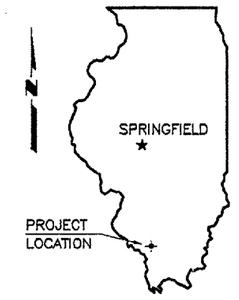
4-29-05 Letting, Item 031

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 2	00-00130-00-BR	JACKSON	11	1
PROJECT NO. BROS-077(42)	CONTRACT NO. 99209			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

BRIDGE REPLACEMENT AND REHABILITATION PROGRAM



C.H. ROUTE 2
SECTION 00-00130-00-BR
PROJECT BROS-077(042)
JOB NO. C-99-521-03
PAUM CREEK

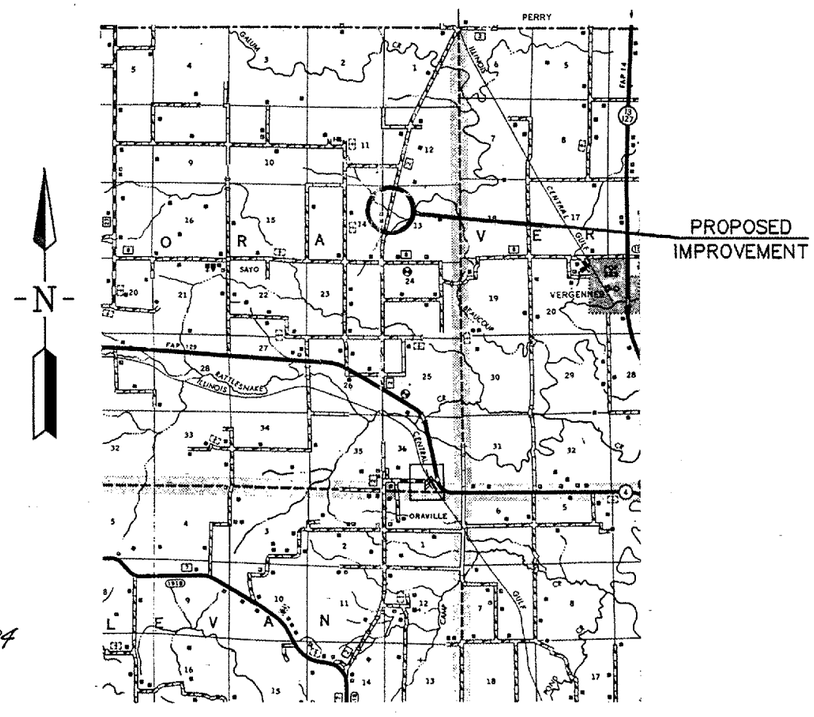
JACKSON COUNTY

SUMMARY OF QUANTITIES

X080-2A

CODE NO.	PAY ITEM	UNIT	TOTAL
LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
20100500	TREE REMOVAL, ACRES	ACRE	0.2
20200100	EARTH EXCAVATION	CU YD	606
20300100*	CHANNEL EXCAVATION	CU YD	75
25000200	SEEDING, CLASS 2	ACRE	0.4
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	36
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	36
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	36
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1
25100120	MULCH, METHOD 2	TON	1
28100807*	STONE DUMPED RIPRAP, CLASS A4	TON	122
40200800*	AGGREGATE SURFACE COURSE, TYPE B	TON	485
50100100*	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	81
50300225	CONCRETE STRUCTURES	CU YD	16.6
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	960
50800105	REINFORCEMENT BARS	POUND	1,720
50900205	STEEL RAILING, TYPE S1	FOOT	80
51201400	FURNISHING STEEL PILES HP10X42	FOOT	352
51202700	DRIVING STEEL PILES	FOOT	352
51204315	CONCRETE ENCASEMENT	CU YD	2.1
51500100	NAME PLATES	EACH	1
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	175
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
78200410*	GUARDRAIL MARKERS, TYPE A	EACH	8
78201000*	TERMINAL MARKER - DIRECT APPLIED	EACH	4

* SEE SPECIAL PROVISIONS



LOCATION MAP
SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 500.00 FT. = 0.0947 MILES

INDEX OF SHEETS

CLASSIFICATION : LOCAL ROAD (RURAL)
ADT : 275
DESIGN SPEED : 40 MPH

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
J.U.L.I.E. 1-800-892-0123
CONTACT 48 HOURS BEFORE EXCAVATING

CONTRACT NO. 99209

E. MILLER ENGINEERING, INC.
CONSULTING ENGINEERS
HARRISBURG, ILLINOIS

EDWARD W. MILLER SR. 25277 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

07-26-04

Edward W. Miller
PROFESSIONAL ENGINEER
#062-025277
EXPIRES NOV. 30, 2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED 9/14, 20 04
LOCAL AGENCY REPRESENTATIVE

PASSED February 24, 20 05
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

APPROVED Feb 25, 20 05
MARY C. LAMIE, P.E.
DEPUTY DIRECTOR OF HIGHWAYS, REGION FIVE ENGINEER

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.2	00-00130-00-BR	JACKSON	11	2
PROJECT NO. BROS-077(42)		CONTRACT NO. 99209		

B.M.- RR Spike in PP
32.5' Rt. Sta. 14+48
Elev. 430.00

Existing Structure - Precast concrete deck beams on closed timber pile bent abutments with concrete rail posts & SPBGR with flared end sections.
18.8' W x 21.92' L

Guardrail placed on near right side approaches only.
Typical application at each location consists of
Traffic Barrier Terminal, Type 5A - 1 Each
Steel Plate Beam Guard Rail, Type A - 87.5 Foot
Traffic Barrier Terminal, Type 1 - 1 Each

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

Woods Field Woods

Existing ROW

Typical shoulder widening transition
See Std. 630001 and BLR 23

Begin Improvement - Station 12+00

50'Transition

End Improvement - Station 17+00

Existing ROW

75' 75' 75' 75'

Dbl.18"

50'Transition

PP PP PP

Construct new field entrance

FE +25

FE +92

Existing ROW

Existing ROW

Woods

Remove existing field entrance

Field

Woods

Station 12+14
Exist. 48"x 50' Steel Pipe
To remain

Remove existing structure

Station 15+00 - Single Span Precast Prestressed Concrete Deck Beam Bridge
41.50' Bk-Bk Abutments

N&C in 50" Tree — 30.57° 96.67' — N&C in 40" Tree

℄ Sta. 12+00
Iron Pin

TIE POINT

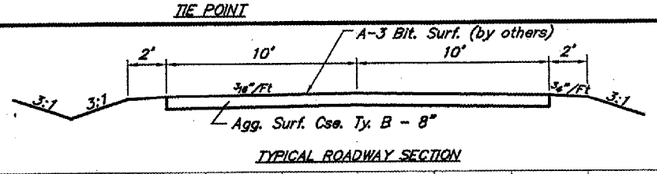
N&C in 6" Tree — 33.52° 47.33' — N&C in 10" Tree

℄ Sta. 18+00
Iron Pin

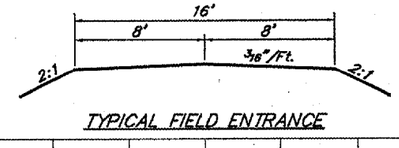
TIE POINT

SCALES:
1" = 80' HOR
1" = 10' VER

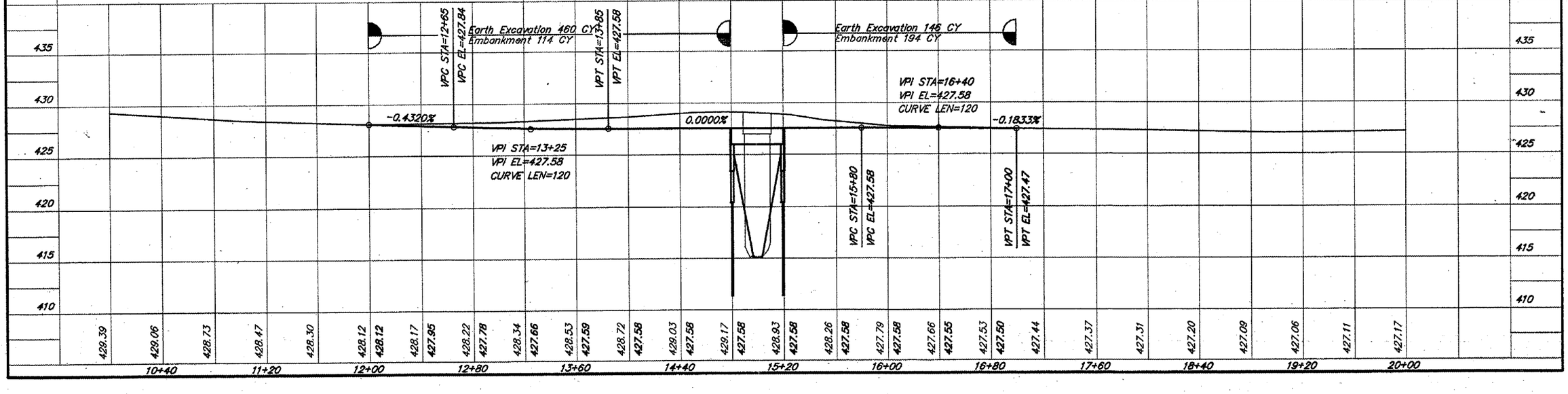
Tree Removal Acres:
The limits of the tree removal shall be from Station 14+25 to Station 17+00 between the ℄ of the road and a line 36 feet left of the ℄ - 0.2 Acres



TYPICAL ROADWAY SECTION



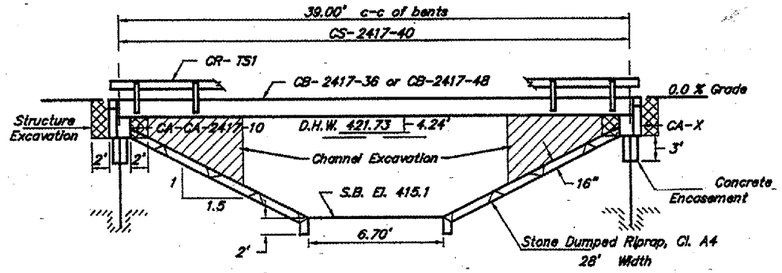
TYPICAL FIELD ENTRANCE



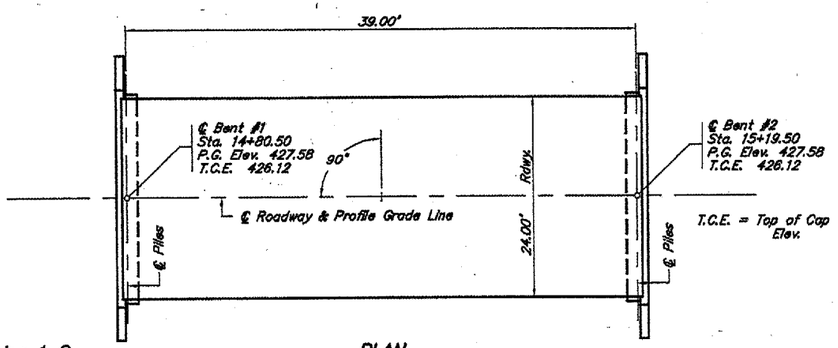
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.2	00-00130-00-BR	JACKSON	11	3
PROJECT NO. BROS-077(42)		CONTRACT NO. 99209		

B.M.- RR Spike in Power Pole
32.5' Rt. Station 14+84
Elev. 430.00 (Assumed)

Existing Structure - Single span precast concrete deck beams on closed timber pile bent abutments 18.8'W X 21.92'L



ELEVATION



Boring 2-S
6' Lt. Sta. 15+35
Rock El. 381.6

Boring 1-S
18' Rt. Sta. 14+66
Rock El. 381.3

PLAN

GENERAL NOTES

1. Class SI Concrete shall be used throughout except in the deck beams.
2. See special provisions for boring logs.
3. The Waterproofing Membrane System and the Bituminous Concrete Surface Course shown on the standard bridge plans shall not be provided.
4. A calcium nitrite corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
5. The Article or Section numbers referencing the Standard Specifications for Road and Bridge Construction as shown on the standard bridge plan sheets included with the contract plans should be interpreted as referring to the current edition of the Standard Specifications (Adopted January 1, 2002) as shown in the "Article/Section No. Reference Table".

ARTICLE/SECTION NO. REFERENCE TABLE

Previous No.	Current No.
504.06	504.06
505.04	505.04
706.05	1006.05
706.32	1006.32
760.07	1060.07

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub. Piers	Sub. Abuts.	Total
Removal of Existing Structures	Each				1
Concrete Structures	Cu. Yds.			16.6	16.6
P.P. Conc. Dk. Bm. 17" Dp.	Sq. Ft.	960			960
Steel Railing, Type S1	Foot	80			80
Reinforcement Bars	Pound			1720	1720
Furnishing Steel Piles HP10X42	Foot			352	352
Driving Steel Piles	Foot			352	352
Concrete Encasement	Cu. Yds.			2.1	2.1
Name Plates	Each			1	1
Structure Excavation	Cu. Yds.			81	81
Channel Excavation	Cu. Yds.			75	75
Stone Dumped Riprap, Class A4	Tons			122	122

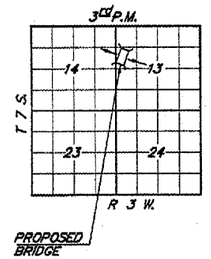
PILE DATA (2-ABUTS.)

Type ____ HP10X42
Capacity ____ Refusal
Estimated Length ____ 44 Feet
Number Required ____ 8

PAUM CREEK
SEC. 00-00130-00-BR BUILT 20 ___
JACKSON COUNTY
LOADING HS20
STR. NO. 039-3257

LETTERING FOR NAME PLATE

Locate Name Plate at Southeast Corner of Bridge (See Std. GN)



LOCATION SKETCH

EDWARD W. MILLER, SR. 25277 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
09/03/04

Edward W. Miller
PROFESSIONAL ENGINEER
#062-025277
EXPIRES NOV. 30, 2005

DESIGN SPECIFICATIONS

1996 AASHTO & Interims
HS 20-44 Loading. Load Factor Design.

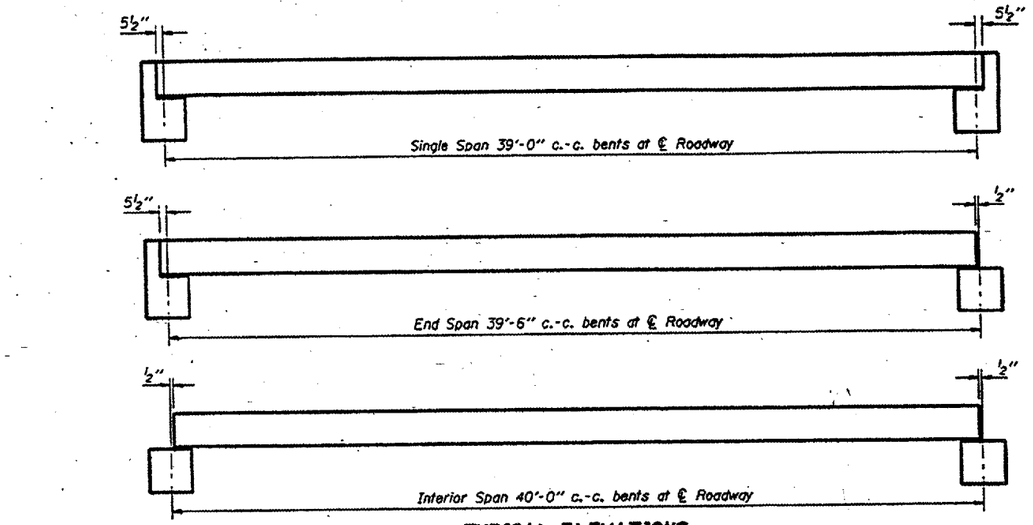
WATERWAY INFORMATION

Drainage Area = 1.465 Sq. Mi. Low Grade Elev. = 427.03 At Sta. 19+00

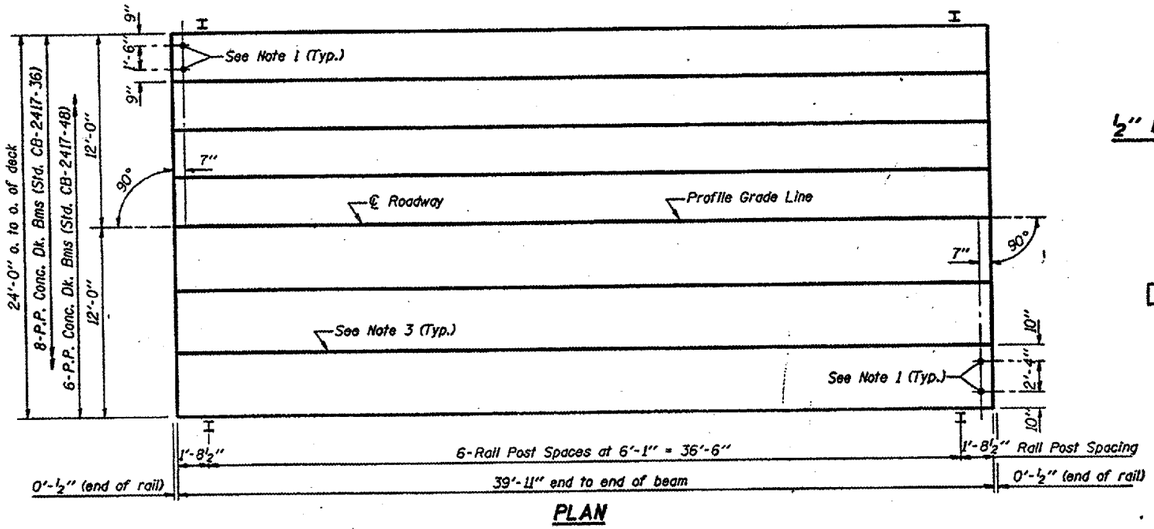
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	897	126.4	110.4	421.73	0.00	0.22	421.73	421.95
Base	100	1323	147.0	139.3	422.76	0.21	0.96	422.97	423.72
Overtopping									
Max. Calc.	500	1729	159.0	157.7	423.36	1.98	2.46	425.34	425.82

GENERAL PLAN & ELEVATION
C.H. 2
PAUM CREEK
SECTION 00-00130-00-BR
JACKSON COUNTY
STATION 15+00

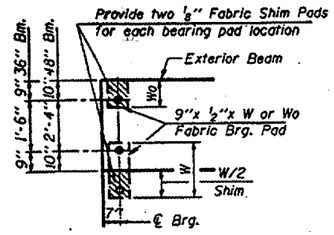
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 2	00-00130-00-BR	JACKSON	11	4
PROJECT NO. BRO5-077(42)		CONTRACT NO. 99209		

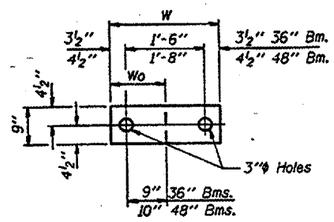


TYPICAL ELEVATIONS



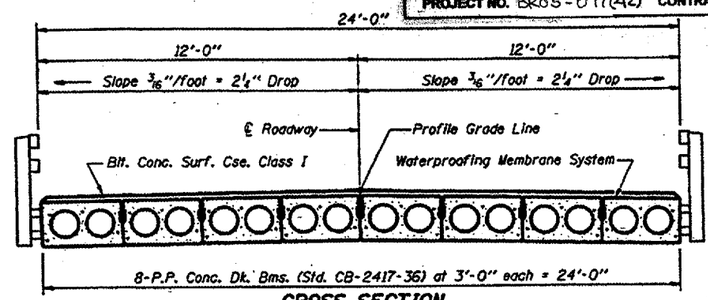
PLAN



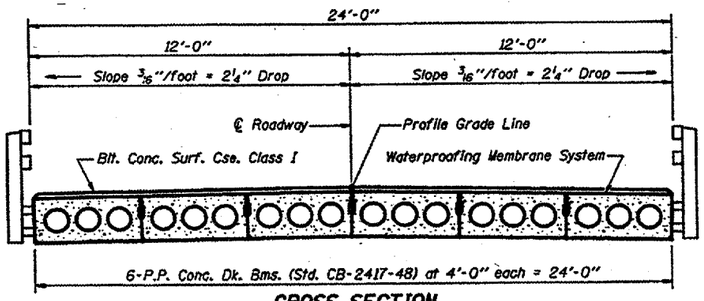


Beam	W	Wo
36"	2'-1"	1'-0½"
48"	2'-5"	1'-2½"

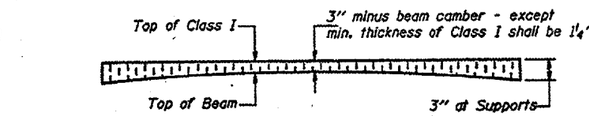
½" FABRIC BRG. PAD DETAILS



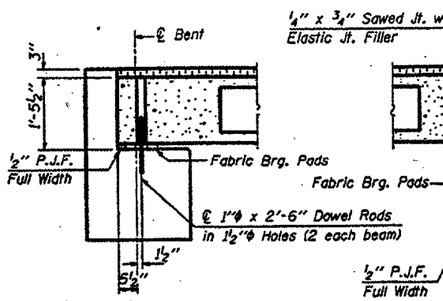
CROSS SECTION



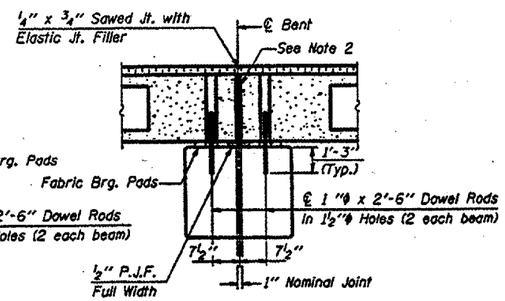
CROSS SECTION



PROFILE OF OVERLAY



SECTION AT ABUTS.
(Along ℄ Beams)



SECTION AT PIERS
(Along ℄ Beams)

NOTES

1. After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
2. Nominal 1" joint at ℄ Pier shall be filled with non-shrink grout.
3. Longitudinal keys shall be grouted.

QUANTITIES FOR ONE SPAN

P.P. Conc. Dk. Bm. 17" Dp.	960 Sq. Ft.
Steel Railing	80 Ft.
~~Bit. Conc. Surf. Cse. Class I~~	~~13.0 Tons~~
~~Waterproofing Membrane System~~	~~106.7 Sq. Yds.~~

Illinois Department of Transportation

PASSED NOVEMBER 1, 1995
Engineer of Bridge Design

APPROVED NOVEMBER 1, 1995
Engineer of Bridges and Structures

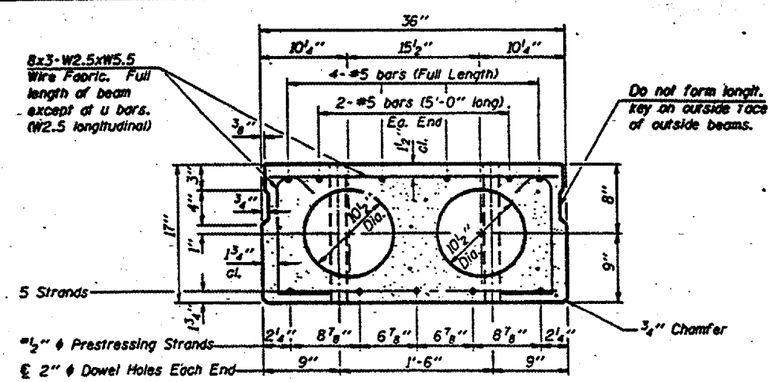
M-4-1 03/93

P.P.C. DECK BEAM SUPERSTRUCTURE

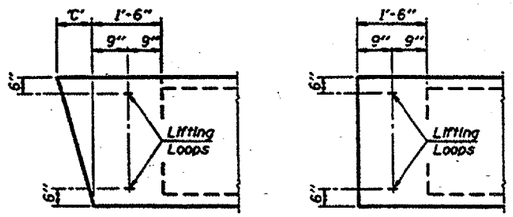
24' RDWY.	17" BMS.	40' SPAN	0° SKEW

STANDARD CS-2417-40

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 2	00-00130--00-BR	JACKSON	11	6
PROJECT NO. BR09-077(42)		CONTRACT NO. 99209		

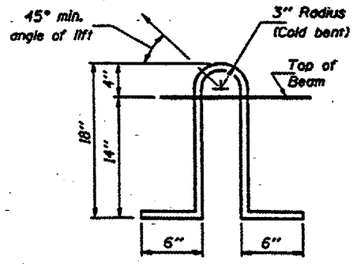


CROSS SECTION
(25' SPAN)



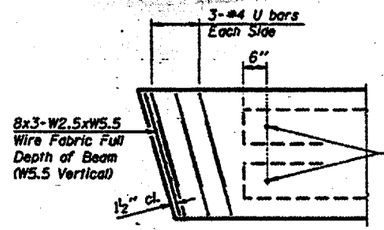
END BLOCK DETAILS

Each beam shall have four Lifting Loops, two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.

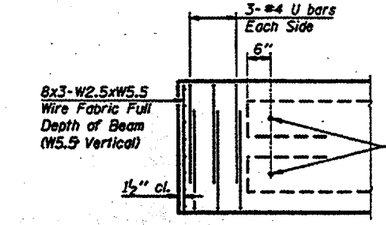


LIFTING LOOP DETAIL

Lifting loops shall be 2. ½"ϕ-270 ksi strands, as shown. Alternate approved lifting devices are also acceptable.



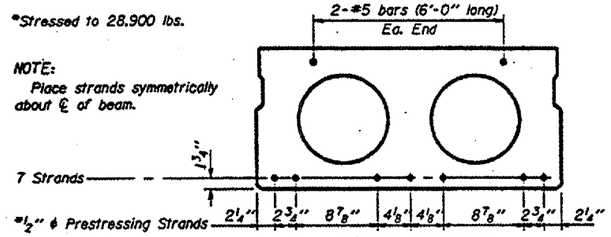
END REINFORCEMENT
(SKEWED)



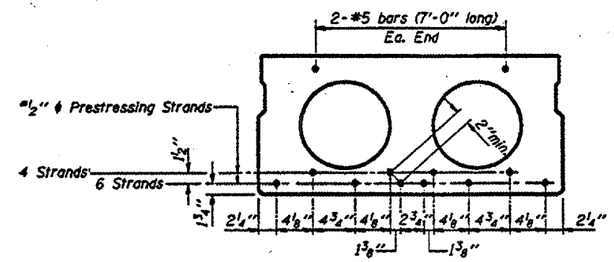
END REINFORCEMENT
(RIGHT ANGLE)

*Stressed to 28,900 lbs.

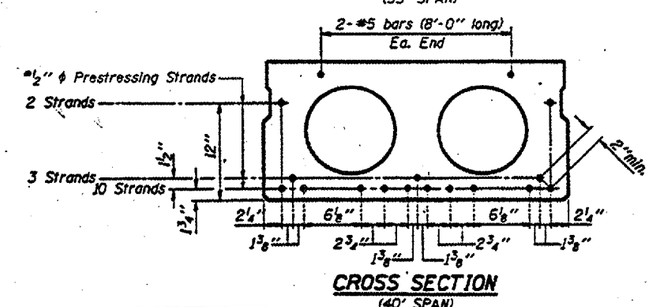
NOTE:
Place strands symmetrically about ℄ of beam.



CROSS SECTION
(30' SPAN)



CROSS SECTION
(35' SPAN)



CROSS SECTION
(40' SPAN)

NOTES

1. Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand, Grade 270.
2. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 square inches.
3. Reinforcement bars shall conform to AASHTO M-31, M-42 or M-53, Grade 60.
4. Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
5. When Waterproofing Membrane System is specified, the top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of ¼".
6. Low relaxation strands may be substituted for the stress relieved strands. The initial prestressing force applied to each strand shall be the same as for the stress relieved strands (28,900 lbs.).
7. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

DIMENSION 'C'

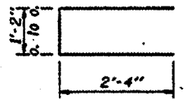
Skew Angle 'D'	0°	5°	10°	15°	20°	25°	30°
Dimension 'C' (Inches)	0	3⅛	6⅜	9⅝	13⅛	16¾	20¾

DESIGN STRESSES

f'_c = 5,000 p.s.i.
f'_{ci} = (See Required Release Strength Table)
f'_s = 270,000 p.s.i. (½" ϕ Strand)
f_{si} = 189,000 p.s.i. (½" ϕ Strand)
f_y = 60,000 p.s.i.

REQUIRED RELEASE STRENGTH

Span	f'_{ci} (psi)
25'	4,000
30'	4,000
35'	4,000
40'	4,000



BAR U

Illinois Department of Transportation
PASSED NOVEMBER 1, 1995
Engineer of Bridge Design
APPROVED NOVEMBER 1, 1995
Engineer of Bridges and Structures
8-1-1 (3913)

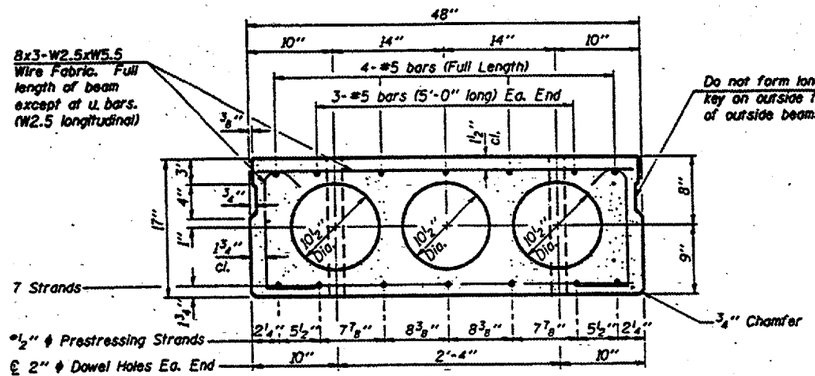
NOTE
The std. reinf. shown on the 25' span cross section is typical for all spans, except as shown.

P.P.C. DECK BEAM DETAILS

24' ROADWAY | 17" x 36" BEAMS

STANDARD CB-2417-36

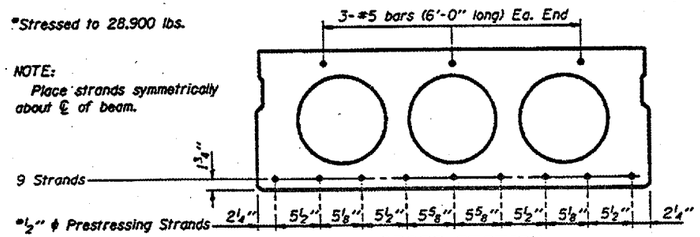
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.Z.	00-00130-00-BR	JACKSON	11	6
PROJECT NO. BROS-077(42)		CONTRACT NO. 99209		



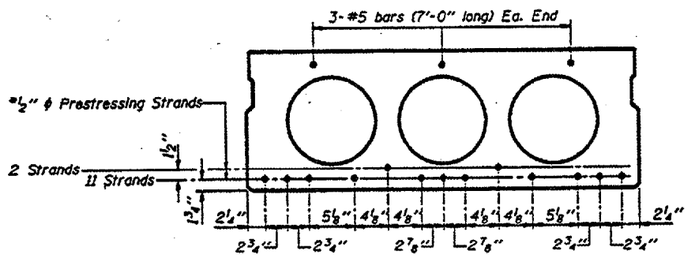
CROSS SECTION
(25' SPAN)

*Stressed to 28,900 lbs.

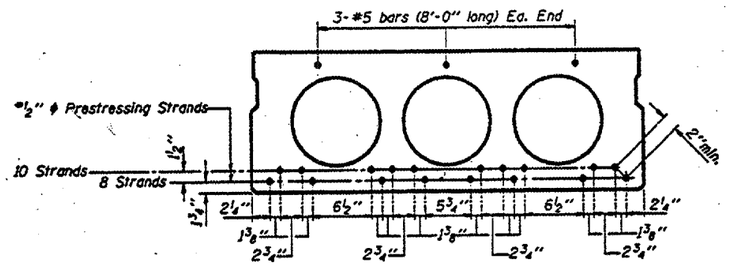
NOTE:
Place strands symmetrically about ℄ of beam.



CROSS SECTION
(30' SPAN)

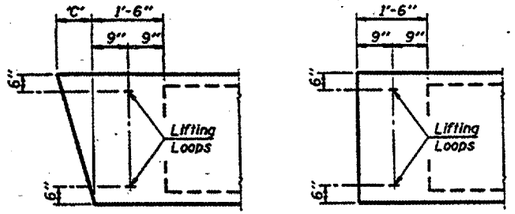


CROSS SECTION
(35' SPAN)



CROSS SECTION
(40' SPAN)

NOTE
The std. reinf. shown on the 25' span cross section is typical for all spans, except as shown.

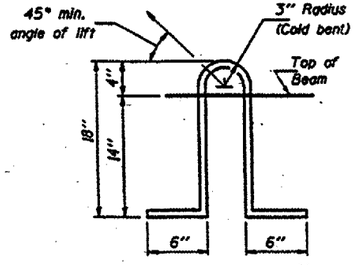


END BLOCK DETAILS

Each beam shall have four Lifting Loops, two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.

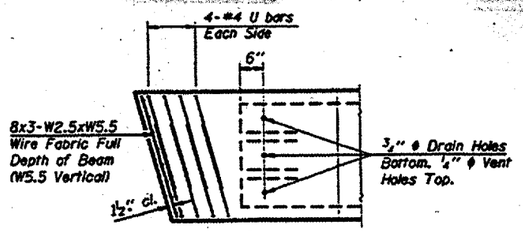
DIMENSION 'C'

Skew Angle 'D'	0°	5°	10°	15°	20°	25°	30°
Dimension 'C' (Inches)	0	4 1/4	8 1/2	12 7/8	17 1/2	22 3/8	27 3/4

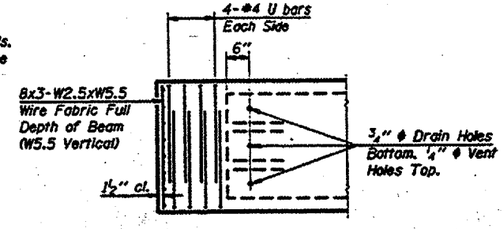


LIFTING LOOP DETAIL

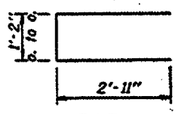
Lifting loops shall be 2, 1/2"ϕ-270 ksi strands, as shown. Alternate approved lifting devices are also acceptable.



END REINFORCEMENT
(SKEWED)



END REINFORCEMENT
(RIGHT ANGLE)



BAR U

NOTES

1. Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand, Grade 270.
2. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
3. Reinforcement bars shall conform to AASHTO M-31, M-42 or M-53, Grade 60.
4. Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
5. When Waterproofing Membrane System is specified, the top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
6. Low-relaxation strands may be substituted for the stress relieved strands. The initial prestressing force applied to each strand shall be the same as for the stress relieved strands (28,900 lbs.).
7. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

DESIGN STRESSES

f'_c = 5,000 p.s.i.
f'_{ci} = (See Required Release Strength Table)
f'_s = 270,000 p.s.i. (1/2" ϕ Strand)
f_{si} = 189,000 p.s.i. (1/2" ϕ Strand)
f_y = 60,000 p.s.i.

REQUIRED RELEASE STRENGTH

Span	f'_{ci} (psi)
25'	4,000
30'	4,000
35'	4,200
40'	4,700

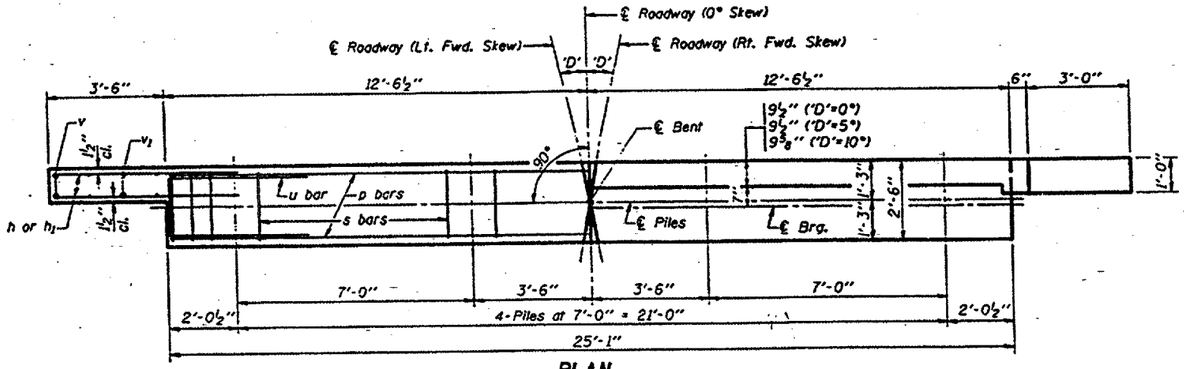
Illinois Department of Transportation
PASSED NOVEMBER 1, 1995
Engineer of Bridge Design
APPROVED NOVEMBER 1, 1995
Engineer of Bridges and Structures
M-14 SERIES

P.P.C. DECK BEAM DETAILS

24' ROADWAY | 17" x 48" BEAMS

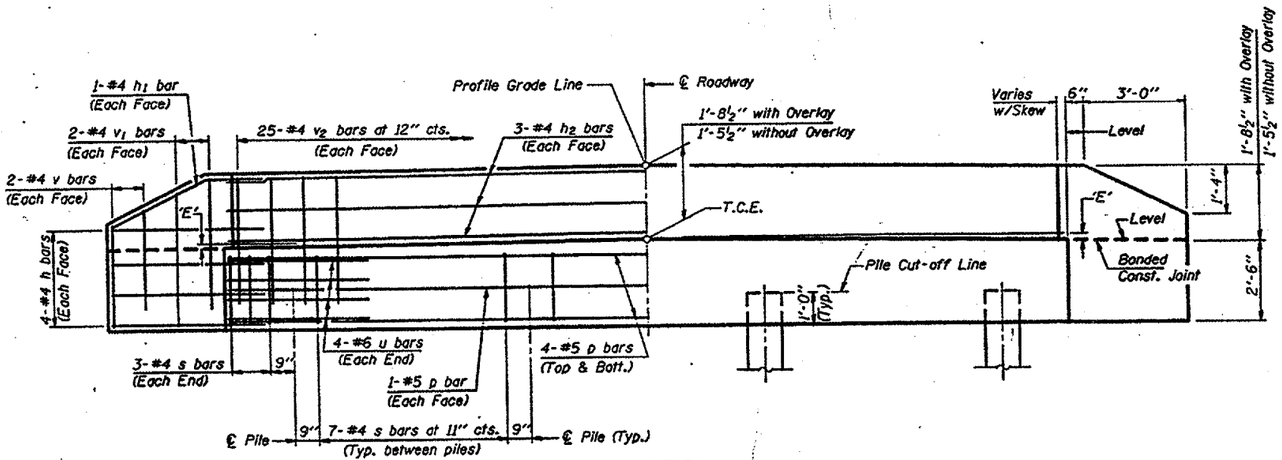
STANDARD CB-2417-48

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I.L.2	00-00130--00-BR	JACKSON	11	7
PROJECT NO. BRDS-0711(42) CONTRACT NO. 98200				

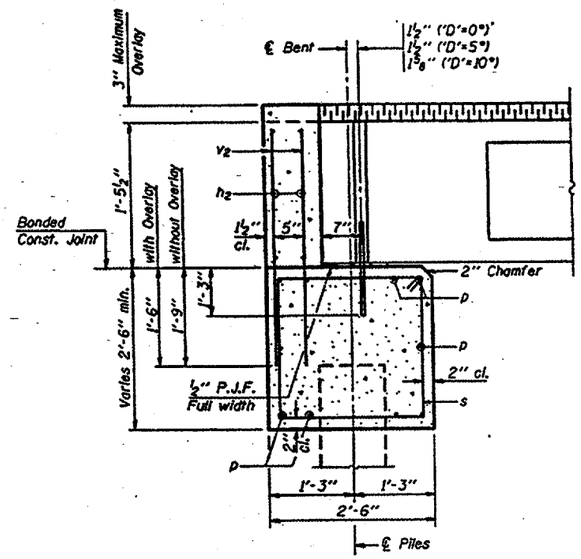


PLAN

('D'=Designated Skew Angle)



ELEVATION



SECTION THRU ABUTMENT

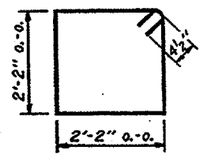
(At Right Angles)

DIMENSION 'E'

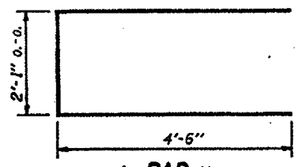
GRADE	'D'=0°		'D'=5°		'D'=10°	
	UPGRADE END	DOWNGRADE END	UPGRADE END	DOWNGRADE END	UPGRADE END	DOWNGRADE END
0%	2 3/8"	2 3/8"	2 3/8"	2 3/8"	2 3/8"	2 3/8"
Over 0% to 1%	2 3/8"	2 3/8"	2 1/4"	2 3/8"	2 1/8"	2 1/2"
Over 1% to 2%	2 3/8"	2 3/8"	2 1/8"	2 1/2"	1 7/8"	2 3/4"
Over 2% to 3%	2 3/8"	2 3/8"	2"	2 5/8"	1 5/8"	3"
Over 3% to 4%	2 3/8"	2 3/8"	1 7/8"	2 3/4"	1 3/8"	3 1/4"

NOTES

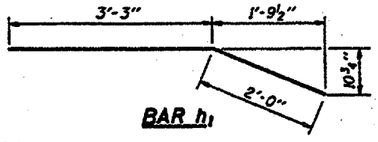
1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
2. Reinforcement bars shall conform to A.A.S.H.T.O. M-31, M-42 or M-53, Grade 60.



BAR s



BAR u



BAR h1

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	16	#4	5'-0"	
h1	4	#4	5'-3"	
h2	6	#4	24'-9"	
p	10	#5	24'-9"	
s	27	#4	9'-5"	
u	8	#6	11'-1"	
v	8	#4	2'-6"	
v1	8	#4	3'-5"	
v2	50	#4	3'-1"	
Concrete Structures			8.3 Cu. Yds.	
Reinforcement Bars			860 Lbs.	

MAXIMUM PILE LOADS

SPAN	TONS
25'	25
30'	26
35'	28
40'	30

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi

Illinois Department of Transportation

PASSED November 1, 1995
Engineer of Bridge Design

APPROVED November 1, 1995
Engineer of Bridges and Structures

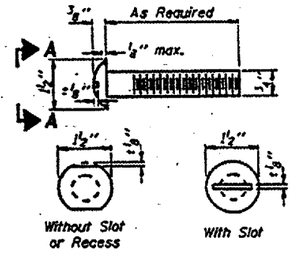
SSRS 1-1-95

P.P.C. DECK BEAMS
PILE BENT ABUTMENT

24' RDWY.	17" BMS.	'D'=0°, 5° OR 10°

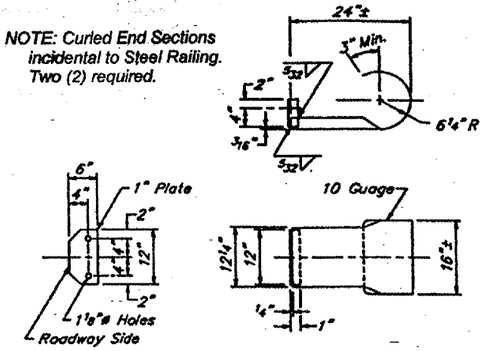
STANDARD CA-2417-10

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.2	00-00130-00-BR	JACKSON	11	8
PROJECT NO. BROS-077(42)		CONTRACT NO. 98209		



VIEW A-A
ROUND HEAD BOLT

NOTE: Curled End Sections incidental to Steel Railing. Two (2) required.



CURLED END SECTION DETAILS

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft.-lbs. at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

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

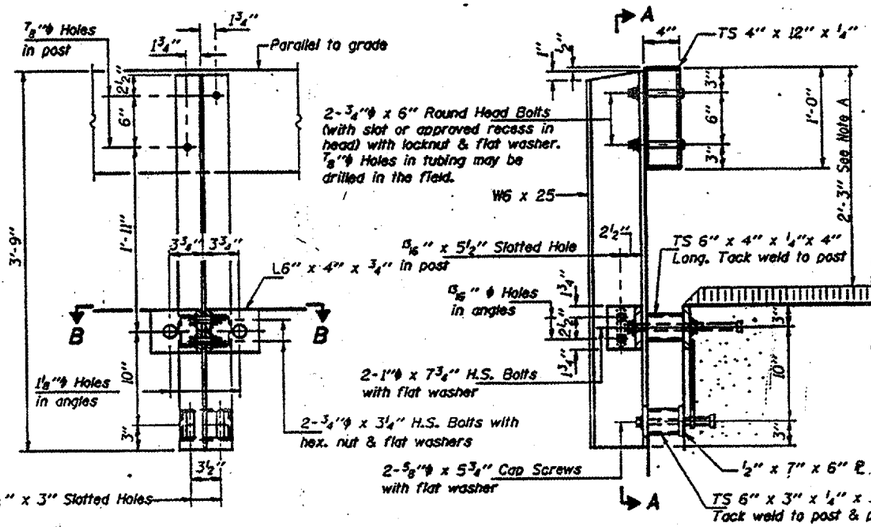
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing, Type S-1.

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

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 760.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.

The 3/4"ø high strength bolts used to connect the 6" x 4" x 3/8" angles to the post shall be tightened in accordance with Article 505.04 (f) (3) of the Standard Specifications. The 1"ø high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8"ø cap screws in bottom of posts shall be tightened to a snug fit only.

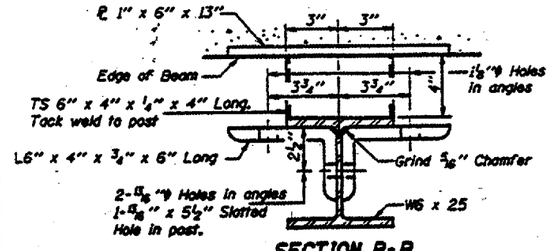
The maximum allowable rail post spacing shall be 10'-6". The rail post spacing shown elsewhere in the plans is based on the allowable spacing for another type of rail. When this type of rail is used, the number of posts may be decreased and the post spacing increased to provide equal post spaces of 10'-6" or less.



SECTION A-A

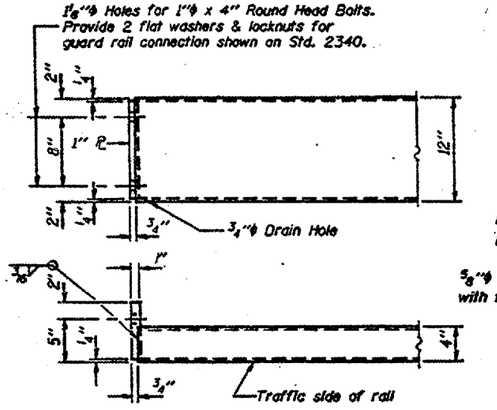
SECTION AT RAIL POST

Note A:
Where no overlay is to be provided adjust top of rail to lay parallel to grade 2'-5" max. above top of beam.

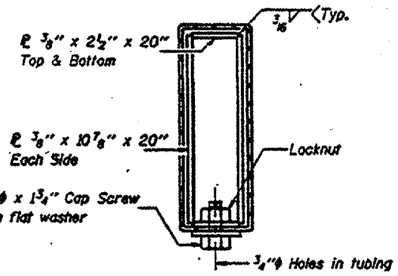


SECTION B-B

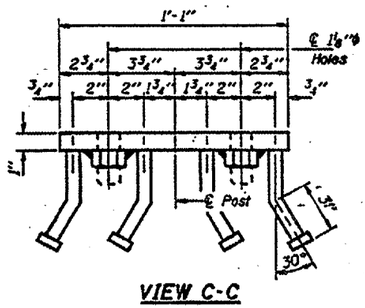
1 1/8"ø Holes for 1"ø x 4" Round Head Bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Std. 2340.



END OF RAIL DETAILS



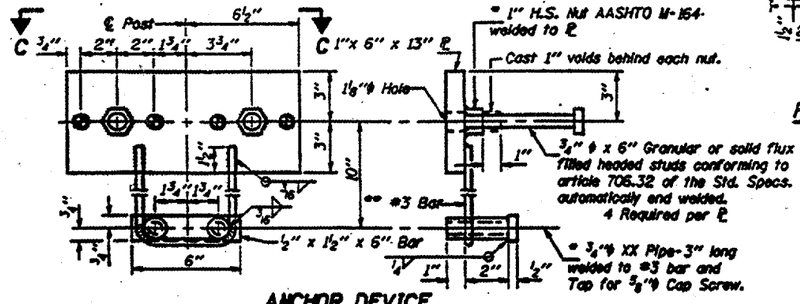
SECTION AT RAIL SPLICE



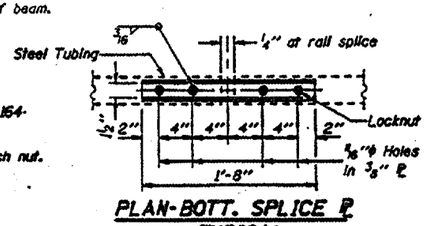
VIEW C-C

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

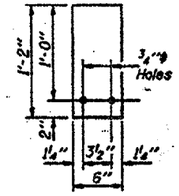
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



ANCHOR DEVICE



PLAN-BOTT. SPLICE ℄ TYPICAL



1/4" SHIM PLATE

Illinois Department of Transportation

PASSED November 1, 1995
Engineer of Bridge Design

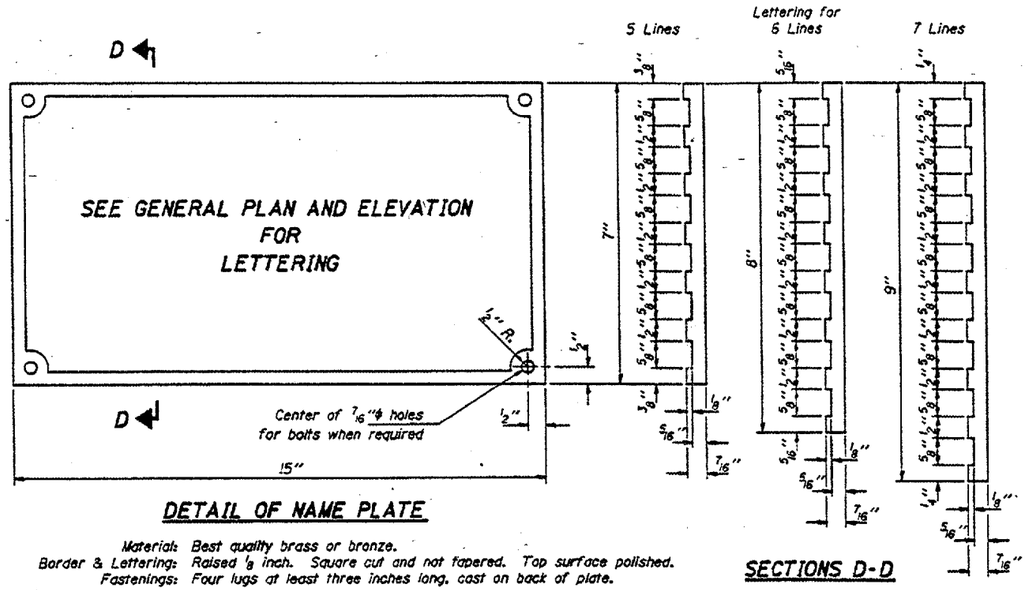
APPROVED November 1, 1995
Engineer of Bridges and Structures

STEEL RAILING, TYPE S-1

STANDARD CR-TS1

VI-1

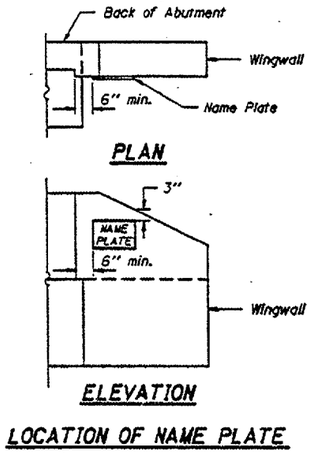
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 2	00-00130--00-BR	JACKSON	11	9
PROJECT NO. BROS-077(42)		CONTRACT NO. 99209		



DETAIL OF NAME PLATE

Material: Best quality brass or bronze.
Border & Lettering: Raised 1/8 inch. Square cut and not tapered. Top surface polished.
Fastenings: Four lugs at least three inches long, cast on back of plate.

SECTIONS D-D



LOCATION OF NAME PLATE

Illinois Department of Transportation

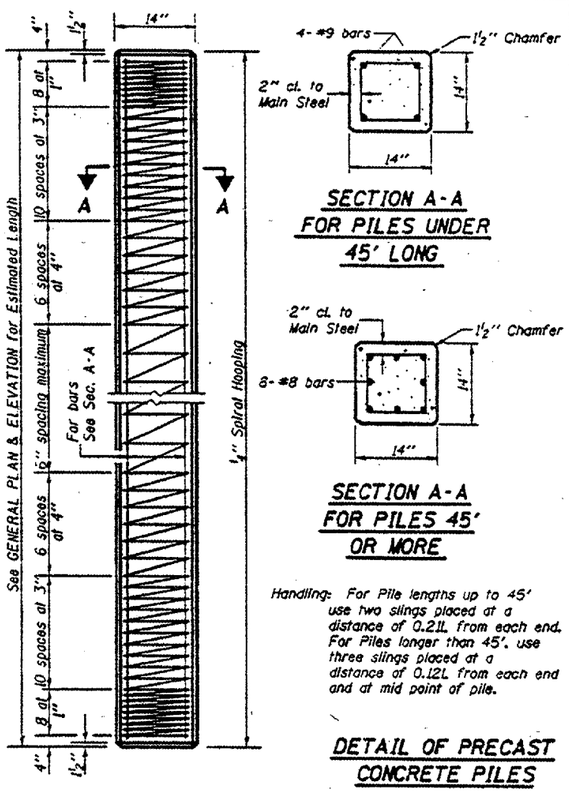
PASSED November 1, 1995
Engineer of Bridge Design

APPROVED November 1, 1995
Engineer of Bridges and Structures

SI-1 (BRS)

NAME PLATE
STANDARD CN

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.2	00-00130--00-BR	JACKSON	11	10
PROJECT NO. BRGS-0771(42)		CONTRACT NO. 99209		

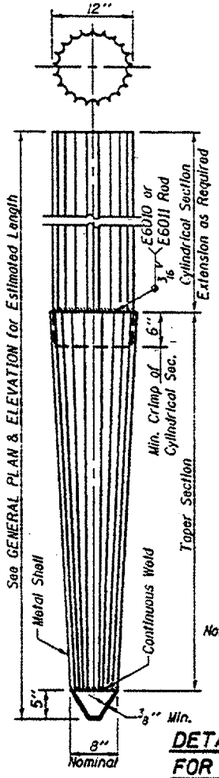


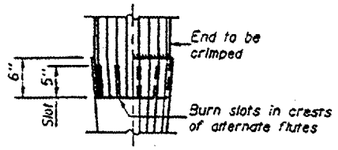
SECTION A-A FOR PILES UNDER 45' LONG

SECTION A-A FOR PILES 45' OR MORE

Handling: For Pile lengths up to 45' use two slings placed at a distance of 0.21L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12L from each end and at mid point of pile.

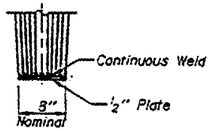
DETAIL OF PRECAST CONCRETE PILES





FIELD CRIMP DETAIL

Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



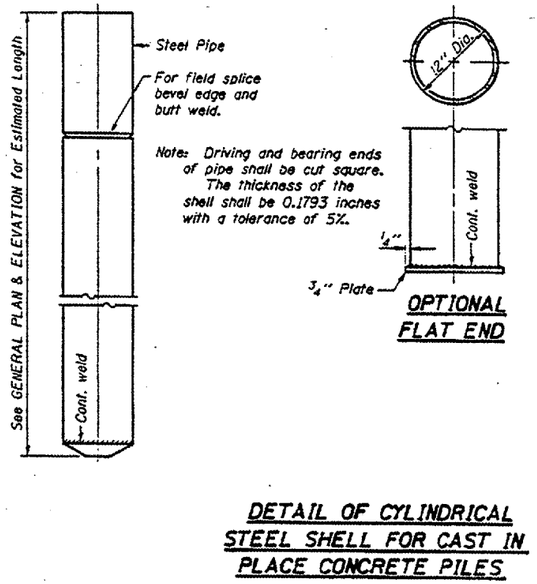
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS

10' Length-Taper 1" in 2'-6"
17' Length-Taper 1" in 4'-0"
25' Length-Taper 1" in 7'-0"
30' Length-Taper 1" in 7'-0"

Note: The thickness of the shell shall be 0.1495 inches with a tolerance of 5%. The shell shall be in accordance with Article 706.05 (a) of the Standard Specification except that minimum yield strength for the steel after cold working shall be 50,000 p.s.i.

DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES



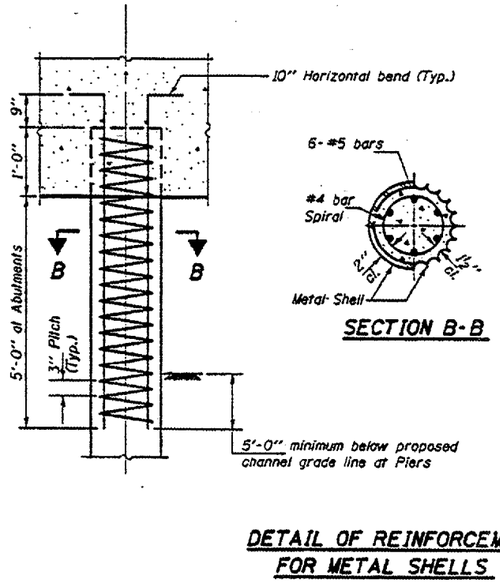
Note: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.

OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

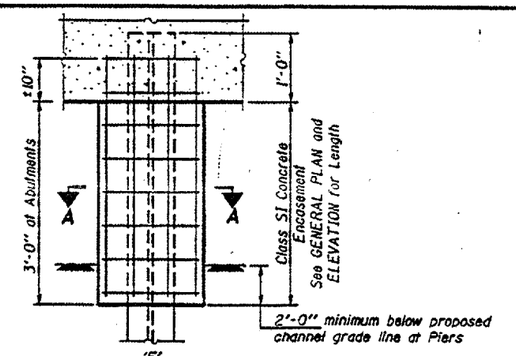
Reinforcement cage shall be omitted when Class SI Concrete Encasement is provided.

The cost of Reinforcement is incidental to the Cost of Furnishing Piles.



SECTION B-B

DETAIL OF REINFORCEMENT FOR METAL SHELLS

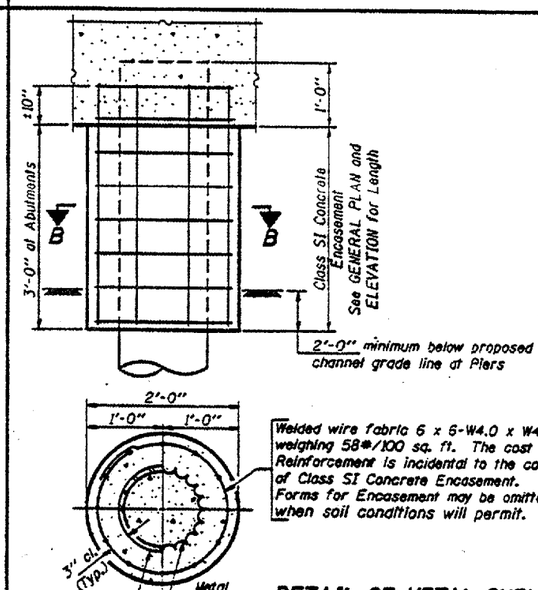


Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Reinforcement is incidental to the cost of Class SI Concrete Encasement. Forms for Encasement may be omitted when soil conditions will permit.

SECTION A-A

Pile	'F'
HP8	1'-6"
HP10	1'-9"
HP12	2'-0"

DETAIL OF HP PILE ENCASEMENT



Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Reinforcement is incidental to the cost of Class SI Concrete Encasement. Forms for Encasement may be omitted when soil conditions will permit.

SECTION B-B

DETAIL OF METAL SHELL PILE ENCASEMENT

QUANTITIES/LIN. FT. OF ENCASEMENT

(STEEL PILES)

Pile Size	Item	Quantity
HP8	Class SI Concrete Encasement	0.063 C.Y.
HP10	Class SI Concrete Encasement	0.086 C.Y.
HP12	Class SI Concrete Encasement	0.112 C.Y.

(METAL SHELL PILES)

Pile Size	Item	Quantity
12" Dia.	Class SI Concrete Encasement	0.087 C.Y.

Illinois Department of Transportation

PASSED November 1, 1995
Engineer of Bridge Design
APPROVED November 1, 1995
Engineer of Bridges and Structures

8-1-95 BRSS

PILE DETAILS

STANDARD CX-1

JACKSON COUNTY SHEET 11 OF 11
SECTION 00-00130-00-BR
PROJECT NO. BRO9-077(42)
C.H. 2 OVER PALM CREEK

End Improvement – Station 17+00

C – 0 | F – 0

427.54

C – 13 | F – 42

427.58

C – 15 | F – 23

427.58

C – 49 | F – 4

427.58

C – 40 | F – 14

427.58

C – 73 | F – 0

427.58

C – 106 | F – 0

427.58

C – 61 | F – 0

427.60

C – 37 | F – 3

427.71

C – 24 | F – 7

C – 0 | F – 0

Begin Improvement – Station 12+00

3:1

2:1

Shoulder Widening

425.2

425.3

425.5

425.6

425.8

17+00 | 16+50 | 16+00 | 15+50 | 15+25 | 14+75 | 14+50 | 14+00 | 13+50 | 13+00 | 12+00

420 | 425 | 430

5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45