

cover.dgn 02-DEC-1997

36X 98%
4-17-1999

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

F.A.P. ROUTE 753 (IL 104)
SECTION 142 (BR, BR-1, BR-2) & 143 BR

PROJECT ACBHF-753(22)
CHRISTIAN COUNTY
C-96-520-98

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 753	142	CHRISTIAN	75	1
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	*ACBHF-753(22)	

D-96-514-96

INDEX OF SHEETS

TITLE SHEET	1
TYPICAL SECTIONS	2
SUMMARY OF QUANTITIES	3-4
SCHEDULE AND GENERAL NOTES	5-6
PLAN AND PROFILE	7-10
TRAFFIC CONTROL PLANS	11-14
DETAILS	15-17
SLOPE WALL AND RIPRAP DETAILS	18
BRIDGE PLANS	19-57 *
CROSS SECTIONS	58-75

* SHEET 48 HAS BEEN DELETED

STANDARDS

- 000001-01
- 420401-01
- 515001
- 630001
- 631026
- 701001
- 701006-01
- 701011
- 701201
- 701301
- 701306
- 701311
- 701321-01
- 701326
- 702001
- 704001
- 780001
- 781001-01

SECTION 142 BR-1 INCLUDES REHABILITATION OF S.N. 011-0020 CARRYING FAP 753 (IL 104) OVER LAKE SANGCHRIS

SECTION 142 BR-1 INCLUDES REMOVAL OF EXISTING GUARDRAIL LT. & RT. STA. 1+400

SECTION 142 BR INCLUDES REHABILITATION OF S.N. 011-0019 CARRYING FAP 753 (IL 104) OVER LAKE SANGCHRIS

BEGIN SECTION 142 BR STA. 0+390
END SECTION 142 BR STA. 0+520

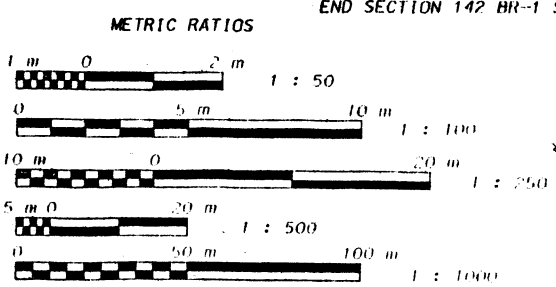
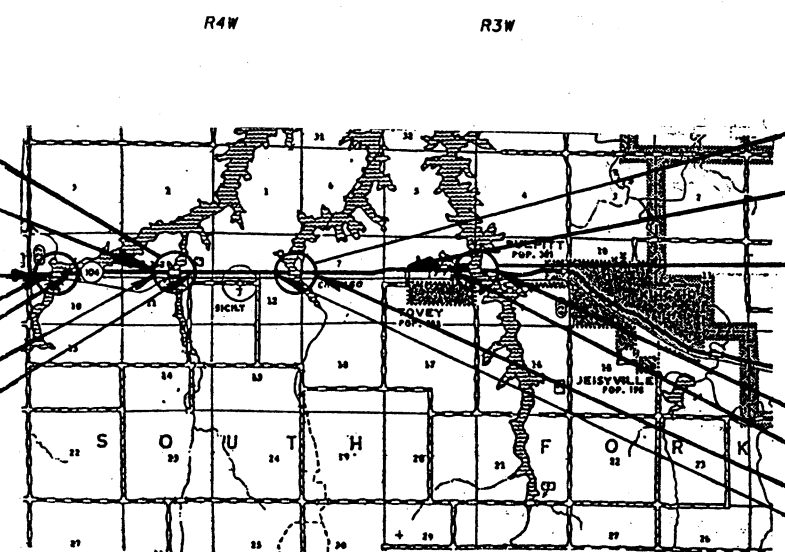
BEGIN SECTION 142 BR-1 STA. 2+445
END SECTION 142 BR-1 STA. 2+575

SECTION 142 BR-2 INCLUDES REHABILITATION OF S.N. 011-0021 CARRYING FAP 753 (IL 104) OVER LAKE SANGCHRIS

SECTION 143 BR INCLUDES REMOVAL OF EXISTING GUARDRAIL RT. STA. 7+185

SECTION 143 BR INCLUDES REHABILITATION OF S.N. 011-0022 CARRYING FAP 753 (IL 104) OVER LAKE SANGCHRIS

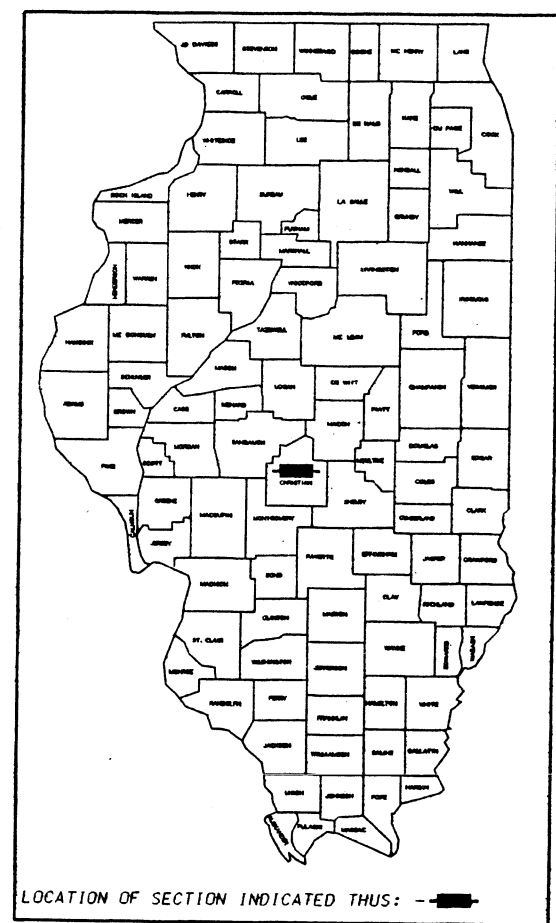
END SECTION 143 BR STA. 7+987.628
BEGIN SECTION 143 BR STA. 7+888.988
END SECTION 142 BR-2 STA. 3+705
BEGIN SECTION 142 BR-2 STA. 3+583.125



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

GROSS LENGTH OF SECTION	7597.628 METERS	7.589 KILOMETERS
SECTION 142 BR	130.000 METERS	0.130 KILOMETERS
SECTION 142 BR-1	130.000 METERS	0.130 KILOMETERS
SECTION 142 BR-2	121.875 METERS	0.122 KILOMETERS
SECTION 143 BR	98.640 METERS	0.099 KILOMETERS
NET LENGTH OF SECTION	480.515 METERS	0.481 KILOMETERS



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 17, 1997
James L. Emery
DISTRICT ENGINEER

19

ENGINEER OF PROJECT
DEVELOPMENT AND IMPLEMENTATION
June 19, 1998
Bill Hunkley
ENGINEER OF DESIGN AND ENVIRONMENT

June 19, 1998
James R. Stutz
DIRECTOR, DIVISION OF HIGHWAYS

CURRENT A.D.T. = 3350 (1994)
PROJECTED A.D.T. = 4150 (2017)

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

6-237

CONTRACT NO. 92926

CHRISTIAN COUNTY SECTION 142 (BR, BR-1, BR-2), 143 BR FAP 753

011-0019

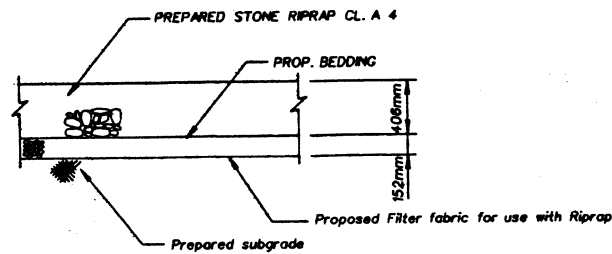
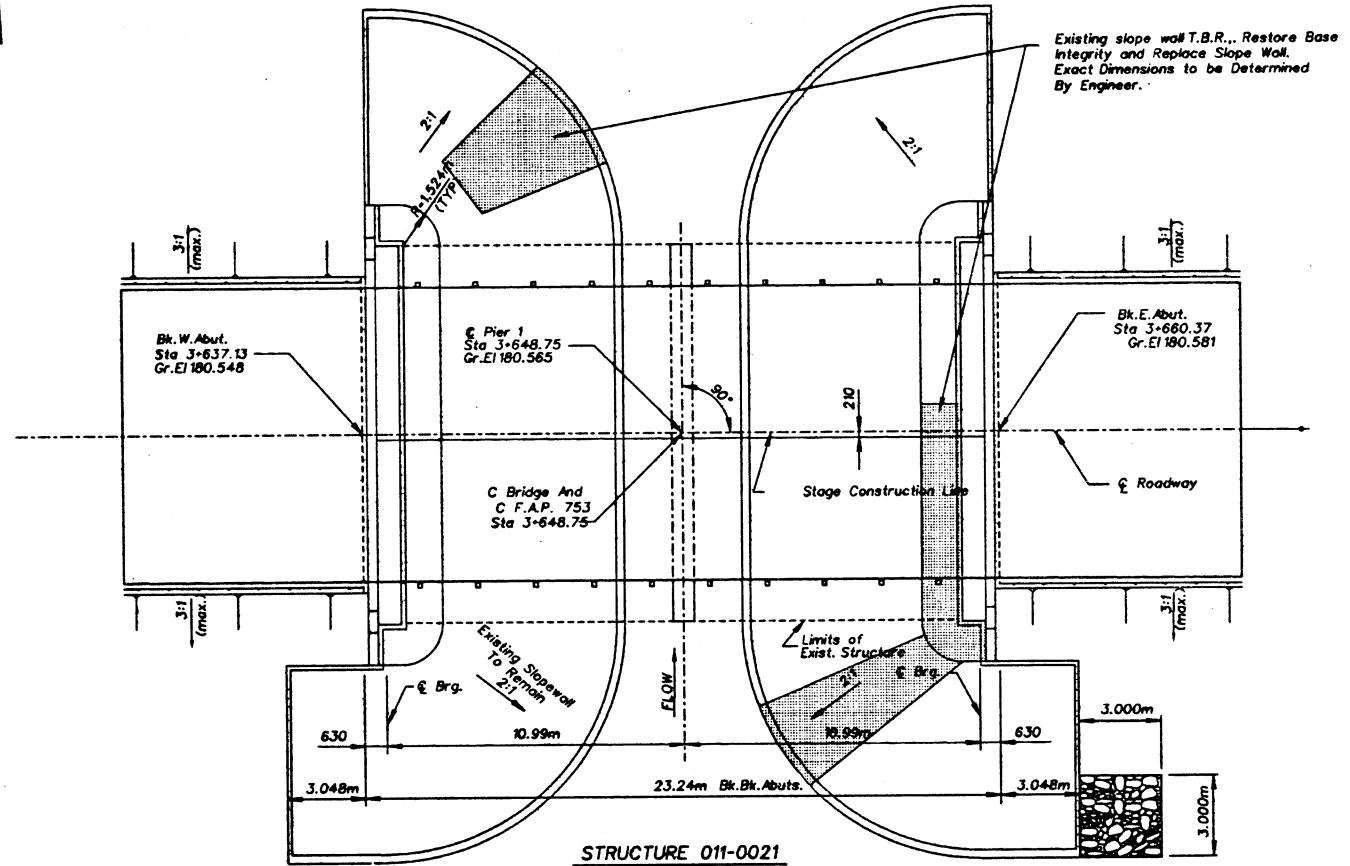
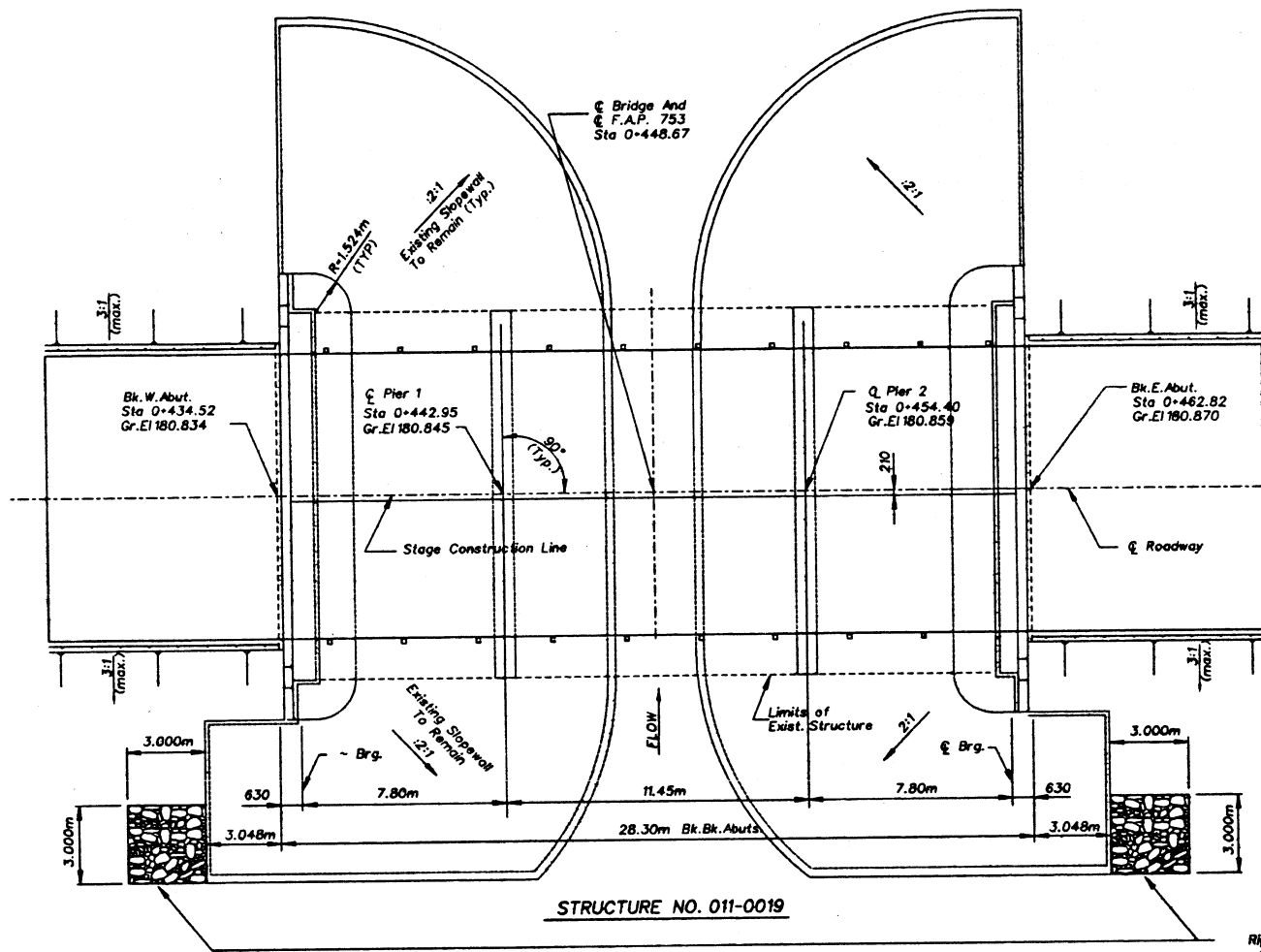
AAIC AAIC Incorporated
Architects / Engineers

011-0019

PROJECT ENGINEER: SAL MADONIA (217) 782-4751
SQUAD LEADER: NICHOLAS A. KETCHUM (217) 524-7340

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SCALE	SHEET NO.
F.A.P. 753		CHRISTIAN	7.5	1A
X SHEETS				



RIP RAP QUANTITIES

Bridge	0011-0019	m ²	Bridge	0011-0021	m ²
East side	9		East side	9	
West side	9		West side	9	
Subtotal	18		Subtotal	18	

SLOPE WALL REPAIRS
& RIPRAP INSTALLATION
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR & 142BR-2
STA. 0+448.67 & 3+648.75
CHRISTIAN COUNTY, ILLINOIS

DESIGNED	SCH
CHECKED	WCU
DRAWN	SY
CHECKED	RAB

EXISTING STRUCTURE-NO. 011-0019

Built in 1965 FAP Route 753 over Sangchris Lake. Simple Precast Conc. Girder Units, 3 Spans lengths of 7.76m, 11.455m, 7.76m, total width of superstructure is 14.12m out to out. Existing Superstructure only to be removed and replaced with 432mm PPC deck beams. Existing abutments and piers to remain and be modified. Stage construction to be utilized.

BENCHMARK

Chisled "B" in S.W. Corner of 4E, Meadow of Railroad Bridge Sta. 0+440.01, 26.16m Right, Elev. 181.411.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SHEET NO.	COUNTY	SECTION	DATE
F.A.P. 753	142BR	CHRISTIAN	75	19

DESIGN SPECIFICATIONS

1996 A.A.S.H.T.O.

SEISMIC DATA

Seismic Performance Category (SPC)=A
Bedrock Acceleration Coefficient (A)=0.066
Site Coefficient (S)=1.5

LOADING MS 18

Allow 12.1kN/m² for future wearing surface

DESIGN STRESSES

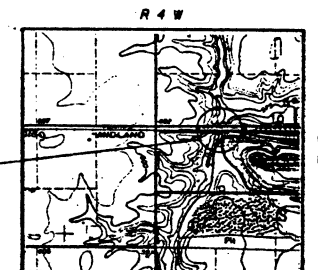
FIELD UNITS

f_c = 24 MPa
f_y = 400 MPa (Reinf.)

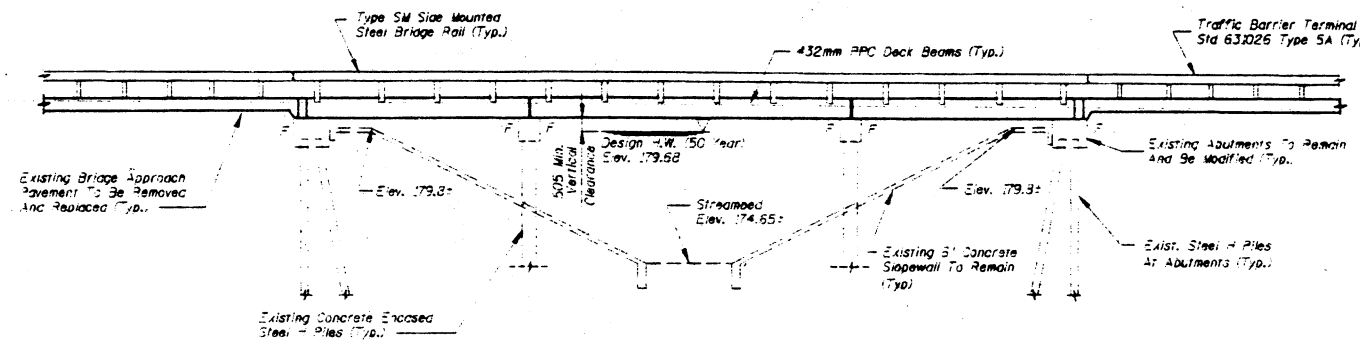
PRECAST PRESTRESSED UNITS

f_c = 35 MPa
f_{ci} = 28 MPa
f_{ti} = 1.860 MPa (2.7mm # strands)
f_{ts} = 1.302 MPa (2.7mm # strands)
Low relaxation

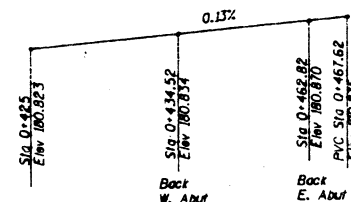
STATION 0+448.67
REBUILT BY
STATE OF ILLINOIS
FAP 753 SECTION 142BR
PROJECT A60MF-753(22)
LOADING MS 18
STR. NO. 011-0019
NAME PLATE
See Sta. 515001



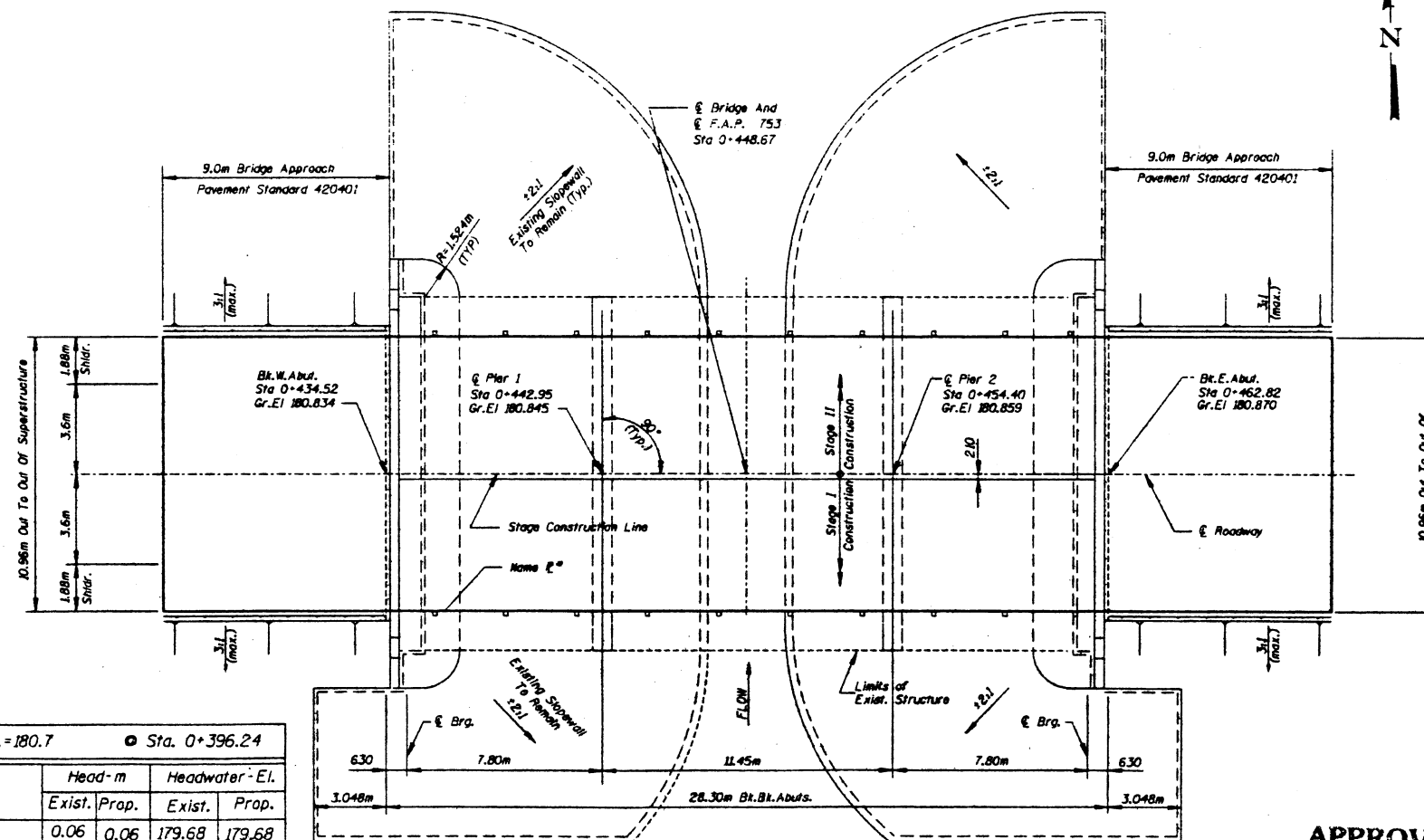
LOCATION SKETCH



ELEVATION



PROFILE GRADE (Along F.A.P. 753)



PLAN

WATERWAY INFORMATION

Drainage Area = 47.4 km ²			Low Grade El.=180.7			● Sta. 0+396.24			
Flood	Freq. Yr.	Q m ³ /s	Opening m ²		Nat. H.W.E.	Head-m		Headwater - El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	61.4	55.2	55.2	179.62	0.06	0.06	179.68	179.68
Base	100	70.8	59.1	59.1	179.80	0.06	0.06	179.86	179.86
Overtopping	—	—	—	—	—	—	—	—	—
Max. Calc.	500	92.9	66.8	66.8	180.11	0.12	0.12	180.23	180.23

DESIGNED	RAB
CHECKED	WCU
DRAWN	SY
CHECKED	RAB

* Existing name plate shall be cleaned and placed next to new name plate. Cost included with name plates.

ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 081-004569
EXPIRES 11-30-98



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

AAIC
AAIC Incorporated
Architects / Engineers

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019

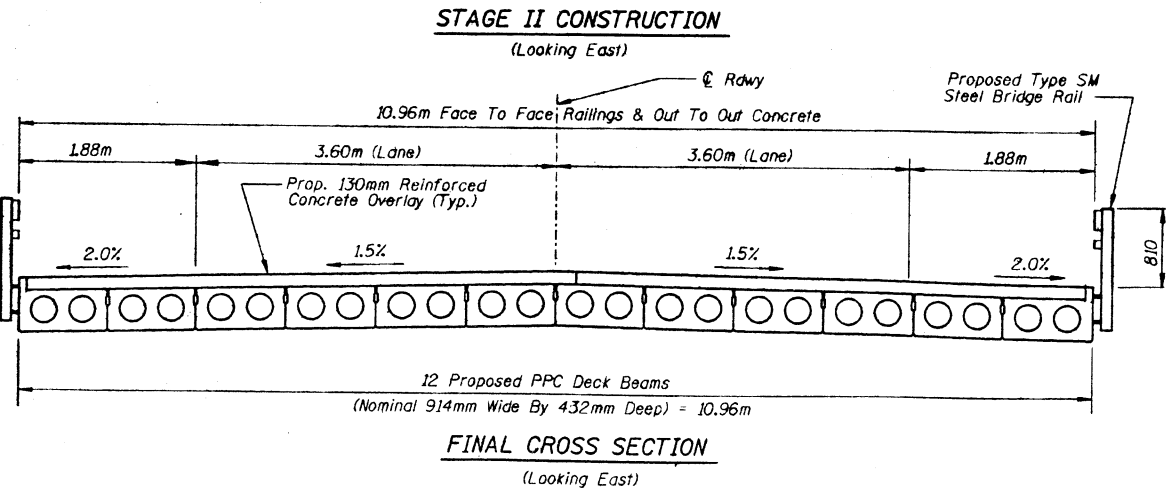
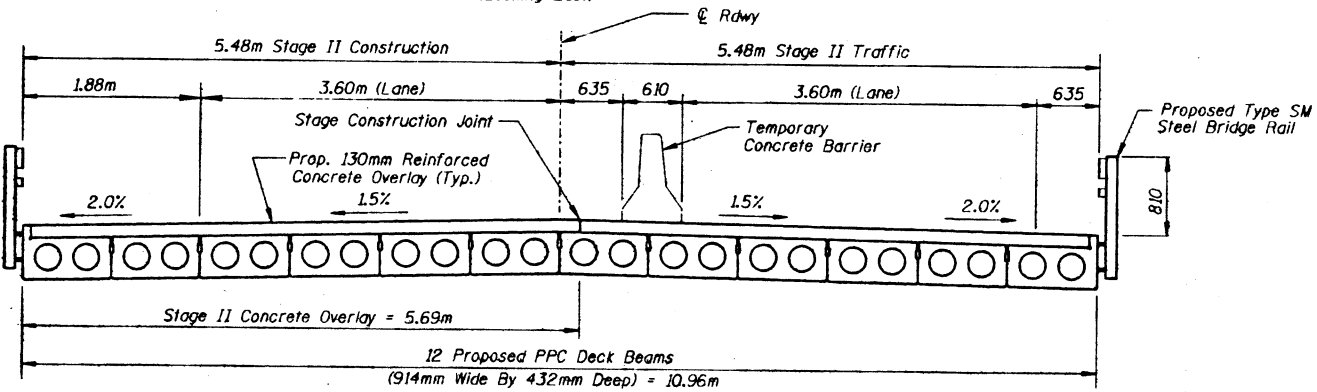
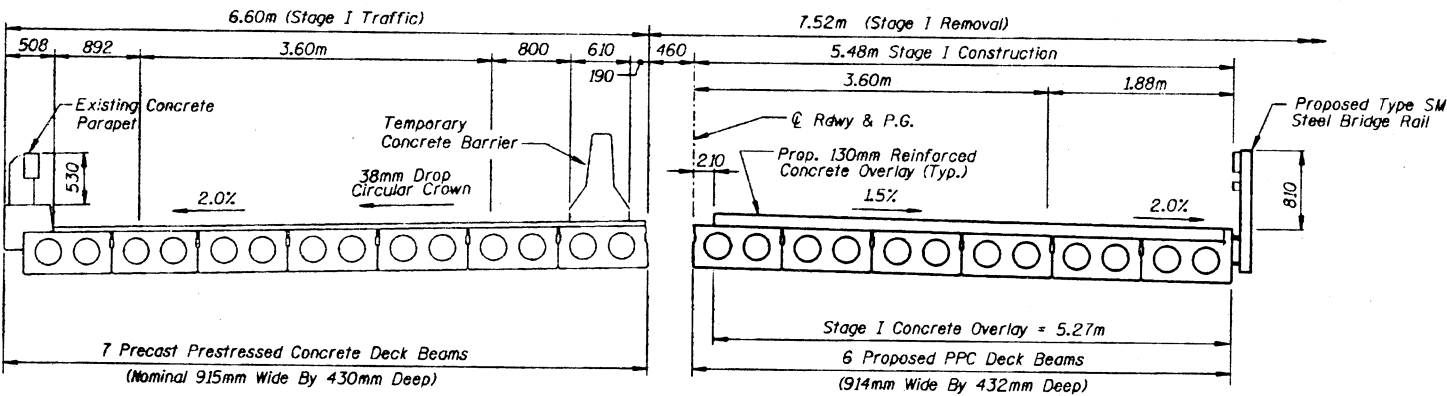
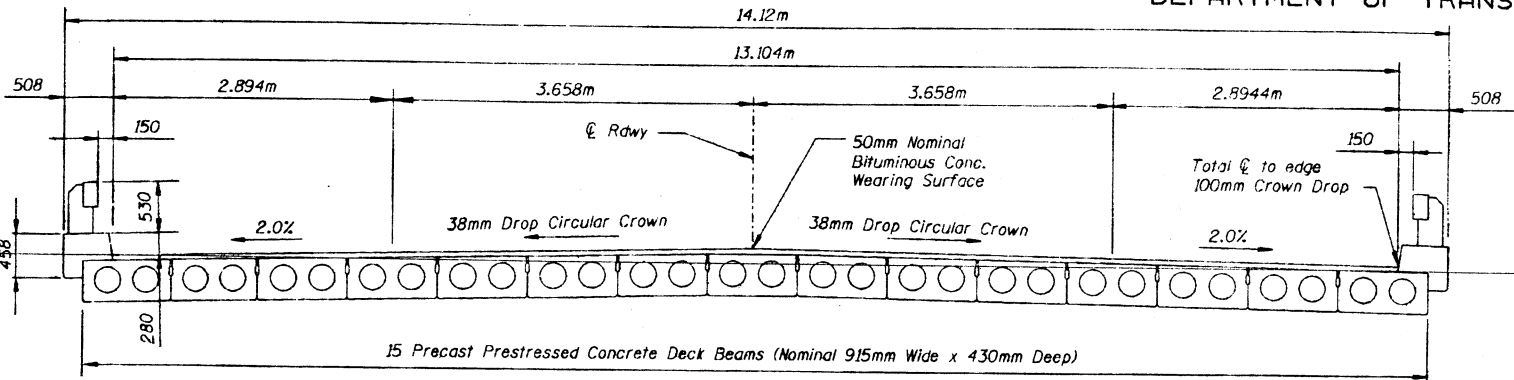
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
F.A.P. 753	142BR	CHRISTIAN	75	20
ILLINOIS PROJECT NO. 011-0019				

SHEET NO. 2
10 SHEETS

GENERAL NOTES

1. Plan dimension and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. A Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
3. All dimensions are in millimeters (mm) except as noted.
4. Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400.
5. Existing dowel rods shall be burned off flush with bearing seat. Cost included with removal of existing superstructure.
6. For Bonded Construction Joints, See Special Provisions.



TOTAL BILL OF MATERIAL

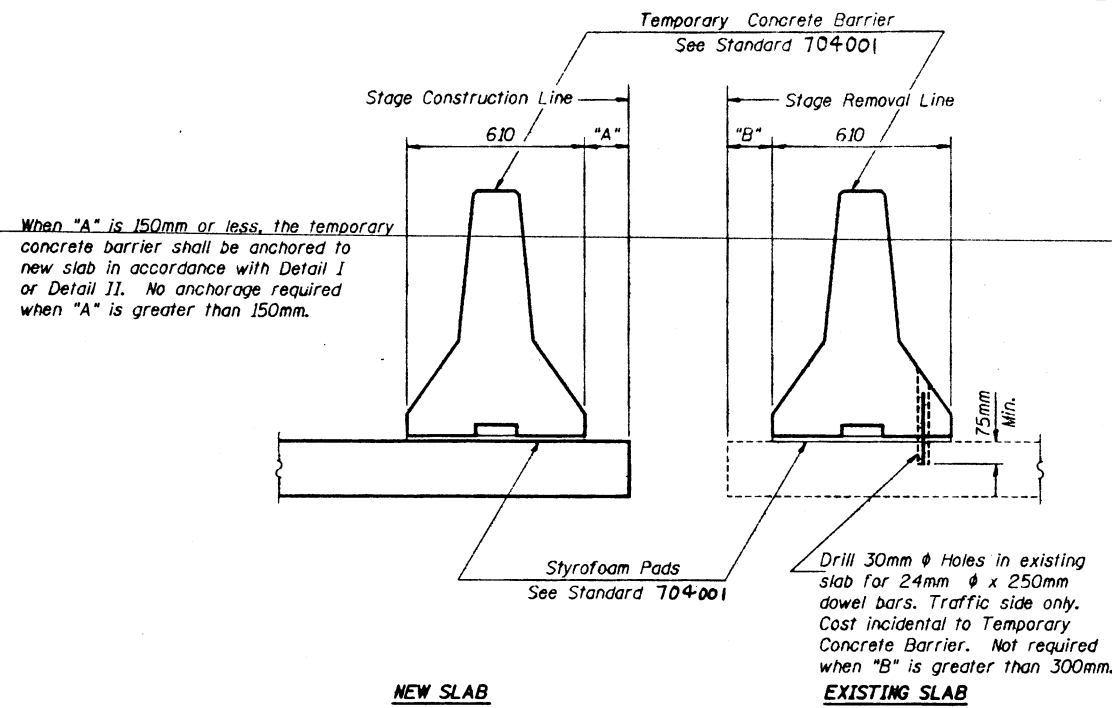
ITEM NAME	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	m ³		4.8	4.8
Concrete Superstructure	m ³		4.8	4.8
Bridge Deck Grooving	m ²	283.8		283.8
Concrete Wearing Surface	m ²	286.8		286.8
Precast Prestressed Concrete Deck Beams (432mm)	m ²	300.1		300.1
Reinforcement Bars, Epoxy Coated	Kg	3650		3650
Steel Bridge Rail, Type SM	Meter	56.6		56.6
Name plates	Each	1		1

AAIIC
AAIC Incorporated
Architects / Engineers

STAGE CONSTRUCTION DETAILS, GENERAL
NOTES, TOTAL BILL OF MATERIAL
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY
STRUCTURE NO. 011-0019

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

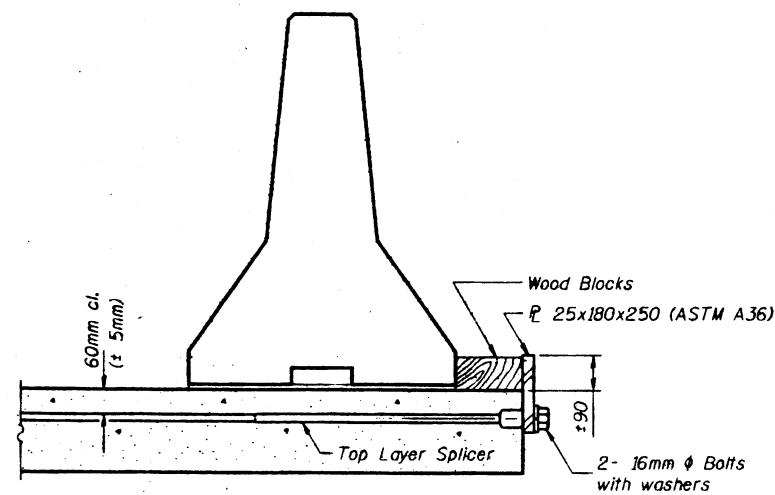
ROUTE NO.	SECTION	COUNTY	STA.	POST MILE	SHEET NO.
753	142BR	CHRISTIAN	75	21	10 SHEETS
PER ROAD DIST. NO. 7					
SHEET NO. 3					



SECTIONS THRU SLAB

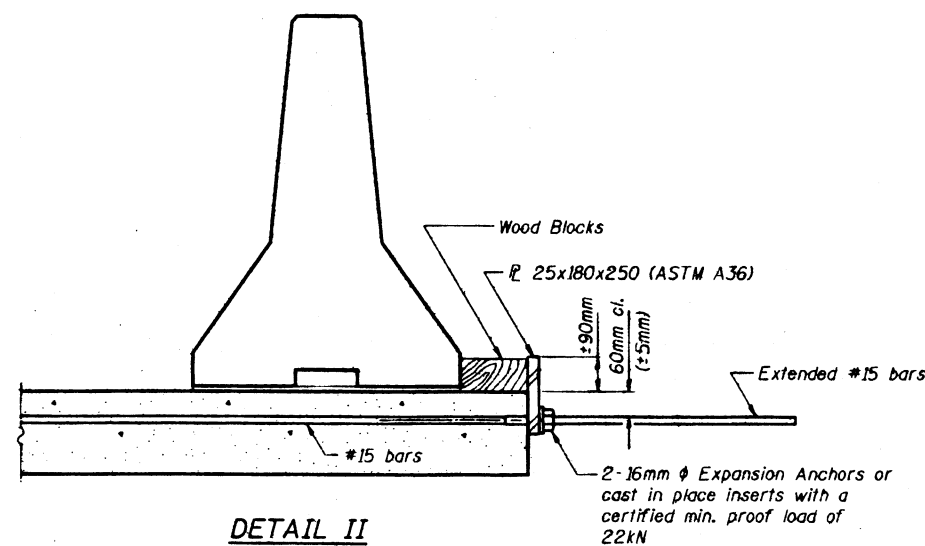
NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 25x180x250 steel $\bar{L}$ to the top layer of couplers with 2-16mm ϕ bolts screwed to coupler at approximate $\bar{C}$ of each 3m barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel $\bar{L}$ to the concrete slab with 2-16mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate $\bar{C}$ of each 3m barrier panel.
- Cost of anchorage is incidental to Temporary Concrete Barrier.
For pay item "Temporary Concrete Barrier, see Roadway plans.



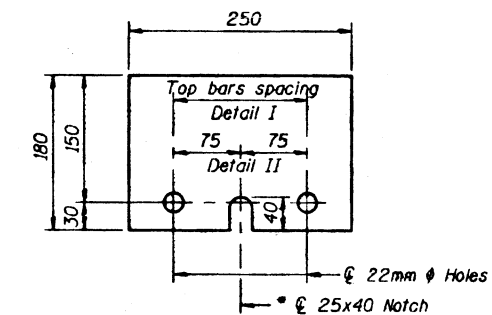
DETAIL I

The 25x180x250 Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 25x180x250 Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



$\bar{L}$ 25x180x250

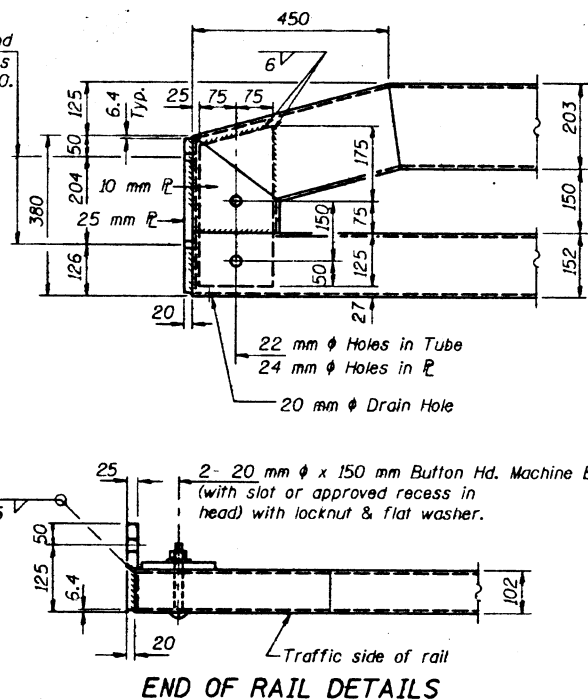
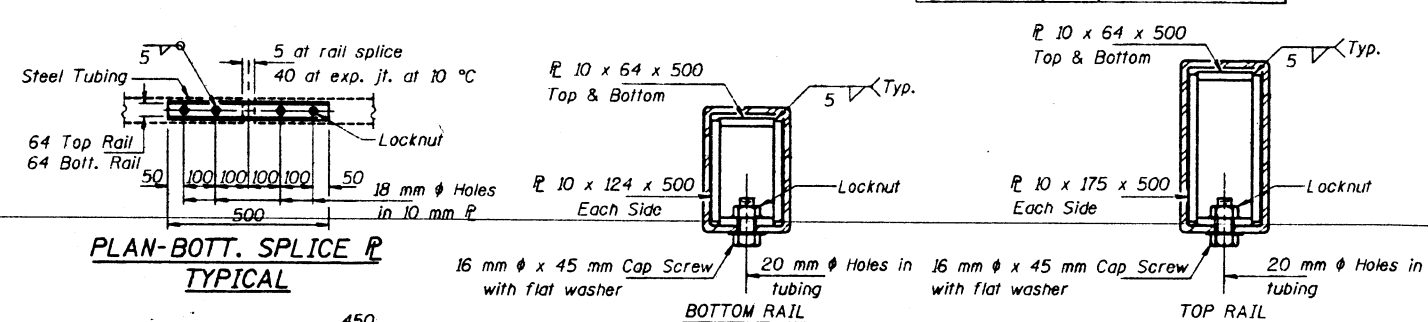
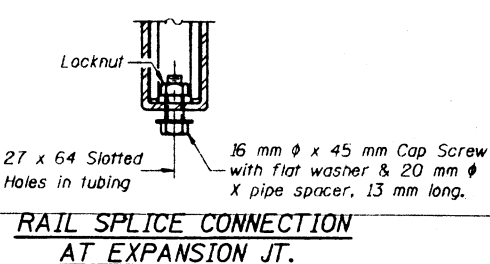
* Required only with Detail II

R-27M

TEMPORARY CONCRETE BARRIER
ILLINOIS ROUTE 104 OVER
SANGCHRIS LAKE
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S.I. F.A.P. 753	142BR	CHRISTIAN	75	22
PED. BRND DIST. NO. 7	ILLINOIS		PED. AND PROJECT.	

SHEET NO. 4
10 SHEETS



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 20 N·m at -18 °C.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 250 except posts and angles shall conform to AASHTO M-270, Grade 345.

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

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.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per meter for STEEL BRIDGE RAIL, TYPE SW.

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

For multi-span PPC Deck bridges, sufficient 6 x 150 x 360 galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to STEEL BRIDGE RAIL TYPE SM

Bofts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement

The M20 high strength bolts used to connect the 152 x 102 x 19 angle to the post shall be tightened in accordance with Article 505.04(F)(3).

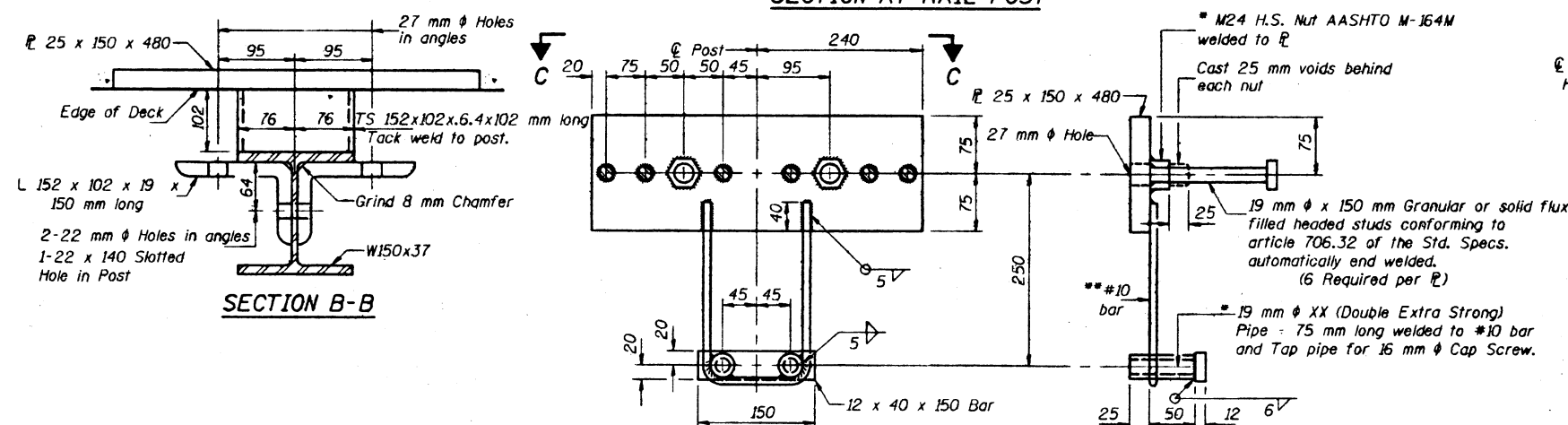
to the post shall be tightened in accordance with Article 505.04(fX3) of the Standard Specifications. The M24 high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given

the angles to the concrete shall be tightened to a snug fit and given an additional $\frac{1}{8}$ turn. The 16 mm ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

All dimensions are in millimeters (mm) except as noted.

Item	Unit	Quantity
Steel Bridge Rail, Type SM	m	56.6

STEEL BRIDGE RAIL SIDE MOUNTED



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

*** Whenever the lower insert assemblies interfere with strand locations, the #10 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 12 mm.*

R-34M

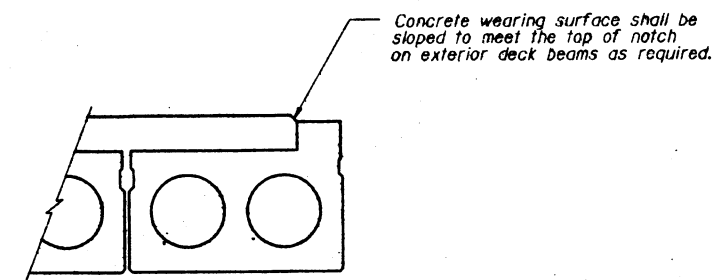
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R.R. F.A.P. 753	142BR	CHRISTIAN	75	23
FED. ROAD DIST. NO. 7		SHEET NO. 5		
		10 SHEETS		



Bar	No.	Size	Length (m)	Shape
$\alpha(E)$	90	#15	5.65	—
$q_1(E)$	90	#15	5.39	—
$b(E)$	102	#15	9.56	—
Concrete Wearing Surface			m^2	286.7
Reinforcement Bars (Epoxy Coated)			Kg	3090

- $a_1(E)$ bars lapped with $a(E)$ bars shall be tied with double the number of ties normally used.

NOTES:
For remainder of superstructure details, see sheet 6 of 10
For sections A-A and B-B see sheet 6 of 10
For post spacing of Type SM Steel Bridge Rail, see sheet 6 of 10
For details of Steel Bridge Rail, see sheet 4 of 10
Reinforcement bars designated (E) shall be epoxy coated.
Minimum lap splice for #15 bars = 660 mm.



SECTION C-C

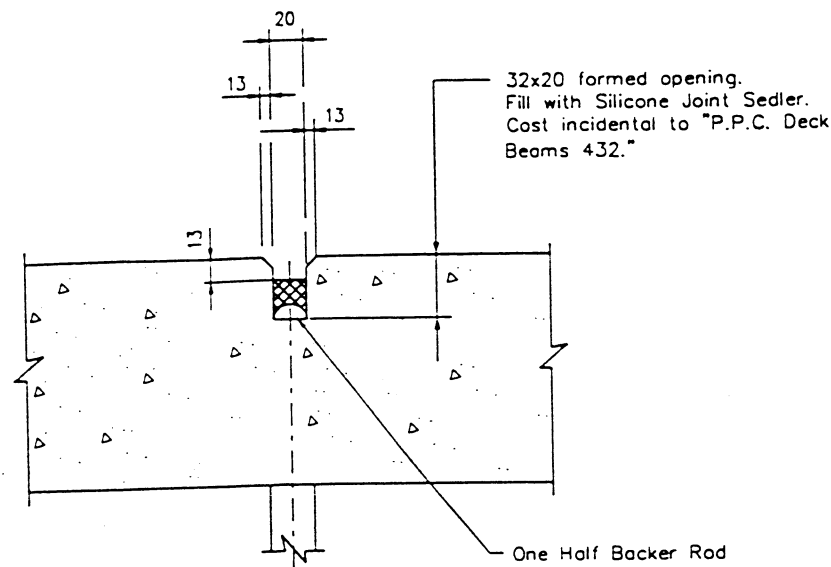
CROSS SECTION
(Looking East)

DESIGNED	R.A.B.
CHECKED	W.C.U.
DRAWN	S.Y.
CHECKED	R.A.B.

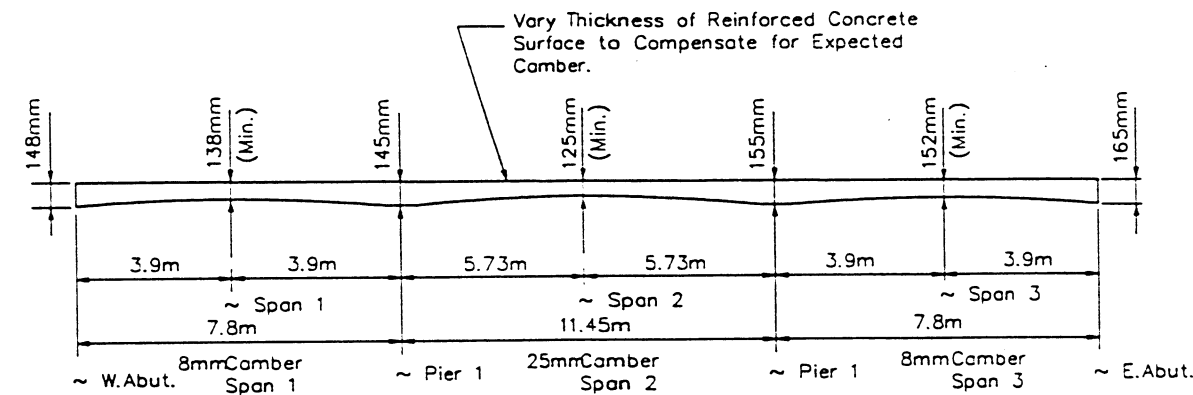
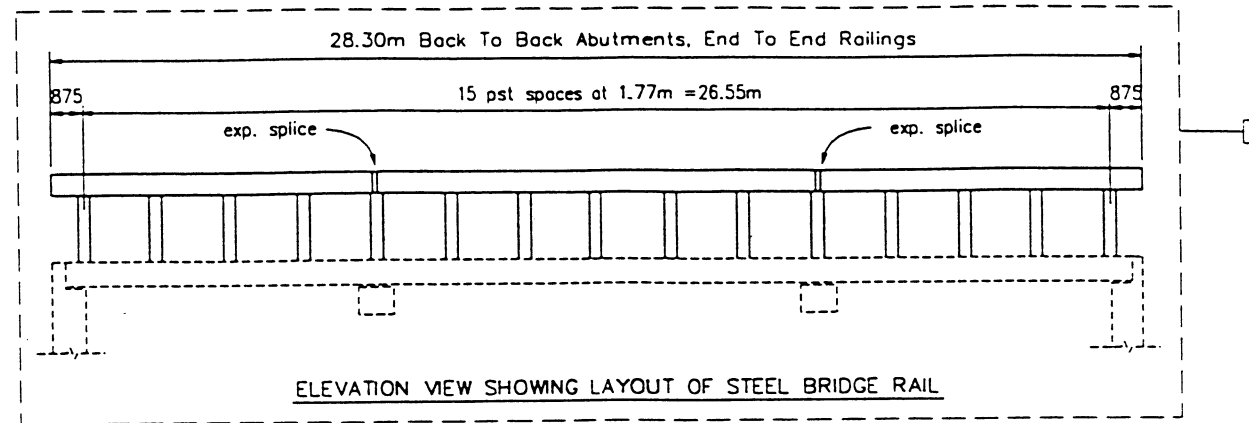
SUPERSTRUCTURE
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

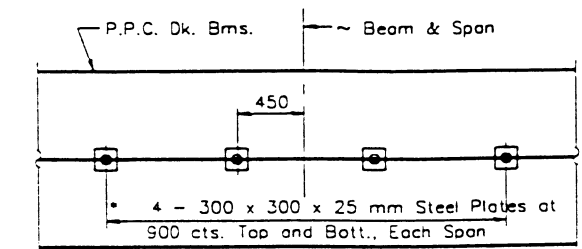
PROJECT NO.	SECTION	DESIGNER	DATE	SHEET NO.
F.A.P. 753	142BR	CHRISTIAN	75	24
10 SHEETS				



DETAIL "A"

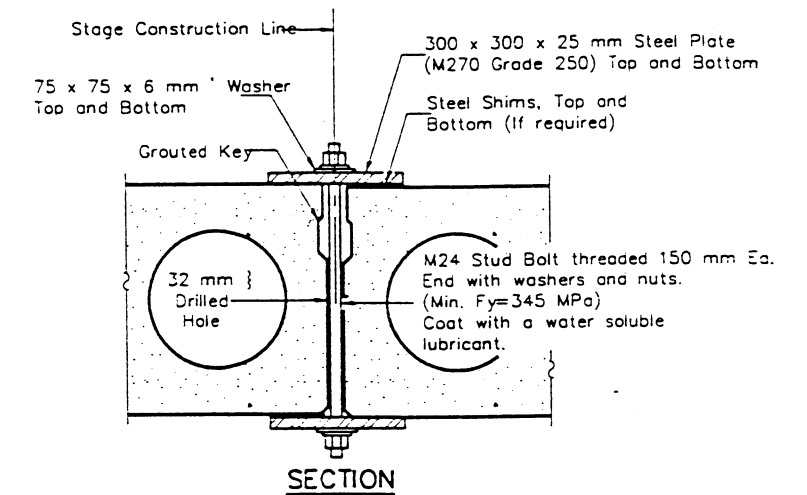


REINFORCED CONCRETE WEARING SURFACE POURING DIAGRAM

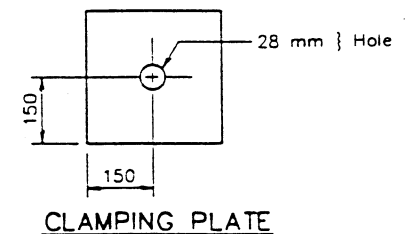


PLAN

* Space plates to miss Temporary Bridge Rail Posts.

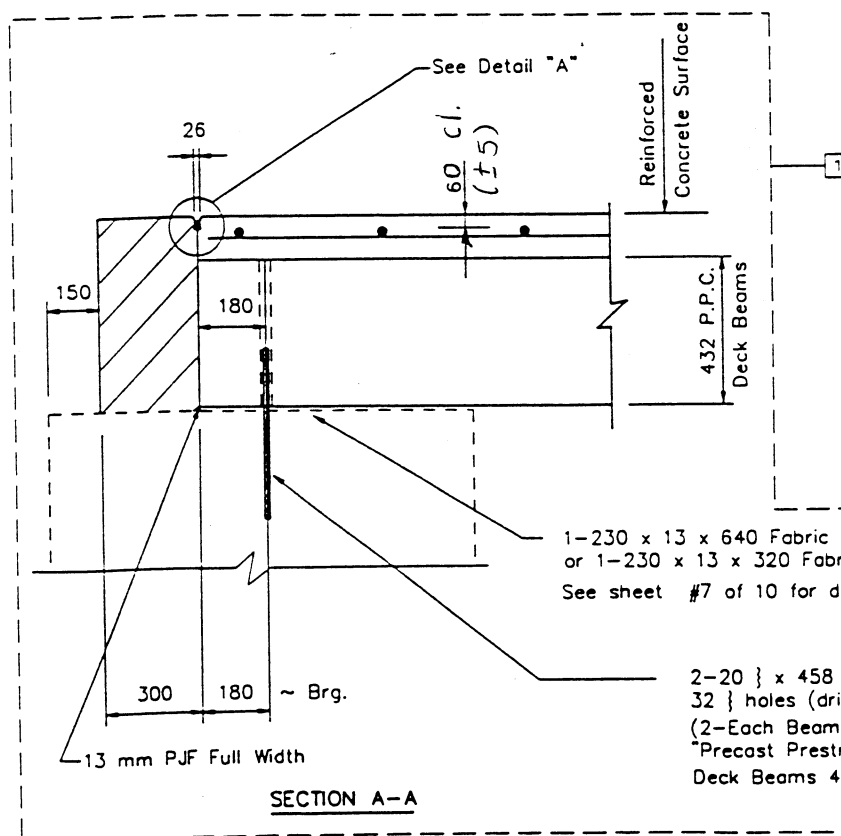


SECTION



SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

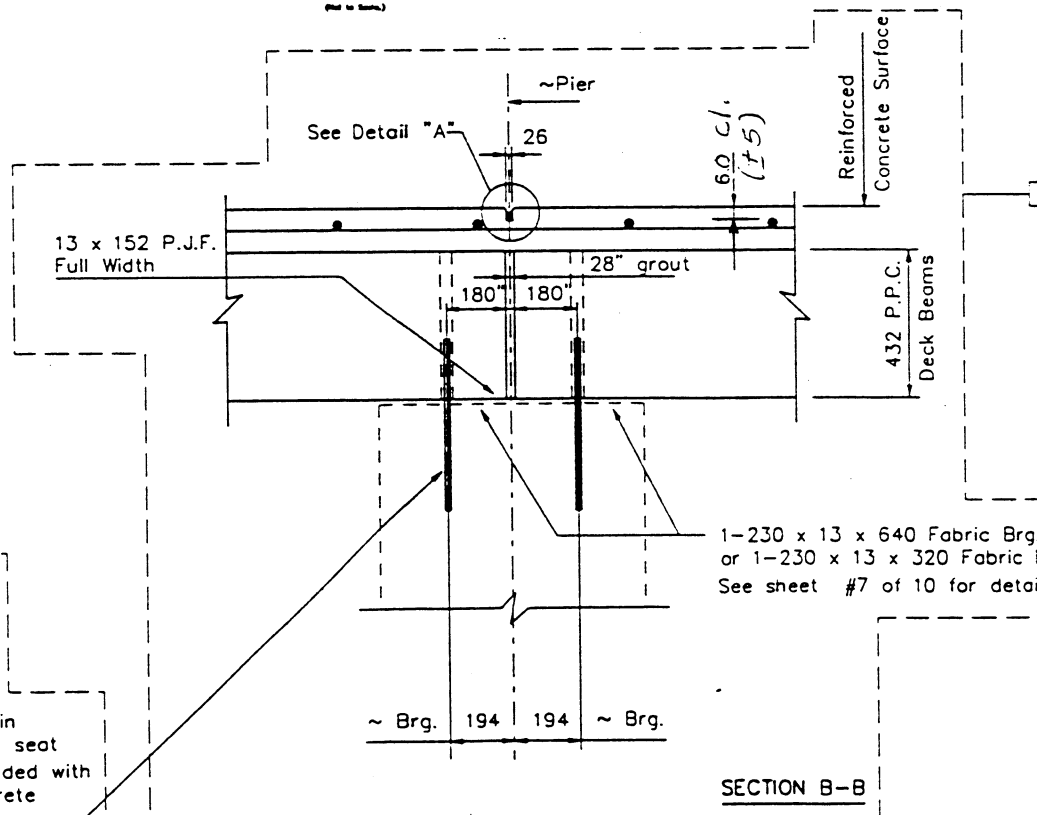
Cost included with Precast
Prestressed Concrete Deck Beams.
See Stage Construction Detail for traffic lane.



SECTION A-A

1-230 x 13 x 640 Fabric Brg. Pad
or 1-230 x 13 x 320 Fabric Brg. Pad
See sheet #7 of 10 for details.

2-20 x 458 Dowel rods in
32 holes (drilled in beam seat
(2-Each Beam). Cost included with
"Precast Prestressed Concrete
Deck Beams 432".



SECTION B-B

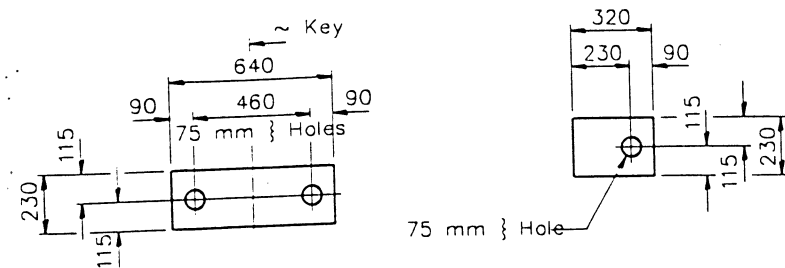
Dowel Rods shall be grouted after beams are in place
and allowed to cure (minimum 24 hours)
prior to grouting the shear keys.

SUPERSTRUCTURE DETAILS
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
753	142BR	CHRISTIAN	75	25
FED. ROAD DIST. NO. 7				
ALIGNED				
FED. AID PROJECT--				

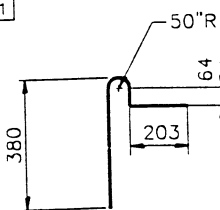
SHEET NO. 7
10 SHEETS



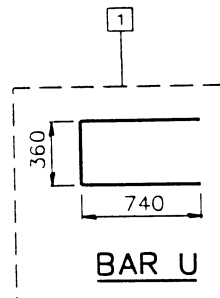
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

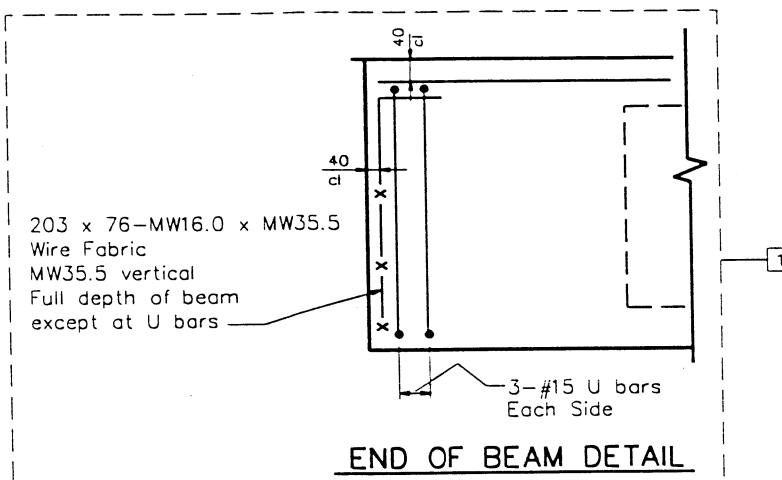
FIXED



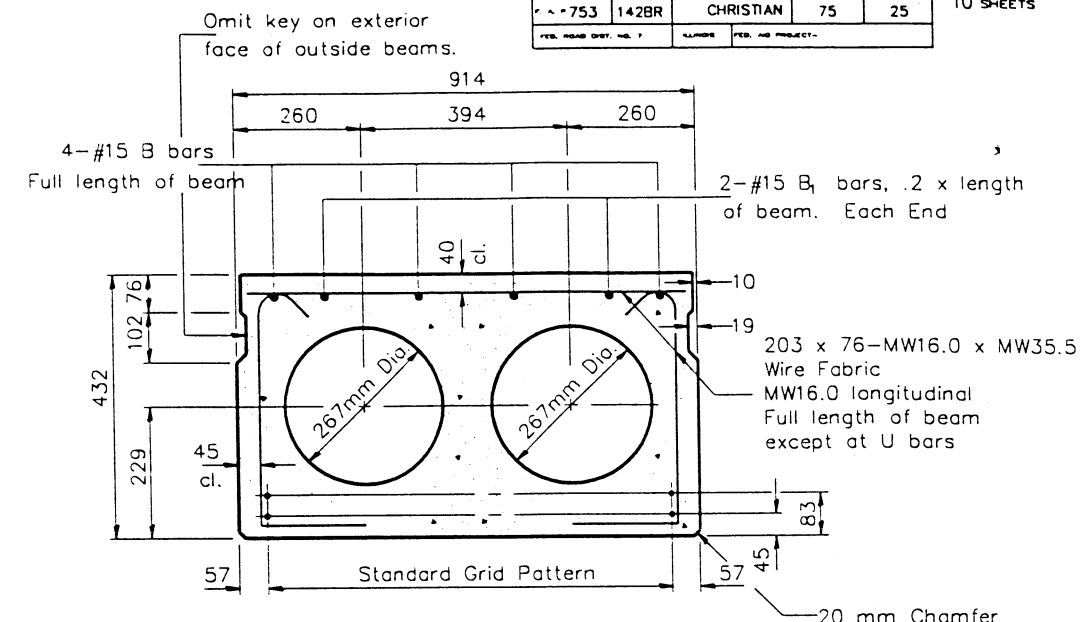
BAR D1(E)



BAR U

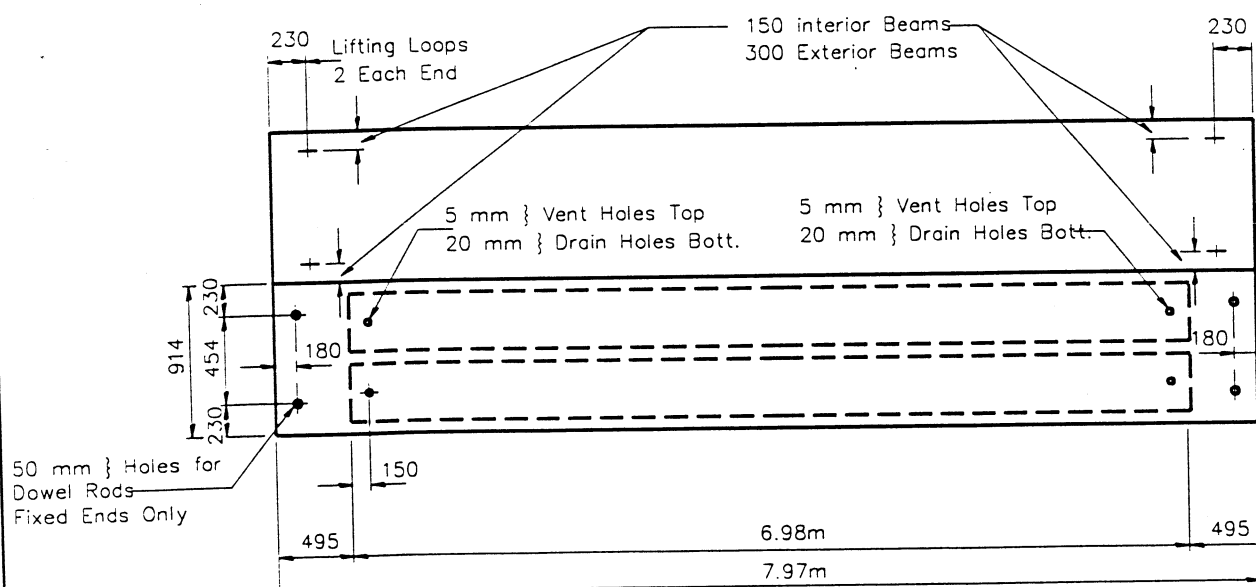


END OF BEAM DETAIL



SECTION THRU INTERIOR BEAM

6-12.7 mm } Strands, Each Strand Stressed to 128,500 N. Note: Place strands symmetrically about ~ of beam.



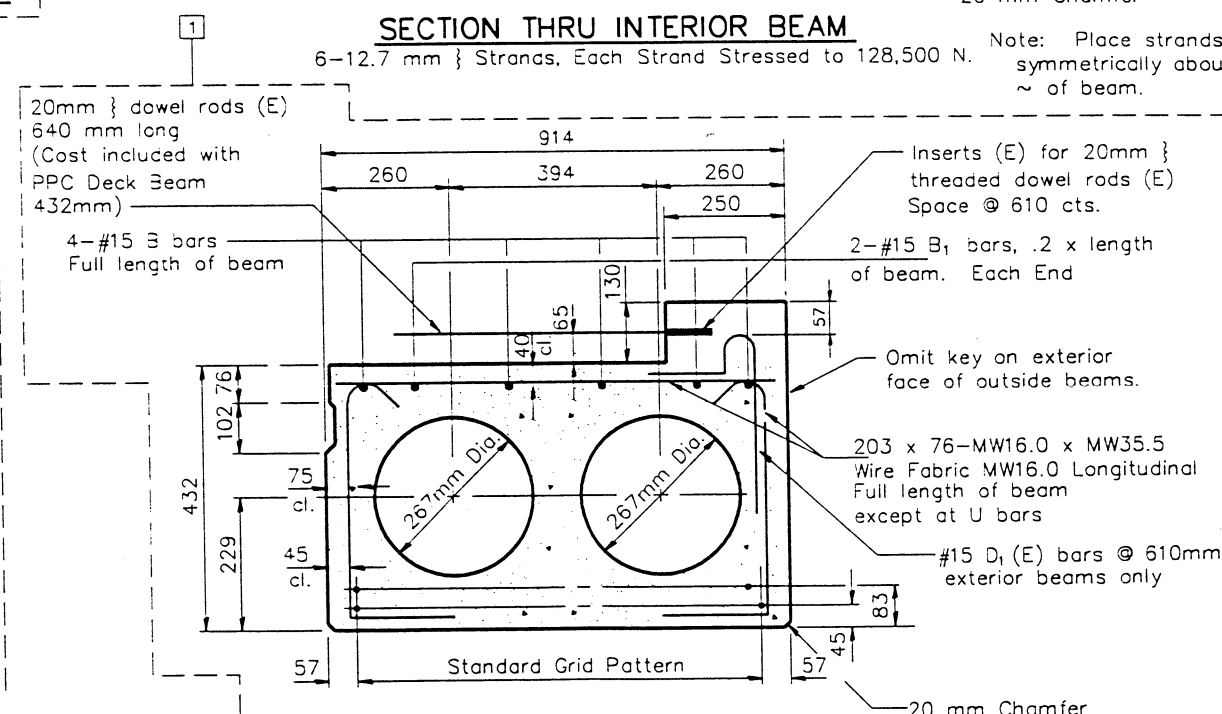
PLAN

BILL OF MATERIAL
(Per Beam)

Bar	No.	Size	Length(m)	Shape
B	4	#15	7.89	
B1	4	#15	1.59	
D1(E)	13	#15	.762	U
U	12	#10	1.840	U
Precast Prestressed Conc. Deck Bms.			m ²	7.28

Reinforcement bars designated (E) shall be epoxy coated.

* Exterior Beams only.



SECTION THRU EXTERIOR BEAM

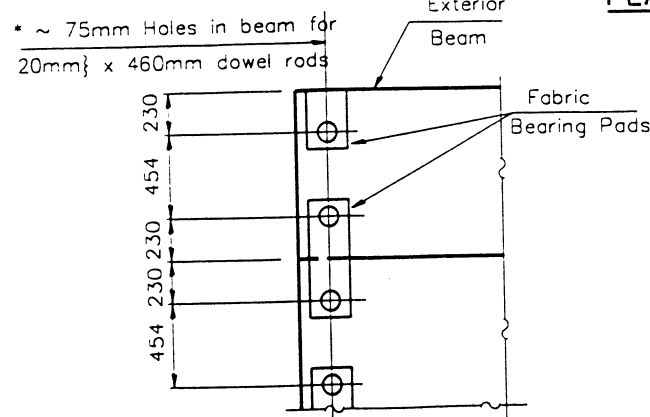
6-12.7 mm } Strands, Each Strand Stressed to 128,500 N symmetrically about ~ of beam.

NOTES

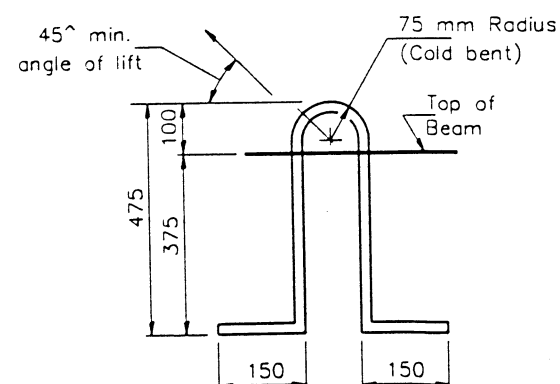
Prestressing steel shall be uncoated high strength, stress-relieved 7-wire strand ($F_u=1860$ MPa). The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm². Lifting loops shall be 2 - 12.7 mm strands ($F_u=1860$ MPa) as shown. The 25 mm } rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 3 mm 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 or 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 the bottom edge of the key. 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 28 MPa. An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted. All dimensions are in millimeters (mm) except as noted.

SUPERSTRUCTURE - PPC DECK
BEAMS, SPANS 1 AND 3
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019

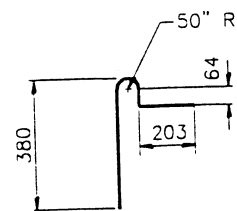
[7] AS REVISED 9-2-1998



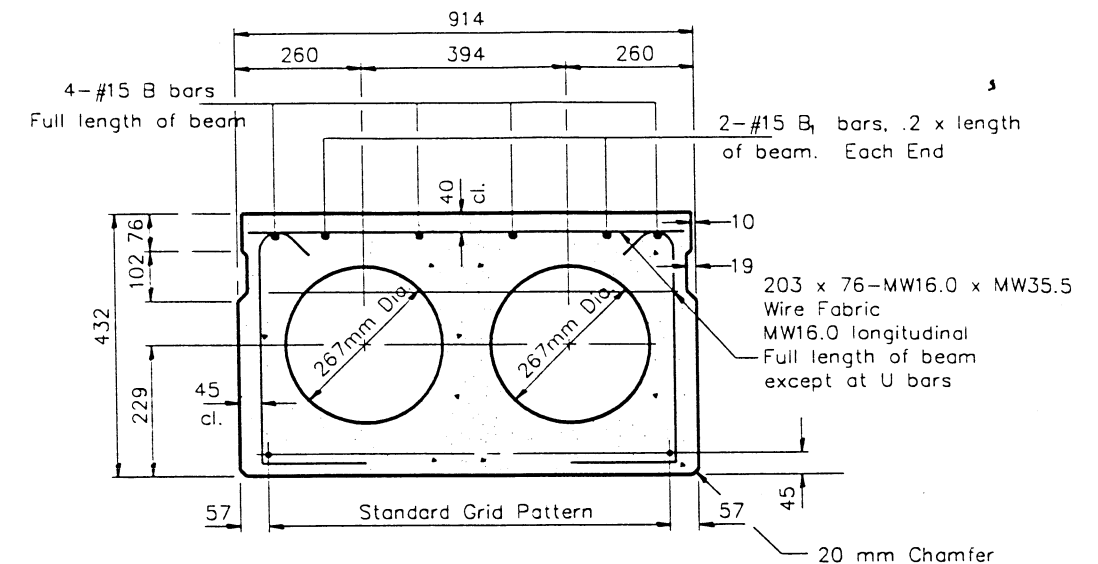
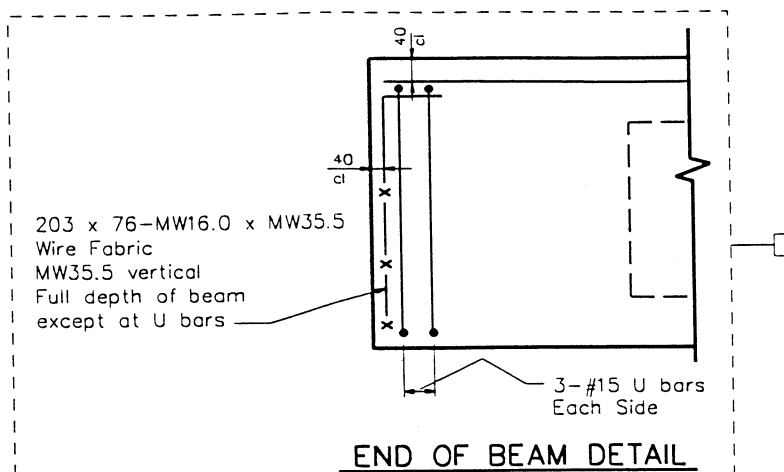
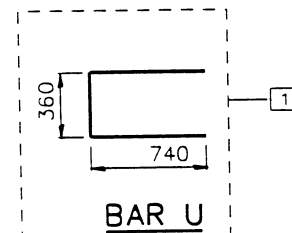
DETAIL OF BEARING PADS
UNDER DECK BEAMS



LIFTING LOOP DETAIL



BAR D, (E)



SECTION THRU INTERIOR BEAM

SECTION THRU INTERIOR BEAM

14-12.7 mm } Strands, Each Strand Stressed to 128,500 N.
10-Strands 45 mm up, 2- Strands 83 mm up
 & 2 Strands 305 mm up

Note: Place strands symmetrically about ~ of beam.

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
B	4	#15	11.34	—
B ₁	4	#15	2.28	—
D ₁ (E)	19	#15	.762	9
U	12	#10	1.840	U
Precast Prestressed Conc. Deck Bms.			m ²	10.44

Reinforcement bars designated (E) shall be epoxy coated.

* Exterior Beams only.

**Cost included with
 PPC Deck Beam,
 432 mm
 20mm dowel rods (E
 640mm long **

4-#15 3 bars ———
Full length of beam

— Inserts (E) for 20} mm
threaded dowel rods (E)
space @ 610 cts.

2-#15 B₁ bars, .2 x length
of beam. Each End

— Omit key on exterior
face of outside beams.

203 x 76-MW16.0 x MW35.5
Wire Fabric MW16.0 Longitudinal
Full length of beam
except at U bars

— #15 D₁ (E) bars @ 610mm |
— exterior beams only |

—20 mm Chamfer

SECTION THRU EXTERIOR BEAM

14-12.7 mm } Strands, Each Strand Stressed to 128,500 N.
10-Strands 45 mm up, 2-Strands 83 mm up
& 2 Strands 305 mm up

NOTES

Prestressing steel shall be uncoated high strength, stress-relieved 7-wire strand ($F_u=1860$ MPa). The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm². Lifting loops shall be 2 - 12.7 mm strands ($F_u=1860$ MPa) as shown.

The 25 mm } rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 3 mm fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

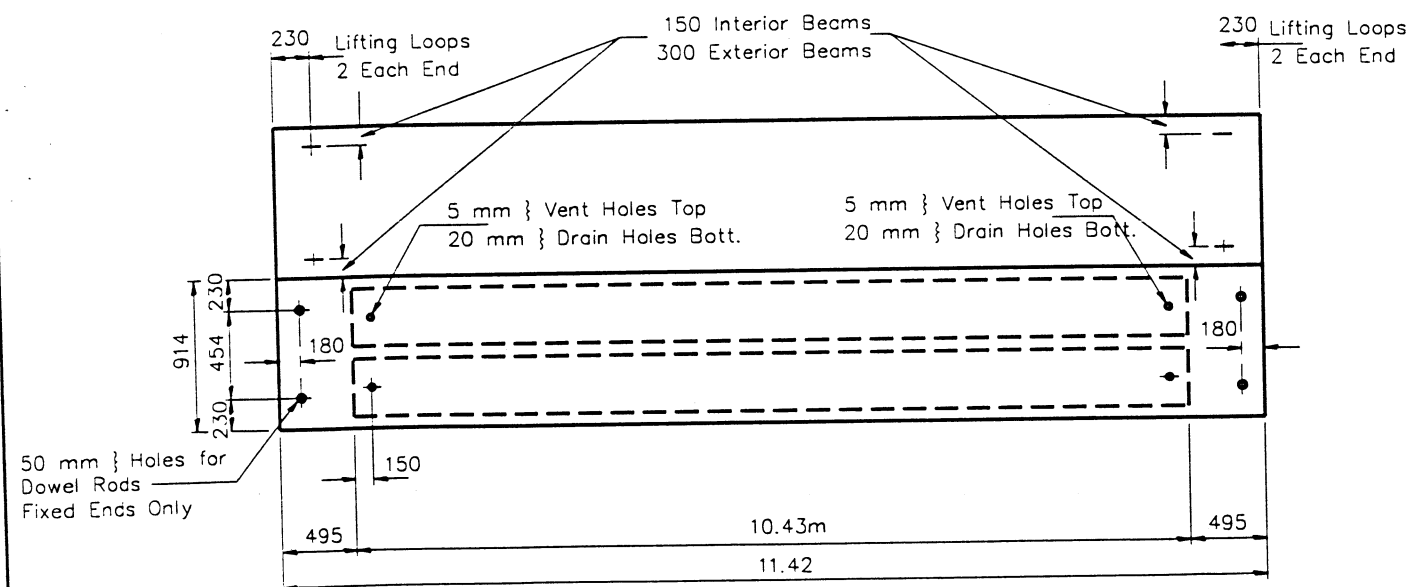
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

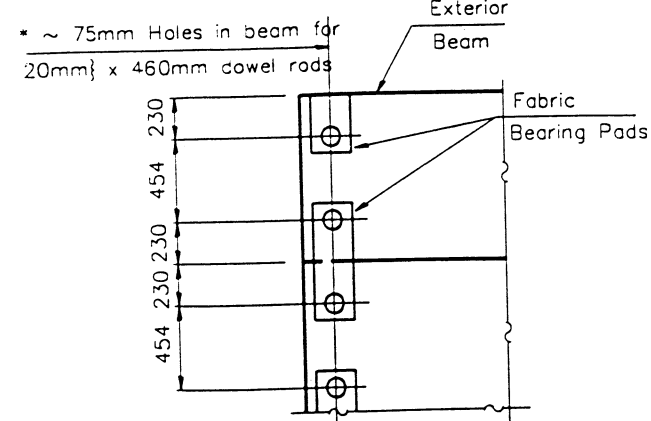
Required Release Strength, f'_{ci} , shall be 28 MPa. 1

An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.

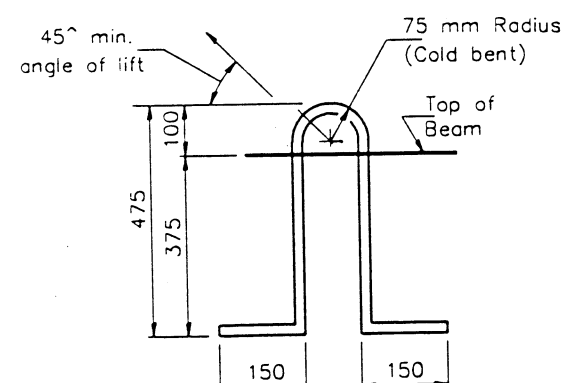
All dimensions are in millimeters (mm) except as noted.



PLAN



DETAIL OF BEARING PADS UNDER DECK BEAMS

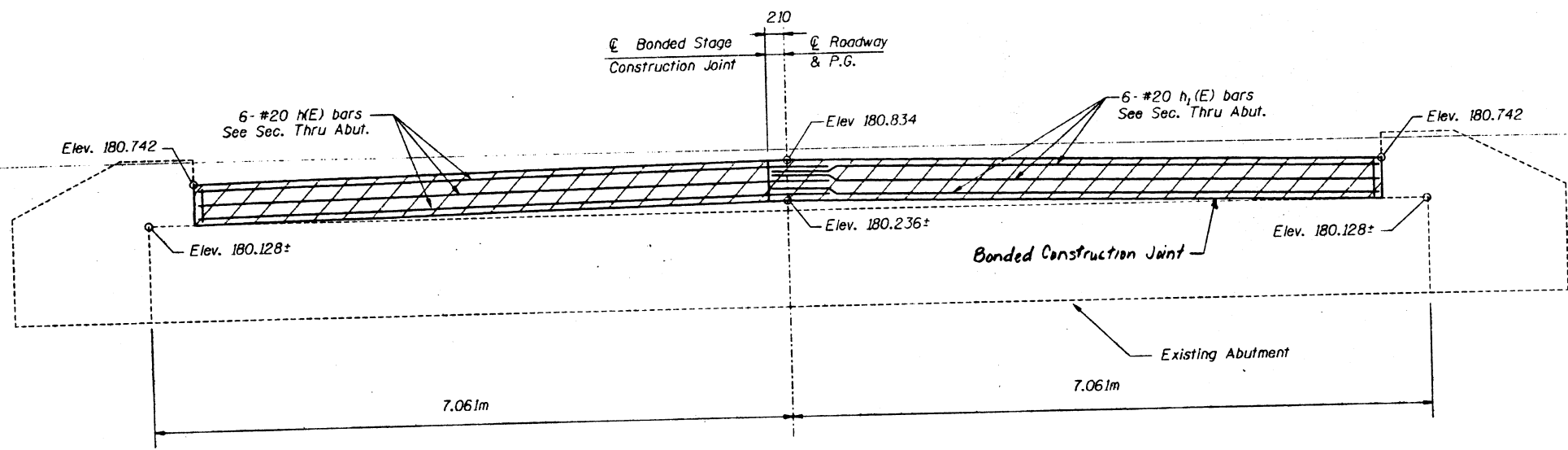


LIFTING LOOP DETAIL

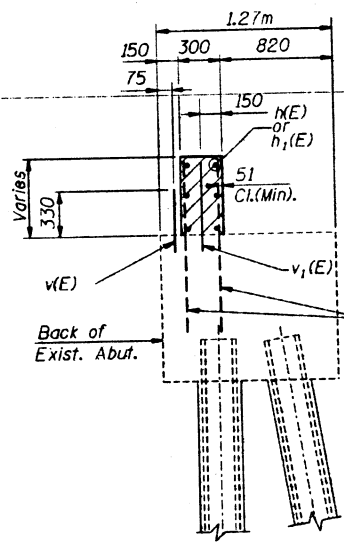
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
F.A.P. 753	142BR	CHRISTIAN	75	27
PROJECT NAME	ILLINOIS ROUTE 104 OVER LAKE SANGCHRIS			

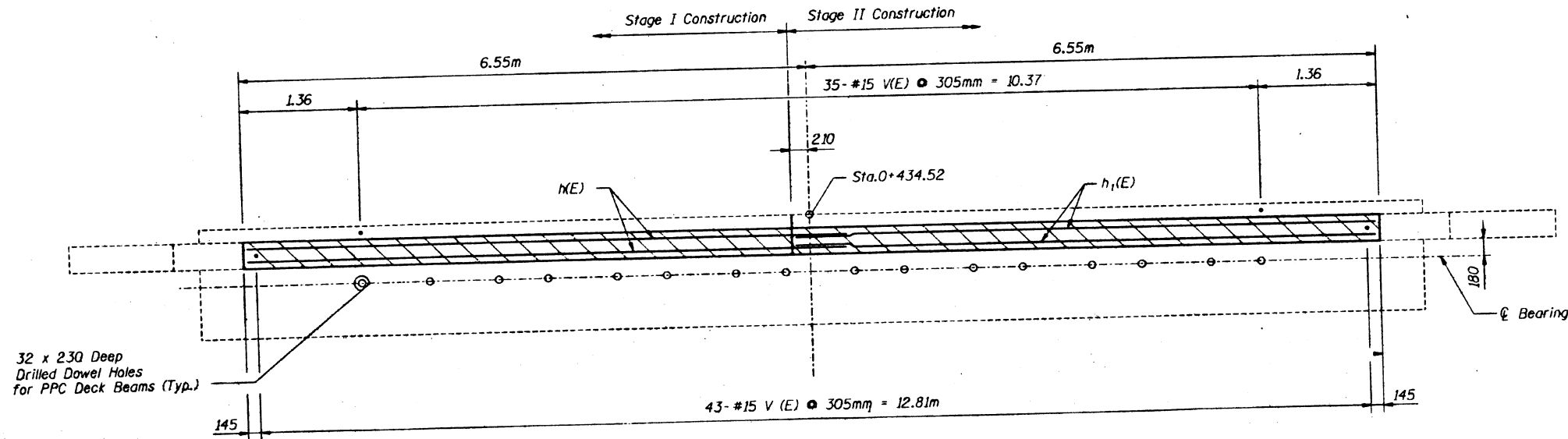
SHEET NO. 9
10 SHEETS



ELEVATION
(Looking West)



SECTION THRU ABUTMENT



PLAN

**SUBSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	6	#20	6.92	—
h ₁ (E)	6	#20	6.74	—
v(E)	35	#15	0.56	—
v ₁ (E)	43	#15	0.78	—
Concrete Superstructure			m ³	2.4
Reinforcement Bars (Epoxy Coated)			Kg	280
Concrete Removal			m ³	2.4

32 x 230 Deep Drilled Dowel Holes for PPC Deck Beams (Typ.)

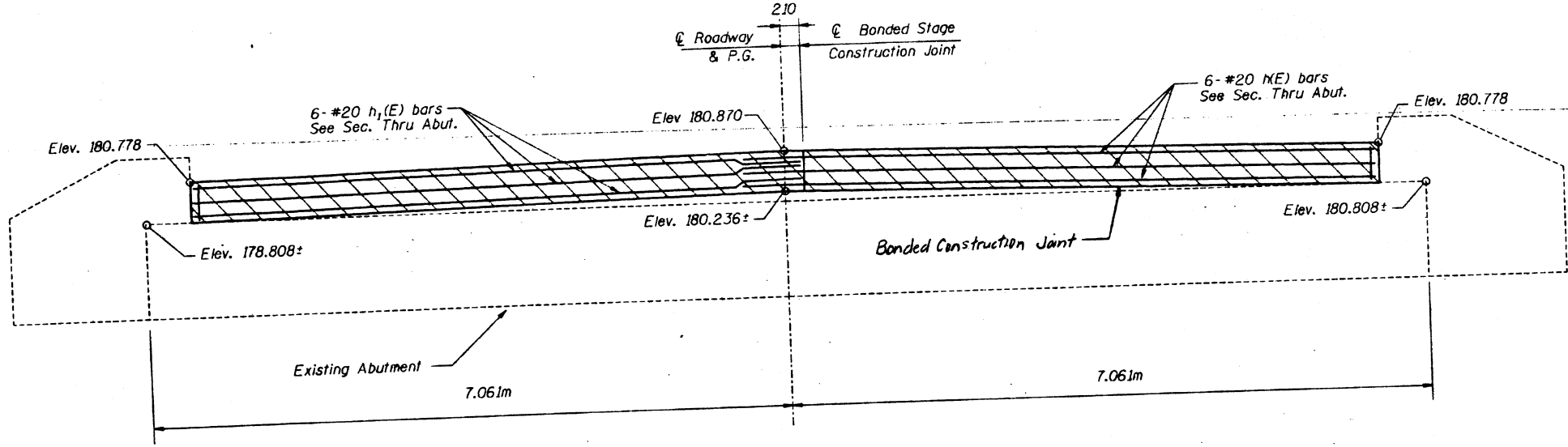
* Epoxy grout v(E) and v₁(E) bars in 22mm ϕ x 230mm min. drilled holes. The grout and the method of application shall be approved by the Department. See Art. 584 of the Standard Spec's.

Hatched area indicates "Concrete removal" and "Concrete Superstructure." Existing vertical reinforcement extending into removed areas shall be cleaned, straightened and incorporated into the new construction. Concrete Superstructure shall be poured as shown above after the superstructure forms have been removed. All edges shall have standard 19mm chamfers except as noted. Reinforcement bars designated (E) shall be epoxy coated. Min. bar lap for #20 bar = 610mm.

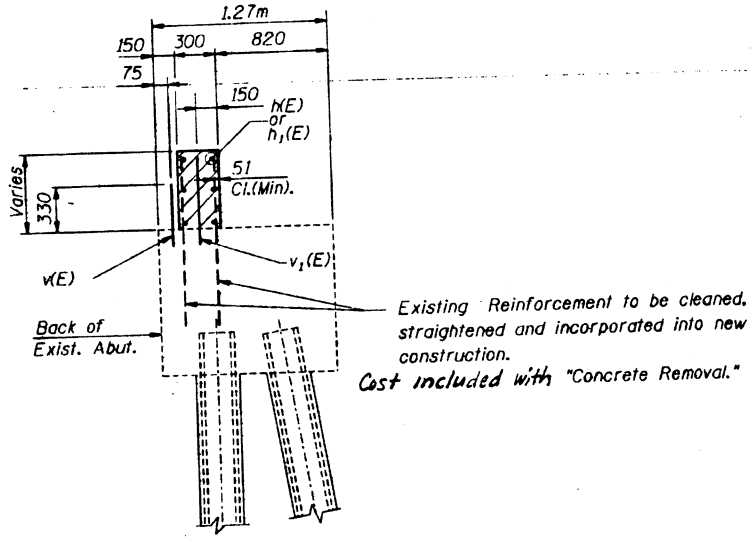
WEST ABUTMENT
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

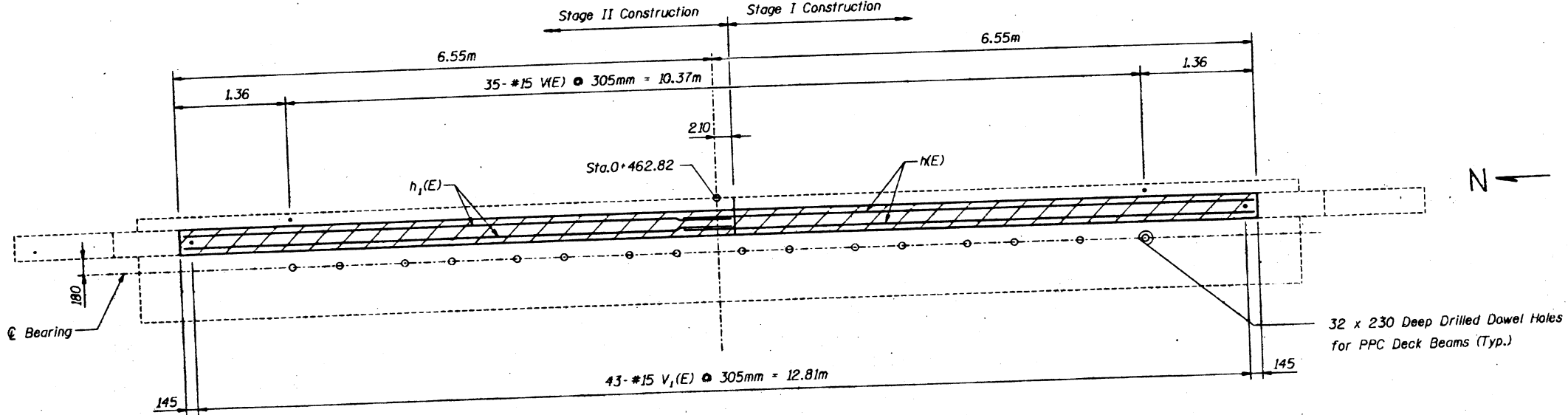
ROUTE NO.	SECTION	COUNTY	SHEET	NO.	SHEET NO.
142BR	CHRISTIAN	75	28	10	10 SHEETS



ELEVATION
(Looking West)



SECTION THRU ABUTMENT



PLAN

**SUBSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	6	#20	6.92	—
h1(E)	6	#20	6.74	—
v(E)	35	#15	0.56	—
v1(E)	43	#15	0.78	—
Concrete Superstructure			m³	2.4
Reinforcement Bars (Epoxy Coated)			Kg	280
Concrete Removal			m³	2.4

* Epoxy grout v(E) and v1(E) bars in 22mm ϕ x 230mm min. drilled holes. The grout and the method of application shall be approved by the Department. See Art. 584 of the Standard Spec's.

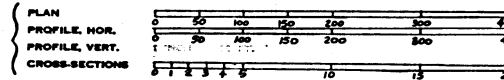
Hatched area indicates "Concrete removal" and "Concrete Superstructure." Existing vertical reinforcement extending into removed areas shall be cleaned, straightened and incorporated into the new construction. Concrete Superstructure shall be poured as shown above after the superstructure forms have been removed. All edges shall have standard 19mm chamfers except as noted. Reinforcement bars designated (E) shall be epoxy coated. Min. bar lap for #20 bar = 610mm.

**EAST ABUTMENT
ILLINOIS ROUTE 104 OVER
LAKE SANGCHRIS
F.A.P. 753 SECTION 142BR
STA. 0+448.67
CHRISTIAN COUNTY, ILLINOIS
STRUCTURE NO. 011-0019**

INDEX OF SHEETS ON SHEET NO. 3

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

SCALES



S.B.I. ROUTE 104 SEC. 142, 143 (XRS-1), 142B-1 & 143B-1
PROJECT P-196
CHRISTIAN COUNTY

C-96-053-64

SECTION 142B-1, ONE BRIDGE @ STA. 1251+35.00
PRECAST PRESTRESSED CONCRETE BEAMS
2 SPANS @ 35'-11 1/2"

OMISSION STATION 1185+00
TO STATION 1241+85

OMISSION STATION 1148+00
TO STATION 1171+00

STATION EQUATION
1314+71.6 BK. = 0+00 AH.

SECTION 143B-1, ONE BRIDGE @ STA. 40+94
PRECAST PRESTRESSED CONCRETE BEAMS
2 SPANS @ 64'-5 1/2"

END SECTION 142, 143 (XRS-1), 142B-1 & 143B-1
@ STATION 50+00

BEGIN SECTION 142, 143 (XRS-1), 142B-1 & 143B-1
STATION 1095+00

SECTION 142B-1, ONE BRIDGE @
STA. 1109+06.18, PRECAST PRESTRESSED
CONCRETE BEAMS, 2 SPANS @ 25'-5 1/2"
& 1 SPAN @ 37'-7"

SECTION 142B-1, ONE BRIDGE @ STA. 1177+60
PRECAST PRESTRESSED CONCRETE BEAMS,
2 SPANS 35'-8 1/2" & 1 SPAN 36'-4"

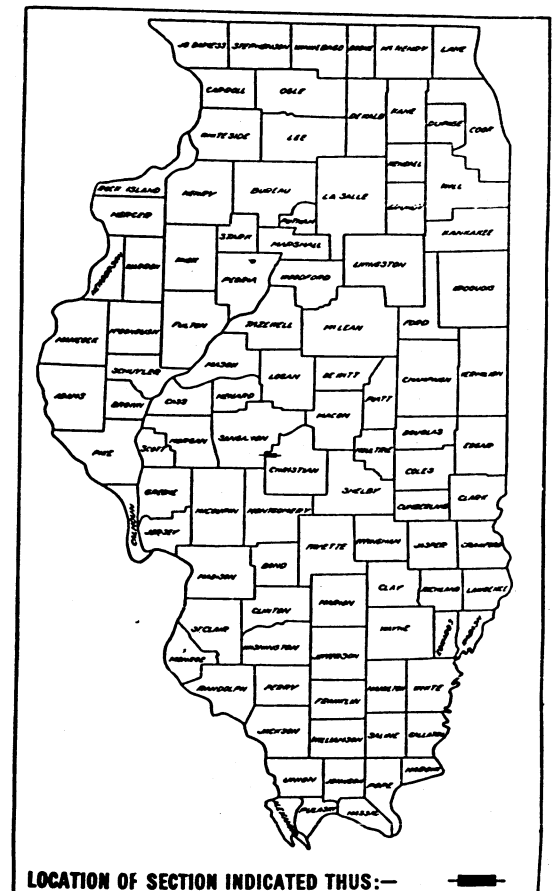
OMISSION STATION 1254+75
TO STATION 9+00

SCALE



NET LENGTH = 12,090.0 FT. = 2.290 MILES

SEC. 142, 143 (XRS-1), 142B-1 & 143B-1			
BOND ISSUE ROUTE NO.	SEC.	COUNTY	SHEET NO.
104		CHRISTIAN	60
P-96-031-63-2			



LOCATION OF SECTION INDICATED THUS:—

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED	August 17, 1964 E. K. O'Sullivan
EXAMINED	August 17, 1964 J. W. W. W. W. W.
PASSED	August 17, 1964 J. W. W. W. W.
APPROVED	August 17, 1964 J. W. W. W. W.
APPROVED	August 17, 1964 J. W. W. W. W.

CONTRACT NO. 23825

CHRISTIAN COUNTY
SECTION 142, 143 (XRS-1), 142B-1 & 143B-1
S. B. I. ROUTE 104

6-25

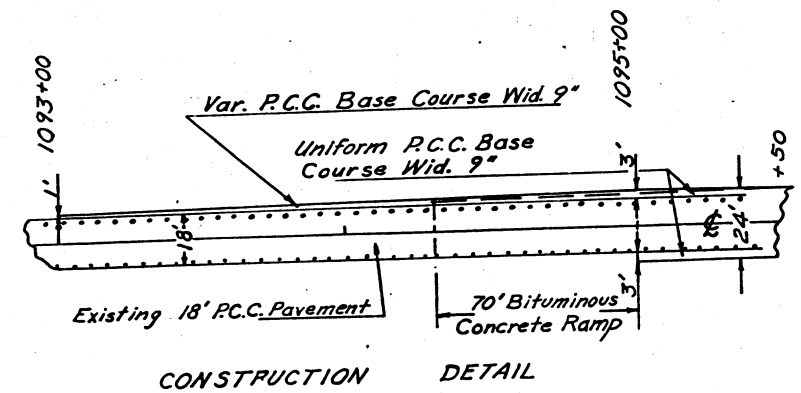
GENERAL NOTES

WHERE SECTION OR SUBSECTION STONES OR MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH STONES ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS UNTIL AN OWNER OR AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE QUANTITIES BORROW, CHANNEL & EARTH EXCAVATION LISTED ON THE BRIDGE TRACINGS ON SHEETS #11, 15, 19 & 23 ARE FOR INFORMATIONAL PURPOSES ONLY. THE QUANTITIES HAVE BEEN INCLUDED IN THE ROADWAY BALANCES AND ARE INCLUDED IN THE TOTAL SUMMARY OF QUANTITIES.

WHEREVER IN THESE PLANS REFERENCE IS MADE TO THE "STANDARD SPECIFICATIONS" IT IS UNDERSTOOD TO INCLUDE THE "SUPPLEMENTAL SPECIFICATIONS" EFFECTIVE MARCH 2, 1964.

SUPERELEVATION ATTAINMENT LENGTHS FOR ALL DETOUR HORIZONTAL CURVES SHALL BE AS GREAT AS POSSIBLE UP TO 50 FEET.



INDEX OF SHEETS

SHEET NO.	1	TITLE SHEET
	2	TYPICAL SECTIONS
	3	INDEX OF SHEETS & SUMMARY OF CLASS "X" CONCRETE
	4	SUMMARY OF QUANTITIES
	5	PLAN AND PROFILE STA. 1095+00 TO STA. 1125+00
	6	PLAN AND PROFILE STA. 1125+00 TO STA. 1150+00
	7	PLAN AND PROFILE STA. 1165+00 TO STA. 1195+00
	8	PLAN AND PROFILE STA. 1240+00 TO STA. 1264+00
	9	PLAN AND PROFILE STA. 8+00 TO STA. 32+00
	10	PLAN AND PROFILE STA. 32+00 TO STA. 55+00
	11-14	BRIDGE PLANS STA. 1109+06.18
	15-18	BRIDGE PLANS STA. 1177+60
	19-22	BRIDGE PLANS STA. 1251+35
	23-26	BRIDGE PLANS STA. 40+94
	27	SPECIAL 3'X5' BOX CULVERT EXTENSION LT&RT 1140+91
	28	SPECIAL 2'X2' BOX CULVERT EXTENSION LT&RT 28+70.5
	29-36	CROSS SECTIONS STA. 1095+00 TO STA. 1149+00
	37-41	CROSS SECTIONS STA. 1165+00 TO STA. 1194+00
	42-44	CROSS SECTIONS STA. 1240+00 TO STA. 1256+00
	45-52	CROSS SECTIONS STA. 8+00 TO STA. 54+00
	53	PIPE CULVERT CROSS SECTIONS
	54	STANDARDS 1666-2, 2203
	55	STANDARDS 2114, 1972-1, 1977-4
	56	STANDARDS 2165, 1744-1, 1766-3
	57	STANDARDS 1687-3, 2113-1
	58	STANDARDS 2070A, 2149-3
	59	STANDARDS 1909-4
	60	STANDARDS 1258-R, 2143-1, 1971-3, 2171
	60A, B, C	CRITICAL PATH SCHEDULES

SUMMARY OF CLASS "X" CONCRETE		QUANTITY	
ITEM			
R.C. CAP STA. 1108+40.26			
BRIDGE - STA. 1109+06.18		100.0	CU.YDS.
SPECIAL 3'X5' BOX CULVERT EXTENSION - STA. 1140+91		20.4	
BRIDGE - STA. 1177+60		102.7	
R.C. CAP STA. 1250+77.38		1.67	
BRIDGE STA. 1251+35		84.5	
R.C. CAP STA. 1251+92.63		1.67	
SPECIAL 2'X2' BOX CULVERT EXTENSION - STA. 28+70.5		21.0	
R.C. CAP STA. 40+07.83		1.68	
BRIDGE - STA. 40+94		103.4	
R.C. CAP STA. 41+80.16		1.68	
TOTAL		440.40	CU.YDS
			85.9*CU.YDS

NOTE: * INDICATES CLASS X CONCRETE ENCASEMENT

INDEX OF SHEETS AND SUMMARY OF CLASS "X" CONCRETE

SBI 104
SECTION, 142, 143 (X, RS-1), 142B-1 & 143B-1
CHRISTIAN COUNTY

SUMMARY OF QUANTITIES					TOTAL CONST. TYPE CODE						
CODE NO.	ITEM	UNIT	QUANTITY	6707	X081	CODE NO.	ITEM	UNIT	QUANTITY	6707	X081
010001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN. DIA	541	541	0	075159	INLETS, SPECIAL	EACH	2	2	0
010002	TREE REMOVAL (OVER 15 INCH DIAMETER)	IN. DIA.	302	302	0	076007	VALVE VAULTS TO BE ADJUSTED	EACH	1	1	0
010005	TREE REMOVAL, ACRES	ACRES	6.8	6.8	0	082001	PAVEMENT REMOVAL	SQ. YD.	9341	9341	0
010006	HEDGE REMOVAL	UNIT	78	78	0	082004	GUTTER REMOVAL	LIN. FT	308	308	0
011001	EARTH EXCAVATION	CU. YD.	102,499	75,599	26,900	082031	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ. YD.	489	489	0
012001	CHANNEL EXCAVATION	CU. YD.	2329	1579	750	083003	SLOPE WALL 6 INCH	SQ. YD.	6570	0	6570
013001	BORROW EXCAVATION	CU. YD.	179,390	108,190	71,200	094001	STEEL PLATE BEAM GUARD RAIL	LIN. FT.	2650	2650	0
019001	POROUS GRANULAR EMBANKMENT	CU. YD.	8820	0	8820	098008	GUARD RAIL REMOVAL	LIN. FT.	900	900	0
024001	SUB-BASE— GRANULAR MATERIAL, TYPE A	TON	8285	8285	0	101002	GRAVEL OR CRUSHED STONE	TON	4905	4905	0
026005	GRAVEL OR CRUSHED STONE SHOULDERS, (SALVAGED AGGREGATE)	CU. YD.	743	743	0	101006	SALVAGED AGGREGATE	CU. YD.	4497	4497	0
029001	GRAVEL OR CRUSHED STONE BASE COURSE, TYPE A	TON	226	226	0	102001	CALCIUM CHLORIDE APPLIED	TON	71	71	0
032006	PORTLAND CEMENT CONCRETE BASE COURSE 9"	SQ. YD.	28,052	28,052	0	104001	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	43	43	0
032009	PORTLAND CEMENT CONCRETE BASE COURSE 16 1/2"-10 1/2"-16 1/2"	SQ. YD.	693	693	0	110004	COMPLETE SEEDING	ACRE	41.2	41.2	0
033006	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 9"	SQ. YD.	645	645	0	110005	FERTILIZER NUTRIENTS	TON	3.3	3.3	0
036001	GRAVEL OR CRUSHED STONE SURFACE COURSE, TYPE A	TON	16,343	16,343	0	158008	PIPE CULVERTS, TYPE 3A RCCP 36"	LIN. FT	130	130	0
046001	BITUMINOUS MATERIALS. (PRIME COAT)	GALLON	3441	3441	0	201004	BRIDGE DECK SEALANT	SQ. YD.	1920	0	1920
046002	AGGREGATE (PRIME COAT)	TON	69	69	0	201023	BRIDGE SEAT SEALANT	L. SUM	1	0	1
046006	BITUMINOUS CONCRETE BINDER COURSE	TON	3194	3194	0	220278	DELINEATORS	EACH	153	153	0
046007	BITUMINOUS CONCRETE SURFACE COURSE SUB-CLASS F-II	TON	2415	2257	158	Z00450	REMOVING BUILDING NO.1	EACH	1	1	
049001	REMOVAL OF EXISTING STRUCTURES	EACH	4	0	4	Z00451	REMOVING BUILDING NO.2	EACH	1	1	
049005	EXPANSION BOLTS 3/4 INCH	EACH	20	20	0	Z00452	REMOVING BUILDING NO.3	EACH	1	1	
050002	CLASS B EXCAVATION FOR STRUCTURES	CU. YD.	180	0	180	Z00453	REMOVING BUILDING NO.4	EACH	1	1	
051002	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1900	0	1900	Z00454	REMOVING BUILDING NO.5	EACH	1	1	
051010	PRECAST PRESTRESSED CONCRETE BRIDGE DECK	SQ. FT.	18,057	0	18,057						
052001	HANDRAIL CONCRETE	CU. YD.	20.5	0	20.5						
052003	CLASS X CONCRETE	CU. YD.	440.4	49.8	390.6						
058199	PIPE CULVERT, TYPE 1 15"	LIN. FT.	152	152	0						
058200	PIPE CULVERT, TYPE 1 18"	LIN. FT.	22	22	0						
058229	PIPE CULVERT, TYPE 2 36"	LIN. FT.	34	34	0						
058253	PIPE CULVERT, TYPE 3 42"	LIN. FT.	242	242	0						
058258	PIPE CULVERT, TYPE 3 72"	LIN. FT.	342	342	0						
158467	PIPE CULVERTS, TYPE 1 15" DETOUR	LIN. FT.	54	54	0						
058594	PIPE CULVERTS, TYPE 1 18" DETOUR	LIN. FT.	88	88	0						
058993	PIPE CULVERTS, TYPE 2A RCCP 72"	LIN. FT.	176	176	0						
059001	REINFORCEMENT BARS	POUND	79,082	46,152	32,930						
060004	FURNISHING CREOSOTED PILES UP TO 20 FEET	LIN. FT	870	0	870						
060008	DRIVING TIMBER PILES	LIN. FT.	870	0	870						
060026	FURNISHING STEEL PILES 10BP42	LIN. FT.	4050	0	4050						
060035	TEST PILE STEEL 10BP42	EACH	7	0	7						
060037	DRIVING STEEL PILES	LIN. FT.	4050	0	4050						
060039	CLASS X CONCRETE ENCASEMENT	CU. YD.	85.9	0	85.9						
061001	NAME PLATES	EACH	4	0	4						
062015	DUMPED RIPRAP	TON	8672	8672	0						

SUMMARY OF QUANTITIES

SBI 104 SECTION 142, 143 (A, RS-1)

CHRISTIAN COUNTY

SUMMARY OF QUANTITIES

SBI 104 SECTION 112, 113 (A, RS-1)

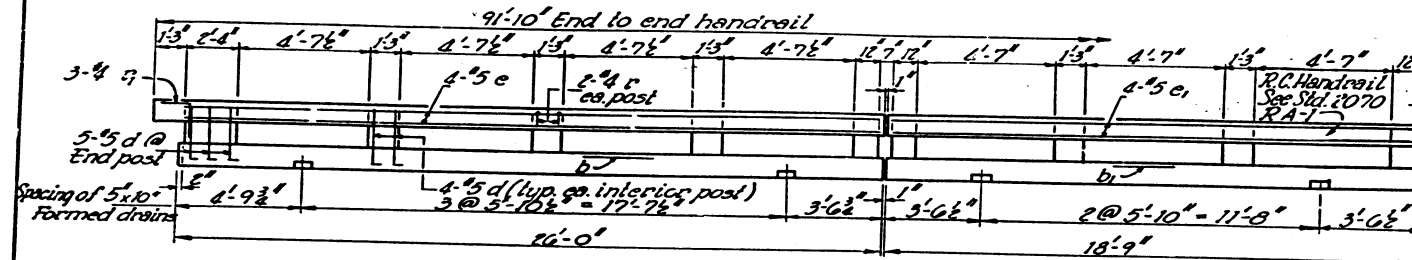
CHRISTIAN COUNTY

LOADING H320-44

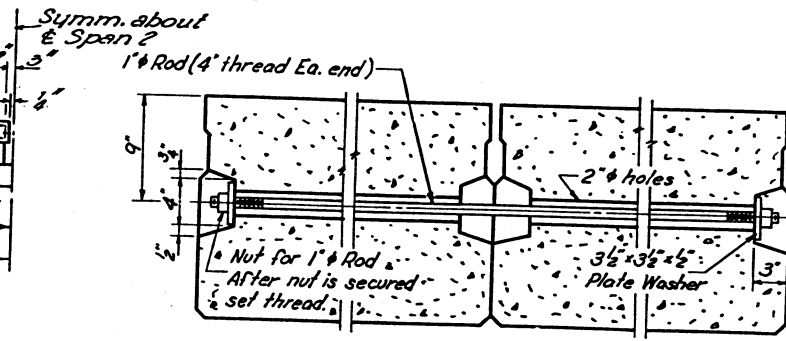
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 104	142B-1	Christian	60	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

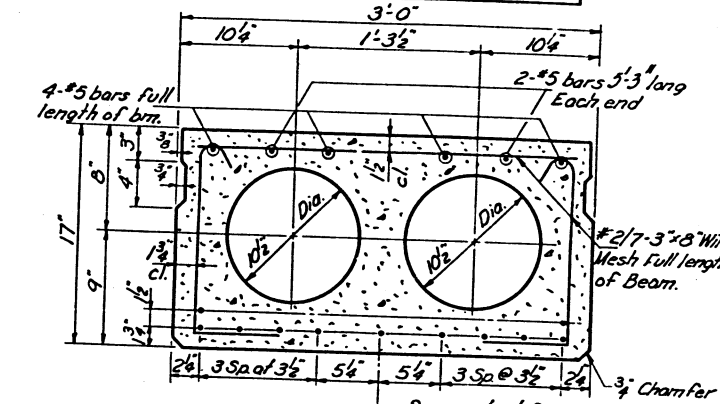
4 SHEETS



HALF ELEVATION OF HANDRAIL

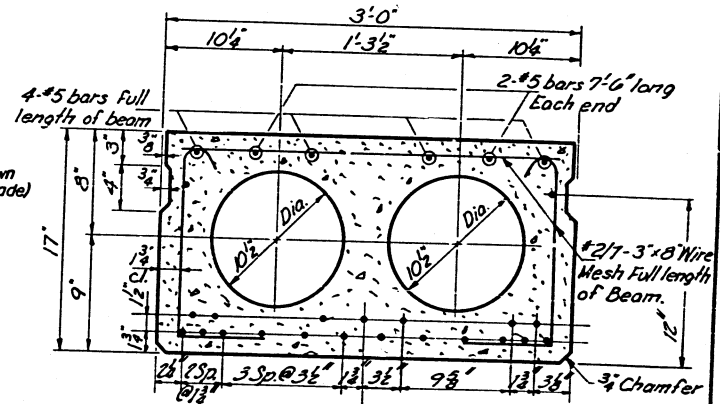


TRANSVERSE TIE ASSEMBLY



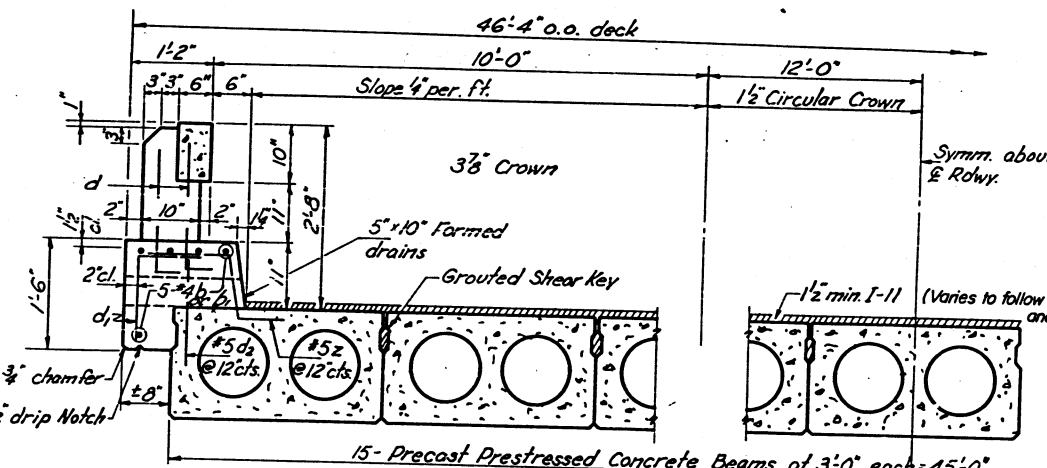
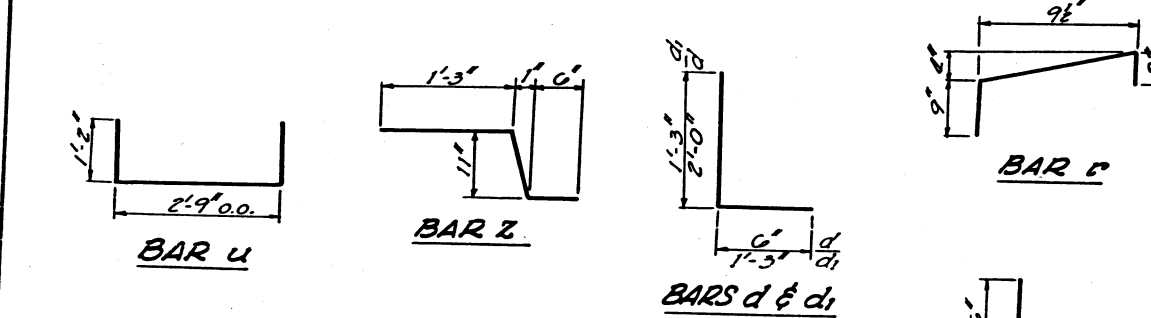
SECTION A-A

11-7 wire - 16# strands, Each strand stressed to 18,900 lbs.
9 - Strands 1 1/4" up, 2 - strands 3 1/4" up

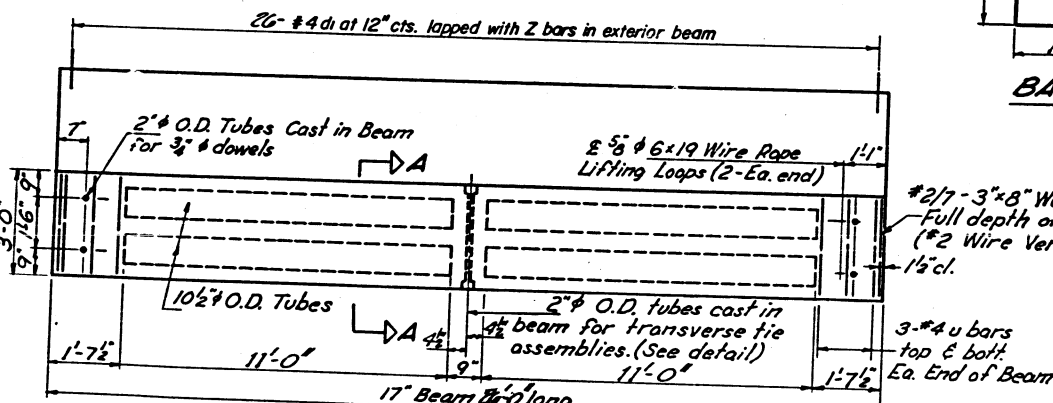


SECTION B-B

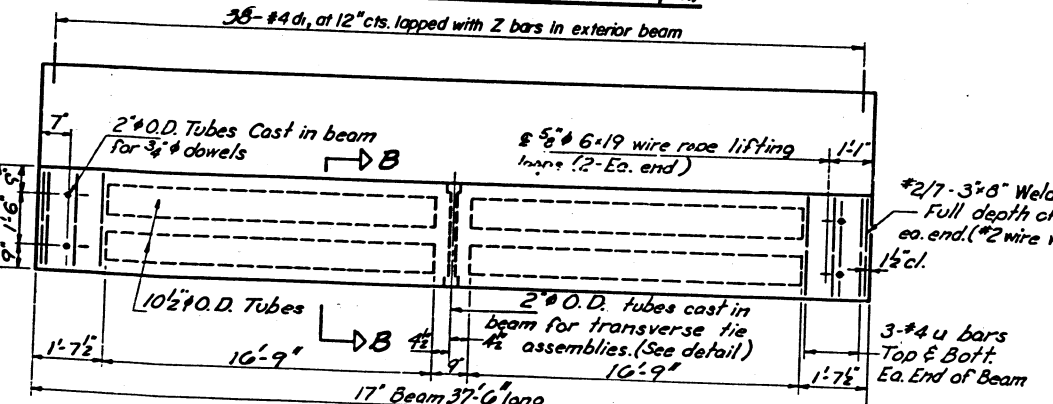
21-7 wire - 16# strands, Each strand stressed to 18,900 lbs.
12 strands 1 1/4" up, 7 - strands 3 1/4" up and 2 - strands 12" up



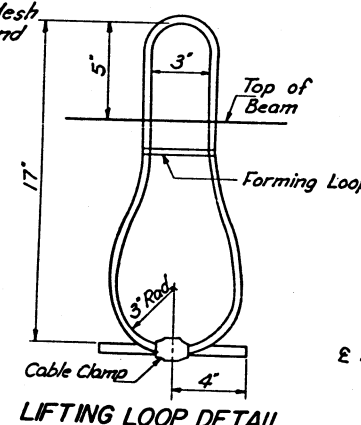
HALF CROSS SECTION



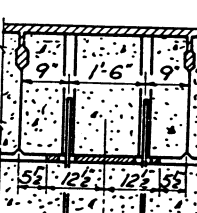
PLAN OF BEAMS-SPAN 1 & 3 (30 req'd)



PLAN OF BEAMS-SPAN 2 (15 req'd)



LIFTING LOOP DETAIL



SEC. C-C

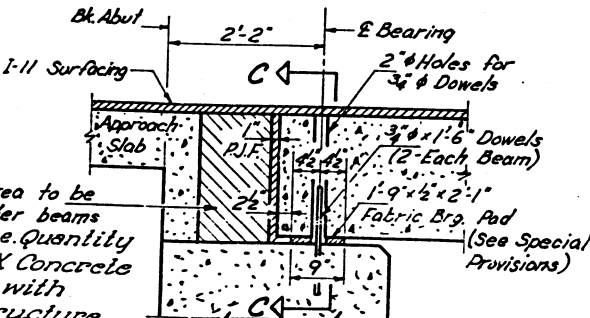
GENERAL NOTES

For Item "Precast Prestressed Concrete Bridge Deck" See Supplemental Specifications effective March 2, 1964.
Prestressing steel shall be non-galvanized high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the nominal cross-sectional area shall be 0.109 square inch.
Lifting loops shall be 3/8" diameter, 6 x 19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set.
Pockets that receive transverse tie bar on outside of beam shall be filled with grout after transverse tie assembly is in place.
Longitudinal shear keys shall be dry packed with 1:1 sand and P.C. Mortar.
Dowel bars shall be set in drilled holes and grouted in place.
Cost of reinforcement and accessories casted into beam, of bearing pads, of furnishing and assembling transverse ties, of furnishing, drilling and grouting dowel holes, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Bridge Deck"

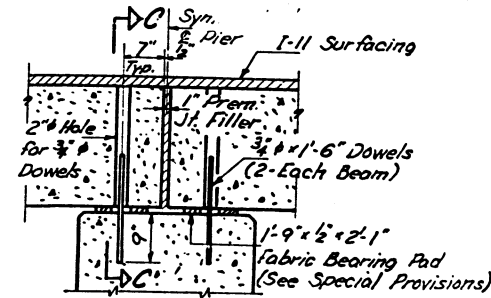
PLAN OF FABRIC BRG. PAD

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b	20	#4	25'-9"	—
b1	20	#4	19'-6"	—
d	148	#5	2'-0"	L
d1	180	#4	2'-6"	L
e	10	#5	25'-9"	—
e1	10	#5	18'-6"	—
f	72	#4	2'-3"	—
g	12	#4	3'-0"	L
17' Precast Prestressed Concrete Bridge Deck			Sq. Ft.	4,028
Class X Concrete			Cu. Yds.	17.8
Handrail Concrete			Cu. Yds.	4.8
Reinforcement Bars			Lbs.	2,160
Bit. Conc. Surf. Course (1 1/2" I-11)			Tons	35



SEC. THRU ABUTMENT



SEC. THRU PIERS

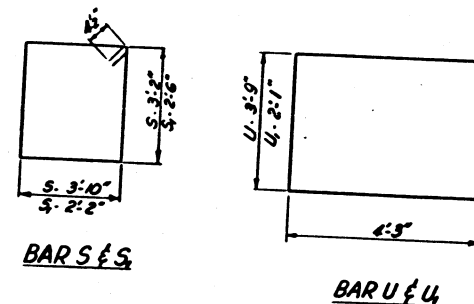
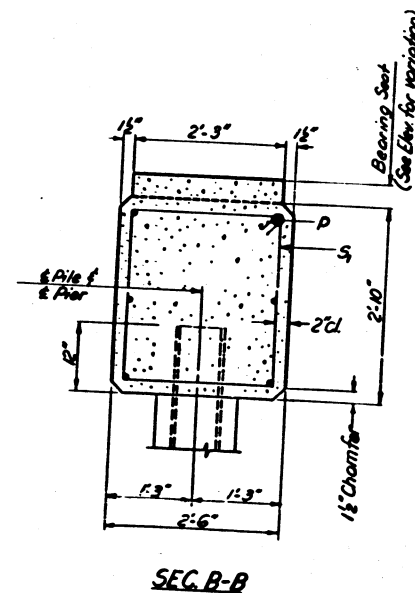
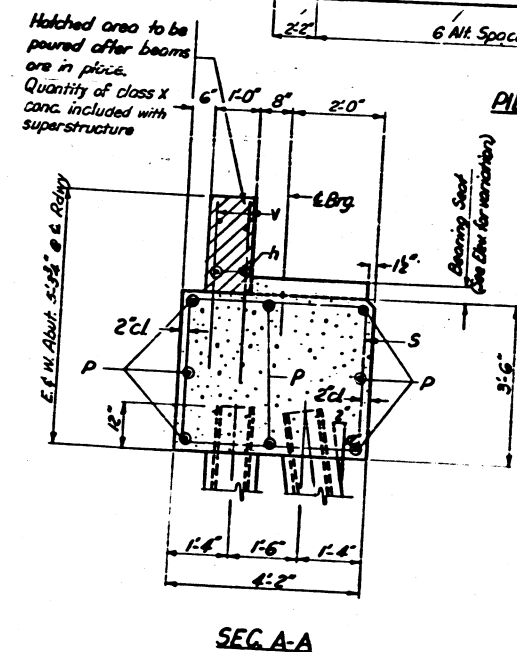
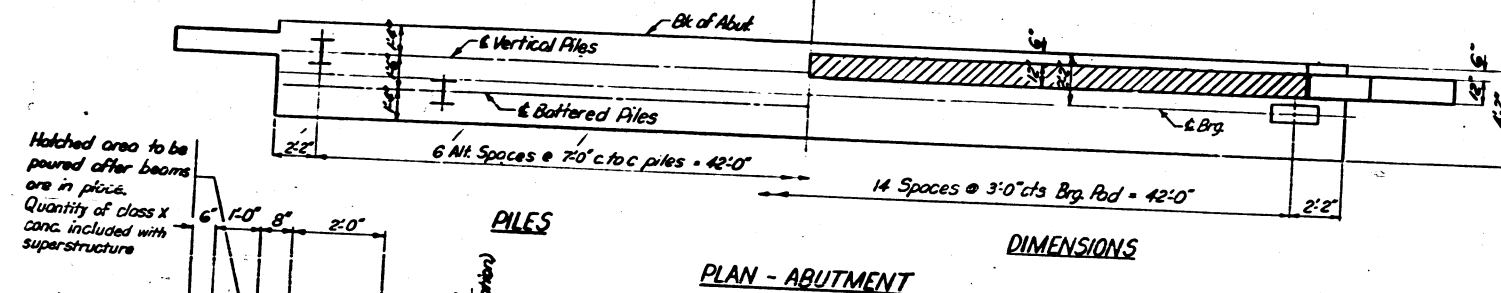
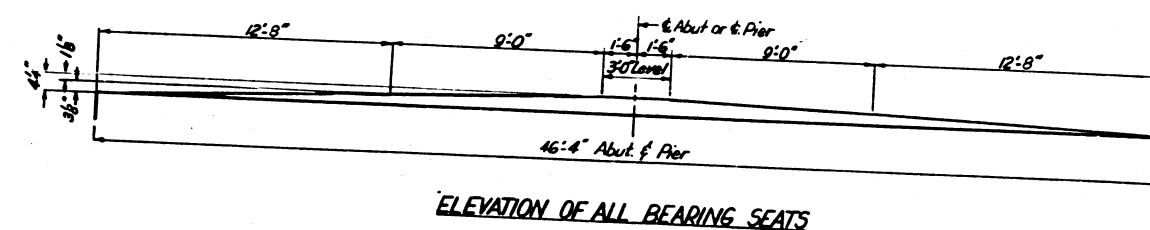
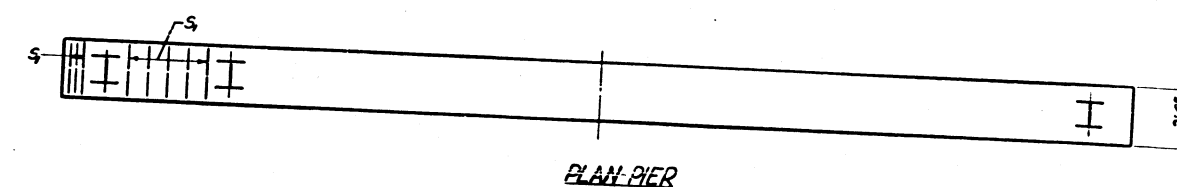
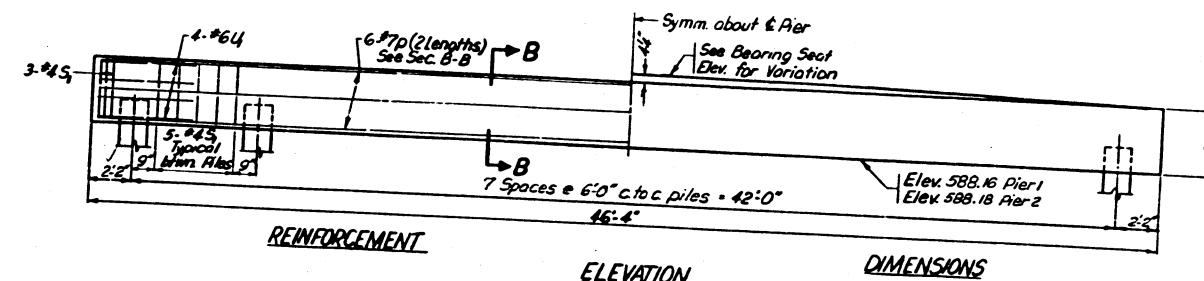
DESIGNED	T.M. Yang
CHECKED	M. Tarnashin
DRAWN	Thomas A. Lewis
CHECKED	M. Tarnashin
EXAMINED	W. Baumann
PASSED	J.L. Putnam
APPROVED	V.E. O'Leary

SUPERSTRUCTURE
S.B.I. RT. 104 SEC. 142 B-1
CHRISTIAN COUNTY
STA. 1109+06.18

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D. L. 104 P. 4.	142B-1	Christian	60	13

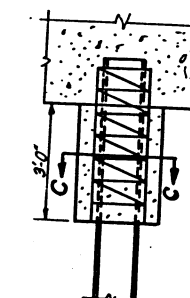
SHEET NO. 3
4 SHEETS

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

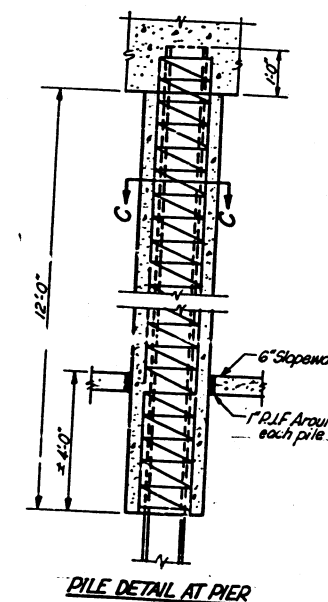


Type - Steel (10 BP42)
Capacity - 30 Tons
Est. Length - 30 Ft
No. Piles - 4 (Including
one test pile @ W. Abut.)

Type - Steel (10 BP 42)
Capacity - 30 Tons
Est. Length - 35 Ft.
No. Req'd - 16 (Including
one test pile @ Pier 2)



PILE DETAIL AT ABUT



PILE DETAIL AT PIER

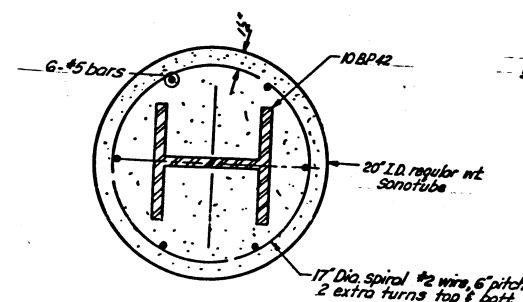
[illegible]

SUBSTRUCTURE
S.B.I. RT. 104 SEC. 142-B-1
CHRISTIAN COUNTY
STA. 1109+06.18

DESIGNED *M. Tamachio, T. no. y*
CHECKED *T. Tamachio, T. no. y*
DRAWN *M. Tamachio*
CHECKED *T. Tamachio, T. no. y*

AUGUST 3 1964
 EXAMINED *W.E. Baumann*
 PASSED *[Signature]*
 APPROVED *U.C. 2245*
 711

NOTE:
Space reinforcement in cap to miss dowel bars
All edges shall have standard $\frac{1}{4}$ " chamfer except
as noted
Four seats monolithically with cap

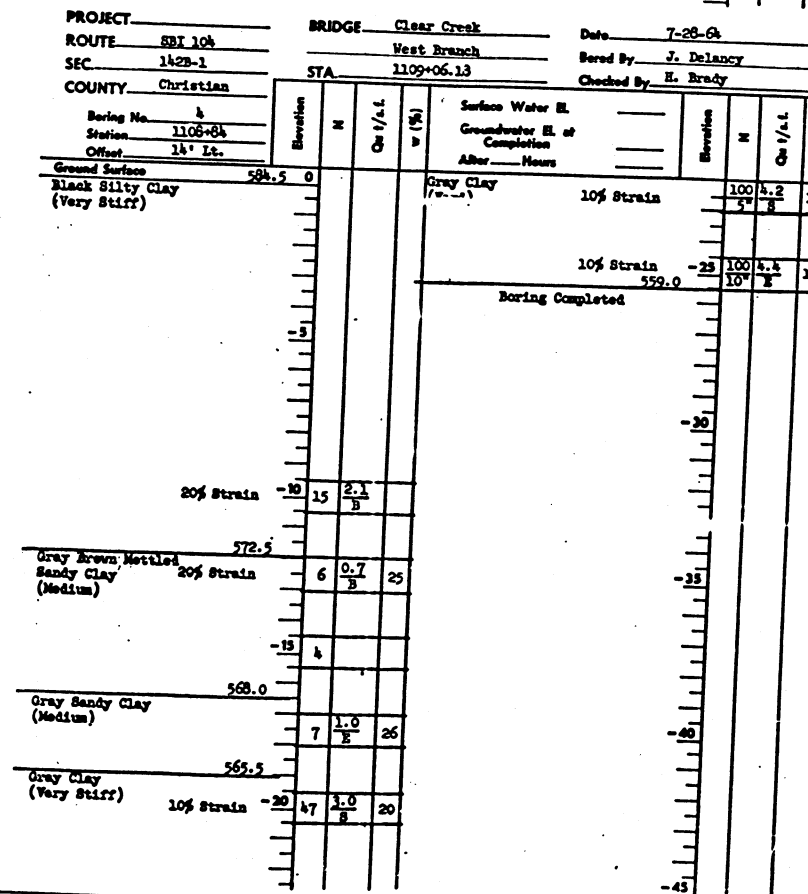
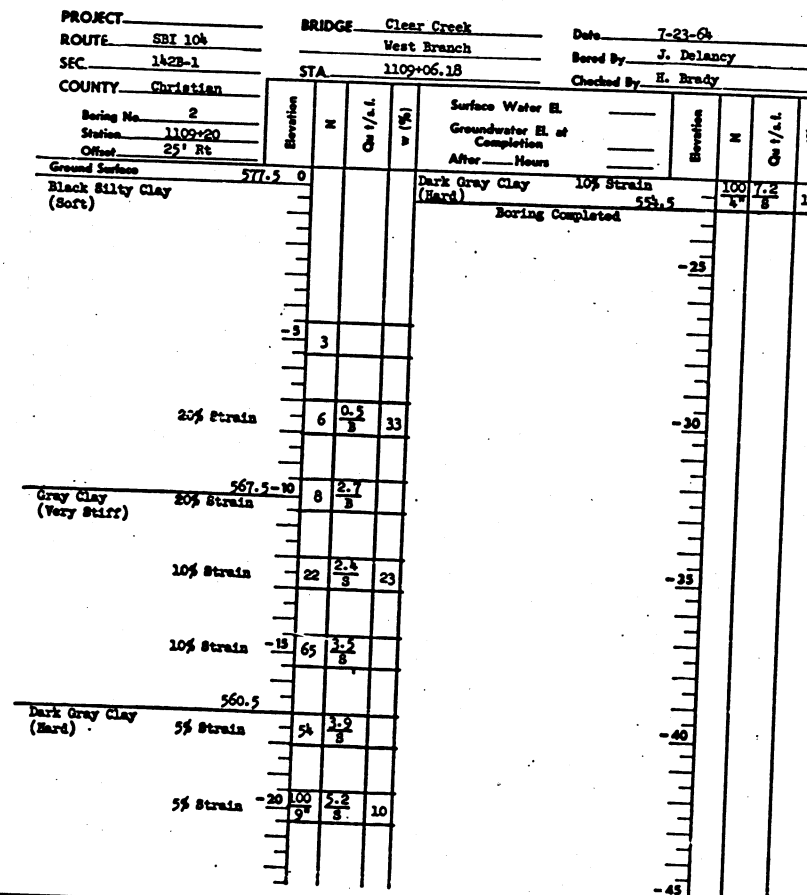
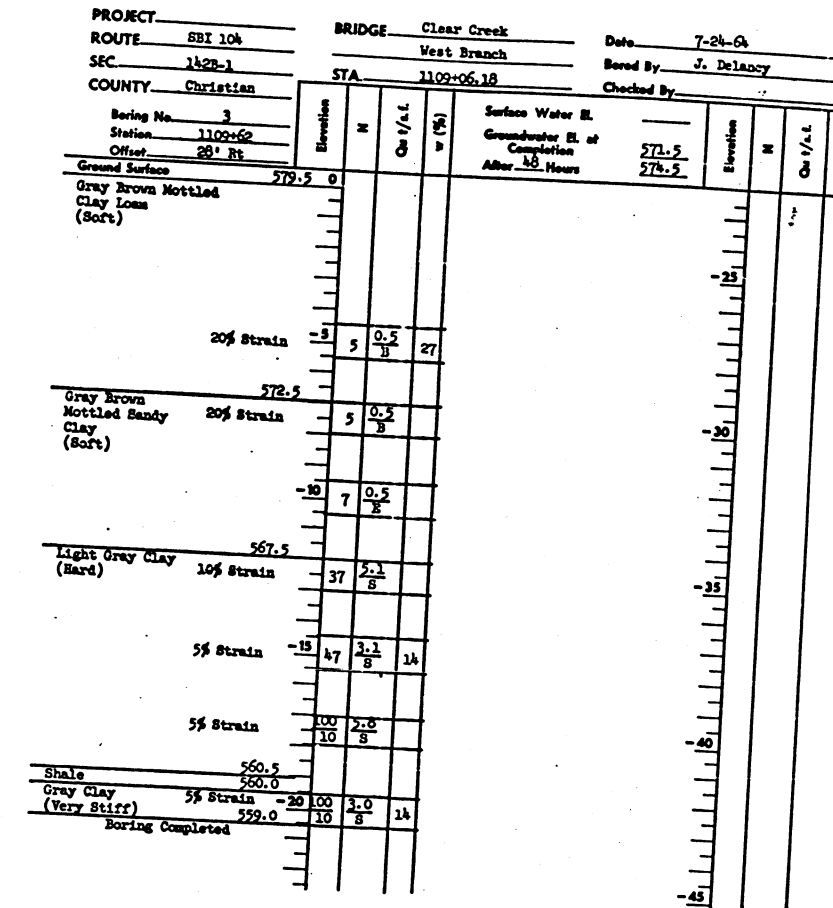
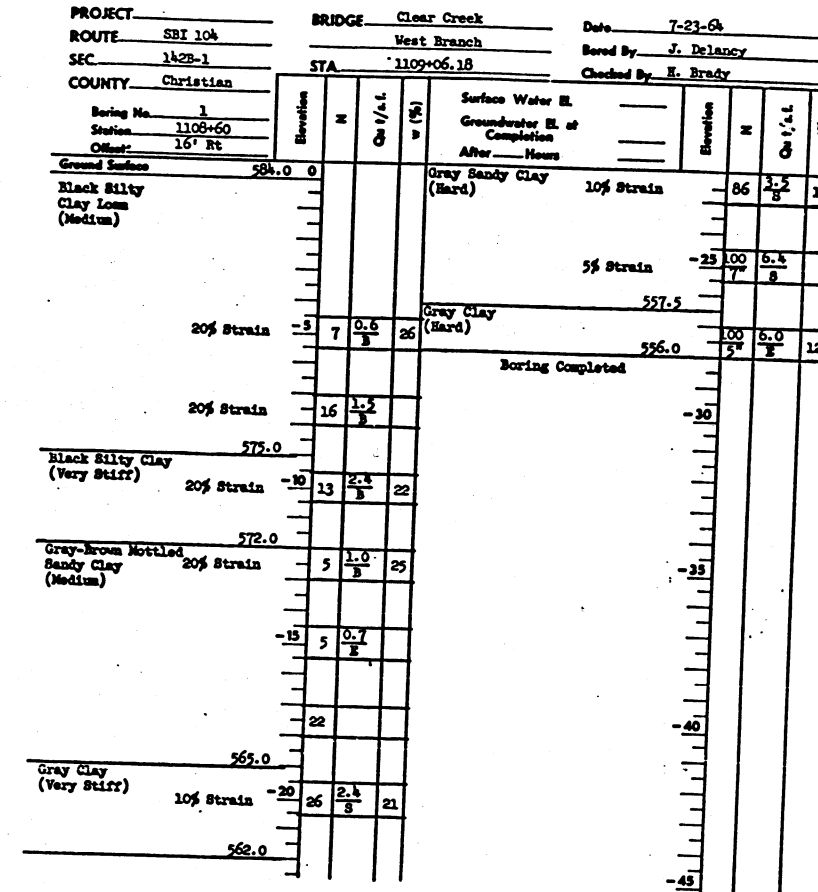


SEC C-C

SEC. C-C
Cost of sonotube & reinf. is incidental to Class X
Concrete Encasement

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 104	142B-1	Christian	60	14
P.A.				
P.B. ROAD DIST. NO. 7	ALIGNMENT	P.B. AND PROJECT		



H - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Q_u - Unconfined Compressive Strength - 1/d
w - Water Content - percentage of oven dry weight - %

Type failure
B - Bulge Failure
S - Shear Failure
E - Estimated Value

DESIGNED *T. J. ...*
CHECKED *M. T.*
DRAWN *Joseph L. Putnam*
CHECKED *M. T.*

EXAMINED *H. E. ...*
PASSED *E. ...*
APPROVED *O. E. ...*

BORING DATA
SBI 104 SEC. 142-B-1
CHRISTIAN COUNTY
STA 1109+06.18