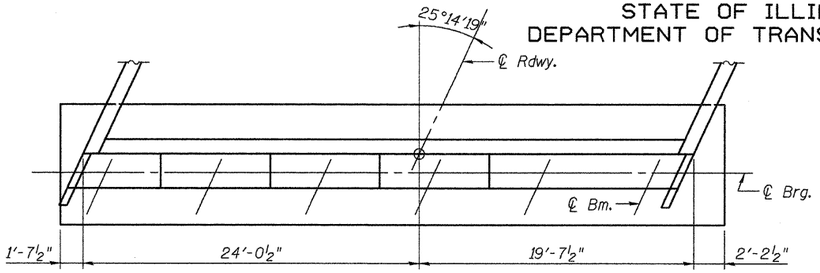
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

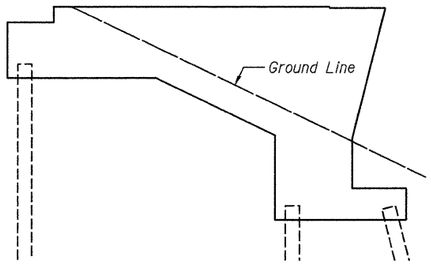
N



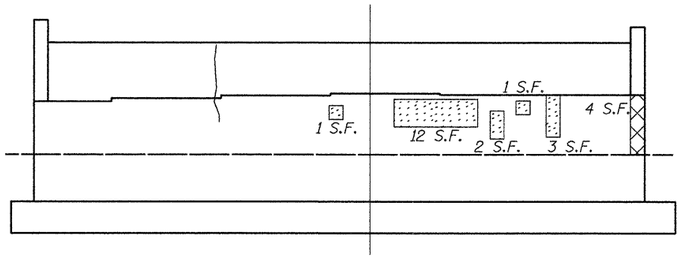
PLAN

LEGEND

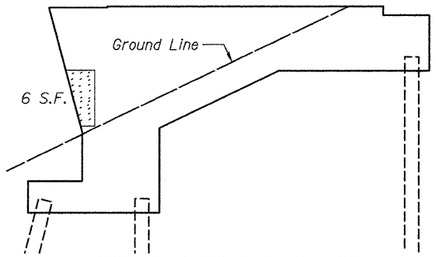
- Hollow or Unsound Concrete
- Spalled Concrete
- Spalled Concrete with Exposed Reinf.
- Hairline Crack



SOUTH WING ELEVATION



ELEVATION AT EAST ABUTMENT



NORTH WING ELEVATION

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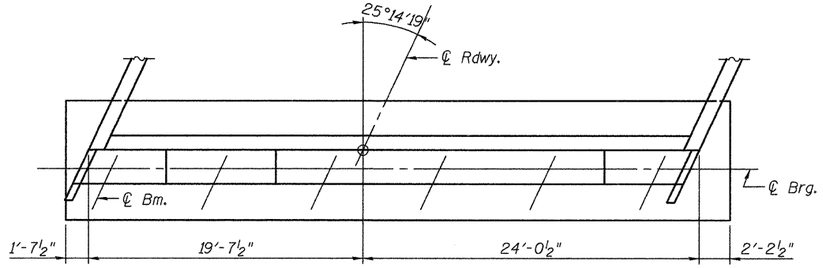
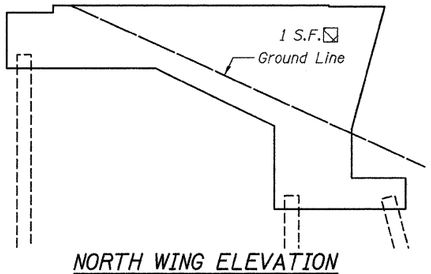
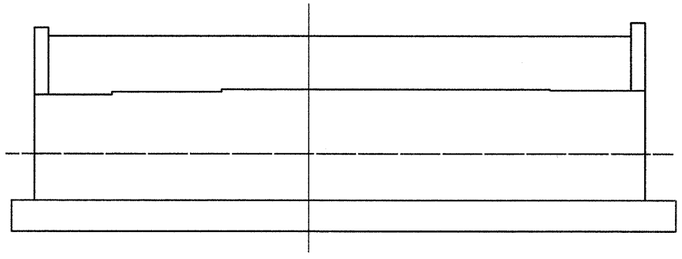


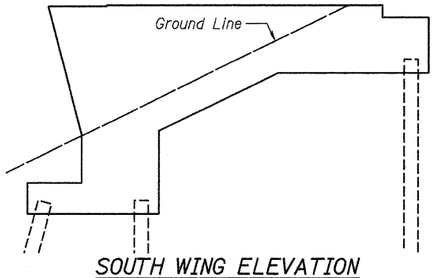
PLAN



NORTH WING ELEVATION



ELEVATION AT WEST ABUTMENT



SOUTH WING ELEVATION

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth = < 5")	Sq. Ft.	5

Notes:
Condition Survey performed 9/16/2009.

Plan quantities assume that areas of "exposed reinforcing" will be repaired.

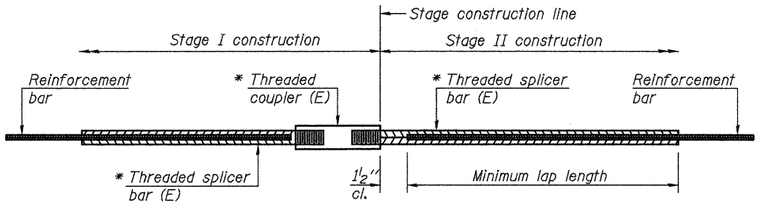
Repair areas are estimated, the Engineer shall determine actual repair locations and record them on the As-Built plans.

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

ABUTMENTS (NB)
STRUCTURE NO. 058-0104(NB) & 0105(SB)

SHEET 10 OF 11	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	101
		STA. 142+55.53	CONTRACT NO. 74150		
		FED. ROAD DIST. NO. / ILLINOIS	FED. AID PROJECT		



STANDARD BAR SPLICER ASSEMBLY

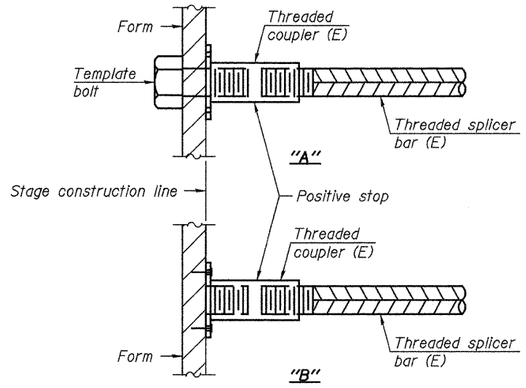
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

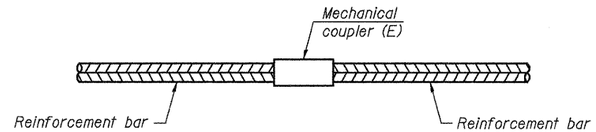
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck Exp. Jts.	#5	4 (SB) & 4 (NB)	3
Deck Exp. Jts.	#6	10 (SB) & 10 (NB)	3
Deck Exp. Jts.	#7	18 (SB) & 18 (NB)	3



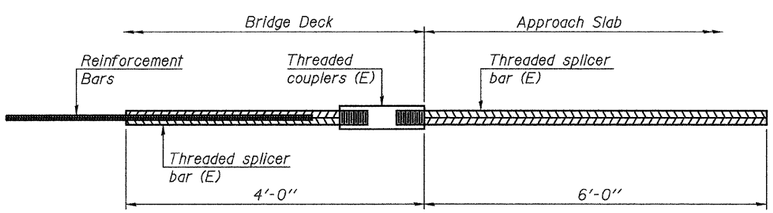
INSTALLATION AND SETTING METHODS

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



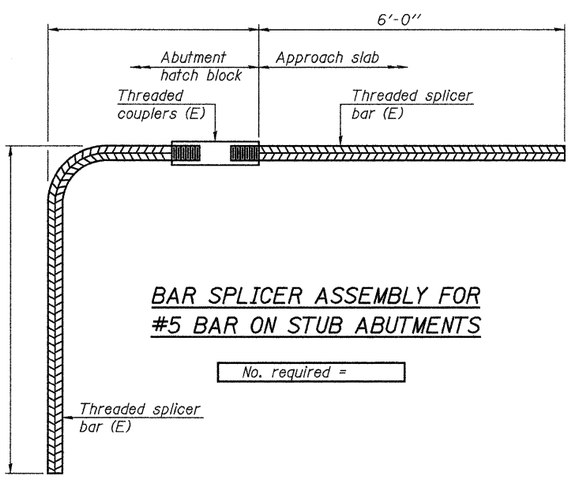
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

BSD-1 11-1-09

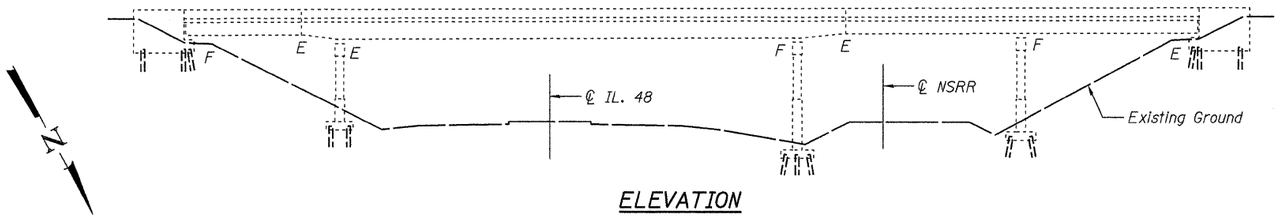
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 058-0104(NB) & 0105(SB)

SHEET 11 OF 11	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	102
		STA. 142+55.53	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

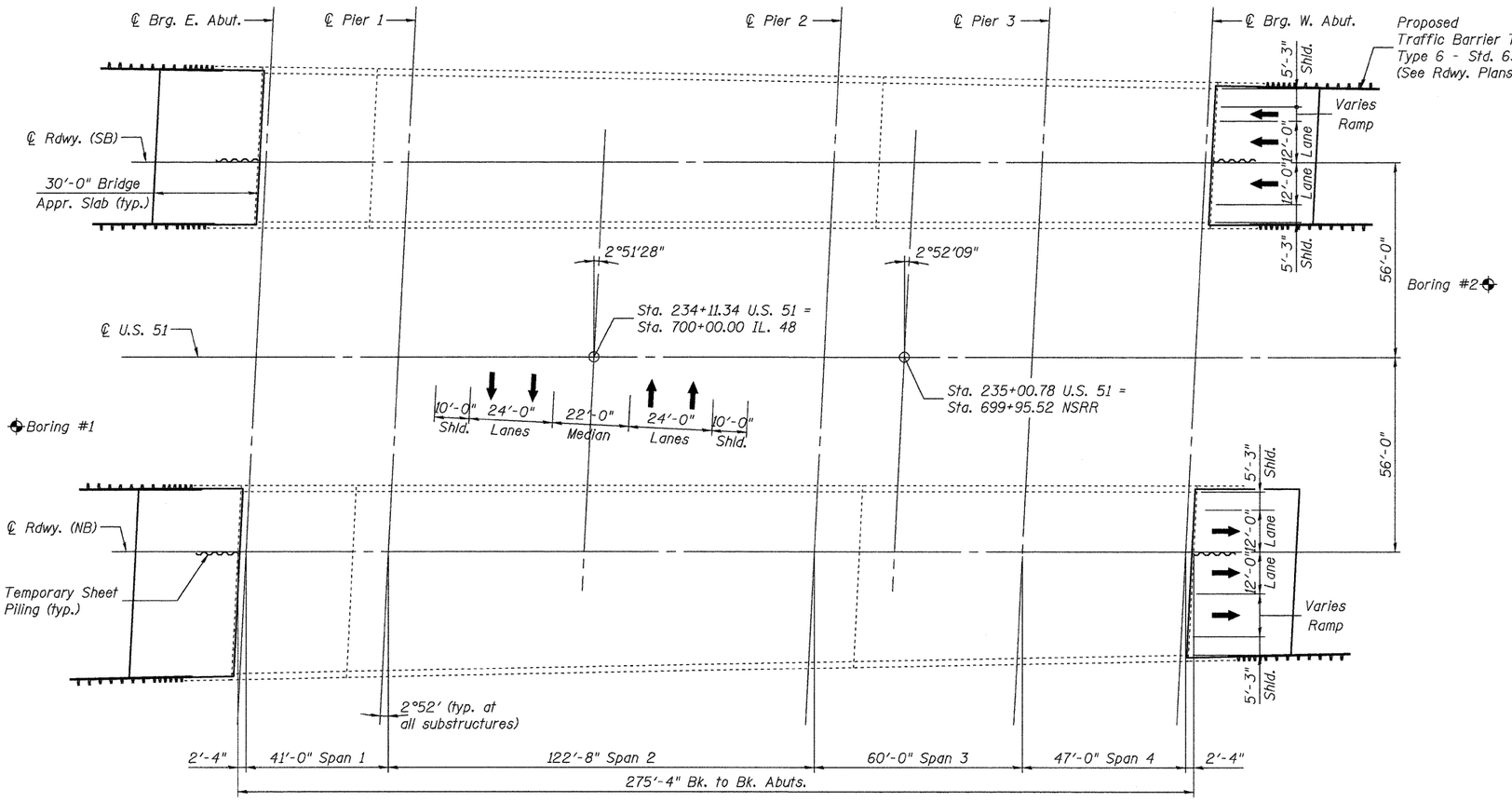
EXISTING STRUCTURE: S.N. 058-0108(SB) & 0109(NB), originally constructed in 1978 as FA Route 412 Sec. 58-20HVB-1 at Station 235+00.78, using rolled and welded steel I-girders with 8" concrete deck and 1½" bituminous wearing surface, 4 spans, 275'-4" back-back abutments, variable out-out width, open stub abutments on concrete piles, multi-column piers with footings on concrete piles.

Staged construction shall be used to maintain one lane of traffic in each direction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN

INDEX OF SHEETS

GENERAL NOTES

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

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

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

Reinforcement bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Where shown on the plans, reinforcement bars shall be epoxy grouted into existing concrete according to Section 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or 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.

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

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

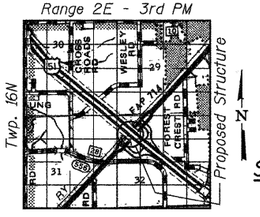
All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

Protective Shield shall be provided for the full width of the bridge deck, over the roadway below from edge of shoulder to edge of shoulder, and over the railroad for 10 feet each side of the track centerline.

Elevations shown on these plans are based on the original 1975 plan elevations, not the current datum. The original plan elevations may be used to establish a temporary benchmark for construction.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SB	NB	
Porous Granular Embankment, Special	Cu Yd	160	200	
Hot-Mix Asphalt Surface Removal (Deck)	Sq Yd	1166	1422	
Concrete Removal	Cu Yd	53.5	65.1	
Protective Shield	Sq Yd	610	733	
Structure Excavation	Cu Yd	160	200	
Concrete Structures	Cu Yd	48.0	56.2	
Concrete Superstructure	Cu Yd	159.2	195.6	
Bridge Deck Grooving	Sq Yd	1440	1772	
Protective Coat	Sq Yd	1753	2085	
Furnishing And Erecting Structural Steel	Pound	1090	1240	
Jack And Remove Existing Bearings	Each	7	8	
Reinforcement Bars, Epoxy Coated	Pound	39580	47590	
Bar Splicers	Each	388	405	
Temporary Sheet Piling	Sq Ft	318	323	
Preformed Joint Strip Seal	Foot	173	209	
Elastomeric Bearing Assembly, Type I	Each	7	8	
Anchor Bolts, 1"	Each	14	16	
Geocomposite Wall Drain	Sq Yd	72	87	
Pipe Underdrains For Structures 4"	Foot	218	235	
Structural Repair Of Concrete (Depth = < 5")	Sq Ft	1	10	
Bridge Deck Microsilica Concrete Overlay 2¼"	Sq Yd	1166	1422	
Bridge Deck Hydro-Scarification ½"	Sq Yd	1166	1422	



LOCATION SKETCH

GENERAL PLAN & ELEVATION
U.S. 51 OVER IL 48 & NSRR
F.A.P. RTE. 322 SECTION (58-20)RS
MACON COUNTY
STATION 235+00.78
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 1 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	103
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

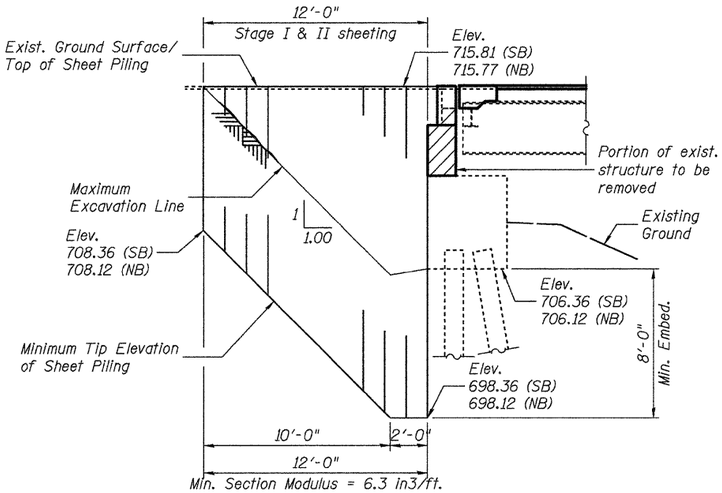
DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

STATE OF ILLINOIS
DAVID C. DEPP
081-005117
LICENSED
STRUCTURAL ENGINEER

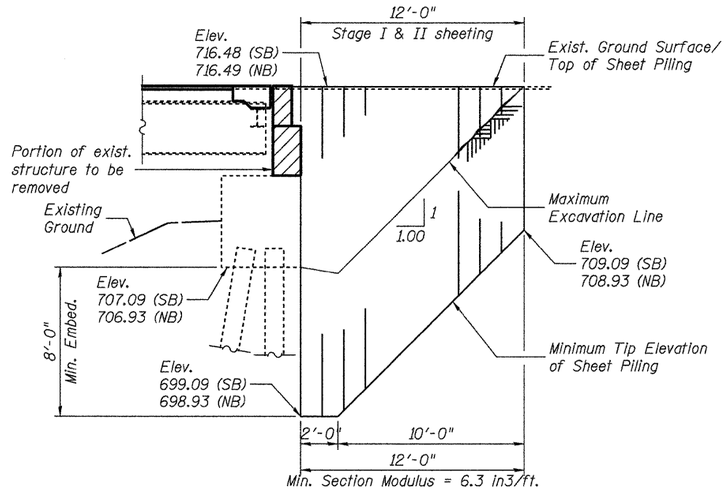
Signed: David Depp
Date: 4-9-2016
Lic. Expires: 11-30-2010

DATE: 04/09/2010 18:02:22 USER: DCD FILE: J:\JDQ\110177 IL-D7VV#8 USSIBridge Repairs\3-IL48-NSRR\058010B-74150-001-gplan.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



EAST ABUTMENT

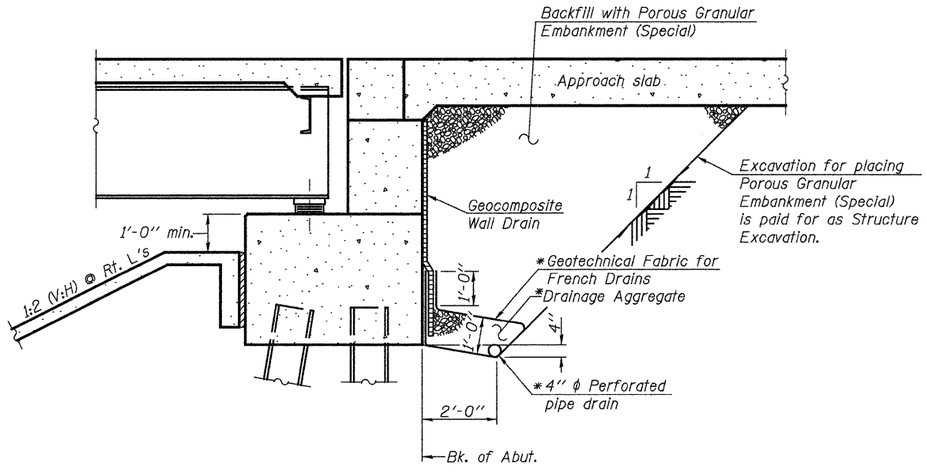


WEST ABUTMENT

TEMPORARY SHEET PILING DETAILS

(Slopes and horizontal dimensions are measured parallel to ℄ roadway)

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.



SECTION THRU PILE SUPPORTED STUB ABUTMENT

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls. The pipe shall extend under the wingwall, then to the toe of slope. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

TEMPORARY SHEET PILING STRUCTURE NO. 058-0108(SB) & 0109(NB)

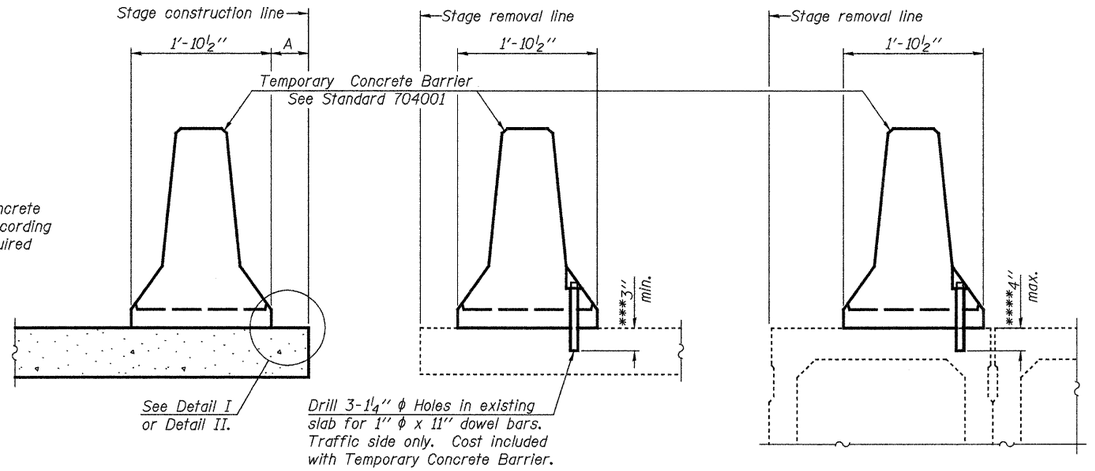
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	
DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

SHEET 2 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	104
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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 ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

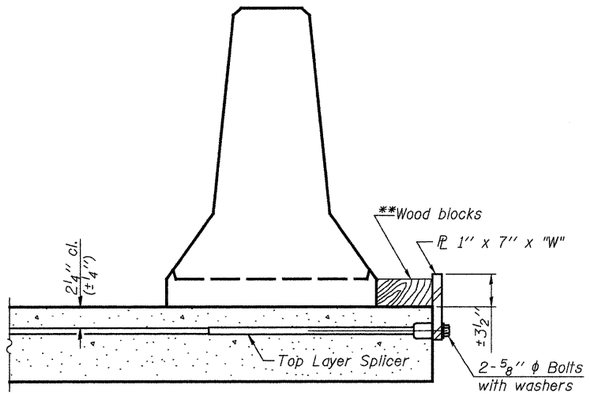
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x 10" steel ℙ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

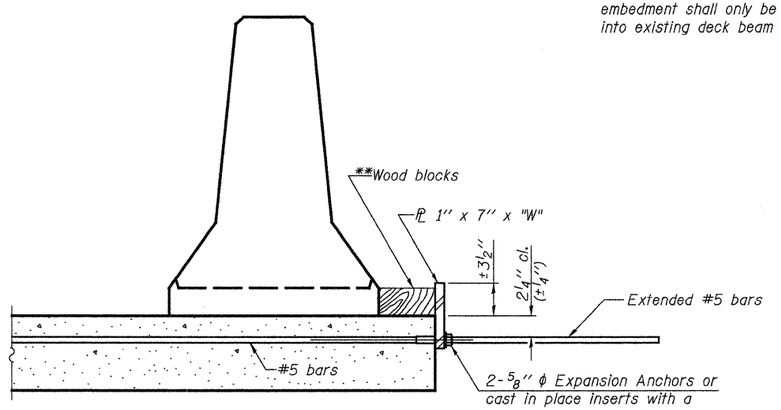
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.



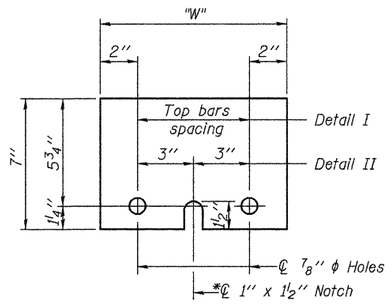
DETAIL I



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.

"W" = Top bars spacing + 4"



STEEL RETAINER ℙ 1" x 7" x 10"

* Required only with Detail II

Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	
DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

R-27 11-1-09

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 3 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	105
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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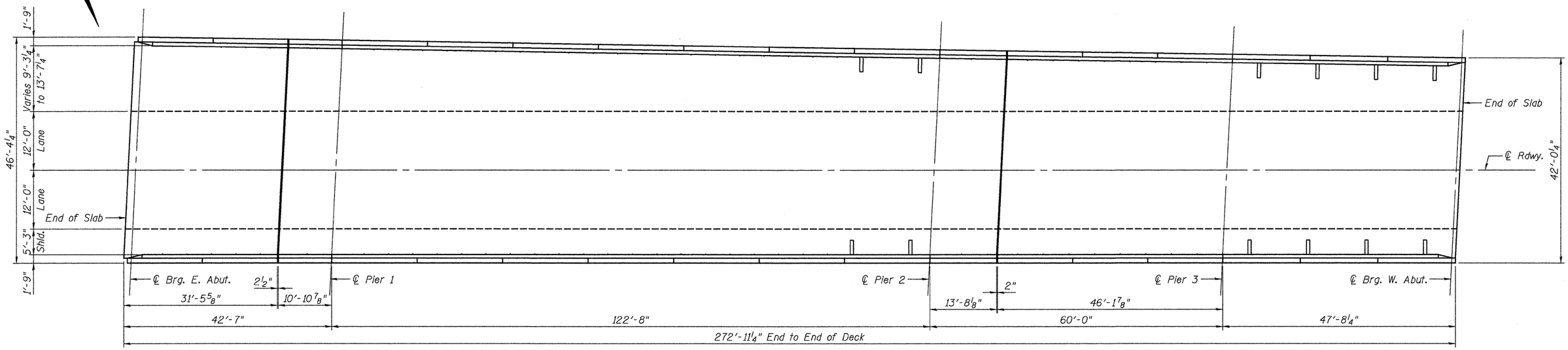
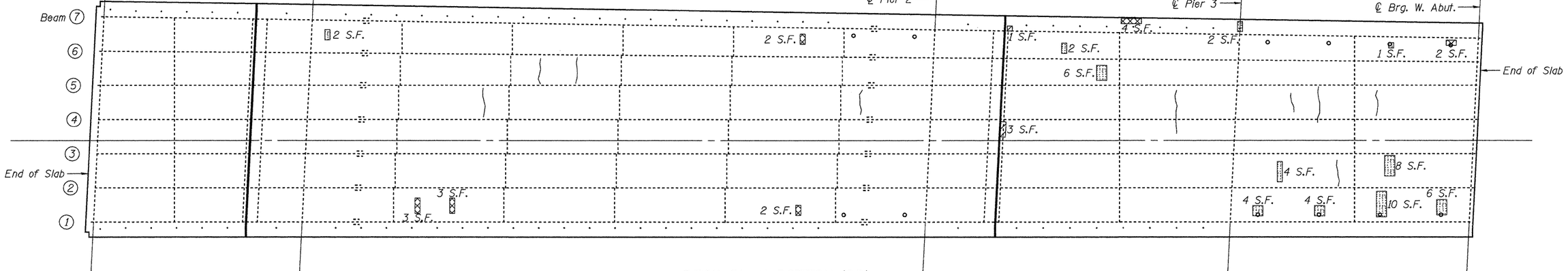
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



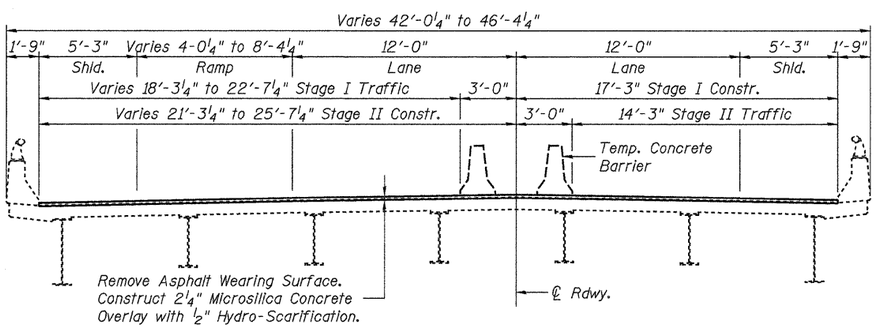
DECK PLAN-TOP (SB)



DECK PLAN-BOTTOM (SB)

LEGEND

- Hollow or Unsound Concrete
- Spalled Concrete
- Spalled Concrete with Exposed Reinf.
- Hairline Crack



CROSS SECTION
(Southbound, Looking West)

Notes:
Deck Condition Survey performed 9/17/2009.

Plan quantities assume that areas of "exposed reinforcing" greater than 5 sq. ft. will use Full-depth Type II repair.

Repair areas are estimated, the Engineer shall determine actual repair locations and record them on the As-Built plans.

Partial depth repairs are included with Bridge Deck Hydro-scarification, see Special Provision for Bridge Deck Microsilica Concrete Overlay.

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	0

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

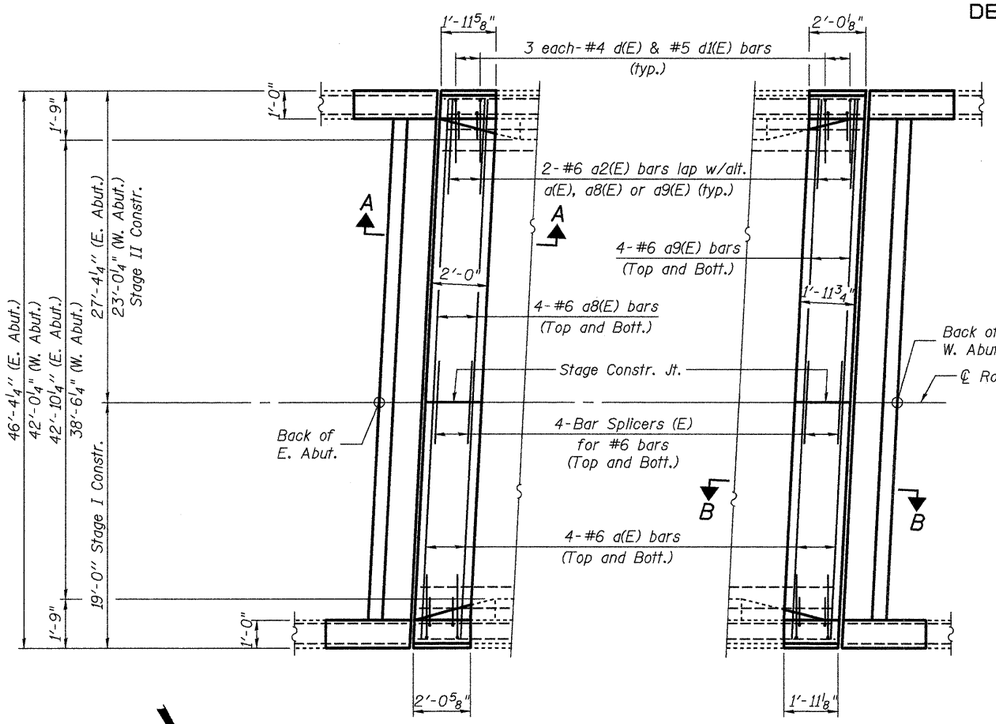
DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

DECK PLAN (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 4 OF 26

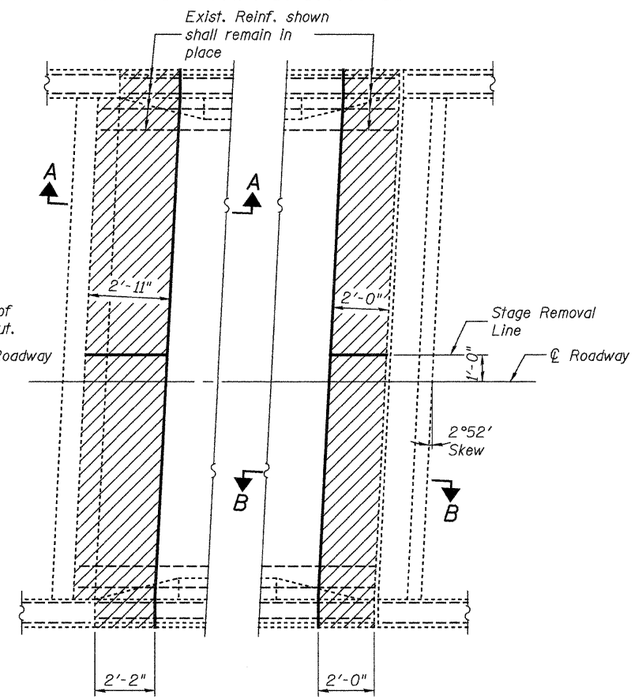
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	106
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



AT EAST ABUT. AT WEST ABUT.

NEW CONSTRUCTION

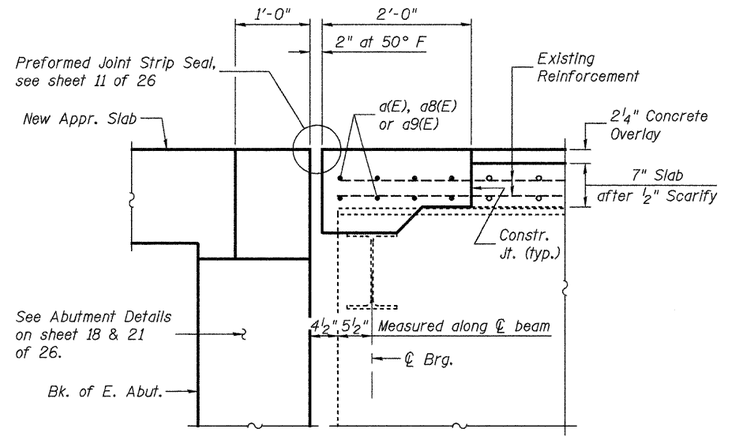


AT EAST ABUT. AT WEST ABUT.

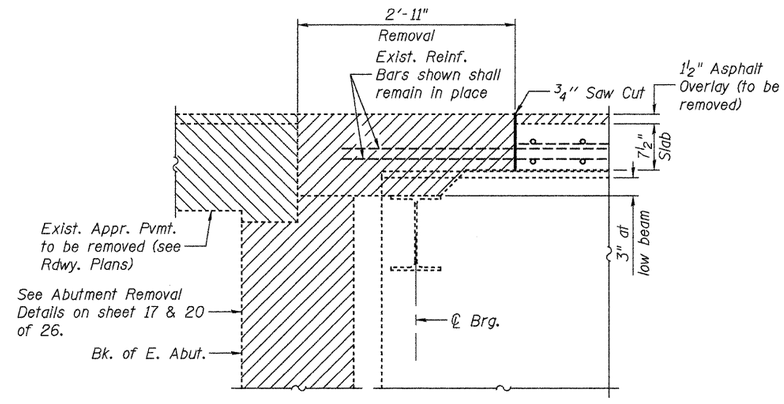
CONCRETE REMOVAL

PLAN AT ABUTMENTS

Indicates Limits of Concrete Removal.



PROPOSED SECTION A-A



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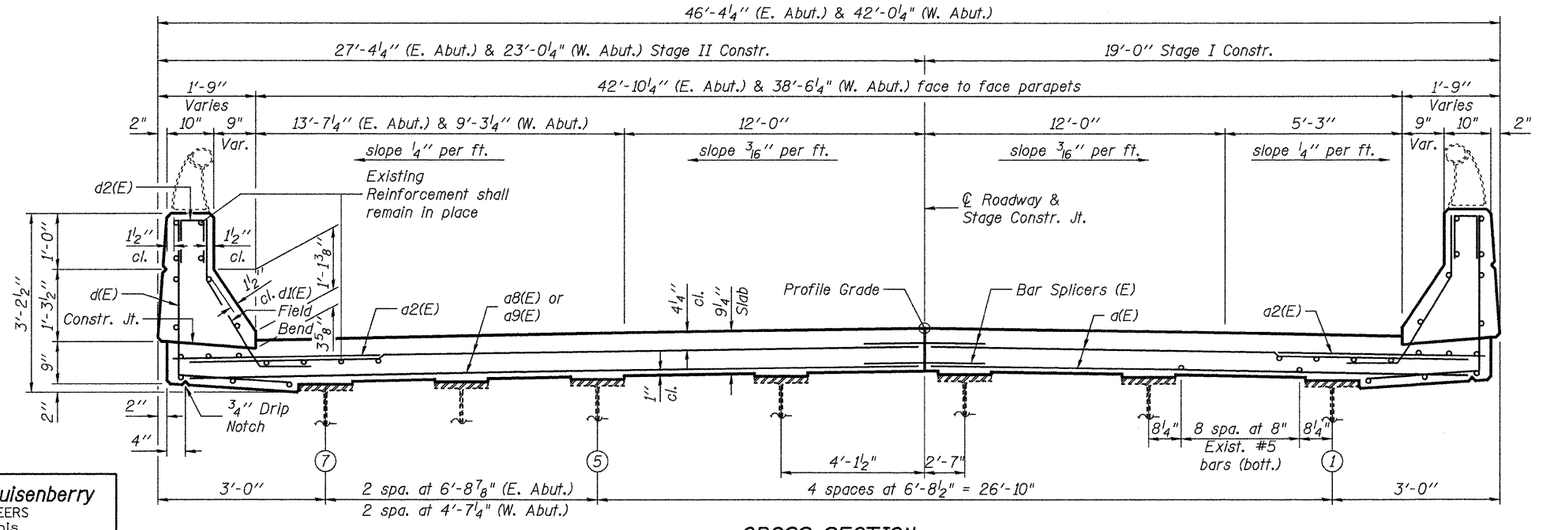


CROSS SECTION
(Looking West)

Notes:
For Section B-B see sheet 8 of 26.

For Parapet Details and Bill of Material see sheet 10 of 26.

The existing expansion joint areas were previously reconstructed. The concrete removal for this project shall extend at least to the limits of the previous reconstruction.

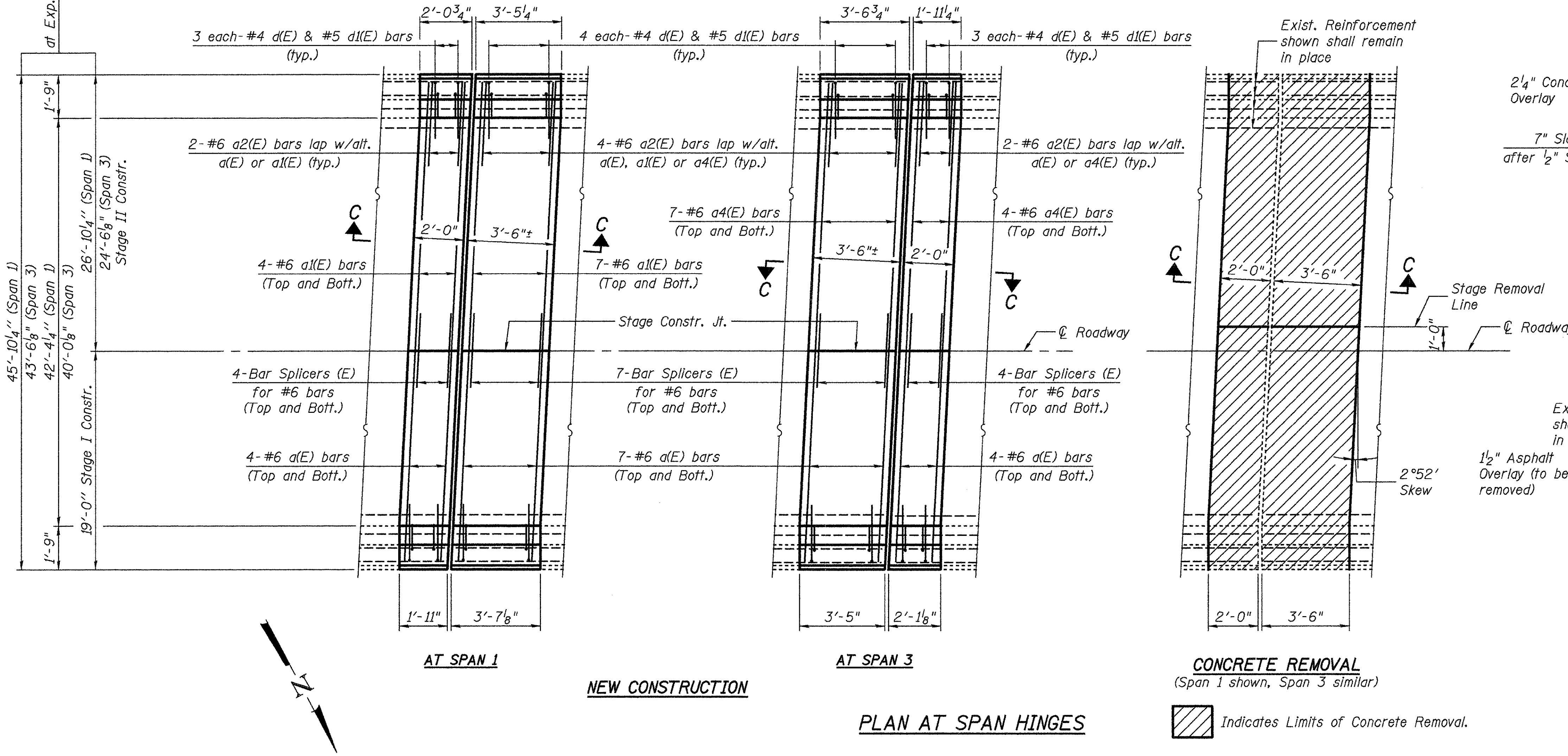
Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

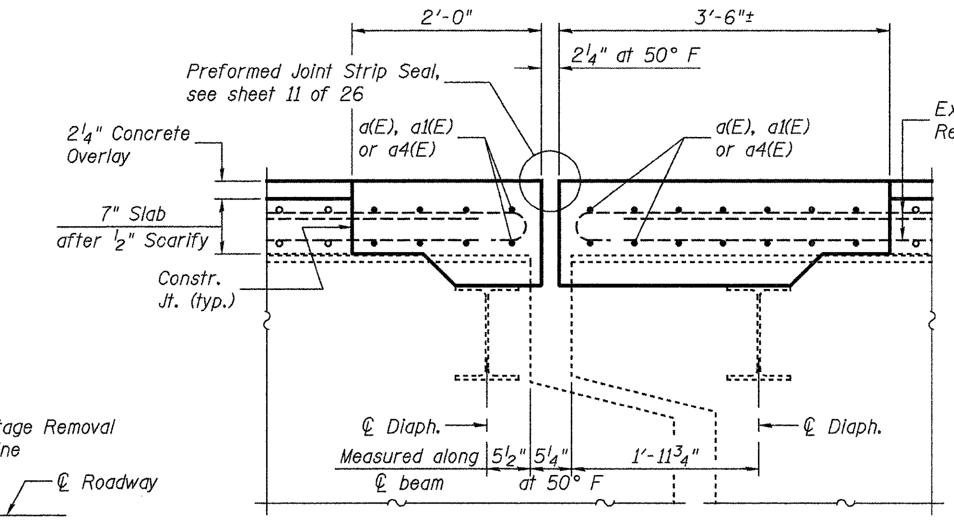
DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

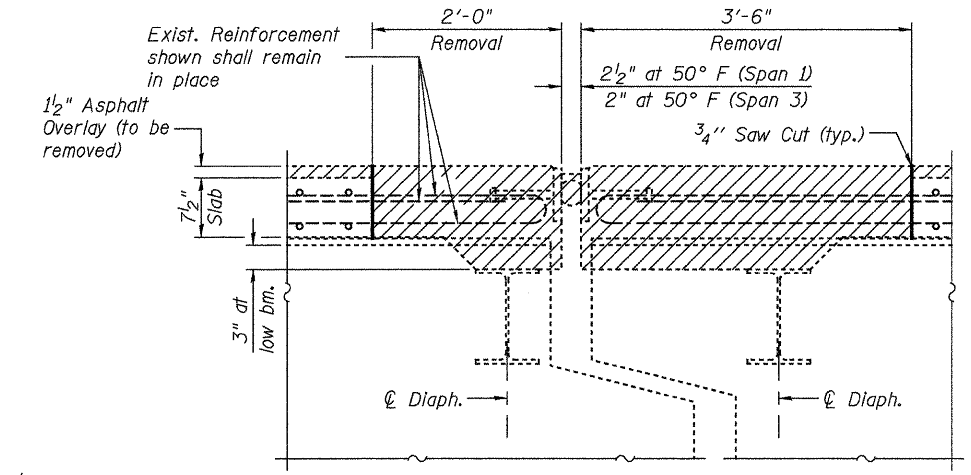
SUPERSTRUCTURE (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

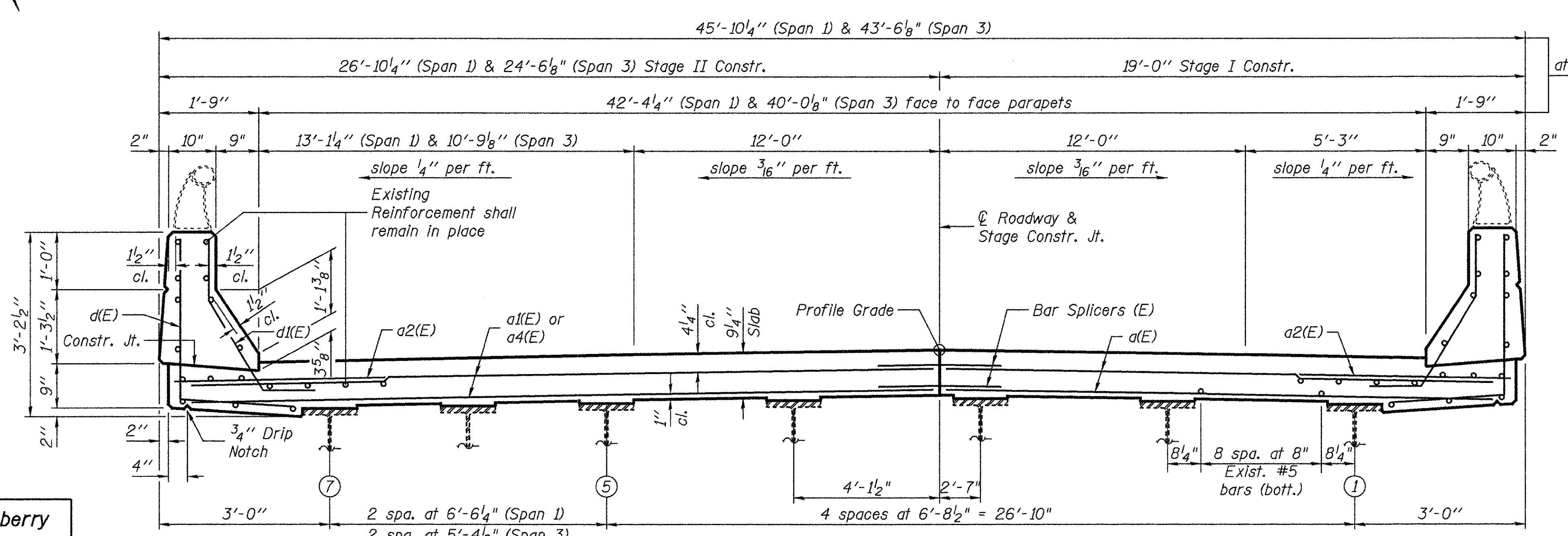
SHEET 5 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	107
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION









CROSS SECTION
(Looking West)

Notes:
For Parapet Details and Bill of Material see sheet 10 of 26.

The existing expansion joint areas were previously reconstructed. The concrete removal for this project shall extend at least to the limits of the previous reconstruction.

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

SUPERSTRUCTURE (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 6 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	108
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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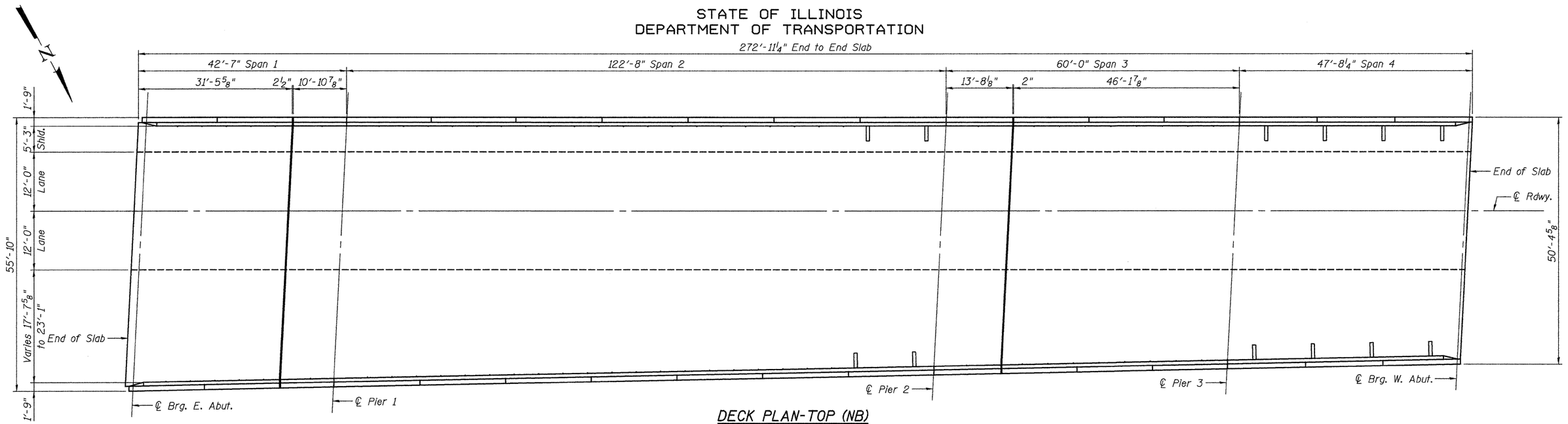
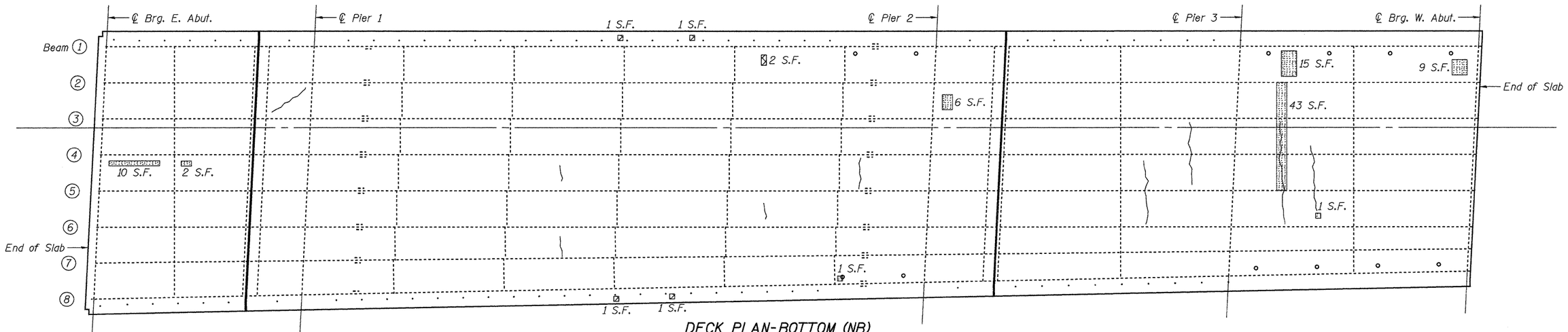
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DECK PLAN-TOP (NB)



DECK PLAN-BOTTOM (NB)

LEGEND

- Hollow or Unsound Concrete
- Spalled Concrete
- Spalled Concrete with Exposed Reinf.
- Hairline Crack

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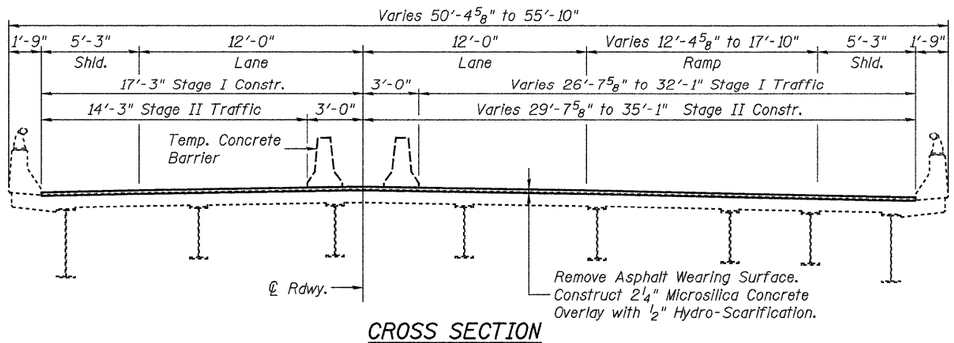
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD



CROSS SECTION
(Northbound, Looking West)

Notes:
Deck Condition Survey performed 9/17/2009.

Plan quantities assume that areas of "exposed reinforcing" greater than 5 sq. ft. will use Full-depth Type II repair.

Repair areas are estimated, the Engineer shall determine actual repair locations and record them on the As-Built plans.

Partial depth repairs are included with Bridge Deck Hydro-scarification, see Special Provision for Bridge Deck Microsilica Concrete Overlay.

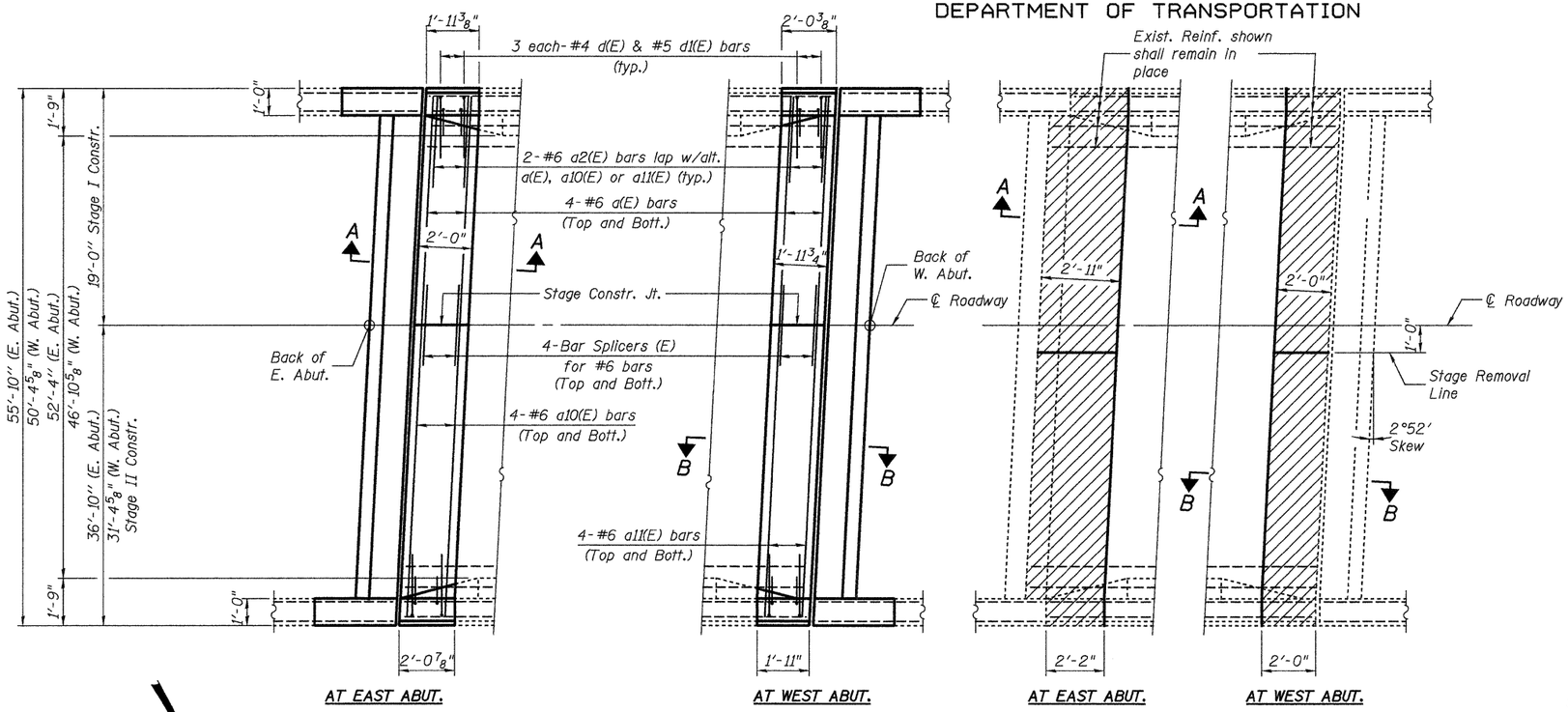
BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	0

DECK PLAN (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 7 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-2O)RS	MACON	151	109
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

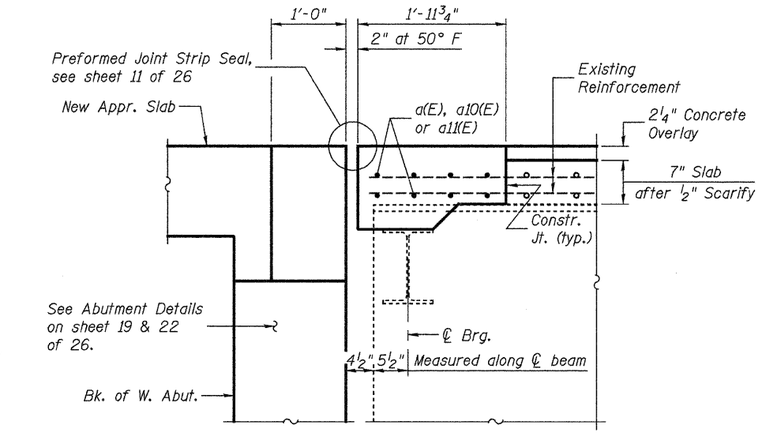


NEW CONSTRUCTION

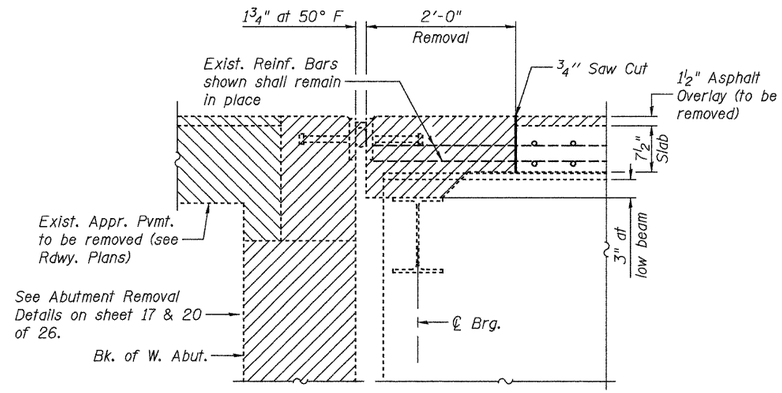
CONCRETE REMOVAL

PLAN AT ABUTMENTS

Indicates Limits of Concrete Removal.



PROPOSED SECTION B-B



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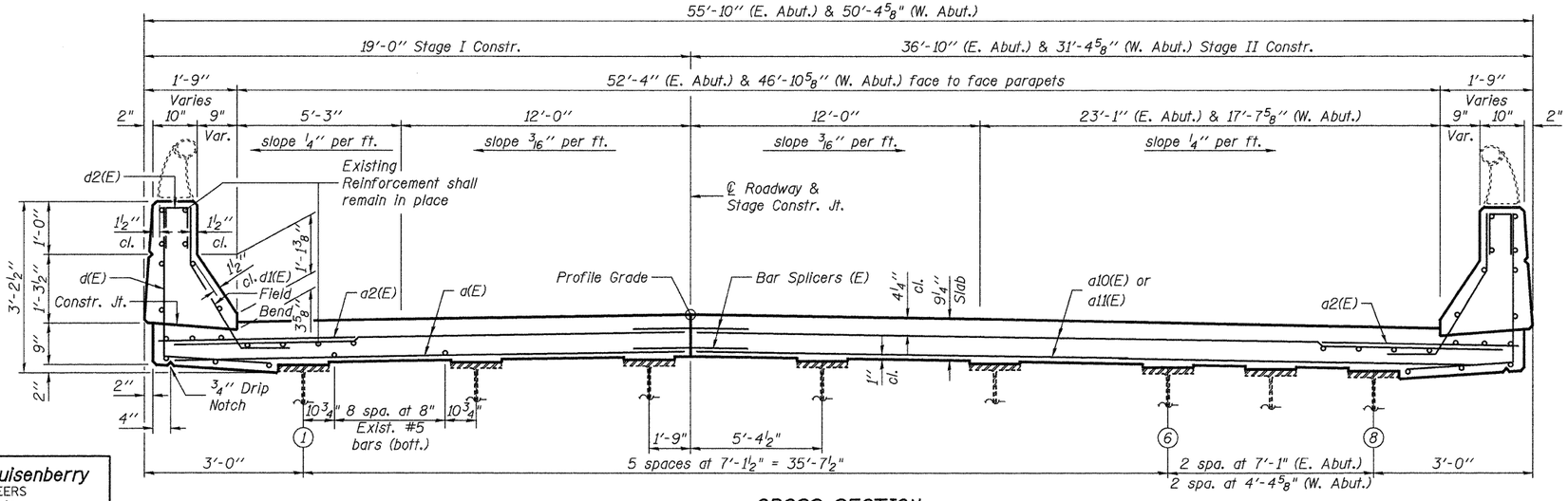


CROSS SECTION
(Looking West)

Notes:
For Section A-A see sheet 5 of 26.

For Parapet Details and Bill of Material see sheet 10 of 26.

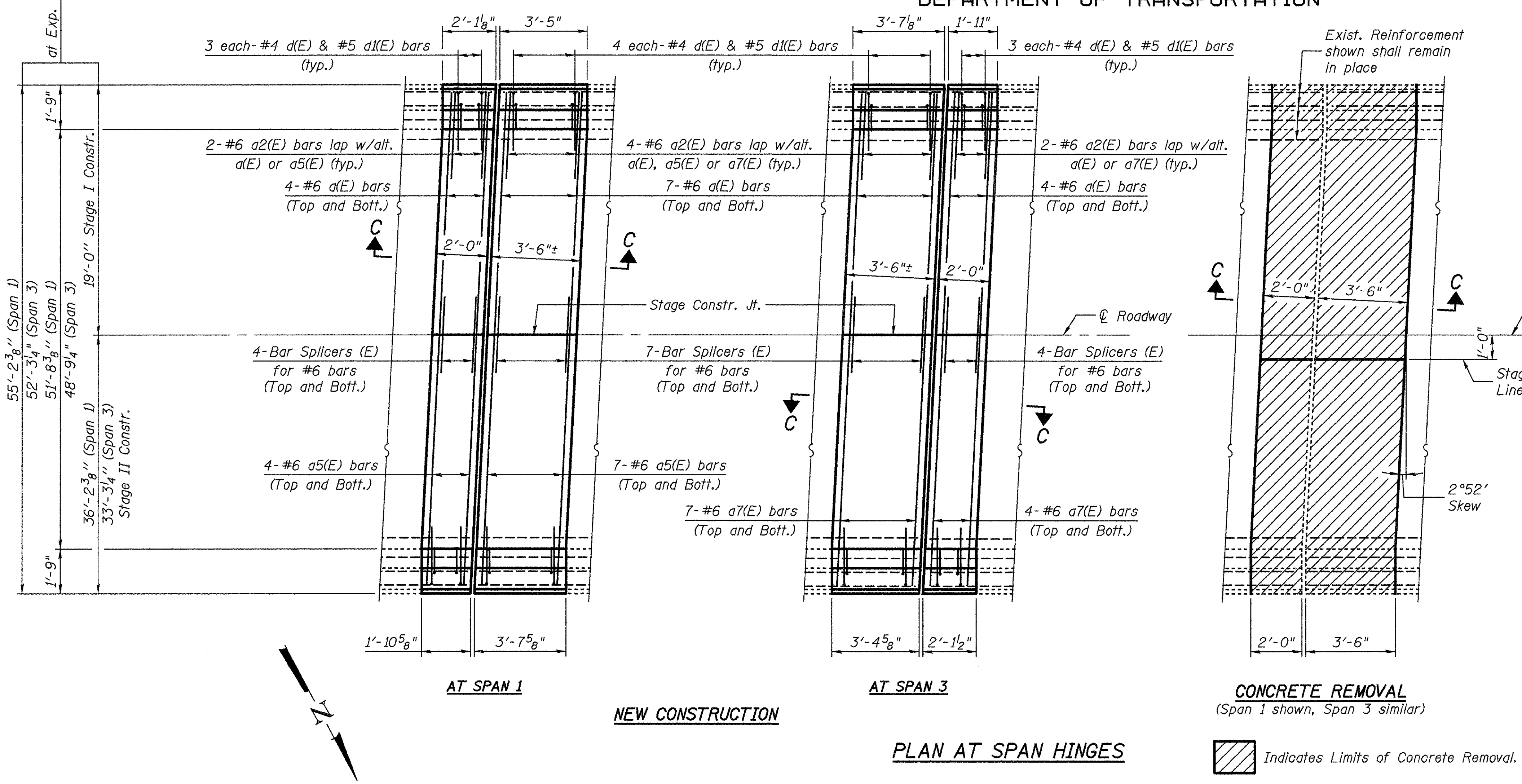
The existing expansion joint areas were previously reconstructed. The concrete removal for this project shall extend at least to the limits of the previous reconstruction.

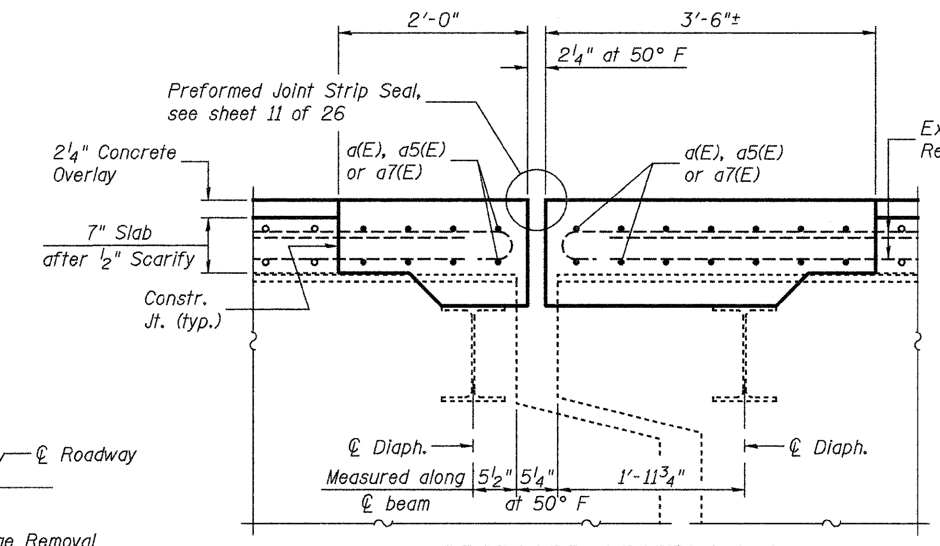
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	
DESIGNED: JDQ	DRAWN: PTR
CHECKED: DCD	CHECKED: DCD

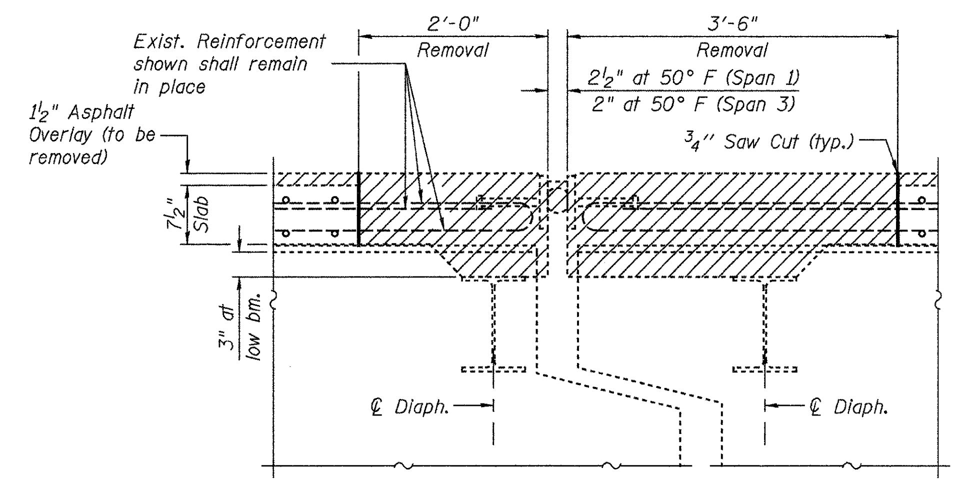
SUPERSTRUCTURE (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

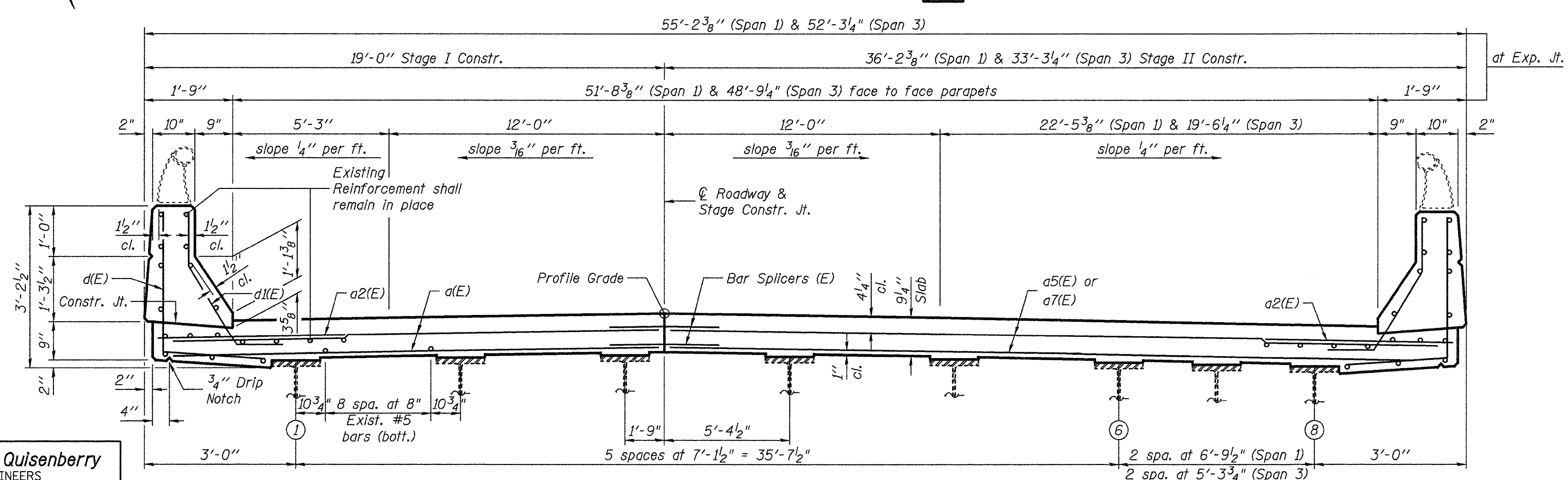
SHEET 8 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	110
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION









CROSS SECTION
(Looking West)

Notes:
For Parapet Details and Bill of Material see sheet 10 of 26.

The existing expansion joint areas were previously reconstructed. The concrete removal for this project shall extend at least to the limits of the previous reconstruction.

SUPERSTRUCTURE (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

SHEET 9 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	111
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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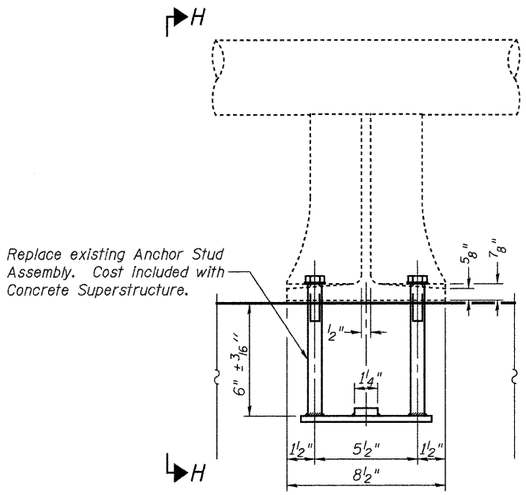
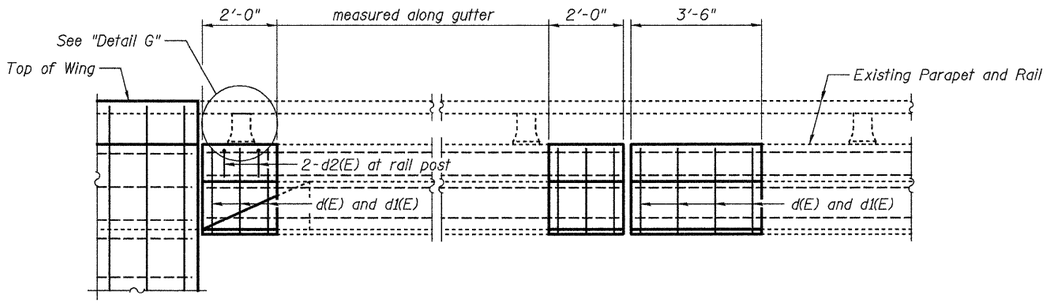
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

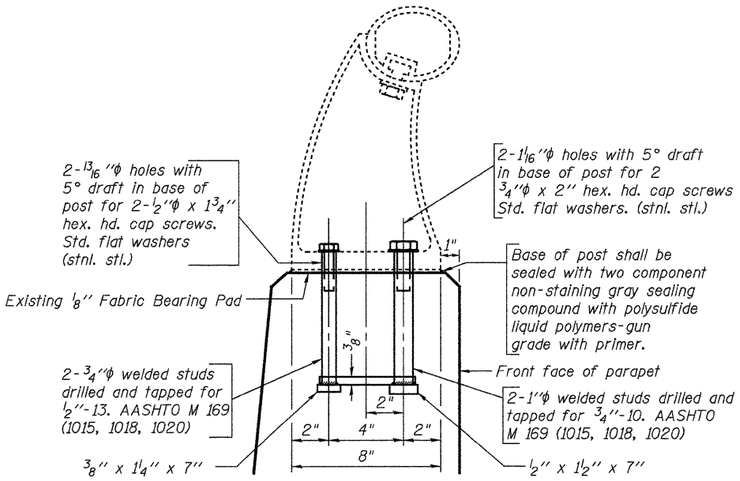


DETAIL G

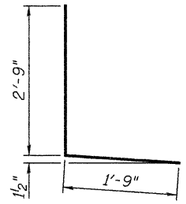


AT EAST ABUTMENT AT SPAN 1

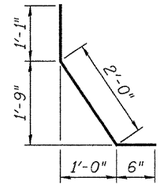
PARTIAL INSIDE ELEVATION OF PARAPET
(Span 3 & West Abutment similar)



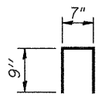
SECTION H-H



BAR d(E)



BAR d1(E)



BAR d2(E)

SUPERSTRUCTURE (SB) BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	60	#6	18'-1"	———
a1(E)	22	#6	25'-11"	———
a2(E)	32	#6	5'-0"	———
a4(E)	22	#6	23'-7"	———
a8(E)	8	#6	26'-5"	———
a9(E)	8	#6	22'-1"	———
d(E)	40	#4	4'-6"	L
d1(E)	40	#5	3'-7"	L
d2(E)	8	#4	2'-1"	⊓
Reinforcement Bars, Epoxy Coated			Pound	4370
Concrete Superstructure			Cu. Yd.	29.9
Concrete Removal			Cu. Yd.	30.5

SUPERSTRUCTURE (NB) BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	60	#6	18'-1"	———
a2(E)	32	#6	5'-0"	———
a5(E)	22	#6	35'-3"	———
a7(E)	22	#6	32'-4"	———
a10(E)	8	#6	35'-11"	———
a11(E)	8	#6	30'-6"	———
d(E)	40	#4	4'-6"	L
d1(E)	40	#5	3'-7"	L
d2(E)	8	#4	2'-1"	⊓
Reinforcement Bars, Epoxy Coated			Pound	5190
Concrete Superstructure			Cu. Yd.	37.6
Concrete Removal			Cu. Yd.	38.3

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 10 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	112
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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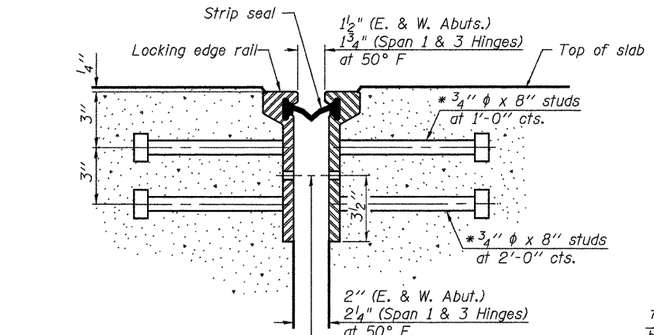
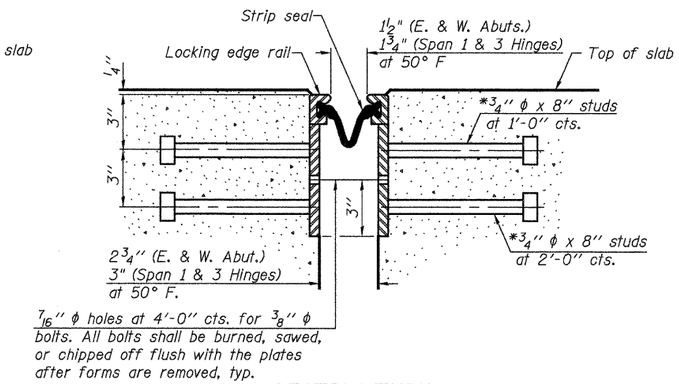
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



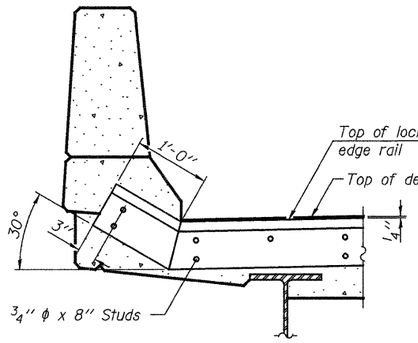
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



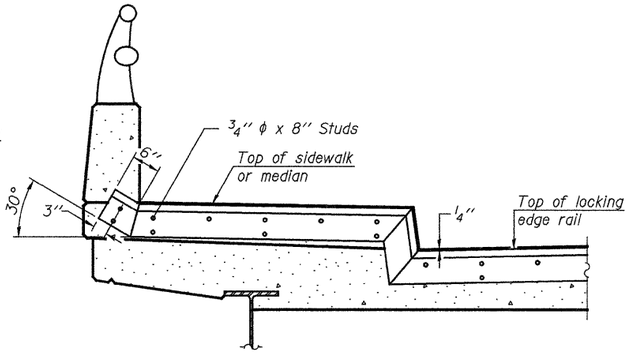
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT



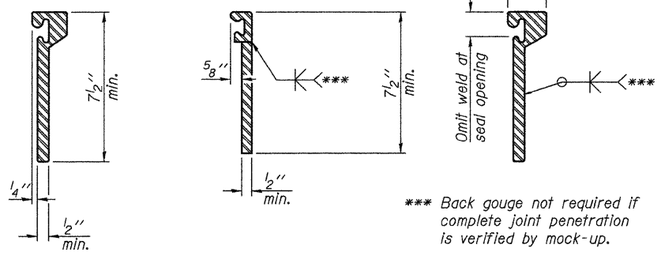
AT PARAPET

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



AT SIDEWALK OR MEDIAN

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



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

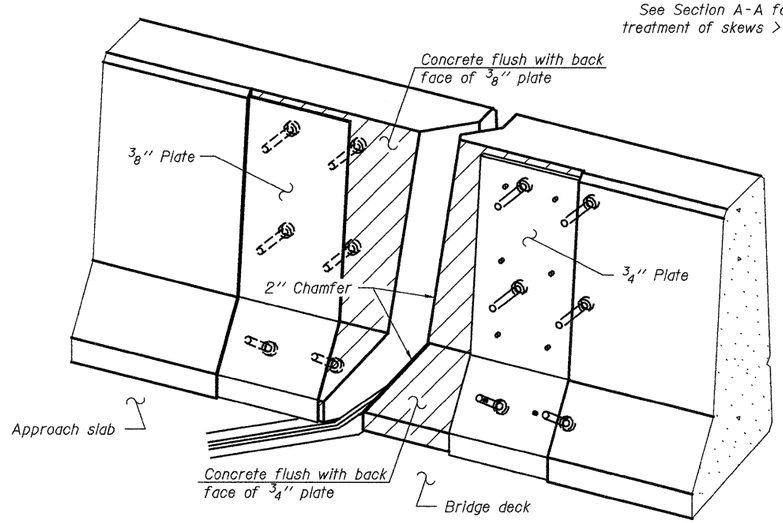
ROLLED EXTRUDED RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

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

Rolled rail shown, welded rail similar.



TRIMETRIC VIEW

(Showing back plates only)

TYPICAL END TREATMENTS

Notes:

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

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

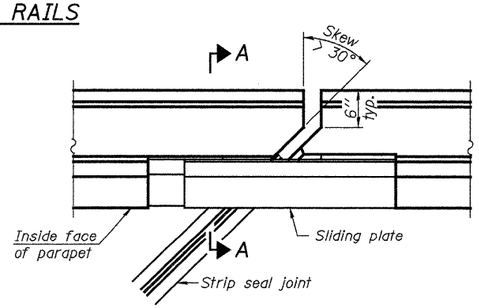
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

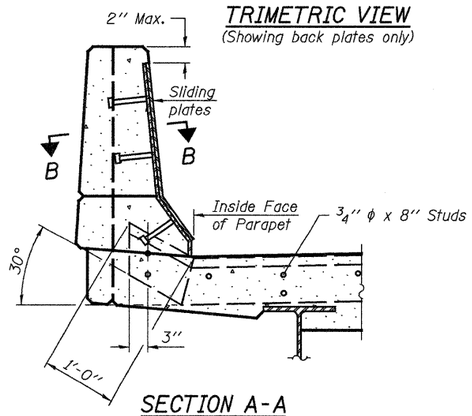
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

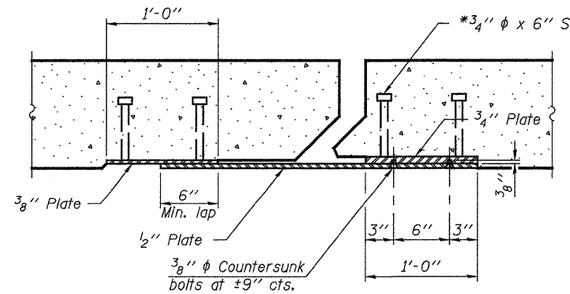
LOCKING EDGE RAILS



PLAN



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	SB Bridge	NB Bridge
Preformed Joint Strip Seal	Foot	173	209

POINT BLOCK DETAILS

(for skews > 30°)

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 058-0108(SB) & 0109(NB)

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

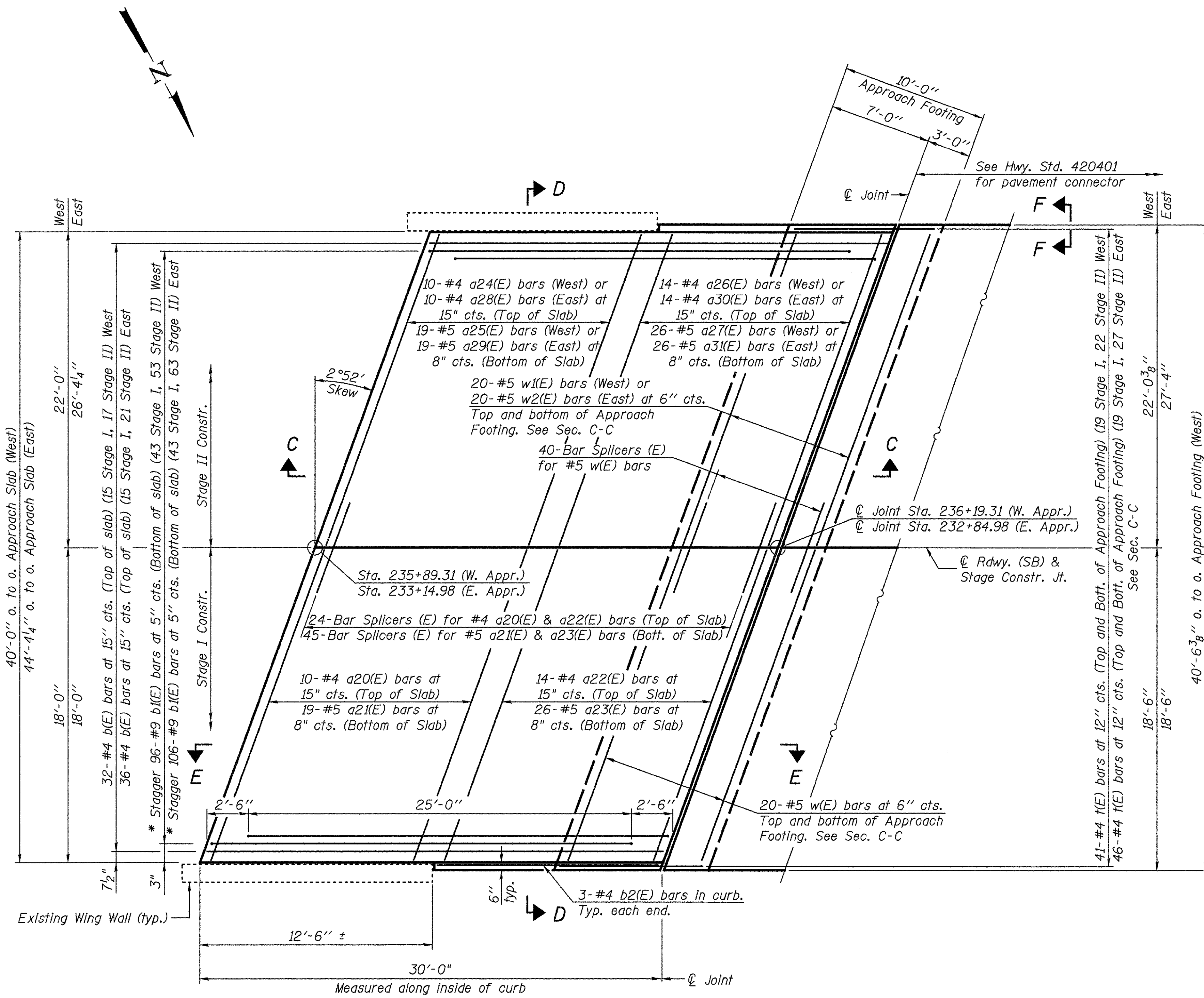
EJ-SSJ 11-1-09

SHEET 11 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	113
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

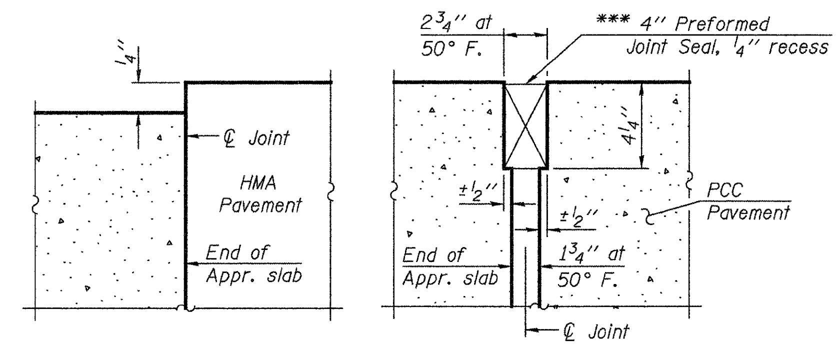
Notes:
See sheet 13 of 26 for Sections C-C & D-D and View E-E.
a20(E) thru a31(E) bar spacings measured along ℄ Rdwy.

*** Cost included with Concrete Superstructure.



PLAN
(West Approach shown, East Approach similar)

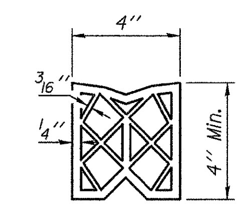
* Tilt #9 b1(E) bars as required to maintain clearance.



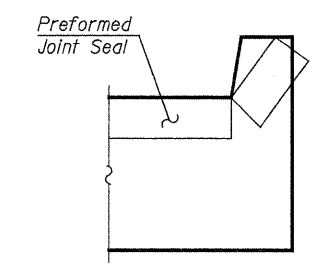
FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A

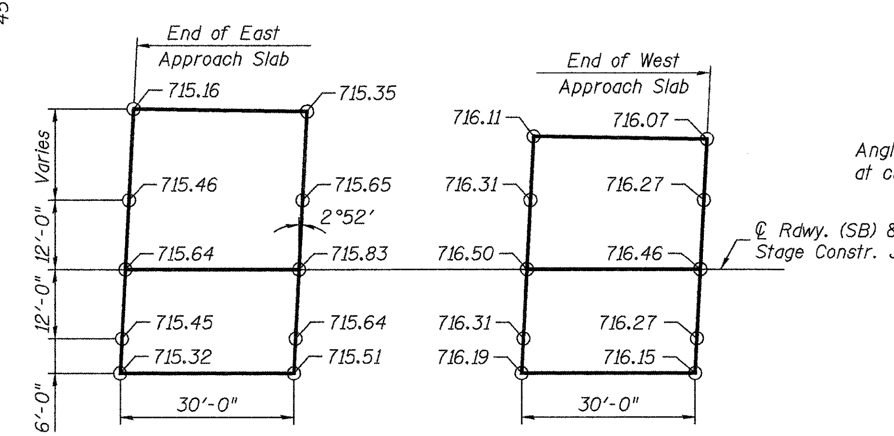


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



TOP OF APPROACH SLAB ELEVATIONS

NOTE:
Proposed elevations are based on the original 1975 plan elevations, increased by 0.02' (¼") to account for the proposed deck overlay.
The top of the existing pavement at the abutment backwall can be used as a temporary benchmark by assuming the following elevations:
Back of East Abut. original PG Elev. 715.81
Back of West Abut. original PG Elev. 716.48

FILE: J:\JDQ\10177 IL-D7VV#8 US51Bridge Repairs\3-IL48-NSRR\0580108-74150-012-apprslab1-SB.dgn

USER: DCD

DATE: 04/09/2010 18:02:56

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

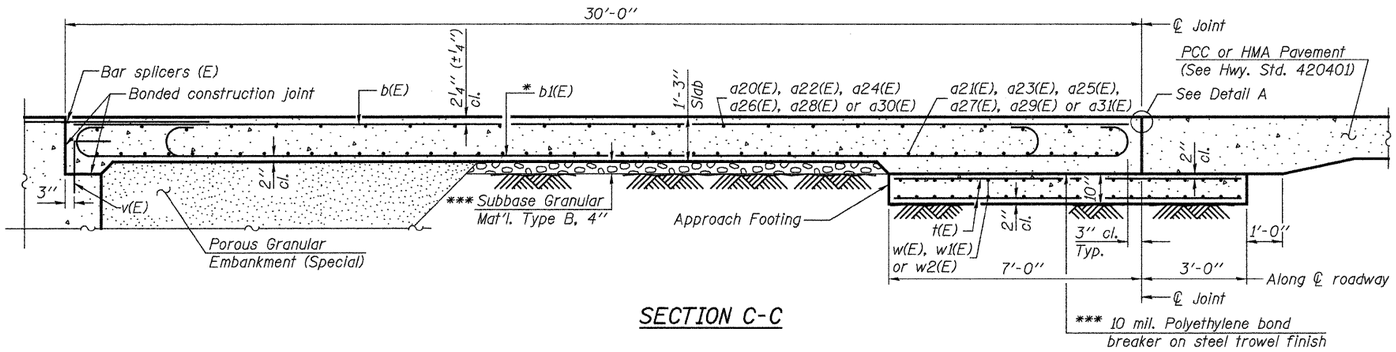
BA-L 11-1-09 (Modified)

(Sheet 1 of 2)

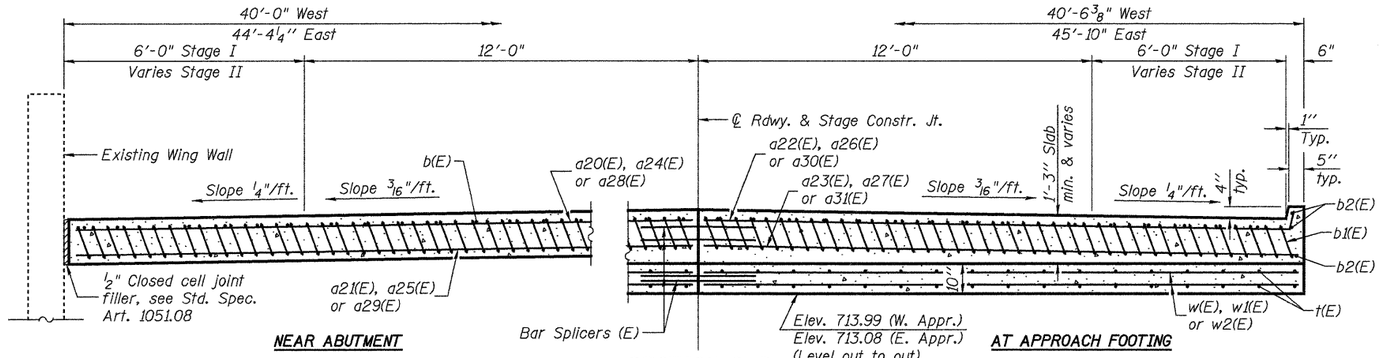
BRIDGE APPROACH SLAB DETAILS (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET 12 OF 26	322	(58-20)RS	MACON	151	114
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C

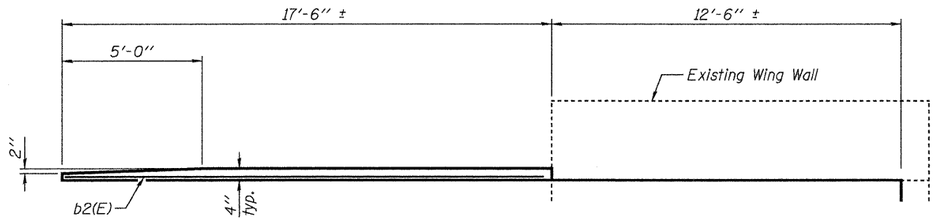


NEAR ABUTMENT

AT APPROACH FOOTING

SECTION D-D

(See Plan for dimensions not shown)



VIEW E-E

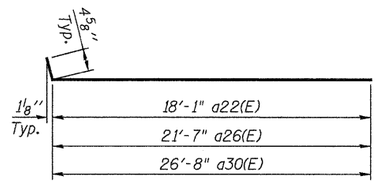
Notes:
See sheet 12 of 26 for Detail A and View F-F.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 18 & 19 of 26.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 25 of 26.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 26.

* Tilt #9 b1(E) bars as required to maintain clearance.

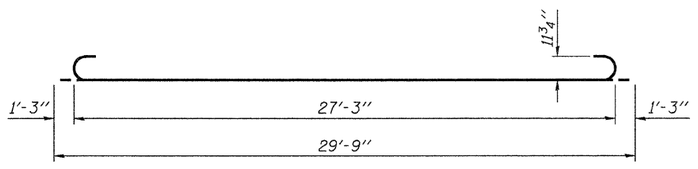
*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	20	#4	17'-8"	
a21(E)	38	#5	17'-8"	
a22(E)	28	#4	18'-6"	
a23(E)	52	#5	18'-2"	
a24(E)	10	#4	21'-6"	
a25(E)	19	#5	21'-6"	
a26(E)	14	#4	22'-0"	
a27(E)	26	#5	21'-8"	
a28(E)	10	#4	26'-0"	
a29(E)	19	#5	26'-0"	
a30(E)	14	#4	27'-1"	
a31(E)	26	#5	26'-9"	
b(E)	68	#4	29'-8"	
b1(E)	202	#9	29'-9"	
b2(E)	12	#4	17'-2"	
t(E)	174	#4	9'-8"	
w(E)	80	#5	18'-2"	
w1(E)	40	#5	21'-8"	
w2(E)	40	#5	26'-11"	
Concrete Superstructure		Cu. Yd.	124.3	
Concrete Structures		Cu. Yd.	26.7	
Reinforcement Bars, Epoxy Coated		Pound	31880	



BARS a22(E), a26(E) & a30(E)



BAR b1(E)

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

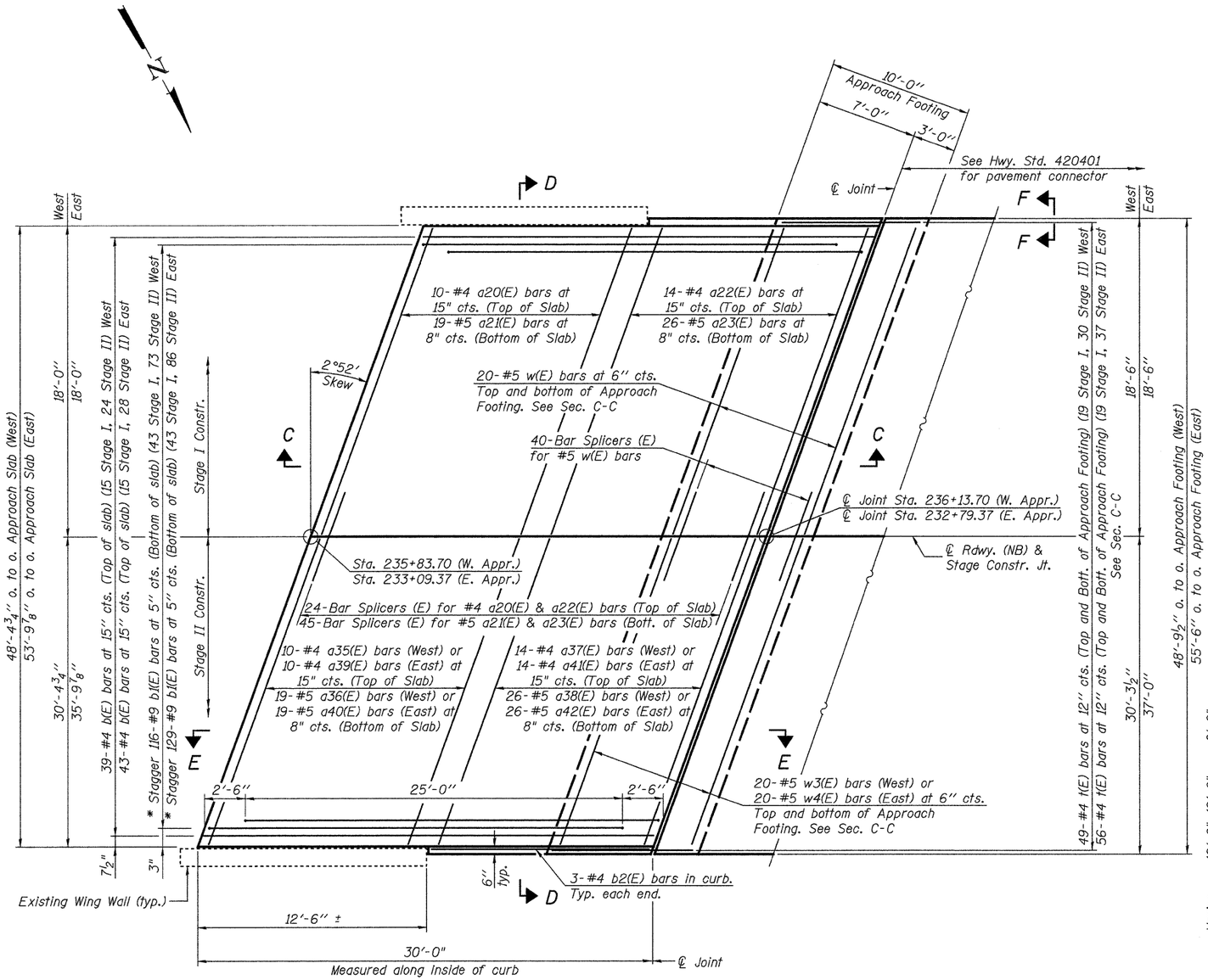
BA-L 11-1-09 (Modified)

(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 13 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	115
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 15 of 26 for Sections C-C & D-D and View E-E.
a20(E) thru a23(E) & a35(E) thru a42(E) bar spacings measured along ℄ Rdwy.

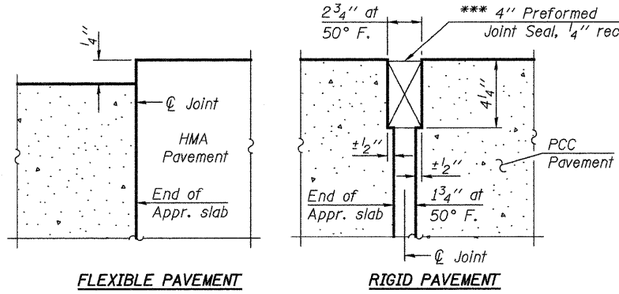


PLAN

(West Approach shown, East Approach similar)

* Tilt #9 b1(E) bars as required to maintain clearance.

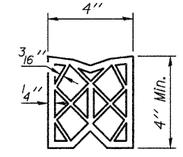
*** Cost included with Concrete Superstructure.



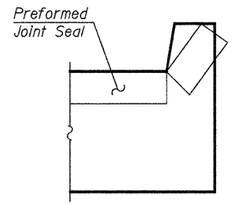
FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A

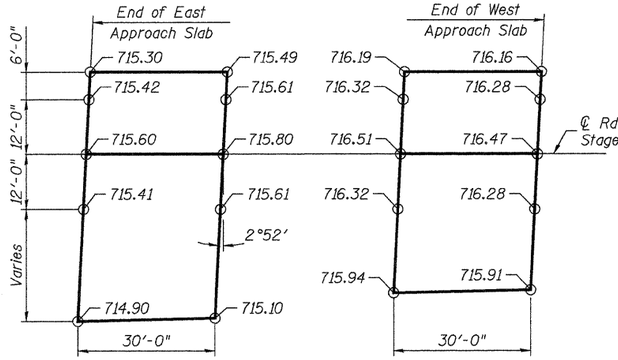


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



TOP OF APPROACH SLAB ELEVATIONS

NOTE:
Proposed elevations are based on the original 1975 plan elevations, increased by 0.02' (1/4") to account for the proposed deck overlay. The top of the existing pavement at the abutment backwall can be used as a temporary benchmark by assuming the following elevations:
Back of East Abut. original PG Elev. 715.77
Back of West Abut. original PG Elev. 716.49

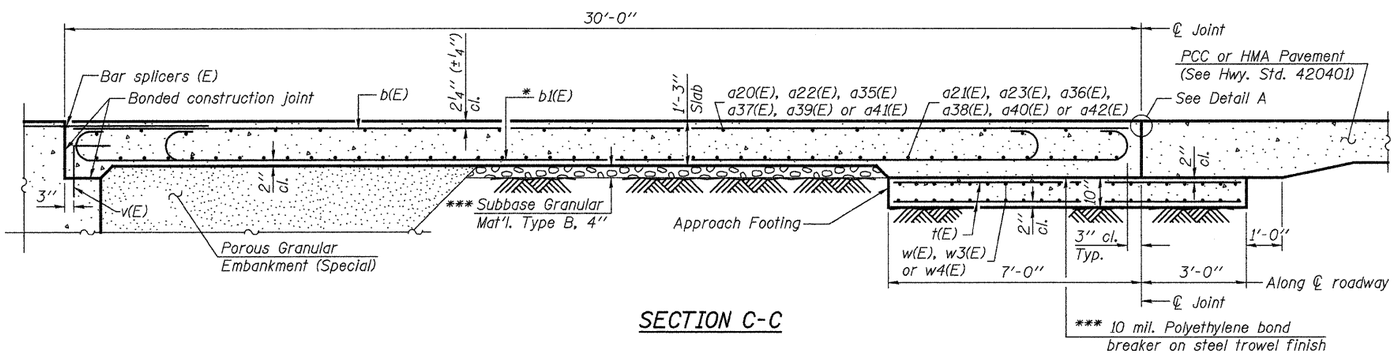
(Sheet 1 of 2)

BRIDGE APPROACH SLAB DETAILS (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

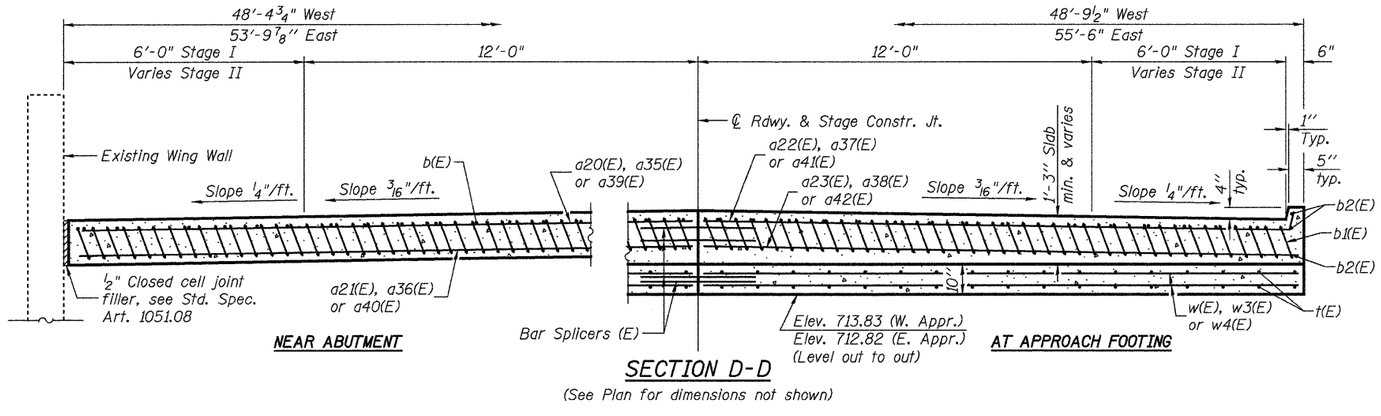
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED: JDQ	DRAWN: P. Ray		
CHECKED: DCD	CHECKED: DCD		
BA-L	11-1-09 (Modified)		

SHEET 14 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	116
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C

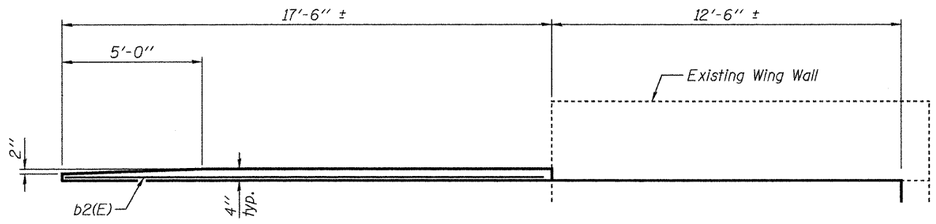


NEAR ABUTMENT

AT APPROACH FOOTING

SECTION D-D

(See Plan for dimensions not shown)



VIEW E-E

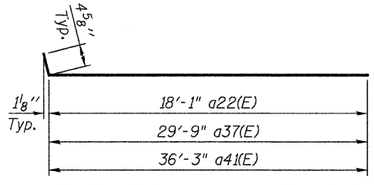
Notes:
See sheet 14 of 26 for Detail A and View F-F.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 21 & 22 of 26.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 25 of 26.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 26.

* Tilt #9 b1(E) bars as required to maintain clearance.

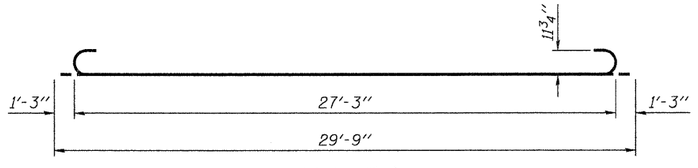
*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	20	#4	17'-8"	———
a21(E)	38	#5	17'-8"	———
a22(E)	28	#4	18'-6"	⌊———
a23(E)	52	#5	18'-2"	———
a35(E)	10	#4	29'-10"	———
a36(E)	19	#5	29'-10"	———
a37(E)	14	#4	30'-2"	⌊———
a38(E)	26	#5	29'-10"	———
a39(E)	10	#4	35'-6"	———
a40(E)	19	#5	35'-6"	———
a41(E)	14	#4	36'-8"	⌊———
a42(E)	26	#5	36'-4"	———
b(E)	82	#4	29'-8"	———
b1(E)	245	#9	29'-9"	⊂——⊃
b2(E)	12	#4	17'-2"	———
t(E)	210	#4	9'-8"	———
w(E)	80	#5	18'-2"	———
w3(E)	40	#5	30'-0"	———
w4(E)	40	#5	36'-7"	———
Concrete Superstructure		Cu. Yd.	151.4	
Concrete Structures		Cu. Yd.	32.2	
Reinforcement Bars, Epoxy Coated		Pound	38610	



BARS a22(E), a37(E) & a41(E)



BAR b1(E)

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

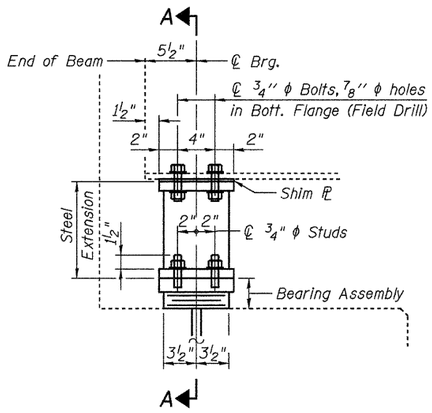
DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

BA-R 11-1-09 (Modified)

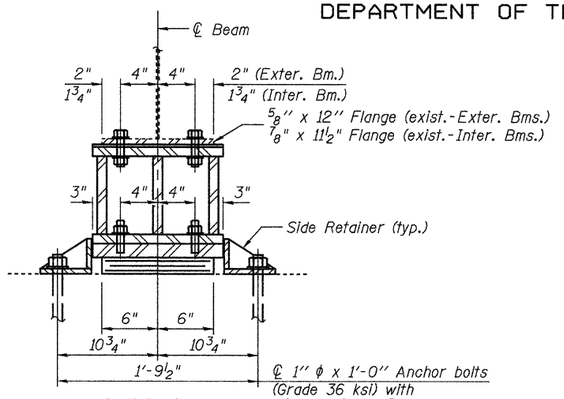
(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 15 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	117
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

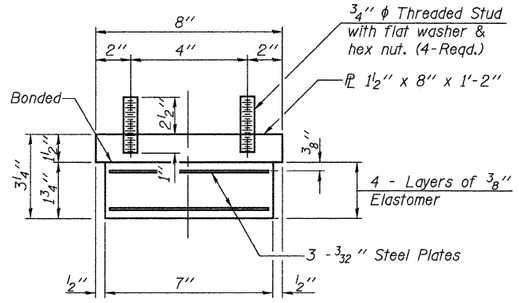


ELEVATION



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

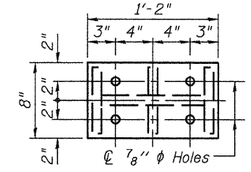
Note:
Shim plates shall not be placed under Bearing Assembly.

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

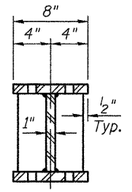
Anchor bolts for side retainers shall be installed in holes drilled after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

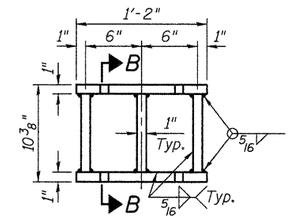
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN - TOP & BOTTOM



SECTION B-B



ELEVATION

STEEL EXTENSION

Notes:
Existing expansion bearings shall be removed and replaced according to the plans. Jacking shall be according to the Special Provisions for "JACK AND REMOVE EXISTING BEARINGS". If web stiffeners are not present directly over the jack location, hardwood timbers shall be installed tightly between top and bottom flanges to prevent rotation.

The abutment bearings shall be in place and the jacks lowered before the new concrete deck is poured at the abutments.

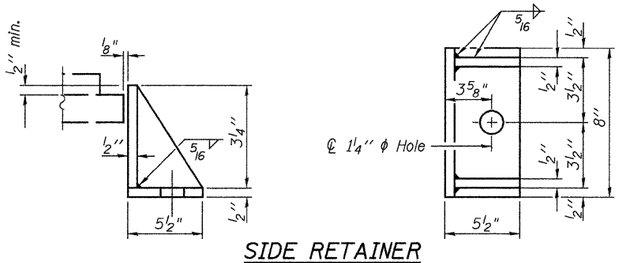
Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Existing bearing dimensions shown are copied from the original plans.

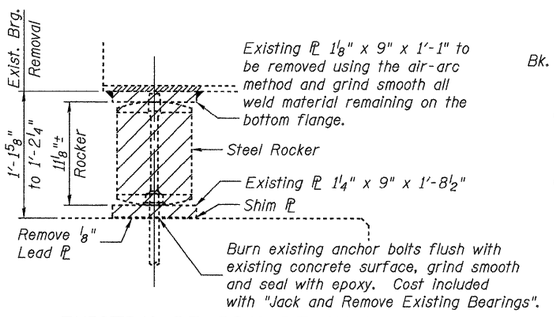
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

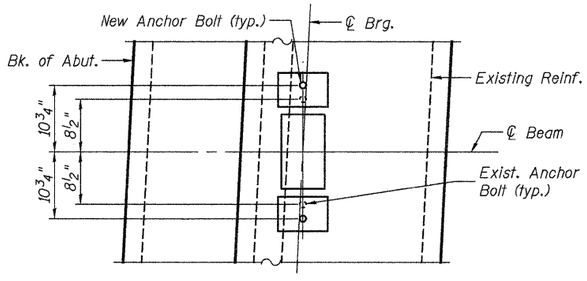
The structural steel bearing plates for the expansion bearings shall conform to the requirements of AASHTO M 270 Grade 36 (min.).



SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



EXISTING BEARING REMOVAL



ANCHOR BOLT LAYOUT

BILL OF MATERIAL

Item	Unit	SB Bridge	NB Bridge
Jack and Remove Existing Bearings	Each	7	8
Elastomeric Bearing Assembly Type I	Each	7	8
Furnishing and Erecting Structural Steel	Pound	1090	1240
Anchor Bolts, 1"	Each	14	16

SHIM THICKNESS TABLE

Location	Beam 3					
W. Abut. (SB)	¼"					
W. Abut. (NB)	⅝"					

INTERIOR GIRDER REACTION TABLE		
		W. Abut.
R (DL)	(K)	24.4
R (LL)	(K)	35.3
R (Imp)	(K)	10.3
R (Total)	(K)	70.0
Minimum Jack Capacity	(Tons)	40

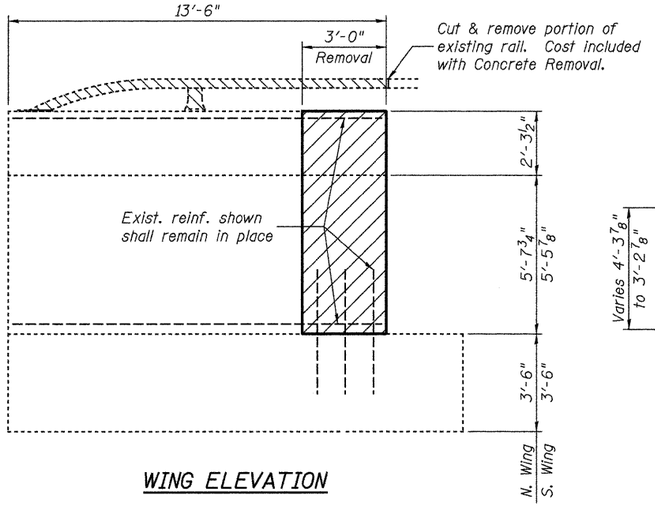
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED:	JDQ	DRAWN:	PTR
CHECKED:	DCD	CHECKED:	DCD

I-2E-1 11-1-09 (Modified)

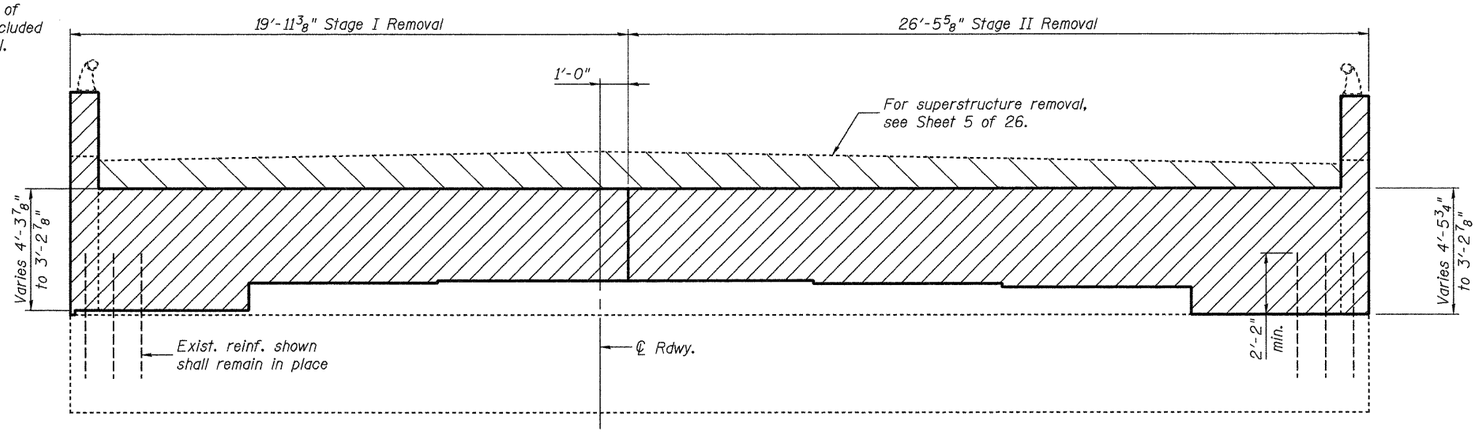
BEARINGS - WEST ABUTMENT
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 16 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	118
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

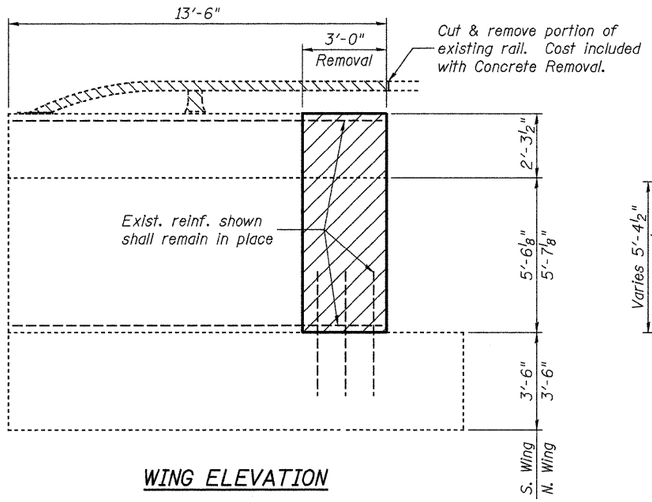
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



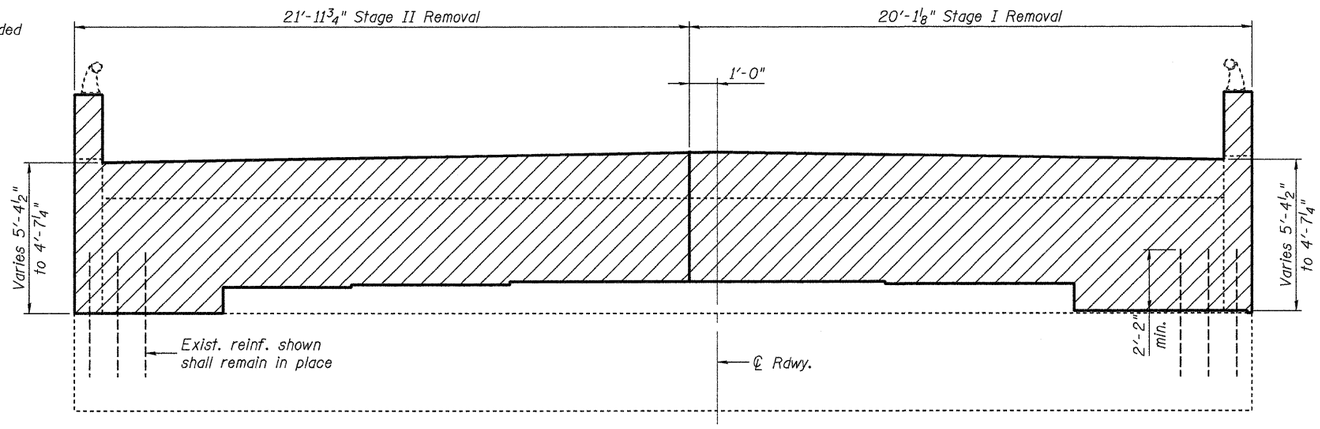
WING ELEVATION



ELEVATION EAST ABUTMENT



WING ELEVATION



ELEVATION WEST ABUTMENT

Indicates Limits of Concrete Removal.

Note:
Quantities for Concrete Removal are included on sheets 18 and 19 of 26.

Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	
DESIGNED: JDQ	DRAWN: P. Ray
CHECKED: DCD	CHECKED: DCD

ABUTMENT - REMOVAL (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 17 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	119
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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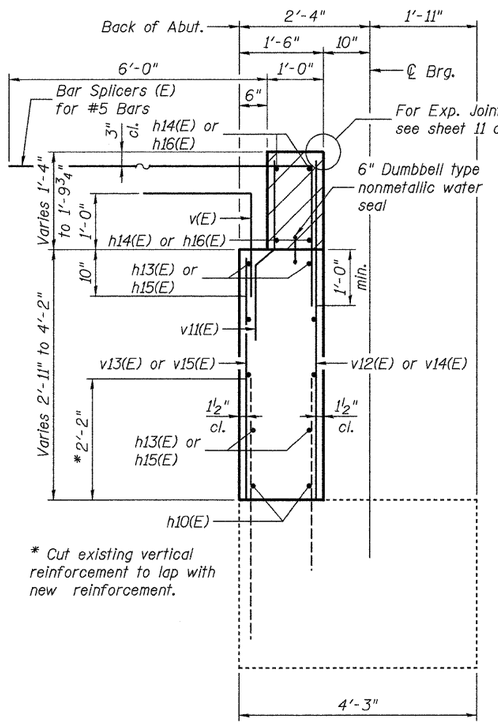
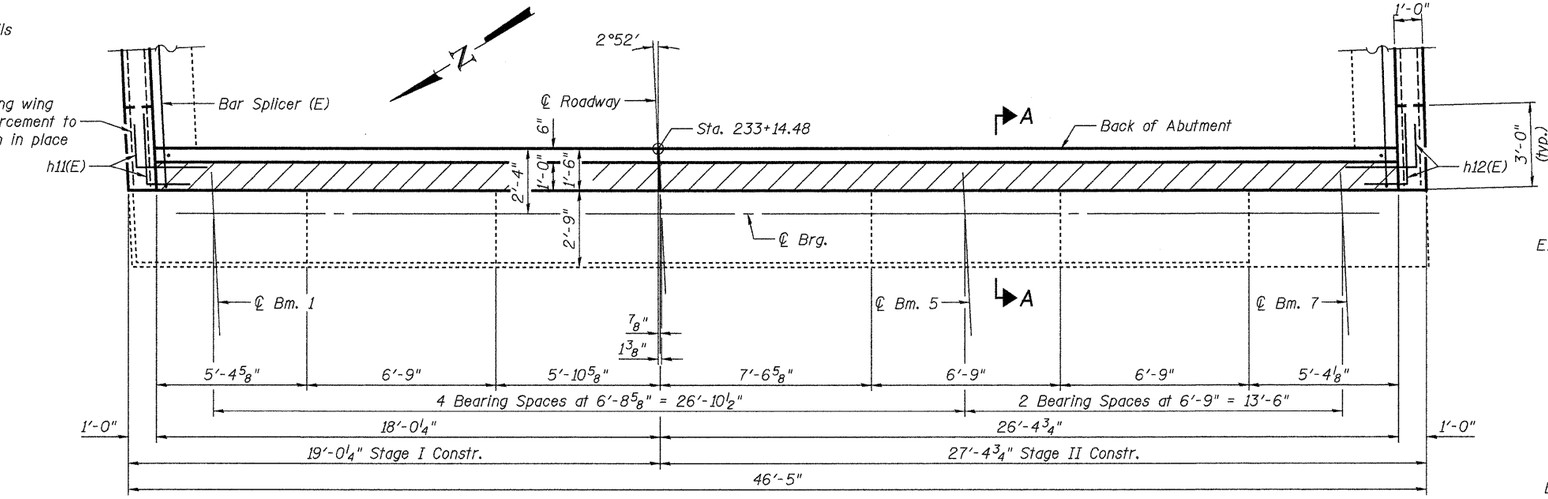
DATE: 04/09/2010 18:03:12

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

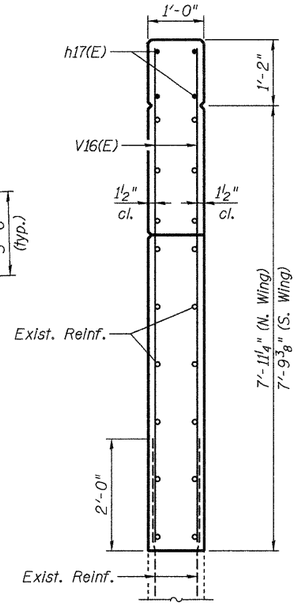


* Cut existing vertical reinforcement to lap with new reinforcement.

SECTION A-A



PLAN



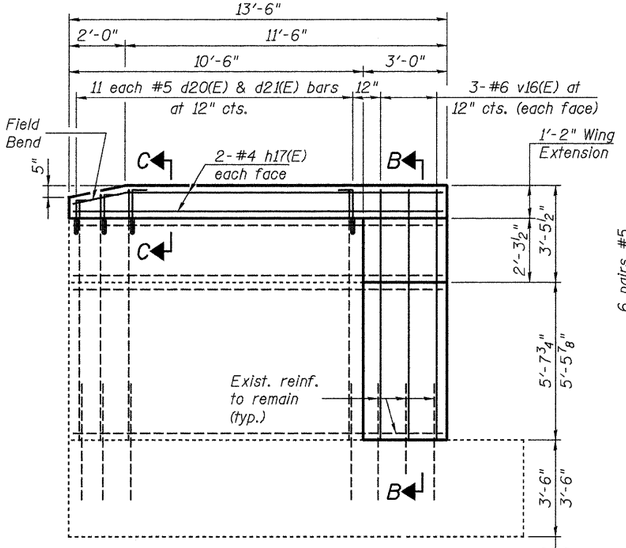
SECTION B-B

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

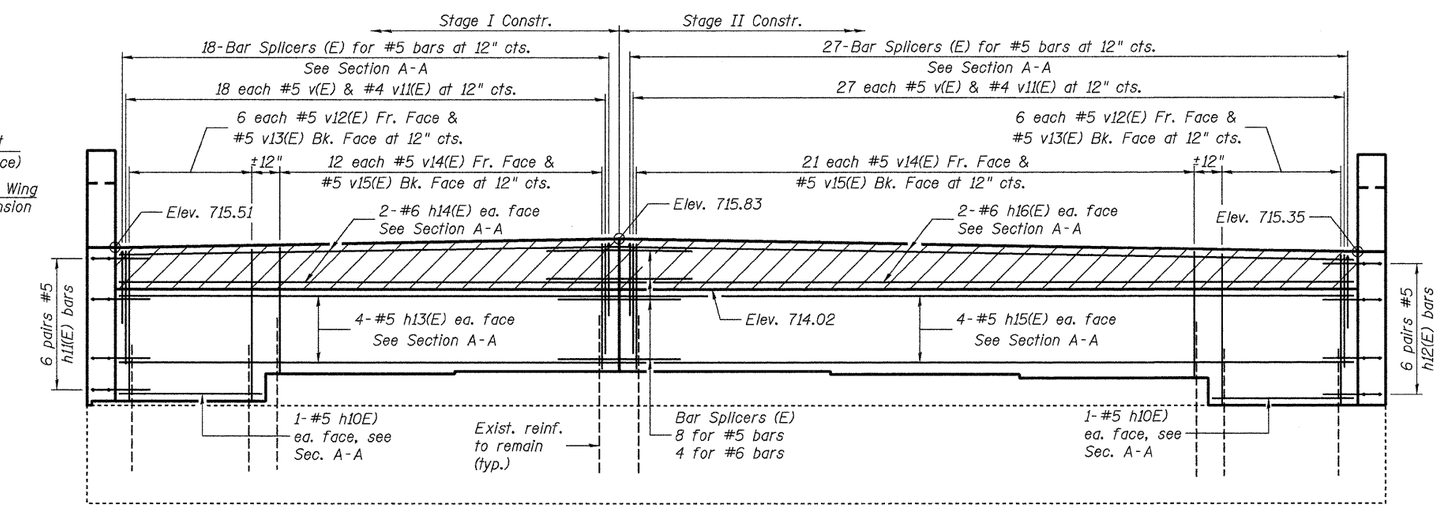
ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d20(E)	22	#5	2'-7"	⊓
d21(E)	22	#5	2'-0"	⌊
h10(E)	4	#5	6'-0"	—
h11(E)	12	#5	4'-0"	⌊
h12(E)	12	#5	4'-0"	⌋
h13(E)	8	#5	18'-8"	—
h14(E)	4	#6	17'-8"	—
h15(E)	8	#5	27'-0"	—
h16(E)	4	#6	26'-0"	—
h17(E)	8	#4	13'-0"	—
v(E)	45	#5	3'-9"	⌊
v11(E)	45	#4	3'-2"	⌊
v12(E)	12	#5	5'-2"	—
v13(E)	12	#5	3'-9"	—
v14(E)	33	#5	4'-3"	—
v15(E)	33	#5	2'-8"	—
v16(E)	12	#6	8'-7"	—
Structure Excavation		Cu. Yd.	84	
Concrete Removal		Cu. Yd.	11.2	
Concrete Structures		Cu. Yd.	11.0	
Concr. Superstructure		Cu. Yd.	2.7	
Reinforcement Bars, Epoxy Coated		Pound	1720	

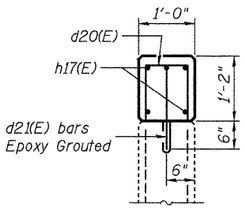
For details of Bar Splicers, see sheet 25 of 26.



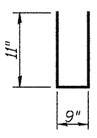
WING ELEVATION



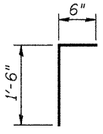
ELEVATION



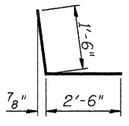
SECTION C-C



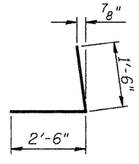
BAR d20(E)



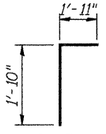
BAR d21(E)



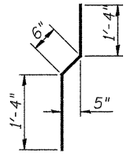
BAR h11(E)



BAR h12(E)



BAR v(E)



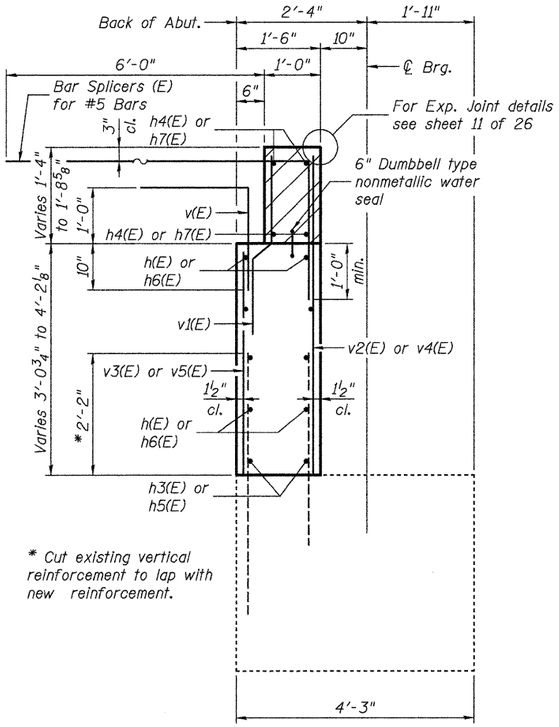
BAR v11(E)

Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED: JDQ	DRAWN: P. Ray		
CHECKED: DCD	CHECKED: DCD		

EAST ABUTMENT (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

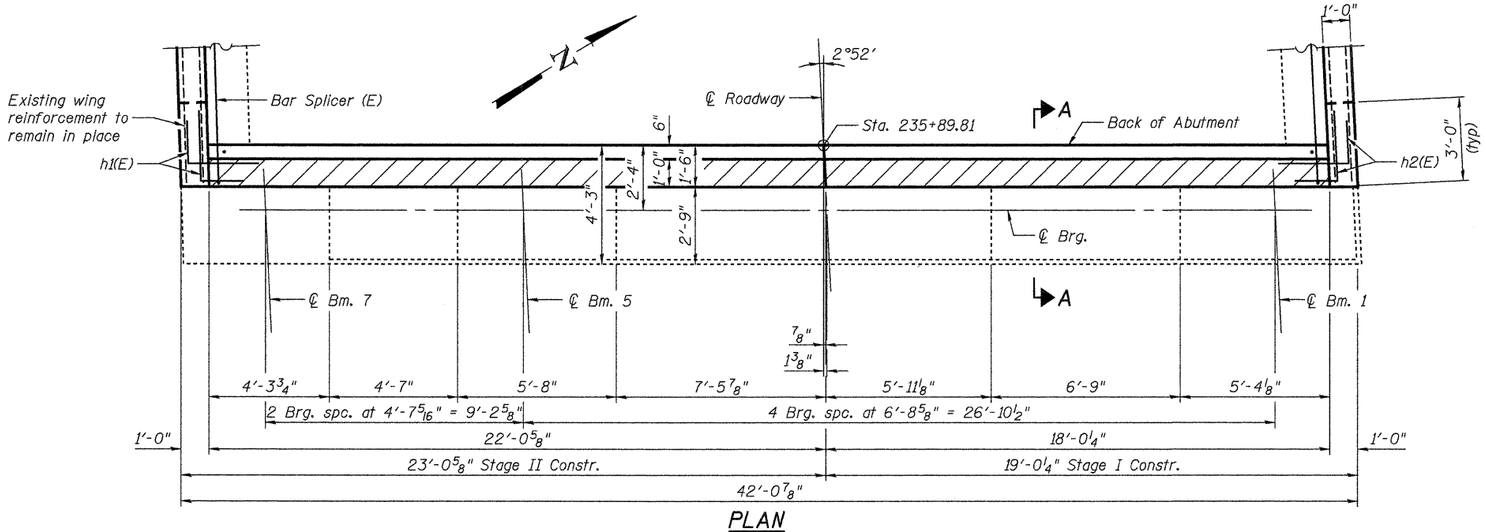
SHEET 18 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	120
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



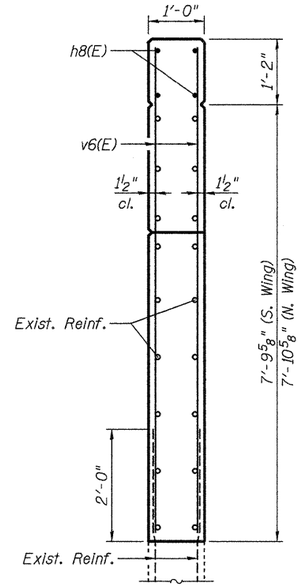
* Cut existing vertical reinforcement to lap with new reinforcement.

SECTION A-A



PLAN

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

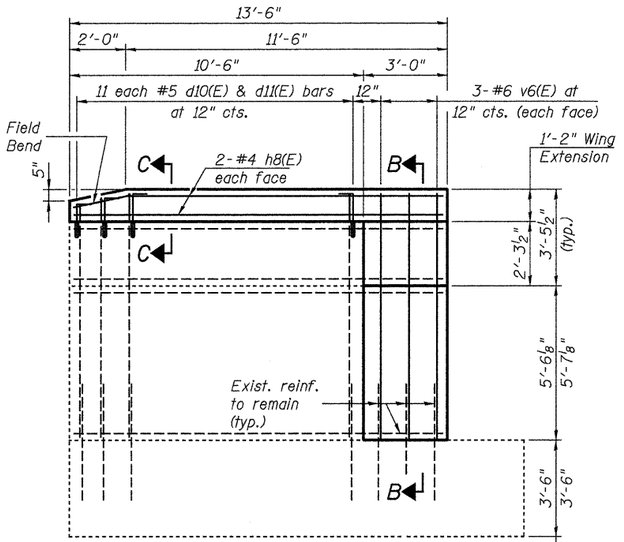


SECTION B-B

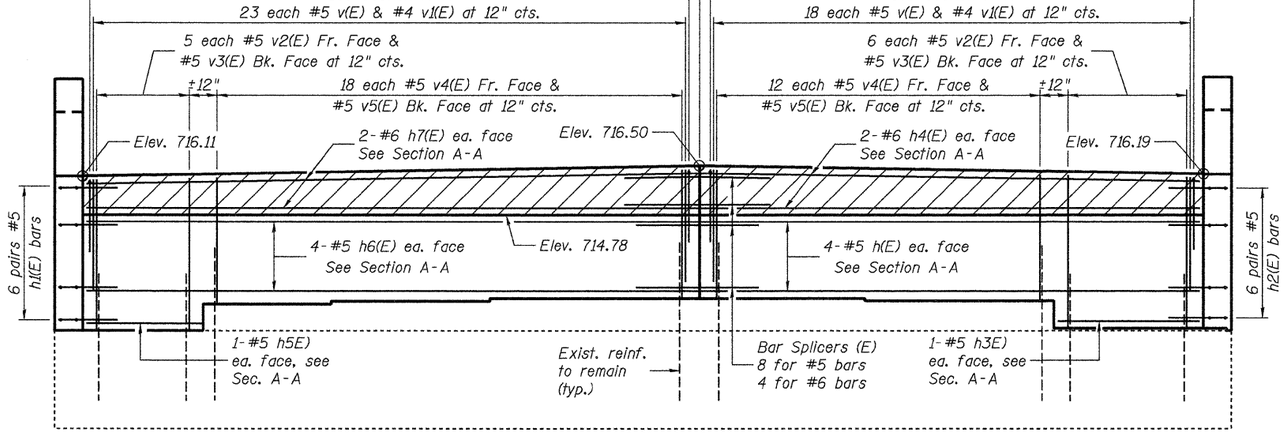
ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d10(E)	22	#5	2'-7"	⊓
d11(E)	22	#5	2'-0"	⌊
h(E)	8	#5	18'-8"	———
h1(E)	12	#5	4'-0"	⌊
h2(E)	12	#5	4'-0"	⌋
h3(E)	2	#5	6'-0"	———
h4(E)	4	#6	17'-8"	———
h5(E)	2	#5	5'-0"	———
h6(E)	8	#5	22'-8"	———
h7(E)	4	#6	21'-8"	———
h8(E)	8	#4	13'-0"	———
v(E)	41	#5	3'-9"	⌊
v1(E)	41	#4	3'-2"	⌊
v2(E)	11	#5	5'-2"	———
v3(E)	11	#5	3'-10"	———
v4(E)	30	#5	4'-5"	———
v5(E)	30	#5	2'-10"	———
v6(E)	12	#6	8'-7"	———
Structure Excavation		Cu. Yd.	76	
Concrete Removal		Cu. Yd.	11.8	
Concrete Structures		Cu. Yd.	10.3	
Concr. Superstructure		Cu. Yd.	2.3	
Reinforcement Bars, Epoxy Coated		Pound	1610	

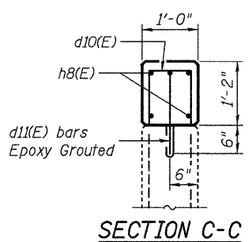
For details of Bar Splicers, see sheet 25 of 26.



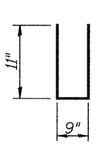
WING ELEVATION



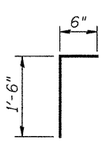
ELEVATION



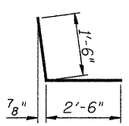
SECTION C-C



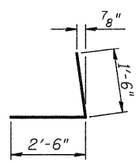
BAR d10(E)



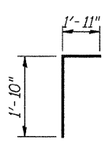
BAR d11(E)



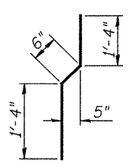
BAR h1(E)



BAR h2(E)



BAR v(E)



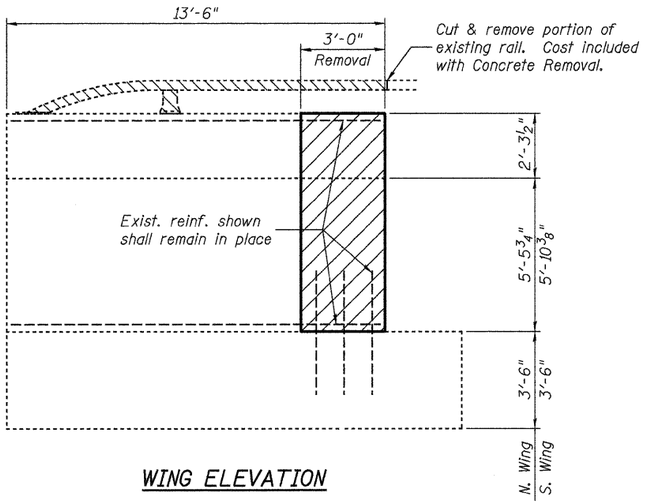
BAR v1(E)

Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

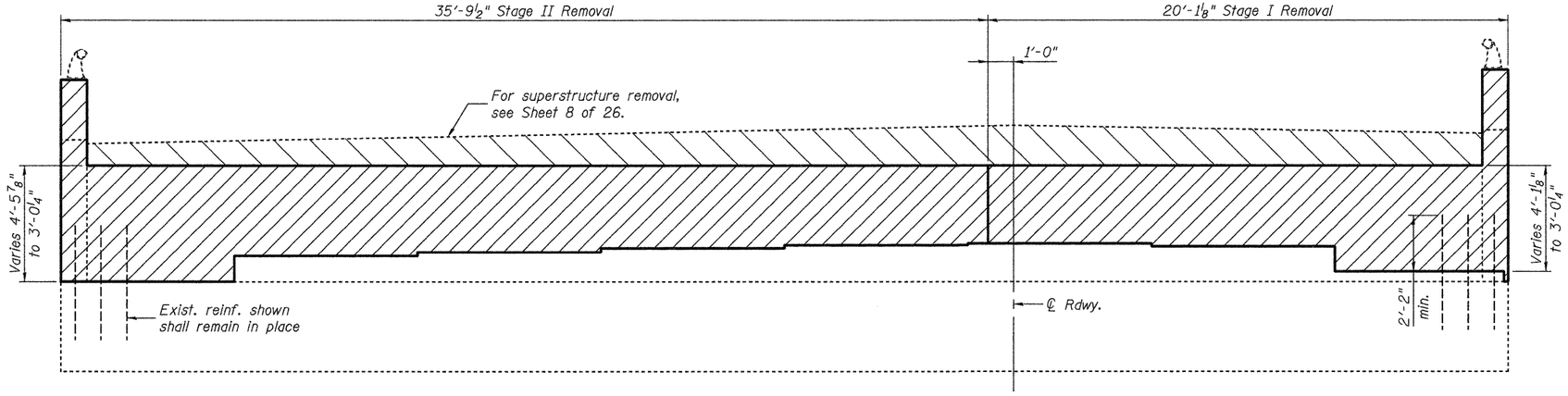
WEST ABUTMENT (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 19 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	121
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

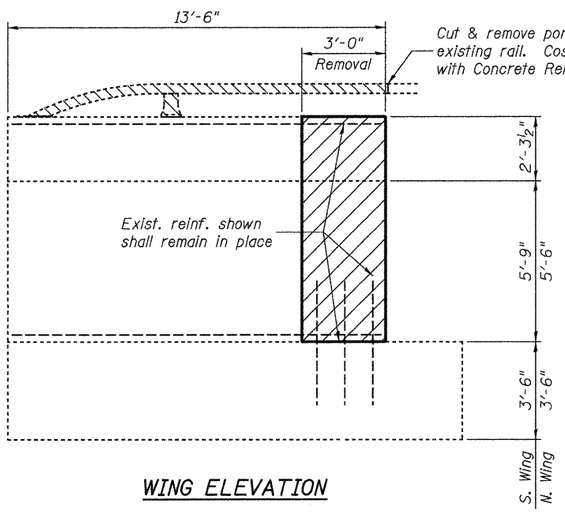
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



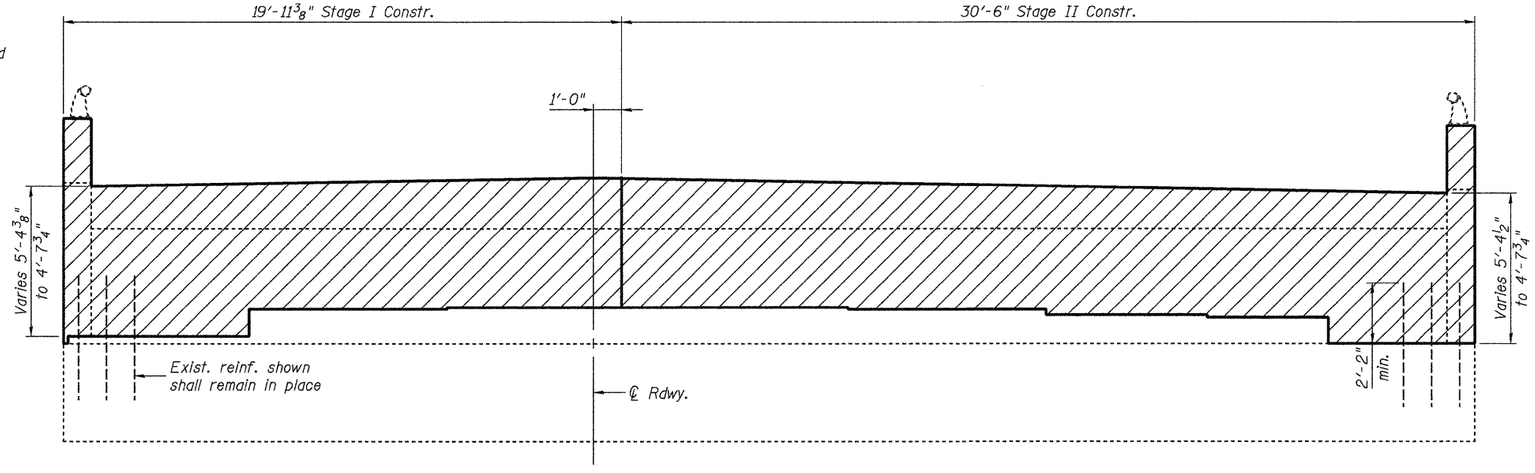
WING ELEVATION



ELEVATION EAST ABUTMENT



WING ELEVATION



ELEVATION WEST ABUTMENT

Indicates Limits of Concrete Removal.

Note:
Quantities for Concrete Removal are included on sheets 21 and 22 of 26.

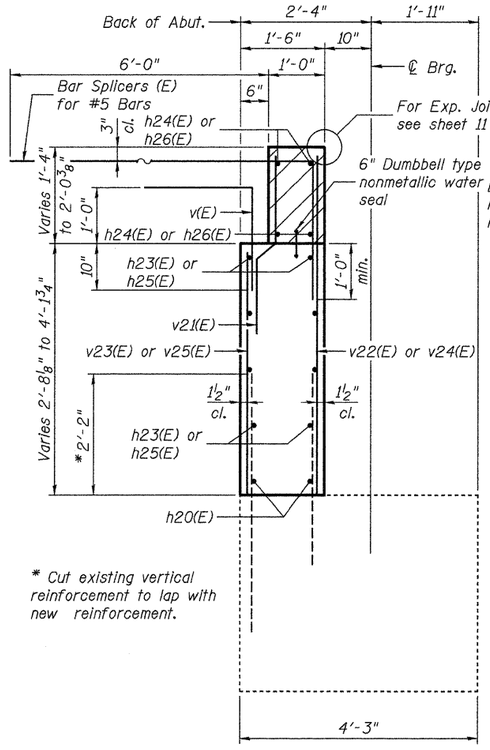
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

ABUTMENT - REMOVAL (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 20 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-2D)RS	MACON	151	122
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

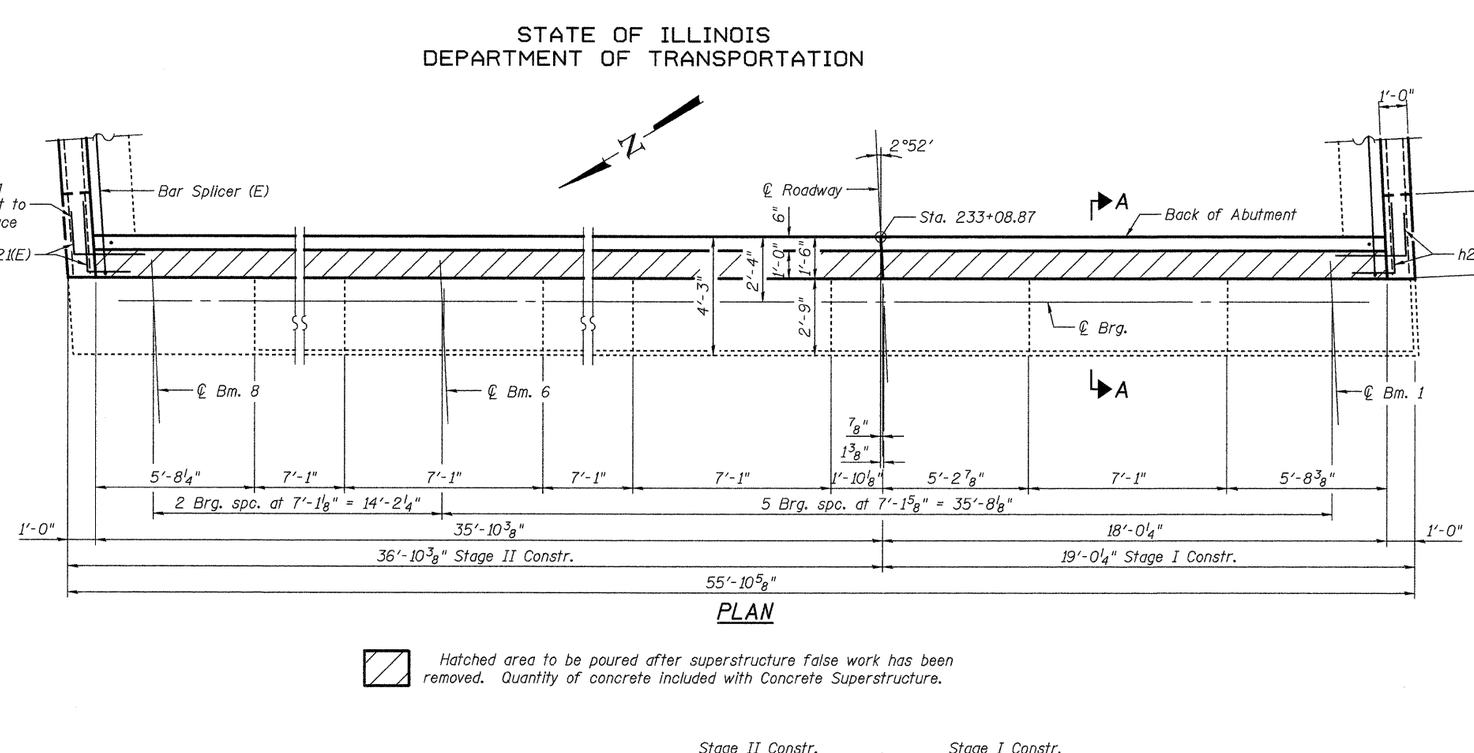
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



* Cut existing vertical reinforcement to lap with new reinforcement.

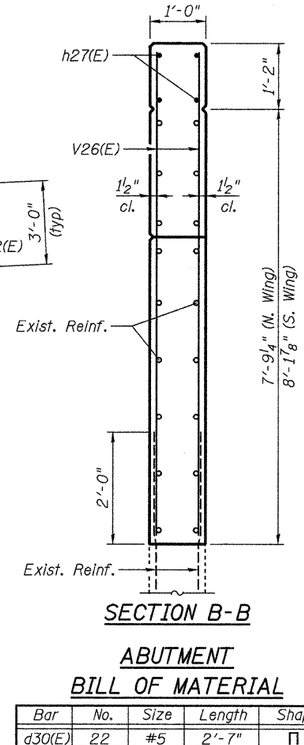
SECTION A-A

WING ELEVATION



PLAN

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

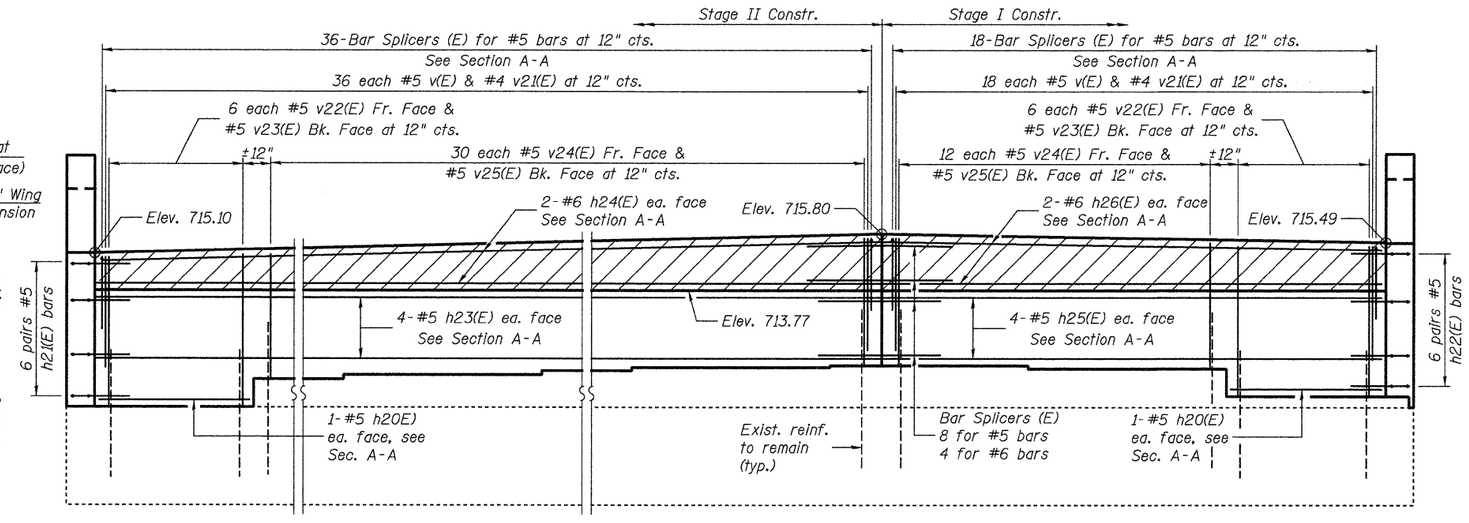


SECTION B-B

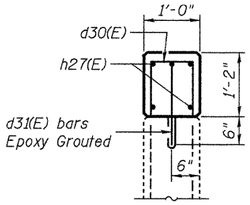
ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d30(E)	22	#5	2'-7"	⊓
d31(E)	22	#5	2'-0"	⌊
h20(E)	4	#5	6'-4"	—
h21(E)	12	#5	4'-0"	⌊
h22(E)	12	#5	4'-0"	⌋
h23(E)	8	#5	36'-6"	—
h24(E)	4	#6	35'-6"	—
h25(E)	8	#5	18'-8"	—
h26(E)	4	#6	17'-8"	—
h27(E)	8	#4	13'-0"	—
v(E)	54	#5	3'-9"	⌊
v21(E)	54	#4	3'-2"	⌐
v22(E)	12	#5	5'-2"	—
v23(E)	12	#5	3'-6"	—
v24(E)	42	#5	4'-3"	—
v25(E)	42	#5	2'-5"	—
v26(E)	12	#6	8'-7"	—
Structure Excavation		Cu. Yd.	106	
Concrete Removal		Cu. Yd.	12.8	
Concrete Structures		Cu. Yd.	12.3	
Concr. Superstructure		Cu. Yd.	3.6	
Reinforcement Bars, Epoxy Coated		Pound	1960	

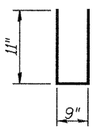
For details of Bar Splicers, see sheet 25 of 26.



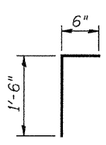
ELEVATION



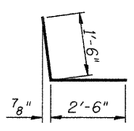
SECTION C-C



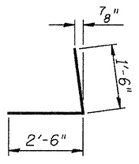
BAR d30(E)



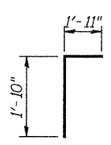
BAR d31(E)



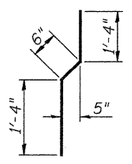
BAR h21(E)



BAR h22(E)



BAR v(E)



BAR v21(E)

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

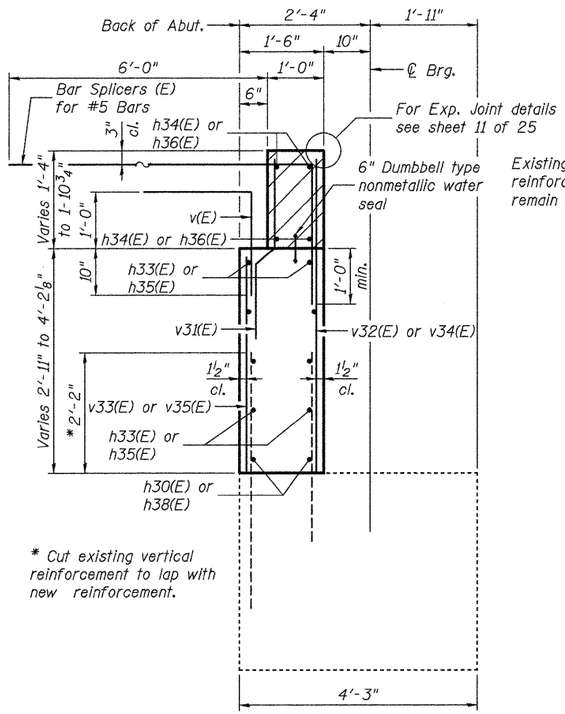
EAST ABUTMENT (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 21 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	123
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

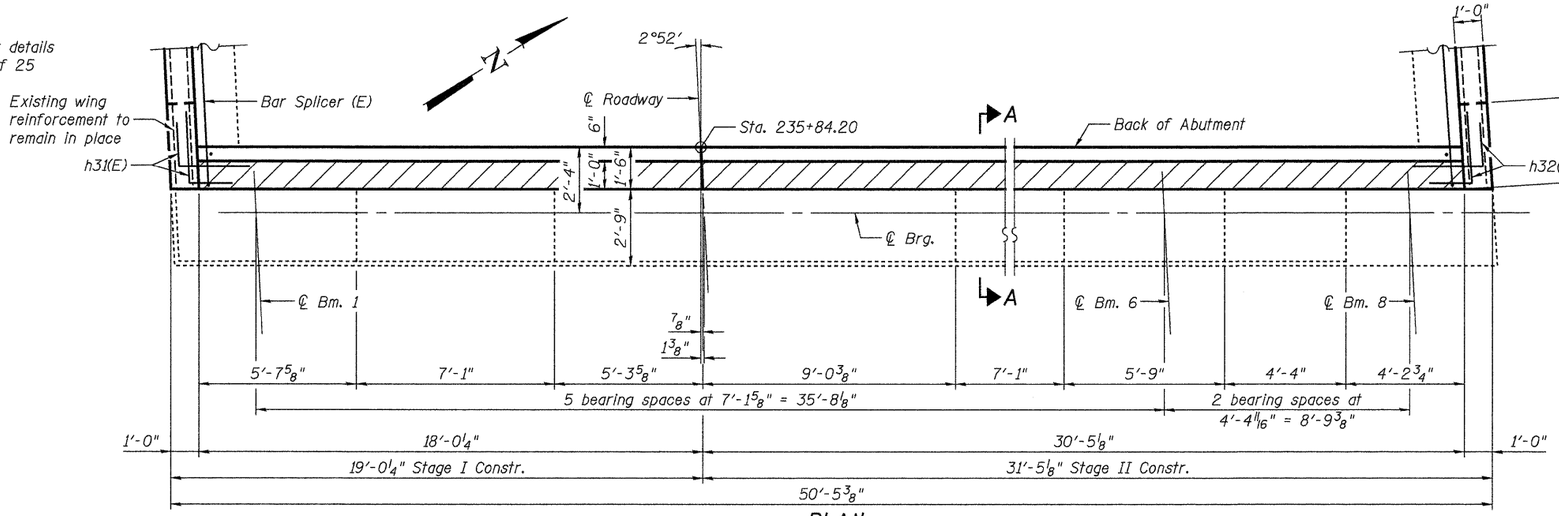
DATE: 04/09/2010 18:03:24 USER: DCD FILE: J:\JDQ\110177 IL-DTVV#8 USSI Bridge Repair\s3-IL48-NSRR\058108-74150-021-abut1-NB.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



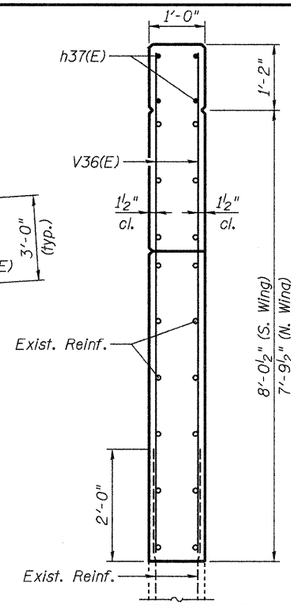
SECTION A-A

* Cut existing vertical reinforcement to lap with new reinforcement.



PLAN

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

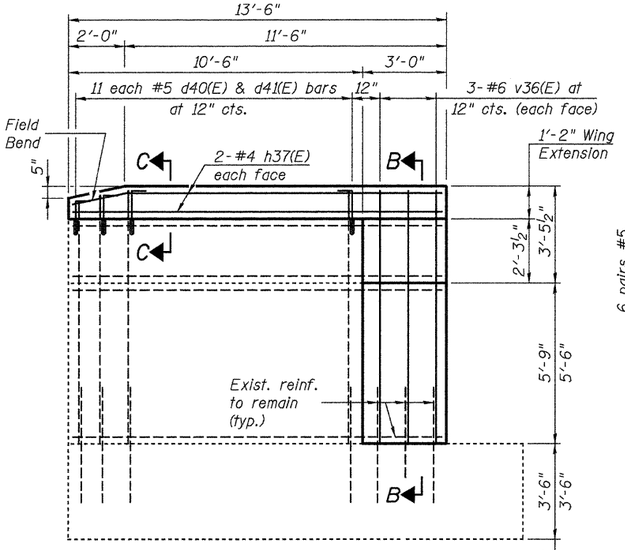


SECTION B-B

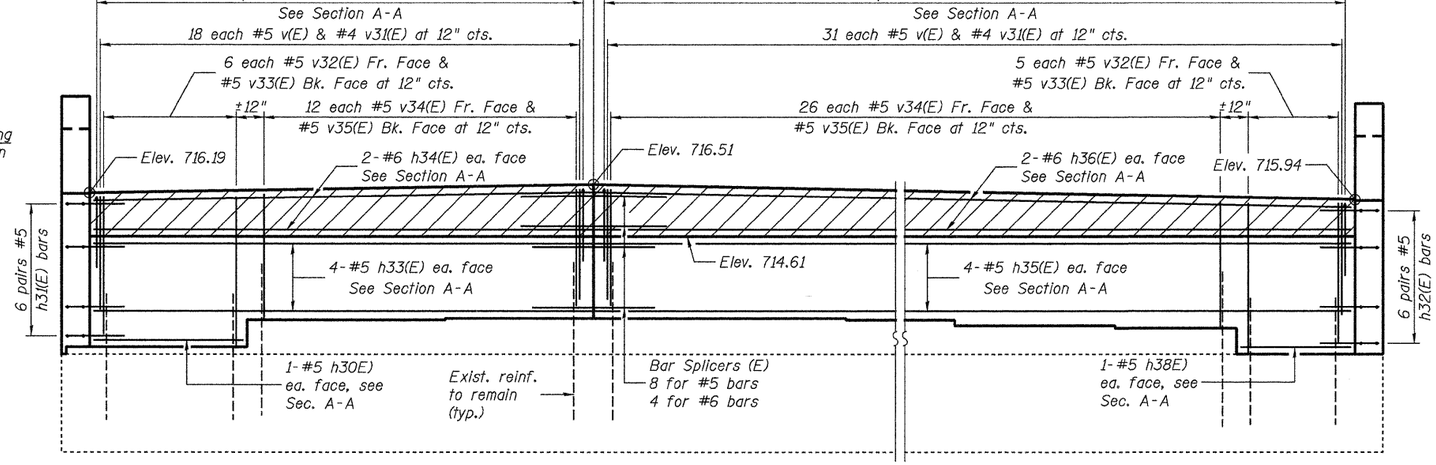
ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d40(E)	22	#5	2'-7"	⊓
d41(E)	22	#5	2'-0"	⌊
h30(E)	2	#5	6'-3"	—
h31(E)	12	#5	4'-0"	⌊
h32(E)	12	#5	4'-0"	⌋
h33(E)	8	#5	18'-8"	—
h34(E)	4	#6	17'-8"	—
h35(E)	8	#5	31'-0"	—
h36(E)	4	#6	30'-0"	—
h37(E)	8	#4	13'-0"	—
h38(E)	2	#5	4'-10"	—
v(E)	49	#5	3'-9"	⌊
v31(E)	49	#4	3'-2"	⌊
v32(E)	11	#5	5'-2"	—
v33(E)	11	#5	3'-8"	—
v34(E)	38	#5	4'-5"	—
v35(E)	38	#5	2'-8"	—
v36(E)	12	#6	8'-7"	—
Structure Excavation		Cu. Yd.	94	
Concrete Removal		Cu. Yd.	14.0	
Concrete Structures		Cu. Yd.	11.7	
Concr. Superstructure		Cu. Yd.	3.0	
Reinforcement Bars, Epoxy Coated		Pound	1830	

For details of Bar Splicers, see sheet 25 of 26.



WING ELEVATION



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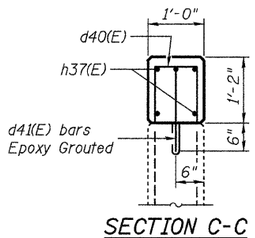
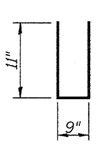
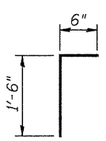


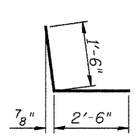
SECTION C-C



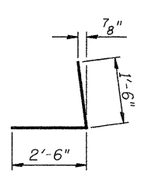
BAR d40(E)



BAR d41(E)



BAR h31(E)



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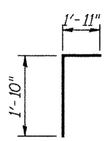
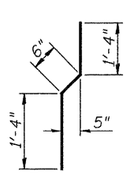


BAR v(E)



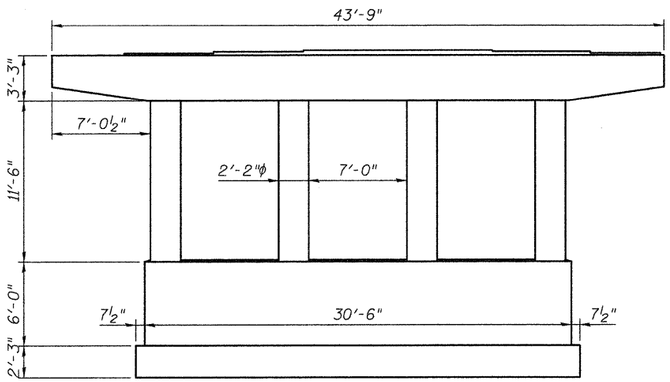
BAR v31(E)

Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

WEST ABUTMENT (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 22 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	124
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER 1 - SB
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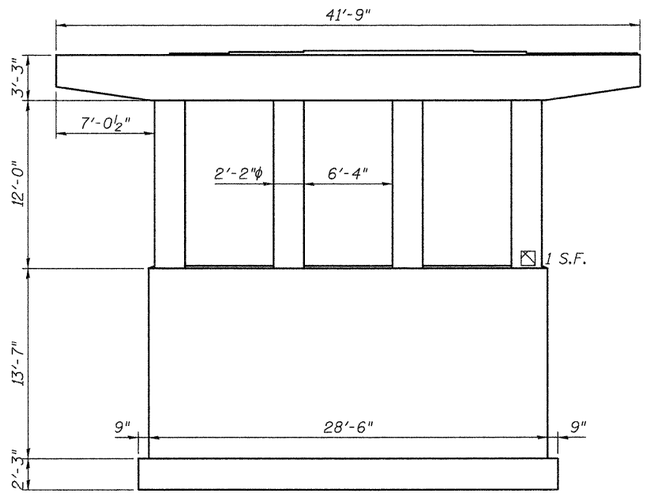

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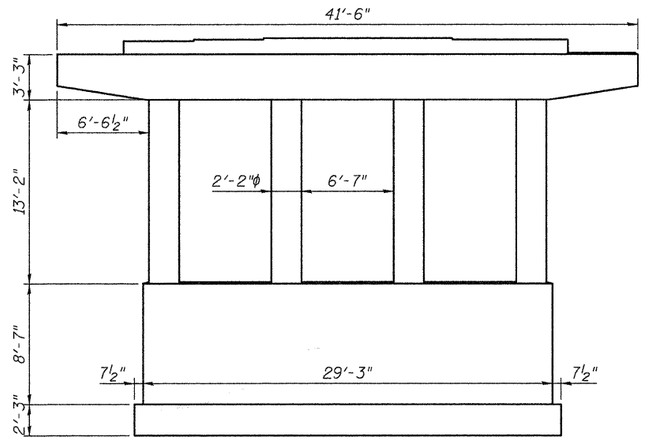
(Facing North)



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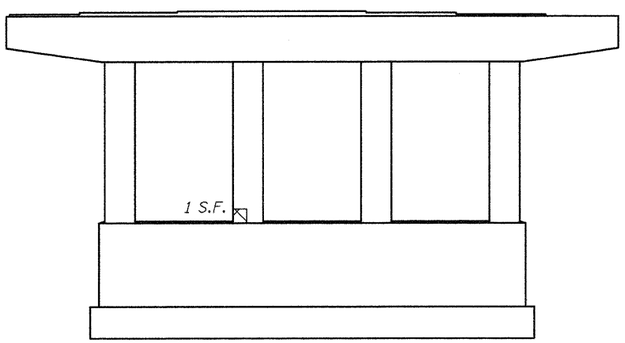
(Facing North)



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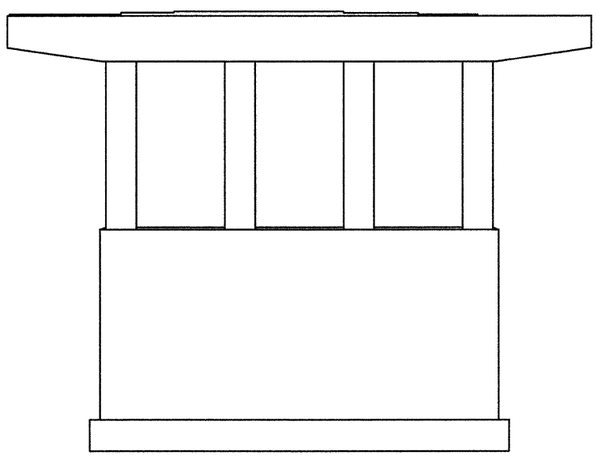
(Facing South)



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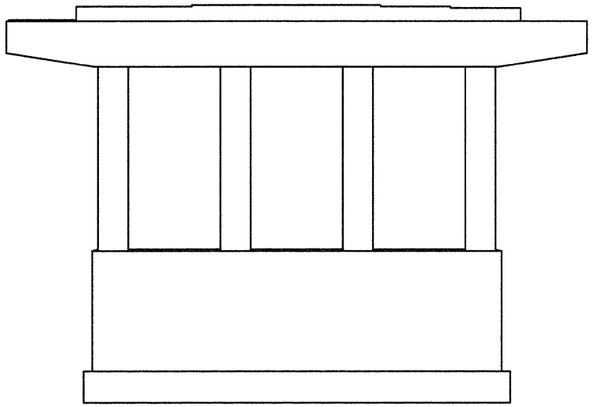


PIER 3 - SB
(Facing South)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth = < 5")	Sq. Ft.	1

LEGEND

- Hollow or Unsound Concrete
- Spalled Concrete
- Spalled Concrete with Exposed Reinf.
- Hairline Crack

Notes:
Pier Condition Survey performed 9/17/2009.

Plan quantities assume that areas of "exposed reinforcing" will be repaired.

Repair areas are estimated, the Engineer shall determine actual repair locations and record them on the As-Built plans.

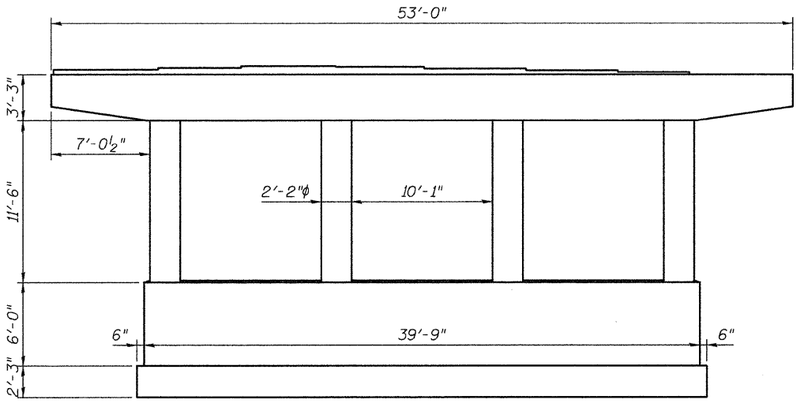
Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

PIERS (SB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 23 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	125
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER 1 - NB
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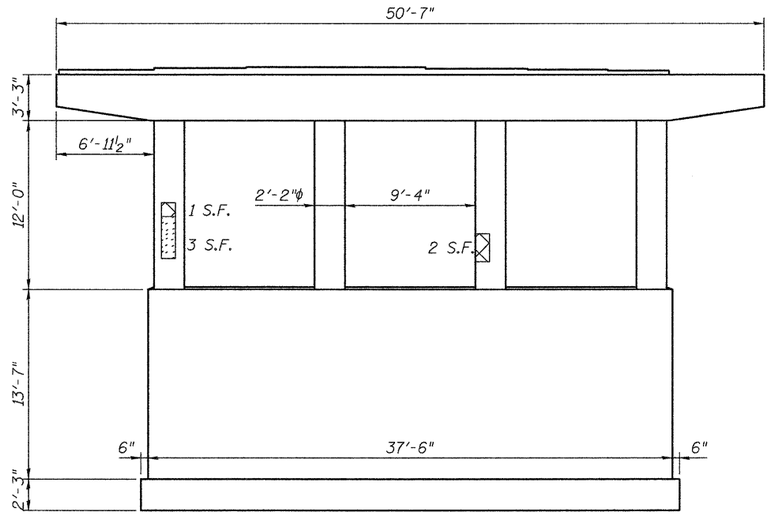

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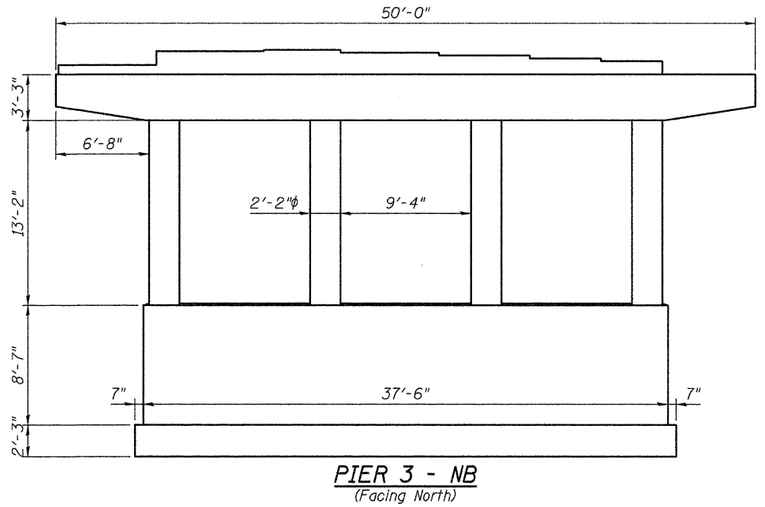
(Facing North)



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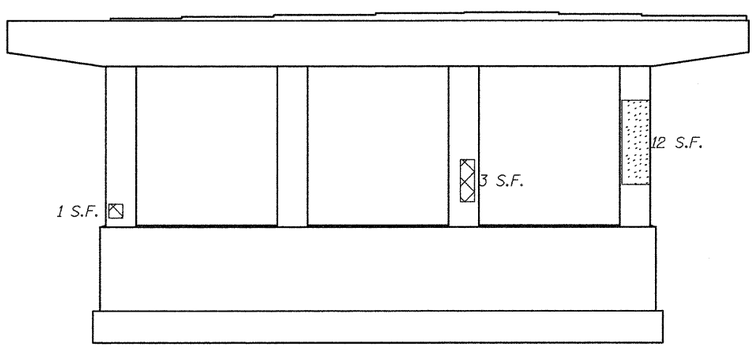
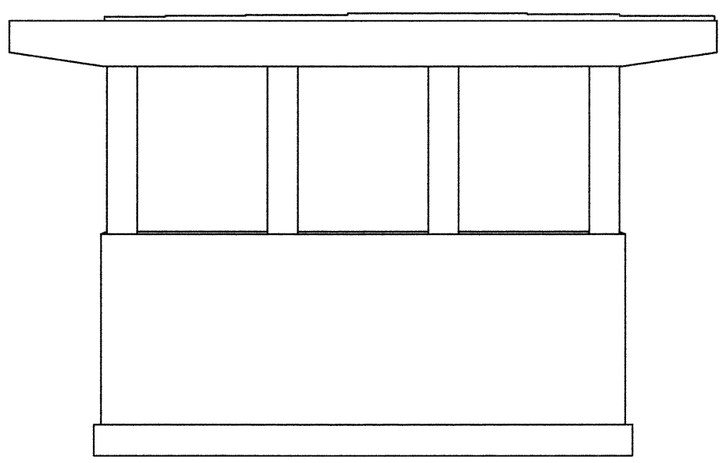


PIER 1 - NB
(Facing South)



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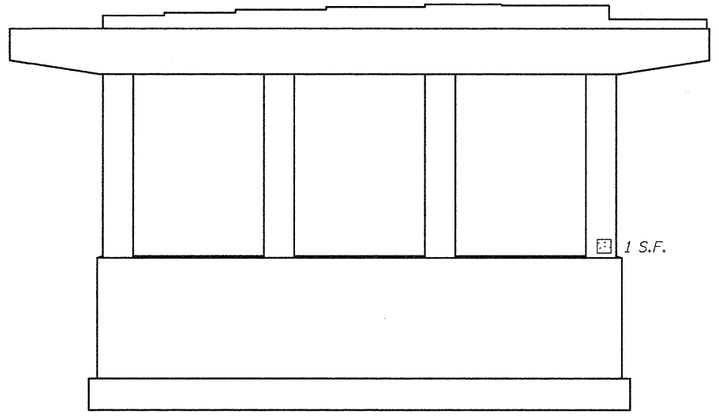


PIER 3 - NB
(Facing South)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth = < 5")	Sq. Ft.	10

LEGEND

- Hollow or Unsound Concrete
- Spalled Concrete
- Spalled Concrete with Exposed Reinf.
- Hairline Crack

Notes:
Pier Condition Survey performed 9/17/2009.

Plan quantities assume that areas of "exposed reinforcing" will be repaired.

Repair areas are estimated, the Engineer shall determine actual repair locations and record them on the As-Built plans.

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

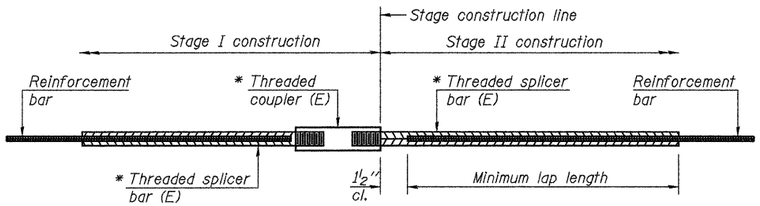
DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

PIERS (NB)
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 24 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	126
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

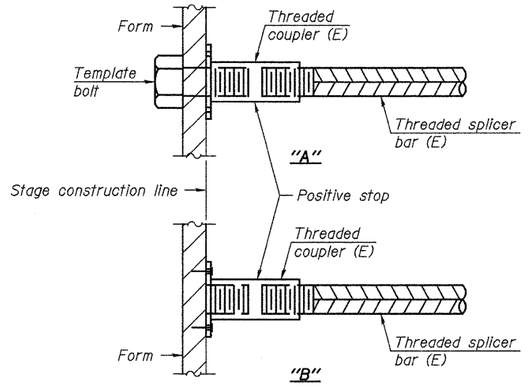
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

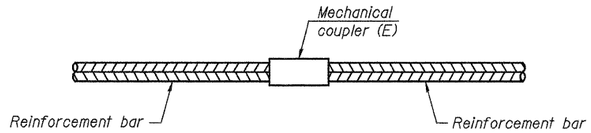
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck Exp. Jts.	#6	60 (SB) & 60 (NB)	3
Appr. Slab	#4	48 (SB) & 48 (NB)	3
Appr. Slab	#5	170 (SB) & 170 (NB)	3
Abutments	#5	16 (SB) & 16 (NB)	3
Abutments	#6	8 (SB) & 8 (NB)	3



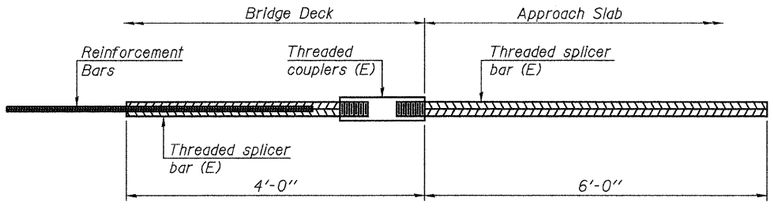
INSTALLATION AND SETTING METHODS

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



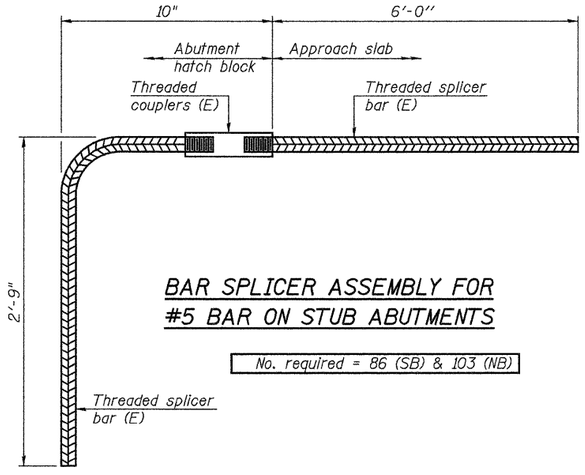
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 86 (SB) & 103 (NB)

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

BSD-1 11-1-09

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 25 OF 26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	MACON	151	127
		STA. 235+00.78	CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/22/09

ROUTE FAP 322 (US 51) DESCRIPTION US 51 over IL 48 LOGGED BY E. Sandschafer

SECTION (58-20)RS & (58-20B-1)BR LOCATION NW 1/4, SEC. 32, TWP. 16 N, RNG. 2 E, 3 PM

COUNTY Macon DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 058-0108 & 0109
Station 235+00.78

BORING NO. 1 (SE)
Station 232+45
Offset 20.00ft Rt
Ground Surface Elev. 714.57 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 72 Hrs. Dry ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
714.27 3" topsoil.			
Very stiff, damp, brown, CLAY.	2		
	1	3.3	11
	2	PP	
710.07			
Stiff to hard, damp, gray, CLAY LOAM TILL. -5	4		
	6	2.0	11
	8	B	
	2		
	3	1.3	12
	4	B	
-10	2		
	6	4.9	10
	6	B	
	2		
	4	2.4	10
	7	B	
-15	4		
	4	4.0	11
	4	B	
	3		
	6	4.7	9
	6	B	
694.57 -20	3		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to very stiff, damp, gray, CLAY LOAM TILL.	8	1.7	10
	6	B	
	4		
	4	2.6	10
	7	B	
-25	4		
	5	2.8	9
	7	B	
	3		
	3	2.6	12
	5	B	
-30	7		
	15	1.7	12
	13	B	
-35	2		
	3	1.2	17
678.57	6	B	
Extent of exploration.			
Benchmark: State of Illinois Division of Highways tablet marked "POT" on raised median of IL 48, Station 700+00 = 687.70' elevation. -40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Latitude W 88 deg 00.420 min, Longitude N 39 deg 47.287 min, Map Datum WGS 84

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/23/09

ROUTE FAP 322 (US 51) DESCRIPTION US 51 over IL 48 LOGGED BY E. Sandschafer

SECTION (58-20)RS & (58-20B-1)BR LOCATION NW 1/4, SEC. 32, TWP. 16 N, RNG. 2 E, 3 PM

COUNTY Macon DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 058-0108 & 0109
Station 235+00.78

BORING NO. 2 (NW)
Station 236+69
Offset 21.00ft Lt
Ground Surface Elev. 714.22 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 48 Hrs. Dry ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
713.92 3" topsoil.			
Brown, CLAY.			
712.22			
Hard, damp, gray, CLAY LOAM TILL.	5		
	5	4.9	10
	6	S	
709.72			
Stiff, damp, gray, CLAY TILL. -5	2		
	4	1.9	17
	8	B	
	3		
	4	5.3	11
	3	B	
704.72 -10	2		
Stiff, damp, brown marbled gray, SANDY CLAY TILL.	3	1.4	12
	5	B	
702.22			
Stiff, damp, gray/brown, CLAY LOAM TILL.	2		
	5	1.6	13
	6	BS	
-15	2		
	4	1.9	11
	7	B	
	4		
	6	3.1	12
	8	B	
694.22 -20	3		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to hard, brown, CLAY LOAM TILL.	4	2.1	13
	8	B	
	3		
	4	1.9	20
	7	B	
-25	4		
	5	2.9	13
	7	B	
	3		
Thin, Sandy Loam lenses, this trip.	4	1.0	14
	6	B	
-30	4		
	6	2.8	13
	9	B	
-35	10		
	26	+4.5	9
678.22	10	PP	
Extent of exploration.			
Benchmark: State of Illinois Division of Highways tablet marked "POT" on raised median of IL 48, Station 700+00 = 687.70' elevation. -40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Latitude W 88 deg 00.516 min, Longitude N 39 deg 48.021 min, Map Datum WGS 84

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	IDOT-D7	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

SOIL BORINGS
STRUCTURE NO. 058-0108(SB) & 0109(NB)

SHEET 26 OF 26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	128
	STA. 235+00.78	CONTRACT NO. 74150		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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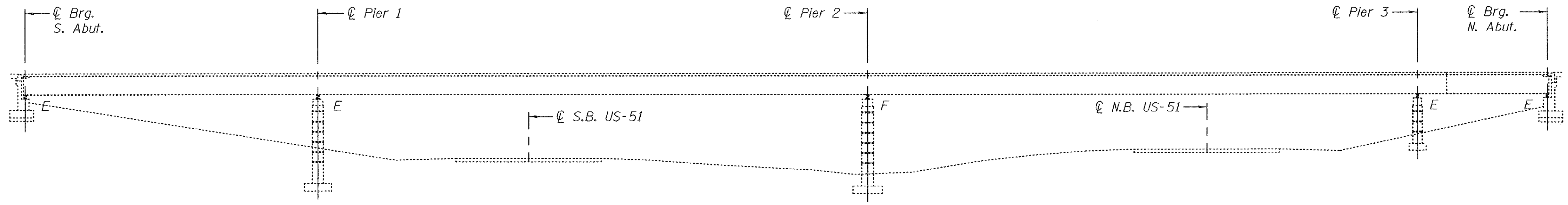
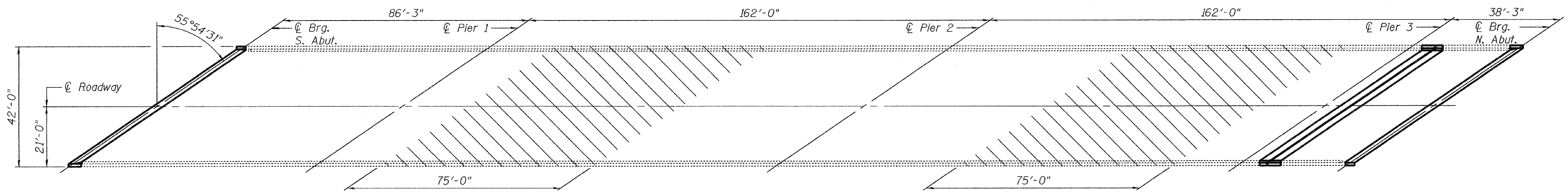
DATE: 04/09/2010 18:03:37

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN

Limits of Protective Shield

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	35.1
Concrete Superstructure	Cu. Yd.	35.9
Furnishing and Erecting Structural Steel	Pound	2,690
Reinforcement Bars, Epoxy Coated	Pound	6,000
Protective Coat	Sq. Yd.	1,965
Bridge Deck Grooving	Sq. Yd.	1,850
Protective Shield	Sq. Yd.	699
Bridge Deck Hydro-Scarification	Sq. Yd.	1,875
Bridge Deck Microsilica Concrete Overlay $2\frac{1}{4}$"	Sq. Yd.	1,875
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	1,875
Preformed Joint Strip Seal	Foot	206
Anchor Bolts 1" Dia.	Each	24
Elastomeric Bearing Assembly, Type II	Each	12
Jack and Remove Existing Bearings	Each	12
Deck Slab Repairs (Full Depth Type 2)	Sq. Yd.	11

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or 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.

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

Cost of removal and reinstallation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I. Cost included with Furnishing and Erecting Structural Steel.

Removal and reinstallation of the existing name plate on the structure will be necessary for construction of the expansion joint. This work and all materials shall be included with Relocating Name Plates.

Removal and reinstallation of the end handrail sections and support posts at both abutments will be necessary for construction at the expansion joints. The existing handrail sections and support posts shall be reused. New bolts, shim plates and post support anchor assemblies as detailed in the plans are to be provided and installed for the replacement of the handrail and supports. This work and all materials shall be included with Concrete Superstructure.

Work is to be done under road closure.

DESIGNED Adrian Halloway
CHECKED [signature]
DRAWN [signature]
CHECKED ATH IJL

April 29, 2010
EXAMINED [signature] ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS RALPH E. ANDERSON 081-004625 SPRINGFIELD LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2010

PLAN AND ELEVATION
SN 058-0103

SHEET NO. 1 / 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	322	(58-20)RS	Macon	151	129
			CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SLT-97-001-09

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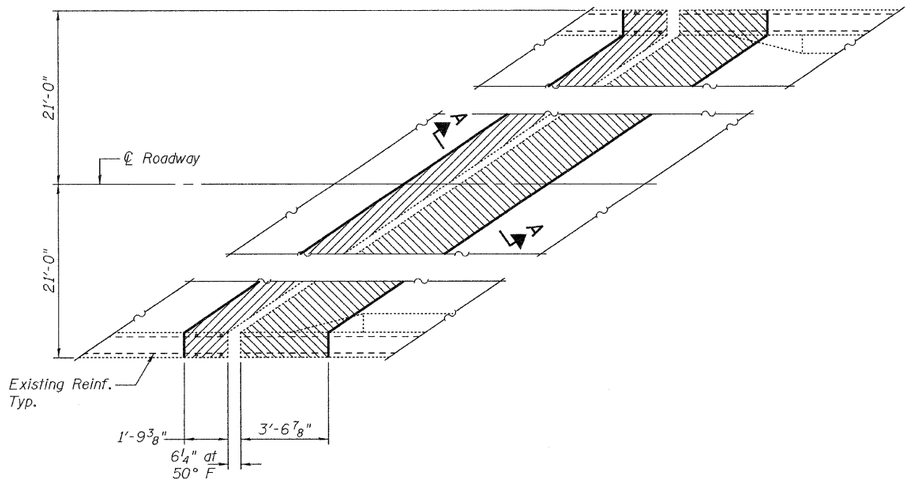
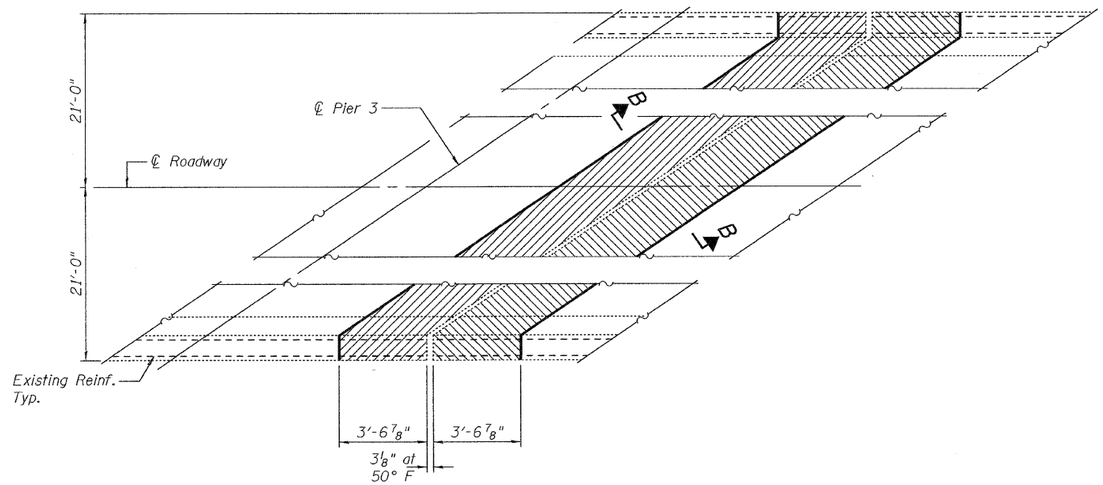
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

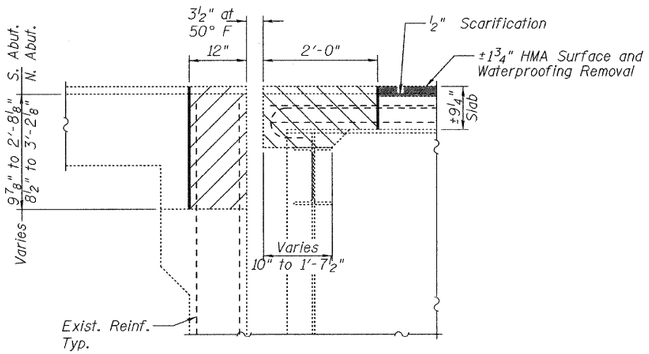


TYPICAL PLAN AT ABUTMENT

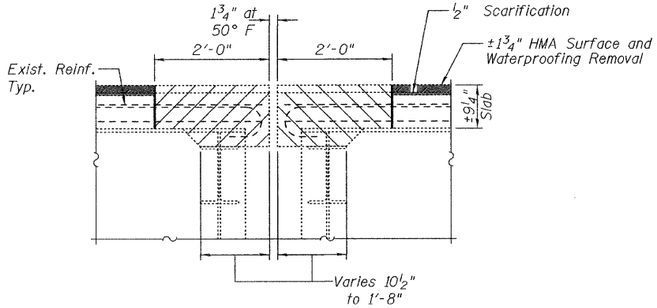
(South Abutment Shown, North Abutment Similar by Rotation)



PLAN AT HINGE JOINT



SECTION A-A



SECTION B-B

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

April 29, 2010
EXAMINED _____ ENGINEER OF STRUCTURAL SERVICES
PASSED _____ ENGINEER OF BRIDGES AND STRUCTURES

REMOVAL DETAILS
SN 058-0103

SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	130
			CONTRACT NO.	74150	
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SLT-97-001-09

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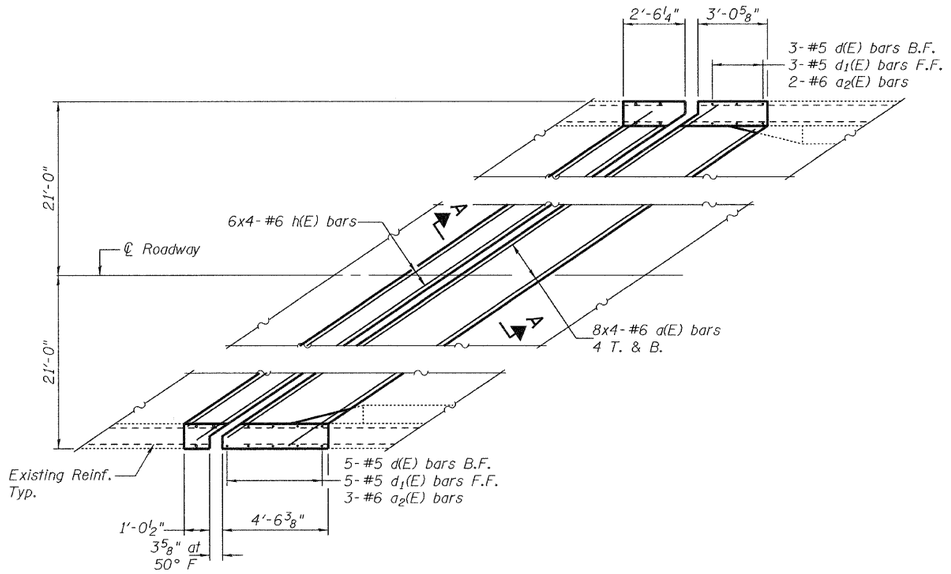
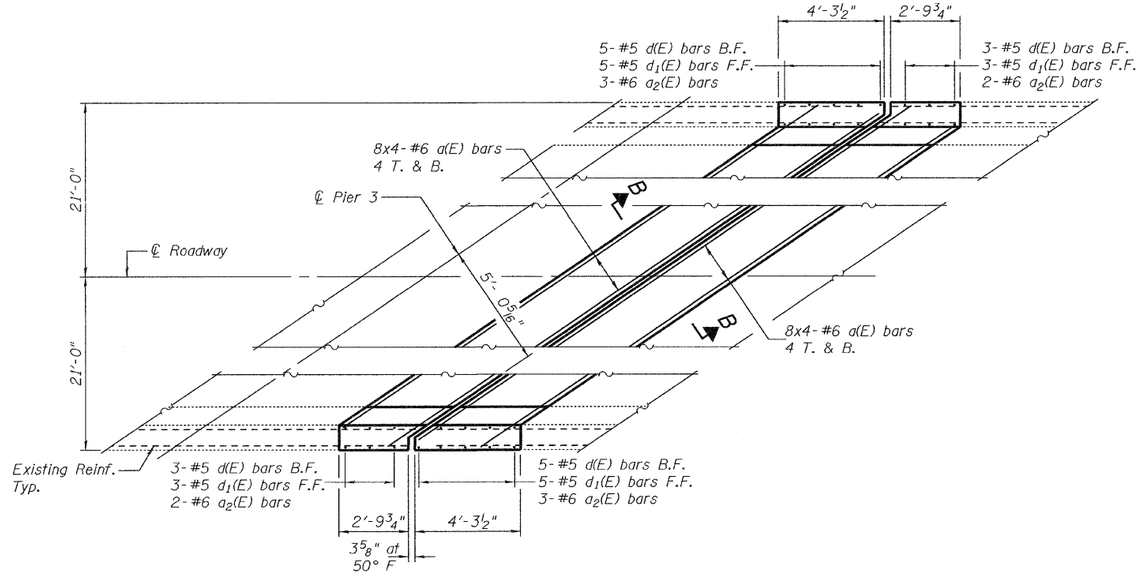
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

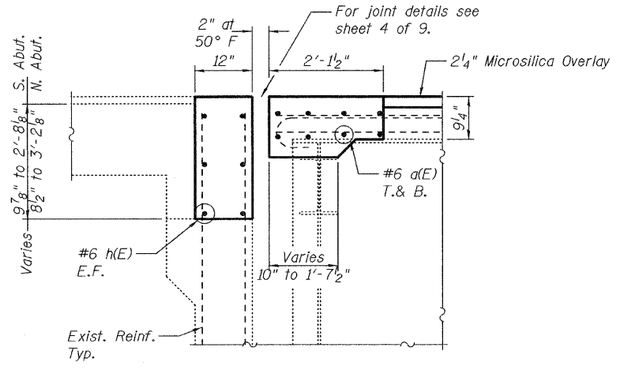


TYPICAL PLAN AT ABUTMENT

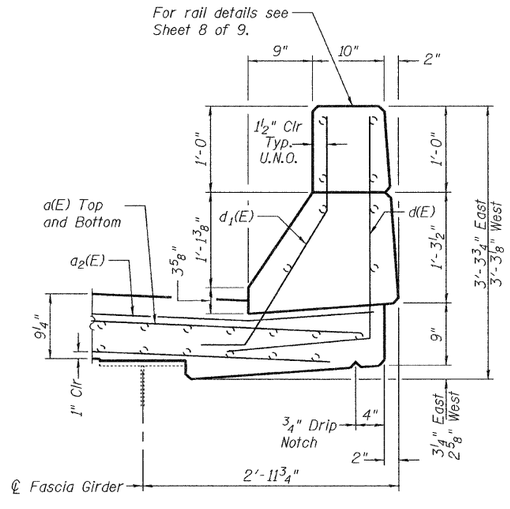
(South Abutment Shown, North Abutment Similar by Rotation)



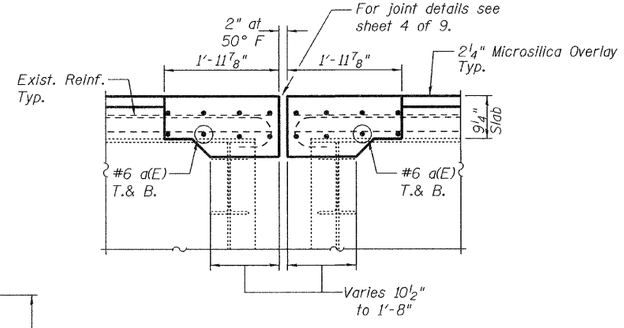
PLAN AT HINGE JOINT



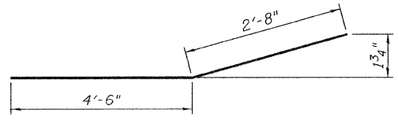
SECTION A-A



TYPICAL PARAPET SECTION



SECTION B-B



Bar a2(E)

Min. Bar Lap

#6 = 3'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	128	#6	20'-11"	———
a2(E)	20	#6	7'-2"	———
d(E)	32	#5	4'-3"	L
d1(E)	32	#5	3'-5"	L
h(E)	48	#6	20'-11"	———
Concrete Removal			Cu. Yd.	35.1
Concrete Superstructure			Cu. Yd.	35.9
Reinforcement Bars, Epoxy Coated			Lbs.	6,000

Bars indicated thus 8 x 4-#6 etc. indicates 8 line of bars with 4 lengths per line.

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

April 29, 2010
EXAMINED A. Carl Peyrot
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

JOINT DETAILS SN 058-0103

SHEET NO. 3	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	131
			CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SLT-97-001-09

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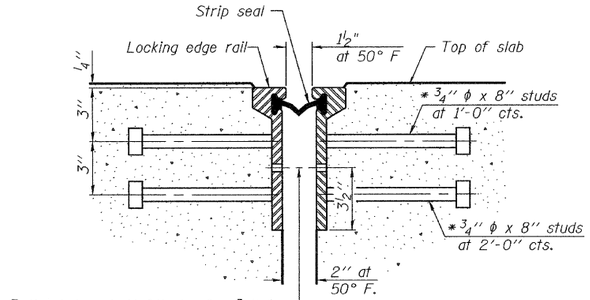
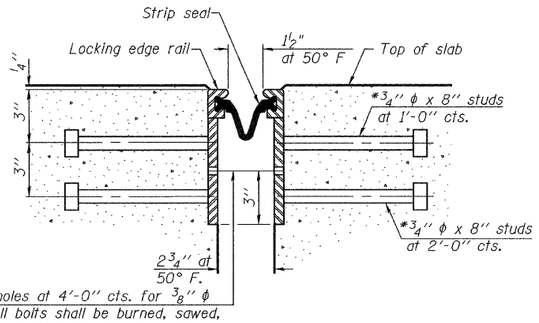
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

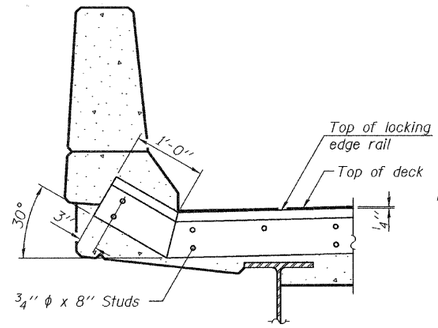
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

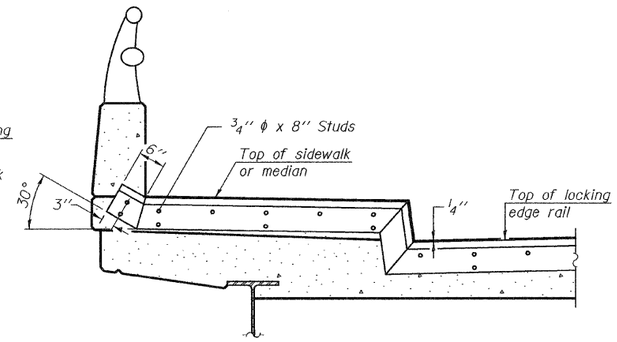


$^{7}/_{16}$" ϕ holes at 4'-0" cts. for $^{3}/_{8}$" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



AT PARAPET

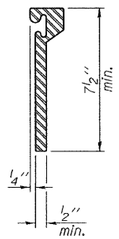
See Section A-A for end treatment of skews > 30°.



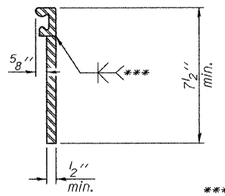
AT SIDEWALK OR MEDIAN

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

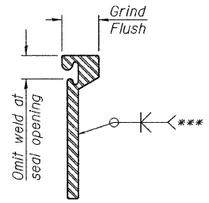
SECTION THRU ROLLED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



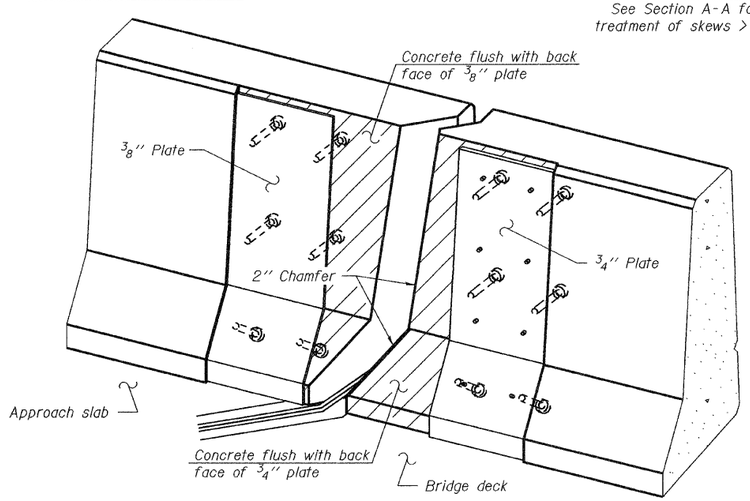
*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

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

Rolled rail shown, welded rail similar.

SECTION THRU WELDED RAIL JOINT



TYPICAL END TREATMENTS

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

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

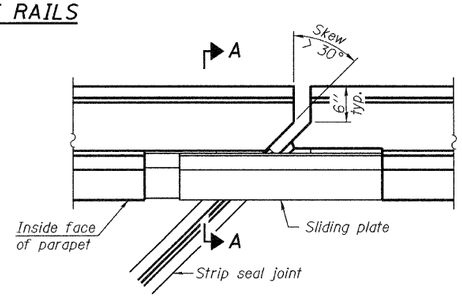
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

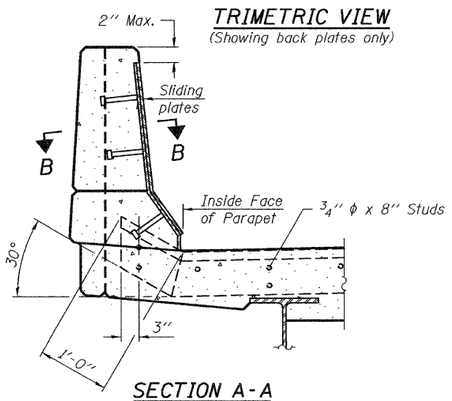
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be $^{3}/_{16}$", sealed with a suitable sealant.

LOCKING EDGE RAILS



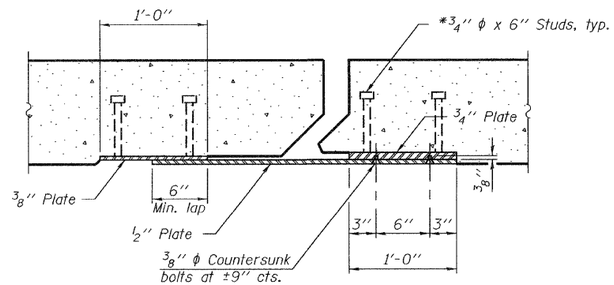
PLAN



SECTION A-A

TRIMETRIC VIEW

(Showing back plates only)



SECTION B-B

POINT BLOCK DETAILS

(for skews > 30°)

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	206

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

April 29, 2010

EXAMINED — ENGINEER OF STRUCTURAL SERVICES

PASSED — ENGINEER OF BRIDGES AND STRUCTURES

EJ-SSJ 11-1-09

SLT-97-001-09

STRIP SEAL DETAILS
SN 058-0103

SHEET NO. 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	132
			CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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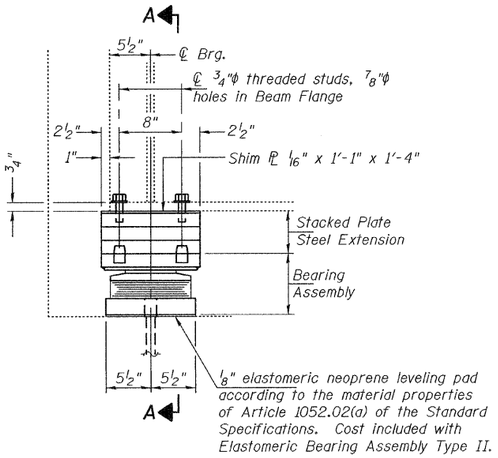
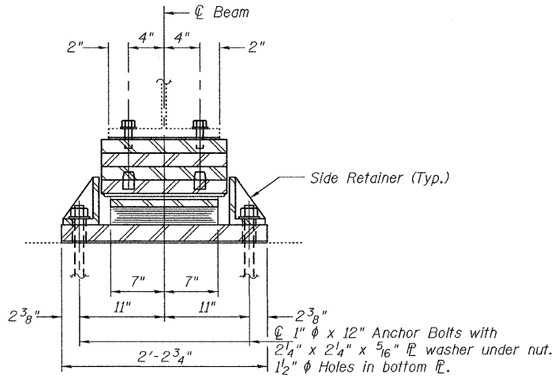
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT



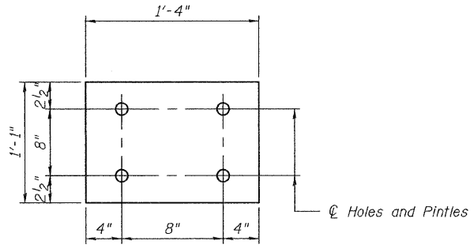
SECTION A-A

TYPE II TFE ELASTOMERIC EXP. BRG.

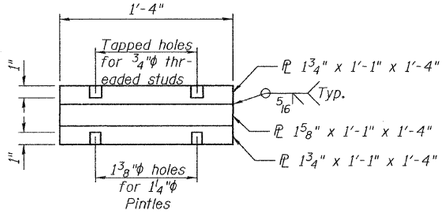
BEAM REACTIONS

Rℙ	(K)	34.4

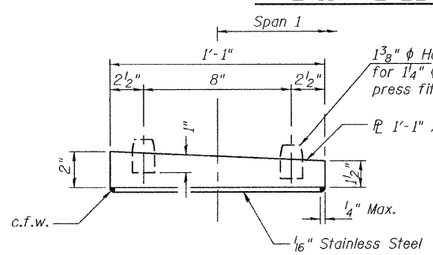
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. jack capacity = 30 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
The ⅛" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of ⅛" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



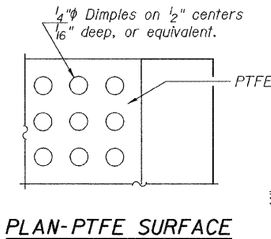
PLAN TOP AND BOTTOM PLATE



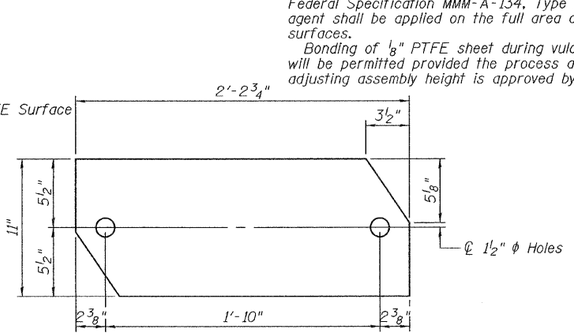
STEEL EXTENSION DETAIL



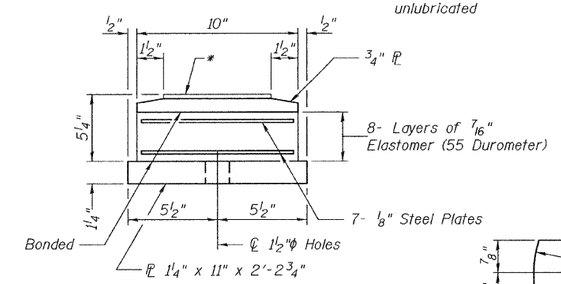
TOP BEARING ASSEMBLY



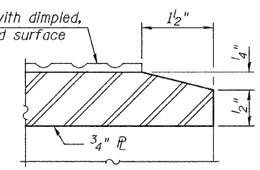
PLAN-PTFE SURFACE



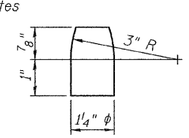
BEARING BOTTOM PLATE PLAN



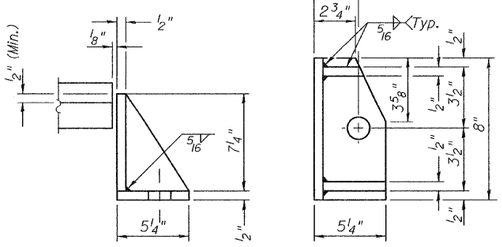
BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE

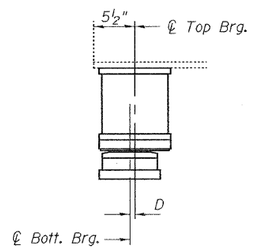


PINTLE



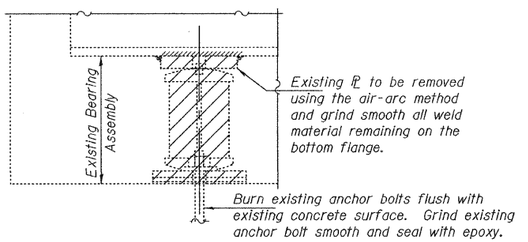
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = ⅛" per each 100° of expansion for every 15° temp. change from the normal temp. of 50°F.



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	1,850
Anchor Bolts 1"ϕ	Each	12

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

April 29, 2010
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

TYII/REPS 12-03-2008

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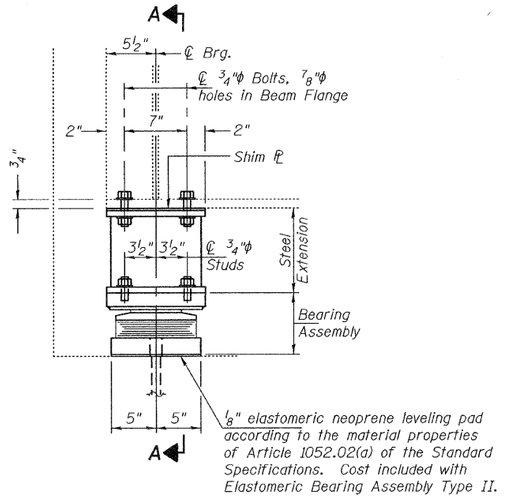
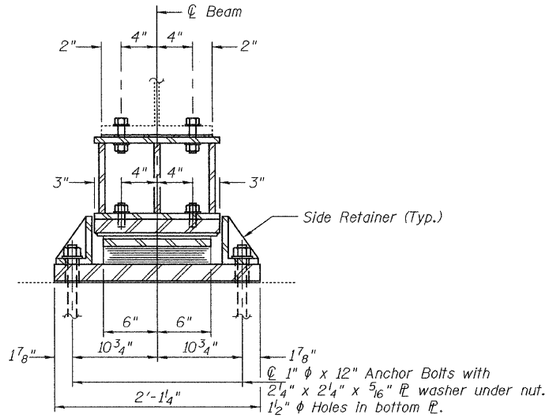
SOUTH ABUTMENT BEARING DETAILS SN 058-0103

SHEET NO. 5	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	133
			CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT

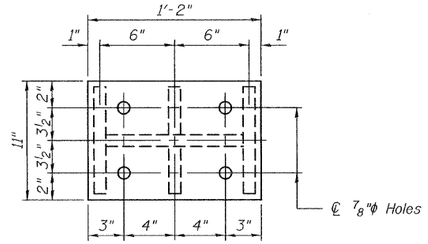


SECTION A-A

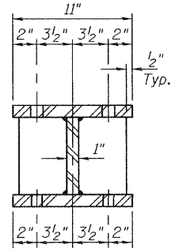
BEAM REACTIONS

Rℙ	(K)	18.2

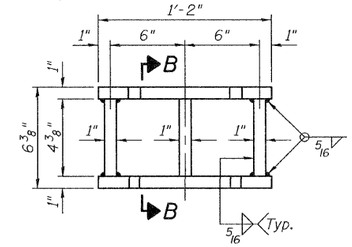
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. jack capacity = 15 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
The ⅛" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of ⅛" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



PLAN TOP AND BOTTOM PLATE

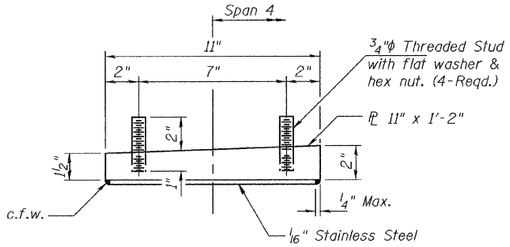


SECTION B-B

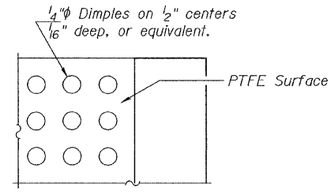


STEEL EXTENSION DETAIL

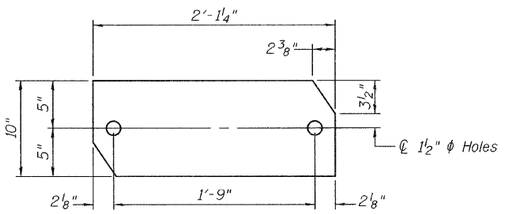
TYPE II TFE ELASTOMERIC EXP. BRG.



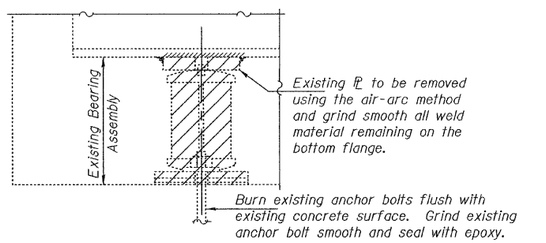
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

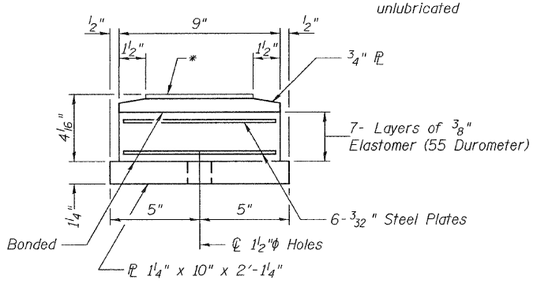


BOTTOM BEARING PLATE PLAN

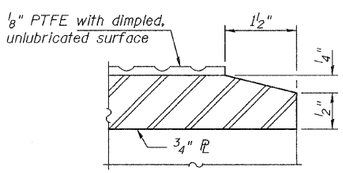


EXISTING BEARING REMOVAL DETAIL

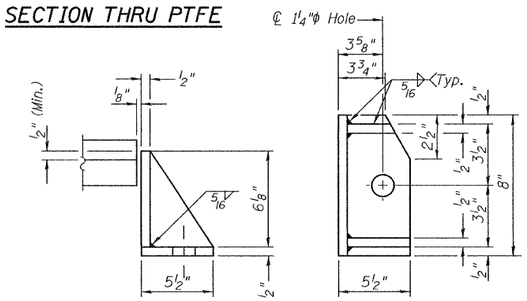
Cost included with Jack and Remove Existing Bearings.



BOTTOM BEARING ASSEMBLY

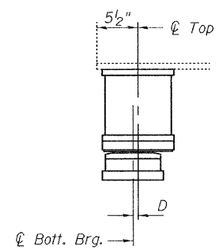


SECTION THRU PTFE

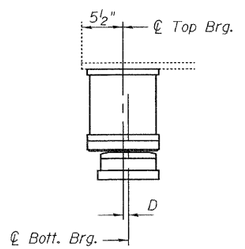


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50° F.
(Move bott. brg. away from fixed brg.)



ABOVE 50° F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = ⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	2
Jack and Remove Existing Bearings	Each	2
Furnishing and Erecting Structural Steel	Pound	280
Anchor Bolts 1"ϕ	Each	4

NORTH ABUTMENT GIRDERS 1 & 6
BEARING DETAILS
SN 058-0103

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

TYII/REPS 12-03-2008

April 29, 2010
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 6	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	134
			CONTRACT NO.	74150	
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SLT-97-001-09

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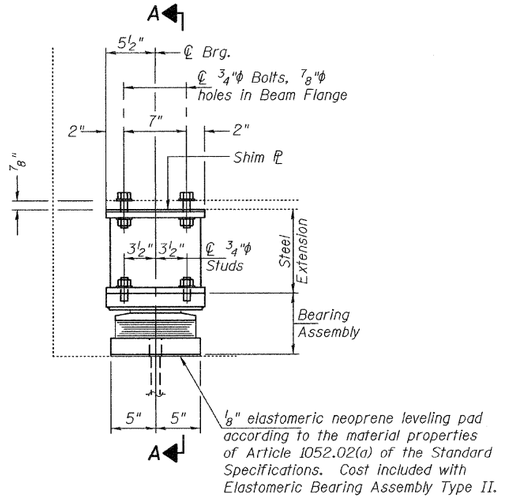
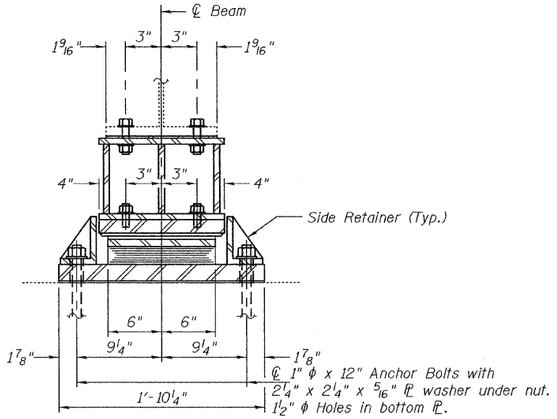
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT



SECTION A-A

BEAM REACTIONS

RL	(K)	18.2

Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. jack capacity = 15 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
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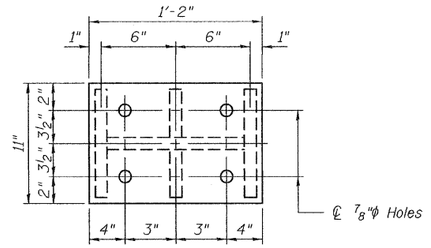
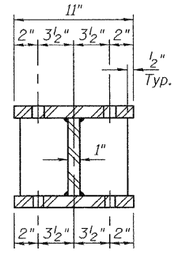
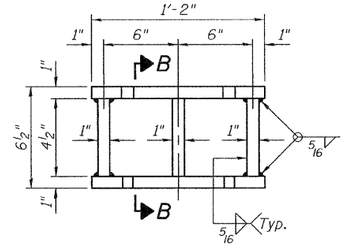
The ⅛" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of ⅛" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



PLAN TOP AND BOTTOM PLATE

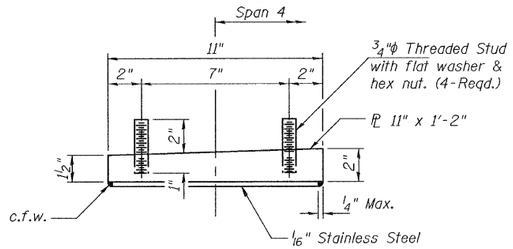


SECTION B-B

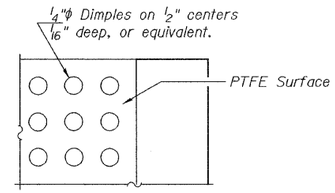


STEEL EXTENSION DETAIL

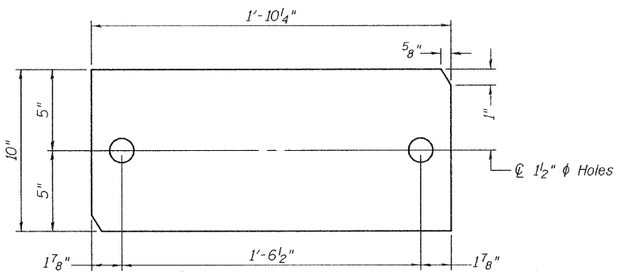
TYPE II TFE ELASTOMERIC EXP. BRG.



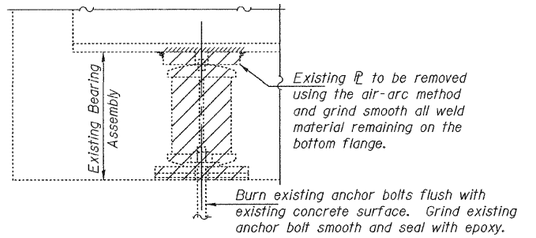
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

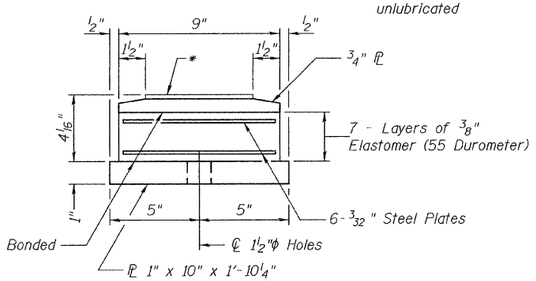


BEARING BOTTOM PLATE PLAN

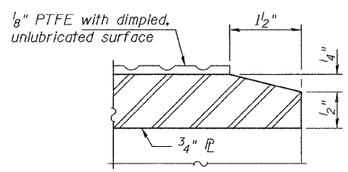


EXISTING BEARING REMOVAL DETAIL

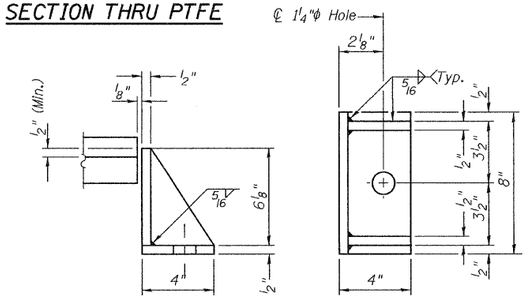
Cost included with Jack and Remove Existing Bearings.



BOTTOM BEARING ASSEMBLY

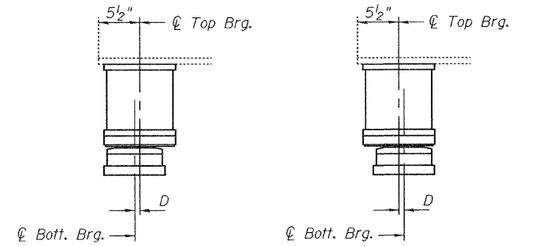


SECTION THRU PTFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50° F. (Move bott. brg. away from fixed brg.)
ABOVE 50° F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = ⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	4
Jack and Remove Existing Bearings	Each	4
Furnishing and Erecting Structural Steel	Pound	560
Anchor Bolts 1"ϕ	Each	8

NORTH ABUTMENT BEAMS 2 THRU 5
BEARING DETAILS
SN 058-0103

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

April 29, 2010
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

TYII/REPS 12-03-2008

SLT-97-001-09

SHEET NO. 7	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	135
			CONTRACT NO.		74150
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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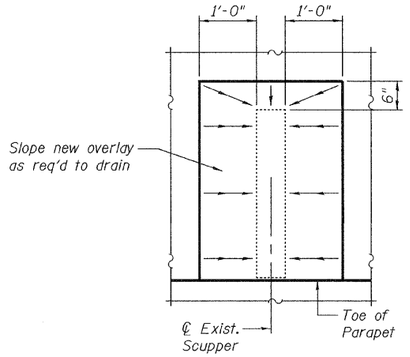
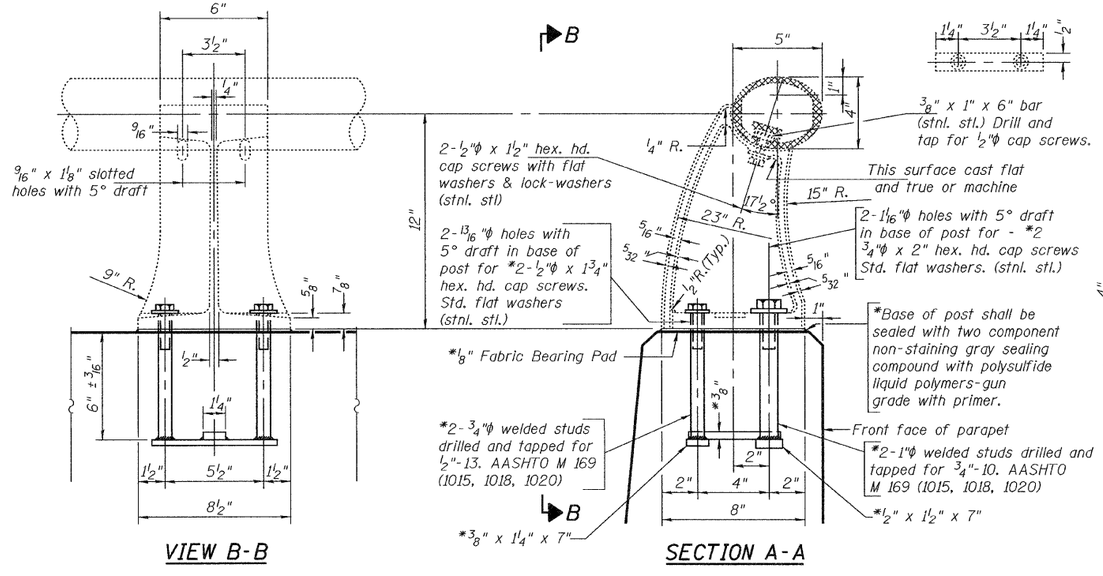
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



OVERLAY SLOPE DETAIL AT SCUPPER LOCATIONS

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts.
Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
Horizontal rail element & rail posts shown are for information only.

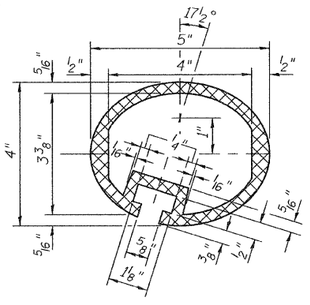


VIEW B-B

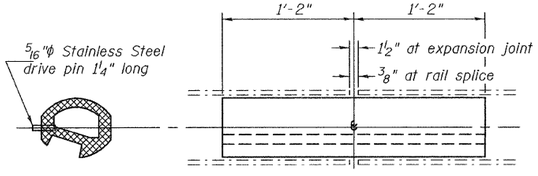
SECTION A-A

RAIL POST DETAILS

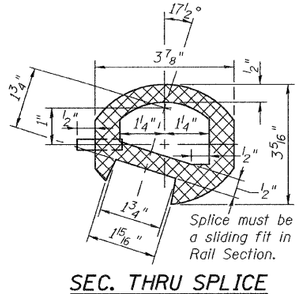
* New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Removing and Re-erecting Existing Railing.



SEC. THRU ELLIPTICAL RAIL SECTION

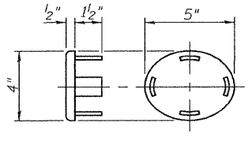


RAIL SPLICE



Splice must be a sliding fit in Rail Section.

SEC. THRU SPLICE



CAST END CAP
DRIVE FIT TYPE

RAILING AND OVERLAY DETAILS
SN 058-0103

SHEET NO. 8	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	322	(58-20)RS	Macon	151	136
			CONTRACT NO. 74150		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNED	A.T.H.
CHECKED	I.J.L.
DRAWN	Drew Christopher
CHECKED	A.T.H. I.J.L.

R17/REPS 1-27-2000

April 29, 2010
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

SLT-97-001-09

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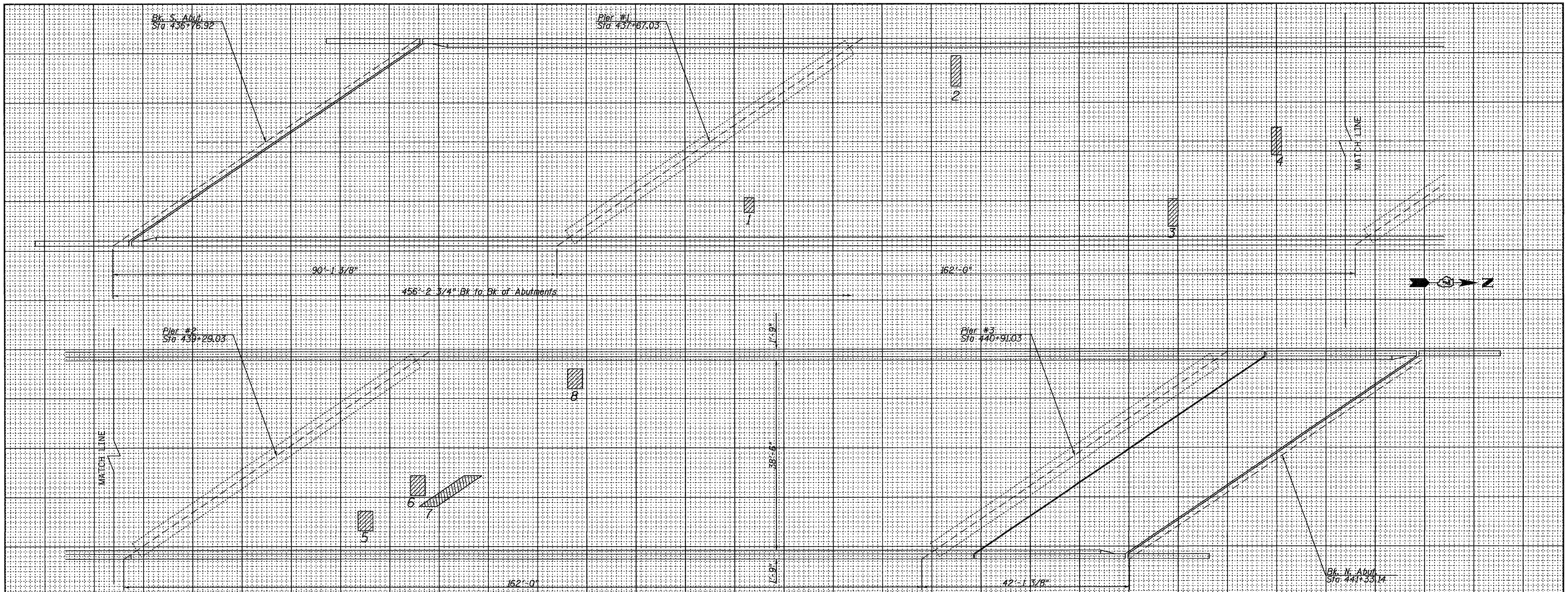


PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH) SQ YD	DECK SLAB REPAIR (FD TY 1) SQ YD	DECK SLAB REPAIR (FD TY 2) SQ YD
1	2.0 x 3.0			6.0
2	2.0 x 5.5			11.0
3	2.0 x 5.5			11.0
4	2.0 x 5.5			11.0
5	3.0 x 4.0			12.0
6	3.0 x 4.0			12.0
7	2.0 x 11.0			22.0
8	3.0 x 4.0			12.0
	TOTAL	1683	0	97

PARTIAL DEPTH (ESTIMATED)	
1683 / 9 =	187.0
USE	187 SQ YD
FULL DEPTH, TYPE 1	
0 / 9 =	0.0
USE	0 SQ YD
FULL DEPTH, TYPE 2	
97 / 9 =	10.8
USE	11 SQ YD

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

PARTIAL DEPTH ESTIMATED AT 10% OF DECK AREA. (FOR INFORMATION ONLY)

FULL DEPTH

DATE OF SURVEY: 1/6/10
SURVEY BY: M. ALLEN, A. RING
METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
MACON COUNTY
US 51
SN 058-0103

103

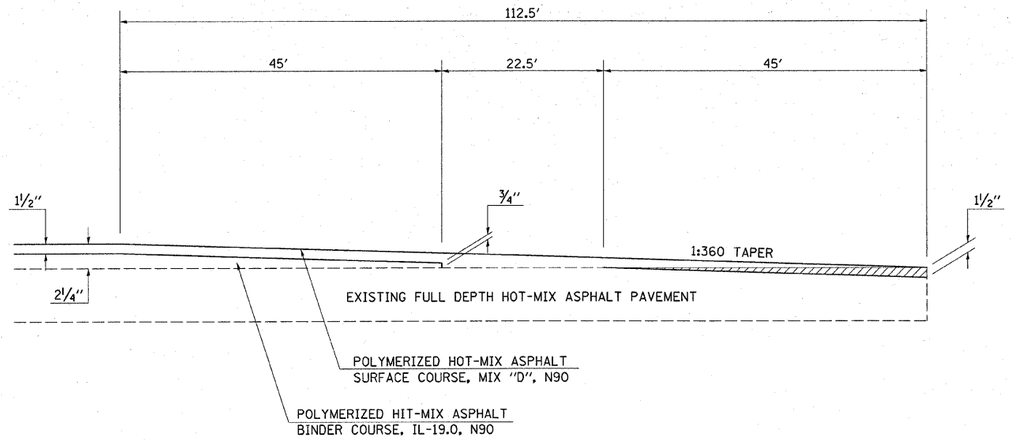
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - MEA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK SLAB REPAIR SN 058-0103
		DRAWN - MEA	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -		
	PLOT DATE = $DATE$	DATE -	REVISED -		SCALE: 50 NA SHEET NO. 9 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	137
		CONTRACT NO. 74150		
	ILLINOIS FED. AID PROJECT			

BRIDGE DECK PATCHING

BUTT JOINT DETAIL

RAMP A ENTRANCE
RAMP D EXIT

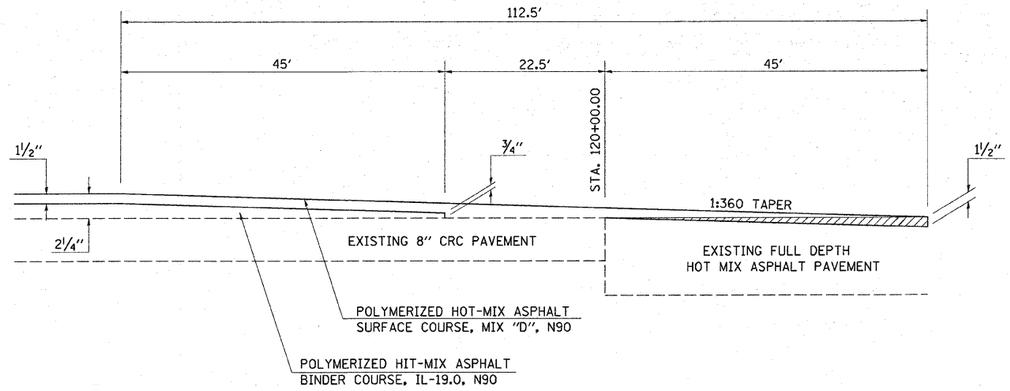


HOT-MIX ASPHALT SURFACE REMOVAL (BUTT JOINT)

NOTE: DETAIL NOT DRAWN TO SCALE

BUTT JOINT DETAIL

STA. 119+55.00 TO STA. 120+67.50 NB/SB

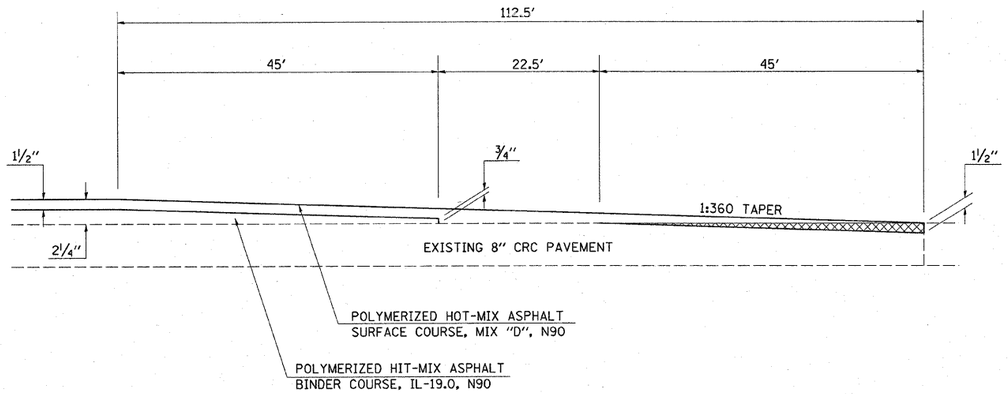


HOT-MIX ASPHALT SURFACE REMOVAL (BUTT JOINT)

NOTE: DETAIL NOT DRAWN TO SCALE

BUTT JOINT DETAIL

STA. 366+27.50 TO STA. 367+40.00 NB/SB

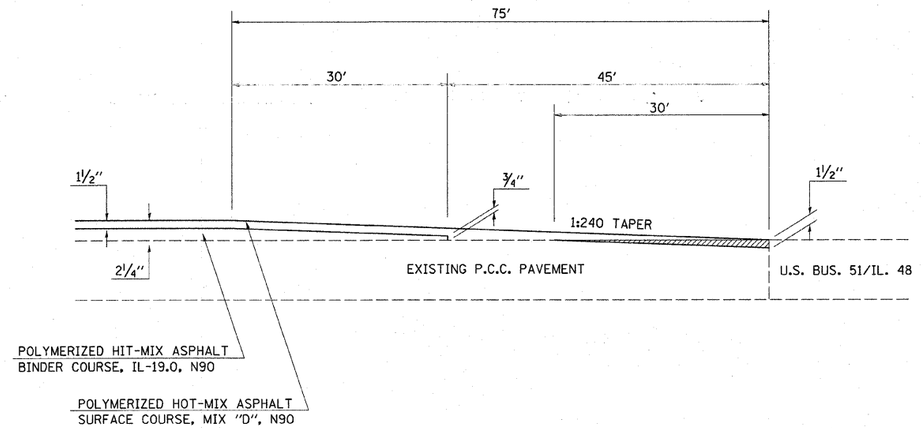


PCC SURFACE REMOVAL (BUTT JOINT)

NOTE: DETAIL NOT DRAWN TO SCALE

BUTT JOINT DETAIL

RAMPS A & B, C & D @ U.S. BUS. 51 & IL. 48



HOT-MIX ASPHALT SURFACE REMOVAL (BUTT JOINT)

NOTE: DETAIL NOT DRAWN TO SCALE

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	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

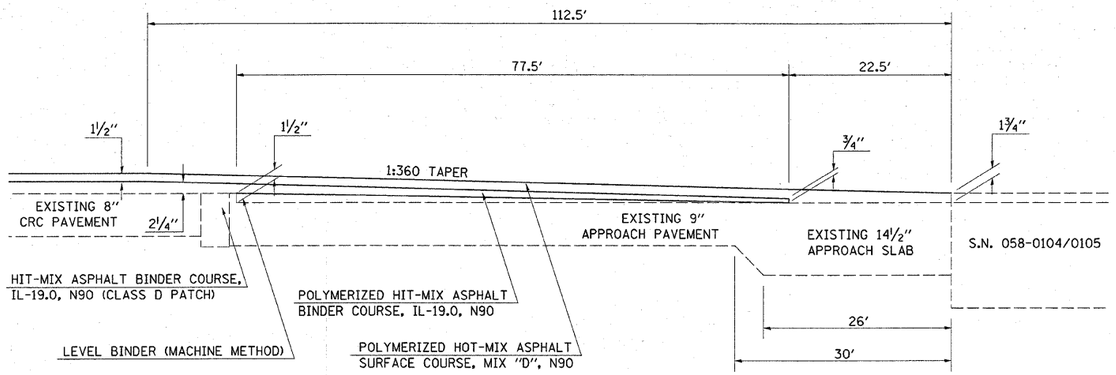
DISTRICT DETAILS

SCALE: NA | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	138
		CONTRACT NO. 74150		
		ILLINOIS FED. AID PROJECT		

BUTT JOINT DETAIL

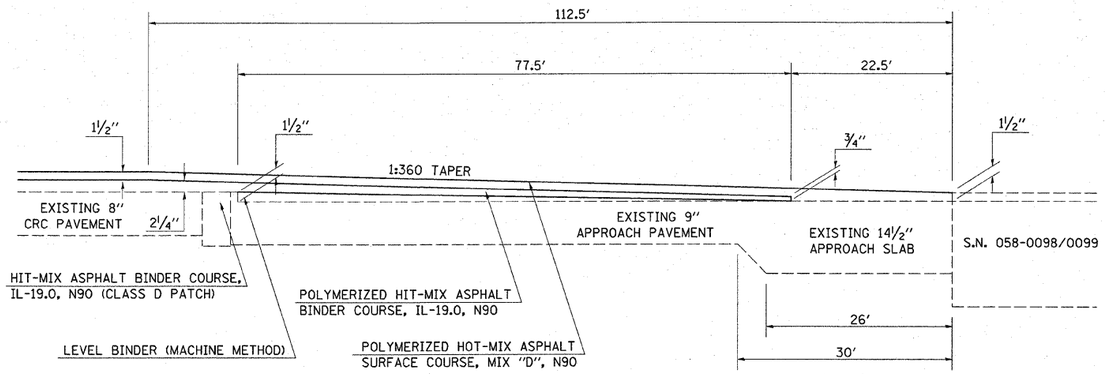
SN 058-0104/0105



NOTE: DETAIL NOT DRAWN TO SCALE

BUTT JOINT DETAIL

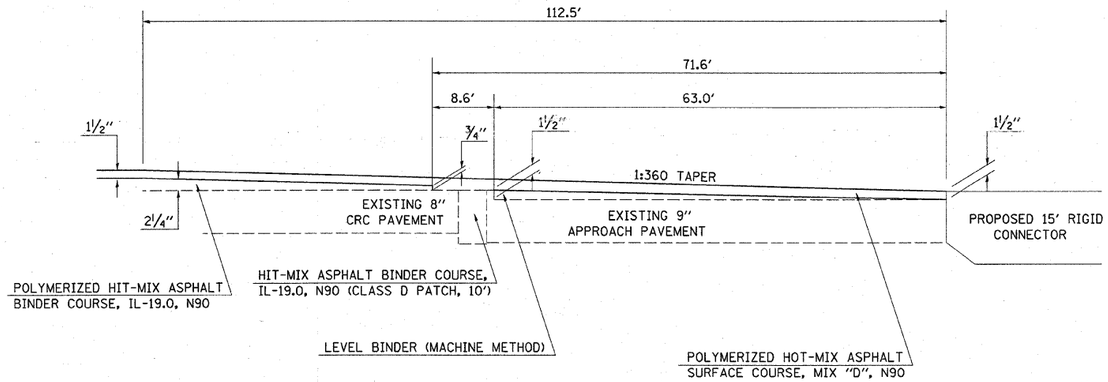
SN 058-0098/0099



NOTE: DETAIL NOT DRAWN TO SCALE

BUTT JOINT DETAIL

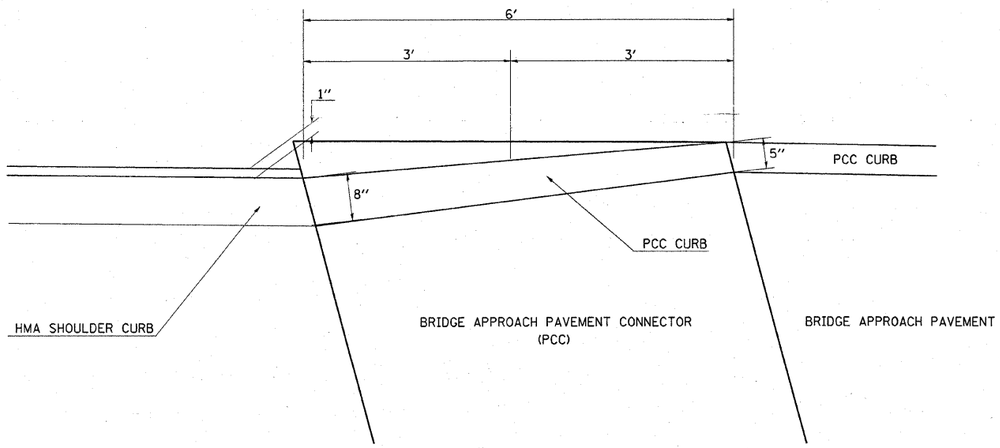
AT RIGID APPROACH CONNECTOR FOR STRUCTURES:
058-0101/0102, 0109/0108 (NB & SB)



NOTE: DETAIL NOT DRAWN TO SCALE

BRIDGE APPROACH PAVEMENT CONNECTOR CURB

(PCC)



NOTE: DETAIL NOT DRAWN TO SCALE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

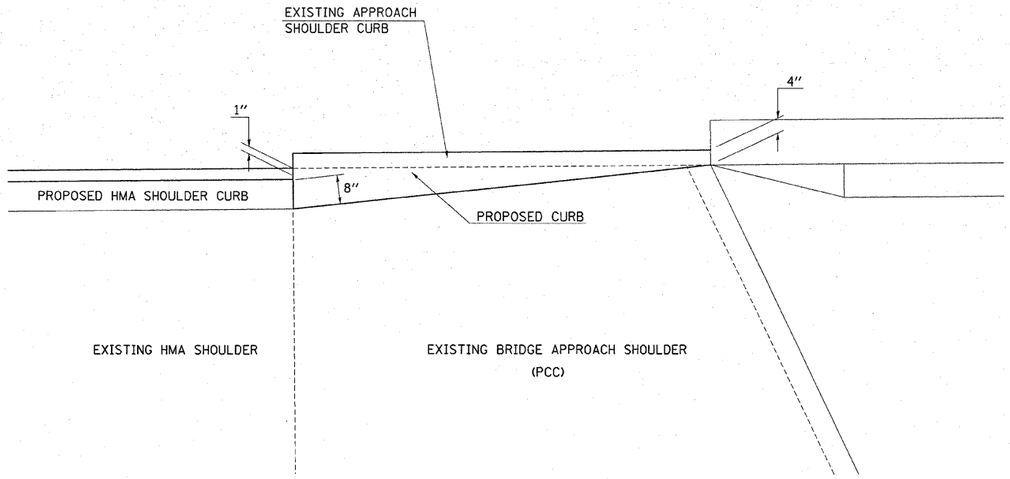
DISTRICT DETAILS

SCALE: NA | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	139
		CONTRACT NO. 74150		
	ILLINOIS FED. AID PROJECT			

CURB REMOVAL AND REPLACEMENT

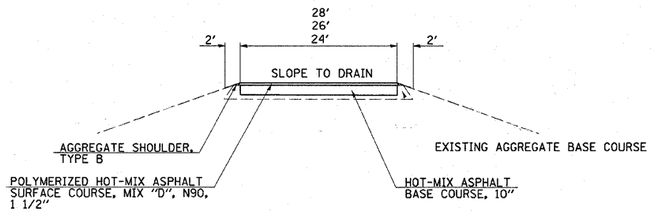
S.N. 058-0104 AND 058-0105
APPROACH SHOULDER PAVEMENT



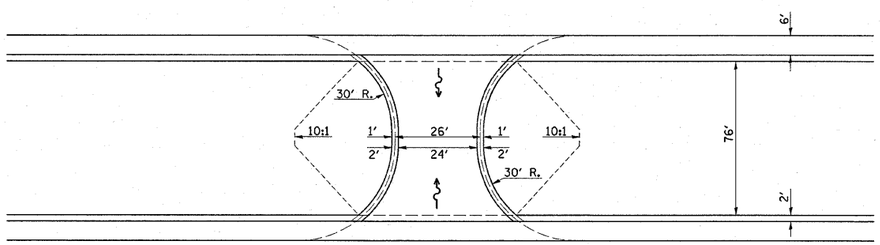
NOTE: DETAIL NOT DRAWN TO SCALE

DETAIL OF MEDIAN CROSSOVER TO BE RECONSTRUCTED

STA. 162 + 34
STA. 268 + 70
STA. 331 + 45

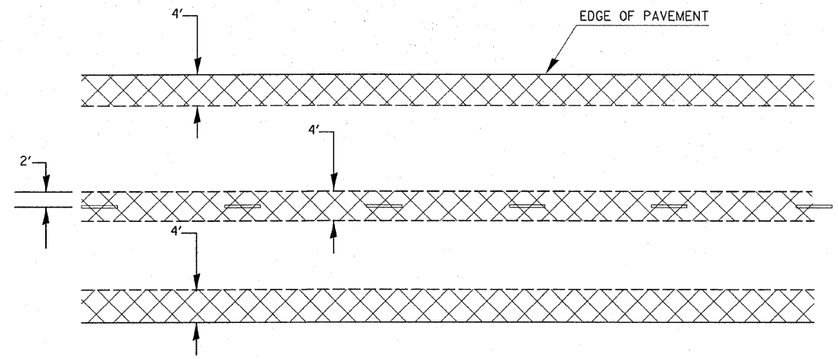


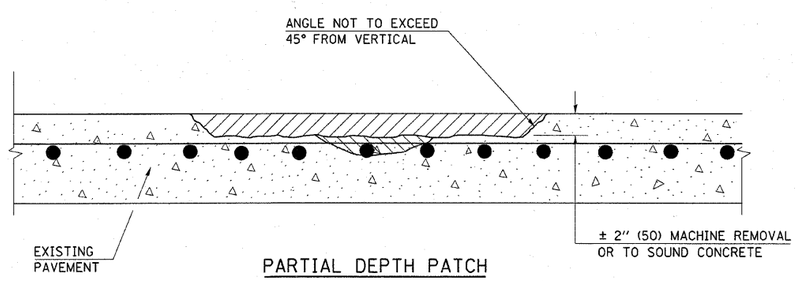
ELEVATION



PLAN

PARTIAL DEPTH PATCHING FOR BARE P.C.C. PAVEMENT





PARTIAL DEPTH PATCH

SEQUENCE OF CONSTRUCTION

1. INSPECT PAVEMENT TO DETERMINE IF A FULL OR PARTIAL DEPTH PATCH IS REQUIRED.
2. REMOVE AND REPLACE FULL DEPTH OR PARTIAL DEPTH PATCH.

GENERAL NOTES

1. THE WORK REQUIRED TO PERFORM A PARTIAL DEPTH PATCH SHALL BE PAID FOR AS SPECIFIED IN THE SPECIAL PROVISION ENTITLED "PAVEMENT PATCHING (PARTIAL DEPTH)".

MILL OR WHEEL SAW REMOVAL + REMOVAL OF LOOSE MATERIAL BY BY COMPRESSED AIR = PAVEMENT REMOVAL (PARTIAL DEPTH)

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

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	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

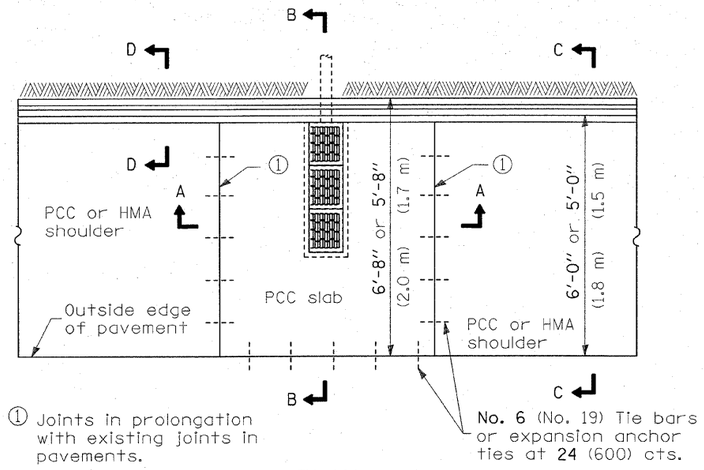
DISTRICT DETAILS

SCALE: NA | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

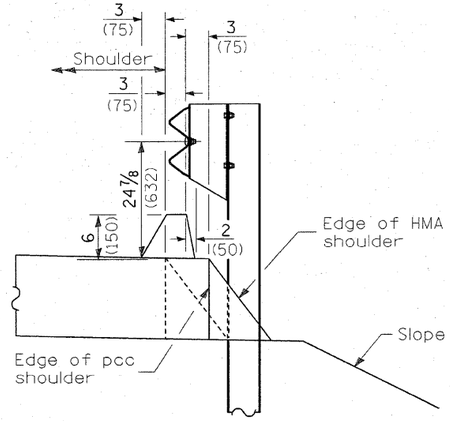
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	140

CONTRACT NO. 74150

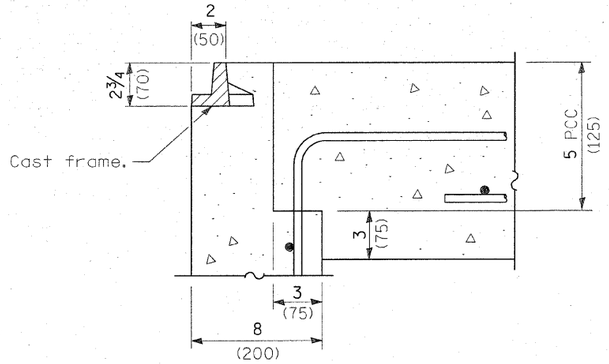
ILLINOIS FED. AID PROJECT



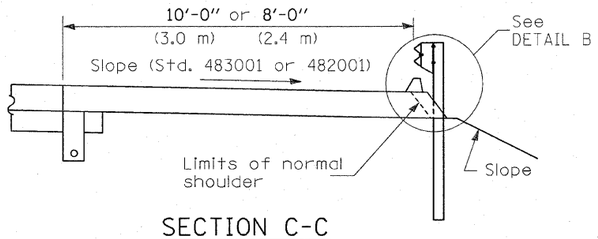
PLAN



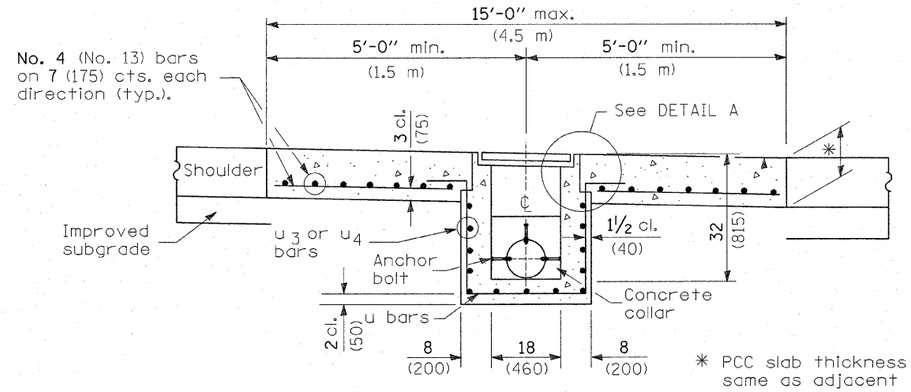
DETAIL B



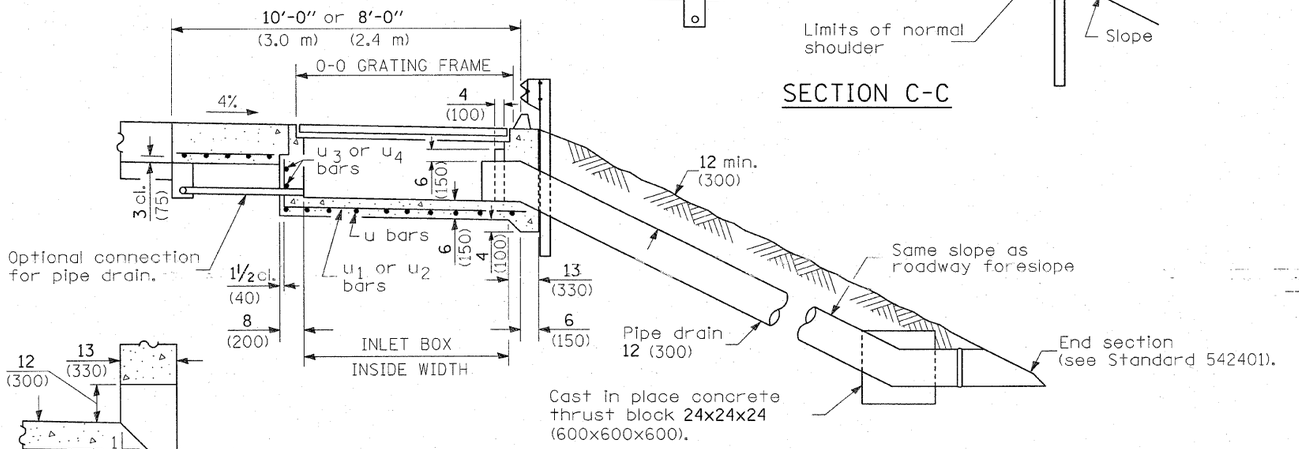
DETAIL A



SECTION C-C

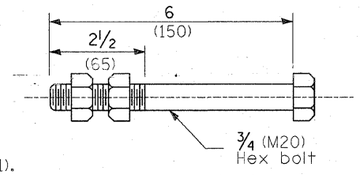


SEC. A-A



SEC. B-B

BOX OUTLET WHEN PRECAST



ANCHOR BOLT

(Used to tie pipe to concrete collar)

INLET TYPE	SHOULDER WIDTH	O-O GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type C	5' TO 6' (1.5 m TO 1.8m))	4'-4" (1.325 m)	3'-11" (1.195 m)	18 (460)

GENERAL NOTES

See Standard 420001 for joint details not shown.

All exposed edges of the inlet, except the upper perimeter, shall be beveled ¾ (20).

For placement of drainage elements on existing construction with existing rigid pavement, substitute expansion anchor ties for tie bars. For nonrigid pavements or monolithic construction of pcc slab and shoulder, omit tie bars.

Alldiminsions are in inches (millimeters) unless otherwise shown.

DETAIL INLETS, SPECIAL, TYPE C

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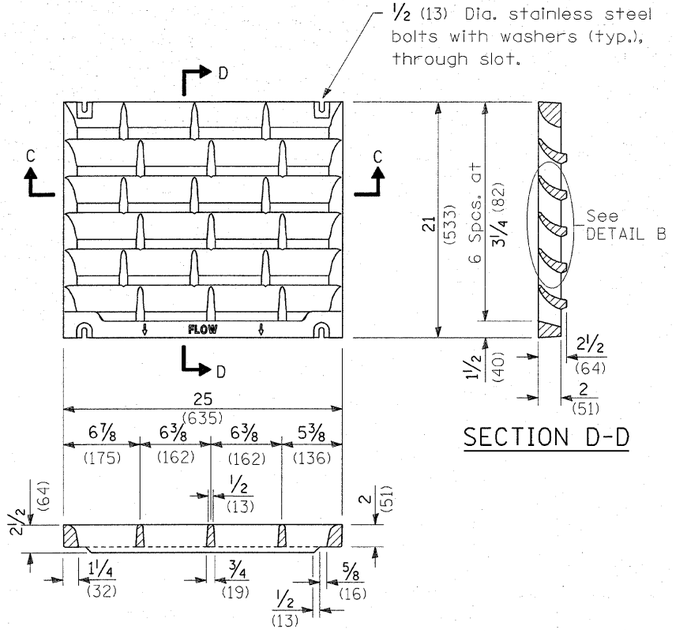
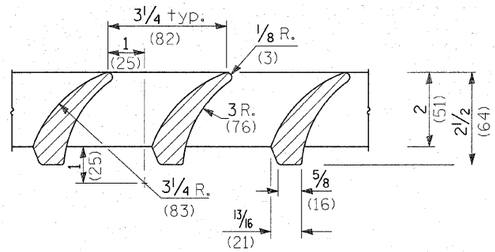
	PLOT SCALE = 20.0000 ' / IN.	DRAWN -	REVISED -	DETAIL INLETS, SPECIAL. TYPE C DISTRICT DETAILS
	PLOT DATE = 3/17/2010	CHECKED -	REVISED -	SCALE: NA | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.
		DATE -	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	141
		CONTRACT NO. 74150		
		ILLINOIS FED. AID PROJECT		

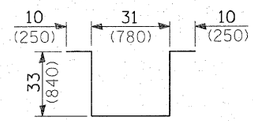


SECTION C-C

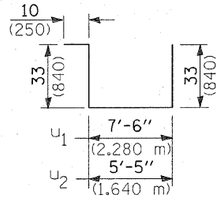
SECTION D-D



DETAIL B



BAR u

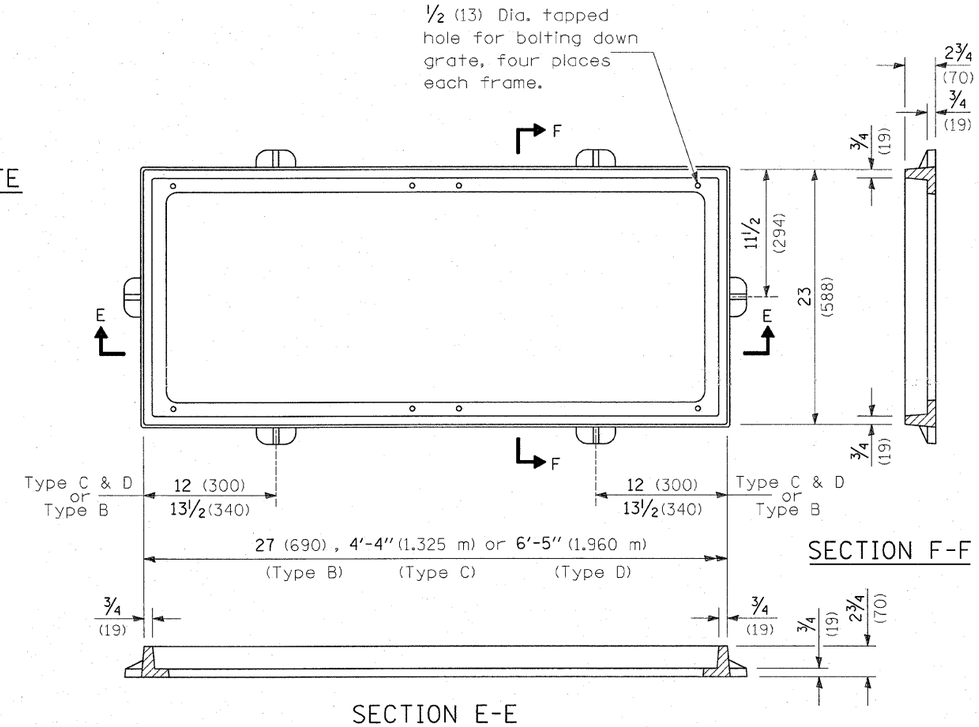


INLET BOX

TYPE C

Bar	Qty.	Size	Length
u	6	No. 4 (No. 13)	9′-9″ (2.96 m)
u_2	3	No. 4 (No. 13)	11′-9″ (3.57 m)
u_4	6	No. 4 (No. 13)	9′-6″ (2.89 m)
Concrete		cu. yds. (m^3)	1.3 (1.0)
Reinf. bars		lbs. (kg)	101 (45.8)
Grating		sq. ft. (m^2)	7.3 (0.68)

½ (13) Dia. tapped hole for bolting down grate, four places each frame.



SECTION F-F

SECTION E-E

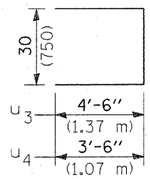
DETAIL OF CAST GRATE

Type B requires 1 grate
Type C requires 2 grates
Type D requires 3 grates

DETAIL OF CAST FRAME

(Type C shown)

BARS u_1,u_2



Bars u_3,u_4

DETAIL INLETS, SPECIAL, TYPE C

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		DRAWN -	REVISED -
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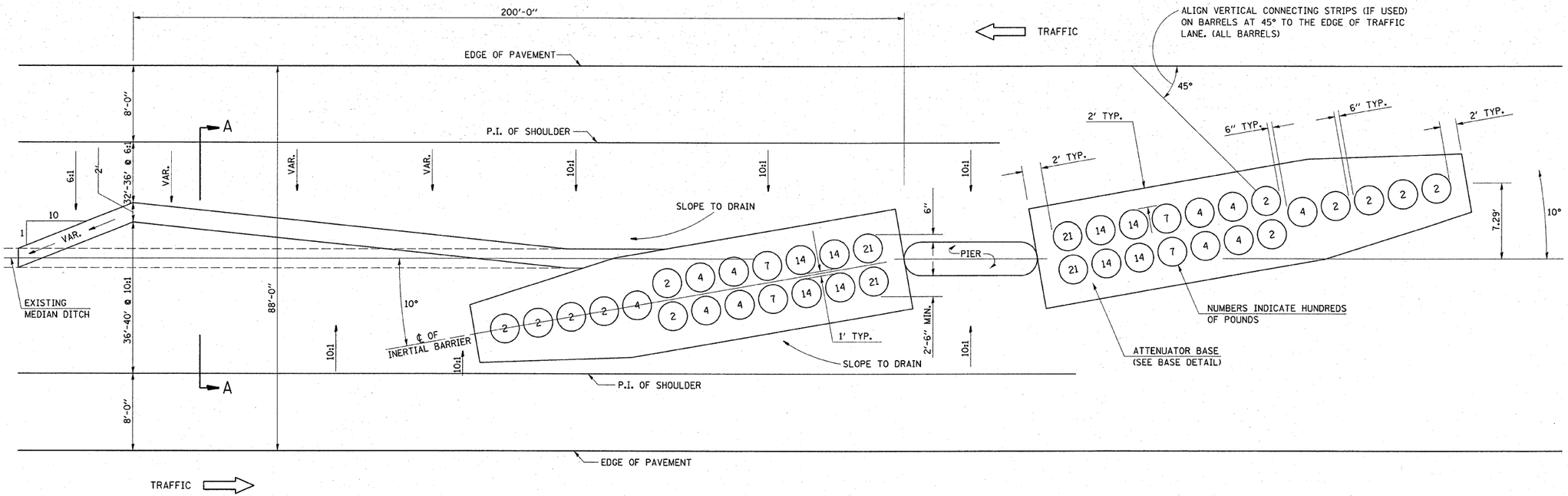
	PLOT DATE = 3/17/2010	DATE -	REVISED -

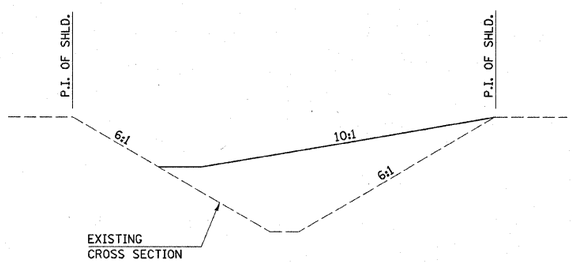
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL INLETS, SPECIAL, TYPE C
DISTRICT DETAILS

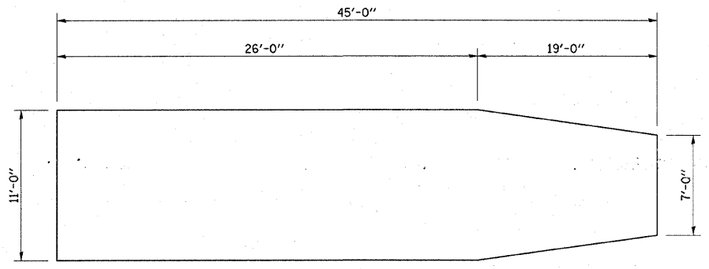
SCALE: NA | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	142
		CONTRACT NO. 74150		
		ILLINOIS FED. AID PROJECT		





SECTION A-A
GRADING AND SHAPING DETAIL



BASE DETAIL

GENERAL NOTES

1. ALL 10:1 SLOPES SHOWN ON THIS DETAIL SHALL BE CONSTRUCTED 10:1 OR FLATTER.
2. THE SLOPES AS SHOWN ON THIS DETAIL SHALL APPLY TO BOTH ENDS OF THE BRIDGE PIERS.
3. THE LENGTH X WIDTH OF MODULE LAYOUT IS 41.0' x 7.0': 19 MODULES - 14,400 LBS.
4. IN AREAS OF 10:1 SLOPES PRECEDING THE ATTENUATOR IN THE MEDIAN INSTALLATION, FOUR OR MORE WOOD POSTS SHALL BE PLACED AT 5' INTERVALS IN THE MEDIAN ℄. SEE SPECIAL PROVISIONS AND SCHEDULES.

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

DISTRICT 7 DETAIL NO. Z0030150

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	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF IMPACT ATTENUATORS (NON-REDIRECTIVE) TEST LEVEL 3
88' MEDIAN

SCALE: NA | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58-20)RS	MACON	151	143
		CONTRACT NO. 74150		
		ILLINOIS FED. AID PROJECT		

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
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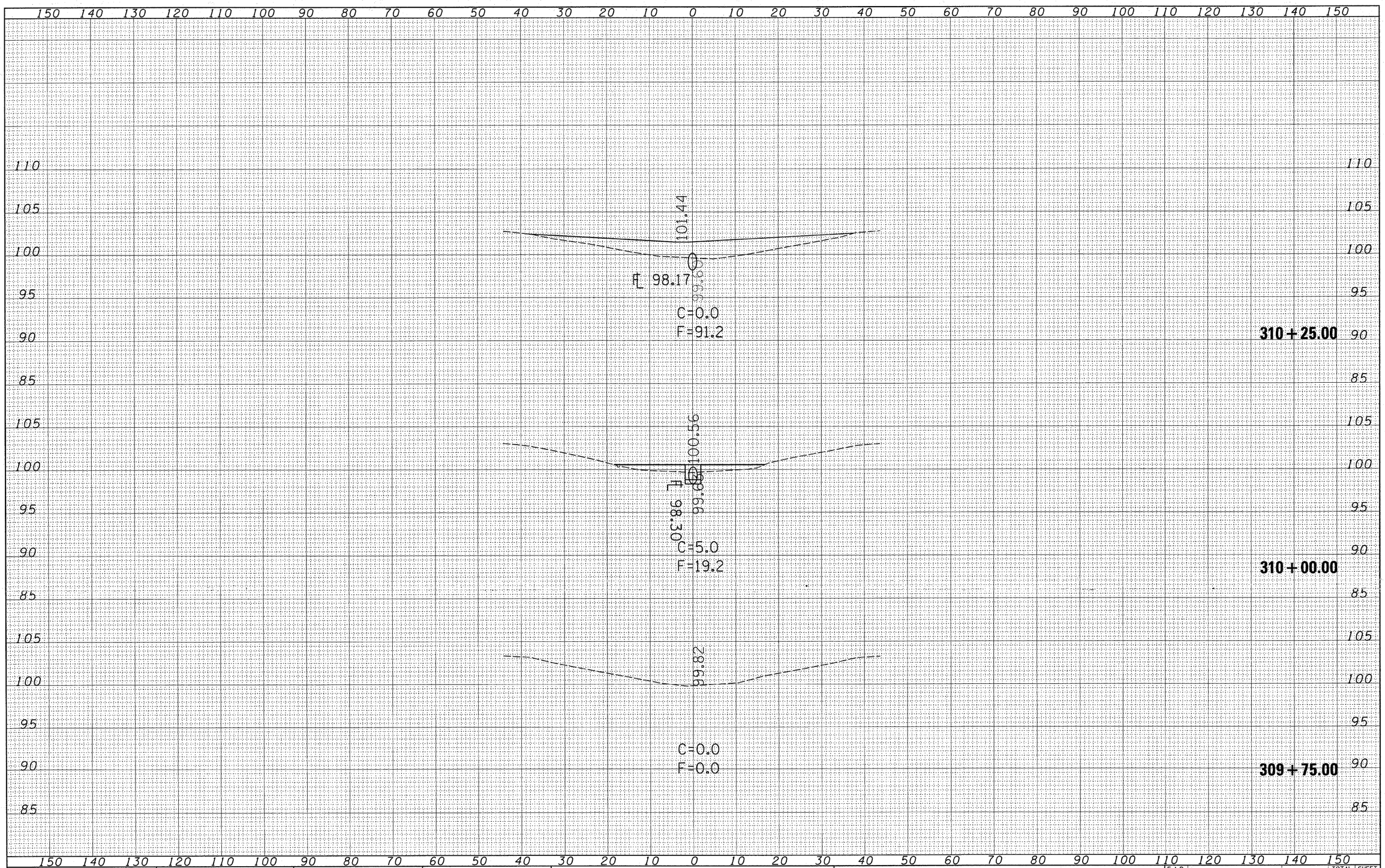

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	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 1 OF 8 SHEETS | STA. 309+75.00 TO STA. 310+25.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	144
		CONTRACT NO. 74150		
	ILLINOIS	FED. AID PROJECT		

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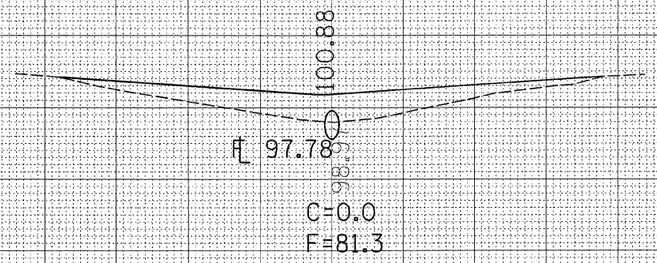
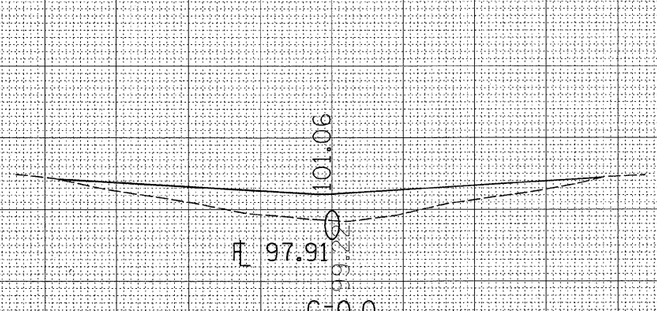
110 105 100 95 90 85



311 + 00.00

105 100 95 90 85



310 + 75.00

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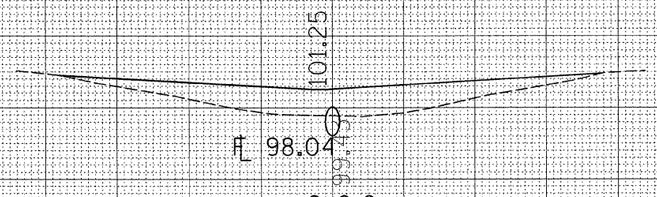

310 + 50.00

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	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 2 OF 8 SHEETS | STA. 310+50.00 TO STA. 311+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	145
		CONTRACT NO. 74150		
		ILLINOIS FED. AID PROJECT		

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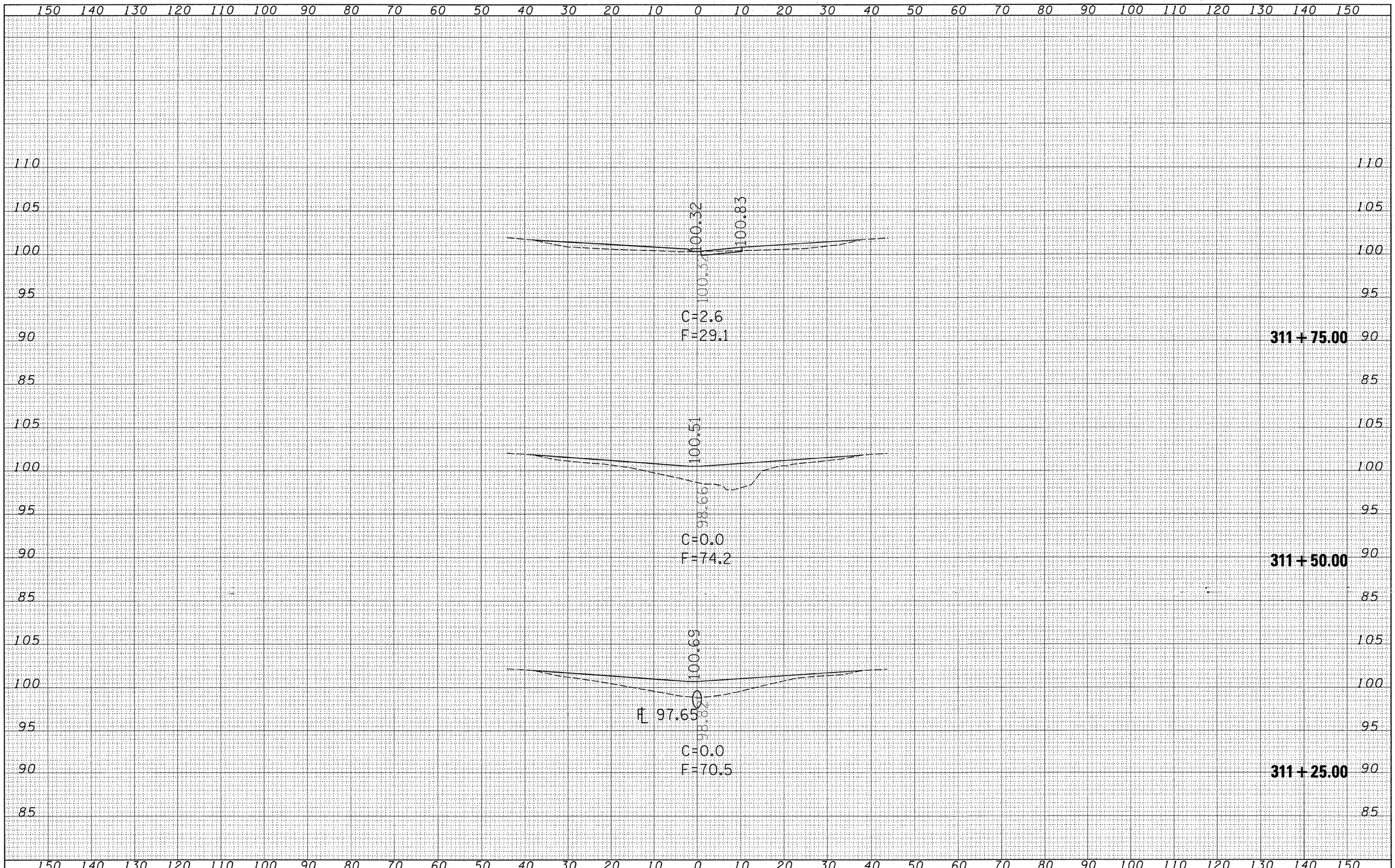

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	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
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	PLOTTED		
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	AREAS		
NO.	AREAS CHECKED		

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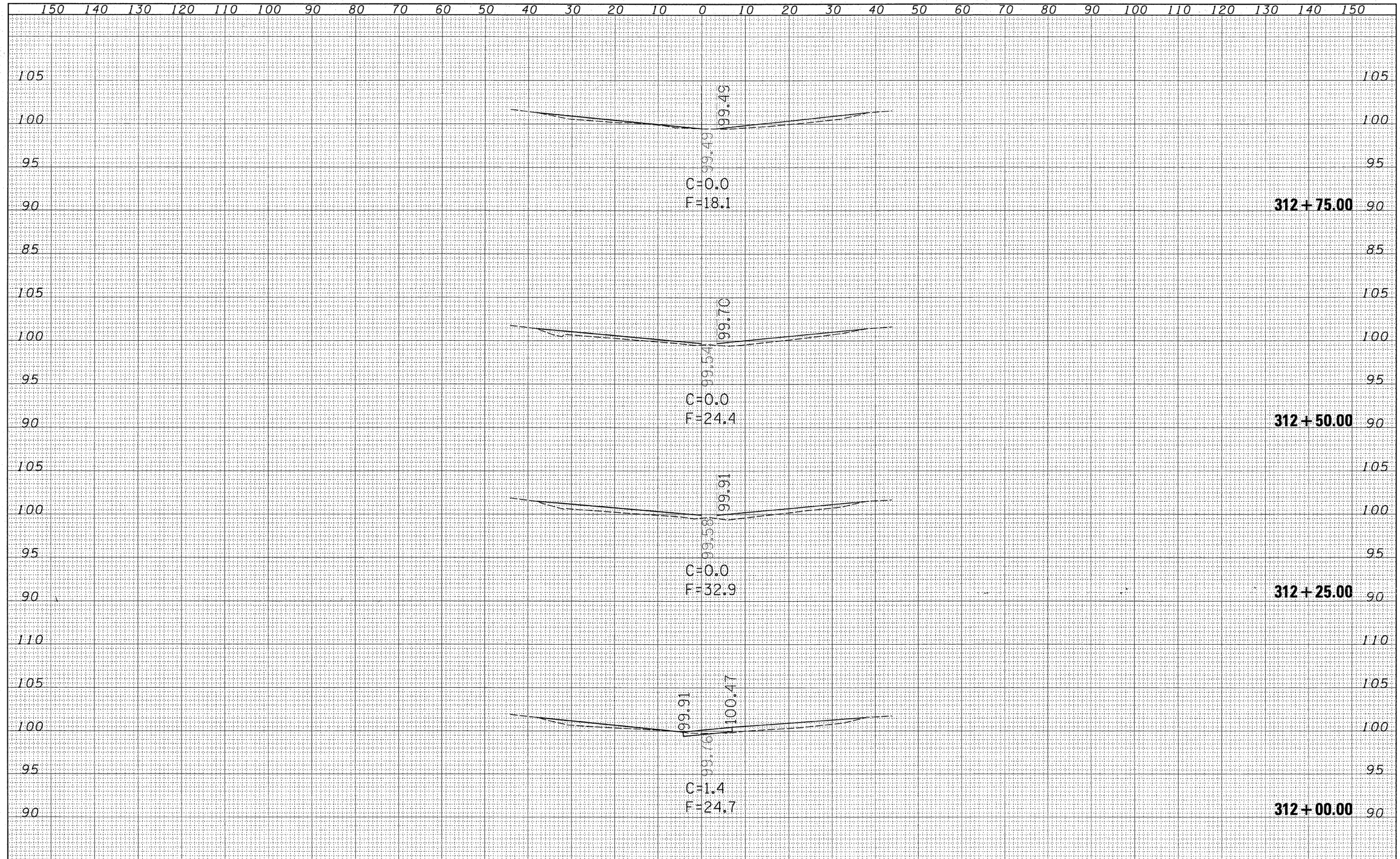
	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 3 OF 8 SHEETS | STA. 311+25.00 TO STA. 311+75.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	146
		CONTRACT NO. 74150		
		ILLINOIS FED. AID PROJECT		



FINAL SURVEY

NOTE BOOK	SURVEYED	BY
NO.	PLOTTED	DATE
	TYPING DATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY

NOTE BOOK	SURVEYED	BY
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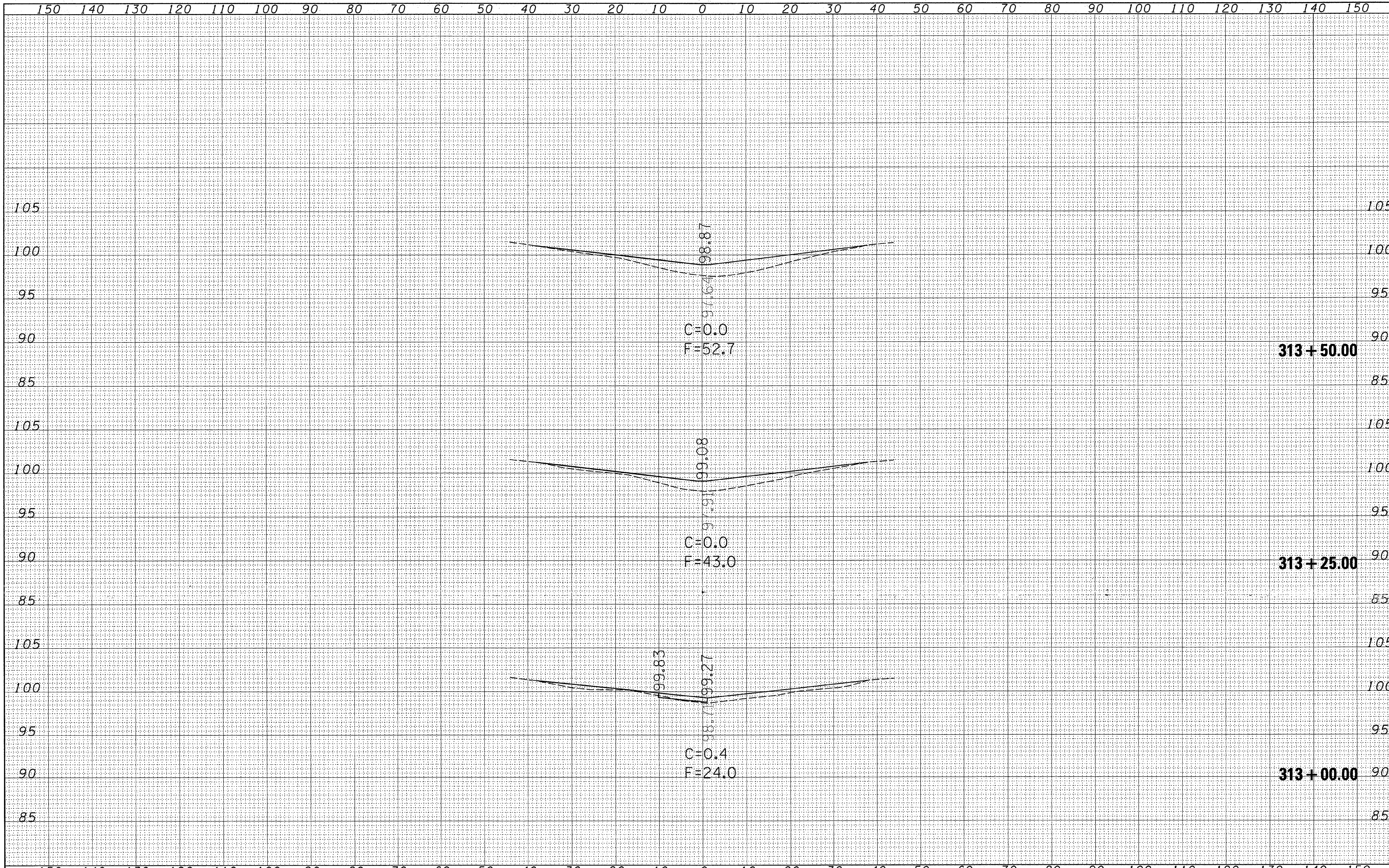
		DRAWN -	REVISED -		
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -		SCALE: 10 | SHEET NO. 4 OF 8 SHEETS | STA. 312+00.00 TO STA. 312+75.00
	PLOT DATE = 3/17/2010	DATE -	REVISED -		

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	147
		CONTRACT NO. 74150		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY — NOTE BOOK / NO. — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE

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

FILE NAME = c:\pw_work\PWIDOT\SWARTZRW\d0138928\D774150-sht-xssht.dgn	USER NAME = swartzrw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

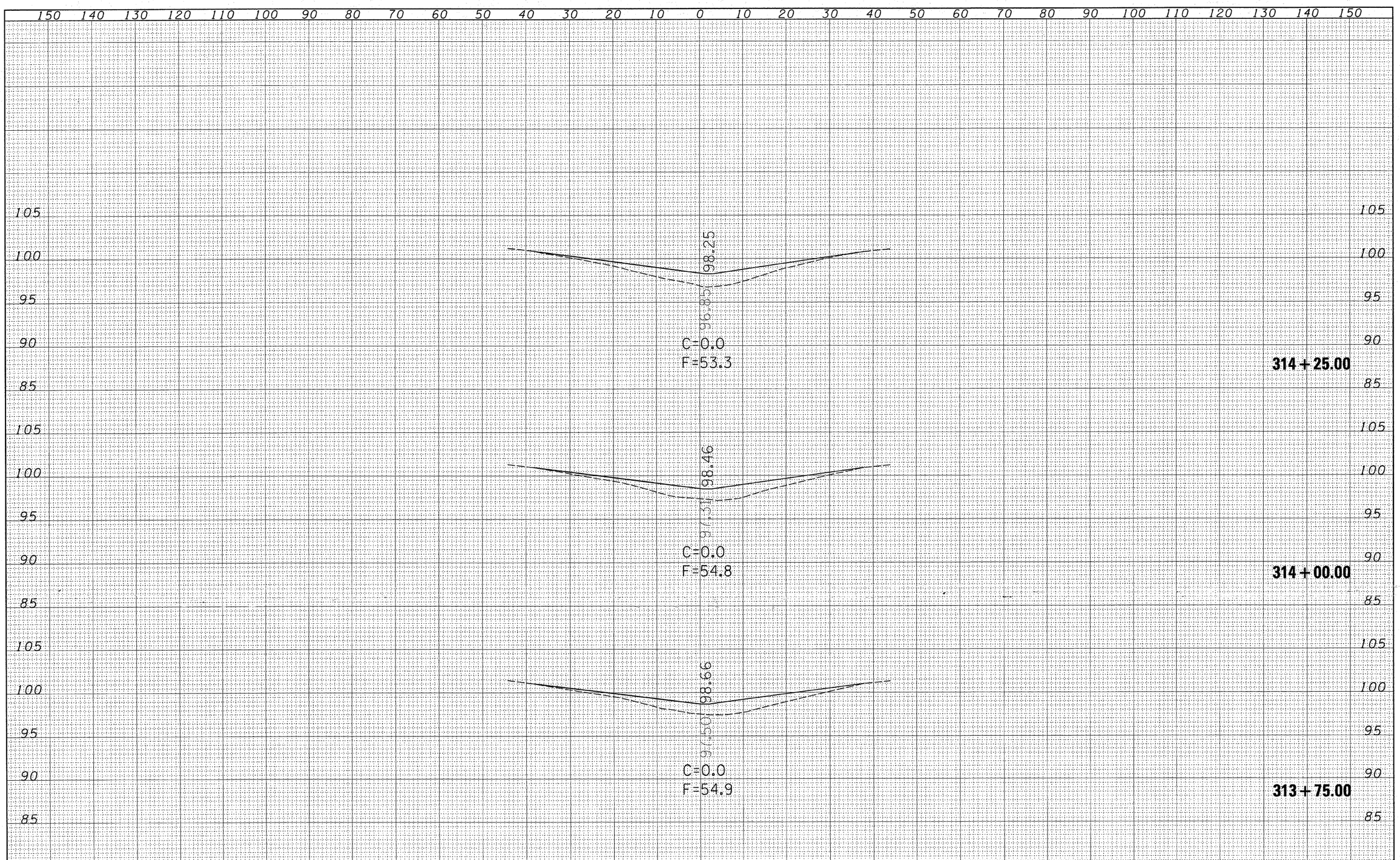
STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 5 OF 8 SHEETS | STA. 313+00.00 TO STA. 313+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	148

CONTRACT NO. 74150

ILLINOIS | FED. AID PROJECT



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

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

FILE NAME = c:\pw_work\PWIDOT\SWARTZRW\d0138928\D774150-sht-xssht.dgn	USER NAME = swartzrw	DESIGNED -	REVISED -
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	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/17/2010	DATE -	REVISED -

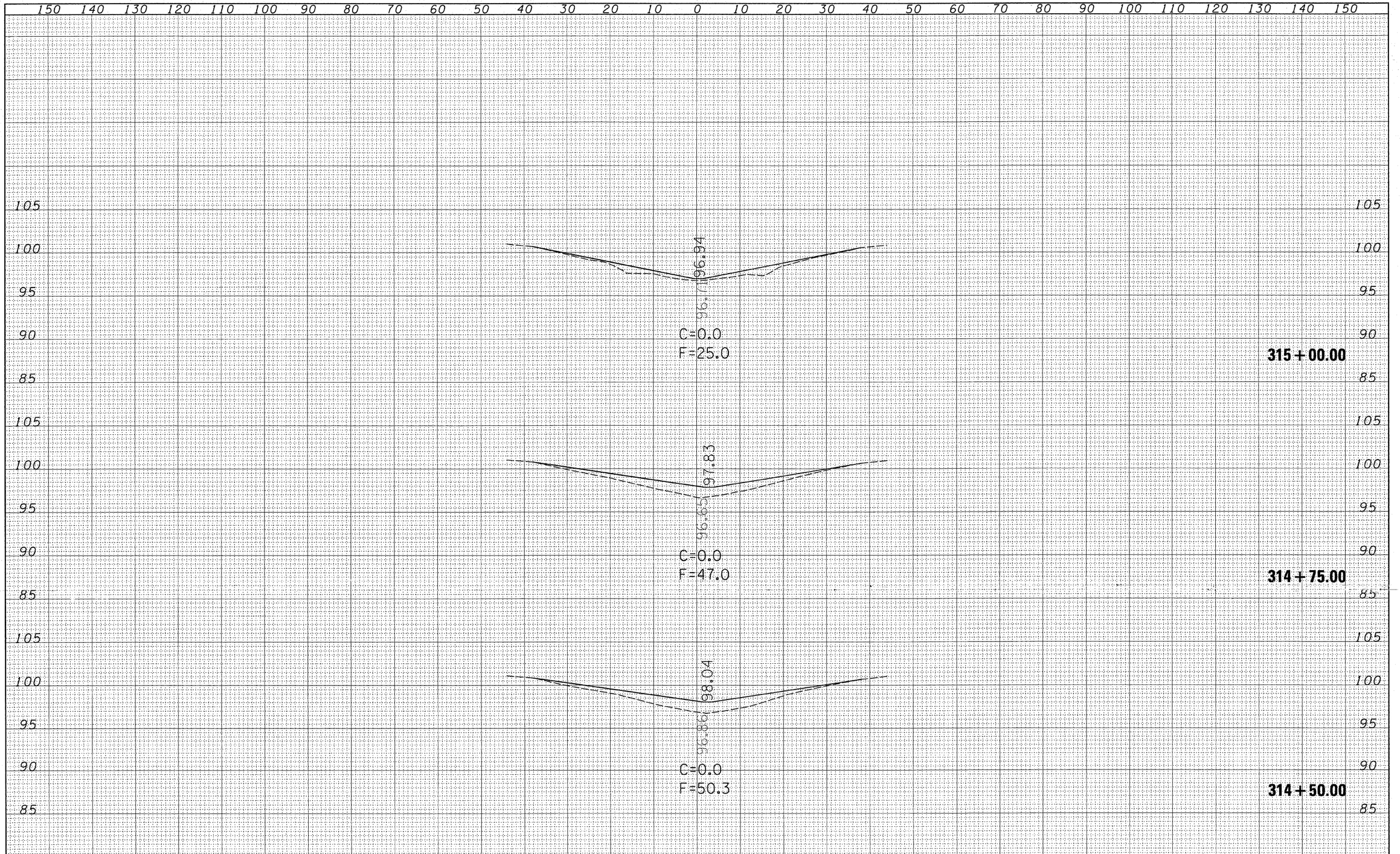
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 6 OF 8 SHEETS | STA. 313+75.00 TO STA. 314+25.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	149
		CONTRACT NO. 74150		
	ILLINOIS FED. AID PROJECT			

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



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

FILE NAME = c:\pw_work\PWIDOT\SWARTZRW\d0138928\D774150-sht-xssht.dgn	USER NAME = swartzrw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 7 OF 8 SHEETS | STA. 314+50.00 TO STA. 315+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	150
		CONTRACT NO. 74150		
		ILLINOIS	FED. AID PROJECT	

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

105 100 95 90 85

99.65

C=0.0
F=0.0

315 + 25.00

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FILE NAME = c:\pw_work\PWIDOT\SWARTZRW\d0138928\D774150-sht-xssht.dgn	USER NAME = swartzrw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/17/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION CROSS SECTIONS

SCALE: 10 | SHEET NO. 8 OF 8 SHEETS | STA. 315+25.00 | TO STA. 315+25.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(58,20)RS	MACON	151	151
		CONTRACT NO. 74150		
	ILLINOIS	FED. AID PROJECT		