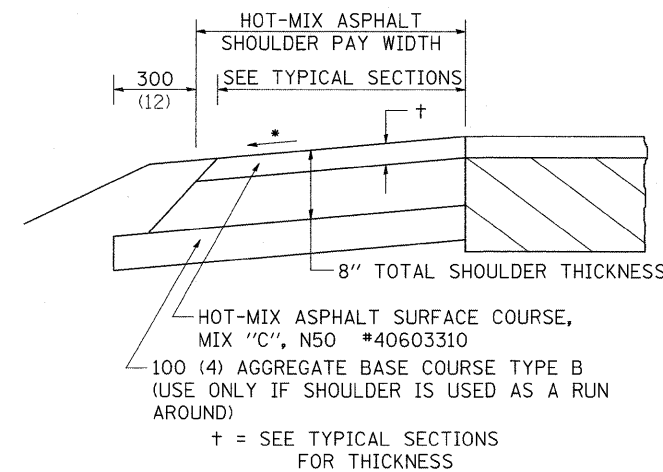
THE HOT-MIX ASPHALT SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE HOT-MIX ASPHALT SURFACE COURSE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C", N50 AND SQUARE METER (SQUARE YARD) FOR HOT-MIX ASPHALT SHOULDERS OF THE THICKNESS SPECIFIED. THE REMOVAL & REINSTALLATION OF THE GUARDRAIL WILL BE INCLUDED IN THE COST OF THE HOT-MIX ASPHALT SURFACE COURSE, MIXTURE C, N50.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

REVISED - 11-01-07

DETAIL OF HOT-MIX ASPHALT SHOULDER AT GUARD RAIL 23.4

HOT-MIX ASPHALT SHOULDER



GENERAL NOTES

THE HOT-MIX ASPHALT SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310 AND SQUARE YARD FOR HOT-MIX ASPHALT SHOULDERS OF THE THICKNESS SPECIFIED.

USE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310. WHEN RESURFACING EXISTING HOT-MIX ASPHALT SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310.

REMOVAL OF MATERIAL FOR PLACEMENT OF THE HOT-MIX ASPHALT SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

* 4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

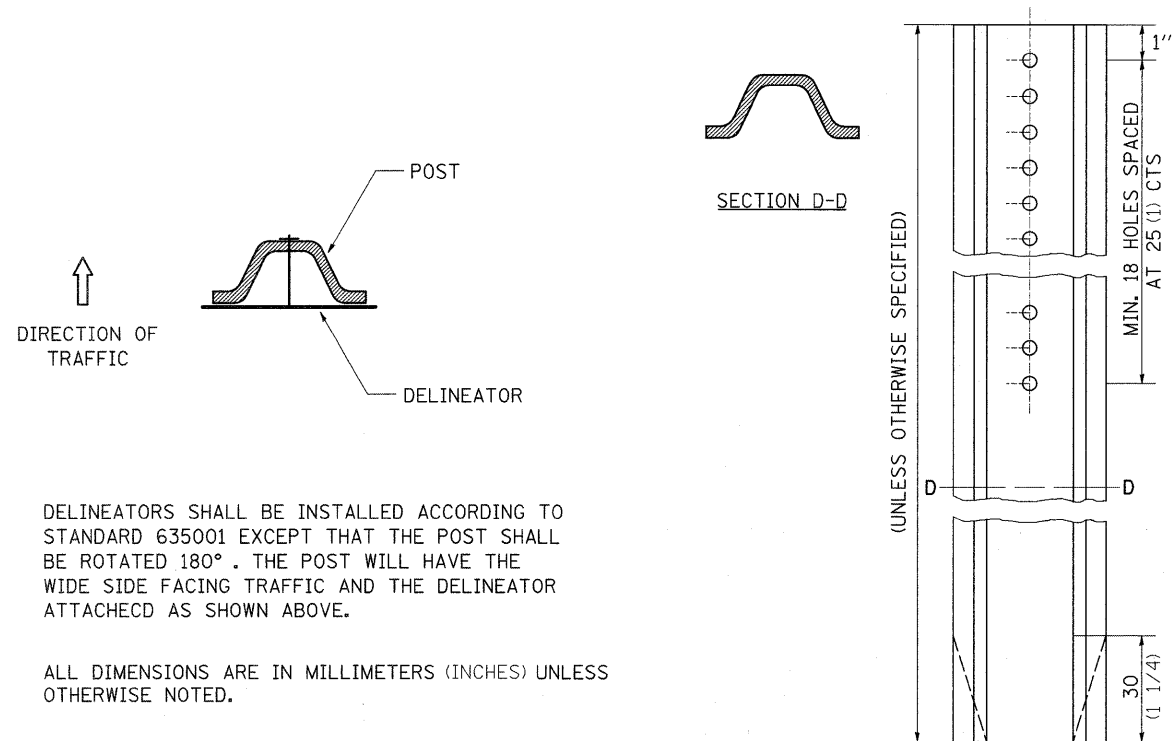
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

REVISED - 11-01-07	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -		74	81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	233
REVISED -		CONTRACT NO. 64A97				
REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLOT DATE = Fri Feb 06 10:54:56 2009

HOT-MIX ASPHALT SHOULDER 23.4a

DELINEATOR AND POST ORIENTATION



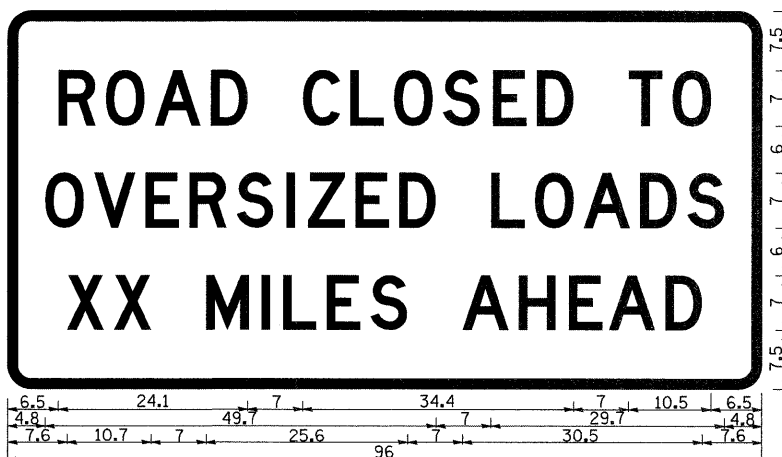
DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHED AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

REVISED - 11-01-07

DELINEATOR AND POST ORIENTATION 37.4

ROAD CLOSED TO OVERSIZED LOADS



Permit Loads - Loads Over 13 Feet; 3.0" Radius, 1.3" Border, Black on Orange;
[ROAD CLOSED TO] D; [OVERSIZED LOADS] D; [XX MILES AHEAD] D;
Table of letter and object heights.

R	O	A	D	C	L	O	S	E	D	T	O		
8.5	12.5	18.7	25.9	37.6	43.6	49.2	55.4	61.8	67.3	79.0	84.6		
O	V	E	R	S	I	Z	E	D	L	O	A	D	S
4.8	11.0	17.8	23.1	29.2	35.5	38.2	44.3	49.8	51.5	67.1	73.3	80.9	86.6
X	X	M	I	L	E	S	A	H	E	A	D		
7.6	13.6	25.3	32.3	35.1	40.6	46.2	57.9	65.1	71.4	78.6	83.7		

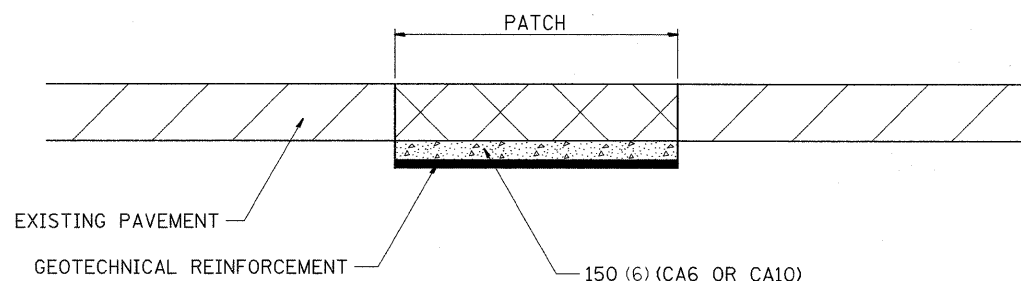
All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 1-9-08

ROAD CLOSED TO OVERSIZED LOADS 40.4

SUBGRADE REPLACEMENT



NOTES:

THE CA 6 OR CA 10 SHALL BE COMPACTED IN A MANNER APPROVED BY THE ENGINEER. IF THE MOISTURE CONTENT OF THE MATERIAL IS SUCH THAT COMPACTION SATISFACTORY TO THE ENGINEER CANNOT BE OBTAINED, SUFFICIENT WATER SHALL BE ADDED SO THAT SATISFACTORY COMPACTION CAN BE OBTAINED.

THE CA 6 OR CA 10 WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CU YD FOR GRANULAR SUBGRADE REPLACEMENT

THE GEOTECHNICAL REINFORCEMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ YD FOR GEOTECHNICAL REINFORCEMENT

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

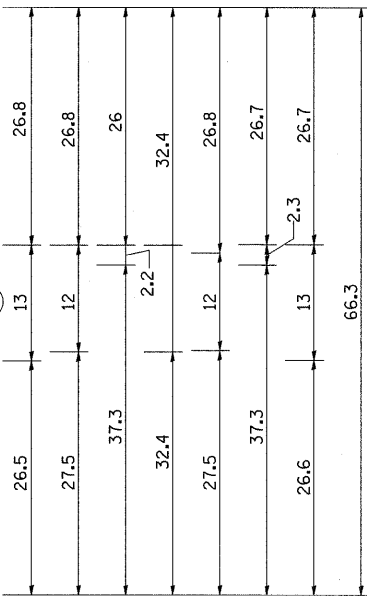
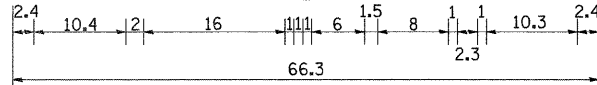
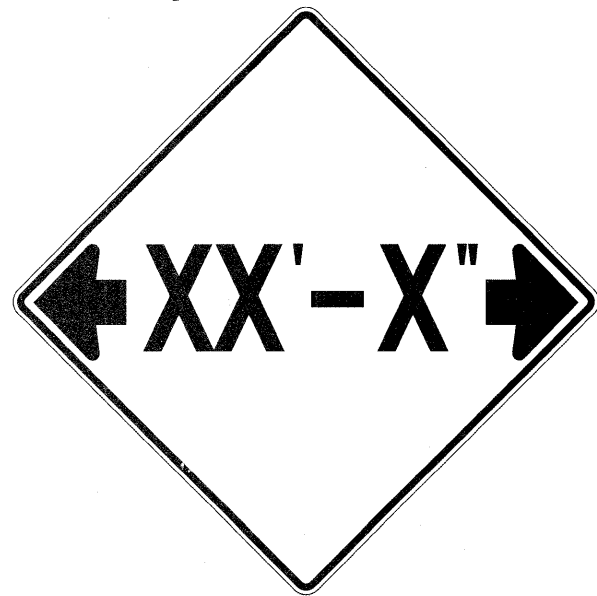
REVISED - 1-09-08

SUBGRADE REPLACEMENT 97.4

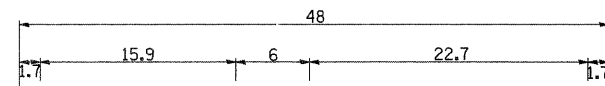
REVISED -	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -		74	81-0-2,1,2-2/RS-1&M	ROCK ISLAND	246	234
REVISED -		CONTRACT NO. 64A97				
REVISED -		SCALE: 50.0000' / IN	SHEET NO.	OF SHEETS	STA.	TO STA.

PLOT DATE = Fri Feb 06 10:54:56 2009

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



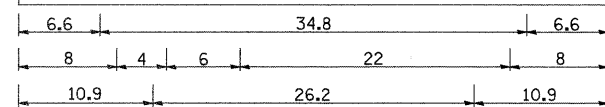
NOTES
 W12-2 - Horizontal Clearance Sign
 48.0" across sides, 1.9" Radius,
 0.8" Border, 0.5" Indent, Black on
 Orange; Standard Arrow Custom
 10.4" X 8.1" 180° Black 11 Inch
 D Series Lettering; Standard Arrow
 Custom 10.4" X 8.1" 0°



MAX WIDTH
 No border, Black on White;
 [MAX WIDTH] D;

XX'-XX''
 No border, Black on Orange;
 [XX'-XX''] D;

**X MILES
 AHEAD**
 No border, Black on White;
 [X MILES] D; [AHEAD] D;



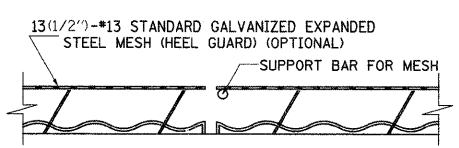
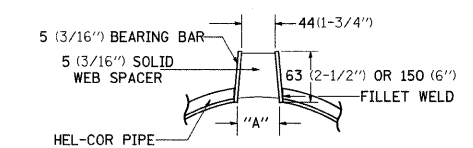
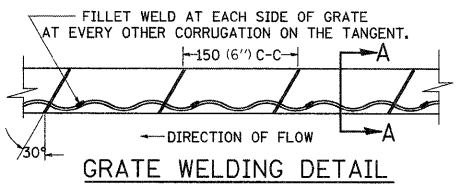
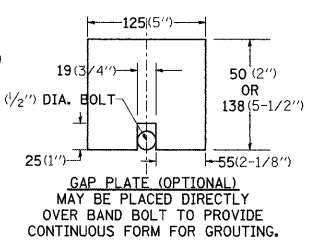
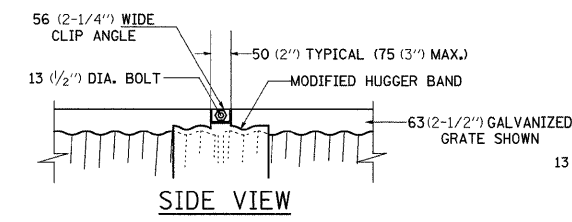
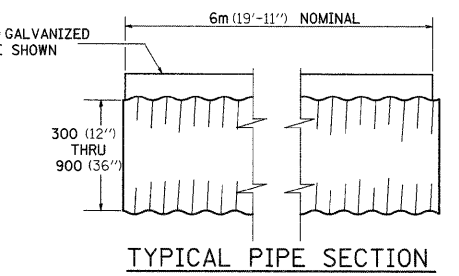
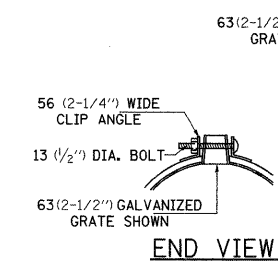
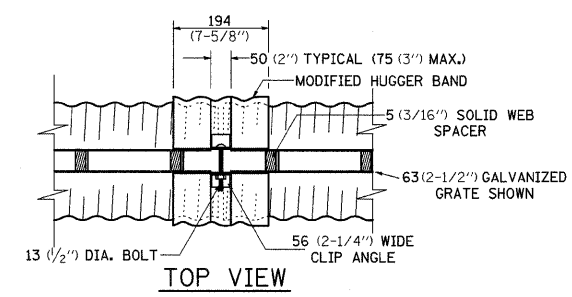
W12-I103 (Width is 8D);
 No border, Black on White;
 [MAX WIDTH] D;
 No border, Black on Orange;
 [XX'-XX''] D;
 No border, Black on White;
 [X MILES] D; [AHEAD] D;

All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 1-9-08

SLOTTED DRAIN PIPE



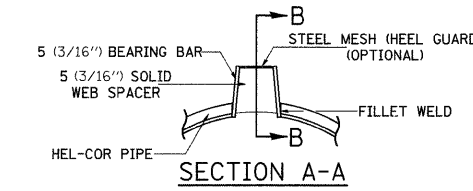
STANDARD SIZES		GRATE TYPE		"A"	
GAGE OF PIPE	DIAMETER OF PIPE	VERT	TRAP	VERT	TRAP
16	300 (12'')	X	X	44 (1-3/4'')	X
14	375 (15'')	X	X	44 (1-3/4'')	X
12	450 (18'')	X	X	56 (2-1/4'')	X
	600 (24'')	X	X	75 (3'')	X
	750 (30'')	X	X		
	900 (36'')	X	X		
	N.A.	N.A.	N.A.	N.A.	N.A.

GRATE TYPE	"A"
VERT 63(2-1/2'')	44 (1-3/4'')
VERT 150 (6'')	44 (1-3/4'')
TRAP 63(2-1/2'')	56 (2-1/4'')
TRAP 150 (6'')	75 (3'')

SLOTTED DRAIN NOTES

- GRATING IS AVAILABLE IN DEPTHS OF 63 (2-1/2'') AND 150 (6'').
- VERTICAL GRATING (STRAIGHT SIDES) WITH VERTICAL SPACERS IS ALSO AVAILABLE.
- FOR 150 (6'') VERTICAL & TRAPZOIDAL REQUIREMENTS, THE SLOTTED DRAIN BAND MAY BE FURNISHED WITH THE 100 (4'') TECHCO BAND ANGLE.
- DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- REFERENCE CONTECH BAND MANUAL DWG. NO. 1008466 FOR BAND DETAILS.

- MANUFACTURING TOLERANCES**
- VERTICAL BOW ± 10 (3/8'')
 - HORIZONTAL BOW ± 16 (5/8'')
 - TWIST ± 13 (1/2'')



**SECTION A-A
 DETAIL WITH MESH**

(TRAPEZOIDAL GALVANIZED GRATE SHOWN)

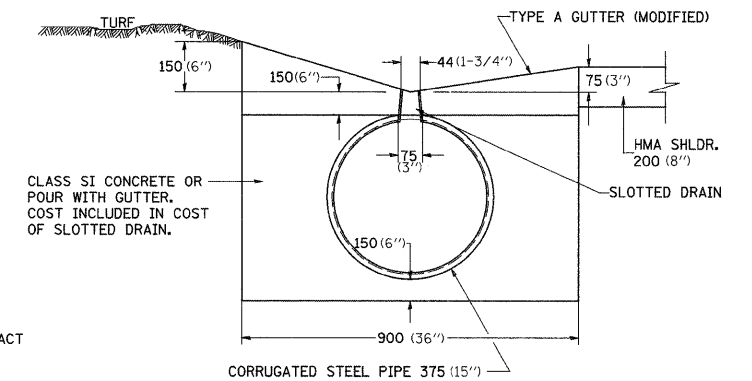
NOTES

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

THE SLOTTED DRAIN SHALL BE CORRUGATED PIPE CULVERT WITH INTEGRAL SLOTTED DRAINS. BEFORE PLACING THE CONCRETE ADJACENT TO THE PIPE, THE SLOT SHALL BE COVERED BY EITHER THIN, FLAT METAL SHEETING OR BY A BOARD NOTCHED TO FIT OVER THE GRATE BARS. THIS COVERING MUST FIT CLOSELY IN THE SLOT TO PREVENT ENTRY OF CONCRETE INTO THE PIPE. PAVING OVER THE SLOTTED DRAIN WILL THEN BE ONE CONTINUOUS OPERATION OVER THE PROTECTED DRAIN. THE PROTECTION FOR THE DRAIN SLOT SHALL THEN BE REMOVED. THE PIPE SHALL DRAIN INTO THE SIDE OF THE INLET. THE OPENING WHERE THE SLOT IS REMOVED SHALL BE COVERED TO PREVENT CONCRETE FROM ENTERING THE PIPE.

THE CORRUGATED STEEL PIPE USED IN THE SLOTTED DRAIN SHALL MEET THE REQUIREMENTS OF AASHTO M-36/ASTM A 760. THE CMP SHALL BE GALVANIZED OR ALUMINIZED STEEL TYPE 2. STEEL GRATING SHALL MEET THE GALVANIZING REQUIREMENTS OF AASHTO M-111. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR SLOTTED DRAIN PIPE, AND SHALL INCLUDE ELBOWS.

USE APPROVED END CAP TO PREVENT CONCRETE ENTRY INTO THE PIPE DURING GUTTER CONSTRUCTION ON THE UPSTREAM END OF PIPE.



CORRUGATED STEEL PIPE 375 (15'')

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

REVISED - 1-9-08	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -				74	81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	235
REVISED -				CONTRACT NO. 64A97				
REVISED -	SCALE: 50.0000' / IN SHEET NO. OF SHEETS STA. TO STA.			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

ROUGH GROOVED SURFACE SIGN

ILLINOIS STANDARD W8-I107

SIGN PANEL TYPE 1



COLOR: LEGEND AND BORDER - BLACK NON-REFLECTIVE
BACKGROUND - ORANGE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
1200x1200 (48x48)	1200 (48.0)	600 (24.1)	75 (3.0)	850 (34.0)	825 (33.0)	150 (6.0)	325 (13.0)	88 (3.5)

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
1200x1200 (48x48)	7C	7C	7C	20 (0.8)	30 (1.2)	B4-48D

ALL DIMENSIONS IN INCHES.

REVISED - 1-09-08

GENERAL NOTES

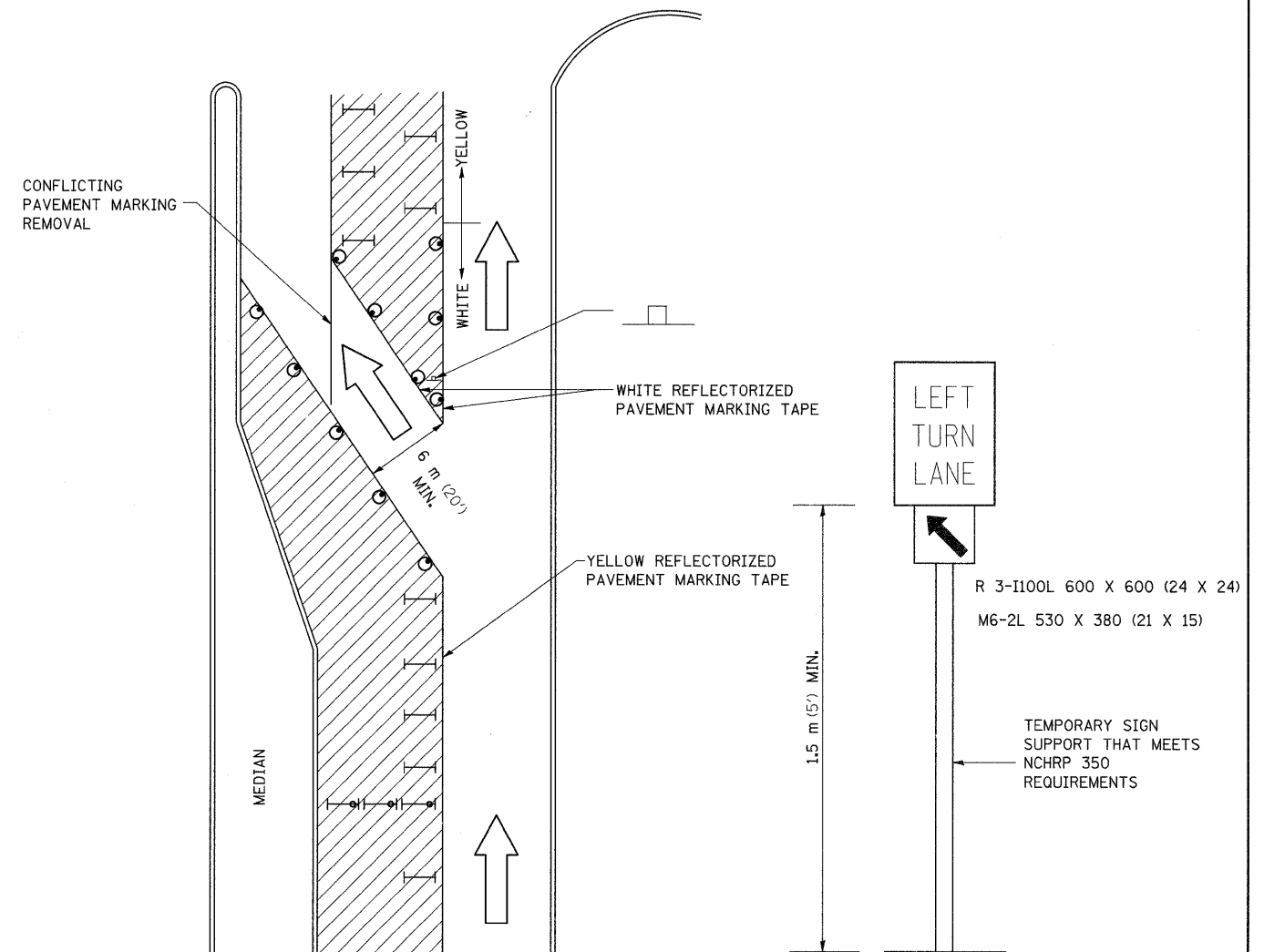
SIGN PANELS AND FACE MATERIALS SHALL BE ACCORDING TO SECTION 720 OF THE STANDARD SPECIFICATIONS

METAL POSTS SHALL BE IN ACCORDANCE WITH STD. 720011.

ALL MOUNTING HARDWARE SHALL BE ALUMINUM, STAINLESS STEEL, ZINC OR CADMIUM PLATED STEEL AND SHALL BE INCLUDED TO THE COST OF THE INSTALLATION.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)



LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE OR DRUM WITH FLASHING BURNING LIGHT
- DRUM OR BARRICADE WITH STEADY BURN LIGHT
- SIGN (SEE DETAIL)
- TYPE I OR II CHECK BARRICADE WITH STEADY LIGHT BURN

GENERAL NOTES

CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 710 (28) IN HEIGHT.

STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE MONODIRECTIONAL.

REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.

THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 600 x 600 (24 x 24) AND M6-2R 530 x 380 (21 x 15) SHALL BE USED.

THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

REVISED - 10-15-04

REVISED -

REVISED -

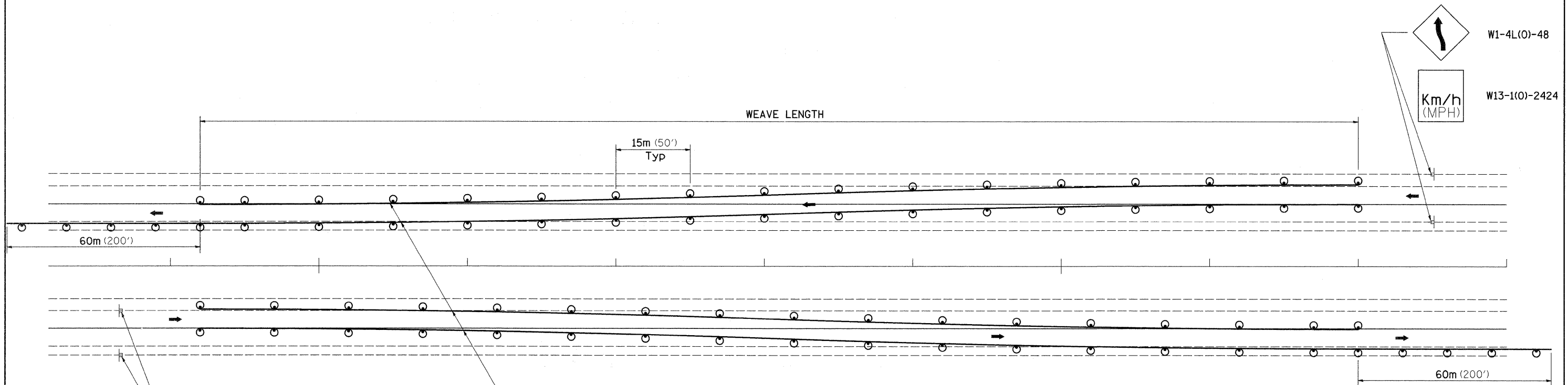
REVISED -

REGION 2 / DISTRICT 2 STANDARD

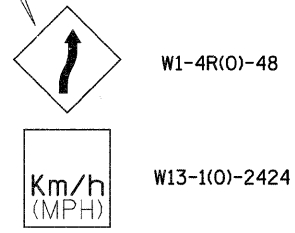
SCALE: 50.0000 / IN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	236
CONTRACT NO. 64A97				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL TYPICAL WEAVE



Temporary Pavement Marking required if Typical Weave is used for 14 days or more.



- LEGEND**
- ⊙ DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHTS
 - ⊞ SIGN ON PERMANENT MOUNT

DESIGNER NOTE:

1. USE ON LONG 4-LANE PROJECTS WHERE THE CONTRACTOR MAY CHANGE A PORTION OF THE WORK TO THE OPPOSITE LANE.
2. USE WHERE THE PROJECT IS ADJACENT TO ANOTHER AND THE CONTRACTOR COULD BE WORKING ON DIFFERENT LANES.
3. TEMPORARY PAVEMENT MARKING SHALL BE USED WHEN TYPICAL WEAVE IS USED FOR 14 DAYS OR MORE.
4. TRAFFIC CONTROL TYPICAL WEAVE SHALL BE INCLUDED IN THE COST OF THE SPECIFIC TRAFFIC CONTROL STANDARDS OF ITEMS.

STANDARD WEAVE CONDITIONS FOR DIFFERENT SPEED LIMITS

POSTED SPEED LIMIT	ADVISORY SPEED LIMIT	WEAVE LENGTH
110 Km/h (65 MPH)	80 Km/h (45 MPH)	240m (780 FT.)
90 Km/h (55 MPH)	60 Km/h (35 MPH)	200m (660 FT.)
80 Km/h (45 MPH)	40 Km/h (25 MPH)	165m (540 FT.)

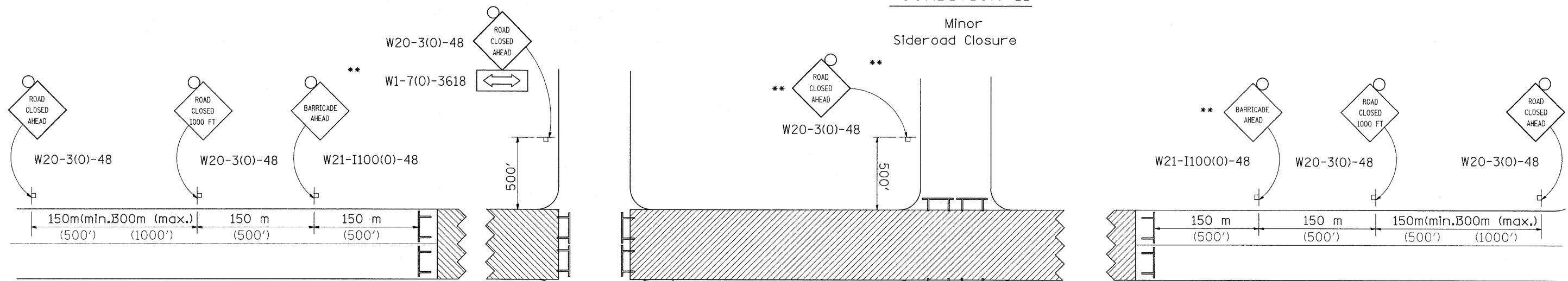
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 5-30-91	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw_work\PWIDOT\DUNCANFA\dms33952\dms33952-shr-ta.dgn	DRAWN -	REVISED -	74			81-1-2,1,2-2)RS-1&M	ROCK ISLAND	246	237	
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	CONTRACT NO. 64A97							
PLOT DATE = Fri Feb 06 10:54:57 2009	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
SCALE:		SHEET NO. OF SHEETS		STA. TO STA.						

TRAFFIC CONTROL FOR ROAD CLOSURE

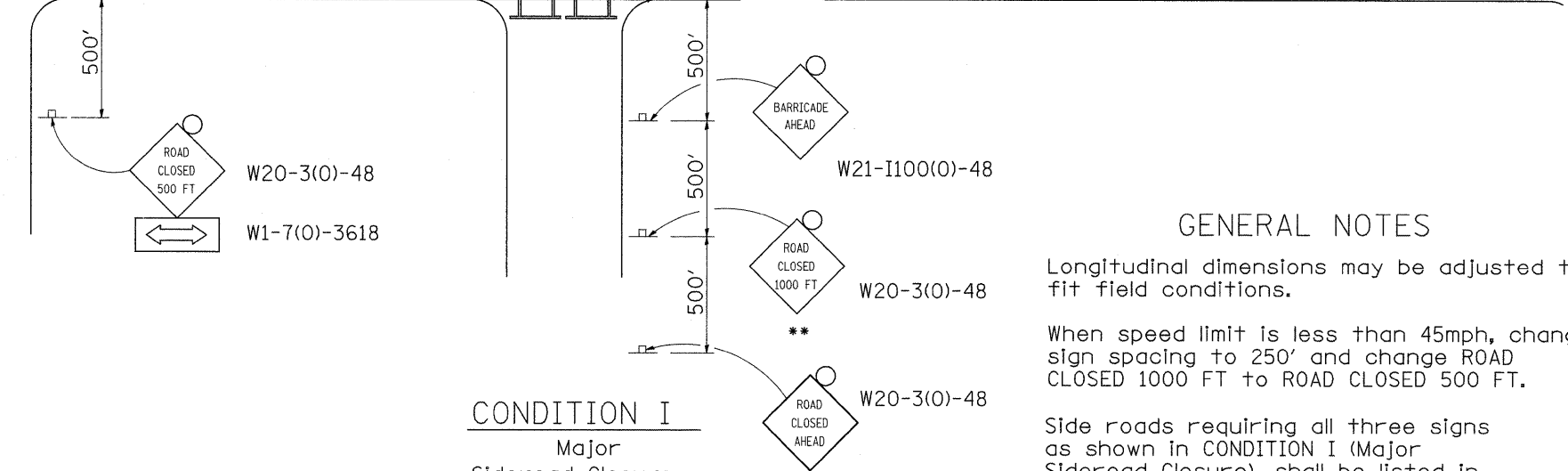
CONDITION II

Minor Sideroad Closure



CONDITION I

Major Sideroad Closure



GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

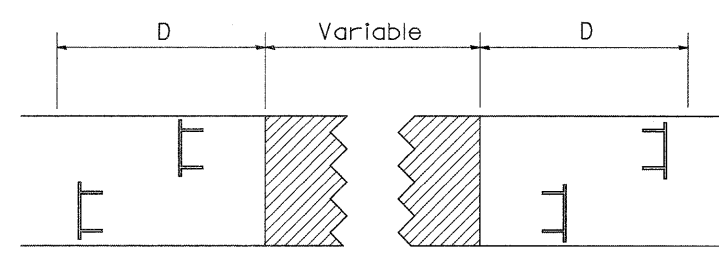
Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

** Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic. Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 701901.

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

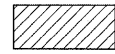


TYPICAL APPLICATION FOR ROAD CLOSURE

ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 701901. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

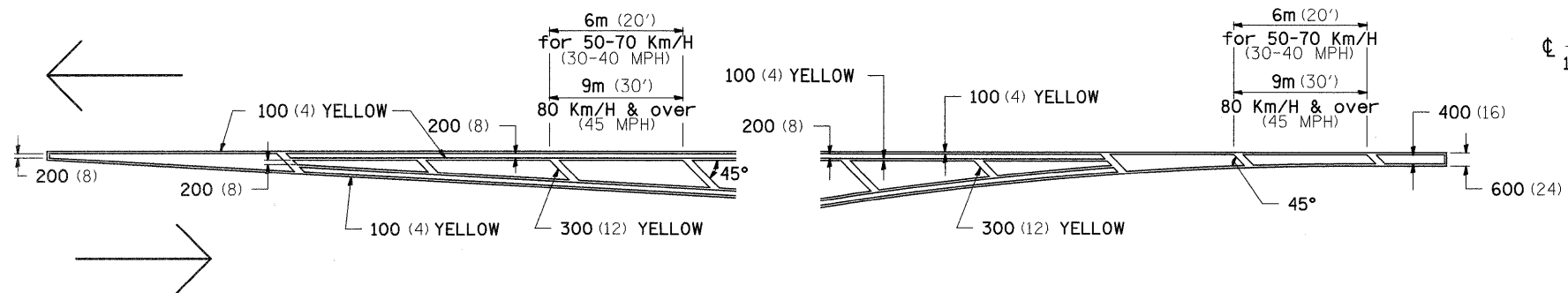
SYMBOLS

-  Work area
-  Type III Barricade with Flashers
-  Sign with flashing light

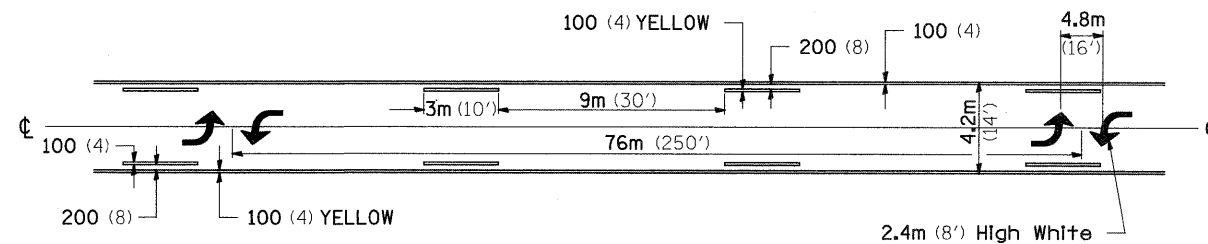
FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 1-11-08	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pvt_work\pwwid\DOT\DUNCANFA\dms33952\dms33952-shr-ta.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -					74	81-1-2,1,2-2/RS-1&M	ROCK ISLAND	246	238
PLOT DATE = Fri Feb 06 10:54:57 2009	DATE -	CHECKED -	REVISED -					CONTRACT NO. 64A97				
								SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

TYPICAL PAVEMENT MARKINGS

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE

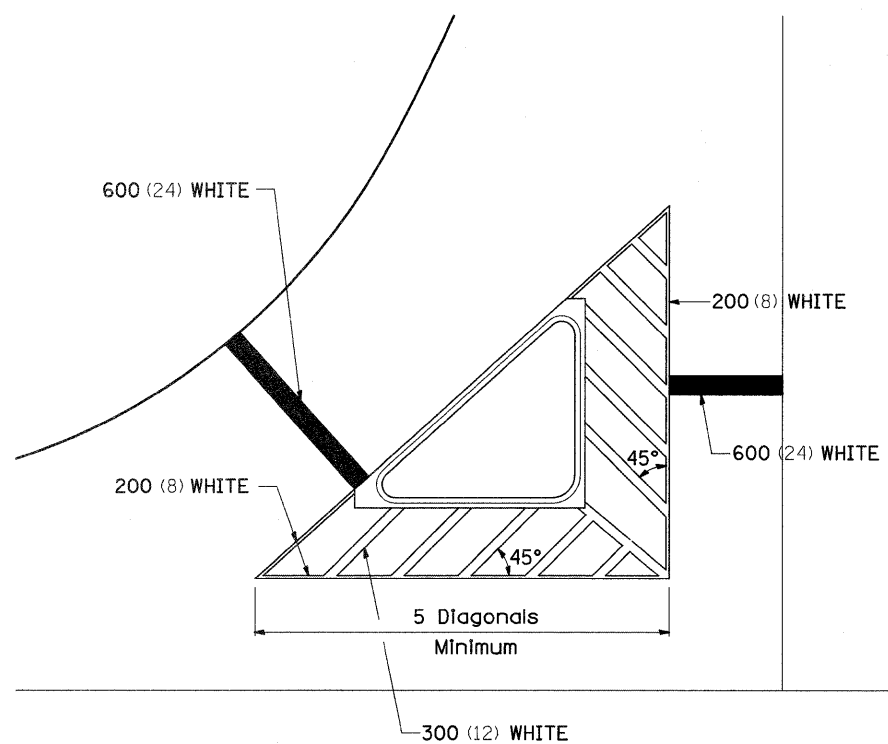


MEDIAN PAVEMENT MARKING

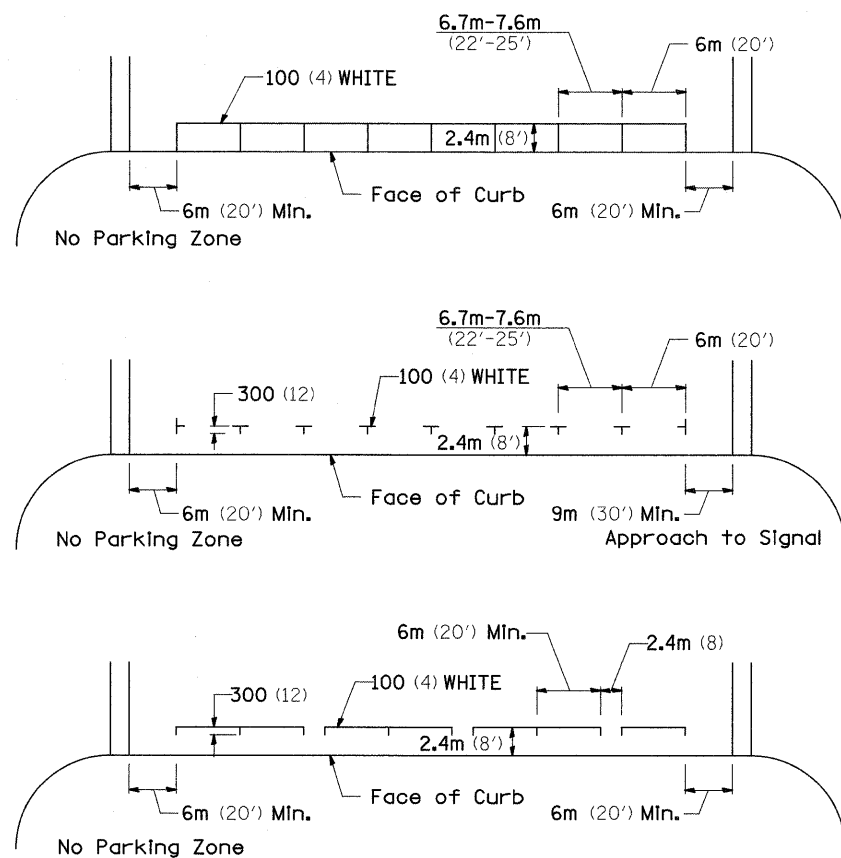


•• ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

TYPICAL ISLAND OFFSET SHOULDER WIDTH

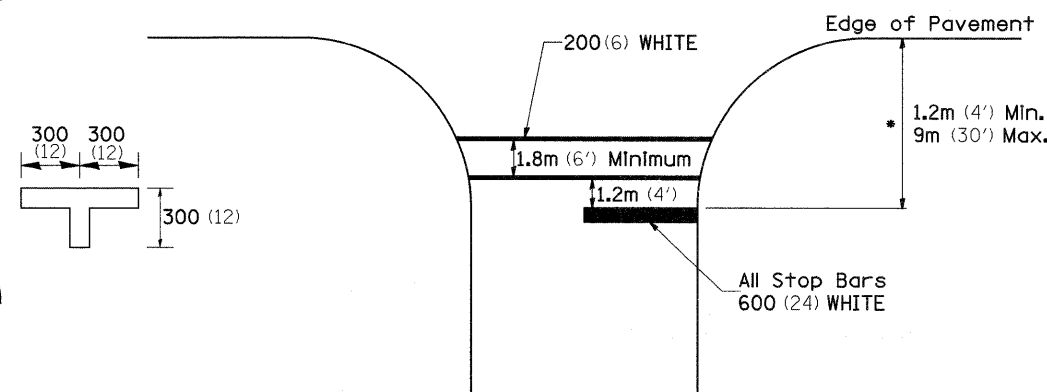


TYPICAL PARKING SPACING



STANDARD CROSSWALK MARKING

See Schedules for Locations

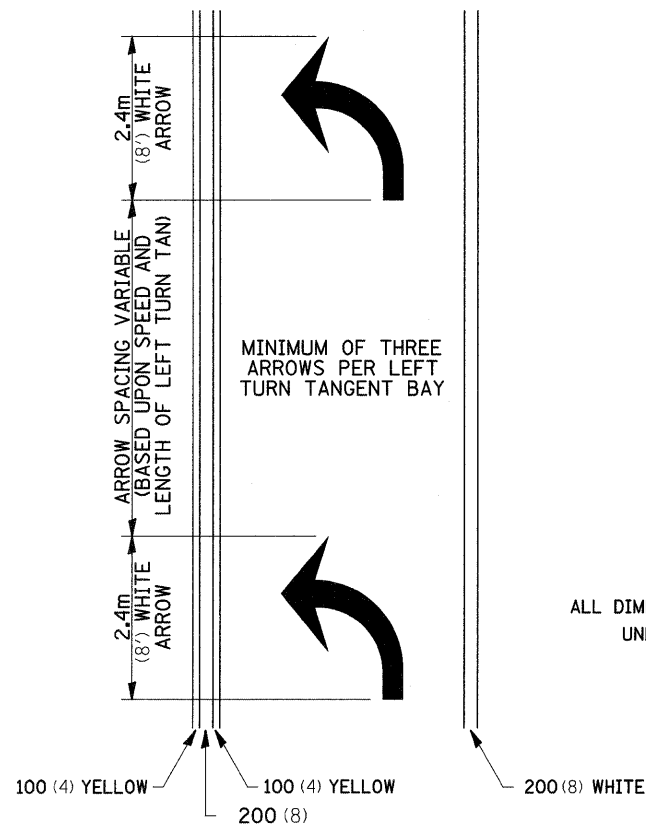


* Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 10-21-08	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
cr:\pw_work\PWIDOT\DUNCANFA\dms33952\dms33952-shr-ta.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -			74	81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	239	
	PLOT DATE = Fri Feb 06 10:54:57 2009	CHECKED -	REVISED -			CONTRACT NO. 64A97					
		DATE	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

TYPICAL PAVEMENT MARKINGS

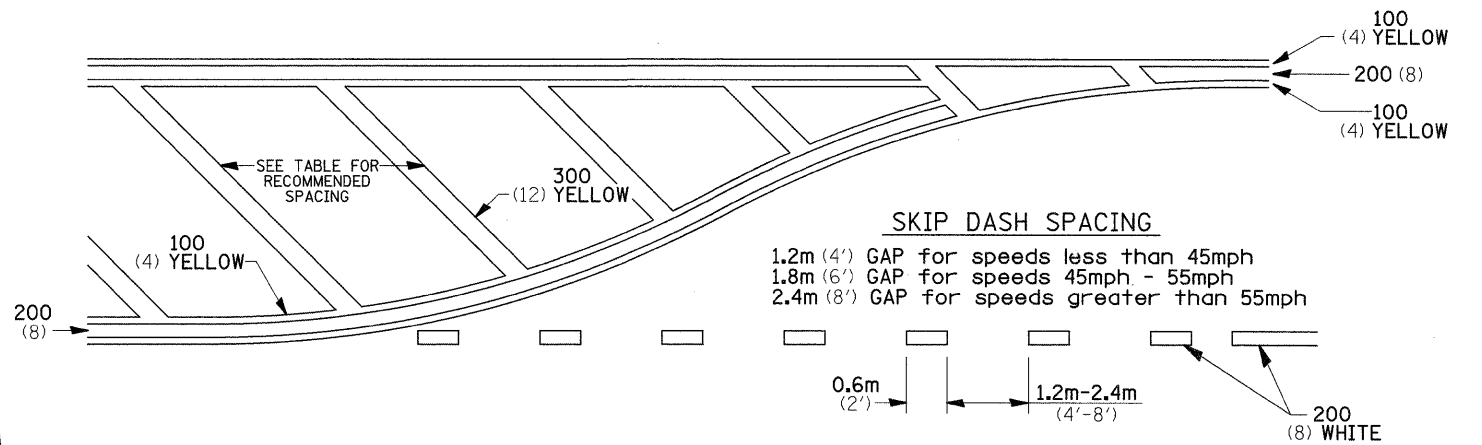
ARROW LAYOUT



- ▲ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER
- ◆ TWO-WAY AMBER MARKER

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

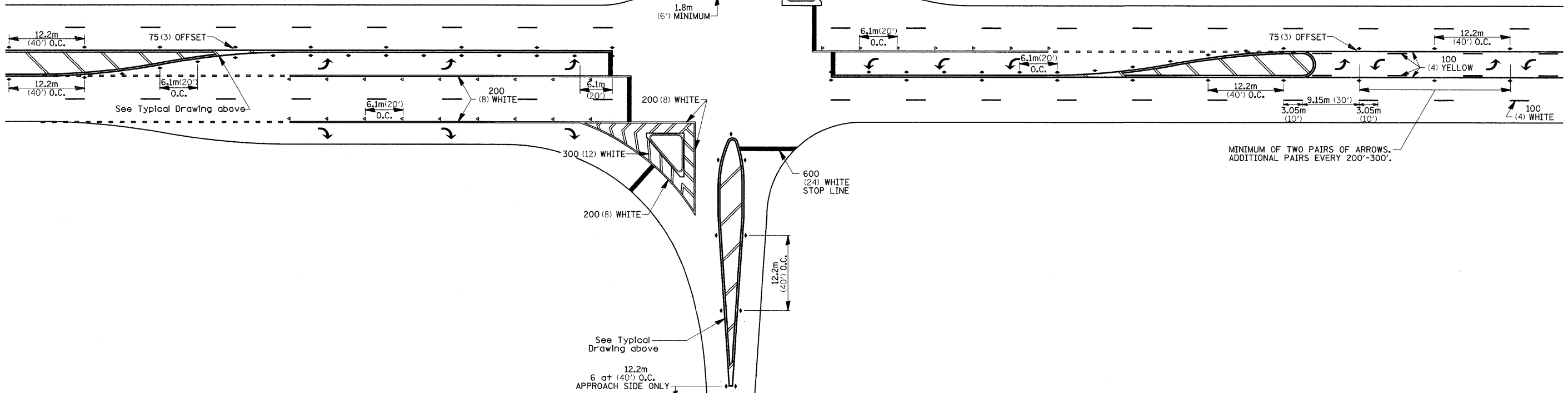
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

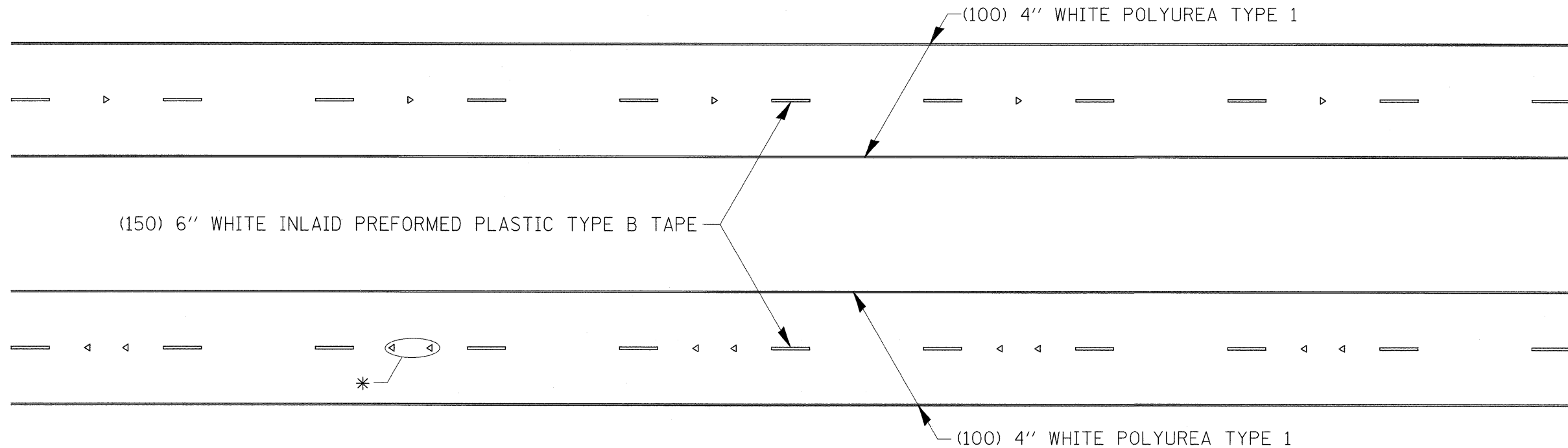
Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 50Km/H (30MPH)	15.3m (50')	4.53m (15')	3.05m (10')
50-60Km/H (30-40MPH)	22.9m (75')	6.1m (20')	4.53m (15')
70Km/H (45MPH) & over	22.9m (75')	9.05m (30')	6.1m (20')

NOTE: If the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



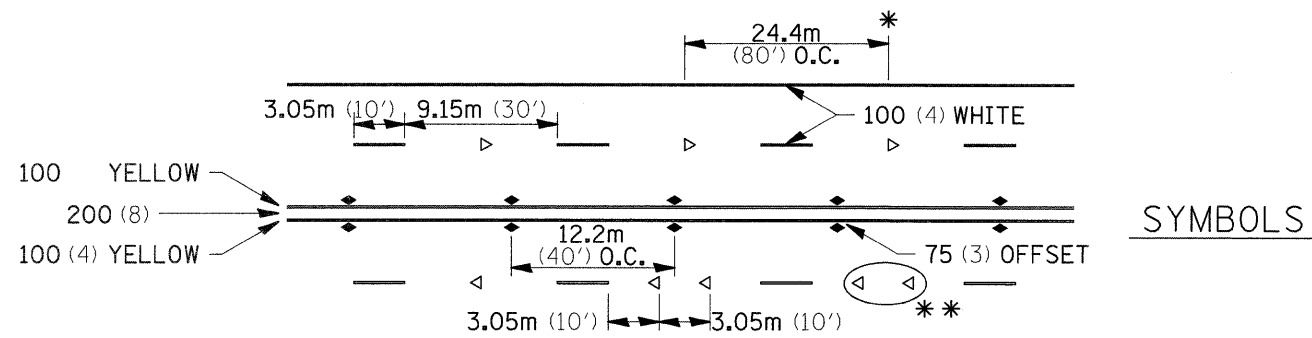
FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 10-21-08	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw_work\pwsdot\duncanfa\dms33952\dms33952-sht-ta.dgn		DRAWN -	REVISED -			74	81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	240	
		CHECKED -	REVISED -			CONTRACT NO. 64A97					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

TYPICAL PAVEMENT MARKINGS



* SEE HIGHWAY STANDARD 781001 FOR SPACING DETAILS.
USE DOUBLE MARKERS WHEN ADT ≥ 25,000.

MULTI-LANE / DIVIDED



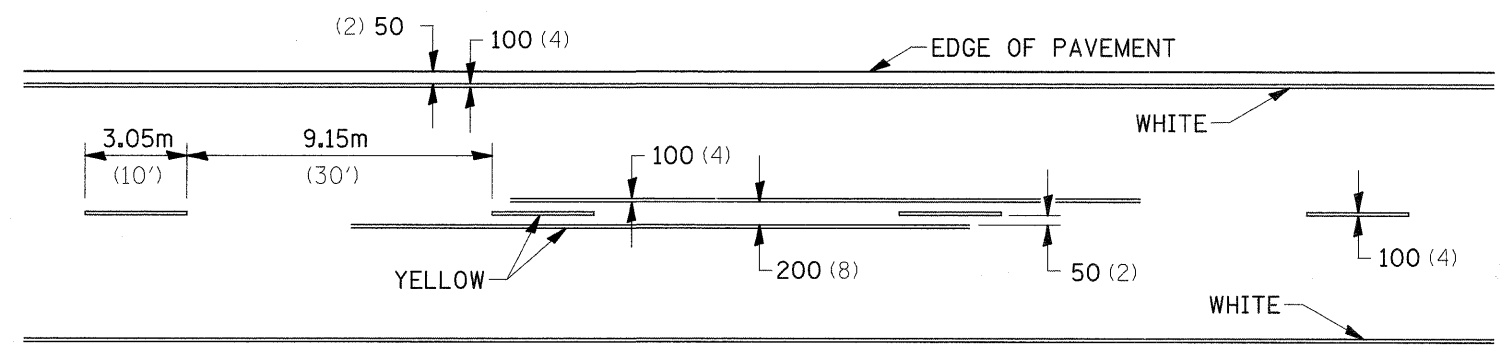
SYMBOLS

* REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15KM/H (10MPH) LOWER THAN POSTED SPEEDS.

** USE DOUBLE MARKERS WHEN ADT ≥ 25,000

MULTI-LANE / UNDIVIDED

TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION – NO PASSING ZONES



FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 10-21-08
ct:\pw_work\PWIDOT\DUNCANFA\dms33952\d0805-sh-t-ts.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

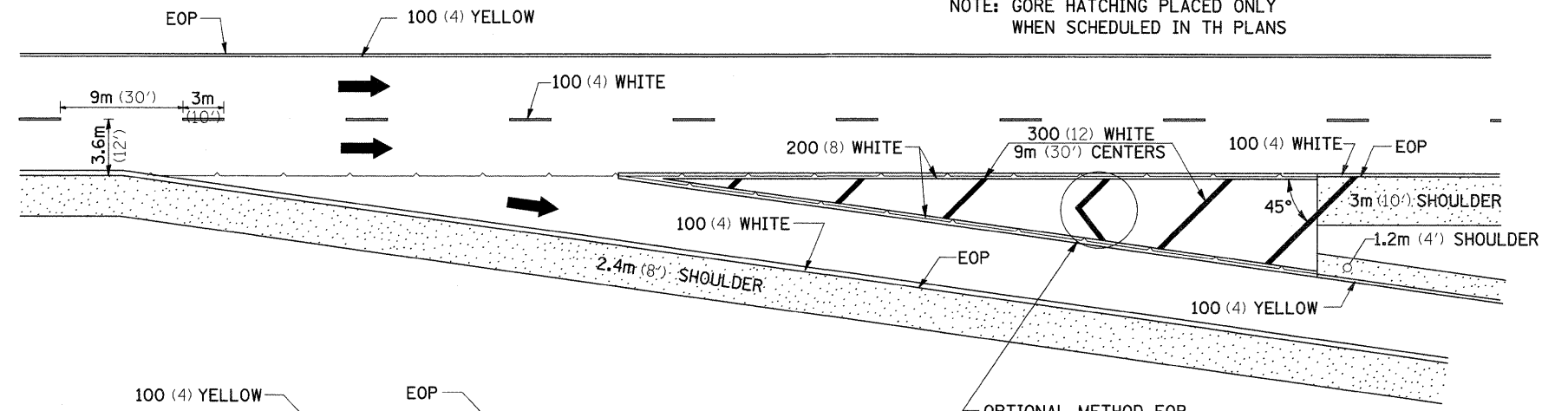
REGION 2 / DISTRICT 2 STANDARD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1-2.1,2-2/RS-1&M	ROCK ISLAND	246	241
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 64A97	

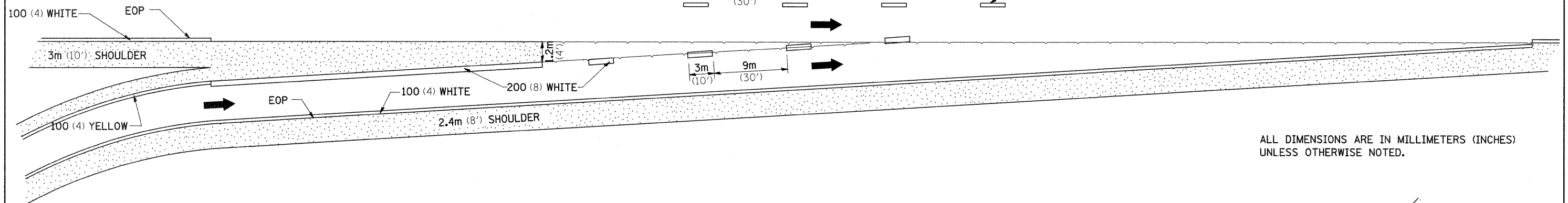
SCALE: SHEET NO. OF SHEETS STA. TO STA.

PAINTING DETAILS

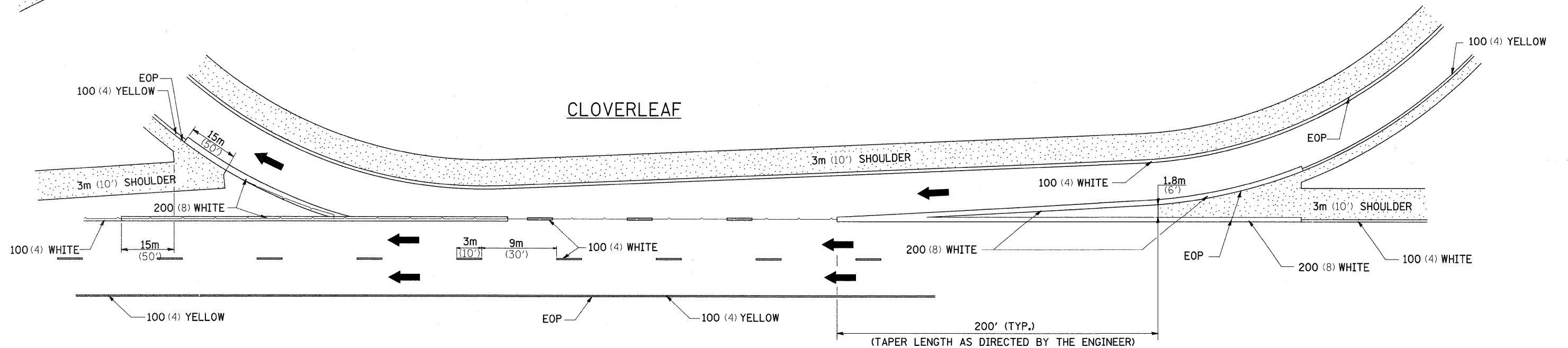
EXIT RAMP



ENTRANCE RAMP

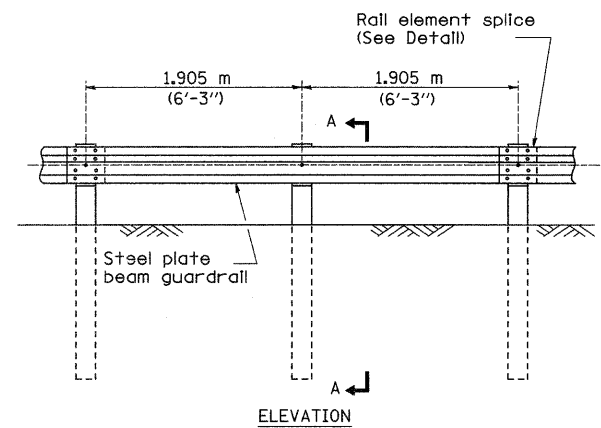


CLOVERLEAF



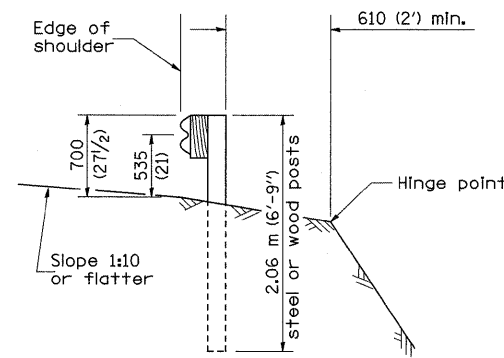
FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 6-26-90	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca\pw_work\PWIDOT\DUNCANFA\dms33952\dms33952-shr-ts.dgn		DRAWN -	REVISED -		74	81-1-2,1,2-2IRS-1&M	ROCK ISLAND	246	242			
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -		CONTRACT NO. 64A97			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
PLOT DATE = Fri Feb 06 10:54:59 2009		DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.			

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

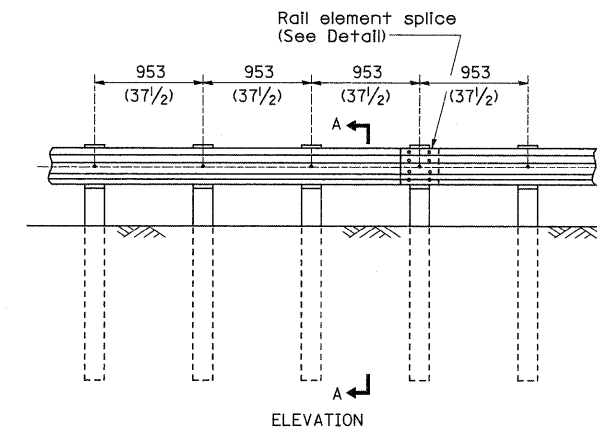


TYPE A

1.905 m (6'-3") Typical post spacing

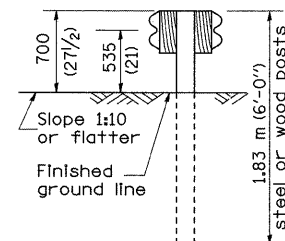


SECTION A-A

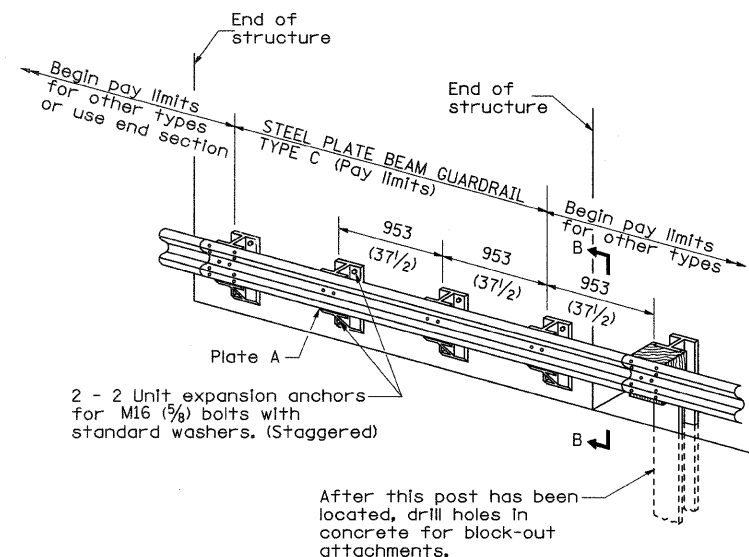


TYPE B

953 (37 1/2) Closed post spacing

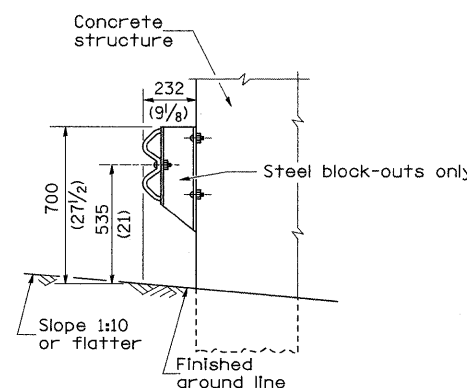


SECTION C-C

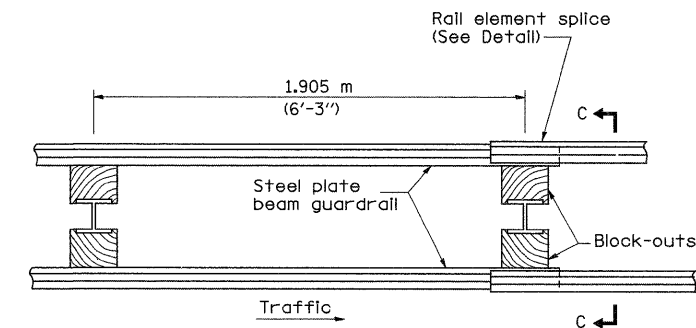


TYPE C

953 (37 1/2) Block-out spacing



SECTION B-B



PLAN

TYPE D

Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.

FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 1-15-08	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
at:\pw_work\PWIDOT\DUNCANFA\dms33952\d080805-shit-ts.dgn	DRAWN -	REVISED -	74			81-1-2,1,2-2RS-1&M	ROCK ISLAND	246	243	
PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISED -	CONTRACT NO. 64A97							
PLOT DATE = Fri Feb 06 10:54:59 2009	DATE -	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							
		SCALE:		SHEET NO. OF SHEETS STA. TO STA.						

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

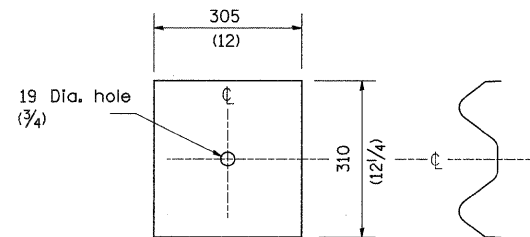
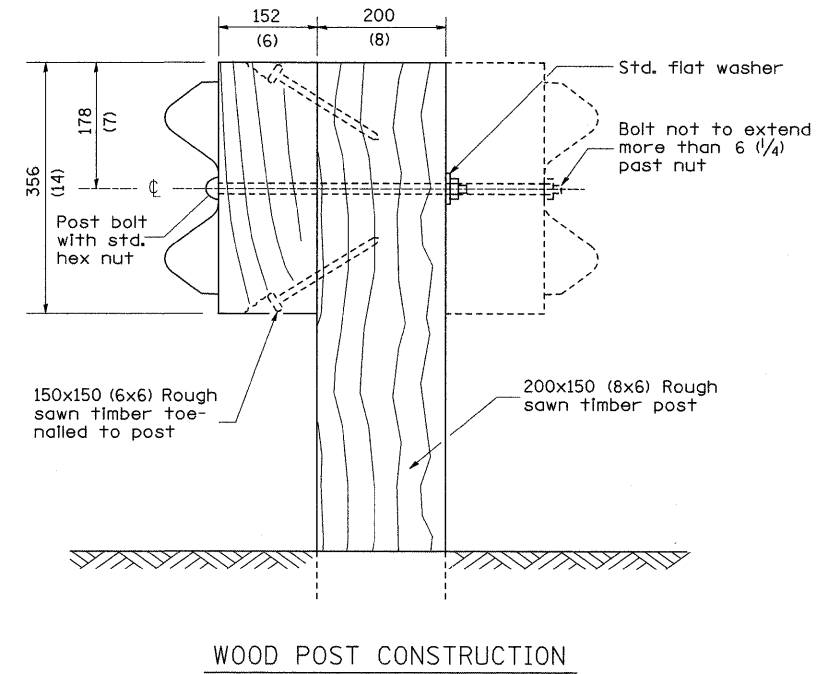
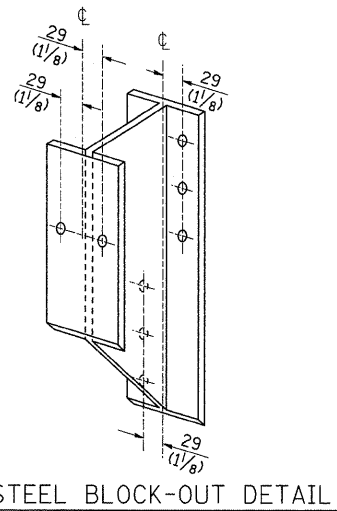
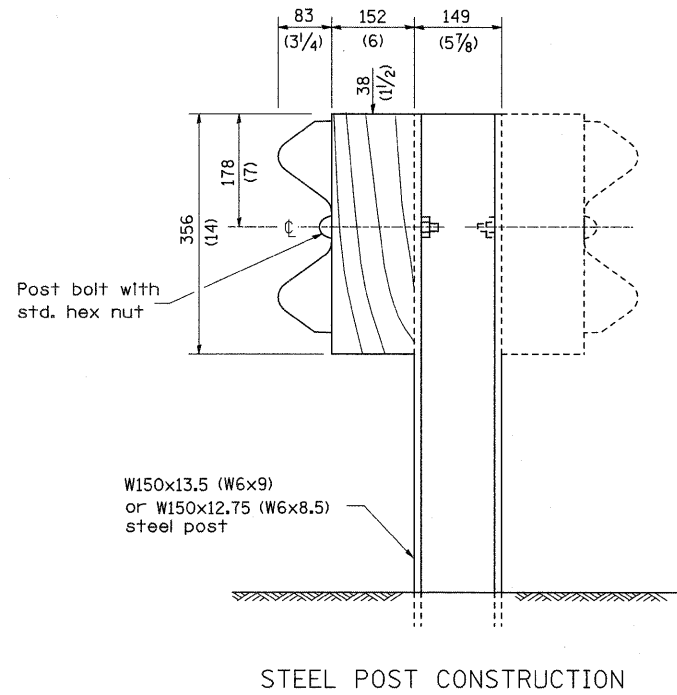
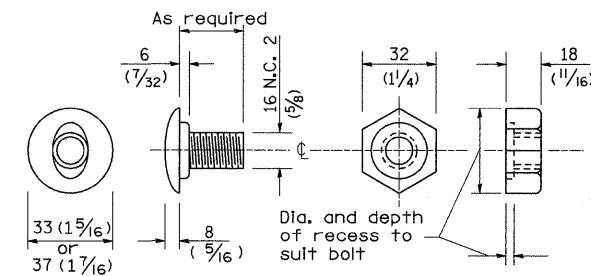


Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 1-15-08
c:\pw_work\PWIDOT\DUNCANFA\dms33952\d0805-shit-ts.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

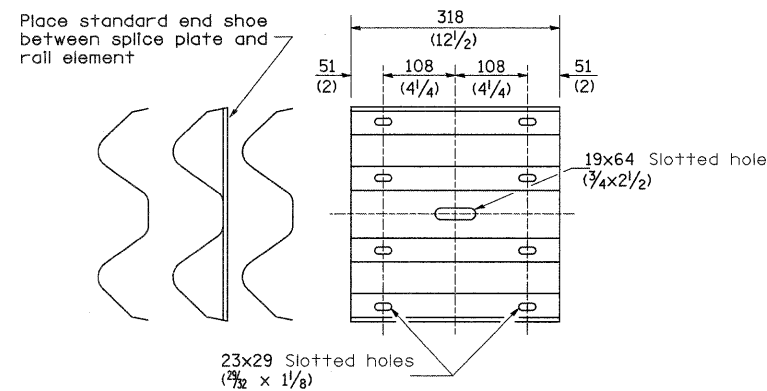
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

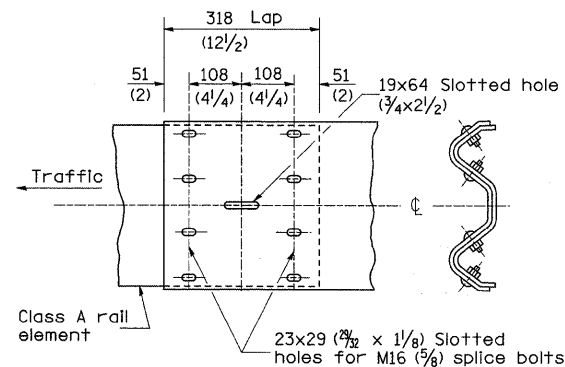
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-01-2,1,2-2IRS-1&M	ROCK ISLAND	246	244
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 64A97	

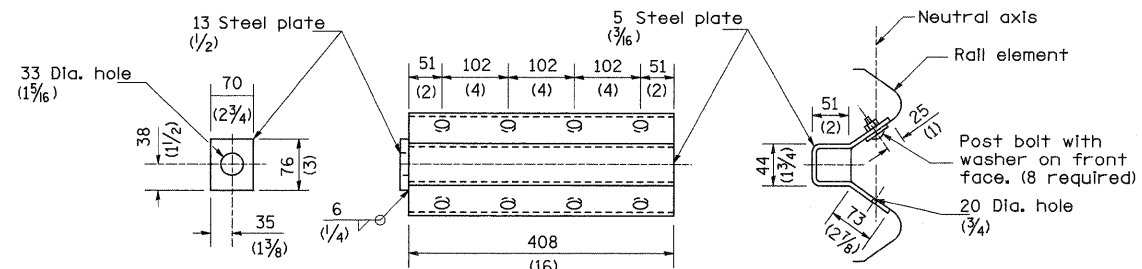
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL



SPLICE PLATE



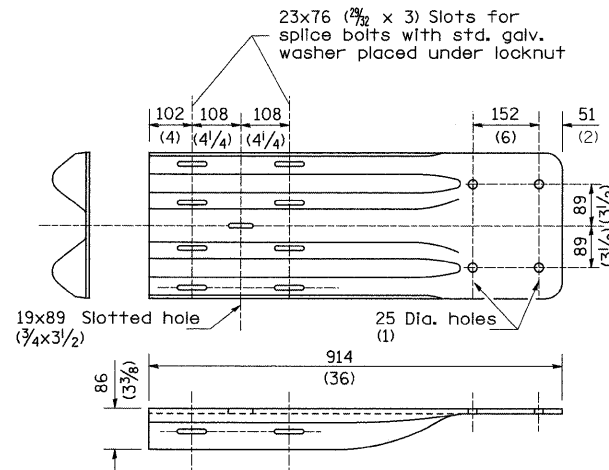
RAIL ELEMENT SPLICE



NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



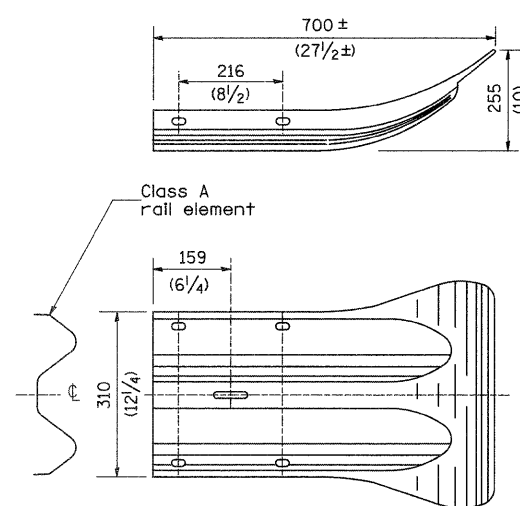
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

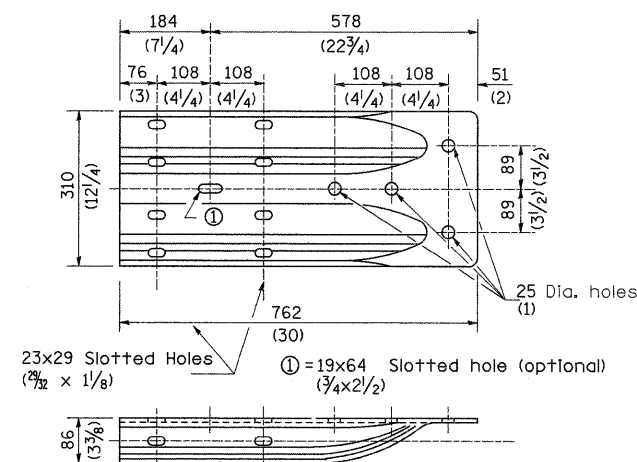
The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE



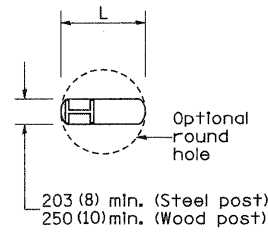
END SECTION



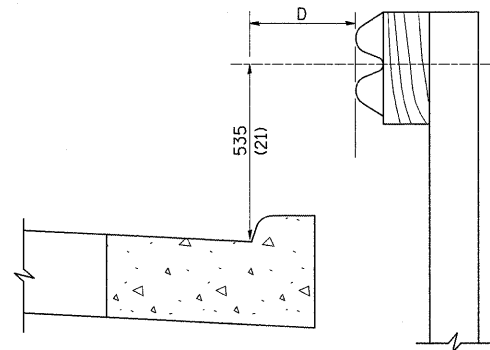
ALTERNATE END SHOE

FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 1-15-08	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pw_work\PWIDOT\DUNCANFA\dms33952\d0805-shit-ts.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -			74	81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	245	
	PLOT DATE = Fri Feb 06 10:54:59 2009	CHECKED -	REVISED -			CONTRACT NO. 64A97					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL



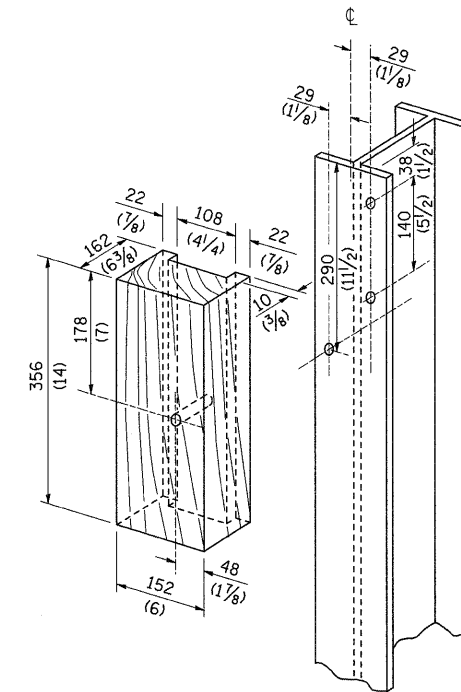
PLAN



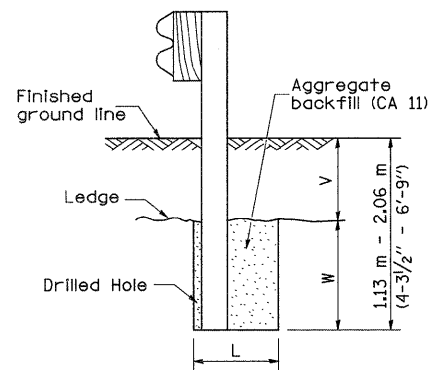
Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 300 (12) maximum)



WOOD BLOCK-OUT AND STEEL POST DETAILS

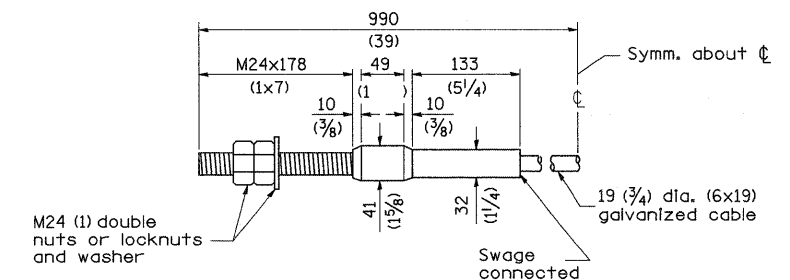


Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

V	W	L	
		Steel Post	Wood Post
0 - 460 (0 - 18)	610 (24)	530 (21)	580 (23)
>460 - 825 (>18 - 41.5)	305 (12)	203 (8)	250 (10)
>825 - 1.13 m (>41.5 - 53.5)	305 - 0 (12 - 0)	203 (8)	250 (10)



CABLE ASSEMBLY

(18,100 kg (40,000 lbs.) min. breaking strength)
Tighten to taut tension.

FILE NAME =	USER NAME = duncanfa	DESIGNED -	REVISED - 1-15-08	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw_work\VP\DOT\DUNCANFA\dms33952\d88905-shit-ts.dgn	DRAWN -	REVISED -	74			81-(1-2,1,2-2)RS-1&M	ROCK ISLAND	246	246	
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	CONTRACT NO. 64A97							
PLOT DATE = Fri Feb 06 10:55:00 2009	DATE -	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							