

Plan for 5-11-84 Setting

4-2-84

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAB 26	82-00106-00-BR	McHENRY	12	1
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**BRIDGE REPLACEMENT & REHABILITATION PROGRAM**

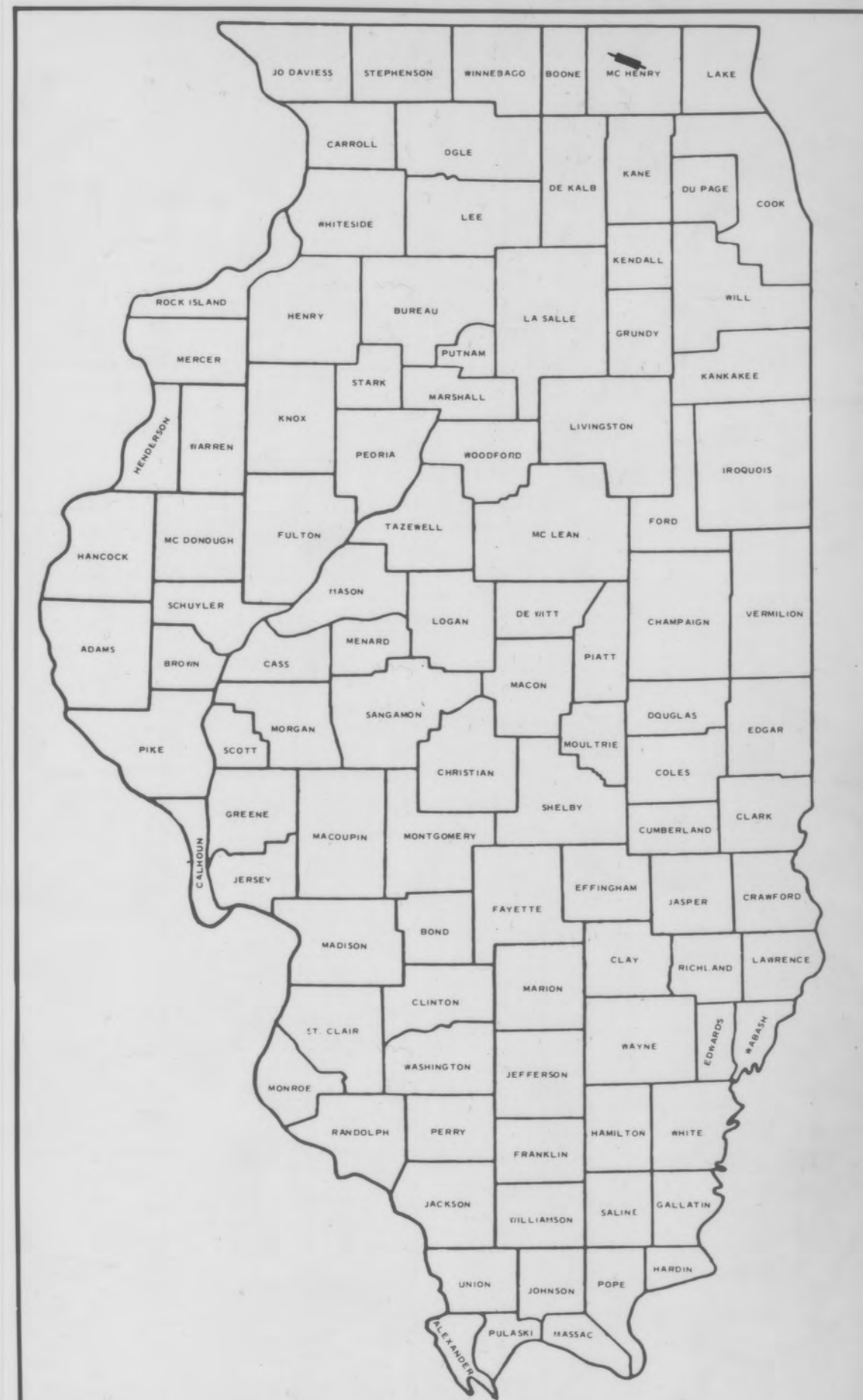
SCALES { PLAN 0' = 50'  
 PROFILE HOR. 0' = 50'  
 PROFILE VERT. 0' = 5'  
 CROSS SECTIONS 0' = 5'

- INDEX OF SHEETS
1. COVER SHEET
  2. SUMMARY OF QUANTITIES, GENERAL NOTES & TYPICAL CROSS SECTION
  3. PLAN & PROFILE
  - 4-5. STATION CROSS SECTIONS
  - 6-12. BRIDGE PLANS

STANDARDS:

1686-4	2300-3
2113-2	2336-3
2230-13	2340-3
2298-7	2381
2299-10	BLR 21-1

STATE SECTION 1982-208B  
 F.A.S. ROUTE 26  
 SECTION 82-00106-00-BR  
 McHENRY COUNTY  
 PROJECT BH-S-26(102)  
 C-91-397-82



LOCATION OF SECTION INDICATED THUS: —

The acceptance of this project is based on the minimum design criteria for a Federal Aid Bridge Replacement and Rehabilitation Improvement.

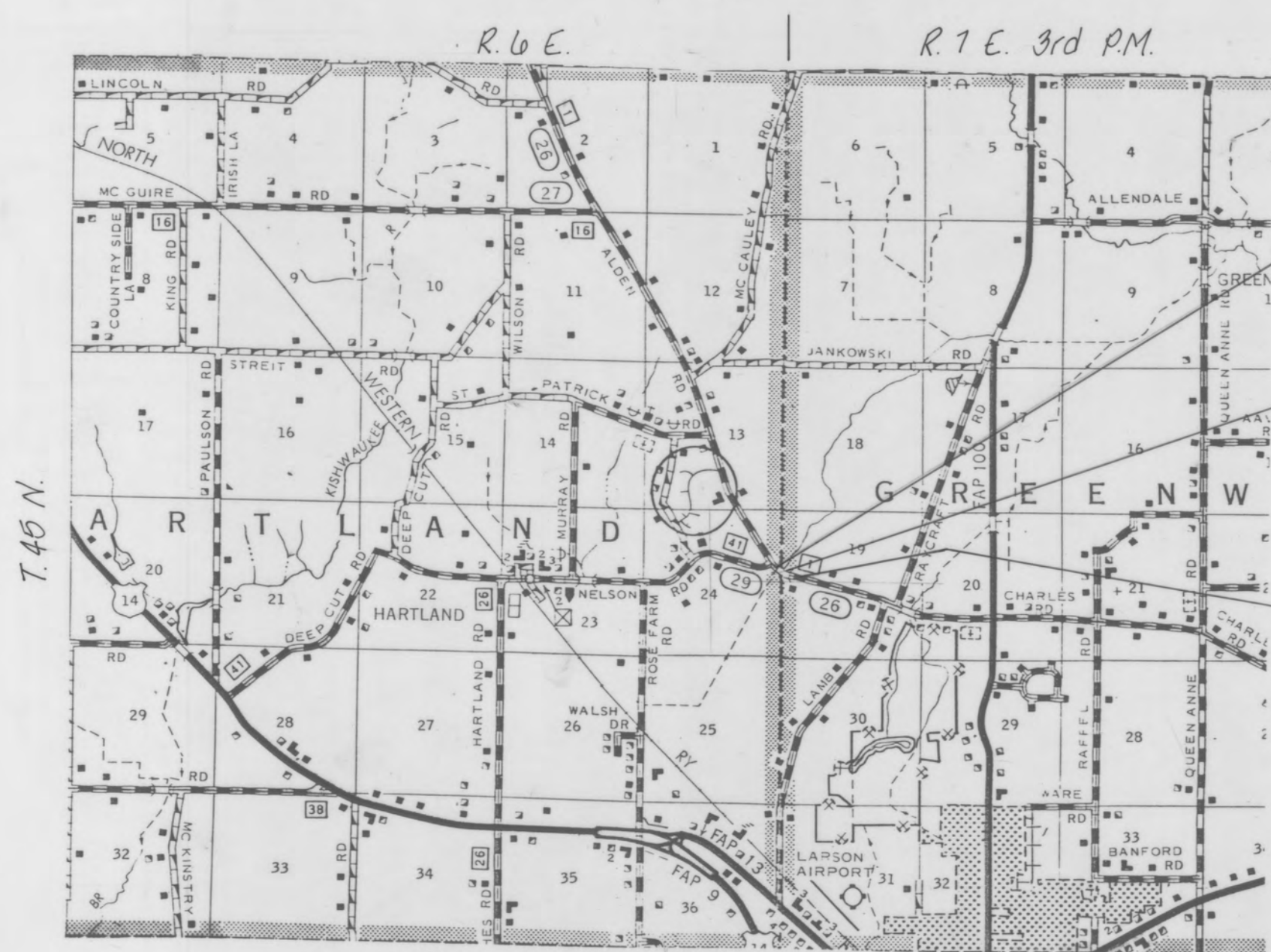
*Samuel M. Harris*  
 District Engineer of Local Roads & Streets

APPROVED March 8 19 84  
*Richard W. Co. Supt. Hwys.*  
 LOCAL AGENCY REPRESENTATIVE

PASSED MARCH 15 19 84  
*Samuel M. Harris*  
 DISTRICT ENGINEER OF LOCAL ROADS & STREETS

APPROVED MARCH 15 19 84  
*Samuel C. Grigoriadis*  
 DISTRICT ENGINEER

TOLL FREE JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS (J.U.L.I.E.)  
 TELEPHONE NUMBER 1-800-892-0123



LAYOUT

0 0.5 1 1.5 2.0 MILES

SCALE

Net Length Section 82-00106-00-BR = 455 Feet = 0.086 Miles



*Fred J. Stone Jr.* (1-24-84)  
 Illinois Professional No. 26065

CONTRACT No. 39922

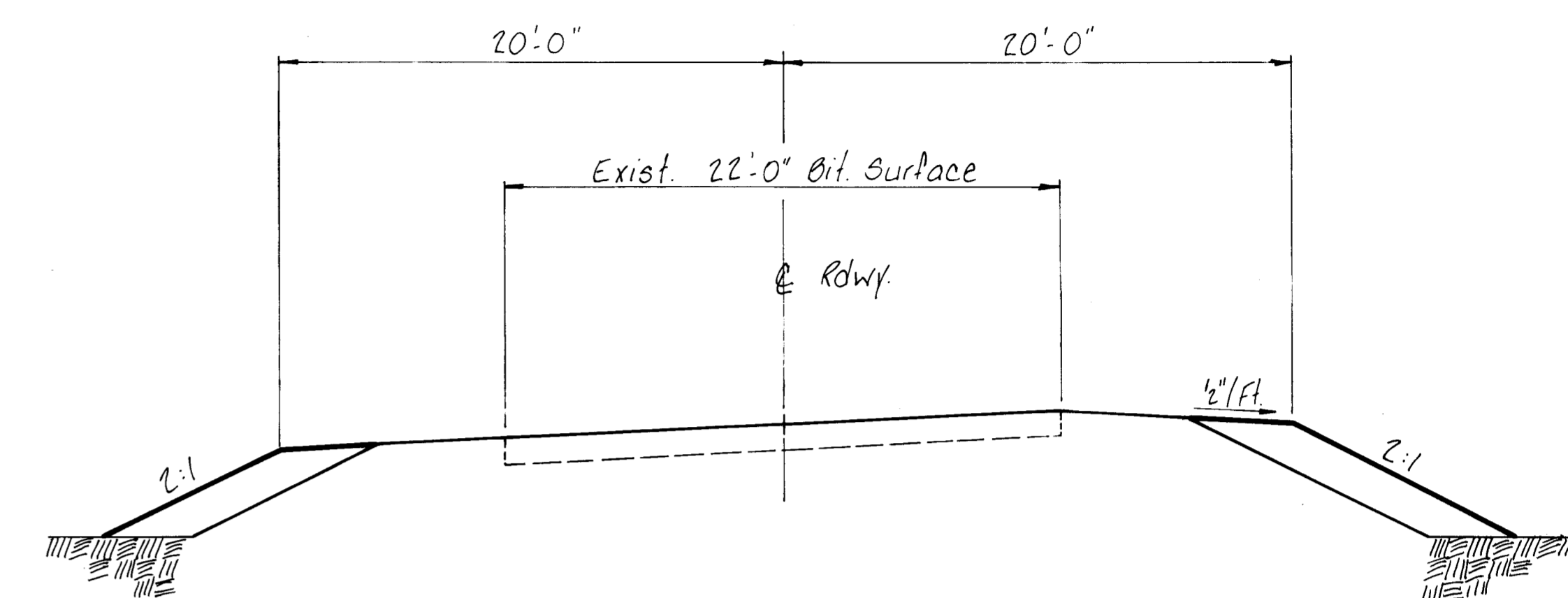
COLLINS AND RICE INC. CONSULTING ENGINEERS SPRINGFIELD, ILLINOIS

McHenry COUNTY SECTION 82-00106-00-BR COUNTY PROJECT 264

10-9 056-3006 1670

SUMMARY OF QUANTITIES

<u>CODE NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>
201001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN DIA	20
202001	EARTH EXCAVATION	CU YD	30
204001	BORROW EXCAVATION	CU YD	150
209001	POROUS GRANULAR EMBANKMENT	TON	90
304001	PORTLAND CEMENT CONCRETE BASE COURSE 12"	SQ YD	57
406013	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D; CLASS I	TON	40
501015	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
501024	CONCRETE REMOVAL	CU YD	12
502001	STRUCTURE EXCAVATION	CU YD	139
504003	CLASS X CONCRETE	CU YD	41.1
505003	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1,991
512001	REINFORCEMENT BARS	POUND	8,240
514001	NAME PLATES	EACH	1
617012	BITUMINOUS CONCRETE SURFACE REMOVAL (PARTIAL)	SQ YD	144
633003	STEEL PLATE BEAM GUARD RAIL REMOVAL	LIN FT	300
633008	TERMINAL SECTION REMOVAL, SINGLE RAIL	EACH	4
634001	ERECTING STEEL PLATE BEAM GUARD RAIL	LIN FT	300
642010	SEEDING CLASS II (SPECIAL)	ACRE	0.4
648017	TRAFFIC CONTROL AND PROTECTION	L SLIM	1
X50809	STEEL RAILING TYPE S-1	LIN FT	160
X62835	TRAFFIC BARRIER TERMINAL, TYPE 1A	EACH	4
X62843	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
Z10317	PORTLAND CEMENT MORTAR FAIRING COURSE	LIN FT	95
Z10530	WATERPROOFING MEMBRANE SYSTEM	SQ YD	251



TYPICAL CROSS SECTION

Sta. 413+55 to 415+13 &  
Sta. 416+03 to 417+60.

Transition from proposed shoulder to existing shoulder to be constructed from Sta. 413+30 to 413+55 and Sta. 417+60 to 417+85.

GENERAL NOTES

Where section or subsection monuments are encountered, the Engineer shall be notified before such monuments are removed. The contractor shall protect and carefully preserve all property marks and monuments until the owner, an authorized surveyor, or agent has witnessed or otherwise referenced their location.

The area to be seeded shall consist of all disturbed earth surfaces within the right of way, as directed by the Engineer.

SEEDING, CLASS II (SPECIAL) = 0.4 ACRES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 26	02-00100-00-6R	McHENRY	12	3
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		

CHARLES ROAD

**TERMINAL SECTION REMOVAL, SINGLE RAIL**

Rt. Sta. 414+28 to 414+53 = 1 Each  
 Lt. Sta. 414+68 to 414+93 = 1  
 Lt. Sta. 416+18 to 416+43 = 1  
 Rt. Sta. 416+28 to 416+53 = 1  
 Total = 4 Each

**STEEL PLATE BEAM GUARD RAIL REMOVAL**

Lt. Sta. 414+93 to 416+18 = 125 Lin. Ft.  
 Rt. Sta. 414+53 to 416+28 = 175  
 Total = 300 Lin. Ft.

**ERECTING STEEL PLATE BEAM GUARD RAIL**

Lt. Sta. 414+75 to 415+00 = 25 Lin. Ft.  
 Rt. Sta. 413+85 to 415+10 = 125  
 Lt. Sta. 416+06 to 417+31 = 125  
 Rt. Sta. 416+16 to 416+41 = 25  
 Total = 300 Lin. Ft.

**TRAFFIC BARRIER TERMINAL, TYPE 5A**

Lt. Sta. 415+00 to 415+13 = 1 Each  
 Rt. Sta. 415+10 to 415+23 = 1  
 Lt. Sta. 415+93 to 416+06 = 1  
 Rt. Sta. 416+03 to 416+16 = 1  
 Total = 4 Each

**TRAFFIC BARRIER TERMINAL, TYPE 1A**

Lt. Sta. 414+50 to 414+75 = 1 Each  
 Rt. Sta. 413+60 to 413+85 = 1  
 Lt. Sta. 417+31 to 417+56 = 1  
 Rt. Sta. 416+41 to 416+66 = 1  
 Total = 4 Each

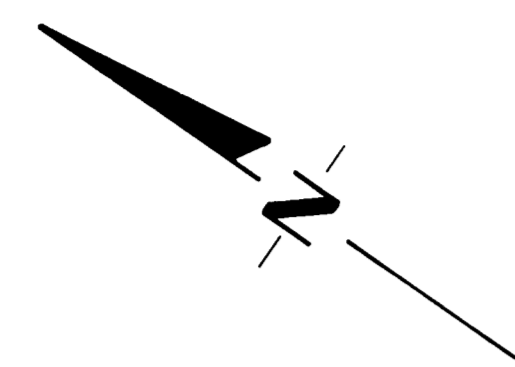
EXISTING STRUCTURE NO. 050-3006  
 Sta. 415+58.10 - single span reinforced concrete slab bridge on closed reinforced abutments and wings 24.0' fc-fc curb, 28.9' fc-fc abuts along centerline.  
 REMOVAL OF EXISTING SUPERSTRUCTURES = 1 Each

**TREE REMOVAL (6 TO 15 IN. DIA.)**

29' Rt. Sta. 415+91 = 20 In. Dia.

**CURVE DATA**

Rt. Sta. 414+54.26  
 $\Delta = 42^{\circ}39'$   
 $D = 4^{\circ}27'56''$   
 $R = 1,283.07'$   
 $T = 500.89'$   
 $L = 955.09'$   
 $E = 94.31'$   
 $SE = 0.05' / 1'$



Proposed Improvement

409 410 419

**BITUMINOUS CONCRETE SURFACE REMOVAL (PARTIAL)**

Sta. 415+13 to 415+42.41 = 71.9 Sq. Yd.  
 Sta. 415+13.19 to 416+03 = 71.4 Sq. Yd.  
 Total = 143.3 Sq. Yd. USE 144 Sq. Yd.

2" Deep Sawed Jt. @ Sta. 416+03 Incidental

Improvement Ends Sta. 417+85

Existing 24" # C.M.P. Use in place

Sta. 415+58.10 special Bridge Design  
 Precast prestressed concrete deck beam bridge, 1 span @ 31'-4 1/2" w/23'-0" approaches  
 40'-0" f-f rail, skew 14" 11"

2" Deep Sawed Jt. @ Sta. 415+13 Incidental

**UNDERGROUND CABLE**

Illinois Bell Telephone  
 Woodstock, Illinois  
 815-338-9981

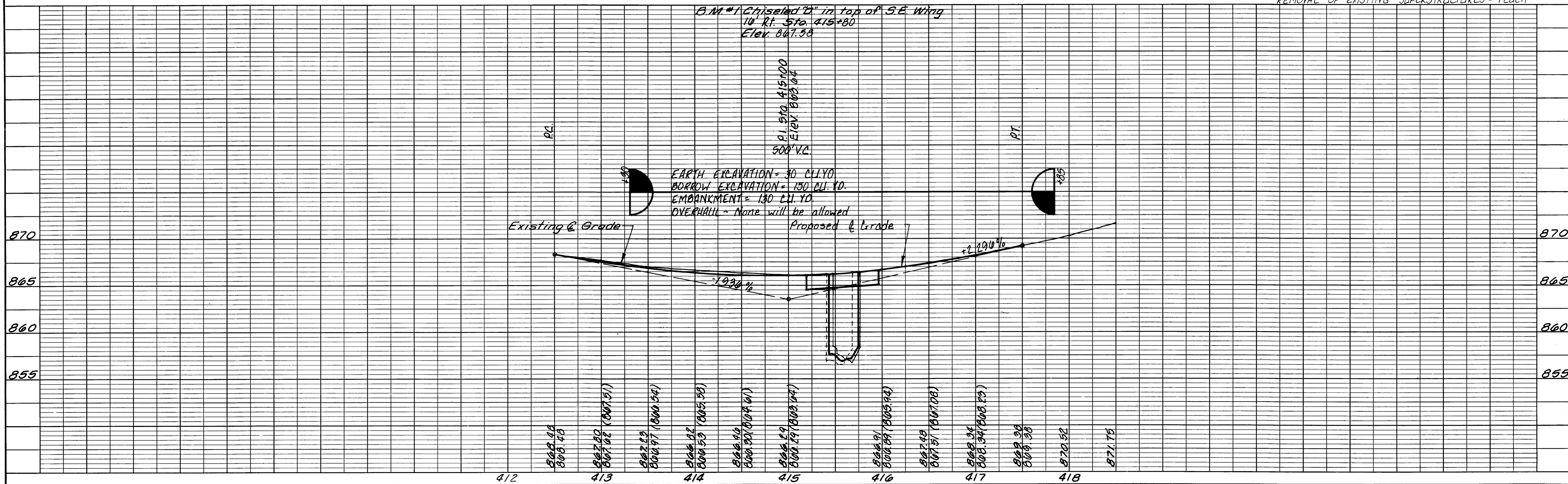
B.M. #1 Chiseled "I" in top of S.E. Wing  
 10' Rt. Sta. 415+80  
 Elev. 867.58

P.I. Sta. 415+00  
 Elev. 868.64  
 500' V.C.

EARTH EXCAVATION = 30 CU. YD.  
 BORROW EXCAVATION = 150 CU. YD.  
 EMBANKMENT = 130 CU. YD.  
 OVERHAUL - None will be allowed

Existing @ Grade

Proposed @ Grade

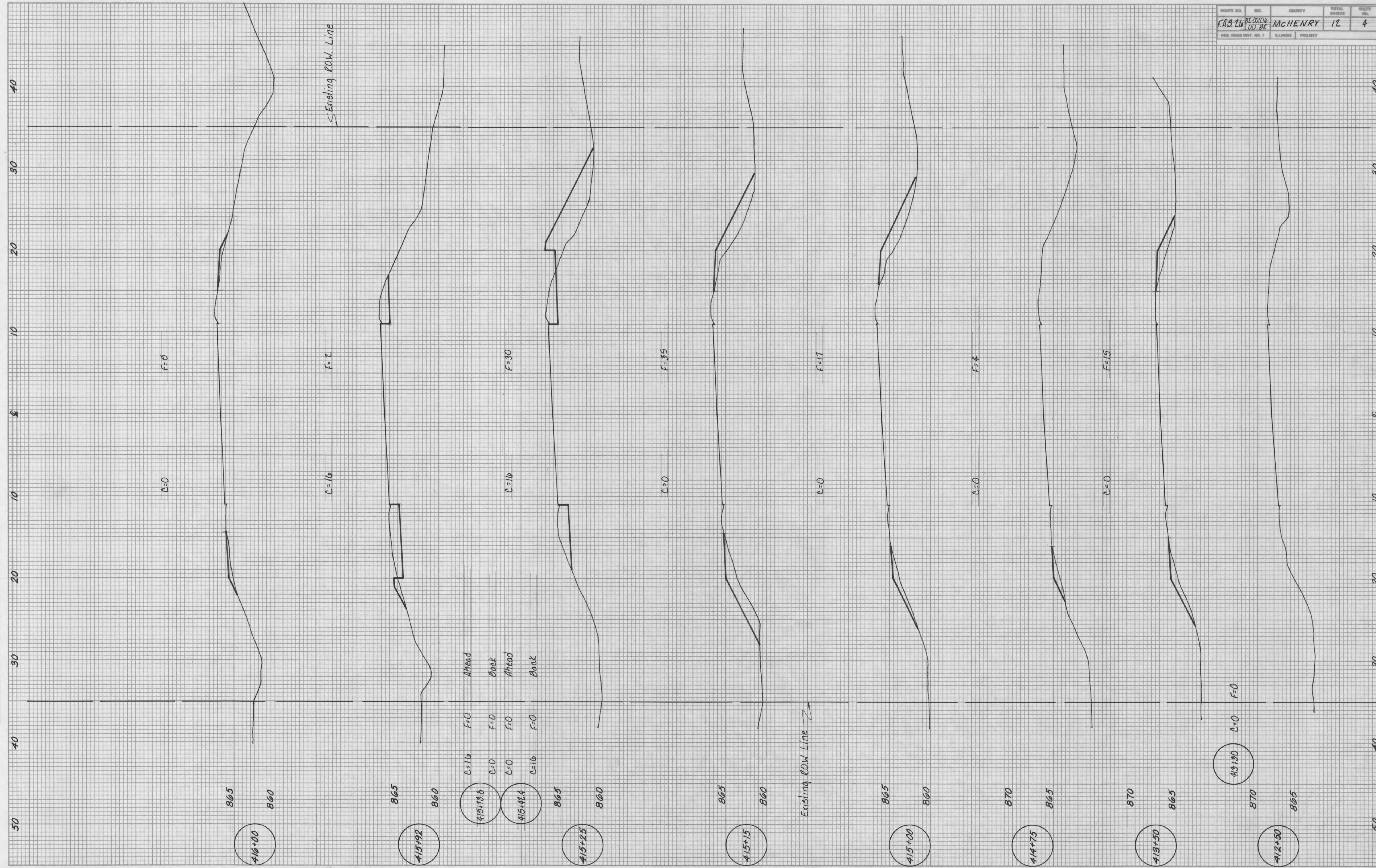


DATE: 5/2/71  
 BY: J.C.  
 SURVEYED: [ ]  
 PLOTTED: [ ]  
 NOTE BOOK: [ ]  
 NO. OF WAY CHECKS: [ ]  
 NO. OF WAY CHECKS: [ ]

DATE: [ ]  
 BY: [ ]  
 SURVEYED: [ ]  
 PLOTTED: [ ]  
 NOTE BOOK: [ ]  
 NO. OF WAY CHECKS: [ ]  
 NO. OF WAY CHECKS: [ ]

FINAL SURVEY SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE #208274/100/1, BY T.C. M.R. F.B.L., DATE 8-24-82, 9-14-82, 9-18-82

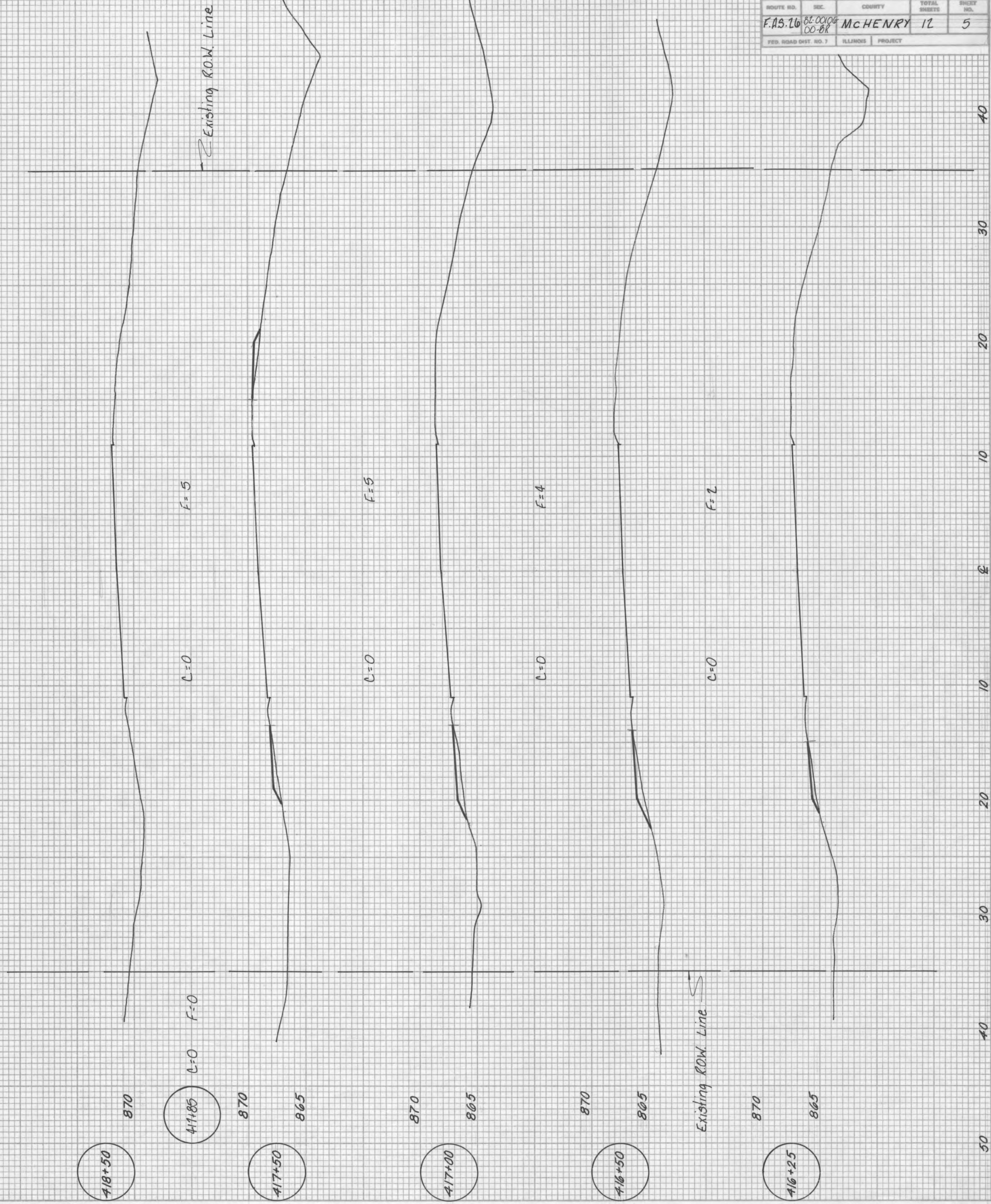
ORIGINAL SURVEY SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE, AREAS CHECKED, BY, DATE



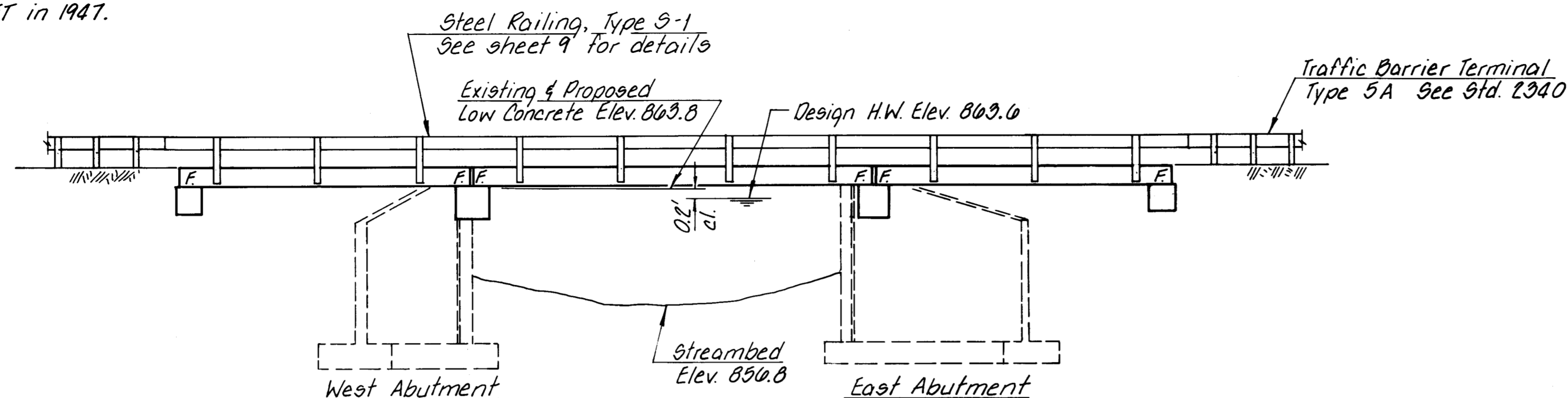
FINAL SURVEY	NO. 056-1	REVIEWED	DATE
NOTE BOOK		PLOTTED	8-24-88
		TEMPLATE	9-14-88
		AREAS CHECKED	9-16-88
		AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 26	00-0006	MC HENRY	12	5
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



B.M. #1 - Chiseled "A" on top of S.E. Wingwall of existing bridge. Elev. 867.58  
 Existing Str. No. 056-3006 - single span reinforced concrete slab bridge on closed concrete abuts. Built as S.A. Rt. 1, Section 33-B-MFT in 1947.



**ELEVATION**

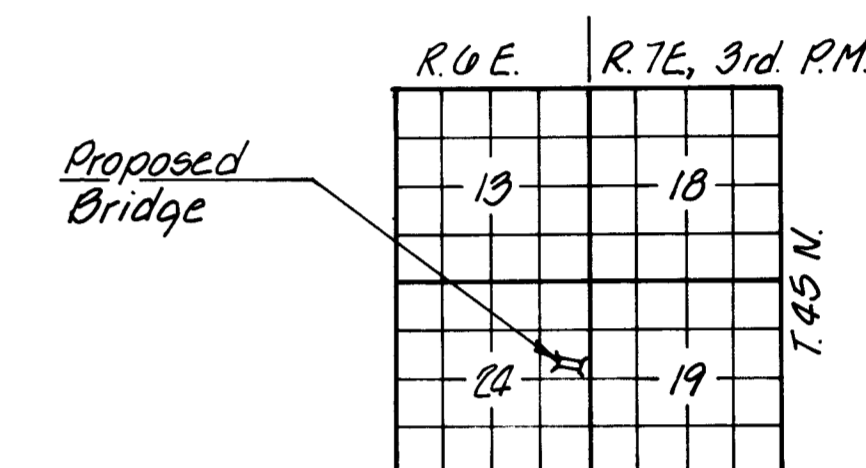
**GENERAL NOTES**

It shall be the responsibility of the Contractor to verify all dimensions and conditions in the field prior to construction and ordering of materials. Necessary approved adjustments 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.

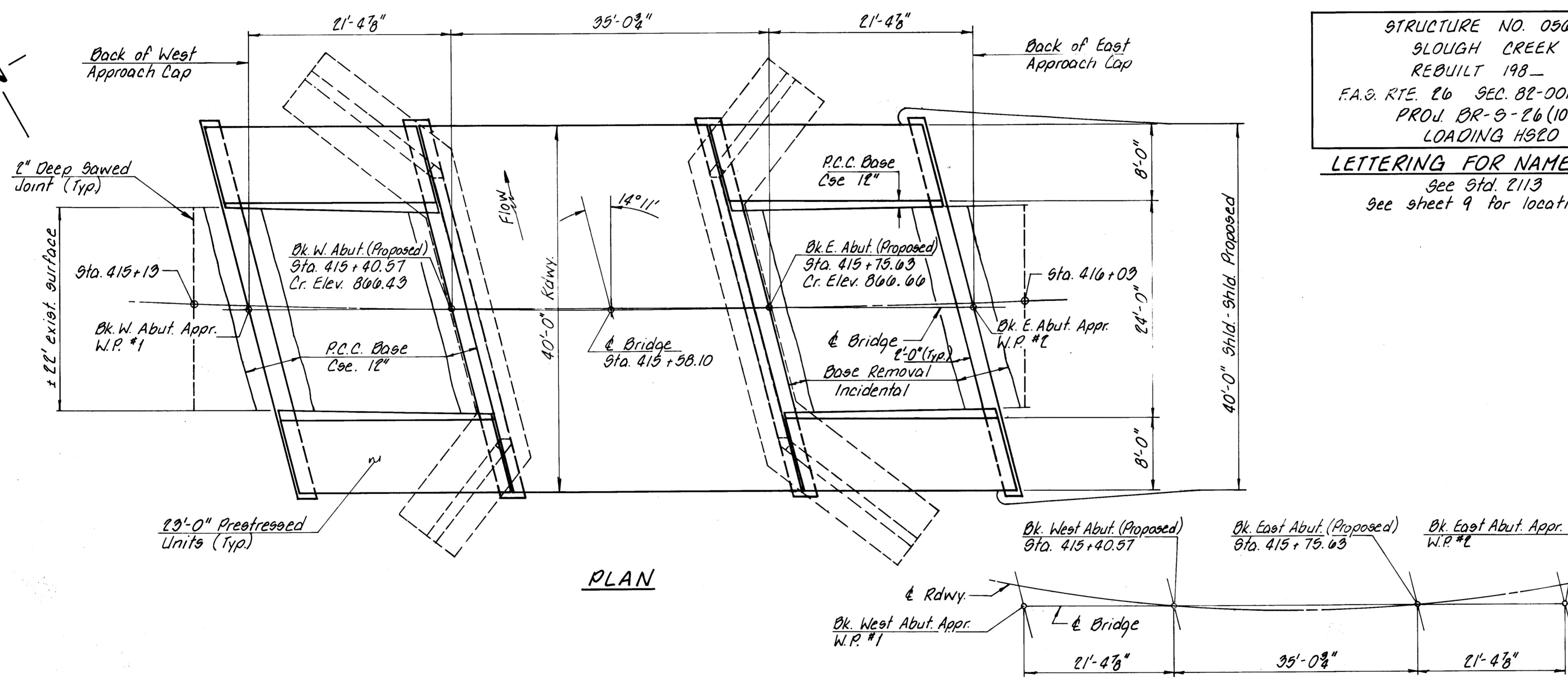
Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

STRUCTURE NO. 056-3006  
 SLOUGH CREEK  
 REBUILT 198-  
 F.A.S. RTE 26 SEC 82-00100-00-BR  
 PROJ. BR-5-26(102)  
 LOADING HS20

**LETTERING FOR NAME PLATE**  
 See Std. 2113  
 See sheet 9 for location.



**LOCATION PLAN**



**PLAN**

**OFFSET LAYOUT**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,991		1,991
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		12	12
Bituminous Concrete Surface Removal Partial	Sq. Yd.			144
Class X Concrete	Cu. Yd.		41.1	41.1
Reinforcement Bars	Pound		8,240	8,240
Steel Railing, Type 5-1	Lin. Ft.	160		160
Name Plates	Each	1		1
P.C. Mortar Fairing Course	Lin. Ft.	95		95
Waterproofing Membrane System	Sq. Yd.	251		251
Porous Granular Embankment	Ton			90
Bit. Conc. Surf. Cree., Mix D, Cl. I	Ton			40
P.C.C. Base Course 12"	Sq. Yd.			57
Structure Excavation	Cu. Yd.		139	139

**WATERWAY DATA**

Drainage Area	10.3	Sq. Mi.
Existing Opening	180	Sq. Ft.
Required Opening	180	Sq. Ft.
Proposed Opening	180	Sq. Ft.

**DESIGN STRESSES**

$f_c = 5,000$  p.s.i. (Prestressed Beams)  
 $f_{ci} = 4,000$  p.s.i. (Prestressed Beams)  
 $f_c = 1,400$  p.s.i. (Class X Concrete)  
 $f_s = 270,000$  p.s.i. (Prestressed Strands)  
 $f_{si} = 189,000$  p.s.i. (Prestressed Strands)  
 $f_s = 20,000$  p.s.i. (Reinf. Bars - Field Units)  
 $f_y = 60,000$  p.s.i. (Reinf. Bars - Precoat Units)  
 $n = 9$  (Class X Concrete)  
 LOADING HS20-44  
 DESIGN SPECIFICATIONS: AASHTO 1977 & 1978 thru 1982 Interims.  
 25\*/99 Ft. included in dead load for future wearing surface.

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

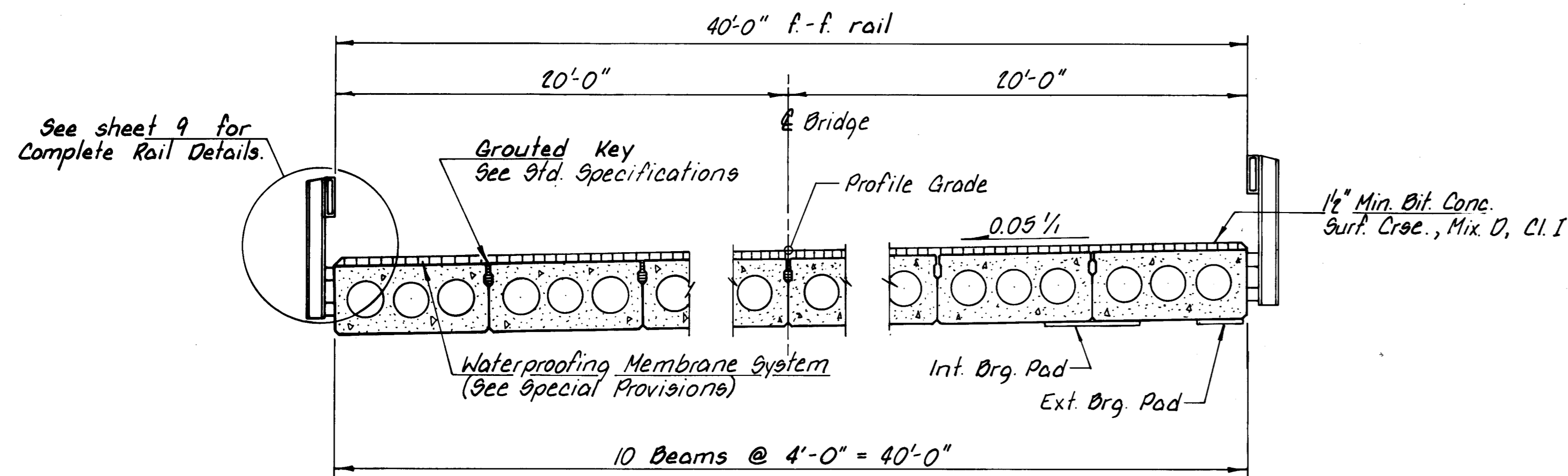
Fred J. Stone Jr.  
 ILLINOIS STRUCTURAL NO. 2934

**GENERAL PLAN & ELEVATION**  
 SECTION 82-00100-00-BR  
 F.A.S. ROUTE 26  
 McHENRY COUNTY  
 STATION 415+58.10

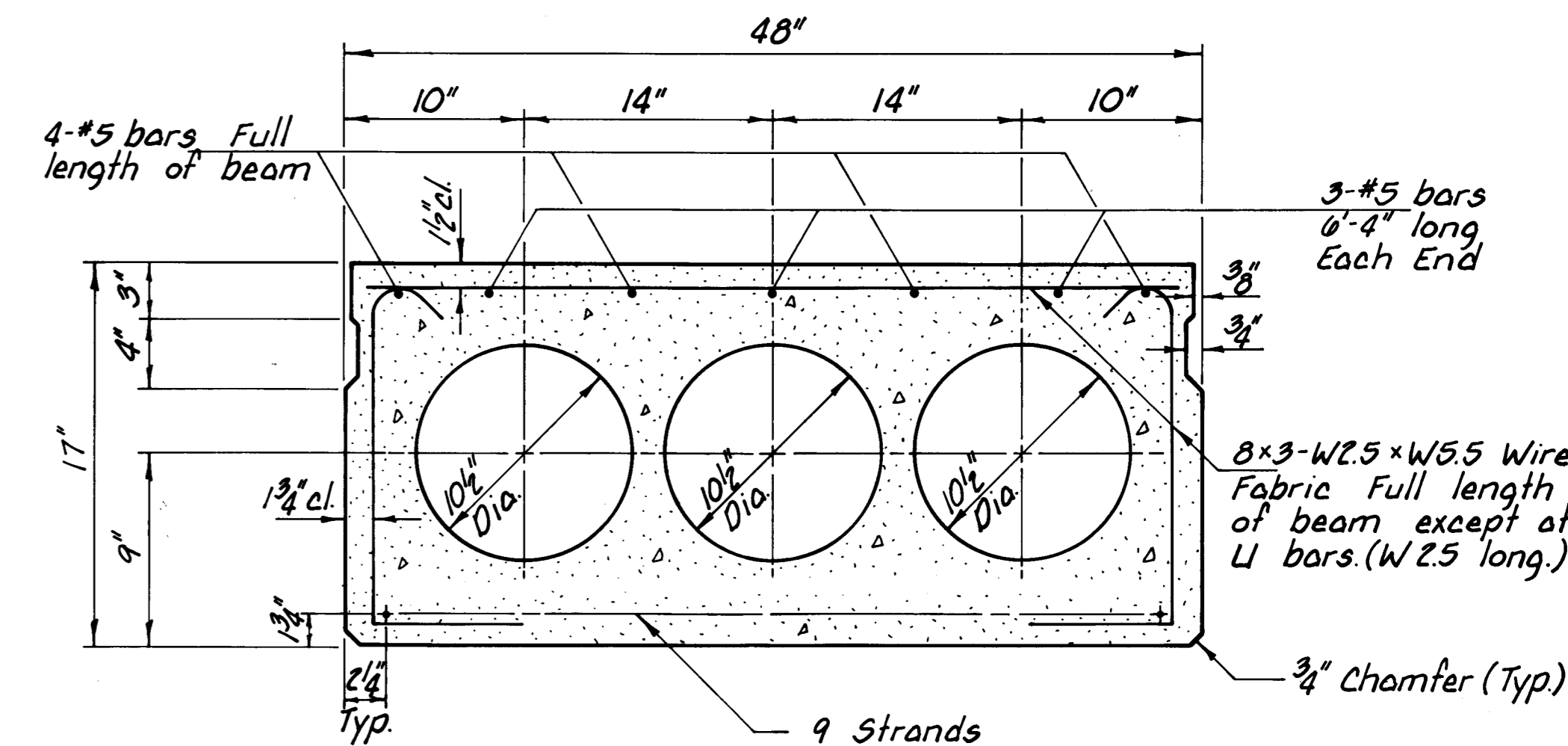
**COLLINS AND RICE**  
 CONSULTING ENGINEERS

DESIGNED R.M.B. CHECKED F.S.  
 DRAWN M.B. DATE 1-26-84 NO. 1070

Note: Omit key on exterior face of outside beams.

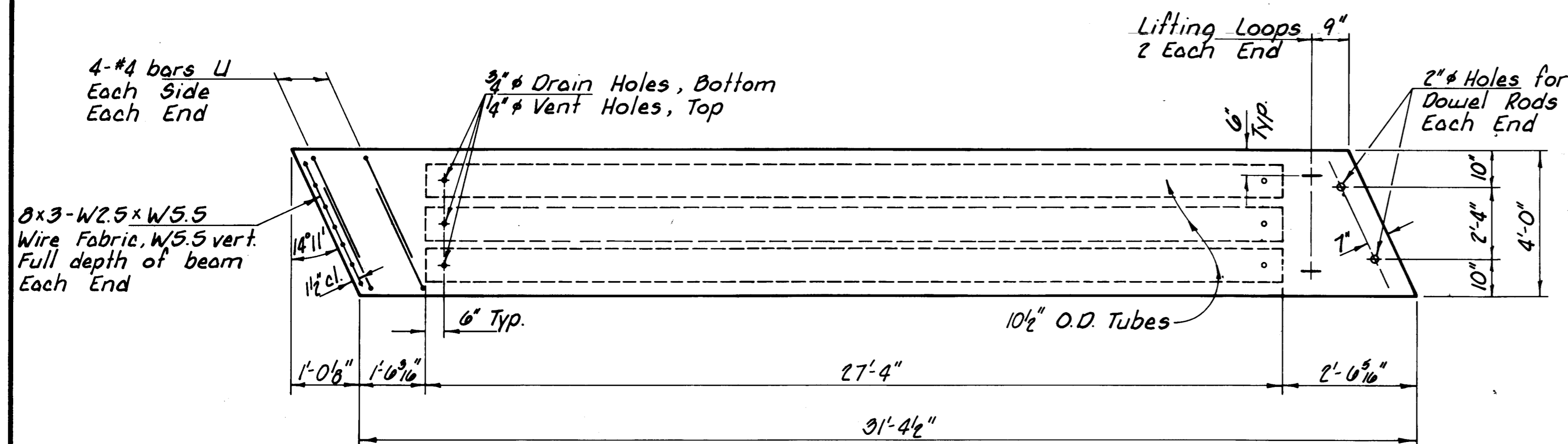


**CROSS SECTION**  
LOOKING EAST

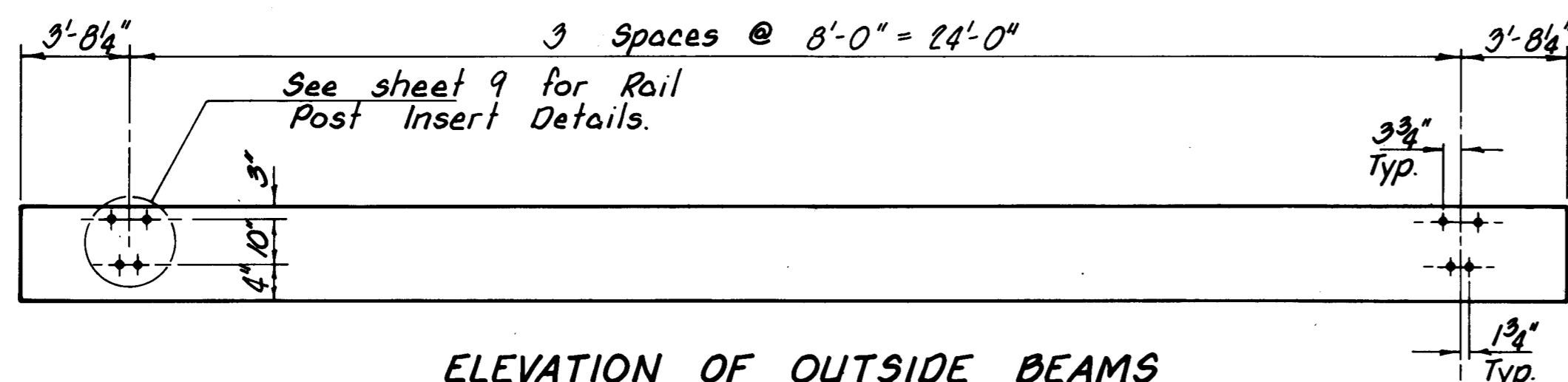


**TYPICAL SECTION THRU BEAM**

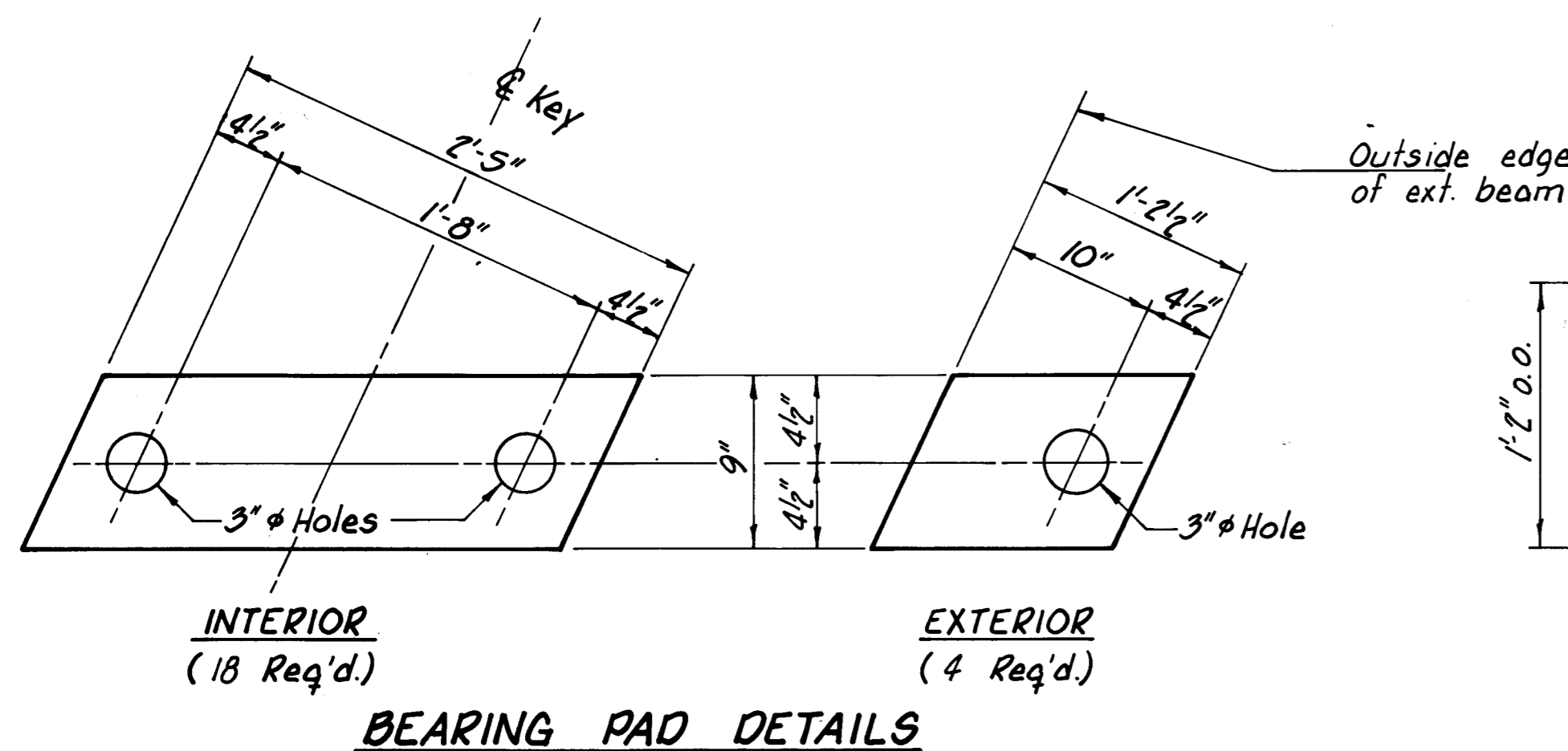
9 - 1/2" Strands Stressed to 28,900 Lbs. Each.  
Place strands symmetrically about C of beam.  
Use Standard Grid Pattern.



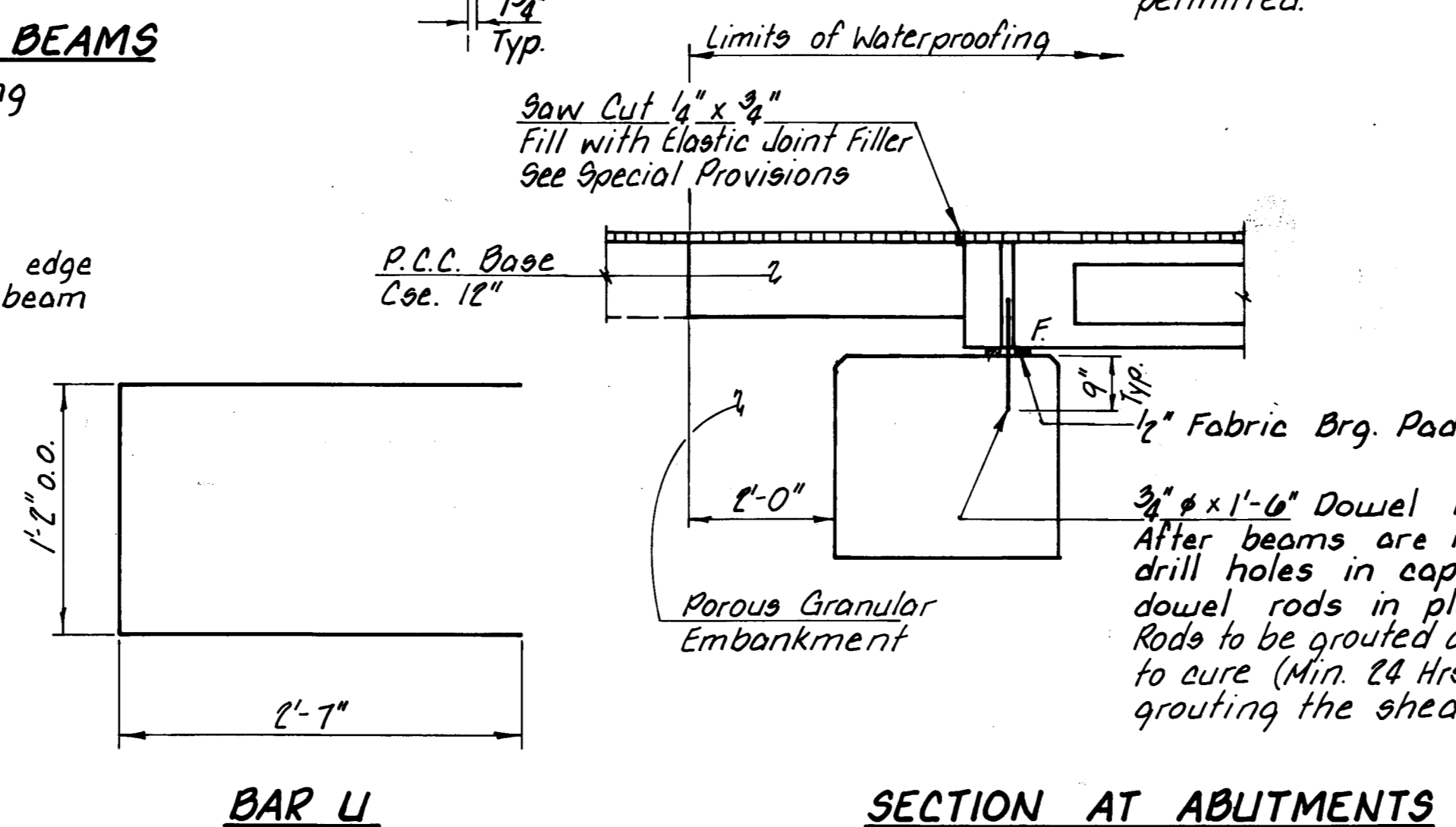
**TYPICAL PLAN OF BEAMS**



**ELEVATION OF OUTSIDE BEAMS**  
Showing Rail Post Spacing



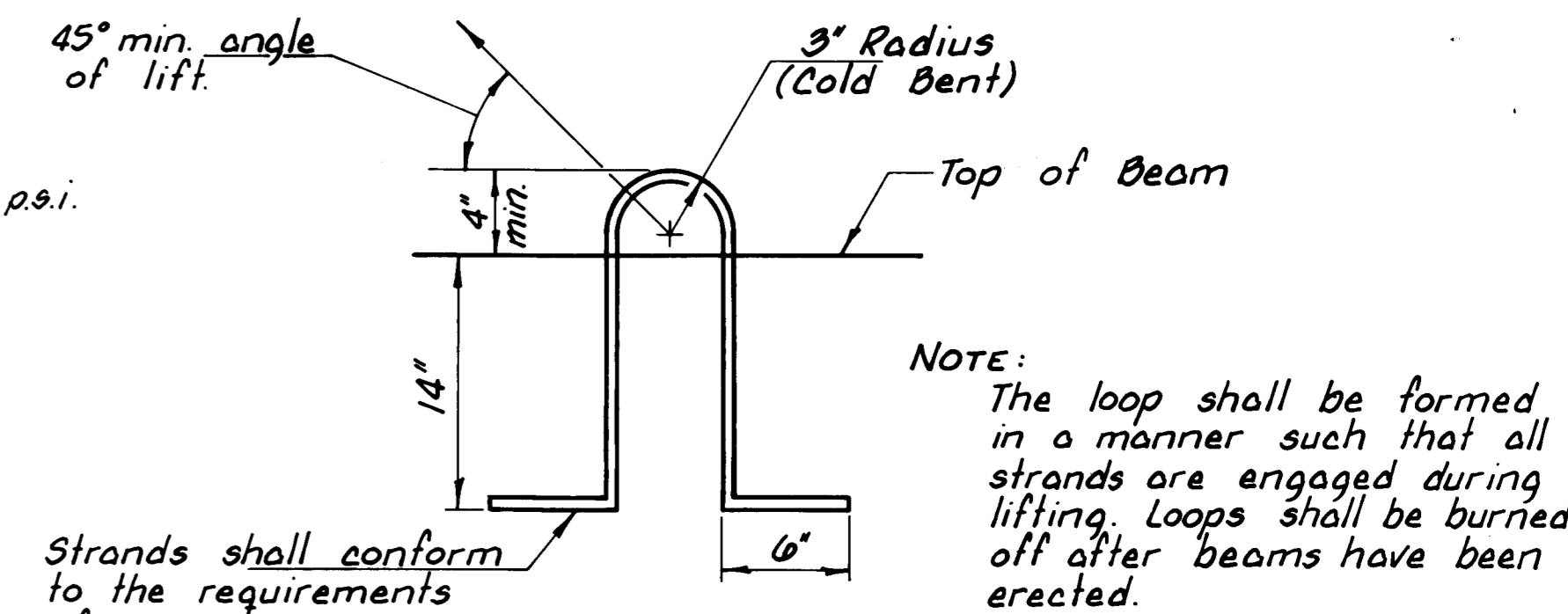
**BEARING PAD DETAILS**



**SECTION AT ABUTMENTS**

**NOTES**

A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.  
Required Release Strength, f'ci, shall be 4,000 p.s.i.  
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.  
The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.  
Lifting Loops shall be 7-wire stress-relieved, 2-1/2" - 270 ksi strands.  
Reinforcement bars shall conform to AASHTO: M-31 or M-53, Grade 60.  
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.  
Keyway surfaces shall be cleaned to remove form oil and other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and bottom edge of the key.  
An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.



**LIFTING LOOP DETAIL**  
Approved alternate may be substituted for the above.

**BILL OF MATERIAL**

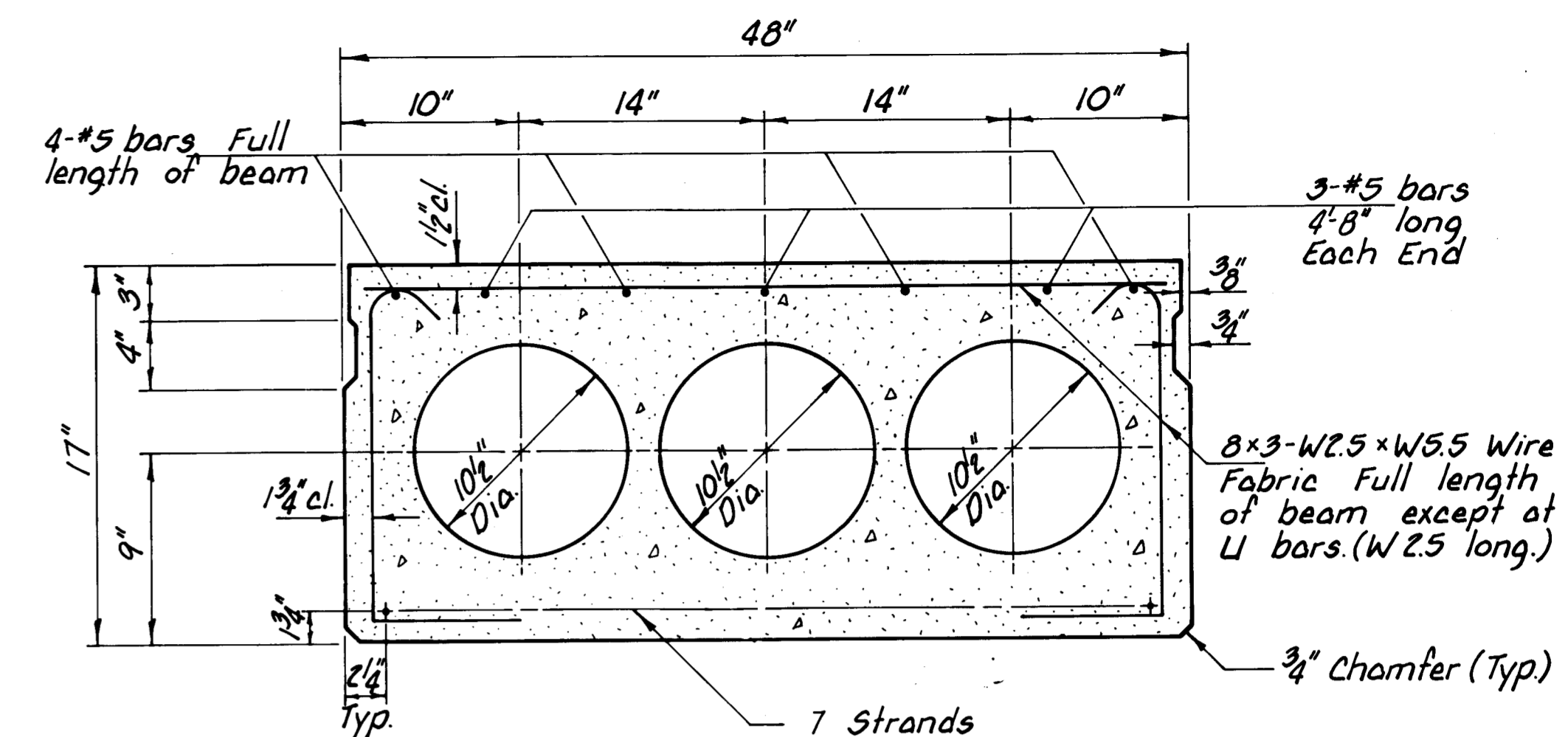
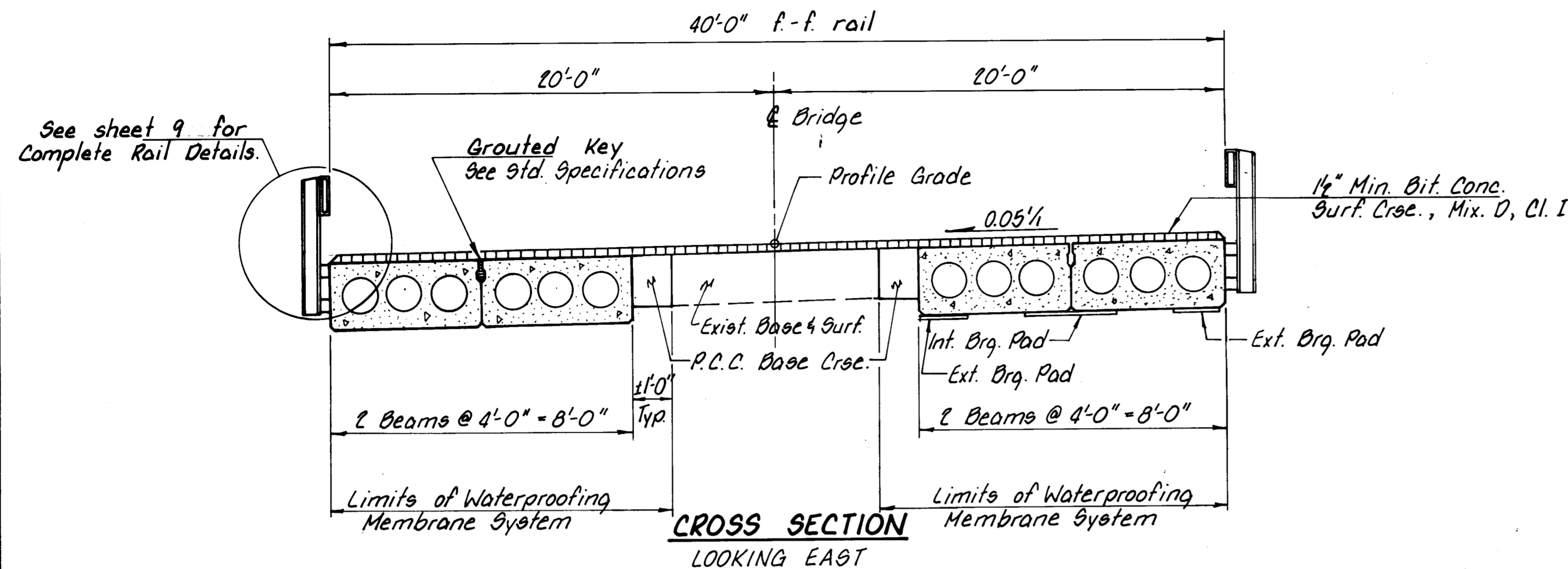
ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,255
P.C. Mortar Fairing Course	Lin. Ft.	70

**SUPERSTRUCTURE DETAILS**  
SECTION 82-00100-00-BR  
F.A.S. ROUTE 26  
McHENRY COUNTY  
STATION 415 +58.10

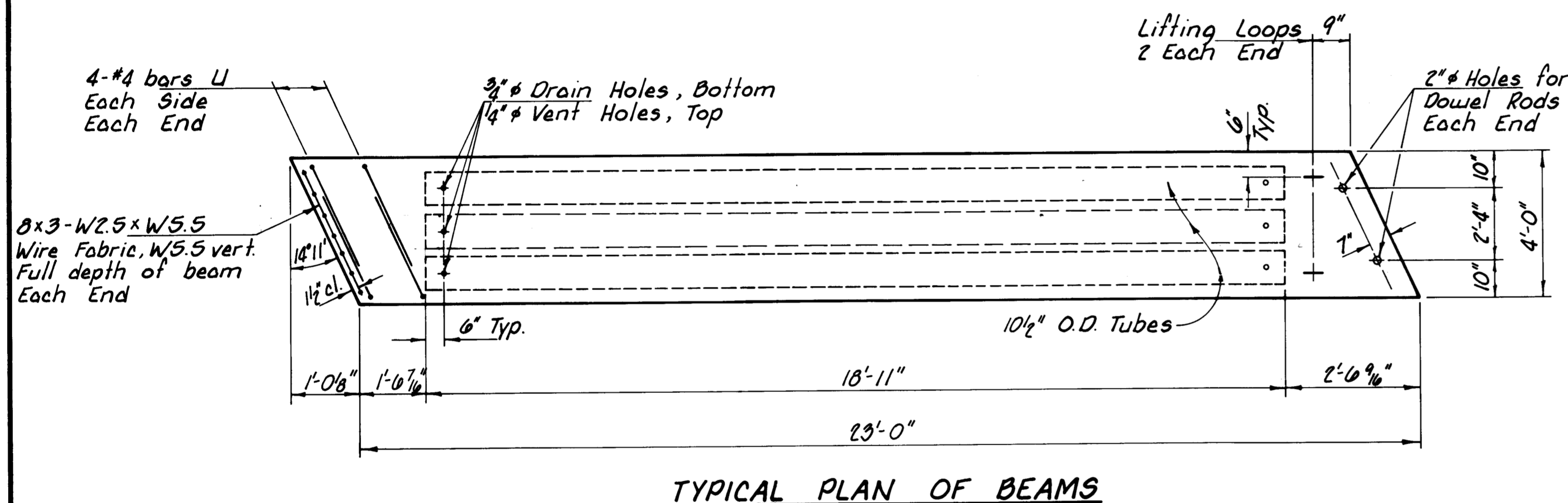
**COLLINS AND RICE**  
CONSULTING ENGINEERS

DESIGNED R.M.B. CHECKED F.S.  
DRAWN M.G. DATE 1-26-84 NO. 1070

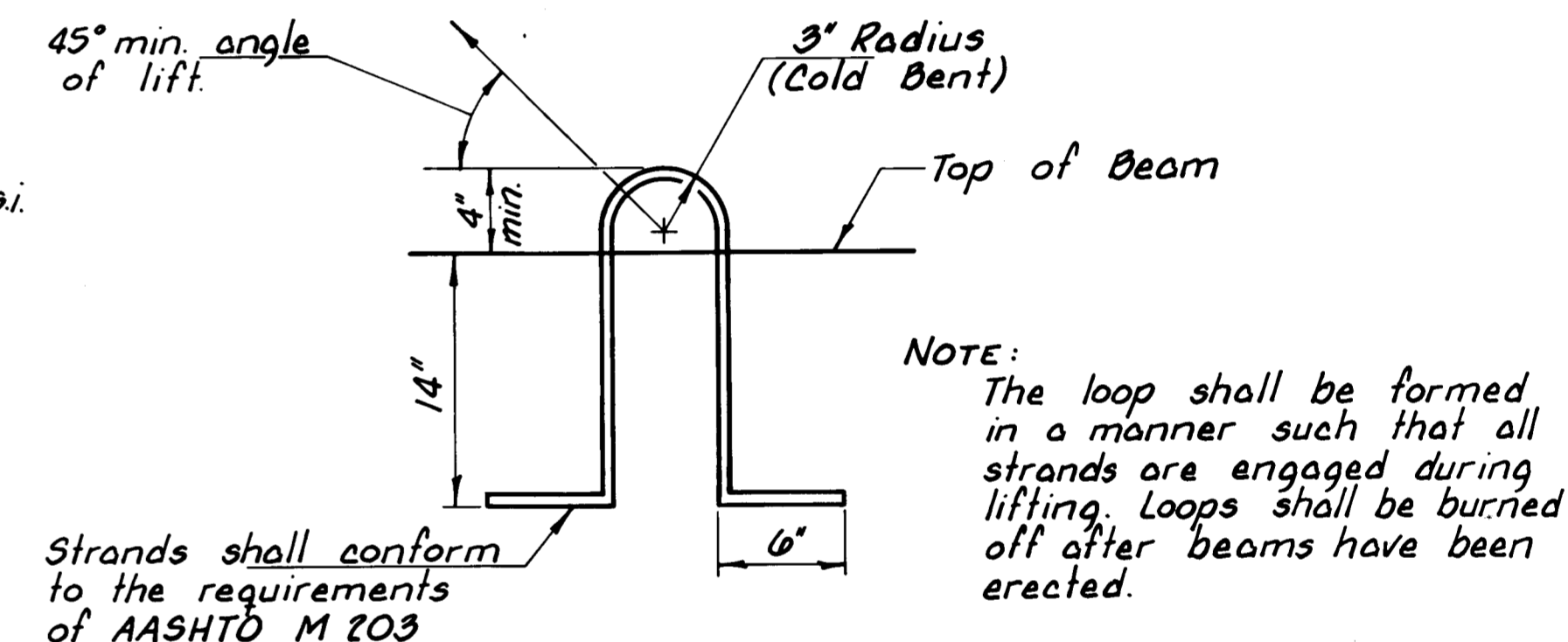
NOTE: Omit key on exterior face of outside beams.



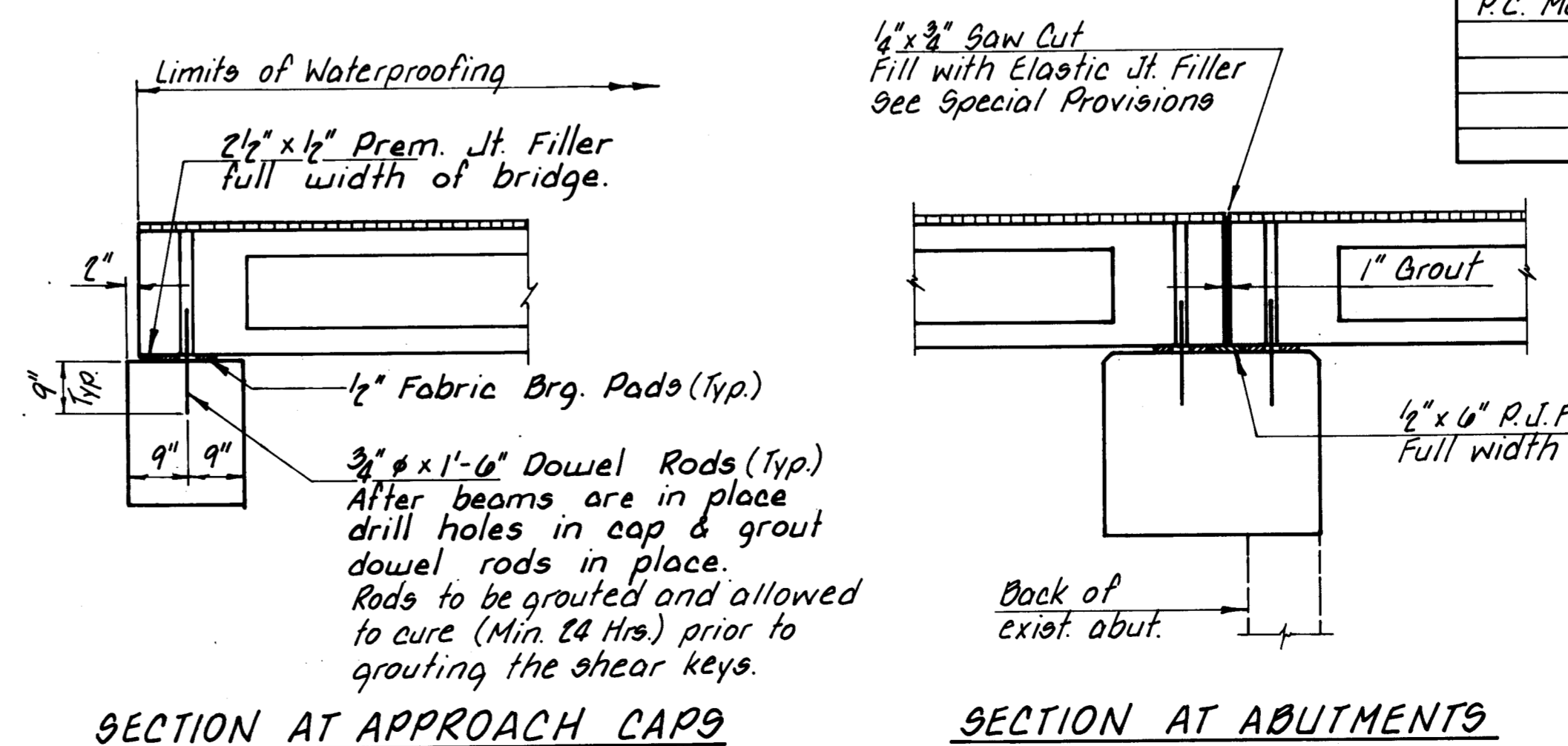
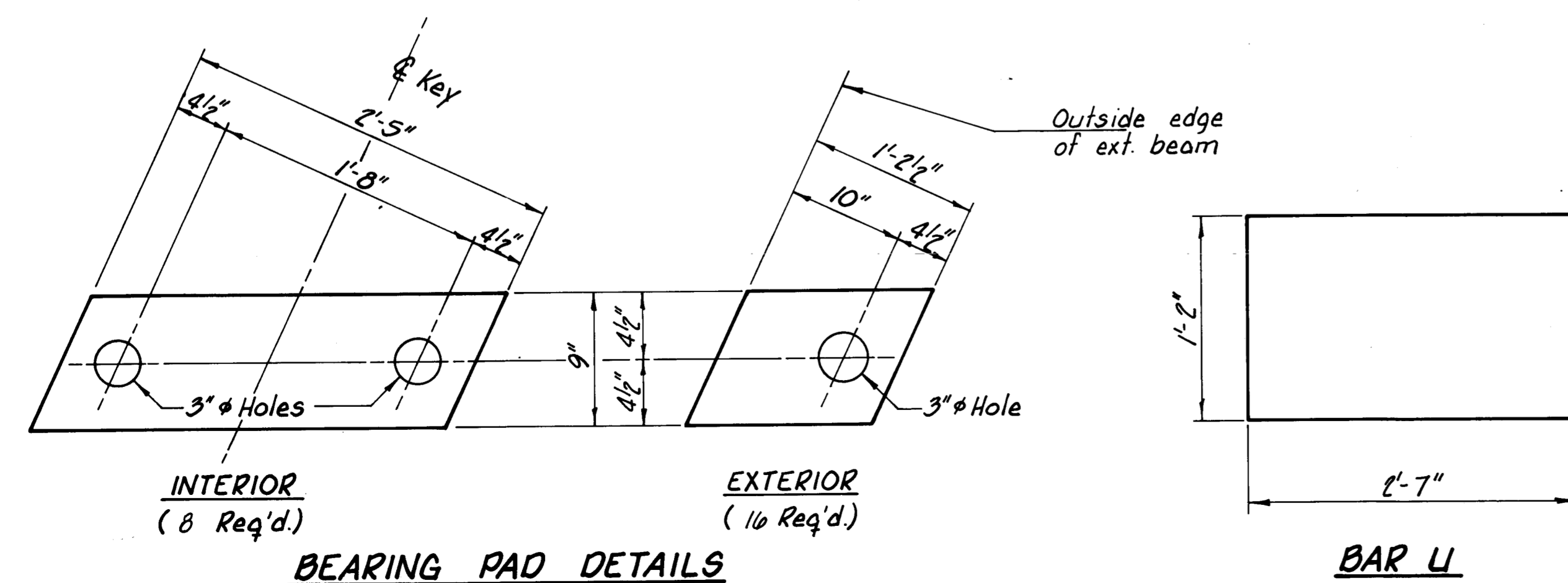
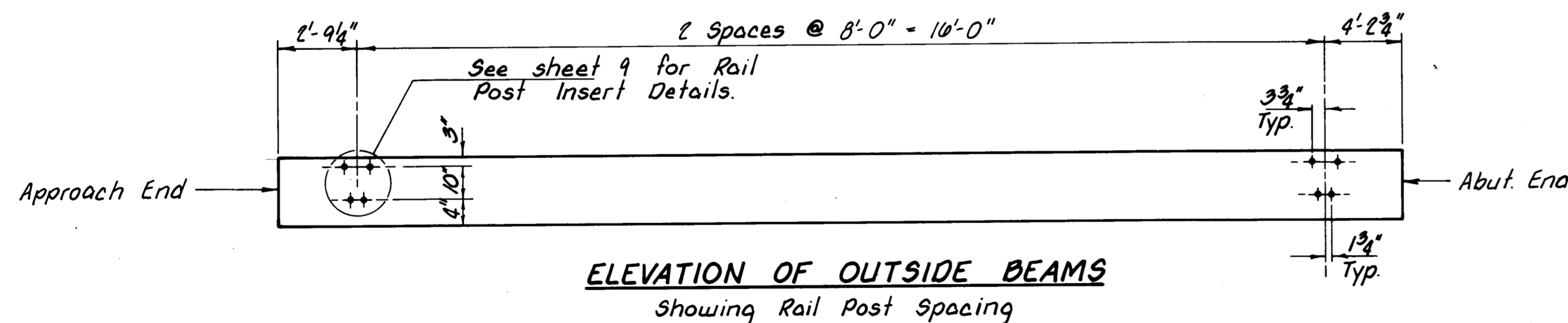
**TYPICAL SECTION THRU BEAM**  
7 - 1/2" Strands Stressed to 28,900 Lbs. Each. Place strands symmetrically about  $\epsilon$  of beam. Use Standard Grid Pattern.



**NOTES**  
A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.  
Required Release Strength,  $f'_{ci}$ , shall be 4,000 psi.  
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.  
The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.  
Lifting Loops shall be 7-wire stress-relieved, 2-1/2" - 270 ksi strands.  
Reinforcement bars shall conform to AASHTO: M-31 or M-53, Grade 60.  
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.  
Keyway surfaces shall be cleaned to remove form oil and other bond breaking material prior to shipment of the beams. Clearing shall be done by sandblasting the keyway areas between top of the beam and bottom edge of the key.  
An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.



**LIFTING LOOP DETAIL**  
Approved alternate may be substituted for the above.



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	736
R.C. Mortar Fairing Course	Lin. Ft.	25

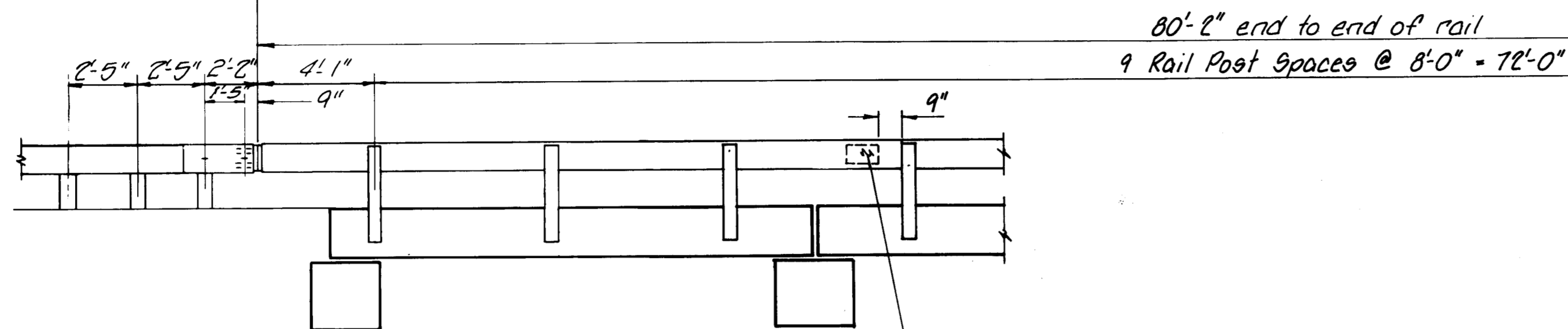
APPROACH SPANS  
SECTION 82-00106-00-BR  
F.A.S. ROUTE 26  
McHENRY COUNTY  
STATION 415 + 58.10

COLLINS AND RICE  
CONSULTING ENGINEERS

DESIGNED R.M.B. CHECKED F.S.  
DRAWN M.G. DATE 1-20-84 NO. 1070



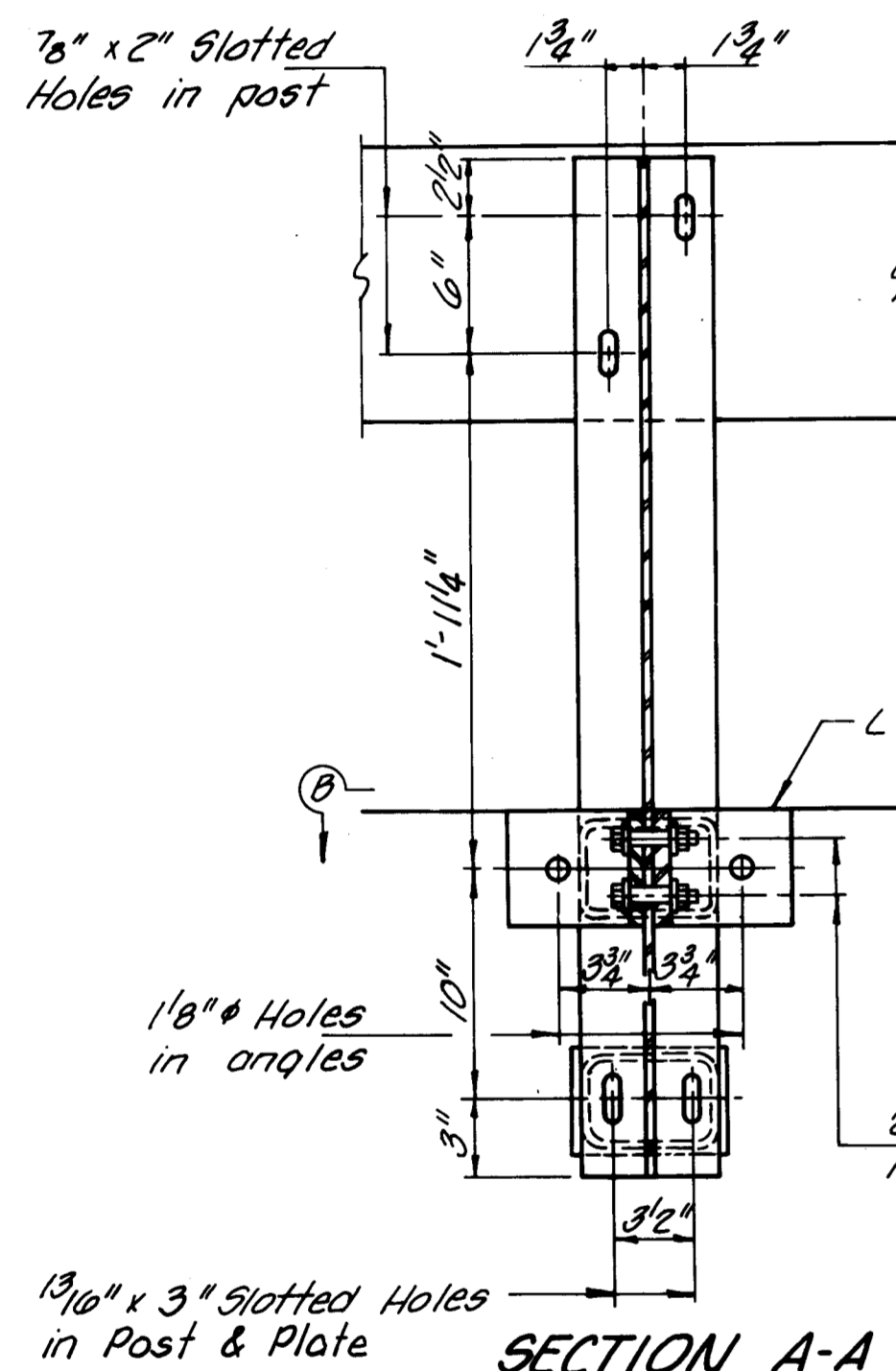
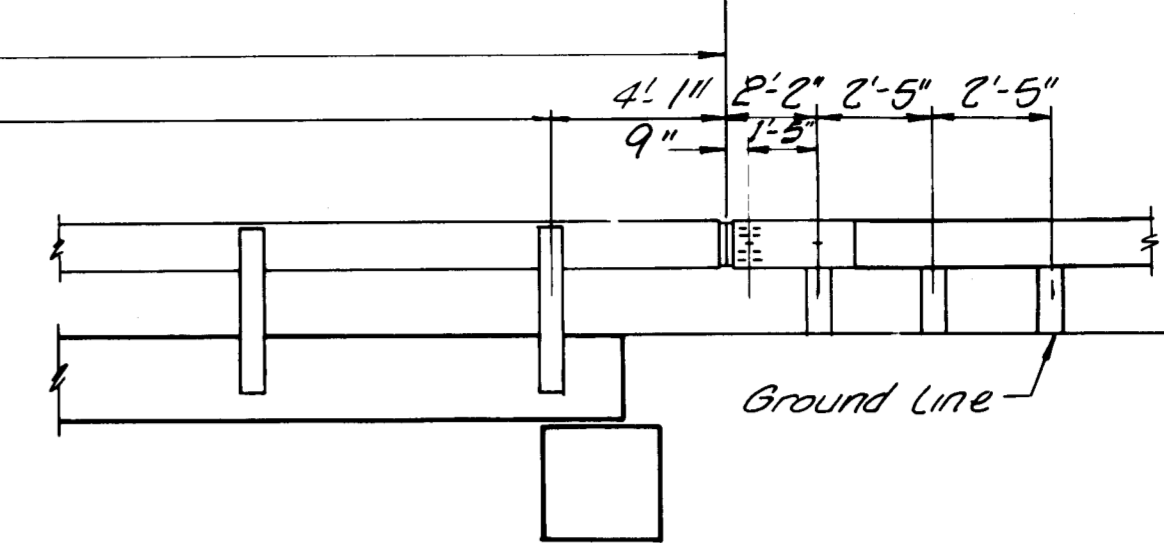
Traffic Barrier Terminal Type 5A  
See Std. 2340



Locate Name Plate on rdwy. face of rail at S.W. corner.

**ELEVATION**

Traffic Barrier Terminal Type 5A  
See Std. 2340

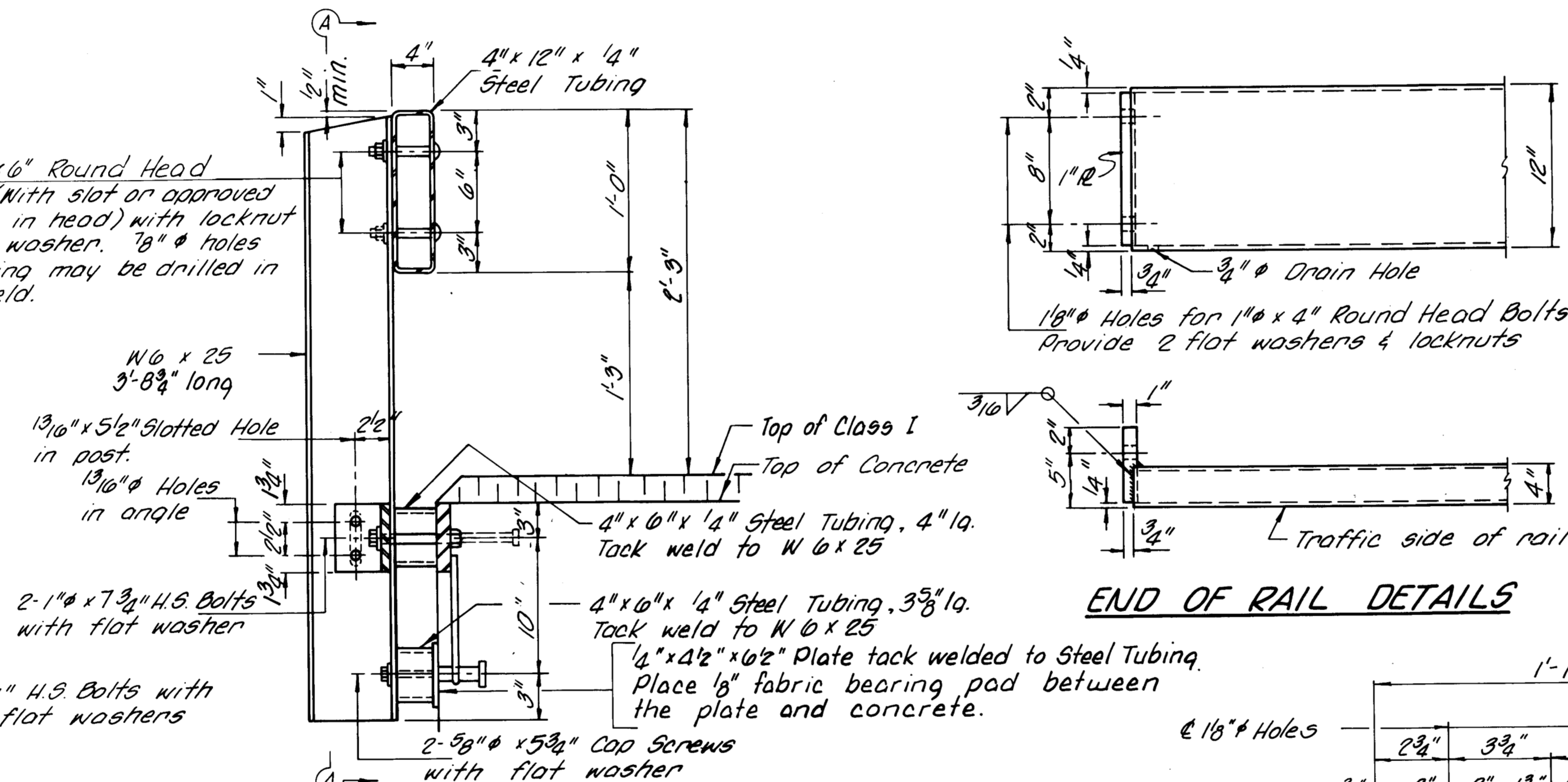


**SECTION A-A**

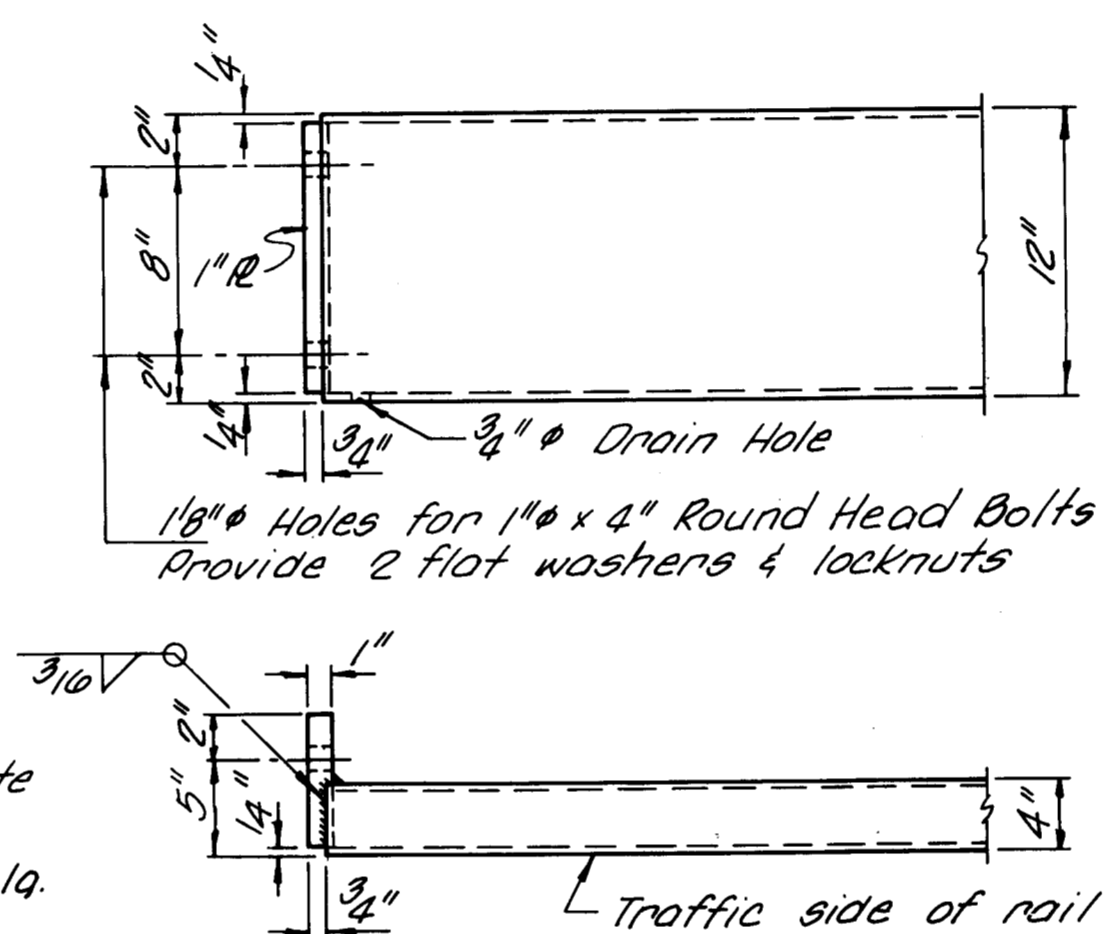
2-3/4" x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" holes in tubing may be drilled in the field.

W6 x 25 3'-8 3/4" long  
1 3/16" x 5 1/2" Slotted Hole in post.  
1 3/16" holes in angle  
2-1" x 7 3/4" H.S. Bolts with flat washer  
2-3/4" x 3/4" H.S. Bolts with hex nut & flat washers

**SECTION AT RAIL POST**



**END OF RAIL DETAILS**



**NOTES**

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. designation M-183 except posts and angles shall conform to A.A.S.H.T.O. M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. designation M-104.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized in accordance with A.A.S.H.T.O. designation M-232.

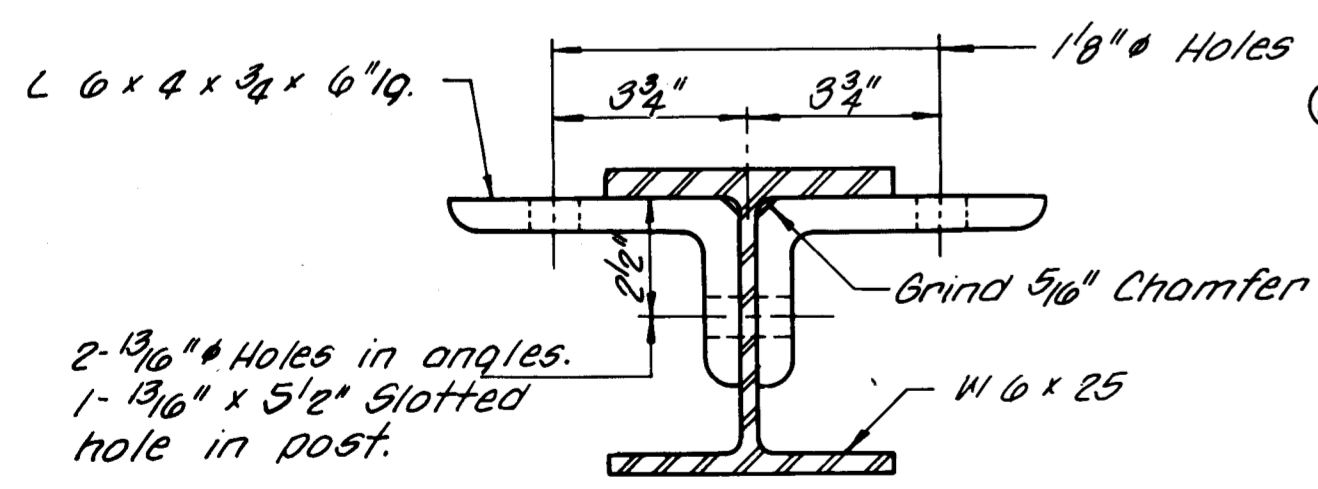
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. A-385 and A.A.S.H.T.O. M-111. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lined foot for STEEL RAILING, TYPE 5-1.

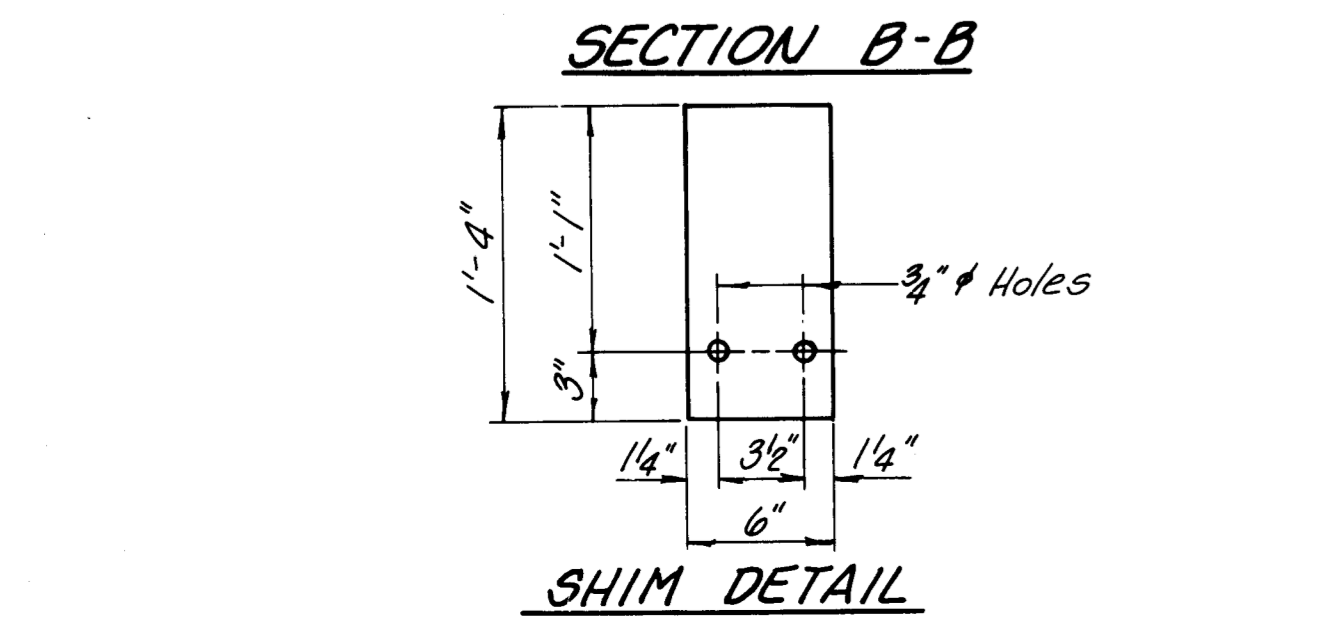
All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1-4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

The 3/4" high strength bolts used to connect the 6" x 4" x 3/4" angles to the post shall be tightened in accordance with Art. 507.04(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only, after the 3/4" high strength bolts have been tightened in accordance with Article 507.04(g)(3).

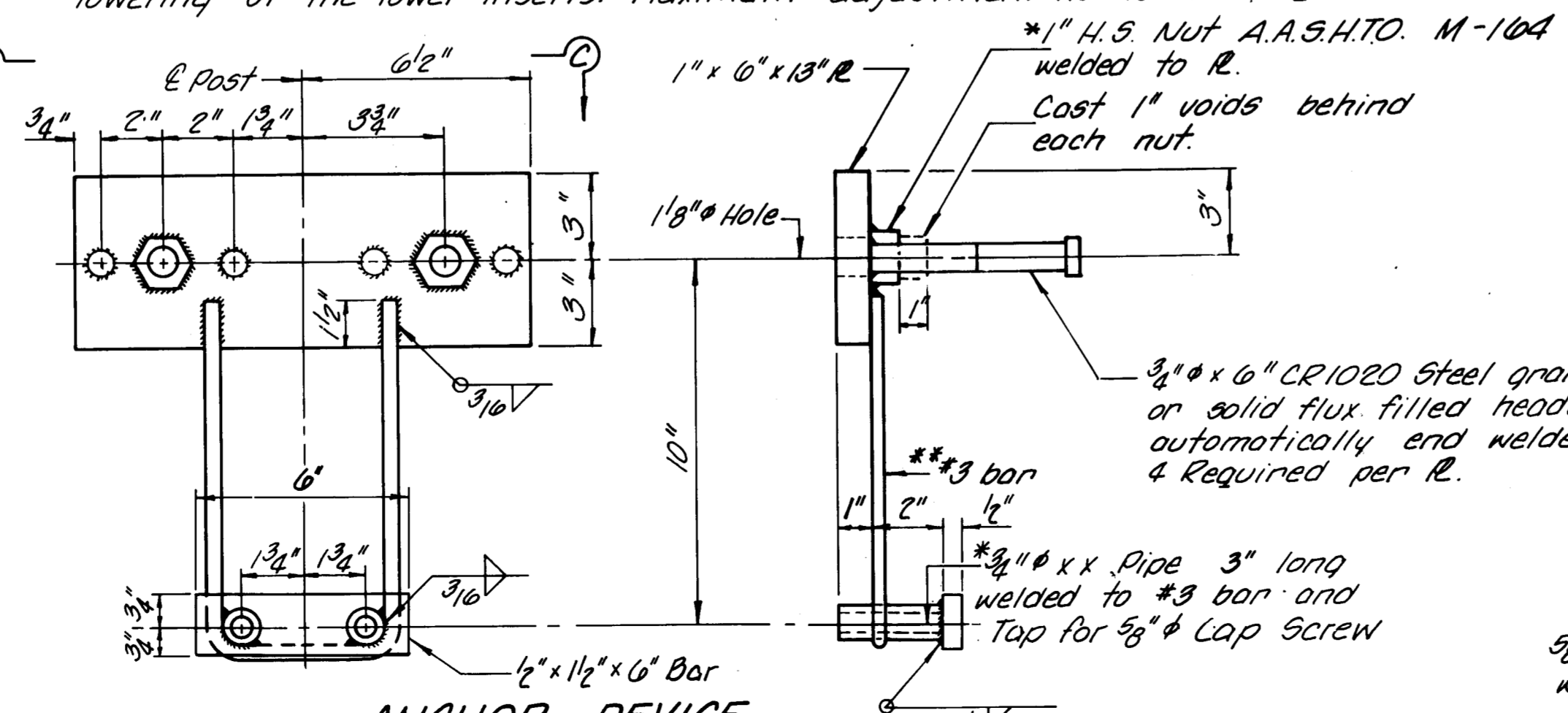


**SECTION B-B**



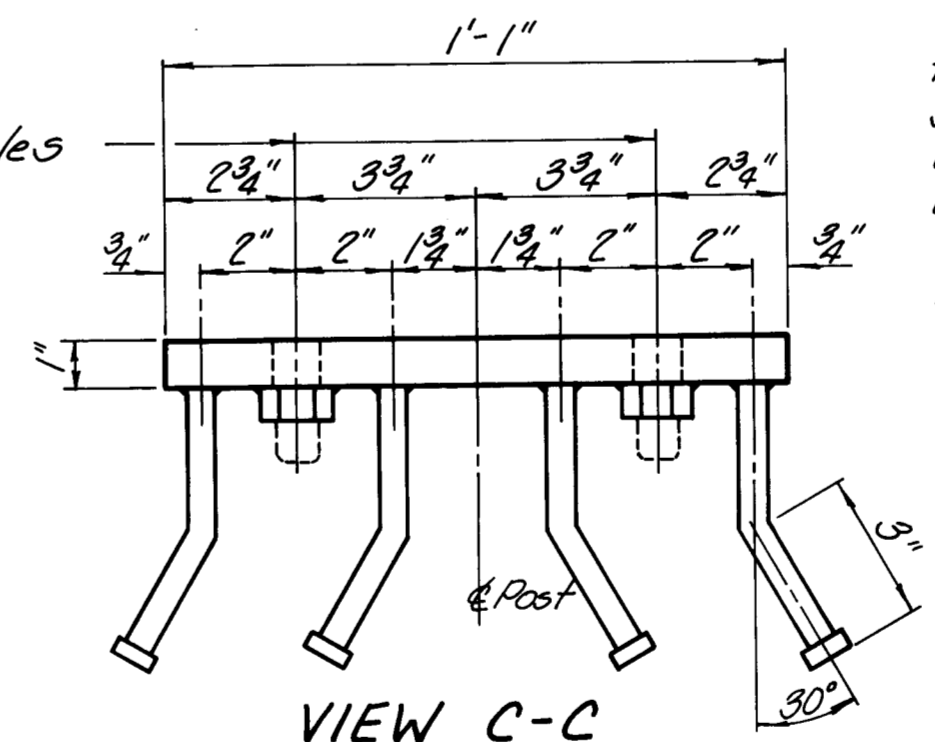
**SHIM DETAIL**

\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

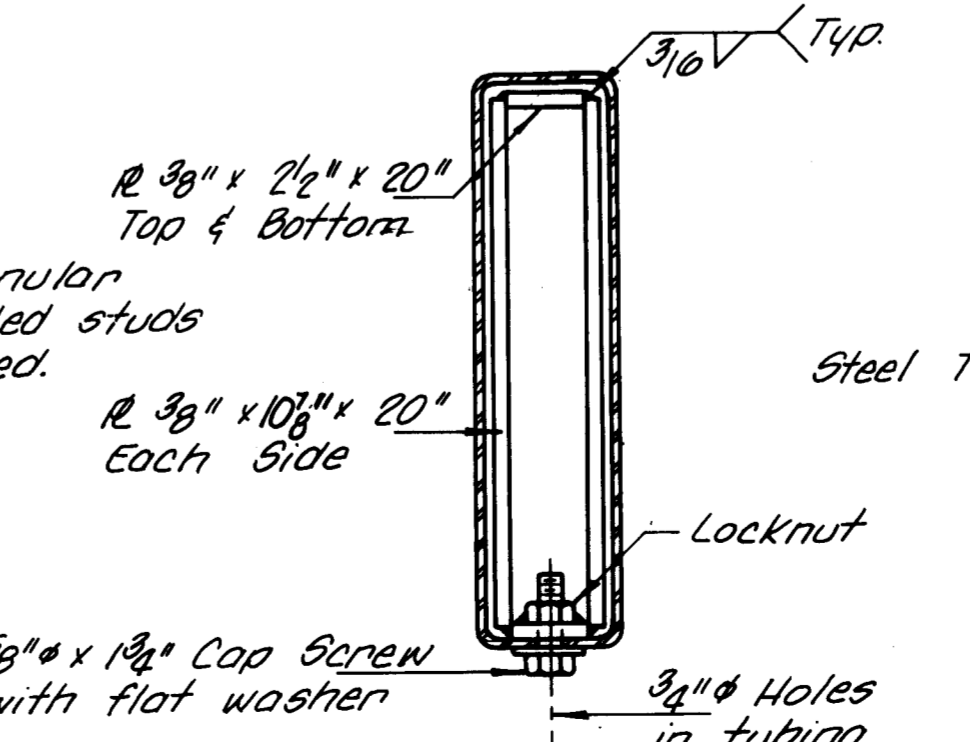


**ANCHOR DEVICE**

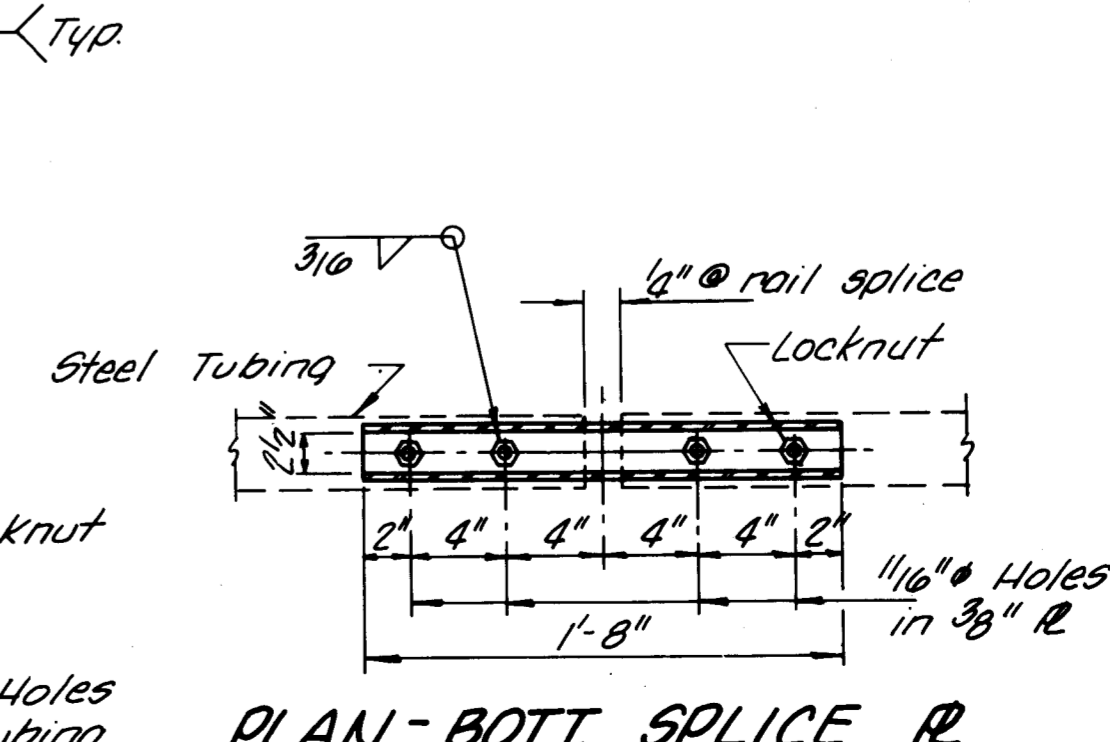
\*Threaded areas shall be plugged or blocked off during casting of beam.



**VIEW C-C**



**SECTION AT RAIL SPLICE**



**PLAN-BOTT. SPLICE R**

**BILL OF MATERIAL**

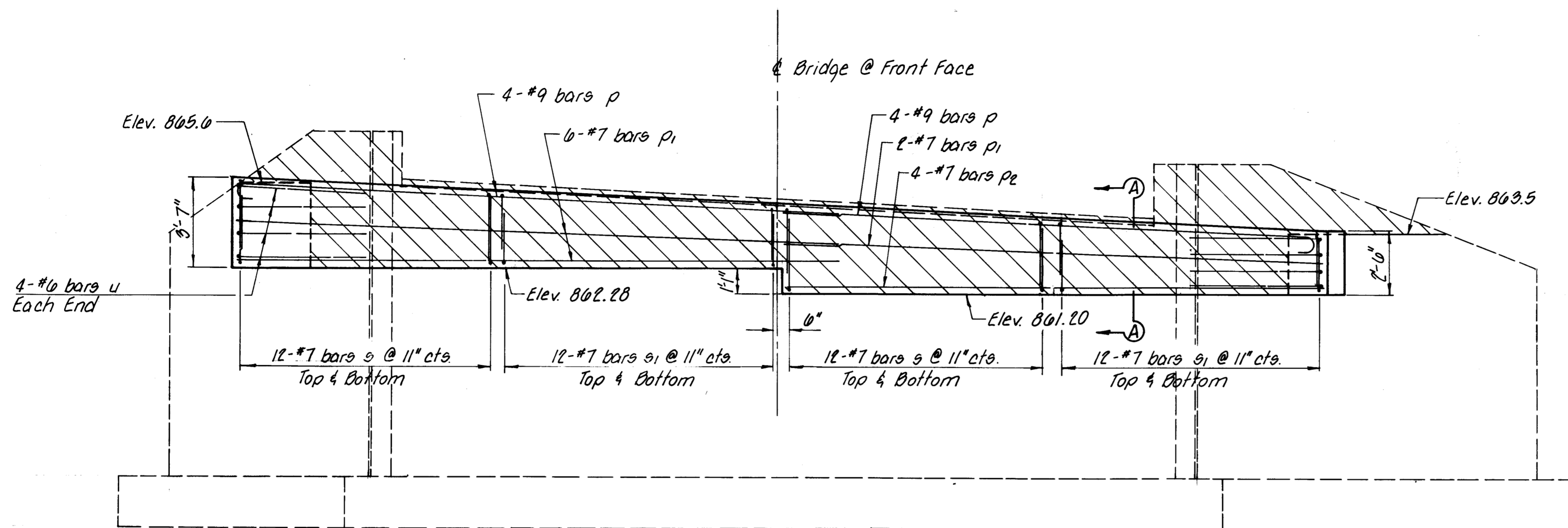
Item	Unit	Quantity
Steel Railing, Type 5-1	Lin. Ft.	160

**RAILING DETAILS**

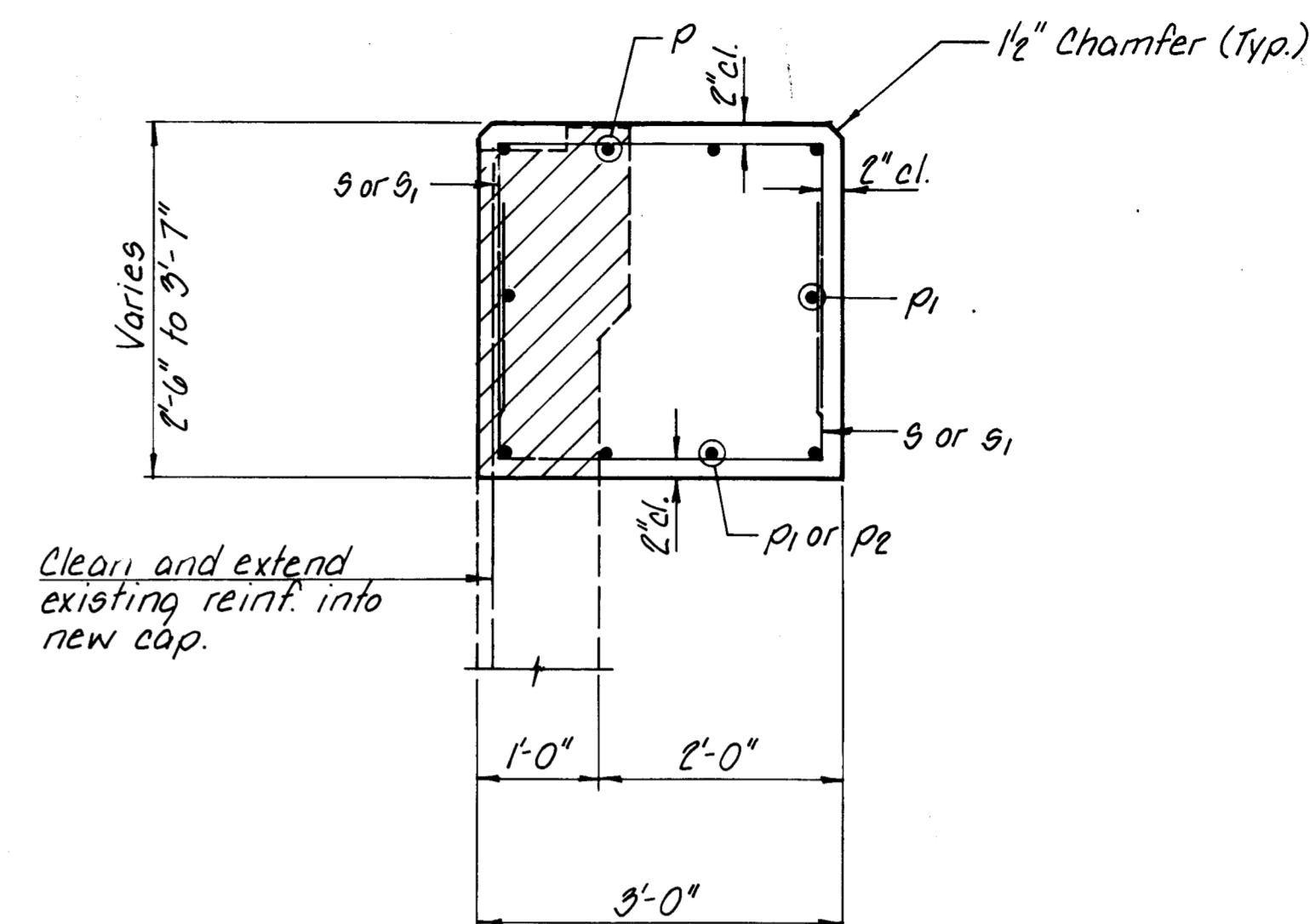
SECTION 82-00100-00-BR  
F.A.S. ROUTE 26  
McHENRY COUNTY  
STATION 415+58.10

**COLLINS AND RICE**  
CONSULTING ENGINEERS

DESIGNED R.M.B. CHECKED F.S.  
DRAWN M.G. DATE 1-10-84 NO. 1670



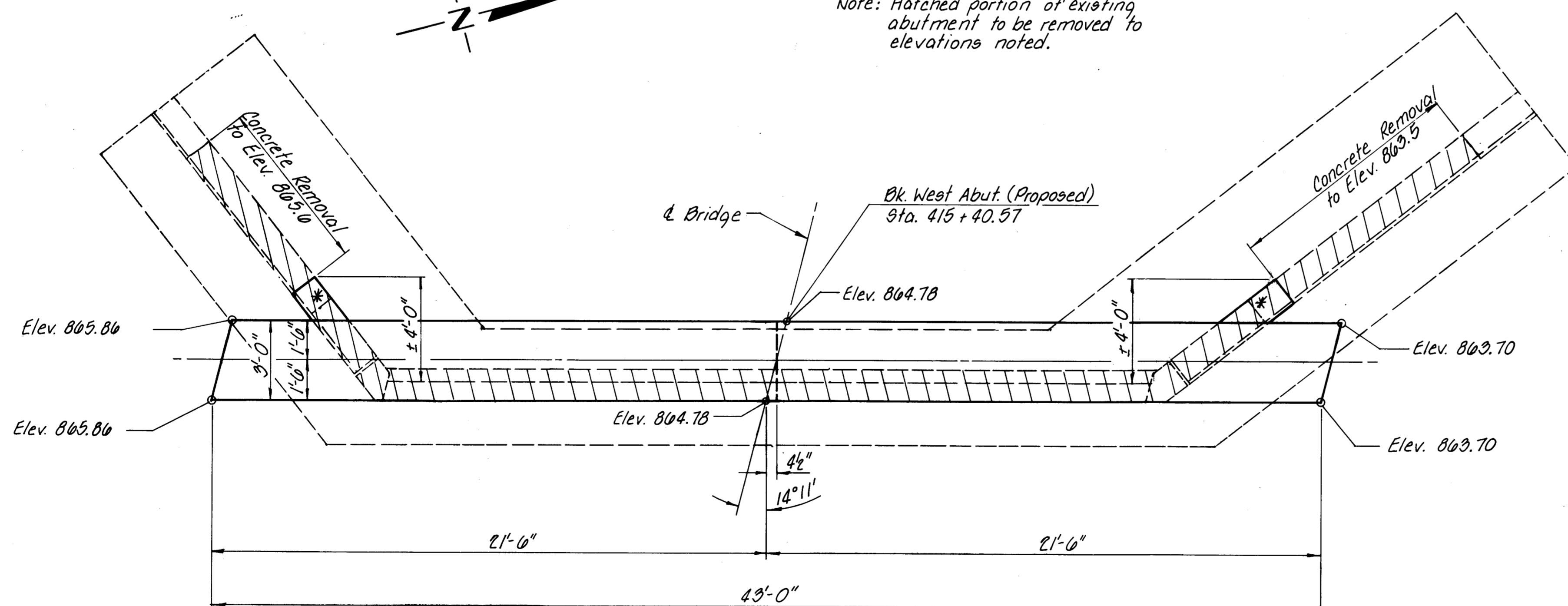
**ELEVATION**  
Looking West



**SECTION A-A**



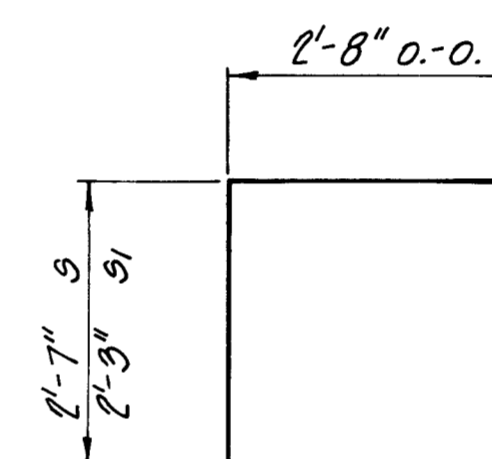
Note: Hatched portion of existing abutment to be removed to elevations noted.



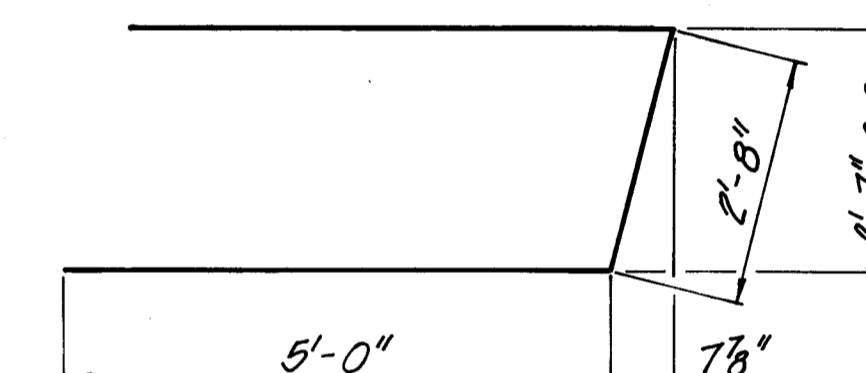
**PLAN**

Note: Elevations given in PLAN are to top of cap.

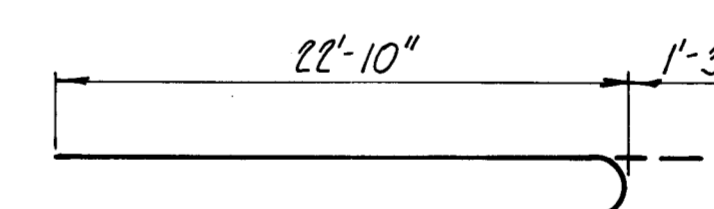
\* Fill gap between existing wingwall and proposed cap with 12" min. concrete. Clean and extend existing reinforcement into new concrete.



**BAR s & s1**



**BAR u**



**BAR p**

**BILL OF MATERIAL - WEST ABUT.**

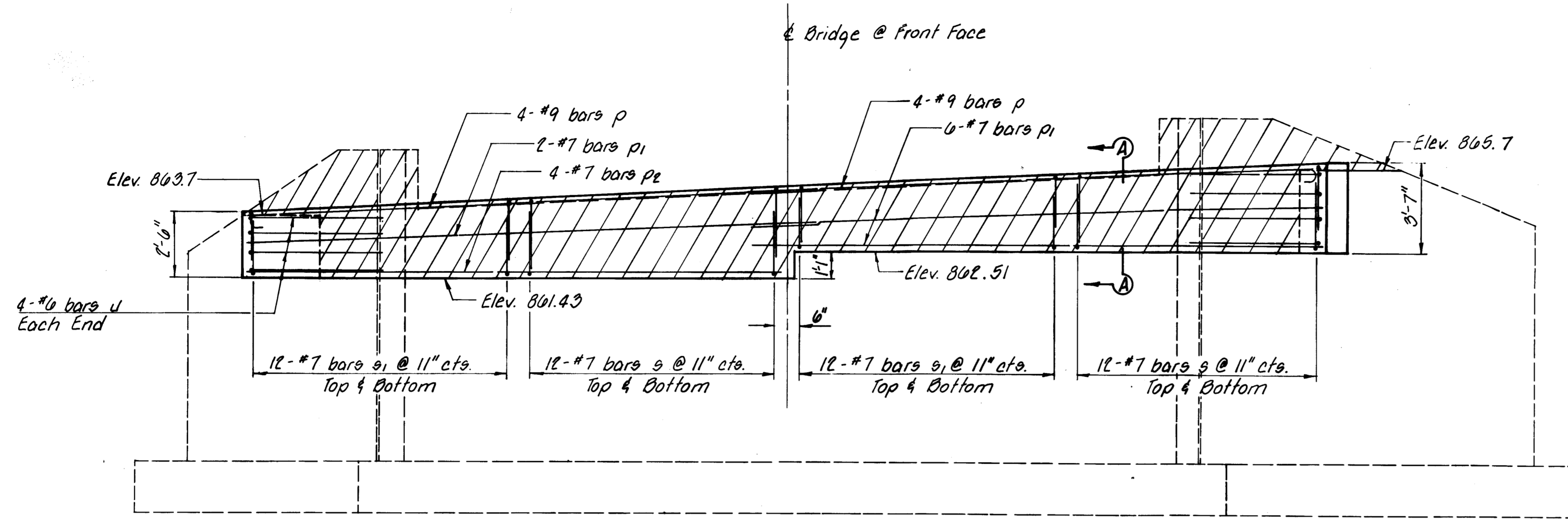
BAR NO.	SIZE	LENGTH	SHAPE
p	#9	22'-10"	U
p1	#7	22'-3"	U
pe	#7	20'-10"	U
s	#7	7'-10"	U
s1	#7	7'-2"	U
u	#6	12'-8"	U
Class X Concrete			Cu. Yd. 14.5
Reinforcement Bars			Pound 2,815
Concrete Removal			Cu. Yd. 6
Structure Excavation			Cu. Yd. 31

**WEST ABUTMENT**  
SECTION 82-00100-00-BR  
FA.S. ROUTE 26  
McHENRY COUNTY  
STATION 415 + 58.10

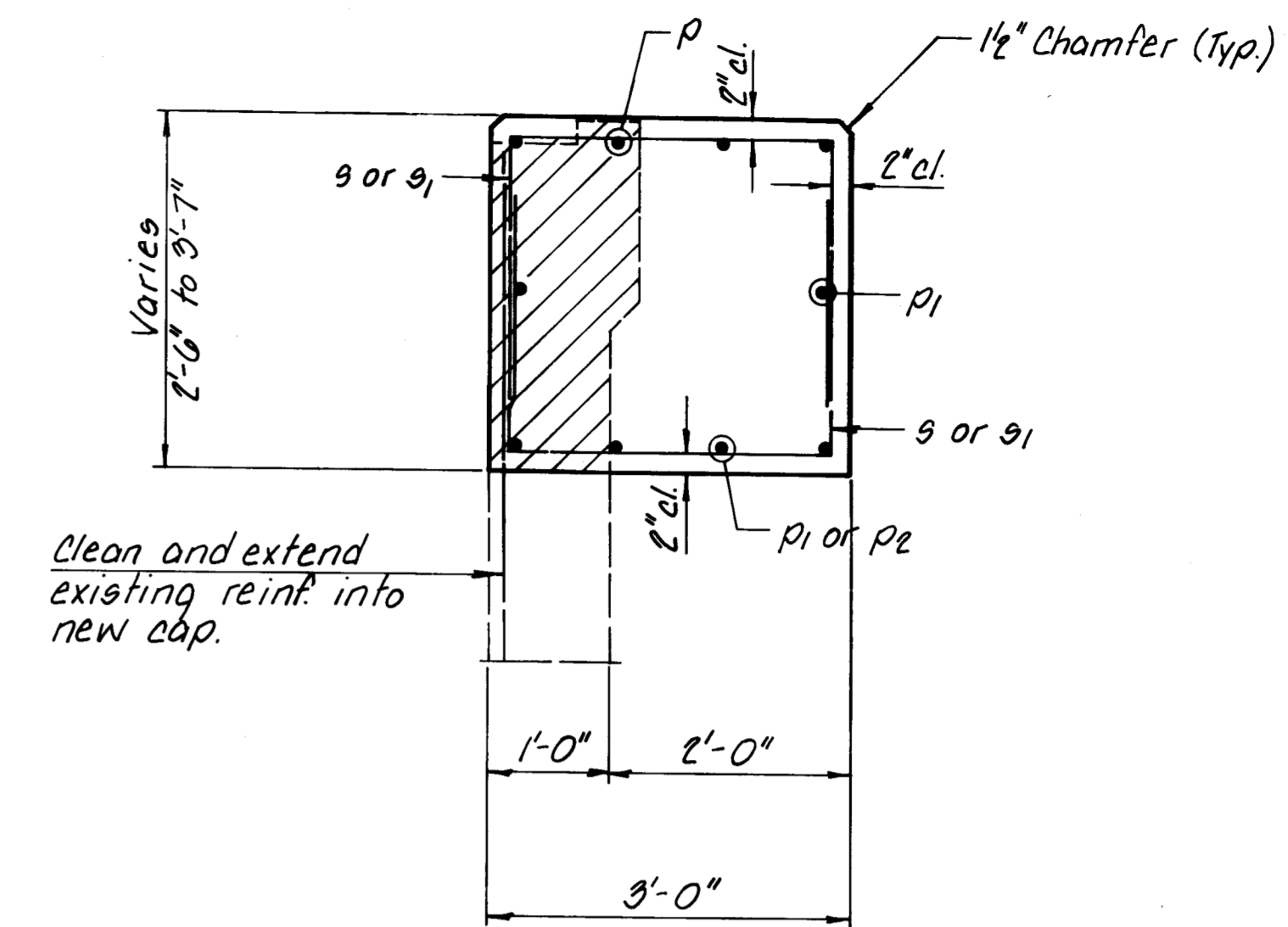
**COLLINS AND RICE**  
CONSULTING ENGINEERS

DESIGNED R.M.B.  
DRAWN M.G.

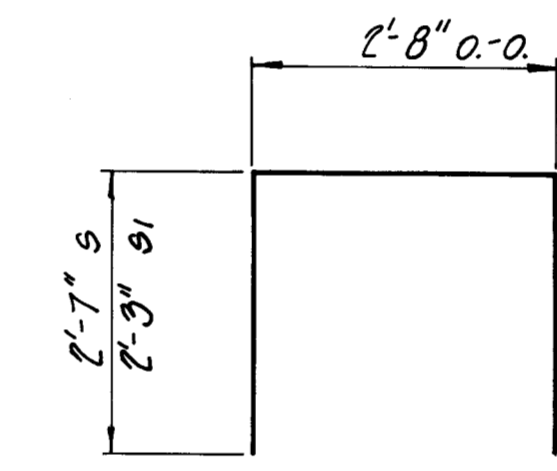
CHECKED F.S.  
DATE 1-26-84 NO. 1070



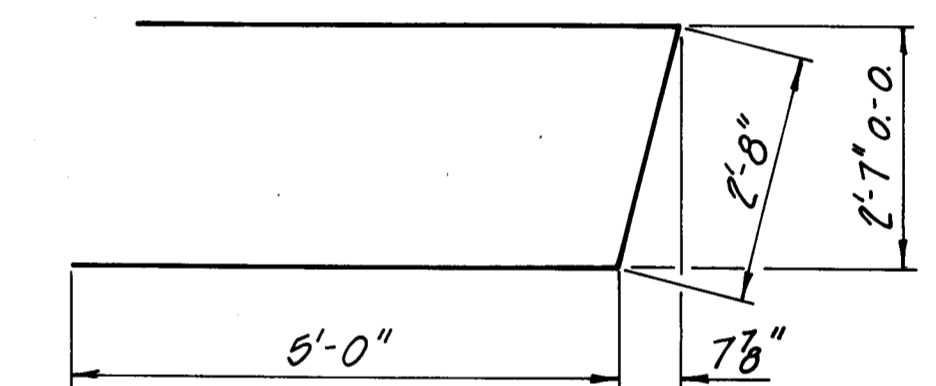
**ELEVATION**  
Looking East



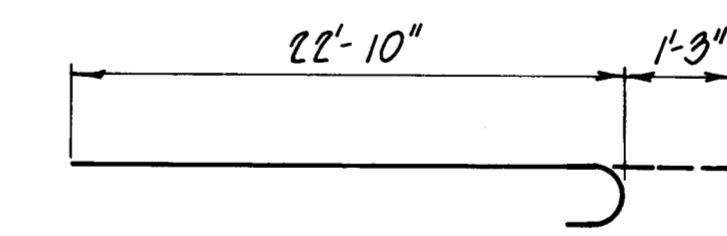
**SECTION A-A**



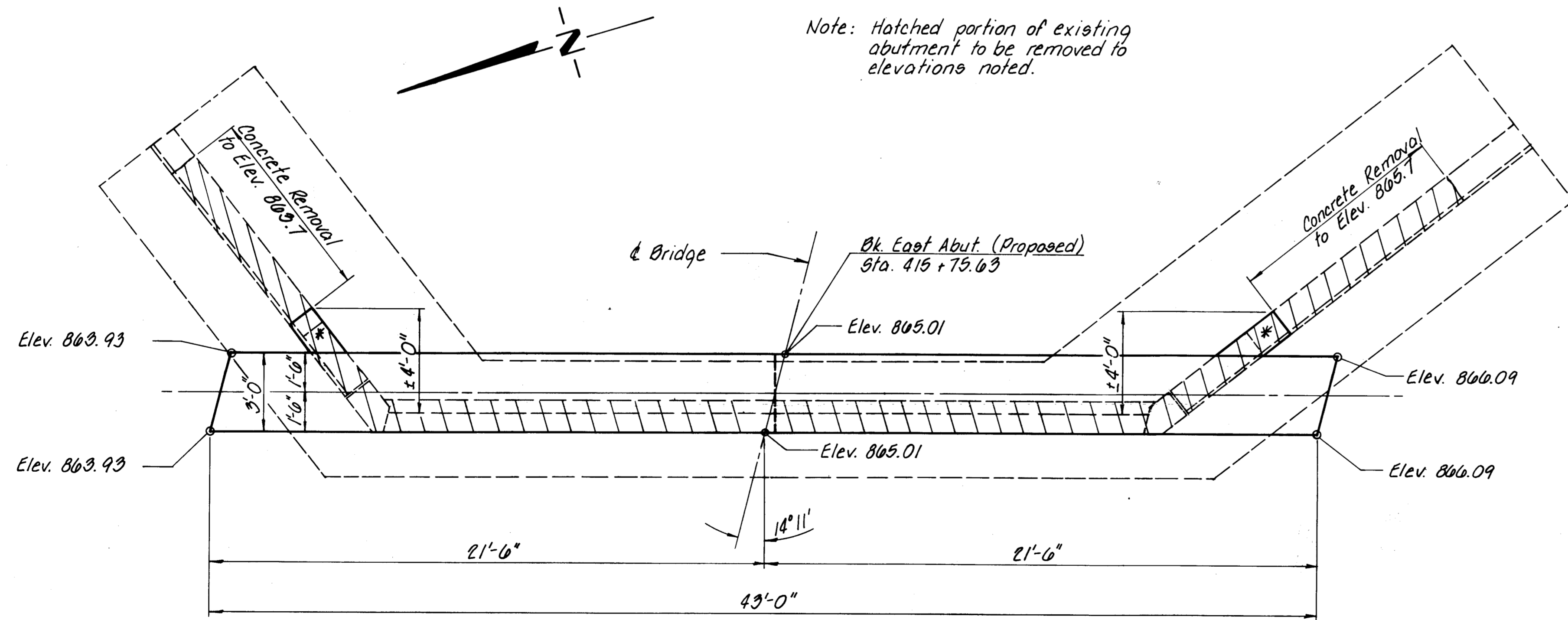
**BAR S & S1**



**BAR U**



**BAR P**



**PLAN**

Note: Hatched portion of existing abutment to be removed to elevations noted.

Note: Elevations given in PLAN are to top of cap.

\* Fill gap between existing wingwall and proposed cap with 12" min. concrete. Clean and extend existing reinforcement into new concrete.

**BILL OF MATERIAL - EAST ABUT.**

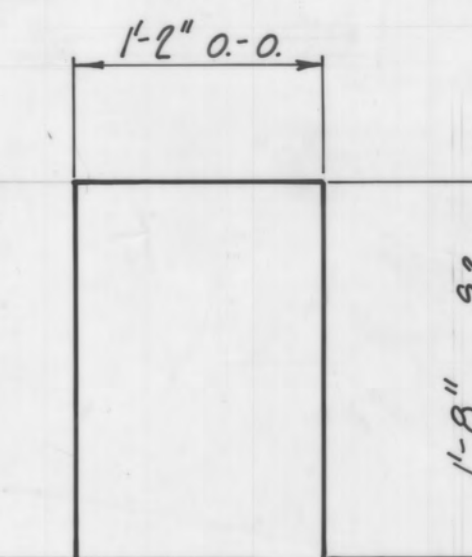
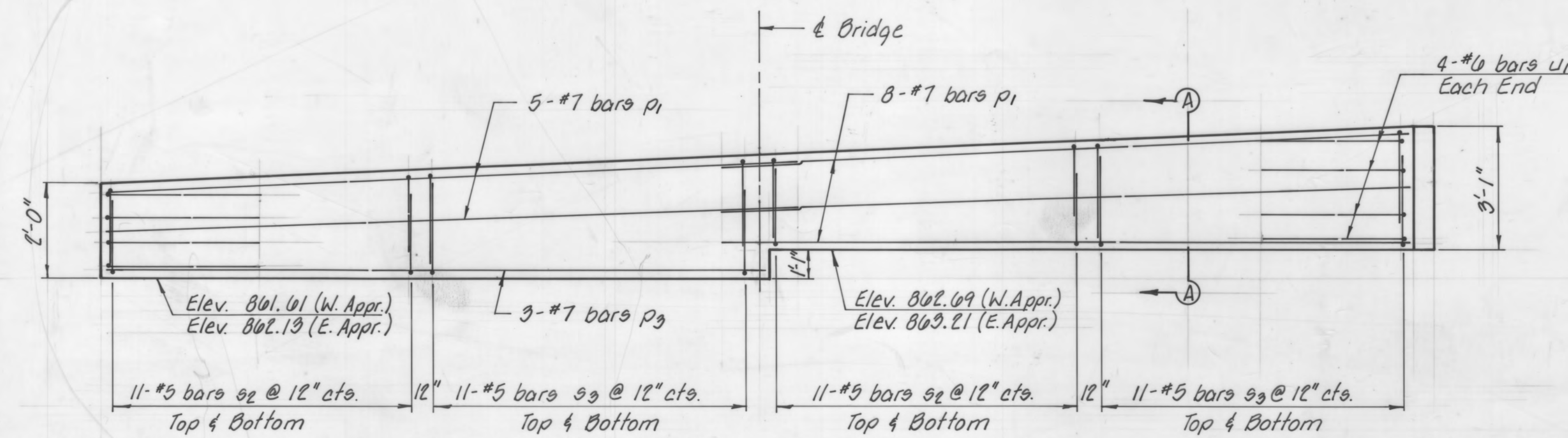
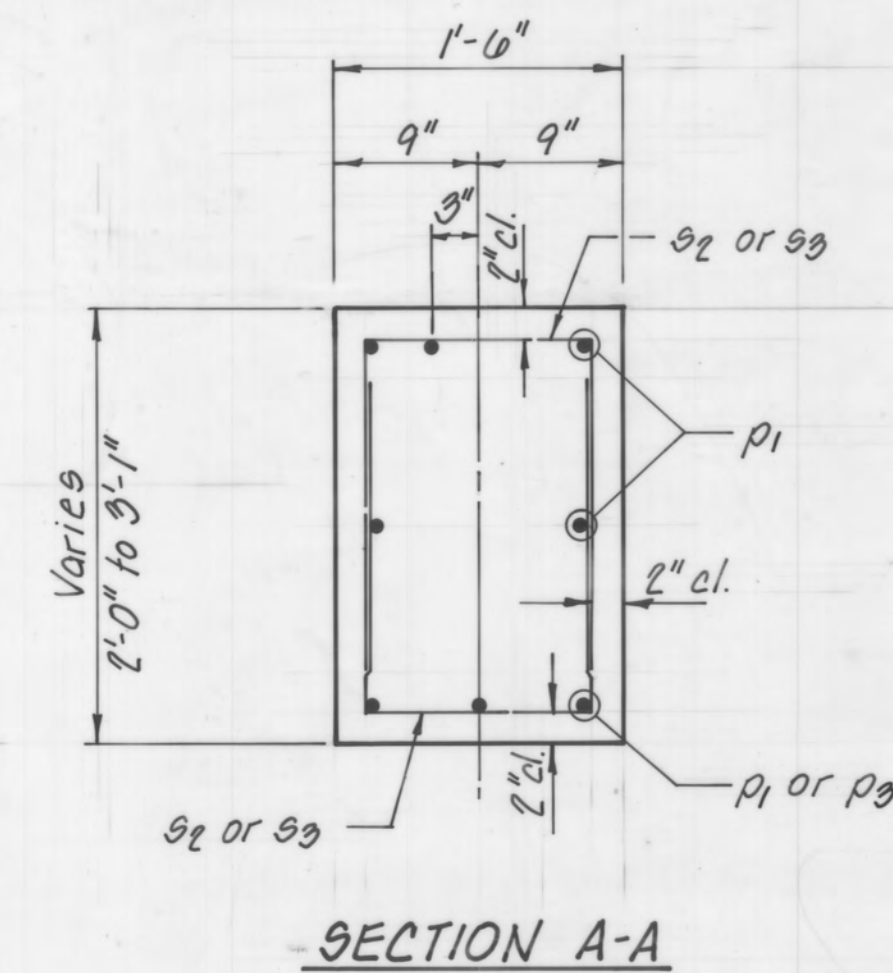
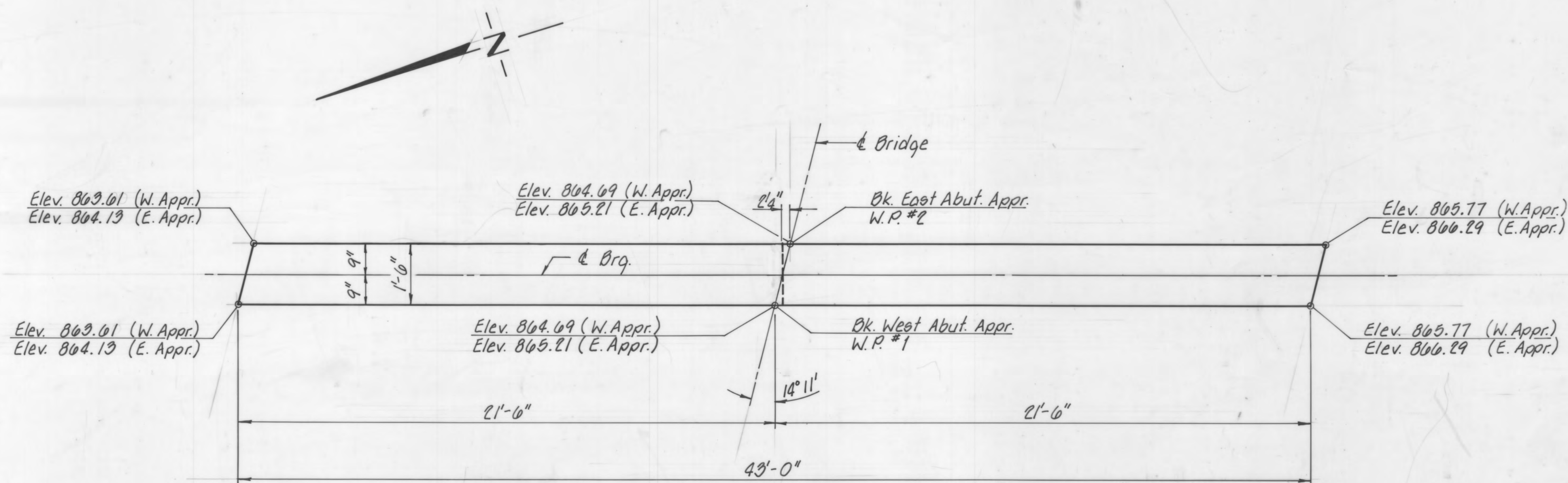
BAR	NO.	SIZE	LENGTH	SHAPE
P	8	#9	24'-1"	U
P1	8	#7	22'-3"	—
P2	4	#7	20'-10"	—
S	48	#7	7'-10"	□
S1	48	#7	7'-2"	□
U	8	#6	12'-8"	U
Class X Concrete		Cu. Yd.	14.5	
Reinforcement Bars		Pound	2,815	
Concrete Removal		Cu. Yd.	6	
Structure Excavation		Cu. Yd.	31	

**EAST ABUTMENT**  
SECTION 82-00106-00-BR  
F.A.S. ROUTE 20  
McHENRY COUNTY  
STATION 415+58.10

**COLLINS AND RICE**  
CONSULTING ENGINEERS

DESIGNED R.M.O.  
DRAWN M.G.

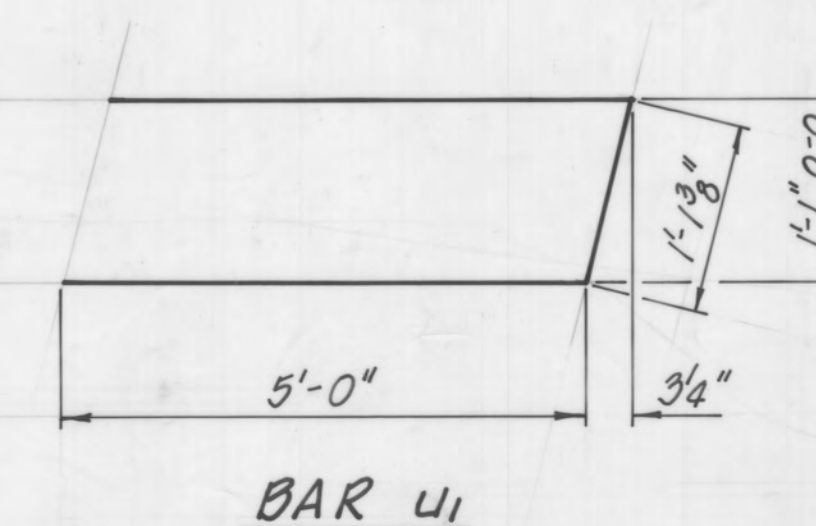
CHECKED F.S.  
DATE 1-26-82 NO. 1670



BARs s2 & s3

BILL OF MATERIAL - APPROACHES

BAR	NO.	SIZE	LENGTH	SHAPE
p1	26	#7	22'-9"	—
p3	6	#7	21'-0"	—
s2	88	#5	4'-6"	□
s3	88	#5	5'-4"	□
u1	16	#6	11'-2"	—
Class X Concrete		Cu. Yd.	12.1	
Reinforcement Bars		Pound	2,610	
Structure Excavation		Cu. Yd.	77	



BAR u1

APPROACH CAPS  
SECTION 82-00106-00-BR  
F.A.S. ROUTE 26  
McHENRY COUNTY  
STATION 415+58.10

COLLINS AND RICE  
CONSULTING ENGINEERS

DESIGNED R.M.B. CHECKED F.S.  
DRAWN M.G. DATE 1-26-84 NO. 1670