

Bench Mark: Chiseled "a" in hub guard 15' Lt. Sta. 2705+49 Elev. 658.67

Existing Structure: 038-0037 Built in 1957 as S.B.I. Rte. 8 Section 19B-1. This structure is a Three Span Continuous R.C. Girder on Solid Piers and Open Abutments. The out to out width is 36'-4" and the bk. to bk. length is 100'-0". The Contractor shall remove and replace the existing Superstructure with a new continuous one. The existing Sub-structure shall be reused with adequate rehabilitation. One lane of traffic to be maintained at all times by Staged Construction. No salvage.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 317	19BR-1	IROQUOIS	107	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

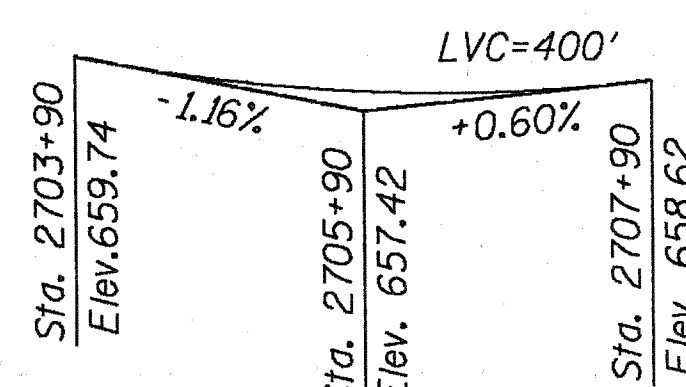
GENERAL NOTES

See Proposal for Boring Data.
All structural steel shall be shop painted with the zinc-silicate and vinyl paint system. The color of the vinyl finish coats shall be Munsell No. YR 3/4 reddish brown.
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.
The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.
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.
The contractor shall drive two concrete test piles in a permanent location one at each abutment as directed by the Engineer before ordering the remainder of piles.
All top surfaces of both abutment seats shall receive Bridge Seat Sealer treatment. Estimated quantity = 247 sq. ft.

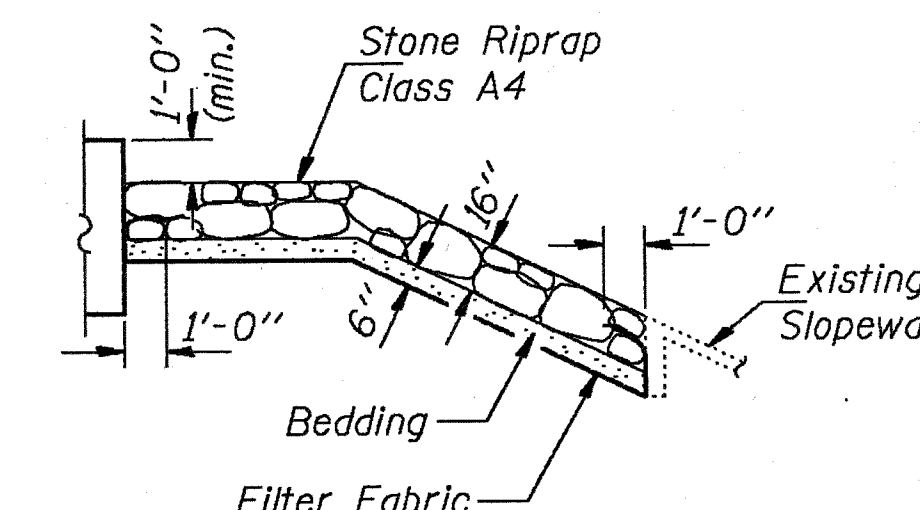
STATION 2705+03.14
REBUILT 199 BY
STATE OF ILLINOIS
F.A. RT. 317 SEC. 19BR-1

LOADING HS20
STR. NO. 038-0037

NAME PLATE
See Std. 2113



PROFILE GRADE

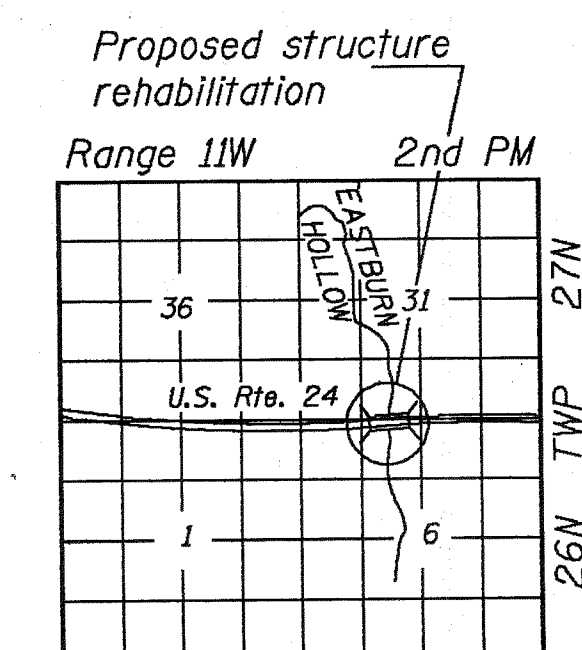


STONE RIPRAP DETAIL

TOTAL BILL OF MATERIAL

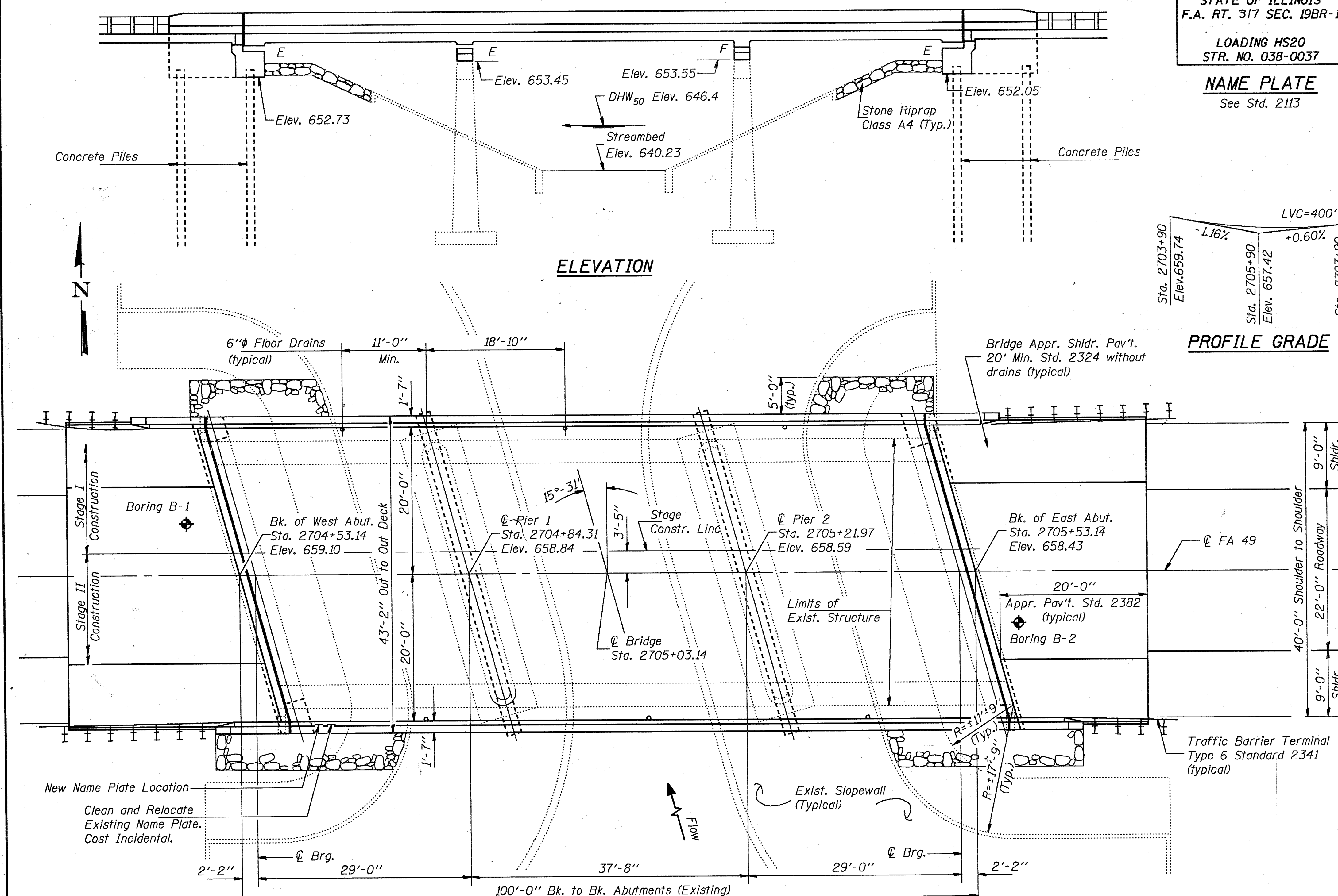
Item	Unit	Super	Sub	Total
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		15	15
Structure Excavation	Cu. Yd.		94	94
Floor Drains	Each	6		6
Preformed Joint Seal 2 1/2"	Lin. Ft.	90		90
Class X Concrete Superstructure	Cu. Yd.	224.0		224.0
Protective Coat	Sq. Yd.	80		80
Elastomeric Bearing Assembly Type I	Each	27		27
Class X Concrete	Cu. Yd.		70.4	70.4
Structural Steel	Pound	3450		3450
Reinforcement Bars, Epoxy Coated	Pound	66240	8800	75040
Concrete Piles	Lin. Ft.		171	171
Test Pile Concrete	Each		2	2
Name Plates	Each	1		1
Stone Riprap Class A4	Sq. Yd.		230	230
Filter Fabric for use with Riprap	Sq. Yd.		230	230
Bridge Seat Sealer	L.S.		1	1
Bridge Deck Grooving	Sq. Yd.	396		396

* New F.A. Rte 317



LOCATION SKETCH

GENERAL PLAN
U.S. RTE. 24 OVER
EASTBURN HOLLOW
* F.A. RTE. 49 SEC. 19BR-1
IROQUOIS COUNTY
STATION 2705+03.14
STRUCTURE NO. 038-0037



PLAN

WATERWAY INFORMATION

Drainage Area = 10.2 Sq. Mi. Low Grade Elev. 658.2 Sta. 2706+00									
Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat.	Head - Ft.		Headwater E.	
		C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	50	1460	250	250	646.4	0.6	0.6	647.0	647.0
Base	100	1790	280	280	647.0	0.8	0.8	647.8	647.8
Overtopping									
Max. Calc.	500	2530	345	345	648.2	1.2	1.2	649.4	649.4

LOADING HS20-44

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

DESIGN SPECIFICATIONS

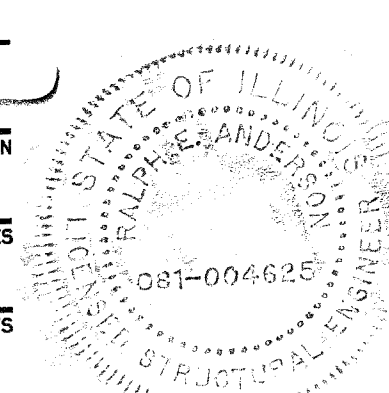
AASHTO (1989) and 1990 Interims and Seismic Retrofitting Guidelines for Highway Bridges.

DESIGN STRESSES

FIELD UNITS (NEW CONSTR.)
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

DESIGNED Michael D. Lima
CHECKED Shaker Astour
DRAWN Jas. W.D.C. JRS
CHECKED MDC, SA

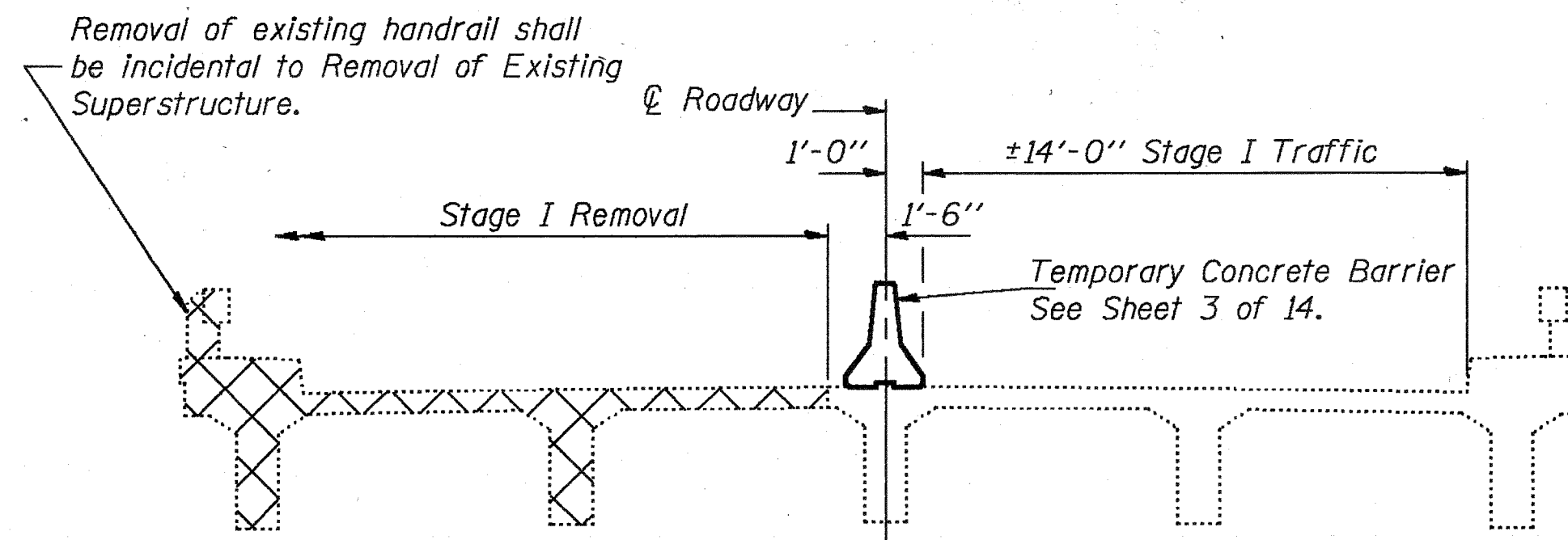
EXAMINED [Signature]
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS



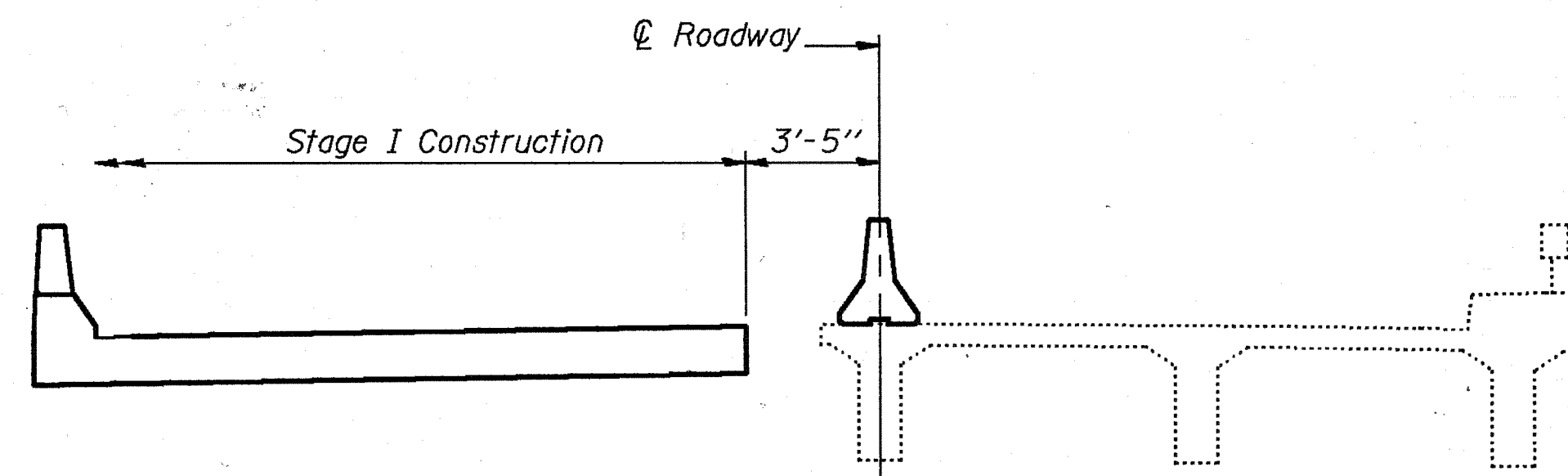
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	19BR-1	IROQUOIS	107	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

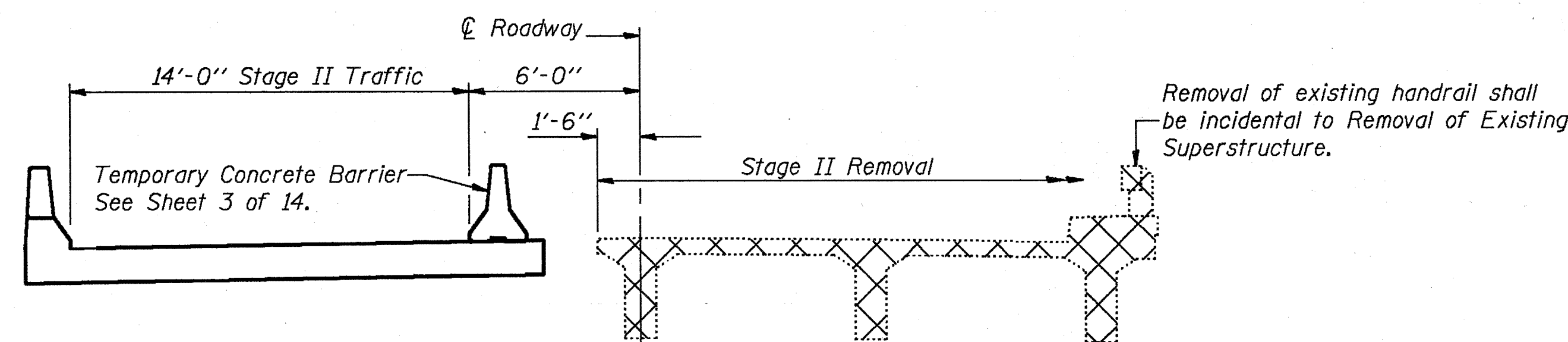
SHEET NO. 2
14 SHEETS



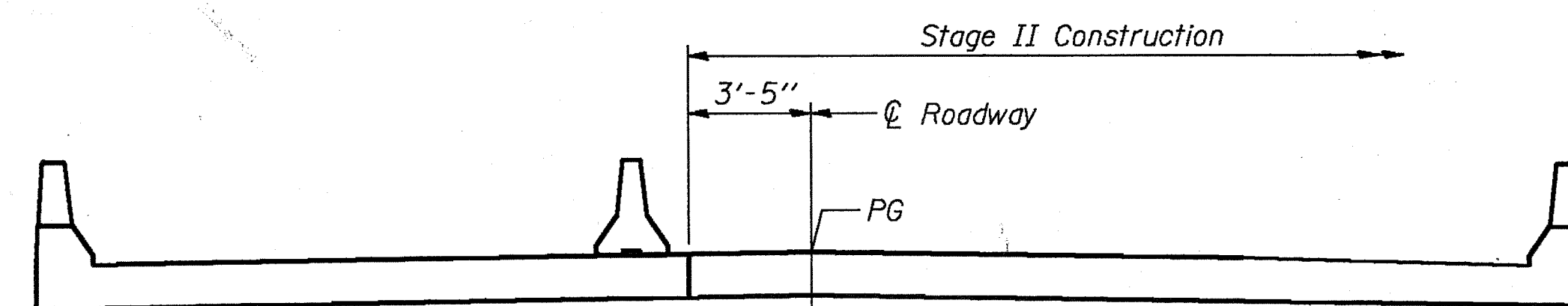
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL

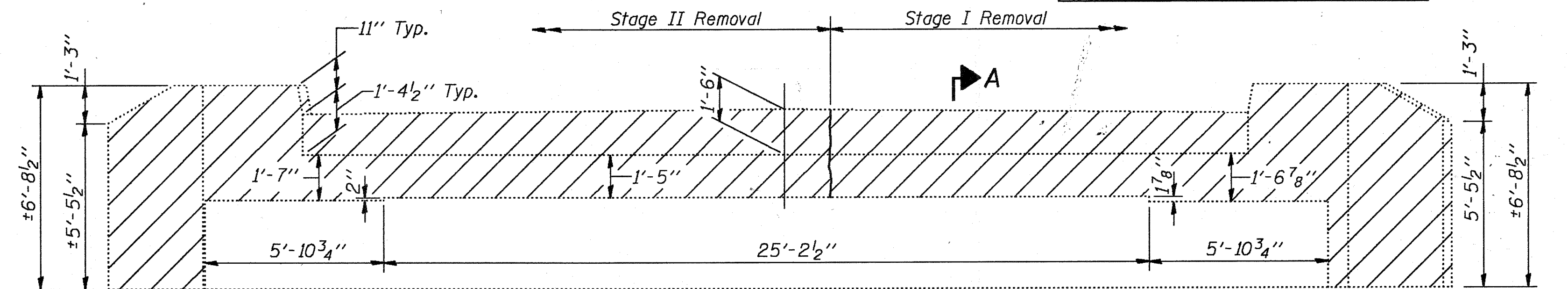


STAGE II CONSTRUCTION

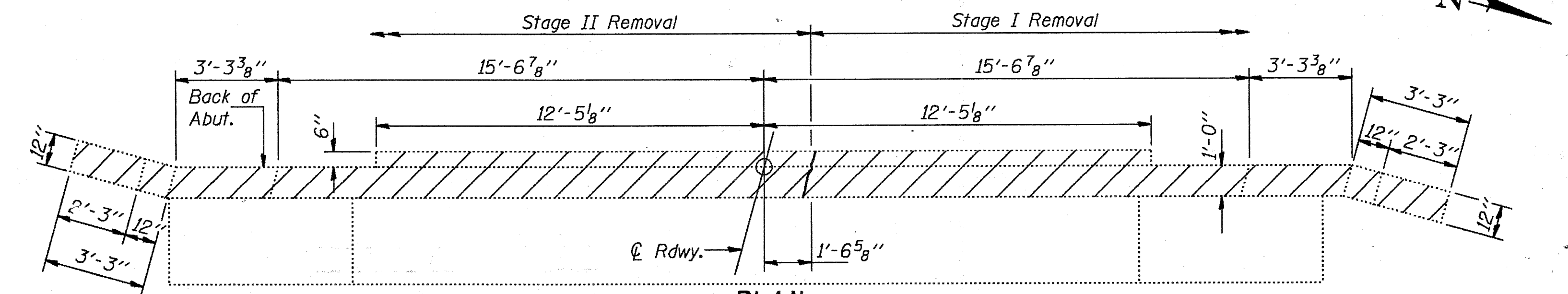
Notes: Cross hatched areas indicate "Removal of Existing Superstructure". All cross sections of superstructure are looking East. For quantities of Temporary Concrete Barrier see Roadway Plans. Hatched areas indicate "Concrete Removal".

DESIGNED	Michael D. Cina
CHECKED	Shaker Asfour
DRAWN	Joe Sutherland
CHECKED	MD C, SA

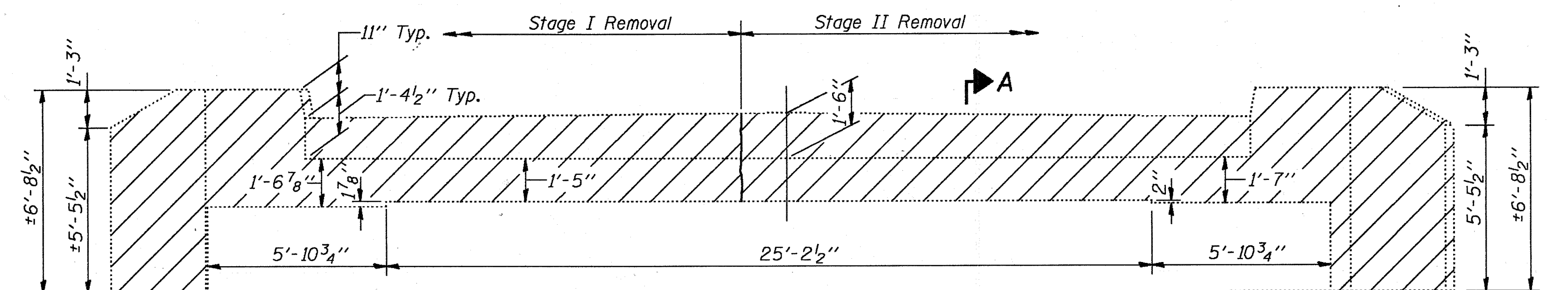
EXAMINED	March 6 1991
PASSED	Eng. J. Kaspar
APPROVED	Eng. E. Anderson
	DIRECTOR OF HIGHWAYS



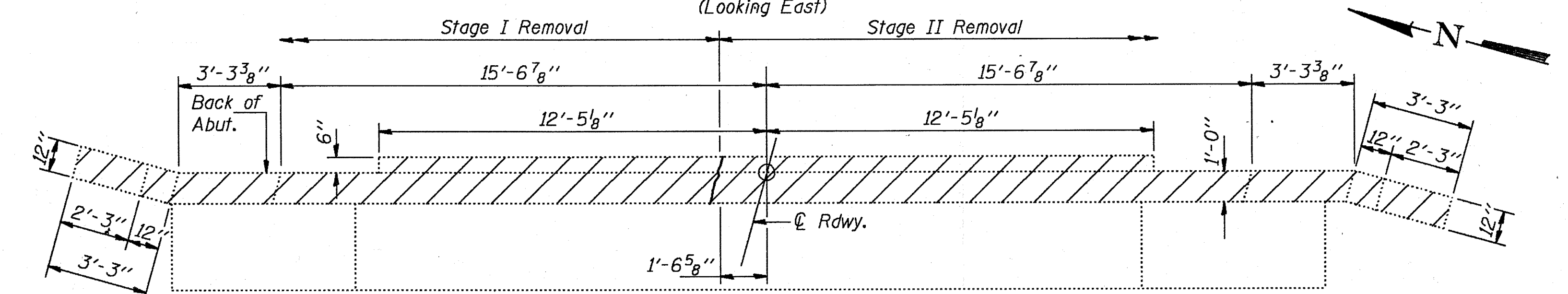
ELEVATION
(Looking West)



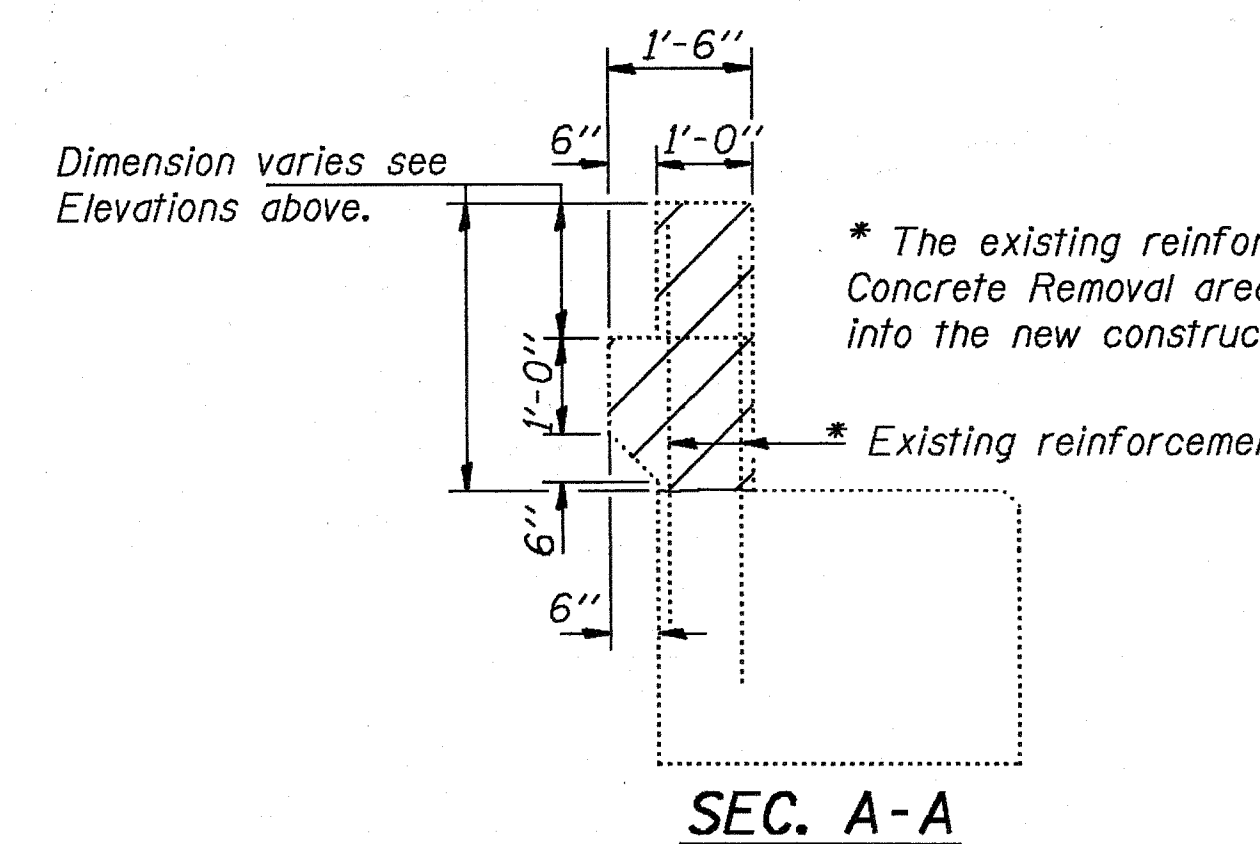
PLAN
WEST ABUTMENT



ELEVATION
(Looking East)



PLAN
EAST ABUTMENT



SEC. A-A

**BILL OF MATERIAL
FOR BOTH ABUTMENTS**

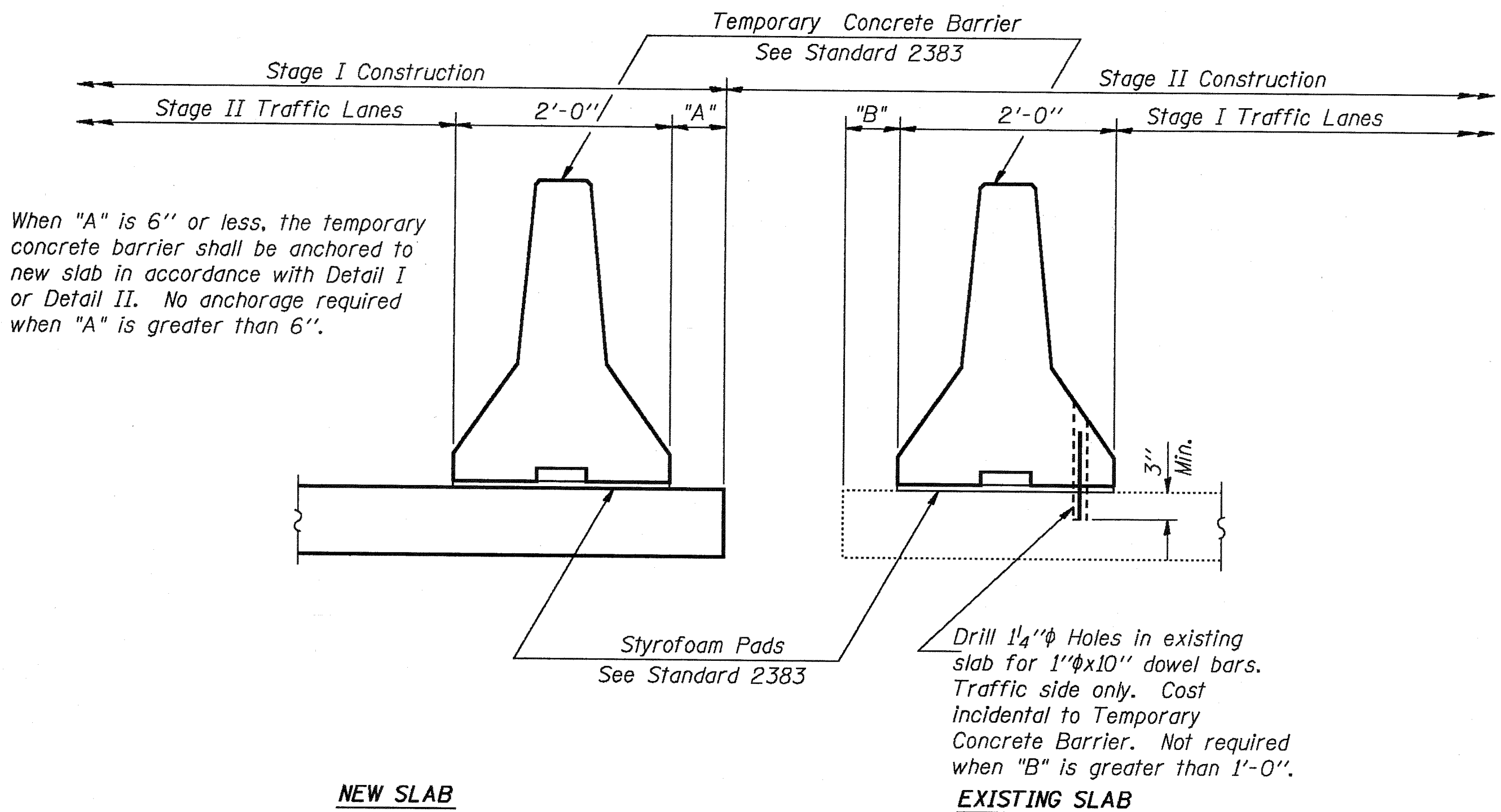
Item	Unit	Total
Concrete Removal	Cu. Yd.	13

STAGE CONSTRUCTION
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	19BR-1	IROQUOIS	107	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
14 SHEETS



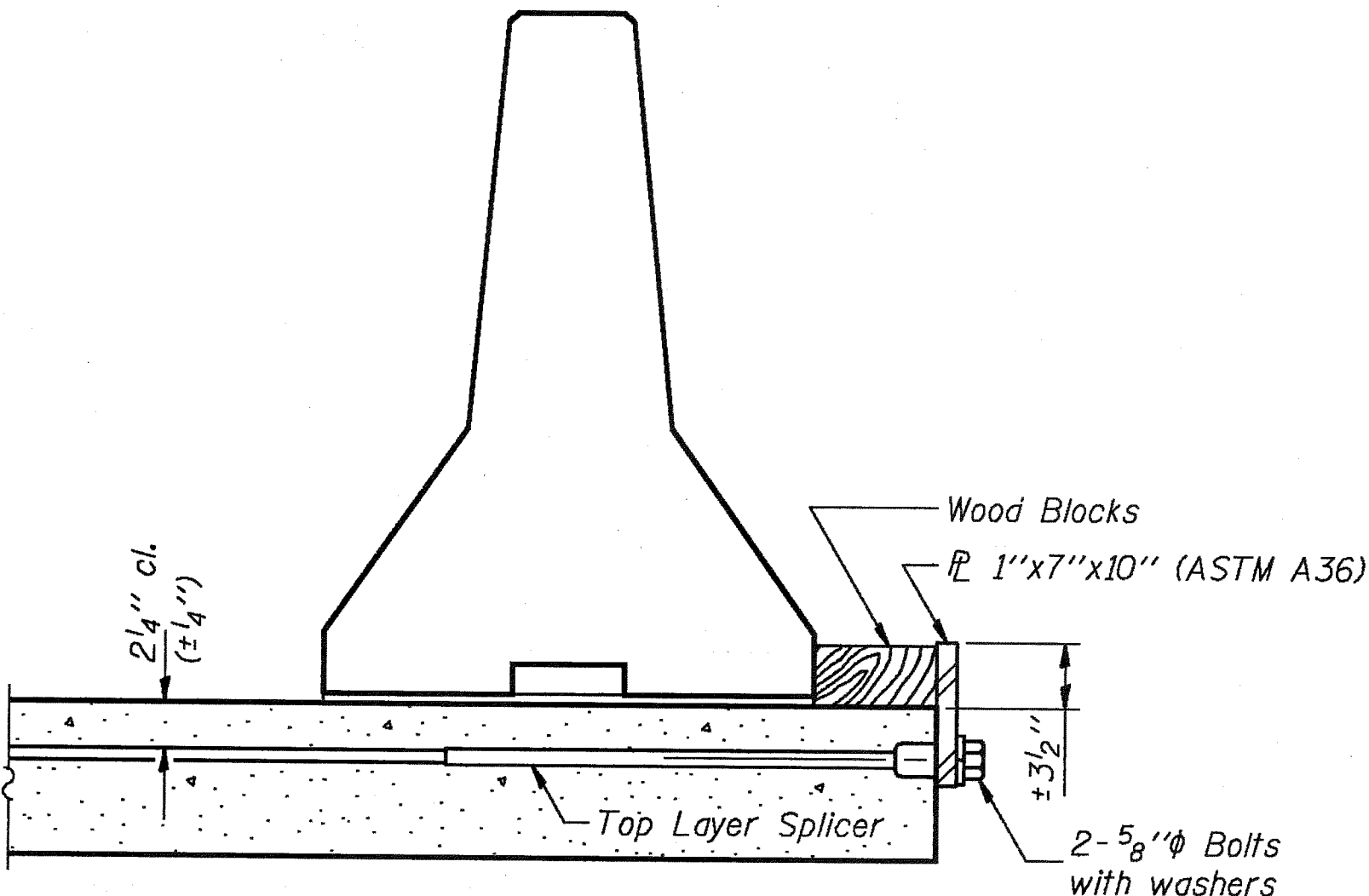
SECTIONS THRU SLAB

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" ϕ bolts screwed to coupler at approximate $\bar{C}$ of each 10'-0" barrier panel.

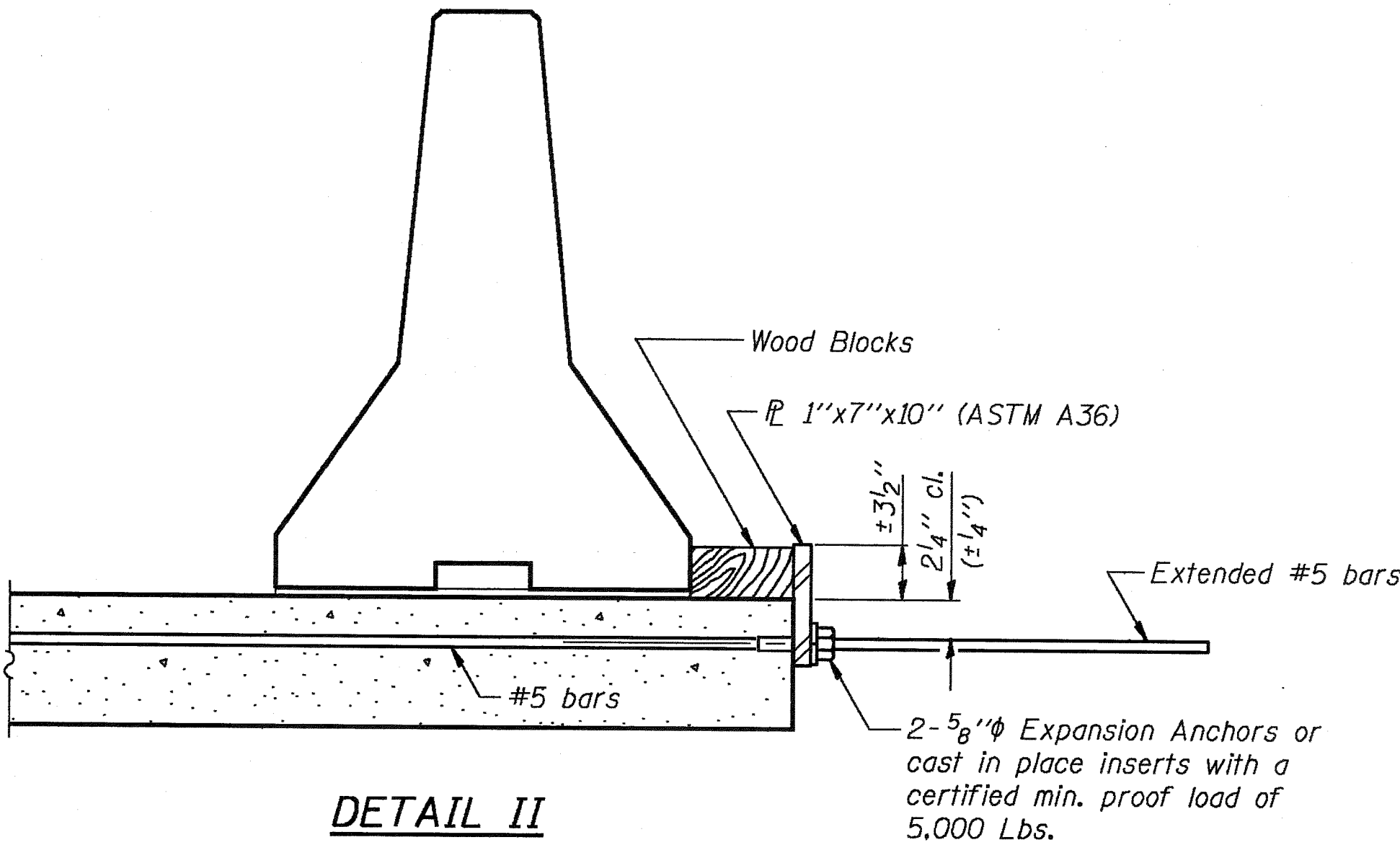
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel $\bar{P}$ to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate $\bar{C}$ of each 10'-0" barrier panel.

Cost of anchorage is incidental to Temporary Concrete Barrier.



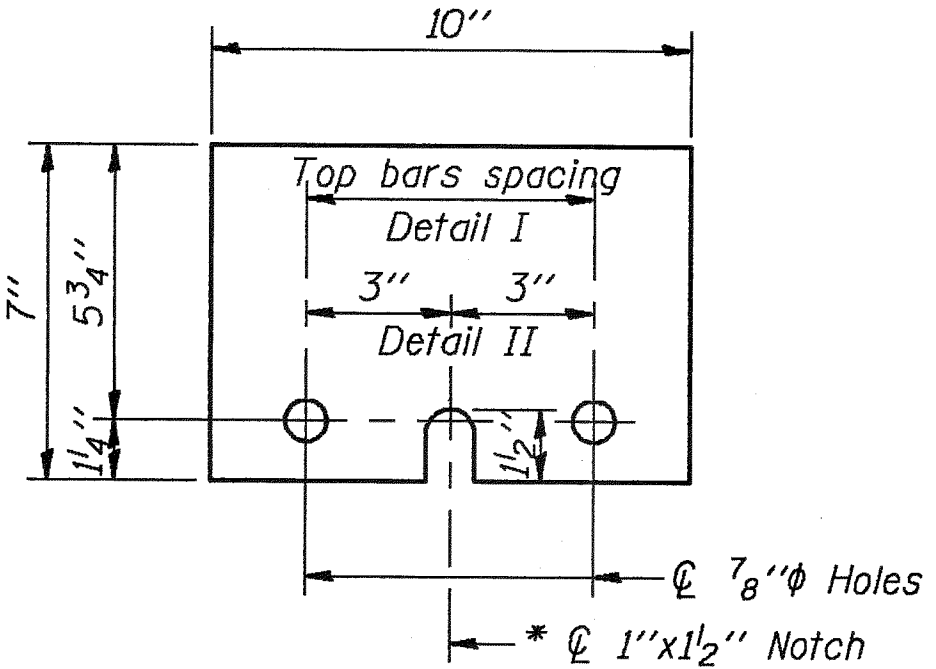
DETAIL I

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"x7"x10"

* Required only with Detail II

DESIGNED	Michael D. Cira
CHECKED	Shaker Astour
DRAWN	Paul Summer
CHECKED	mpc, SA

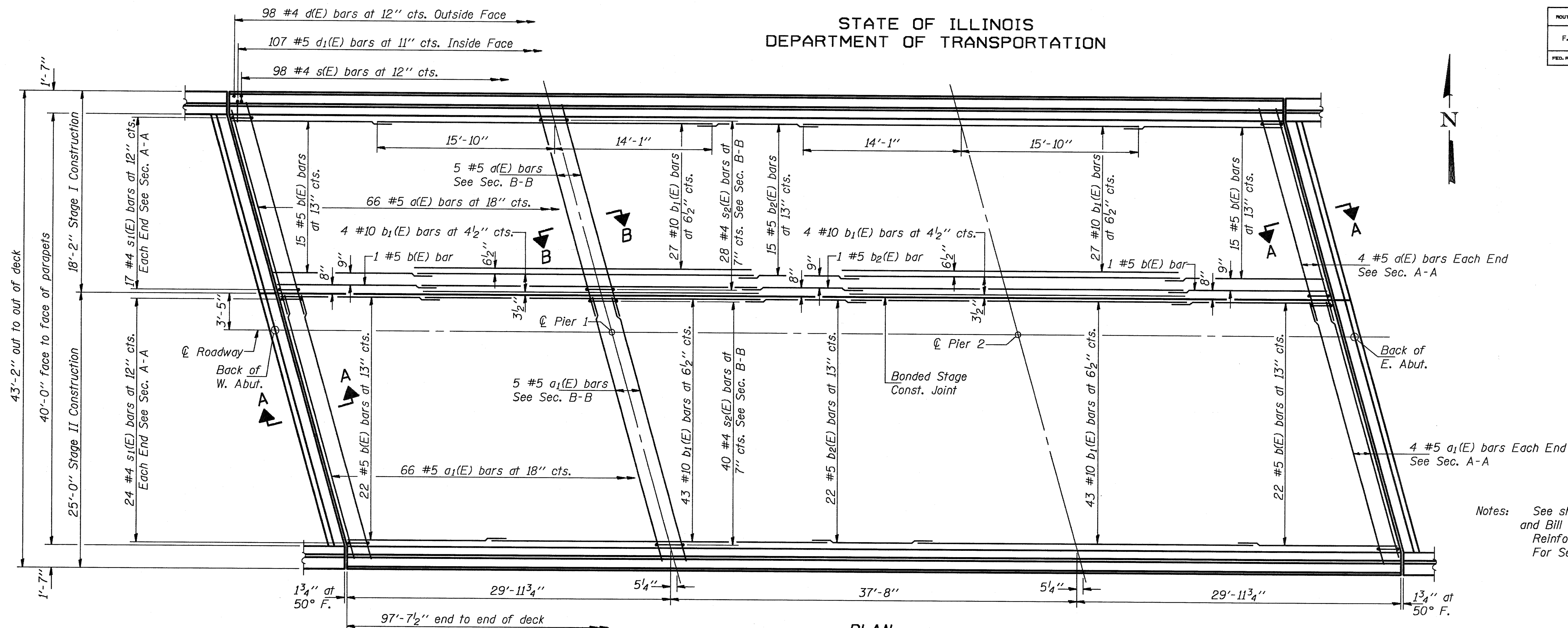
R-27 6-1-89

EXAMINED	March 6 1991
PASSED	Raj D. Kaspar
APPROVED	Ralph E. Anderson

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
F.A. 49	19BR-1	IROQUOIS	107	40	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



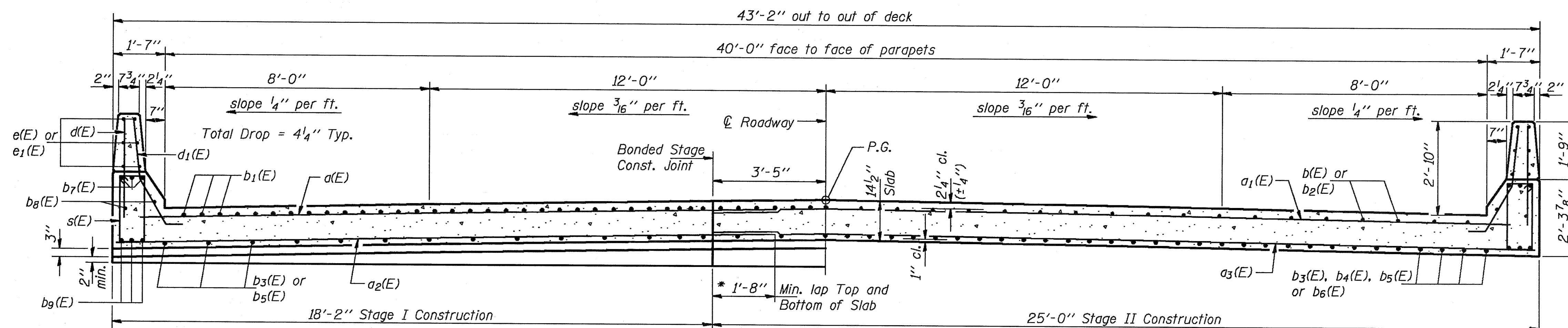
PLAN

Showing reinforcement in top of slab.
For reinforcement in bottom of slab
see sheet 5 of 14.

Notes: See sheets 5 and 6 of 14 for superstructure details
and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
For Sections A-A and B-B see sheet 6 of 14.

MIN. BAR LAPS

#5 Bars = 1'-4"
#10 Bars = 4'-6"
For minimum lap at stage construction joint
see Cross Section.



CROSS SECTION

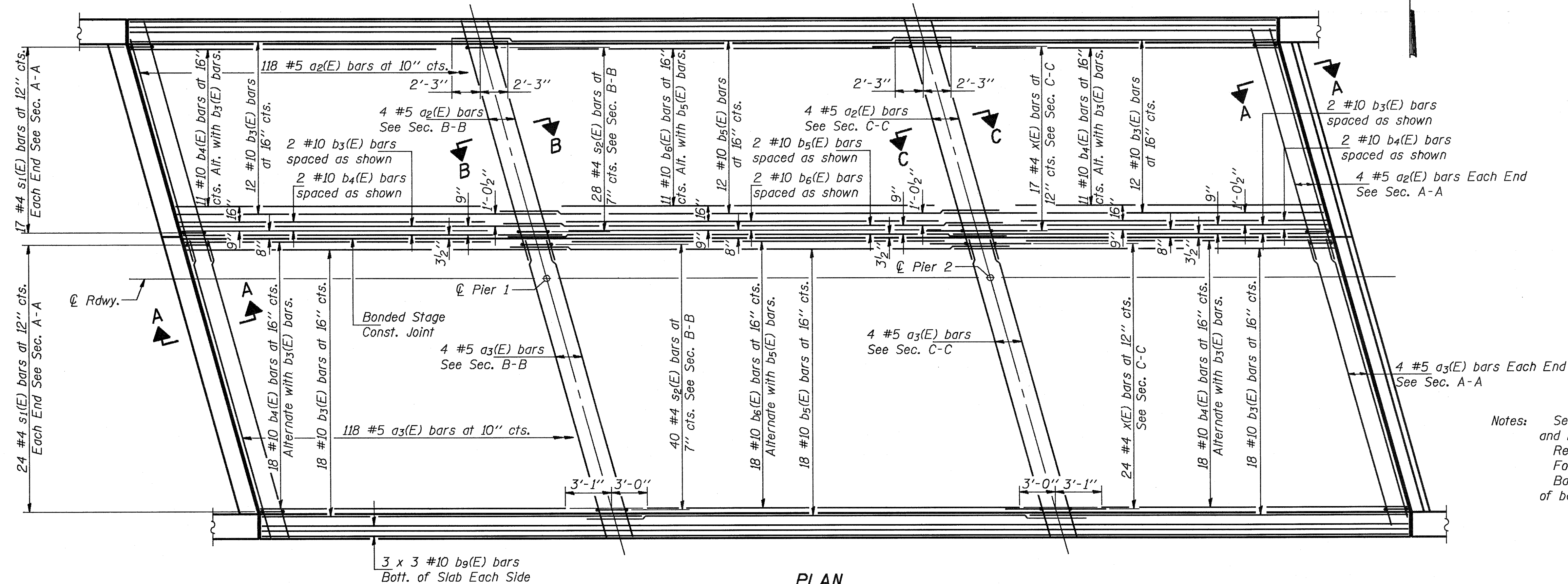
* Lapped bars at this location shall be tied
with double the number of ties normally used.

DESIGNED	Michael P. Cima	EXAMINED	Greg J. Kaspar
CHECKED	Shaker Asfour	PASSED	Ralph E. Anderson
DRAWN	Joe Sutherland	APPROVED	
CHECKED	MDC, SA		

SUPERSTRUCTURE
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
F.A. 49	19BR-1	IROQUOIS	107	41	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

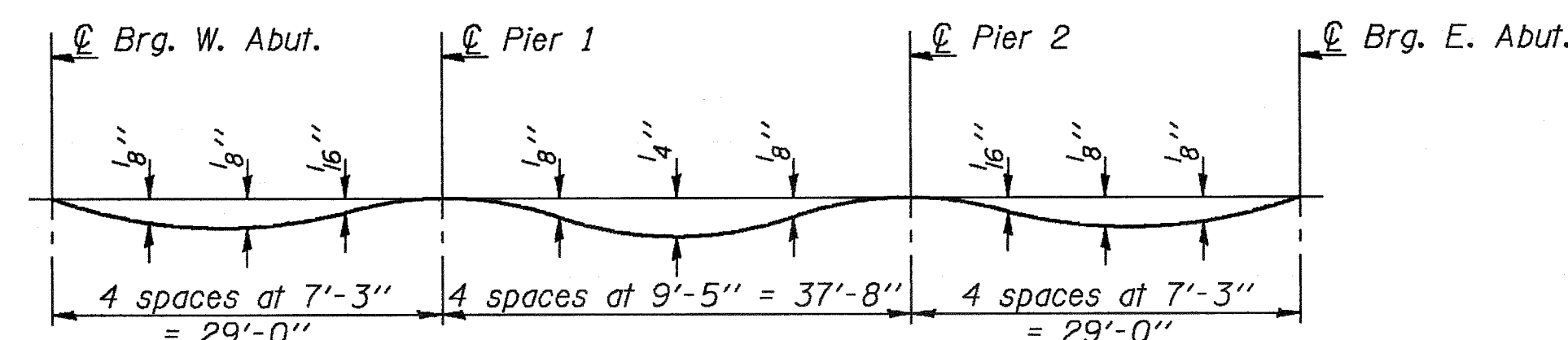
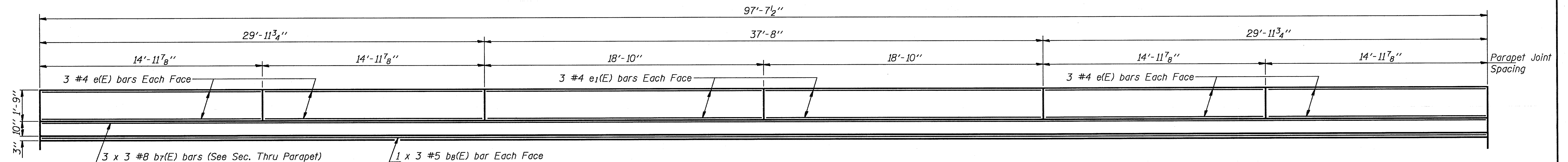


Notes: See sheets 4 and 6 of 14 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
For Sections A-A, B-B and C-C see sheet 6 of 14.
Bars indicated thus 3 x 3 #5 etc. indicates 3 lines of bars with 3 lengths per line.

MIN. BAR LAPS

#5 Bars = 1'-4"
#8 Bars = 2'-9"
#10 Bars = 4'-6"

For minimum lap at stage construction joint see Cross Section on sheet 4 of 14.



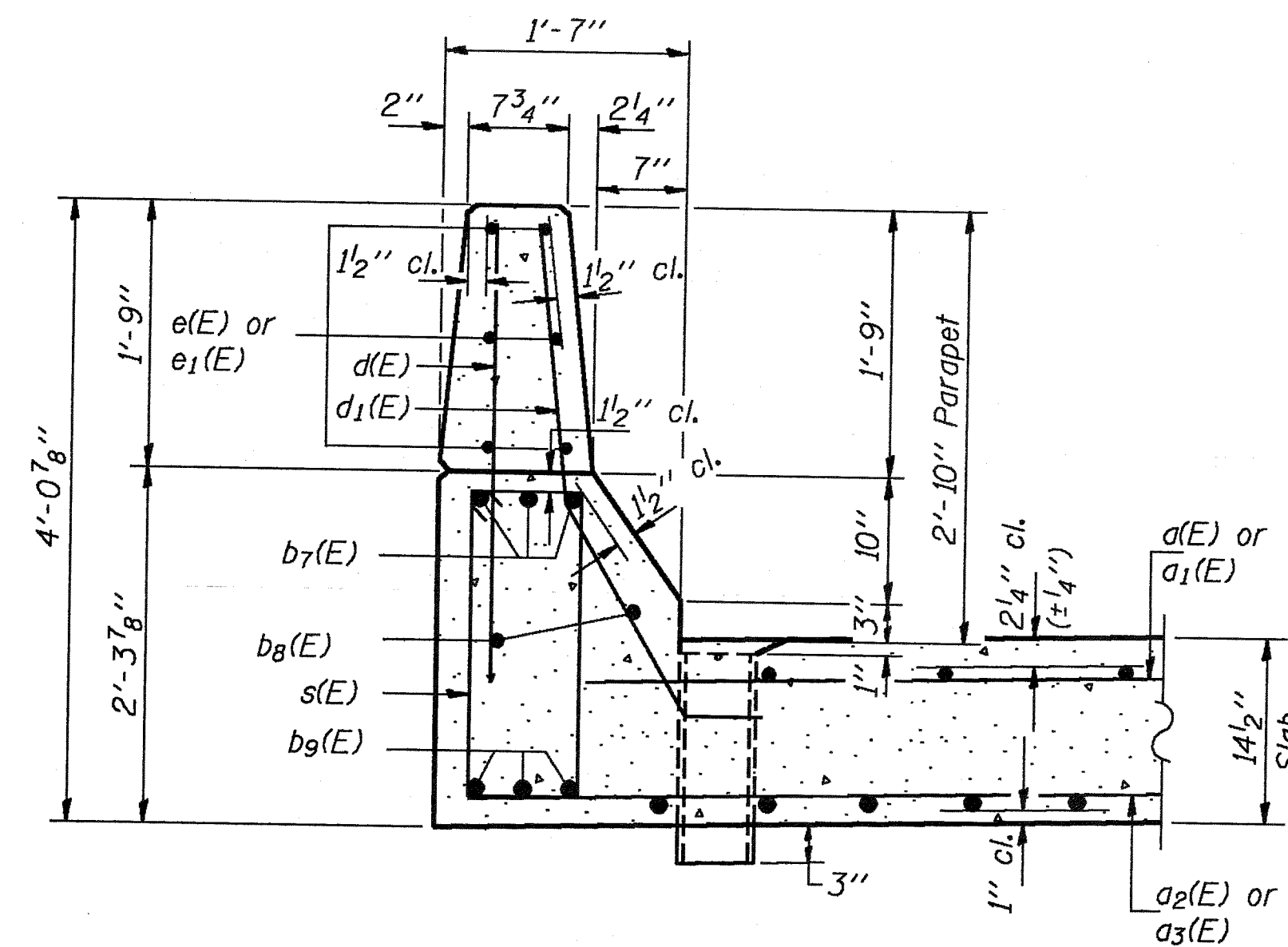
DESIGNED	Michael D. Ginn
CHECKED	Shaker Asfour
DRAWN	Joe Sutherland
CHECKED	MPC, SA

EXAMINED	March 6 1991
PASSED	Engineer of Bridge Design
APPROVED	Engineer of Bridges and Structures
	DIRECTOR OF HIGHWAYS

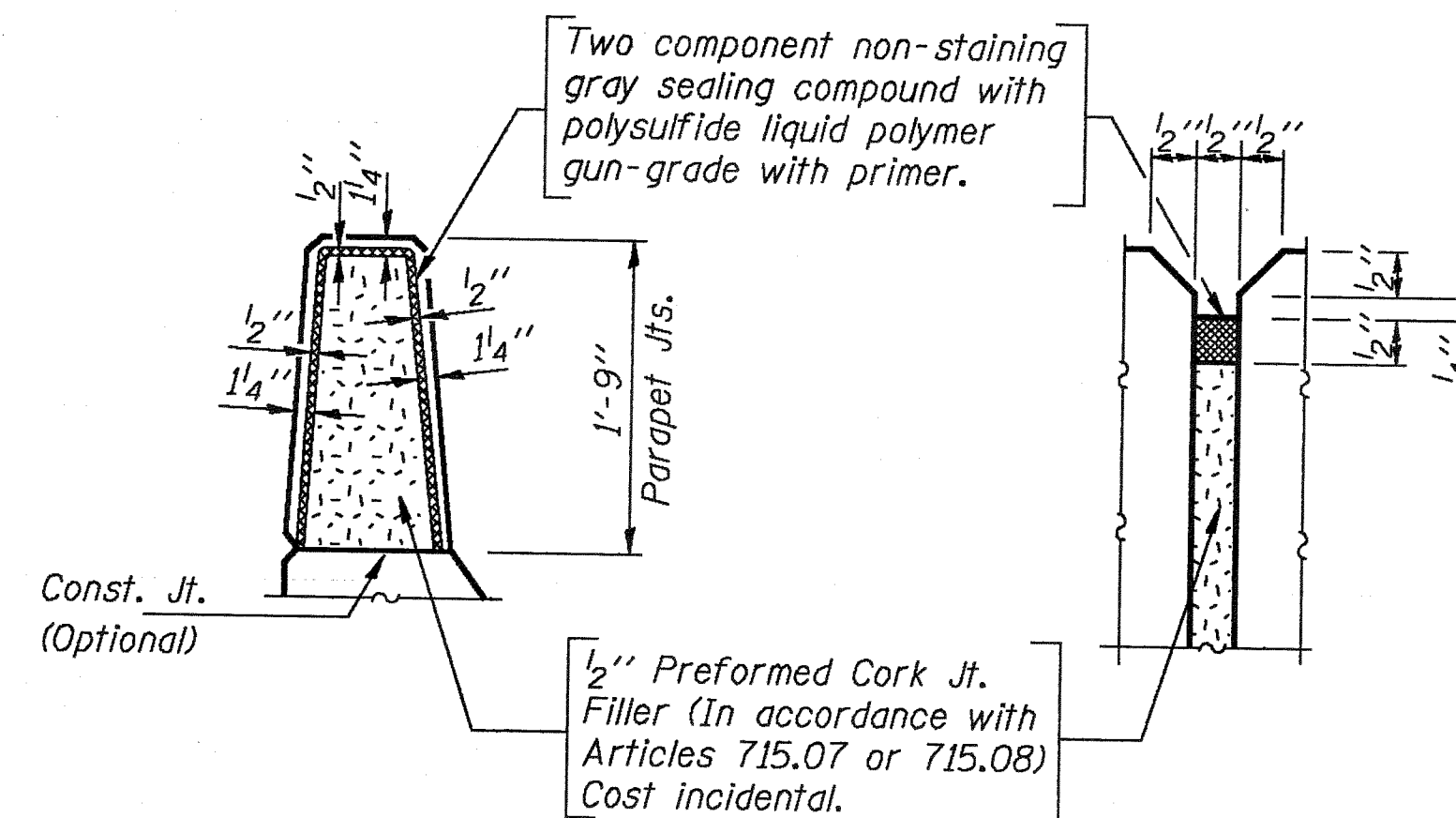
SUPERSTRUCTURE
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

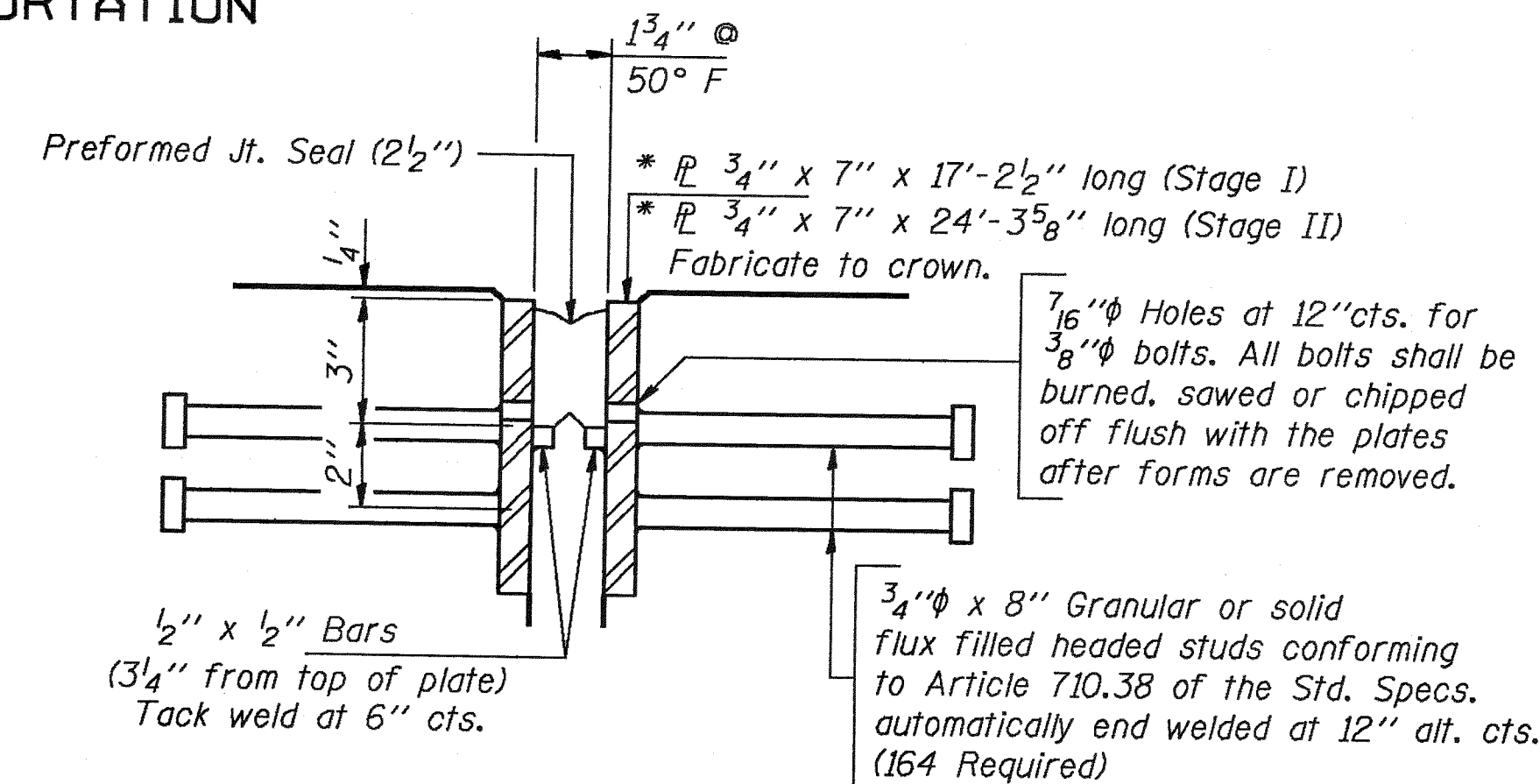
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	19BR-1	IROQUOIS	107	42
SHEET NO. 6				
14 SHEETS				



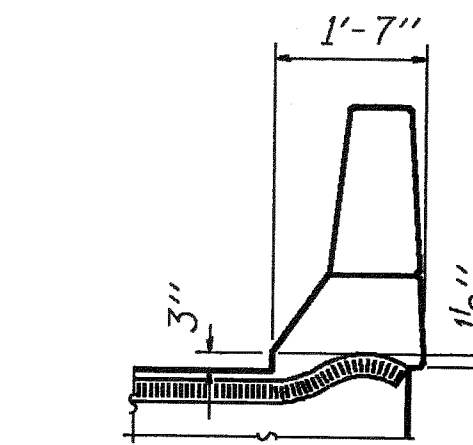
SECTION THRU PARAPET



PARAPET JOINT DETAILS



DETAIL A



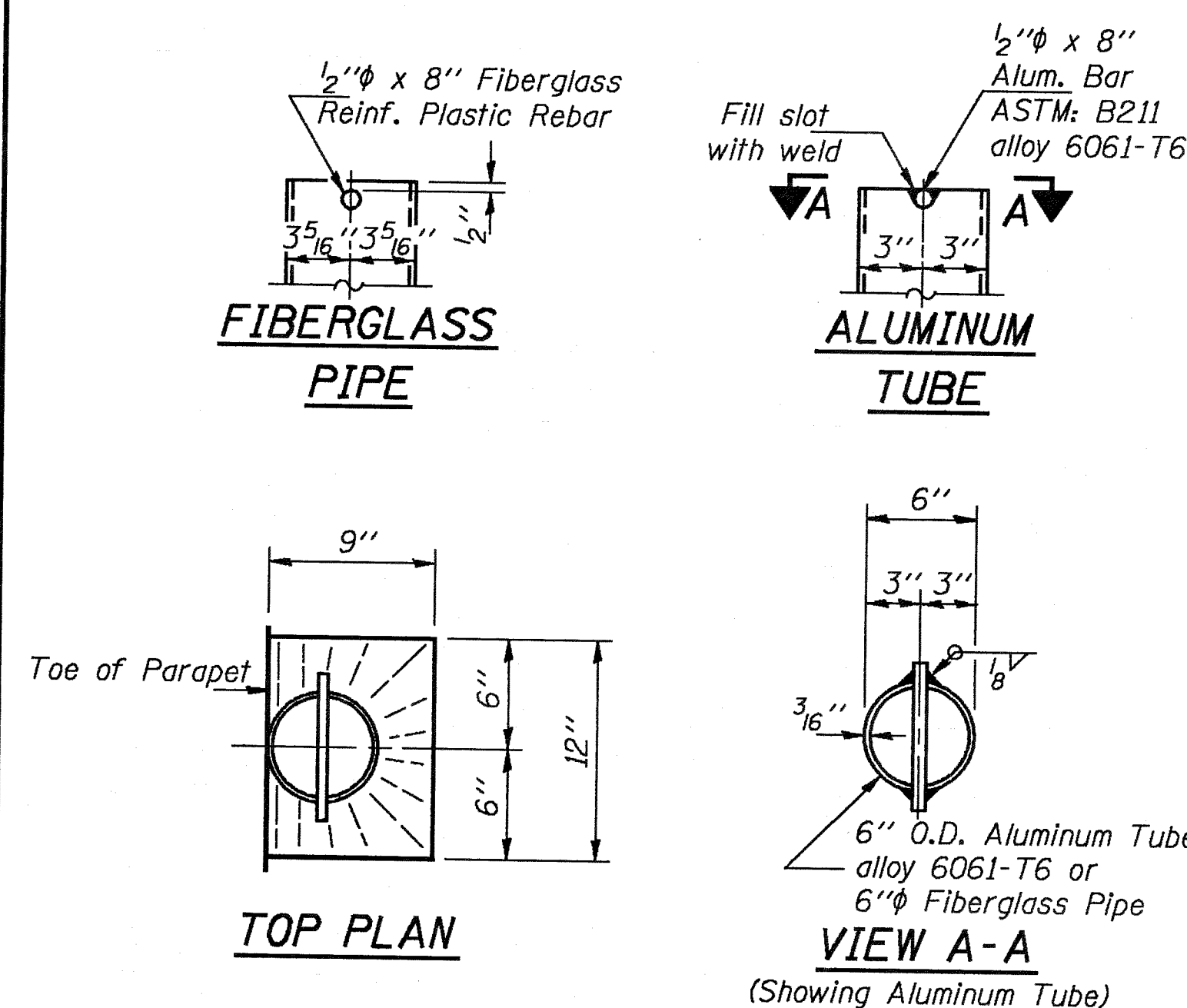
END TREATMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	79	#5	19'-6"	
a1(E)	79	#5	25'-0"	
a2(E)	134	#5	20'-2"	
a3(E)	134	#5	25'-6"	
b(E)	76	#5	15'-6"	
b1(E)	148	#10	29'-11"	
b2(E)	38	#5	12'-2"	
b3(E)	64	#10	33'-6"	
b4(E)	62	#10	28'-2"	
b5(E)	32	#10	42'-2"	
b6(E)	31	#10	31'-8"	
b7(E)	18	#8	34'-4"	
b8(E)	12	#5	33'-5"	
b9(E)	18	#10	35'-5"	
d(E)	196	#4	2'-9"	
d1(E)	214	#5	3'-11"	
e(E)	48	#4	14'-9"	
e1(E)	24	#4	18'-7"	
s(E)	196	#4	6'-3"	
s1(E)	164	#4	4'-1"	
s2(E)	136	#4	4'-6"	
x(E)	41	#4	5'-11"	
Reinforcement Bars (Epoxy Coated)				Pound
Class X Concrete Superstructure				Cu. Yd.
				66240
				224.0

Reinforcement bars designated (E) shall be epoxy coated.

SUPERSTRUCTURE DETAILS
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14



FIBERGLASS PIPE

ALUMINUM TUBE

TOP PLAN

VIEW A-A

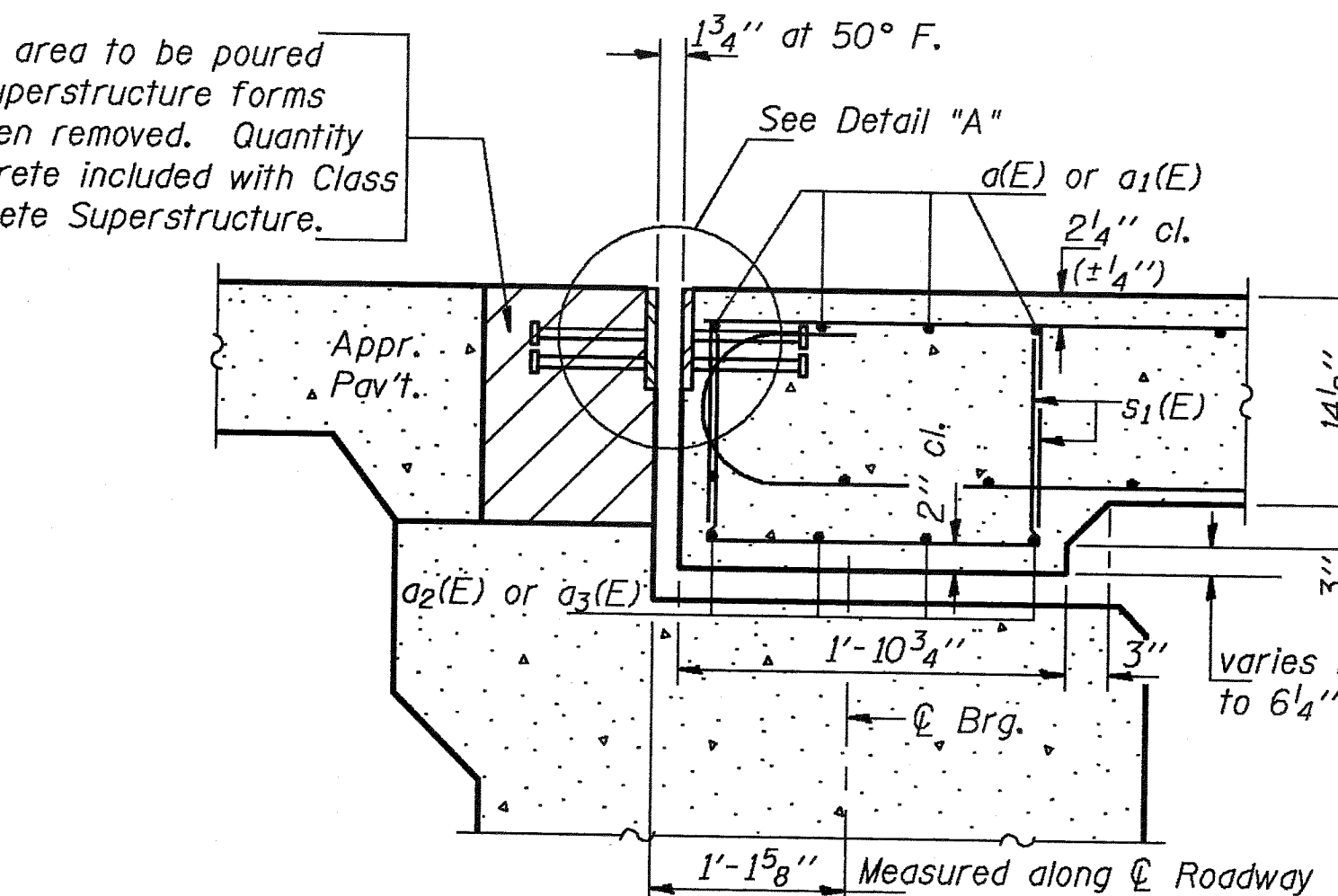
DRAIN DETAILS

Notes: Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

The exterior surfaces of the Fiberglass Floor Drains shall be painted with a vinyl enamel coat. The color shall be Munsell Standard 10Y7/1 Light Grey. Painting of the Fiberglass Floor Drains will not be required when the exterior surfaces of the furnished drains are coated by the manufacturer with silver pigment or a pigment that matches the color of the concrete beam.

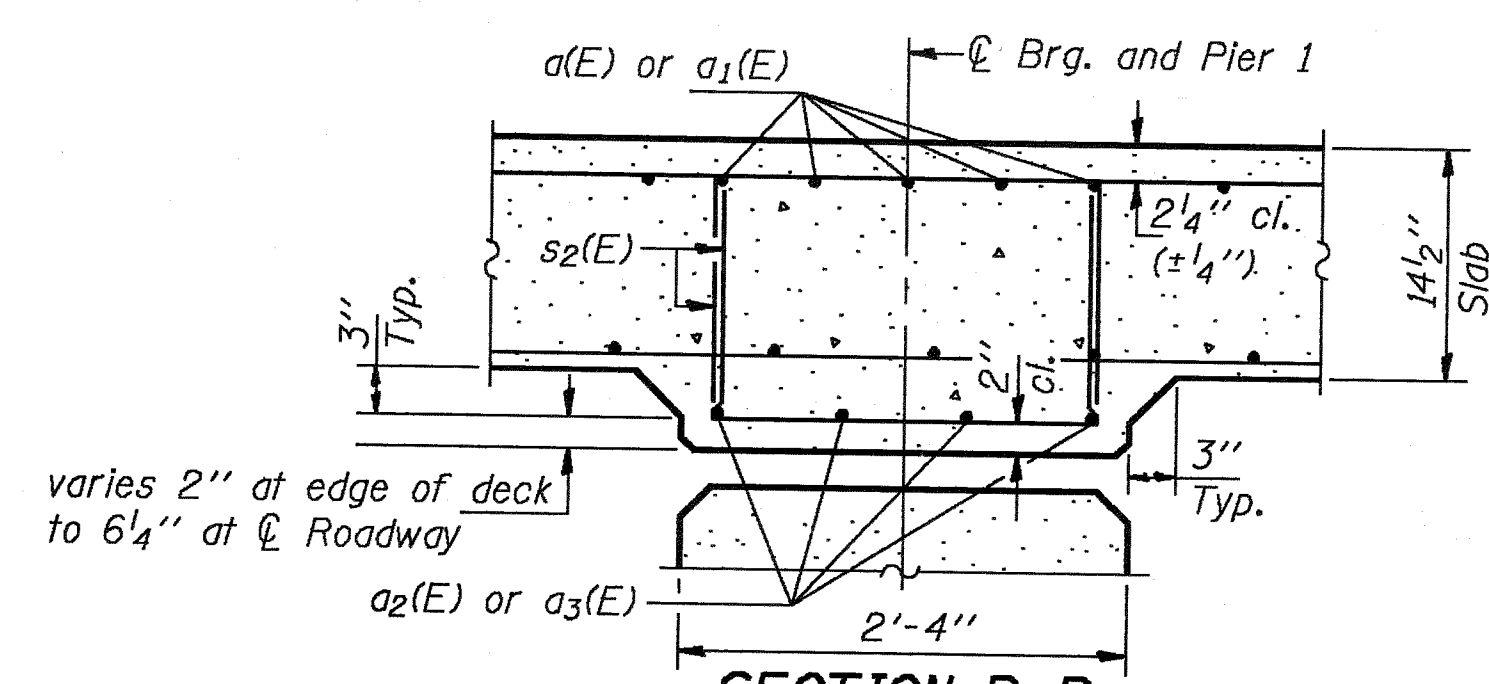
DESIGNED	Michael D. Cina
CHECKED	Shaker Asfour
DRAWN	Joe Sutherland
CHECKED	MDC, SA

EXAMINED	March 6 1991
PASSED	Raj D. Kasper
APPROVED	Ralph E. Anderson
	DIRECTOR OF HIGHWAYS

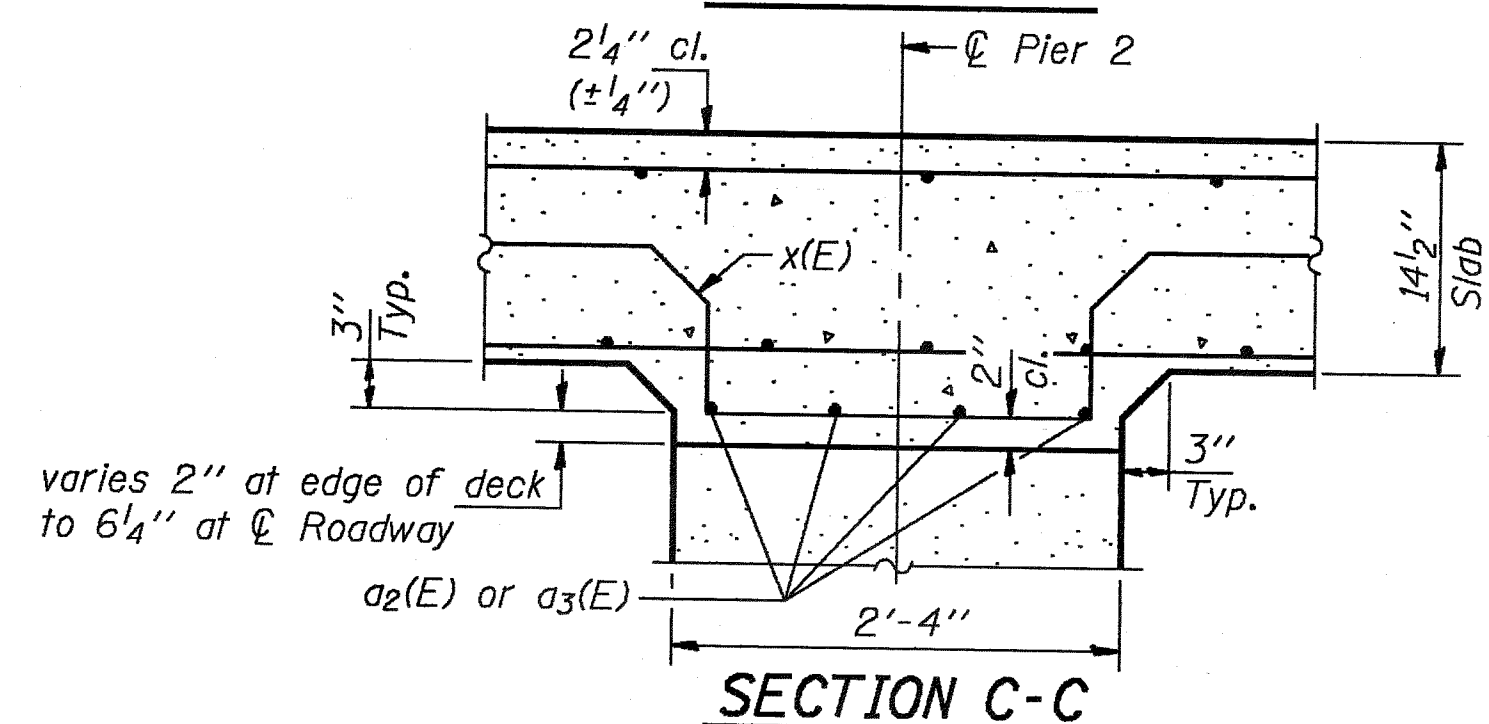


SECTION A-A

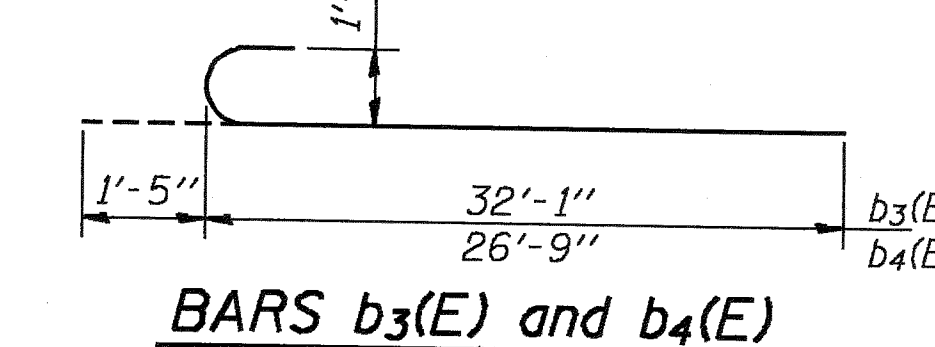
Dimensions are at right angles to abutment unless otherwise noted.



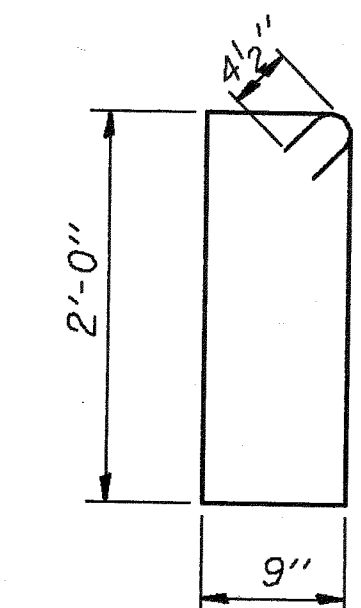
SECTION B-B



SECTION C-C

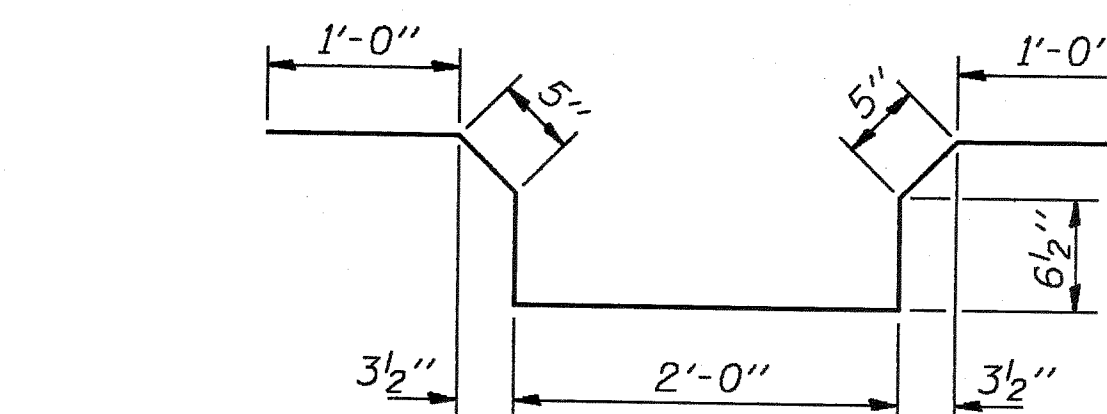


BARS b3(E) and b4(E)



BAR s(E)

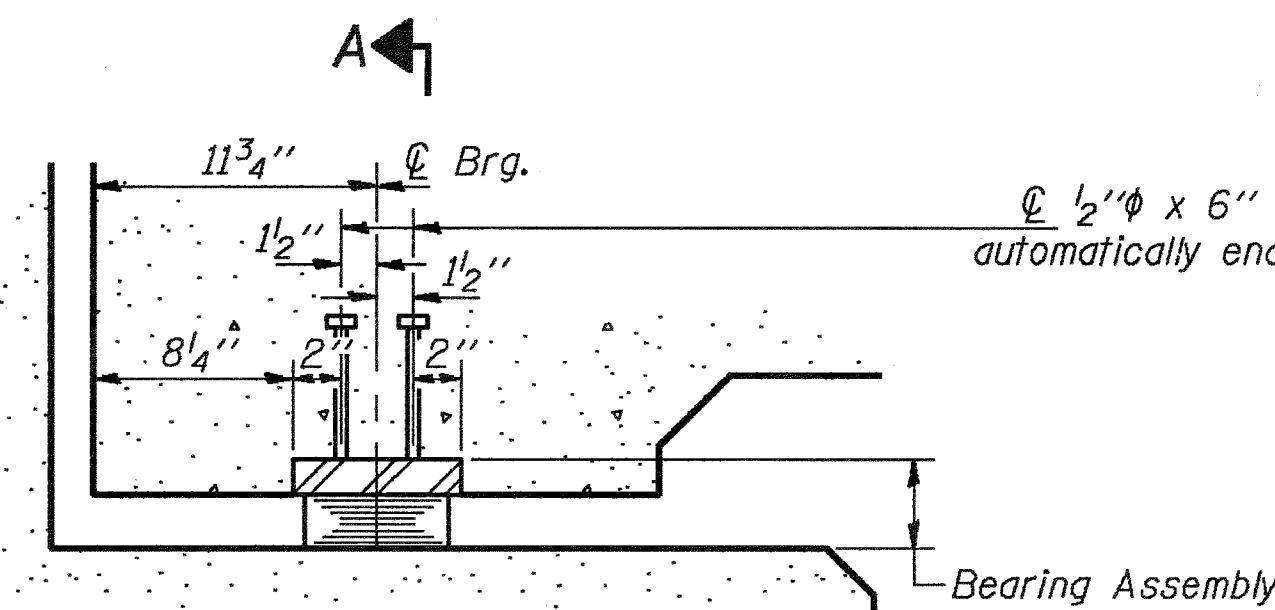
BARS s1(E) and s2(E)



BAR x(E)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
F.A. 49	19BR-1	IROQUOIS	107	43	14 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

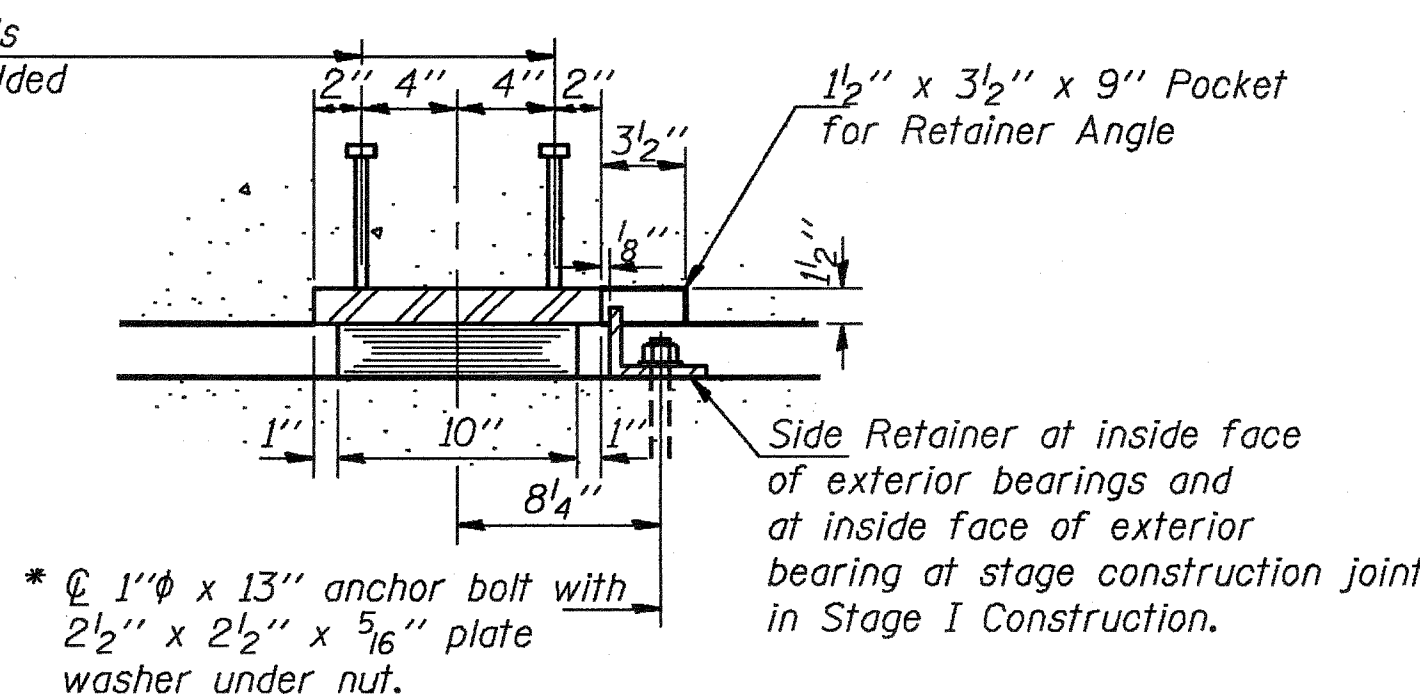


SECTION AT ABUTMENT

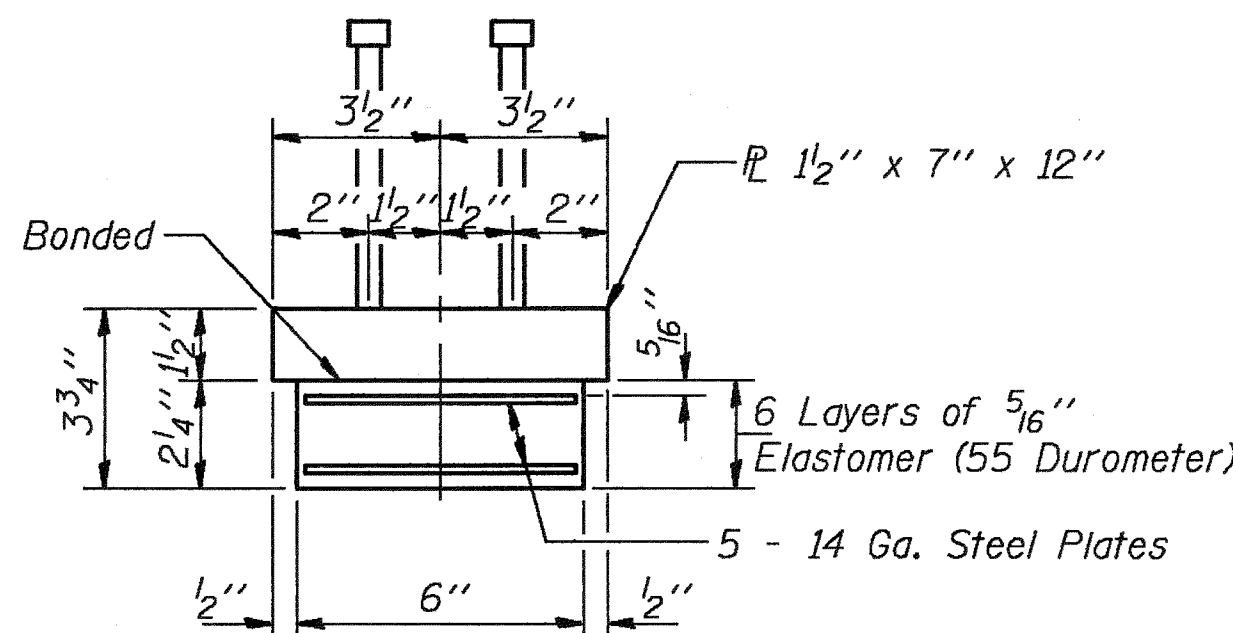
Looking North

Dimensions are parallel to Roadway.

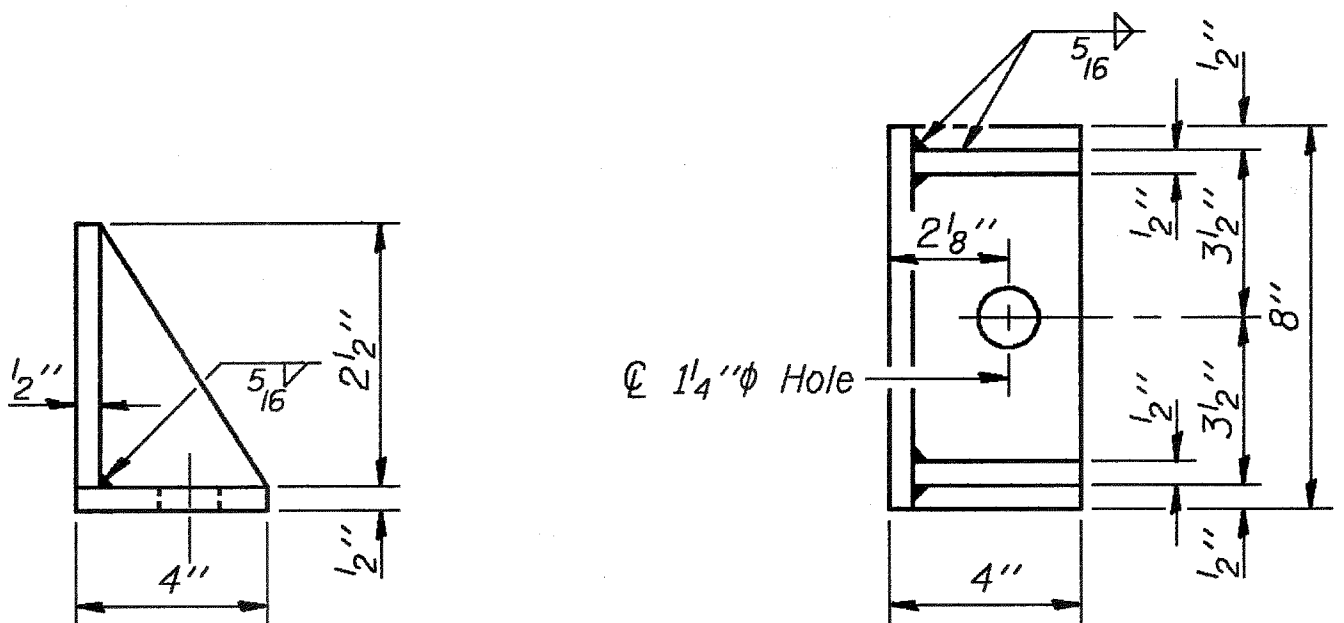
WEST ABUTMENT TYPE I ELASTOMERIC EXPANSION BEARINGS



SECTION A-A

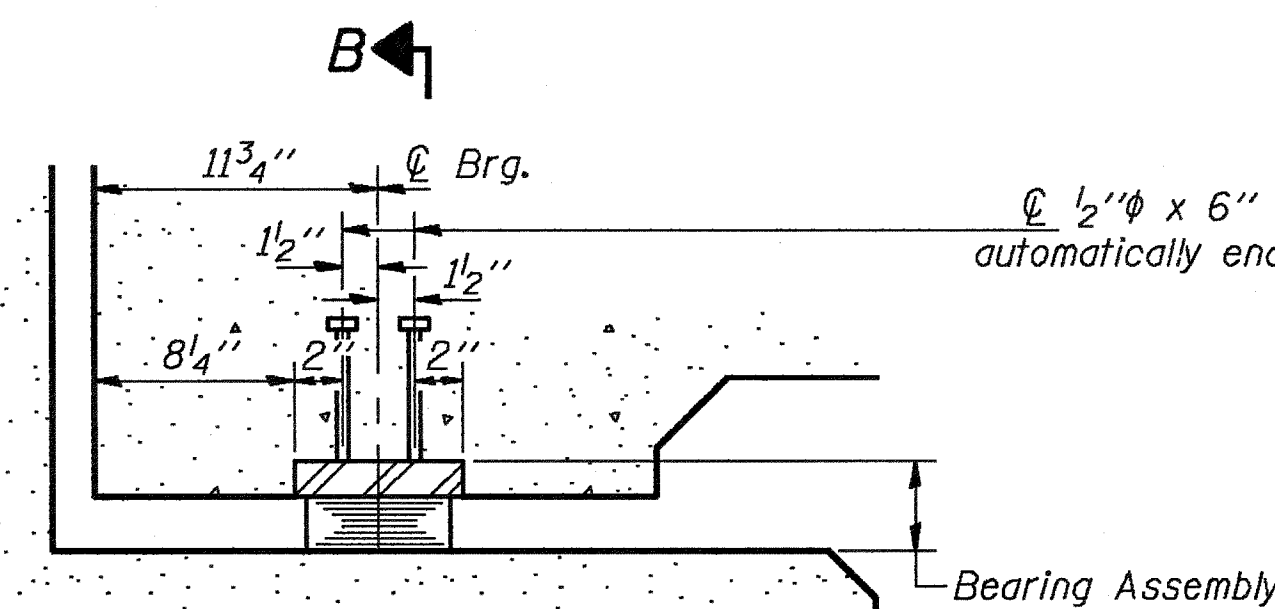


WEST ABUTMENT BEARING ASSEMBLY



TYP. SIDE RETAINER

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

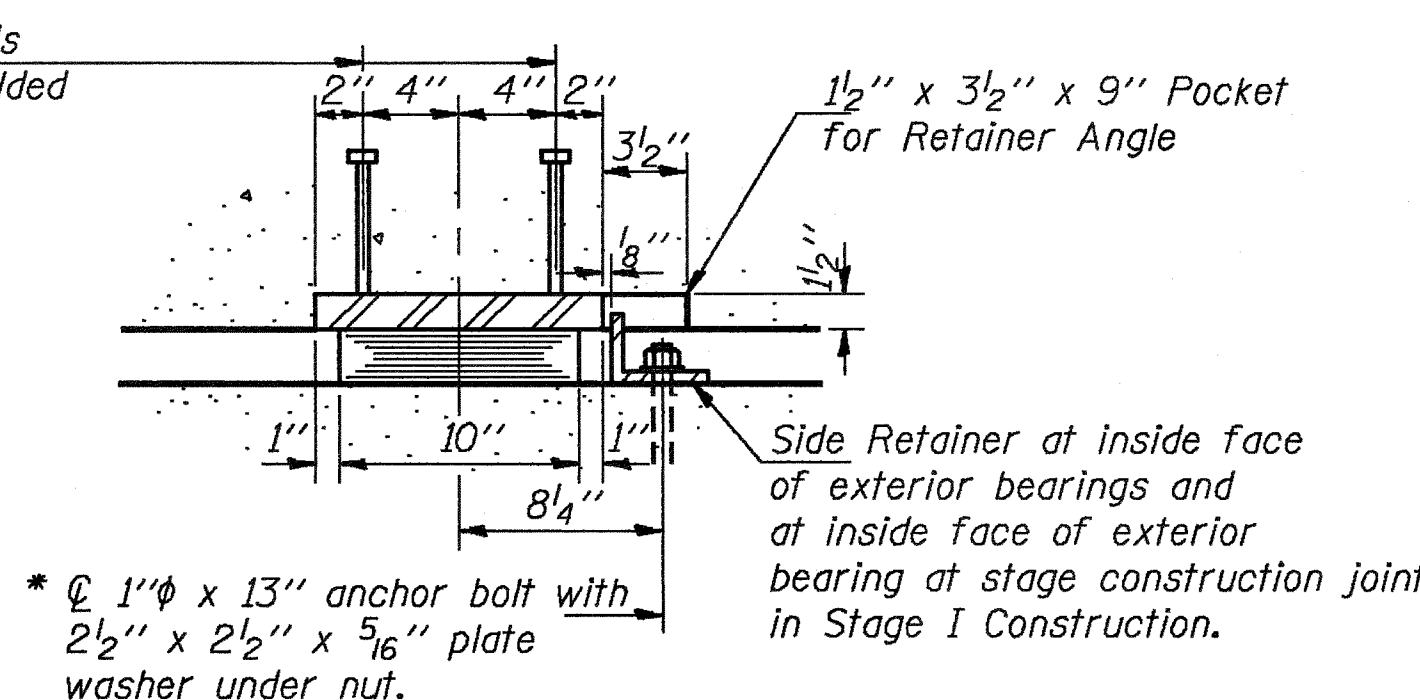


SECTION AT ABUTMENT

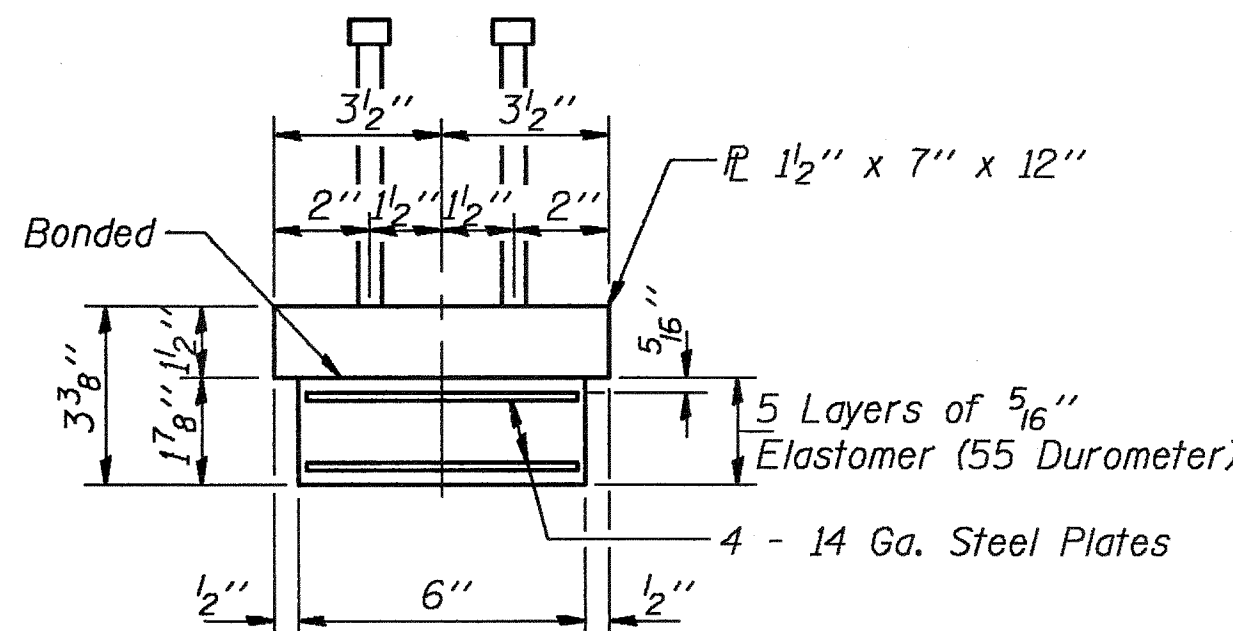
Looking South

Dimensions are parallel to Roadway.

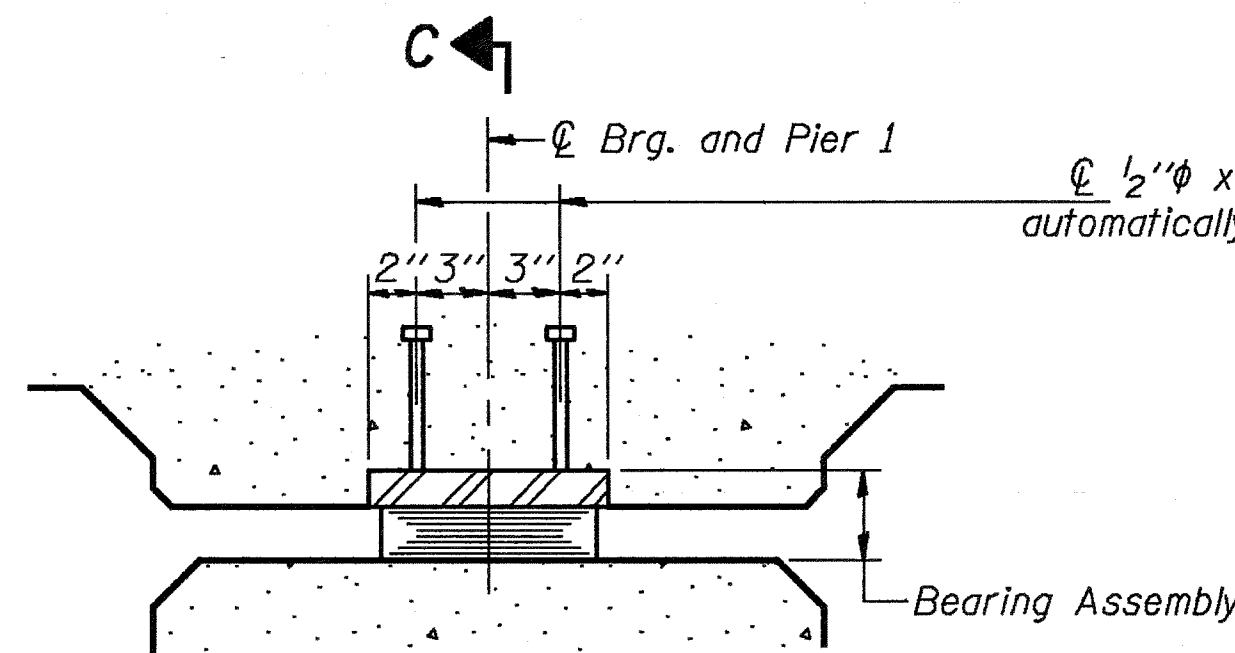
EAST ABUTMENT TYPE I ELASTOMERIC EXPANSION BEARINGS



SECTION B-B



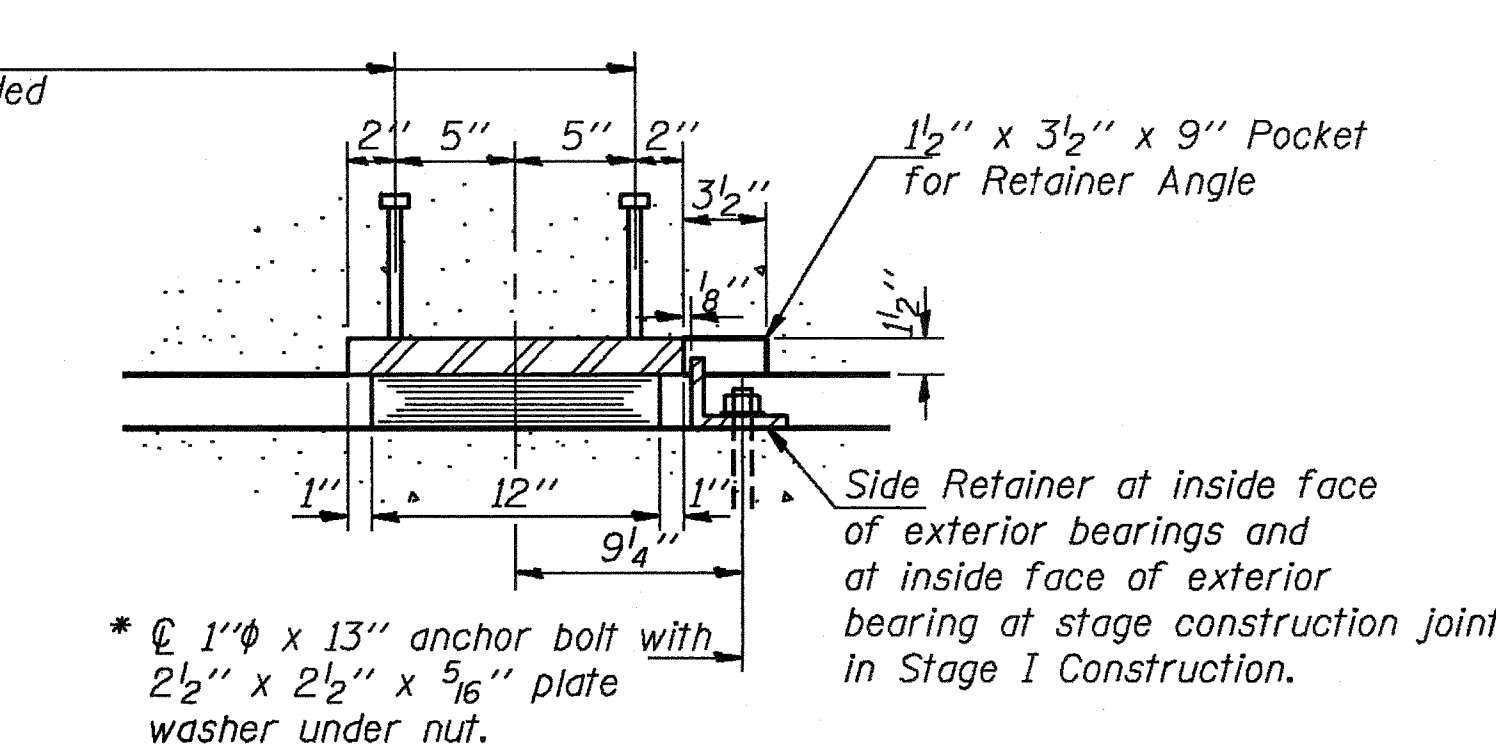
EAST ABUTMENT BEARING ASSEMBLY



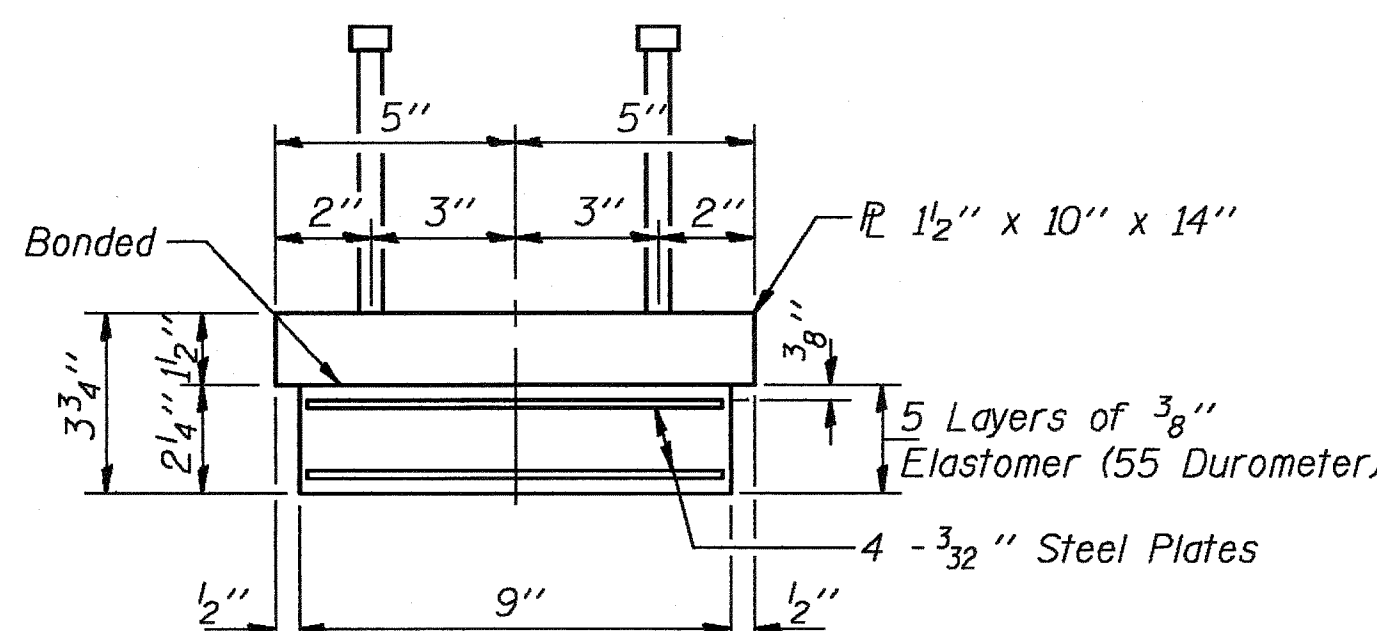
SECTION AT PIER 1

Dimensions are parallel to Roadway.

PIER 1 TYPE I ELASTOMERIC EXPANSION BEARINGS



SECTION C-C



PIER 1 BEARING ASSEMBLY

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	27

BEARING DETAILS
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

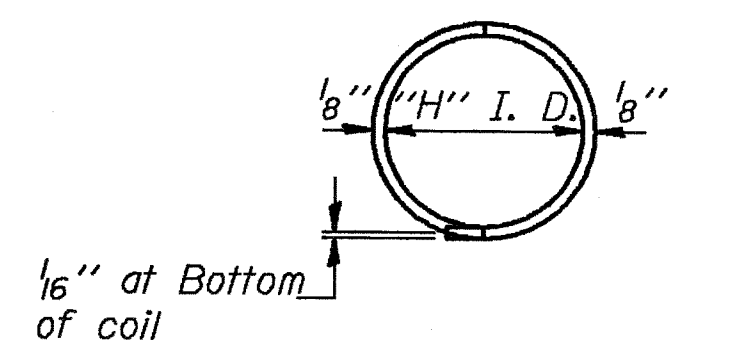
DESIGNED	Michael D. Cera
CHECKED	Shaker Asfour
DRAWN	Joe Sutherland
CHECKED	M.D. SA

EXAMINED	March 6 1991
PASSED	Ralph E. Anderson
APPROVED	DIRECTOR OF HIGHWAYS

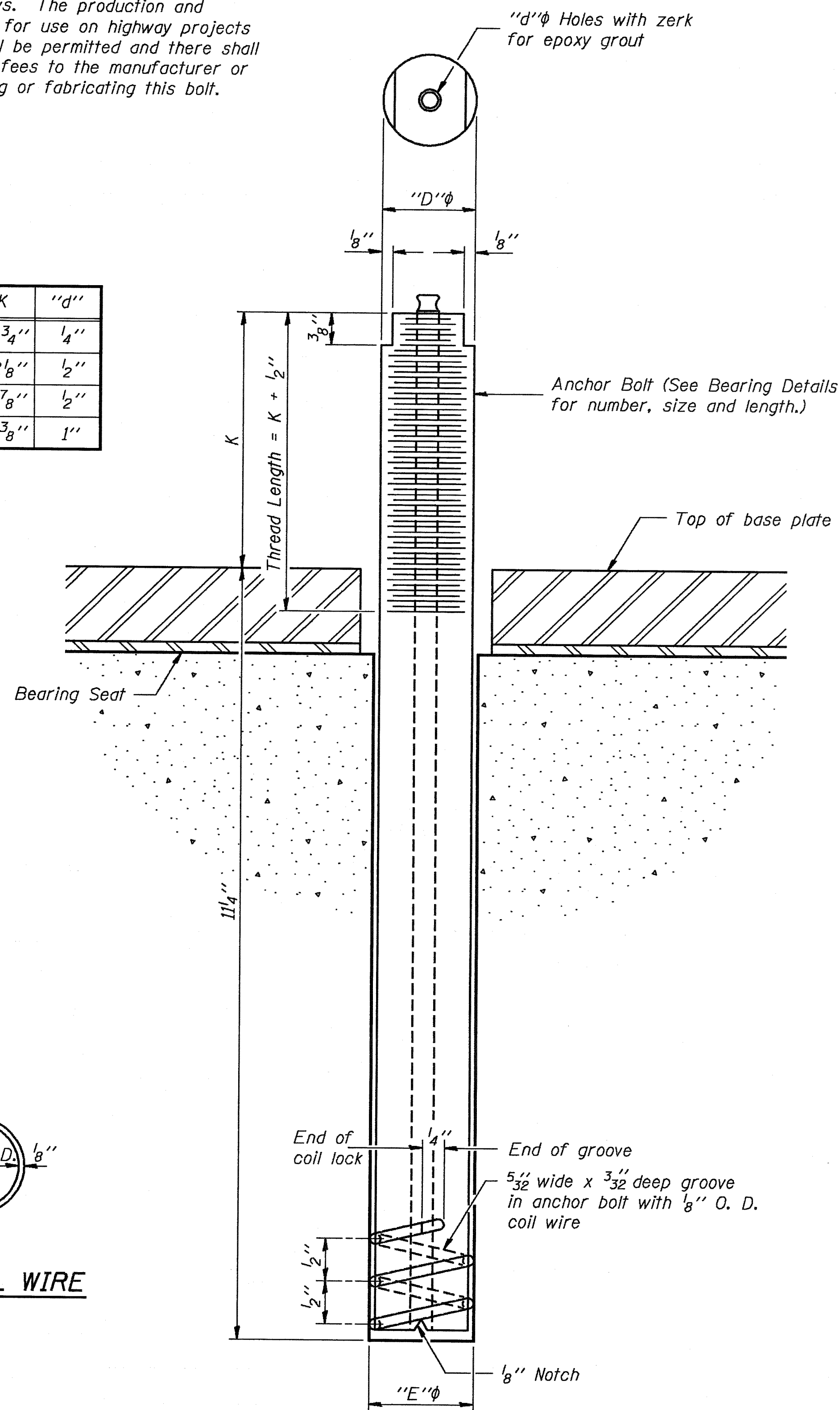
* Notes: Anchor bolts and Retainer Angles
shall be placed before the deck is poured.
See sheet 8 of 14 for Anchor Bolt installation.

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 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



PLAN-COIL WIRE



ILLINOIS COIL-LOCK ANCHOR BOLT

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

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 1026 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 1 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.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
F.A. 49	19BR-1	IROQUOIS	107	44	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

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".

ANCHOR BOLT DETAILS FOR BEARINGS

F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

DESIGNED	Michael D. Cuna
CHECKED	Shaker Asfour
DRAWN	Joe Sutherland
CHECKED	MDC, SA

ABB-1 12-1-83

EXAMINED	March 6 1991
PASSED	Ralph E. Anderson
APPROVED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

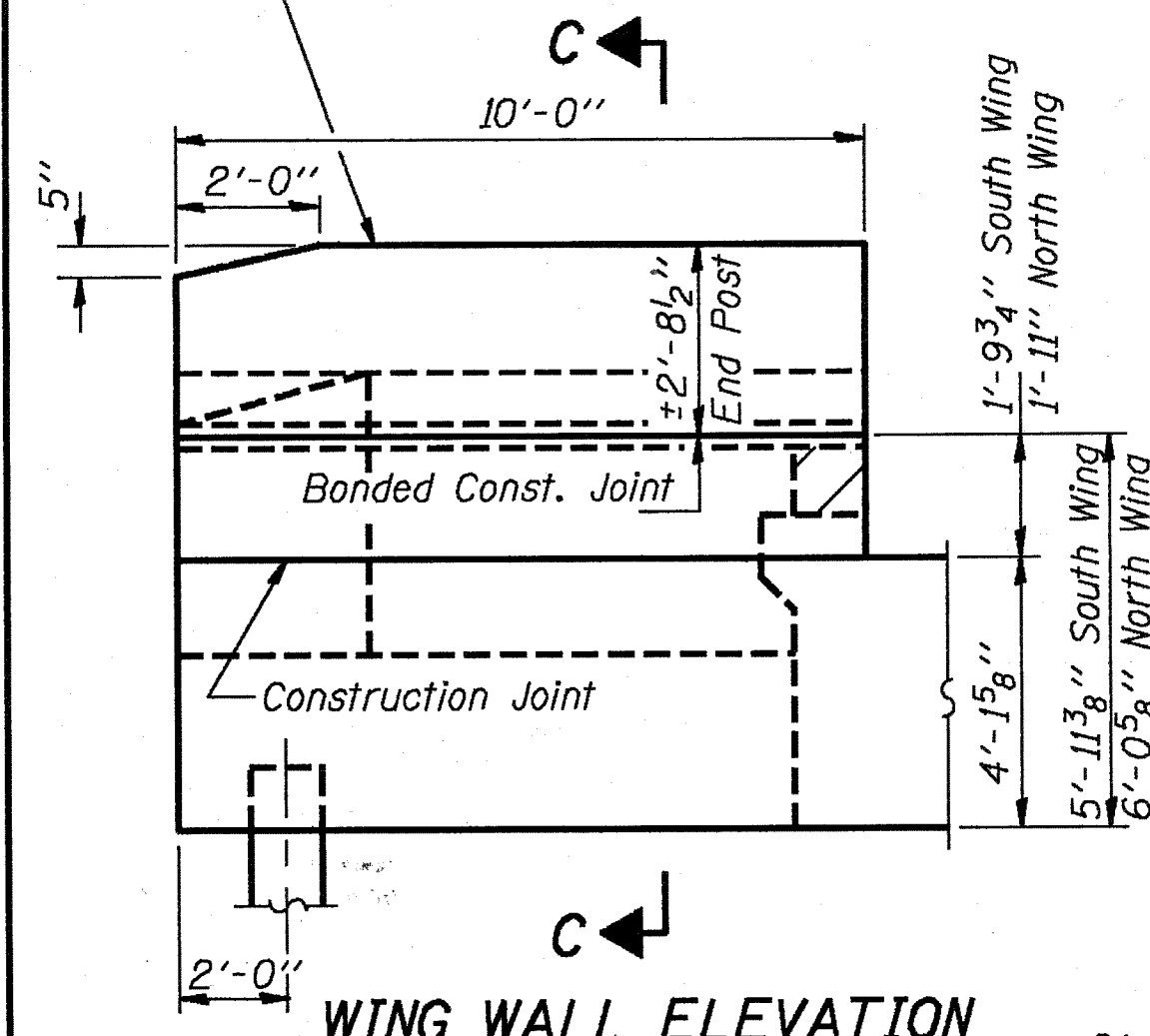
* Epoxy grout p₂(E) bars in 1" x 9" minimum drilled holes. Use a grout approved by the Department or epoxy grout in accordance with BSP-11 (See Special Provisions). The method of grout application shall be approved by the Engineer.

** Epoxy grout s₄(E) bars in 7/8" x 9" minimum drilled holes. See Special Provisions.
*** Elevations are given at front face of hatched block.

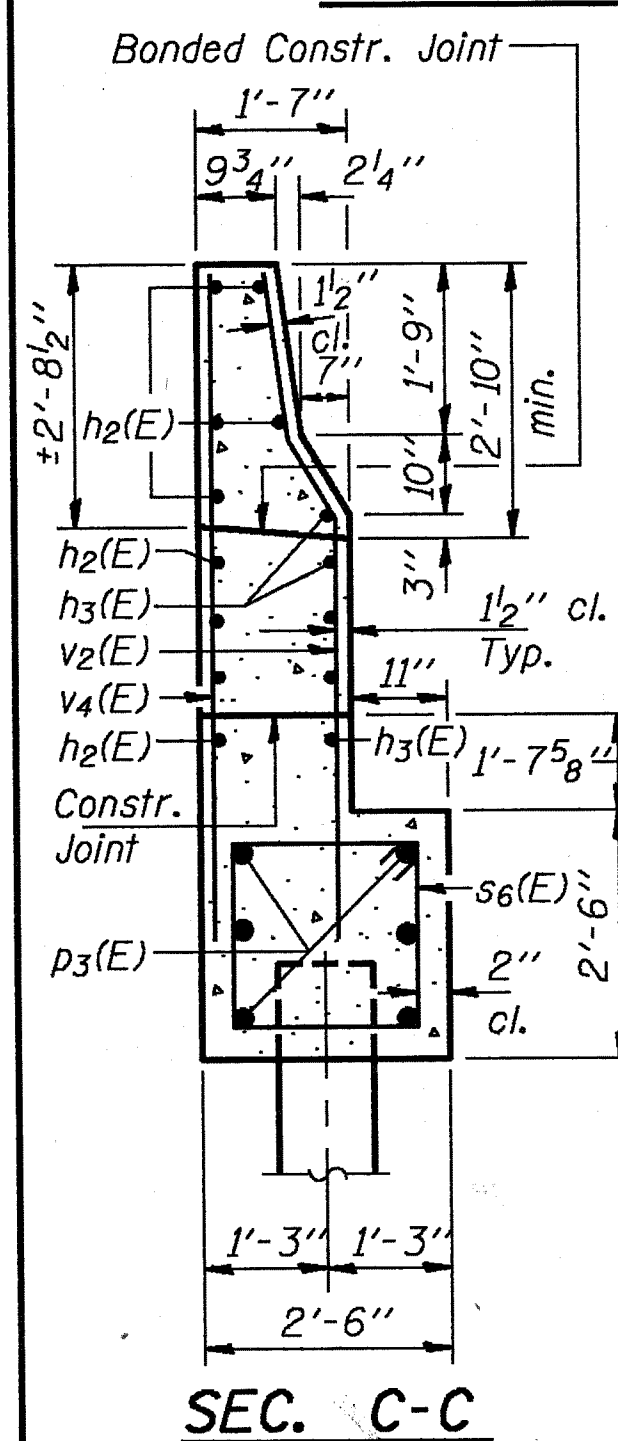
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FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

14 SHEETS

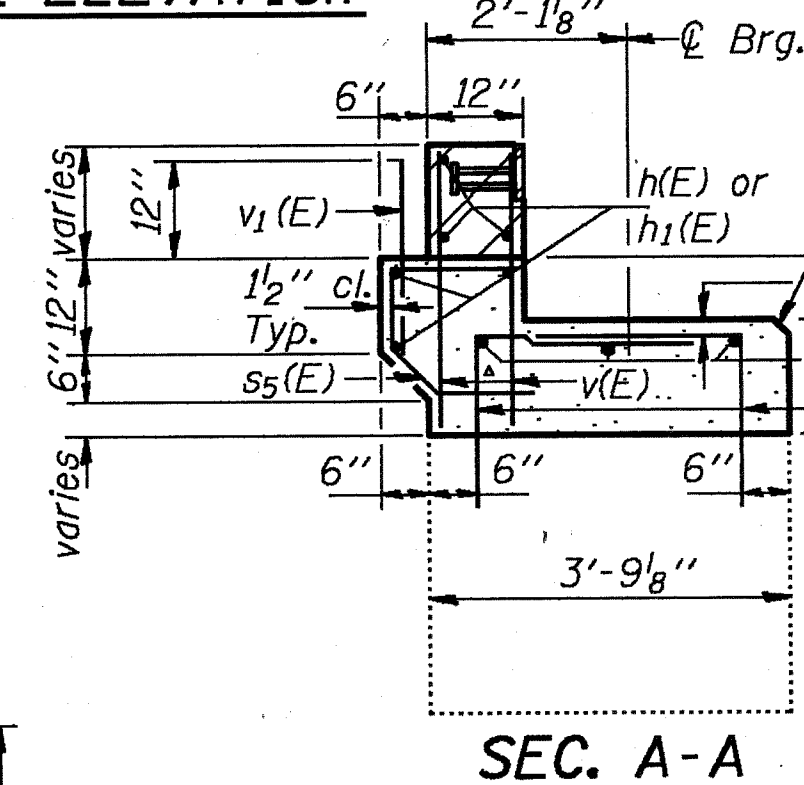
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.



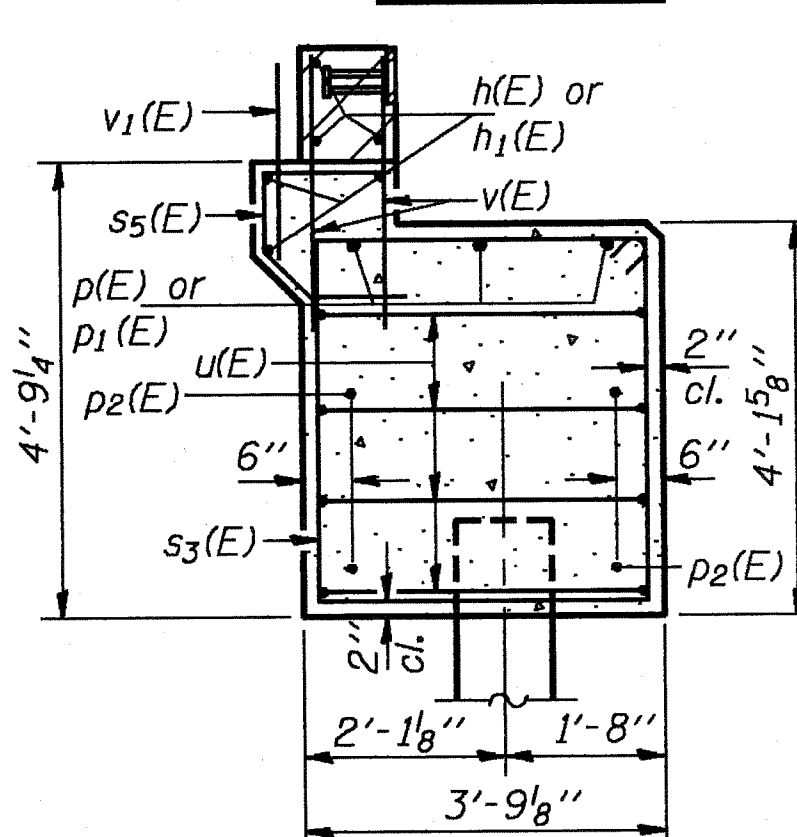
WING WALL ELEVATION



SEC. C-C



SEC. A-A



SEC. B-B

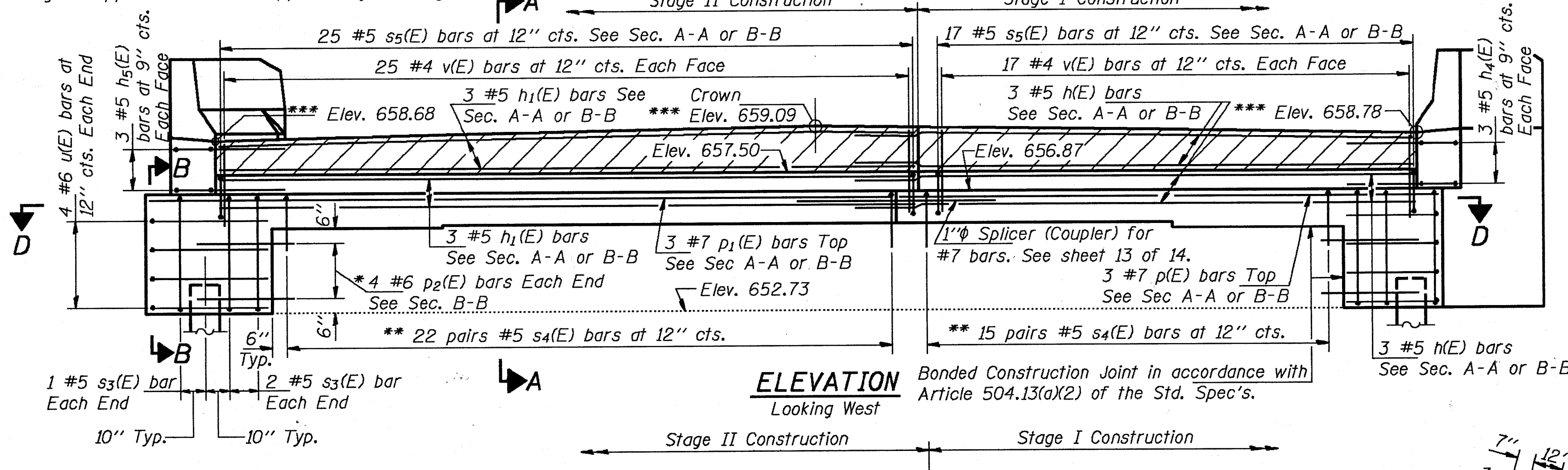
Notes: Space reinforcement in cap to miss anchor bolts.
Reinforcement bars designated (E) shall be epoxy coated.

PILE DATA

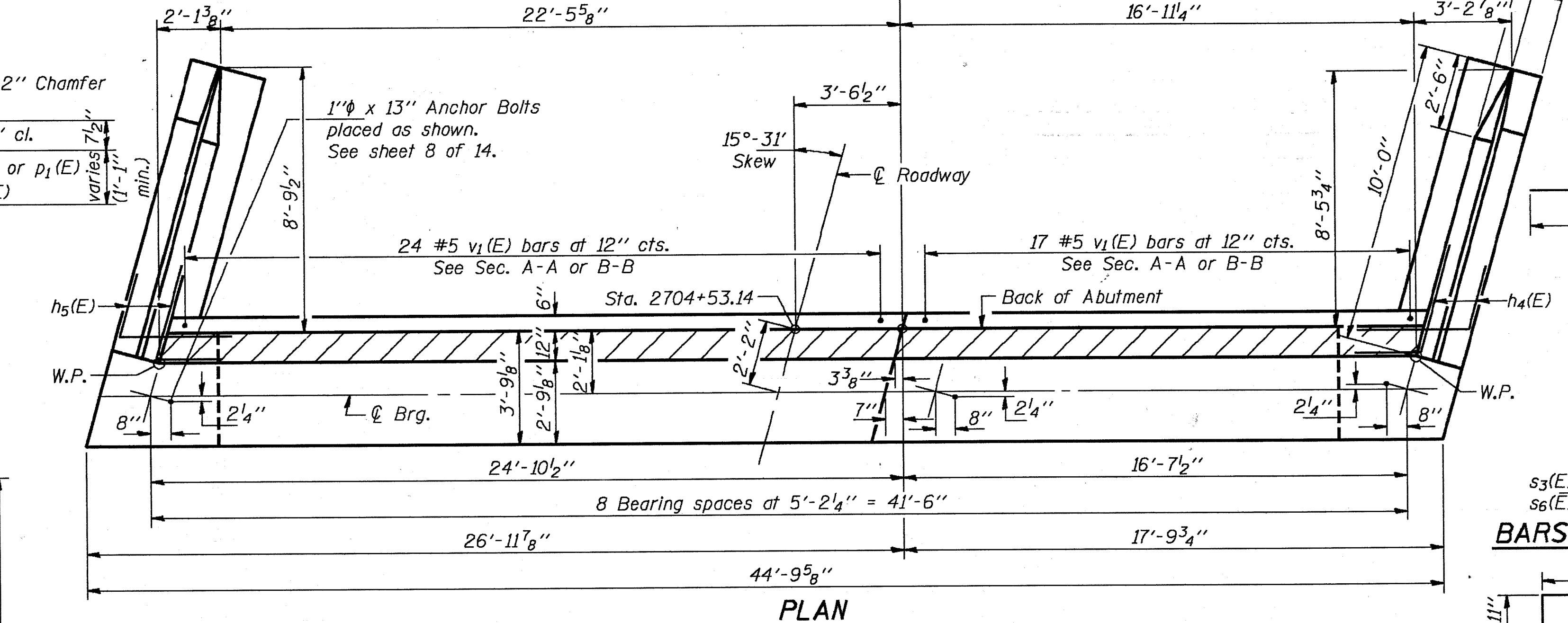
Type: Concrete Piles
Capacity: 30 Ton
Est. Length: 28 ft.
No. Req'd.: 3 + 1 Test Pile

DESIGNED Michael D. Carr
CHECKED Shaker Asfour
DRAWN Joe Sutherland
CHECKED MDC / SA

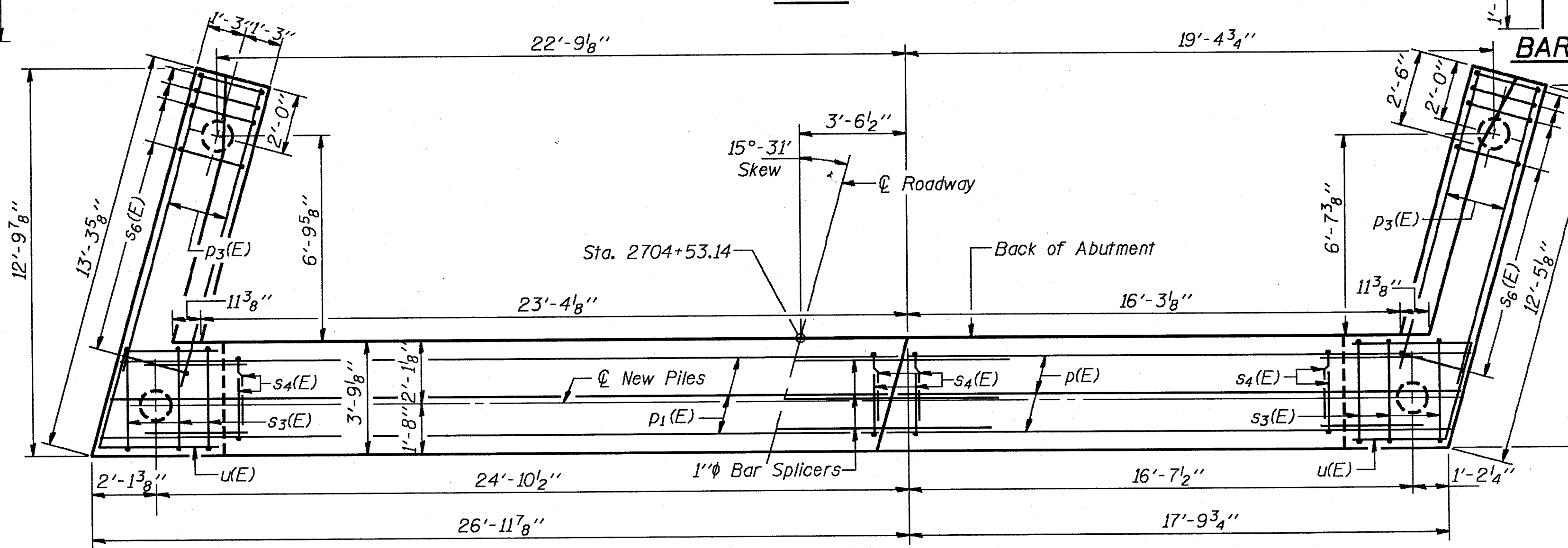
EXAMINED Raj D. Kasper
PASSED Ralph E. Anderson
APPROVED
DIRECTOR OF HIGHWAYS



ELEVATION
Looking West



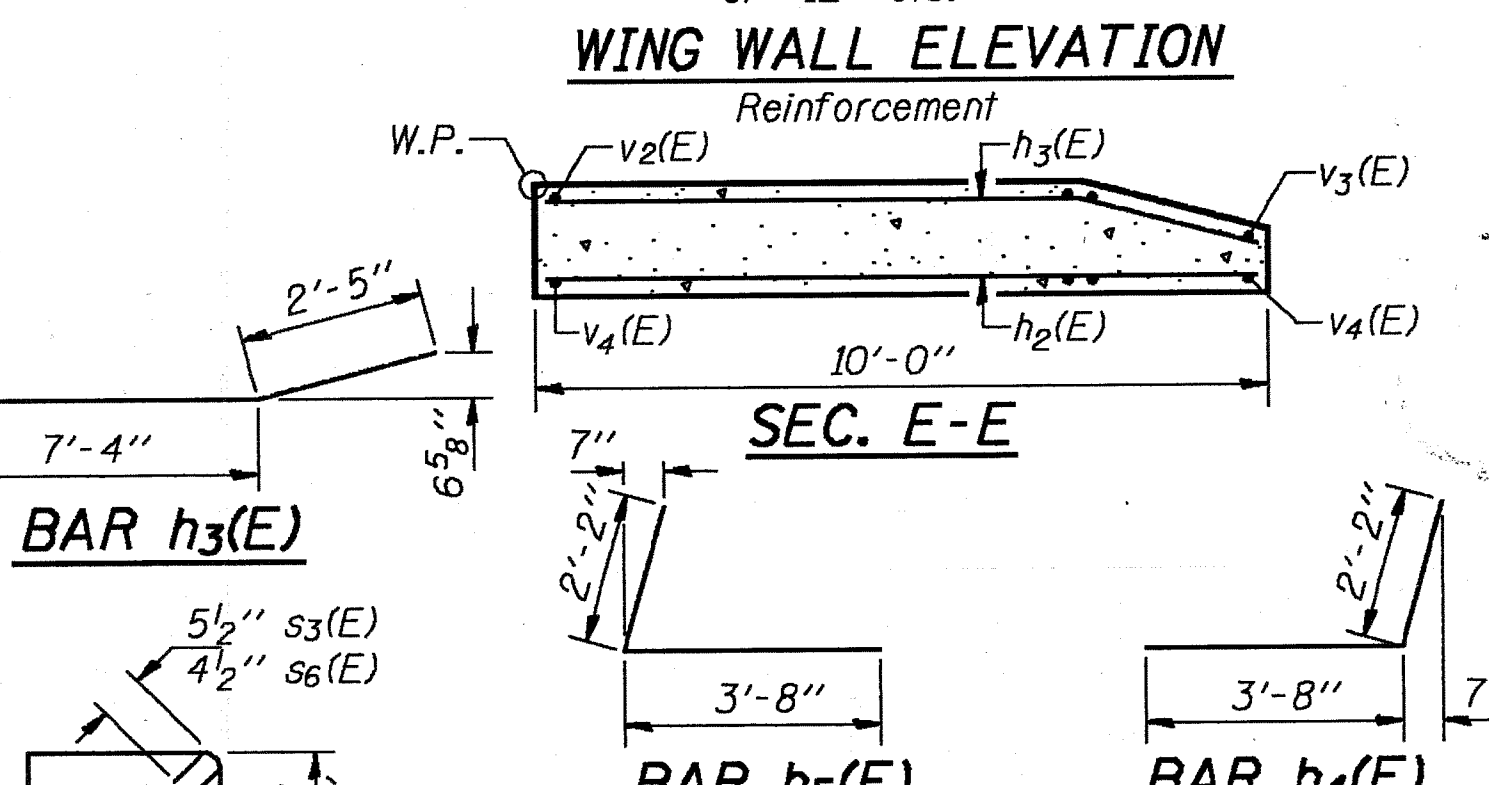
PLAN



SECTION D-D

MIN. BAR LAPS

#5 Bars = 1'-8"



WING WALL ELEVATION
Reinforcement

BAR h3(E)

BARS s3(E) and s6(E)

BAR s4(E)

BAR s5(E)

BAR u(E)

BAR v2(E)

BAR v3(E)

BILL OF MATERIAL

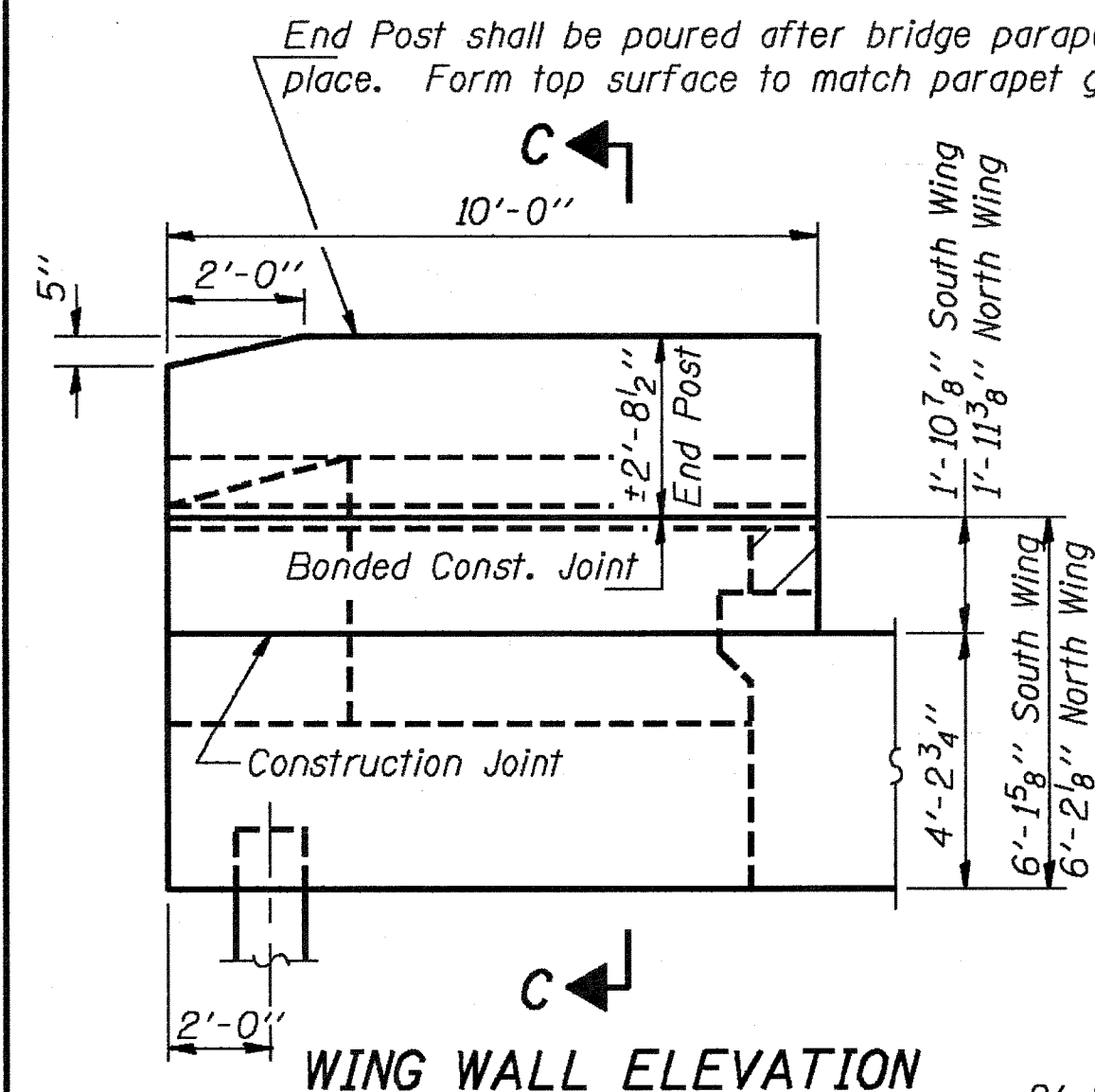
Bar	No.	Size	Length	Shape
h(E)	6	#5	18'-9"	
h1(E)	6	#5	24'-2"	
h2(E)	18	#4	9'-9"	
h3(E)	10	#4	9'-9"	
h4(E)	6	#5	5'-10"	
h5(E)	6	#5	5'-10"	
p(E)	3	#7	18'-8"	
p1(E)	3	#7	25'-10"	
p2(E)	8	#6	3'-4"	
p3(E)	12	#7	11'-6"	
s3(E)	6	#5	15'-3"	
s4(E)	74	#5	4'-8"	
s5(E)	42	#5	3'-9"	
s6(E)	22	#4	9'-5"	
u(E)	8	#6	10'-4"	
v(E)	84	#4	2'-9"	
v1(E)	41	#5	2'-0"	
v2(E)	16	#6	8'-5"	
v3(E)	6	#6	8'-0"	
v4(E)	22	#6	8'-4"	
Structure Excavation			Cu. Yd.	47
Class X Concrete			Cu. Yd.	23.0
Reinforcement Bars (Epoxy Coated)			Pound	2790
Concrete Piles			Lin. Ft.	84
Test Pile Concrete			Each	1

WEST ABUTMENT

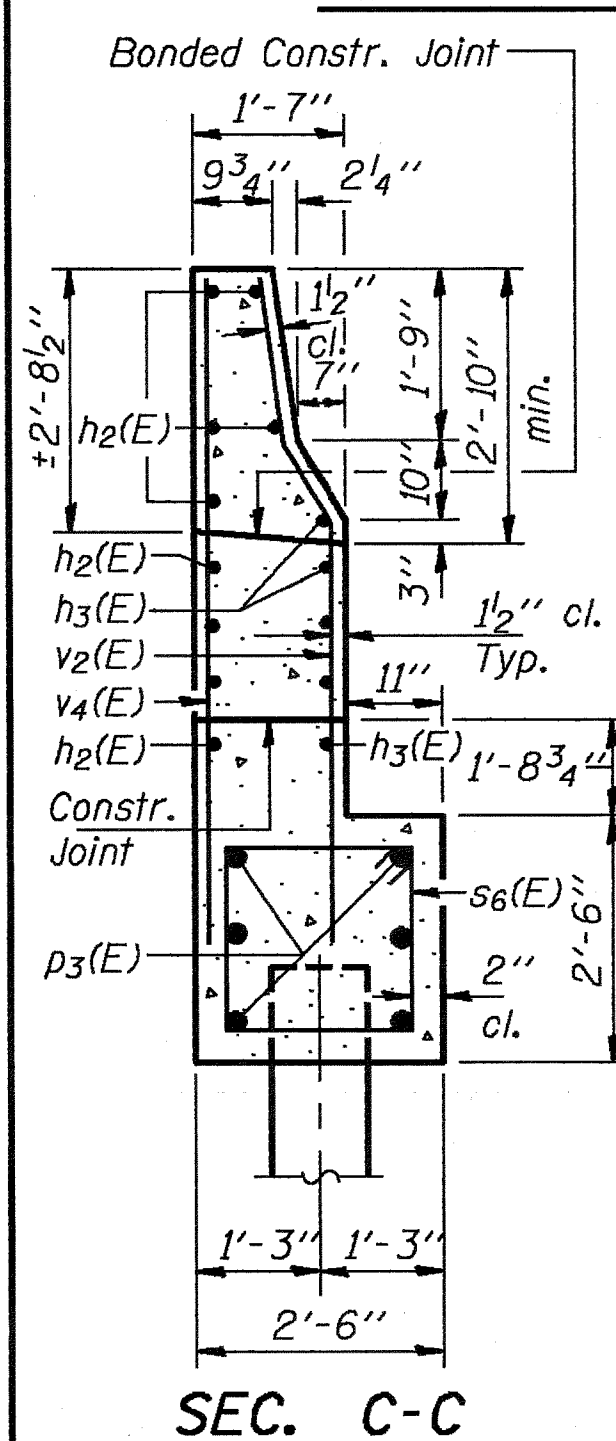
F.A. RT. 49 SEC. 19BR-1
IROQUOIS COUNTY
STA. 2705+03.14

* Epoxy grout p2(E) bars in 1"φ x 9" minimum drilled holes. Use a grout approved by the Department or epoxy grout in accordance with BSP-11 (See Special Provisions). The method of grout application shall be approved by the Engineer.

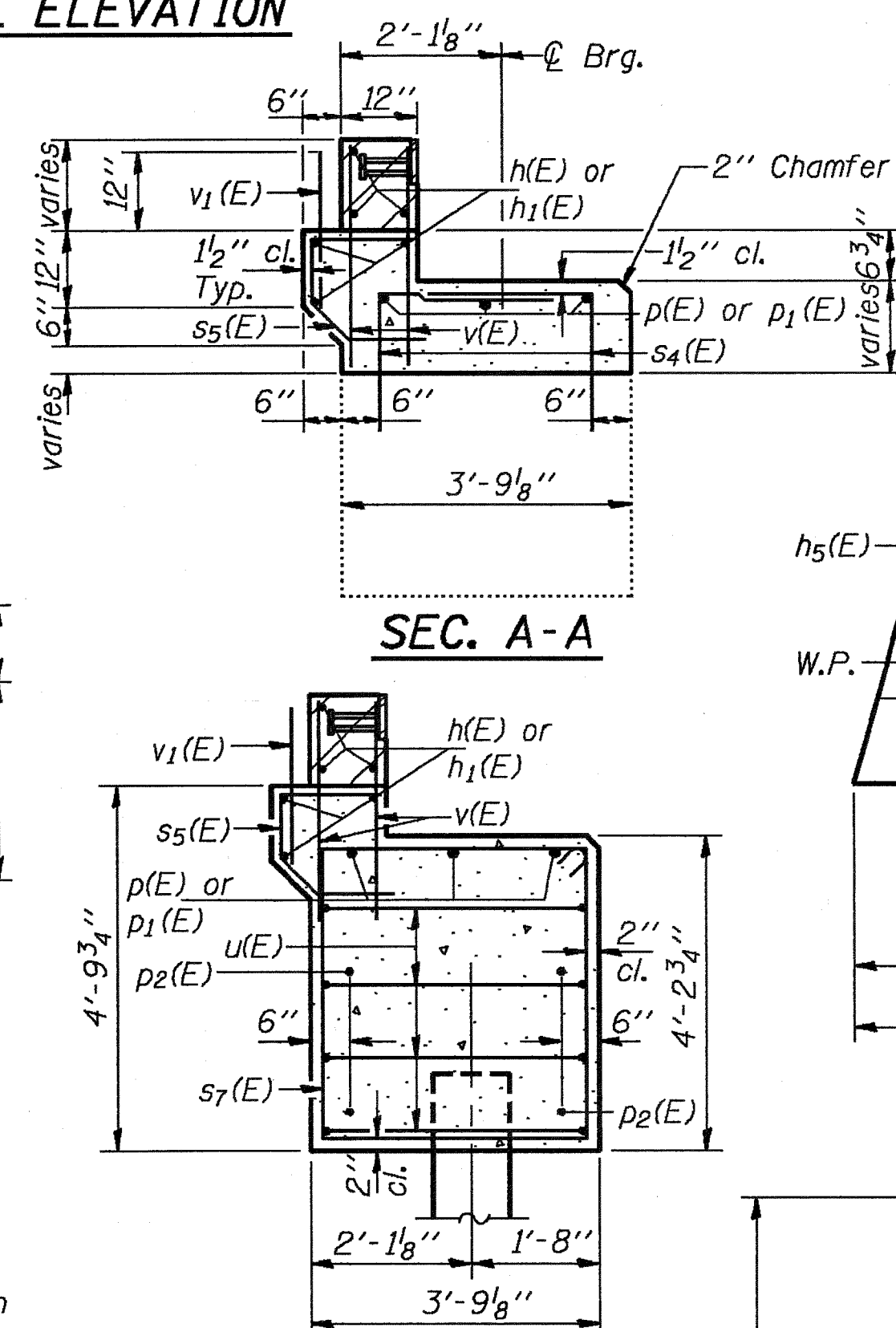
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
F.A. 49	19BR-1	IROQUOIS	107	46	14 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		



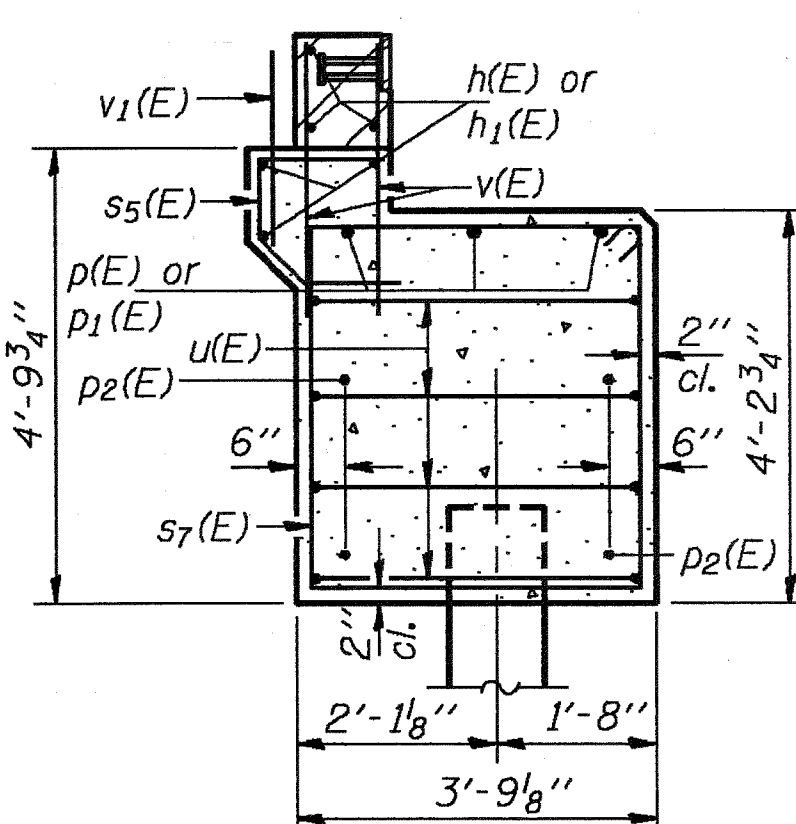
WING WALL ELEVATION



SEC. C-C

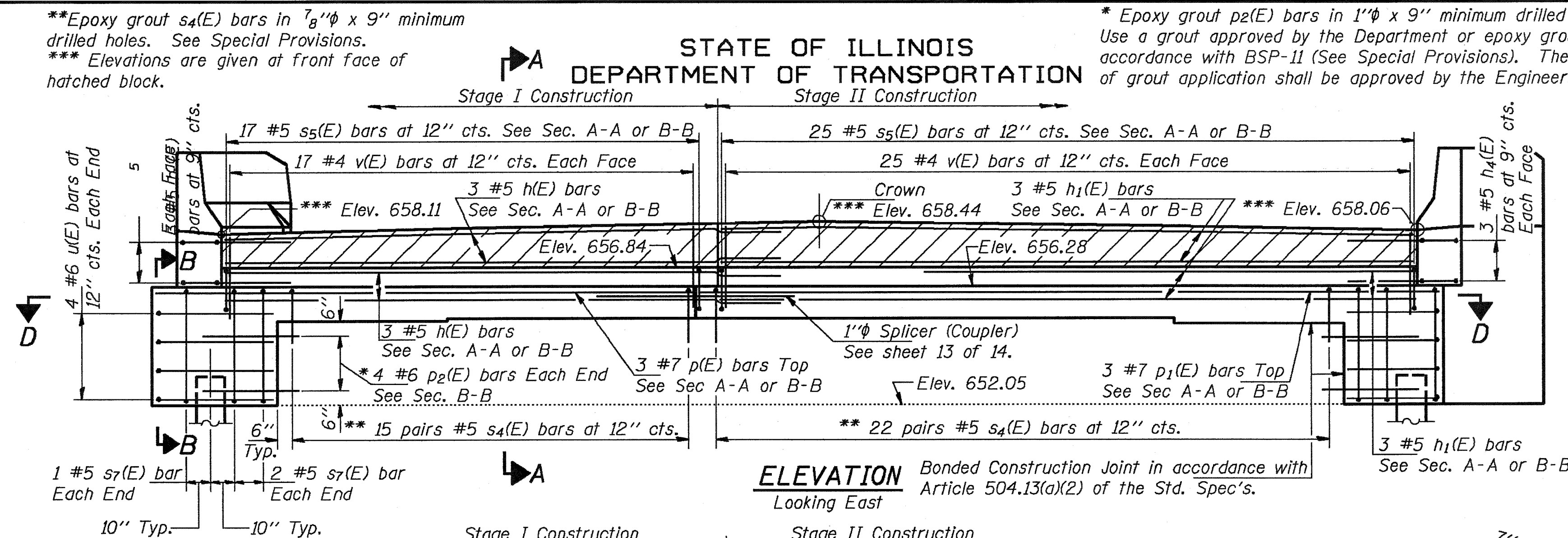


SEC. A-A



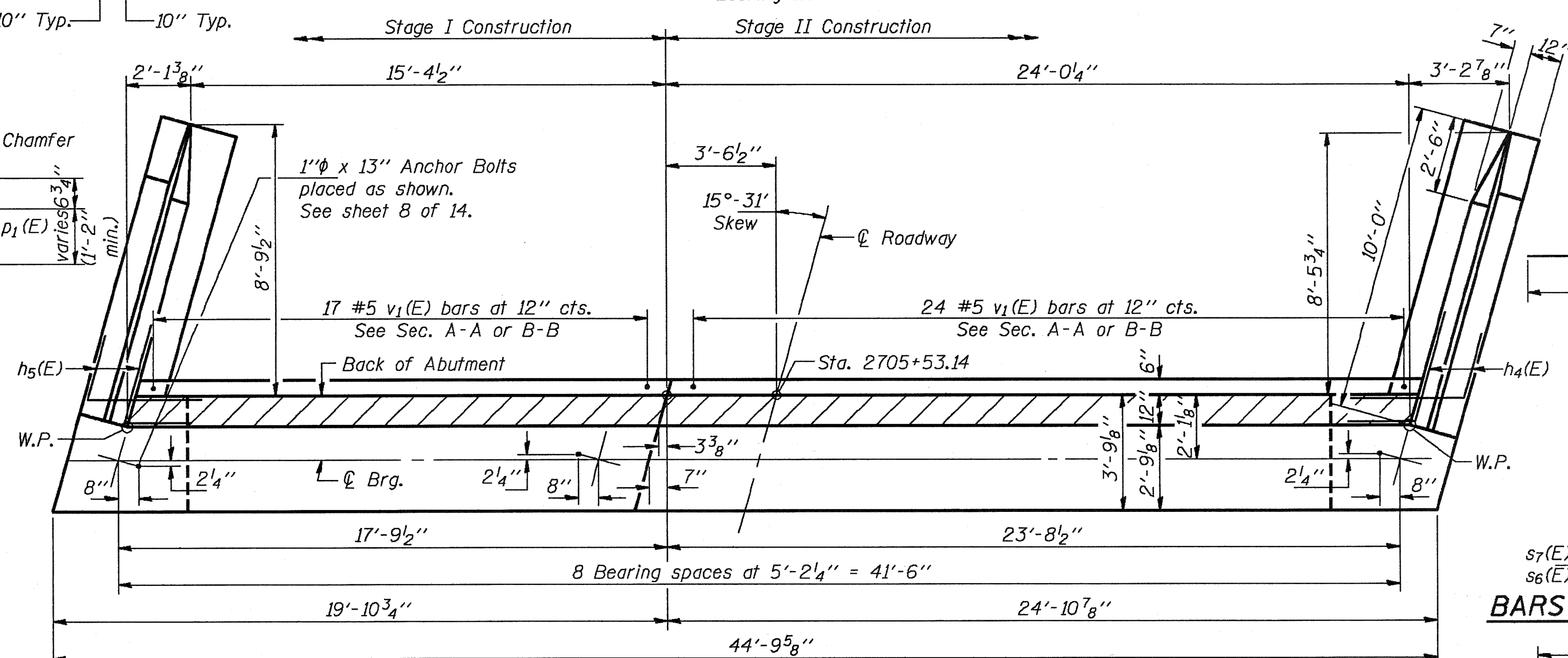
SEC. B-B

*Dimensions are the same as
Sec. A-A except as noted.*

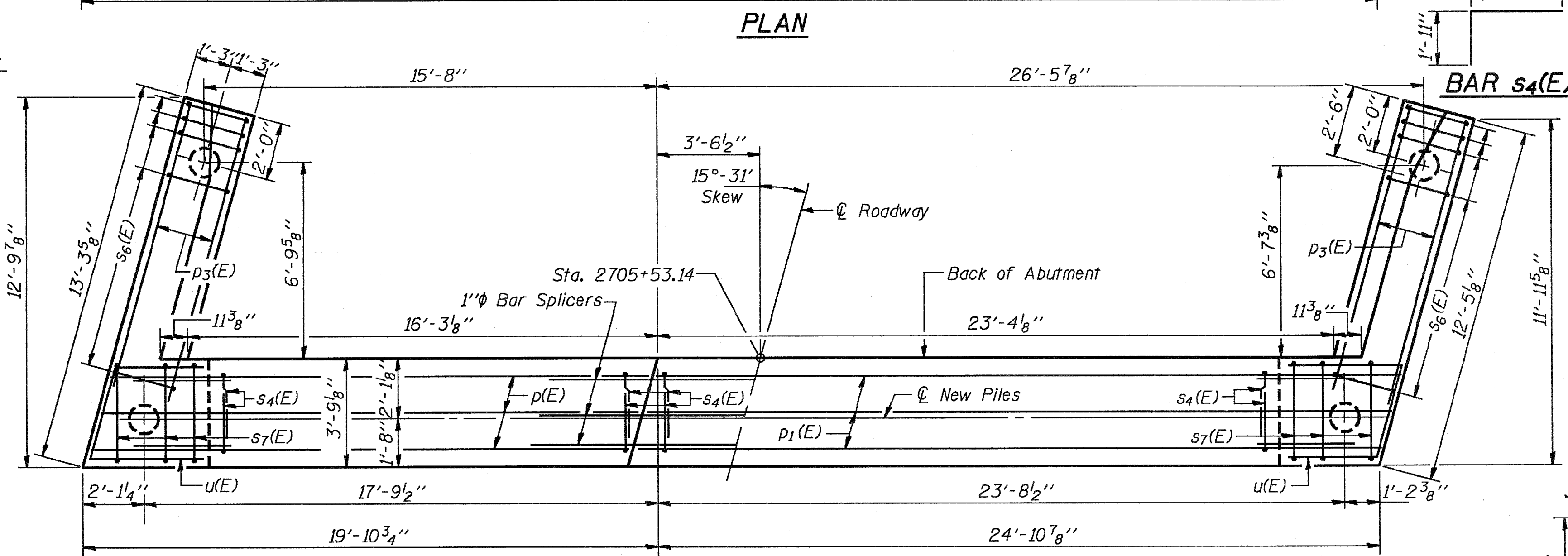


ELEVATION

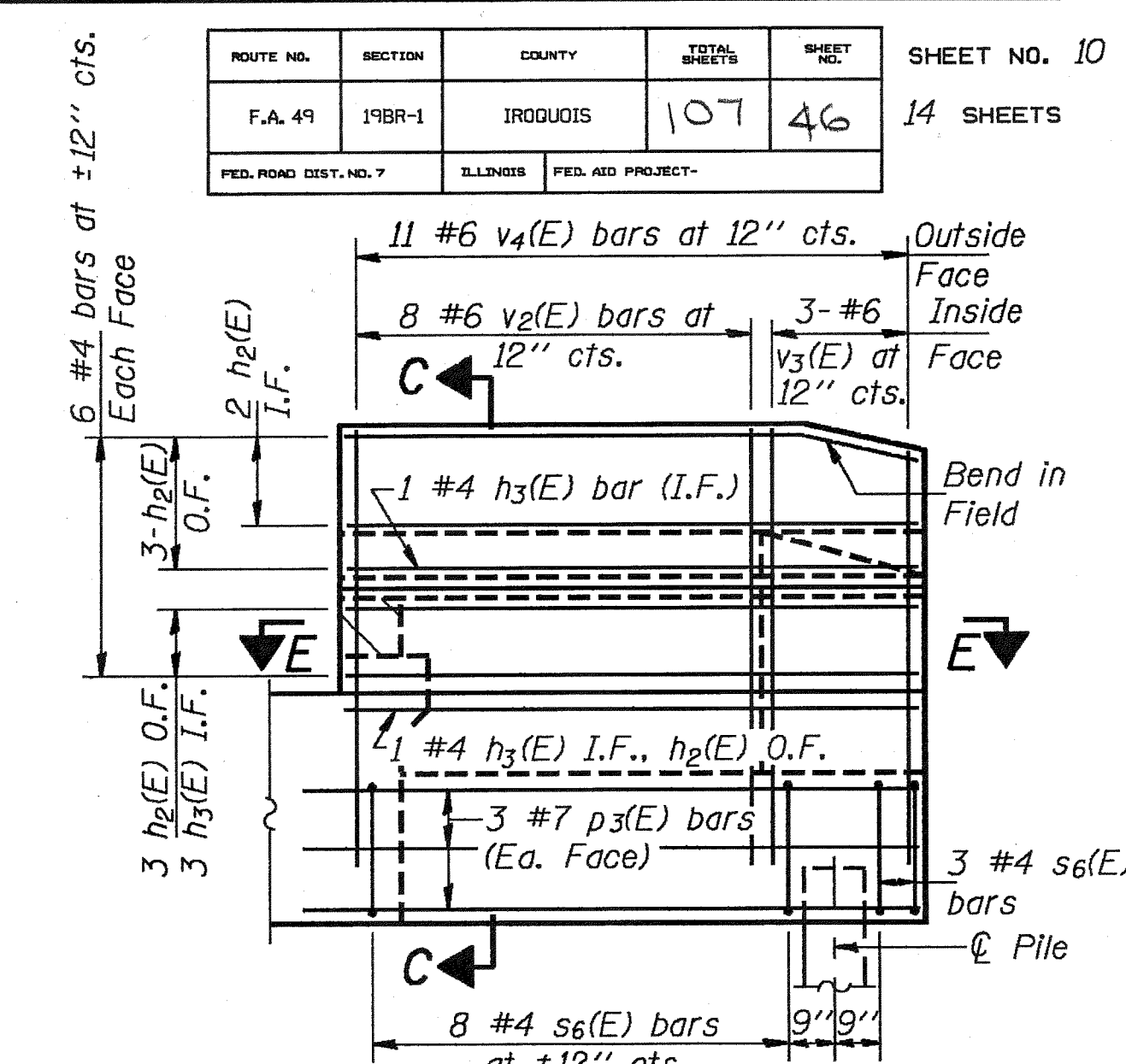
Looking East



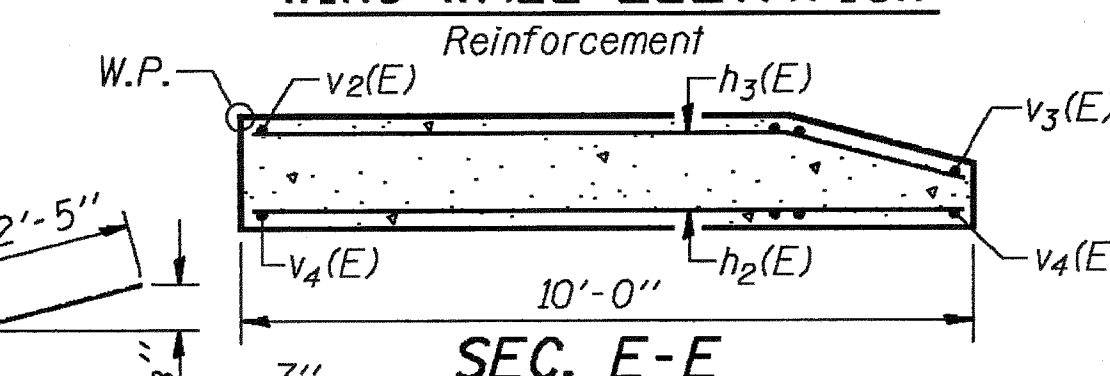
PLAN



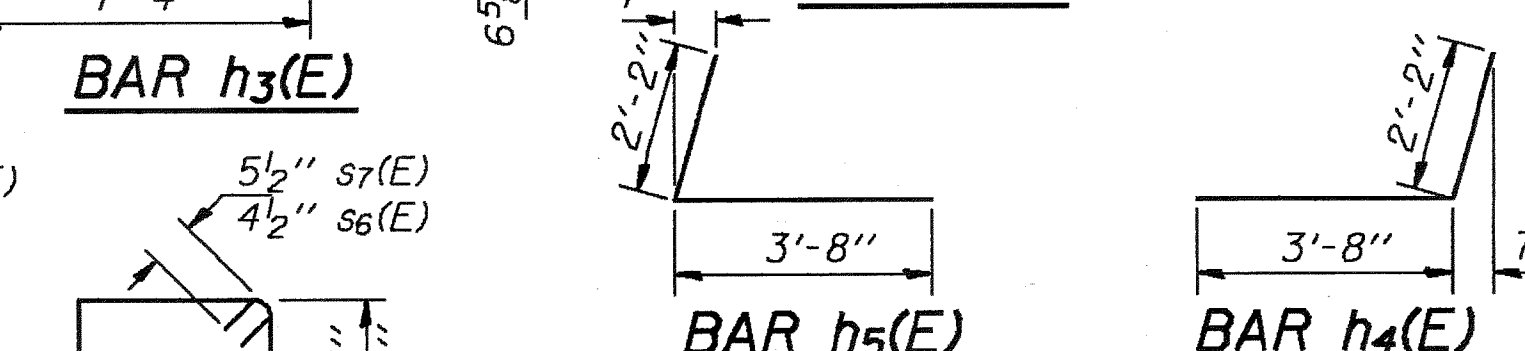
SECTION D-D



WING WALL ELEVATION



SEC. E-E


$$BAR \ h_5(E)$$

BAR $h_4(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h(E)$	6	#5	18'-9"	—
$h_1(E)$	6	#5	24'-2"	—
$h_2(E)$	18	#4	9'-9"	—
$h_3(E)$	10	#4	9'-9"	—
$h_4(E)$	6	#5	5'-10"	└
$h_5(E)$	6	#5	5'-10"	└
$p(E)$	3	#7	18'-8"	—
$p_1(E)$	3	#7	25'-10"	—
$p_2(E)$	8	#6	3'-4"	—
$p_3(E)$	12	#7	11'-6"	—
$s_4(E)$	74	#5	4'-8"	┌
$s_5(E)$	42	#5	3'-3"	└
$s_6(E)$	22	#4	9'-5"	□
$s_7(E)$	6	#5	15'-7"	□
$u(E)$	8	#6	10'-4"	└
$v(E)$	84	#5	2'-9"	—
$v_1(E)$	41	#5	2'-0"	—
$v_2(E)$	16	#6	8'-5"	—
$v_3(E)$	6	#6	8'-0"	—
$v_4(E)$	22	#6	8'-4"	—
Structure Excavation			Cu. Yd.	47
Class X Concrete			Cu. Yd.	23.0
Reinforcement Bars (Epoxy Coated)			Pound	2790
Concrete Piles			Lin. Ft.	87
Test Pile Concrete			Each	1

EAST ABUTMENT

F.A. RT. 49 SEC. 19BR-1

TROQUOIS COUNTY

STA 2705+03.14

PIIF DATA

Type: Concrete Piles
Capacity: 30 Ton
Est. Length: 29 ft.
No. Req'd.: 3 + 1 Test Pile

MARCH 6 1991

EXAMINED Draj L. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anders
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED

DIRECTOR OF HIGHWAYS

DESIGNED Michael D. Cima

CHECKED *Shaker Asfour*

DRAWN **Joe Sutherland**

NUMBER 1400 CA

CHECKED MDC 7 311

MIN. BAR LAPS

#5 Bars = 1'-8"