

09-18-2020 LETTING ITEM 025

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 3 TO 7

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAP ROUTE 801 (ILL 10)
SECTION 4BR-2
PROJECT NHPP-6MPB(736)
BRIDGE SUPERSTRUCTURE
CHAMPAIGN COUNTY

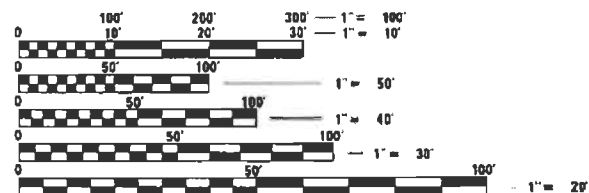
C-95-053-18

COPPER SLOUGH W OF DUNCAN RD

TRAFFIC DATA

2020 ADT = 7,950
PV% = 91.2%
SU% = 5.7%
MU% = 3.1%

TOWNSHIP:
CHAMPAIGN

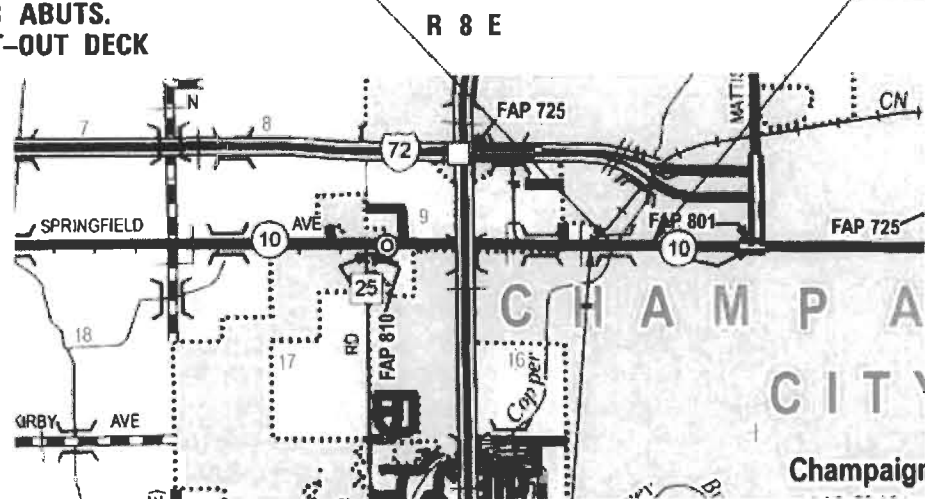


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: JASON W. STULTS
SQUAD LEADER: RYAN T. CARROLL
DESIGNER: TYLER J. PIERSON
PHONE: (217)-465-4181
CONTRACT NO. 70602

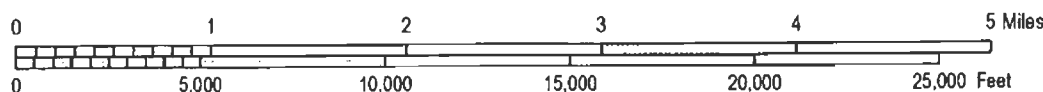
SUPERSTRUCTURE REPLACEMENT
STA. 84 + 18.00
S.N. 010-0247
40'-8" B-B ABUTS.
44'-0" OUT-OUT DECK
NO SKEW



BEGIN SECTION 4BR-2
STA. 81 + 28.00

END SECTION 4BR-2
STA. 86 + 56.00

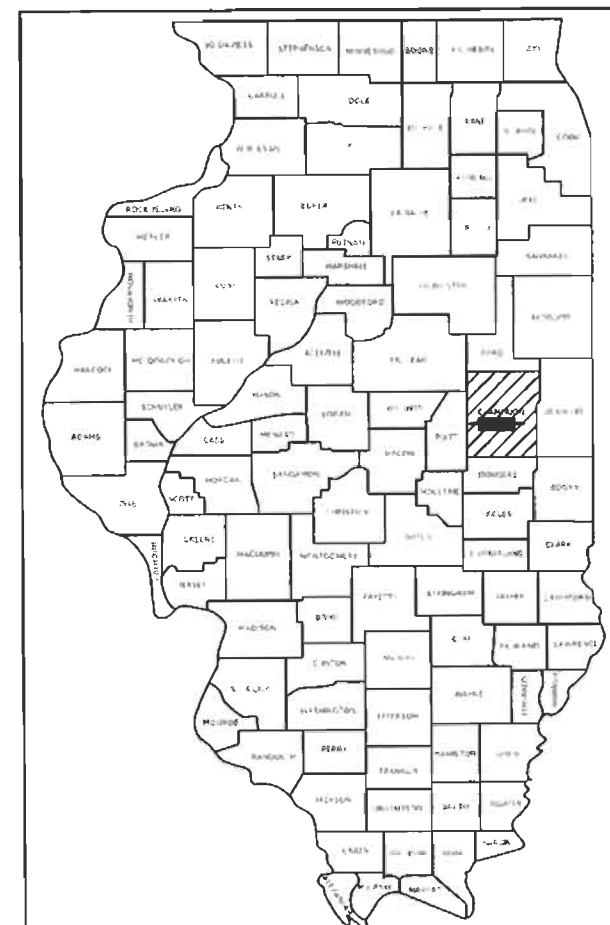
SCALE FOR MAIN MAP



GROSS LENGTH = 528.00 FT. = 0.100 MILE
NET LENGTH = 528.00 FT. = 0.100 MILE

FAP R/L	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	1
ILLINOIS CONTRACT NO. 70602				

D-95-116-06



LOCATION OF SECTION INDICATED THUS: —

FUNCTIONAL CLASSIFICATION:
OTHER PRINCIPAL ARTERIAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 6/23/2020
Regional Engineer
August 14, 2020
Engineer of Design and Environment
August 14, 2020
Director of Highways Project Implementation

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OF THE STATE OF ILLINOIS

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LIST OF STANDARDS

<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-04	NAME PLATE FOR BRIDGES
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001-02	DELINEATORS
701001-02	OFF-RD OPERATIONS, 2L, 2W MORE THAN 15' (4.5M) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
701901-08	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
725001-01	OBJECT AND TERMINAL MARKERS
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

G.N.-100A
ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD
FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN
VERTICAL DATUM OF 1988. (NAVD 88)

G.N. -406H
MIXTURE REQUIREMENTS

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

G.N. - 703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (TACK COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N.- 781
THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE
RAISED REFLECTIVE PAVEMENT MARKERS.

EXCAVATED SOIL INFORMATION

ALL EXCAVATED SOIL ASSOCIATED WITH THE SHOULDER REMOVAL, APPROACH PAVEMENT REMOVAL, APPROACH FOOTING AND FLEXIBLE CONNECTOR SHALL REMAIN ON OR BE INCORPORATED WITHIN THE EXISTING ROW FOR THE PROJECT.

Location	IL 10	IL 10
Mixture Use	*Surface Mainline & Top 1 1/2" of shoulder Incidental	*Binder Bottom 6 1/2" of Shoulder
AC/PG	PG 64-22	PG 64-22
Design Air Voids	4.0% @ Ndes=70	4.0% @ Ndes=50
Mix Comp(Gradation)	IL 9.5	IL 19.0
Friction Aggregate	Mix D	N.A.
Mixture Weight	112	112
Quality Management Program	QC/QA	QC/QA
Sublot Size	N.A.	N.A.

* Option to use the surface mix for all 8" of shoulder or 19.0 Binder on the bottom 6 1/2" of shoulder

COMMITMENTS

THERE ARE NO COMMITMENTS FOR THIS CONTRACT.

USER NAME = PiersonTJ	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, LIST OF STANDARDS, COMMITMENTS, & GENERAL NOTES	F A P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHE NC	
	DRAWN -	REVISED -			801	4BR-2	CHAMPAIGN	44	2	
PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 70602					
PLOT DATE = 6/22/2020	DATE -	REVISED -			SCALE:	SHEET 1	OF 1	SHEETS	STA.	TO STA.

Benchmark: #4482-3 from the intersection of IL Rte. 10 and Duncan Rd., go West on IL Rte. 10 for 0.1 mile to the chiseled square on the top of the Northwest wingwall of Structure No. 010-0247. Elev. 730.12

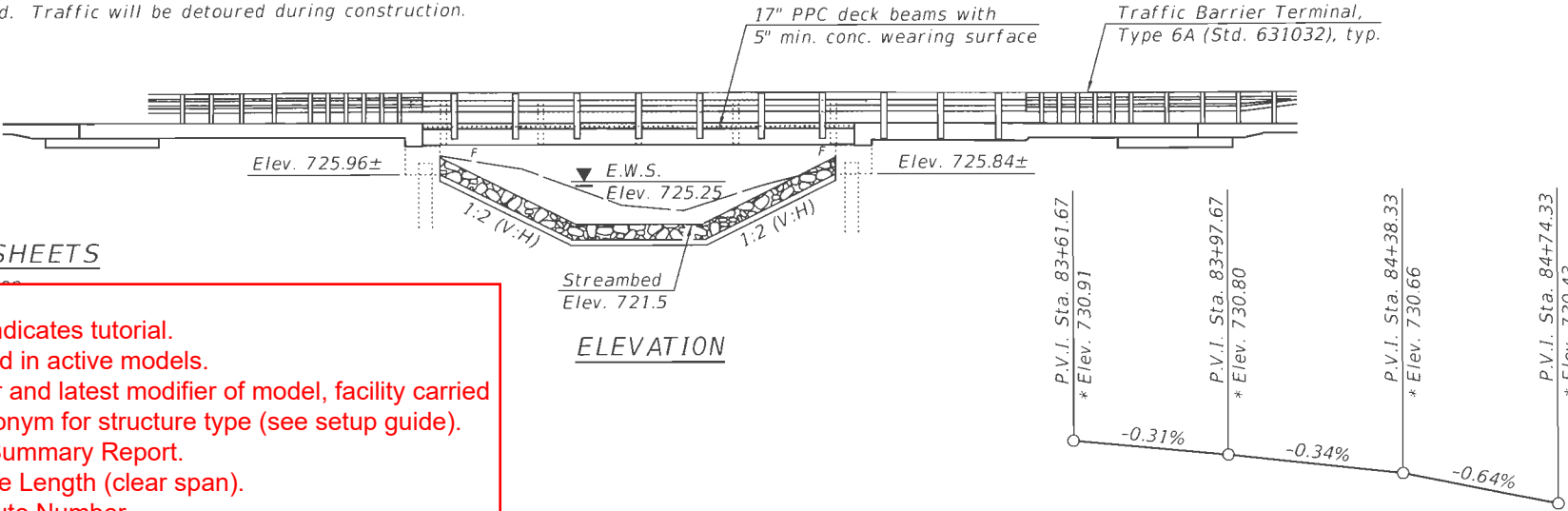
Existing Structure: Structure No. 010-0247, built in 1983 as F.A.U. Rte. 7123, Section 4BR at Sta. 84+20, resurfaced in 2003 as F.A.P. Rte. 801, Section 4RS-5, is a one span PPC deck beam superstructure supported by pile bent abutments. The clear bridge width is 44'-0". The abutment back-to-back length is 40'-8". The superstructure is to be replaced in-kind. Traffic will be detoured during construction.

No Salvage.

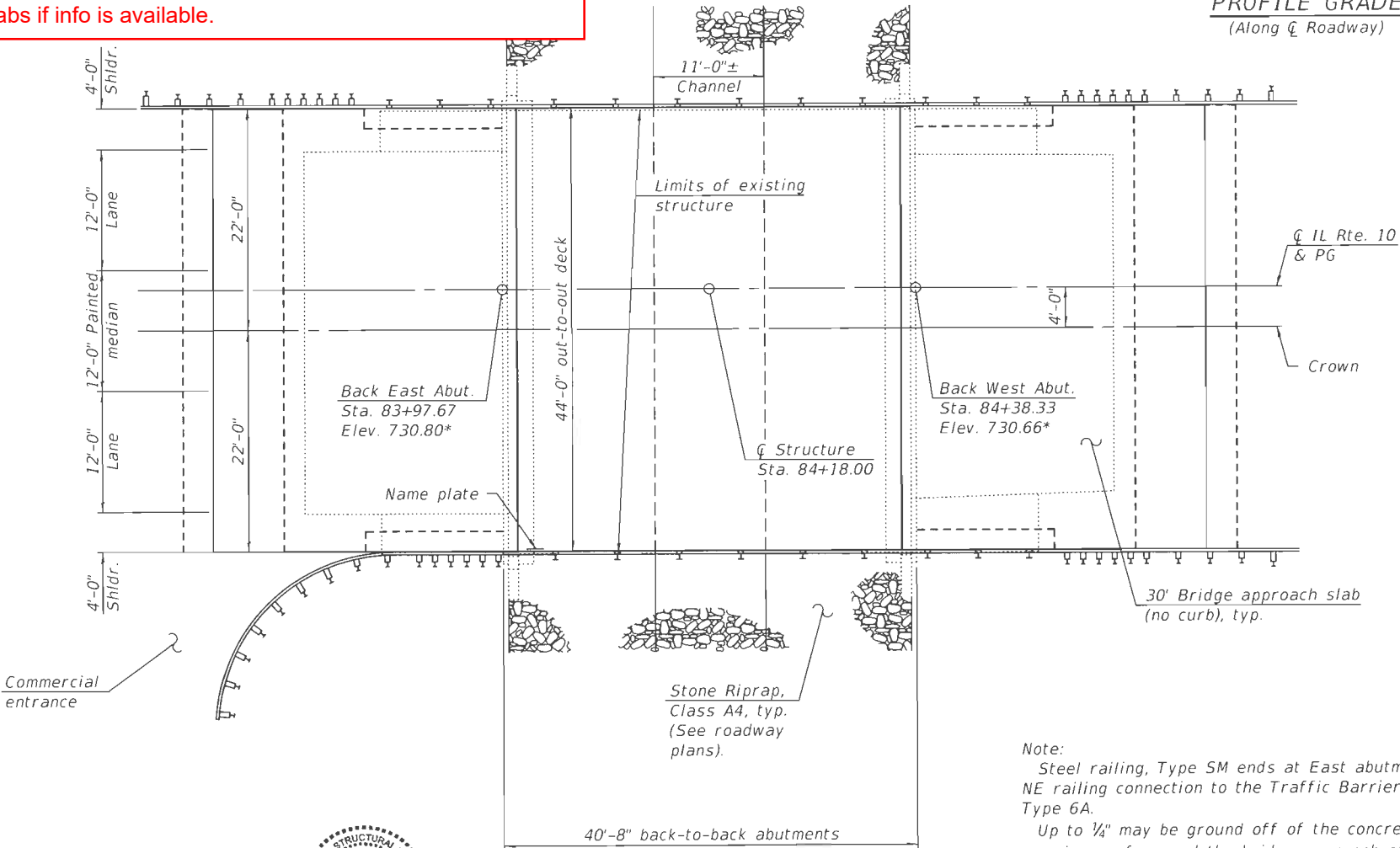
INDEX OF SHEETS

Main Window:

- "tut" suffix on Bridge & NBI ID indicates tutorial.
- "Template" should be unchecked in active models.
- Name includes initials of creator and latest modifier of model, facility carried over feature intersected, and acronym for structure type (see setup guide).
- Fields should match Structure Summary Report.
- Length refers to AASHTO Bridge Length (clear span).
- Route number refers to Key Route Number.
- Mi. post refers to Station.
- Fill in remaining tabs if info is available.



PROFILE GRADE
(Along C Roadway)



EXPIRES 11-30-2020

DESIGNED	NEPTALI RIVERA-MARTINEZ
CHECKED	D.S. / D.H.R. / R.P.N.
DRAWN	MICHAEL B. MOSSMAN
CHECKED	D.H.R. / R.P.N. / G.R.A.

EXAMINED

ENGINEER OF BRIDGE DESIGN

DATE - 8/6/2020

REVIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 14 SHEETS

GENERAL NOTES

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

The Contractor is advised that the existing PPC deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Repair of the abutment caps shall be completed prior to placement of the new deck beams.

The minimum thickness of concrete wearing surface shall be 5" after grinding and varies as required to adjust for new profile grade and beam camber.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		4.8	4.8
Concrete Structures	Cu. Yd.		27.2	27.2
Protective Coat	Sq. Yd.	478		478
Concrete Superstructure (Approach Slab)	Cu. Yd.	129.7		129.7
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,665		1,665
Reinforcement Bars, Epoxy Coated	Pound	52,830		52,830
Steel Railing, Type SM	Foot	121		121
Name Plates	Each	1		1
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.		53.5	53.5
Diamond Grinding (Bridge Section)	Sq. Yd.	435		435
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	261		261
Concrete Wearing Surface, 5"	Sq. Yd.	185		185

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)		
	E. Abut.	W. Abut.	Item
Q100	725.96	725.84	8
Q200	725.96	725.84	
Design	725.96	725.84	
Check	725.96	725.84	

NAME PLATE

Existing name plate shall be cleaned and relocated next to new name plate. Cost included with Name Plates. See Std. 515001

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Category = A
Bedrock Acceleration Coefficient (A) = 0.048 g
Site Coefficient (S) = 1.5

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

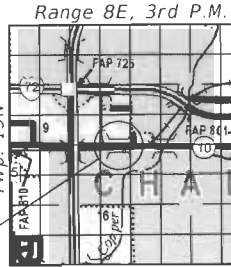
FIELD UNITS

f'c = 5,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2" Ø low lax strands)
fpbt = 201,960 psi (1/2" Ø low lax strands)

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 10 OVER UNNAMED
TRIBUTARY TO COPPER SLOUGH
F.A.P. ROUTE 801 - SEC. 4BR-2
CHAMPAIGN COUNTY
STATION 84+18.00
STRUCTURE NO. 010-0247

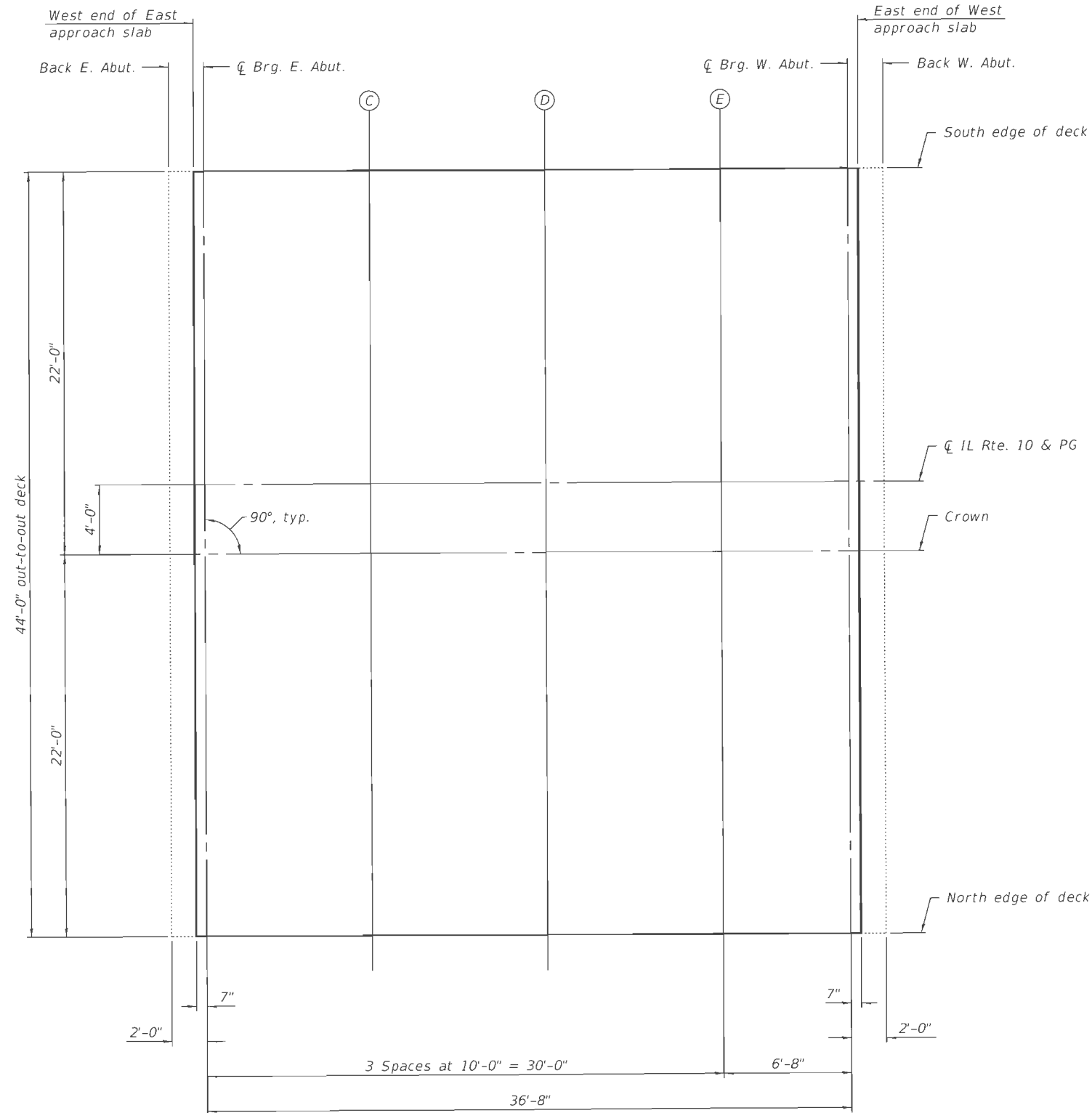


LOCATION SKETCH

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	17
CONTRACT NO. 70602				

ILLINOIS FED. AID PROJECT

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PLAN

DESIGNED	-	NEPHTALI RIVERA-MARTINEZ
CHECKED	-	D.S. / D.H.R. / R.P.N.
DRAWN	-	MICHAEL B. MOSSMAN
CHECKED	-	D.H.R. / R.P.N. / G.R.A.

EXAMINED
PASSED

Joanna F. [Signature]
ENGINEER OF BRIDGE DESIGN
Carl [Signature]
ENGINEER OF BRIDGES AND STRUCTURES

DATE -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 010 - 0247

SHEET 2 OF 14 SHEETS

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	18
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				

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SOUTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
Bk. E. Abut.	83+97.67	-18.00	730.53	730.55
W. End E. Appr.	83+99.09	-18.00	730.53	730.55
Q Brg. E. Abut.	83+99.67	-18.00	730.52	730.54
C	84+09.67	-18.00	730.49	730.51
D	84+19.67	-18.00	730.45	730.47
E	84+29.67	-18.00	730.42	730.44
Q Brg. W. Abut.	84+36.33	-18.00	730.40	730.42
E. End W. Appr.	84+36.91	-18.00	730.39	730.41
Bk. W. Abut.	84+38.33	-18.00	730.39	730.41

Q IL RTE. 10 & PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
Bk. E. Abut.	83+97.67	0.00	730.80	730.82
W. End E. Appr.	83+99.09	0.00	730.80	730.82
Q Brg. E. Abut.	83+99.67	0.00	730.79	730.81
C	84+09.67	0.00	730.76	730.78
D	84+19.67	0.00	730.72	730.74
E	84+29.67	0.00	730.69	730.71
Q Brg. W. Abut.	84+36.33	0.00	730.67	730.69
E. End W. Appr.	84+36.91	0.00	730.66	730.68
Bk. W. Abut.	84+38.33	0.00	730.66	730.68

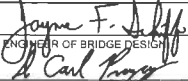

CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
Bk. E. Abut.	83+97.67	4.00	730.86	730.88
W. End E. Appr.	83+99.09	4.00	730.86	730.88
Q Brg. E. Abut.	83+99.67	4.00	730.85	730.87
C	84+09.67	4.00	730.82	730.84
D	84+19.67	4.00	730.78	730.80
E	84+29.67	4.00	730.75	730.77
Q Brg. W. Abut.	84+36.33	4.00	730.73	730.75
E. End W. Appr.	84+36.91	4.00	730.72	730.74
Bk. W. Abut.	84+38.33	4.00	730.72	730.74

NORTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
Bk. E. Abut.	83+97.67	26.00	730.53	730.55
W. End E. Appr.	83+99.09	26.00	730.53	730.55
Q Brg. E. Abut.	83+99.67	26.00	730.52	730.54
C	84+09.67	26.00	730.49	730.51
D	84+19.67	26.00	730.45	730.47
E	84+29.67	26.00	730.42	730.44
Q Brg. W. Abut.	84+36.33	26.00	730.40	730.42
E. End W. Appr.	84+36.91	26.00	730.39	730.41
Bk. W. Abut.	84+38.33	26.00	730.39	730.41

DESIGNED -	NEPHTALI RIVERA-MARTINEZ
CHECKED -	D.S. / D.H.R. / R.P.N.
DRAWN -	MICHAEL B. MOSSMAN
CHECKED -	D.H.R. / R.P.N. / G.R.A.

EXAMINED		DATE -	
PASSED		REVISED -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 010 - 0247

SHEET 3 OF 14 SHEETS

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	19
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				

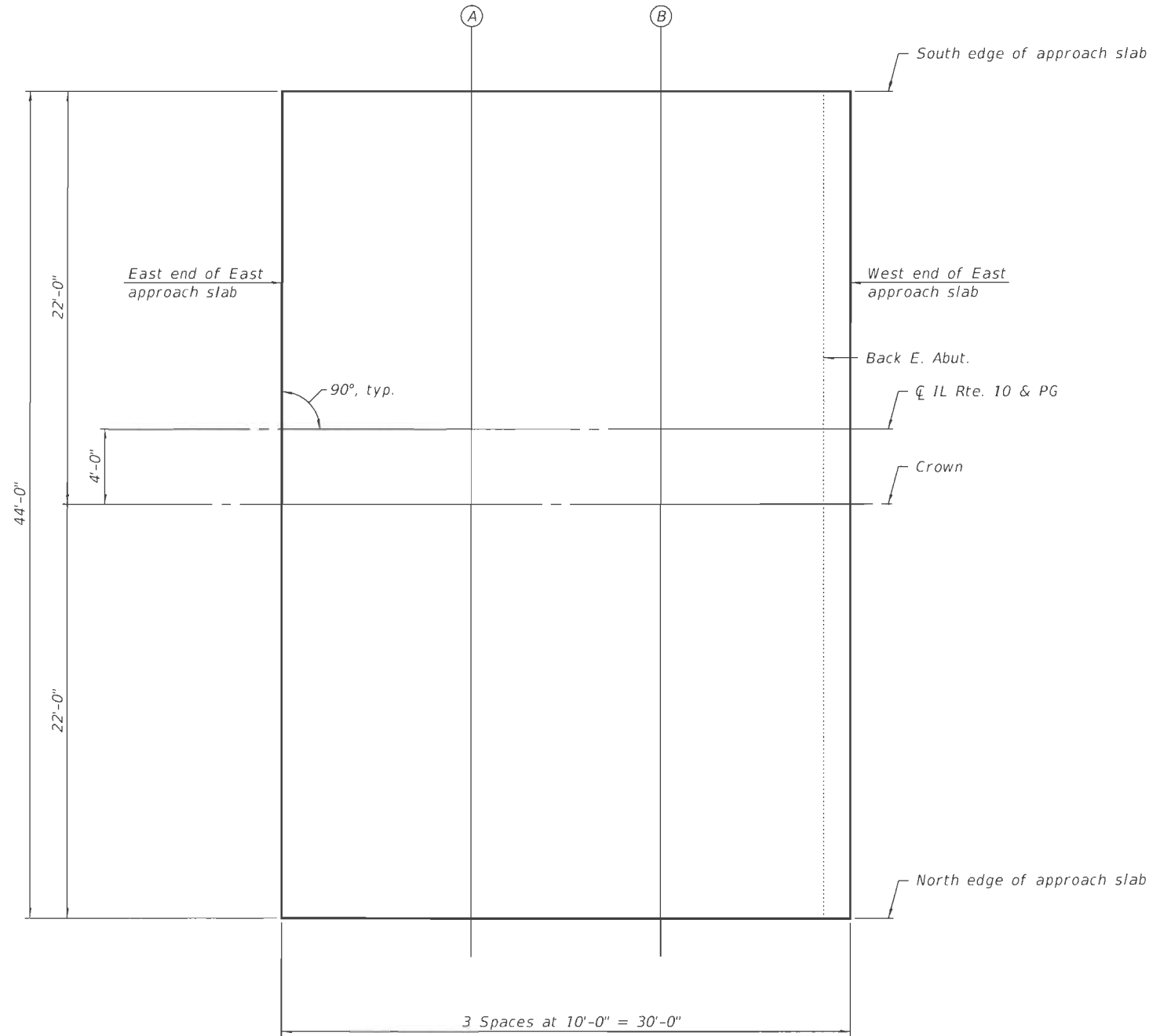
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SOUTH EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of E. Appr. Slab	83+69.09	-18.00	730.62	730.64
A	83+79.09	-18.00	730.59	730.61
B	83+89.09	-18.00	730.56	730.58
W. End of E. Appr. Slab	83+99.09	-18.00	730.53	730.55

CL IL RTE. 10 & PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of E. Appr. Slab	83+69.09	0.00	730.89	730.91
A	83+79.09	0.00	730.86	730.88
B	83+89.09	0.00	730.83	730.85
W. End of E. Appr. Slab	83+99.09	0.00	730.80	730.82



PLAN

CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of E. Appr. Slab	83+69.09	4.00	730.95	730.97
A	83+79.09	4.00	730.92	730.94
B	83+89.09	4.00	730.89	730.91
W. End of E. Appr. Slab	83+99.09	4.00	730.86	730.88

NORTH EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of E. Appr. Slab	83+69.09	26.00	730.62	730.64
A	83+79.09	26.00	730.59	730.61
B	83+89.09	26.00	730.56	730.58
W. End of E. Appr. Slab	83+99.09	26.00	730.53	730.55

DESIGNED - NEPHTALI RIVERA-MARTINEZ
CHECKED - D.S. / D.H.R. / R.P.N.
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED - *Joanne F. J. [Signature]*
PASSED - *Carl [Signature]*
ENGINEER OF BRIDGES AND STRUCTURES

DATE -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 010 - 0247

SHEET 4 OF 14 SHEETS

F.A.P. RTE. 801
SECTION 48R-2
COUNTY CHAMPAIGN
TOTAL SHEETS 44
SHEET NO. 20
CONTRACT NO. 70602
ILLINOIS FED. AID PROJECT

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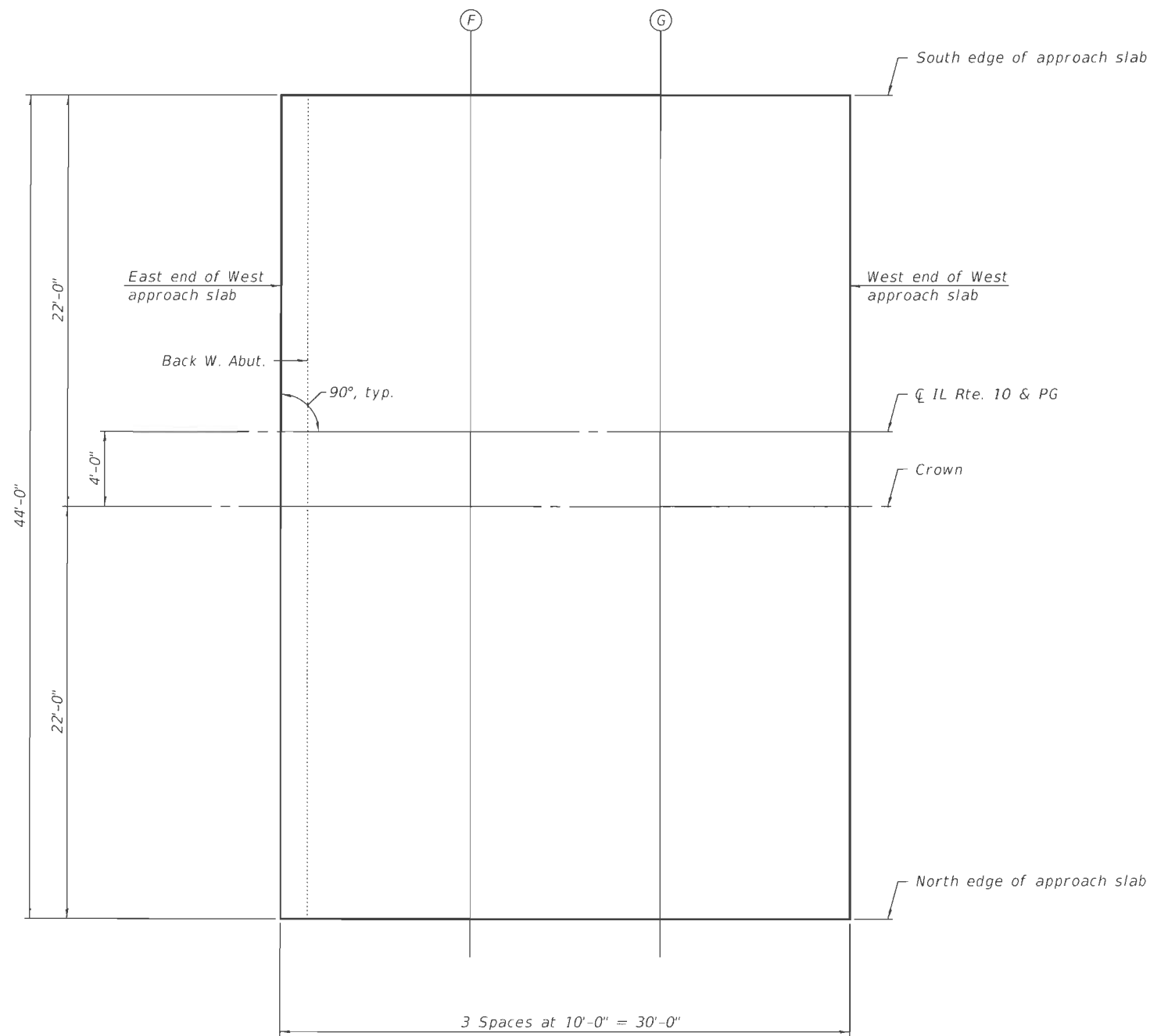
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SOUTH EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of W. Appr. Slab	84+36.91	-18.00	730.40	730.42
F	84+46.91	-18.00	730.34	730.36
G	84+56.91	-18.00	730.27	730.29
W. End of W. Appr. Slab	84+66.91	-18.00	730.21	730.23

CL IL RTE. 10 & PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of W. Appr. Slab	84+36.91	0.00	730.67	730.69
F	84+46.91	0.00	730.61	730.63
G	84+56.91	0.00	730.54	730.56
W. End of W. Appr. Slab	84+66.91	0.00	730.48	730.50



CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of W. Appr. Slab	84+36.91	4.00	730.73	730.75
F	84+46.91	4.00	730.67	730.69
G	84+56.91	4.00	730.60	730.62
W. End of W. Appr. Slab	84+66.91	4.00	730.54	730.56

NORTH EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
E. End of W. Appr. Slab	84+36.91	26.00	730.40	730.42
F	84+46.91	26.00	730.34	730.36
G	84+56.91	26.00	730.27	730.29
W. End of W. Appr. Slab	84+66.91	26.00	730.21	730.23

PLAN

DESIGNED -	NEPHTALI RIVERA-MARTINEZ
CHECKED -	D.S. / D.H.R. / R.P.N.
DRAWN -	MICHAEL B. MOSSMAN
CHECKED -	D.H.R. / R.P.N. / G.R.A.

EXAMINED	<i>Joanne F. Jaffe</i>
PASSED	<i>Carl Kopp</i>
ENGINEER OF BRIDGES AND STRUCTURES	

DATE -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

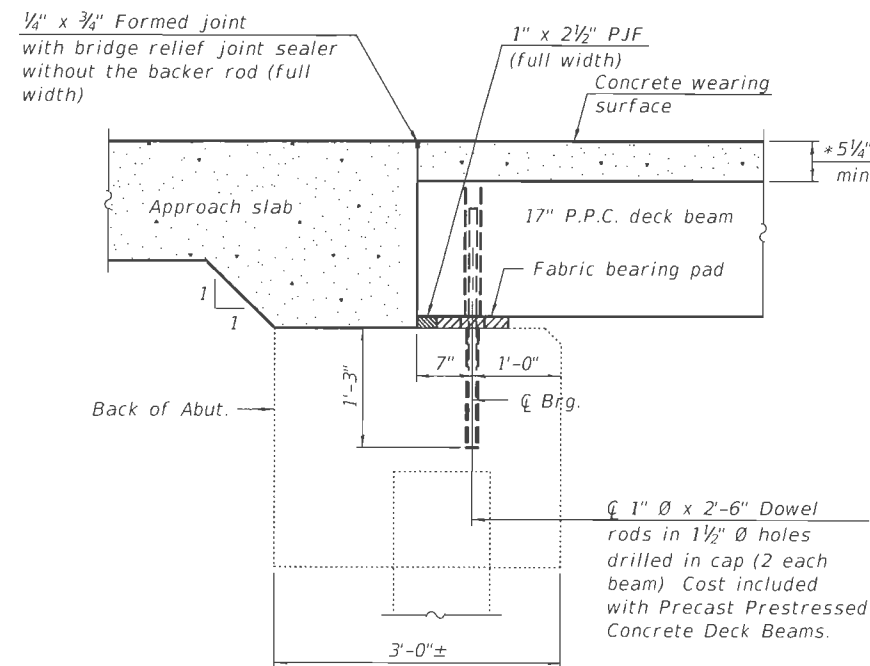
TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 010 - 0247

SHEET 5 OF 14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	21
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				

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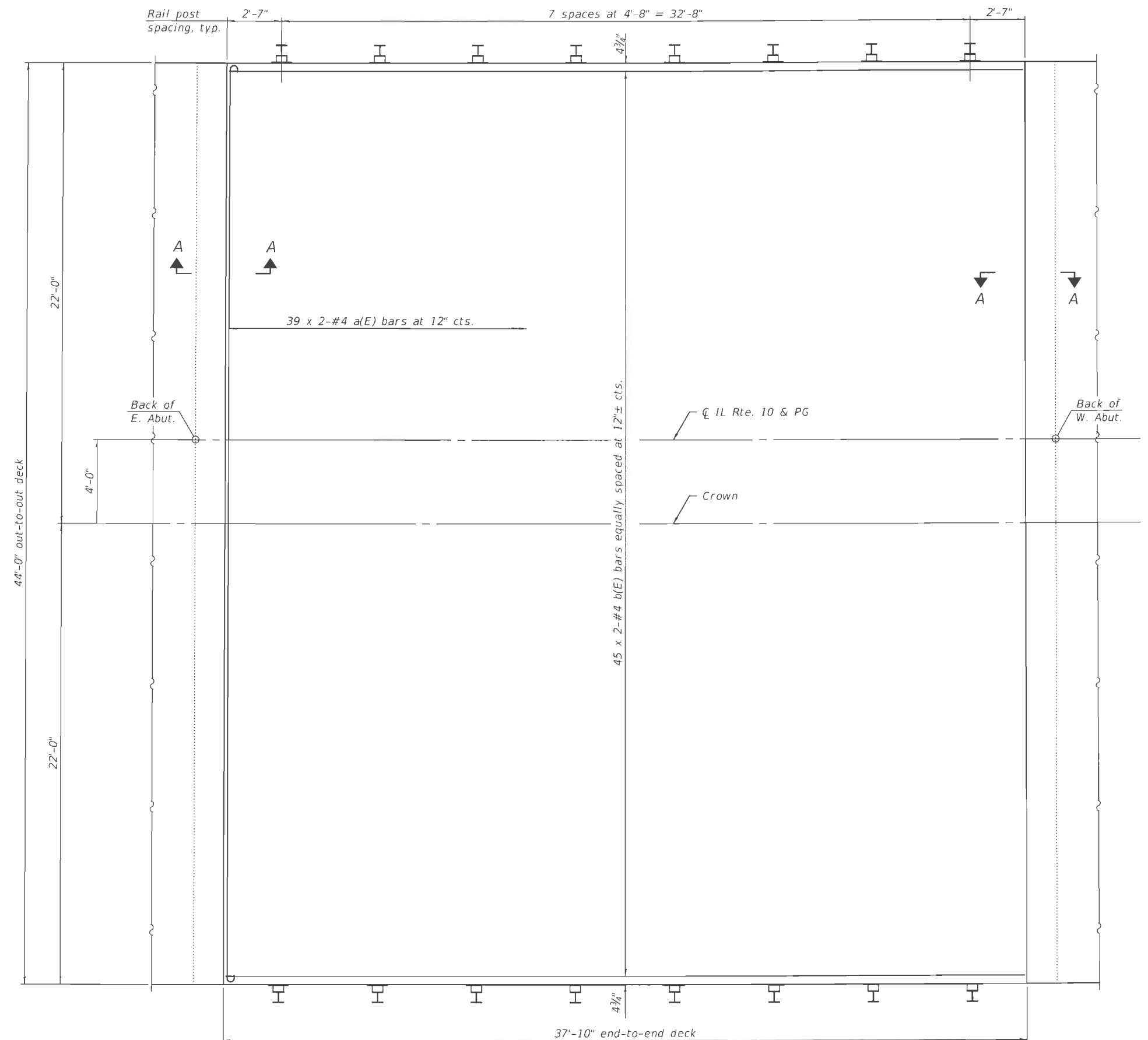
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FILE NAME: pw:\planroom\dot:illinois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0100247\CADD Plans\0100247-70602.dgn



SECTION A-A
*Before grinding

Notes:
See sheet 7 of 14 for Superstructure Details and Bill of Material.
Bars indicated thus 45 x 2-#4 etc. indicates 45 lines of bars with 2 lengths per line.
All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.
See sheet 9 of 14 for fabric bearing pad details.

MINIMUM BAR LAP
#4 bar = 2'-2"



PLAN

DESIGNED -	NEPHTALI RIVERA-MARTINEZ
CHECKED -	D.S. / D.H.R. / R.P.N.
DRAWN -	MICHAEL B. MOSSMAN
CHECKED -	D.H.R. / R.P.N. / G.R.A.

EXAMINED
PASSED

Joanna F. J. [Signature]
ENGINEER OF BRIDGE DESIGN
Carl [Signature]
ENGINEER OF BRIDGES AND STRUCTURES

DATE -	
REVISED -	
REVISED -	

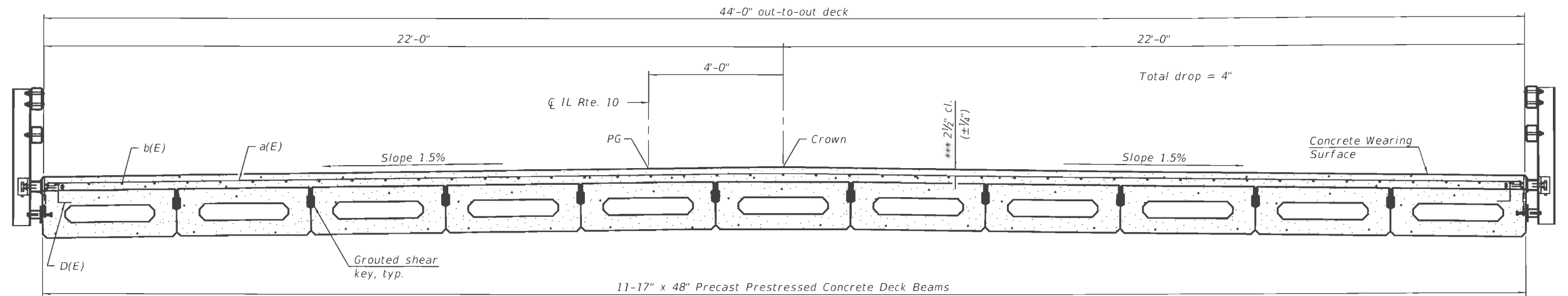
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE
STRUCTURE NO. 010 - 0247**

SHEET 6 OF 14 SHEETS

F.A.P. RTE. 801	SECTION 4BR-2	COUNTY CHAMPAIGN	TOTAL SHEETS 44	SHEET NO. 22
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				

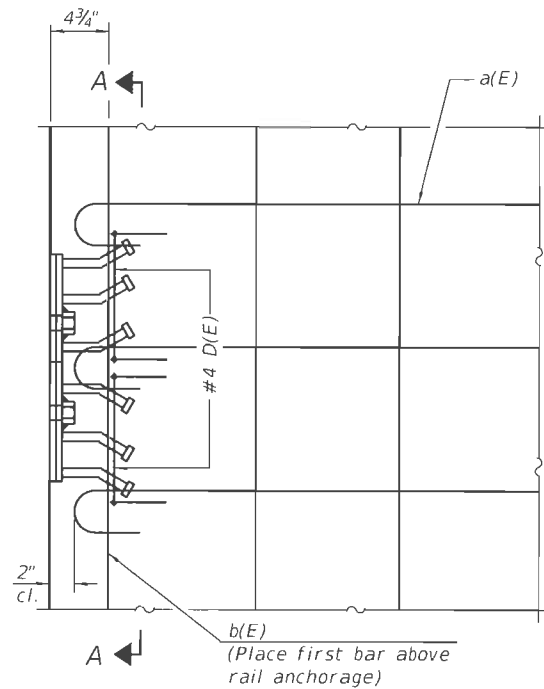
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* Member(s) that controls the overall load rating should have " - X" as a suffix in the Member Name and both the "Existing" and "Current" boxes should be checked in the Member window. Non-controlling members should only have the "Current" box checked.

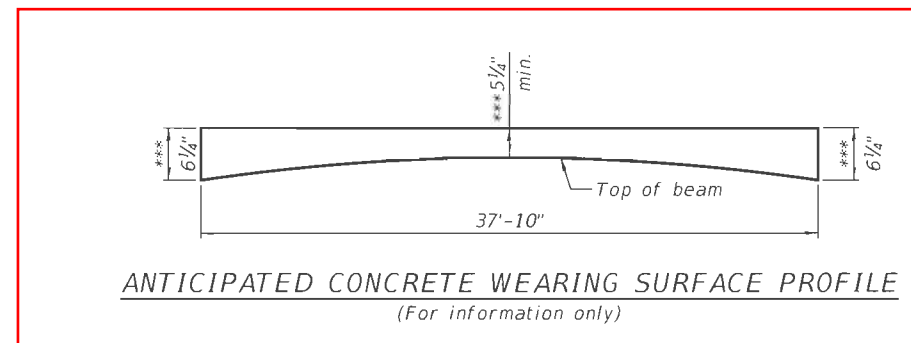
CROSS SECTION
(Looking west)

*** Prior to grinding.

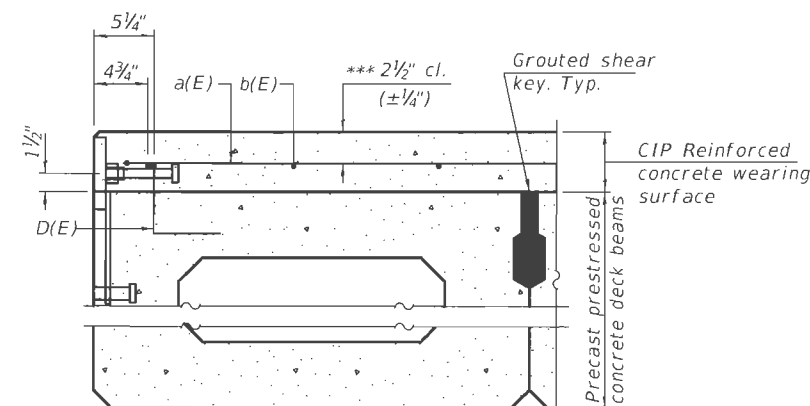
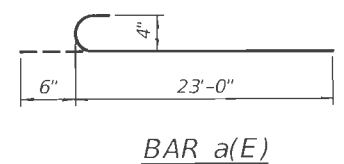
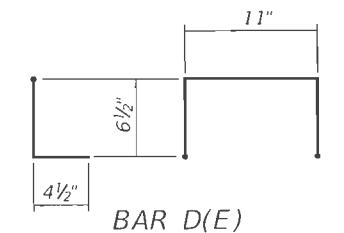


PLAN

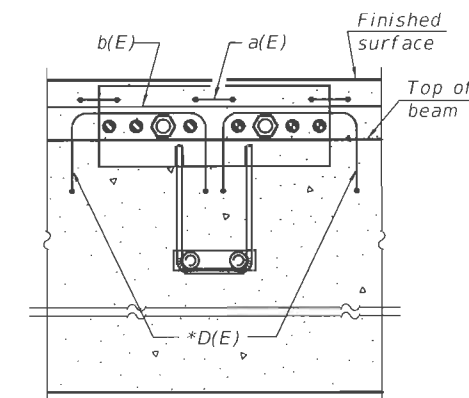
Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



Average thickness post-grinding used in model.



SECTION THRU FASCIA BEAM



SECTION A-A

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	78	#4	23'-6"	C
b(E)	90	#4	19'-11"	—
Reinforcement Bars, Epoxy Coated				Pound 2,430
Concrete Wearing Surface, 5"				Sq. Yd. 185

MODEL: 0100247-70602-007
FILE NAME: pw:\planning\dot\Illinois\gov\pw\DOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0100247\CADD Plans\0100247-70602.dgn

DESIGNED - NEPTALI RIVERA-MARTINEZ
CHECKED - D.S. / D.H.R. / R.P.N.
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED
PASSED

JOYCE F. JEFF
ENGINEER OF BRIDGE DESIGN
CARL K. K...
ENGINEER OF BRIDGES AND STRUCTURES

DATE -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

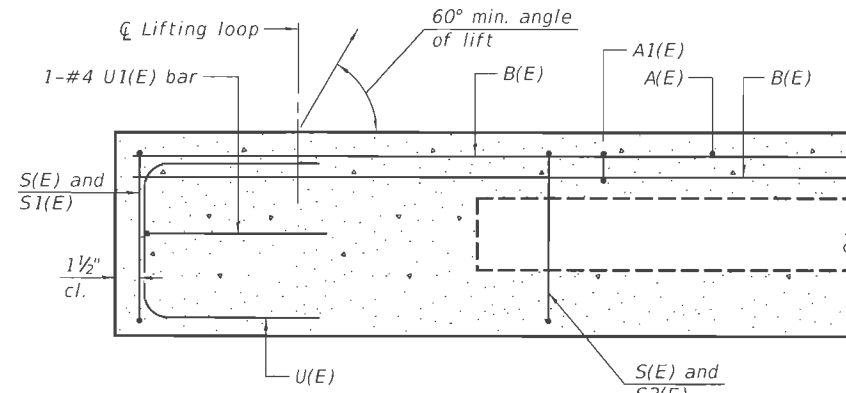
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 010 - 0247

SHEET 7 OF 14 SHEETS

F.A.P. RTE. 801
SECTION 4BR-2
COUNTY CHAMPAIGN
TOTAL SHEETS 44
SHEET NO. 23
CONTRACT NO. 70602
ILLINOIS FED. AID PROJECT

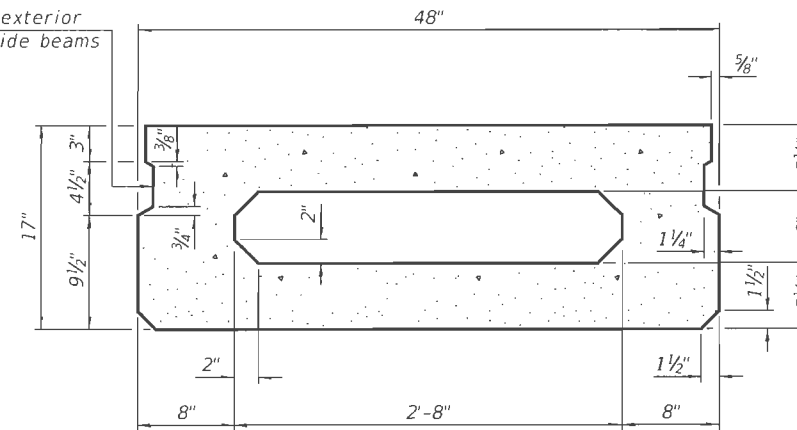
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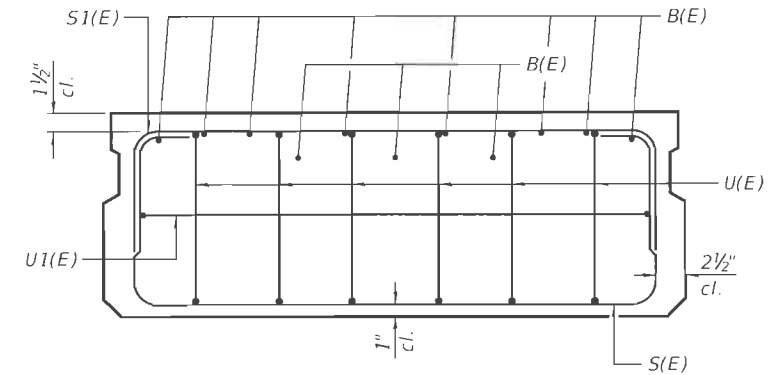


SECTION A-A

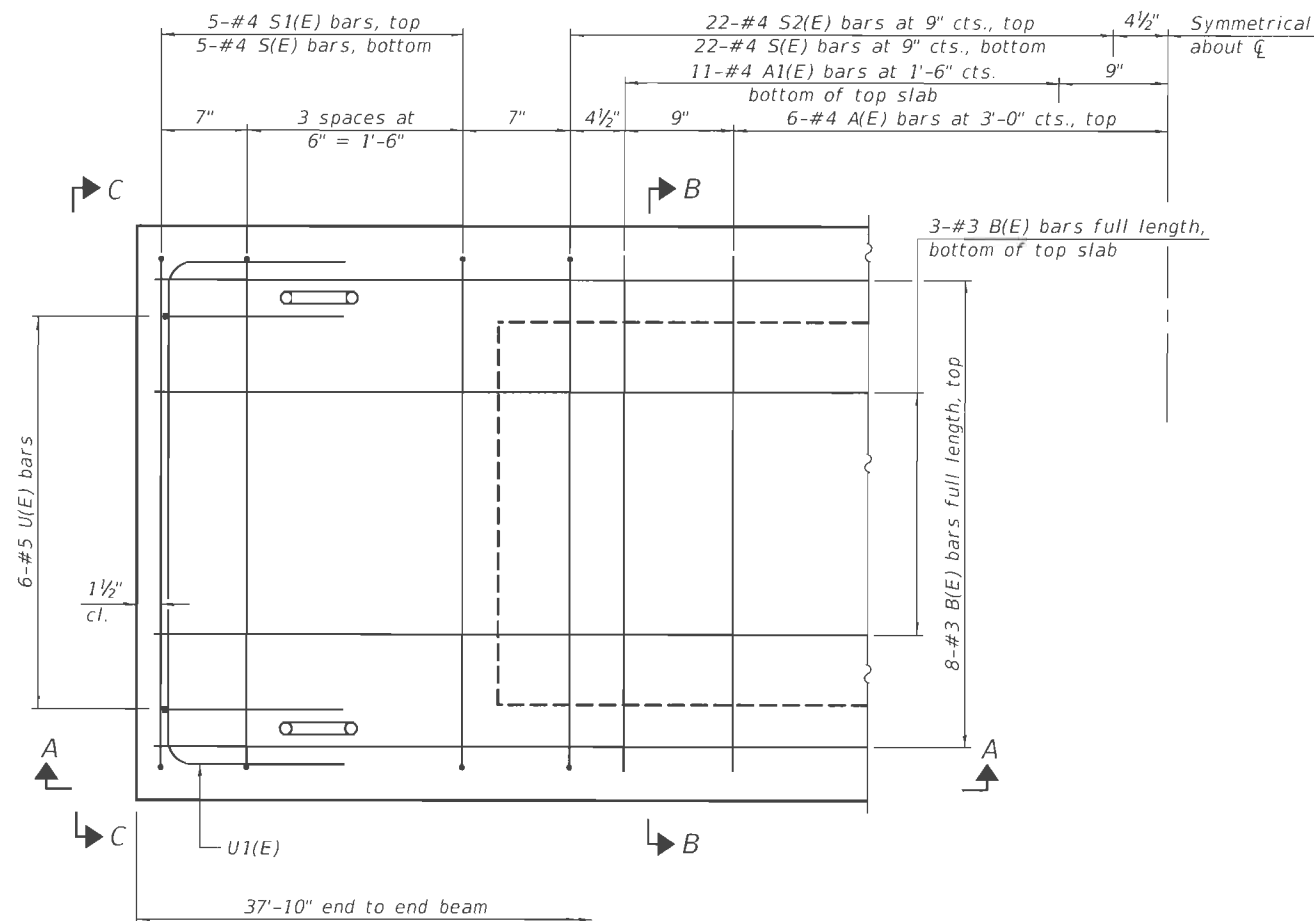
Omit key on exterior face of outside beams



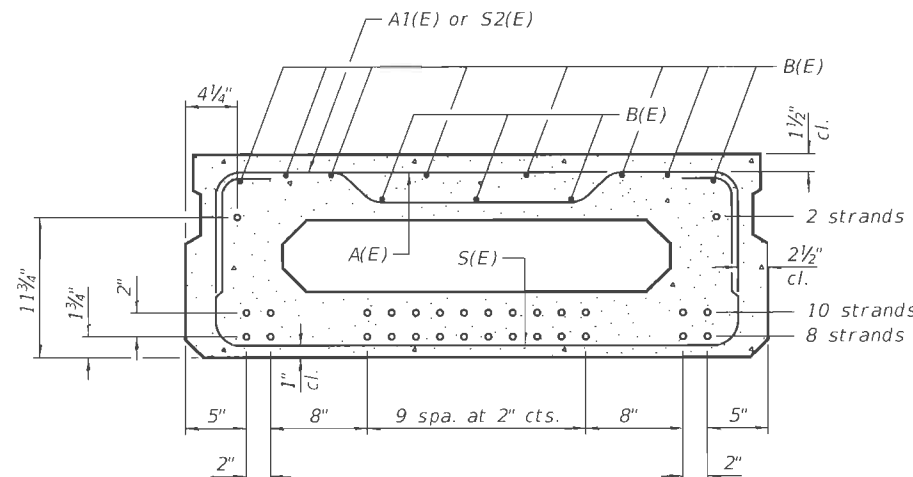
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note:

Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP
#3 bar = 1'-6"

Note:

Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	11	#4	3'-7"	—
A1(E)	22	#4	3'-10"	—
B(E)	11	#3	37'-7"	—
S(E)	54	#4	6'-9"	U
S1(E)	10	#4	5'-3"	U
S2(E)	44	#4	5'-6"	U
U(E)	12	#5	3'-8"	U
U1(E)	2	#4	6'-0"	U

Note:

See sheet 9 of 14 for additional details and Bill of Material.

PD-1748-0

1-1-2020

DESIGNED - NEPTALI RIVERA-MARTINEZ
CHECKED - D.S. / D.H.R. / R.P.N.
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED
PASSED

Jaime F. Joffe
ENGINEER OF BRIDGES AND STRUCTURES

DATE -
REVISED -
REVISED -

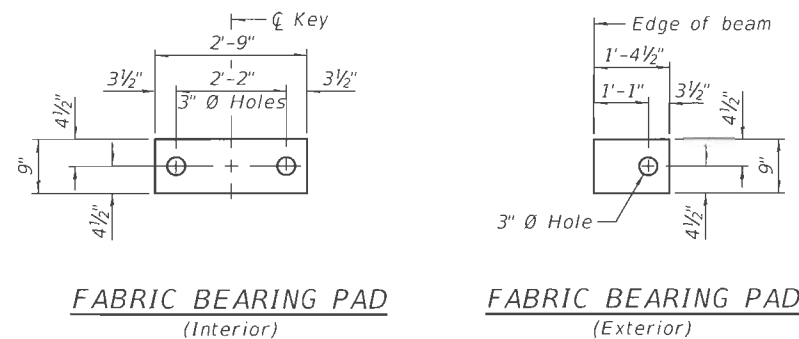
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

17" x 48" PPC DECK BEAM
STRUCTURE NO. 010 - 0247

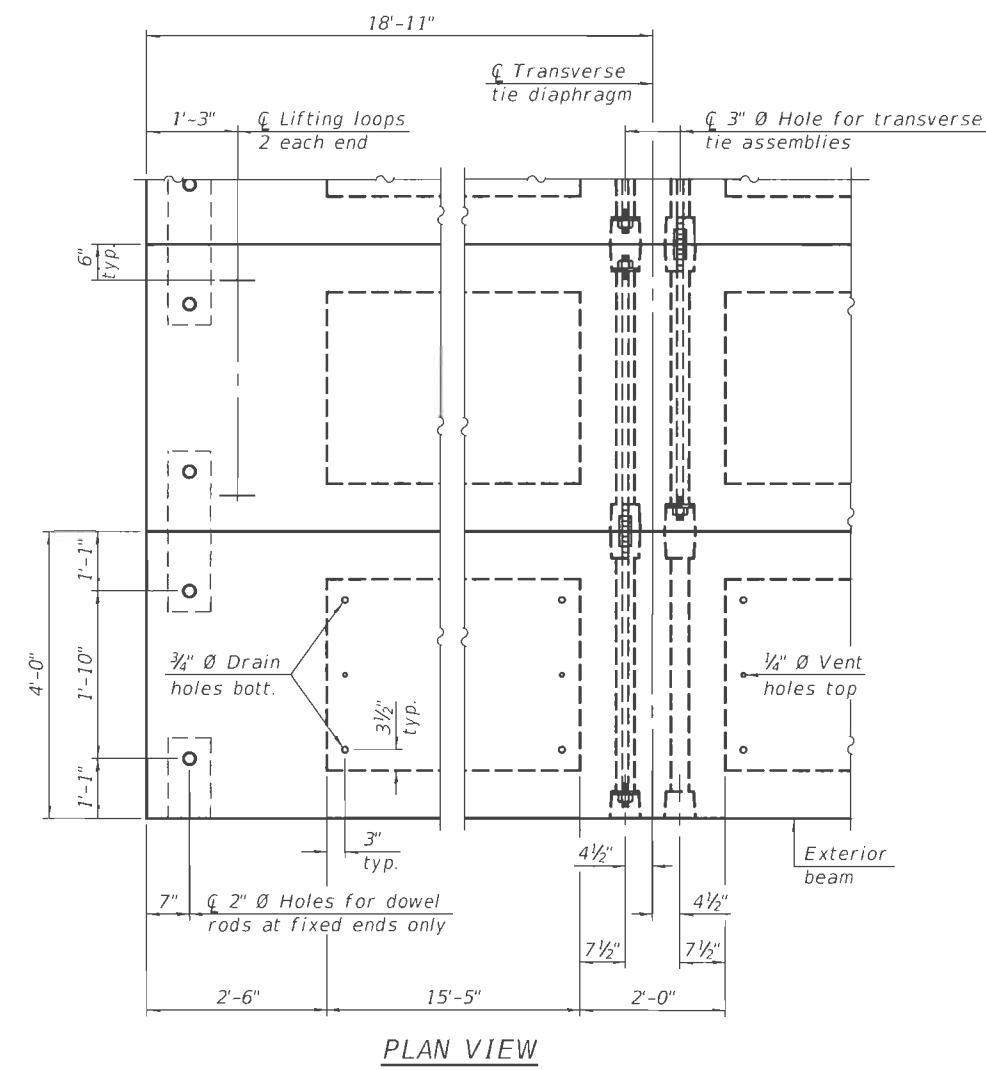
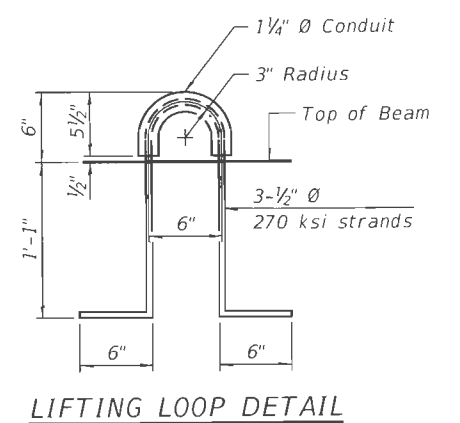
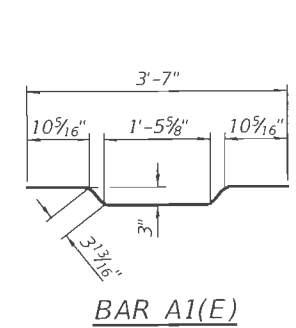
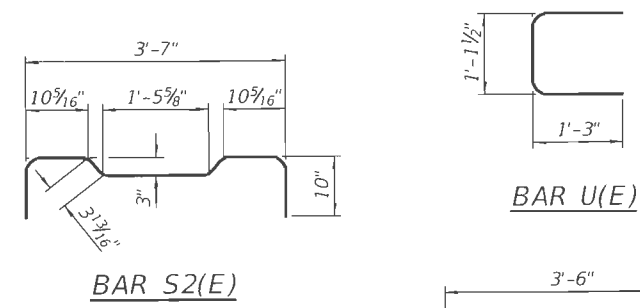
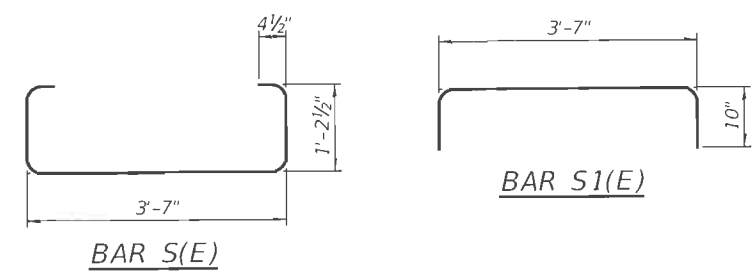
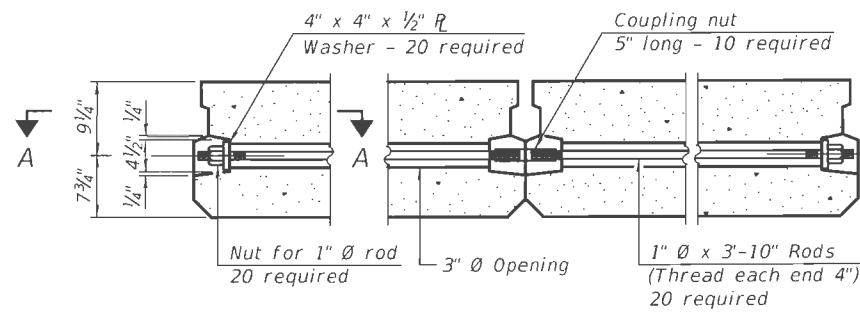
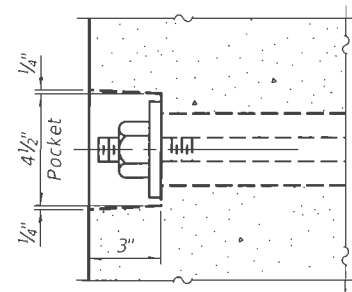
SHEET 8 OF 14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	24
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				

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Notes:
 All bearing pads shall be 1" thick.
 Omit holes when using expansion bearings.
 Expansion bearing pads shall be bonded to the substructure.



Note:
 Connect beams in pairs with the transverse tie configuration shown.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'_c , shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'_{ci} , shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,665
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PDD-1748-0

1-1-2020

DESIGNED - NEPTALI RIVERA-MARTINEZ	EXAMINED - <i>Joan F. [Signature]</i>
CHECKED - D.S. / D.H.R. / R.P.N.	PASSED - <i>Carl [Signature]</i>
DRAWN - MICHAEL B. MOSSMAN	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED - D.H.R. / R.P.N. / G.R.A.	

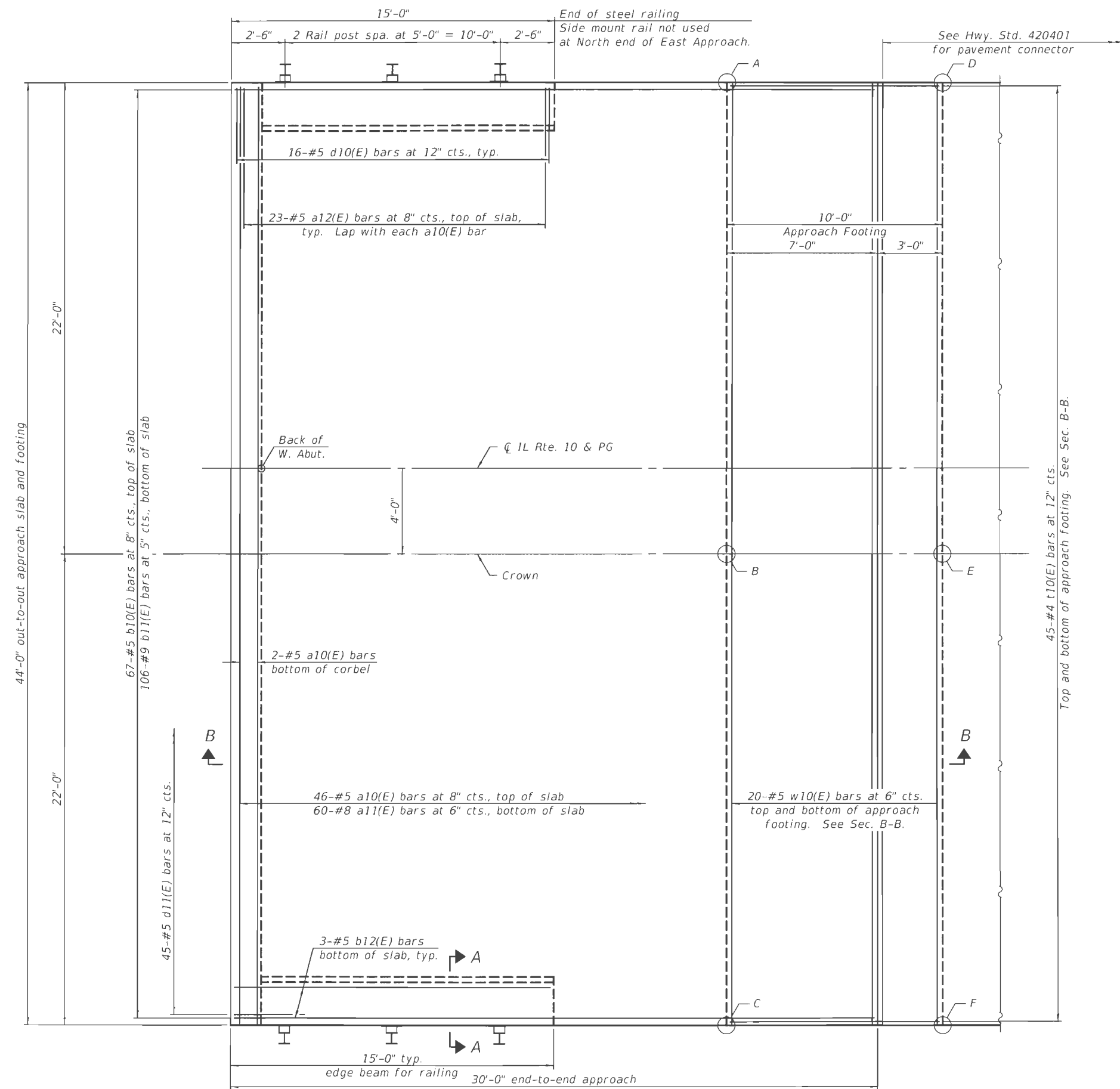
DATE -	
REVISED -	
REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**17" x 48" PPC DECK BEAM
 STRUCTURE NO. 010 - 0247**

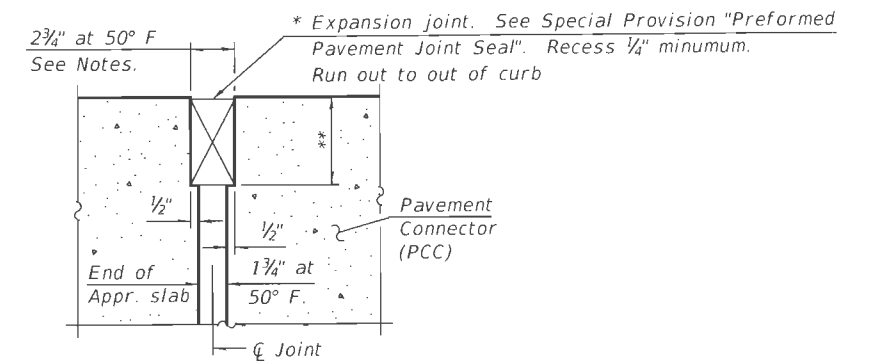
SHEET 9 OF 14 SHEETS

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	25
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				

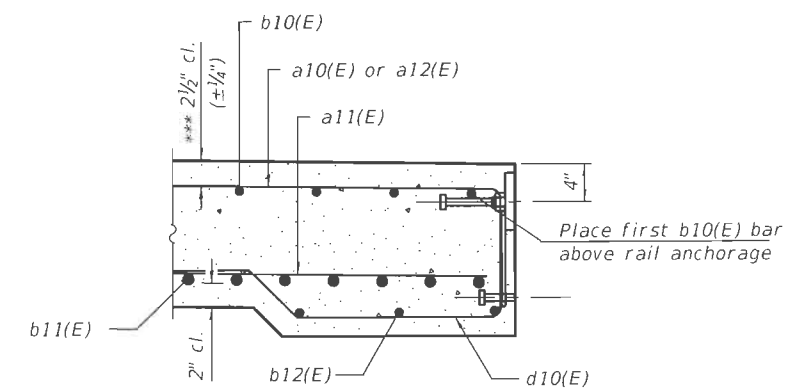


PLAN

(West approach shown, East approach slab similar by symmetry except as noted).



DETAIL A



SECTION A-A

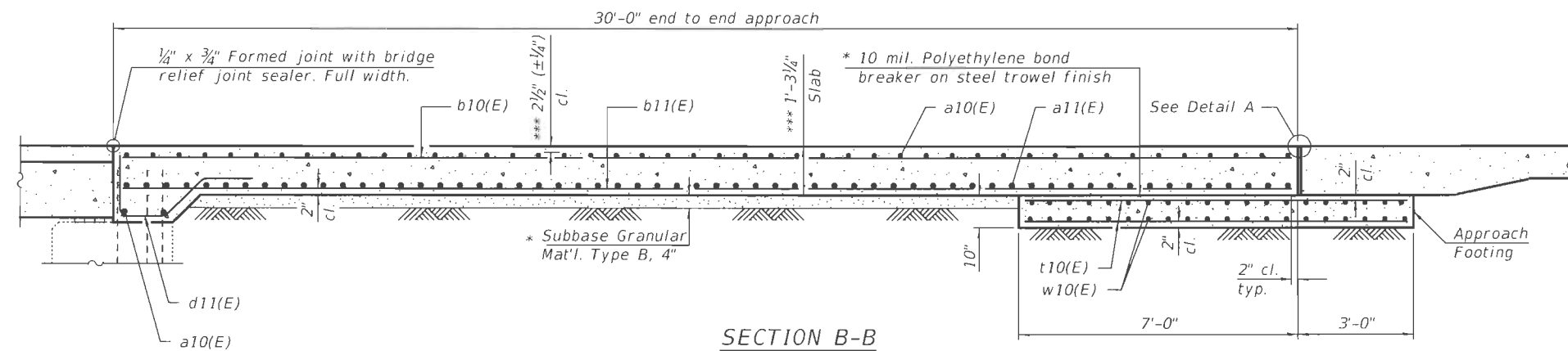
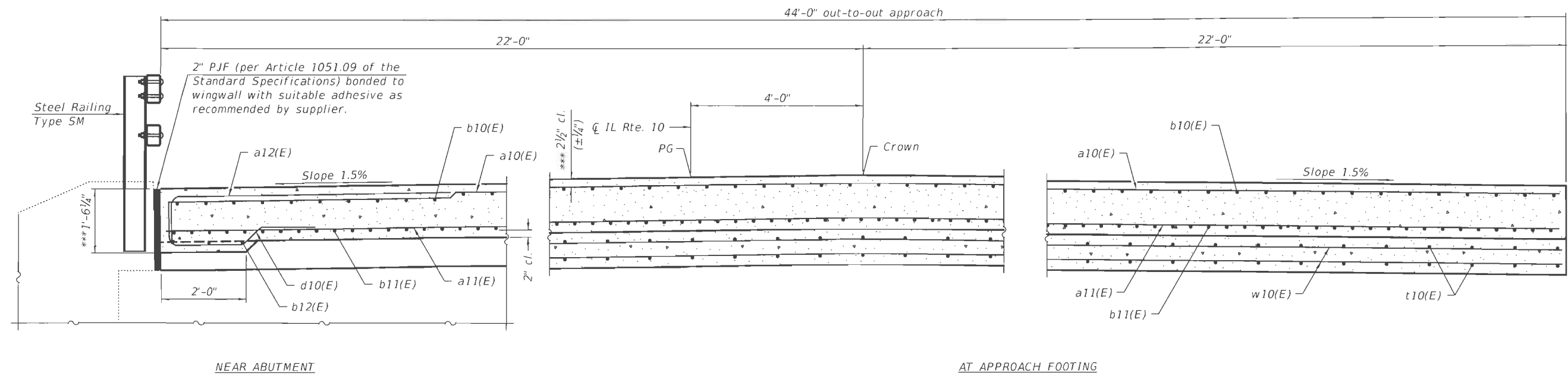
* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

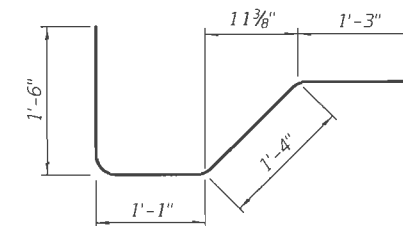
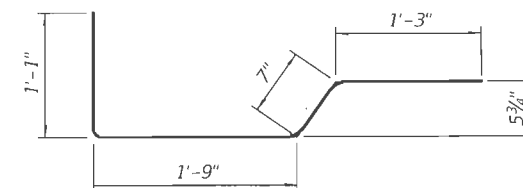
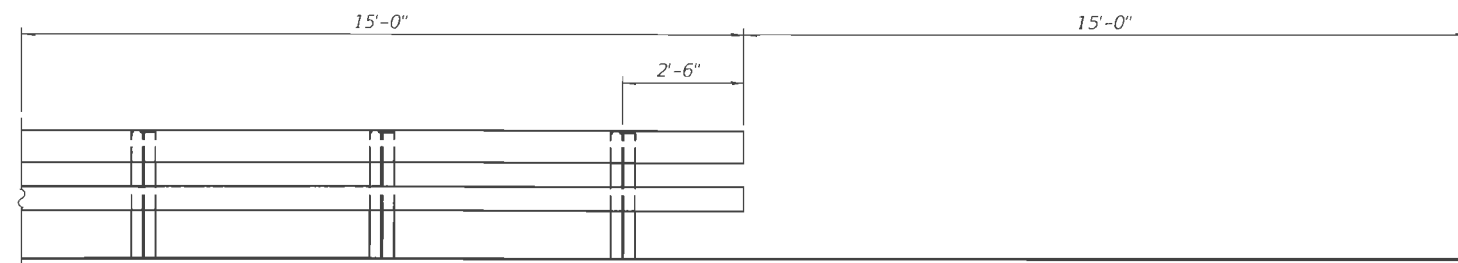
*** Prior to grinding.

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING











	East Approach		West Approach	
Point	Top	Bottom	Top	Bottom
A	729.35	728.51	729.00	728.16
B	729.68	728.84	729.33	728.49
C	729.35	728.51	729.00	728.16
D	729.38	728.54	728.93	728.10
E	729.71	728.87	729.26	728.43
F	729.38	728.54	728.93	728.10



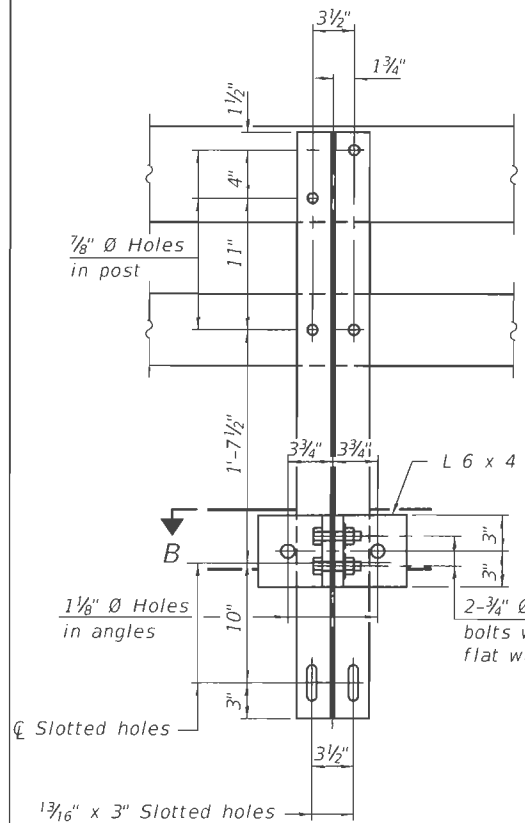
* Cost included with Concrete Superstructure (Approach Slab).



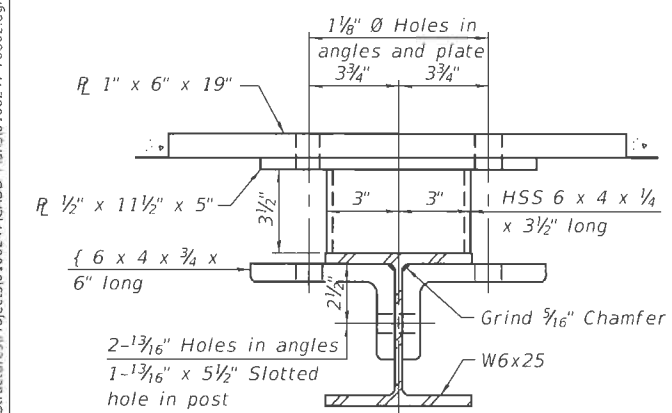
Notes:

Bar	No.	Size	Length	Shape
a10(E)	96	#5	43'-8"	
a11(E)	120	#8	43'-8"	
a12(E)	92	#5	7'-6"	
b10(E)	134	#5	29'-8"	
b11(E)	212	#9	29'-8"	
b12(E)	12	#5	14'-8"	
d10(E)	64	#5	4'-8"	
d11(E)	90	#5	5'-2"	
t10(E)	180	#4	9'-8"	
w10(E)	80	#5	43'-8"	
Concrete Superstructure (Approach Slab)			Cu. Yd.	129.7
Concrete Structures			Cu. Yd.	27.2
Reinforcement Bars, Epoxy Coated			Pound	50,400

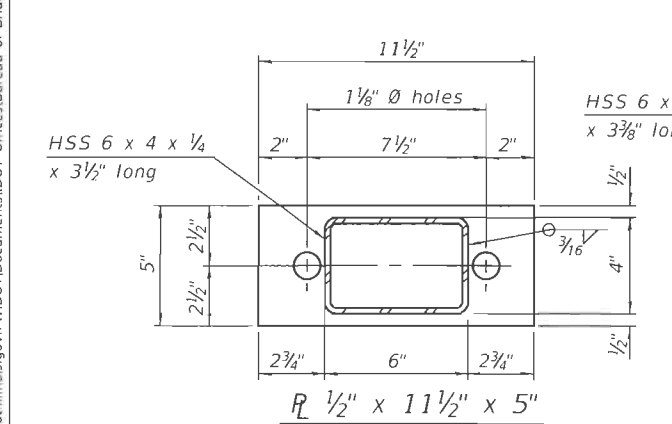
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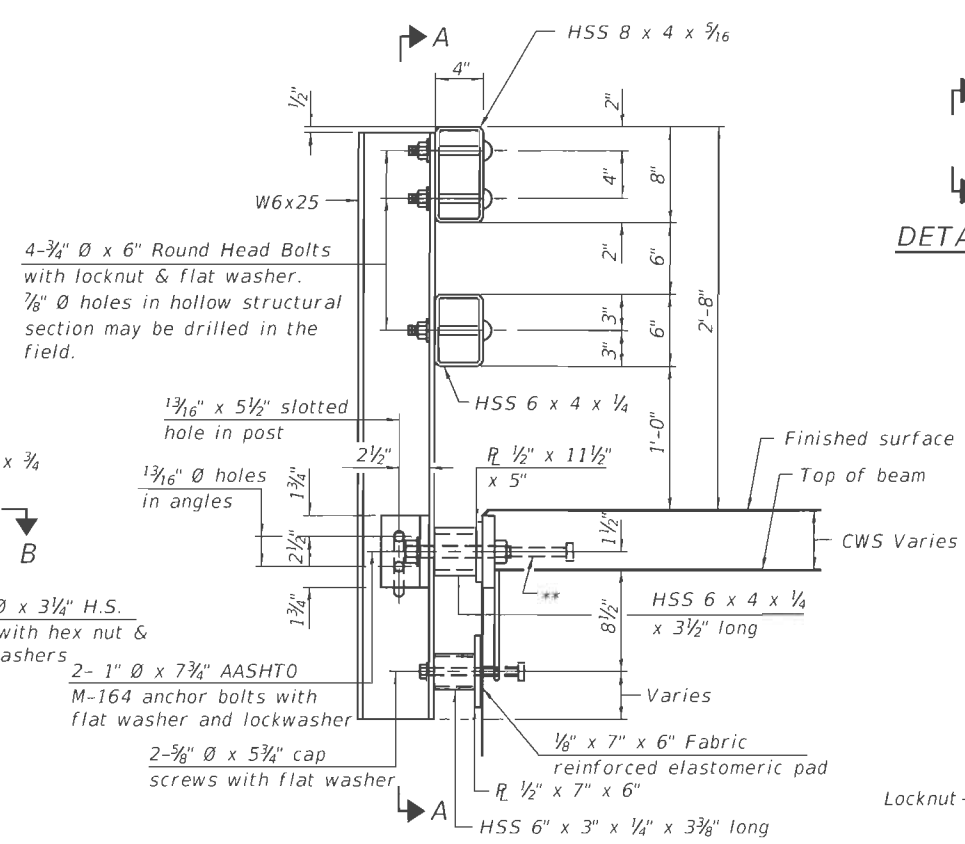
SECTION A-A



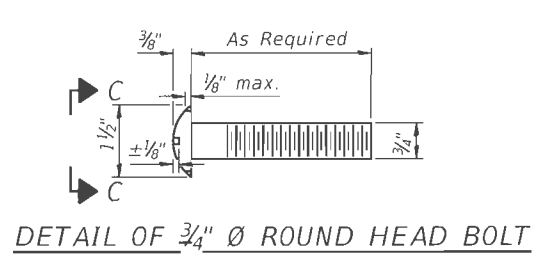
SECTION B-B



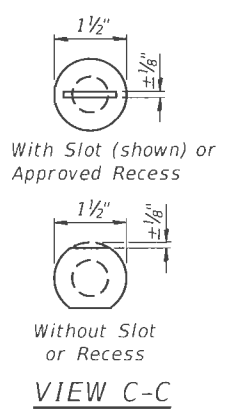
SECTION C-C



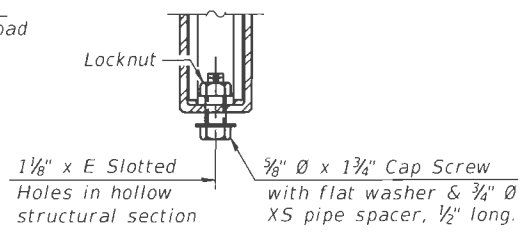
SECTION AT RAIL POST



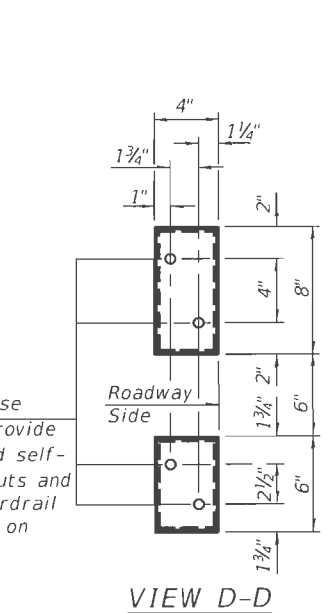
DETAIL OF 3/4" Ø ROUND HEAD BOLT



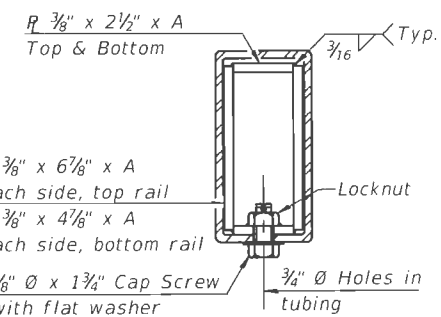
VIEW C-C



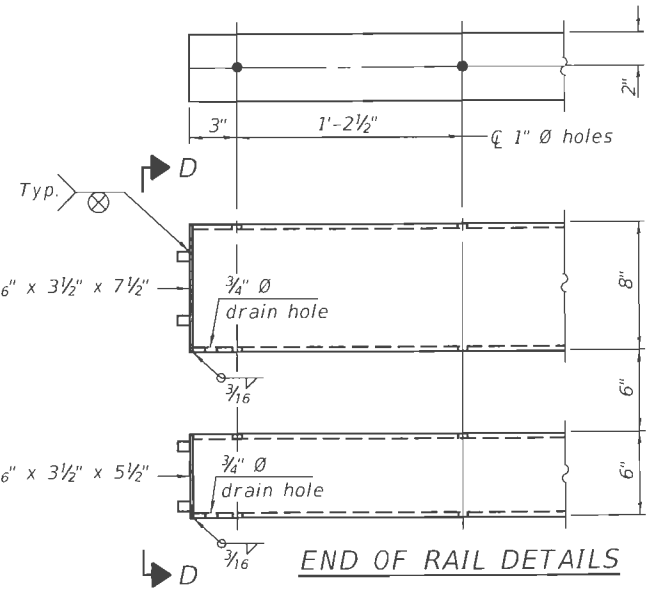
RAIL SPLICE CONNECTION AT EXPANSION JT.



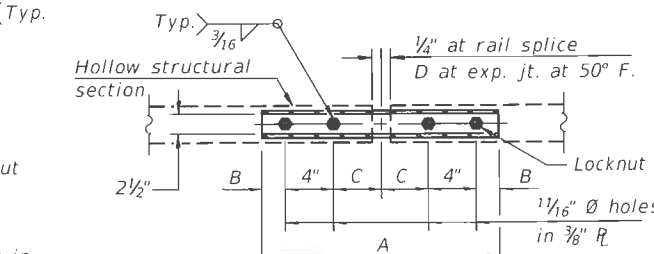
VIEW D-D



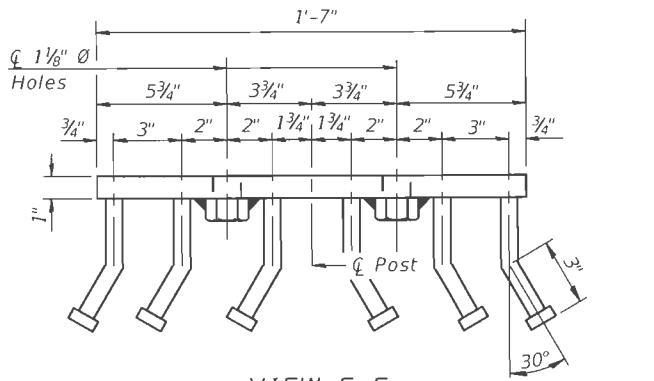
SECTION AT RAIL SPLICE



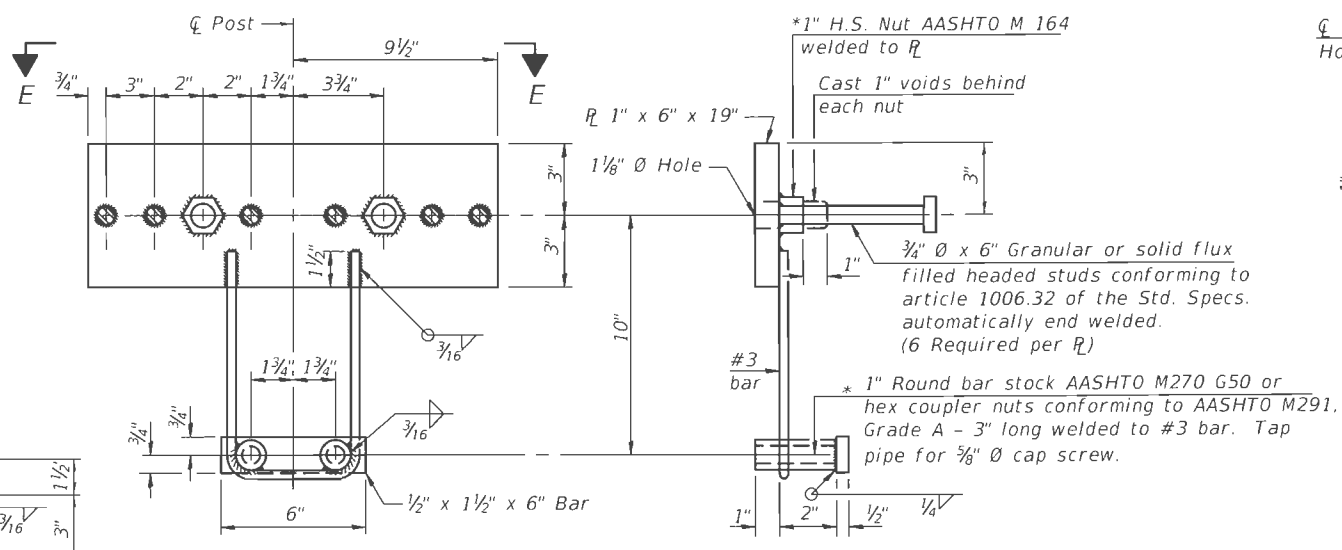
END OF RAIL DETAILS



PLAN-BOTT. SPLICE R TYPICAL



VIEW E-E



ANCHOR DEVICE

SPLICE DIMENSIONS					
T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

Notes:
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 included with Steel Railing, Type SM.
Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	121

R-34CWS 2-17-2017 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

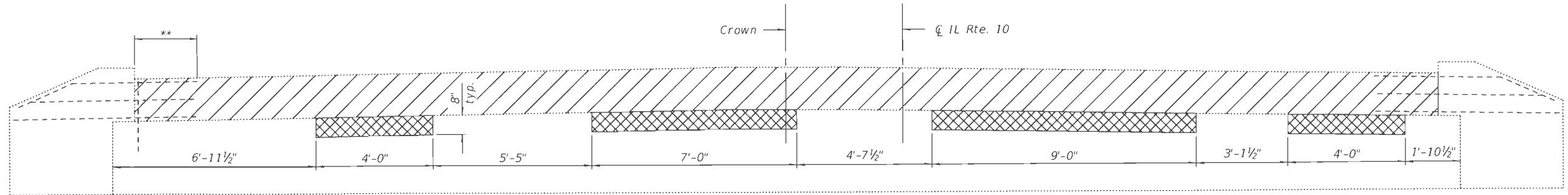
DESIGNED - NEPTALI RIVERA-MARTINEZ	EXAMINED -	DATE -
CHECKED - D.S. / D.H.R. / R.P.N.	PASSED -	REVISED -
DRAWN - MICHAEL B. MOSSMAN		REVISED -
CHECKED - D.H.R. / R.P.N. / G.R.A.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

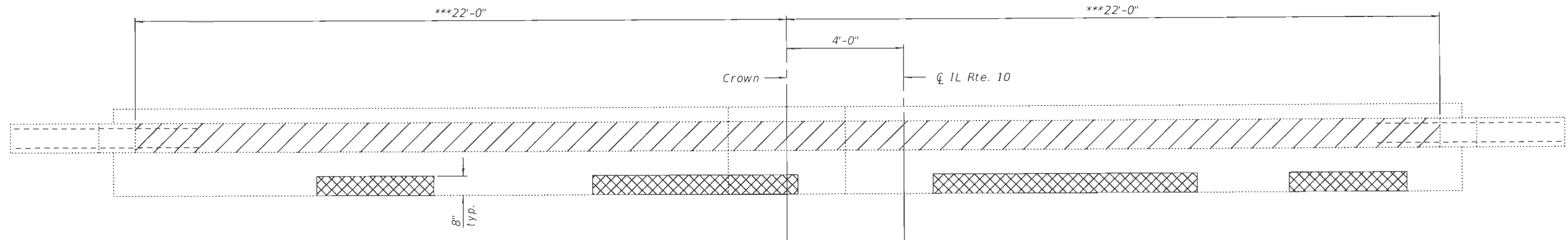
STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE
STRUCTURE NO. 010 - 0247

SHEET 12 OF 14 SHEETS

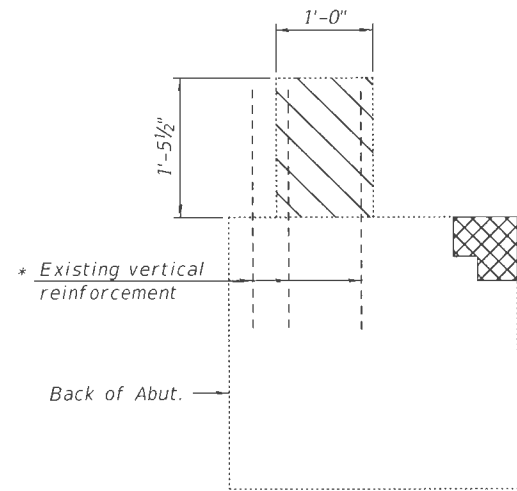
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	28
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				



ELEVATION
(Looking East)



PLAN



SECTION THRU ABUTMENT

- * Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in Concrete Removal.
- ** Cut, clean, straighten, and incorporate existing horizontal reinforcement into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in Concrete Removal.
- *** Concrete Removal dimensions shall be determined in the field. The removal limits should be adjusted to account for beam overrun and PJF installation as required for placement of the new superstructure.

Notes:
Hatched areas indicate areas of Concrete Removal.
Cross-hatched areas indicate areas of Structural Repair of Concrete (Depth Equal to or Less than 5 Inches).

BILL OF MATERIAL

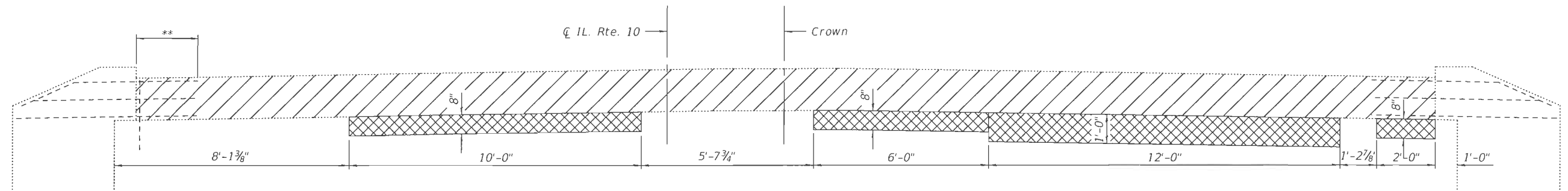
Item	Unit	Quantity
Concrete Removal	Cu. Yd.	2.4
Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	22.0

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

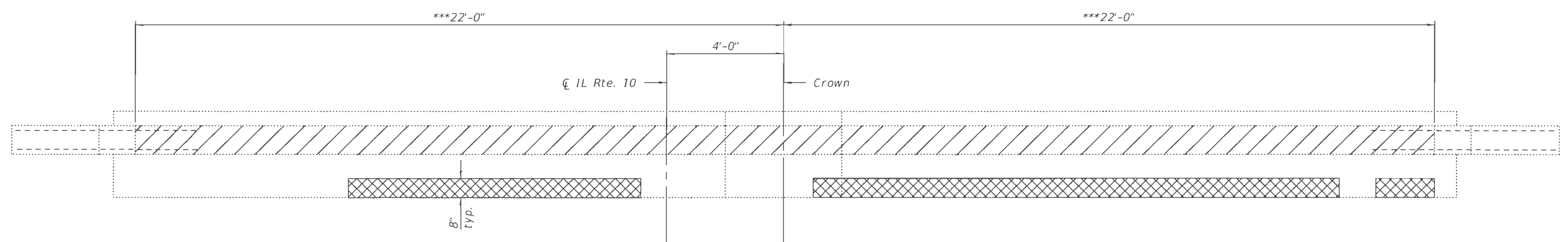
EAST ABUTMENT REMOVAL & REPAIRS
STRUCTURE NO. 010 - 0247

SHEET 13 OF 14 SHEETS

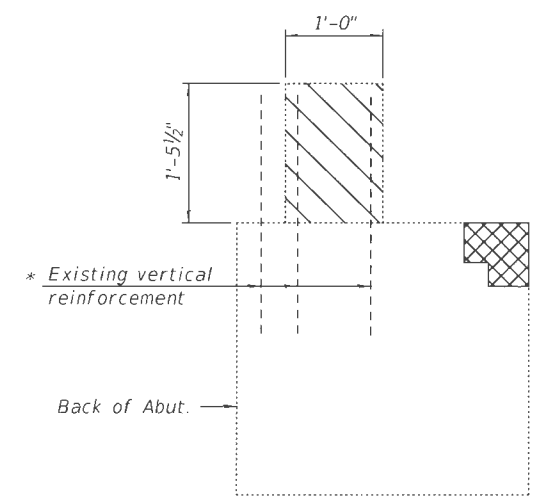
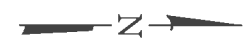
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	29
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				



ELEVATION
(Looking West)



PLAN



SECTION THRU ABUTMENT

- * Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in Concrete Removal.
- ** Cut, clean, straighten, and incorporate existing horizontal reinforcement into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in Concrete Removal.
- *** Concrete Removal dimensions shall be determined in the field. The removal limits should be adjusted to account for beam overrun and PJF installation as required for placement of the new superstructure.

Notes:
Hatched areas indicate areas of Concrete Removal.
Cross-hatched areas indicate areas of Structural Repair of Concrete (Depth Equal to or Less than 5 Inches).

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	2.4
Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	31.5

MODEL: 0100247-70602-014
FILE NAME: pw\planroom\dot-illinois.gov\PWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0100247\00247-70602.dgn
8/10/2020 9:13:19 AM

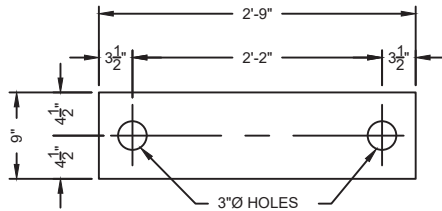
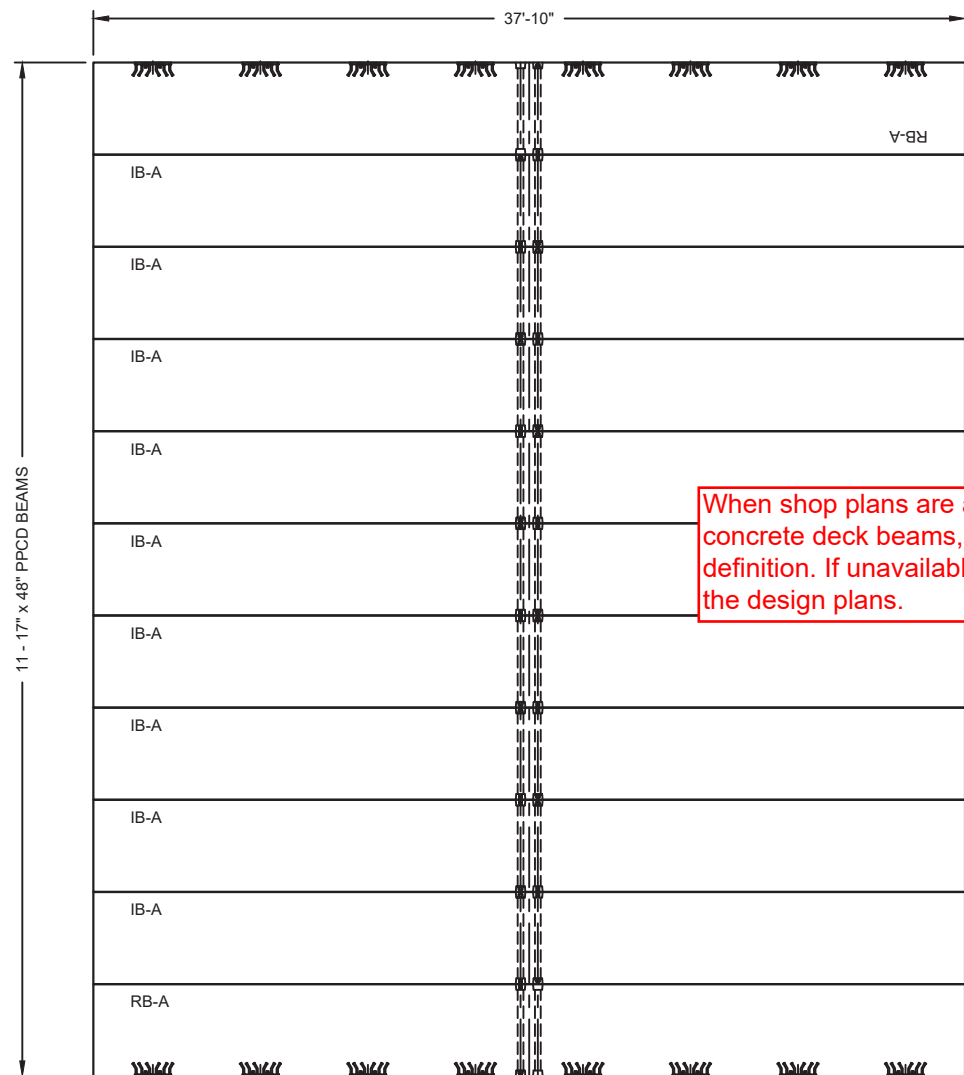
DESIGNED - NEPTALI RIVERA-MARTINEZ	EXAMINED - <i>Joanne F. Jaffe</i>	DATE -
CHECKED - D.S. / D.H.R. / R.P.N.	PASSED - <i>Michael B. Mossman</i>	REVISED -
DRAWN - MICHAEL B. MOSSMAN	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
CHECKED - D.H.R. / R.P.N. / G.R.A.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT REMOVAL & REPAIRS
STRUCTURE NO. 010 - 0247

SHEET 14 OF 14 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
801	4BR-2	CHAMPAIGN	44	30
CONTRACT NO. 70602				
ILLINOIS FED. AID PROJECT				



ENGINEER OF BRIDGES & STRUCTURES

DISTRIBUTION DRAWING

8 THICK

48

When shop plans are available for precast prestressed concrete deck beams, they should be used for the model definition. If unavailable, the beams can be modeled using the design plans.



SECTION @ ABUTMENT

Diagram illustrating the cross-section of a bridge deck with reinforcement details:

- FABRIC BEARING PADS**: Indicated by a label pointing to the top surface of the deck.
- 2½"x1" P.J.F. FULL WIDTH OF BRIDGE DECK BEAMS. 90 L.F. REQUIRED**: Label pointing to the vertical reinforcement bars (P.J.F. bars) extending through the deck.
- 15"**: Dimension indicating the height of the deck section shown.
- 1"Ø x 2'-6" DOWEL BARS 44 REQUIRED**: Label pointing to the horizontal reinforcement bars (dowel bars) located near the bottom of the deck.

** Transverse Tie Rods, Nuts, Sleeves, and Washers shall be hot dipped Galvanized in accordance with AASHTO M 232 after fabrication.

THIS JOB IS STATE INSPECTED.

LOADING HL93 (NEW CONSTRUCTION) F'C = 6,000PSI. F'CI. = 5,000PSI.

PRESTRESSING STEEL SHALL BE UNCOATED HIGH STRENGTH, LOW RELAXATION 1/2"Ø 7-WIRE STRAND, GRADE 270 STRESSED TO 30,900 LBS. EACH.

STEEL FOR THE TRANSVERSE TIE ROD ASSEMBLIES (i.e. RODS, NUTS, WASHERS, AND COUPLING NUTS) SHALL BE ASTM F1554 GRADE 55. TRANSVERSE TIE ASSEMBLIES SHALL BE HOT DIPPED GALVANIZED ACCORDING TO AASHTO M232.

STEEL FOR DOWEL RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 55 OR ASTM A706 GRADE 60. DOWEL RODS SHALL BE EITHER EPOXY COATED ACCORDING TO ASTM A775 OR GALVANIZED ACCORDING TO AASHTO M111.

ALL STEEL HARDWARE SHALL BE HOT DIPPED GALVANIZED ACCORDING TO AASHTO M111 OR M232.

REINFORCEMENT BARS SHALL CONFORM TO ASTM A 706, GRADE 60. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

REBAR PLACEMENT TOLERANCE SHALL CONFORM TO SECTION 1.2.4, TABLE FOR MAXIMUM ALLOWABLE DIMENSIONAL TOLERANCES FOR DECK BEAMS OF THE MANUAL FOR FABRICATION OF PRECAST PRESTRESSED CONCRETE PRODUCTS.

ACTUAL DIMENSIONS ARE MEASURED ALONG CENTERLINE OF BAR TO NEAREST INCH.

FABRIC BEARING PADS SHALL CONFORM TO ART. 1082.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

CORROSION INHIBITOR, PER ARTICLE 1020.05(b)(10) AND 1021.07 OF THE STANDARD SPECIFICATIONS, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.

THE TOP SURFACE OF THE BEAMS SHALL BE PREPARED BY WASHING WITH WATER UNDER PRESSURE OR BY SANDBLASTING TO EXPOSE CLEAN, WELL BONDED AGGREGATE TO AN AMPLITUDE OF APPROXIMATELY ¼". TO FACILITATE THE REMOVAL OF THE CEMENT PASTE, THE EXPOSED SURFACE SHALL BE THOROUGHLY COVERED IN SURFACE RETARDER. SEE ARTICLE 504.06 OF THE STANDARD SPECIFICATIONS AND SEC. 3.4.1 OF THE MANUAL FOR FABRICATION OF PRECAST PRESTRESSED CONCRETE PRODUCTS.

THE CUT STRANDS OF EACH BEAM END SHALL BE GIVEN TWO COATS OF ZINC DUST SPRAY OR PAINT MEETING THE REQUIREMENTS OF ASTM A 780. THE ZINC DUST SPRAY OR PAINT SHALL BE APPLIED BEFORE CORROSION APPEARS AND ALLOWED TO DRY ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS PRIOR TO ANOTHER COAT OF ZINC.


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 SAND, ABRASIVE, OR WATER BLASTING THE KEYWAY AREAS BETWEEN THE TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.

PLACEMENT OF INSERTS, DOWEL TUBES, & TRANSVERSE TIE TUBES SHALL NOT INTERFERE WITH ANY REINFORCEMENT OR STRUCTURAL COMPONENTS DETAILS SHOWN ON CONTRACT PLANS AND SHALL NOT EXCEED A PLACEMENT TOLERANCE OF ± 1/2"

ALL DIMENSIONS ARE OUT TO OUT.

LIFT LOOPS SHALL BE MADE OF ½"Ø-270KSI STRANDS TIED AND SHAPED TO FORM LOOPS. SEE LIFT LOOP DETAIL FOR NUMBER OF STRANDS TO BE USED PER LOOP. A MINIMUM 2 ½"Ø LIFTING PIN SHALL BE USED TO ENGAGE THE LIFTING LOOPS DURING HANDLING.

A PROTECTIVE COAT MEETING THE REQUIREMENTS OF SEC. 1023 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO THE FASCIA DECK BEAMS ON THE SIDE EXPOSED TO VIEW AND THE ADJACENT SIDE UNDERNEATH FOR A DISTANCE EXTENDING A MINIMUM OF 9". THE PROTECTIVE COAT SHALL BE APPLIED IN ACCORDANCE OF THE GUIDELINES SET OUT IN PARAGRAPHS 2 AND 4 OF SECTION 503.19 OF THE STANDARD SPECIFICATIONS.

Letting: 9/18/20 Item# 025			1,665 S.F. PRESTRESSED CONCRETE DECK BEAMS 17"			<div>COUNTY MATERIALS</div> <div></div> <div>702 N. EDWIN ST. CHAMPAIGN, ILLINOIS 61821 PHONE: 217-352-4181 FAX: 217-352-9601</div> <div><table><tr><td colspan="3">PRODUCTION PLANT: CHAMPAIGN, IL</td></tr><tr><td>REVIEWED:</td><td>CE</td><td>10-15-20</td></tr></table></div>	PRODUCTION PLANT: CHAMPAIGN, IL			REVIEWED:	CE	10-15-20
PRODUCTION PLANT: CHAMPAIGN, IL												
REVIEWED:	CE	10-15-20										
PRINT RECORD			Contract No. 70602		Slate Job No, C-95-053-18							
DATE	No.	To	<div><u>STR. NO. 010-0247</u></div> <div><u>IL 10 OVER UNNAMED TRIBUTARY</u></div> <div><u>TO COPPER SLOUGH</u></div> <div><u>CHAMPAIGN ROAD DISTRICT</u></div> <div><u>STA. 84+18.00</u></div> <div><u>CHAMPAIGN COUNTY, IL</u></div> <div><u>SEC. 4BR-2</u></div>									
10/15/20	1											
CONTRACTOR STARK EXCAVATING												
			ERECTION DETAILS									
			SHOP NO: CHPC-31-20									
			SHEET 1 of 3									

APPROVED

For Main Dimensions and
Materials Only

October 21, 2020

Dr. Carl J. Perry

ENGINEER OF BRIDGES & STRUCTURES

DISTRIBUTION DRAWING

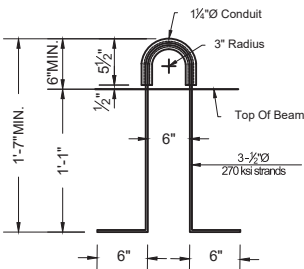
10 STRANDS

8 STRANDS

STRAND PATTERN

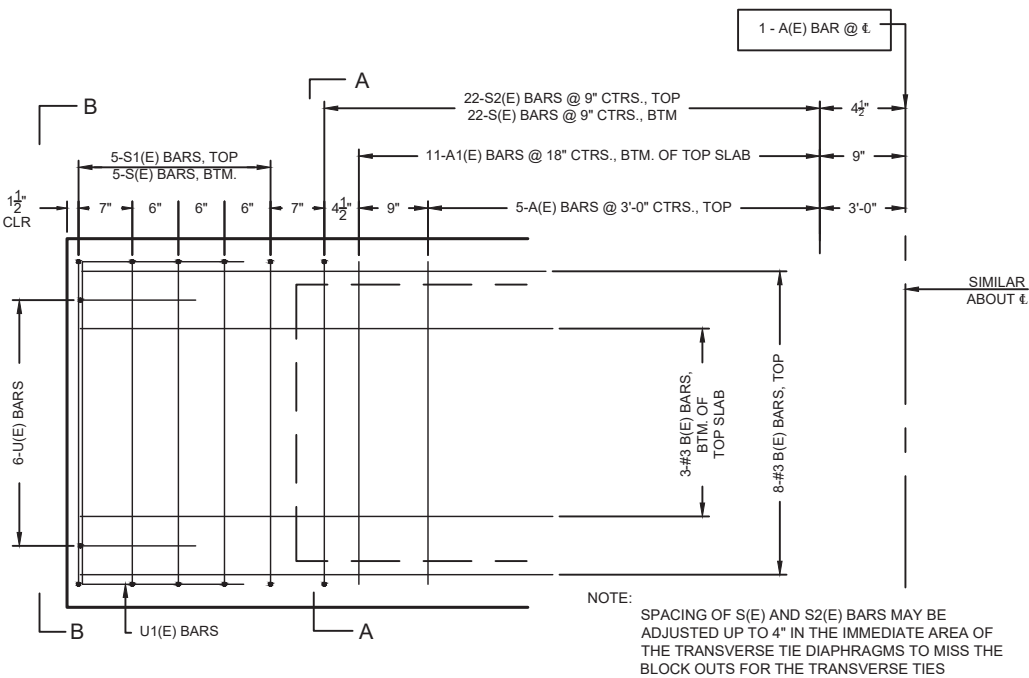
20 STRAND - 8 UP $1\frac{3}{4}$ ", 10 UP $3\frac{3}{4}$ ",
2 UP $11\frac{3}{4}$ "

STRAND RELEASE PATTERN

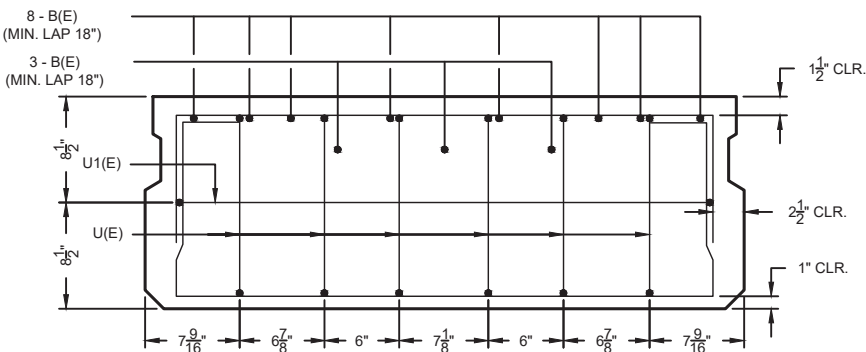


LIFTING LOOP

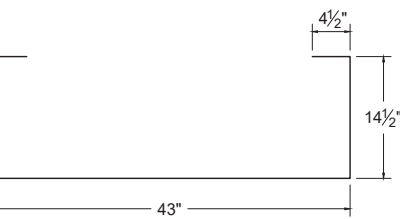
USE 3 - $\frac{1}{2}$ " \varnothing STRAND



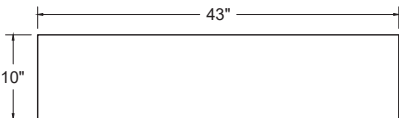
END OF BEAM DETAIL



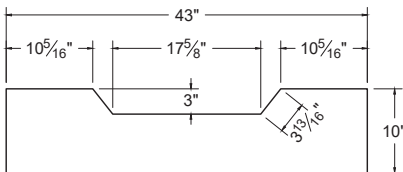
VIEW B-B



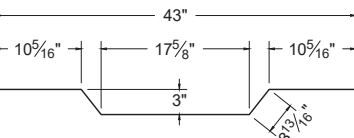
S(E) BAR
594 REQUIRED



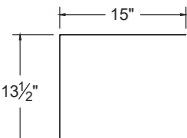
S1(E) BAR
110 REQUIRED



S2(E) BAR
484 REQUIRED



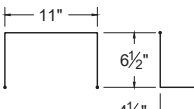
A1(E) BAR
242 REQUIRED



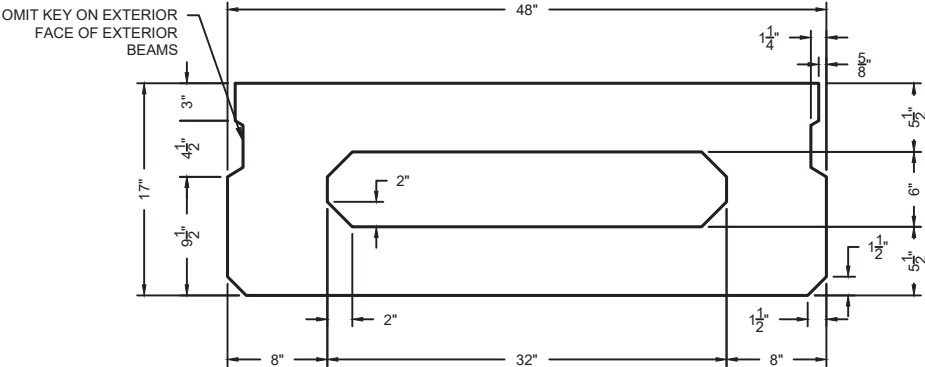
U(E) BAR
132 REQUIRED



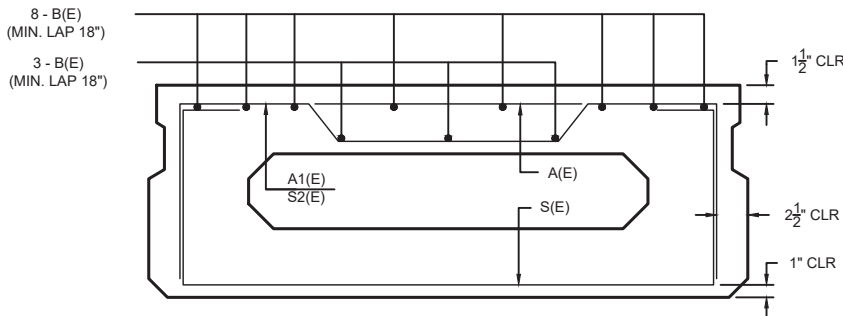
U1(E) BAR
22 REQUIRED



D(E) BAR
32 REQUIRED



SECTION A-A
SHOWING DIMENSIONS



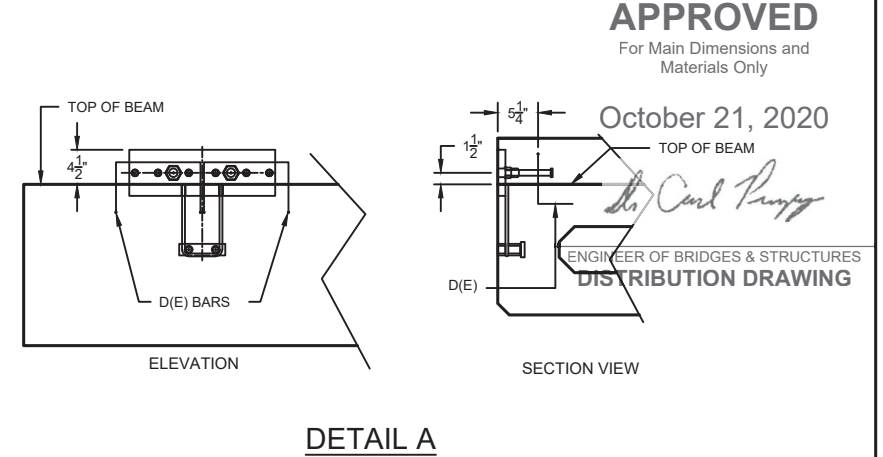
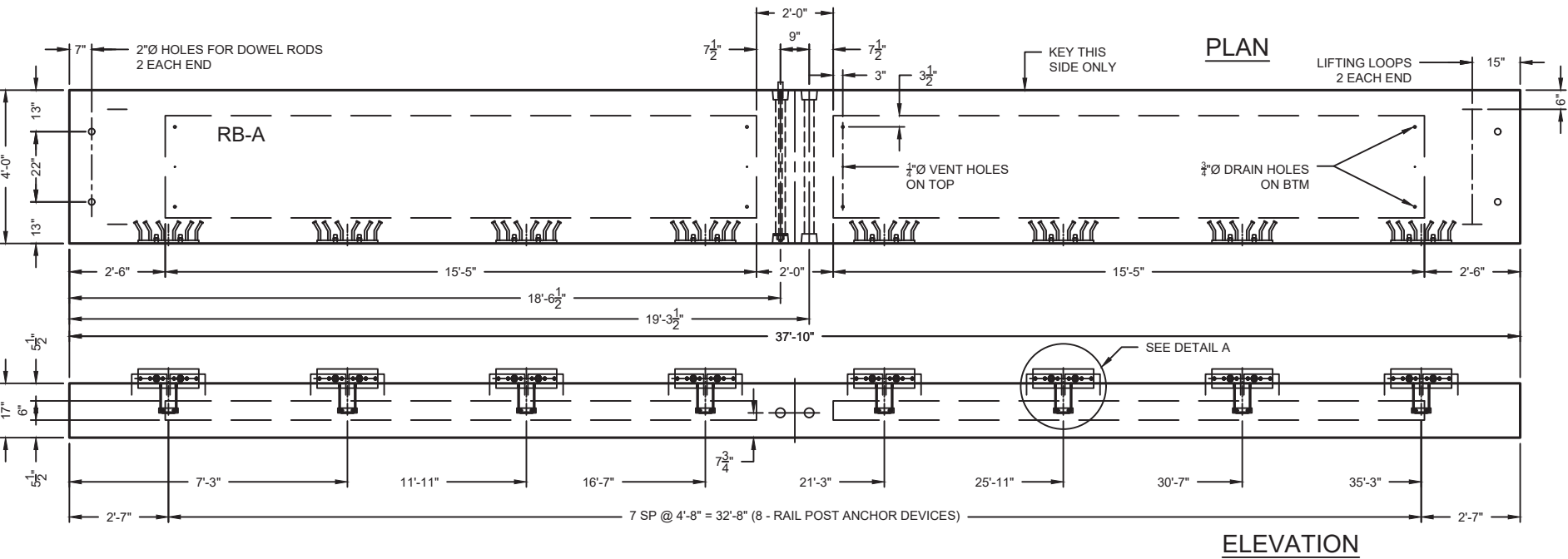
SECTION A-A
SHOWING REINFORCEMENT

MINIMUM BAR LAP
#3 BAR = 1'-6"

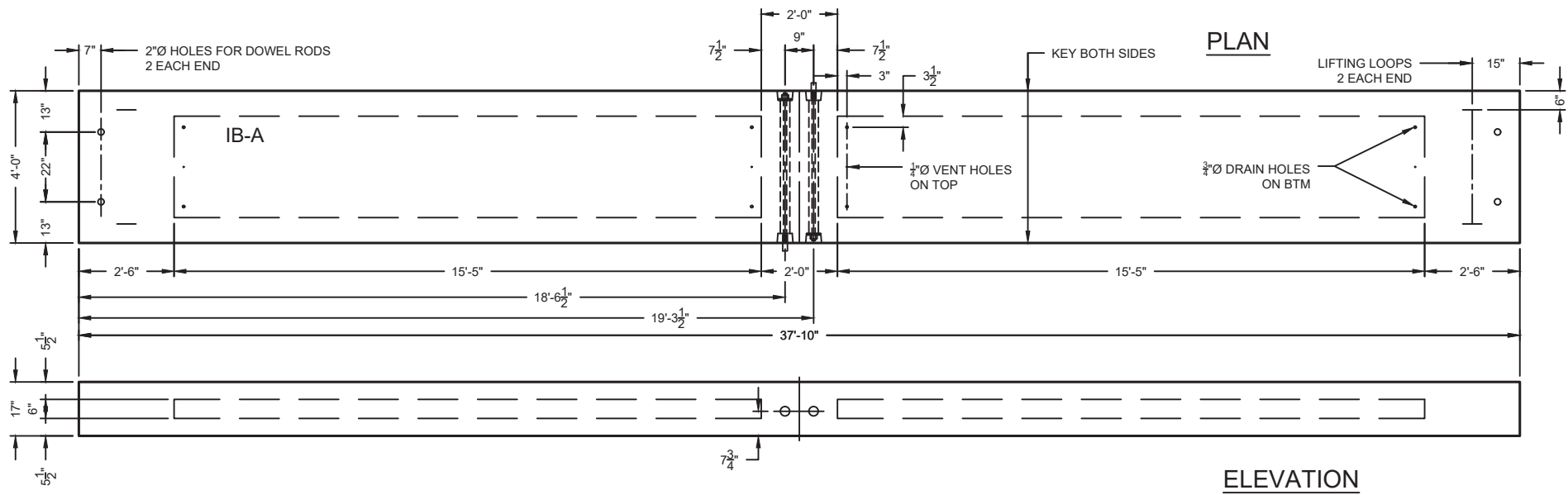
BILL OF BARS

BAR	SIZE	LENGTH	SHAPE	ONE BEAM	JOB TOTAL
A(E)	# 4	3'-7"	—	11	121
A1(E)	# 4	3'-10"	—	22	242
B(E)	# 3	37'-7"	—	11	121
S(E)	# 4	6'-9"	□	54	594
S1(E)	# 4	5'-3"	□	10	110
S2(E)	# 4	5'-6"	□	44	484
U(E)	# 5	3'-8"	□	12	132
U1(E)	# 4	6'-0"	□	2	22
RB-A ONLY					
D(E)	# 4	2'-9"	□	16	32

CONTRACT No. 70602	STATE JOB No. C-95-053-18
STR. NO. 010-0247	
IL 10 OVER	
UNNAMED TRIBUTARY	
TO COPPER SLOUGH	
CHAMPAIGN COUNTY, IL	
SEC. 4BR-2	
REVIEWED:	CE 10-15-20
17" x 48" BEAM	
SHOP NO. CHPC-31-20	
SHEET 2 OF 3	



DATE POURED			
1		2	
17" x 48" BEAM RB-A			



DATE POURED			
1		6	
2		7	
3		8	
4		9	
5			
17" x 48" BEAM IB-A			

FABRICATION NOTES:

SEAL DRAIN BEFORE CONCRETE PLACEMENT AND OPEN BEFORE SHIPMENT. VENTS TO BE OPEN DURING CURING PERIOD BUT REMOVED AND SEALED BEFORE SHIPMENT (FLUSH WITH TOP OF BEAM)

THE TOP SURFACE OF THE BEAMS SHALL BE PREPARED BY WASHING WITH WATER UNDER PRESSURE OR BY SANDBLASTING TO EXPOSE CLEAN, WELL BONDED AGGREGATE TO AN AMPLITUDE OF APPROXIMATELY 1/4". TO FACILITATE THE REMOVAL OF THE CEMENT PASTE, THE EXPOSED SURFACE SHALL BE THOROUGHLY COVERED IN SURFACE RETARDER. SEE ARTICLE 504.06 OF THE STANDARD SPECIFICATIONS AND SEC. 3.4.1 OF THE MANUAL FOR FABRICATION OF PRECAST PRESTRESSED CONCRETE PRODUCTS.

SHOP BILL OF MATERIAL				
		ONE BEAM	TOTAL JOB	REMARKS
CONCRETE 6,000psi		CU YD	6.42	70.62
LIFTING LOOPS		EACH	4	44
FOAM VOID 32" x 6"	* 15'-5"		2	22
TUBES 2"Ø x 1'-5"			4	44
TUBES 3"Ø x 3'-6"			2	22
DRAIN TUBES ¾"Ø x 5½"			8	88
VENT TUBES ¼"Ø x 6½"			4	44
RAIL POST ANCHOR DEVICES			8	16
*DENOTES ORDER LENGTH				

COUNTY MATERIALS CHAMPAIGN
702 N. EDWIN ST. CHAMPAIGN, ILLINOIS 61821
PHONE: 217-352-4181

CONTRACT No. 70602	STATE JOB No. C-95-053-18
STR. NO. 010-0247	
IL 10 OVER	
UNNAMED TRIBUTARY	
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CHAMPAIGN COUNTY, IL	
SEC. 4BR-2	
REVIEWED:	CE 10-15-20
17" x 48" BEAM	
SHOP NO. CHPC-31-20	
SHEET 3 OF 3	