

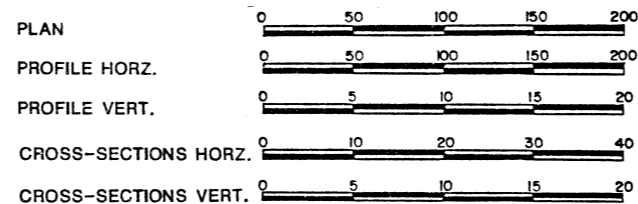
INDEX OF SHEETS

- 1. COVER SHEET
- 2. TYPICAL SECTIONS
- 3. SUMMARY OF QUANTITIES
- 4. PAINT PAVEMENT MARKING SCHEDULE & DETAIL ; GENERAL NOTES
- 5. SCHEMATIC LAYOUT & TIES
- 6.-7. PLAN & PROFILE
- 8.-9. ROADWAY APPROACH DETAILS
- 10. TRAFFIC CONTROL PLAN
- 11. TRAFFIC CONTROL DETAIL
- 12.-47. BRIDGE PLANS - (SECTION 127 BR)
- 48.-75. BRIDGE PLANS - (SECTION 127 BR-1)
- 76.-81. CROSS SECTIONS
- 82.-84. R.O.W. PLANS

977
12/21/88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY



F.A.P. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
805	*	CLINTON	84	1

* SECTION 127 BR & SECTION 127 BR-1 P-98-050-77

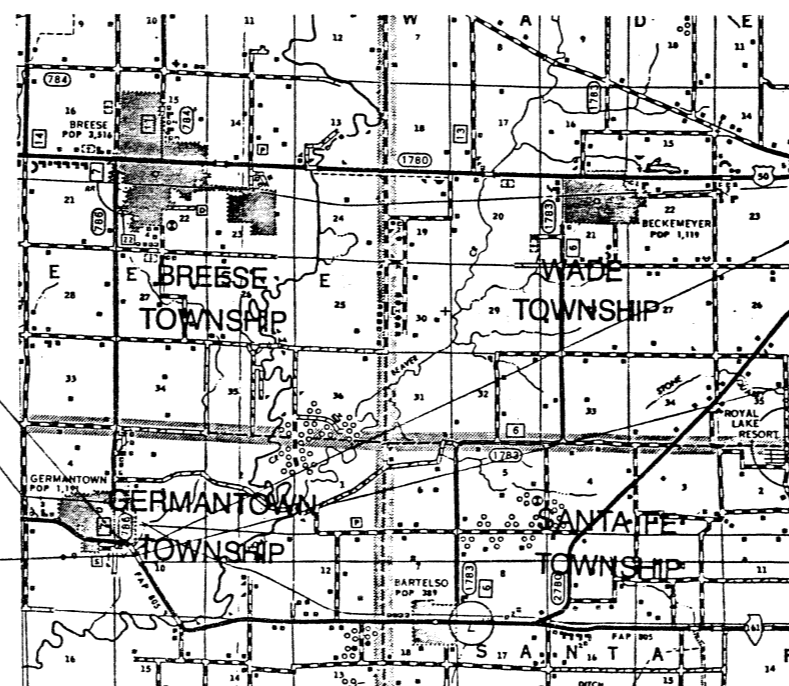


F.A.P. ROUTE 805 (ILL. RTE.161) SECTION 127BR & 127 BR-1
 PROJECT ACBHF-805(37), CLINTON COUNTY
 BRIDGE REPLACEMENT
 C - 98 - 011 - 86
 3rd P.M.

STANDARDS

1686-4	2298-7	2324-6
2113-2	2299-10	2336-4
2228-4	2300-3	2341-1
2230-15	2306-6	2382-2
2239-7	2323-11	2383-1
	2308-5	2381
		2396
		2409-1

R.4W. R.3W.



SECTION 127 BR - BEGINS STA. 1396 + 95

SECTION 127 BR: BRIDGE REPLACEMENT

EXISTING STRUCTURE CONSISTS OF AN 8- SPAN, @ ± 50' EACH = ± 400; 24' WIDE R.C.C. DECK WITH CONCRETE HANDRAILS ON STEEL STRINGERS ON PILE BENT ABUTMENTS AND PIERS.

SECTION 127 BR- ENDS STA. 1416 + 25

NET LENGTH OF SECTION
1930 FEET = 0.366 MILES

SECTION 127 BR-1 BEGINS STA. 1416 + 25

SECTION 127 BR-1 BRIDGE REPLACEMENT

EXISTING STRUCTURE CONSISTS OF A 9 SPAN, @ ± 50' EACH = ± 450; 24 WIDE R.C.C. DECK WITH CONCRETE HANDRAILS ON STEEL STRINGERS ON PILE BENT ABUTMENTS AND PIERS.

SECTION 127 BR-1 - ENDS STA. 1435 + 50

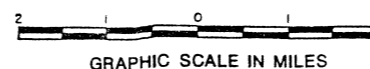
NET LENGTH OF SECTION
1925 FEET = 0.365 MILES

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: May 12, 1989
 Examined: [Signature]
 Approved: [Signature]
 DIRECTOR OF HIGHWAYS

LOCATION PLAN



CONTRACT NO. 96105

014-0009

INDEX OF SHEETS

- (1B) COVER SHEET
- 2. TYPICAL SECTIONS
- 3. SUMMARY OF QUANTITIES
- 4. PAINT PAVEMENT MARKING SCHEDULE & DETAIL; GENERAL NOTES
- 5. SCHEMATIC LAYOUT & TIES
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- 82.-84. R.O.W. PLANS

* Includes sheets 13A and 29A

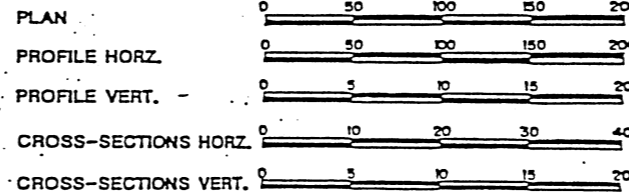
** Includes sheets 12A, 16A, 18A, 21A, 22A, 23A, 24A & 28A

STANDARDS

1686-4	2298-7	2324-6
2113-2	2299-10	2336-4
2228-4	2300-3	2341-1
2230-15	2306-6	2382-2
2239-7	2323-11	2383-1
	2308-5	2381
		2396
		2409-1

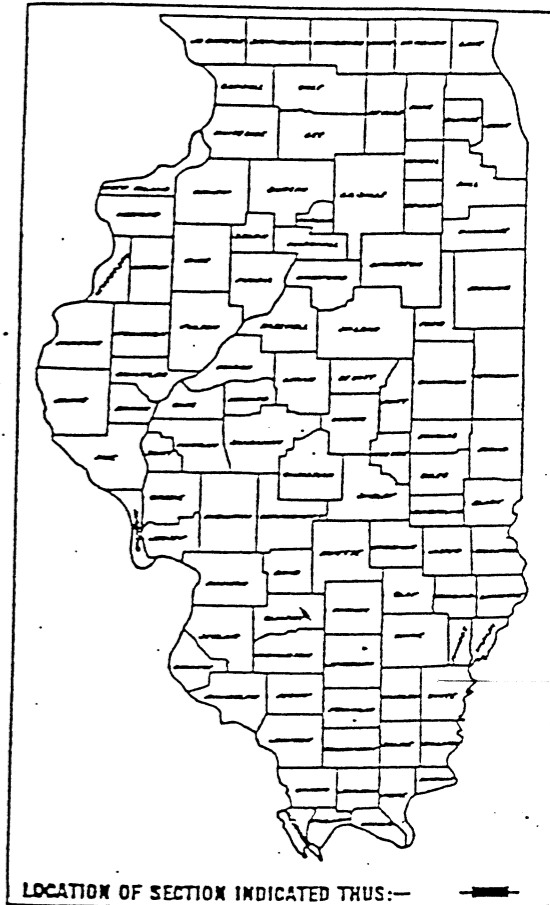
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY



F.A.P.	SEC.	COUNTY	TOTAL SHEETS	(1B)
805	*	CLINTON	81	(1B)

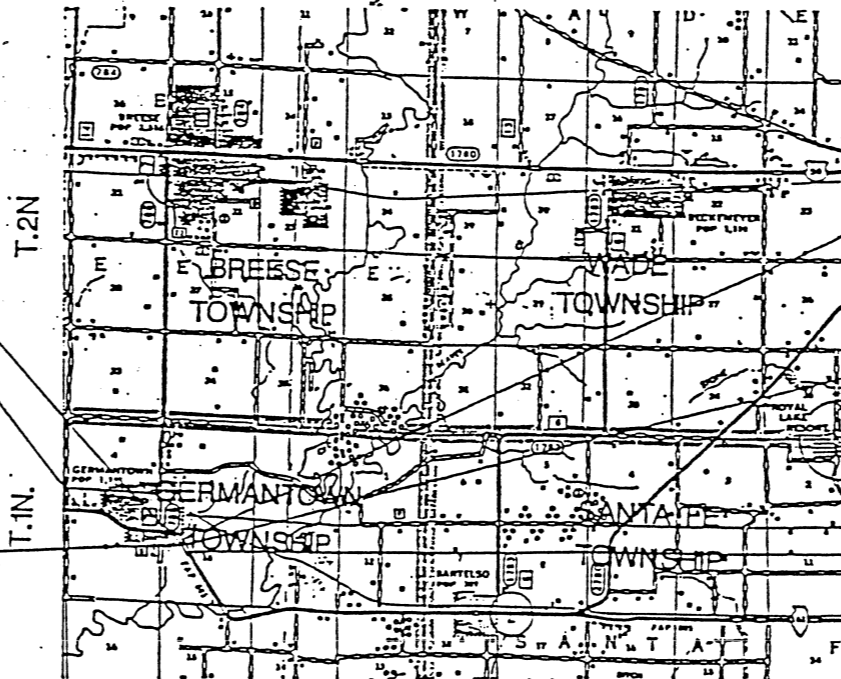
* SECTION 127 BR & SECTION 127 BR-1 P-98-050-77



F.A.P. ROUTE 805 (ILL. RTE.161) SECTION 127BR & 127 BR-1
PROJECT ACBHF-805 (37), CLINTON COUNTY
BRIDGE REPLACEMENT

C - 98 - 011 - 86
3rd P.M.

R.4W. R.3W.



SECTION 127 BR - BEGNS STA. 1396 + 95

SECTION 127 BR: BRIDGE REPLACEMENT

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SECTION 127 BR - ENDS STA. 1416 + 25

NET LENGTH OF SECTION
1930 FEET = 0.366 MILES

SECTION 127 BR-1 BEGNS STA. 1416 + 25

SECTION 127 BR-1 BRIDGE REPLACEMENT

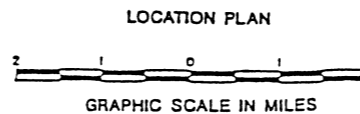
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SECTION 127 BR-1 - ENDS STA. 1435 + 50

NET LENGTH OF SECTION
1925 FEET = 0.365 MILES

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 May 12 1989
 [Signatures]
 DIRECTOR OF HIGHWAYS



CONTRACT NO. 96105

(AS REVISED 8/4/89 A.L.N.)
 (AS REVISED 3/8/90 A.L.N.)

INDEX OF SHEETS

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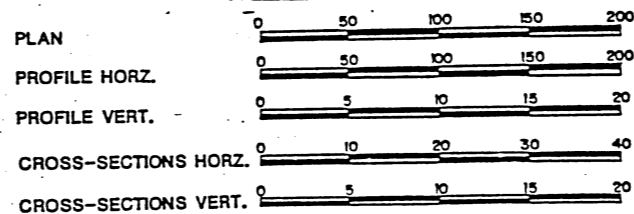
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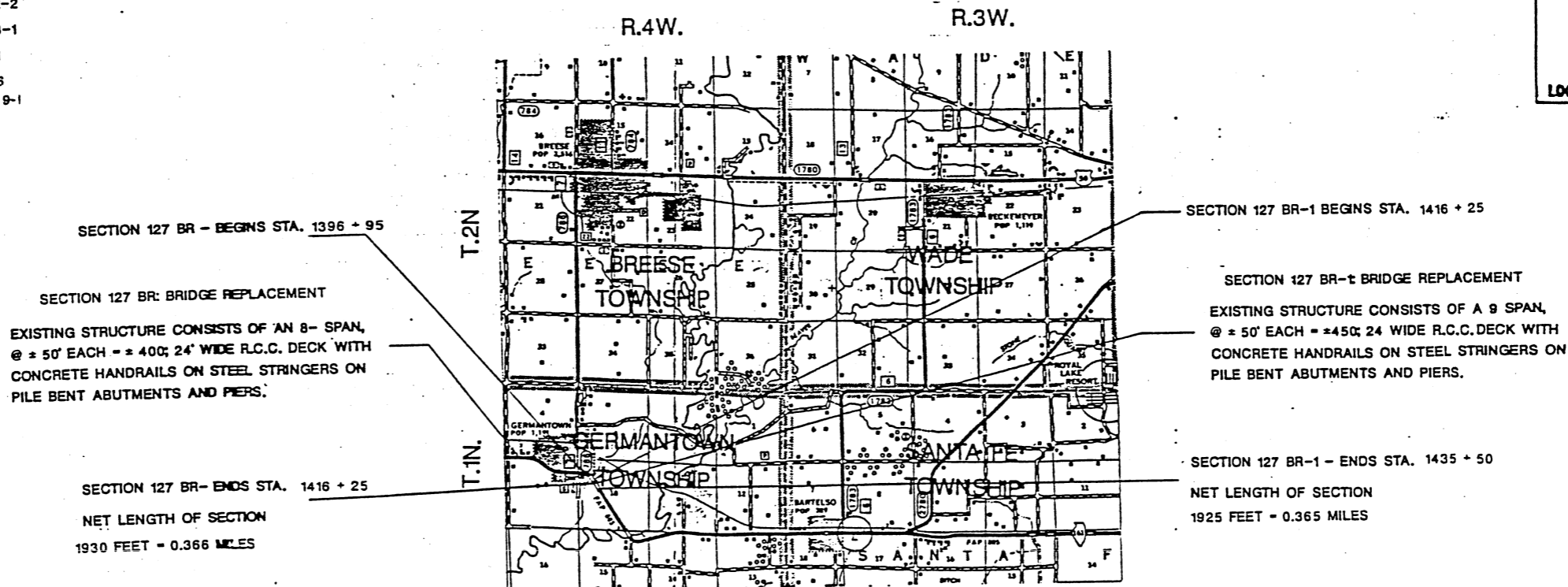
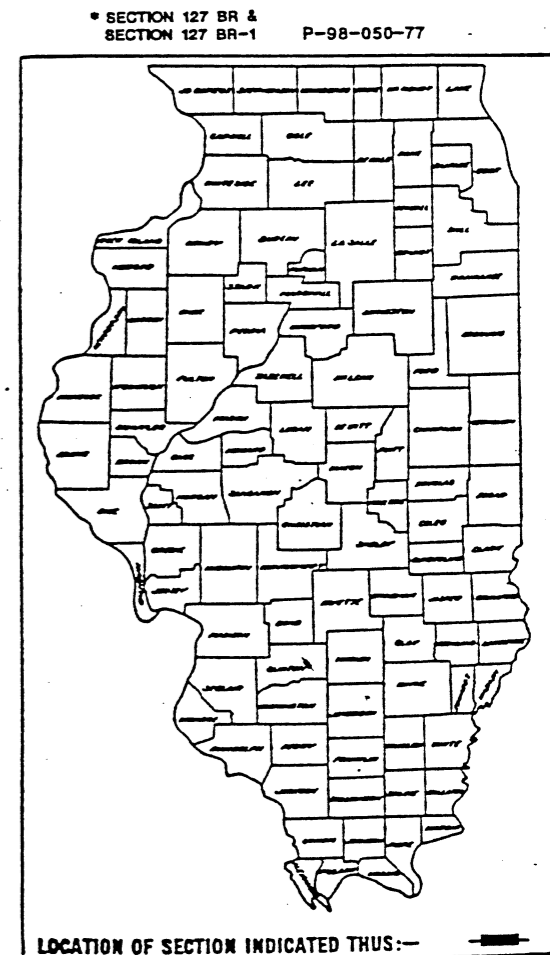
MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY



F.A.P. ROUTE 805 (ILL. RTE.161) SECTION 127BR & 127 BR-1
 PROJECT ACBHF-805 (37), CLINTON COUNTY
 BRIDGE REPLACEMENT
 C - 98 - 011 - 86
 3rd P.M.



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

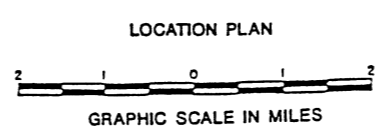
DATE: May 12, 1989

BY: [Signature]

AWARDED TO: [Signature]

RESIDENT ENGINEER: [Signature]

DIRECTOR OF HIGHWAYS: [Signature]



CONTRACT NO. 96105

(AS REVISED 8/4/89 A.L.N.)

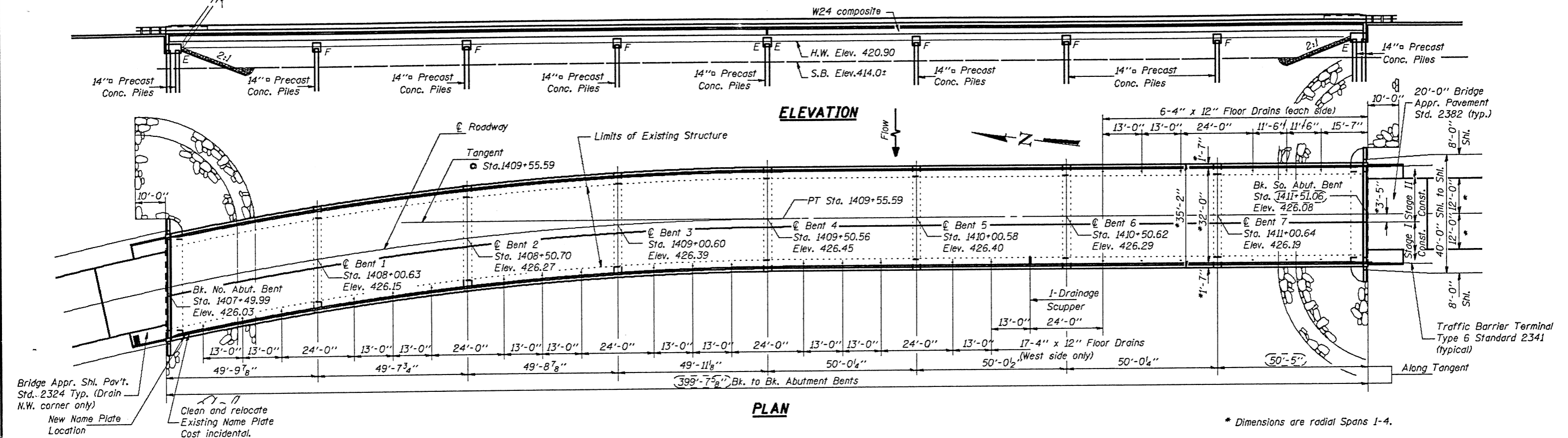
Bench Mark: #2 "d" N.E. side of Wilken Lake bridge on abut. = 426.39 & #3 "b" S.E. side of Wilken Lake bridge on abut. = 425.53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET INCL.
805	127BR	CLINTON	84	12A	36 SHEETS
FED. ROAD DIST. NO. Y		ILLINOIS	FED. AID PROJECT		

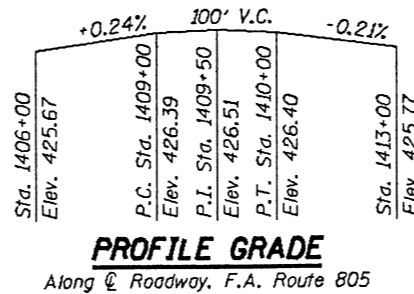
Existing Structure: No. 014-0009 is 401'-2" long by 27'-6" wide. Built as S.B.I. Route 161 Section 127B&C at Sta. 1409+50 in 1934. The existing substructure shall be widened in kind and a new superstructure built utilizing stage construction so as to maintain one lane traffic during rehabilitation.

Min. Vertical Cl. above D.H.W.E. varies $\pm 10\frac{1}{2}$ " @ Bk. N. Abut.
to $\pm 2'-7"$ @ Bent 4 to $\pm 2'-1"$ @ Bk. S. Abut.

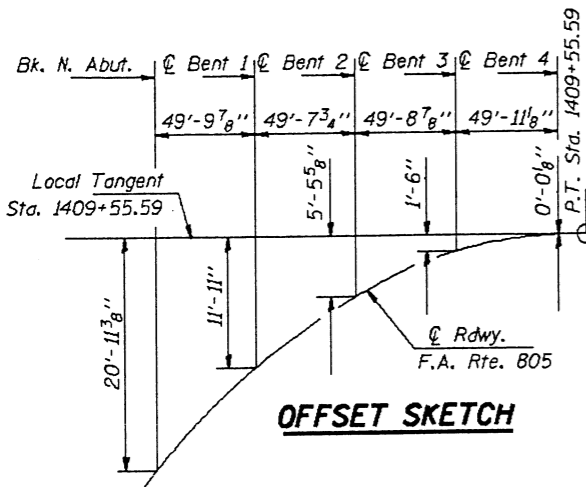
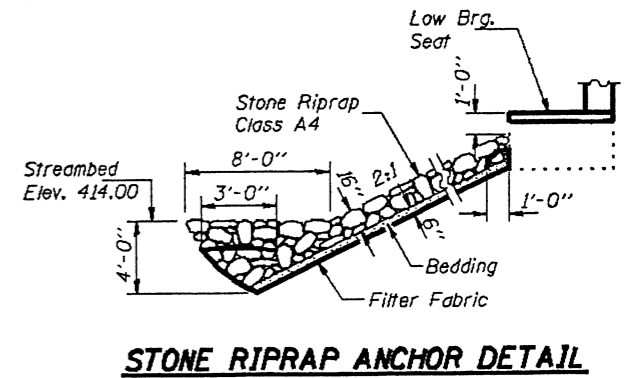


HORIZ. CURVE DATA

P.I. Sta. 1405+13.20
 $\Delta = 55^\circ 07' 00''$
 $D = 5^\circ 42' 00''$
 $T = 524.57'$
 $R = 1005.19'$
 $L = 966.96'$
 $E = 128.64'$
 $SE. = 0.081'$
 Superelevation Transition:
 Sta. 1408+83.59 to Sta. 1410+99.59
 P.C. Sta. 1399+88.63
 P.T. Sta. 1409+55.59



STATION 1409+50.00
 BUILT BY
 STATE OF ILLINOIS
 F.A.P. RT. 805 SEC. 127BR
 PROJ. ACBHF-805(37)
 LOADING HS20
 STR. NO. 014-0009
NAME PLATE
 See Standard 2113



OFFSET SKETCH

WATERWAY INFORMATION

Drainage Area = *5.12 Low Grade Elev. 423.7 @ Sta. 1431+00

Flood	Freq. Yr.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	14,280	3150	420.9	0.49	0.49	420.9	420.9
Base	100	16,525	3430	421.6	0.48	0.48	421.6	421.6
Overtopping								
Max. Calc.	500	20,830	3430	422.0	0.45	0.45	422.45	422.45

* + 890 = 895.12 Sq. Miles
 This structure serves as an overflow for Shoal Creek

DESIGN SPECIFICATIONS

1983 AASHTO, 1984, 1985 Thru 1988 Interims

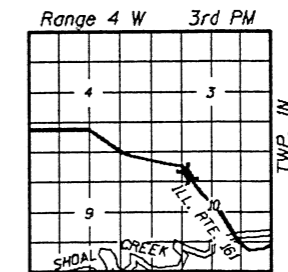
LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinf.)
 $f_y = 50,000$ psi (M223 Grade 50)



LOCATION SKETCH

AS REVISED 3/8/90 A.L.N.

GENERAL PLAN
 ILL. RTE. 161 OVER
 WILKEN LAKE
 F.A.P. ROUTE 805
 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50.00
 STRUCTURE NO. 014-0009

DESIGNED	<i>Arvid P. Noma</i>
CHECKED	<i>James J. ...</i>
DRAWN	jas
CHECKED	<i>W.J.H.</i>

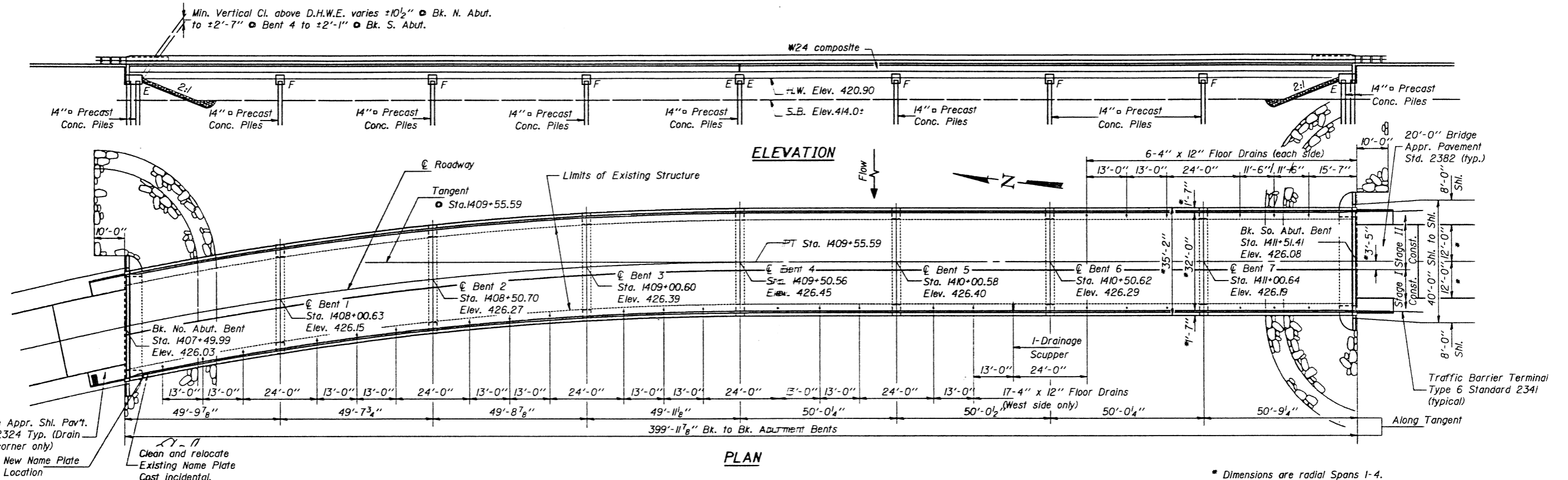
DESIGNED *Arvid P. Noma*
 EXAMINED *James J. ...*
 PASSED *James J. ...*
 APPROVED *James J. ...*
 DIRECTOR OF HIGHWAYS

Bench Mark: #2 "a" N.E. side of Wilken Lake bridge on abut. = 426.39 & #3 "a" S.E. side of Wilken Lake bridge on abut. = 425.53

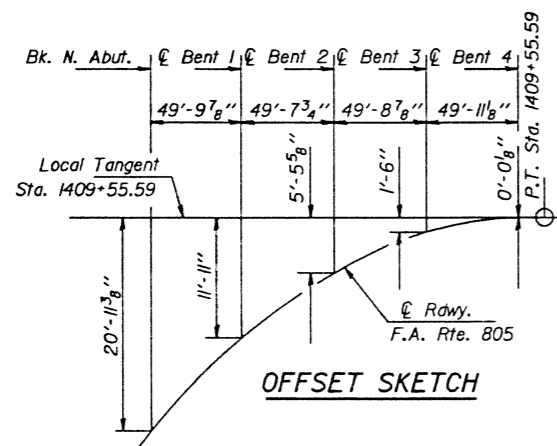
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
F.A. 805	127BR	Clinton	84	12
PROJECT NO.		SHEET NO.		
127BR		36 SHEETS		

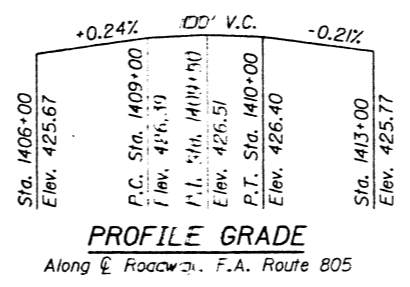


* Dimensions are radial Spans 1-4.

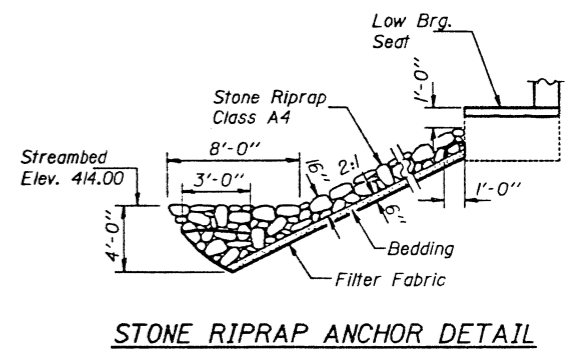


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 $L = 966.96'$
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 P.C. Sta. 1399+88.63
 P.T. Sta. 1409+55.59



STATION 1409+50.00
 BUILT BY
 STATE OF ILLINOIS
 F.A.P. RT. 805 SEC. 127BR
 PROJ. ACBHF-805(37)
 LOADING HS20
 STR. NO. 014-0009
 NAME PLATE
 See Standard 2113



STONE RIPRAP ANCHOR DETAIL

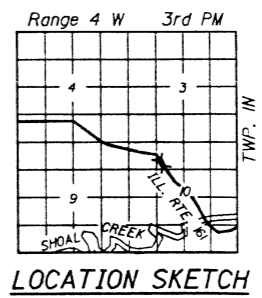
WATERWAY INFORMATION

Drainage Area = 5.12		Low Grade Elev. 423.7		Sta. 1431+00				
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E. Exist.	Prop. H.W.E.	Head - Ft. Exist.	Prop.	hecawater El.
Design	50	14,280	3150	3150	420.9	0.49	0.49	422.3
Base	100	16,525	3430	3340	421.6	0.48	0.48	422.5
Overlapping								
Max. Calc.	500	20,830	3430	3430	422.0	0.45	0.45	422.45

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LOADING HS20-44
 Allow 25#/sq. ft. for future wearing surface

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
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 $f_y = 50,000$ psi (M223 Grade 50)



LOCATION SKETCH

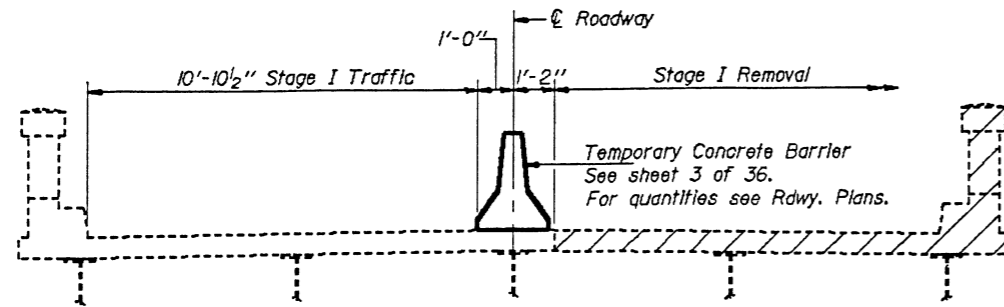
GENERAL PLAN
 ILL. RTE. 161 OVER
 WILKEN LAKE
 F.A.P. ROUTE 805
 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50.00
 STRUCTURE NO. 014-0009

DESIGNED: [Signature]
 CHECKED: [Signature]
 DRAWN: jas
 CHECKED: [Signature]
 EXAMINED: [Signature]
 PASSED: [Signature]
 APPROVED: [Signature]
 May 24 1989
 DIRECTOR OF HIGHWAYS

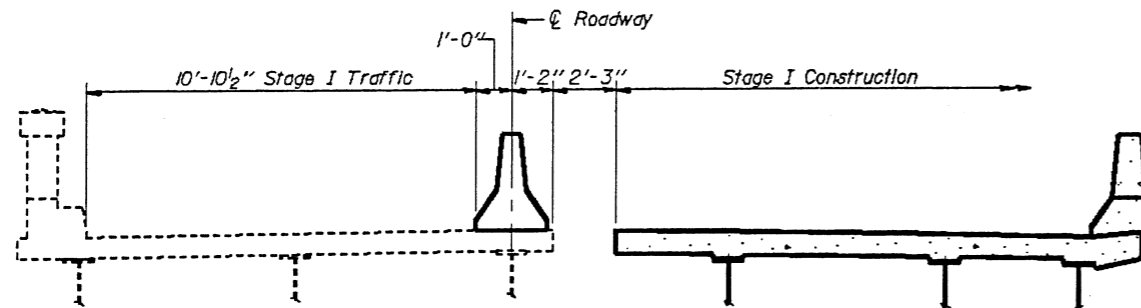
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
				13A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

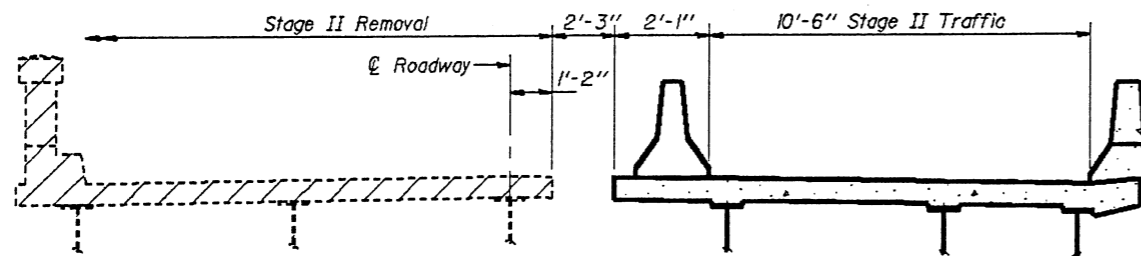
SHEET NO. 2A
36 SHEETS



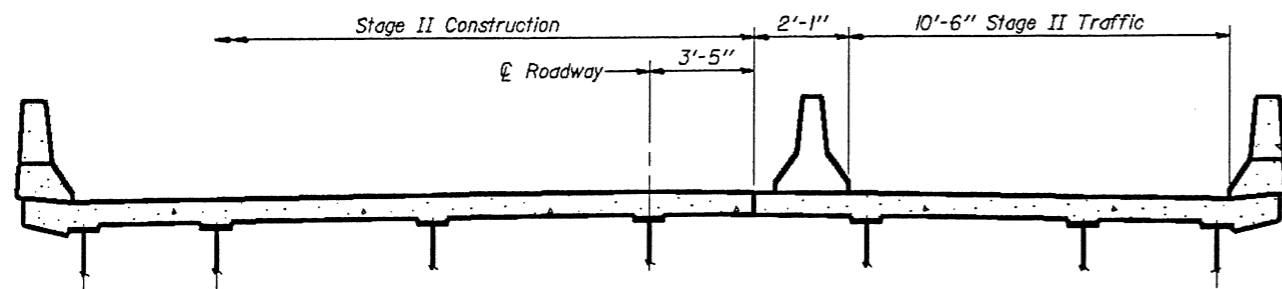
STAGE I REMOVAL
(Looking South)



STAGE I CONSTRUCTION
(Looking South)



STAGE II REMOVAL
(Looking South)



STAGE II CONSTRUCTION
(Looking South)

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{5}{16}$ " ϕ , unless otherwise noted.
 Calculated weight of Structural Steel M223 Grade 50 = 266,730 Lbs.; M183 = 58,610 Lbs.
 The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel. The color of the final finish coat shall be Munsell Standard 7.5G 4/8 Interstate Green.
 Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from bents 1, 2, 3, 5, 6 & 7. Field welding in other areas will be permitted only when approved by the Engineer.
 Anchor bolts shall be set before bolting diaphragms over supports.
 The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 223.
 The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These Components are the wide flange beams and all splice plate material of the wide flange beams.
 Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and $\frac{3}{4}$ " ϕ x 12" hooked bolts.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
 The contractor shall drive 4 precast concrete test piles in a permanent location (one each) at both abutments and bents 4 and 7 as directed by the Engineer before ordering the remainder of piles.
 For cantilever forming brackets see Special Provisions.
 Bridge Seat Sealer shall be applied to the seat area of both abutments and Bent 4. Estimated Quantity = 407 Sq. Ft.

For quantities of Temporary Concrete Barrier see Roadway Plans.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		12.6	12.6
Expansion Bolts $\frac{3}{4}$ "	Each		172	172
Structure Excavation	Cu. Yd.		44	44
Preformed Joint Seal 4"	Lin. Ft.	71		71
Floor Drains	Each	29		29
Class X Concrete Superstructure	Cu. Yd.	420.5		420.5
Protective Coat	Sq. Yd.	325		325
Elastomeric Bearing Assembly Type II	Each		28	28
Class X Concrete	Cu. Yd.		65.3	65.3
Structural Steel	L.S.	.62		.62
Stud Shear Connectors	Each	8169		8169
Reinforcement Bars, Epoxy Coated	Pound	101,590	4,910	106,500
Precast Concrete Piles 14"	Lin. Ft.		500	500
Test Pile Precast Concrete	Each		4	4
Name Plates	Each	1		1
Stone Riprap Class A4	Sq. Yd.			521
Filter Fabric for use with Riprap	Sq. Yd.			521
Drainage Scuppers	Each	1		1
** Epoxy Mortar Repair	Cu. Ft.		12.2	12.2
** Neoprene Expansion Joint 4"	Lin. Ft.	34		34
** Epoxy Crack Sealing	Lin. Ft.		5	5
Bridge Seat Sealer	L.S.		1	1

** See Special Provisions.

DESIGNED *Angela L. Nemesy*
 CHECKED *Walter J. Hilby*
 DRAWN *J.T. Downing*
 CHECKED *A.L.N. W.J.H.*

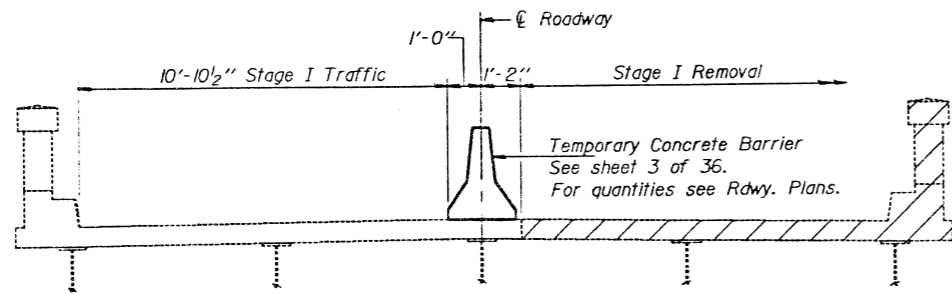
EXAMINED *Draj O. Kaspar*
 PASSED *James J. Robinson*
 APPROVED _____
 DIRECTOR OF HIGHWAYS

May 24 1989

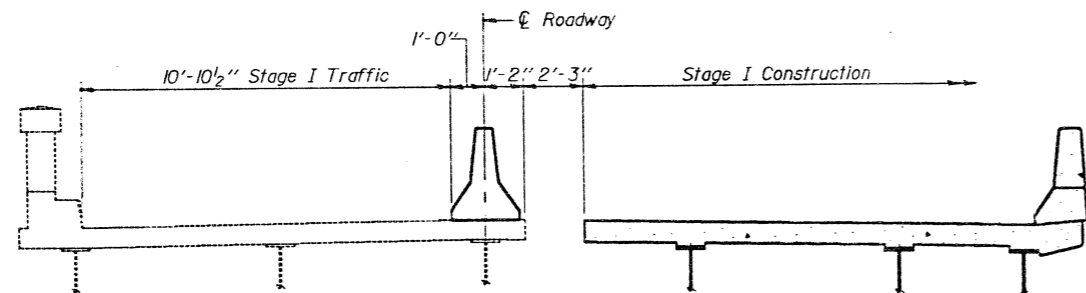
AS REVISED 8/4/89 A.L.N.
 STAGE CONSTRUCTION DETAILS
 F.A.P. RT. 805 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

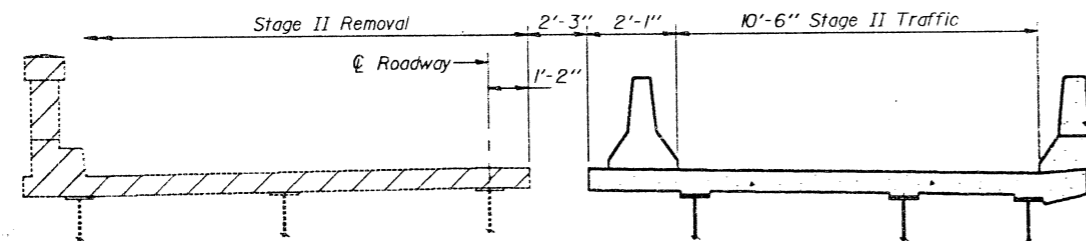
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 2
			13	36 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



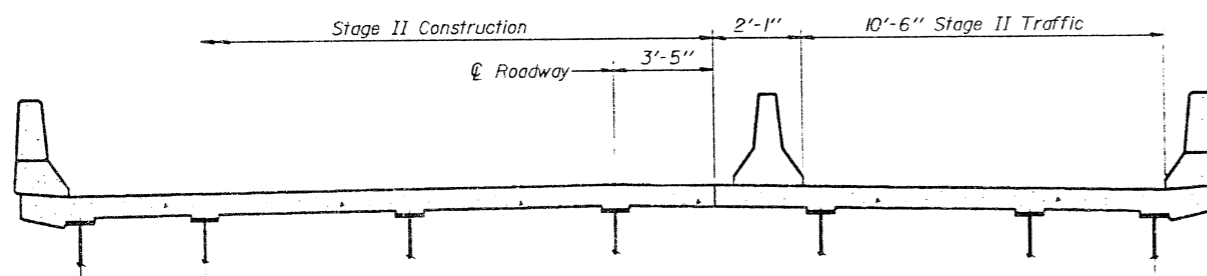
STAGE I REMOVAL
(Looking South)



STAGE I CONSTRUCTION
(Looking South)



STAGE II REMOVAL
(Looking South)



STAGE II CONSTRUCTION
(Looking South)

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{5}{16}$ " ϕ , unless otherwise noted.
 Calculated weight of Structural Steel M223 Grade 50 = 266,730 Lbs.; M183 = 59,600 Lbs.
 The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel. The color of the final finish coat shall be Munsell Standard 7.5G 4/8 Interstate Green.
 Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from bents 1, 2, 3, 5, 6 & 7. Field welding in other areas will be permitted only when approved by the Engineer.
 Anchor bolts shall be set before bolting diaphragms over supports.
 The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 223.
 The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These Components are the wide flange beams and all splice plate material of the wide flange beams.
 Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and $\frac{3}{4}$ " ϕ x 12" hooked bolts.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
 The contractor shall drive 4 precast concrete test piles in a permanent location (one each) at both abutments and bents 4 and 7 as directed by the Engineer before ordering the remainder of piles.
 For cantilever forming brackets see Special Provisions.
 Bridge Seat Sealer shall be applied to the seat area of both abutments and Bent 4. Estimated Quantity = 407 Sq. Ft.

For quantities of Temporary Concrete Barrier see Roadway Plans.

TOTAL BILL OF MATERIAL

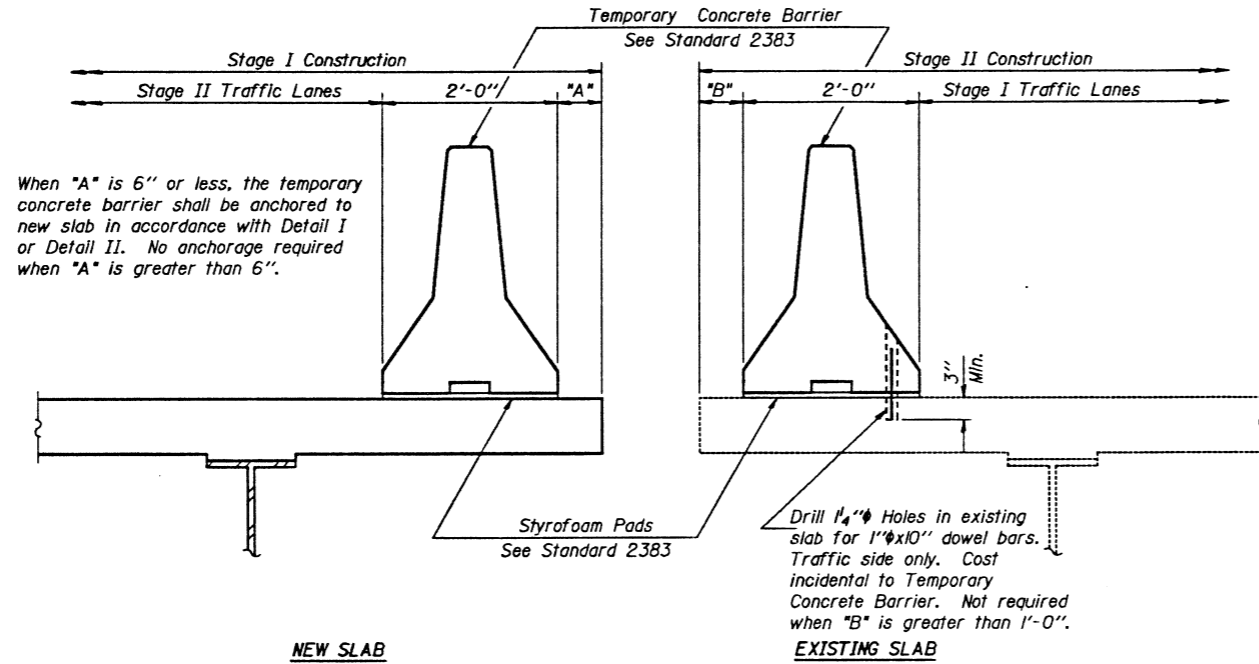
Item	Unit	Super.	Sub.	Total
Removal of Existing Superstructures No. 1	Each	1		1
Concrete Removal	Cu. Yd.		12.6	12.6
Expansion Bolts $\frac{3}{4}$ "	Each		172	172
Structure Excavation	Cu. Yd.		44	44
Preformed Joint Seal 4"	Lin. Ft.	71		71
Floor Drains	Each	29		29
Class X Concrete Superstructure	Cu. Yd.	420.5		420.5
Protective Coat	Sq. Yd.	325		325
Elastomeric Bearing Assembly Type II	Each		28	28
Class X Concrete	Cu. Yd.		65.3	65.3
Structural Steel	L.S.	0.62		0.62
Stud Shear Connectors	Each	8169		8169
Reinforcement Bars, Epoxy Coated	Pound	101,590	4,910	106,500
Precast Concrete Piles 14"	Lin. Ft.		500	500
Test Pile Precast Concrete	Each		4	4
Name Plates	Each	1		1
Stone Riprap Class A4	Sq. Yd.		521	521
Filter Fabric for use with Riprap	Sq. Yd.		521	521
Drainage Scuppers	Each	1		1
Epoxy Mortar Repair	Cu. Ft.		12.2	12.2
Neoprene Expansion Joint 4"	Lin. Ft.	34		34
Epoxy Crack Sealing	Lin. Ft.		5	5
Bridge Seat Sealer	L.S.		1	1

DESIGNED	1/24/89	19 89
CHECKED	J.T. Downing	
DRAWN	J.T. Downing	
CHECKED		
EXAMINED	James J. Kaubert	ENGINEER OF BRIDGE DESIGN
PASSED	James J. Kaubert	ENGINEER OF BRIDGE AND STRUCTURES
APPROVED		DIRECTOR OF HIGHWAYS

STAGE CONSTRUCTION DETAILS
 F.A.P. RT. 805 SEC. 1273R
 CLINTON COUNTY
 STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO. 3
			4	36 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



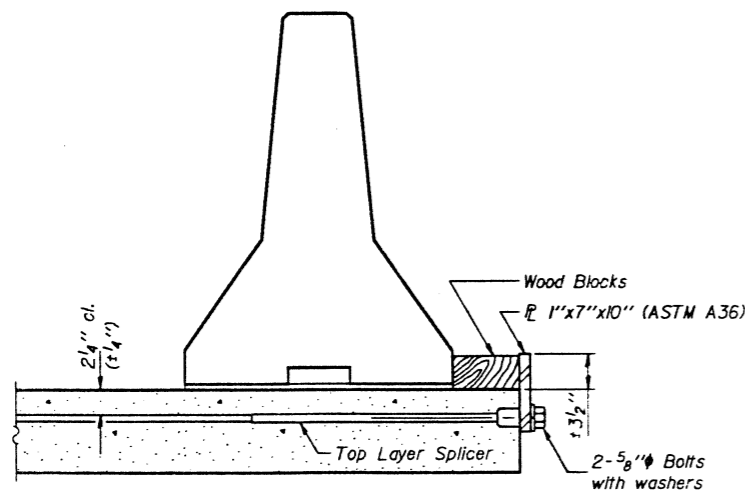
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" bolts screwed to coupler at approximate \bar{C} of each 10'-0" barrier panel.

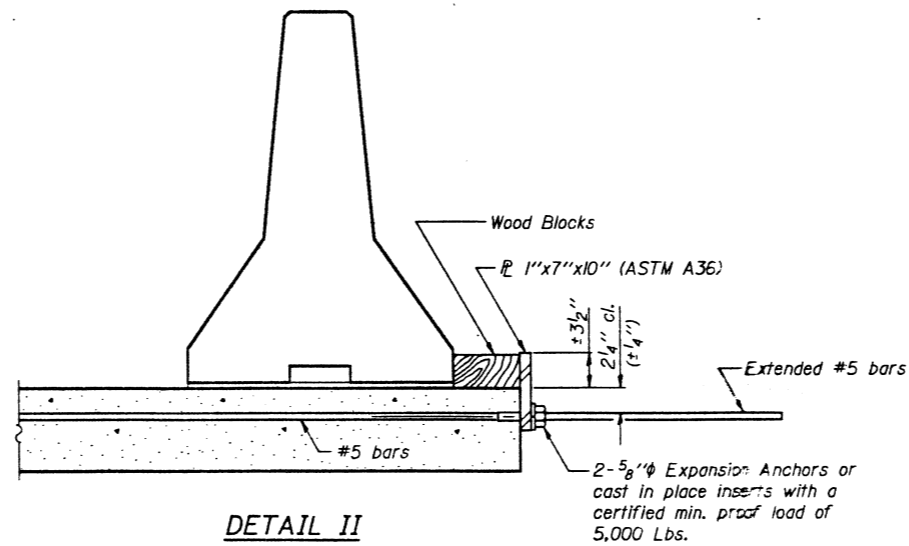
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab with 2-5/8" Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each 10'-0" barrier panel.

Cost of anchorage is incidental to Temporary Concrete Barrier.



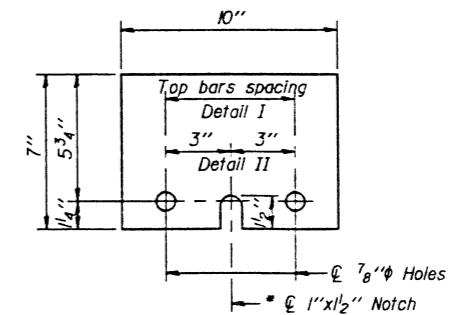
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



1" x 7" x 10"

* Required only with Detail II

DESIGNED	Angela Z. Krasny
CHECKED	Walter Hilby
DRAWN	J.T. Downing
CHECKED	W.J.H.

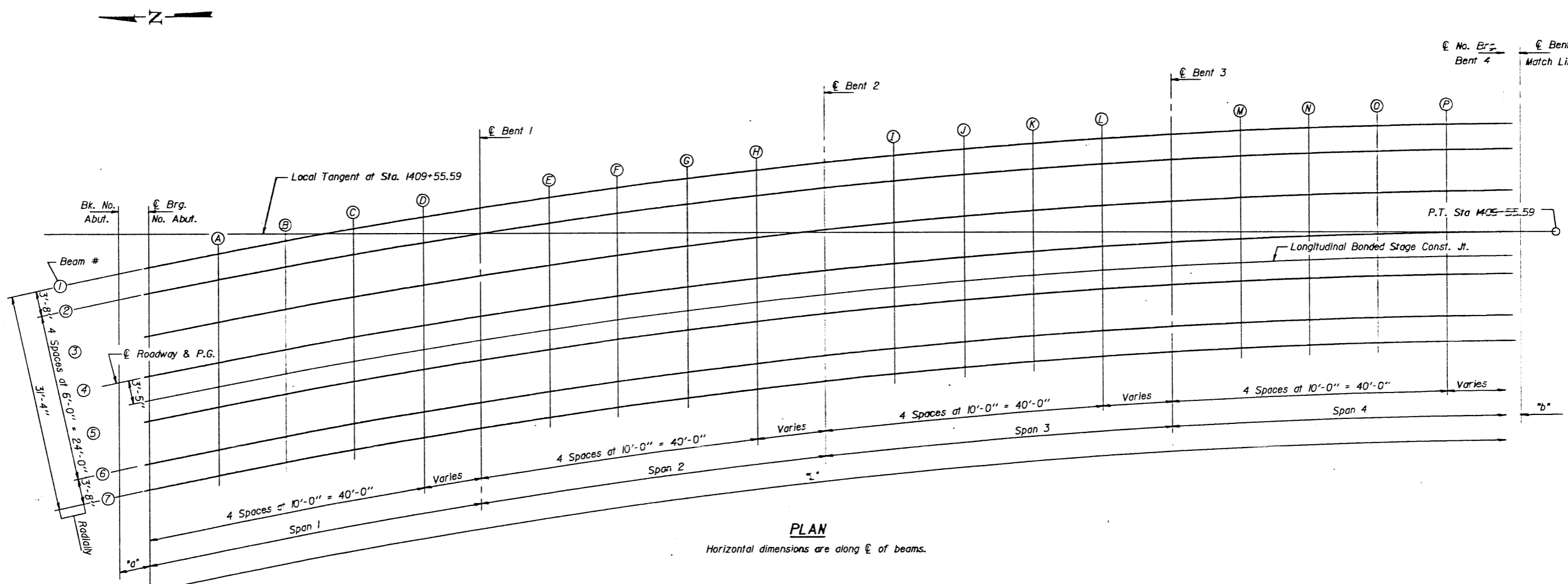
EXAMINED	May 24 1989 Craig J. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED	James J. Kubit ENGINEER OF BRIDGE AND STRUCTURES
APPROVED	DIRECTOR OF HIGHWAYS

R-27 6-15-83

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	BRIDGE	DATE	SHEET NO. 4
				36 SHEETS
S.D.L.		E		
P.A.				
FED. ROAD DIST. NO. 7		ILLINOIS		



PLAN
Horizontal dimensions are along \bar{c} of beams.

DIMENSIONS

Loc. Bm. #	Span 1	Span 2	Span 3	Span 4	"L"	"a"	"b"
1	48'-2 ⁵ / ₈ "	50'-0 ³ / ₄ "	49'-10 ³ / ₈ "	49'-2 ⁷ / ₈ "	197'-5 ⁵ / ₈ "	2'-4 ⁷ / ₁₆ "	8 ⁵ / ₈ "
2	48'-3"	50'-0 ³ / ₄ "	49'-10 ³ / ₈ "	49'-2 ⁷ / ₈ "	197'-5 ³ / ₈ "	2'-4 ⁷ / ₁₆ "	8 ⁵ / ₈ "
3	48'-3 ¹ / ₂ "	50'-0 ¹³ / ₁₆ "	49'-10 ¹³ / ₁₆ "	49'-2 ⁷ / ₈ "	197'-5 ⁵ / ₈ "	2'-4 ⁷ / ₁₆ "	8 ⁵ / ₈ "
4	48'-3 ¹ / ₂ "	50'-0 ⁷ / ₈ "	49'-10 ¹³ / ₁₆ "	49'-2 ⁷ / ₈ "	197'-5 ¹³ / ₁₆ "	2'-4 ⁷ / ₁₆ "	8 ⁵ / ₈ "
5	48'-3 ⁵ / ₈ "	50'-0 ¹⁵ / ₁₆ "	49'-10 ⁷ / ₈ "	49'-2 ⁷ / ₈ "	197'-6"	2'-4 ¹ / ₂ "	8 ⁵ / ₈ "
6	48'-3 ⁷ / ₈ "	50'-1"	49'-10 ⁷ / ₈ "	49'-2 ⁷ / ₈ "	197'-6 ³ / ₈ "	2'-4 ¹ / ₂ "	8 ⁵ / ₈ "
7	48'-3 ¹ / ₂ "	50'-1 ¹ / ₈ "	49'-10 ⁷ / ₈ "	49'-2 ⁷ / ₈ "	197'-6 ⁵ / ₈ "	2'-4 ¹ / ₂ "	8 ⁵ / ₈ "

DESIGNED *Angela L. Henrich*
 CHECKED *Walter J. Hulby*
 DRAWN *J.T. Downing*
 CHECKED *W.L. H. W. H.*

EXAMINED *Craig J. Kaspar*
 PASSED *James J. Kobernik*
 APPROVED _____

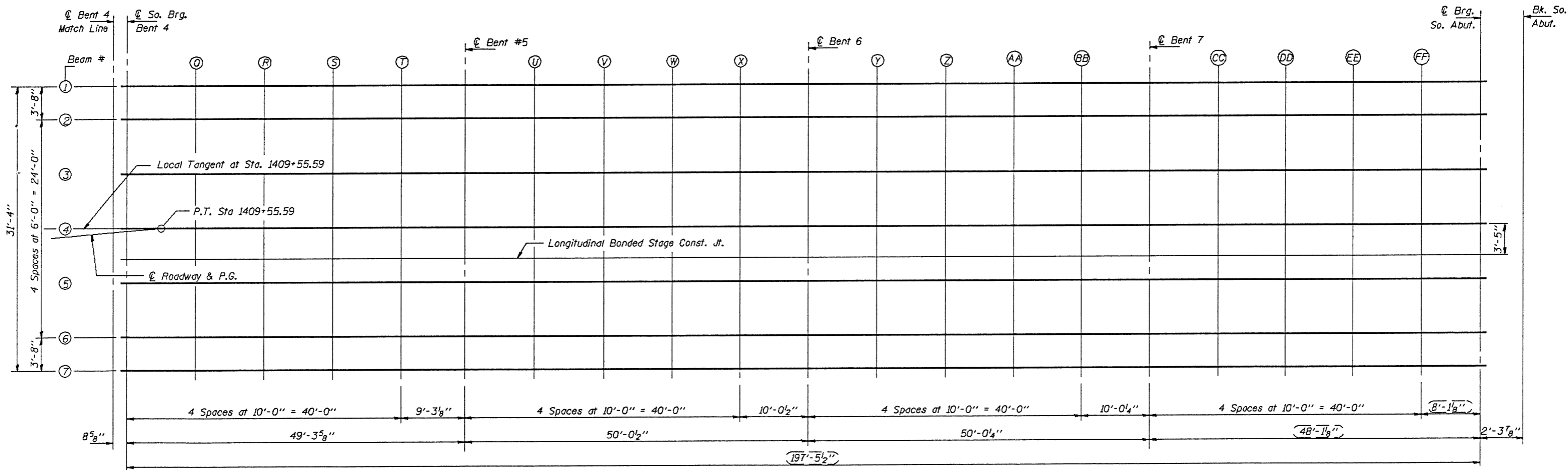
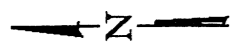
May 24 1989

SPANS 1 THRU 4
 TOP OF SLAB ELEVATIONS
 F.A.P. RT. 805 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
805	127BR	CLINTON	84	16A
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT

SHEET NO. 5A
36 SHEETS



PLAN

DESIGNED	<i>Angus L. Nordin</i>
CHECKED	<i>Walker J. Hilby</i>
DRAWN	J.T. Downing
CHECKED	<i>A.L.M. W.J.H.</i>

May 24 1989

EXAMINED	<i>Dr. J. J. ...</i>
PASSED	<i>James T. ...</i>
APPROVED	

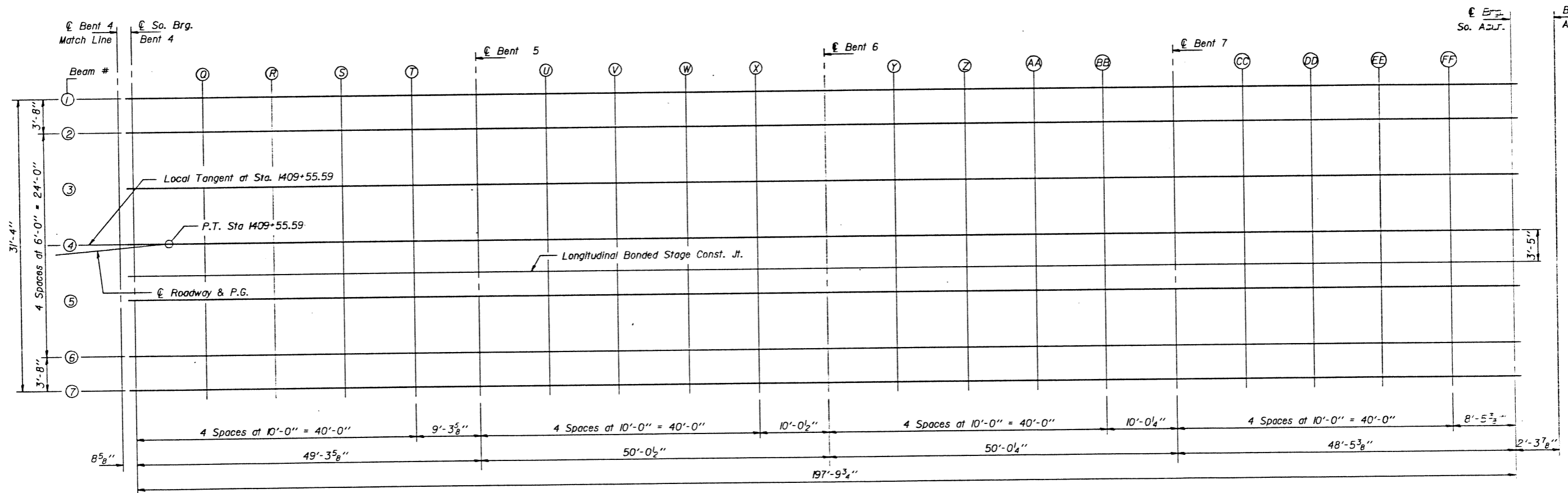
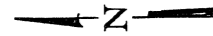
AS REVISED 3/8/90 A.L.N.
SPANS 5 THRU 8
TOP OF SLAB ELEVATIONS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	PROJECT	SHEET NO.
				5
F.A.P.				16
FED. ROAD DIST. NO. 7				ILLINOIS
FED. AID PROJECT				

SHEET NO. 5

36 SHEETS

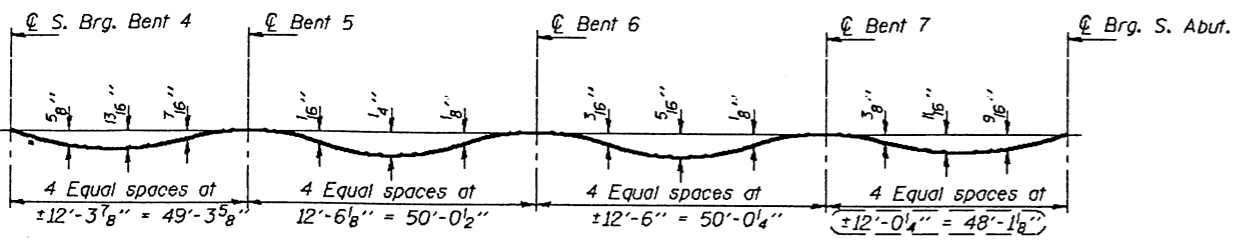


PLAN

DESIGNED <i>Carla L. Hensley</i>	EXAMINED <i>Craig J. Kasper</i>
CHECKED <i>Walter J. Hilby</i>	PASSED <i>James J. Kasper</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>James J. Kasper</i>
CHECKED <i>W.J.H.</i>	SUPERVISOR OF HIGHWAYS

May 24 1989

SPANS 5 THRU 8
TOP OF SLAB ELEVATIONS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

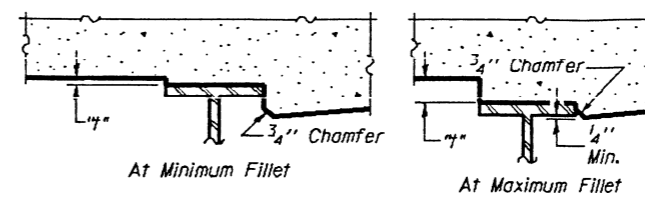


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

Project information table including SHEET NO. 7A, 36 SHEETS, COUNTY CLINTON, and STATION 1409+50.

BEAM 1

Table for BEAM 1 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

BEAM 2

Table for BEAM 2 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

BEAM 3

Table for BEAM 3 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

BEAM 4 & ROADWAY

Table for BEAM 4 & ROADWAY with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

LONGITUDINAL BONDED CONST. JT.

Table for LONGITUDINAL BONDED CONST. JT. with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

BEAM 5

Table for BEAM 5 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

BEAM 6

Table for BEAM 6 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

BEAM 7

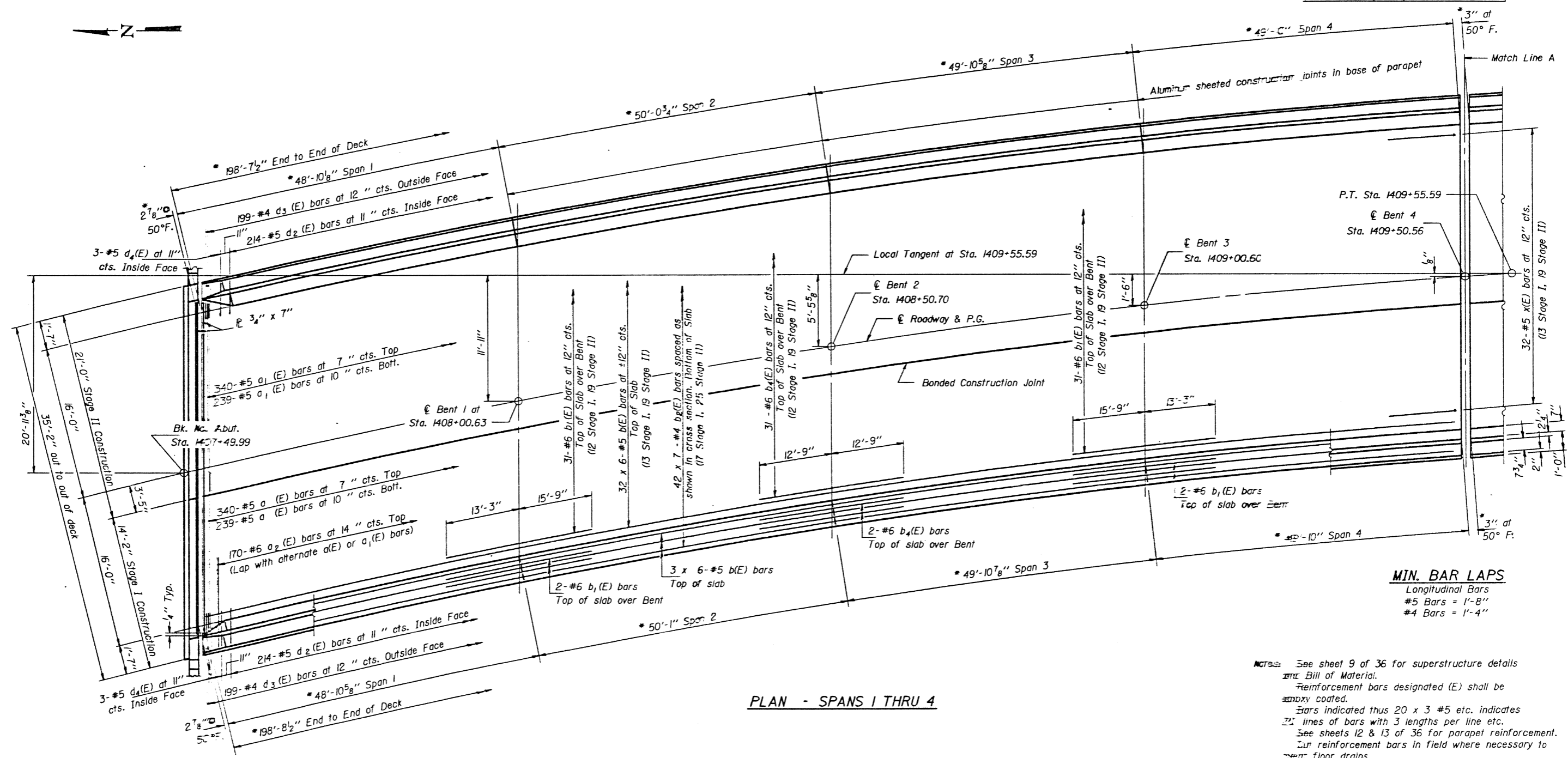
Table for BEAM 7 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection.

DESIGNED, CHECKED, DRAWN, and APPROVED stamps with signatures and dates.

AS REVISED 3/8/90 A.L.N.
SPANS 5 THRU 8
TOP OF SLAB ELEVATIONS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN NO.	SECTION	DATE	TOTAL SHEETS	SHEET NO.
			19	36 SHEETS
F.A.P. RT. 805		CLINTON COUNTY		
STATION 1409+50		SEC. 127BR		



PLAN - SPANS I THRU 4

* Dimensions are along inside face of parapet.

MIN. BAR LAPS
 Longitudinal Bars
 #5 Bars = 1'-8"
 #4 Bars = 1'-4"

- NOTES:
- See sheet 9 of 36 for superstructure details and Bill of Material.
 - Reinforcement bars designated (E) shall be epoxy coated.
 - Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line etc.
 - See sheets 12 & 13 of 36 for parapet reinforcement.
 - Put reinforcement bars in field where necessary to cover floor drains.
 - See sheet 1 of 36 for drain locations and sheet 3 of 36 for details.
 - Longitudinal bars shall be placed parallel to ϵ Roadway

DESIGNED: *Walter J. Hilly*
 CHECKED: *Walter J. Hilly*
 DRAWN: J.T. Downing
 CHECKED: *J.T. Downing*

EXAMINED: *Orsi J. Kaspar*
 ENGINEER OF BRIDGE DESIGN

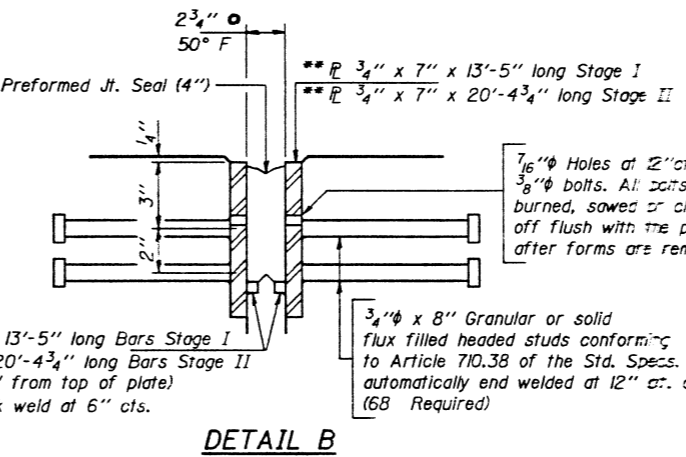
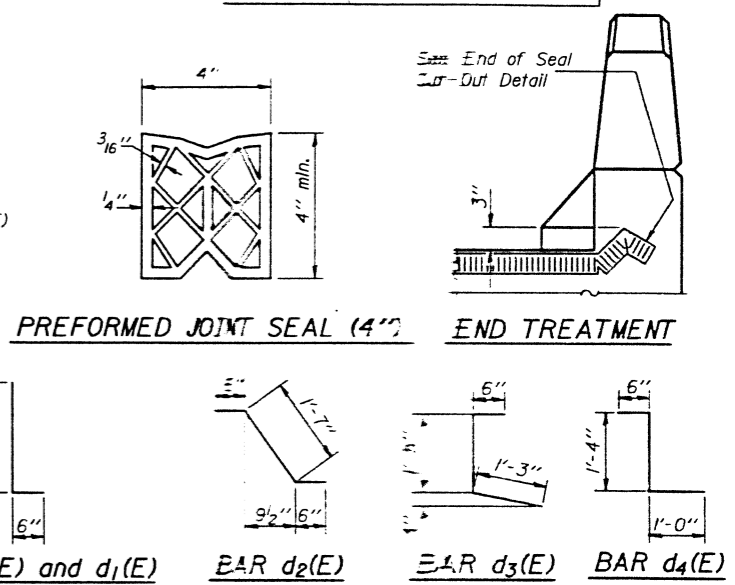
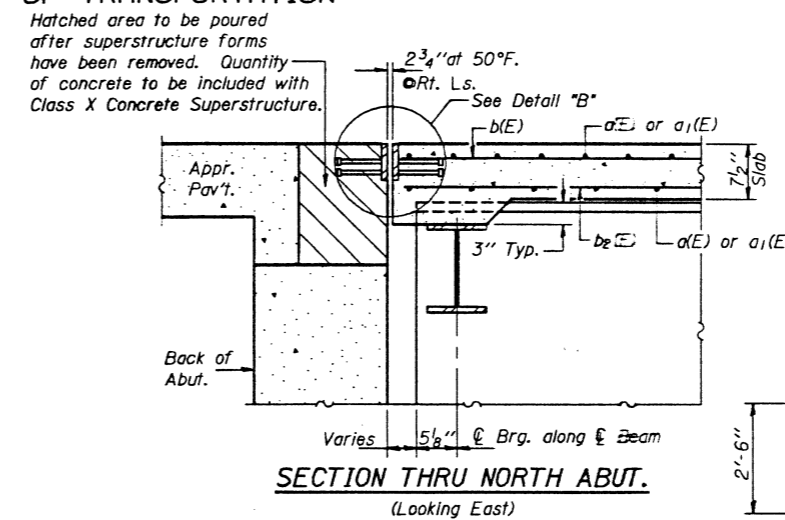
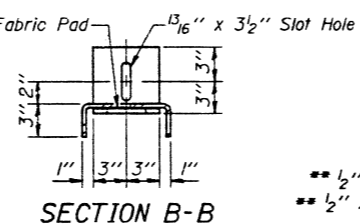
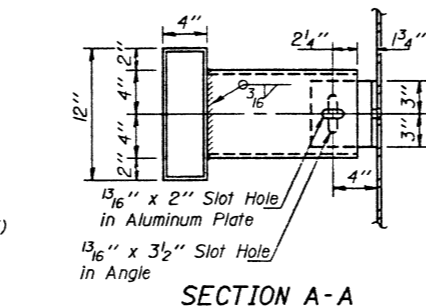
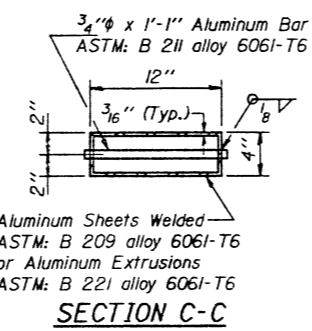
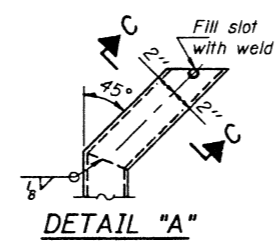
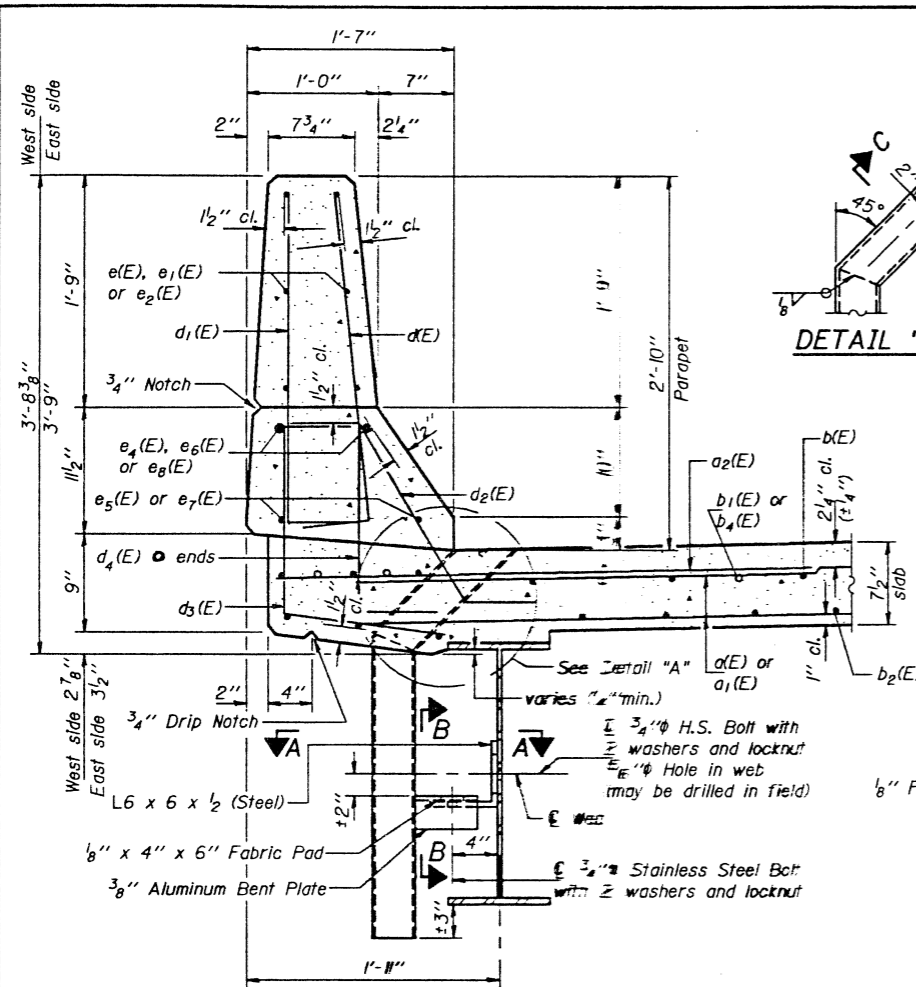
PASSED: *James J. Robinson*
 ENGINEER OF BRIDGE AND STRUCTURES

APPROVED: _____
 DIRECTOR OF HIGHWAYS

MAY 24 1989

SPANS I THRU 4
 SUPERSTRUCTURE
 F.A.P. RT. 805 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



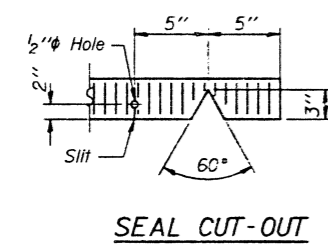
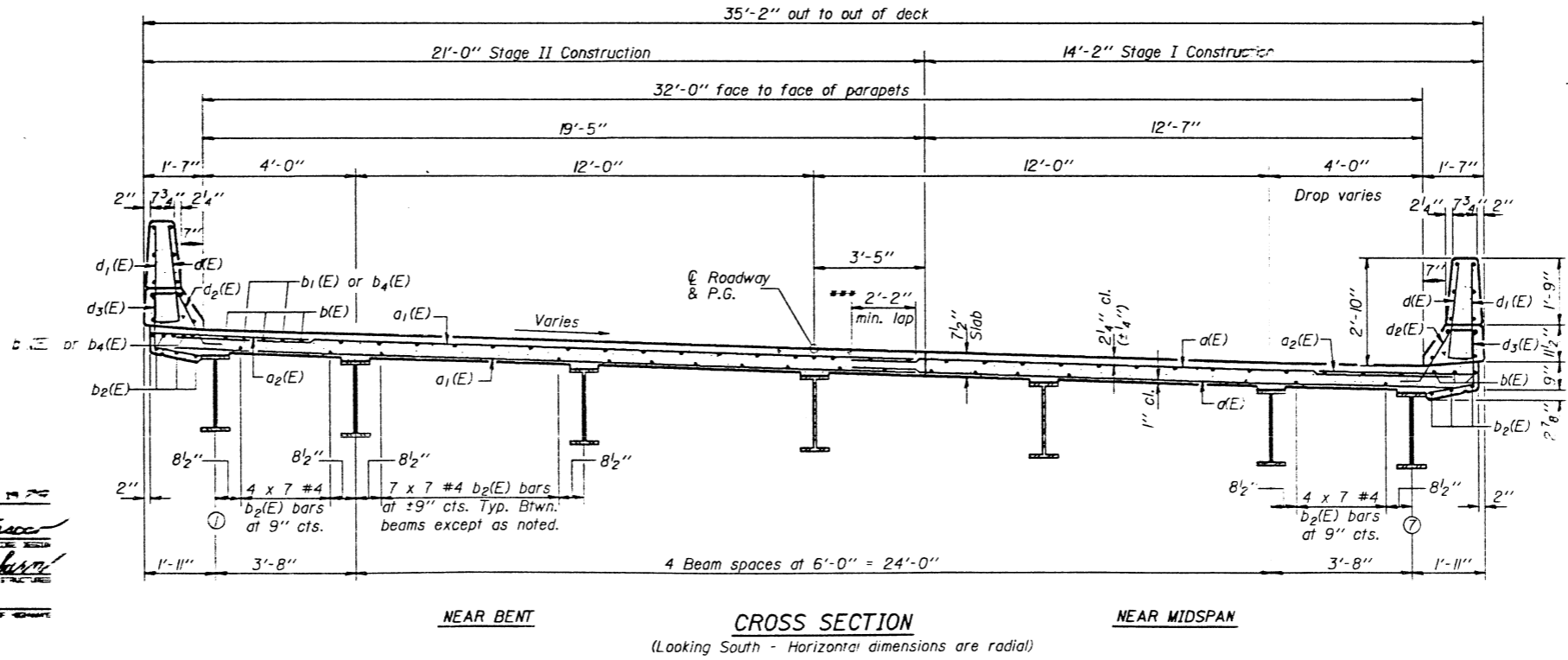
Notes: The exterior surfaces of the aluminum drains shall be cleaned and given a washcoat pretreatment in accordance with the Steel Structures Painting Council's Spec. SSPC-SPI and SSPC-Paint 27 followed by the vinyl enamel coat painting specified for Structural Steel.

SPANS 1 THRU 4
LIST OF MATERIAL

Bar	No.	Size	Length	Shape
d1(E)	#5	15'-10"		
d2(E)	#5	20'-6"		
d3(E)	#6	4'-0"		
d4(E)	#5	3'-0"		L
d5(E)	#4	3'-0"		L
d6(E)	#5	2'-7"		
d7(E)	#4	3'-2"		
d8(E)	#5	2'-10"		
e1(E)	#4	16'-0"		
e2(E)	#4	16'-5"		
e3(E)	#4	16'-4"		
e4(E)	#8	48'-7"		
e5(E)	#5	25'-2"		
e6(E)	#8	49'-9"		
e7(E)	#5	25'-9"		
e8(E)	#8	49'-7"		
x(E)	#5	4'-1"		
Class 4 Concrete Superstructure	Cu. Yd.	209.9		
Reinforcement Bars Eddy's	Pound	51,220		

Reinforcement bars designated (E) shall be epoxy coated.

SPANS 1 THRU 4
SUPERSTRUCTURE DETAILS
F.A.P. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50



*** Lapped bars at this location shall be tied with double the number of ties normally used.

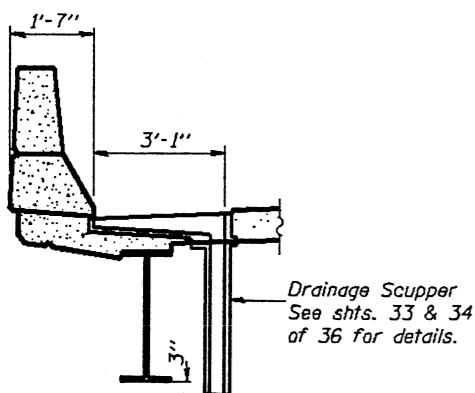
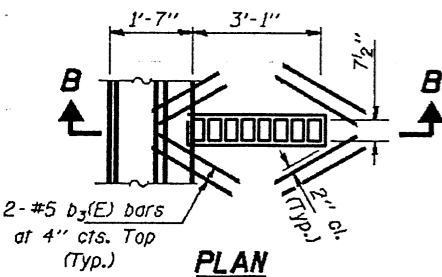
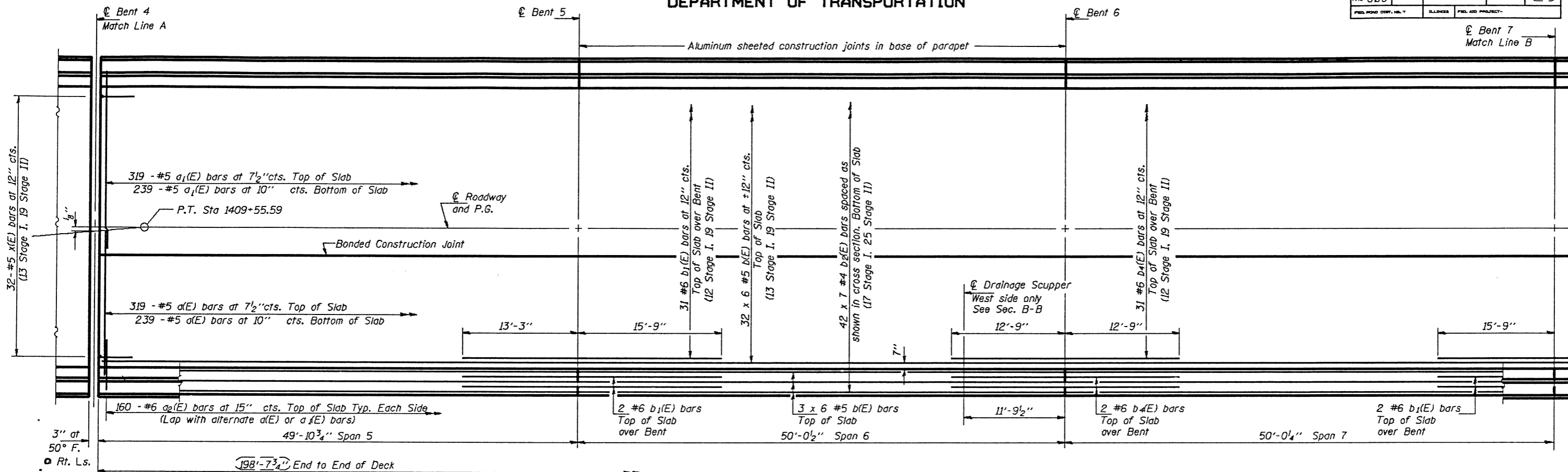
DESIGNED: *Charles J. P. [Signature]*
CHECKED: *James J. [Signature]*
DRAWN: J.T. Downing
CHECKED: *[Signature]*

EXAMINED: *[Signature]*
PASSED: *[Signature]*
APPROVED: *[Signature]*

NEAR BENT CROSS SECTION NEAR MIDSPAN
(Looking South - Horizontal dimensions are radial)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

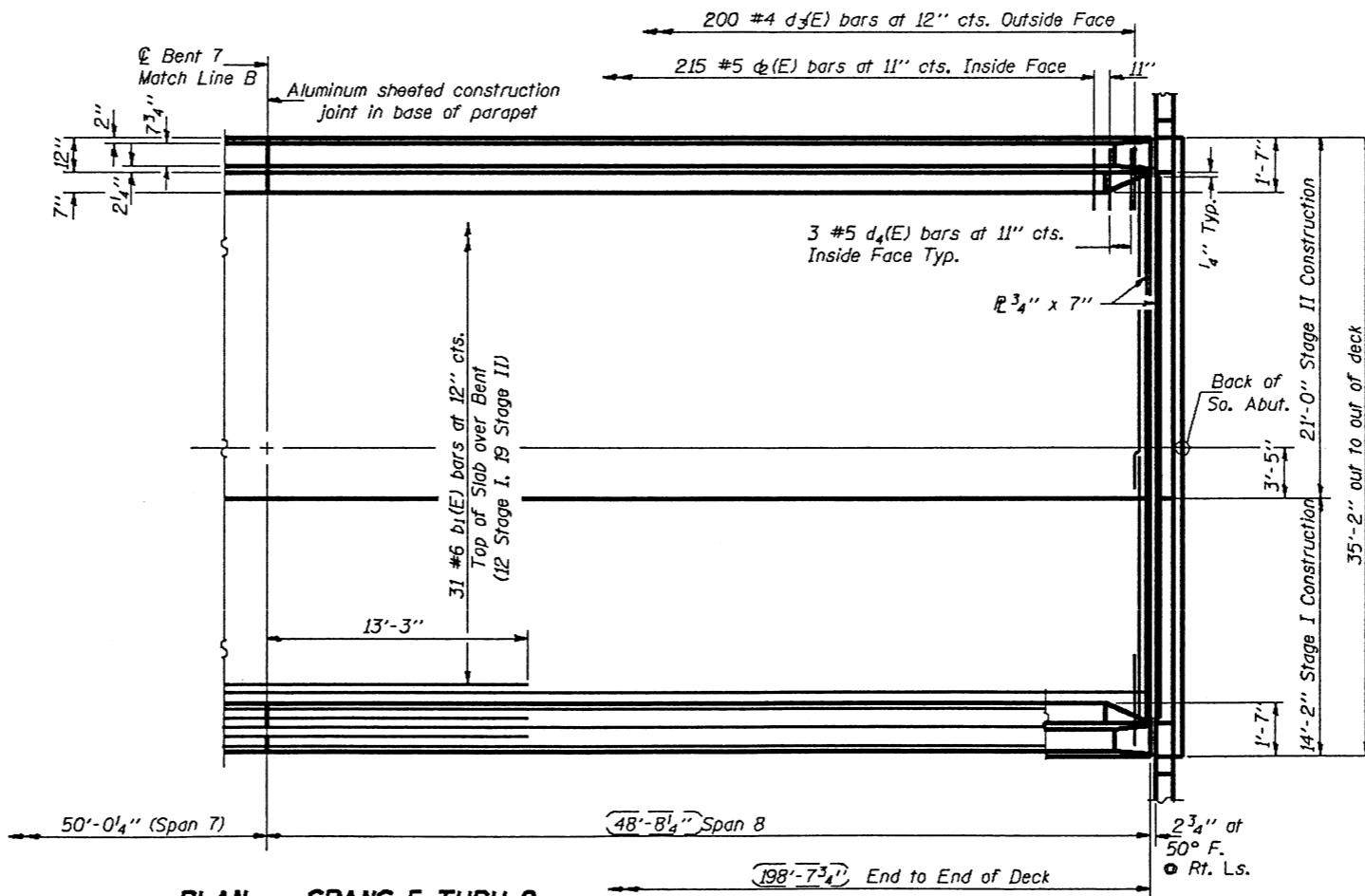
PROJECT NO.	SECTION	COUNTY	STA.	SHEET	SHEET NO. 10A 36 SHEETS
805	127BR	CLINTON	84	21A	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



DESIGNED *Angela L. Kennedy*
 CHECKED *Walter J. Hilby*
 DRAWN *J.T. Downing*
 CHECKED *[Signature]*

EXAMINED *[Signature]*
 PASSED *[Signature]*
 APPROVED *[Signature]*
 DIRECTOR OF HIGHWAYS

May 24 1989



MIN. BAR LAPS
 Longitudinal Bars
 #5 Bars = 1'-8"
 #4 Bars = 1'-4"

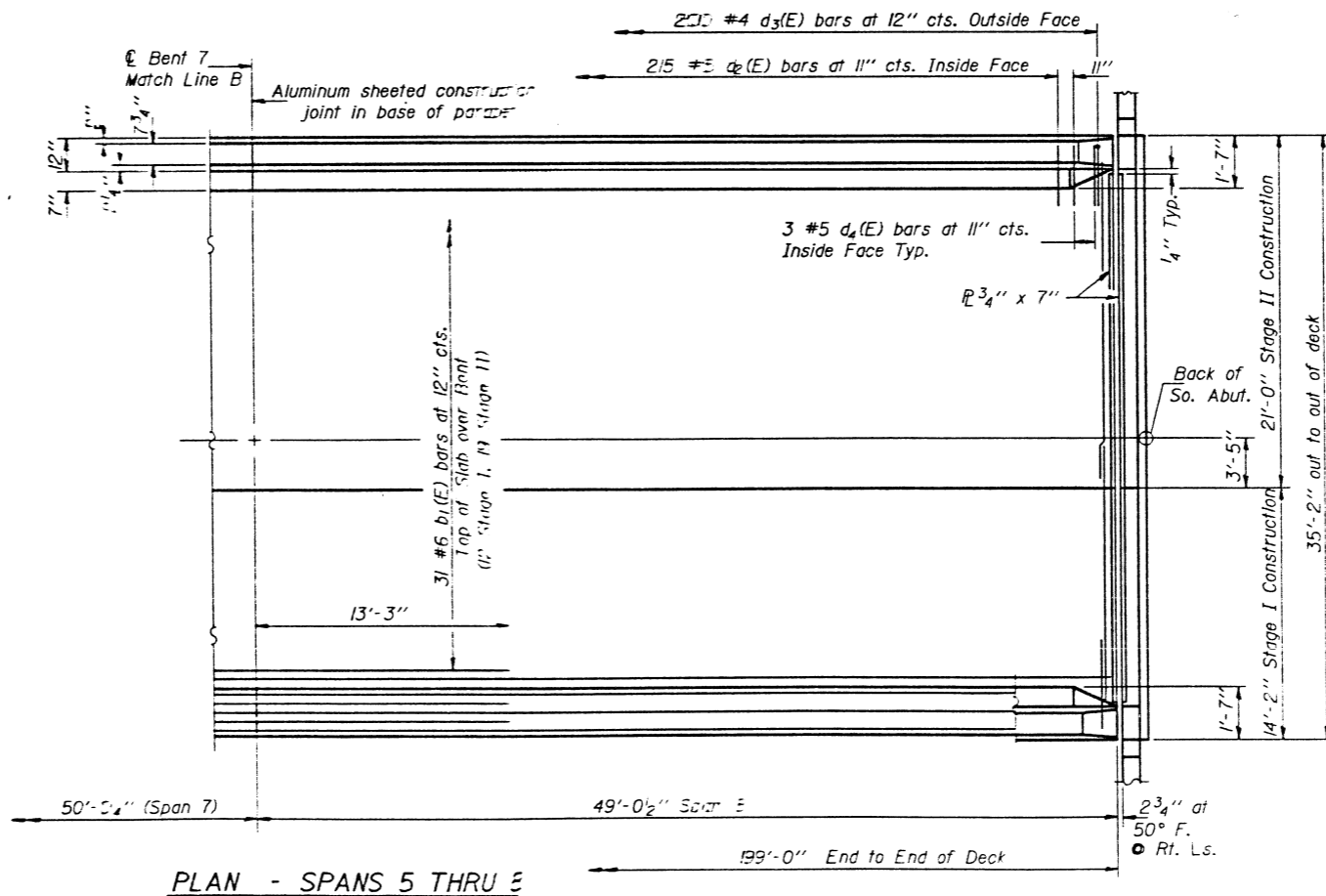
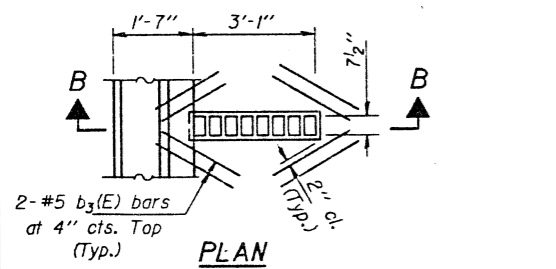
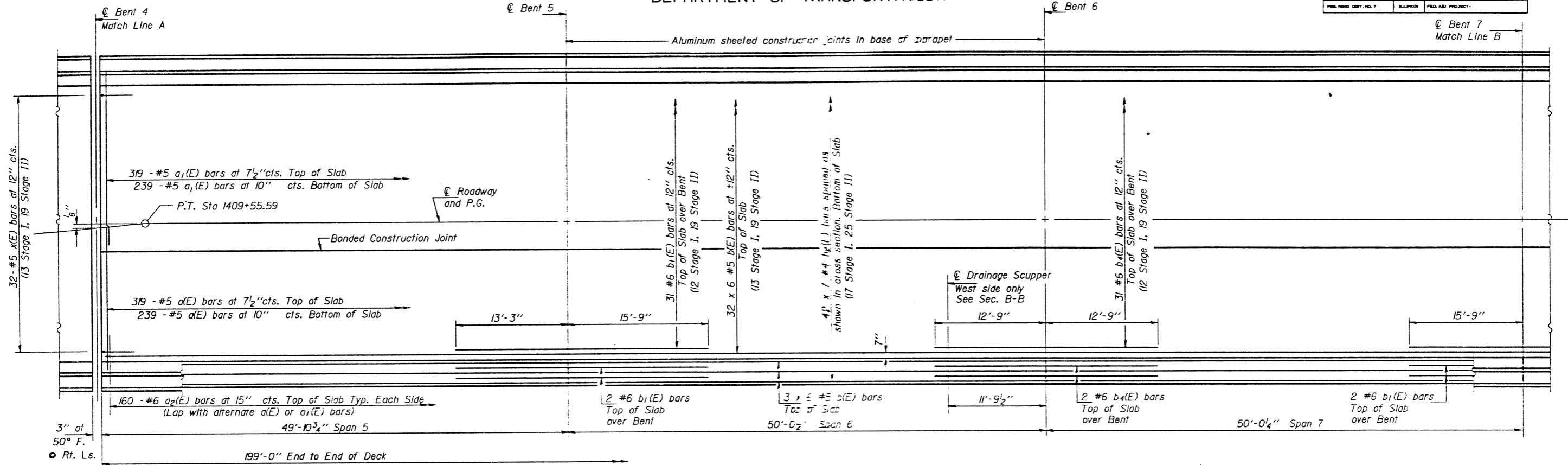
Notes: See sheet 11 of 36 for superstructure details and Bill of Material.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line.
 See sheets 12 & 13 of 36 for parapet reinforcement.
 Cut reinforcement bars in field where necessary to clear floor drains and drainage scuppers.
 See sheet 1 of 36 for drain locations and sheet 11 of 36 for details.

PLAN - SPANS 5 THRU 8

(AS REVISED 3/8/90 A.L.N.)
SPANS 5 THRU 8
SUPERSTRUCTURE
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			21	10
F.A.P.		36 SHEETS		
FED. ROAD DIST. NO. 7		FED. AID PROJECT		



MIN. BAR LAPS

Longitudinal Bars
#5 Bars = 1'-8"
#4 Bars = 1'-4"

Notes: See sheet 11 of 36 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheets 12 & 13 of 36 for parapet reinforcement.
Cut reinforcement bars in field where necessary to clear floor drains and drainage scuppers.
See sheet 1 of 36 for drain locations and sheet 11 of 36 for details.

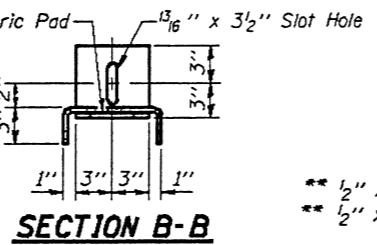
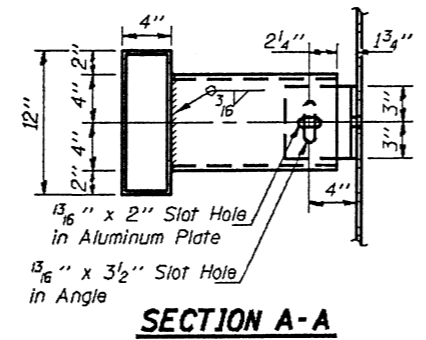
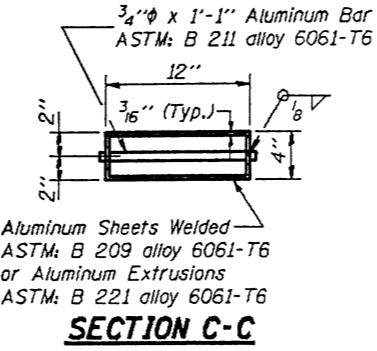
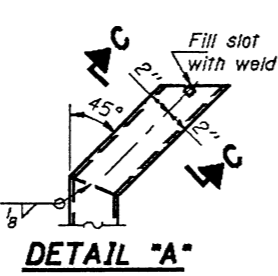
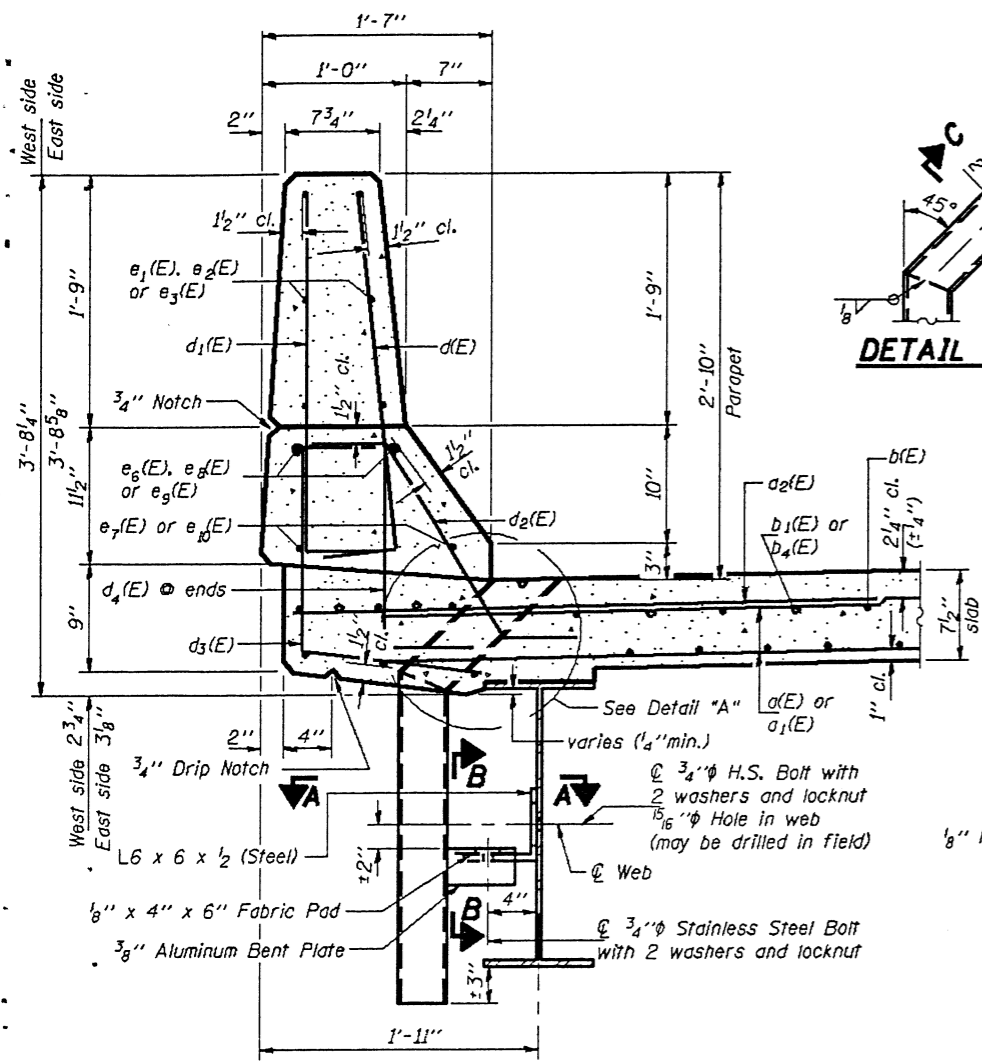
DESIGNED <i>Angelina ...</i>	EXAMINED <i>May 24 1989</i>
CHECKED <i>...</i>	PASSED <i>James J. ...</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>...</i>
CHECKED <i>...</i>	DIRECTOR OF HIGHWAYS

**SPANS 5 THRU 8
SUPERSTRUCTURE**
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

PLAN - SPANS 5 THRU 8

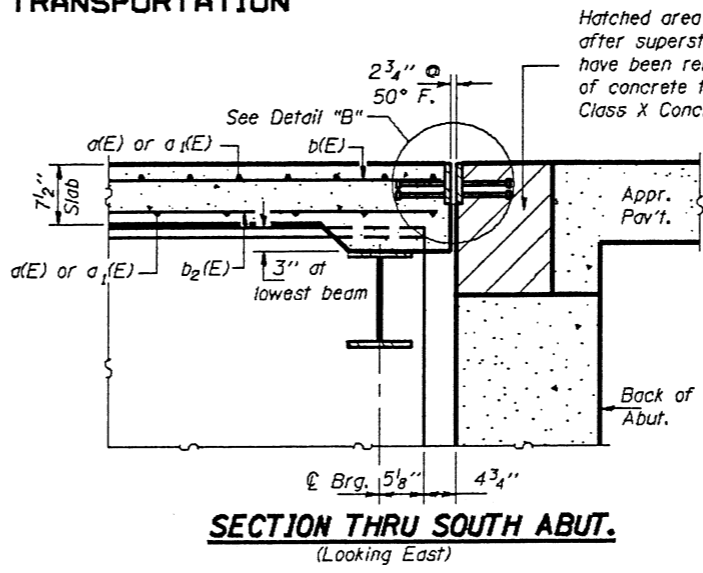
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. IIA
805	127BR	CLINTON	84	22A	36 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

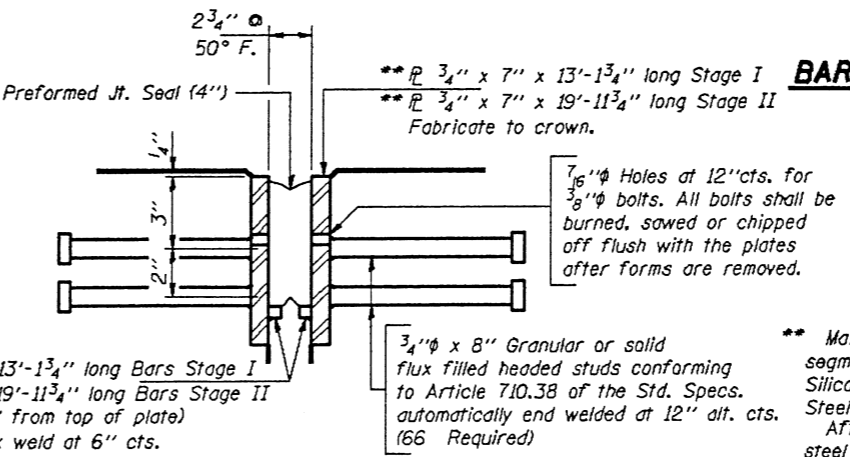


SECTION THRU PARAPET

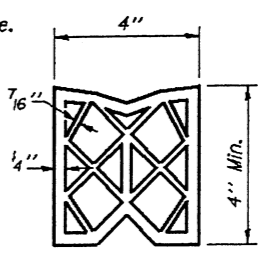
Notes: The exterior surfaces of the aluminum drains shall be cleaned and given a washcoat pretreatment in accordance with the Steel Structures Painting Council's Spec. SSPC-SP1 and SSPC-Paint 27 followed by the vinyl enamel coat painting specified for Structural Steel.



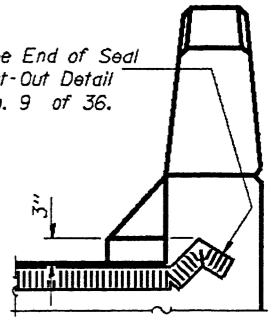
SECTION THRU SOUTH ABUT.
(Looking East)



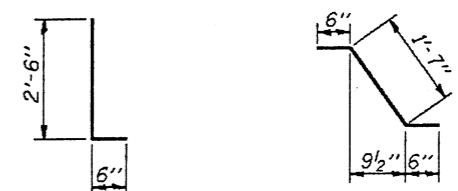
DETAIL B



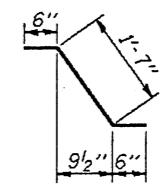
PREFORMED JOINT SEAL (4")



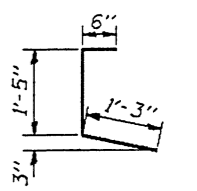
END TREATMENT



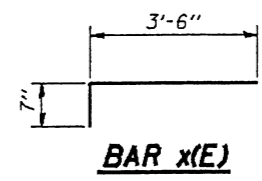
BAR d1(E) and d2(E)



BAR d3(E)



BAR d4(E)



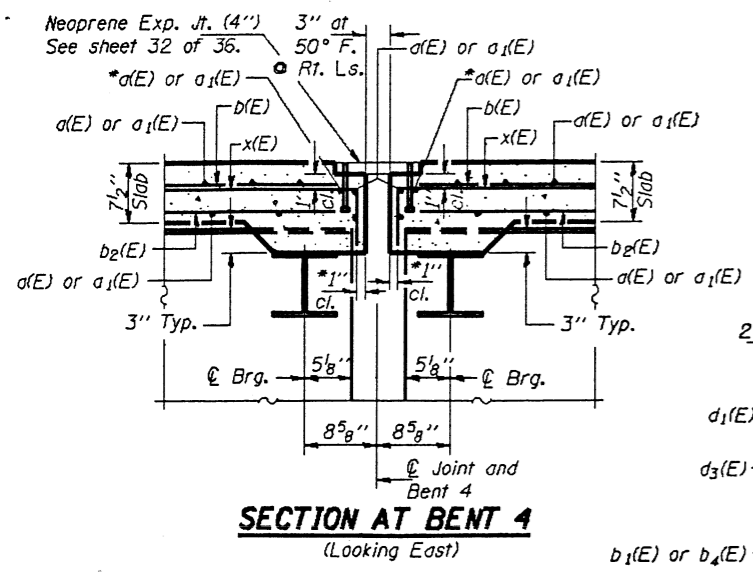
BAR x(E)

SPANS 5 THRU 8
BILL OF MATERIAL

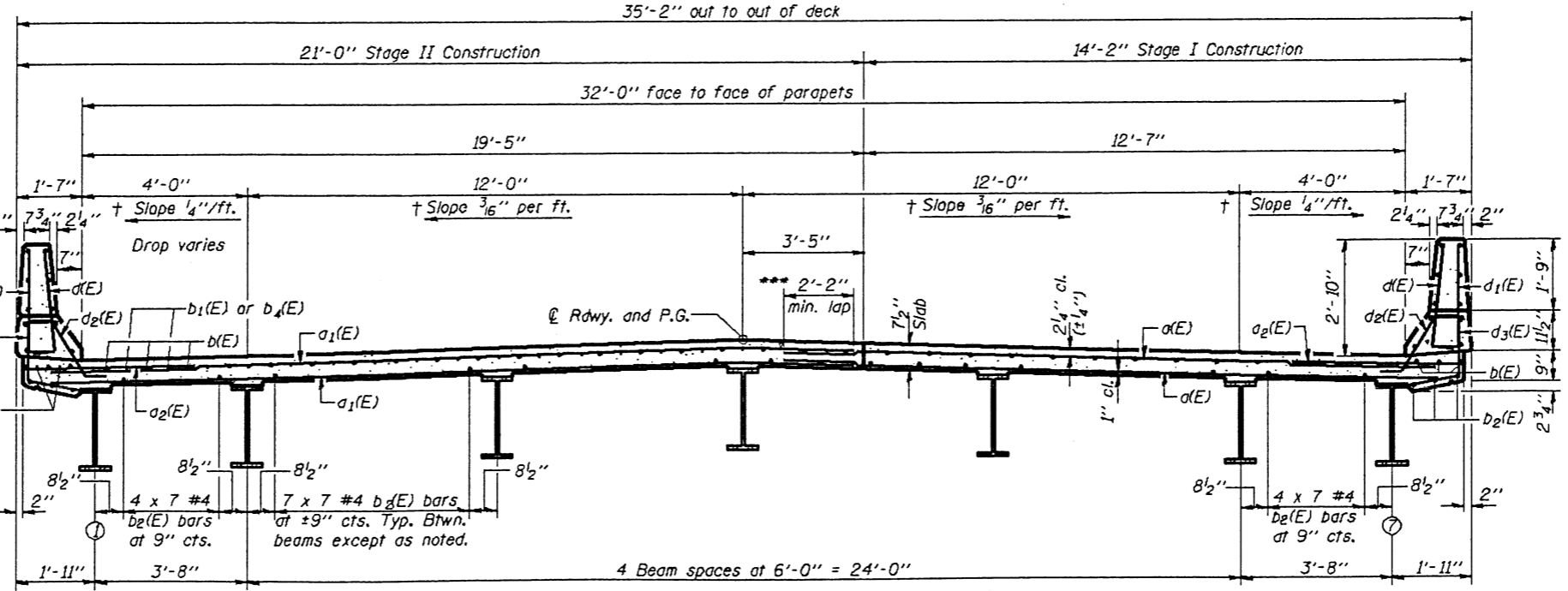
Bar	No.	Size	Length	Shape
d1(E)	558	#5	15'-10"	
d2(E)	320	#6	4'-0"	
b(E)	228	#5	34'-7"	
b1(E)	70	#6	29'-0"	
b2(E)	294	#4	29'-7"	
b3(E)	8	#5	2'-0"	
b4(E)	35	#6	25'-6"	
d(E)	436	#5	3'-0"	L
d1(E)	400	#4	3'-0"	L
d2(E)	430	#5	2'-7"	L
d3(E)	400	#4	3'-2"	L
d4(E)	6	#5	2'-10"	L
e1(E)	72	#4	16'-5"	
e2(E)	36	#4	16'-4"	
e3(E)	36	#4	15'-11"	
e6(E)	8	#8	49'-9"	
e7(E)	24	#5	25'-9"	
e8(E)	4	#8	49'-7"	
e9(E)	4	#8	48'-5"	
e10(E)	8	#5	25'-3"	
x(E)	32	#5	4'-1"	L
Class X Concrete Superstructure			Cu. Yd.	210.6
Reinforcement Bars Epoxy Coated			Pound	50,370

Reinforcement bars designated (E) shall be epoxy coated.

AS REVISED 3/8/90 A.L.N.
SPANS 5 THRU 8
SUPERSTRUCTURE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50



SECTION AT BENT 4
(Looking East)



CROSS SECTION
(Looking South)

DESIGNED: *Angela L. Nemo*
CHECKED: *Walter J. Hilby*
DRAWN: J.T. Downing
CHECKED: *R.L.N. W.J.H.*

May 24 1989

EXAMINED: *David J. Hagan*
PASSED: *James J. Hagan*
APPROVED: *R.L.N. W.J.H.*

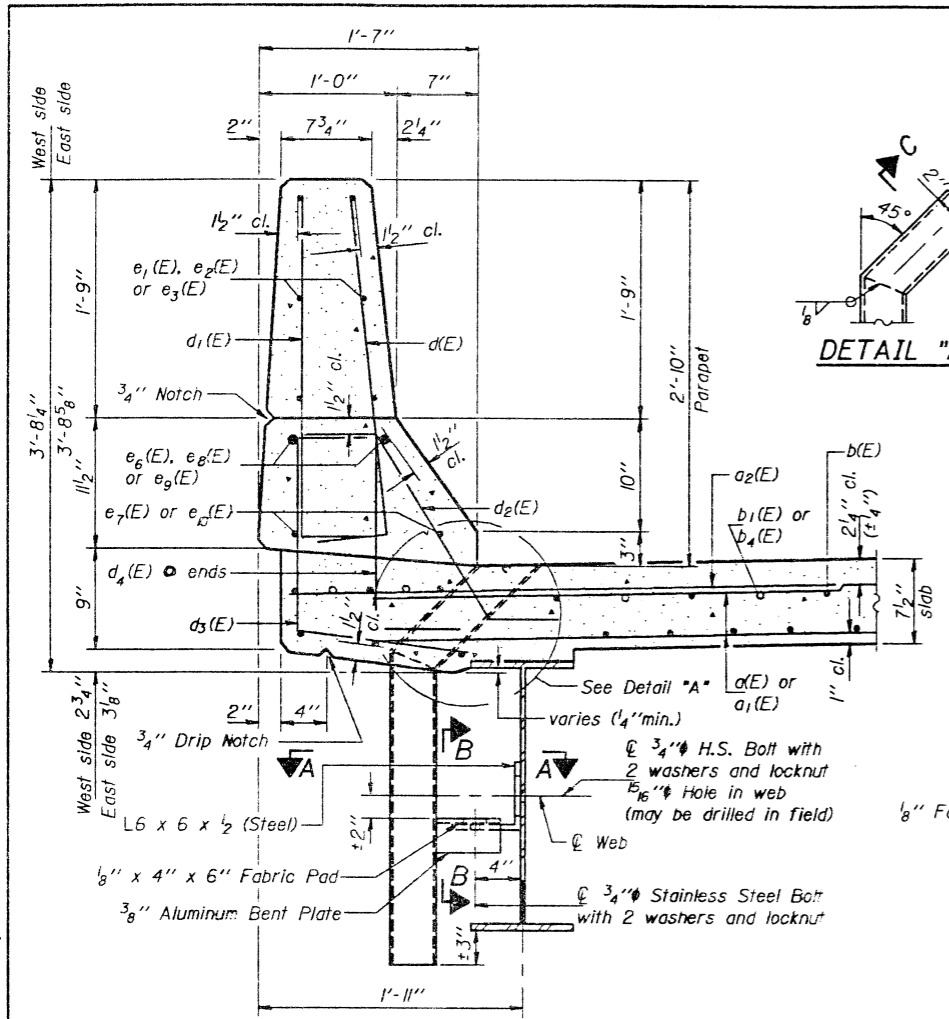
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGE AND STRUCTURES
DIRECTOR OF HIGHWAYS

*** Lapped bars at this location shall be tied with double the number of ties normally used.

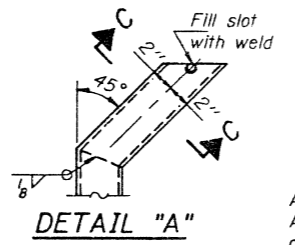
† Slope varies. Normal crown shown.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

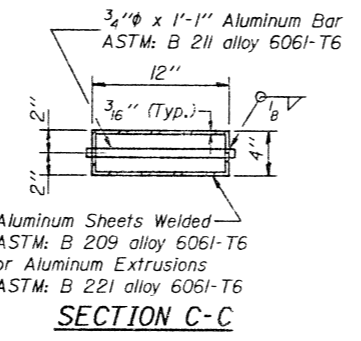
ROUTE NO.	SECTION	QUANTITY	UNIT	SHEET NO. 11 36 SHEETS
A.B.L. P.A.			22	
FILE NO. (EST. NO.)	DESIGNER	FIELD PROJECT		



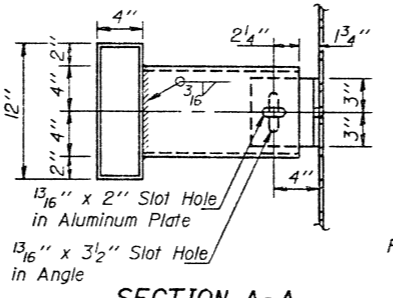
SECTION THRU PARAPET



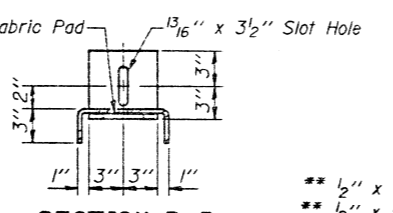
DETAIL "A"



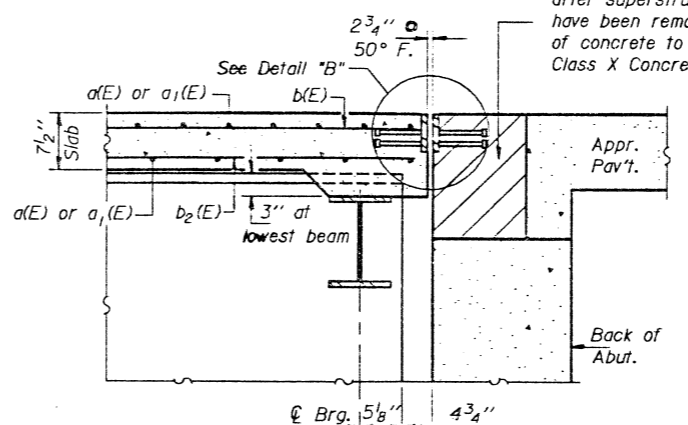
SECTION C-C



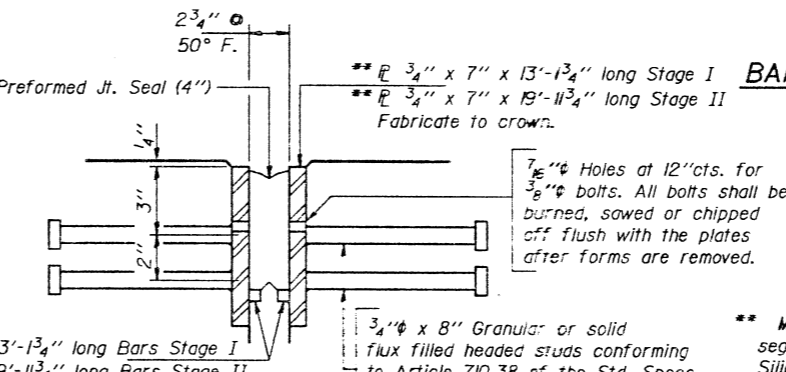
SECTION A-A



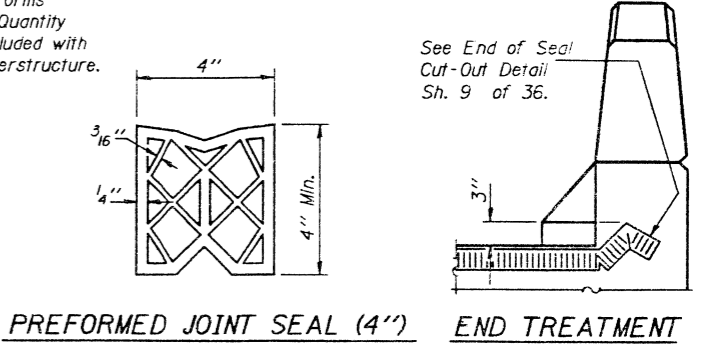
SECTION B-B



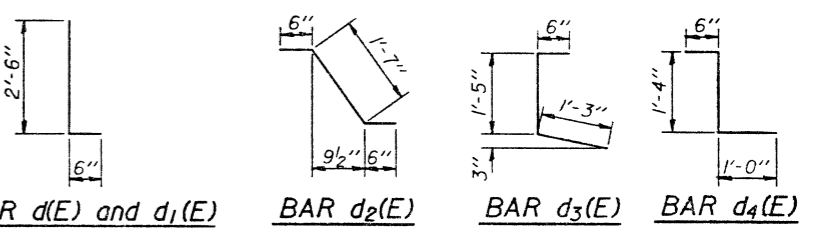
SECTION THRU SOUTH ABUT.
(Looking East)



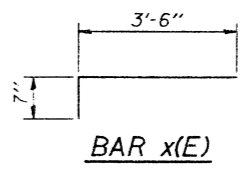
DETAIL B



PREFORMED JOINT SEAL (4') END TREATMENT



BAR d1(E) and d2(E) BAR d3(E) BAR d4(E)



BAR x(E)

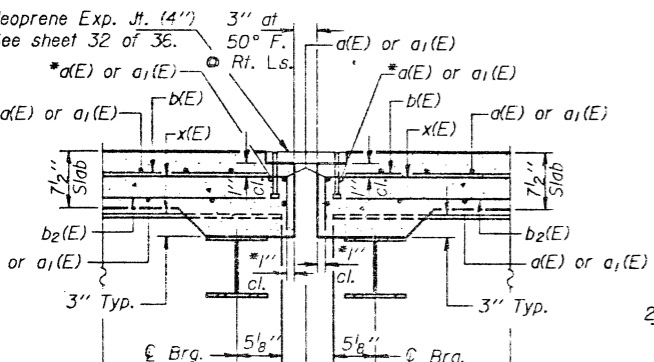
SPANS 5 THRU 8
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	558	#5	15'-10"	
a1(E)	558	#5	20'-6"	
a2(E)	320	#6	4'-0"	
b(E)	228	#5	34'-7"	
b1(E)	70	#5	23'-0"	
b2(E)	294	#4	23'-7"	
b3(E)	8	#5	2'-0"	
b4(E)	35	#6	25'-6"	
d1(E)	436	#5	3'-0"	L
d2(E)	400	#4	3'-0"	L
d3(E)	430	#5	2'-7"	
d4(E)	400	#4	3'-2"	
d5(E)	6	#5	2'-10"	
e1(E)	72	#4	16'-5"	
e2(E)	36	#4	16'-4"	
e3(E)	36	#4	16'-1"	
e4(E)	8	#8	49'-9"	
e5(E)	24	#5	25'-9"	
e6(E)	4	#8	49'-7"	
e7(E)	4	#8	48'-9"	
e8(E)	8	#5	25'-3"	
x(E)	32	#5	4'-1"	
Class X Concrete Superstructure		Cu. Yd.	210.6	
Reinforcement Bars Epoxy Coated		Pound	50,370	

Reinforcement bars designated (E) shall be epoxy coated.

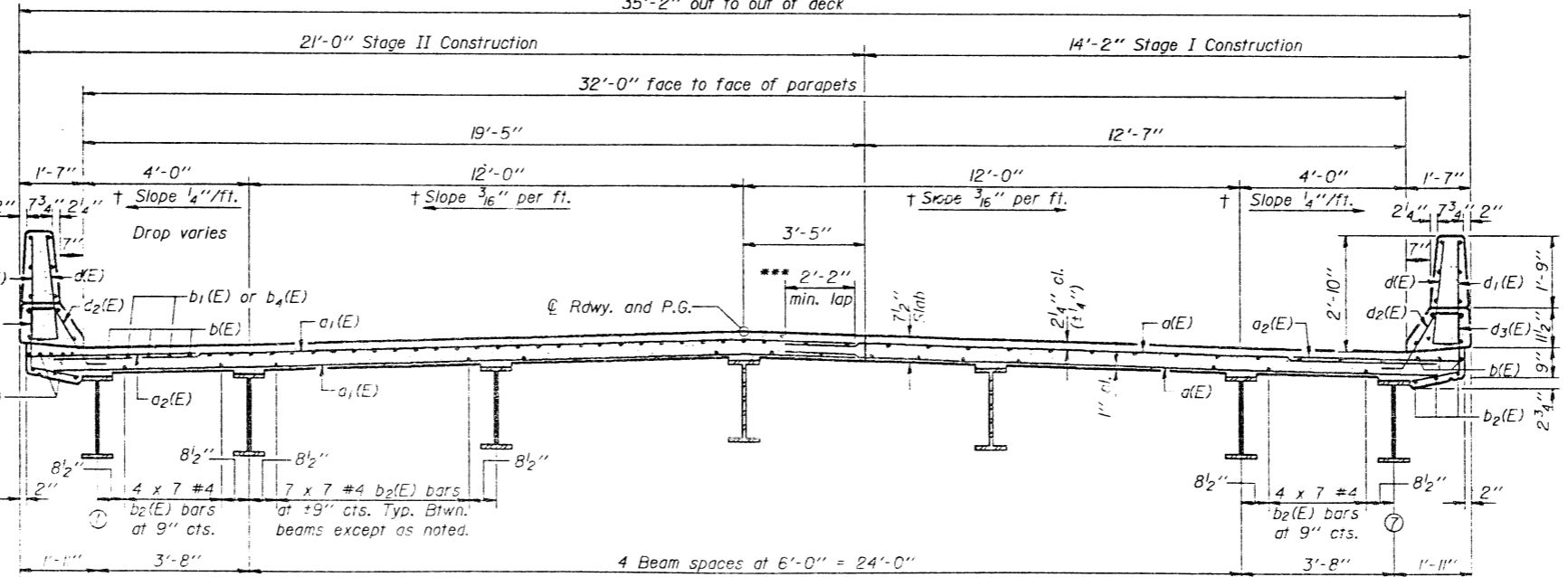
SPANS 5 THRU 8
SUPERSTRUCTURE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

Notes: The exterior surfaces of the aluminum drains shall be cleaned and given a washcoat pretreatment in accordance with the Steel Structures Painting Council's Spec. SSPC-SPI and SSPC-Paint 27 followed by the vinyl enamel coat painting specified for Structural Steel.



SECTION AT BENT 4
(Looking East)

* Place d(E) or a1(E) bars in back of anchor bolts as shown if required to maintain 1" cl. (±0-1/8"). Anchor bolts should be tied to d(E) and a1(E) bars.



CROSS SECTION
(Looking South)

*** Lapped bars at this location shall be tied with double the number of ties normally used.

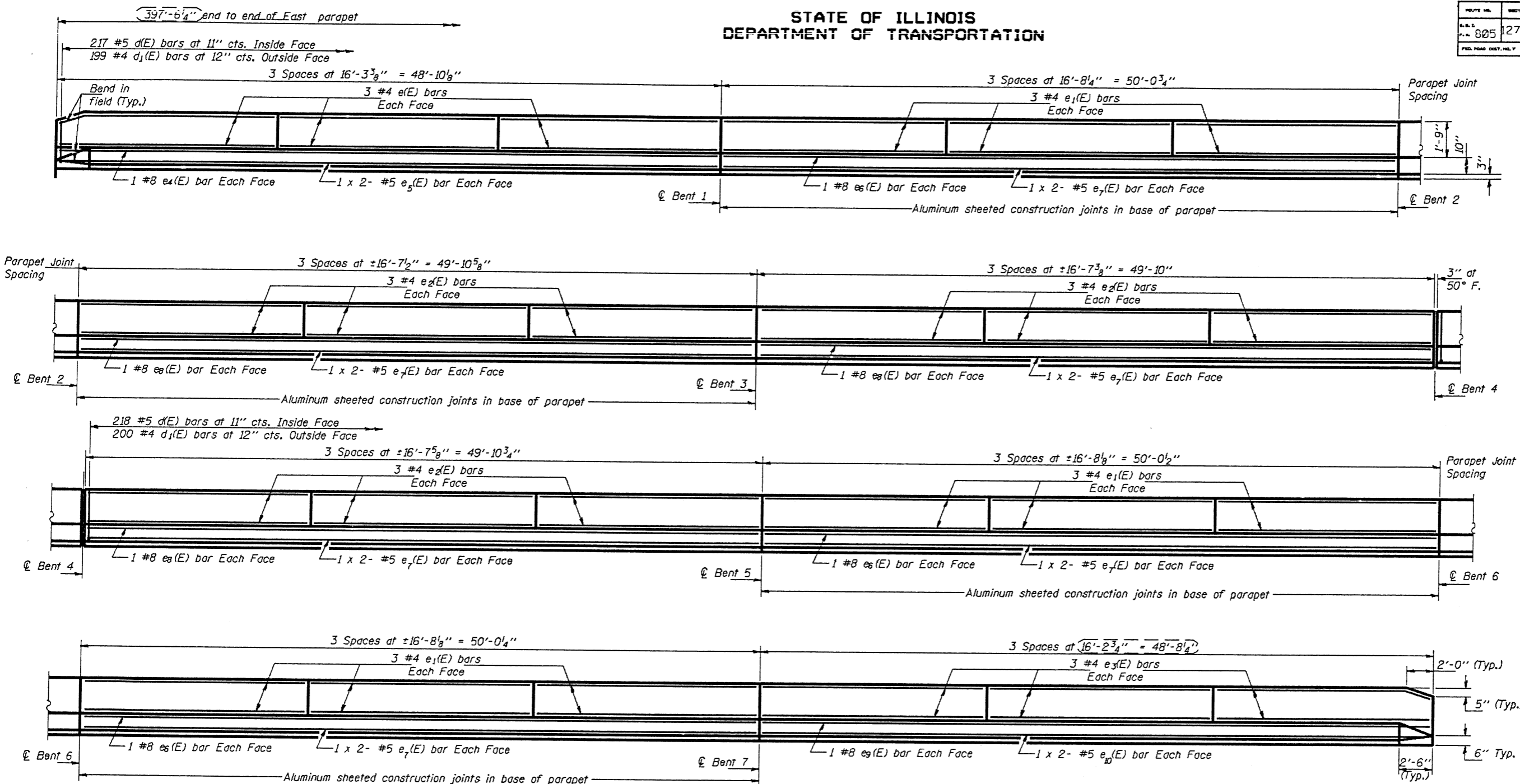
† Slope varies. Normal crown shown.

DESIGNED	1989
CHECKED	
DRAWN	J.T. Downing
CHECKED	
EXAMINED	May 24 1989
PASSED	
APPROVED	

DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

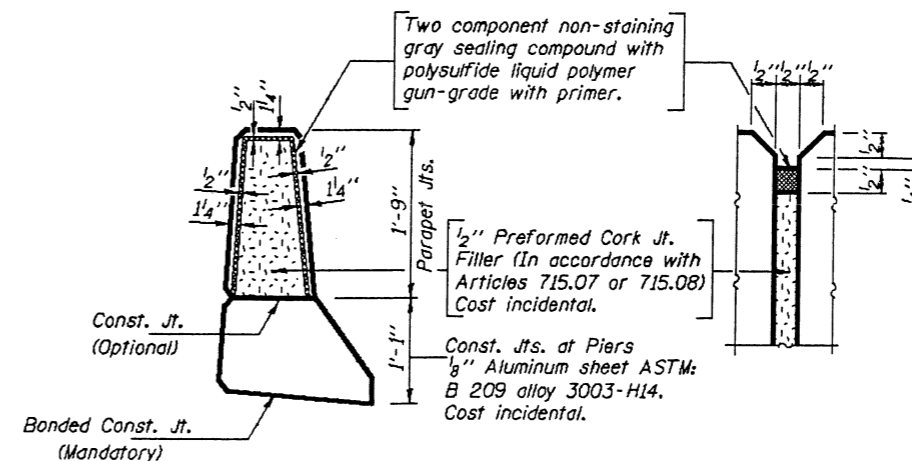
ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 123
805	127BR	CLINTON	84	238	36 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



MIN. BAR LAPS

#5 Bars = 1'-8"

Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line.



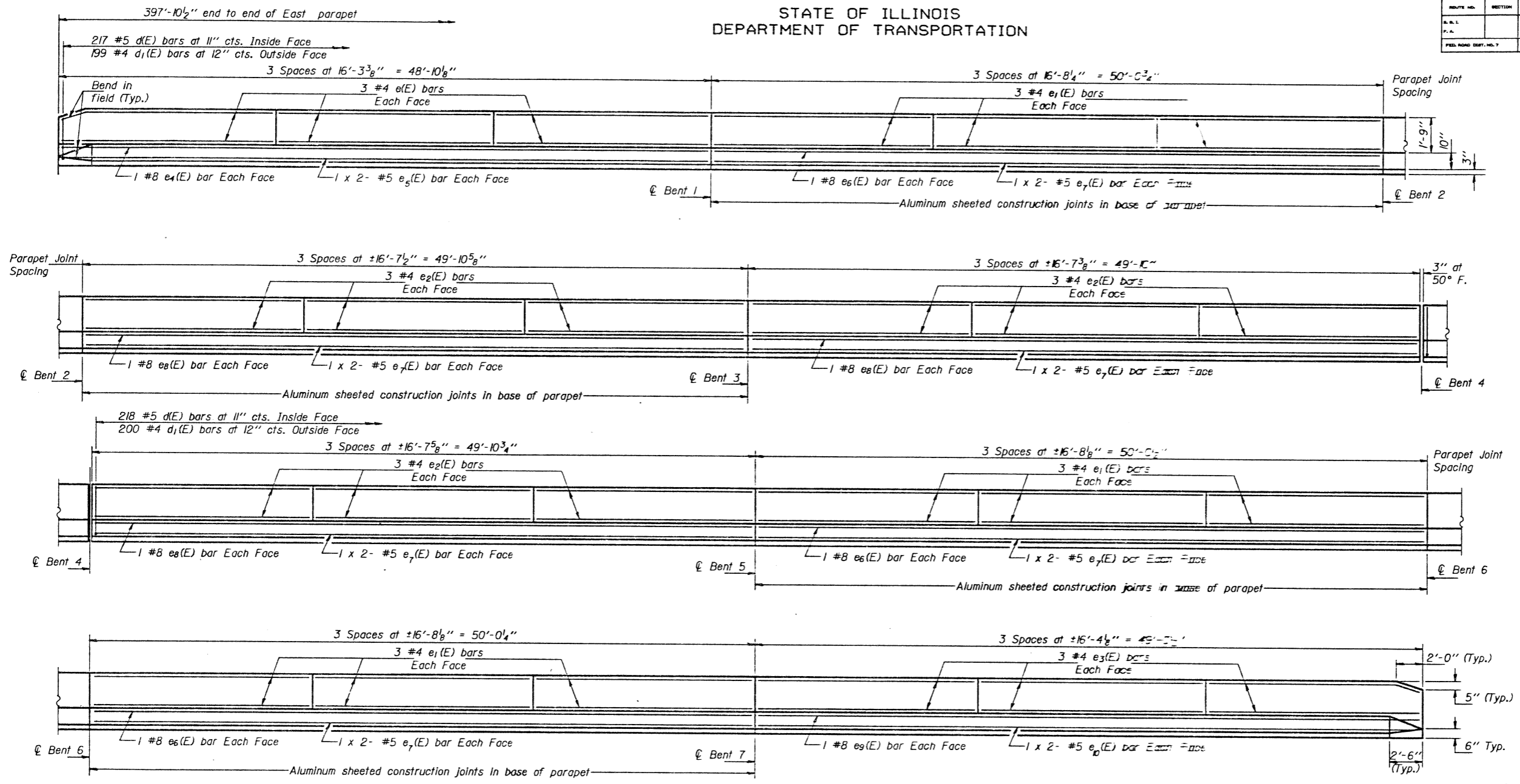
PARAPET JOINT DETAILS

DESIGNED	APR 24 1989
CHECKED	WALTER J. HOLBY
DRAWN	J.T. DOWNING
CHECKED	W.J.H.
EXAMINED	James J. Reber
PASSED	James J. Reber
APPROVED	James J. Reber

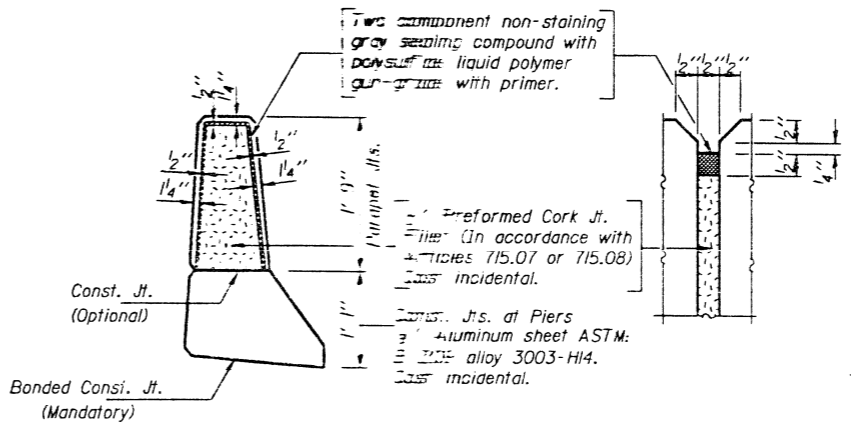
AS REVISED 3/8/90 A.L.N.
EAST PARAPET
SUPERSTRUCTURE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	12
SHEET NO. 12 36 SHEETS				
F.A.P.		ILLINOIS		
FED. ROAD DIST. NO. 7		ILLINOIS		



ELEVATION EAST PARAPET
Showing inside face of parapets.



PARAPET JOINT DETAILS

MIN. BAR LAPS
#5 Bars = 1'-8"

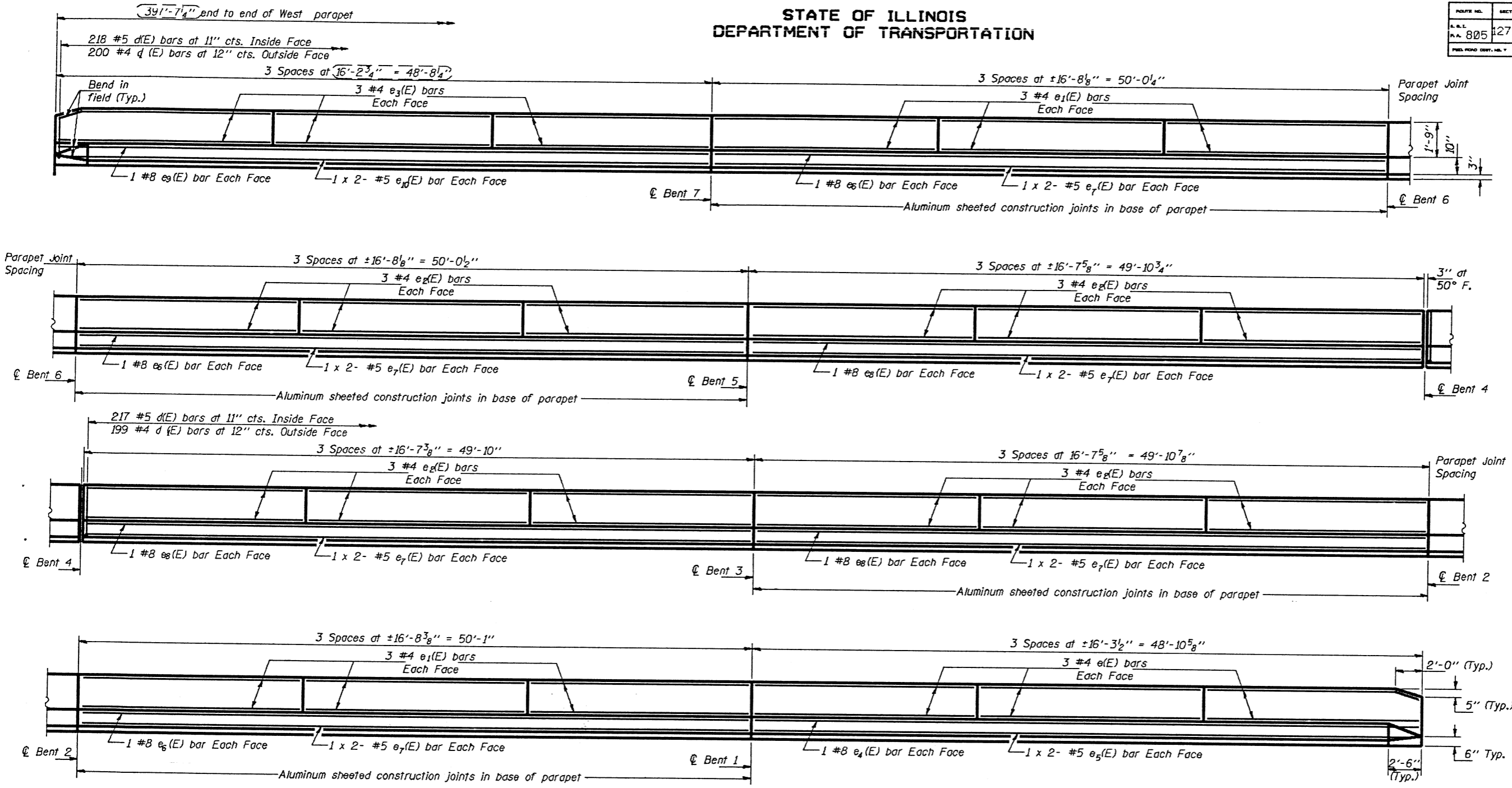
Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED <i>Angela L. Hensley</i>	EXAMINED <i>Greg J. Kaspar</i>
CHECKED <i>Walter Hilly</i>	PASSED <i>James J. Kuehner</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>James J. Kuehner</i>
CHECKED <i>W.S.H.</i>	DIRECTOR OF HIGHWAYS

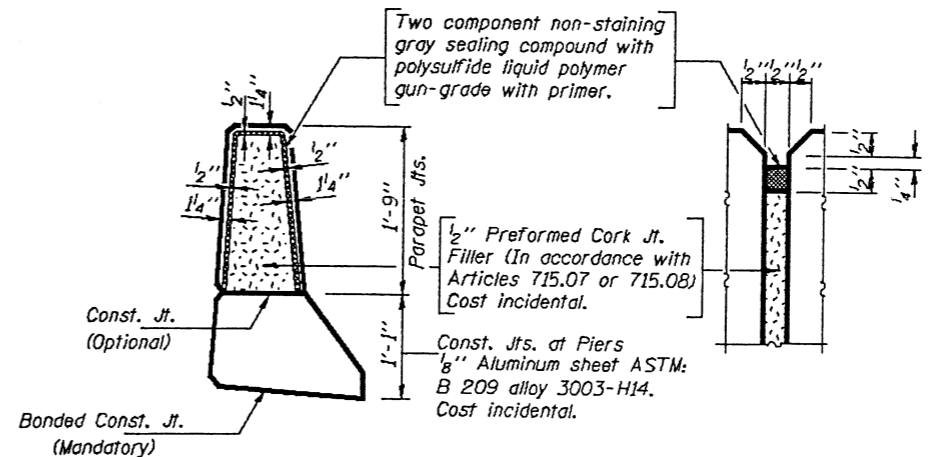
**EAST PARAPET
SUPERSTRUCTURE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLATE NO.	SECTION	COUNTY	STATION	DATE	SHEET NO. 13A
A.A.L. P.A. 805	127BR	CLINTON	64	24B	36 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



ELEVATION WEST PARAPET
Showing inside face of parapets.



PARAPET JOINT DETAILS

MIN. BAR LAPS
#5 Bars = 1'-8"

Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED: *Walter J. Hulbig*
CHECKED: *Walter J. Hulbig*
DRAWN: J.T. Downing
CHECKED: *W.D.H.*

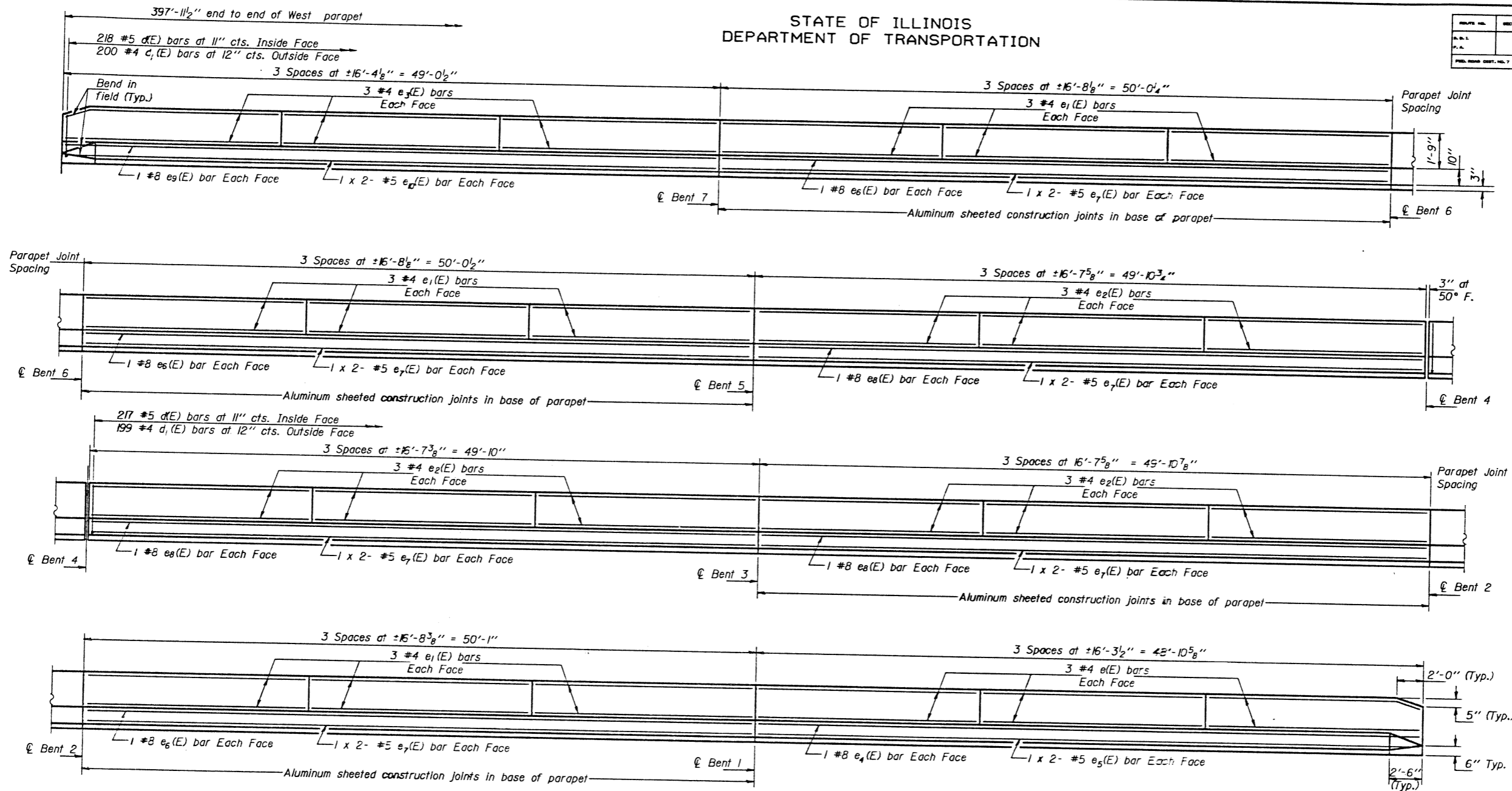
EXAMINED: *James J. Rapp*
PASSED: *James J. Rapp*
APPROVED: *James J. Rapp*
DIRECTOR OF HIGHWAYS

May 24 1989

AS REVISED 3/8/90 A.L.N.
WEST PARAPET
SUPERSTRUCTURE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

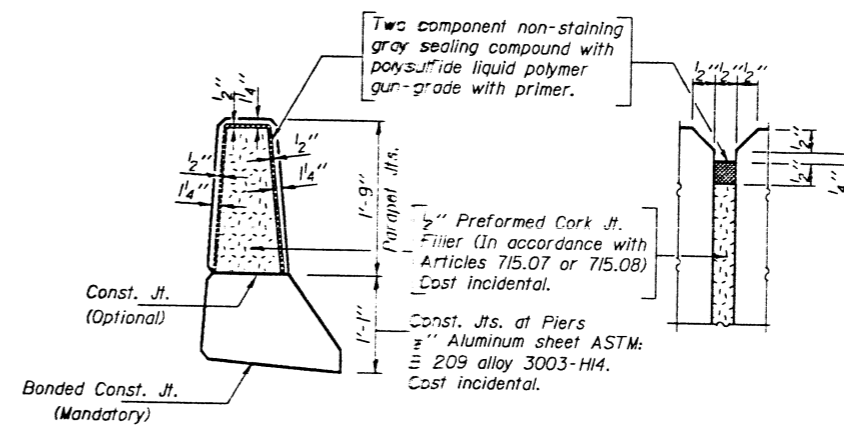
DATE	SECTION	QUANTITY	UNIT	PRICE	SHEET NO. 13 36 SHEETS
FEDERAL ROAD DIST. NO. 7 ILLINOIS FEDERAL PROJECT					



ELEVATION WEST PARAPET
Showing inside face of parapets.

MIN. BAR LAPS
#5 Bars = 1'-8"

Bars indicated thus 20 x 3 #5 etc. indicates 20 lines of bars with 3 lengths per line.



PARAPET JOINT DETAILS

**WEST PARAPET
SUPERSTRUCTURE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50**

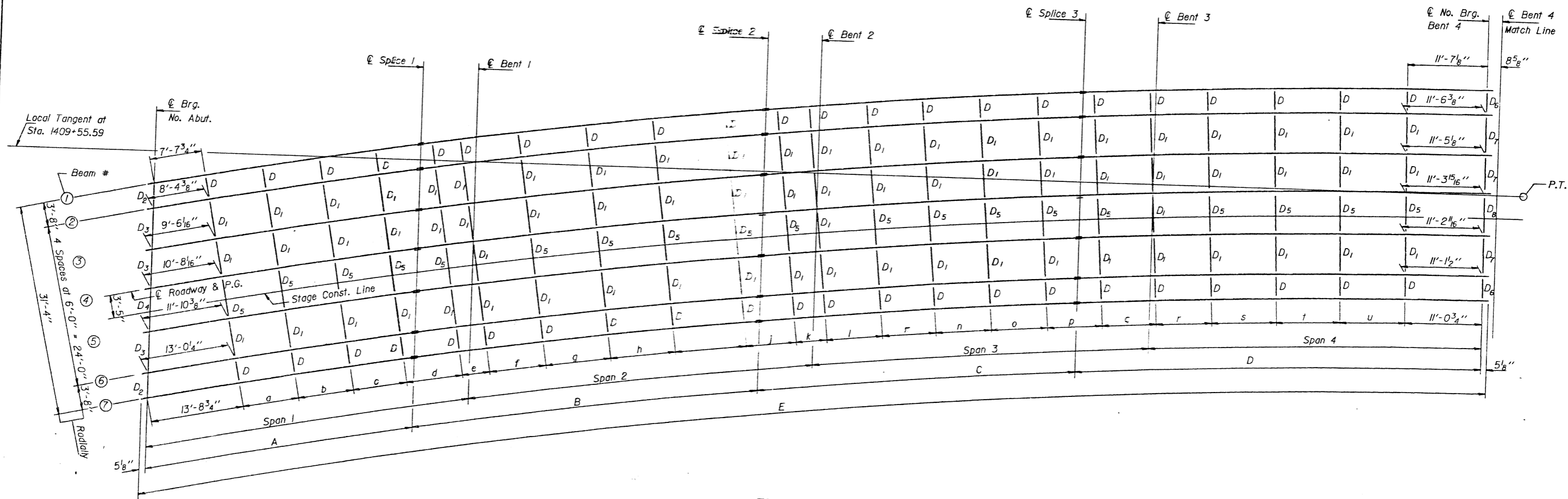
DESIGNED <i>Amelia T. ...</i>	EXAMINED <i>Draj D. Kaspar</i>
CHECKED <i>Wilma ...</i>	PASSED <i>James J. ...</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>James J. ...</i>
CHECKED <i>1-27</i>	DIRECTOR OF HIGHWAYS

May 24 1989

Notes: All beams shall be W24 x 94 (AASHTO M223, Grade 50) and shall meet Notch Toughness Requirements. For details of diaphragms and splices see sheet 16 of 36. For Beam dimensions see sheet 15 of 36.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
			25	36 SHEETS
F.A.P.		ILLINOIS		
FED. ROAD DIST. NO. 1		FED. AID PROJECT		



FRAMING PLAN

horizontal dimensions are along ℓ of beams.

DESIGNED *Amelia ...*
 CHECKED *...*
 DRAWN J.T. Downing
 CHECKED *...*

May 24 1989
 EXAMINED *Greg J. Kaspar*
 PASSED *James J. Rayburn*
 APPROVED _____
 DIRECTOR OF HIGHWAYS

SPANS 1 THRU 4
 STRUCTURAL STEEL
 F.A.P. RT. 805 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
				15
F.A.P.				36 SHEETS
F.P.O. NO. (EST. NO.)	ILLINOIS	F.P.O. NO. PROJECT		

TOP OF BEAM ELEVATIONS
(For Fabrication only.)

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7
☉ Brg. North Abut.	426.63	426.33	425.85	425.36	424.88	425.40	424.10
☉ Splice 1	426.66	426.36	425.88	425.40	424.92	424.43	424.14
☉ Bent 1	426.68	426.38	425.90	425.42	424.94	424.45	424.16
☉ Splice 2	426.79	426.49	426.00	425.52	425.04	424.55	424.26
☉ Bent 2	426.80	426.50	426.02	425.54	425.06	424.58	424.28
☉ Splice 3	426.85	426.57	426.10	425.65	425.18	424.71	424.41
☉ Bent 3	426.80	426.54	426.10	425.67	425.22	424.77	424.49
☉ North Brg. Bent 4	426.57	426.39	426.09	425.78	425.42	425.06	424.83

BEAM DIMENSIONS

Loc. Bm. #	Radius	Span 1	Span 2	Span 3	Span 4	A	B	C	D	E
1	1020.86	48'-2 ¹ / ₂ "	50'-0 ³ / ₁₆ "	49'-10 ³ / ₁₆ "	49'-2 ¹ / ₈ "	39'-11 ⁵ / ₁₆ "	50'-3"	46'-11 ³ / ₁₆ "	60'-2 ⁵ / ₁₆ "	198'-3 ⁹ / ₁₆ "
2	1017.19	48'-3"	50'-0 ³ / ₁₆ "	49'-10 ³ / ₁₆ "	49'-2 ¹ / ₈ "	40'-0"	50'-3"	46'-11 ³ / ₁₆ "	60'-2 ⁵ / ₁₆ "	198'-3 ⁹ / ₁₆ "
3	1011.19	48'-3 ¹ / ₂ "	50'-0 ¹³ / ₁₆ "	49'-10 ¹³ / ₁₆ "	49'-2 ¹ / ₈ "	40'-0 ¹ / ₂ "	50'-3 ¹ / ₁₆ "	46'-11 ¹³ / ₁₆ "	60'-2 ⁵ / ₁₆ "	198'-3 ⁹ / ₁₆ "
4	1005.19	48'-3 ¹ / ₄ "	50'-0 ⁷ / ₁₆ "	49'-10 ¹³ / ₁₆ "	49'-2 ¹ / ₈ "	40'-0 ³ / ₁₆ "	50'-3 ¹ / ₁₆ "	46'-11 ¹³ / ₁₆ "	60'-2 ⁵ / ₁₆ "	198'-4 ¹ / ₁₆ "
5	999.19	48'-3 ⁵ / ₁₆ "	50'-0 ¹⁵ / ₁₆ "	49'-10 ¹³ / ₁₆ "	49'-2 ¹ / ₈ "	40'-0 ⁵ / ₁₆ "	50'-3 ¹ / ₁₆ "	46'-11 ¹³ / ₁₆ "	60'-2 ⁵ / ₁₆ "	198'-4 ¹ / ₁₆ "
6	993.19	48'-3 ⁷ / ₁₆ "	50'-1"	49'-10 ¹³ / ₁₆ "	49'-2 ¹ / ₈ "	40'-0 ³ / ₁₆ "	50'-3 ⁵ / ₁₆ "	46'-11 ¹³ / ₁₆ "	60'-2 ⁵ / ₁₆ "	198'-4 ¹ / ₁₆ "
7	989.52	48'-3 ¹ / ₂ "	50'-1 ¹ / ₁₆ "	49'-10 ¹³ / ₁₆ "	49'-2 ¹ / ₈ "	40'-0 ⁷ / ₁₆ "	50'-3 ⁵ / ₁₆ "	46'-11 ¹³ / ₁₆ "	60'-2 ¹ / ₁₆ "	198'-4 ⁹ / ₁₆ "

DIAPHRAGM SPACING

Loc. Bm. #	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
1	8'-6"	8'-6"	8'-5"	8'-7"	4'-2"	8'-6"	10'-0"	10'-0"	10'-0"	7'-7 ¹ / ₄ "	4'-9"	8'-6"	8'-5"	8'-5"	8'-5"	8'-5 ³ / ₁₆ "	8'-6"	8'-6"	10'-0"	10'-0"	10'-0"
2	8'-5 ⁵ / ₁₆ "	8'-5 ⁵ / ₁₆ "	8'-4 ⁵ / ₁₆ "	8'-6 ⁵ / ₁₆ "	4'-1 ¹³ / ₁₆ "	8'-5 ⁵ / ₁₆ "	9'-11 ⁹ / ₁₆ "	9'-11 ⁹ / ₁₆ "	9'-11 ⁹ / ₁₆ "	7'-6 ¹⁵ / ₁₆ "	4'-8 ¹³ / ₁₆ "	8'-5 ⁵ / ₁₆ "	8'-4 ⁵ / ₁₆ "	8'-4 ⁵ / ₁₆ "	8'-4 ⁵ / ₁₆ "	8'-4 ¹³ / ₁₆ "	8'-5 ⁵ / ₁₆ "	8'-5 ⁵ / ₁₆ "	9'-11 ⁹ / ₁₆ "	9'-11 ⁹ / ₁₆ "	9'-11 ⁹ / ₁₆ "
3	8'-5 ¹ / ₁₆ "	8'-5 ¹ / ₁₆ "	8'-4 ¹ / ₁₆ "	8'-6"	4'-1 ¹ / ₂ "	8'-5 ¹ / ₁₆ "	9'-10 ¹ / ₁₆ "	9'-10 ¹ / ₁₆ "	9'-10 ¹ / ₁₆ "	7'-6 ³ / ₁₆ "	4'-8 ¹ / ₁₆ "	8'-5 ¹ / ₁₆ "	8'-4 ¹ / ₁₆ "	8'-4 ¹ / ₁₆ "	8'-4 ¹ / ₁₆ "	8'-4 ¹ / ₁₆ "	8'-5 ¹ / ₁₆ "	8'-5 ¹ / ₁₆ "	9'-10 ¹ / ₁₆ "	9'-10 ¹ / ₁₆ "	9'-10 ¹ / ₁₆ "
4	8'-4 ⁷ / ₁₆ "	8'-4 ⁷ / ₁₆ "	8'-3 ⁷ / ₁₆ "	8'-5 ⁷ / ₁₆ "	4'-1 ¹ / ₄ "	8'-4 ⁷ / ₁₆ "	9'-10 ⁷ / ₁₆ "	9'-10 ⁷ / ₁₆ "	9'-10 ⁷ / ₁₆ "	7'-5 ⁷ / ₁₆ "	4'-8 ⁷ / ₁₆ "	8'-4 ⁷ / ₁₆ "	8'-3 ⁷ / ₁₆ "	8'-3 ⁷ / ₁₆ "	8'-3 ⁷ / ₁₆ "	8'-3 ⁷ / ₁₆ "	8'-4 ⁷ / ₁₆ "	8'-4 ⁷ / ₁₆ "	9'-10 ⁷ / ₁₆ "	9'-10 ⁷ / ₁₆ "	9'-10 ⁷ / ₁₆ "
5	8'-3 ¹⁵ / ₁₆ "	8'-3 ¹⁵ / ₁₆ "	8'-2 ¹⁵ / ₁₆ "	8'-4 ¹⁵ / ₁₆ "	4'-0 ¹⁵ / ₁₆ "	8'-3 ¹⁵ / ₁₆ "	9'-9 ¹⁵ / ₁₆ "	9'-9 ¹⁵ / ₁₆ "	9'-9 ¹⁵ / ₁₆ "	7'-5 ¹⁵ / ₁₆ "	4'-7 ¹⁵ / ₁₆ "	8'-3 ¹⁵ / ₁₆ "	8'-2 ¹⁵ / ₁₆ "	8'-2 ¹⁵ / ₁₆ "	8'-2 ¹⁵ / ₁₆ "	8'-2 ¹⁵ / ₁₆ "	8'-3 ¹⁵ / ₁₆ "	8'-3 ¹⁵ / ₁₆ "	9'-9 ¹⁵ / ₁₆ "	9'-9 ¹⁵ / ₁₆ "	9'-9 ¹⁵ / ₁₆ "
6	8'-3 ¹ / ₄ "	8'-3 ¹ / ₄ "	8'-2 ¹ / ₄ "	8'-4 ¹ / ₄ "	4'-0 ⁵ / ₄ "	8'-3 ¹ / ₄ "	9'-8 ³ / ₄ "	9'-8 ³ / ₄ "	9'-8 ³ / ₄ "	7'-4 ³ / ₄ "	4'-7 ¹ / ₄ "	8'-3 ¹ / ₄ "	8'-2 ¹ / ₄ "	8'-2 ¹ / ₄ "	8'-2 ¹ / ₄ "	8'-2 ¹ / ₄ "	8'-3 ¹ / ₄ "	8'-3 ¹ / ₄ "	9'-8 ³ / ₄ "	9'-8 ³ / ₄ "	9'-8 ³ / ₄ "
7	8'-2 ¹ / ₂ "	8'-2 ¹ / ₂ "	8'-1 ¹ / ₂ "	8'-3 ¹ / ₂ "	4'-0 ¹ / ₂ "	8'-2 ¹ / ₂ "	9'-8 ⁵ / ₁₆ "	9'-8 ⁵ / ₁₆ "	9'-8 ⁵ / ₁₆ "	7'-4 ¹ / ₁₆ "	4'-7 ¹ / ₁₆ "	8'-2 ¹ / ₂ "	8'-1 ¹ / ₂ "	8'-1 ¹ / ₂ "	8'-1 ¹ / ₂ "	8'-2 ¹ / ₁₆ "	8'-2 ¹ / ₁₆ "	8'-2 ¹ / ₁₆ "	9'-8 ⁵ / ₁₆ "	9'-8 ⁵ / ₁₆ "	9'-8 ⁵ / ₁₆ "

INTERIOR BEAM MOMENT TABLE

	0.4 Sp. 1 0.6 Sp. 4	Bent 1 & 3	Bent 2	0.5 Spans 2 & 3
I _s (in ⁴)	2700	2700	2700	2700
I _c (in ⁴)	8081			8081
S _s (in ³)	222	222	222	222
S _c (in ³)	345			346
S _{bi} (in ³)	12.0	12.0	12.0	12.0
Q (K/ft.)	.695	.977	.977	.695
M _ℓ (K)	134.2	241.4	170.8	64.7
s _ℓ (K/ft.)	.287			.287
M _{sℓ} (K)	63.8			40.3
M _t (K)	292.9	136.6	127.5	243.3
M (Imp) (K)	84.9	39.6	37.0	70.6
M _{cf} (K)	19.9	9.3	8.7	16.5
S ₃ (M _t +I) (K)	629.7	293.7	274.2	523.2
M _a (K)	101.9	707.7	589.1	838.1
M _{bi} (K)	4.6	2.1	1.8	3.5
f _{sℓ non-comp} (k.s.i.)	7.3	13.0	9.2	3.5
f _{sℓ comp} (k.s.i.)	2.2			1.4
f _{sℓ 3(t+I)} (k.s.i.)	21.8	15.9	14.8	18.1
f _{scf} (k.s.i.)	.7	.5	.5	.6
f _{s (Overload)} (k.s.i.)	32.0	29.4	24.5	23.6
f _{s (Total)} (k.s.i.)	41.6	38.2	31.9	30.7
f _w (k.s.i.)	4.6	2.1	1.8	3.5
f _{s + f_w} (k.s.i.)	46.2	40.3	33.7	34.2
F _b (k.s.i.)	50	50	50	50
VR (K)	45.2			48.2

INTERIOR BEAM REACTION TABLE

	N. Abut. & N. Brg. Bent 4	Bent 2	Bent 1 & 3
R _ℓ (K)	19.8	46.5	55.4
R _t (K)	33.0	38.4	38.8
Imp. (K)	9.0	10.4	10.5
R (Total) (K)	61.8	95.3	104.7

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing I_s (Total & Overload).

I_c and S_c are the moment of inertia and section modulus of the composite section used in computing I_s (Total & Overload).

VR is the maximum Live Load + Impact shear range in span.

M_a (Applied Moment) = 1.3[M_ℓ + M_{cf} + M_{sℓ} + S₃(M_t + I)]
f_s (Overload) is the sum of the stresses due to M_ℓ + M_{sℓ} + S₃(M_t + I) + M_{cf}.

f_s (Total) is the sum of the stresses due to 1.3[M_ℓ + M_{sℓ} + S₃(M_t + I) + M_{cf}]

VR, and R_t have been increased due to effect of centrifugal force and superelevation.

F_b Maximum allowable stress F_{bu} or F_{by} computed according to AASHTO [Guide Specifications for Horizontally Curved Highway Bridges Section 2.12(B) & 2.16].

M_{cf} is the moment due to centrifugal force.

S_{bi} is the section modulus for one flange for lateral flange bending.

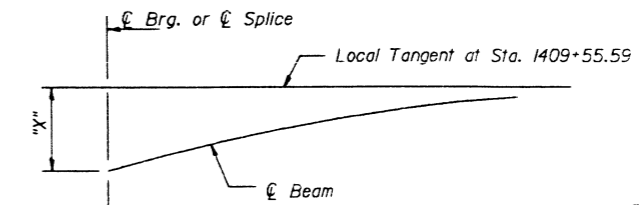
f_w is the calculated normal stress at the edge of the flange due to lateral flange bending (Factored).

M_{bi} is the lateral bending moment for the flange (Factored).

Notes: All beams shall be fabricated following the curvature given by their respective radii.
All horizontal dimensions are given along ☉ Beam.
All vertical dimensions are at right angles to Local Tangent.
Dimensions "x" are given from the respective Local Tangent of each Beam at Station 1409+55.59.

"X" OFFSET DIMENSIONS

Loc. Bm. #	☉ Brg. N. Abut.	☉ Splice 1	☉ Bent 1	☉ Splice 2	☉ Bent 2	☉ Splice 3	☉ Bent 3	☉ N. Brg. Bent 4
1	20'-1 ¹ / ₈ "	13'-0 ³ / ₁₆ "	11'-8 ¹³ / ₁₆ "	6'-2 ¹ / ₈ "	5'-4 ⁵ / ₁₆ "	2'-1 ⁹ / ₁₆ "	1'-5 ³ / ₁₆ "	3 ¹ / ₁₆ "
2	20'-2 ¹ / ₄ "	13'-0 ³ / ₁₆ "	11'-9 ⁹ / ₁₆ "	6'-3 ³ / ₁₆ "	5'-4 ¹³ / ₁₆ "	2'-1 ⁹ / ₁₆ "	1'-5 ¹³ / ₁₆ "	3 ¹ / ₁₆ "
3	20'-4 ¹ / ₁₆ "	13'-1 ¹ / ₁₆ "	11'-10 ⁷ / ₁₆ "	6'-3 ³ / ₁₆ "	5'-5 ¹ / ₁₆ "	2'-1 ⁹ / ₁₆ "	1'-5 ¹ / ₁₆ "	3 ¹ / ₁₆ "
4	20'-5 ¹ / ₁₆ "	13'-2 ¹ / ₁₆ "	11'-11 ¹ / ₁₆ "	6'-4 ¹ / ₁₆ "	5'-5 ⁵ / ₁₆ "	2'-1 ⁹ / ₁₆ "	1'-6 ¹ / ₁₆ "	3 ¹ / ₁₆ "
5	20'-7 ¹ / ₁₆ "	13'-3 ⁵ / ₁₆ "	11'-11 ⁵ / ₁₆ "	6'-4 ⁹ / ₁₆ "	5'-6"	2'-2 ¹ / ₁₆ "	1'-6 ⁵ / ₁₆ "	3 ¹ / ₁₆ "
6	20'-8 ¹ / ₄ "	13'-4 ⁵ / ₁₆ "	12'-0 ¹³ / ₁₆ "	6'-5"	5'-6 ⁷ / ₁₆ "	2'-2 ¹ / ₁₆ "	1'-6 ⁹ / ₁₆ "	3 ¹ / ₁₆ "
7	20'-9 ¹ / ₁₆ "	13'-5 ¹ / ₁₆ "	12'-1 ³ / ₁₆ "	6'-5 ⁵ / ₁₆ "	5'-6 ¹ / ₁₆ "	2'-2 ³ / ₁₆ "	1'-6 ¹³ / ₁₆ "	3 ¹ / ₁₆ "



"X" OFFSET DIMENSIONS

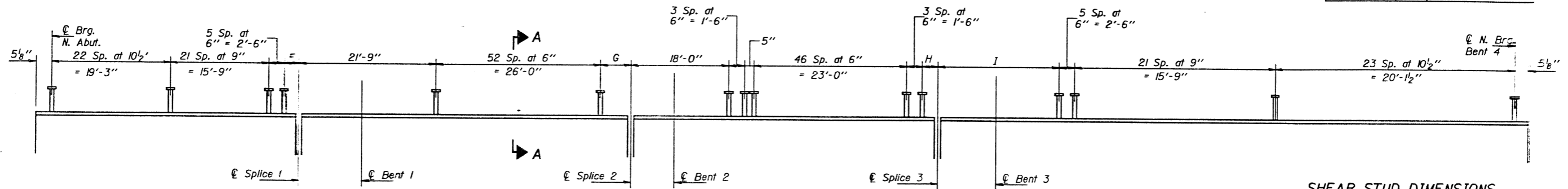
SPANS 1 THRU 4
STRUCTURAL STEEL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

DESIGNED	Myrtle L. Downey	EXAMINED	
CHECKED	Walker J. Hill	PASSED	ENGINEER OF BRIDGE DESIGN
DRAWN	J.T. Downing	APPROVED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	C. L. Hill		DIRECTOR OF HIGHWAYS

May 20 1989

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	QUANTITY	DATE	SHEET NO. 16
			27	36 SHEETS



ELEVATION
Showing Shear Stud spacing

SHEAR STUD DIMENSIONS

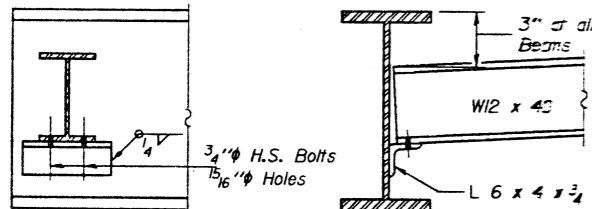
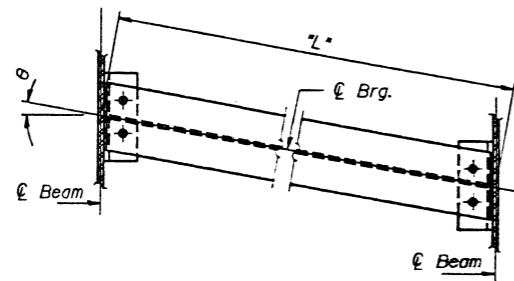
Loc. Bm.	F	G	H	I
1	2'-5 15/16"	2'-6"	2'-6 3/4"	2'-10 1/2"
2	2'-6"	2'-6"	2'-6 3/4"	2'-10 1/2"
3	2'-6 1/8"	2'-6 1/8"	2'-6 13/16"	2'-10 1/2"
4	2'-6 3/8"	2'-6 3/8"	2'-6 13/16"	2'-10 1/2"
5	2'-6 5/8"	2'-6 5/8"	2'-6 13/16"	2'-10 1/2"
6	2'-6 3/8"	2'-6 5/8"	2'-6 1/8"	2'-10 1/2"
7	2'-6 1/8"	2'-6 5/8"	2'-6 1/8"	2'-10 1/2"

VALUE OF θ

Loc.	Bm. #1	#2	#3	#4	#5	#6	#7
Brq. N. Abut.	11°-24'-14"	11°-26'-44"	11°-30'-52"	11°-35'-3"	11°-39'-17"	11°-43'-34"	11°-46'-13"
N. Brq. Bent 4	0°-19'-22"	0°-19'-26"	0°-19'-33"	0°-19'-40"	0°-19'-47"	0°-19'-54"	0°-19'-58"

DIMENSIONS "L"

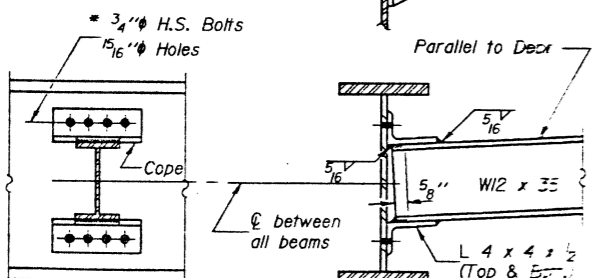
Loc.	Bm. #1 & #2	Betwn. Bm. #2 & #3	Betwn. Bm. #3 & #4	Betwn. Bm. #4 & #5	Betwn. Bm. #5 & #6	Betwn. Bm. #6 & #7
Brq. N. Abut.	3'-8 1/8"	6'-1 1/2"	6'-1 1/2"	6'-1 1/2"	6'-1 1/2"	3'-9"
N. Brq. Bent 4	3'-8"	6'-0"	6'-0"	6'-0"	6'-0"	3'-8"



DIAPHRAGMS D₂, D₃, D₆ & D₇

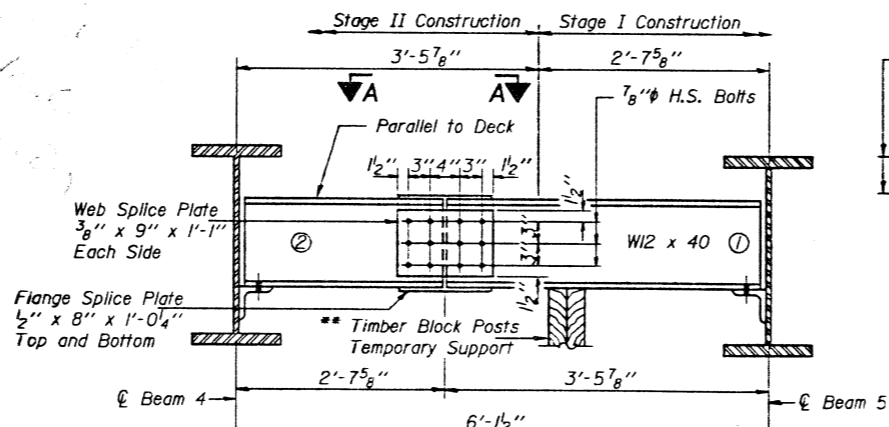
2 D₂; 2 D₆ Required
3 D₃; 3 D₇ Required

* 1 1/2" x 1 3/16" Slotted holes in Ls. Beam 4 only. (for diaphragm D₅)



DIAPHRAGMS D₁ & D₅

44 D Required
69 D₁ Required
19 D₅ Required



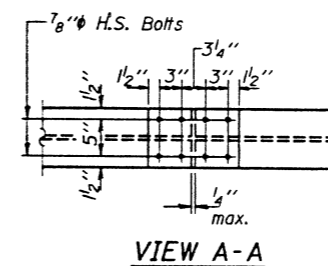
DIAPHRAGM D₄

1 Required (Looking South)

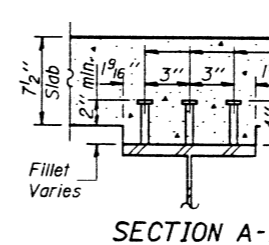
** Temporary Support System is cast incidental to Structural Steel.
For details of connections to beams see Diaphragm D₂. See sheet 18 of 36 for Diaphragm D₆.

DIAPHRAGM D₄ CONSTRUCTION SEQUENCE

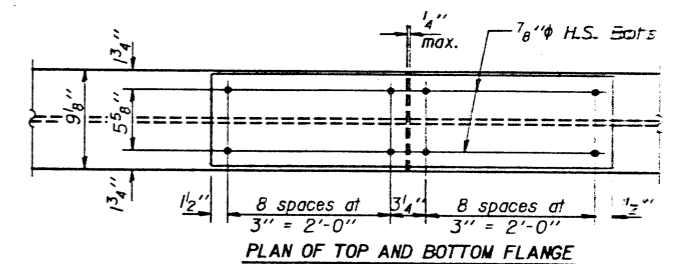
- 1.) Order Diaphragm D₄ in two sections with lengths of 2'-7" and 3'-5 1/4".
- 2.) Attach part ① of Diaphragm to Beam 5 during Stage I Construction.
- 3.) Place Temporary Support System between part ① of diaphragm and abutment bearing seat.
- 4.) Attach part ② of diaphragm to both Beam 4 and part ① of diaphragm during Stage II Construction.
- 5.) Attach all splice plates to part ① and part ② of diaphragms.
- 6.) Remove Temporary Support System.



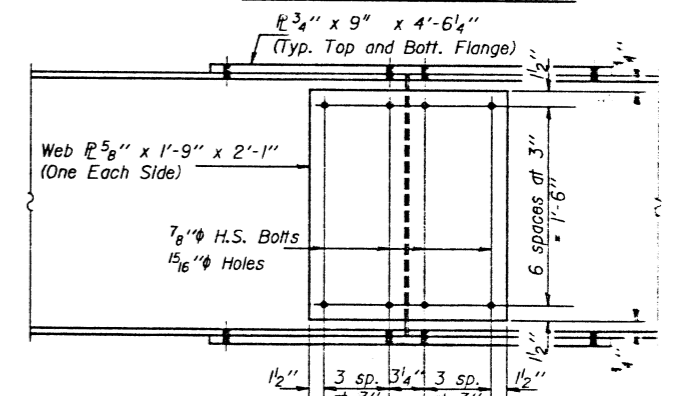
VIEW A-A



SECTION A-A



PLAN OF TOP AND BOTTOM FLANGE



WEB ELEVATION

SPLICE DETAILS

Splices 1, 2 & 3

DESIGNED <i>Amelia S. Downey</i>	EXAMINED <i>Orville J. Kasper</i>
CHECKED <i>Walter A. Hill</i>	PASSED <i>James J. Kasper</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>James J. Kasper</i>
CHECKED <i>G. H. Hill</i>	DIRECTOR OF HIGHWAYS

I-2-D 8-30-80

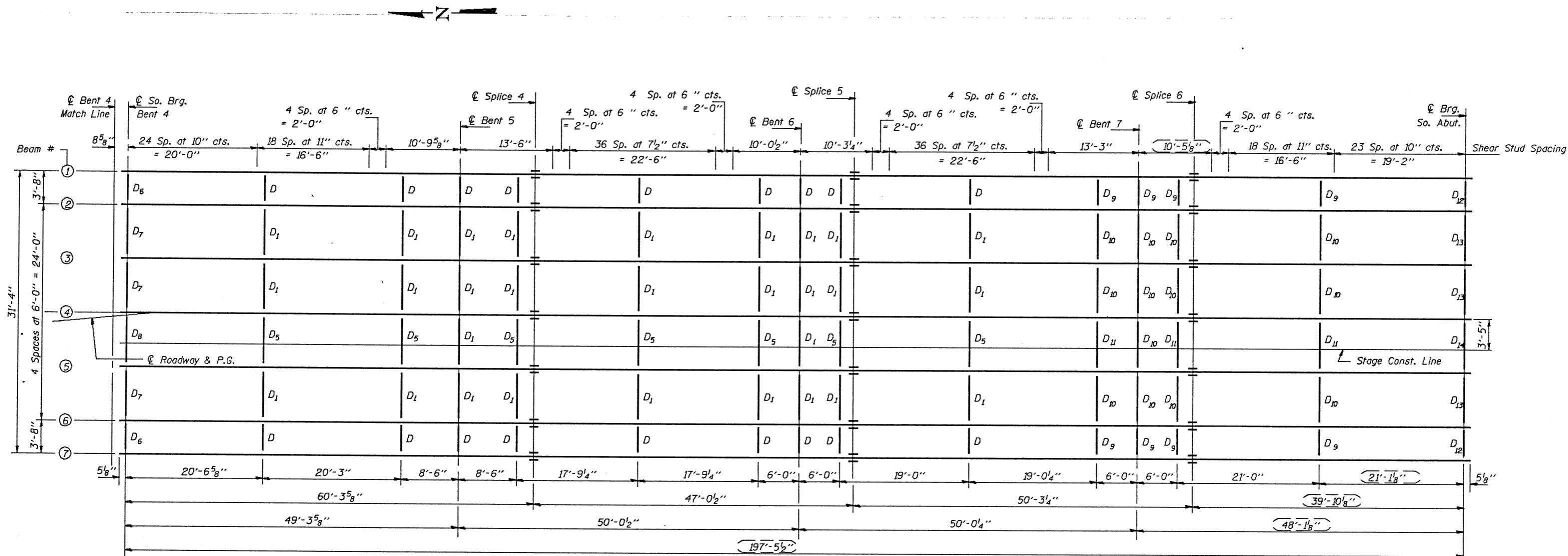
Notes: Two hardened washers shall be required over all bolt holes for diaphragms. The bolts for the slotted holes shall only be finger-tightened prior to the deck slab pouring and then be fully-tightened after completion of the pouring. All splice plate material of the W24 Beams shall meet Notch Toughness Requirements. All splice plate material of the W24 Beams shall be AASHTO M 223 Grade 50.

SPANS 1 THRU 4
STRUCTURAL STEEL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409-50

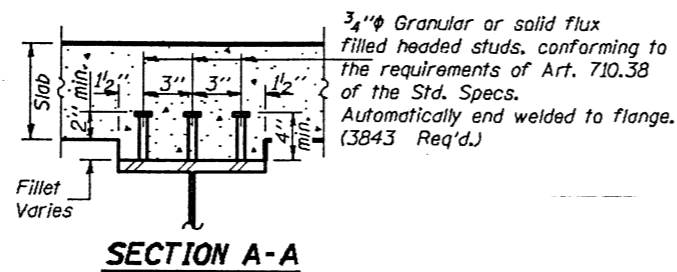
Notes: All beams shall be W24 x 76 (AASHTO M223, Grade 50) and shall meet Notch Toughness Requirements. For details of diaphragms and splices see sheet 18 of 36.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	DATE	SHEET NO.
P.A. 805	127BR	CLINTON	84	17A
36 SHEETS				



FRAMING PLAN



DESIGNED *Arnell L. Nims*
CHECKED *Walter J. Hill*
DRAWN *J.T. Downing*
CHECKED *A.L.N. 4/6/4*

EXAMINED *Origi O. Kasper*
PASSED *James J. Roberts*
APPROVED *[Signature]*
DIRECTOR OF HIGHWAYS

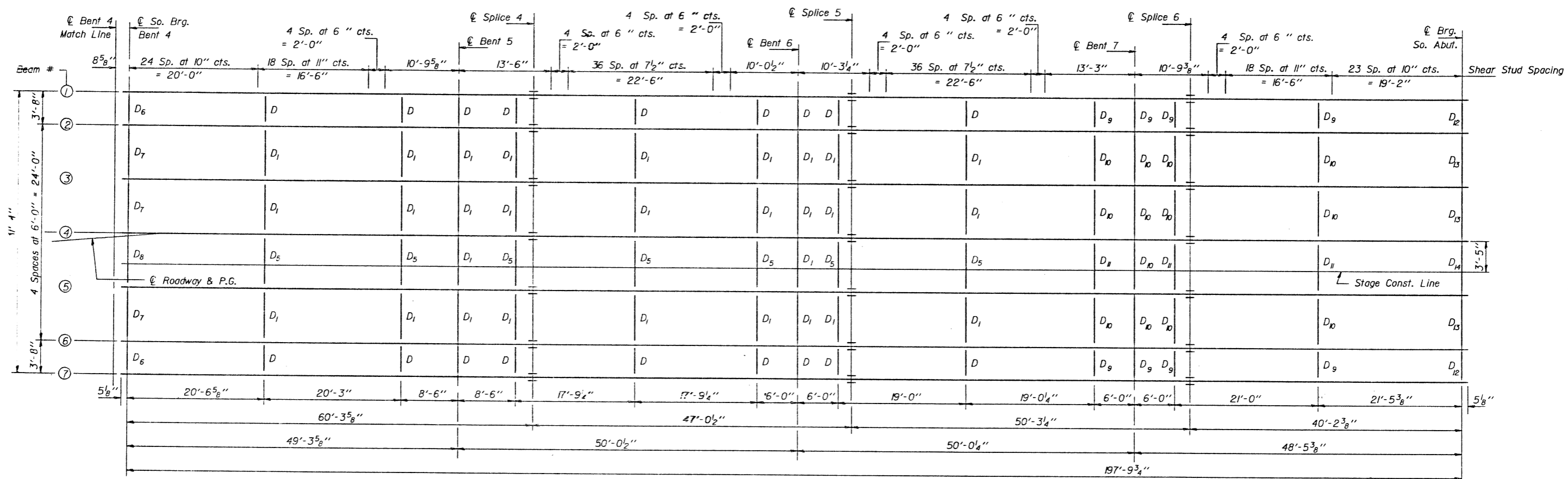
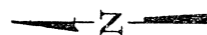
May 24 19 89

AS REVISED 3/8/90 A.L.N.
SPANS 5 THRU 8
STRUCTURAL STEEL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

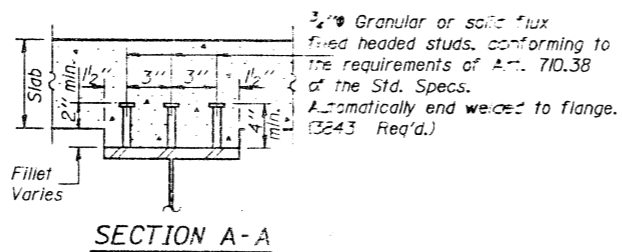
NOTES: All beams shall be W24 x 76 (AASHTO M223, Grade 50) and shall meet Notch Toughness Requirements. For details of diaphragms and splices see sheet 18 of 36.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17
			28		36 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			



FRAMING PLAN



DESIGNED: *W. J. Downing*
CHECKED: *Walter J. Wiley*
DRAWN: *J.T. Downing*
CHECKED: *W.J.H.*

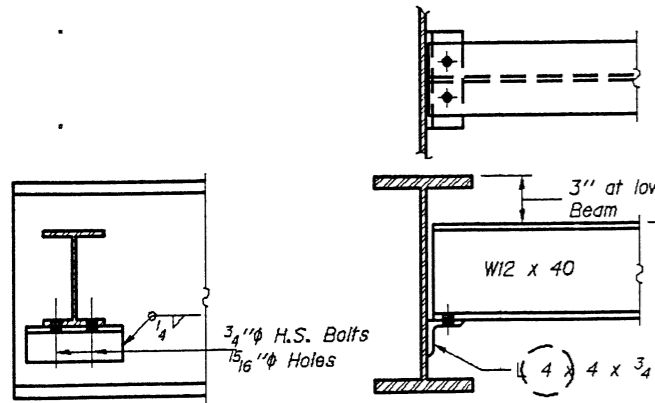
EXAMINED: *May 24 1969*
James J. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED: *James J. Kaspar*
ENGINEER OF BRIDGE AND STRUCTURES

APPROVED: _____
DIRECTOR OF HIGHWAYS

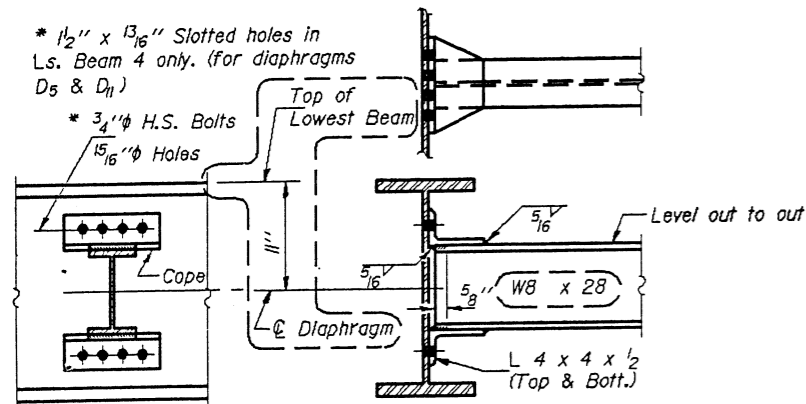
SPANS 5 THRU 8
STRUCTURAL STEEL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



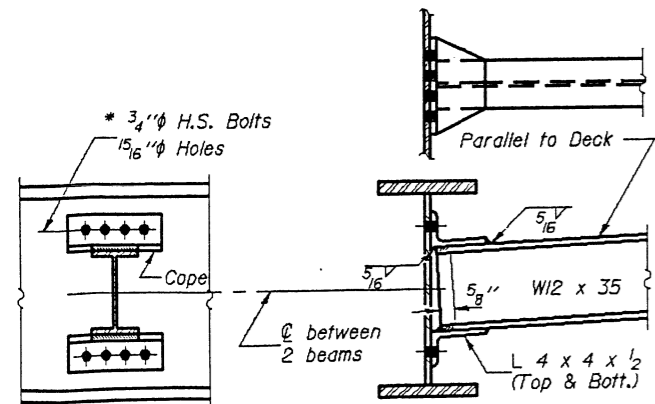
DIAPHRAGMS D₂ & D₃

2 D₂ Required
3 D₃ Required



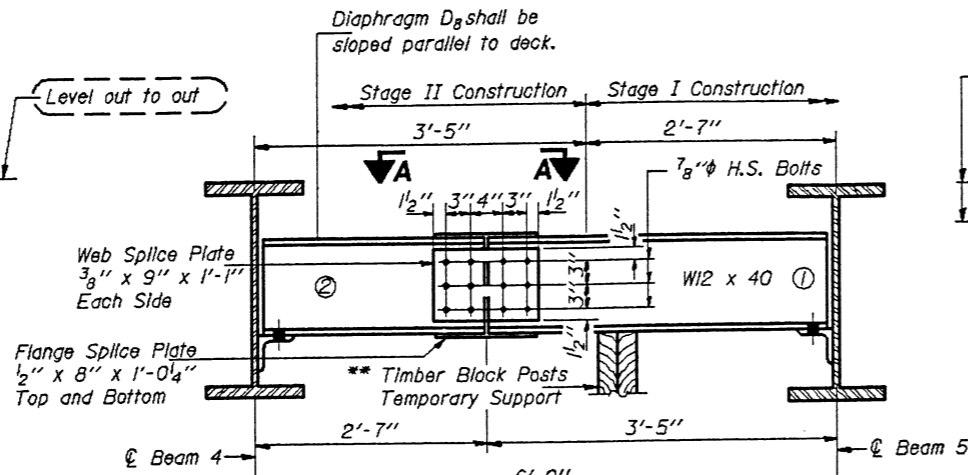
DIAPHRAGMS D₉, D₁₀ & D₁₁

8 D₉ Required
13 D₁₀ Required
3 D₁₁ Required



DIAPHRAGMS D, D₁ & D₅

18 D Required
29 D₁ Required
7 D₅ Required

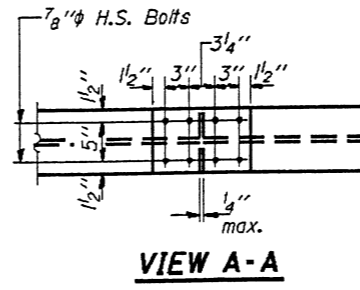


DIAPHRAGMS D₈ & D₁₁

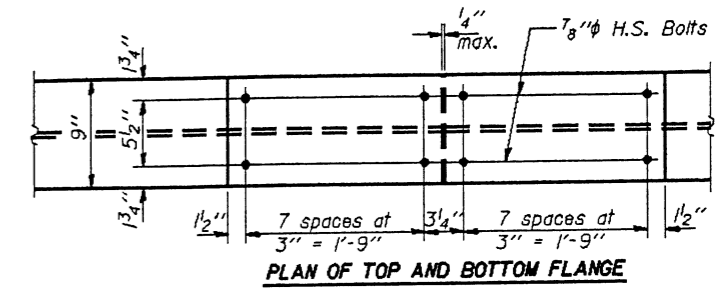
2 D₈, 1 D₁₁ Required (Looking South)
For details of connections to beams see Diaphragm D₇ & D₁₃.

DIAPHRAGMS D₈ & D₁₁ CONSTRUCTION SEQUENCE

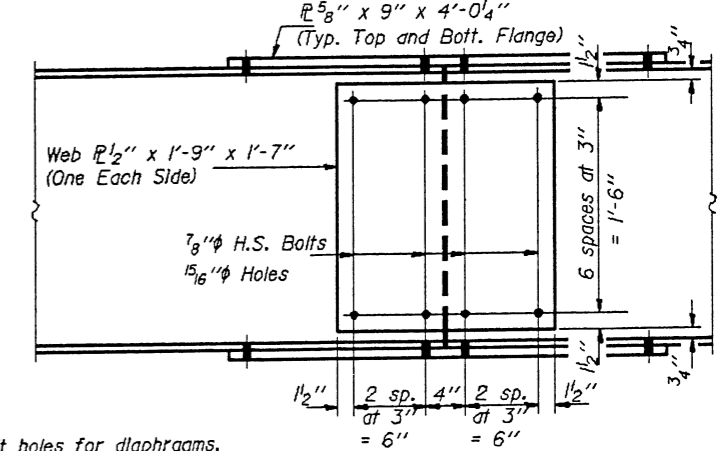
- 1.) Order Diaphragms D₈ & D₁₁ in two sections with lengths of 2'-6 3/8" and 3'-4 3/8".
- 2.) Attach part ① of Diaphragm to Beam 5 during Stage I Construction.
- 3.) Place Temporary Support System between part ① of diaphragm and abutment bearing seat.
- 4.) Attach part ② of diaphragm to both Beam 4 and part ① of diaphragm during Stage II Construction.
- 5.) Attach all splice plates to part ① and part ② of diaphragms.
- 6.) Remove Temporary Support System.



VIEW A-A



PLAN OF TOP AND BOTTOM FLANGE

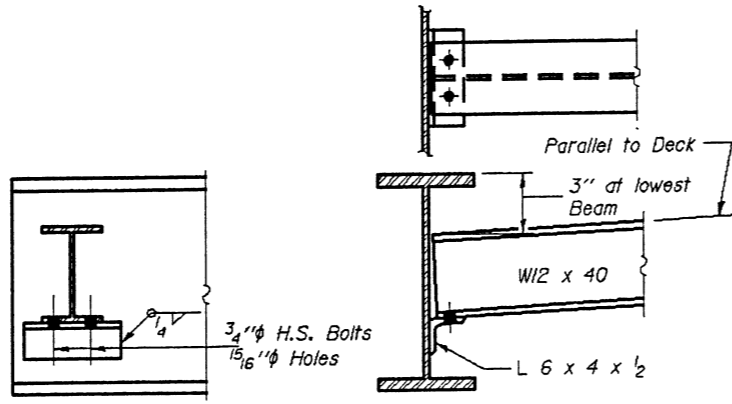


WEB ELEVATION

SPLICE DETAILS

Typical Splices 4, 5 & 6.

Notes: Two hardened washers shall be required over all bolt holes for diaphragms. The bolts for the slotted holes shall only be finger-tightened prior to the deck slab pouring and then be fully-tightened after completion of the pouring. All splice plate material of the W24 Beams shall meet Notch Toughness Requirements. All splice plate material of the W24 Beams shall be AASHTO M223, Grade 50.



DIAPHRAGMS D₆ & D₇

2 D₆ Required
3 D₇ Required

TOP OF BEAM ELEVATIONS

(For fabrication only.)

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7
© South Brg. Bent 4	426.56	426.38	426.08	425.78	425.42	425.06	424.84
© Bent 5	426.12	426.03	425.86	425.69	425.42	425.15	424.97
© Splice 4	426.02	425.95	425.81	425.67	425.42	425.17	425.00
© Bent 6	425.66	426.65	425.61	425.58	425.39	425.21	425.09
© Splice 5	425.59	425.59	425.57	425.56	425.38	425.22	425.11
© Bent 7	425.21	425.28	425.38	425.47	425.38	425.28	425.21
© Splice 6	425.15	425.23	425.34	425.45	425.38	425.29	425.23
© Brg. South Abut.	425.16	425.23	425.33	425.42	425.33	425.23	425.16

INTERIOR BEAM MOMENT TABLE				
	0.4 Sp. 5 0.6 Sp. 8	Bent 5 & 7	Bent 6	0.5 Spans 6 & 7
I _s (in ⁴)	2100	2100	2100	2100
I _c (in ⁴)	6667			6667
S _s (in ³)	176			176
S _c (in ³)	280.6			280.6
Z (in ³)		200	200	
ψ (K/ft.)	.674	.961	.961	.674
M _ℓ (K)	130.2	234.9	166.6	62.8
s _ℓ (K/ft.)	.287			.287
M _{sℓ} (K)	64.2			41.0
M _ℓ (K)	293.9	134.2	125.5	244.8
M (Imp) (K)	85.2	38.9	36.4	71.0
S ₃ (M _ℓ +I) (K)	631.8	288.5	269.8	526.3
M _a (K)	1074.1	680.4	567.3	819.1
M _u (K)	1636.1			1636.1
f _{sℓ} non-comp (k.s.i.)	8.9	14.1	10.0	4.3
f _{sℓ} (comp) (k.s.i.)	2.7			1.8
f _s S ₃ (ℓ+I) (k.s.i.)	27.0	17.3	16.2	22.5
f _s (Overload) (k.s.i.)	38.6	31.4	26.2	28.6
f _s (Total) (k.s.i.)		40.8	34.1	
VR (K)	43.2			45.0

INTERIOR BEAM REACTION TABLE			
	S. Abut. & S. Brg. Bent 4	Bent 5 & 7	Bent 6
R _ℓ (K)	19.3	54.2	45.5
R _ℓ (K)	31.0	36.3	35.9
Imp. (K)	9.0	10.5	10.4
R (Total) (K)	59.3	101.0	91.8

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
M_a (Applied Moment) = 1.3[M_ℓ + M_{sℓ} + S₃(M_ℓ + I)].
M_u is the Full Plastic Moment Capacity for Compact, Braced section.
f_s (Overload) is the sum of the stresses due to M_ℓ + M_{sℓ} + S₃(M_ℓ + I).
f_s (Total) (Non-compact section) is the sum of the stresses due to 1.3[M_ℓ + M_{sℓ} + S₃(M_ℓ + I)].

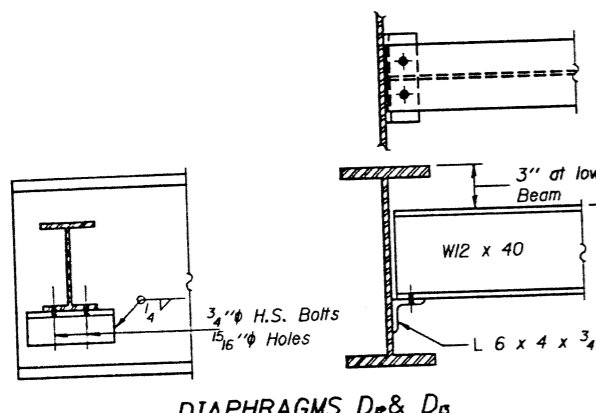
DESIGNED	
CHECKED	
DRAWN	J.T. Downing
CHECKED	

EXAMINED	<i>[Signature]</i>
PASSED	<i>[Signature]</i>
APPROVED	

AS REVISED 8/4/89 A.L.N.
SPANS 5 THRU 8
STRUCTURAL STEEL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

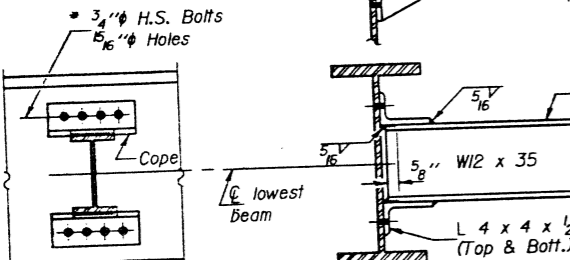
ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
			29	36 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



DIAPHRAGMS D₂ & D₃

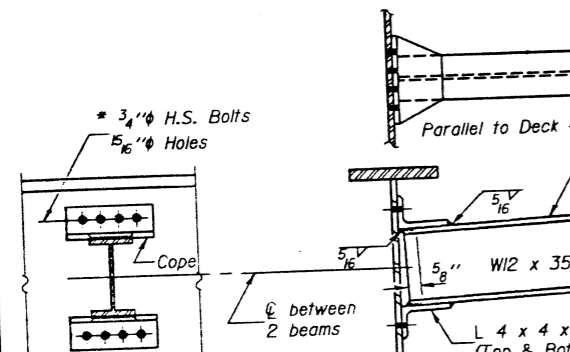
2 D₂ Required
3 D₃ Required

1/2" x 13/16" Slotted holes in L.S. Beam 4 only. (for diaphragms D₅ & D₇)



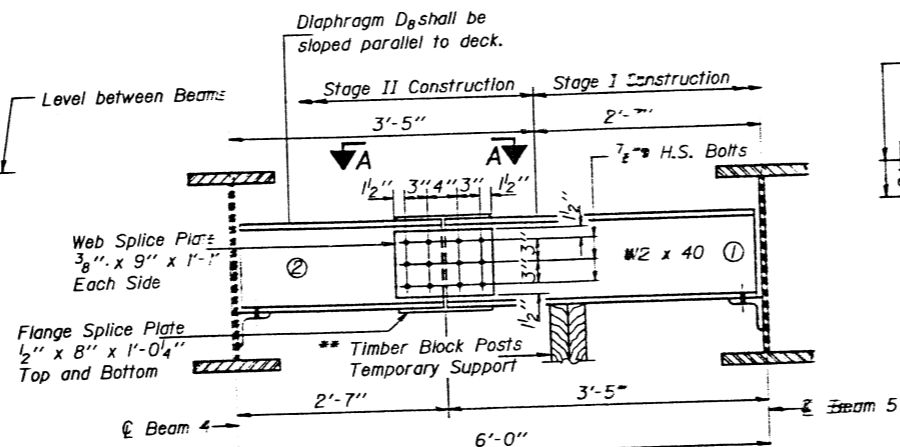
DIAPHRAGMS D₉, D₁₀ & D₁₁

8 D₉ Required
13 D₁₀ Required
3 D₁₁ Required



DIAPHRAGMS D, D₁ & D₅

18 D Required
29 D₁ Required
7 D₅ Required

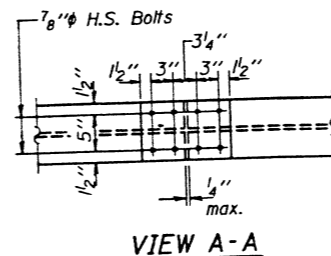


DIAPHRAGMS D₈ & D₁₄

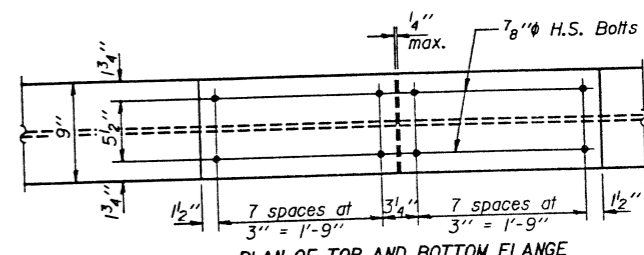
2-D₈, 1-D₁₄ Required (Looking South)
For details of connections to beams see Diaphragm D₇ & D₁

DIAPHRAGMS D₈ & D₁₄ CONSTRUCTION SEQUENCE

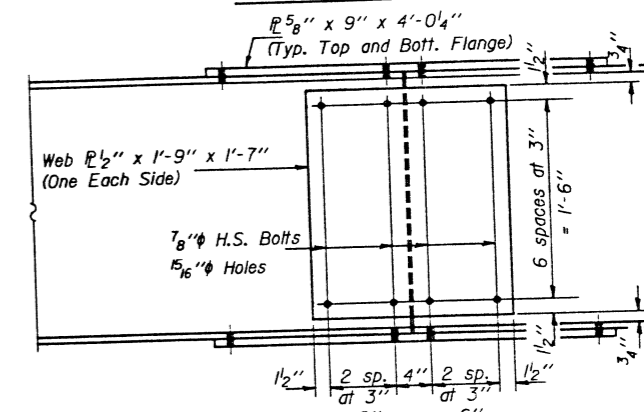
- 1) Order Diaphragms D₈ & D₁₄ in two sections with lengths of 2'-6 1/2" and 3'-4 3/8".
- 2) Attach part ① of Diaphragm to Beam 5 during Stage I Construction.
- 3) Place Temporary Support System between part ① of diaphragm and adjacent bearing seat.
- 4) Attach part ② of diaphragm to both Beam 4 and part ① of diaphragm during Stage II Construction.
- 5) Attach all splice plates to part ① and part ② of diaphragms.
- 6) Remove Temporary Support System.



VIEW A-A



PLAN OF TOP AND BOTTOM FLANGE

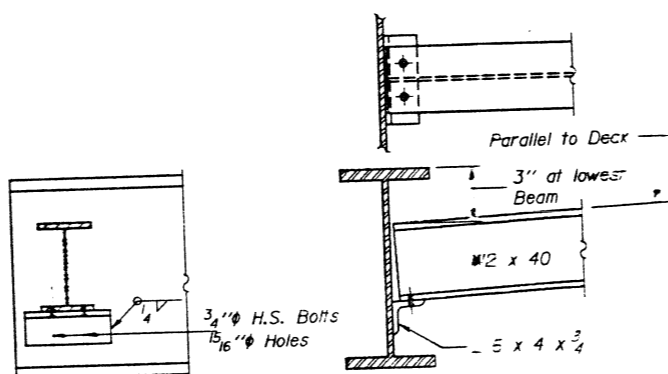


WEB ELEVATION

SPLICE DETAILS

Typical Splices 4, 5 & 6.

Notes: Two hardened washers shall be required over all bolt holes for diaphragms. The bolts for the slotted holes shall only be finger-tightened prior to the deck slab pouring and then be fully-tightened after completion of the pouring. All splice plate material of the W24 Beams shall meet Notch Toughness Requirements. All splice plate material of the W24 Beams shall be AASHTO M223 Grade 50.



DIAPHRAGMS D₆ & D₇

2 D₆ Required
3 D₇ Required

TOP OF BEAM ELEVATIONS

(For fabrication only.)

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7
© South Brg. Bent 4	426.56	426.38	426.08	425.78	425.42	425.06	424.84
© Bent 5	426.12	426.03	425.86	425.69	425.42	425.15	424.87
© Splice 4	426.02	425.95	425.81	425.67	425.42	425.17	424.90
© Bent 6	425.66	426.65	425.61	425.58	425.39	425.2	425.09
© Splice 5	425.59	425.59	425.57	425.58	425.38	425.22	425.1
© Bent 7	425.21	425.28	425.38	425.47	425.38	425.28	425.21
© Splice 6	425.15	425.23	425.34	425.45	425.38	425.29	425.23
© Brg. South Bent	425.16	425.23	425.33	425.42	425.33	425.23	425.18

	INTERIOR BEAM MOMENT TABLE			
	0.4 Sp. 5 0.6 Sp. 8	Bent 5 & 7	Bent 6	0.5 Spans 6 & 7
I _s (in ⁴)	2100	2100	2100	2100
I _c (in ⁴)	6667			6667
S _s (in ³)	175			176
S _c (in ³)	280.5			280.6
Z (in ³)		200	200	
I _p (K/ft.)	.674	.961	.961	.674
M _R (K)	132.2	234.9	166.6	62.8
s _p (K/ft.)	.287			.287
M _{sR} (K)	64.2			41.0
M _t (K)	293.9	134.2	125.5	244.8
M (Imp) (K)	65.2	38.9	36.4	71.0
S ₃ (M _t +I) (K)	63.9	288.5	269.8	526.3
M _a (K)	1074.1	680.4	567.3	819.1
M _u (K)	1532.1			1636.1
f _{sR} non-comp (k.s.i.)	6.9	14.1	10.0	4.3
f _{sR} (comp) (k.s.i.)	2.7			1.8
f _s (k+I) (k.s.i.)	27.0	17.3	16.2	22.5
f _s (Overload) (k.s.i.)	32.5	31.4	26.2	28.6
f _s (Total) (k.s.i.)		40.8	34.1	45.0
VR (K)	43.2			

	INTERIOR BEAM REACTION TABLE		
	S. Abut. & S. Brg. Bent 4	Bent 5 & 7	Bent 6
R _p (K)	19.3	54.2	45.5
R _t (K)	31.0	36.3	35.9
Imp. (K)	9.0	10.5	10.4
R (Total) (K)	59.3	101.0	91.8

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
M_a (Applied Moment) = 1.3[M_R + M_{sR} + S₃(M_t + I)].
M_u is the Full Plastic Moment Capacity for Compact, Braced section.
f_s (Overload) is the sum of the stresses due to M_R + M_{sR} + S₃(M_t + I).
f_s (Total) (Non-compact section) is the sum of the stresses due to 1.3[M_R + M_{sR} + S₃(M_t + I)].

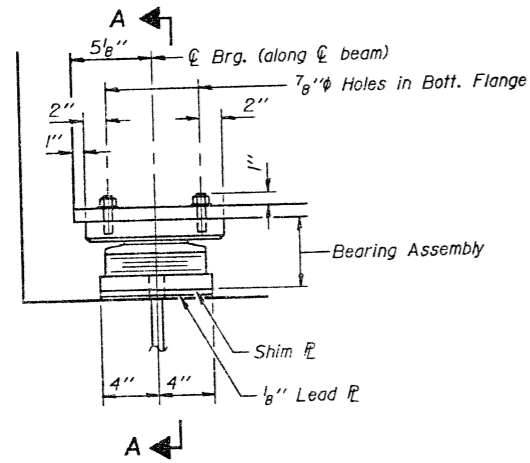
SPANS 5 THRU 8
STRUCTURAL STEEL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

DESIGNED *Clinton Thomas*
CHECKED *Walter J. H. H.*
DRAWN *J.T. Downing*
CHECKED *W.J.H.*

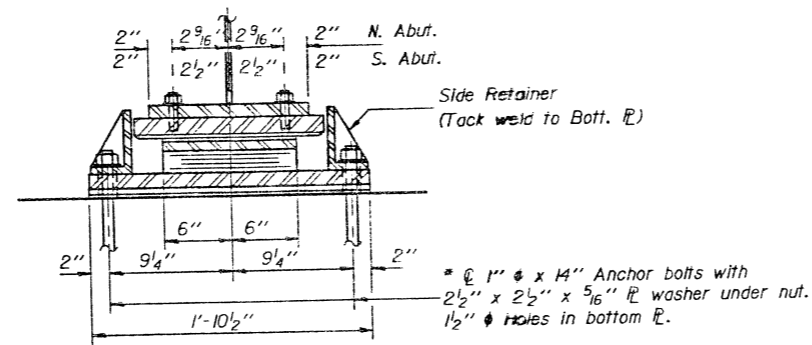
EXAMINED *Greg J. Kaspar*
PASSED *James J. Kaspar*
APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

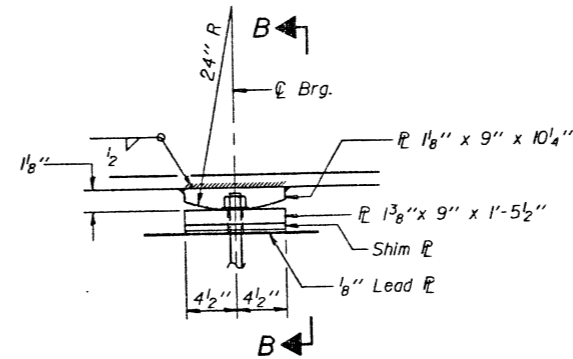
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
			30	36 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



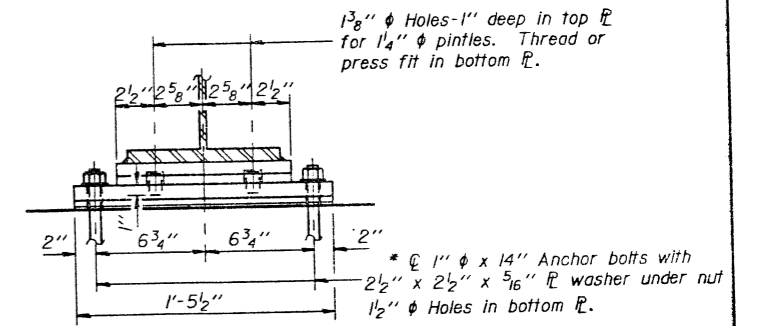
ELEVATION AT ABUTS.



SECTION A-A



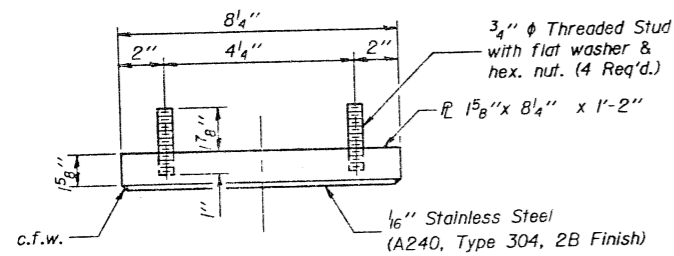
ELEVATION AT BENT 5



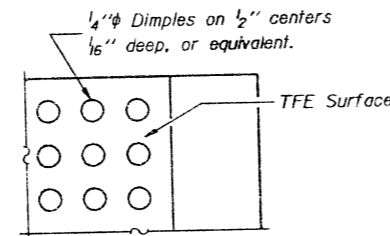
SECTION B-B

TYPE II TFE ELASTOMERIC EXP. BRG.

FIXED BEARING

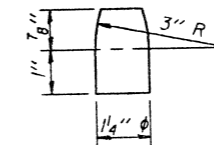


TOP BEARING ASSEMBLY

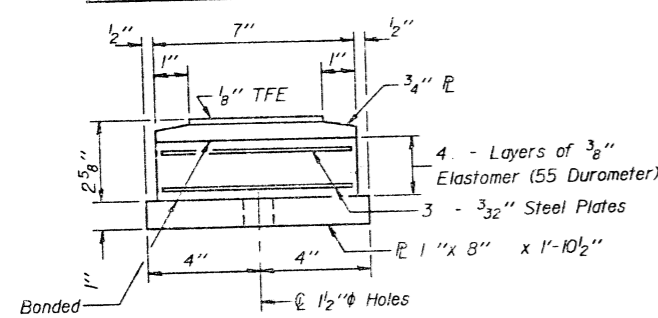


PLAN-TFE SURFACE

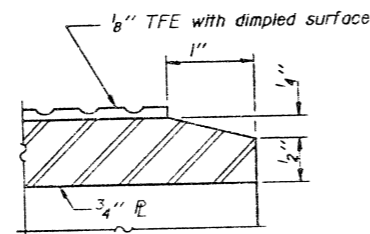
* See sheet 35 of 36 for Anchor Bolt Installation.



PINTLE



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

Note: The 1/8" TFE 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 WWM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

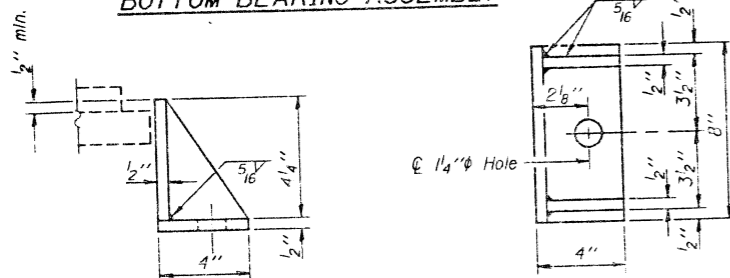
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Notes: Steel used for bearing plates shall conform to AASHTO M223, Grade 50. Work this sheet with sheet 20 of 36.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	28

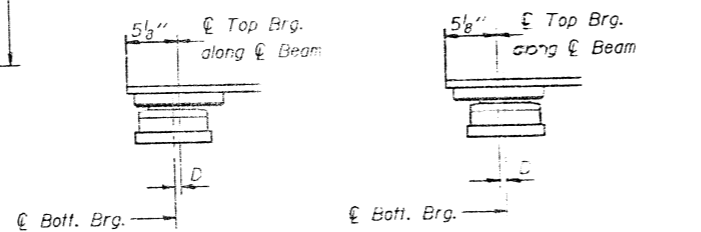
BEARINGS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50



SIDE RETAINER

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

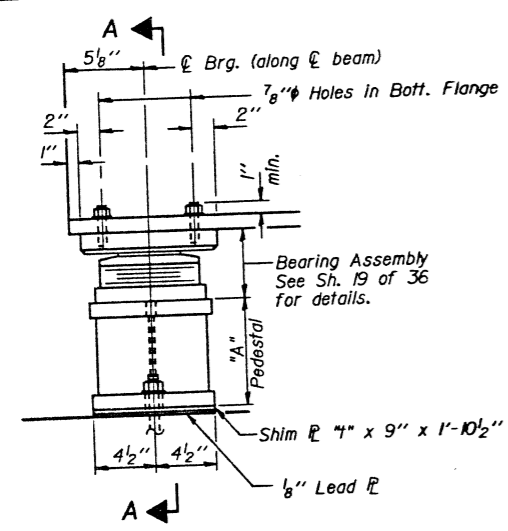
DESIGNED <i>J.T. Downing</i>	EXAMINED <i>Orji O. Kaspar</i>
CHECKED <i>J.T. Downing</i>	PASSED <i>James J. Kuyburn</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>James J. Kuyburn</i>
CHECKED <i>(1.7.77)</i>	DIRECTOR OF HIGHWAYS



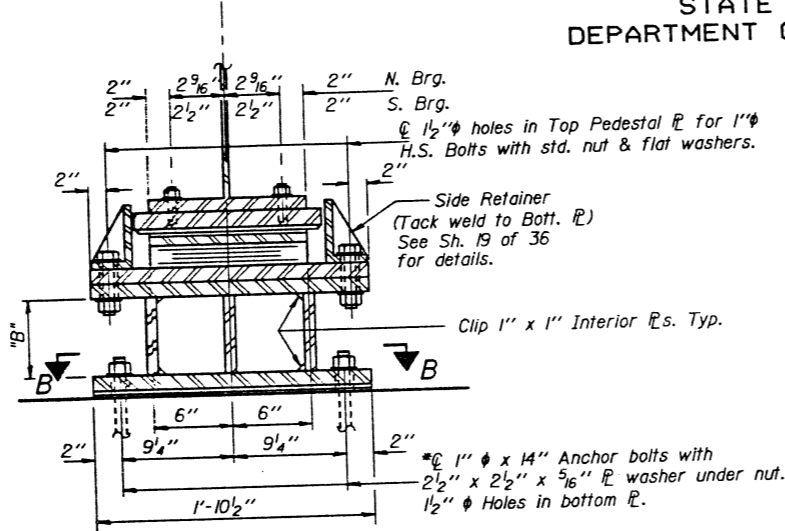
SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 5° temp. change from the normal temp. of 50°F.

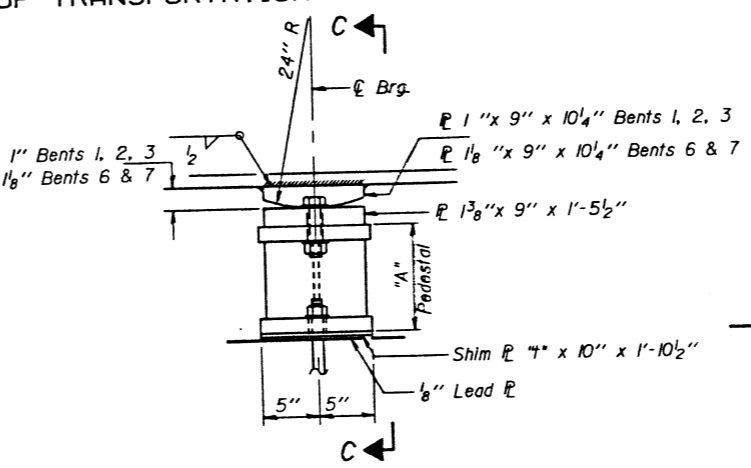
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



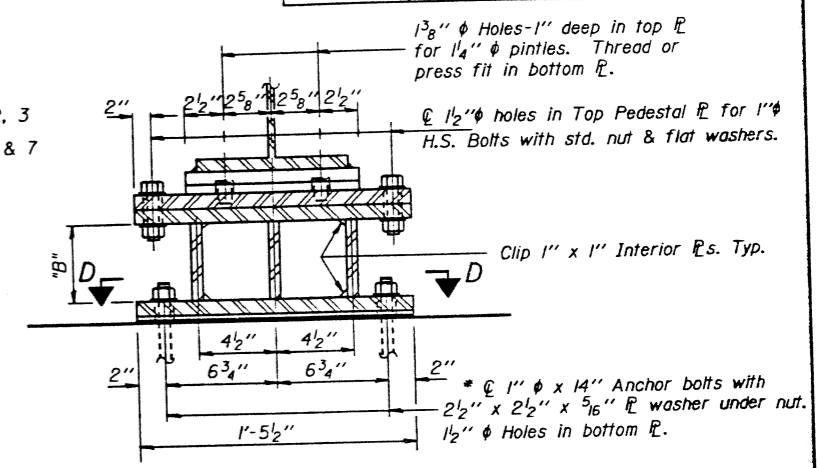
ELEVATION AT BENT 4



SECTION A-A



ELEVATION AT BENTS 1 THRU 3, 6 & 7

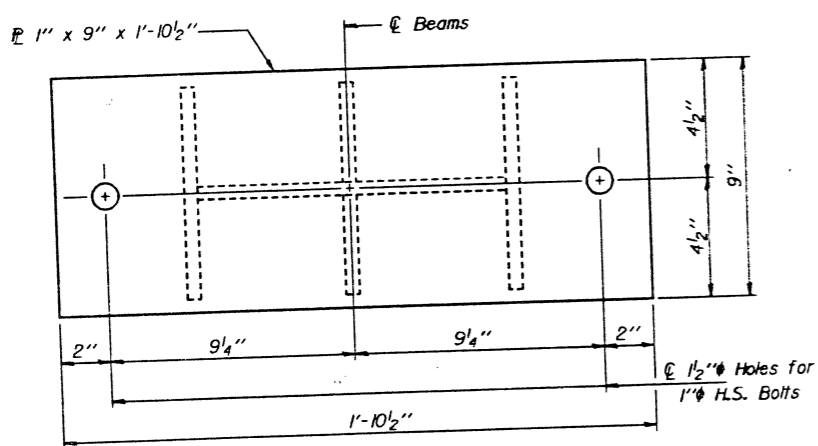


SECTION C-C

* See sheet 35 of 36 for Anchor Bolt Installation.

TYPE II TFE ELASTOMERIC EXP. BRG.

Notes: Weight of Steel Shim Plates, Lead Plates, bolts with nuts & washers, side retainers, and Pedestals is included in "Structural Steel". Steel used in Pedestals and Bearing plates shall conform to AASHTO M223, Grade 50.



PLAN TOP PEDESTAL PLATE

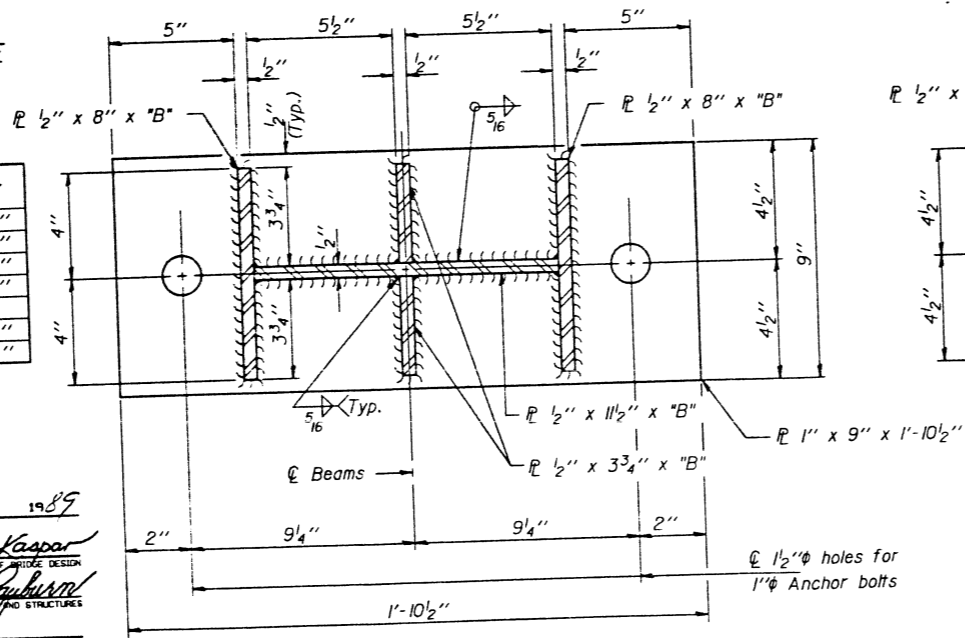
TABLE OF "A" DIMENSIONS

Beam #	1	2	3	4	5	6	7
Bent 1	10 1/2"	10 1/2"	10 1/2"	10 1/2"	10 1/2"	11 1/4"	10 1/2"
Bent 2	10 1/2"	10"	10 1/2"	10 1/2"	10 1/2"	11 1/4"	10 1/2"
Bent 3	10 1/2"	10"	10"	10 1/2"	11 1/2"	12 1/2"	10 1/2"
N. Brg. Bent 4	6 3/4"	*	6 3/4"	9 1/4"	10 1/2"	12 1/2"	9 1/4"
S. Brg. Bent 4	6 3/4"	5"	6 3/4"	9 1/4"	11"	12 1/2"	10"
Bent 6	8 1/4"	8 1/4"	9 1/4"	11 1/4"	11"	11"	9 1/4"
Bent 7	9 1/4"	10"	11 1/2"	12 1/2"	11 1/2"	10"	9 1/4"

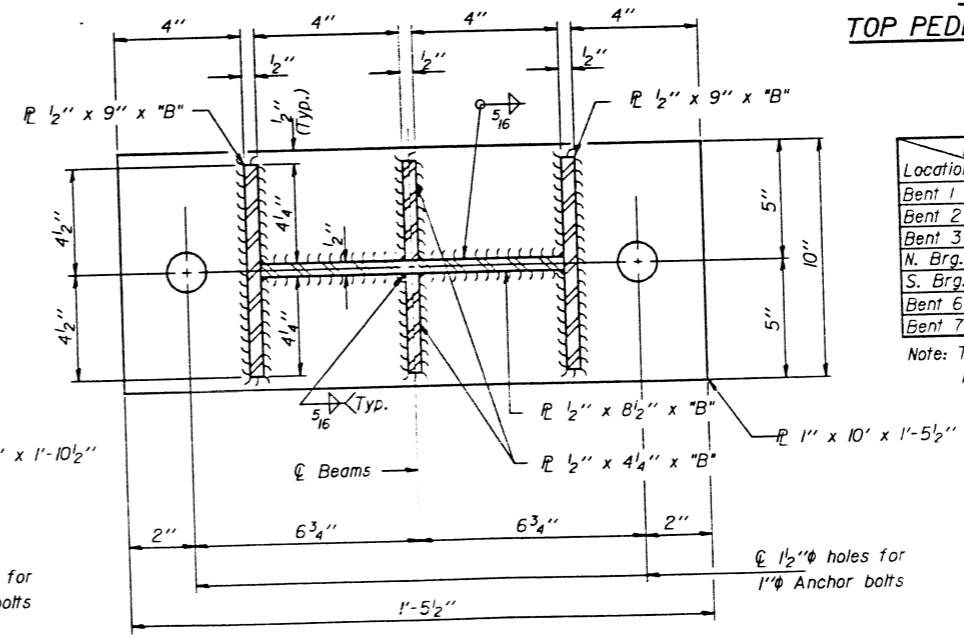
* No pedestal required. The bearing shall be shimmed 4 5/8" using plates with plan dimensions as shown in Sec. D-D.

TABLE OF "B" DIMENSIONS

Beam #	1	2	3	4	5	6	7
Bent 1	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	9 1/4"	8 1/2"
Bent 2	8 1/2"	8"	8 1/2"	8 1/2"	8 1/2"	9 1/4"	8 1/2"
Bent 3	8 1/2"	8"	8 1/2"	9 1/2"	10 1/2"	10 1/2"	8 1/2"
N. Brg. Bent 4	4 3/4"		4 3/4"	7 1/4"	8 1/2"	10 1/2"	7 1/4"
S. Brg. Bent 4	4 3/4"	3"	4 3/4"	7 1/4"	9"	10 1/2"	8"
Bent 6	6 1/4"	6 1/4"	7 1/4"	9 1/4"	9"	9"	7 1/4"
Bent 7	7 1/4"	8"	9 1/2"	10 1/2"	9 1/2"	10"	7 1/4"



SECTION B-B



SECTION D-D

PLAN TOP PEDESTAL PLATE

TABLE OF "I" DIMENSIONS

Beam #	1	2	3	4	5	6	7
Bent 1	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Bent 2	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Bent 3	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
N. Brg. Bent 4	1 1/2"	4 5/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
S. Brg. Bent 4	3 1/2"	1 1/2"	3 1/2"	1 1/2"	1 1/2"	1 1/2"	3 1/2"
Bent 6	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Bent 7	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

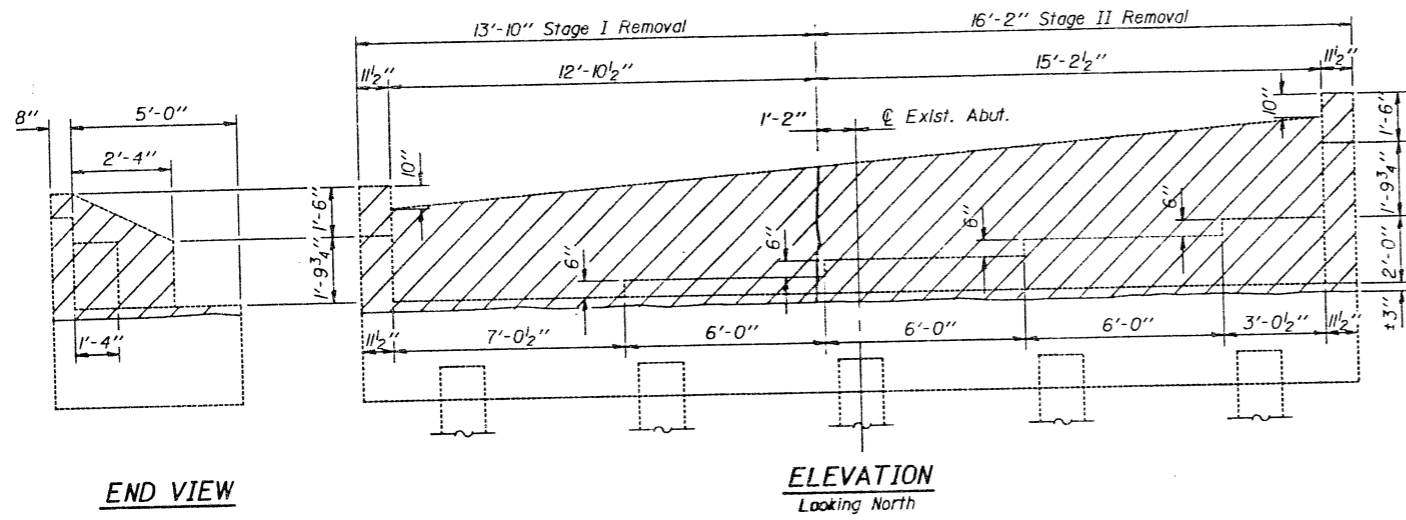
Note: The Contractor shall supply additional shim plates if required to bring bearings to grade.

DESIGNED: *Angela J. ...*
EXAMINED: *May 24 1989*
CHECKED: *J.T. Downing*
DRAWN: *J.T. Downing*
APPROVED: *James J. ...*
DIRECTOR OF HIGHWAYS

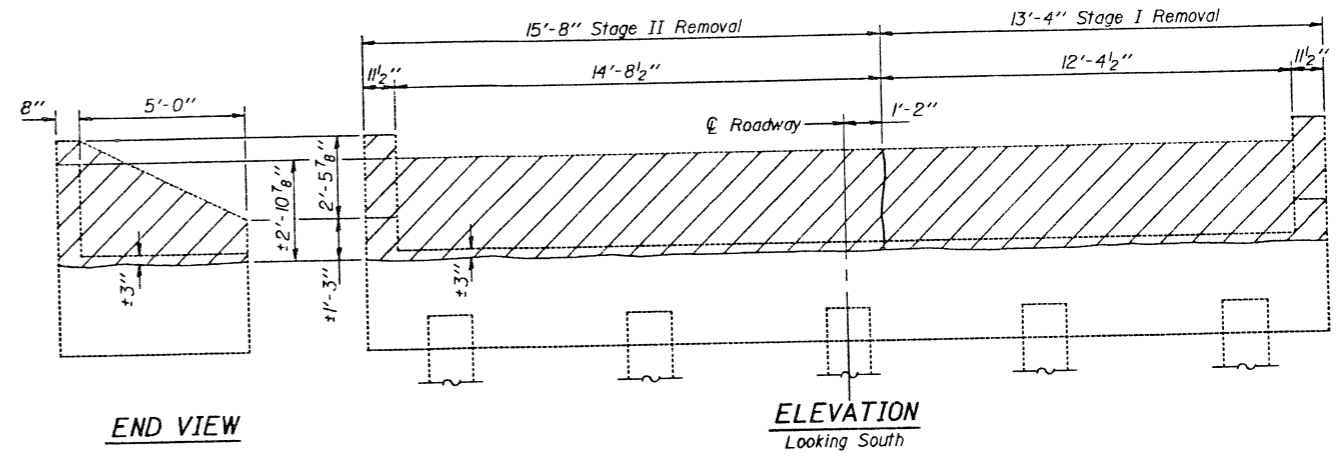
BEARINGS WITH PEDESTALS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

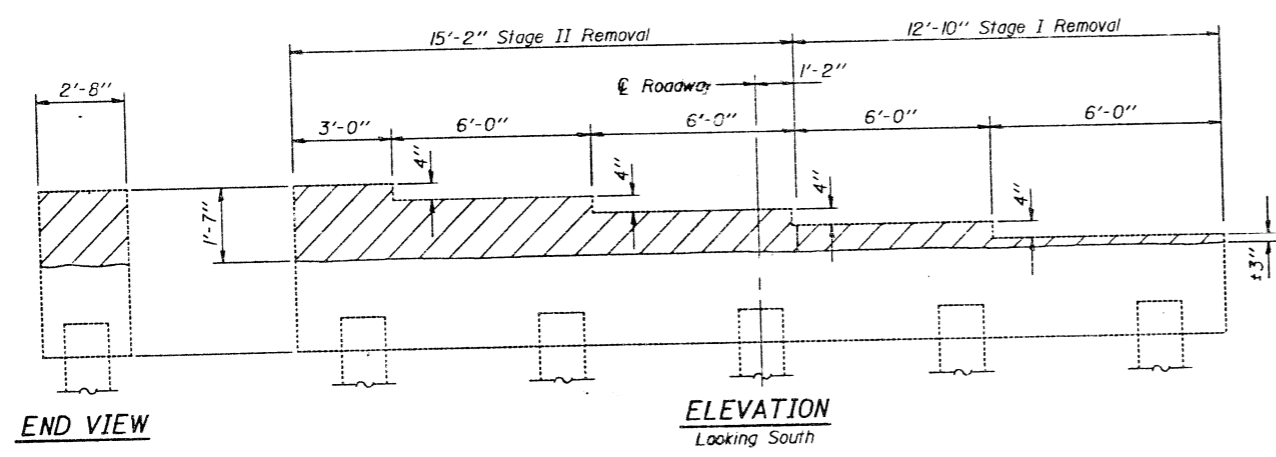
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 21
			32	36 SHEETS
F.A.P.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



STAGE REMOVAL NORTH ABUTMENT BENT
For Stage Construction see sheet 23 of 36.



STAGE REMOVAL SOUTH ABUTMENT BENT
For Stage Construction see sheet 24 of 36.



STAGE REMOVAL BENT 5
For Stage Construction see sheets 29 of 36.

Notes: Hatched areas indicate "Concrete Removal".
Concrete Removal shall not be carried below the top elevation of existing stirrup bars inside the existing pile bent caps.
In back wall of abutments, clean, straighten and incorporate existing vertical bars into new construction.
In wings of abutments cut off existing vertical bars flush with concrete removal line.
Existing anchor bolts shall be cut off flush at the concrete removal line. Cost is incidental to "Concrete Removal".

**BILL OF MATERIAL
FOR BENT 5**

Item	Unit	Total
Concrete Removal	Cu. Yd.	2.3

**BILL OF MATERIAL
FOR BOTH ABUTMENTS**

Item	Unit	Total
Concrete Removal	Cu. Yd.	10.3

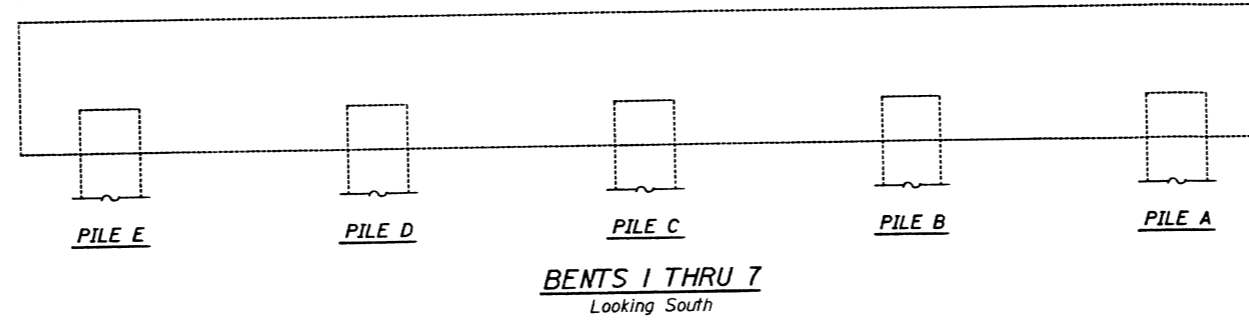
CONCRETE REMOVAL
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

DESIGNED *Angela J. Hensley*
CHECKED *J.T. Downing*
DRAWN *J.T. Downing*
CHECKED *J.T. Downing*

EXAMINED *Raj D. Kaspar*
PASSED *James J. Kuehner*
APPROVED *[Signature]*

May 24 1985
DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



EPOXY MORTAR REPAIR LOCATIONS

Location	Pile A	Pile B	Pile C	Pile D	Pile E	CCP
Bent 1	1.3 Cu. Ft.	—	—	—	.3 Cu. Ft.	—
Bent 2	—	—	—	—	—	.5 Cu. Ft.
Bent 3	.3 Cu. Ft.	—	1.3 Cu. Ft.	.5 Cu. Ft.	1.7 Cu. Ft.	—
Bent 4	.2 Cu. Ft.	.2 Cu. Ft.	.3 Cu. Ft.	—	—	—
Bent 5	1.3 Cu. Ft.	.3 Cu. Ft.	.7 Cu. Ft.	.8 Cu. Ft.	.5 Cu. Ft.	—
Bent 6	—	—	—	—	—	.5 Cu. Ft.
Bent 7	—	—	—	—	—	1.5 Cu. Ft.

EPOXY CRACK SEALING LOCATIONS

Bent 1	North face near Pile A	1 Lin. Ft.
Bent 6	Each side near Pile D	1 Lin. Ft.
Bent 7	N. face near Piles A & D & S. face near Pile E	3 Lin. Ft.

(Locations refer to the cap of the bents)

BILL OF MATERIAL

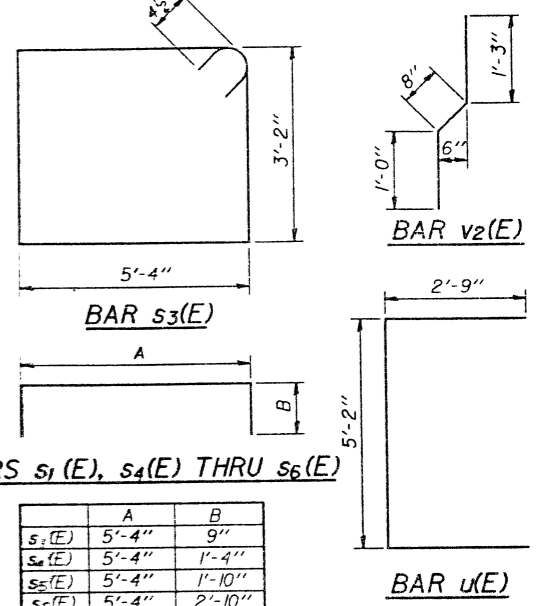
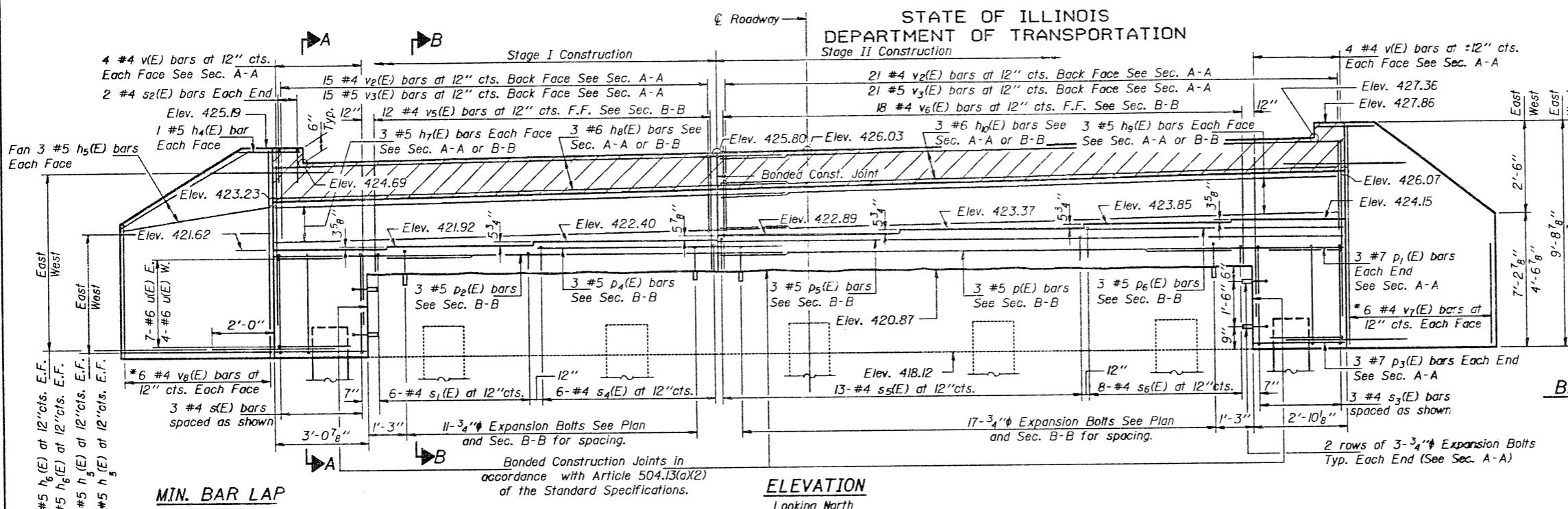
Item	Unit	Total
* Epoxy Mortar Repair	Cu. Ft.	12.2
Epoxy Crack Sealing	Lin. Ft.	5

* Quantity is based on an averaged thickness of 2", actual quantity to be adjusted in the field.

DESIGNED <i>Arvid J. Hensley</i>	EXAMINED <i>May 24 1988</i>
CHECKED <i>James J. Kasper</i>	PASSED <i>James J. Kasper</i>
DRAWN <i>J.T. Downing</i>	APPROVED <i>James J. Kasper</i>
CHECKED <i>S.M.</i>	DIRECTOR OF HIGHWAYS

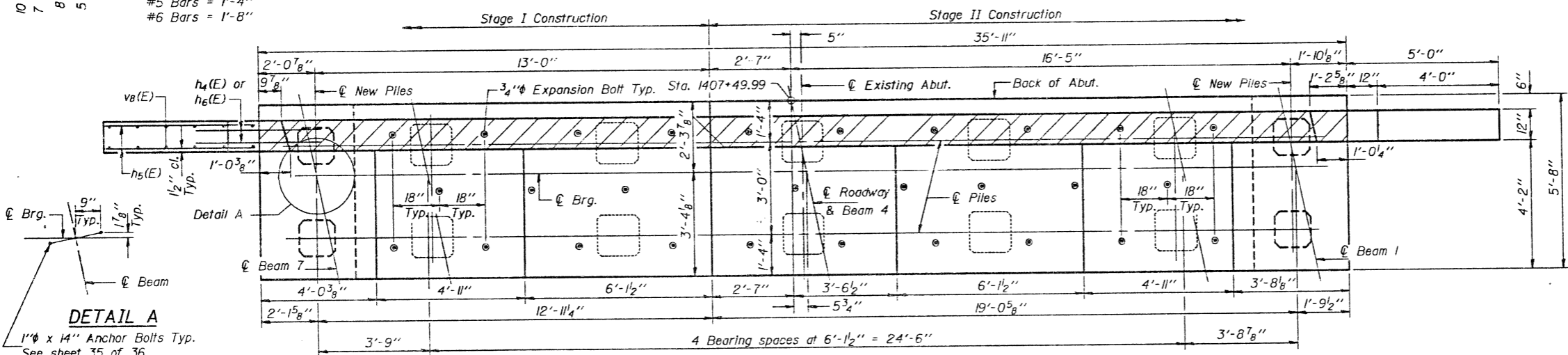
BENT REPAIR
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

ELEVATION
Looking North



DETAIL A
1"Ø x 14" Anchor Bolts Typ.
See sheet 35 of 36.

PILE DATA

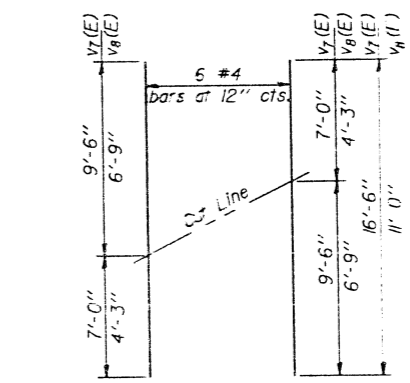
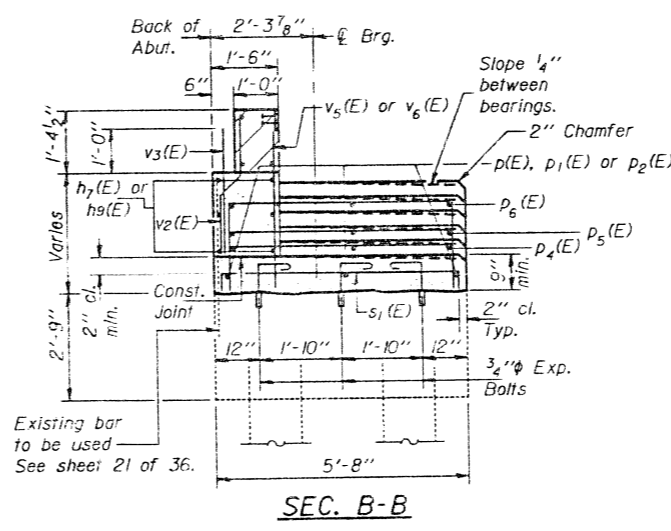
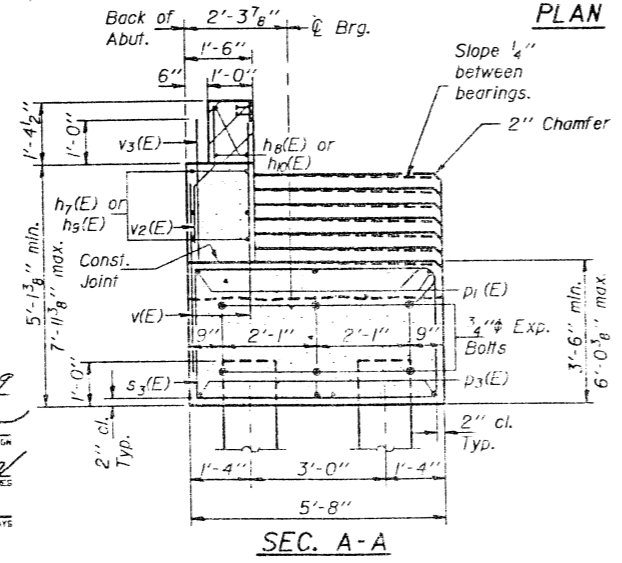
Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 30'
No. Required: 3 plus 1 test pile

Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
Four steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.
Hatched area to be poured after superstructure is in place and form work is removed. Concrete in hatched area shall be filled with superstructure as "Class X Concrete Superstructure".

DESIGNED: *Angela J. Thomas*
CHECKED: *[Signature]*
DRAWN: J.T. Downing
CHECKED: *[Signature]*

EXAMINED: *[Signature]*
PASSED: *[Signature]*
APPROVED: *[Signature]*
DIRECTOR OF HIGHWAYS

May 24 1989



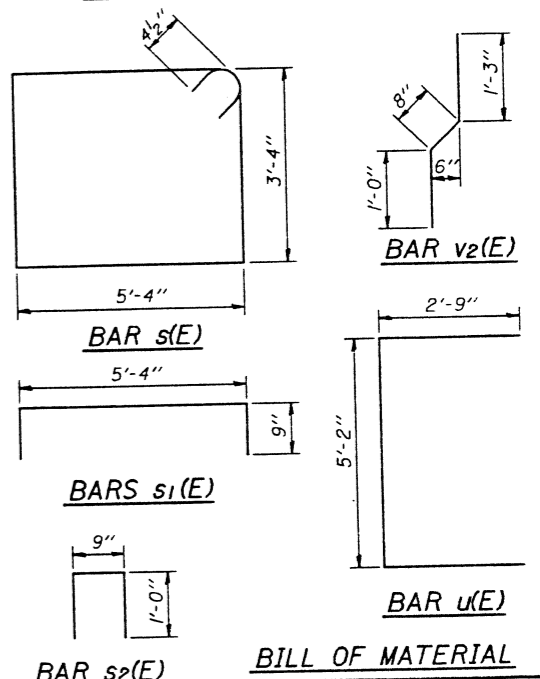
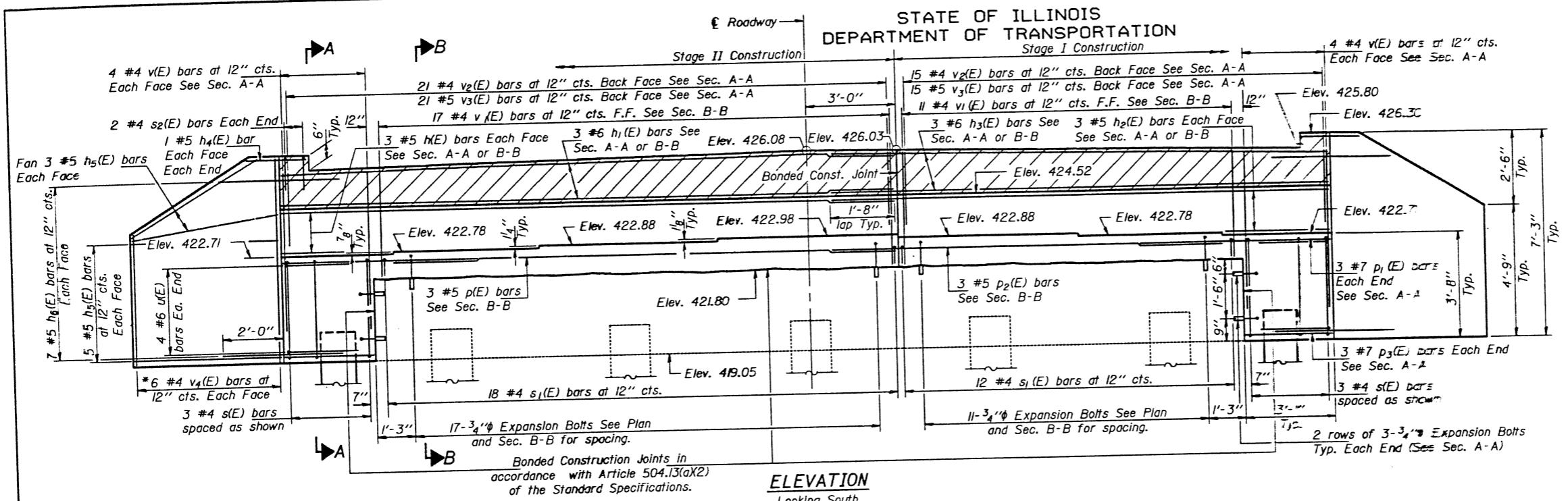
* FIELD CUTTING DIAGRAM
Order v7(E) & v8(E) bars full length. Cut to fit as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4(E)	4	#5	1'-9"	
h5(E)	38	#5	4'-9"	
h6(E)	34	#5	4'-0"	
h7(E)	6	#5	16'-6"	
h8(E)	3	#6	16'-6"	
h9(E)	6	#5	20'-7"	
hd(E)	3	#6	20'-7"	
p(E)	3	#5	16'-2"	
p1(E)	6	#7	6'-0"	
p2(E)	3	#5	11'-11"	
p3(E)	6	#7	2'-9"	
p4(E)	3	#5	7'-6"	
p5(E)	3	#5	13'-7"	
p6(E)	3	#5	8'-4"	
s1(E)	6	#4	6'-10"	
s2(E)	4	#4	2'-9"	
s3(E)	6	#4	17'-9"	
s4(E)	6	#4	8'-0"	
s5(E)	13	#4	9'-0"	
s6(E)	8	#4	11'-0"	
u(E)	11	#6	10'-8"	
v(E)	16	#4	4'-6"	
v2(E)	36	#4	2'-11"	
v3(E)	36	#5	2'-0"	
v5(E)	12	#4	3'-9"	
v6(E)	18	#4	4'-9"	
v7(E)	6	#4	16'-6"	
v8(E)	6	#4	11'-0"	
Expansion Bolts	3/4"	Each	40	
Class X Concrete		Cu. Yd.	24.5	
Reinforcement Bars		Pound	1870	
Epoxy Coated				
Precast Concrete Piles 14"		Lin. Ft.	90	
Test Pile Precast Concrete		Each	1	
Structure Excavation		Cu. Yd.	24	

Reinforcement bars designated (E) shall be epoxy coated.

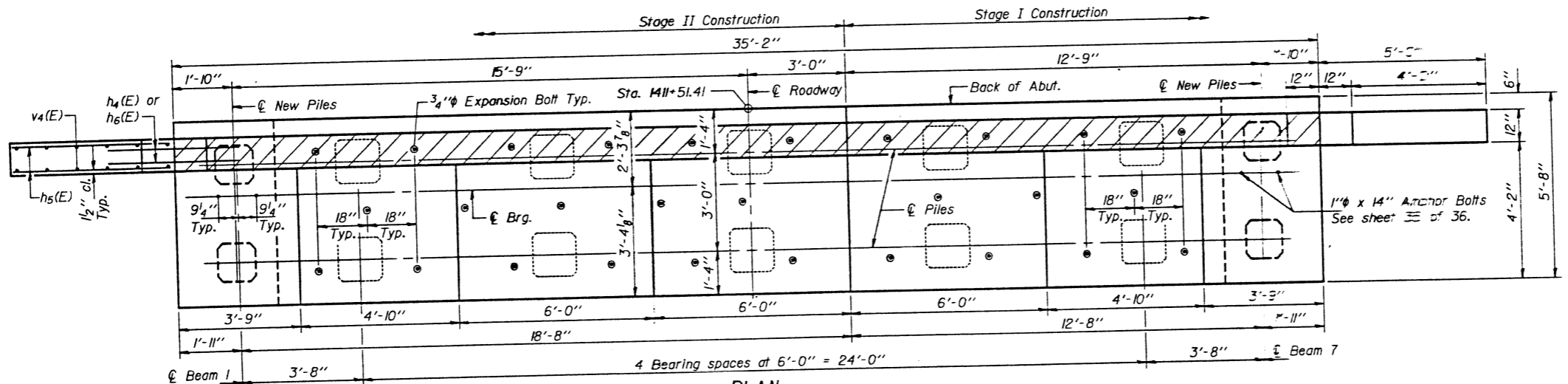
NORTH ABUTMENT
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	6	#5	20'-4"	
h ₁ (E)	3	#6	20'-4"	
h ₂ (E)	6	#5	16'-2"	
h ₃ (E)	3	#6	16'-2"	
h ₄ (E)	4	#5	1'-9"	
h ₅ (E)	32	#5	4'-9"	
h ₆ (E)	28	#5	4'-0"	
p ₁ (E)	3	#5	16'-3"	
p ₂ (E)	6	#7	6'-0"	
p ₂ (E)	3	#5	11'-11"	
p ₃ (E)	6	#7	2'-9"	
s(E)	6	#4	18'-1"	□
s ₁ (E)	26	#4	6'-10"	□
s ₂ (E)	4	#4	2'-9"	□
u(E)	8	#6	10'-8"	□
v ₁ (E)	16	#4	4'-6"	
v ₁ (E)	28	#4	3'-5"	
v ₂ (E)	36	#4	2'-11"	
v ₃ (E)	36	#5	2'-0"	
v ₄ (E)	12	#4	11'-6"	
Expansion Bolts 3/4"	Each			40
Class X Concrete				Cu. Yd. 16.7
Reinforcement Bars Epoxy Coated				Pound 1570
Precast Concrete Piles 14"				Lin. Ft. 75
Test Pile Precast Concrete				Each 1
Structure Excavation				Cu. Yd. 20

Reinforcement bars designated (E) shall be epoxy coated.



PILE DATA

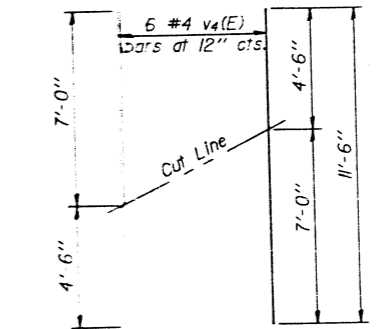
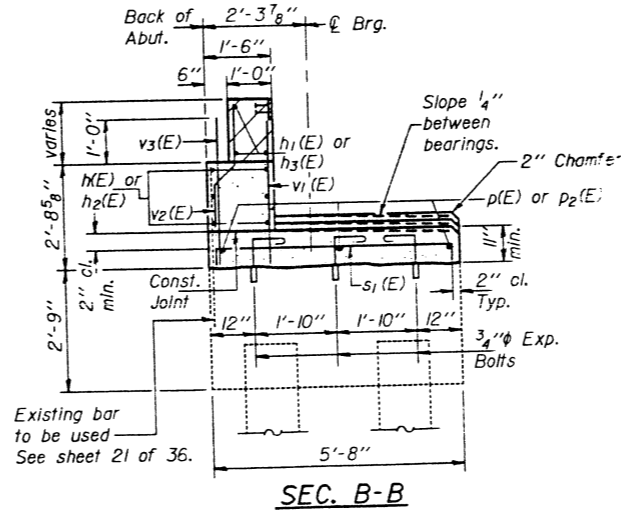
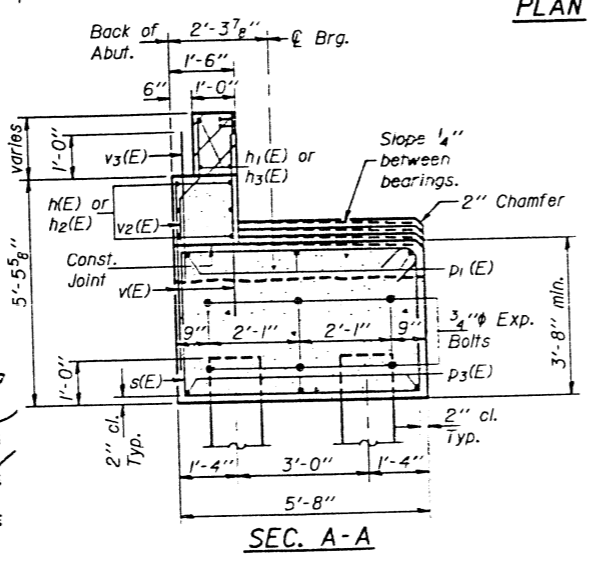
Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 25'
No. Required: 3 plus 1 test pile

Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.
Hatched area to be poured after superstructure is in place and form work is removed. Concrete in hatched area shall be billed with superstructure as "Class X Concrete Superstructure".

DESIGNED: *Angela L. Whiting*
CHECKED: *Stacy D. ...*
DRAWN: J.T. Downing
CHECKED: *...*

EXAMINED: *Greg J. Kaspar*
PASSED: *James J. ...*
APPROVED: *...*

May 24 1989

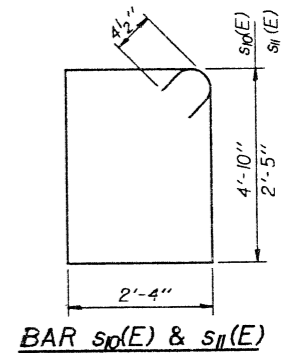
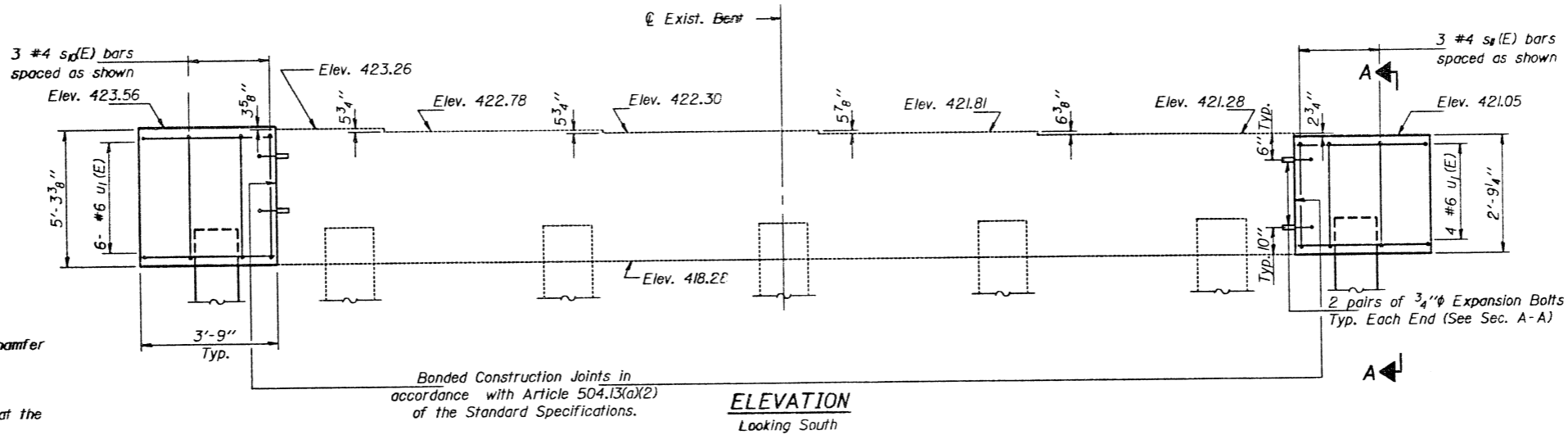


SOUTH ABUTMENT
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

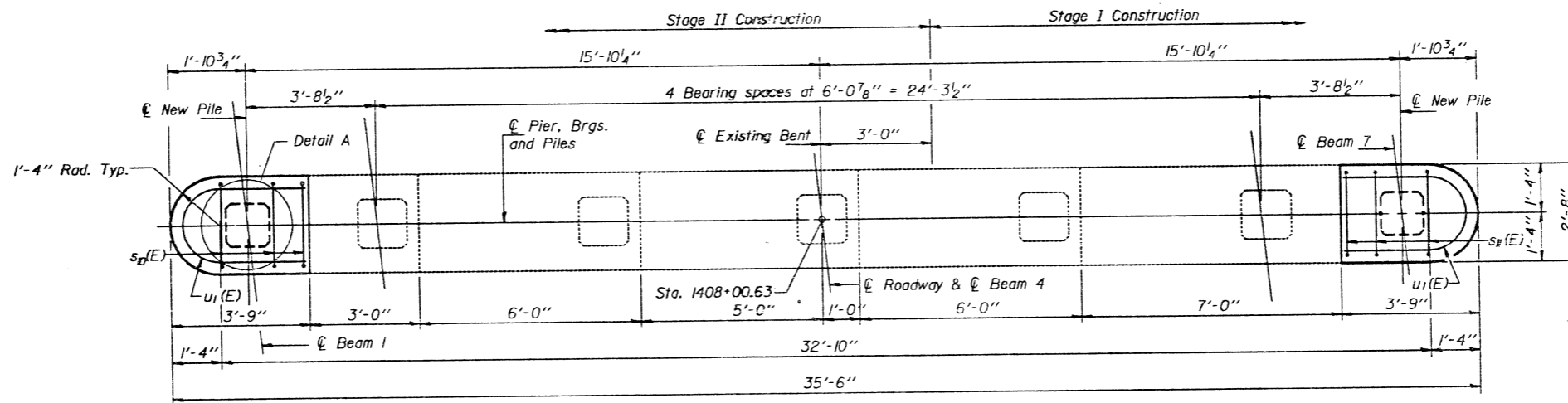
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE DATA

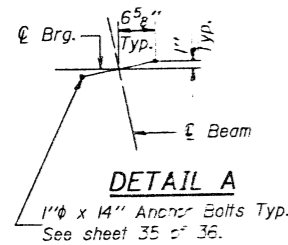
Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 27'
No. Required: 2



Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
Space reinforcement in cap to miss anchor bolts.
Existing anchor bolts shall be cut off flush at the top of bent. Cost is incidental to "Structural Steel".

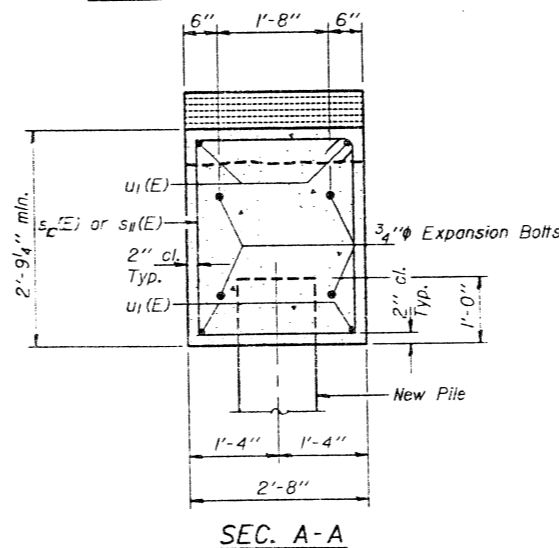


PLAN

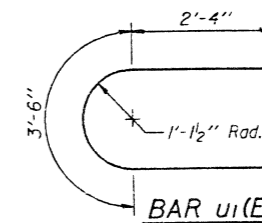


DETAIL A

1" x 14" Anchor Bolts Typ.
See sheet 35 of 36.



SEC. A-A



BAR u_l(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s_p(E)	3	#4	15'-11"	□
s_II(E)	3	#4	10'-3"	□
u_l(E)	10	#6	8'-2"	C
Expansion Bolts 3/4"	Each		8	
Class X Concrete			Cu. Yd.	2.7
Reinforcement Bars Epoxy Coated			Pound	170
Precast Concrete Piles 14"			Lin. Ft.	54

Reinforcement bars designated (E) shall be epoxy coated.

BENT 1
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

DESIGNED: *[Signature]*
CHECKED: *[Signature]*
DRAWN: J.T. Downing
CHECKED: *[Signature]*

EXAMINED: *[Signature]*
PASSED: *[Signature]*
APPROVED: *[Signature]*

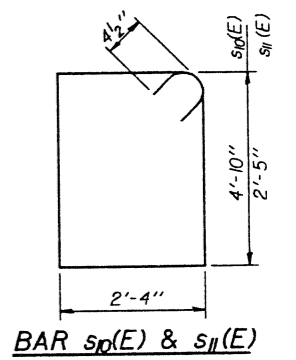
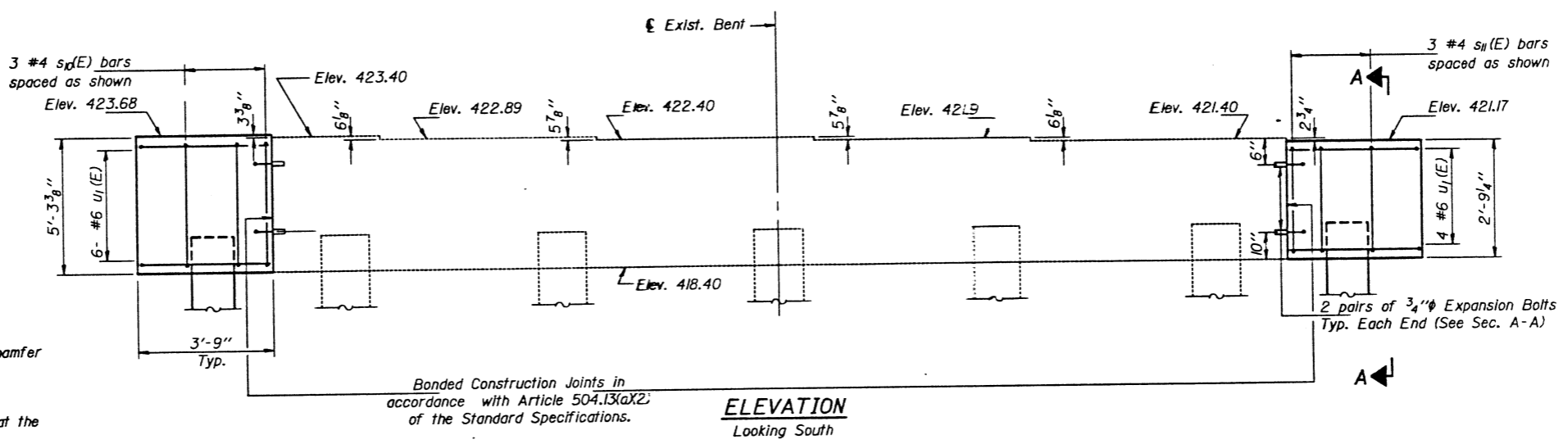
May 24 1989

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

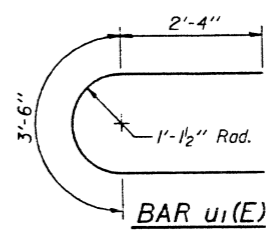
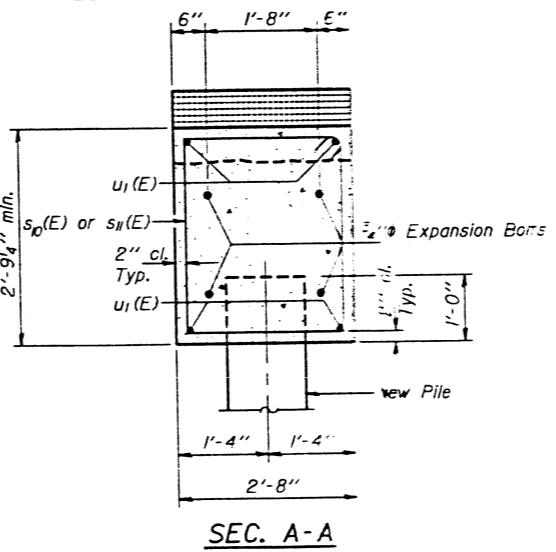
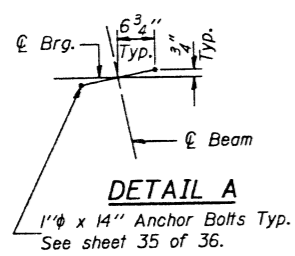
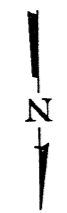
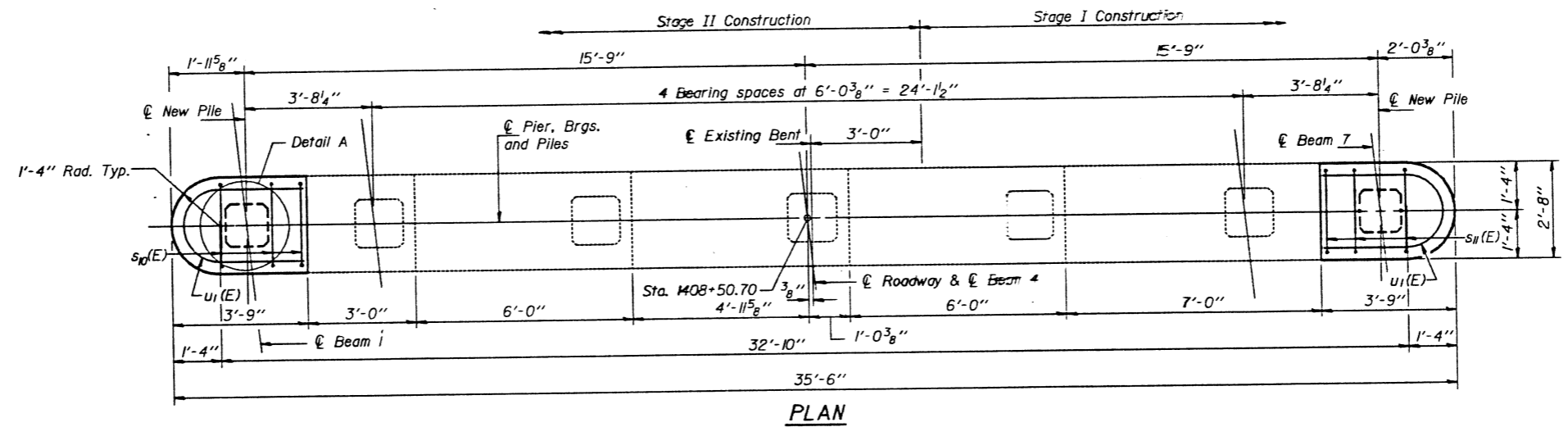
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO. 26
			37	36 SHEETS
F.A.P. NO.		FED. AID PROJECT NO.		

PILE DATA

Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 28'
No. Required: 2



Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
Space reinforcement in cap to miss anchor bolts.
Existing anchor bolts shall be cut off flush at the top of bent. Cost is incidental to "Structural Steel".



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
sII(E)	3	#4	15'-1"	□
sI(E)	3	#4	10'-3"	□
uI(E)	10	#6	8'-2"	U
Expansion Bolts 3/4"	Each		8	
Class X Concrete			Cu. Yd.	2.7
Reinforcement Bars Epoxy Coated			Pound	170
Precast Concrete Piles 14"			LIn. Ft.	56

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED: *Franklin Hensley*
CHECKED: *James J. Hensley*
DRAWN: J.T. Downing
CHECKED: *W.D.A.*

EXAMINED: *Gregory D. Kaspar*
PASSED: *James J. Hensley*
APPROVED: _____

May 24 1989

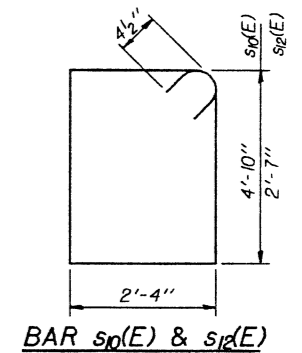
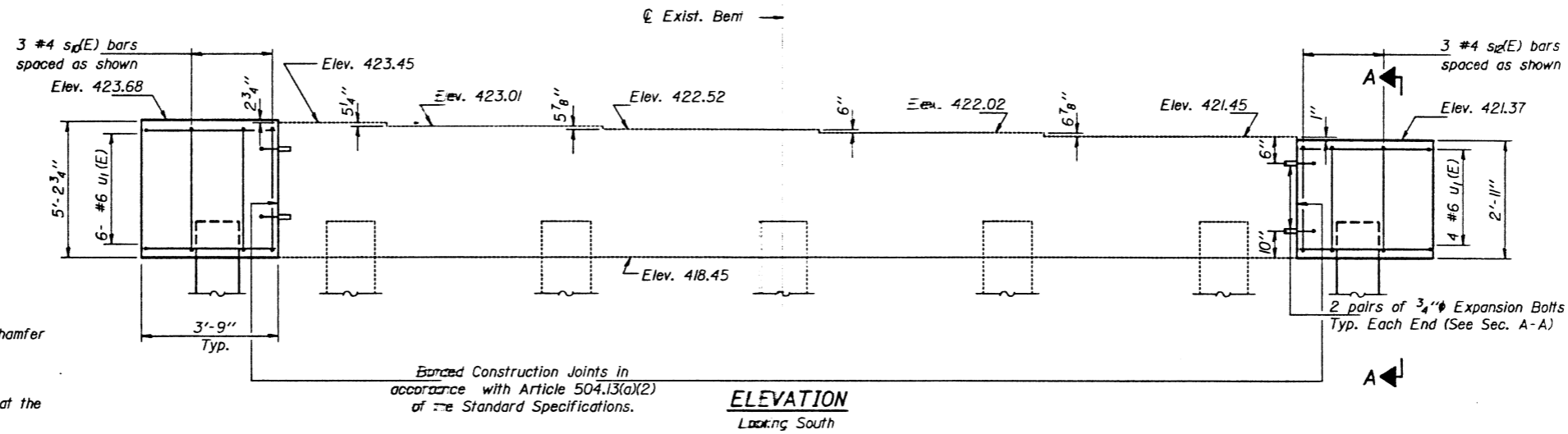
BENT 2
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

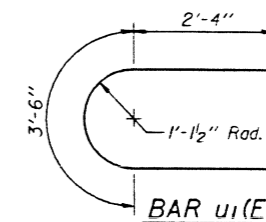
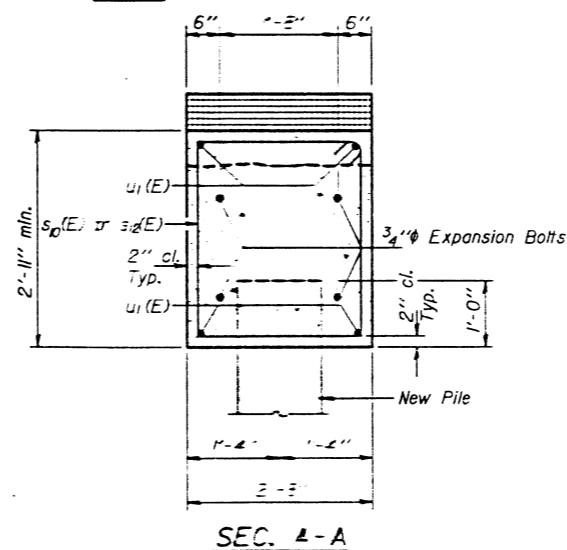
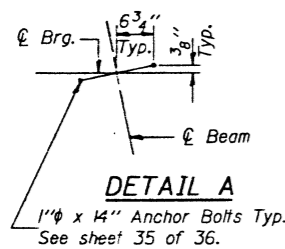
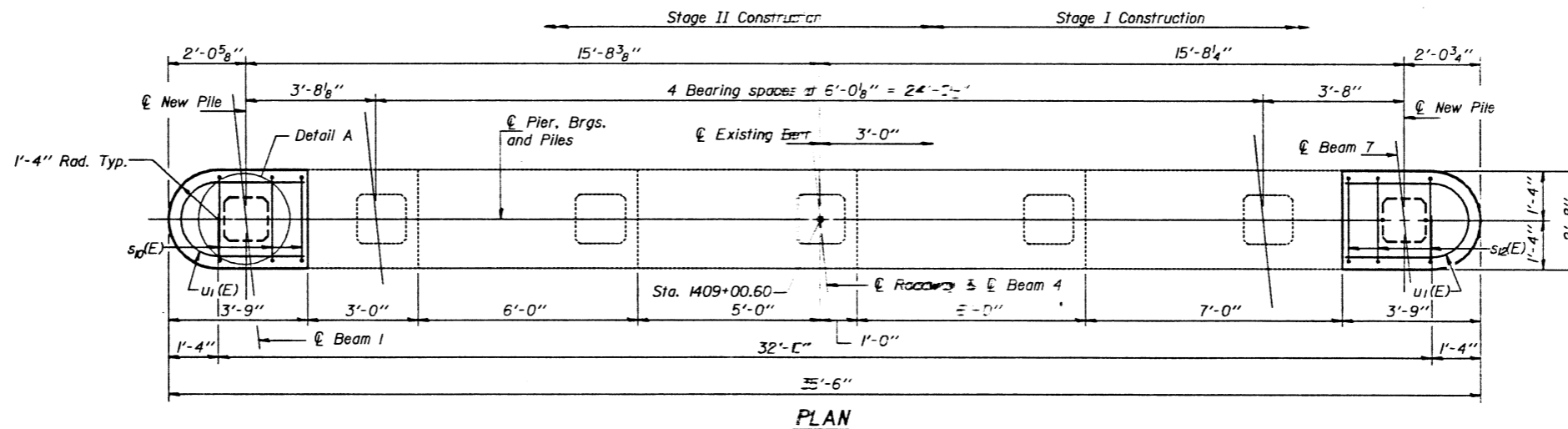
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 27
F.A.P.			38	36 SHEETS
FED. ROAD DIST. NO. 7	BRIDGE	FED. AID PROJECT		

PILE DATA

Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 30'
No. Required: 2



Notes: All exposed edges shall have standard $\frac{3}{4}$ " chamfer except as noted.
Space reinforcement in cap to miss anchor bolts.
Existing anchor bolts shall be cut off flush at the top of bent. Cast is incidental to "Structural Steel".



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
sp(E)	3	#4	15'-1"	□
sig(E)	3	#4	10'-7"	□
u1(E)	10	#6	8'-2"	U
Expansion Bolts	3/4"	Each	8	
Class X Concrete		Cu. Yd.	2.7	
Reinforcement Bars Epoxy Coated		Pound	170	
Precast Concrete Piles 14"		Lin. Ft.	60	

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED: *Amelbert Spindler*
CHECKED: *James J. Kasper*
DRAWN: J.T. Downing
CHECKED: *G.L.M.*

EXAMINED: *James J. Kasper*
PASSED: *James J. Kasper*
APPROVED: *James J. Kasper*
DIRECTOR OF HIGHWAYS

May 24 1989

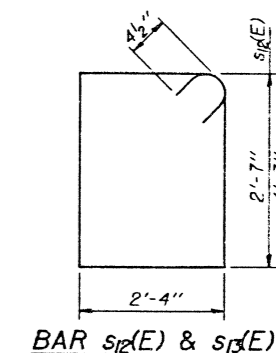
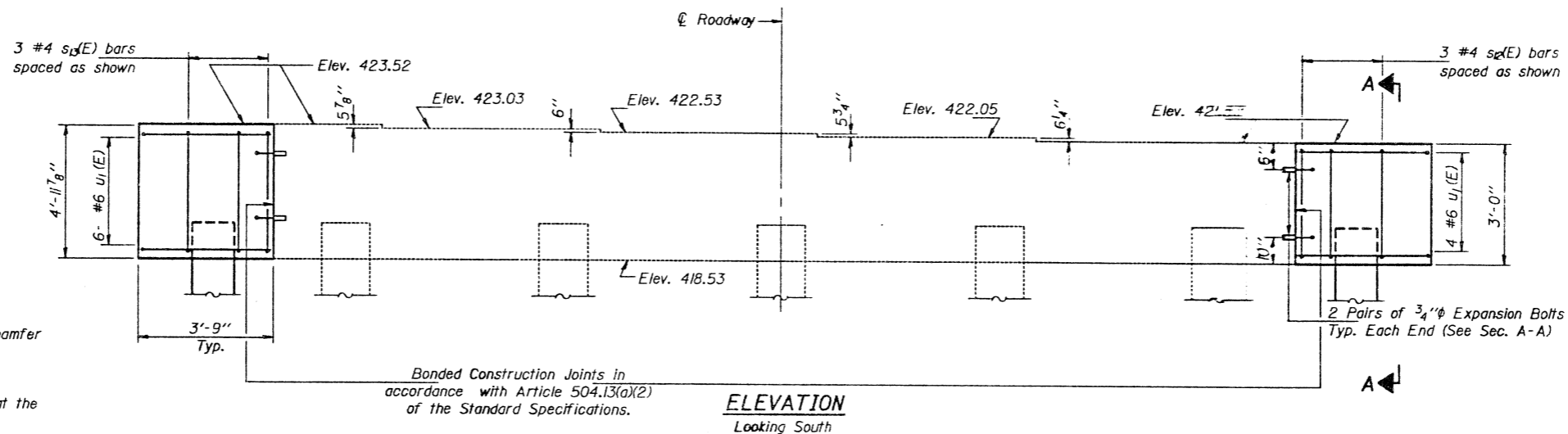
BENT 3
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

PILE DATA

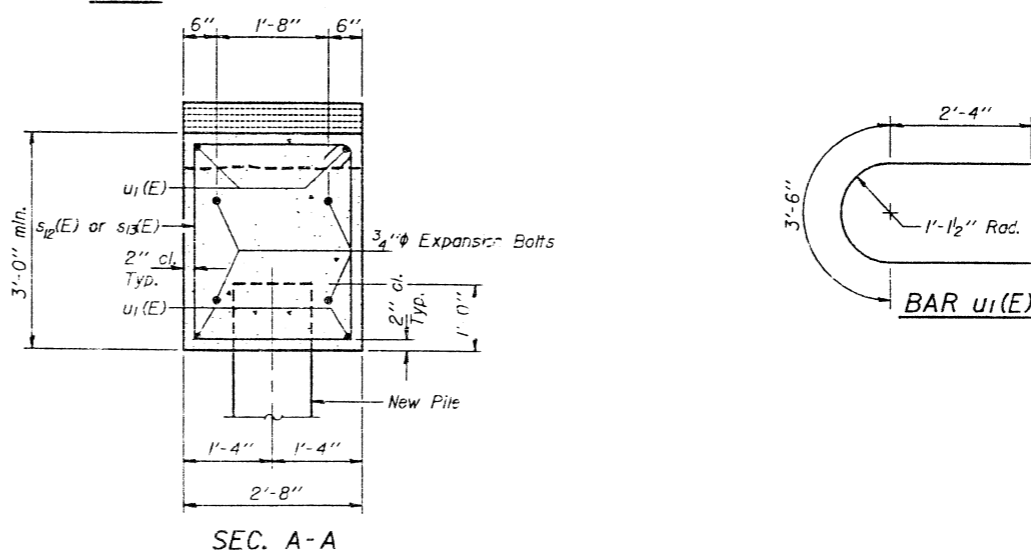
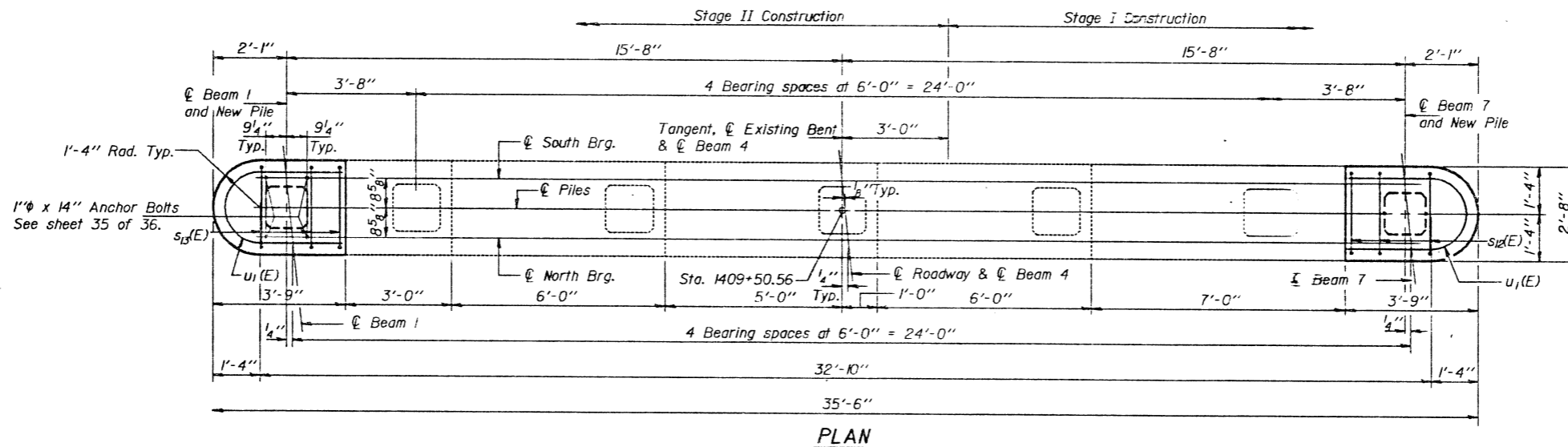
Type: Precast Concrete Piles 14"
 Capacity: 36 Ton
 Est. Length: 30'
 No. Required: 1+1 Test Pile

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO. 28
			30	36 SHEETS
FED. ROAD DIST. NO. 7		BILLBOARD	FED. AID PROJECT	



Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
 Space reinforcement in cap to miss anchor bolts.
 Existing anchor bolts shall be cut off flush at the top of bent. Cost is incidental to "Structural Steel".



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s ₂ (E)	3	#4	10'-7"	□
s ₃ (E)	3	#4	14'-7"	□
u ₁ (E)	10	#6	8'-2"	C
Expansion Bolts 3/4"	Each		8	
Class X Concrete	Cu. Yc.		2.6	
Reinforcement Bars Epoxy Coated	Pound		170	
Precast Concrete Piles 14"	Lin. Ft.		30	
Test Pile Precast Concrete	Each		1	

BENT 4
 F.A.P. RT. 805 SEC. 127BR
 CLINTON COUNTY
 STATION 1409+50

DESIGNED: *[Signature]*
 CHECKED: *[Signature]*
 DRAWN: J.T. Downing
 CHECKED: *[Signature]*

EXAMINED: *[Signature]* ENGINEER OF BRIDGE DESIGN
 PASSED: *[Signature]* ENGINEER OF BRIDGES AND STRUCTURES
 APPROVED: *[Signature]* DIRECTOR OF HIGHWAYS

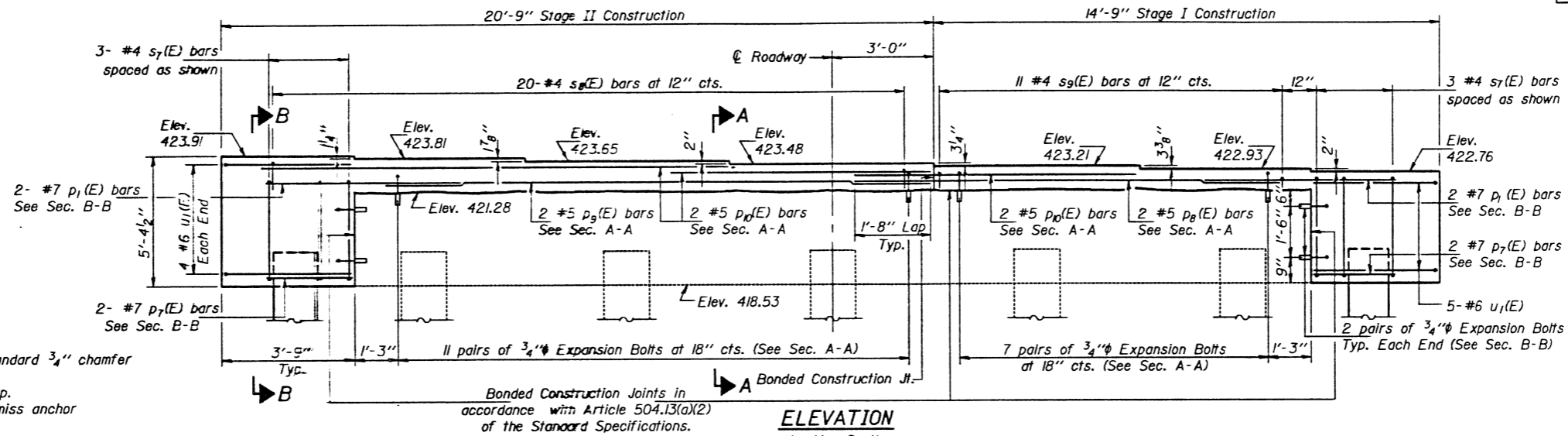
May 24 1988

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

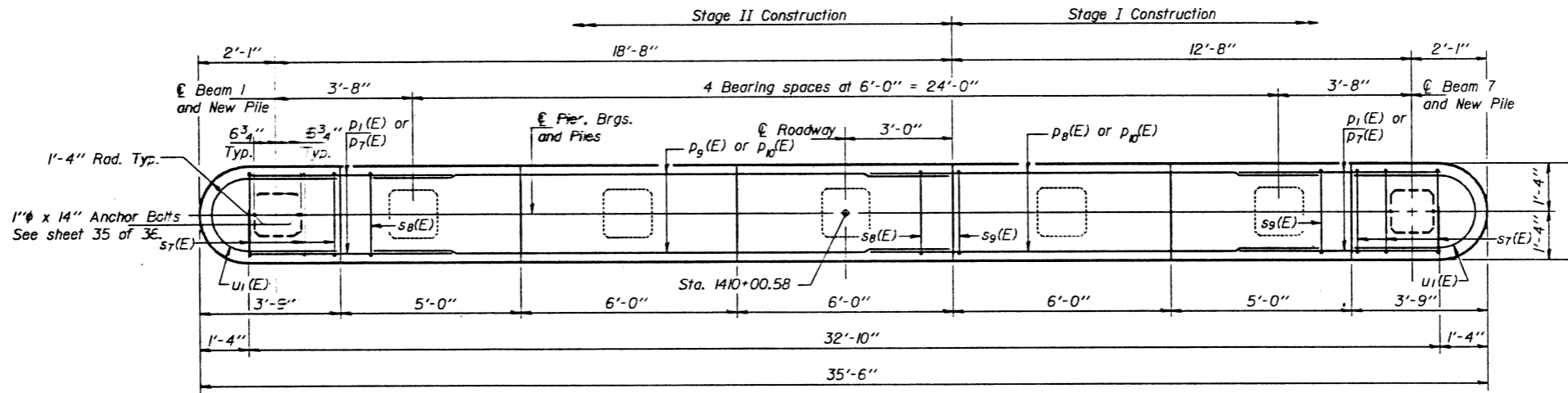
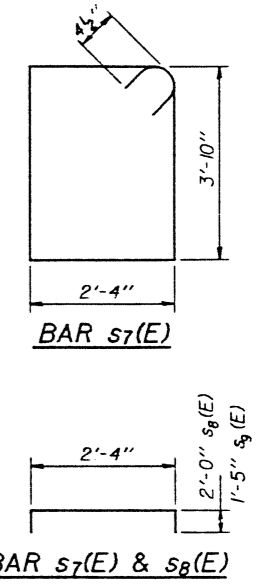
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A.B.L.				40	
P.L.A.					
FILED DIST. NO. 7	APPROVED	FILED PROJECT			

PILE DATA

Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 30'
No. Required: 2



Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.

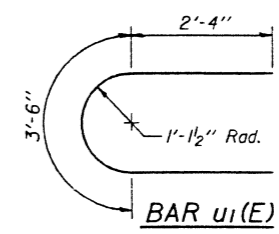
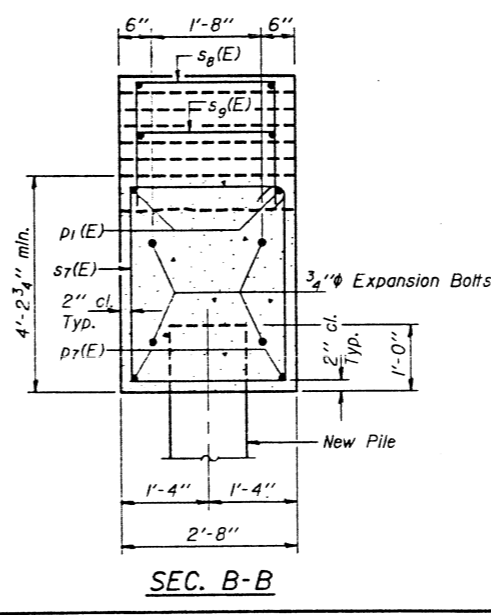
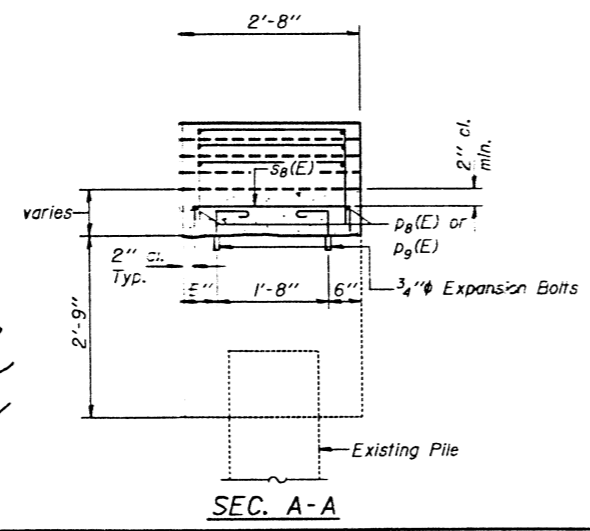


MIN. BAR LAPS
#5 Bar = 1'-4"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p1(E)	4	#7	6'-0"	—
p7(E)	4	#7	2'-4"	—
p8(E)	2	#5	10'-1"	—
p9(E)	2	#5	14'-9"	—
p10(E)	8	#5	7'-4"	—
s7(E)	6	#4	13'-1"	□
s8(E)	20	#4	6'-4"	□
s9(E)	11	#4	5'-2"	□
u1(E)	11	#6	8'-2"	C
Expansion Bolts 3/4"	Each		44	
Class X Concrete	Cu. Yd.		9.2	
Reinforcement Bars Epoxy Coated	Pound		490	
Precast Concrete Piles 14"	Lin. Ft.		60	

Reinforcement bars designated (E) shall be epoxy coated.



DESIGNED *[Signature]*
CHECKED *[Signature]*
DRAWN J.T. Downes
CHECKED *[Signature]*

EXAMINED *[Signature]* May 21 1989
PASSED *[Signature]*
APPROVED *[Signature]*
DIRECTOR OF HIGHWAYS

BENT 5
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

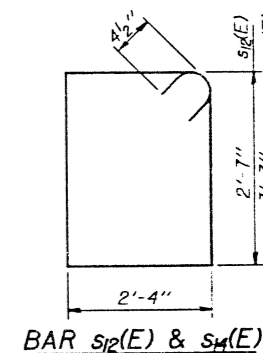
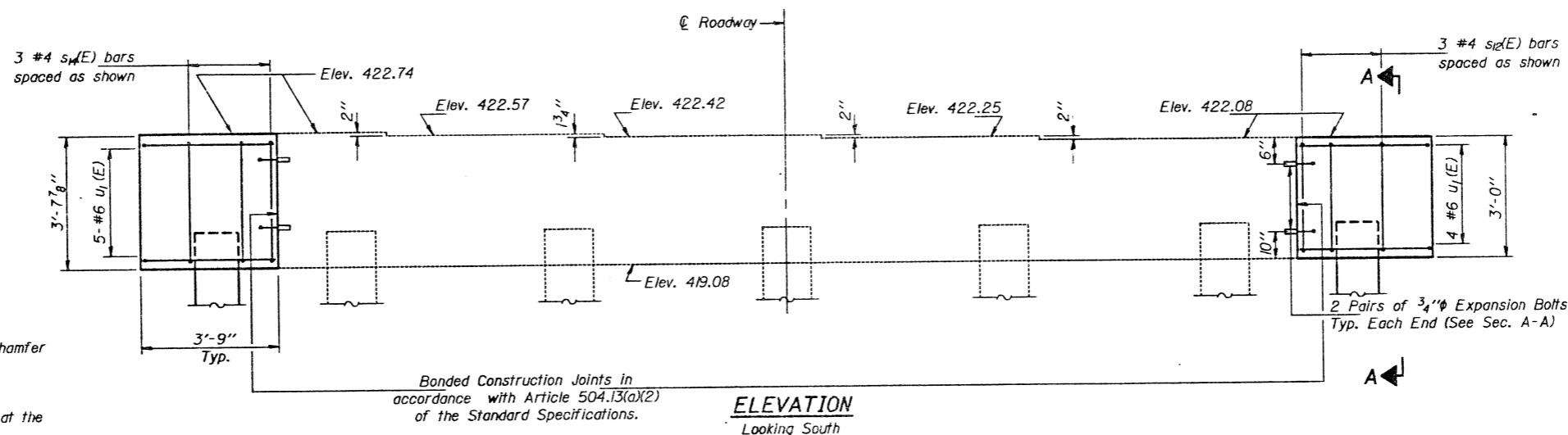
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	QUANTITY	UNIT	DATE
				4/1
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

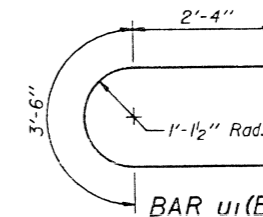
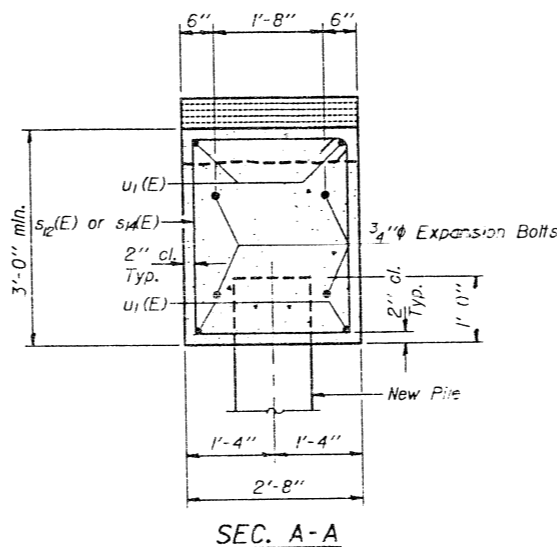
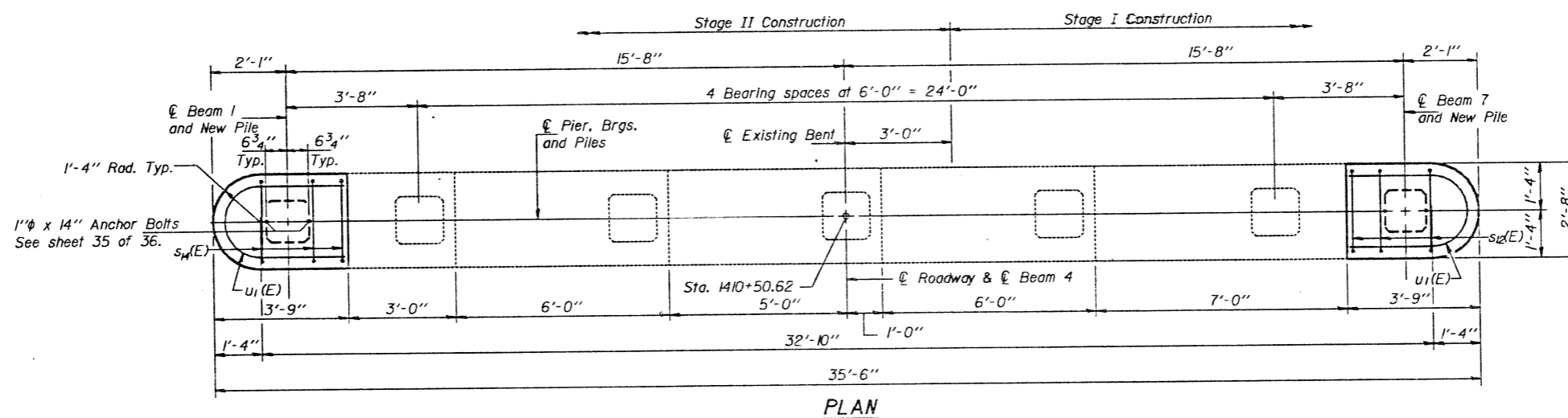
SHEET NO. 30
36 SHEETS

PILE DATA

Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 25'
No. Required: 2



Notes: All exposed edges shall have standard 3/4" chamfer except as noted.
Space reinforcement in cap to miss anchor bolts.
Existing anchor bolts shall be cut off flush at the top of bent. Cost is incidental to "Structural Steel".



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s12(E)	3	#4	10'-7"	□
s14(E)	3	#4	11'-11"	□
u1(E)	9	#6	8'-2"	C
Expansion Bolts 3/4"	Each			8
Class X Concrete			Cu. Yd.	2.2
Reinforcement Bars Epoxy Coated			Pound	160
Precast Concrete Piles 14"			Lin. Ft.	50

Reinforcement bars designated (E) shall be epoxy coated.

BENT 6
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

DESIGNED	J.T. Downing
CHECKED	J.T. Downing
DRAWN	J.T. Downing
CHECKED	J.T. Downing

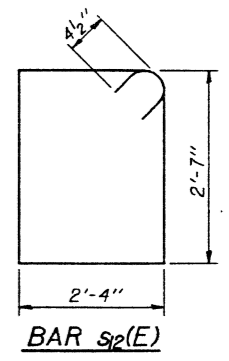
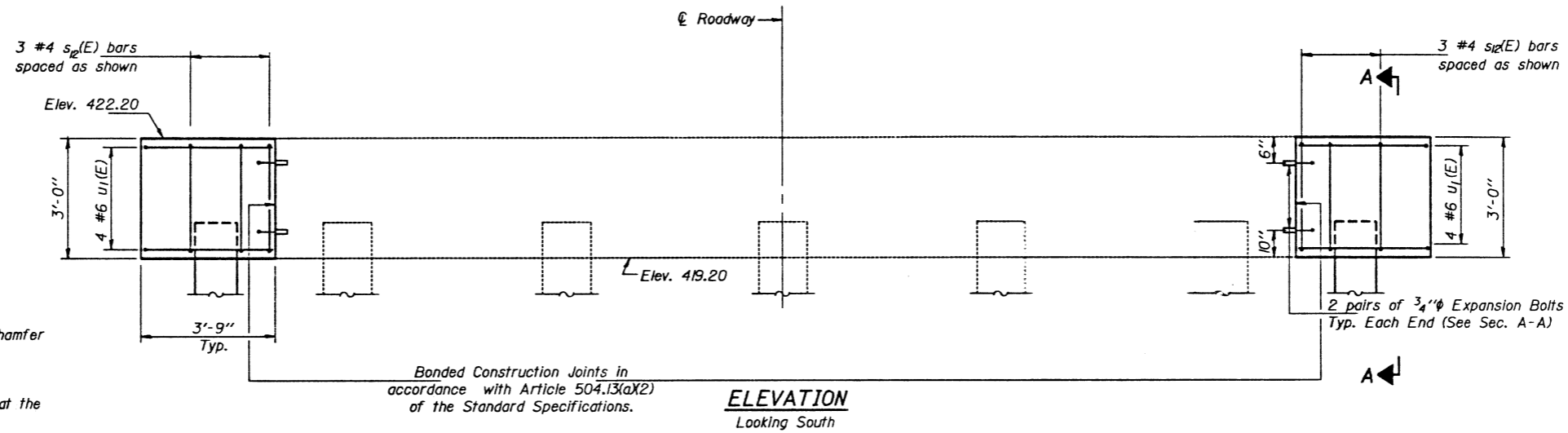
EXAMINED	May 24 1989 [Signature]
PASSED	[Signature]
APPROVED	[Signature]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

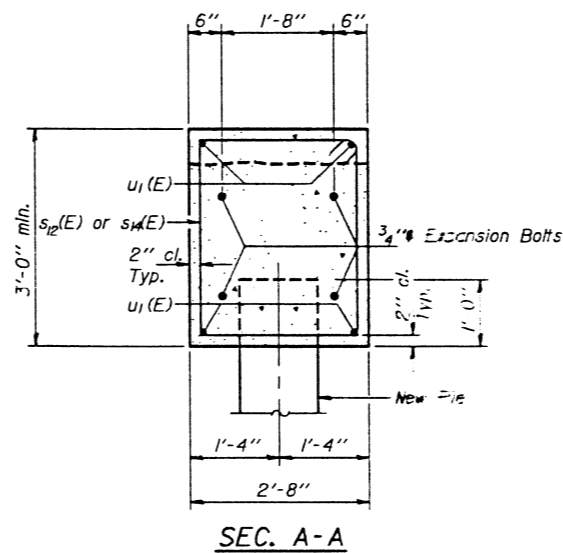
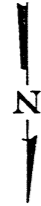
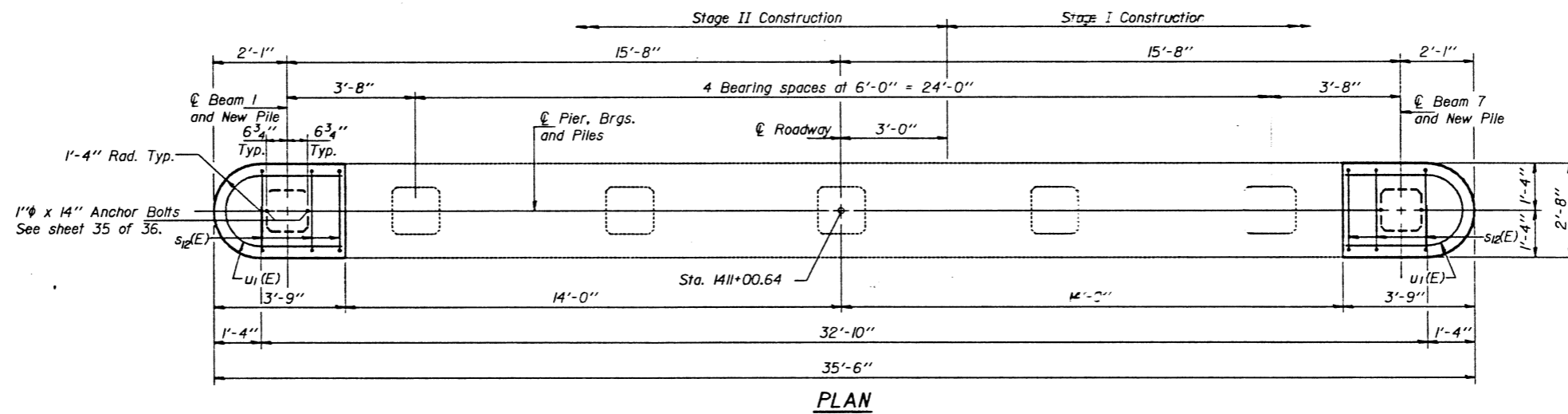
ROUTE NO.	SECTION	COUNTY	FEED SHEET	SHEET NO.
			42	31
SHEET NO. 31 36 SHEETS				
F.A.P. NO.		PROJECT		

PILE DATA

Type: Precast Concrete Piles 14"
Capacity: 36 Ton
Est. Length: 25'
No. Required: 1+1 Test Pile



Notes: All exposed edges shall have standard $\frac{3}{4}$ " chamfer except as noted.
Space reinforcement in cap to miss anchor bolts.
Existing anchor bolts shall be cut off flush at the top of bent. Cost is incidental to "Structural Steel".



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
S12(E)	6	#4	10'-7"	□
U1(E)	8	#6	8'-2"	C
Expansion Bolts $\frac{3}{4}$ "	Each			8
Class X Concrete			Cu. Yd.	2.0
Reinforcement Bars Epoxy Coated			Pound	140
Precast Concrete Piles 14"			Lin. Ft.	25
Test Pile Precast Concrete			Each	1

Reinforcement bars designated (E) shall be epoxy coated.

BENT 7
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

DESIGNED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
DRAWN	J.T. Downing
CHECKED	<i>[Signature]</i>

EXAMINED	<i>[Signature]</i>	May 24 1987
PASSED	<i>[Signature]</i>	
APPROVED	<i>[Signature]</i>	

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

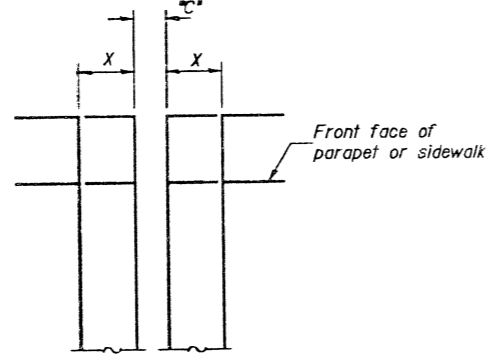
INSTALLATION NOTES

- Install sponge mandrels into positions shown to form flap convolution.
- Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- Install continuous seal in roadway.
- Install anchor blocks as indicated.

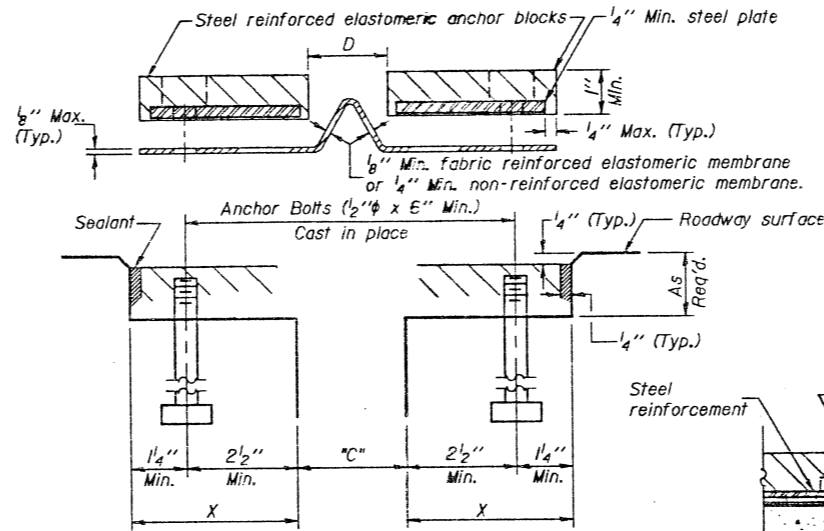
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKREW LIMITATIONS

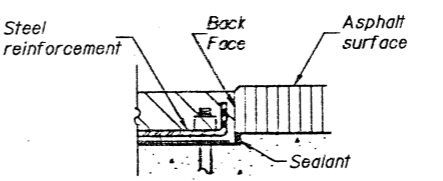
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skew. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH



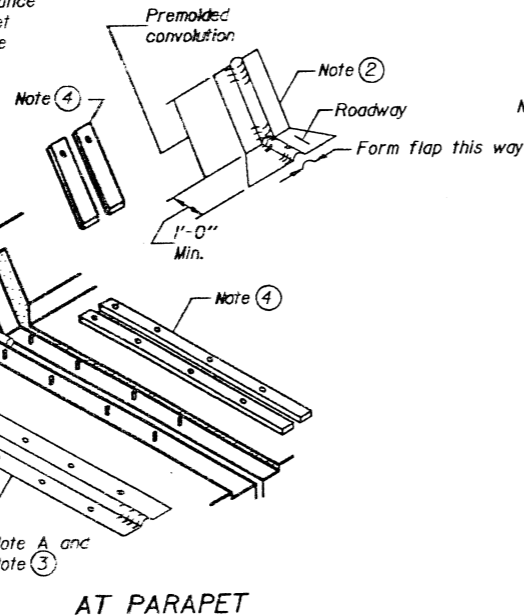
CROSS SECTION



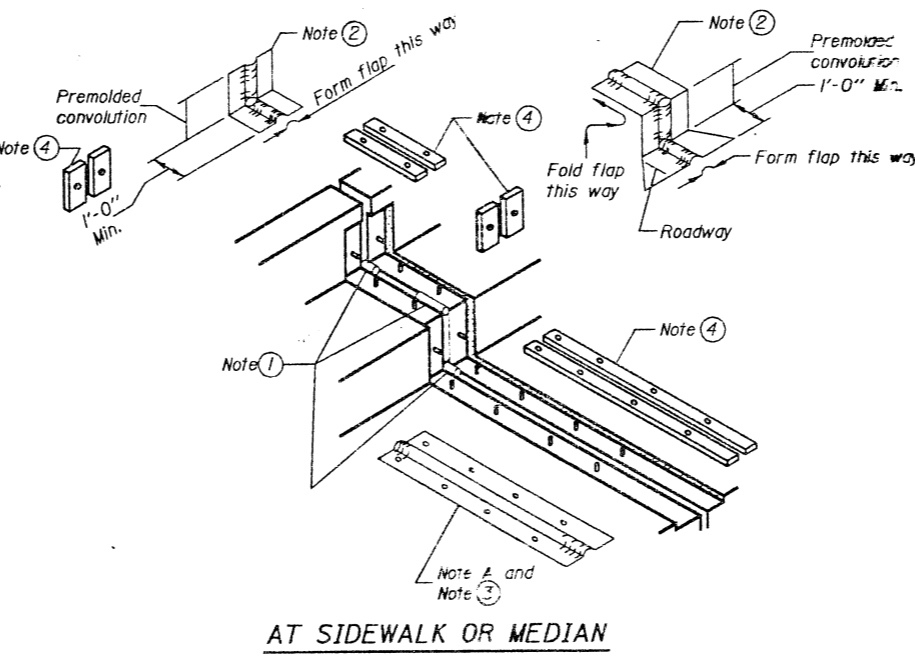
ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

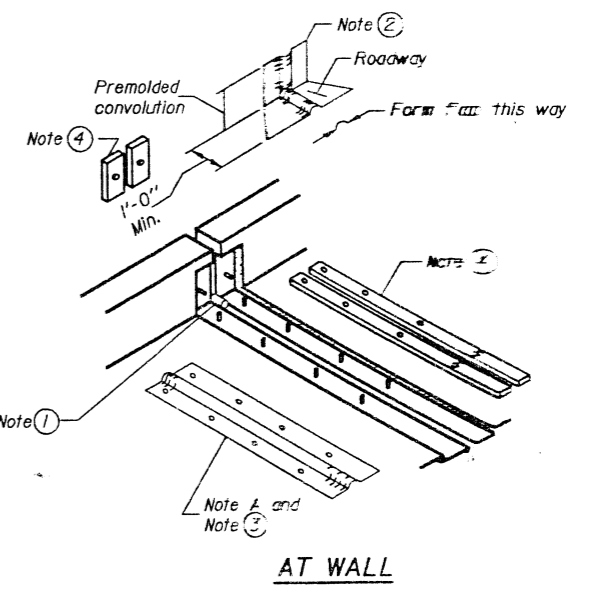
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.
The elastomeric membrane shall be preformed with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
The steel reinforcement must extend to the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



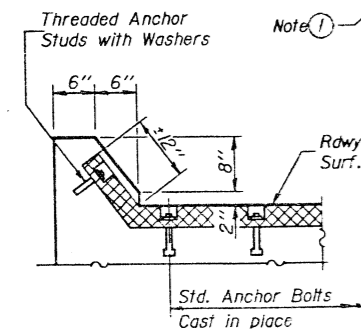
AT PARAPET



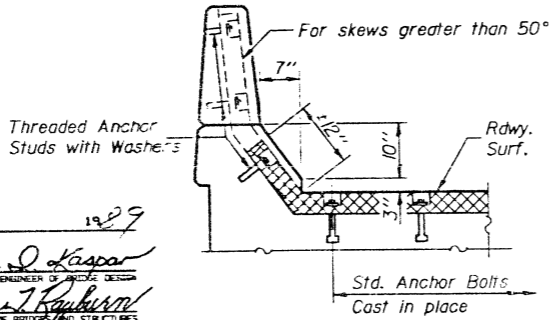
AT SIDEWALK OR MEDIAN



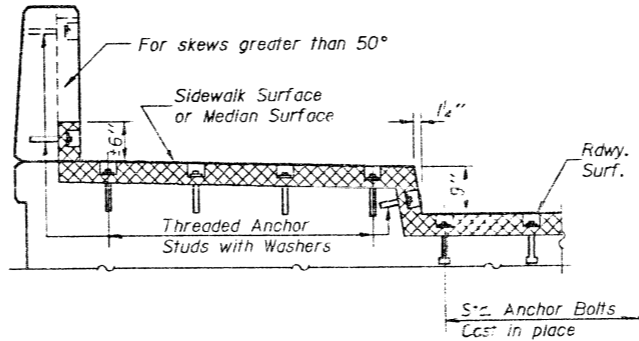
AT WALL



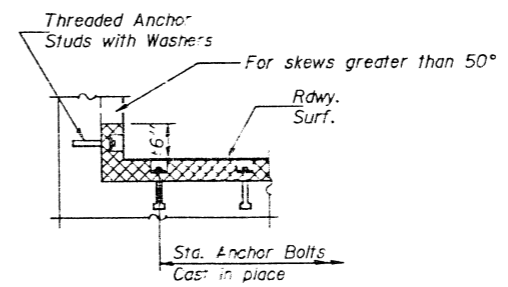
AT CURB



AT PARAPET



**AT SIDEWALK OR MEDIAN
TYPICAL END TREATMENTS**



AT WALL

DESIGNED *Charles J. Thomas*
CHECKED *Walter J. Hiley*
DRAWN *J.T. Downing*
CHECKED *W.L.H. Smith*

EXAMINED *Orsi D. Kaspa*
PASSED *James J. Reubert*
APPROVED _____
DIRECTOR OF HIGHWAYS

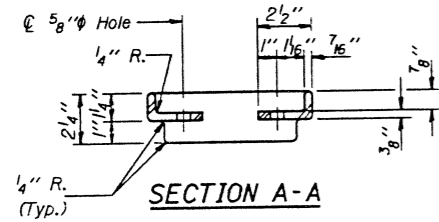
May 24 1989

**CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS**
For 2", 2 1/2" and 4" Movement

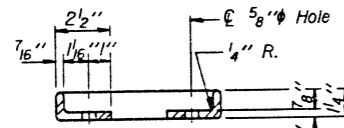
**F.A.P. RT. 305 SEC. 127BR
CLINTON COUNTY
STATION 1409+50**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

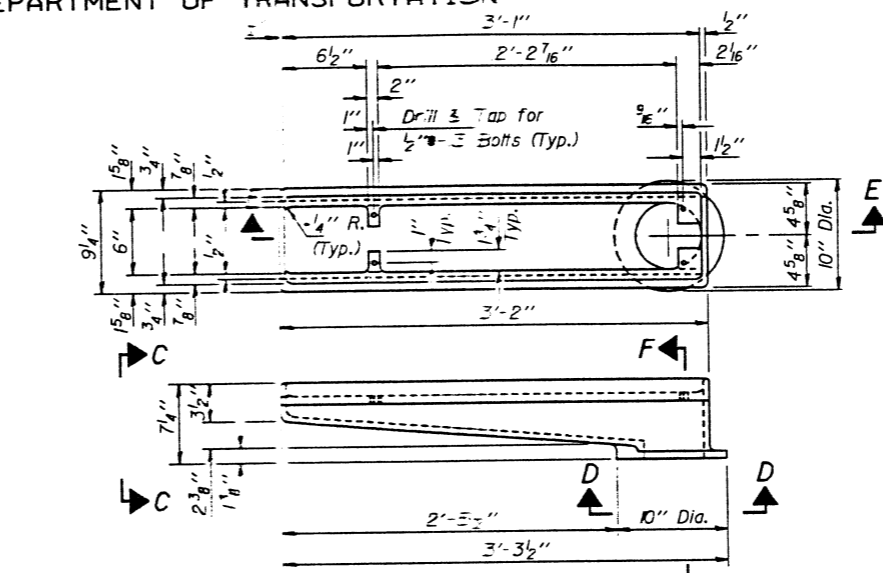
ROUTE NO.	SECTION	COUNTY	MILE	POST MILE	SHEET NO. 34
				45	36 SHEETS
<small>ILL. ROAD DIST. NO. 7</small> <small>ILLINOIS</small> <small>POST MILE PROJECT</small>					



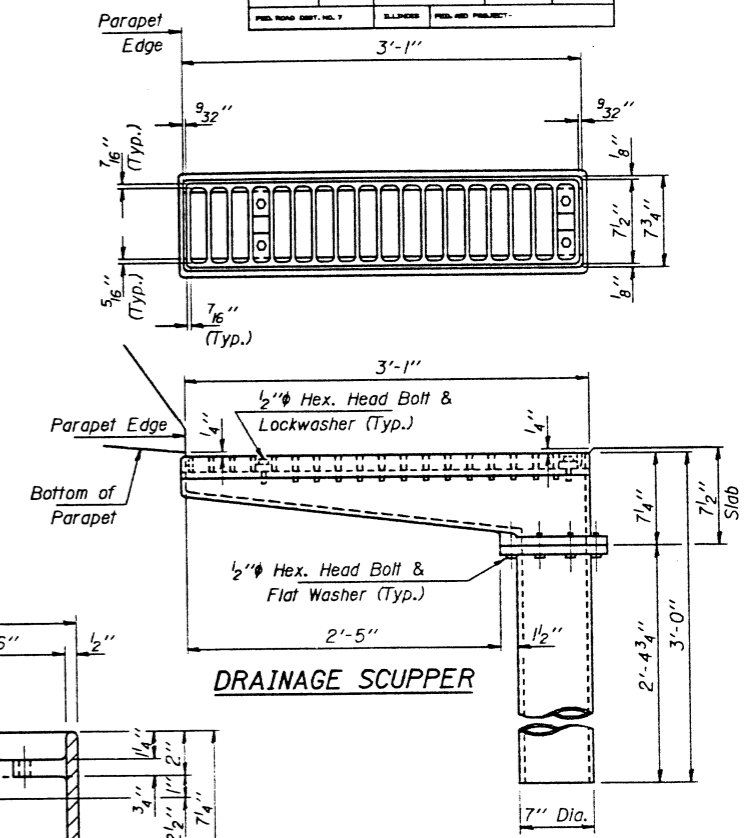
SECTION A-A



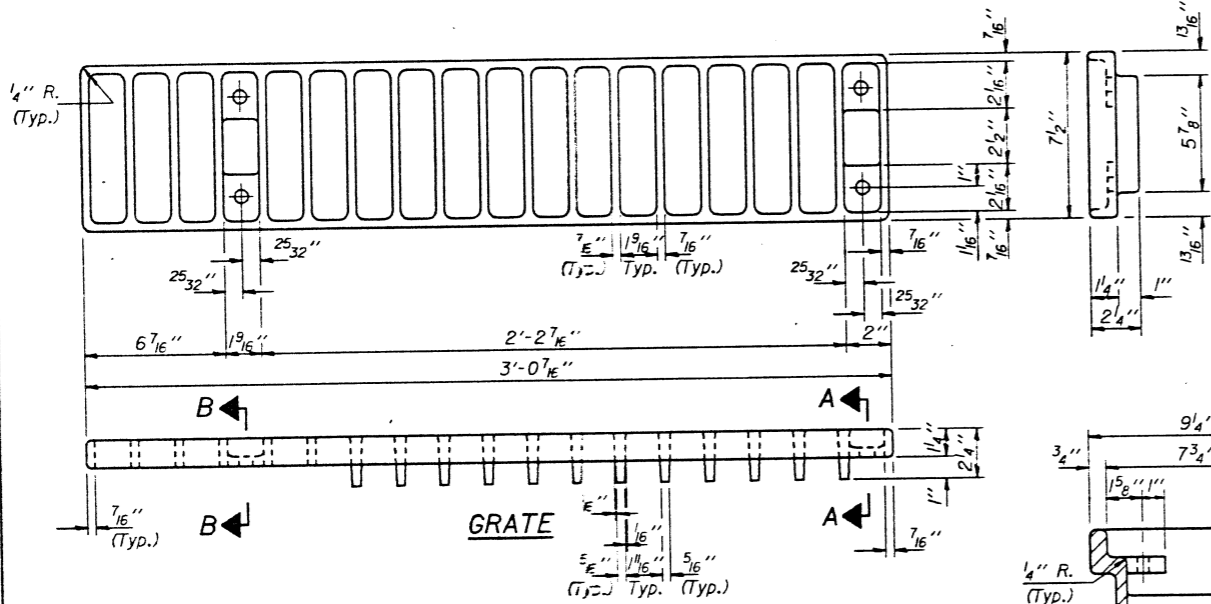
SECTION B-B



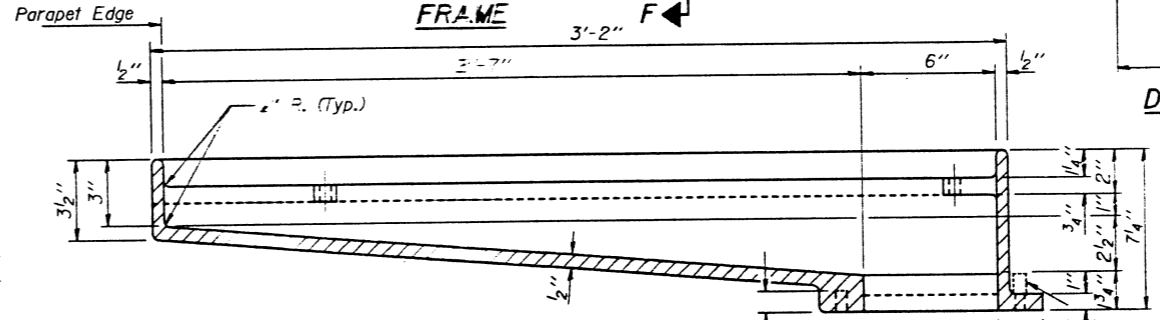
FRAME



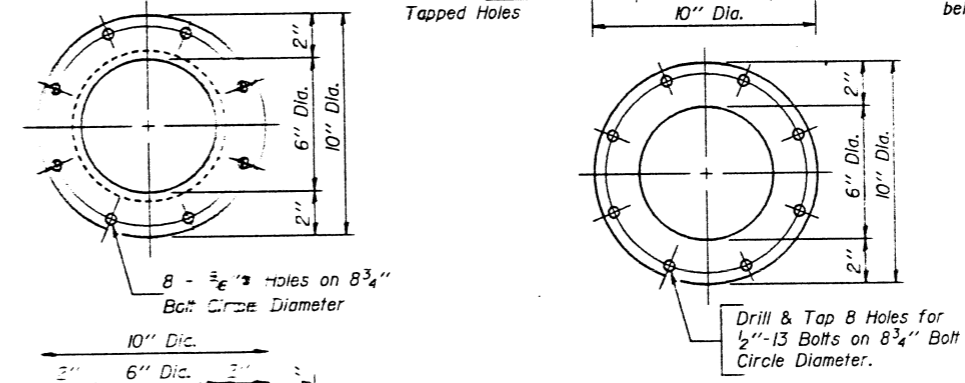
DRAINAGE SCUPPER



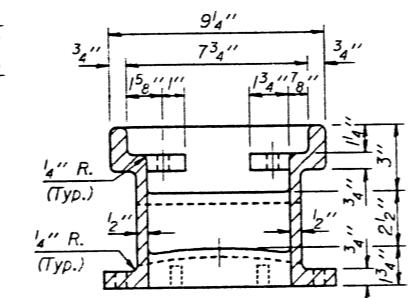
GRATE



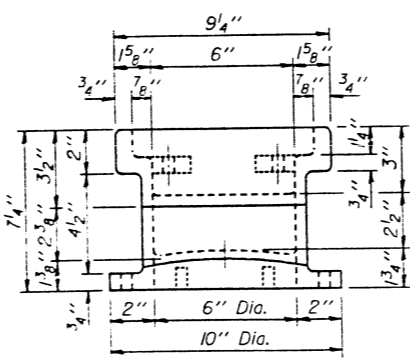
SECTION E-E



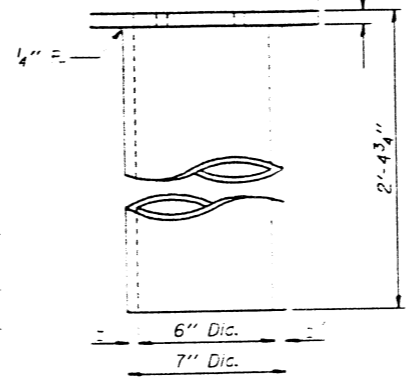
VIEW D-D



SECTION F-F



VIEW C-C



DOWNSPOUT

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 30.
Bolts and washers shall conform to the requirements of ASTM A307.
All bolts and washers shall be galvanized in accordance with AASHTO M232.
As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A193, Type 304.
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price for "DRAINAGE SCUPPERS."
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

DESIGNED	May 24 1959	EXAMINED	W. J. Downing
CHECKED	W. J. Downing	PASSED	W. J. Downing
DRAWN	J. T. Downing	APPROVED	W. J. Downing
CHECKED	W. J. Downing		

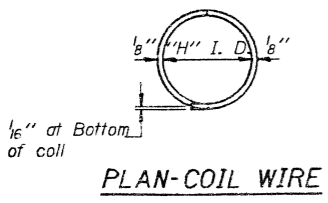
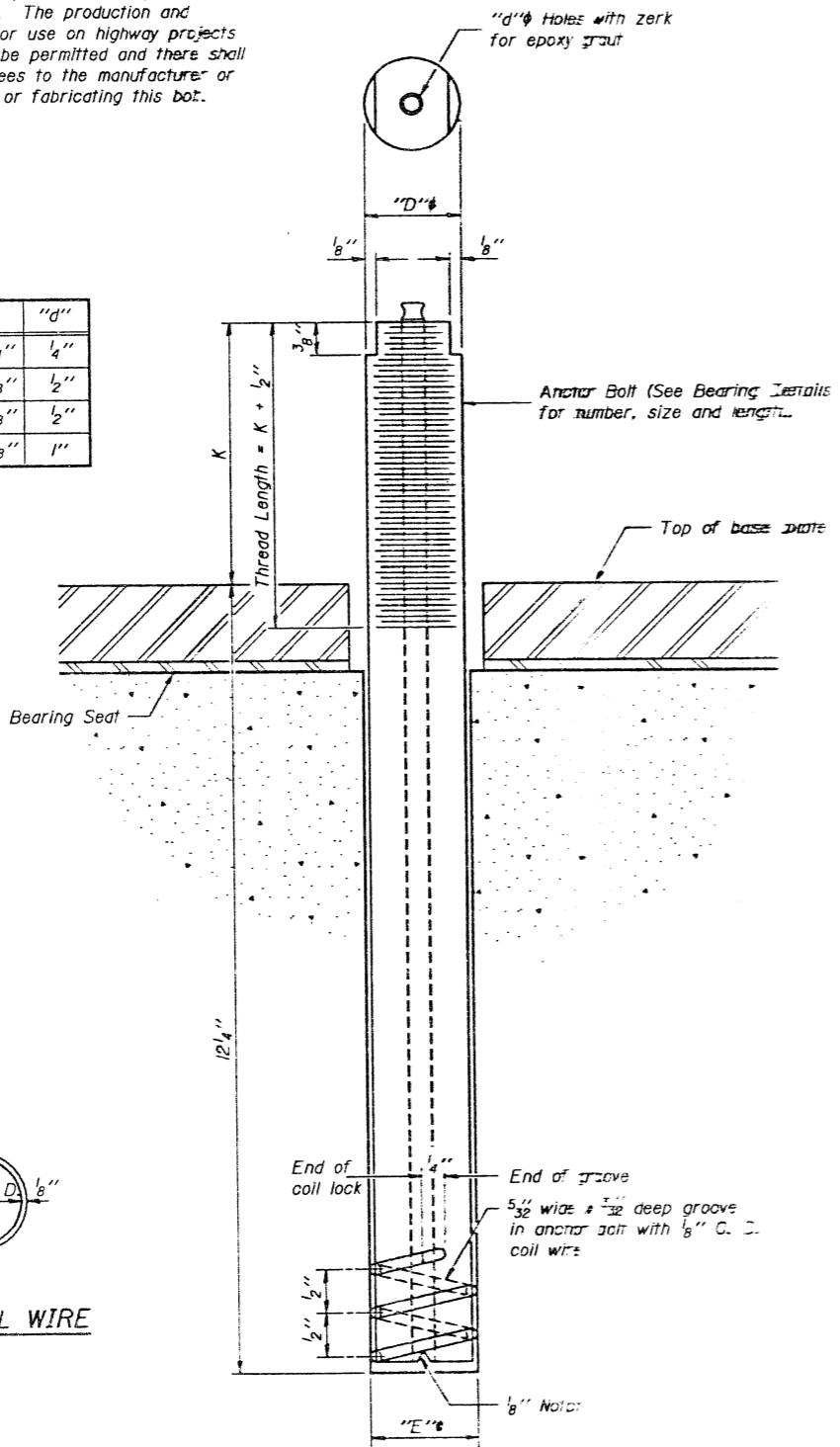
DS-4 12-1-83 (W.T. to inside of exterior stringer edge shall not be > 3'-11")

(Sheet 2 of 2)
ALTERNATE - CAST IRON
DRAINAGE SCUPPER
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade K25 and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

DESIGNED *Clayton H. Hensley*
CHECKED *Walter J. Hensley*
DRAWN *J.T. Downing*
CHECKED *W.S.H.*

EXAMINED *Ortiz O. Lasso*
PASSED *James J. Robinson*
APPROVED _____

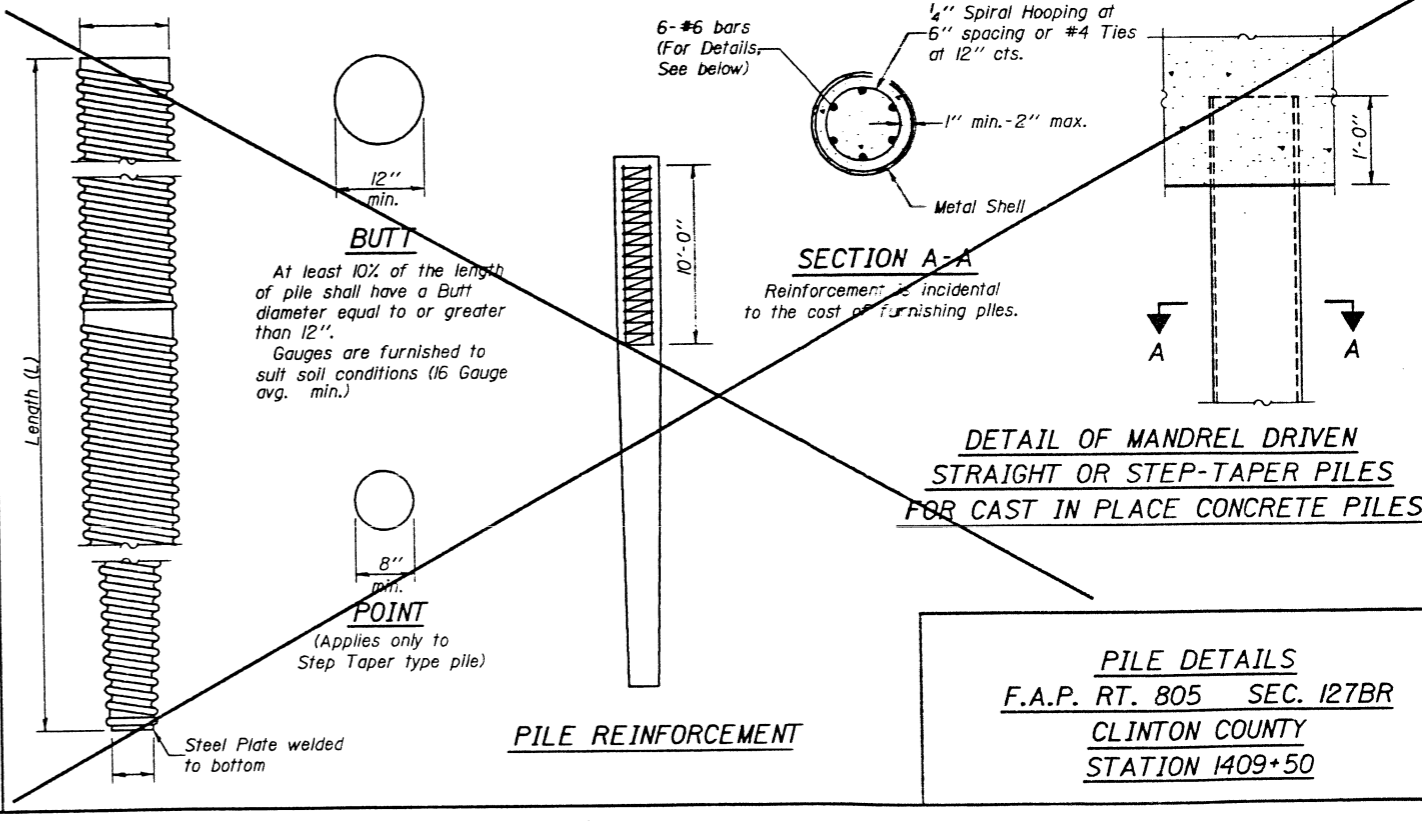
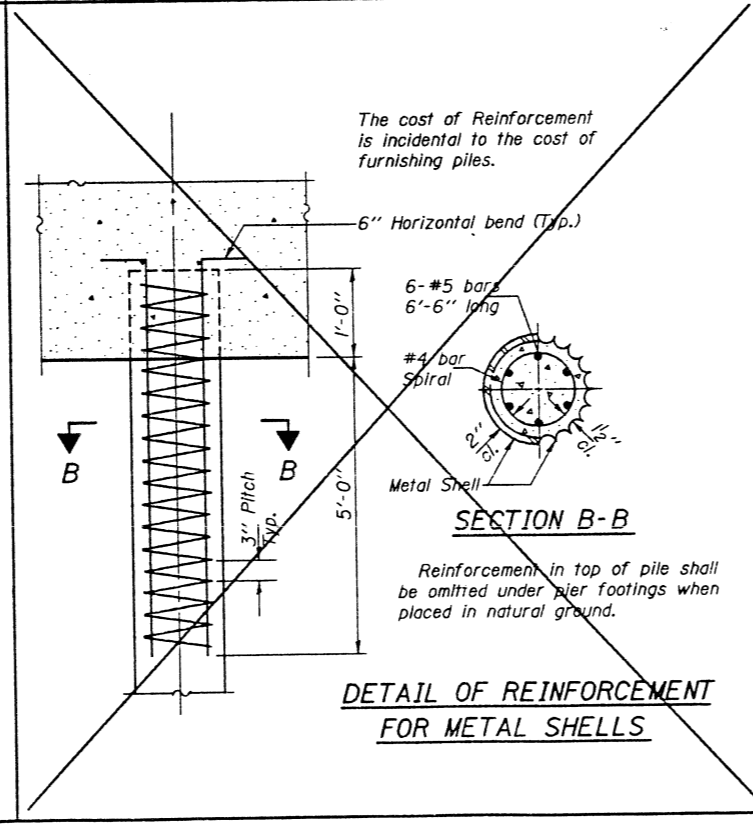
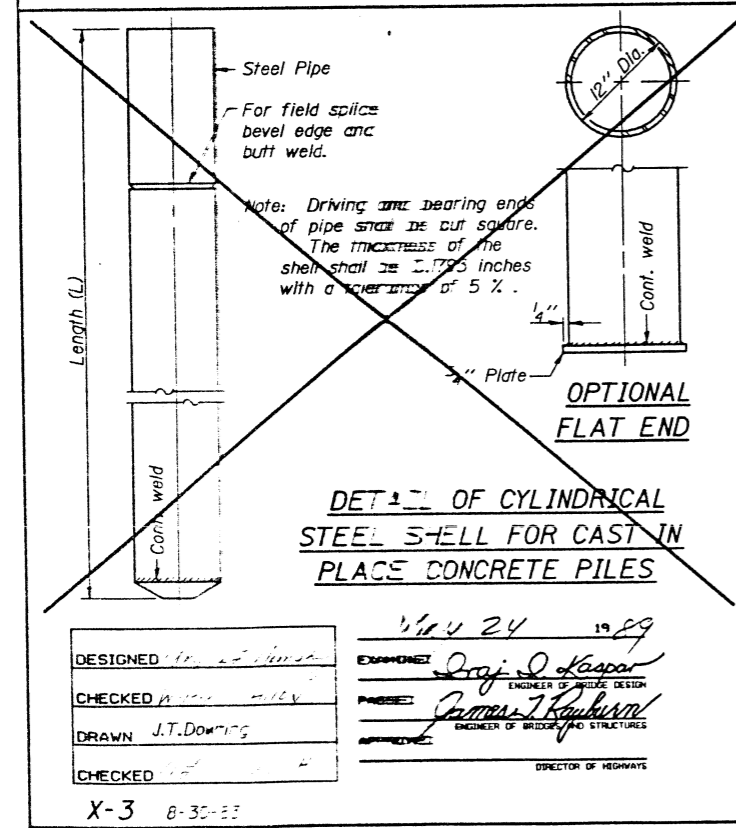
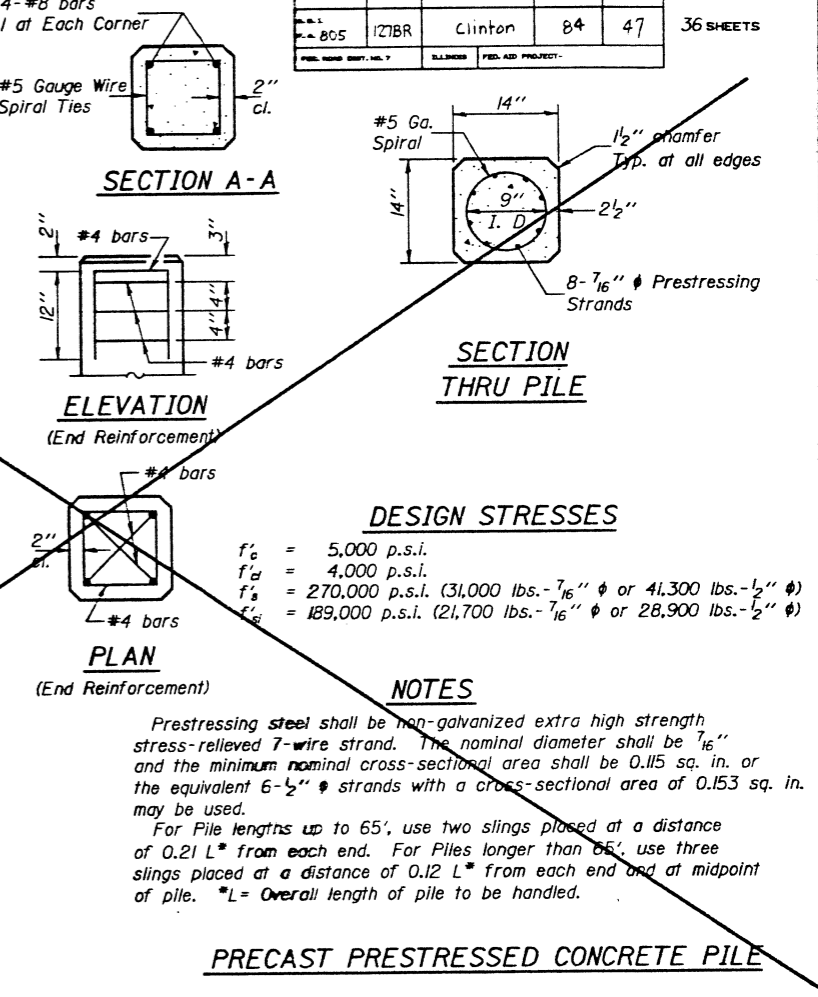
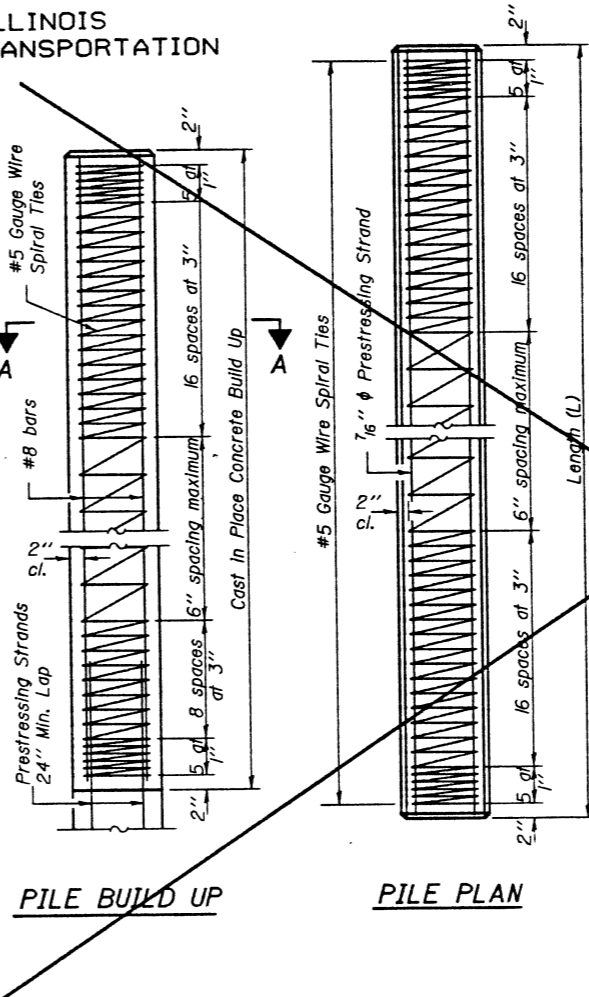
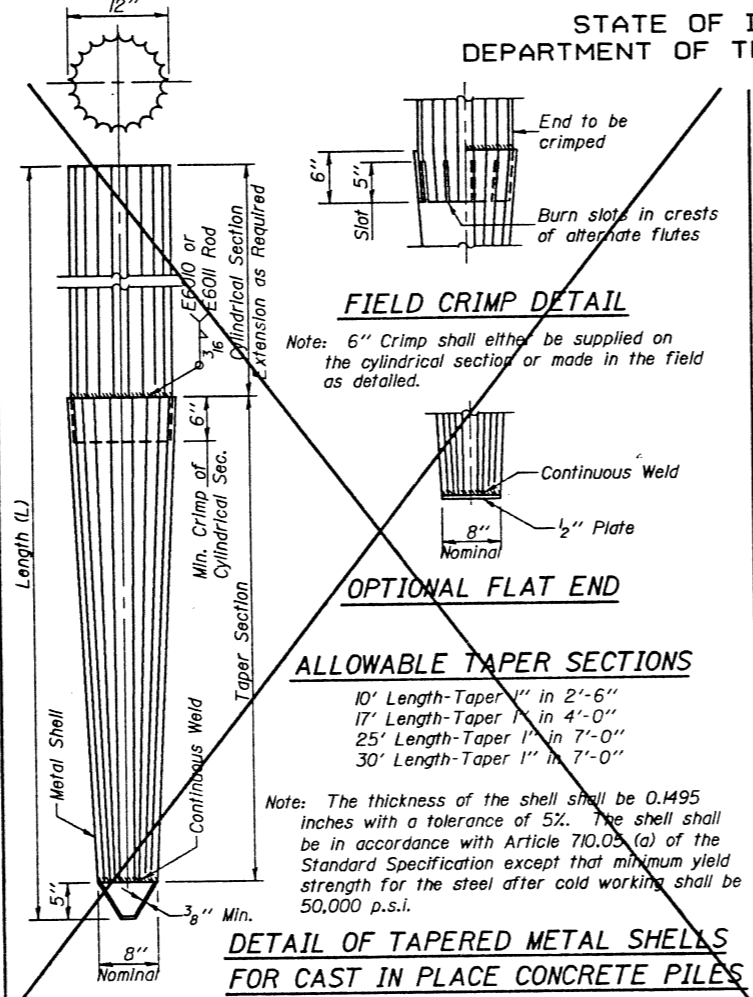
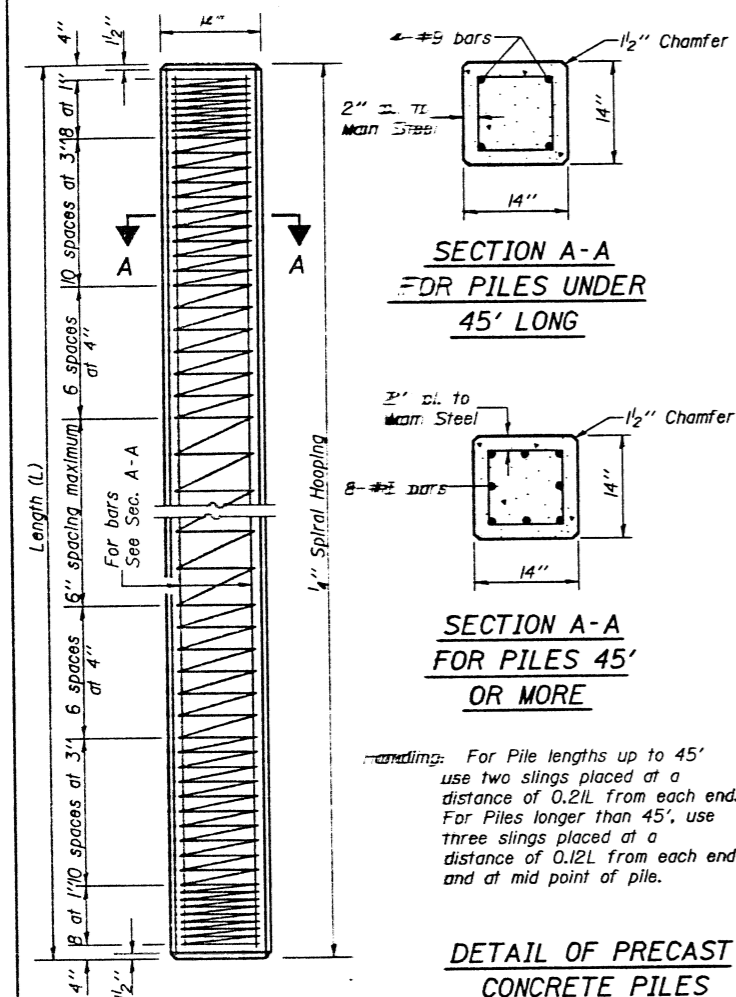
May 24 1979
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGE & STRUCTURES
DIRECTOR OF HIGHWAYS

ABB-1 12-1-83

ANCHOR BOLT DETAILS
FOR BEARINGS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 36 36 SHEETS
RT. 805	127BR	Clinton	84	47	
DESIGNED BY: J.T. Downing CHECKED BY: J.T. Downing DRAWN BY: J.T. Downing CHECKED BY: J.T. Downing					



DESIGNED BY: J.T. Downing
CHECKED BY: J.T. Downing
DRAWN BY: J.T. Downing
CHECKED BY: J.T. Downing

APPROVED BY: [Signature]
ENGINEER OF BRIDGE AND STRUCTURES

APPROVED BY: [Signature]
DIRECTOR OF HIGHWAYS

PILE DETAILS
F.A.P. RT. 805 SEC. 127BR
CLINTON COUNTY
STATION 1409+50

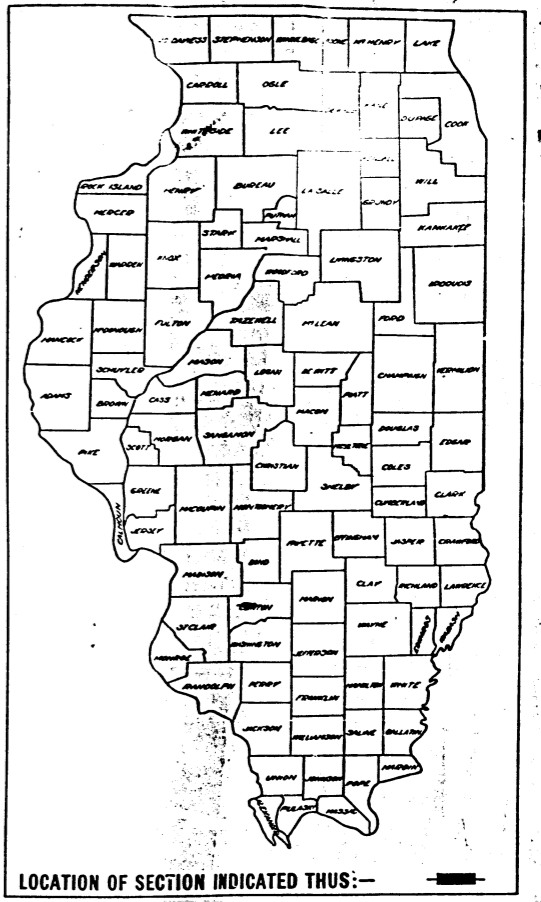
SHEET No.	TITLE PAGE
1	PLAN AND PROFILE, STA. 1390+00 TO 1420+00
2	" " " " " " " " 1420+00 " 1450+00
3	" " " " " " " " 1450+00 " 1477+00
4	" " " " " " " " 1423+25 C2
S.C. incl. SPECIAL BRIDGE DESIGN, STA. 1409+50 (2 SHEETS)	
7-8	" " " " " " " " 1423+25 C2
9-14	" " " " " " " " 1460+55 C6
15	STANDARD 117B.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
STATE BOND ISSUE HIGHWAY

1. 10 BRIDGE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
161	127	CLINTON	15	1

PLAN 1 INCH = 100 FT.
 PROFILE HOR. 1 INCH = 100 FT.
 PROFILE VERT. 1 INCH = 10 FT.
 CROSS-SECTIONS 1 INCH = 8 FT.

S. B. I. ROUTE 161 - SEC. 127-B CLINTON CO.



SUMMARY OF QUANTITIES - SEC. B.

379.2 cu. yds.	CLASS A CONCRETE
348.9 cu. yds.	CLASS X CONCRETE
21220 lbs.	REINFORCEMENT BARS
4025 lin. ft.	FURNISHING PRECAST CONCRETE PILES.
4025 lin. ft.	DRIVING PRECAST CONCRETE PILES.
0 each	TEST PILES (CONCRETE)
3600 lin. ft.	FURNISHING UNTREATED PILES UP TO 20 FT. LONG.
3600 lin. ft.	DRIVING PILES UP TO 20 FT. LONG.
4 each	TEST PILES (WOOD)
2 each	REMOVAL OF OLD BRIDGE.
1615 bbls.	CEMENT.

ONE I-BEAM BRIDGE, 8 SPANS AT 50 FT., AT STATION 1409+50, A POINT NEAR THE N.E. CORNER OF THE S.E. 1/4 THE N.W. 1/4 OF SEC. 10, T. 1 N., R. 4 W. OF THE 3RD P.M.

ONE I-BEAM BRIDGE, 9 SPANS AT 50 FT., AT STATION 1423+25, A POINT NEAR THE N.W. CORNER OF THE S.E. 1/4 OF SEC. 10, T. 1 N., R. 4 W. OF THE 3RD P.M.

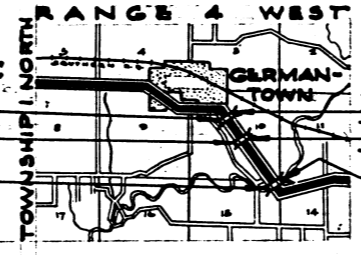
ONE STEEL BRIDGE, 1 SPAN AT 160 FT., 2 I-BEAM APPROACH SPANS AT 50 FT., AT STATION 1460+55, A POINT NEAR THE N.E. CORNER OF SEC. 15, T. 1 N., R. 4 W. OF THE 3RD P.M.

SUMMARY OF QUANTITIES - SEC. C.

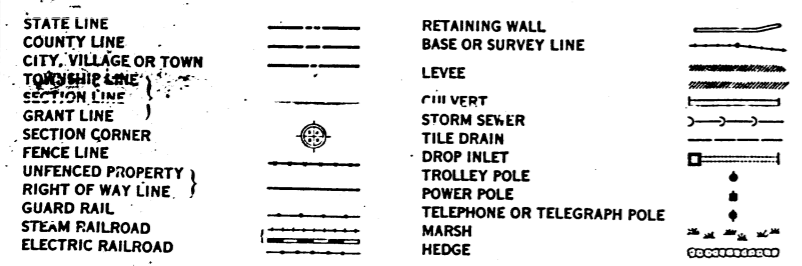
1086 cu. yds.	HANDRAIL CONCRETE.
780.9 cu. yds.	CLASS X CONCRETE.
191340 lbs.	REINFORCEMENT BARS
233210 lbs.	STRUCTURAL STEEL
163 each	FLOOR DRAINS
3 each	NAME PLATES
1425 bbls.	CEMENT.

SEC. 127B INCLUDES:
 R.C. SUBSTRUCTURE FOR 8 STEEL SPANS FOR THE BRIDGE AT STA. 1409+50.
 R.C. SUBSTRUCTURE FOR 9 STEEL SPANS FOR THE BRIDGE AT STA. 1423+25.
 R.C. SUBSTRUCTURE FOR 1 STEEL SPAN & FOR 2 I-BEAM APPROACH SPANS FOR THE BRIDGE AT STA. 1460+55.

SEC. 127C INCLUDES:
 STEEL SUPERSTRUCTURE, 8 SPANS AT 50 FT., FOR THE BRIDGE AT STA. 1409+50.
 STEEL SUPERSTRUCTURE, 9 SPANS AT 50 FT., FOR THE BRIDGE AT STA. 1423+25.
 STEEL SUPERSTRUCTURE, 1 SPAN AT 160 FT., AND 2 I-BEAM APPROACH SPANS AT 50 FT., FOR THE BRIDGE AT STA. 1460+55.



LAYOUT
 APPROXIMATE SCALE: 1 inch = 1 mile.



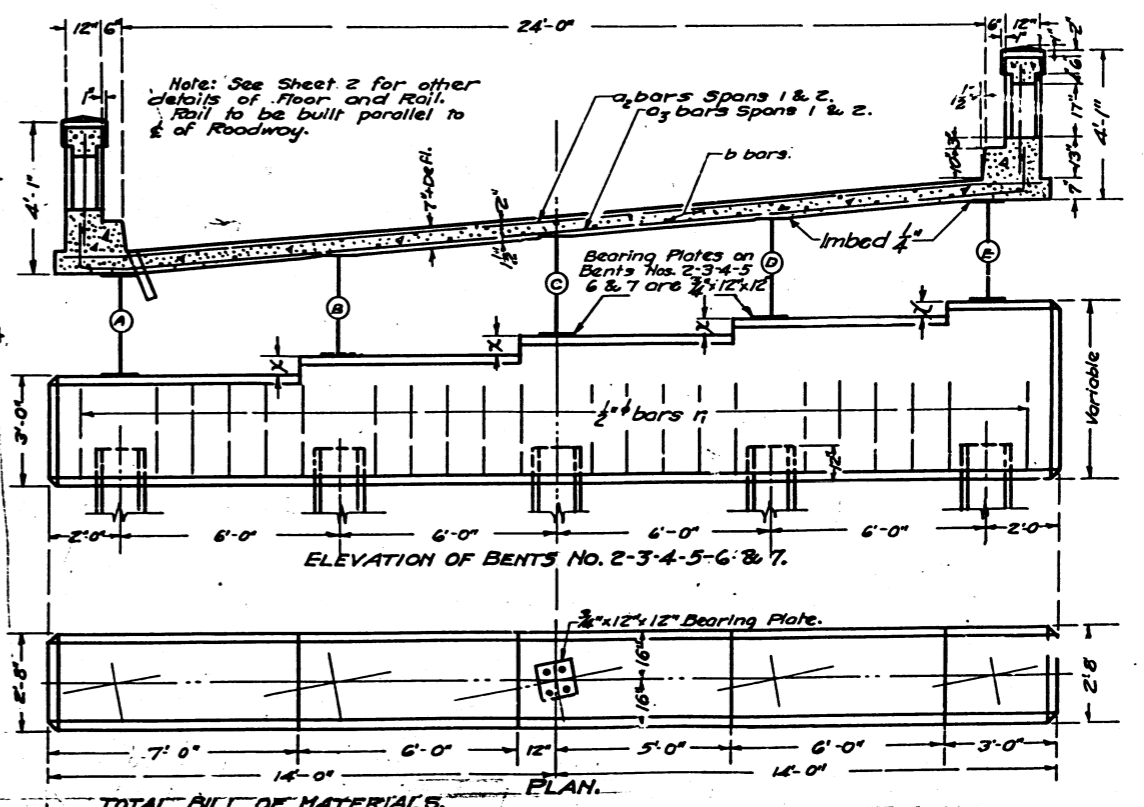
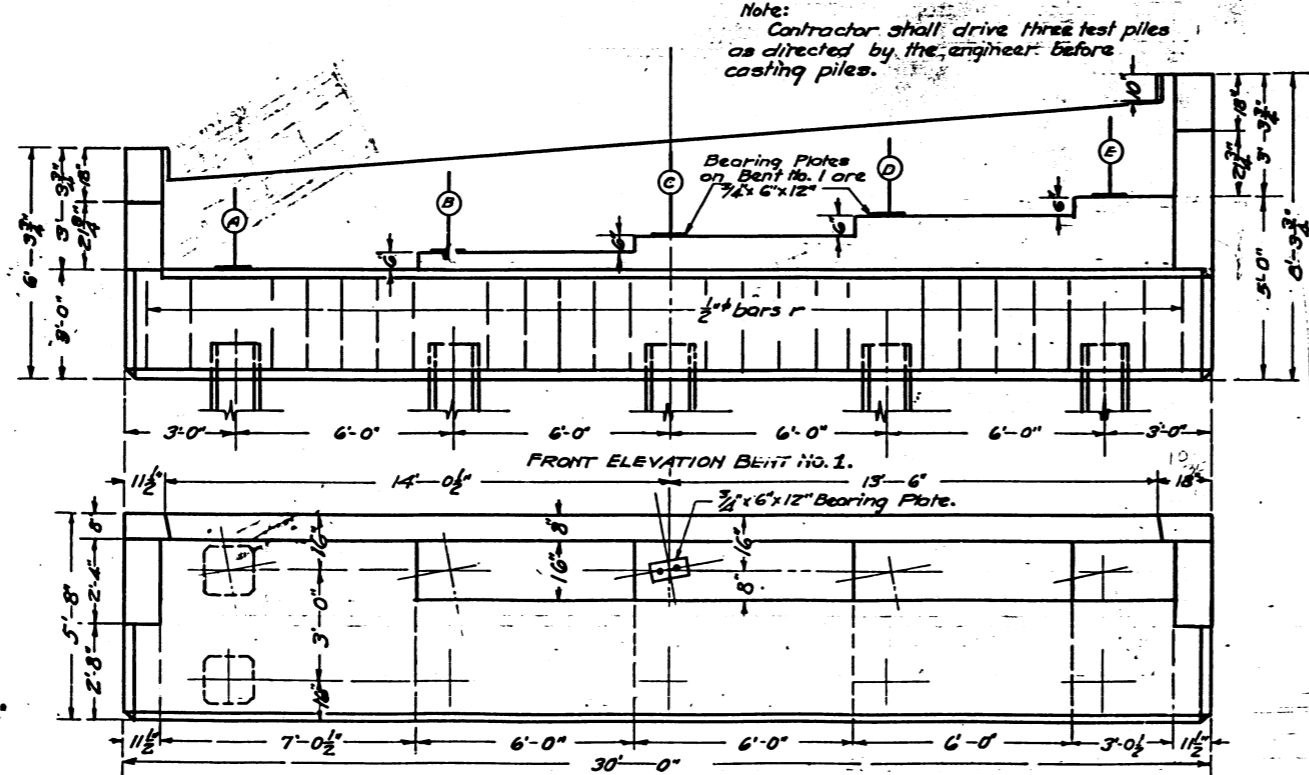
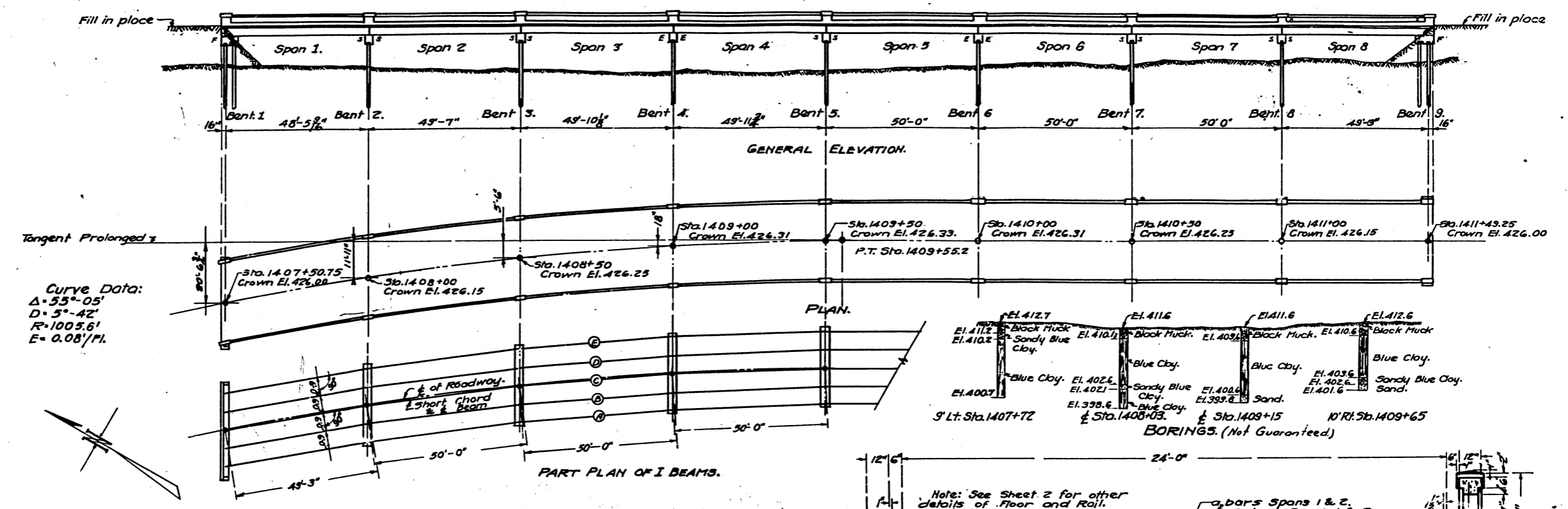
STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED:	4/23/28
EXAMINED:	E. D. W. [Signature]
DRAWN:	[Signature]
APPROVED:	[Signature]

B. M. N. & W. 30' Maple 9' Lt. Sta. 1406+51.
 Elev. 414.52; N & W. Roof. 10' Elm 27' Rt. Sta. 1412+94
 Elev. 414.44.
 Old Bridge: Wooden bridge on timber piles. To be
 removed by contractor for Sec. 127B.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
161	27	CLINTON	15	5
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT

SHEET NO. 1.
2 SHEETS.



STANDARD	COMPUTED	<i>[Signature]</i>
	CHECKED	
	DRAWN	F.R.S.
	CHECKED	W. N. Sommer
SPECIAL	ASSEMBLED	
	CHECKED	

EXAMINED 8-11-34
 PASSED *[Signature]*
 APPROVED *[Signature]*

BLOCKS ON BENTS TO PROVIDE SUPER ELEVATION OF FLOOR.

Bents	X
2 to 5	6"
6	4"
7	2"

TOTAL BILL OF MATERIALS.

Item	Sec. 127-B	Sec. 127-C	Totals
Hand Rail Concrete Cu.Yds.		45.4	45.4
Class X Concrete-Spans-Cu.Yds.		289.8	289.8
Class X Concrete-Caps-Cu.Yds.	109.9		109.9
* Reinforcing Steel-Lbs.	4660	67860	72520
Structural Steel-Lbs.		283070	283070
Concrete Piling-Lin.Ft.	1925		1925
Floor Drains		47	47
Name Plate		One	One
Test Piles Each	3		3
Old Bridge-Removal	One		One

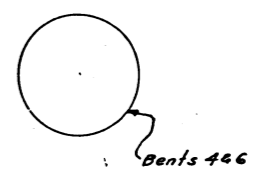
* Does not include steel in Piles

WILKEN LAKE.
 STATE BOND ISSUE RT. 161
 SEC. 127-B & C CLINTON Co.
 STA. 1409+50.

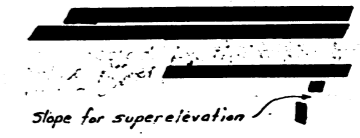
ROUTE NO.	SEC.	COUNTY	STATION	NO.
161	127B	CLINTON	15	6
PER. ROAD DIST. NO. 7		PLANNED	PER. AIR PROJECT	

2

401-2



Bents 446



Slope for super-elevation

Note: No Crown in Expansion Guard.

8	42.6
713	C
713	C
464	C
646	C
70	B
36	C
64	C
8	C
24	C
6	B
48	B
154	B
8	B
28	B
12	B

AT BENTS 1 & 9.

2-3-5-7 & 8.

4 & 6.

35' 0"

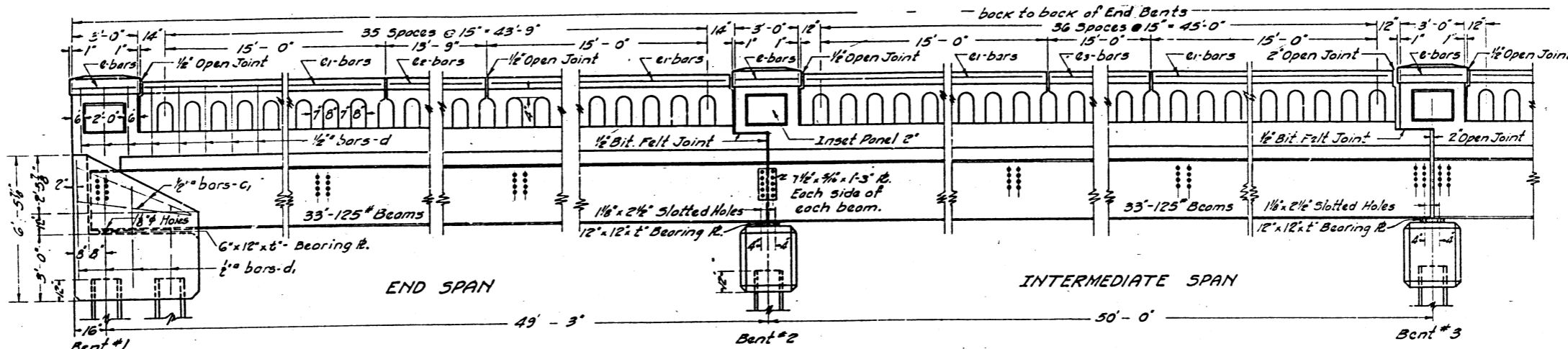
Test Piles	Each	
Q ₃	235	27'-6" C
Q ₄	235	28'-0" C
Removal Existing Bridge		One B

STATE BOND ISSUE RT. 161.
SEC. 127 B & C. CLINTON CO
STA. 1409+50.

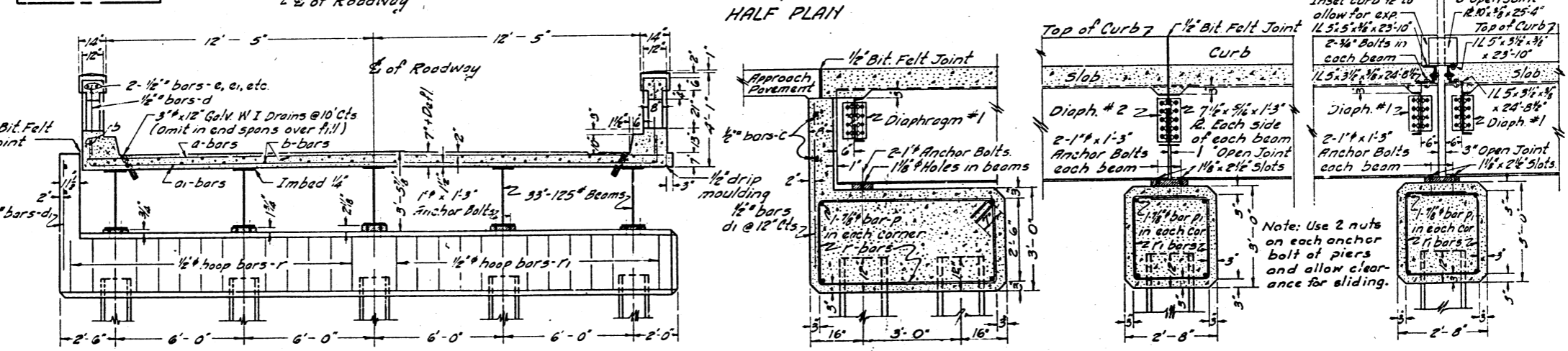
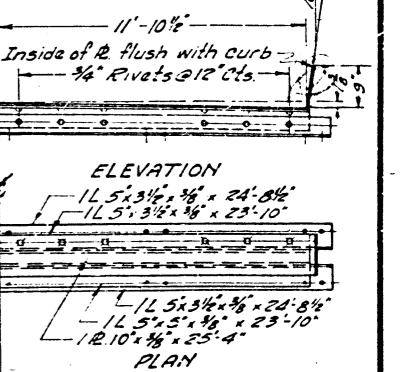
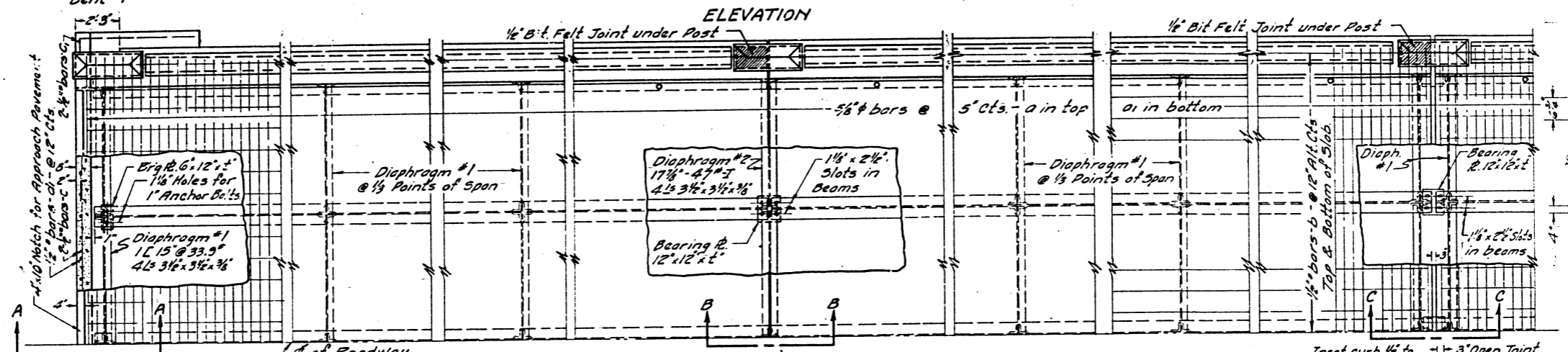
J.R.S.
W. N. Sommer

8-11-34
H. F. Burch
McJannet
E. Liberman

1644



General Notes
Class X concrete shall be used throughout.
All reinforcing steel shall be wired securely in place before concrete is poured.
3/4" rivets, 3/8" holes, unless noted.
Inspection by Illinois Division of Highways before painting.
Paint (see specs) one coat in shop, two coats in field.
Anchor bolts shall be set before connecting diaphragms over bents.
Concrete floors shall be finished according to Art. 43.3(e) of Specifications.
Each pile shall be driven to a minimum capacity of 36 tons.
One test pile shall be cast and driven at each of 5 Sts. before casting piles.

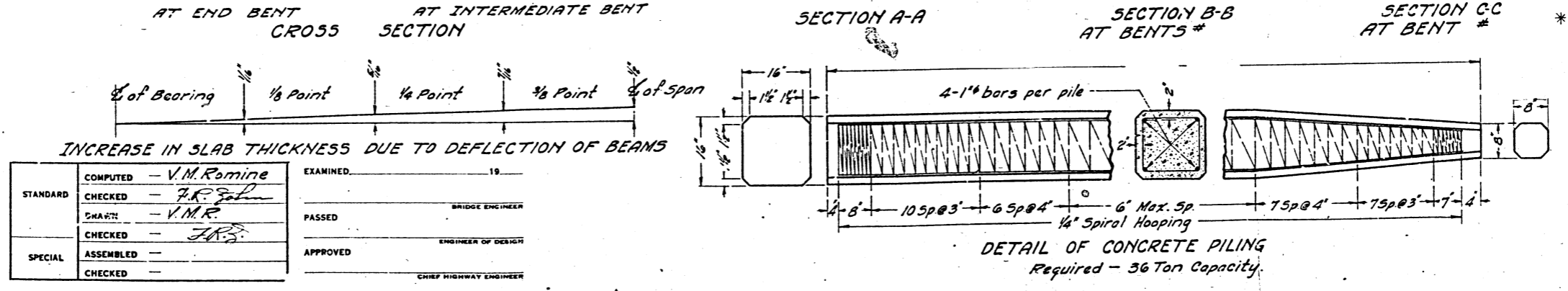


SPANS

BILL OF MATERIAL

Bar	No	Size	Length
a	2	3/8"	27'-0"
a1	2	3/8"	28'-6"
b	2	1/2"	26'-0"
d	2	1/2"	3'-3"
d1	2	1/2"	4'-6"
e	2	1/2"	3'-0"
e1	2	1/2"	15'-6"
e2	2	1/2"	13'-6"
e3	2	1/2"	14'-9"
c	2	1/2"	28'-6"
r	2	1/2"	17'-0"
r1	2	1/2"	11'-0"
p	2	3/8"	28'-6"
p1	2	3/8"	27'-6"
q	2	1/2"	7'-0"

Hand Rail Concrete - Cu Yds
Cl. X Concrete (Span) - Cu Yds
Cl. X Concrete (Caps) - Cu Yds
Reinforcing Steel - Lbs.
Structural Steel - Lbs.
Concrete Piling - Lin. Ft.
Floor Drains - Each
Name Plates - Each



INCREASE IN SLAB THICKNESS DUE TO DEFLECTION OF BEAMS

COMPUTED	V.M. Romire	EXAMINED	19
CHECKED	F.R. John	PASSED	BRIDGE ENGINEER
CHARN	V.M.R.	PASSED	ENGINEER OF DESIGN
CHECKED	J.R.S.	APPROVED	CHIEF HIGHWAY ENGINEER
SPECIAL ASSEMBLED			
CHECKED			

* Does not include steel in piling.