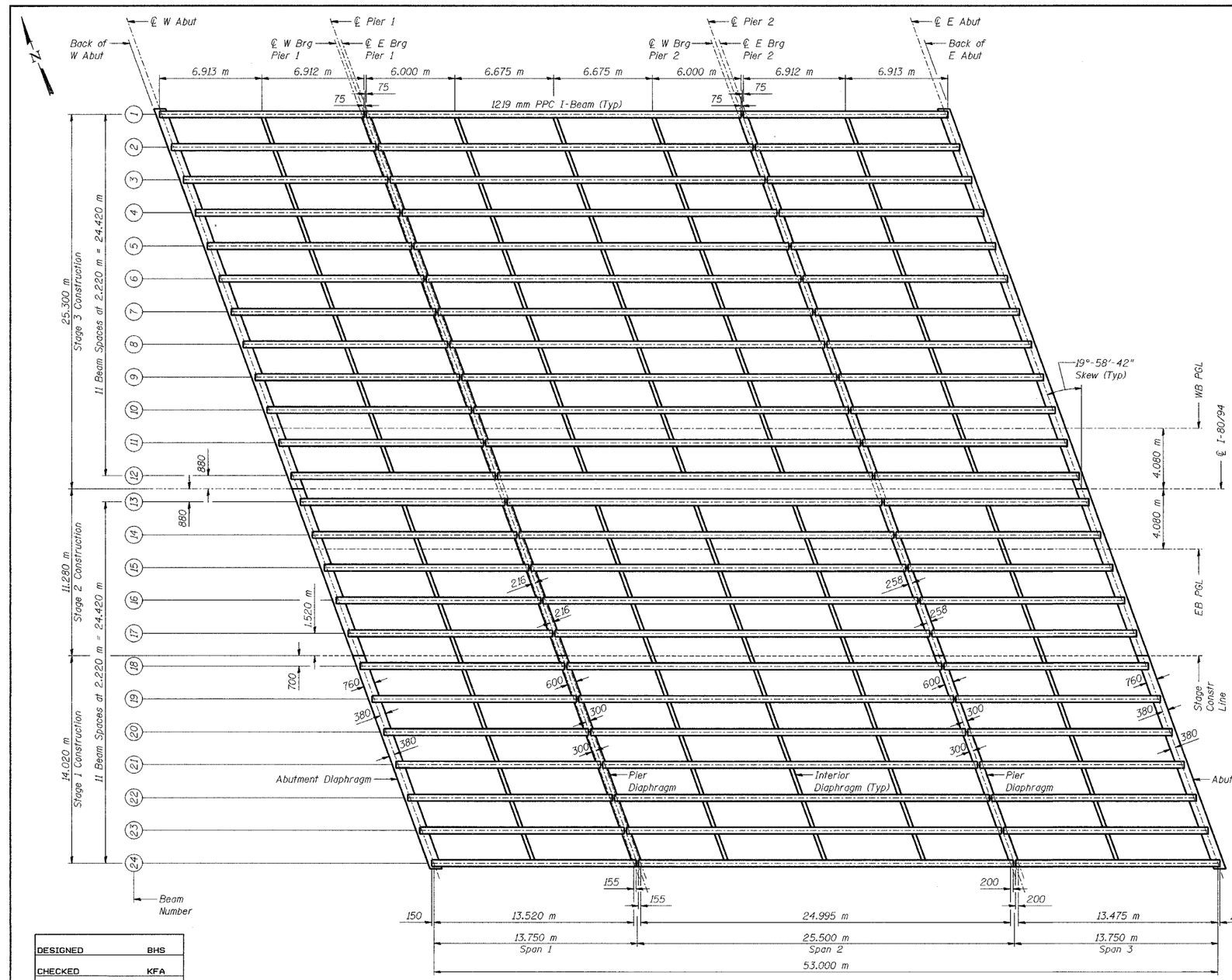


FRAMING PLAN

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	601
		ILL.SHEETS	FED. AID PROJECT-	

SHEET NO. S-22
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 0.6 Span 3	Pier 1 or 2	0.5 Span 2
I	(10^6 mm^4)	59986	———	59986
I'	(10^6 mm^4)	153856	———	153856
Sb	(10^3 mm^3)	111989	———	111989
Sb'	(10^3 mm^3)	179051	———	179051
St	(10^3 mm^3)	87753	———	87753
St'	(10^3 mm^3)	463460	———	463460
$M_{\mathbb{D}}$	(kN·m)	20.54	———	21.08
$M_{\mathbb{D}}$	(kN·m)	489	———	1684
$s_{\mathbb{D}}$	(kN/m)	11.40	11.40	11.40
$M_{s\mathbb{D}}$	(kN·m)	48	526	401
$M_{\mathbb{L}}$	(kN·m)	463	609	765
M (Imp)	(kN·m)	135	178	183

INTERIOR BEAM REACTION TABLE

		Abutment	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
	$R_{\mathbb{D}}$ (kN)	140	143	272
*	$Rs_{\mathbb{D}}$ (kN)	40	117	145
*	$R_{\mathbb{L}}$ (kN)	191	215	244
*	Imp. (kN)	56	63	58
	R (Total) (kN)	427	538	719

* The total $Rs_{\mathbb{D}}$, $R_{\mathbb{L}}$, and Impact Reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier shall be based on the maximum reactions of either span.

I and I' are the moment of inertia and composite moment of inertia of the beam section.

Sb and Sb' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

St and St' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

$M_{\mathbb{D}}$ is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

$M_{s\mathbb{D}}$ is the moment due to dead loads on the composite section.

$M_{\mathbb{L}}$ is the moment due to live load on the composite section.

M (Imp) is the moment due to live load impact on the composite section.

NOTES:

See Sheet Nos. S-17 thru S-19 for diaphragm details.

See Sheet Nos. S-23 and S-24 for prestressed beam details.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

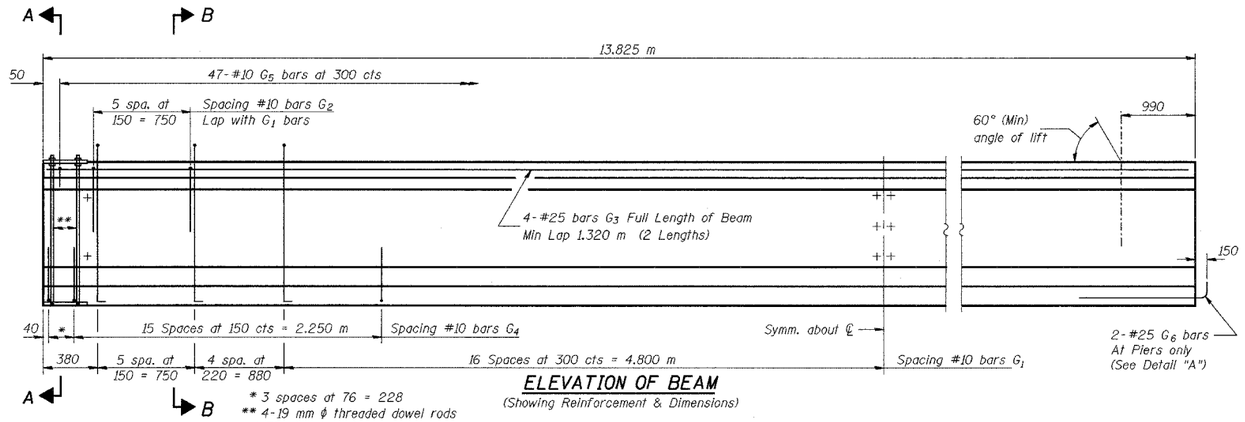
FRAMING PLAN
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-1001 & 016-1002)**

AMERICAN CONSULTING ENGINEERS

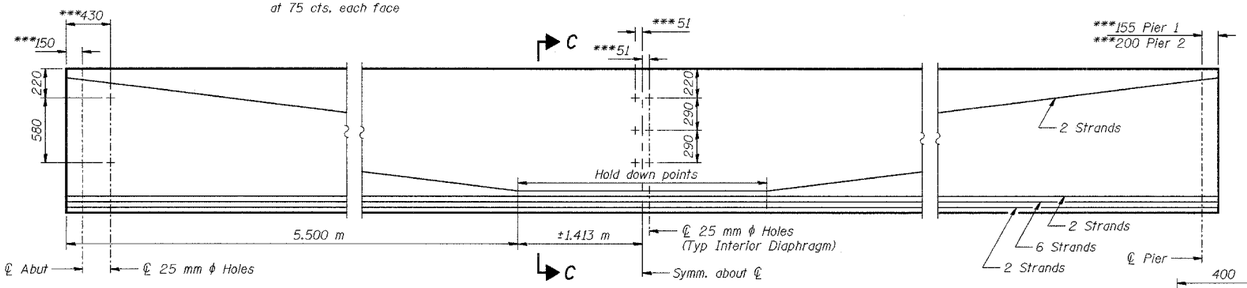
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	602
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-23
40 SHEETS

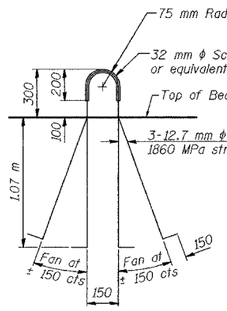
CONTRACT NO. 62114 INDOT DES. NO. 0100987



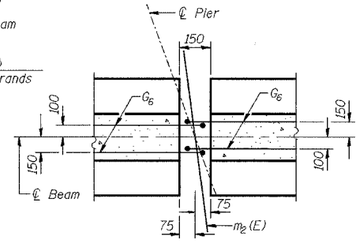
ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)



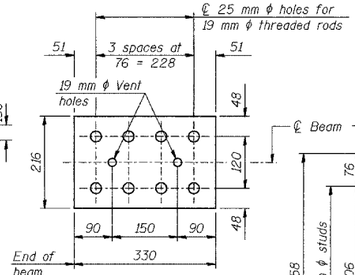
ELEVATION OF BEAM
(Span 1 shown looking North, Span 3 similar)
(Showing Prestressing Steel)



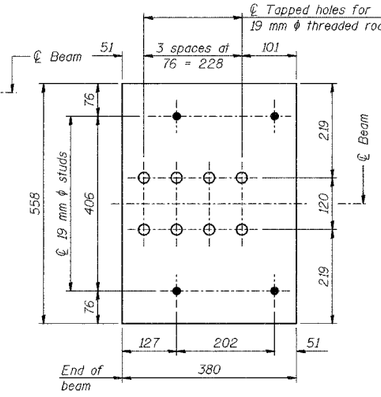
LIFTING LOOP DETAIL



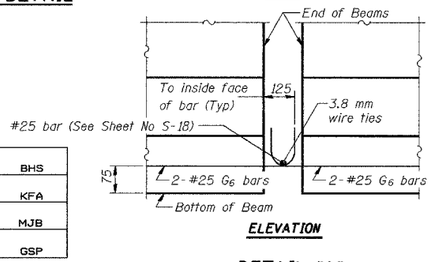
PLAN



TOP PLATE
(Typical at each end of beam)



BOTTOM PLATE
(Typical at each end of beam)
(See bearing details for pintle hole locations at Pier 2)

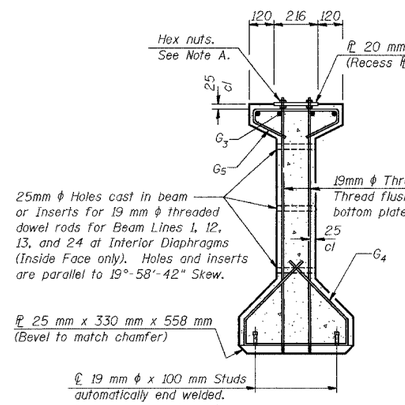


ELEVATION

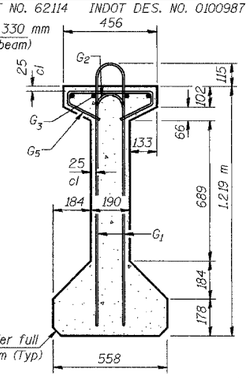
DETAIL "A"

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PI-4-1219 (M) 7-15-05

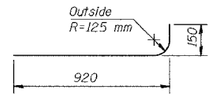


SECTION A-A

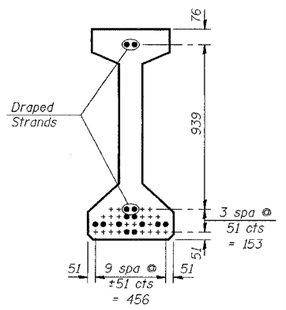


SECTION B-B

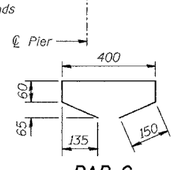
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



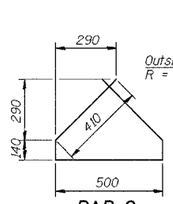
BAR G6



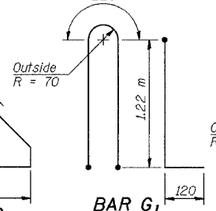
SECTION C-C



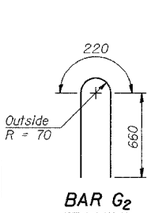
BAR G5



BAR G4



BAR G1



BAR G2

NOTES

Inserts for 19 mm threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand (Fu=1860 MPa).

The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm^2.

Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M Grade 400.

A minimum 60 mm ϕ lifting pin shall be used to engage the lifting loops during handling.

Required release strength, f'ci, shall be 35 MPa.

Reinforcement bars designated (E) shall be epoxy coated.

Cut G_6 bars when necessary to maintain 40 mm clearance.

The bottom plates and studs shall be galvanized according to AASHTO M111 and ASTM A385.

Threaded rods shall be ASTM F 1554 Grade 380.

The cut strands at 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. A concrete sealer meeting the requirements of Section 587 of the IDOT Standard Specifications shall be applied to all portions of the I-beam or Bulb-T beam, except the top surface of the top flange and the bottom surface of the bottom flange, starting at each beam end and extending out a distance of 1.22 m. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

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

***Measured along ℄ Beam

* BAR LIST

Bar	No.	Size	Length (m)	Shape
G_1	52	#10	2.90	
G_2	12	#10	1.54	
G_3	8	#25	9.30	
G_4	38	#10	1.60	
G_5	47	#10	0.82	
G_6	2	#25	1.14	

* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm	m	663.6

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

1219 mm PPC I-BEAM – SPANS 1 & 3
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-I-8459 (EB & WB)

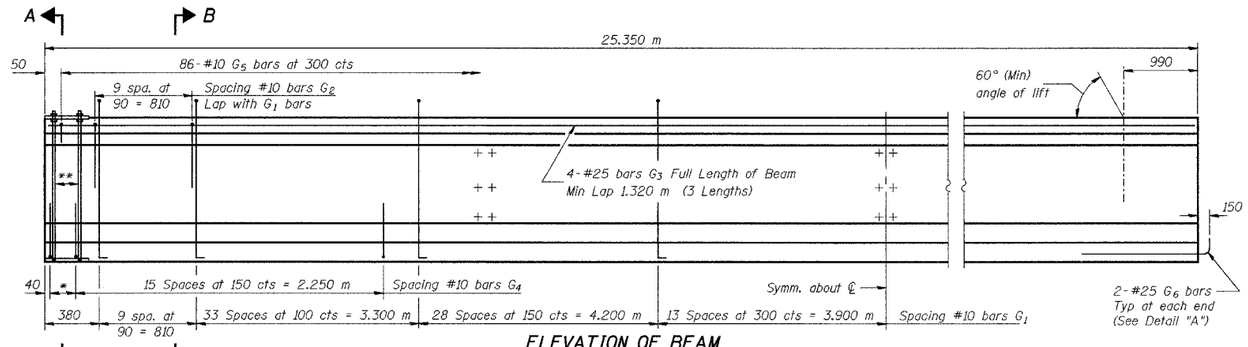
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

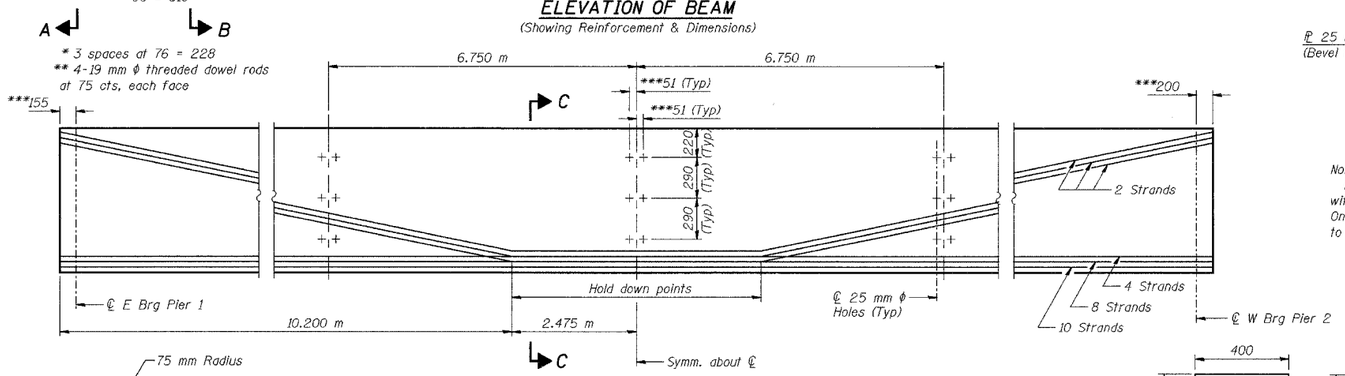
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	603
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-24
40 SHEETS

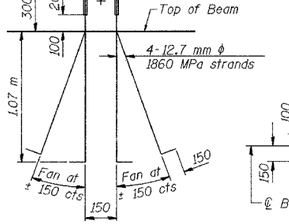
CONTRACT NO. 62114 INDOT DES. NO. 0100987



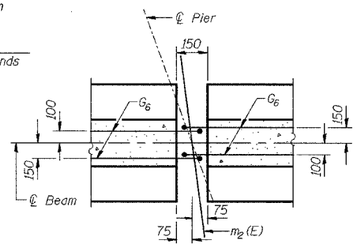
ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)



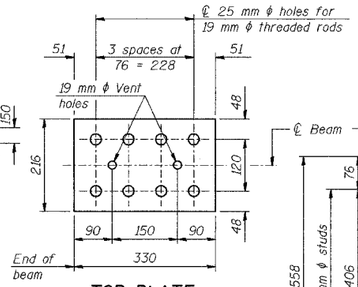
ELEVATION OF BEAM
(Showing Prestressing Steel)



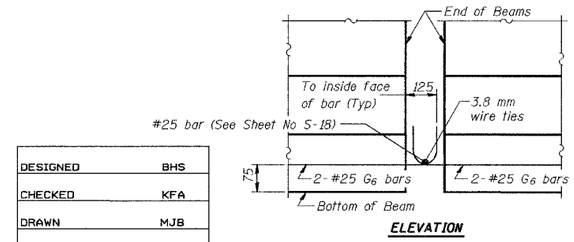
LIFTING LOOP DETAIL



PLAN

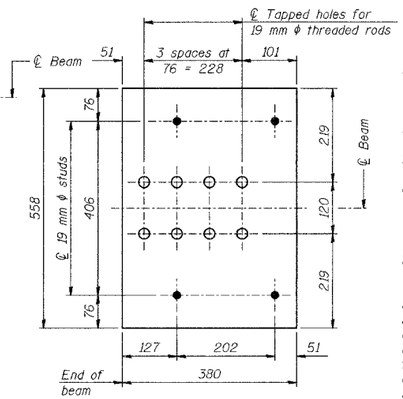


TOP PLATE
(Typical at each end of beam)



ELEVATION

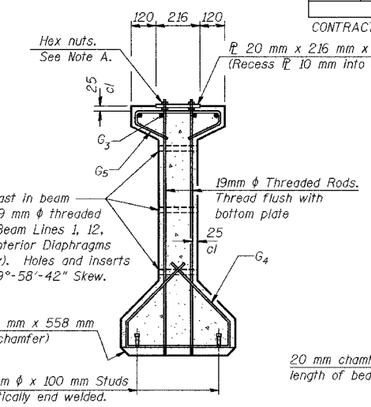
DETAIL "A"



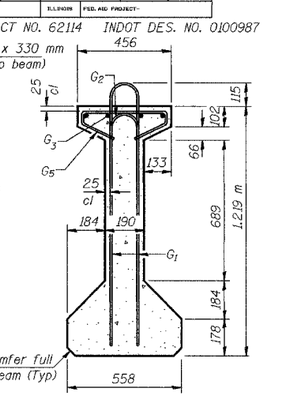
BOTTOM PLATE
(Typical at each end of beam)
(See bearing details for pintle hole locations at Pier 2)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PI-4-1219 (M) 7-15-05

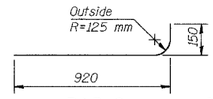


SECTION A-A

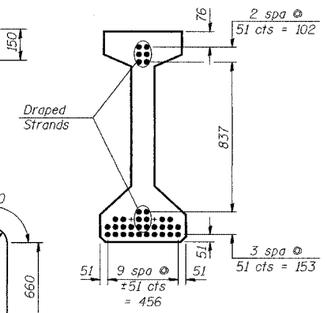


SECTION B-B

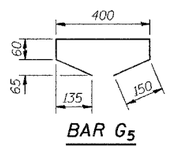
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



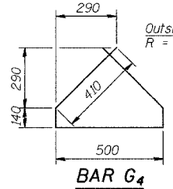
BAR G6



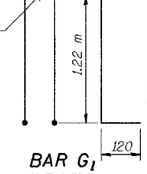
SECTION C-C



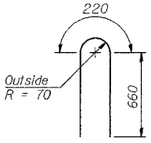
BAR G5



BAR G4



BAR G1



BAR G2

NOTES

Inserts for 19 mm threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand (Fu=1860 MPa).

The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm².

Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M Grade 400.

A minimum 60 mm ϕ lifting pin shall be used to engage the lifting loops during handling.

Required release strength, f'ci, shall be 35 MPa.

Reinforcement bars designated (E) shall be epoxy coated.

Cut G_6 bars when necessary to maintain 40 mm clearance.

The bottom plates and studs shall be galvanized according to AASHTO M111 and ASTM A385.

Threaded rods shall be ASTM F 1554 Grade 380.

The cut strands at 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. A concrete sealer meeting the requirements of Section 587 of the IDOT Standard Specifications shall be applied to all portions of the I-beam or Bulb-T beam, except the top surface of the top flange and the bottom surface of the bottom flange, starting at each beam end and extending out a distance of 1.22 m. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

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

***Measured along ℄ Beam

* BAR LIST

Bar	No.	Size	Length (m)	Shape
G_1	168	#10	2.90	
G_2	20	#10	1.54	
G_3	12	#25	9.30	
G_4	38	#10	1.60	
G_5	86	#10	0.82	
G_6	4	#25	1.14	

* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm	m	608.4

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

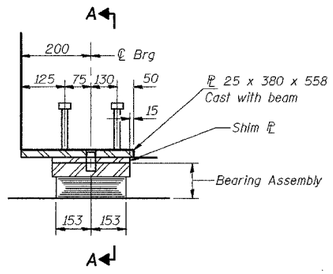
1219 mm PPC I-BEAM – SPAN 2
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-1001 & 016-1002)**

AMERICAN CONSULTING ENGINEERS

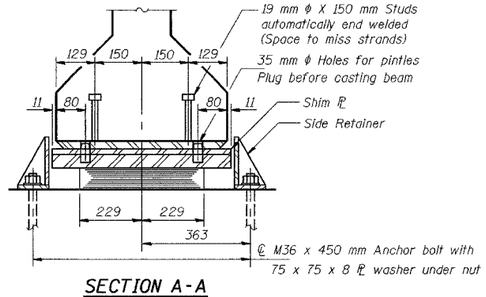
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	604
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-25
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



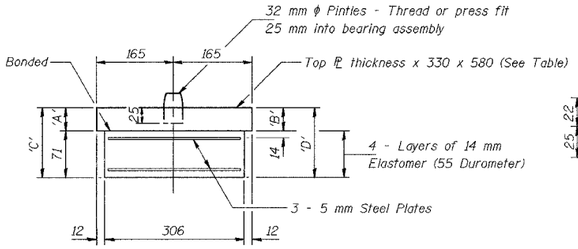
SECTION AT PIER 2



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

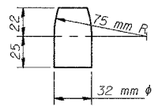
Notes: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place.
See Sheet S-26 for anchor bolt installation.
All dimensions are in millimeters (mm) except as noted.



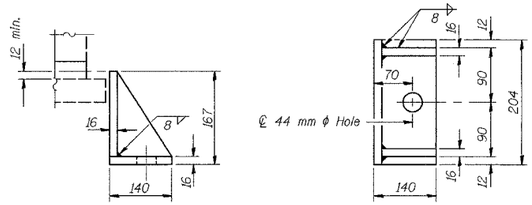
BEARING ASSEMBLY

(Looking North)

Note: Shim plates shall not be placed under Bearing Assembly.



PINTLE

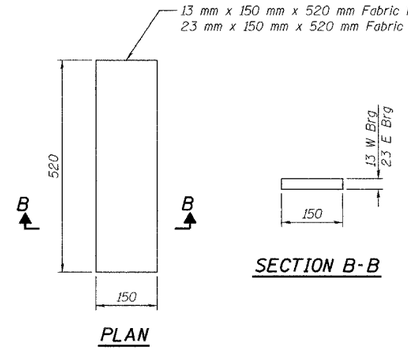


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(Cost included with Elastomeric Bearing Assembly, Type I)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PI-2E-1 (M) 9-1-03



PLAN

SECTION B-B

FABRIC PAD AT PIER 1

(Cost included with Concrete, C. Superstructure)

BEARING ASSEMBLY DIMENSIONS

Location	'A'	'B'	'C'	'D'
W Brg - Beams 13 thru 24	65	65	136	136
E Brg - Beams 13 thru 24	77	77	136	136
W Brg - Beams 1 thru 12	65	72	136	143
E Brg - Beams 1 thru 12	77	84	148	155

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	48

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

BEARING DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

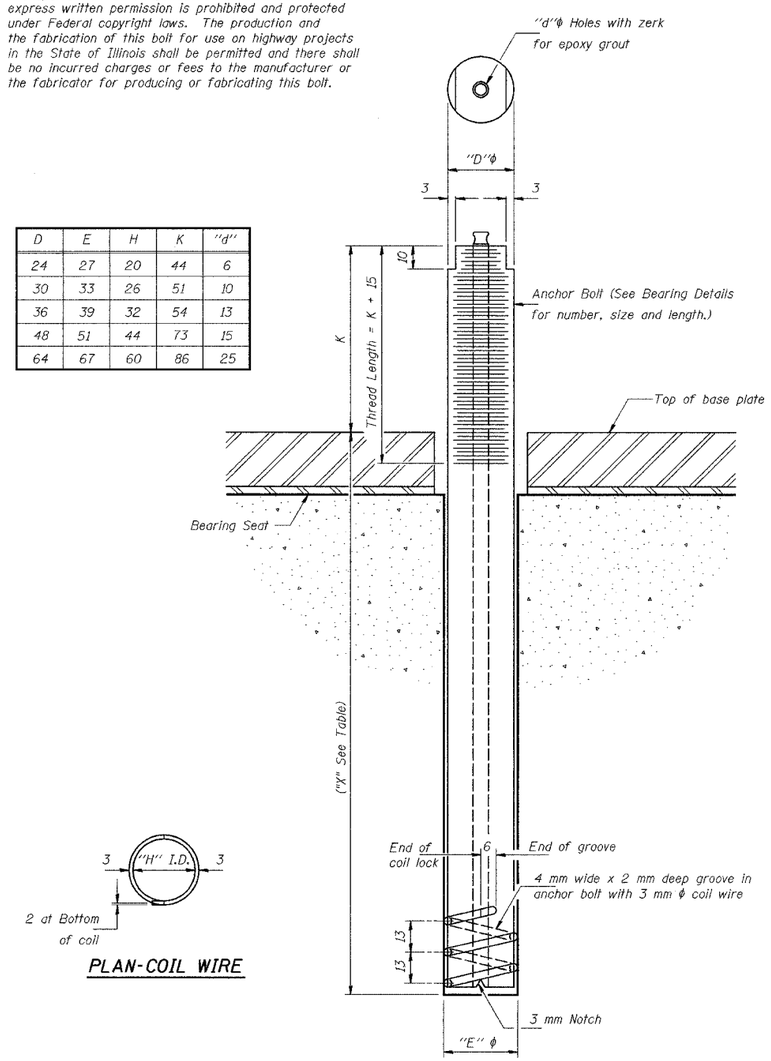
AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	605
	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-26
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type	D	X
Pier 1	A307	36	396
Pier 2	A307	36	396

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Anchor Bolt.

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ABB-1 (M) 4-30-99

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

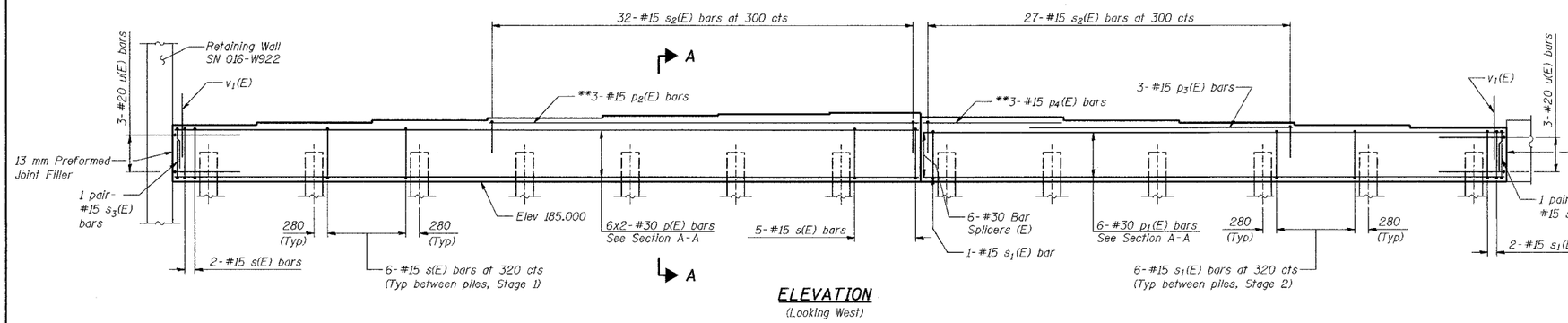
ANCHOR BOLT DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-1001 & 016-1002)**

AMERICAN CONSULTING ENGINEERS

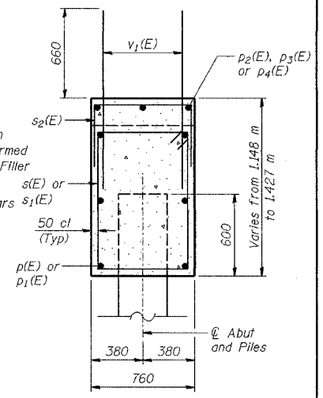
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	606
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-27
40 SHEETS

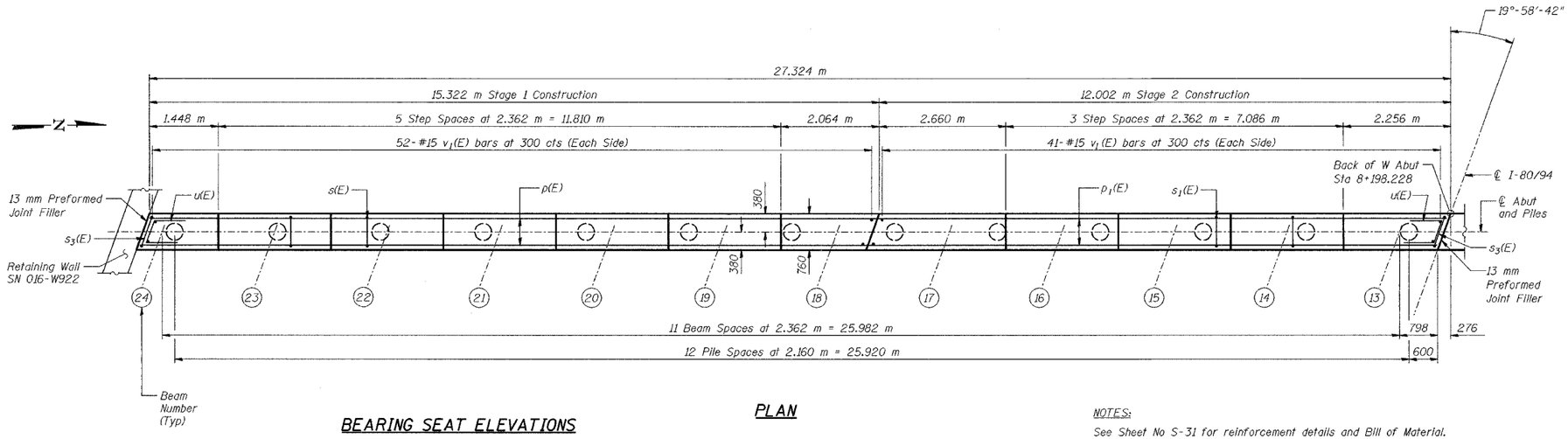
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION
(Looking West)



SECTION A-A



PLAN

PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 17.0 m
*Est Length - 21.0 m
No Read - 12
Test Piles - 1

BEARING SEAT ELEVATIONS

Beam	℄ W Abut
13	186.148
14	186.220
15	186.286
16	186.347
17	186.398
18	186.427
19	186.407
20	186.386
21	186.357
22	186.318
23	186.280
24	186.241

NOTES:

See Sheet No S-31 for reinforcement details and Bill of Material.

See Sheet No S-36 for concrete pile details.

Pour steps monolithically with cap.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.

*For the 3 southernmost piles, which are outside the Limits of Existing Structure.

**Cut bars to fit in field.

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#30 bars = 1850

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

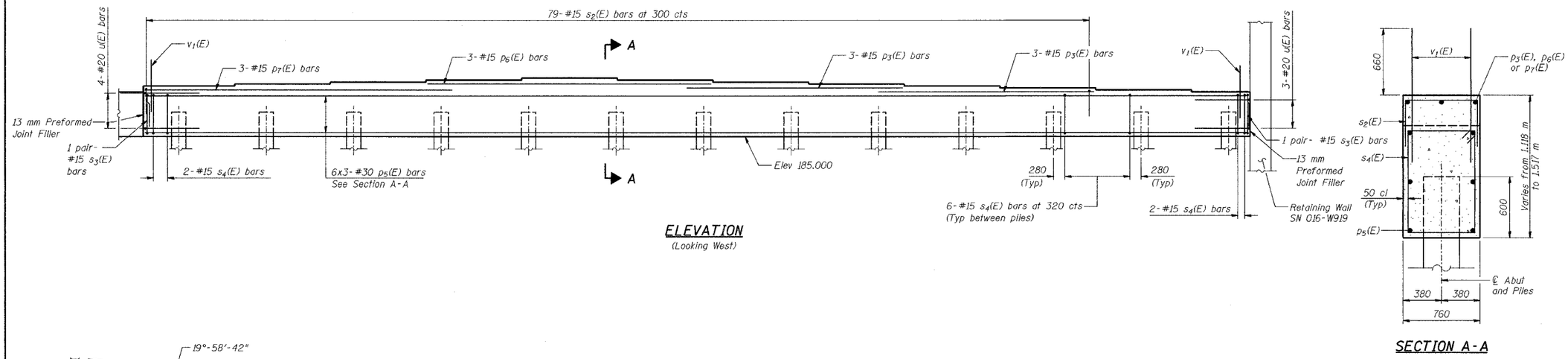
WEST ABUTMENT – EASTBOUND
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	607
		ILLINOIS FED. AID PROJECT-		

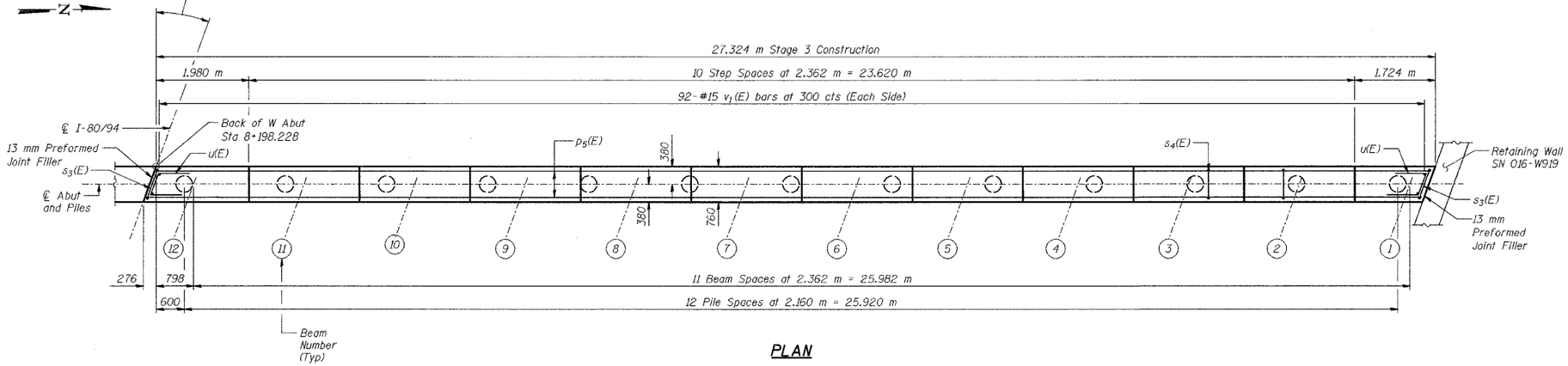
SHEET NO. S-28
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION
(Looking West)

SECTION A-A



PLAN

PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 17.0 m
*Est Length - 18.8 m
No Reqd - 13
Test Piles - 0

BEARING SEAT ELEVATIONS

Beam	℄ W Abut
1	186.118
2	186.191
3	186.265
4	186.338
5	186.402
6	186.460
7	186.497
8	186.517
9	186.497
10	186.475
11	186.444
12	186.406

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-31 for reinforcement details and Bill of Material.

See Sheet No S-36 for concrete pile details.

Pour steps monolithically with cap.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.

*For the 3 northernmost piles, which are outside the Limits of Existing Structure.

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

WEST ABUTMENT – WESTBOUND
SECTION 2626.2–R–2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I–80–1–8459 (EB & WB)
(016–I001 & 016–I002)

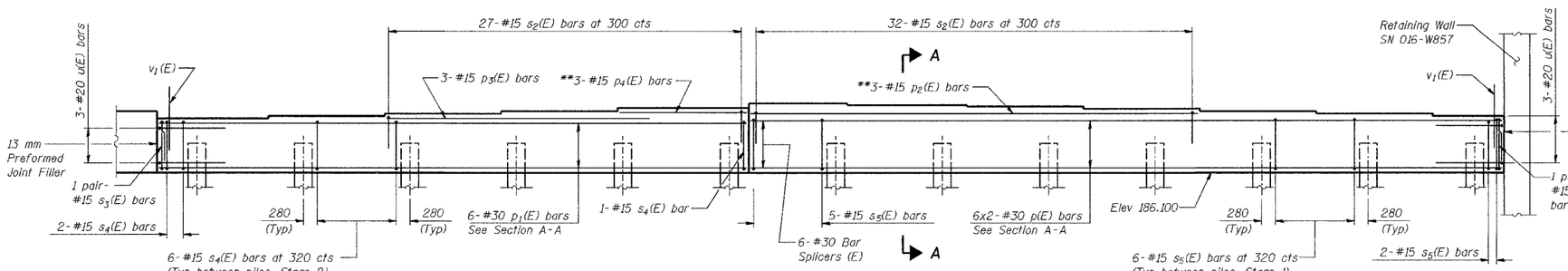
DATE 09/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	608
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-29
40 SHEETS

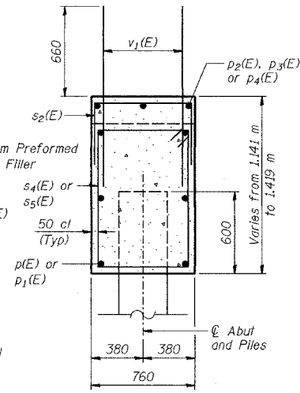
CONTRACT NO. 62114 INDOT DES. NO. 0100987



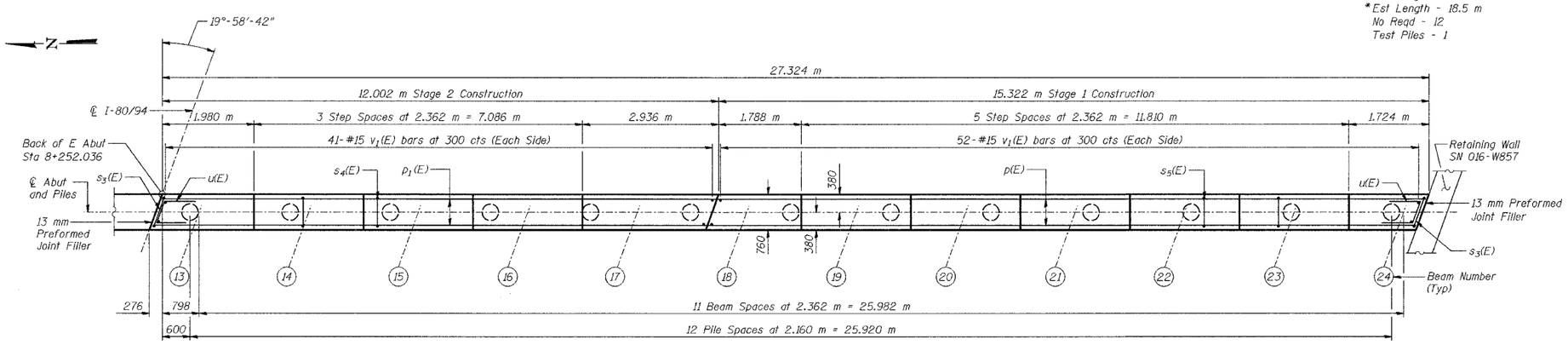
ELEVATION
(Looking East)

PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 15.3 m
*Est Length - 18.5 m
No Reqd - 12
Test Piles - 1



SECTION A-A



PLAN

BEARING SEAT ELEVATIONS

Beam	℄ E Abut
13	187.241
14	187.313
15	187.379
16	187.440
17	187.491
18	187.519
19	187.499
20	187.478
21	187.450
22	187.411
23	187.372
24	187.333

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-31 for reinforcement details and Bill of Material.

See Sheet No S-36 for concrete pile details.

Pour steps monolithically with cap.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.

* For the 3 southernmost piles, which are outside the Limits of Existing Structure.

** Cut bars to fit in field.

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

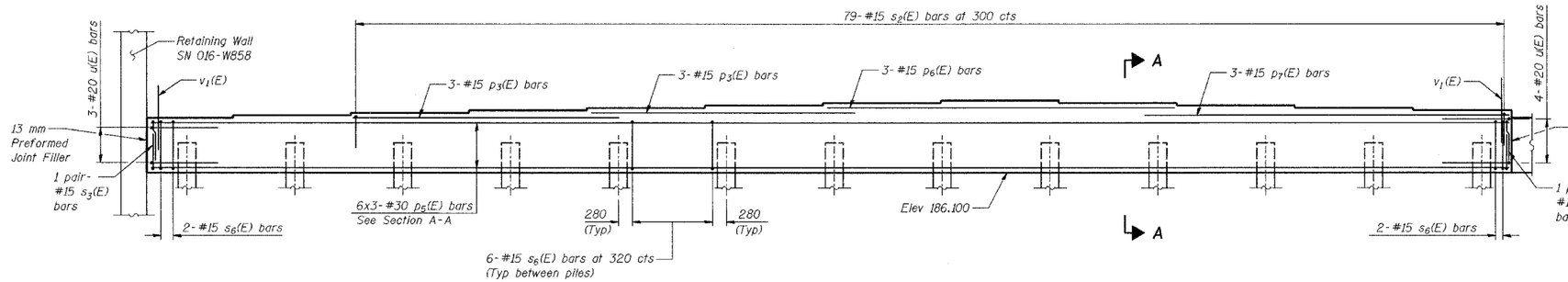
EAST ABUTMENT – EASTBOUND
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

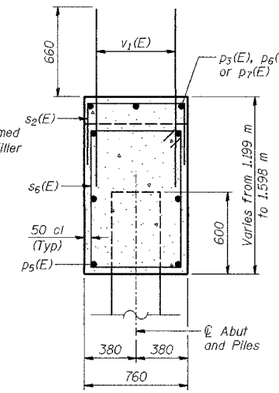
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	609
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-30
40 SHEETS

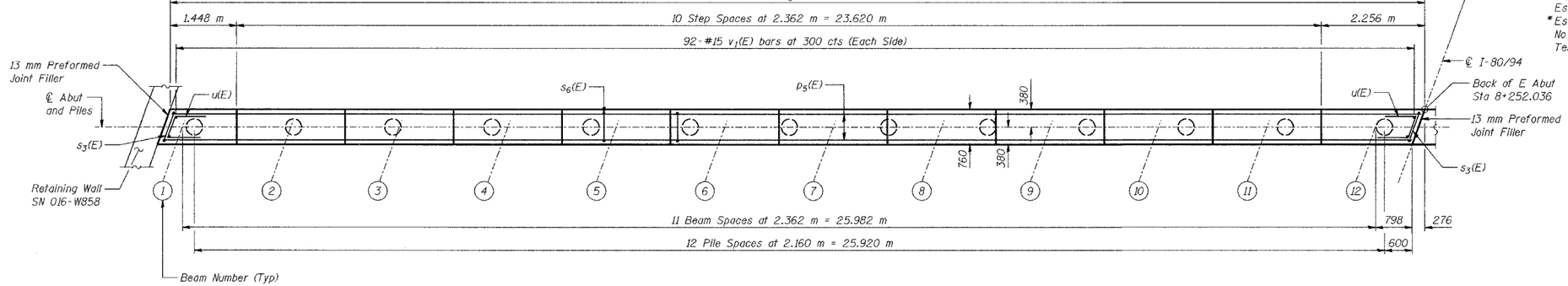
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION
(Looking East)



SECTION A-A



PLAN

PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 15.3 m
*Est Length - 17.7 m
No Read - 13
Test Piles - 0

BEARING SEAT ELEVATIONS

Beam	℄ E Abut
1	187.299
2	187.372
3	187.446
4	187.519
5	187.582
6	187.641
7	187.678
8	187.698
9	187.678
10	187.656
11	187.624
12	187.587

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-31 for reinforcement details and Bill of Material.

See Sheet No S-36 for concrete pile details.

Pour steps monolithically with cap.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.

*For the 3 northernmost piles, which are outside the Limits of Existing Structure.

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

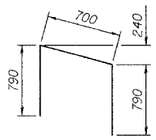
EAST ABUTMENT – WESTBOUND
SECTION 2626.2–R–2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I–80–1–8459 (EB & WB)
DATE 09/05 **(016–I001 & 016–I002)**

AMERICAN CONSULTING ENGINEERS

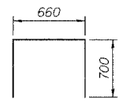
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	610
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-31
40 SHEETS

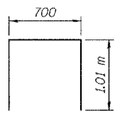
CONTRACT NO. 62114 INDOT DES. NO. 0100987



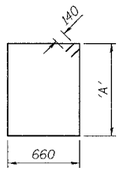
BAR u(E)



BAR s_2(E)



BAR s_3(E)



BARS s(E), s_1(E), s_4(E), s_5(E), or s_6(E)

BAR DIMENSIONS

Bar	'A'
s(E)	1.14 m
s_1(E)	1.04 m
s_4(E)	1.01 m
s_5(E)	1.13 m
s_6(E)	1.09 m

WEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
p(E)	12	#30	8.54	——
p_1(E)	6	#30	11.90	——
p_2(E)	3	#15	9.05	——
p_3(E)	9	#15	5.37	——
p_4(E)	3	#15	2.83	——
p_5(E)	18	#30	10.31	——
p_6(E)	3	#15	6.98	——
p_7(E)	3	#15	7.62	——
s(E)	43	#15	3.88	⊐
s_1(E)	33	#15	3.68	⊐
s_2(E)	138	#15	2.06	⊓
s_3(E)	8	#15	2.72	⊓
s_4(E)	76	#15	3.62	⊐
u(E)	13	#20	2.28	⊓
v_1(E)	370	#15	1.32	——
Excavation, Foundation, Unclassified		m^3	132	
Structure Backfill		m^3	308	
Test Pile		Each	1	
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm		m	442.0	
Concrete, A, Substructure		m^3	56.3	
Reinforcing Bars, Epoxy Coated		kg	4,380	
Threaded Tie Bar Assembly, Epoxy Coated		Each	6	
Slopewall, Concrete, 100 mm		m^2	928	

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
p(E)	12	#30	8.54	——
p_1(E)	6	#30	11.90	——
p_2(E)	3	#15	9.05	——
p_3(E)	9	#15	5.37	——
p_4(E)	3	#15	2.83	——
p_5(E)	18	#30	10.31	——
p_6(E)	3	#15	6.98	——
p_7(E)	3	#15	7.62	——
s_2(E)	138	#15	2.06	⊓
s_3(E)	8	#15	2.72	⊓
s_4(E)	33	#15	3.62	⊐
s_5(E)	43	#15	3.86	⊐
s_6(E)	76	#15	3.78	⊐
u(E)	13	#20	2.28	⊓
v_1(E)	370	#15	1.32	——
Excavation, Foundation, Unclassified		m^3	338	
Structure Backfill		m^3	315	
Test Pile		Each	1	
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm		m	410.0	
Concrete, A, Substructure		m^3	57.9	
Reinforcing Bars, Epoxy Coated		kg	4,390	
Threaded Tie Bar Assembly, Epoxy Coated		Each	6	
Slopewall, Concrete, 100 mm		m^2	928	

NOTES:
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

ABUTMENT DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

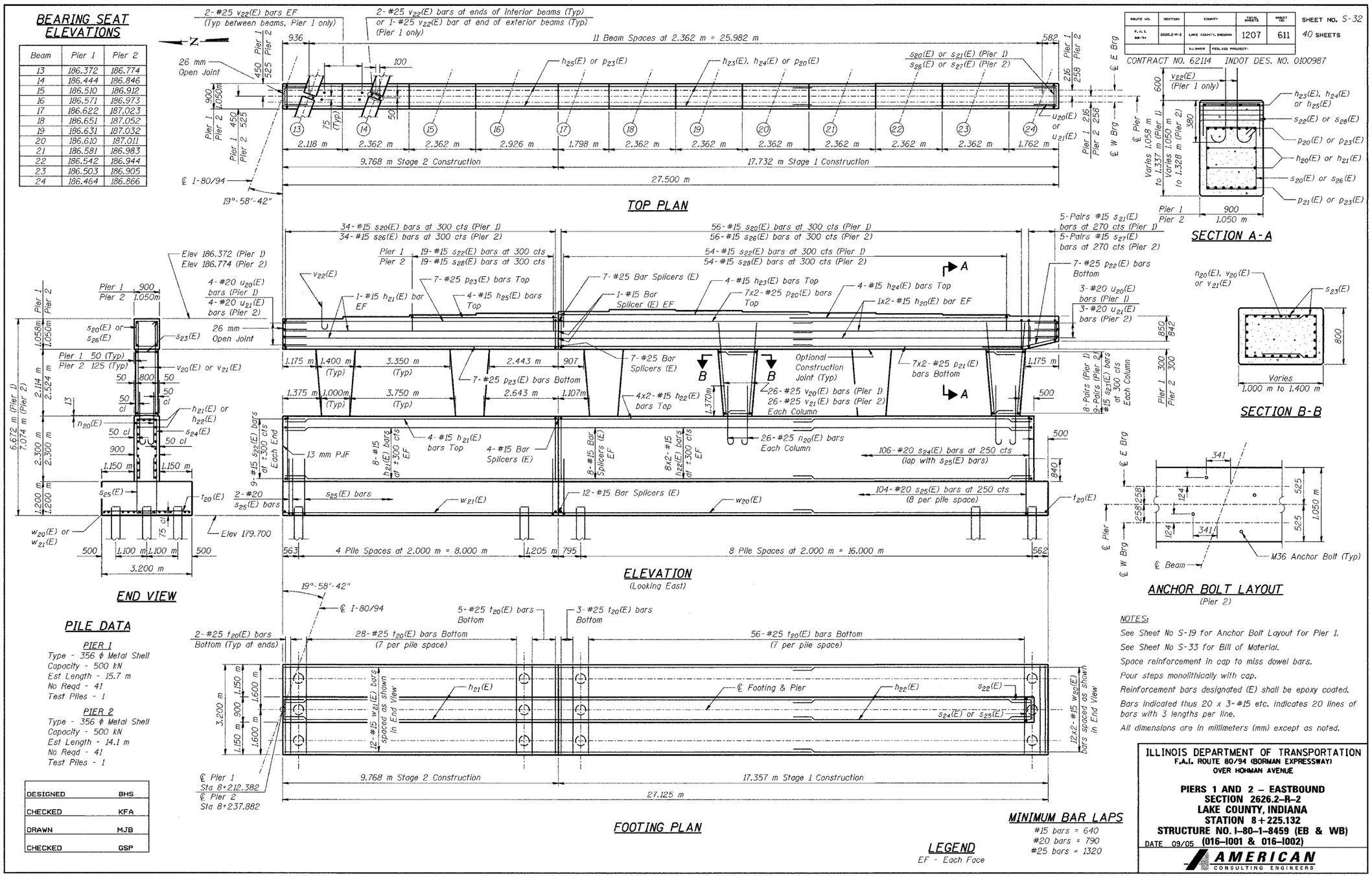
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	611
	ILL.STATE	FED. AID PROJECT-		

SHEET NO. S-32
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Beam	Pier 1	Pier 2
13	186.372	186.774
14	186.444	186.846
15	186.510	186.912
16	186.571	186.973
17	186.622	187.023
18	186.651	187.052
19	186.631	187.032
20	186.610	187.011
21	186.581	186.983
22	186.542	186.944
23	186.503	186.905
24	186.464	186.866



PILE DATA

PIER 1
Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 15.7 m
No Reqd - 41
Test Piles - 1

PIER 2
Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 14.1 m
No Reqd - 41
Test Piles - 1

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

LEGEND

EF - Each Face

NOTES:

See Sheet No S-19 for Anchor Bolt Layout for Pier 1.
See Sheet No S-33 for Bill of Material.
Space reinforcement in cap to miss dowel bars.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

PIERS 1 AND 2 – EASTBOUND
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-1001 & 016-1002)**

AMERICAN CONSULTING ENGINEERS

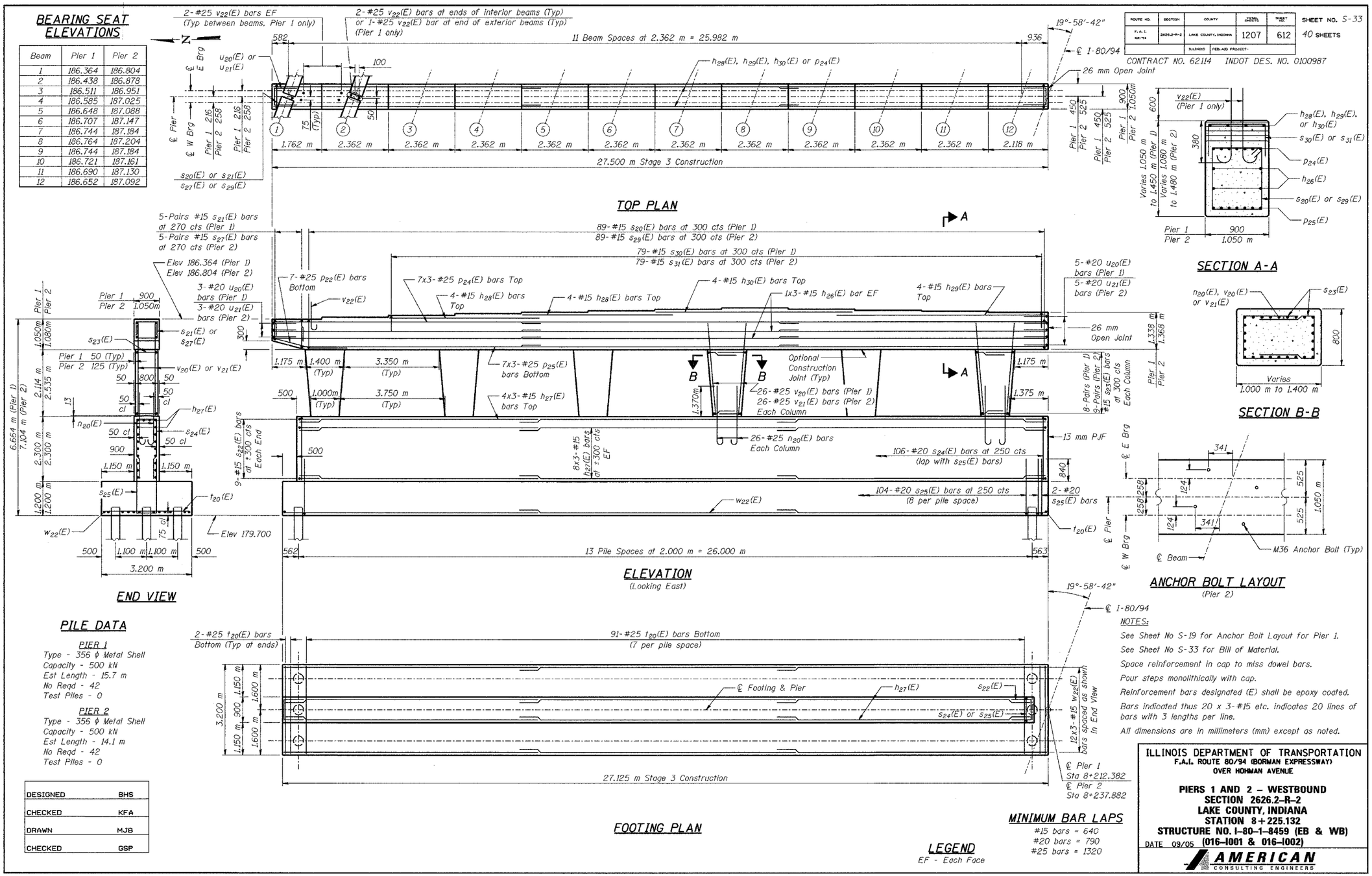
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	612
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-33
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Beam	Pier 1	Pier 2
1	186.364	186.804
2	186.438	186.878
3	186.511	186.951
4	186.585	187.025
5	186.648	187.088
6	186.707	187.147
7	186.744	187.184
8	186.764	187.204
9	186.744	187.184
10	186.721	187.161
11	186.690	187.130
12	186.652	187.092



PILE DATA

PIER 1
Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 15.7 m
No Reqd - 42
Test Piles - 0

PIER 2
Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 14.1 m
No Reqd - 42
Test Piles - 0

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

LEGEND

EF - Each Face

NOTES:

See Sheet No S-19 for Anchor Bolt Layout for Pier 1.
See Sheet No S-33 for Bill of Material.
Space reinforcement in cap to miss dowel bars.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

PIERS 1 AND 2 – WESTBOUND
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-I-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

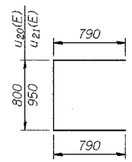
AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	613
		ILLINOIS FED. AID PROJECT-		

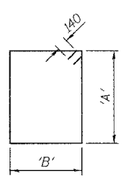
SHEET NO. S-34
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

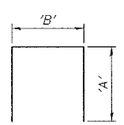
BAR $D_{22}(E)$



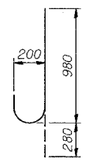
BARS $u_{20}(E)$ or $u_{21}(E)$



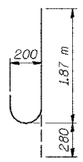
BARS $s_{20}(E)$, $s_{26}(E)$ or $s_{29}(E)$



BARS $s_{21}(E)$, $s_{22}(E)$, $s_{23}(E)$, $s_{24}(E)$, $s_{25}(E)$, $s_{27}(E)$, $s_{28}(E)$, $s_{30}(E)$ or $s_{31}(E)$



BAR $v_{22}(E)$



BAR $n_{20}(E)$

BAR DIMENSIONS

Bar	'A'	'B'
$s_{20}(E)$	950	800
$s_{21}(E)$	740	800
$s_{22}(E)$	640	800
$s_{23}(E)$	900	700
$s_{24}(E)$	2.20 m	800
$s_{25}(E)$	1.97 m	800
$s_{26}(E)$	950	950
$s_{27}(E)$	740	950
$s_{28}(E)$	640	950
$s_{29}(E)$	960	950
$s_{30}(E)$	700	800
$s_{31}(E)$	700	950

PIER 1 AND 2 - EASTBOUND BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{20}(E)$	16	#15	9.14	——
$h_{21}(E)$	48	#15	9.66	——
$h_{22}(E)$	80	#15	8.70	——
$h_{23}(E)$	8	#15	8.78	——
$h_{24}(E)$	8	#15	7.73	——
$h_{25}(E)$	8	#15	5.18	——
$n_{20}(E)$	312	#25	2.15	⊃
$p_{20}(E)$	28	#25	9.48	——
$p_{21}(E)$	28	#25	8.89	——
$p_{22}(E)$	14	#25	2.43	~
$p_{23}(E)$	28	#25	9.66	——
$s_{20}(E)$	90	#15	3.78	□
$s_{21}(E)$	10	#15	2.28	⊓
$s_{22}(E)$	109	#15	2.08	⊓
$s_{23}(E)$	204	#15	2.50	⊓
$s_{24}(E)$	212	#20	5.20	⊓
$s_{25}(E)$	212	#20	4.74	⊓
$s_{26}(E)$	90	#15	4.08	□
$s_{27}(E)$	10	#15	2.43	⊓
$s_{28}(E)$	73	#15	2.23	⊓
$t_{20}(E)$	192	#25	3.10	——
$u_{20}(E)$	7	#20	2.38	⊏
$u_{21}(E)$	7	#20	2.53	⊏
$v_{20}(E)$	156	#25	3.03	——
$v_{21}(E)$	156	#25	3.43	——
$v_{22}(E)$	132	#25	1.26	⊃
$w_{20}(E)$	48	#15	8.95	——
$w_{21}(E)$	24	#15	9.66	——

Test Pile	Each	2
Excavation, Foundation, Unclassified	m^3	728
Concrete, A, Substructure	m^3	409.3
Reinforcing Bars, Epoxy Coated	kg	23,790
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	1,220.0
Threaded Tie Bar Assembly, Epoxy Coated	Each	100

PIER 1 AND 2 - WESTBOUND BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{26}(E)$	24	#15	9.56	——
$h_{27}(E)$	120	#15	9.27	——
$h_{28}(E)$	16	#15	5.37	——
$h_{29}(E)$	8	#15	7.49	——
$h_{30}(E)$	8	#15	6.98	——
$n_{20}(E)$	312	#25	2.15	⊃
$p_{22}(E)$	14	#25	2.43	~
$p_{24}(E)$	42	#25	10.02	——
$p_{25}(E)$	42	#25	9.63	——
$s_{20}(E)$	89	#15	3.78	□
$s_{21}(E)$	10	#15	2.28	⊓
$s_{22}(E)$	36	#15	2.08	⊓
$s_{23}(E)$	204	#15	2.50	⊓
$s_{24}(E)$	212	#20	5.20	⊓
$s_{25}(E)$	212	#20	4.74	⊓
$s_{27}(E)$	10	#15	2.43	⊓
$s_{29}(E)$	89	#15	4.10	□
$s_{30}(E)$	79	#15	2.20	⊓
$s_{31}(E)$	79	#15	2.35	⊓
$t_{20}(E)$	190	#25	3.10	——
$u_{20}(E)$	8	#20	2.38	⊏
$u_{21}(E)$	8	#20	2.53	⊏
$v_{20}(E)$	156	#25	3.03	——
$v_{21}(E)$	156	#25	3.43	——
$v_{22}(E)$	132	#25	1.26	⊃
$w_{22}(E)$	72	#15	9.44	——

Excavation, Foundation, Unclassified	m^3	678
Concrete, A, Substructure	m^3	416.5
Reinforcing Bars, Epoxy Coated	kg	24,130
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	1,252.0

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

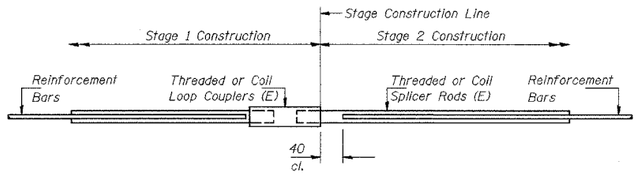
PIER DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-1001 & 016-1002)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	614
		ILLINOIS	FED. AID PROJECT-	

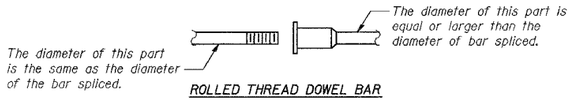
SHEET NO. S-35
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



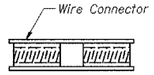
BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
15	488	Deck
20	8	W Abut Diaphragm
20	8	E Abut Diaphragm
30	6	W Abut
15	36	Pier 1
25	14	Pier 1
15	36	Pier 2
25	14	Pier 2
30	6	E Abut



ROLLED THREAD DOWEL BAR

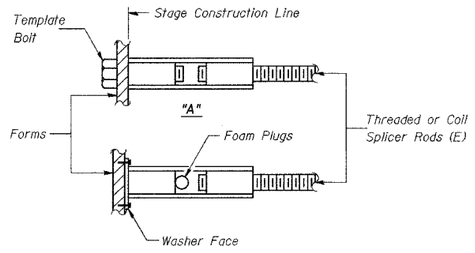
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) = $1.25 \times 10^{-3} \times f_y \times A_t$

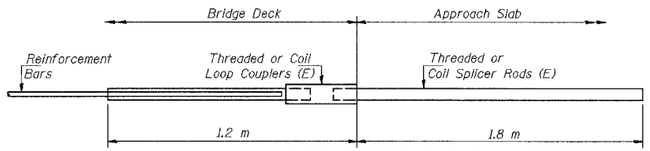
② Minimum *Pull-out Strength (Tension in kN) = $1.25 \times 10^{-3} \times fs_{allow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in MPa.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
A_t = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	640 mm	100	40
#20	790 mm	150	60
#25	1.320 m	250	100
#30	1.850 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for Threaded Tie Bar Assembly, Epoxy Coated.

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



INTEGRAL ABUTMENT BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 340

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BSD-1 (M)

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

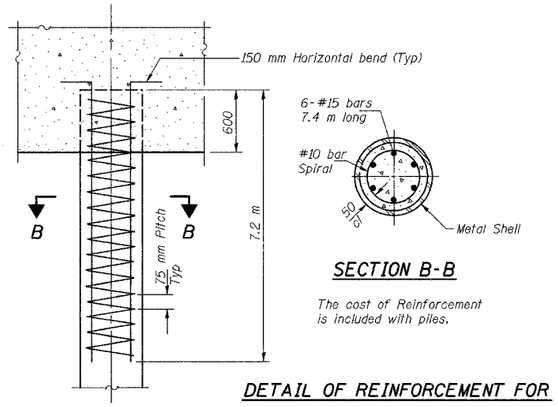
BAR SPLICER (COUPLER) DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	615
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-36
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

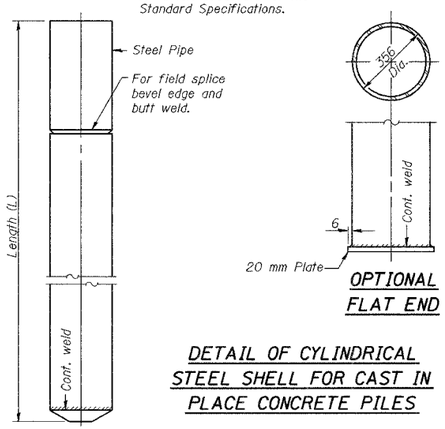


SECTION B-B

The cost of Reinforcement is included with piles.

DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS

Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 6.35 mm with a tolerance of 5 %. The shell shall be according to Article 1006.05(a) of the Standard Specifications.



OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

X-PB (M) 10-31-02 (All dimensions are in millimeters (mm) except as noted.)

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

CONCRETE PILE DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	616
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-37
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-07 (1 OF 2)

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Page 1 of 2

BORING LOG AB-07

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 186.45 m
North: 545382.06 m
East: 367610.93 m
Station: 8+189.36
Offset: 16.41 LT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	186.1	203-mm thick ASPHALT over 152-mm thick CONCRETE --PAVEMENT--							
	185.9	Gray CRUSHED STONE --BASE COURSE--							
	185.4	Loose, brown and gray, SANDY LOAM --FILL--				1	5 4 5	NP	11
		Medium dense, brown, medium SAND --FILL--				2	5 6 7	NP	7
						3	6 7 9	NP	21
	184.0	Very stiff, brown and gray CLAY --FILL--				4	3 3 5	196 B	22
	183.2	Loose to medium dense, brown, medium SAND --FILL--				5	5 7 10	NP	18
						6	4 4 7	NP	23
						7	4 7 8	NP	21
						8	4 4 4	NP	23
	180.2	Loose, black SILTY LOAM --BURIED TOPSOIL--				9	2 4 5	NP	31
	179.4	Very stiff to hard, brown and gray CLAY				10	4 7 8	408 B	21
	178.7	Stiff to very stiff, gray CLAY							
	172.1	Medium dense, gray SILT							
		A-6 (20) LL=40%, PL=20% GRAVEL=0.2% SAND=4.7% SILT=26.2% CLAY=68.9%							
		A-4 (3) LL=26%, PL=22% GRAVEL=0.6% SAND=2.2%							

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
			8						
			9			12	5 6 5		5
			10						
			11			13	4 4 6	181 S	20
			12						
			13			14	3 4 4	212 B	29
			14						
			15			15	4 4 6	196 B	17
			16			16	4 5 6	NP	25

GENERAL NOTES

Begin Drilling 04-03-2002 Complete Drilling 04-03-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ 2.13 m
Time After Drilling 24 hours
Depth to Water ▽ 7.01 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-07 (2 OF 2)

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Page 2 of 2

BORING LOG AB-07

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 186.45 m
North: 545382.06 m
East: 367610.93 m
Station: 8+189.36
Offset: 16.41 LT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		SILT=69.5% CLAY=27.7%							
	170.6	Very stiff, gray CLAY				17	4 5 5	243 B	22
						18	4 6 9	354 B	16
	169.1	Very stiff to hard, gray SILTY CLAY				19	9 12 15	613 B	16
						20	12 20 19	731 B	14
	163.9	Dense, gray SANDY LOAM				21	10 16 24	NP	14

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
			23						
	163.0	Hard, gray SILTY CLAY							
			24			22	10 18 18	754 B	14
	162.1	Boring terminated at 24.38 m							
			25						
			26						
			27						
			28						
			29						
			30						

GENERAL NOTES

Begin Drilling 04-03-2002 Complete Drilling 04-03-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ 2.13 m
Time After Drilling 24 hours
Depth to Water ▽ 7.01 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-08 (1 OF 2)

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Page 1 of 2

BORING LOG AB-08

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.31 m
North: 545359.39 m
East: 367674.07 m
Station: 8+256.45
Offset: 16.17 LT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	188.1	356-mm thick ASPHALT over 152-mm thick CONCRETE --PAVEMENT--							
	187.8	Gray, CRUSHED STONE --BASE COURSE--							
	187.4	Very stiff, brown and gray SILTY CLAY --FILL--				1	9 14 6	NP	12
						2	6 7 8	220 B	17
						3	12 11 10	330 B	21
	185.1	Loose, brown, medium SAND --FILL--				4	4 6 7	192 P	19
						5	3 3 3	NP	24
	184.4	Stiff, brown and gray SILTY CLAY --FILL--				6	2 3 4	120 P	22
	182.6	Medium dense to dense, brown, medium SAND --FILL--				7	8 12 13	NP	17
						8	7 15 17	NP	21
	182.1	Dense, gray, medium SAND --FILL--				9	10 12 18	NP	22
	181.3	Very stiff, brown and gray CLAY				10	4 4 4	251 B	24
	180.5	Hard, brown and gray CLAY							
	179.5	Medium dense, gray SILT							
	178.6	Very stiff, gray CLAY							
	174.0								

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
			8						
			9			12	5 6 5	432 B	22
			10						
			11			13	4 5 6	377 B	20
			12						
			13			14	3 3 4	196 B	20
			14						
			15			15	4 5 6	NP	24
			16			16	4 5 5	243 B	15

GENERAL NOTES

Begin Drilling 04-04-2002 Complete Drilling 04-05-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ 24.08 m
Time After Drilling – hours
Depth to Water ▽ m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

BORING LOGS (1 OF 4)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-I001 & 016-I002)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	617
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-38
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-08 (2 OF 2)

Page 2 of 2

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BORING LOG AB-08

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.31 m
North: 545359.39 m
East: 367674.07 m
Station: 8+256.45
Offset: 16.17 LT

Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		16				
			17	4 5 6	260 B	21
		17				
		18	18	4 4 5	267 B	22
		19				
			19	6 7 9	354 B	18
		20				
167.9	Very stiff to hard, gray SILTY CLAY					
		21	20	9 14 15	NR	
		22				
			21	9 15 18	707 B	13
		23				
		24	22	9 15 15	550 B	14
		25				
		26	23	7 15 15	369 B	16
161.8	Very dense, gray SANDY LOAM					
		27	24	40 55 55	NP	9
160.9	Boring terminated at 27.43 m					
		28				
		29				
		30				

GENERAL NOTES
Begin Drilling 04-04-2002 Complete Drilling 04-05-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA
While Drilling -
At Completion of Drilling 24.08 m
Time After Drilling - hours
Depth to Water m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-09 (1 OF 2)

Page 1 of 2

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BORING LOG AB-09

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 186.53 m
North: 545367.44 m
East: 367610.71 m
Station: 8+194.04
Offset: 2.56 LT

Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	356-mm thick CONCRETE --PAVEMENT--					
186.2	Medium dense, gray CRUSHED STONE		1	14 12 7	NP	5
185.9	--BASE COURSE--					
	Medium dense, gray and brown SILTY LOAM --FILL--	1	2	5 6 8	220 B	20
184.6	Loose, brown SANDY LOAM --FILL--	2	3	2 3 3	NP	21
183.9	Loose to dense, brown, medium SAND --FILL--	3	4	5 6 6	NP	6
			5	10 11 8	NP	6
		4	6	7 9 9	NP	21
		5	7	9 15 19	NP	20
		6	8	4 4 4	NP	26
180.3	Very stiff, dark gray CLAY LOAM -- BURIED TOPSOIL--		9	2 3 4	204 B	29
179.6	Stiff to very stiff, brown CLAY to SILTY CLAY	7				
			10	3 3 4	103 S	25
		8	11	4 4 5	290 B	20
178.0	Stiff to very stiff, gray CLAY					
		9	12	3 3 5	149 B	20
		10				
			13	3 5 5	220 B	19
		11				
175.3	Dense, gray SILT					
		12	14	14 15 17	NP	22
173.7	Stiff, gray CLAY	13				
			15	3 3 3	133 B	27
		14				
172.2	Very stiff, gray SILTY CLAY LOAM					
	A-6 (11) LL=35%, PL=18% GRAVEL=1.8%	15	16	2 2 4	220 B	16

GENERAL NOTES
Begin Drilling 02-07-2002 Complete Drilling 02-07-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&D Logger H. Suhail Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA
While Drilling -
At Completion of Drilling -
Time After Drilling 24 hours
Depth to Water 5.49 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-09 (2 OF 2)

Page 2 of 2

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BORING LOG AB-09

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 186.53 m
North: 545367.44 m
East: 367610.71 m
Station: 8+194.04
Offset: 2.56 LT

Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	SAND=25.2% SILT=37.2% CLAY=35.8%					
170.7	Very stiff, gray CLAY	16				
			17	4 5 7	212 B	21
		17				
		18	18	3 5 8	236 B	19
167.6	Hard, gray SILTY CLAY	19				
			19	7 9 16	574 B	13
		20				
		21	20	6 8 9	464 B	13
		22				
			21	7 9 11	385 B	15
		23				
		24	22	6 9 13	464 B	14
		25				
		26	23	8 11 16	432 B	14
		27	24	9 14 18	¢431 P	14
159.1	Boring terminated at 27.43 m					
		28				
		29				
		30				

GENERAL NOTES
Begin Drilling 02-07-2002 Complete Drilling 02-07-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&D Logger H. Suhail Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA
While Drilling -
At Completion of Drilling -
Time After Drilling 24 hours
Depth to Water 5.49 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

BORING LOGS (2 OF 4)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
(016-I001 & 016-I002)

DATE 09/05

AMERICAN CONSULTING ENGINEERS

BORING NO. AB-10 (1 OF 2)

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BORING LOG AB-10

Page 1 of 2

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.24 m
North: 545346.34 m
East: 367670.04 m
Station: 8+257.01
Offset: 2.51 LT

Elevation (m)	Soil and Rock Description	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	330-mm thick ASPHALT over 305-mm thick CONCRETE --PAVEMENT--				
187.6	Stiff to very stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM --FILL--	1	4, 6, 11	168 P	13
		2	7, 8, 8	216 P	17
		3	5, 5, 5	240 P	20
184.8	Medium dense, brown, medium SAND --FILL--	4	13, 12, 13	NP	9
		5	6, 12, 13	NP	20
		6	6, 10, 10	NP	22
		7	6, 11, 14	NP	24
182.0	Loose, gray SANDY LOAM --FILL--	8	4, 4, 4	NP	26
181.2	Very stiff, brown and gray CLAY	9	5, 7, 8	314 B	22
		10	5, 6, 8	354 B	23
		11	4, 5, 7	290 B	23
178.5	Stiff, gray SILTY CLAY LOAM; A-6 (14) LL=38%, PL=20% GRAVEL=0.0% SAND=18.9% SILT=44.4% CLAY=36.7%	12	3, 5, 7	181 B	21
177.0	Stiff, gray CLAY to SILTY CLAY	13	4, 3, 4	157 B	20
		14	3, 4, 6	157 B	20
173.9	Very stiff, gray SILTY CLAY; A-6 (13) LL=31%, PL=17% GRAVEL=0.0% SAND=4.6%	15	4, 5, 6	220 B	22

GENERAL NOTES
Begin Drilling 02-11-2002   Complete Drilling 02-11-2002
Drilling Contractor TSC   Drill Rig CME 75
Driller C&A   Logger B. Fugiel   Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA
While Drilling ∇ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 6.10 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-10 (2 OF 2)

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BORING LOG AB-10

Page 2 of 2

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.24 m
North: 545346.34 m
East: 367670.04 m
Station: 8+257.01
Offset: 2.51 LT

Elevation (m)	Soil and Rock Description	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	SILT=41.3% CLAY=54.1%				
172.4	Very stiff, gray CLAY	16	3, 4, 6	196 B	21
		17	3, 5, 7	236 B	22
169.3	Hard, gray SILTY CLAY	18	8, 12, 14	471 B	13
		19	7, 9, 11	417 B	13
		20	9, 11, 11	471 B	13
	A-4 (2) LL=20%, PL=15% GRAVEL=0.0% SAND=6.3% SILT=36.6% CLAY=57.1%	21	8, 10, 17	418 B	15
163.2	Dense, gray SILT	22	8, 10, 24	NP	17
162.5	Hard, gray SILTY CLAY	23	8, 14, 20	535 B	13
160.8	Boring terminated at 27.43 m				

GENERAL NOTES
Begin Drilling 02-11-2002   Complete Drilling 02-11-2002
Drilling Contractor TSC   Drill Rig CME 75
Driller C&A   Logger B. Fugiel   Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA
While Drilling ∇ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 6.10 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-11 (1 OF 2)

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BORING LOG AB-11

Page 1 of 2

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 186.78 m
North: 545348.04 m
East: 367610.15 m
Station: 8+200.00
Offset: 15.9 RT

Elevation (m)	Soil and Rock Description	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	305-mm thick CONCRETE --PAVEMENT--				
186.5	Gray CRUSHED STONE --BASE COURSE--				
186.4	Loose to medium dense, brown, medium SAND --FILL--	1	3, 4, 6	383 P	11
		2	5, 6, 6	NP	5
184.8	Stiff, brown SILTY CLAY LOAM --FILL--	3	2, 2, 3	168 P	20
184.3	Loose to medium dense, brown, medium SAND --FILL--	4	3, 3, 4	NP	15
		5	4, 5, 8	NP	8
		6	5, 6, 7	NP	23
181.8	Stiff to hard, brown and gray SILTY CLAY --FILL--	7	4, 3, 7	168 P	24
		8	5, 4, 6	335 P	34
		9	6, 6, 12	471 B	20
179.8	Very stiff, brown CLAY	10	4, 6, 10	307 B	22
		11	3, 4, 5	299 B	24
178.2	Stiff, gray CLAY	12	3, 3, 4	157 B	21
		13	3, 5, 10	157 S	18
		14	3, 5, 9	181 B	18
		15	2, 2, 2	149 B	35
172.5	Loose, gray SILT	16	2, 3, 3	NP	21

GENERAL NOTES
Begin Drilling 02-04-2002   Complete Drilling 02-05-2002
Drilling Contractor TSC   Drill Rig CME 75
Driller C&D   Logger H. Suhail   Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA
While Drilling ∇ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 3.81 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

BORING LOGS (3 OF 4)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
(016-I001 & 016-I002)

DATE 09/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	619
		R.A.134208	FED. AID PROJECT-	

SHEET NO. S-40
40 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-11 (2 OF 2)

Page 2 of 2

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BORING LOG AB-11

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 186.78 m
North: 545348.04 m
East: 367670.15 m
Station: 8+200.00
Offset: 15.9 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type / recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	170.9	Very stiff, gray CLAY	16					
			17			3 5 6	228 B	22
			18			4 6 6	236 B	23
	167.9	Very stiff to hard, gray SILTY CLAY	19			6 8 12	447 B	15
			20			21 19 24	236 S	15
			21			6 9 14	479 B	16
	157.8	Boring terminated at 28.96 m	22					
			23					
			24			6 10 16	346 B	14
			25			11 13 17	464 B	15
			26					
			27			10 16 19	494 B	14
			28					
			29			18 25 31	ϕ431 P	12
			30					

GENERAL NOTES

Begin Drilling 02-04-2002 Complete Drilling 02-05-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&D Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ –
Time After Drilling 24 hours
Depth to Water ▽ 3.81 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-12 (1 OF 2)

Page 1 of 2

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BORING LOG AB-12

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.50 m
North: 545326.42 m
East: 367670.23 m
Station: 8+263.85
Offset: 16.2 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type / recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	188.3	229-mm thick ASPHALT --PAVEMENT--						
		Medium dense, brown and gray, medium SAND --FILL--	1		1	20 9 10	NP	5
			2		2	5 6 4	NP	10
	186.6	Very stiff, gray SILTY CLAY LOAM --FILL--	3		3	1 2 3	216 P	17
	186.1	Medium dense, brown, medium SAND --FILL--	4		4	4 5 7	NP	5
	185.3	Stiff, gray SANDY CLAY LOAM --FILL--	5		5	3 5 6	96 P	21
	184.5	Medium dense, brown SAND --FILL--	6		6	6 8 10	NP	22
			5		7	6 9 10	NP	23
			6		8	6 8 9	NP	24
			7		9	8 12 10	NP	25
	181.8	Very stiff, gray CLAY LOAM	10		10	3 4 5	283 P	20
	180.7	Very stiff, brown CLAY	8		11	5 6 5	330 B	23
			9		12	5 5 4	346 B	24
	178.7	Stiff to very stiff, gray CLAY to SILTY CLAY	10		13	2 3 4	157 B	20
			11					
			12		14	2 3 5	157 B	20
			13					
		A-6 (16) LL=35%, PL=17% GRAVEL=0.8% SAND=9.7% SILT=32.6%	15		15	2 3 3	196 B	20
			14					
			15		16	2 3 5	251 B	21

GENERAL NOTES

Begin Drilling 01-28-2002 Complete Drilling 01-29-2002
Drilling Contractor TSC Drill Rig CME 75
Driller J&D Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ –
Time After Drilling – hours
Depth to Water ▽ m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-12 (2 OF 2)

Page 2 of 2

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BORING LOG AB-12

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.50 m
North: 545326.42 m
East: 367670.23 m
Station: 8+263.85
Offset: 16.2 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type / recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		CLAY=56.9%						
			16					
			17			2 4 5	236 B	22
			18			2 4 4	243 B	21
			19			3 5 8	299 B	20
			20			4 6 8	346 B	20
	166.6	Dense, gray SILTY LOAM	21			12 20 26	NP	18
	165.3	Hard, gray SILTY CLAY	22					
			23		22	10 14 18	644 B	13
			24					
			25		23	7 12 23	535 B	15
			26					
	162.0	Medium dense, gray SILT	27					
	161.1	Boring terminated at 27.43 m	28		24	10 13 16	NP	21
			29					
			30					

GENERAL NOTES

Begin Drilling 01-28-2002 Complete Drilling 01-29-2002
Drilling Contractor TSC Drill Rig CME 75
Driller J&D Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ –
Time After Drilling – hours
Depth to Water ▽ m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HOHMAN AVENUE

BORING LOGS (4 OF 4)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+225.132
STRUCTURE NO. I-80-1-8459 (EB & WB)
DATE 09/05 **(016-1001 & 016-1002)**

AMERICAN CONSULTING ENGINEERS

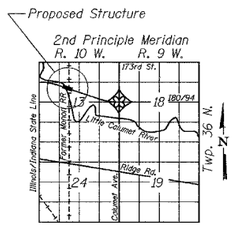
BENCHMARK:
TBM 213: Chiseled box on Northeast corner of outside parapet on Eastbound I-80 over Little Calumet River Bridge. Station 8+603.3, Offset 22.3 Rt, Elevation = 191.392.

EXISTING STRUCTURE:
S.N. I-80-1-2122 originally built in 1949 as State Road 420-AA9 over the Little Calumet River and the Monon Railroad by the State Highway Commission of Indiana. The structure was widened in 1966, 1982, 1990 and 1996. The existing structure is an eleven span, dual-structure bridge, 164.306 m average length back to back of abutments, with a reinforced concrete deck superstructure varying from 43.045 m to 44.604 m, supported by continuous wide flange steel beams on multi-column concrete piers and open abutments with varying skew angles.

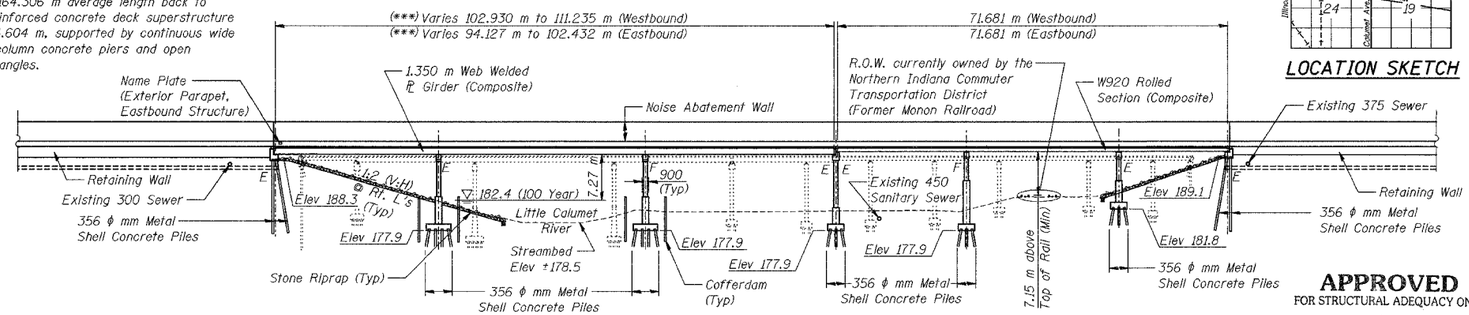
SALVAGE:
None.

NOTE:
All dimensions millimeters (mm) except as noted.

(***) **NOTE:** The dimensions shown are the Maximum and Minimum beam lengths (℄ to ℄) within the structure.

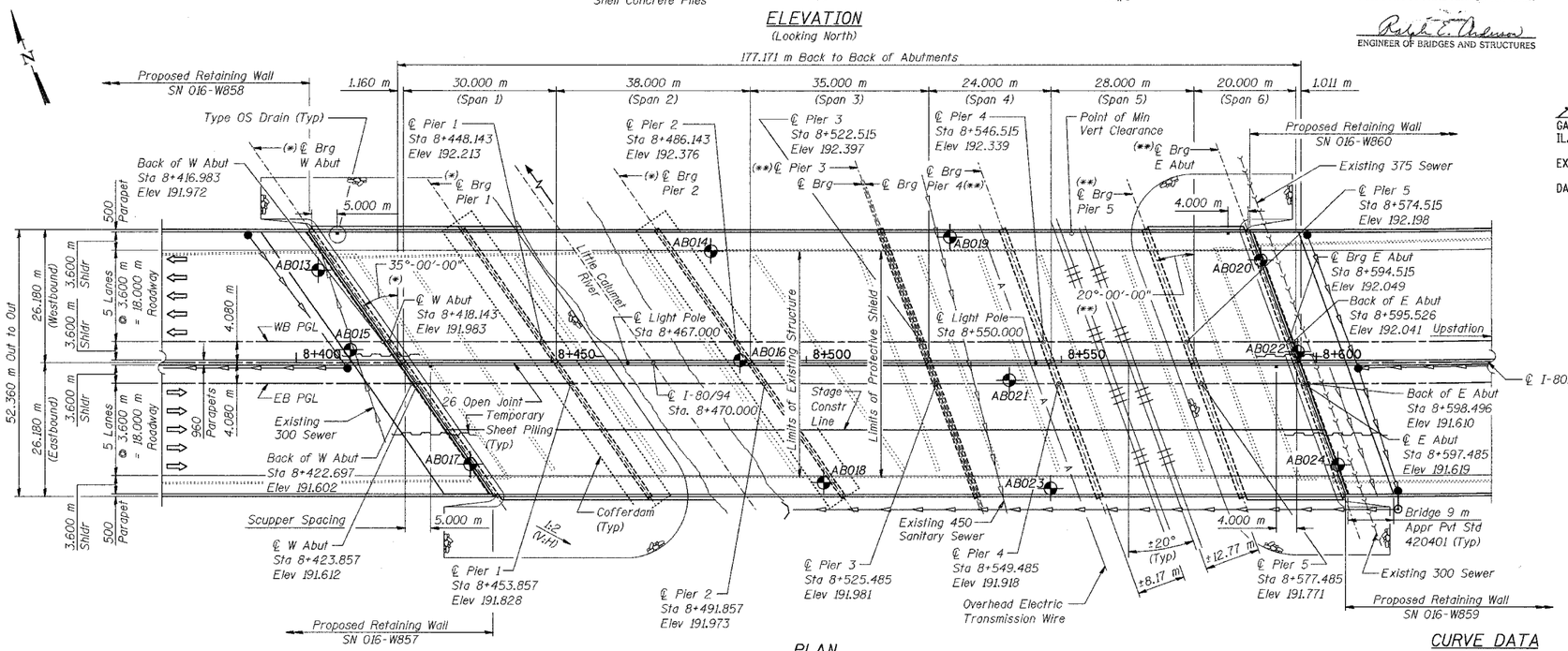


LOCATION SKETCH



ELEVATION
(Looking North)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



PLAN

DESIGNED	BHS
CHECKED	KFA
DRAWN	BHS
CHECKED	GSP

LEGEND
E.B. - Eastbound Traffic
W.B. - Westbound Traffic
- Proposed Sewer
- Temporary Sheet Piling
- Soil Boring
- Drainage Structure

(*) Skew angle 35°-00'-00" for West Abutment, Pier 1, and Pier 2.

(**) Skew angle 20°-00'-00" for Pier 3, Pier 4, Pier 5, and East Abutment.

NOTES: Constant superelevation of 2.5% across the structure, as shown in the Cross Section on Sheet 2.

No deck drains will be permitted in Span 5 over Railroad ROW.

CURVE DATA
Δ = 20°-51'-41"
T = 343.250 m
L = 678.899 m
E = 31.331 m
R = 1,864.600 m
S.E. = 3.0%
P.C. = Sta 8+603.684
P.T. = Sta 9+282.583
P.I. = Sta 8+946.934

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	620
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-1
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987
R-28029

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications for Highway Bridges.
1989 AASHTO Guide Specifications for Structural Design of Sound Barriers and 1992 Interims.

DESIGN LOADING
Roadway Live Load: MS-18, Alt. Military, and Indiana Toll Road Truck Loads
Future Wearing Surface: 2.4 kN/sq m
Wind Load on Noise Wall = 1.7 kPa

DESIGN STRESSES
Concrete, A, Substructure (Indiana): f'c = 24 MPa
Concrete, C, Superstructure (Indiana): f'c = 28 MPa
Reinforcement: fy = 400 MPa
Structural Steel: fy = 345 MPa (M 270M grade 345W)

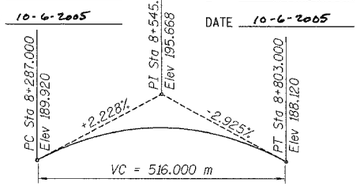
SEISMIC DATA
Seismic Performance Category (SPC): A
Bedrock Acceleration Coefficient (A): 0.04g
Site Coefficient (S): 1.0

LICENSED STRUCTURAL ENGINEER — GARY S. POWELL 081-004771 — CHICAGO ILLINOIS — STATE OF ILLINOIS

GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771
EXP 11-30-2006
DATE 10-6-2005

REGISTERED PROFESSIONAL ENGINEER — GARY S. POWELL — No. 10403944 — STATE OF INDIANA

GARY S. POWELL, P. E.
IN. LIC. NO. 10403944
EXP 07-31-2006
DATE 10-6-2005



PROFILE GRADE I-80/94 W.B.

PROFILE GRADE I-80/94 E.B.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

GENERAL PLAN
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	621
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-2
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GENERAL NOTES

1. Fasteners shall be high strength bolts (AASHTO M164 type 3). Bolts M22 ϕ, open holes 24 mm ϕ, unless otherwise noted.

2. Calculated total mass of Structural Steel (M270M, Grade 345W) = 1,630,550 kg
Calculated total mass of Structural Steel (M270M, Grade 345) = 5,600 kg
The estimated amount of structural steel for this structure that is to be erected under this contract is 1,285,870 kg G345W and 4,190 kg G345 for the Lump Sum item of Erecting Structural Steel.

3. All structural steel shall be AASHTO M 270M Grade 345W except expansion joint plates and attached bars which shall be AASHTO M 270M Grade 345.

4. Expansion joint plates and attached bars shall be shop painted with the inorganic zinc rich primer.

5. Field welding of construction accessories will not be permitted to beams or girders.

6. The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345W.

7. Anchor bolts shall be set before bolting diaphragms or cross frames over supports.

8. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams, tension flanges and webs of plate girders and all splice plate material except fill plates.

9. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M 322M Grade 400.

10. Layout of slope protection system may be varied in the field to suit ground conditions as directed by Engineer.

11. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 3 mm adjusting shims shall be provided for each bearing and placed as detailed.

12. The contractor shall drive 7-356 ϕ Metal Shell test piles in a permanent location. One each at the East and West Abutments, and one each at the five Piers as directed by the Engineer before ordering the remainder of piles.

13. Bridge Seat Sealer shall be applied to the seat area of the East Abutment, West Abutment and Pier 3.

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

15. When deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met.

    1. At least 72 hours shall have elapsed from the end of the previous pour.

    2. The concrete strength shall have attained a minimum modulus of rupture of 4.5 MPa or a mimimum compressive strength of 24 MPa.

16. The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project. No additional compensation will be made to properly dispose of the existing structure containing lead.

17. All construction joints shall be bonded.

18. AASHTO M 270M Grade 345W structural steel shall only be painted, for a distance of three times the depth of the beams or girders (but not exceeding 3 m) each way from the deck joints. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

	ITEM	UNIT	*PHASE 2 SUPER	*PHASE 2 SUB	PHASE 3 SUPER	PHASE 3 SUB	TOTAL
(IN)	Present Structure, Str. No. I-80-1-8460, Remove Portions	L. Sum	1		1		
(IN)	Field Welded Stud Shear Connector	Each	10,464		33,612		44,076
(IN)	Test Pile, 356 mm	Each		7			7
(IN)	Structure Backfill	m^3		153		473	626
(IN)	Riprap, Revetment	m^2		2,122		4,314	6,436
(IN)	Excavation, Foundation, Unclassified	m^3		878		2,671	3,549
(IN)	Excavation, Wet	m^3		166		498	664
(IN)	Excavation, Dry	m^3		455		1,362	1,817
(IN)	Concrete, A, Substructure	m^3		902.7		2,761.1	3,663.8
(IN)	Concrete, C, Superstructure	m^3	554.7		1,716.2		2,270.9
(IN)	Surface Seal	L. Sum	0.75		0.47		
(IN)	Reinforcing Bars, Epoxy Coated	kg	71,800	64,650	223,480	199,750	559,680
(IN)	Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m		2,865.5		9,483.0	12,348.5
(IN)	Structural Expansion Joint, SS	m	43.7		131.1		174.8
(IN)	Threaded Tie Bar Assembly, Epoxy Coated	Each	1,465	424		299	2,188
(IN)	Anchor Bolt	Each	154		462		616
	Noise Abatement Wall Anchor Rod Assembly	Each	50		55		105
*	Furnishing Structural Steel	L. Sum					0.54
	Erecting Structural Steel	L. Sum	1		0.79		
*	Furnishing Elastomeric Bearing Assembly, Type I	Each					84
	Erecting Elastomeric Bearing Assembly, Type I	Each		21		63	84
*	Furnishing Elastomeric Bearing Assembly, Type II	Each					56
	Erecting Elastomeric Bearing Assembly, Type II	Each		14		42	56
*	Furnishing Floating Bearings, Guided Expansion, 1250 kN	Each					28
	Erecting Floating Bearings, Guided Expansion, 1250 kN	Each		7		21	28
*	Storage of Structural Steel and Bearings	**					1,883
(IN)	Masonry Coating	L. Sum	1		0.25		
(IN)	Grates, Basins, and Fittings, Cast Iron	kg			584		584

** For Storage of Structural Steel one unit shall be equal to 5 metric tons. The quantity was calculated based on the assumption that 25% of the steel mass has to be stored for 30 calendar days.

(IN) Indiana Pay Items, denoted by "(Indiana)" in Special Provisions and Summary of Quantities.

- Structural steel and bearings are being furnished by Beam and Bearing Fabrication Contract 62743.
- Phase 2 Construction is annotated on these drawings as "For Information Only" and is being completed in Contract 62113.
- Contract 62114 includes Phase 3 Construction work only.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

*FOR INFORMATION ONLY

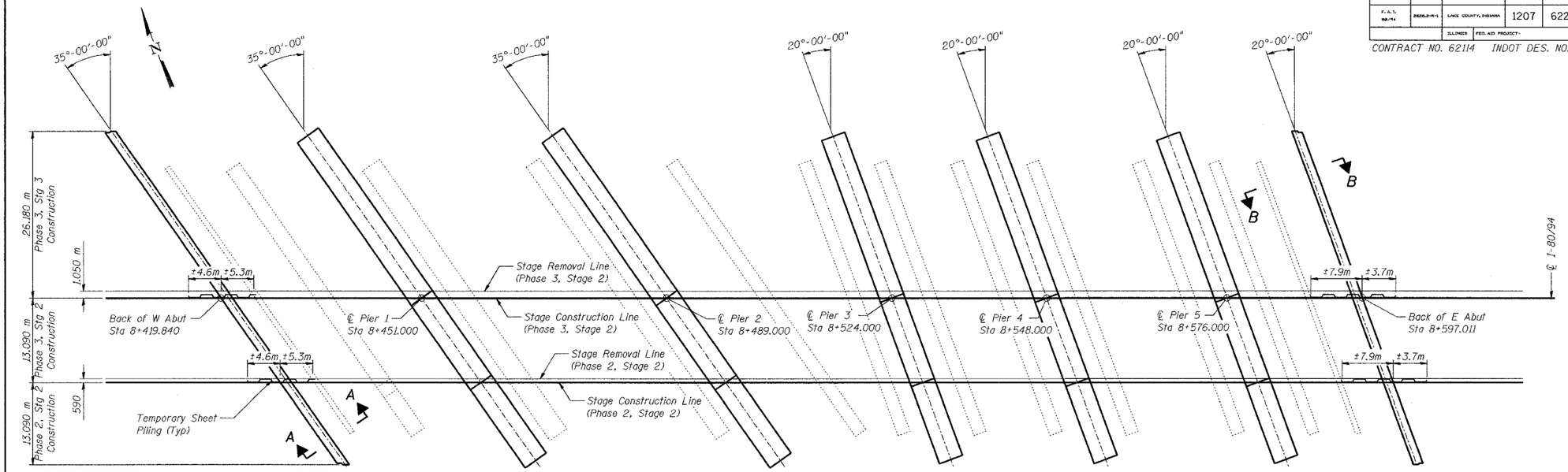
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.
GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)
DATE 07/05

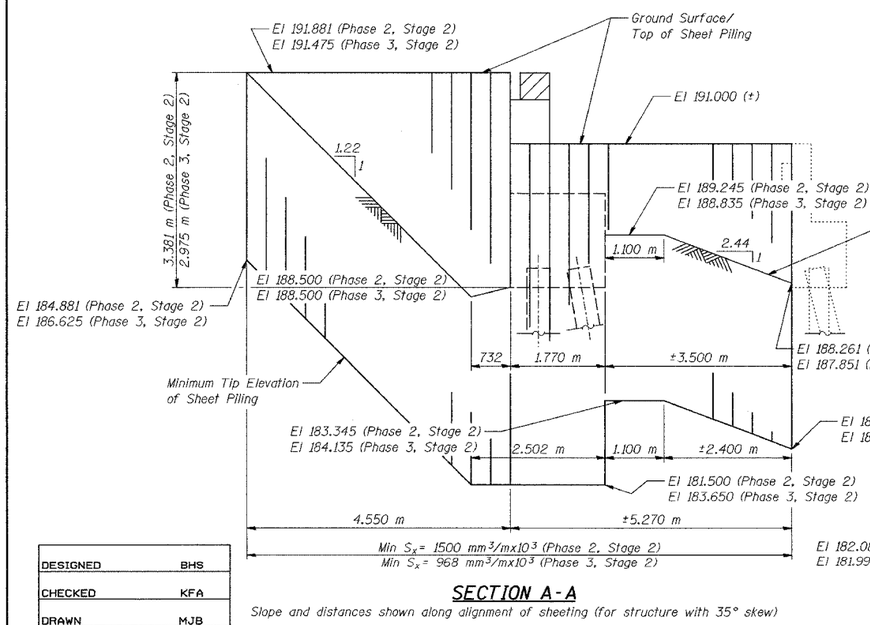
AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	622
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-3
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

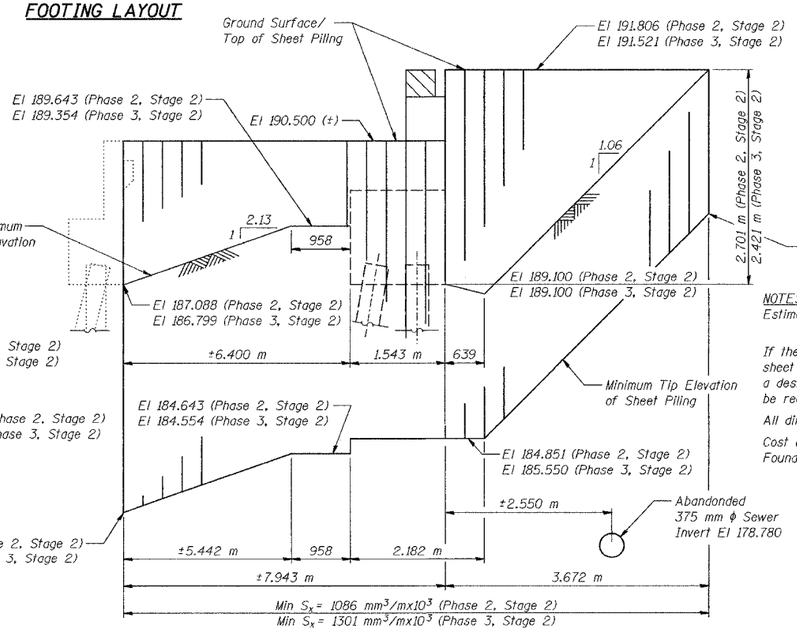




SECTION A-A

Slope and distances shown along alignment of sheeting (for structure with 35° skew)

FOOTING LAYOUT



SECTION B-B

Slope and distances shown along alignment of sheeting (for structure with 20° skew)

NOTES:

Estimated Area of Temporary Sheet Piling = 161 m² Phase 2 and 139 m² Phase 3

If the contractor chooses to alter the temporary cantilevered sheet piling design requirements as shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

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

Cost of Temporary Sheet Piling included with Excavation, Foundation, Unclassified.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

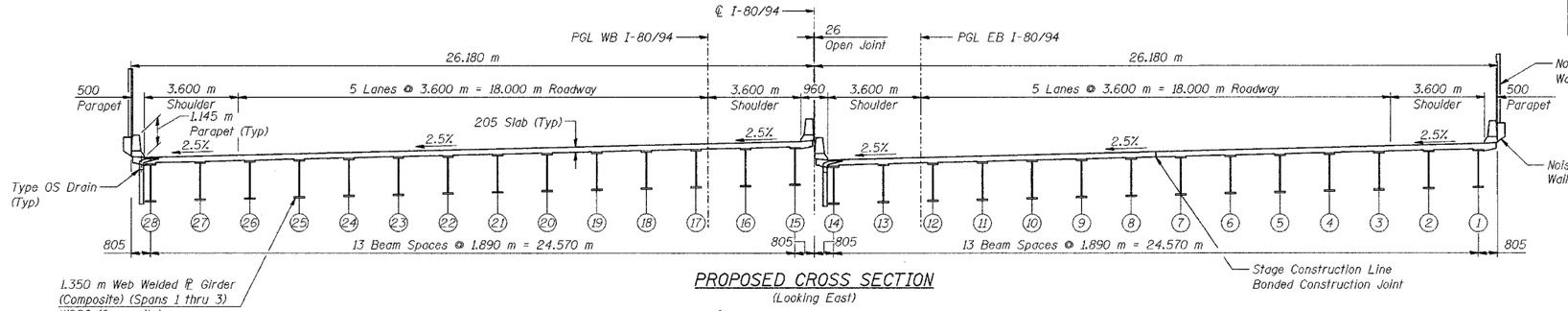
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.
STAGE CONSTRUCTION DETAILS – SUBSTRUCTURE
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 (016-1003 & 016-1004)

AMERICAN CONSULTING ENGINEERS

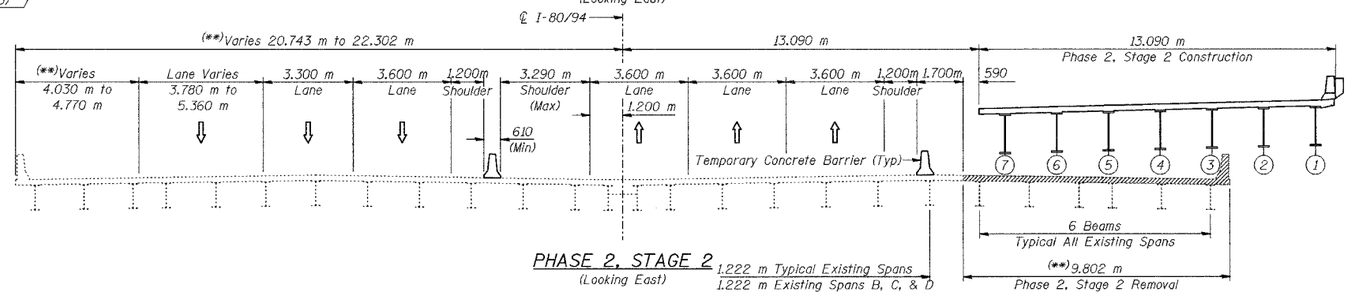
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	623
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-4
72 SHEETS

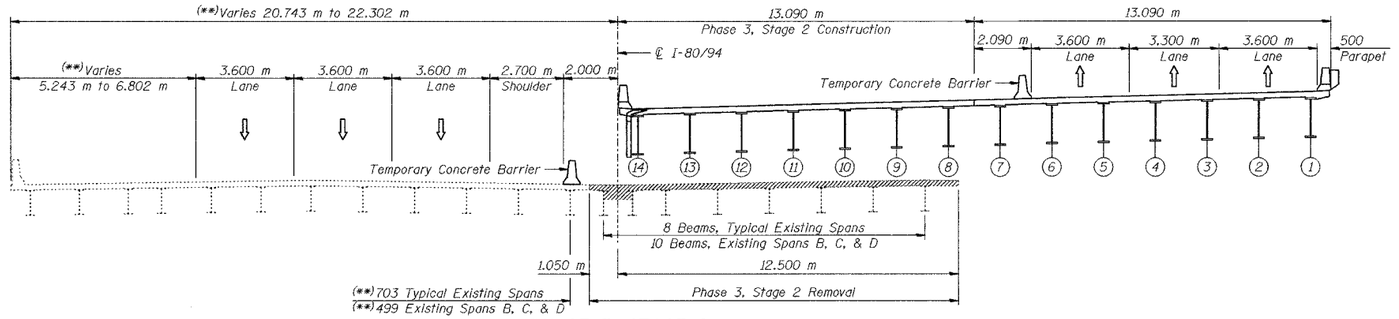
CONTRACT NO. 62114 INDOT DES. NO. 0100987



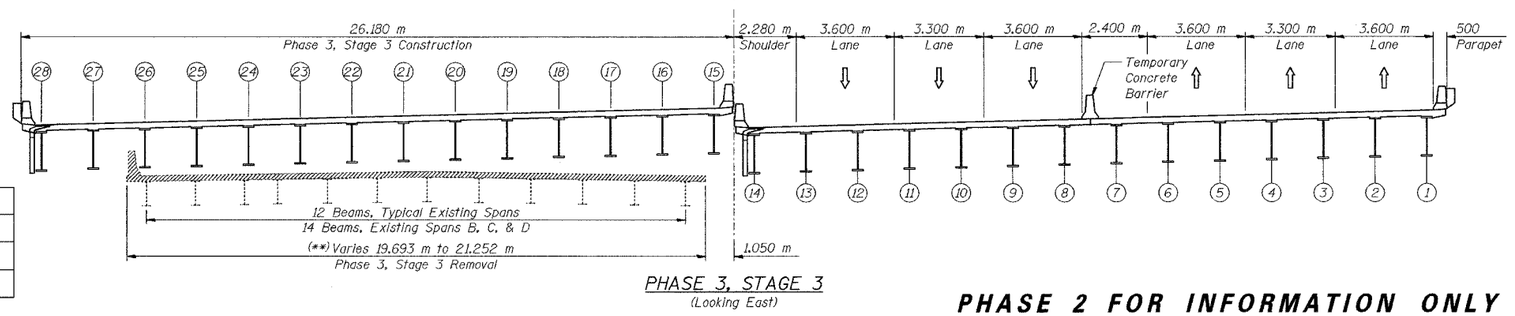
PROPOSED CROSS SECTION
(Looking East)



PHASE 2, STAGE 2
(Looking East)



PHASE 3, STAGE 2
(Looking East)



PHASE 3, STAGE 3
(Looking East)

PHASE 2 FOR INFORMATION ONLY

STAGING NOTES:

1. Reconstruction of the I-80/94 Structure over the Little Calumet River and N.I.C.T.D. R.O.W. will be let in separate contracts (Phase 2 and Phase 3), with each contract responsible for the removal and reconstruction to the limits shown.
2. No structure work will be performed during Stage 1 of Phase 3, however the traffic configuration during this stage will require the Eastbound Lanes to be shifted over the centerline of the structure.

NOTES:

Slip forming of median barrier is not allowed.

Existing Spans are lettered from west to east, starting with Span A for the westernmost span.

(**) Plan dimensions relative to existing structures are subject to nominal construction variations.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

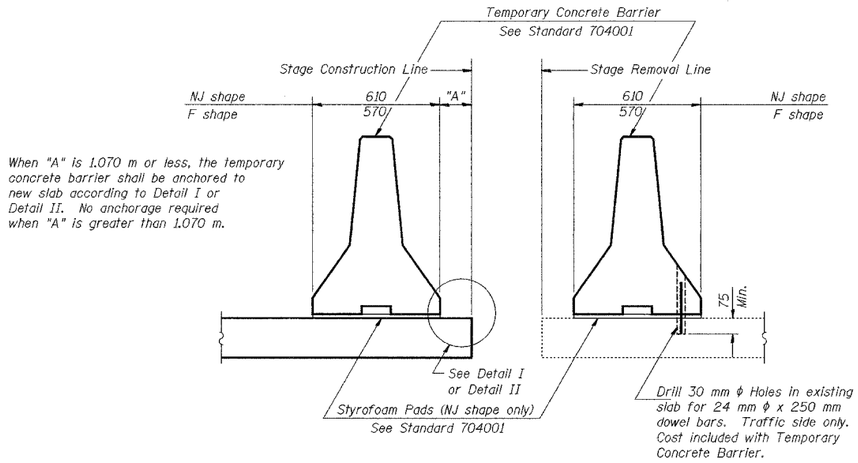
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.
STAGE CONSTRUCTION DETAILS – SUPERSTRUCTURE
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 (016-1003 & 016-1004)

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	624
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-5
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



NEW SLAB EXISTING SLAB

SECTIONS THRU SLAB

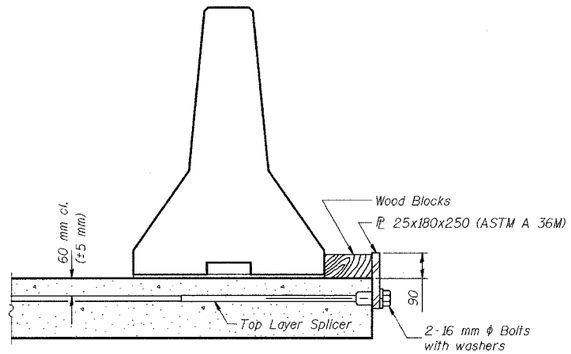
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 25x180x250 steel ℙ to the top layer of couplers with 2-16 mm ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel ℙ to the concrete slab with 2-16 mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

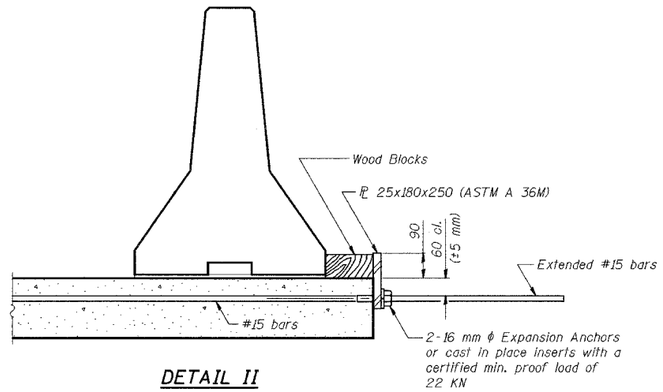
Cost of anchorage is included with Temporary Concrete Barrier.

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



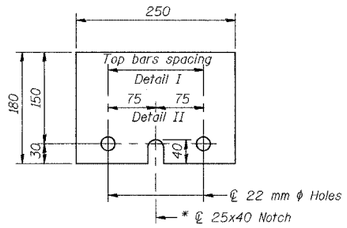
DETAIL I

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.



ℙ 25x180x250

* Required only with Detail II

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

R-27 (M)

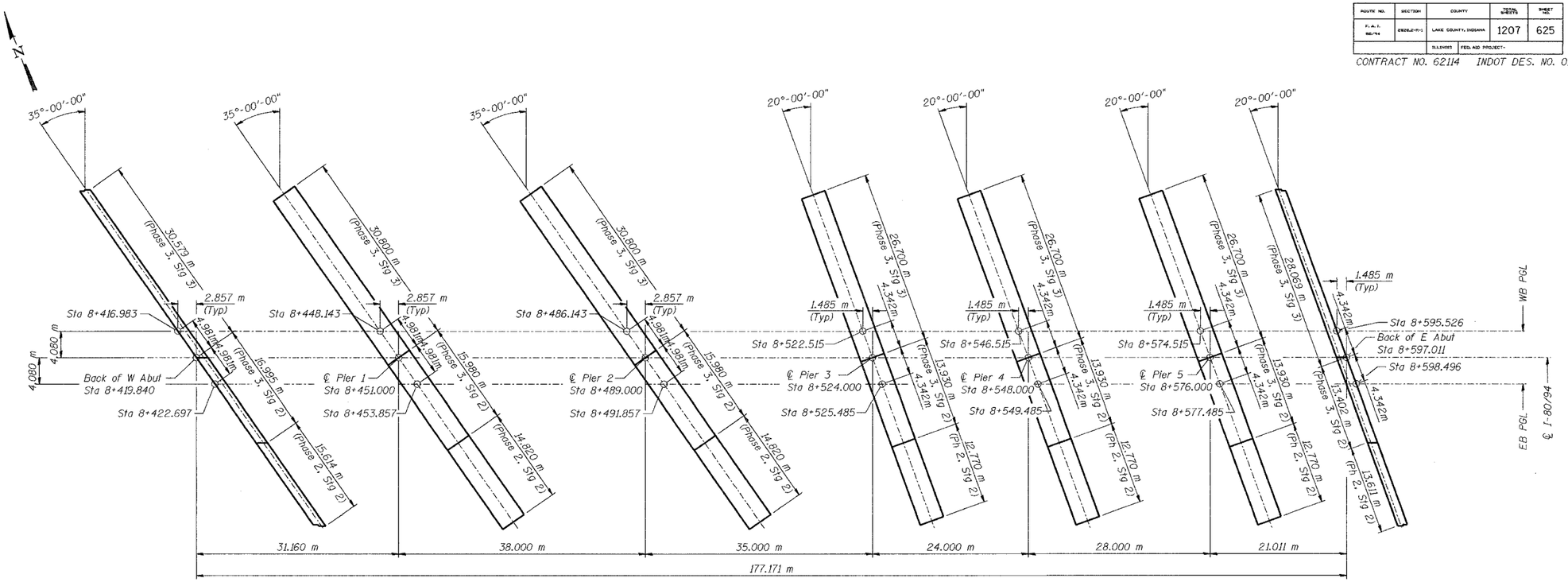
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

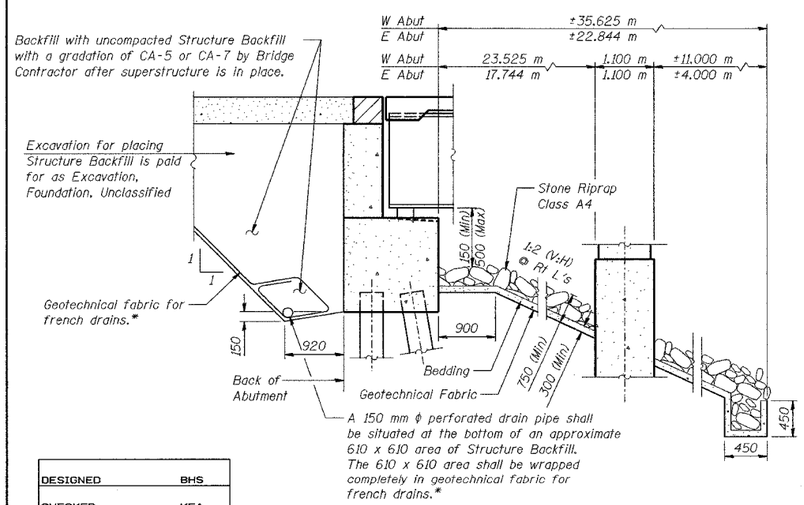
AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RTE-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	625
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-6
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987





SECTION THRU ABUTMENT

* Included in the cost of Structure Backfill

FOOTING LAYOUT

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

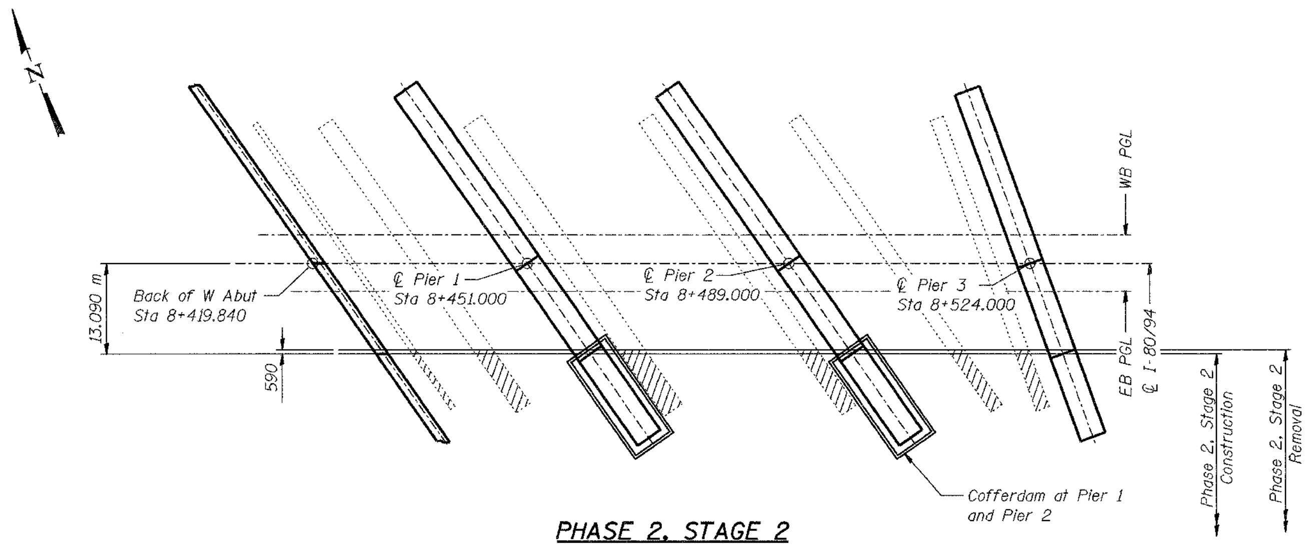
SUBSTRUCTURE LAYOUT
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

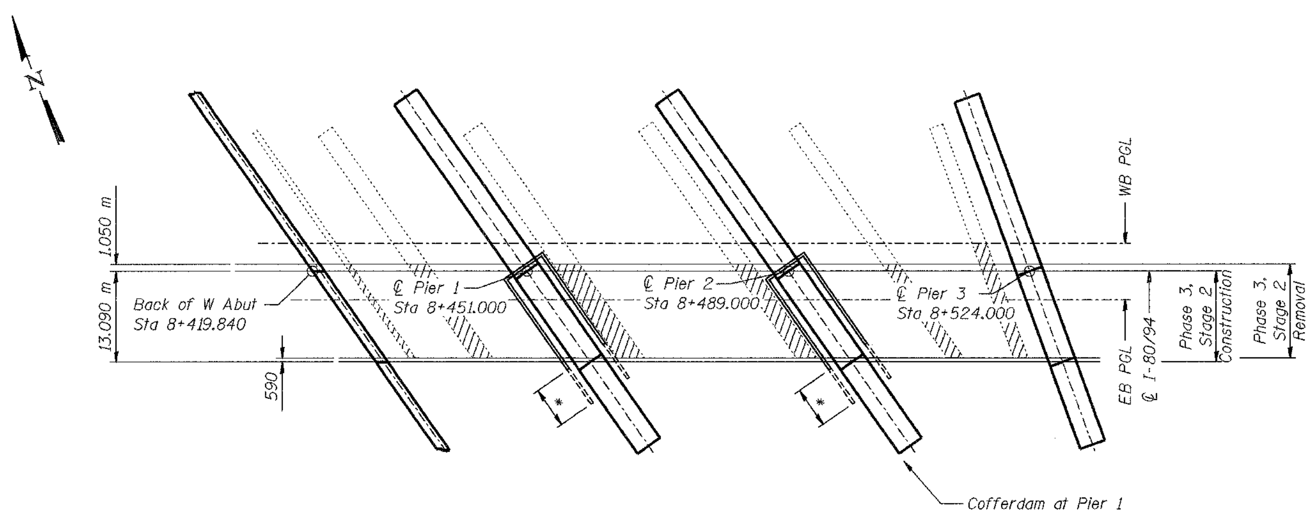
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	626
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-7
72 SHEETS

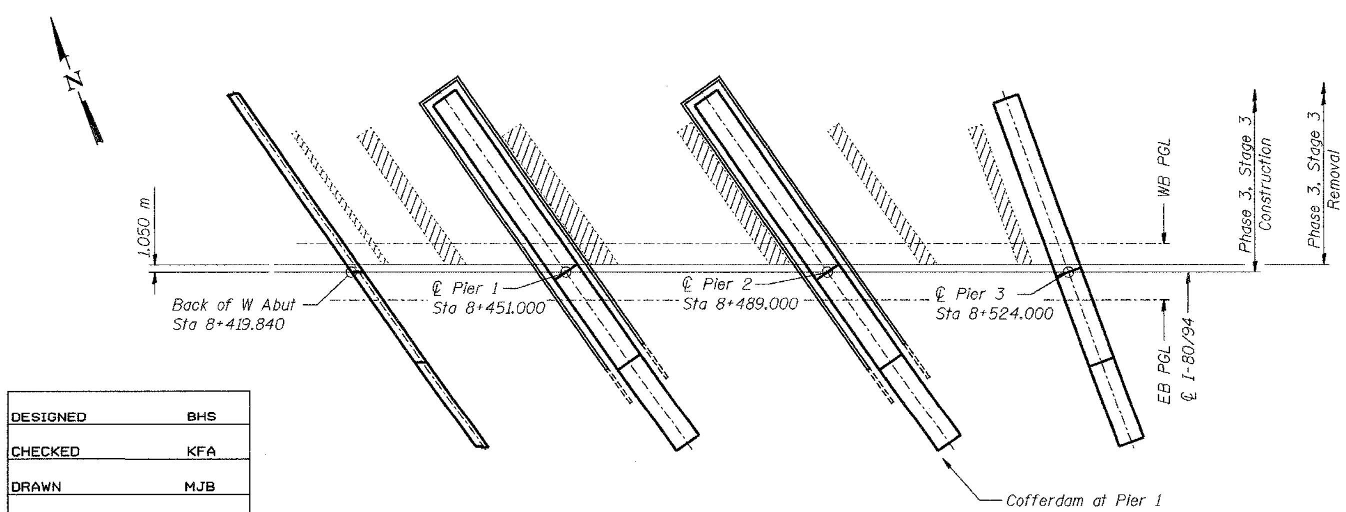
CONTRACT NO. 62114 INDOT DES. NO. 0100987



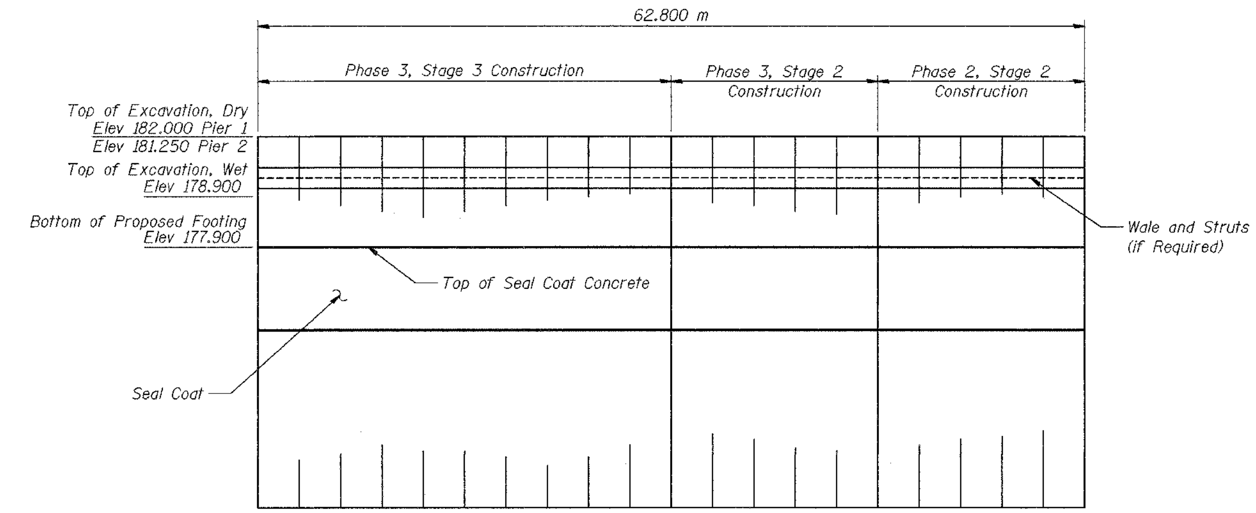
PHASE 2, STAGE 2



PHASE 3, STAGE 2



PHASE 3, STAGE 3



COFFERDAM ELEVATION
(Looking East)

* A portion of the cofferdam installed in Phase 2 will be left in place. It shall be the contractor's responsibility to connect to the existing sheeting and provide closure to Piers 1 and 2 constructed in Phase 2. Cost included with "Excavation, Wet (Indiana)".

The contractor shall verify the sheeting type and size, quantity and location of the existing cofferdam remaining from Phase 2.

The complete removal of all the existing cofferdam remaining from Phase 2 is the responsibility of the contractor and shall be included in the cost of "Excavation, Wet (Indiana)".

NOTES:

The information shown for the Cofferdams is estimated. It is the Contractor's responsibility to provide a design and computations of the Cofferdams, Cofferdam bracing, and all associated members, if required, subject to the approval of the Engineer.

Cofferdam sheeting, walers, bracing, struts, and seal coat concrete, as required by the contractor's design, shall be included in the cost of "Excavation, Wet (Indiana)".

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

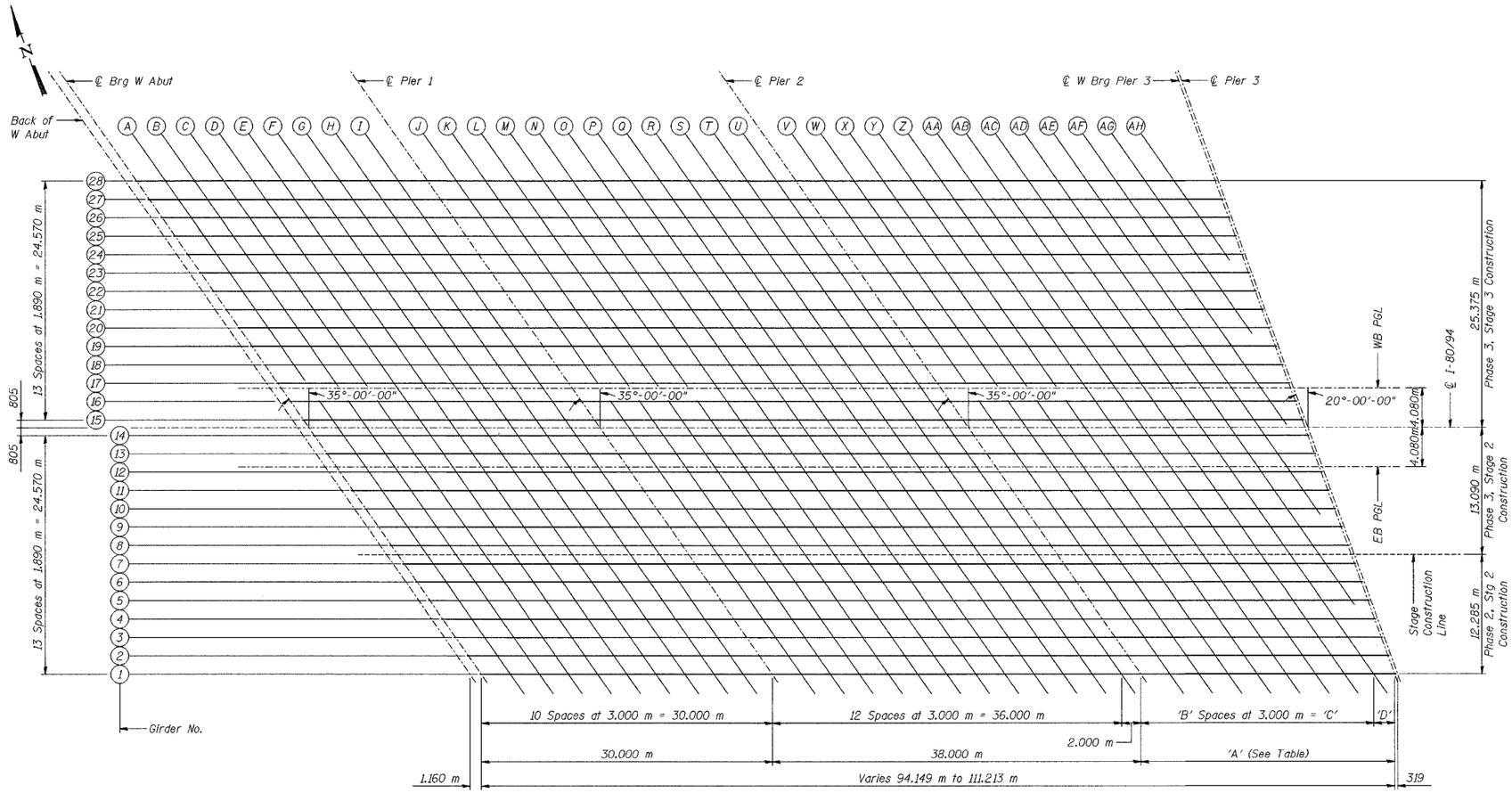
COFFERDAMS FOR PIER CONSTRUCTION
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	627
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-8
72 SHEETS

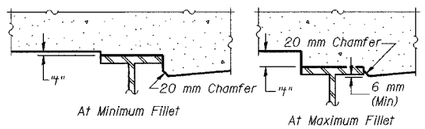
CONTRACT NO. 62114 INDOT DES. NO. 0100987



PLAN - UNIT 1

VARIABLE DIMENSION TABLE

LOCATION	'A'	'B'	'C'	'D'
Girder 28	43.213	13	39.000	4.213
Girder 27	42.577	13	39.000	3.577
Girder 26	41.942	13	39.000	2.942
Girder 25	41.306	13	39.000	2.306
Girder 24	40.671	13	39.000	1.671
Girder 23	40.035	12	36.000	4.035
Girder 22	39.400	12	36.000	3.400
Girder 21	38.764	12	36.000	2.764
Girder 20	38.129	12	36.000	2.129
Girder 19	37.493	11	33.000	4.493
Girder 18	36.858	11	33.000	3.858
Girder 17	36.222	11	33.000	3.222
WB PGL	36.052	11	33.000	3.052
Girder 16	35.587	11	33.000	2.587
Girder 15	34.951	11	33.000	1.951
Girder 14	34.410	10	30.000	4.410
Girder 13	33.775	10	30.000	3.775
EB PGL	33.309	10	30.000	3.309
Girder 12	33.139	10	30.000	3.139
Girder 11	32.504	10	30.000	2.504
Girder 10	31.868	10	30.000	1.868
Girder 9	31.233	9	27.000	4.233
Girder 8	30.597	9	27.000	3.597
Stage Const Line	30.280	9	27.000	3.280
Girder 7	29.962	9	27.000	2.962
Girder 6	29.326	9	27.000	2.326
Girder 5	28.691	9	27.000	1.691
Girder 4	28.055	8	24.000	4.055
Girder 3	27.420	8	24.000	3.420
Girder 2	26.784	8	24.000	2.784
Girder 1	26.149	8	24.000	2.149



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in Tables on Sheet S-10 thru S-17, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS

NOTE:

See Sheet No. S-10 for girder dead load deflection diagram.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

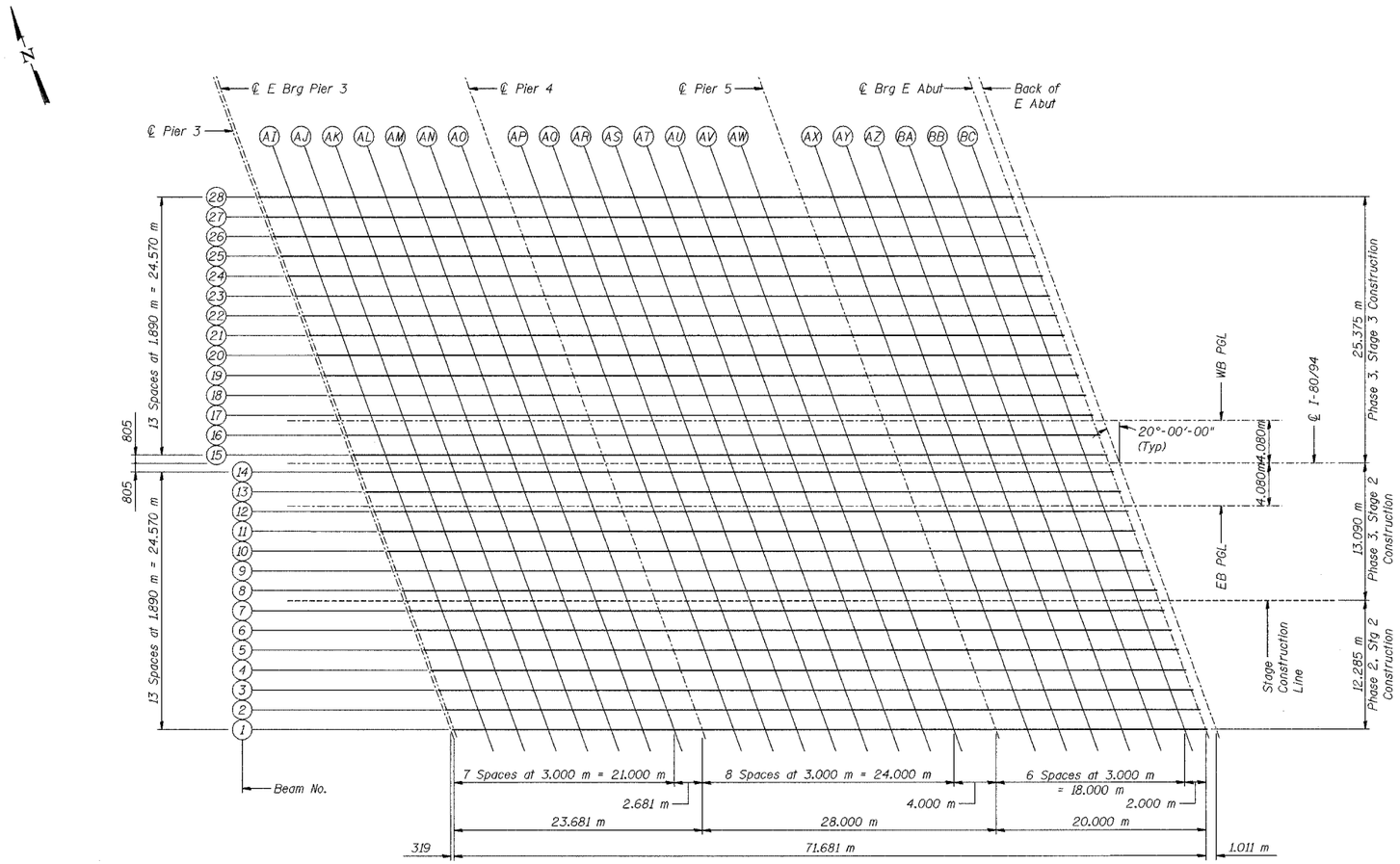
TOP OF DECK ELEVATIONS – UNIT 1 LAYOUT
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

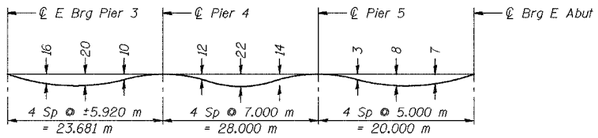
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	628
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-9
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



PLAN - UNIT 2

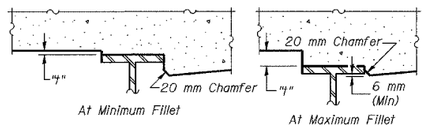


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

NOTE: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections.

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



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in Tables on Sheet S-18 thru S-22, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

PHASE 2 FOR INFORMATION ONLY

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 2 LAYOUT
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	629
		R.-I.-M.C.T.D.	FED. AID PROJECT-	

SHEET NO. S-10
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

*GIRDER 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+437.608	25.375	192.255	192.255
CL Brg W Abut	8+438.768	25.375	192.263	192.263
A	8+441.768	25.375	192.285	192.291
B	8+444.768	25.375	192.305	192.317
C	8+447.768	25.375	192.324	192.340
D	8+450.768	25.375	192.343	192.359
E	8+453.768	25.375	192.360	192.378
F	8+456.768	25.375	192.377	192.391
G	8+459.768	25.375	192.393	192.402
H	8+462.768	25.375	192.408	192.414
I	8+465.768	25.375	192.422	192.425
CL Pier 1	8+468.768	25.375	192.435	192.435
J	8+471.768	25.375	192.447	192.452
K	8+474.768	25.375	192.458	192.469
L	8+477.768	25.375	192.469	192.485
M	8+480.768	25.375	192.478	192.499
N	8+483.768	25.375	192.487	192.511
O	8+486.768	25.375	192.495	192.523
P	8+489.768	25.375	192.501	192.529
Q	8+492.768	25.375	192.507	192.531
R	8+495.768	25.375	192.512	192.533
S	8+498.768	25.375	192.516	192.532
T	8+501.768	25.375	192.520	192.529
U	8+504.768	25.375	192.522	192.526
CL Pier 2	8+506.768	25.375	192.523	192.523
V	8+509.768	25.375	192.524	192.524
W	8+512.768	25.375	192.524	192.525
X	8+515.768	25.375	192.523	192.526
Y	8+518.768	25.375	192.521	192.526
Z	8+521.768	25.375	192.518	192.524
AA	8+524.768	25.375	192.515	192.520
AB	8+527.768	25.375	192.510	192.515
AC	8+530.768	25.375	192.505	192.506
CL W Brg Pier 3	8+532.917	25.375	192.500	192.500
CL Pier 3	8+533.236	25.375	192.499	192.499

*GIRDER 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+436.285	23.485	192.198	192.198
CL Brg W Abut	8+437.445	23.485	192.207	192.207
A	8+440.445	23.485	192.228	192.234
B	8+443.445	23.485	192.249	192.261
C	8+446.445	23.485	192.269	192.284
D	8+449.445	23.485	192.287	192.304
E	8+452.445	23.485	192.305	192.323
F	8+455.445	23.485	192.323	192.336
G	8+458.445	23.485	192.339	192.348
H	8+461.445	23.485	192.354	192.360
I	8+464.445	23.485	192.368	192.371
CL Pier 1	8+467.445	23.485	192.382	192.382
J	8+470.445	23.485	192.395	192.400
K	8+473.445	23.485	192.406	192.417
L	8+476.445	23.485	192.417	192.433
M	8+479.445	23.485	192.427	192.447
N	8+482.445	23.485	192.436	192.460
O	8+485.445	23.485	192.444	192.472
P	8+488.445	23.485	192.451	192.478
Q	8+491.445	23.485	192.458	192.481
R	8+494.445	23.485	192.463	192.483
S	8+497.445	23.485	192.467	192.483
T	8+500.445	23.485	192.471	192.481
U	8+503.445	23.485	192.474	192.478
CL Pier 2	8+505.445	23.485	192.475	192.475
V	8+508.445	23.485	192.476	192.477
W	8+511.445	23.485	192.477	192.478
X	8+514.445	23.485	192.476	192.480
Y	8+517.445	23.485	192.475	192.481
Z	8+520.445	23.485	192.472	192.480
AA	8+523.445	23.485	192.469	192.476
AB	8+526.445	23.485	192.465	192.471
AC	8+529.445	23.485	192.460	192.463
CL W Brg Pier 3	8+532.229	23.485	192.454	192.454
CL Pier 3	8+532.548	23.485	192.454	192.454

*GIRDER 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+434.961	21.595	192.141	192.141
CL Brg W Abut	8+436.121	21.595	192.149	192.149
A	8+439.121	21.595	192.171	192.178
B	8+442.121	21.595	192.193	192.205
C	8+445.121	21.595	192.213	192.229
D	8+448.121	21.595	192.232	192.249
E	8+451.121	21.595	192.250	192.268
F	8+454.121	21.595	192.268	192.282
G	8+457.121	21.595	192.284	192.294
H	8+460.121	21.595	192.300	192.306
I	8+463.121	21.595	192.315	192.318
CL Pier 1	8+466.121	21.595	192.329	192.329
J	8+469.121	21.595	192.342	192.347
K	8+472.121	21.595	192.354	192.364
L	8+475.121	21.595	192.365	192.381
M	8+478.121	21.595	192.375	192.395
N	8+481.121	21.595	192.385	192.408
O	8+484.121	21.595	192.393	192.421
P	8+487.121	21.595	192.401	192.427
Q	8+490.121	21.595	192.408	192.430
R	8+493.121	21.595	192.413	192.433
S	8+496.121	21.595	192.418	192.433
T	8+499.121	21.595	192.422	192.431
U	8+502.121	21.595	192.425	192.429
CL Pier 2	8+504.121	21.595	192.427	192.427
V	8+507.121	21.595	192.429	192.430
W	8+510.121	21.595	192.429	192.432
X	8+513.121	21.595	192.429	192.434
Y	8+516.121	21.595	192.428	192.436
Z	8+519.121	21.595	192.426	192.435
AA	8+522.121	21.595	192.423	192.432
AB	8+525.121	21.595	192.420	192.427
AC	8+528.121	21.595	192.415	192.419
CL W Brg Pier 3	8+531.541	21.595	192.408	192.408
CL Pier 3	8+531.860	21.595	192.408	192.408

*GIRDER 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+433.638	19.705	192.083	192.083
CL Brg W Abut	8+434.798	19.705	192.092	192.092
A	8+437.798	19.705	192.115	192.121
B	8+440.798	19.705	192.136	192.148
C	8+443.798	19.705	192.157	192.173
D	8+446.798	19.705	192.176	192.193
E	8+449.798	19.705	192.195	192.213
F	8+452.798	19.705	192.213	192.227
G	8+455.798	19.705	192.230	192.240
H	8+458.798	19.705	192.246	192.252
I	8+461.798	19.705	192.261	192.264
CL Pier 1	8+464.798	19.705	192.276	192.276
J	8+467.798	19.705	192.289	192.294
K	8+470.798	19.705	192.301	192.312
L	8+473.798	19.705	192.313	192.329
M	8+476.798	19.705	192.324	192.343
N	8+479.798	19.705	192.334	192.357
O	8+482.798	19.705	192.342	192.369
P	8+485.798	19.705	192.350	192.376
Q	8+488.798	19.705	192.358	192.380
R	8+491.798	19.705	192.364	192.382
S	8+494.798	19.705	192.369	192.383
T	8+497.798	19.705	192.373	192.382
U	8+500.798	19.705	192.377	192.381
CL Pier 2	8+502.798	19.705	192.379	192.379
V	8+505.798	19.705	192.381	192.382
W	8+508.798	19.705	192.382	192.385
X	8+511.798	19.705	192.382	192.388
Y	8+514.798	19.705	192.381	192.390
Z	8+517.798	19.705	192.380	192.390
AA	8+520.798	19.705	192.377	192.388
AB	8+523.798	19.705	192.374	192.384
AC	8+526.798	19.705	192.370	192.375
CL W Brg Pier 3	8+530.853	19.705	192.363	192.363
CL Pier 3	8+531.172	19.705	192.362	192.362

DEAD LOAD DEFLECTION TABLE

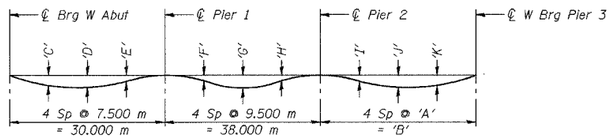
	GIRDER	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'
	28	±10.803	43.213	19	24	13	4	5	-3	41	74	60
	27	±10.644	42.577	19	23	13	4	6	-2	38	70	56
	26	±10.485	41.942	19	23	12	5	7	-1	36	66	53
	25	±10.327	41.306	18	23	12	5	8	0	33	62	50
	24	±10.168	40.671	18	23	12	6	9	1	31	57	46
	23	±10.009	40.035	18	22	12	7	10	2	28	53	43
	22	±9.850	39.400	18	22	12	7	11	2	26	49	40
	21	±9.691	38.764	18	22	11	8	12	3	24	45	37
	20	±9.532	38.129	18	22	11	8	13	4	22	42	34
	19	±9.373	37.493	18	21	11	9	14	5	20	39	32
	18	±9.214	36.858	17	21	11	9	15	6	19	36	30
	17	±9.056	36.222	17	21	11	10	16	6	17	33	27
	16	±8.897	35.587	17	21	10	10	17	7	15	30	25
	15	±8.738	34.951	17	21	10	11	17	8	13	27	22
	14	±8.603	34.410	16	20	9	13	21	10	17	33	27
	13	±8.444	33.775	16	19	9	13	22	11	15	30	25
	12	±8.285	33.139	16	19	9	14	23	12	14	28	23
	11	±8.126	32.504	16	19	9	14	24	13	12	25	21
	10	±7.967	31.868	16	19	9	14	24	13	11	23	19
	9	±7.808	31.233	16	19	9	15	25	14	9	20	17
	8	±7.649	30.597	16	18	8	15	26	15	8	18	15
*	7	±7.490	29.962	16	18	8	16	27	15	7	16	14
*	6	±7.332	29.326	16	18	8	16	27	16	6	14	12
*	5	±7.173	28.691	15	18	8	16	28	16	5	12	11
*	4	±7.014	28.055	15	18	8	16	28	17	4	11	10
*	3	±6.855	27.420	15	18	8	17	29	17	3	9	8
*	2	±6.696	26.784	15	18	8	17	29	18	2	7	7
*	1	±6.537	26.149	15	18	8	17	30	18	1	6	6

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

NOTE: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections.

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

*** FOR INFORMATION ONLY**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 1 (1 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	630
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-11
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

*GIRDER 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+432.314	17.815	192.026	192.026
CL Brg W Abut	8+433.474	17.815	192.035	192.035
A	8+436.474	17.815	192.058	192.064
B	8+439.474	17.815	192.079	192.092
C	8+442.474	17.815	192.100	192.116
D	8+445.474	17.815	192.121	192.138
E	8+448.474	17.815	192.140	192.158
F	8+451.474	17.815	192.158	192.172
G	8+454.474	17.815	192.175	192.185
H	8+457.474	17.815	192.192	192.198
I	8+460.474	17.815	192.207	192.211
CL Pier 1	8+463.474	17.815	192.222	192.222
J	8+466.474	17.815	192.236	192.241
K	8+469.474	17.815	192.249	192.259
L	8+472.474	17.815	192.261	192.276
M	8+475.474	17.815	192.272	192.291
N	8+478.474	17.815	192.282	192.305
O	8+481.474	17.815	192.291	192.318
P	8+484.474	17.815	192.300	192.325
Q	8+487.474	17.815	192.307	192.329
R	8+490.474	17.815	192.314	192.332
S	8+493.474	17.815	192.320	192.333
T	8+496.474	17.815	192.324	192.333
U	8+499.474	17.815	192.328	192.332
CL Pier 2	8+501.474	17.815	192.330	192.330
V	8+504.474	17.815	192.333	192.335
W	8+507.474	17.815	192.334	192.338
X	8+510.474	17.815	192.335	192.342
Y	8+513.474	17.815	192.335	192.344
Z	8+516.474	17.815	192.333	192.346
AA	8+519.474	17.815	192.331	192.343
AB	8+522.474	17.815	192.328	192.339
AC	8+525.474	17.815	192.325	192.332
AD	8+528.474	17.815	192.320	192.322
CL W Brg Pier 3	8+530.165	17.815	192.317	192.317
CL Pier 3	8+530.484	17.815	192.316	192.316

*GIRDER 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+430.991	15.925	191.968	191.968
CL Brg W Abut	8+432.151	15.925	191.977	191.977
A	8+435.151	15.925	192.000	192.007
B	8+438.151	15.925	192.023	192.035
C	8+441.151	15.925	192.044	192.060
D	8+444.151	15.925	192.065	192.082
E	8+447.151	15.925	192.084	192.102
F	8+450.151	15.925	192.103	192.117
G	8+453.151	15.925	192.121	192.131
H	8+456.151	15.925	192.137	192.144
I	8+459.151	15.925	192.153	192.157
CL Pier 1	8+462.151	15.925	192.168	192.168
J	8+465.151	15.925	192.183	192.188
K	8+468.151	15.925	192.196	192.206
L	8+471.151	15.925	192.208	192.223
M	8+474.151	15.925	192.220	192.239
N	8+477.151	15.925	192.230	192.253
O	8+480.151	15.925	192.240	192.266
P	8+483.151	15.925	192.249	192.274
Q	8+486.151	15.925	192.257	192.278
R	8+489.151	15.925	192.264	192.281
S	8+492.151	15.925	192.270	192.283
T	8+495.151	15.925	192.275	192.283
U	8+498.151	15.925	192.279	192.283
CL Pier 2	8+500.151	15.925	192.282	192.282
V	8+503.151	15.925	192.285	192.287
W	8+506.151	15.925	192.287	192.291
X	8+509.151	15.925	192.288	192.295
Y	8+512.151	15.925	192.288	192.299
Z	8+515.151	15.925	192.287	192.301
AA	8+518.151	15.925	192.285	192.298
AB	8+521.151	15.925	192.283	192.295
AC	8+524.151	15.925	192.279	192.288
AD	8+527.151	15.925	192.275	192.279
CL W Brg Pier 3	8+529.477	15.925	192.271	192.271
CL Pier 3	8+529.796	15.925	192.270	192.270

*GIRDER 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+429.668	14.035	191.910	191.910
CL Brg W Abut	8+430.828	14.035	191.920	191.920
A	8+433.828	14.035	191.943	191.949
B	8+436.828	14.035	191.966	191.978
C	8+439.828	14.035	191.987	192.004
D	8+442.828	14.035	192.008	192.026
E	8+445.828	14.035	192.028	192.047
F	8+448.828	14.035	192.047	192.062
G	8+451.828	14.035	192.066	192.076
H	8+454.828	14.035	192.083	192.089
I	8+457.828	14.035	192.099	192.103
CL Pier 1	8+460.828	14.035	192.115	192.115
J	8+463.828	14.035	192.129	192.134
K	8+466.828	14.035	192.143	192.153
L	8+469.828	14.035	192.156	192.170
M	8+472.828	14.035	192.168	192.186
N	8+475.828	14.035	192.179	192.201
O	8+478.828	14.035	192.189	192.214
P	8+481.828	14.035	192.198	192.222
Q	8+484.828	14.035	192.206	192.227
R	8+487.828	14.035	192.214	192.231
S	8+490.828	14.035	192.220	192.233
T	8+493.828	14.035	192.226	192.234
U	8+496.828	14.035	192.230	192.234
CL Pier 2	8+498.828	14.035	192.233	192.233
V	8+501.828	14.035	192.236	192.239
W	8+504.828	14.035	192.239	192.244
X	8+507.828	14.035	192.240	192.248
Y	8+510.828	14.035	192.240	192.252
Z	8+513.828	14.035	192.240	192.256
AA	8+516.828	14.035	192.239	192.253
AB	8+519.828	14.035	192.237	192.250
AC	8+522.828	14.035	192.234	192.244
AD	8+525.828	14.035	192.230	192.235
CL W Brg Pier 3	8+528.789	14.035	192.225	192.225
CL Pier 3	8+529.108	14.035	192.224	192.224

STAGE CONSTRUCTION LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+429.006	13.090	191.881	191.881
CL Brg W Abut	8+430.166	13.090	191.891	191.891
A	8+433.166	13.090	191.914	191.921
B	8+436.166	13.090	191.937	191.950
C	8+439.166	13.090	191.959	191.975
D	8+442.166	13.090	191.980	191.998
E	8+445.166	13.090	192.000	192.019
F	8+448.166	13.090	192.020	192.034
G	8+451.166	13.090	192.038	192.048
H	8+454.166	13.090	192.055	192.062
I	8+457.166	13.090	192.072	192.075
CL Pier 1	8+460.166	13.090	192.088	192.088
J	8+463.166	13.090	192.103	192.107
K	8+466.166	13.090	192.116	192.126
L	8+469.166	13.090	192.129	192.144
M	8+472.166	13.090	192.141	192.160
N	8+475.166	13.090	192.153	192.174
O	8+478.166	13.090	192.163	192.188
P	8+481.166	13.090	192.172	192.196
Q	8+484.166	13.090	192.181	192.201
R	8+487.166	13.090	192.188	192.205
S	8+490.166	13.090	192.195	192.208
T	8+493.166	13.090	192.201	192.209
U	8+496.166	13.090	192.206	192.209
CL Pier 2	8+498.166	13.090	192.209	192.209
V	8+501.166	13.090	192.212	192.215
W	8+504.166	13.090	192.214	192.220
X	8+507.166	13.090	192.216	192.225
Y	8+510.166	13.090	192.217	192.229
Z	8+513.166	13.090	192.217	192.233
AA	8+516.166	13.090	192.216	192.231
AB	8+519.166	13.090	192.214	192.228
AC	8+522.166	13.090	192.211	192.223
AD	8+525.166	13.090	192.207	192.213
CL W Brg Pier 3	8+528.445	13.090	192.202	192.202
CL Pier 3	8+528.764	13.090	192.201	192.201

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

* FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS - UNIT 1 (2 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	631
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-12
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+428.344	12.145	191.852	191.852
CL Brg W Abut	8+429.504	12.145	191.862	191.862
A	8+432.504	12.145	191.886	191.892
B	8+435.504	12.145	191.909	191.921
C	8+438.504	12.145	191.931	191.947
D	8+441.504	12.145	191.952	191.969
E	8+444.504	12.145	191.972	191.991
F	8+447.504	12.145	191.992	192.006
G	8+450.504	12.145	192.010	192.021
H	8+453.504	12.145	192.028	192.035
I	8+456.504	12.145	192.045	192.048
CL Pier 1	8+459.504	12.145	192.061	192.061
J	8+462.504	12.145	192.076	192.081
K	8+465.504	12.145	192.090	192.099
L	8+468.504	12.145	192.103	192.117
M	8+471.504	12.145	192.115	192.133
N	8+474.504	12.145	192.127	192.148
O	8+477.504	12.145	192.137	192.162
P	8+480.504	12.145	192.147	192.170
Q	8+483.504	12.145	192.155	192.175
R	8+486.504	12.145	192.163	192.180
S	8+489.504	12.145	192.170	192.182
T	8+492.504	12.145	192.176	192.184
U	8+495.504	12.145	192.181	192.184
CL Pier 2	8+497.504	12.145	192.184	192.184
V	8+500.504	12.145	192.188	192.191
W	8+503.504	12.145	192.190	192.196
X	8+506.504	12.145	192.192	192.202
Y	8+509.504	12.145	192.193	192.206
Z	8+512.504	12.145	192.193	192.210
AA	8+515.504	12.145	192.192	192.209
AB	8+518.504	12.145	192.190	192.206
AC	8+521.504	12.145	192.188	192.201
AD	8+524.504	12.145	192.184	192.191
CL W Brg Pier 3	8+528.101	12.145	192.179	192.179
CL Pier 3	8+528.420	12.145	192.178	192.178

GIRDER 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+427.021	10.255	191.794	191.794
CL Brg W Abut	8+428.181	10.255	191.803	191.803
A	8+431.181	10.255	191.828	191.834
B	8+434.181	10.255	191.851	191.864
C	8+437.181	10.255	191.874	191.890
D	8+440.181	10.255	191.896	191.913
E	8+443.181	10.255	191.916	191.935
F	8+446.181	10.255	191.936	191.951
G	8+449.181	10.255	191.955	191.966
H	8+452.181	10.255	191.973	191.980
I	8+455.181	10.255	191.990	191.994
CL Pier 1	8+458.181	10.255	192.007	192.007
J	8+461.181	10.255	192.022	192.027
K	8+464.181	10.255	192.036	192.046
L	8+467.181	10.255	192.050	192.064
M	8+470.181	10.255	192.063	192.080
N	8+473.181	10.255	192.074	192.095
O	8+476.181	10.255	192.085	192.109
P	8+479.181	10.255	192.095	192.118
Q	8+482.181	10.255	192.104	192.124
R	8+485.181	10.255	192.113	192.128
S	8+488.181	10.255	192.120	192.132
T	8+491.181	10.255	192.126	192.134
U	8+494.181	10.255	192.132	192.135
CL Pier 2	8+496.181	10.255	192.135	192.135
V	8+499.181	10.255	192.139	192.143
W	8+502.181	10.255	192.142	192.149
X	8+505.181	10.255	192.144	192.155
Y	8+508.181	10.255	192.146	192.161
Z	8+511.181	10.255	192.146	192.165
AA	8+514.181	10.255	192.145	192.165
AB	8+517.181	10.255	192.144	192.162
AC	8+520.181	10.255	192.142	192.158
AD	8+523.181	10.255	192.139	192.148
CL W Brg Pier 3	8+527.414	10.255	192.133	192.133
CL Pier 3	8+527.733	10.255	192.132	192.132

GIRDER 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+425.697	8.365	191.735	191.735
CL Brg W Abut	8+426.857	8.365	191.745	191.745
A	8+429.857	8.365	191.770	191.776
B	8+432.857	8.365	191.794	191.807
C	8+435.857	8.365	191.817	191.833
D	8+438.857	8.365	191.839	191.856
E	8+441.857	8.365	191.860	191.879
F	8+444.857	8.365	191.880	191.895
G	8+447.857	8.365	191.900	191.910
H	8+450.857	8.365	191.918	191.925
I	8+453.857	8.365	191.936	191.939
CL Pier 1	8+456.857	8.365	191.952	191.952
J	8+459.857	8.365	191.968	191.973
K	8+462.857	8.365	191.983	191.992
L	8+465.857	8.365	191.997	192.011
M	8+468.857	8.365	192.010	192.027
N	8+471.857	8.365	192.022	192.042
O	8+474.857	8.365	192.033	192.057
P	8+477.857	8.365	192.044	192.066
Q	8+480.857	8.365	192.053	192.072
R	8+483.857	8.365	192.062	192.077
S	8+486.857	8.365	192.070	192.081
T	8+489.857	8.365	192.076	192.083
U	8+492.857	8.365	192.082	192.085
CL Pier 2	8+494.857	8.365	192.086	192.086
V	8+497.857	8.365	192.090	192.094
W	8+500.857	8.365	192.094	192.102
X	8+503.857	8.365	192.096	192.108
Y	8+506.857	8.365	192.098	192.115
Z	8+509.857	8.365	192.099	192.120
AA	8+512.857	8.365	192.099	192.120
AB	8+515.857	8.365	192.098	192.118
AC	8+518.857	8.365	192.096	192.115
AD	8+521.857	8.365	192.093	192.105
AE	8+524.857	8.365	192.089	192.094
CL W Brg Pier 3	8+526.726	8.365	192.086	192.086
CL Pier 3	8+527.045	8.365	192.086	192.086

GIRDER 11

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+424.374	6.475	191.677	191.677
CL Brg W Abut	8+425.534	6.475	191.687	191.687
A	8+428.534	6.475	191.712	191.718
B	8+431.534	6.475	191.736	191.749
C	8+434.534	6.475	191.759	191.776
D	8+437.534	6.475	191.782	191.800
E	8+440.534	6.475	191.803	191.822
F	8+443.534	6.475	191.824	191.839
G	8+446.534	6.475	191.844	191.855
H	8+449.534	6.475	191.863	191.870
I	8+452.534	6.475	191.881	191.884
CL Pier 1	8+455.534	6.475	191.898	191.898
J	8+458.534	6.475	191.914	191.918
K	8+461.534	6.475	191.929	191.938
L	8+464.534	6.475	191.944	191.957
M	8+467.534	6.475	191.957	191.974
N	8+470.534	6.475	191.970	191.989
O	8+473.534	6.475	191.981	192.004
P	8+476.534	6.475	191.992	192.013
Q	8+479.534	6.475	192.002	192.020
R	8+482.534	6.475	192.011	192.025
S	8+485.534	6.475	192.019	192.030
T	8+488.534	6.475	192.026	192.033
U	8+491.534	6.475	192.032	192.035
CL Pier 2	8+493.534	6.475	192.036	192.036
V	8+496.534	6.475	192.041	192.045
W	8+499.534	6.475	192.045	192.054
X	8+502.534	6.475	192.048	192.061
Y	8+505.534	6.475	192.050	192.068
Z	8+508.534	6.475	192.051	192.074
AA	8+511.534	6.475	192.051	192.076
AB	8+514.534	6.475	192.051	192.074
AC	8+517.534	6.475	192.049	192.071
AD	8+520.534	6.475	192.047	192.061
AE	8+523.534	6.475	192.044	192.050
CL W Brg Pier 3	8+526.038	6.475	192.040	192.040
CL Pier 3	8+526.357	6.475	192.040	192.040

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 1 (3 OF 8)
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	632
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-13
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 12

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+423.051	4.585	191.618	191.618
CL Brg W Abut	8+424.211	4.585	191.628	191.628
A	8+427.211	4.585	191.654	191.660
B	8+430.211	4.585	191.678	191.691
C	8+433.211	4.585	191.702	191.719
D	8+436.211	4.585	191.725	191.743
E	8+439.211	4.585	191.747	191.766
F	8+442.211	4.585	191.768	191.783
G	8+445.211	4.585	191.788	191.799
H	8+448.211	4.585	191.807	191.814
I	8+451.211	4.585	191.826	191.829
CL Pier 1	8+454.211	4.585	191.843	191.843
J	8+457.211	4.585	191.860	191.864
K	8+460.211	4.585	191.875	191.884
L	8+463.211	4.585	191.890	191.903
M	8+466.211	4.585	191.904	191.920
N	8+469.211	4.585	191.917	191.936
O	8+472.211	4.585	191.929	191.951
P	8+475.211	4.585	191.940	191.961
Q	8+478.211	4.585	191.950	191.968
R	8+481.211	4.585	191.960	191.973
S	8+484.211	4.585	191.968	191.978
T	8+487.211	4.585	191.976	191.982
U	8+490.211	4.585	191.983	191.985
CL Pier 2	8+492.211	4.585	191.987	191.987
V	8+495.211	4.585	191.992	191.997
W	8+498.211	4.585	191.996	192.006
X	8+501.211	4.585	191.999	192.014
Y	8+504.211	4.585	192.002	192.022
Z	8+507.211	4.585	192.003	192.029
AA	8+510.211	4.585	192.004	192.031
AB	8+513.211	4.585	192.004	192.029
AC	8+516.211	4.585	192.003	192.027
AD	8+519.211	4.585	192.001	192.018
AE	8+522.211	4.585	191.998	192.007
CL W Brg Pier 3	8+525.350	4.585	191.994	191.994
CL Pier 3	8+525.669	4.585	191.994	191.994

EB PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+422.697	4.080	191.602	191.602
CL Brg W Abut	8+423.857	4.080	191.612	191.612
A	8+426.857	4.080	191.638	191.645
B	8+429.857	4.080	191.663	191.676
C	8+432.857	4.080	191.687	191.703
D	8+435.857	4.080	191.710	191.728
E	8+438.857	4.080	191.732	191.751
F	8+441.857	4.080	191.753	191.768
G	8+444.857	4.080	191.773	191.784
H	8+447.857	4.080	191.792	191.800
I	8+450.857	4.080	191.811	191.815
CL Pier 1	8+453.857	4.080	191.828	191.828
J	8+456.857	4.080	191.845	191.849
K	8+459.857	4.080	191.861	191.869
L	8+462.857	4.080	191.876	191.889
M	8+465.857	4.080	191.890	191.906
N	8+468.857	4.080	191.903	191.922
O	8+471.857	4.080	191.915	191.937
P	8+474.857	4.080	191.926	191.947
Q	8+477.857	4.080	191.937	191.954
R	8+480.857	4.080	191.946	191.960
S	8+483.857	4.080	191.955	191.965
T	8+486.857	4.080	191.962	191.969
U	8+489.857	4.080	191.969	191.972
CL Pier 2	8+491.857	4.080	191.973	191.973
V	8+494.857	4.080	191.979	191.984
W	8+497.857	4.080	191.983	191.993
X	8+500.857	4.080	191.986	192.002
Y	8+503.857	4.080	191.989	192.010
Z	8+506.857	4.080	191.991	192.016
AA	8+509.857	4.080	191.992	192.019
AB	8+512.857	4.080	191.991	192.017
AC	8+515.857	4.080	191.990	192.015
AD	8+518.857	4.080	191.989	192.007
AE	8+521.857	4.080	191.986	191.995
CL W Brg Pier 3	8+525.166	4.080	191.982	191.982
CL Pier 3	8+525.485	4.080	191.981	191.981

GIRDER 13

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+421.727	2.695	191.559	191.559
CL Brg W Abut	8+422.887	2.695	191.569	191.569
A	8+425.887	2.695	191.595	191.602
B	8+428.887	2.695	191.620	191.633
C	8+431.887	2.695	191.644	191.661
D	8+434.887	2.695	191.668	191.686
E	8+437.887	2.695	191.690	191.709
F	8+440.887	2.695	191.711	191.727
G	8+443.887	2.695	191.732	191.743
H	8+446.887	2.695	191.752	191.759
I	8+449.887	2.695	191.770	191.774
CL Pier 1	8+452.887	2.695	191.788	191.788
J	8+455.887	2.695	191.805	191.809
K	8+458.887	2.695	191.821	191.830
L	8+461.887	2.695	191.836	191.849
M	8+464.887	2.695	191.851	191.866
N	8+467.887	2.695	191.864	191.882
O	8+470.887	2.695	191.877	191.898
P	8+473.887	2.695	191.888	191.908
Q	8+476.887	2.695	191.899	191.915
R	8+479.887	2.695	191.909	191.921
S	8+482.887	2.695	191.917	191.927
T	8+485.887	2.695	191.925	191.931
U	8+488.887	2.695	191.932	191.935
CL Pier 2	8+490.887	2.695	191.937	191.937
V	8+493.887	2.695	191.942	191.948
W	8+496.887	2.695	191.947	191.958
X	8+499.887	2.695	191.951	191.967
Y	8+502.887	2.695	191.954	191.975
Z	8+505.887	2.695	191.956	191.983
AA	8+508.887	2.695	191.957	191.986
AB	8+511.887	2.695	191.957	191.985
AC	8+514.887	2.695	191.956	191.982
AD	8+517.887	2.695	191.955	191.975
AE	8+520.887	2.695	191.952	191.963
CL W Brg Pier 3	8+524.662	2.695	191.948	191.948
CL Pier 3	8+524.981	2.695	191.947	191.947

GIRDER 14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+420.404	0.805	191.500	191.500
CL Brg W Abut	8+421.564	0.805	191.510	191.510
A	8+424.564	0.805	191.537	191.543
B	8+427.564	0.805	191.562	191.575
C	8+430.564	0.805	191.587	191.604
D	8+433.564	0.805	191.610	191.629
E	8+436.564	0.805	191.633	191.653
F	8+439.564	0.805	191.655	191.670
G	8+442.564	0.805	191.676	191.687
H	8+445.564	0.805	191.696	191.703
I	8+448.564	0.805	191.715	191.719
CL Pier 1	8+451.564	0.805	191.733	191.733
J	8+454.564	0.805	191.751	191.755
K	8+457.564	0.805	191.767	191.775
L	8+460.564	0.805	191.783	191.795
M	8+463.564	0.805	191.797	191.812
N	8+466.564	0.805	191.811	191.829
O	8+469.564	0.805	191.824	191.844
P	8+472.564	0.805	191.836	191.855
Q	8+475.564	0.805	191.847	191.863
R	8+478.564	0.805	191.857	191.869
S	8+481.564	0.805	191.866	191.875
T	8+484.564	0.805	191.875	191.880
U	8+487.564	0.805	191.882	191.884
CL Pier 2	8+489.564	0.805	191.887	191.887
V	8+492.564	0.805	191.893	191.899
W	8+495.564	0.805	191.898	191.909
X	8+498.564	0.805	191.902	191.919
Y	8+501.564	0.805	191.905	191.928
Z	8+504.564	0.805	191.908	191.936
AA	8+507.564	0.805	191.909	191.942
AB	8+510.564	0.805	191.910	191.940
AC	8+513.564	0.805	191.909	191.938
AD	8+516.564	0.805	191.908	191.932
AE	8+519.564	0.805	191.906	191.920
CL W Brg Pier 3	8+523.974	0.805	191.901	191.901
CL Pier 3	8+524.293	0.805	191.901	191.901

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 1 (4 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	633
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-14

72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 15

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+419.276	-0.805	192.075	192.075
CL Brg W Abut	8+420.436	-0.805	192.086	192.086
A	8+423.436	-0.805	192.112	192.119
B	8+426.436	-0.805	192.137	192.151
C	8+429.436	-0.805	192.162	192.180
D	8+432.436	-0.805	192.186	192.205
E	8+435.436	-0.805	192.209	192.229
F	8+438.436	-0.805	192.231	192.247
G	8+441.436	-0.805	192.252	192.264
H	8+444.436	-0.805	192.272	192.280
I	8+447.436	-0.805	192.291	192.295
CL Pier 1	8+450.436	-0.805	192.309	192.309
J	8+453.436	-0.805	192.327	192.330
K	8+456.436	-0.805	192.343	192.350
L	8+459.436	-0.805	192.359	192.369
M	8+462.436	-0.805	192.374	192.386
N	8+465.436	-0.805	192.387	192.402
O	8+468.436	-0.805	192.400	192.417
P	8+471.436	-0.805	192.412	192.428
Q	8+474.436	-0.805	192.423	192.436
R	8+477.436	-0.805	192.434	192.443
S	8+480.436	-0.805	192.443	192.450
T	8+483.436	-0.805	192.451	192.456
U	8+486.436	-0.805	192.459	192.461
CL Pier 2	8+488.436	-0.805	192.464	192.464
V	8+491.436	-0.805	192.470	192.474
W	8+494.436	-0.805	192.475	192.484
X	8+497.436	-0.805	192.479	192.493
Y	8+500.436	-0.805	192.482	192.501
Z	8+503.436	-0.805	192.485	192.508
AA	8+506.436	-0.805	192.486	192.513
AB	8+509.436	-0.805	192.487	192.512
AC	8+512.436	-0.805	192.487	192.510
AD	8+515.436	-0.805	192.486	192.506
AE	8+518.436	-0.805	192.484	192.496
AF	8+521.436	-0.805	192.481	192.486
CL W Brg Pier 3	8+523.388	-0.805	192.478	192.478
CL Pier 3	8+523.707	-0.805	192.478	192.478

GIRDER 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+417.953	-2.695	192.016	192.016
CL Brg W Abut	8+419.113	-2.695	192.026	192.026
A	8+422.113	-2.695	192.053	192.060
B	8+425.113	-2.695	192.079	192.093
C	8+428.113	-2.695	192.104	192.122
D	8+431.113	-2.695	192.128	192.148
E	8+434.113	-2.695	192.151	192.172
F	8+437.113	-2.695	192.174	192.190
G	8+440.113	-2.695	192.195	192.208
H	8+443.113	-2.695	192.216	192.224
I	8+446.113	-2.695	192.235	192.239
CL Pier 1	8+449.113	-2.695	192.254	192.254
J	8+452.113	-2.695	192.272	192.275
K	8+455.113	-2.695	192.289	192.295
L	8+458.113	-2.695	192.305	192.314
M	8+461.113	-2.695	192.320	192.332
N	8+464.113	-2.695	192.334	192.348
O	8+467.113	-2.695	192.347	192.363
P	8+470.113	-2.695	192.360	192.374
Q	8+473.113	-2.695	192.371	192.383
R	8+476.113	-2.695	192.382	192.391
S	8+479.113	-2.695	192.392	192.398
T	8+482.113	-2.695	192.401	192.404
U	8+485.113	-2.695	192.409	192.410
CL Pier 2	8+487.113	-2.695	192.413	192.413
V	8+490.113	-2.695	192.420	192.425
W	8+493.113	-2.695	192.425	192.435
X	8+496.113	-2.695	192.430	192.445
Y	8+499.113	-2.695	192.434	192.454
Z	8+502.113	-2.695	192.437	192.462
AA	8+505.113	-2.695	192.439	192.468
AB	8+508.113	-2.695	192.440	192.468
AC	8+511.113	-2.695	192.440	192.466
AD	8+514.113	-2.695	192.439	192.463
AE	8+517.113	-2.695	192.437	192.453
AF	8+520.113	-2.695	192.435	192.442
CL W Brg Pier 3	8+522.700	-2.695	192.432	192.432
CL Pier 3	8+523.019	-2.695	192.431	192.431

WB PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+416.983	-4.080	191.972	191.972
CL Brg W Abut	8+418.143	-4.080	191.983	191.983
A	8+421.143	-4.080	192.010	192.017
B	8+424.143	-4.080	192.036	192.050
C	8+427.143	-4.080	192.061	192.079
D	8+430.143	-4.080	192.086	192.105
E	8+433.143	-4.080	192.109	192.130
F	8+436.143	-4.080	192.132	192.149
G	8+439.143	-4.080	192.154	192.166
H	8+442.143	-4.080	192.175	192.183
I	8+445.143	-4.080	192.194	192.199
CL Pier 1	8+448.143	-4.080	192.213	192.213
J	8+451.143	-4.080	192.232	192.235
K	8+454.143	-4.080	192.249	192.255
L	8+457.143	-4.080	192.265	192.274
M	8+460.143	-4.080	192.280	192.292
N	8+463.143	-4.080	192.295	192.308
O	8+466.143	-4.080	192.309	192.324
P	8+469.143	-4.080	192.321	192.335
Q	8+472.143	-4.080	192.333	192.344
R	8+475.143	-4.080	192.344	192.352
S	8+478.143	-4.080	192.354	192.360
T	8+481.143	-4.080	192.363	192.367
U	8+484.143	-4.080	192.371	192.373
CL Pier 2	8+486.143	-4.080	192.376	192.376
V	8+489.143	-4.080	192.383	192.389
W	8+492.143	-4.080	192.389	192.400
X	8+495.143	-4.080	192.394	192.410
Y	8+498.143	-4.080	192.398	192.420
Z	8+501.143	-4.080	192.401	192.428
AA	8+504.143	-4.080	192.403	192.435
AB	8+507.143	-4.080	192.405	192.435
AC	8+510.143	-4.080	192.405	192.434
AD	8+513.143	-4.080	192.405	192.431
AE	8+516.143	-4.080	192.403	192.421
AF	8+519.143	-4.080	192.401	192.410
CL W Brg Pier 3	8+522.196	-4.080	192.398	192.398
CL Pier 3	8+522.515	-4.080	192.397	192.397

GIRDER 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+416.629	-4.585	191.956	191.956
CL Brg W Abut	8+417.789	-4.585	191.967	191.967
A	8+420.789	-4.585	191.994	192.001
B	8+423.789	-4.585	192.021	192.034
C	8+426.789	-4.585	192.046	192.064
D	8+429.789	-4.585	192.070	192.090
E	8+432.789	-4.585	192.094	192.115
F	8+435.789	-4.585	192.117	192.134
G	8+438.789	-4.585	192.139	192.151
H	8+441.789	-4.585	192.159	192.168
I	8+444.789	-4.585	192.179	192.184
CL Pier 1	8+447.789	-4.585	192.199	192.199
J	8+450.789	-4.585	192.217	192.220
K	8+453.789	-4.585	192.234	192.240
L	8+456.789	-4.585	192.251	192.260
M	8+459.789	-4.585	192.266	192.277
N	8+462.789	-4.585	192.281	192.294
O	8+465.789	-4.585	192.294	192.310
P	8+468.789	-4.585	192.307	192.321
Q	8+471.789	-4.585	192.319	192.330
R	8+474.789	-4.585	192.330	192.338
S	8+477.789	-4.585	192.340	192.346
T	8+480.789	-4.585	192.350	192.353
U	8+483.789	-4.585	192.358	192.359
CL Pier 2	8+485.789	-4.585	192.363	192.363
V	8+488.789	-4.585	192.370	192.375
W	8+491.789	-4.585	192.376	192.387
X	8+494.789	-4.585	192.381	192.397
Y	8+497.789	-4.585	192.385	192.407
Z	8+500.789	-4.585	192.388	192.416
AA	8+503.789	-4.585	192.391	192.423
AB	8+506.789	-4.585	192.392	192.423
AC	8+509.789	-4.585	192.392	192.422
AD	8+512.789	-4.585	192.392	192.419
AE	8+515.789	-4.585	192.391	192.410
AF	8+518.789	-4.585	192.389	192.398
CL W Brg Pier 3	8+522.012	-4.585	192.385	192.385
CL Pier 3	8+522.331	-4.585	192.385	192.385

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 1 (5 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

...\SHEETS\PTA_BASE.dgn 10/17/2005 08:25:57 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	634
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-15
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 18

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+415.306	-6.475	191.897	191.897
CL Brg W Abut	8+416.466	-6.475	191.907	191.907
A	8+419.466	-6.475	191.935	191.942
B	8+422.466	-6.475	191.962	191.976
C	8+425.466	-6.475	191.988	192.006
D	8+428.466	-6.475	192.012	192.032
E	8+431.466	-6.475	192.036	192.058
F	8+434.466	-6.475	192.060	192.077
G	8+437.466	-6.475	192.082	192.095
H	8+440.466	-6.475	192.103	192.112
I	8+443.466	-6.475	192.124	192.128
CL Pier 1	8+446.466	-6.475	192.143	192.143
J	8+449.466	-6.475	192.162	192.165
K	8+452.466	-6.475	192.179	192.185
L	8+455.466	-6.475	192.196	192.205
M	8+458.466	-6.475	192.212	192.223
N	8+461.466	-6.475	192.227	192.240
O	8+464.466	-6.475	192.241	192.256
P	8+467.466	-6.475	192.254	192.267
Q	8+470.466	-6.475	192.267	192.277
R	8+473.466	-6.475	192.278	192.285
S	8+476.466	-6.475	192.289	192.293
T	8+479.466	-6.475	192.298	192.301
U	8+482.466	-6.475	192.307	192.308
CL Pier 2	8+484.466	-6.475	192.312	192.312
V	8+487.466	-6.475	192.320	192.326
W	8+490.466	-6.475	192.326	192.338
X	8+493.466	-6.475	192.331	192.350
Y	8+496.466	-6.475	192.336	192.360
Z	8+499.466	-6.475	192.340	192.369
AA	8+502.466	-6.475	192.342	192.378
AB	8+505.466	-6.475	192.344	192.378
AC	8+508.466	-6.475	192.345	192.377
AD	8+511.466	-6.475	192.345	192.375
AE	8+514.466	-6.475	192.344	192.366
AF	8+517.466	-6.475	192.343	192.355
CL W Brg Pier 3	8+521.324	-6.475	192.339	192.339
CL Pier 3	8+521.643	-6.475	192.339	192.339

GIRDER 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+413.983	-8.365	191.837	191.837
CL Brg W Abut	8+415.143	-8.365	191.848	191.848
A	8+418.143	-8.365	191.876	191.883
B	8+421.143	-8.365	191.903	191.917
C	8+424.143	-8.365	191.929	191.947
D	8+427.143	-8.365	191.954	191.974
E	8+430.143	-8.365	191.979	192.000
F	8+433.143	-8.365	192.002	192.019
G	8+436.143	-8.365	192.025	192.038
H	8+439.143	-8.365	192.047	192.055
I	8+442.143	-8.365	192.067	192.072
CL Pier 1	8+445.143	-8.365	192.087	192.087
J	8+448.143	-8.365	192.106	192.109
K	8+451.143	-8.365	192.124	192.130
L	8+454.143	-8.365	192.142	192.150
M	8+457.143	-8.365	192.158	192.168
N	8+460.143	-8.365	192.173	192.185
O	8+463.143	-8.365	192.188	192.201
P	8+466.143	-8.365	192.202	192.214
Q	8+469.143	-8.365	192.214	192.223
R	8+472.143	-8.365	192.226	192.232
S	8+475.143	-8.365	192.237	192.241
T	8+478.143	-8.365	192.247	192.250
U	8+481.143	-8.365	192.256	192.257
CL Pier 2	8+483.143	-8.365	192.262	192.262
V	8+486.143	-8.365	192.269	192.276
W	8+489.143	-8.365	192.276	192.289
X	8+492.143	-8.365	192.282	192.301
Y	8+495.143	-8.365	192.287	192.312
Z	8+498.143	-8.365	192.291	192.322
AA	8+501.143	-8.365	192.294	192.332
AB	8+504.143	-8.365	192.296	192.334
AC	8+507.143	-8.365	192.298	192.333
AD	8+510.143	-8.365	192.298	192.331
AE	8+513.143	-8.365	192.298	192.323
AF	8+516.143	-8.365	192.296	192.312
CL W Brg Pier 3	8+520.636	-8.365	192.292	192.292
CL Pier 3	8+520.955	-8.365	192.292	192.292

GIRDER 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+412.659	-10.255	191.777	191.777
CL Brg W Abut	8+413.819	-10.255	191.788	191.788
A	8+416.819	-10.255	191.816	191.823
B	8+419.819	-10.255	191.844	191.858
C	8+422.819	-10.255	191.870	191.889
D	8+425.819	-10.255	191.896	191.916
E	8+428.819	-10.255	191.921	191.942
F	8+431.819	-10.255	191.945	191.962
G	8+434.819	-10.255	191.968	191.981
H	8+437.819	-10.255	191.990	191.999
I	8+440.819	-10.255	192.011	192.016
CL Pier 1	8+443.819	-10.255	192.031	192.031
J	8+446.819	-10.255	192.051	192.053
K	8+449.819	-10.255	192.069	192.074
L	8+452.819	-10.255	192.087	192.095
M	8+455.819	-10.255	192.104	192.113
N	8+458.819	-10.255	192.119	192.131
O	8+461.819	-10.255	192.134	192.147
P	8+464.819	-10.255	192.148	192.160
Q	8+467.819	-10.255	192.161	192.170
R	8+470.819	-10.255	192.174	192.179
S	8+473.819	-10.255	192.185	192.188
T	8+476.819	-10.255	192.195	192.198
U	8+479.819	-10.255	192.205	192.206
CL Pier 2	8+481.819	-10.255	192.211	192.211
V	8+484.819	-10.255	192.219	192.226
W	8+487.819	-10.255	192.226	192.240
X	8+490.819	-10.255	192.232	192.253
Y	8+493.819	-10.255	192.238	192.265
Z	8+496.819	-10.255	192.242	192.276
AA	8+499.819	-10.255	192.245	192.285
AB	8+502.819	-10.255	192.248	192.289
AC	8+505.819	-10.255	192.250	192.288
AD	8+508.819	-10.255	192.251	192.286
AE	8+511.819	-10.255	192.251	192.280
AF	8+514.819	-10.255	192.250	192.268
AG	8+517.819	-10.255	192.248	192.255
CL W Brg Pier 3	8+519.948	-10.255	192.246	192.246
CL Pier 3	8+520.267	-10.255	192.246	192.246

GIRDER 21

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+411.336	-12.145	191.716	191.716
CL Brg W Abut	8+412.496	-12.145	191.728	191.728
A	8+415.496	-12.145	191.757	191.764
B	8+418.496	-12.145	191.784	191.799
C	8+421.496	-12.145	191.811	191.830
D	8+424.496	-12.145	191.838	191.858
E	8+427.496	-12.145	191.863	191.885
F	8+430.496	-12.145	191.887	191.905
G	8+433.496	-12.145	191.910	191.924
H	8+436.496	-12.145	191.933	191.942
I	8+439.496	-12.145	191.955	191.959
CL Pier 1	8+442.496	-12.145	191.975	191.975
J	8+445.496	-12.145	191.995	191.998
K	8+448.496	-12.145	192.014	192.019
L	8+451.496	-12.145	192.032	192.039
M	8+454.496	-12.145	192.049	192.058
N	8+457.496	-12.145	192.065	192.076
O	8+460.496	-12.145	192.081	192.092
P	8+463.496	-12.145	192.095	192.105
Q	8+466.496	-12.145	192.109	192.116
R	8+469.496	-12.145	192.121	192.126
S	8+472.496	-12.145	192.133	192.136
T	8+475.496	-12.145	192.144	192.145
U	8+478.496	-12.145	192.154	192.154
CL Pier 2	8+480.496	-12.145	192.160	192.160
V	8+483.496	-12.145	192.168	192.176
W	8+486.496	-12.145	192.176	192.190
X	8+489.496	-12.145	192.182	192.204
Y	8+492.496	-12.145	192.188	192.217
Z	8+495.496	-12.145	192.193	192.228
AA	8+498.496	-12.145	192.197	192.239
AB	8+501.496	-12.145	192.200	192.244
AC	8+504.496	-12.145	192.202	192.243
AD	8+507.496	-12.145	192.203	192.242
AE	8+510.496	-12.145	192.203	192.237
AF	8+513.496	-12.145	192.203	192.225
AG	8+516.496	-12.145	192.201	192.212
CL W Brg Pier 3	8+519.261	-12.145	192.199	192.199
CL Pier 3	8+519.580	-12.145	192.199	192.199

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS - UNIT 1 (6 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	635
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-16
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+410.012	-14.035	191.656	191.656
CL Brg W Abut	8+411.172	-14.035	191.668	191.668
A	8+414.172	-14.035	191.697	191.704
B	8+417.172	-14.035	191.725	191.739
C	8+420.172	-14.035	191.752	191.771
D	8+423.172	-14.035	191.779	191.799
E	8+426.172	-14.035	191.805	191.827
F	8+429.172	-14.035	191.829	191.847
G	8+432.172	-14.035	191.853	191.867
H	8+435.172	-14.035	191.876	191.885
I	8+438.172	-14.035	191.898	191.903
CL Pier 1	8+441.172	-14.035	191.919	191.919
J	8+444.172	-14.035	191.939	191.941
K	8+447.172	-14.035	191.959	191.963
L	8+450.172	-14.035	191.977	191.984
M	8+453.172	-14.035	191.994	192.003
N	8+456.172	-14.035	192.011	192.021
O	8+459.172	-14.035	192.027	192.038
P	8+462.172	-14.035	192.042	192.051
Q	8+465.172	-14.035	192.055	192.062
R	8+468.172	-14.035	192.068	192.072
S	8+471.172	-14.035	192.081	192.083
T	8+474.172	-14.035	192.092	192.093
U	8+477.172	-14.035	192.102	192.103
CL Pier 2	8+479.172	-14.035	192.108	192.108
V	8+482.172	-14.035	192.117	192.125
W	8+485.172	-14.035	192.125	192.141
X	8+488.172	-14.035	192.132	192.156
Y	8+491.172	-14.035	192.138	192.169
Z	8+494.172	-14.035	192.144	192.182
AA	8+497.172	-14.035	192.148	192.193
AB	8+500.172	-14.035	192.151	192.199
AC	8+503.172	-14.035	192.154	192.199
AD	8+506.172	-14.035	192.155	192.198
AE	8+509.172	-14.035	192.156	192.194
AF	8+512.172	-14.035	192.156	192.182
AG	8+515.172	-14.035	192.155	192.169
CL W Brg Pier 3	8+518.573	-14.035	192.153	192.153
CL Pier 3	8+518.892	-14.035	192.152	192.152

GIRDER 23

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+408.689	-15.925	191.595	191.595
CL Brg W Abut	8+409.849	-15.925	191.607	191.607
A	8+412.849	-15.925	191.637	191.644
B	8+415.849	-15.925	191.665	191.680
C	8+418.849	-15.925	191.693	191.712
D	8+421.849	-15.925	191.720	191.741
E	8+424.849	-15.925	191.746	191.768
F	8+427.849	-15.925	191.771	191.789
G	8+430.849	-15.925	191.795	191.809
H	8+433.849	-15.925	191.819	191.828
I	8+436.849	-15.925	191.841	191.846
CL Pier 1	8+439.849	-15.925	191.863	191.863
J	8+442.849	-15.925	191.883	191.885
K	8+445.849	-15.925	191.903	191.907
L	8+448.849	-15.925	191.922	191.928
M	8+451.849	-15.925	191.940	191.947
N	8+454.849	-15.925	191.957	191.965
O	8+457.849	-15.925	191.973	191.983
P	8+460.849	-15.925	191.988	191.996
Q	8+463.849	-15.925	192.002	192.008
R	8+466.849	-15.925	192.016	192.019
S	8+469.849	-15.925	192.028	192.029
T	8+472.849	-15.925	192.040	192.041
U	8+475.849	-15.925	192.050	192.051
CL Pier 2	8+477.849	-15.925	192.057	192.057
V	8+480.849	-15.925	192.066	192.075
W	8+483.849	-15.925	192.075	192.092
X	8+486.849	-15.925	192.082	192.108
Y	8+489.849	-15.925	192.089	192.122
Z	8+492.849	-15.925	192.094	192.135
AA	8+495.849	-15.925	192.099	192.147
AB	8+498.849	-15.925	192.103	192.155
AC	8+501.849	-15.925	192.106	192.155
AD	8+504.849	-15.925	192.108	192.154
AE	8+507.849	-15.925	192.109	192.152
AF	8+510.849	-15.925	192.109	192.139
AG	8+513.849	-15.925	192.108	192.126
CL W Brg Pier 3	8+517.885	-15.925	192.106	192.106
CL Pier 3	8+518.204	-15.925	192.106	192.106

GIRDER 24

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+407.366	-17.815	191.535	191.535
CL Brg W Abut	8+408.526	-17.815	191.547	191.547
A	8+411.526	-17.815	191.577	191.584
B	8+414.526	-17.815	191.606	191.620
C	8+417.526	-17.815	191.634	191.653
D	8+420.526	-17.815	191.661	191.682
E	8+423.526	-17.815	191.687	191.710
F	8+426.526	-17.815	191.713	191.731
G	8+429.526	-17.815	191.738	191.752
H	8+432.526	-17.815	191.761	191.771
I	8+435.526	-17.815	191.784	191.789
CL Pier 1	8+438.526	-17.815	191.806	191.806
J	8+441.526	-17.815	191.827	191.829
K	8+444.526	-17.815	191.847	191.851
L	8+447.526	-17.815	191.866	191.872
M	8+450.526	-17.815	191.885	191.891
N	8+453.526	-17.815	191.902	191.910
O	8+456.526	-17.815	191.918	191.927
P	8+459.526	-17.815	191.934	191.942
Q	8+462.526	-17.815	191.949	191.954
R	8+465.526	-17.815	191.963	191.965
S	8+468.526	-17.815	191.975	191.976
T	8+471.526	-17.815	191.987	191.988
U	8+474.526	-17.815	191.999	191.999
CL Pier 2	8+476.526	-17.815	192.005	192.005
V	8+479.526	-17.815	192.015	192.024
W	8+482.526	-17.815	192.024	192.042
X	8+485.526	-17.815	192.032	192.059
Y	8+488.526	-17.815	192.039	192.074
Z	8+491.526	-17.815	192.045	192.088
AA	8+494.526	-17.815	192.050	192.101
AB	8+497.526	-17.815	192.054	192.110
AC	8+500.526	-17.815	192.057	192.111
AD	8+503.526	-17.815	192.060	192.110
AE	8+506.526	-17.815	192.061	192.108
AF	8+509.526	-17.815	192.062	192.097
AG	8+512.526	-17.815	192.061	192.083
AH	8+515.526	-17.815	192.060	192.068
CL W Brg Pier 3	8+517.197	-17.815	192.059	192.059
CL Pier 3	8+517.516	-17.815	192.059	192.059

GIRDER 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+406.042	-19.705	191.474	191.474
CL Brg W Abut	8+407.202	-19.705	191.486	191.486
A	8+410.202	-19.705	191.516	191.524
B	8+413.202	-19.705	191.546	191.560
C	8+416.202	-19.705	191.574	191.594
D	8+419.202	-19.705	191.602	191.623
E	8+422.202	-19.705	191.629	191.652
F	8+425.202	-19.705	191.655	191.673
G	8+428.202	-19.705	191.680	191.694
H	8+431.202	-19.705	191.704	191.713
I	8+434.202	-19.705	191.727	191.732
CL Pier 1	8+437.202	-19.705	191.749	191.749
J	8+440.202	-19.705	191.771	191.772
K	8+443.202	-19.705	191.791	191.794
L	8+446.202	-19.705	191.811	191.816
M	8+449.202	-19.705	191.829	191.836
N	8+452.202	-19.705	191.847	191.854
O	8+455.202	-19.705	191.864	191.872
P	8+458.202	-19.705	191.880	191.887
Q	8+461.202	-19.705	191.895	191.899
R	8+464.202	-19.705	191.909	191.910
S	8+467.202	-19.705	191.923	191.922
T	8+470.202	-19.705	191.935	191.935
U	8+473.202	-19.705	191.947	191.946
CL Pier 2	8+475.202	-19.705	191.954	191.954
V	8+478.202	-19.705	191.964	191.973
W	8+481.202	-19.705	191.973	191.992
X	8+484.202	-19.705	191.981	192.010
Y	8+487.202	-19.705	191.988	192.026
Z	8+490.202	-19.705	191.995	192.041
AA	8+493.202	-19.705	192.000	192.055
AB	8+496.202	-19.705	192.005	192.066
AC	8+499.202	-19.705	192.009	192.066
AD	8+502.202	-19.705	192.011	192.066
AE	8+505.202	-19.705	192.013	192.064
AF	8+508.202	-19.705	192.014	192.054
AG	8+511.202	-19.705	192.014	192.040
AH	8+514.202	-19.705	192.014	192.025
CL W Brg Pier 3	8+516.509	-19.705	192.012	192.012
CL Pier 3	8+516.828	-19.705	192.012	192.012

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 1 (7 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	636
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-17
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 26

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+404.719	-21.595	191.413	191.413
CL Brg W Abut	8+405.879	-21.595	191.425	191.425
A	8+408.879	-21.595	191.456	191.463
B	8+411.879	-21.595	191.486	191.500
C	8+414.879	-21.595	191.514	191.534
D	8+417.879	-21.595	191.543	191.564
E	8+420.879	-21.595	191.570	191.593
F	8+423.879	-21.595	191.596	191.615
G	8+426.879	-21.595	191.621	191.636
H	8+429.879	-21.595	191.646	191.656
I	8+432.879	-21.595	191.669	191.674
CL Pier 1	8+435.879	-21.595	191.692	191.692
J	8+438.879	-21.595	191.714	191.715
K	8+441.879	-21.595	191.735	191.738
L	8+444.879	-21.595	191.755	191.759
M	8+447.879	-21.595	191.774	191.779
N	8+450.879	-21.595	191.792	191.798
O	8+453.879	-21.595	191.809	191.816
P	8+456.879	-21.595	191.826	191.831
Q	8+459.879	-21.595	191.841	191.844
R	8+462.879	-21.595	191.856	191.856
S	8+465.879	-21.595	191.870	191.869
T	8+468.879	-21.595	191.882	191.882
U	8+471.879	-21.595	191.894	191.894
CL Pier 2	8+473.879	-21.595	191.902	191.902
V	8+476.879	-21.595	191.912	191.922
W	8+479.879	-21.595	191.922	191.942
X	8+482.879	-21.595	191.930	191.961
Y	8+485.879	-21.595	191.938	191.978
Z	8+488.879	-21.595	191.945	191.993
AA	8+491.879	-21.595	191.951	192.008
AB	8+494.879	-21.595	191.956	192.021
AC	8+497.879	-21.595	191.960	192.022
AD	8+500.879	-21.595	191.963	192.021
AE	8+503.879	-21.595	191.965	192.020
AF	8+506.879	-21.595	191.967	192.012
AG	8+509.879	-21.595	191.967	191.997
AH	8+512.879	-21.595	191.967	191.982
CL W Brg Pier 3	8+515.821	-21.595	191.966	191.966
CL Pier 3	8+516.140	-21.595	191.965	191.965

GIRDER 27

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+403.395	-23.485	191.351	191.351
CL Brg W Abut	8+404.555	-23.485	191.364	191.364
A	8+407.555	-23.485	191.395	191.402
B	8+410.555	-23.485	191.425	191.440
C	8+413.555	-23.485	191.455	191.474
D	8+416.555	-23.485	191.483	191.505
E	8+419.555	-23.485	191.511	191.534
F	8+422.555	-23.485	191.537	191.556
G	8+425.555	-23.485	191.563	191.578
H	8+428.555	-23.485	191.588	191.598
I	8+431.555	-23.485	191.612	191.617
CL Pier 1	8+434.555	-23.485	191.635	191.635
J	8+437.555	-23.485	191.657	191.659
K	8+440.555	-23.485	191.678	191.681
L	8+443.555	-23.485	191.699	191.703
M	8+446.555	-23.485	191.718	191.723
N	8+449.555	-23.485	191.737	191.742
O	8+452.555	-23.485	191.755	191.761
P	8+455.555	-23.485	191.771	191.776
Q	8+458.555	-23.485	191.787	191.789
R	8+461.555	-23.485	191.802	191.802
S	8+464.555	-23.485	191.816	191.815
T	8+467.555	-23.485	191.830	191.829
U	8+470.555	-23.485	191.842	191.841
CL Pier 2	8+472.555	-23.485	191.850	191.850
V	8+475.555	-23.485	191.860	191.871
W	8+478.555	-23.485	191.870	191.892
X	8+481.555	-23.485	191.879	191.912
Y	8+484.555	-23.485	191.887	191.930
Z	8+487.555	-23.485	191.895	191.946
AA	8+490.555	-23.485	191.901	191.961
AB	8+493.555	-23.485	191.906	191.976
AC	8+496.555	-23.485	191.911	191.977
AD	8+499.555	-23.485	191.914	191.977
AE	8+502.555	-23.485	191.917	191.976
AF	8+505.555	-23.485	191.919	191.970
AG	8+508.555	-23.485	191.920	191.955
AH	8+511.555	-23.485	191.920	191.939
CL W Brg Pier 3	8+515.133	-23.485	191.919	191.919
CL Pier 3	8+515.452	-23.485	191.919	191.919

GIRDER 28

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+402.072	-25.375	191.290	191.290
CL Brg W Abut	8+403.232	-25.375	191.302	191.302
A	8+406.232	-25.375	191.334	191.342
B	8+409.232	-25.375	191.365	191.380
C	8+412.232	-25.375	191.394	191.414
D	8+415.232	-25.375	191.423	191.445
E	8+418.232	-25.375	191.451	191.475
F	8+421.232	-25.375	191.478	191.498
G	8+424.232	-25.375	191.505	191.520
H	8+427.232	-25.375	191.530	191.540
I	8+430.232	-25.375	191.554	191.559
CL Pier 1	8+433.232	-25.375	191.578	191.578
J	8+436.232	-25.375	191.600	191.601
K	8+439.232	-25.375	191.622	191.624
L	8+442.232	-25.375	191.643	191.646
M	8+445.232	-25.375	191.663	191.667
N	8+448.232	-25.375	191.682	191.686
O	8+451.232	-25.375	191.700	191.705
P	8+454.232	-25.375	191.717	191.720
Q	8+457.232	-25.375	191.733	191.734
R	8+460.232	-25.375	191.749	191.747
S	8+463.232	-25.375	191.763	191.761
T	8+466.232	-25.375	191.777	191.775
U	8+469.232	-25.375	191.789	191.789
CL Pier 2	8+471.232	-25.375	191.797	191.797
V	8+474.232	-25.375	191.809	191.820
W	8+477.232	-25.375	191.819	191.841
X	8+480.232	-25.375	191.828	191.862
Y	8+483.232	-25.375	191.837	191.881
Z	8+486.232	-25.375	191.844	191.898
AA	8+489.232	-25.375	191.851	191.914
AB	8+492.232	-25.375	191.857	191.929
AC	8+495.232	-25.375	191.862	191.933
AD	8+498.232	-25.375	191.866	191.933
AE	8+501.232	-25.375	191.869	191.932
AF	8+504.232	-25.375	191.871	191.927
AG	8+507.232	-25.375	191.872	191.912
AH	8+510.232	-25.375	191.873	191.896
CL W Brg Pier 3	8+514.445	-25.375	191.872	191.872
CL Pier 3	8+514.764	-25.375	191.872	191.872

NOTES:

See Sheet No. S-8 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 1 (8 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	637
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-18
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+533.236	25.375	192.499	192.499
CL E Brg Pier 3	8+533.555	25.375	192.499	192.499
AI	8+536.555	25.375	192.491	192.500
AJ	8+539.555	25.375	192.483	192.500
AK	8+542.555	25.375	192.474	192.492
AL	8+545.555	25.375	192.464	192.484
AM	8+548.555	25.375	192.454	192.468
AN	8+551.555	25.375	192.442	192.451
AO	8+554.555	25.375	192.429	192.434
CL Pier 4	8+557.236	25.375	192.417	192.417
AP	8+560.236	25.375	192.403	192.408
AQ	8+563.236	25.375	192.388	192.398
AR	8+566.236	25.375	192.372	192.387
AS	8+569.236	25.375	192.355	192.374
AT	8+572.236	25.375	192.337	192.358
AU	8+575.236	25.375	192.318	192.335
AV	8+578.236	25.375	192.299	192.312
AW	8+581.236	25.375	192.278	192.286
CL Pier 5	8+585.236	25.375	192.249	192.249
AX	8+588.236	25.375	192.227	192.228
AY	8+591.236	25.375	192.203	192.207
AZ	8+594.236	25.375	192.179	192.185
BA	8+597.236	25.375	192.153	192.161
BB	8+600.236	25.375	192.127	192.134
BC	8+603.236	25.375	192.100	192.103
CL Brg E Abut	8+605.236	25.375	192.081	192.081
Back of E Abut	8+606.247	25.375	192.072	192.072

BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+532.548	23.485	192.454	192.454
CL E Brg Pier 3	8+532.867	23.485	192.453	192.453
AI	8+535.867	23.485	192.446	192.454
AJ	8+538.867	23.485	192.438	192.454
AK	8+541.867	23.485	192.429	192.447
AL	8+544.867	23.485	192.420	192.439
AM	8+547.867	23.485	192.409	192.423
AN	8+550.867	23.485	192.398	192.407
AO	8+553.867	23.485	192.385	192.389
CL Pier 4	8+556.548	23.485	192.373	192.373
AP	8+559.548	23.485	192.359	192.364
AQ	8+562.548	23.485	192.344	192.355
AR	8+565.548	23.485	192.328	192.343
AS	8+568.548	23.485	192.312	192.331
AT	8+571.548	23.485	192.294	192.314
AU	8+574.548	23.485	192.275	192.292
AV	8+577.548	23.485	192.256	192.270
AW	8+580.548	23.485	192.236	192.243
CL Pier 5	8+584.548	23.485	192.207	192.207
AX	8+587.548	23.485	192.185	192.186
AY	8+590.548	23.485	192.161	192.165
AZ	8+593.548	23.485	192.137	192.144
BA	8+596.548	23.485	192.112	192.119
BB	8+599.548	23.485	192.086	192.093
BC	8+602.548	23.485	192.059	192.062
CL Brg E Abut	8+604.548	23.485	192.040	192.040
Back of E Abut	8+605.559	23.485	192.031	192.031

BEAM 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+531.860	21.595	192.408	192.408
CL E Brg Pier 3	8+532.179	21.595	192.407	192.407
AI	8+535.179	21.595	192.400	192.409
AJ	8+538.179	21.595	192.393	192.409
AK	8+541.179	21.595	192.384	192.402
AL	8+544.179	21.595	192.375	192.394
AM	8+547.179	21.595	192.364	192.378
AN	8+550.179	21.595	192.353	192.362
AO	8+553.179	21.595	192.341	192.345
CL Pier 4	8+555.860	21.595	192.329	192.329
AP	8+558.860	21.595	192.315	192.320
AQ	8+561.860	21.595	192.301	192.311
AR	8+564.860	21.595	192.285	192.300
AS	8+567.860	21.595	192.268	192.287
AT	8+570.860	21.595	192.251	192.271
AU	8+573.860	21.595	192.232	192.250
AV	8+576.860	21.595	192.213	192.227
AW	8+579.860	21.595	192.193	192.201
CL Pier 5	8+583.860	21.595	192.165	192.165
AX	8+586.860	21.595	192.143	192.144
AY	8+589.860	21.595	192.119	192.123
AZ	8+592.860	21.595	192.095	192.102
BA	8+595.860	21.595	192.070	192.078
BB	8+598.860	21.595	192.045	192.052
BC	8+601.860	21.595	192.018	192.021
CL Brg E Abut	8+603.860	21.595	191.999	191.999
Back of E Abut	8+604.871	21.595	191.990	191.990

BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+531.172	19.705	192.362	192.362
CL E Brg Pier 3	8+531.491	19.705	192.361	192.361
AI	8+534.491	19.705	192.355	192.363
AJ	8+537.491	19.705	192.347	192.364
AK	8+540.491	19.705	192.339	192.357
AL	8+543.491	19.705	192.330	192.349
AM	8+546.491	19.705	192.319	192.334
AN	8+549.491	19.705	192.308	192.318
AO	8+552.491	19.705	192.296	192.301
CL Pier 4	8+555.172	19.705	192.285	192.285
AP	8+558.172	19.705	192.271	192.276
AQ	8+561.172	19.705	192.257	192.267
AR	8+564.172	19.705	192.241	192.256
AS	8+567.172	19.705	192.225	192.244
AT	8+570.172	19.705	192.208	192.228
AU	8+573.172	19.705	192.190	192.207
AV	8+576.172	19.705	192.170	192.184
AW	8+579.172	19.705	192.151	192.158
CL Pier 5	8+583.172	19.705	192.123	192.123
AX	8+586.172	19.705	192.100	192.102
AY	8+589.172	19.705	192.078	192.081
AZ	8+592.172	19.705	192.054	192.060
BA	8+595.172	19.705	192.029	192.036
BB	8+598.172	19.705	192.003	192.010
BC	8+601.172	19.705	191.977	191.980
CL Brg E Abut	8+603.172	19.705	191.959	191.959
Back of E Abut	8+604.183	19.705	191.949	191.949

BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+530.484	17.815	192.316	192.316
CL E Brg Pier 3	8+530.803	17.815	192.315	192.315
AI	8+533.803	17.815	192.309	192.317
AJ	8+536.803	17.815	192.302	192.318
AK	8+539.803	17.815	192.294	192.312
AL	8+542.803	17.815	192.285	192.304
AM	8+545.803	17.815	192.275	192.289
AN	8+548.803	17.815	192.264	192.273
AO	8+551.803	17.815	192.252	192.256
CL Pier 4	8+554.484	17.815	192.241	192.241
AP	8+557.484	17.815	192.227	192.232
AQ	8+560.484	17.815	192.213	192.223
AR	8+563.484	17.815	192.198	192.212
AS	8+566.484	17.815	192.182	192.200
AT	8+569.484	17.815	192.164	192.185
AU	8+572.484	17.815	192.147	192.164
AV	8+575.484	17.815	192.128	192.141
AW	8+578.484	17.815	192.108	192.116
CL Pier 5	8+582.484	17.815	192.080	192.080
AX	8+585.484	17.815	192.058	192.060
AY	8+588.484	17.815	192.036	192.040
AZ	8+591.484	17.815	192.012	192.019
BA	8+594.484	17.815	191.987	191.995
BB	8+597.484	17.815	191.962	191.969
BC	8+600.484	17.815	191.936	191.938
CL Brg E Abut	8+602.484	17.815	191.918	191.918
Back of E Abut	8+603.495	17.815	191.908	191.908

BEAM 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+529.796	15.925	192.270	192.270
CL E Brg Pier 3	8+530.115	15.925	192.270	192.270
AI	8+533.115	15.925	192.263	192.272
AJ	8+536.115	15.925	192.256	192.273
AK	8+539.115	15.925	192.248	192.266
AL	8+542.115	15.925	192.239	192.259
AM	8+545.115	15.925	192.230	192.244
AN	8+548.115	15.925	192.219	192.228
AO	8+551.115	15.925	192.208	192.212
CL Pier 4	8+553.796	15.925	192.196	192.196
AP	8+556.796	15.925	192.183	192.188
AQ	8+559.796	15.925	192.169	192.179
AR	8+562.796	15.925	192.154	192.169
AS	8+565.796	15.925	192.138	192.157
AT	8+568.796	15.925	192.121	192.142
AU	8+571.796	15.925	192.103	192.121
AV	8+574.796	15.925	192.085	192.098
AW	8+577.796	15.925	192.065	192.073
CL Pier 5	8+581.796	15.925	192.038	192.038
AX	8+584.796	15.925	192.016	192.018
AY	8+587.796	15.925	191.994	191.998
AZ	8+590.796	15.925	191.970	191.977
BA	8+593.796	15.925	191.946	191.953
BB	8+596.796	15.925	191.921	191.928
BC	8+599.796	15.925	191.895	191.897
CL Brg E Abut	8+601.796	15.925	191.877	191.877
Back of E Abut	8+602.807	15.925	191.867	191.867

BEAM 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+529.108	14.035	192.224	192.224
CL E Brg Pier 3	8+529.427	14.035	192.224	192.224
AI	8+532.427	14.035	192.218	192.226
AJ	8+535.427	14.035	192.211	192.227
AK	8+538.427	14.035	192.203	192.221
AL	8+541.427	14.035	192.194	192.214
AM	8+544.427	14.035	192.185	192.199
AN	8+547.427	14.035	192.174	192.183
AO	8+550.427	14.035	192.163	192.167
CL Pier 4	8+553.108	14.035	192.152	192.152
AP	8+556.108	14.035	192.139	192.144
AQ	8+559.108	14.035	192.125	192.135
AR	8+562.108	14.035	192.110	192.125
AS	8+565.108	14.035	192.095	192.113
AT	8+568.108	14.035	192.078	192.098
AU	8+571.108	14.035	192.060	192.077
AV	8+574.108	14.035	192.042	192.056
AW	8+577.108	14.035	192.023	192.030
CL Pier 5	8+581.108	14.035	191.995	191.995
AX	8+584.108	14.035	191.974	191.976
AY	8+587.108	14.035	191.952	191.956
AZ	8+590.108	14.035	191.928	191.935
BA	8+593.108	14.035	191.904	191.912
BB	8+596.108	14.035	191.879	191.886
BC	8+599.108	14.035	191.853	191.856
CL Brg E Abut	8+601.108	14.035	191.836	191.836
Back of E Abut	8+602.119	14.035	191.826	191.826

NOTES:

See Sheet No. S-9 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 2 (1 OF 5)
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	638
	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-19
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

STAGE CONSTRUCTION LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+528.764	13.090	192.201	192.201
CL E Brg Pier 3	8+529.083	13.090	192.201	192.201
AI	8+532.083	13.090	192.195	192.203
AJ	8+535.083	13.090	192.188	192.204
AK	8+538.083	13.090	192.180	192.198
AL	8+541.083	13.090	192.172	192.191
AM	8+544.083	13.090	192.162	192.177
AN	8+547.083	13.090	192.152	192.161
AO	8+550.083	13.090	192.141	192.145
CL Pier 4	8+552.764	13.090	192.130	192.129
AP	8+555.764	13.090	192.117	192.122
AQ	8+558.764	13.090	192.103	192.113
AR	8+561.764	13.090	192.088	192.103
AS	8+564.764	13.090	192.073	192.092
AT	8+567.764	13.090	192.056	192.077
AU	8+570.764	13.090	192.039	192.056
AV	8+573.764	13.090	192.020	192.034
AW	8+576.764	13.090	192.001	192.009
CL Pier 5	8+580.764	13.090	191.974	191.973
AX	8+583.764	13.090	191.953	191.955
AY	8+586.764	13.090	191.931	191.935
AZ	8+589.764	13.090	191.908	191.914
BA	8+592.764	13.090	191.883	191.891
BB	8+595.764	13.090	191.859	191.866
BC	8+598.764	13.090	191.833	191.836
CL Brg E Abut	8+600.764	13.090	191.815	191.815
Back of E Abut	8+601.775	13.090	191.806	191.806

BEAM 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+528.420	12.145	192.178	192.178
CL E Brg Pier 3	8+528.739	12.145	192.178	192.178
AI	8+531.739	12.145	192.172	192.180
AJ	8+534.739	12.145	192.165	192.182
AK	8+537.739	12.145	192.158	192.176
AL	8+540.739	12.145	192.149	192.168
AM	8+543.739	12.145	192.140	192.154
AN	8+546.739	12.145	192.130	192.139
AO	8+549.739	12.145	192.118	192.123
CL Pier 4	8+552.420	12.145	192.108	192.108
AP	8+555.420	12.145	192.095	192.100
AQ	8+558.420	12.145	192.081	192.091
AR	8+561.420	12.145	192.067	192.081
AS	8+564.420	12.145	192.051	192.070
AT	8+567.420	12.145	192.035	192.055
AU	8+570.420	12.145	192.017	192.034
AV	8+573.420	12.145	191.999	192.013
AW	8+576.420	12.145	191.980	191.988
CL Pier 5	8+580.420	12.145	191.953	191.953
AX	8+583.420	12.145	191.932	191.933
AY	8+586.420	12.145	191.910	191.913
AZ	8+589.420	12.145	191.887	191.893
BA	8+592.420	12.145	191.863	191.870
BB	8+595.420	12.145	191.838	191.845
BC	8+598.420	12.145	191.812	191.815
CL Brg E Abut	8+600.420	12.145	191.794	191.794
Back of E Abut	8+601.431	12.145	191.785	191.785

BEAM 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+527.733	10.255	192.132	192.132
CL E Brg Pier 3	8+528.052	10.255	192.131	192.131
AI	8+531.052	10.255	192.126	192.134
AJ	8+534.052	10.255	192.120	192.136
AK	8+537.052	10.255	192.112	192.130
AL	8+540.052	10.255	192.104	192.123
AM	8+543.052	10.255	192.095	192.109
AN	8+546.052	10.255	192.085	192.094
AO	8+549.052	10.255	192.074	192.078
CL Pier 4	8+551.733	10.255	192.063	192.063
AP	8+554.733	10.255	192.051	192.056
AQ	8+557.733	10.255	192.037	192.047
AR	8+560.733	10.255	192.023	192.037
AS	8+563.733	10.255	192.007	192.026
AT	8+566.733	10.255	191.991	192.012
AU	8+569.733	10.255	191.974	191.991
AV	8+572.733	10.255	191.956	191.970
AW	8+575.733	10.255	191.937	191.945
CL Pier 5	8+579.733	10.255	191.910	191.910
AX	8+582.733	10.255	191.889	191.891
AY	8+585.733	10.255	191.868	191.871
AZ	8+588.733	10.255	191.845	191.852
BA	8+591.733	10.255	191.821	191.828
BB	8+594.733	10.255	191.796	191.803
BC	8+597.733	10.255	191.771	191.774
CL Brg E Abut	8+599.733	10.255	191.753	191.753
Back of E Abut	8+600.744	10.255	191.744	191.744

BEAM 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+527.045	8.365	192.086	192.086
CL E Brg Pier 3	8+527.364	8.365	192.085	192.085
AI	8+530.364	8.365	192.080	192.088
AJ	8+533.364	8.365	192.074	192.090
AK	8+536.364	8.365	192.067	192.085
AL	8+539.364	8.365	192.059	192.078
AM	8+542.364	8.365	192.050	192.064
AN	8+545.364	8.365	192.040	192.049
AO	8+548.364	8.365	192.029	192.033
CL Pier 4	8+551.045	8.365	192.019	192.019
AP	8+554.045	8.365	192.006	192.012
AQ	8+557.045	8.365	191.993	192.003
AR	8+560.045	8.365	191.979	191.994
AS	8+563.045	8.365	191.964	191.983
AT	8+566.045	8.365	191.948	191.968
AU	8+569.045	8.365	191.931	191.948
AV	8+572.045	8.365	191.913	191.927
AW	8+575.045	8.365	191.894	191.902
CL Pier 5	8+579.045	8.365	191.868	191.868
AX	8+582.045	8.365	191.847	191.849
AY	8+585.045	8.365	191.825	191.829
AZ	8+588.045	8.365	191.803	191.810
BA	8+591.045	8.365	191.779	191.787
BB	8+594.045	8.365	191.755	191.762
BC	8+597.045	8.365	191.730	191.732
CL Brg E Abut	8+599.045	8.365	191.712	191.712
Back of E Abut	8+600.056	8.365	191.703	191.703

BEAM 11

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+526.357	6.475	192.040	192.040
CL E Brg Pier 3	8+526.676	6.475	192.039	192.039
AI	8+529.676	6.475	192.034	192.042
AJ	8+532.676	6.475	192.028	192.044
AK	8+535.676	6.475	192.021	192.039
AL	8+538.676	6.475	192.013	192.033
AM	8+541.676	6.475	192.005	192.019
AN	8+544.676	6.475	191.995	192.004
AO	8+547.676	6.475	191.984	191.989
CL Pier 4	8+550.357	6.475	191.974	191.974
AP	8+553.357	6.475	191.962	191.967
AQ	8+556.357	6.475	191.949	191.959
AR	8+559.357	6.475	191.935	191.950
AS	8+562.357	6.475	191.920	191.939
AT	8+565.357	6.475	191.904	191.925
AU	8+568.357	6.475	191.887	191.905
AV	8+571.357	6.475	191.870	191.883
AW	8+574.357	6.475	191.851	191.859
CL Pier 5	8+578.357	6.475	191.825	191.825
AX	8+581.357	6.475	191.805	191.806
AY	8+584.357	6.475	191.783	191.787
AZ	8+587.357	6.475	191.761	191.768
BA	8+590.357	6.475	191.737	191.745
BB	8+593.357	6.475	191.713	191.720
BC	8+596.357	6.475	191.688	191.691
CL Brg E Abut	8+598.357	6.475	191.671	191.671
Back of E Abut	8+599.368	6.475	191.662	191.662

BEAM 12

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+525.669	4.585	191.994	191.994
CL E Brg Pier 3	8+525.988	4.585	191.993	191.993
AI	8+528.988	4.585	191.988	191.996
AJ	8+531.988	4.585	191.982	191.999
AK	8+534.988	4.585	191.976	191.994
AL	8+537.988	4.585	191.968	191.987
AM	8+540.988	4.585	191.959	191.974
AN	8+543.988	4.585	191.950	191.959
AO	8+546.988	4.585	191.940	191.944
CL Pier 4	8+549.669	4.585	191.930	191.930
AP	8+552.669	4.585	191.918	191.923
AQ	8+555.669	4.585	191.905	191.915
AR	8+558.669	4.585	191.891	191.906
AS	8+561.669	4.585	191.876	191.895
AT	8+564.669	4.585	191.861	191.881
AU	8+567.669	4.585	191.844	191.861
AV	8+570.669	4.585	191.827	191.840
AW	8+573.669	4.585	191.808	191.816
CL Pier 5	8+577.669	4.585	191.783	191.783
AX	8+580.669	4.585	191.762	191.764
AY	8+583.669	4.585	191.741	191.745
AZ	8+586.669	4.585	191.719	191.726
BA	8+589.669	4.585	191.696	191.703
BB	8+592.669	4.585	191.672	191.679
BC	8+595.669	4.585	191.647	191.650
CL Brg E Abut	8+597.669	4.585	191.630	191.630
Back of E Abut	8+598.680	4.585	191.621	191.621

EB PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+525.485	4.080	191.981	191.981
CL E Brg Pier 3	8+525.804	4.080	191.981	191.981
AI	8+528.804	4.080	191.976	191.984
AJ	8+531.804	4.080	191.970	191.986
AK	8+534.804	4.080	191.963	191.981
AL	8+537.804	4.080	191.956	191.975
AM	8+540.804	4.080	191.947	191.962
AN	8+543.804	4.080	191.938	191.947
AO	8+546.804	4.080	191.928	191.932
CL Pier 4	8+549.485	4.080	191.918	191.918
AP	8+552.485	4.080	191.906	191.911
AQ	8+555.485	4.080	191.893	191.903
AR	8+558.485	4.080	191.879	191.894
AS	8+561.485	4.080	191.865	191.883
AT	8+564.485	4.080	191.849	191.869
AU	8+567.485	4.080	191.833	191.850
AV	8+570.485	4.080	191.815	191.829
AW	8+573.485	4.080	191.797	191.805
CL Pier 5	8+577.485	4.080	191.771	191.771
AX	8+580.485	4.080	191.751	191.753
AY	8+583.485	4.080	191.730	191.734
AZ	8+586.485	4.080	191.707	191.714
BA	8+589.485	4.080	191.684	191.692
BB	8+592.485	4.080	191.661	191.667
BC	8+595.485	4.080	191.636	191.638
CL Brg E Abut	8+597.485	4.080	191.619	191.619
Back of E Abut	8+598.496	4.080	191.610	191.610

NOTES:

See Sheet No. S-9 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 2 (2 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	639
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-20
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEAM 13

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+524.981	2.695	191.947	191.947
CL E Brg Pier 3	8+525.300	2.695	191.947	191.947
AI	8+528.300	2.695	191.942	191.950
AJ	8+531.300	2.695	191.936	191.953
AK	8+534.300	2.695	191.930	191.948
AL	8+537.300	2.695	191.923	191.942
AM	8+540.300	2.695	191.914	191.928
AN	8+543.300	2.695	191.905	191.914
AO	8+546.300	2.695	191.895	191.899
CL Pier 4	8+548.981	2.695	191.885	191.885
AP	8+551.981	2.695	191.873	191.878
AQ	8+554.981	2.695	191.861	191.871
AR	8+557.981	2.695	191.847	191.862
AS	8+560.981	2.695	191.832	191.851
AT	8+563.981	2.695	191.817	191.838
AU	8+566.981	2.695	191.801	191.818
AV	8+569.981	2.695	191.784	191.797
AW	8+572.981	2.695	191.765	191.773
CL Pier 5	8+576.981	2.695	191.740	191.740
AX	8+579.981	2.695	191.720	191.721
AY	8+582.981	2.695	191.699	191.703
AZ	8+585.981	2.695	191.677	191.683
BA	8+588.981	2.695	191.654	191.661
BB	8+591.981	2.695	191.630	191.637
BC	8+594.981	2.695	191.605	191.608
CL Brg E Abut	8+596.981	2.695	191.588	191.588
Back of E Abut	8+597.992	2.695	191.580	191.580

BEAM 14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+524.293	0.805	191.901	191.901
CL E Brg Pier 3	8+524.612	0.805	191.901	191.901
AI	8+527.612	0.805	191.896	191.904
AJ	8+530.612	0.805	191.891	191.907
AK	8+533.612	0.805	191.884	191.902
AL	8+536.612	0.805	191.877	191.896
AM	8+539.612	0.805	191.869	191.883
AN	8+542.612	0.805	191.860	191.869
AO	8+545.612	0.805	191.850	191.854
CL Pier 4	8+548.293	0.805	191.840	191.840
AP	8+551.293	0.805	191.829	191.834
AQ	8+554.293	0.805	191.816	191.827
AR	8+557.293	0.805	191.803	191.818
AS	8+560.293	0.805	191.789	191.808
AT	8+563.293	0.805	191.773	191.794
AU	8+566.293	0.805	191.757	191.774
AV	8+569.293	0.805	191.740	191.754
AW	8+572.293	0.805	191.722	191.730
CL Pier 5	8+576.293	0.805	191.697	191.697
AX	8+579.293	0.805	191.677	191.679
AY	8+582.293	0.805	191.656	191.660
AZ	8+585.293	0.805	191.635	191.641
BA	8+588.293	0.805	191.612	191.619
BB	8+591.293	0.805	191.588	191.595
BC	8+594.293	0.805	191.564	191.567
CL Brg E Abut	8+596.293	0.805	191.547	191.547
Back of E Abut	8+597.304	0.805	191.538	191.538

BEAM 15

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+523.707	-0.805	192.478	192.478
CL E Brg Pier 3	8+524.026	-0.805	192.477	192.477
AI	8+527.026	-0.805	192.473	192.481
AJ	8+530.026	-0.805	192.467	192.484
AK	8+533.026	-0.805	192.461	192.479
AL	8+536.026	-0.805	192.453	192.473
AM	8+539.026	-0.805	192.445	192.459
AN	8+542.026	-0.805	192.436	192.445
AO	8+545.026	-0.805	192.426	192.430
CL Pier 4	8+547.707	-0.805	192.416	192.416
AP	8+550.707	-0.805	192.405	192.410
AQ	8+553.707	-0.805	192.392	192.402
AR	8+556.707	-0.805	192.379	192.393
AS	8+559.707	-0.805	192.364	192.383
AT	8+562.707	-0.805	192.349	192.369
AU	8+565.707	-0.805	192.333	192.350
AV	8+568.707	-0.805	192.316	192.329
AW	8+571.707	-0.805	192.298	192.305
CL Pier 5	8+575.707	-0.805	192.272	192.272
AX	8+578.707	-0.805	192.252	192.254
AY	8+581.707	-0.805	192.231	192.235
AZ	8+584.707	-0.805	192.209	192.216
BA	8+587.707	-0.805	192.186	192.194
BB	8+590.707	-0.805	192.163	192.170
BC	8+593.707	-0.805	192.138	192.141
CL Brg E Abut	8+595.707	-0.805	192.121	192.121
Back of E Abut	8+596.718	-0.805	192.112	192.112

BEAM 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+523.019	-2.695	192.431	192.431
CL E Brg Pier 3	8+523.338	-2.695	192.431	192.431
AI	8+526.338	-2.695	192.427	192.435
AJ	8+529.338	-2.695	192.421	192.438
AK	8+532.338	-2.695	192.415	192.433
AL	8+535.338	-2.695	192.408	192.427
AM	8+538.338	-2.695	192.400	192.414
AN	8+541.338	-2.695	192.391	192.400
AO	8+544.338	-2.695	192.381	192.386
CL Pier 4	8+547.019	-2.695	192.372	192.372
AP	8+550.019	-2.695	192.360	192.365
AQ	8+553.019	-2.695	192.348	192.358
AR	8+556.019	-2.695	192.334	192.349
AS	8+559.019	-2.695	192.320	192.339
AT	8+562.019	-2.695	192.305	192.326
AU	8+565.019	-2.695	192.289	192.306
AV	8+568.019	-2.695	192.272	192.286
AW	8+571.019	-2.695	192.254	192.262
CL Pier 5	8+575.019	-2.695	192.229	192.229
AX	8+578.019	-2.695	192.209	192.211
AY	8+581.019	-2.695	192.189	192.193
AZ	8+584.019	-2.695	192.167	192.174
BA	8+587.019	-2.695	192.144	192.152
BB	8+590.019	-2.695	192.121	192.128
BC	8+593.019	-2.695	192.096	192.099
CL Brg E Abut	8+595.019	-2.695	192.080	192.080
Back of E Abut	8+596.030	-2.695	192.071	192.071

WB PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+522.515	-4.080	192.397	192.397
CL E Brg Pier 3	8+522.834	-4.080	192.397	192.397
AI	8+525.834	-4.080	192.393	192.401
AJ	8+528.834	-4.080	192.388	192.404
AK	8+531.834	-4.080	192.382	192.400
AL	8+534.834	-4.080	192.375	192.394
AM	8+537.834	-4.080	192.367	192.381
AN	8+540.834	-4.080	192.358	192.367
AO	8+543.834	-4.080	192.348	192.353
CL Pier 4	8+546.515	-4.080	192.339	192.339
AP	8+549.515	-4.080	192.328	192.333
AQ	8+552.515	-4.080	192.315	192.326
AR	8+555.515	-4.080	192.302	192.317
AS	8+558.515	-4.080	192.288	192.307
AT	8+561.515	-4.080	192.273	192.294
AU	8+564.515	-4.080	192.257	192.274
AV	8+567.515	-4.080	192.241	192.254
AW	8+570.515	-4.080	192.223	192.231
CL Pier 5	8+574.515	-4.080	192.198	192.198
AX	8+577.515	-4.080	192.178	192.180
AY	8+580.515	-4.080	192.158	192.161
AZ	8+583.515	-4.080	192.136	192.143
BA	8+586.515	-4.080	192.114	192.121
BB	8+589.515	-4.080	192.090	192.097
BC	8+592.515	-4.080	192.066	192.069
CL Brg E Abut	8+594.515	-4.080	192.049	192.049
Back of E Abut	8+595.526	-4.080	192.041	192.041

BEAM 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+522.331	-4.585	192.385	192.385
CL E Brg Pier 3	8+522.650	-4.585	192.385	192.385
AI	8+525.650	-4.585	192.380	192.389
AJ	8+528.650	-4.585	192.375	192.392
AK	8+531.650	-4.585	192.369	192.387
AL	8+534.650	-4.585	192.362	192.382
AM	8+537.650	-4.585	192.355	192.369
AN	8+540.650	-4.585	192.346	192.355
AO	8+543.650	-4.585	192.336	192.341
CL Pier 4	8+546.331	-4.585	192.327	192.327
AP	8+549.331	-4.585	192.316	192.321
AQ	8+552.331	-4.585	192.303	192.314
AR	8+555.331	-4.585	192.290	192.305
AS	8+558.331	-4.585	192.276	192.295
AT	8+561.331	-4.585	192.261	192.282
AU	8+564.331	-4.585	192.246	192.263
AV	8+567.331	-4.585	192.229	192.243
AW	8+570.331	-4.585	192.211	192.219
CL Pier 5	8+574.331	-4.585	192.187	192.187
AX	8+577.331	-4.585	192.167	192.169
AY	8+580.331	-4.585	192.146	192.150
AZ	8+583.331	-4.585	192.125	192.132
BA	8+586.331	-4.585	192.102	192.110
BB	8+589.331	-4.585	192.079	192.086
BC	8+592.331	-4.585	192.055	192.058
CL Brg E Abut	8+594.331	-4.585	192.038	192.038
Back of E Abut	8+595.342	-4.585	192.030	192.030

BEAM 18

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+521.643	-6.475	192.339	192.339
CL E Brg Pier 3	8+521.962	-6.475	192.338	192.338
AI	8+524.962	-6.475	192.334	192.343
AJ	8+527.962	-6.475	192.329	192.346
AK	8+530.962	-6.475	192.324	192.342
AL	8+533.962	-6.475	192.317	192.336
AM	8+536.962	-6.475	192.309	192.323
AN	8+539.962	-6.475	192.301	192.310
AO	8+542.962	-6.475	192.291	192.296
CL Pier 4	8+545.643	-6.475	192.282	192.282
AP	8+548.643	-6.475	192.271	192.276
AQ	8+551.643	-6.475	192.259	192.269
AR	8+554.643	-6.475	192.246	192.261
AS	8+557.643	-6.475	192.232	192.251
AT	8+560.643	-6.475	192.218	192.238
AU	8+563.643	-6.475	192.202	192.219
AV	8+566.643	-6.475	192.186	192.199
AW	8+569.643	-6.475	192.168	192.176
CL Pier 5	8+573.643	-6.475	192.144	192.144
AX	8+576.643	-6.475	192.124	192.126
AY	8+579.643	-6.475	192.104	192.108
AZ	8+582.643	-6.475	192.082	192.089
BA	8+585.643	-6.475	192.060	192.068
BB	8+588.643	-6.475	192.037	192.044
BC	8+591.643	-6.475	192.013	192.016
CL Brg E Abut	8+593.643	-6.475	191.997	191.997
Back of E Abut	8+594.654	-6.475	191.988	191.988

NOTES:

See Sheet No. S-9 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 2 (3 OF 5)
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	640
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-21
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEAM 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+520.955	-8.365	192.292	192.292
CL E Brg Pier 3	8+521.274	-8.365	192.292	192.292
AI	8+524.274	-8.365	192.288	192.296
AJ	8+527.274	-8.365	192.283	192.300
AK	8+530.274	-8.365	192.278	192.296
AL	8+533.274	-8.365	192.271	192.290
AM	8+536.274	-8.365	192.264	192.278
AN	8+539.274	-8.365	192.256	192.265
AO	8+542.274	-8.365	192.246	192.251
CL Pier 4	8+544.955	-8.365	192.237	192.237
AP	8+547.955	-8.365	192.226	192.232
AQ	8+550.955	-8.365	192.215	192.225
AR	8+553.955	-8.365	192.202	192.217
AS	8+556.955	-8.365	192.188	192.207
AT	8+559.955	-8.365	192.174	192.194
AU	8+562.955	-8.365	192.159	192.176
AV	8+565.955	-8.365	192.142	192.156
AW	8+568.955	-8.365	192.125	192.133
CL Pier 5	8+572.955	-8.365	192.101	192.101
AX	8+575.955	-8.365	192.081	192.083
AY	8+578.955	-8.365	192.061	192.065
AZ	8+581.955	-8.365	192.040	192.047
BA	8+584.955	-8.365	192.018	192.026
BB	8+587.955	-8.365	191.995	192.002
BC	8+590.955	-8.365	191.972	191.974
CL Brg E Abut	8+592.955	-8.365	191.955	191.955
Back of E Abut	8+593.966	-8.365	191.947	191.947

BEAM 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+520.267	-10.255	192.246	192.246
CL E Brg Pier 3	8+520.586	-10.255	192.245	192.245
AI	8+523.586	-10.255	192.242	192.250
AJ	8+526.586	-10.255	192.237	192.254
AK	8+529.586	-10.255	192.232	192.250
AL	8+532.586	-10.255	192.226	192.245
AM	8+535.586	-10.255	192.218	192.233
AN	8+538.586	-10.255	192.210	192.219
AO	8+541.586	-10.255	192.201	192.206
CL Pier 4	8+544.267	-10.255	192.192	192.192
AP	8+547.267	-10.255	192.182	192.187
AQ	8+550.267	-10.255	192.170	192.181
AR	8+553.267	-10.255	192.158	192.173
AS	8+556.267	-10.255	192.144	192.163
AT	8+559.267	-10.255	192.130	192.151
AU	8+562.267	-10.255	192.115	192.132
AV	8+565.267	-10.255	192.099	192.112
AW	8+568.267	-10.255	192.082	192.090
CL Pier 5	8+572.267	-10.255	192.058	192.058
AX	8+575.267	-10.255	192.039	192.040
AY	8+578.267	-10.255	192.019	192.023
AZ	8+581.267	-10.255	191.998	192.005
BA	8+584.267	-10.255	191.976	191.984
BB	8+587.267	-10.255	191.953	191.960
BC	8+590.267	-10.255	191.930	191.933
CL Brg E Abut	8+592.267	-10.255	191.914	191.914
Back of E Abut	8+593.278	-10.255	191.905	191.905

BEAM 21

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+519.580	-12.145	192.199	192.199
CL E Brg Pier 3	8+519.899	-12.145	192.199	192.199
AI	8+522.899	-12.145	192.195	192.204
AJ	8+525.899	-12.145	192.191	192.207
AK	8+528.899	-12.145	192.186	192.204
AL	8+531.899	-12.145	192.180	192.199
AM	8+534.899	-12.145	192.173	192.187
AN	8+537.899	-12.145	192.165	192.174
AO	8+540.899	-12.145	192.156	192.160
CL Pier 4	8+543.580	-12.145	192.148	192.148
AP	8+546.580	-12.145	192.137	192.142
AQ	8+549.580	-12.145	192.126	192.136
AR	8+552.580	-12.145	192.113	192.128
AS	8+555.580	-12.145	192.100	192.119
AT	8+558.580	-12.145	192.086	192.107
AU	8+561.580	-12.145	192.071	192.088
AV	8+564.580	-12.145	192.055	192.069
AW	8+567.580	-12.145	192.039	192.046
CL Pier 5	8+571.580	-12.145	192.015	192.015
AX	8+574.580	-12.145	191.996	191.998
AY	8+577.580	-12.145	191.976	191.980
AZ	8+580.580	-12.145	191.955	191.962
BA	8+583.580	-12.145	191.934	191.941
BB	8+586.580	-12.145	191.911	191.918
BC	8+589.580	-12.145	191.888	191.891
CL Brg E Abut	8+591.580	-12.145	191.872	191.872
Back of E Abut	8+592.591	-12.145	191.864	191.864

BEAM 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+518.892	-14.035	192.152	192.152
CL E Brg Pier 3	8+519.211	-14.035	192.152	192.152
AI	8+522.211	-14.035	192.149	192.157
AJ	8+525.211	-14.035	192.145	192.161
AK	8+528.211	-14.035	192.140	192.158
AL	8+531.211	-14.035	192.134	192.153
AM	8+534.211	-14.035	192.127	192.141
AN	8+537.211	-14.035	192.120	192.129
AO	8+540.211	-14.035	192.111	192.115
CL Pier 4	8+542.892	-14.035	192.103	192.103
AP	8+545.892	-14.035	192.092	192.097
AQ	8+548.892	-14.035	192.081	192.091
AR	8+551.892	-14.035	192.069	192.084
AS	8+554.892	-14.035	192.056	192.075
AT	8+557.892	-14.035	192.042	192.063
AU	8+560.892	-14.035	192.027	192.045
AV	8+563.892	-14.035	192.012	192.025
AW	8+566.892	-14.035	191.995	192.003
CL Pier 5	8+570.892	-14.035	191.972	191.972
AX	8+573.892	-14.035	191.953	191.955
AY	8+576.892	-14.035	191.934	191.937
AZ	8+579.892	-14.035	191.913	191.920
BA	8+582.892	-14.035	191.892	191.899
BB	8+585.892	-14.035	191.869	191.876
BC	8+588.892	-14.035	191.846	191.849
CL Brg E Abut	8+590.892	-14.035	191.830	191.830
Back of E Abut	8+591.903	-14.035	191.822	191.822

BEAM 23

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+518.204	-15.925	192.106	192.106
CL E Brg Pier 3	8+518.523	-15.925	192.105	192.105
AI	8+521.523	-15.925	192.102	192.111
AJ	8+524.523	-15.925	192.099	192.115
AK	8+527.523	-15.925	192.094	192.112
AL	8+530.523	-15.925	192.088	192.107
AM	8+533.523	-15.925	192.082	192.096
AN	8+536.523	-15.925	192.074	192.083
AO	8+539.523	-15.925	192.066	192.070
CL Pier 4	8+542.204	-15.925	192.058	192.058
AP	8+545.204	-15.925	192.047	192.053
AQ	8+548.204	-15.925	192.037	192.047
AR	8+551.204	-15.925	192.025	192.039
AS	8+554.204	-15.925	192.012	192.031
AT	8+557.204	-15.925	191.998	192.019
AU	8+560.204	-15.925	191.984	192.001
AV	8+563.204	-15.925	191.968	191.982
AW	8+566.204	-15.925	191.952	191.960
CL Pier 5	8+570.204	-15.925	191.929	191.929
AX	8+573.204	-15.925	191.910	191.912
AY	8+576.204	-15.925	191.891	191.895
AZ	8+579.204	-15.925	191.871	191.877
BA	8+582.204	-15.925	191.849	191.857
BB	8+585.204	-15.925	191.827	191.834
BC	8+588.204	-15.925	191.804	191.807
CL Brg E Abut	8+590.204	-15.925	191.789	191.789
Back of E Abut	8+591.215	-15.925	191.780	191.780

BEAM 24

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+517.516	-17.815	192.059	192.059
CL E Brg Pier 3	8+517.835	-17.815	192.059	192.059
AI	8+520.835	-17.815	192.056	192.064
AJ	8+523.835	-17.815	192.052	192.069
AK	8+526.835	-17.815	192.048	192.066
AL	8+529.835	-17.815	192.042	192.062
AM	8+532.835	-17.815	192.036	192.050
AN	8+535.835	-17.815	192.029	192.038
AO	8+538.835	-17.815	192.021	192.025
CL Pier 4	8+541.516	-17.815	192.012	192.012
AP	8+544.516	-17.815	192.003	192.008
AQ	8+547.516	-17.815	191.992	192.002
AR	8+550.516	-17.815	191.980	191.995
AS	8+553.516	-17.815	191.968	191.987
AT	8+556.516	-17.815	191.954	191.975
AU	8+559.516	-17.815	191.940	191.957
AV	8+562.516	-17.815	191.925	191.938
AW	8+565.516	-17.815	191.908	191.916
CL Pier 5	8+569.516	-17.815	191.885	191.885
AX	8+572.516	-17.815	191.867	191.869
AY	8+575.516	-17.815	191.848	191.852
AZ	8+578.516	-17.815	191.828	191.835
BA	8+581.516	-17.815	191.807	191.815
BB	8+584.516	-17.815	191.785	191.792
BC	8+587.516	-17.815	191.763	191.765
CL Brg E Abut	8+589.516	-17.815	191.747	191.747
Back of E Abut	8+590.527	-17.815	191.739	191.739

BEAM 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+516.828	-19.705	192.012	192.012
CL E Brg Pier 3	8+517.147	-19.705	192.012	192.012
AI	8+520.147	-19.705	192.009	192.018
AJ	8+523.147	-19.705	192.006	192.022
AK	8+526.147	-19.705	192.002	192.020
AL	8+529.147	-19.705	191.996	192.016
AM	8+532.147	-19.705	191.990	192.004
AN	8+535.147	-19.705	191.983	191.992
AO	8+538.147	-19.705	191.975	191.980
CL Pier 4	8+540.828	-19.705	191.967	191.967
AP	8+543.828	-19.705	191.958	191.963
AQ	8+546.828	-19.705	191.947	191.957
AR	8+549.828	-19.705	191.936	191.950
AS	8+552.828	-19.705	191.923	191.942
AT	8+555.828	-19.705	191.910	191.931
AU	8+558.828	-19.705	191.896	191.913
AV	8+561.828	-19.705	191.881	191.895
AW	8+564.828	-19.705	191.865	191.873
CL Pier 5	8+568.828	-19.705	191.842	191.842
AX	8+571.828	-19.705	191.824	191.826
AY	8+574.828	-19.705	191.805	191.809
AZ	8+577.828	-19.705	191.785	191.792
BA	8+580.828	-19.705	191.765	191.772
BB	8+583.828	-19.705	191.743	191.750
BC	8+586.828	-19.705	191.721	191.723
CL Brg E Abut	8+588.828	-19.705	191.705	191.705
Back of E Abut	8+589.839	-19.705	191.697	191.697

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No. S-9 for Plan.

All stations, offsets, and elevations are in meters.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS - UNIT 2 (4 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	641
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-22

72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEAM 26

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+516.140	-21.595	191.965	191.965
CL E Brg Pier 3	8+516.459	-21.595	191.965	191.965
AI	8+519.459	-21.595	191.963	191.971
AJ	8+522.459	-21.595	191.960	191.976
AK	8+525.459	-21.595	191.955	191.974
AL	8+528.459	-21.595	191.950	191.970
AM	8+531.459	-21.595	191.944	191.959
AN	8+534.459	-21.595	191.938	191.947
AO	8+537.459	-21.595	191.930	191.934
CL Pier 4	8+540.140	-21.595	191.922	191.922
AP	8+543.140	-21.595	191.913	191.918
AQ	8+546.140	-21.595	191.902	191.913
AR	8+549.140	-21.595	191.891	191.906
AS	8+552.140	-21.595	191.879	191.898
AT	8+555.140	-21.595	191.866	191.886
AU	8+558.140	-21.595	191.852	191.869
AV	8+561.140	-21.595	191.837	191.851
AW	8+564.140	-21.595	191.821	191.829
CL Pier 5	8+568.140	-21.595	191.799	191.799
AX	8+571.140	-21.595	191.781	191.783
AY	8+574.140	-21.595	191.762	191.766
AZ	8+577.140	-21.595	191.743	191.750
BA	8+580.140	-21.595	191.722	191.730
BB	8+583.140	-21.595	191.701	191.708
BC	8+586.140	-21.595	191.679	191.681
CL Brg E Abut	8+588.140	-21.595	191.663	191.663
Back of E Abut	8+589.151	-21.595	191.655	191.655

BEAM 27

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+515.452	-23.485	191.919	191.919
CL E Brg Pier 3	8+515.771	-23.485	191.918	191.918
AI	8+518.771	-23.485	191.916	191.925
AJ	8+521.771	-23.485	191.913	191.930
AK	8+524.771	-23.485	191.909	191.927
AL	8+527.771	-23.485	191.904	191.924
AM	8+530.771	-23.485	191.899	191.913
AN	8+533.771	-23.485	191.892	191.901
AO	8+536.771	-23.485	191.884	191.889
CL Pier 4	8+539.452	-23.485	191.877	191.877
AP	8+542.452	-23.485	191.868	191.873
AQ	8+545.452	-23.485	191.858	191.868
AR	8+548.452	-23.485	191.847	191.861
AS	8+551.452	-23.485	191.835	191.854
AT	8+554.452	-23.485	191.822	191.842
AU	8+557.452	-23.485	191.808	191.825
AV	8+560.452	-23.485	191.793	191.807
AW	8+563.452	-23.485	191.778	191.786
CL Pier 5	8+567.452	-23.485	191.756	191.756
AX	8+570.452	-23.485	191.738	191.740
AY	8+573.452	-23.485	191.720	191.724
AZ	8+576.452	-23.485	191.700	191.707
BA	8+579.452	-23.485	191.680	191.687
BB	8+582.452	-23.485	191.659	191.666
BC	8+585.452	-23.485	191.637	191.639
CL Brg E Abut	8+587.452	-23.485	191.621	191.621
Back of E Abut	8+588.463	-23.485	191.613	191.613

BEAM 28

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
CL Pier 3	8+514.764	-25.375	191.872	191.872
CL E Brg Pier 3	8+515.083	-25.375	191.872	191.872
AI	8+518.083	-25.375	191.870	191.878
AJ	8+521.083	-25.375	191.867	191.883
AK	8+524.083	-25.375	191.863	191.881
AL	8+527.083	-25.375	191.858	191.878
AM	8+530.083	-25.375	191.853	191.867
AN	8+533.083	-25.375	191.846	191.856
AO	8+536.083	-25.375	191.839	191.843
CL Pier 4	8+538.764	-25.375	191.832	191.832
AP	8+541.764	-25.375	191.823	191.828
AQ	8+544.764	-25.375	191.813	191.823
AR	8+547.764	-25.375	191.802	191.817
AS	8+550.764	-25.375	191.790	191.809
AT	8+553.764	-25.375	191.778	191.798
AU	8+556.764	-25.375	191.764	191.781
AV	8+559.764	-25.375	191.750	191.763
AW	8+562.764	-25.375	191.734	191.742
CL Pier 5	8+566.764	-25.375	191.712	191.712
AX	8+569.764	-25.375	191.695	191.697
AY	8+572.764	-25.375	191.677	191.681
AZ	8+575.764	-25.375	191.657	191.664
BA	8+578.764	-25.375	191.637	191.645
BB	8+581.764	-25.375	191.616	191.623
BC	8+584.764	-25.375	191.594	191.597
CL Brg E Abut	8+586.764	-25.375	191.579	191.579
Back of E Abut	8+587.775	-25.375	191.572	191.572

NOTES:

See Sheet No. S-9 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

TOP OF DECK ELEVATIONS – UNIT 2 (5 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

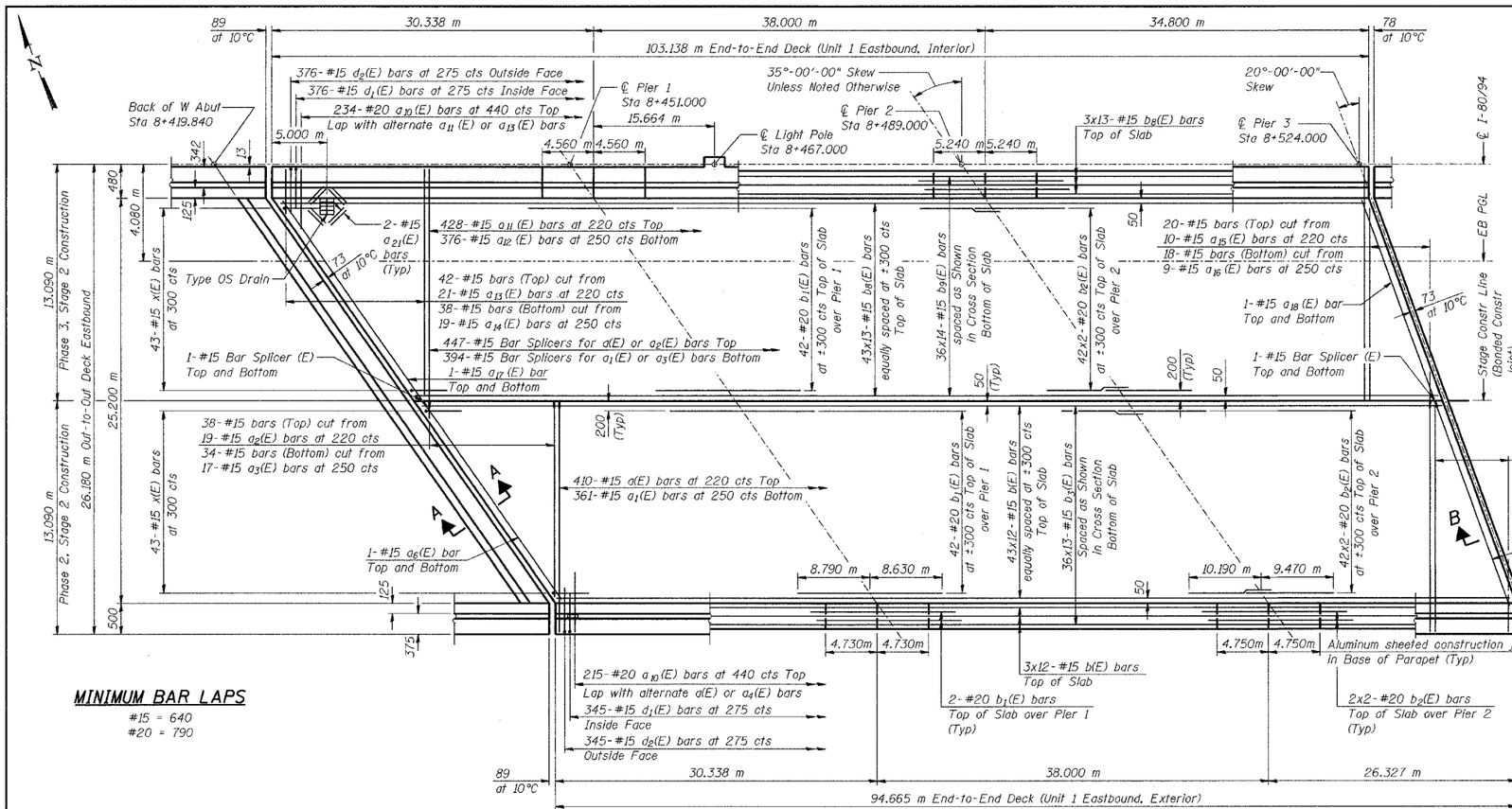
DATE 07/05

AMERICAN CONSULTING ENGINEERS

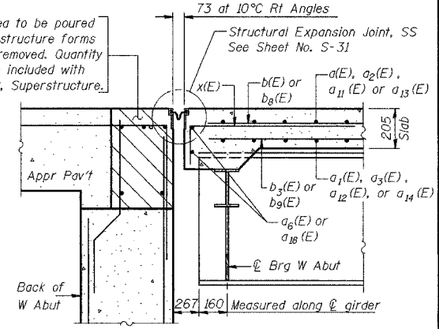
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	642
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-23
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



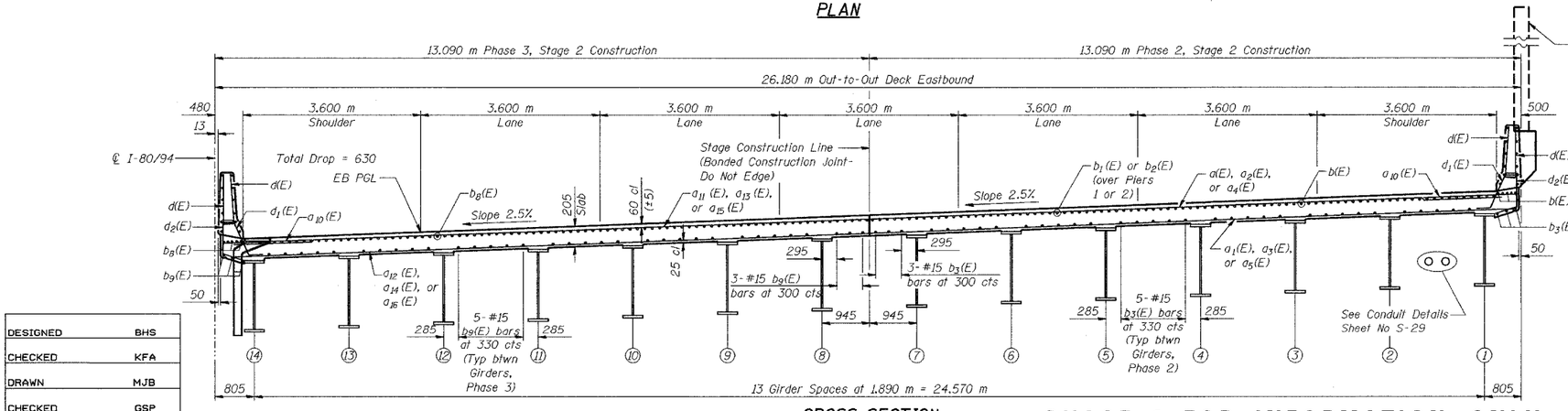
PLAN



SECTION A-A

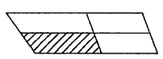
MINIMUM BAR LAPS

#15 = 640
#20 = 790



CROSS SECTION
(Looking East)

PHASE 2 FOR INFORMATION ONLY



KEY PLAN

NOTES:

See Sheet No. S-25 for Section B-B.

See Sheet No. S-27 for parapet reinforcement.

See Sheet No. S-29 for parapet details.

See Sheet No. S-30 for superstructure details, field cutting diagrams, and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

Apply Surface Seal to entire top surface of the bridge deck and parapets and the inside vertical faces of the parapets.

Cut longitudinal reinforcement to clear drainage structures.

Bar Splicers paid for as "Threaded Tie Bar Assembly, Epoxy Coated."

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

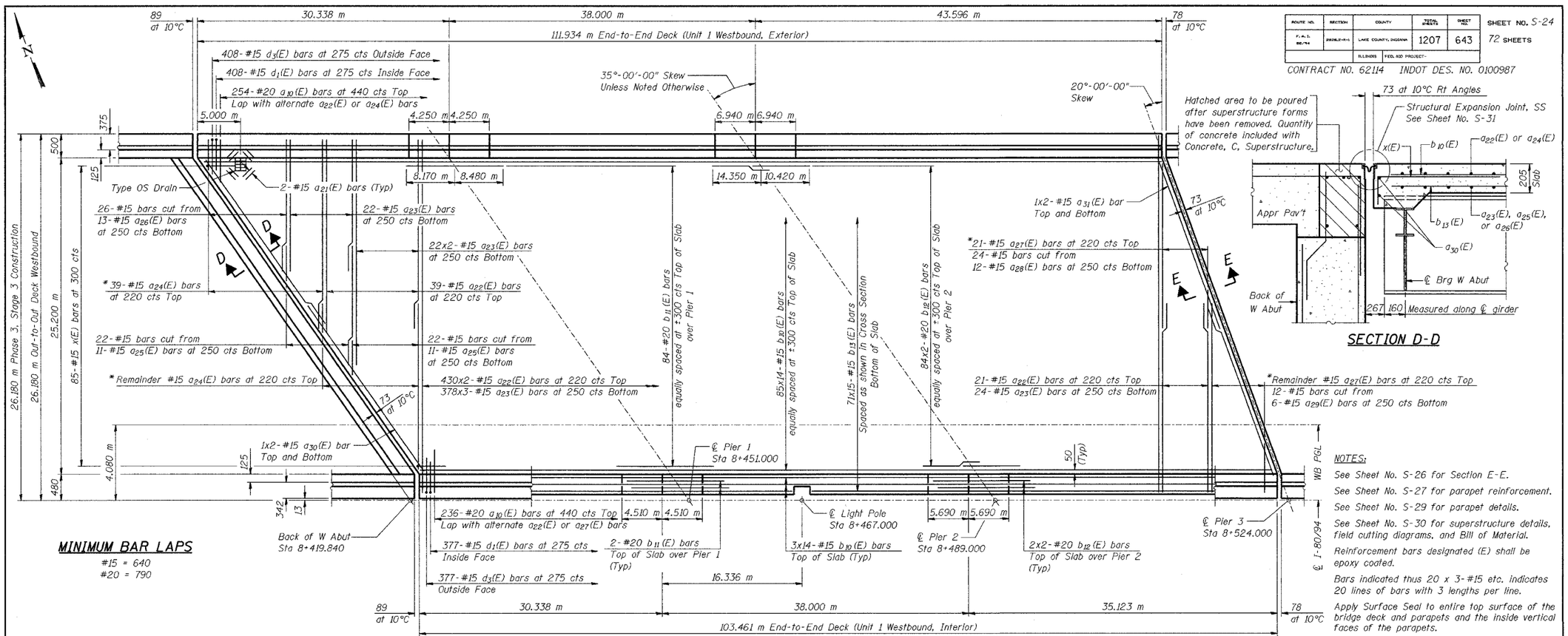
DECK PLAN – UNIT 1 EASTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2R-1-1	LAKE COUNTY, INDIANA	1207	643
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-24
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



PLAN

SECTION D-D

MINIMUM BAR LAPS

#15 = 640
#20 = 790

NOTES:

See Sheet No. S-26 for Section E-E.

See Sheet No. S-27 for parapet reinforcement.

See Sheet No. S-29 for parapet details.

See Sheet No. S-30 for superstructure details, field cutting diagrams, and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

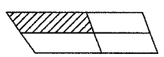
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

Apply Surface Seal to entire top surface of the bridge deck and parapets and the inside vertical faces of the parapets.

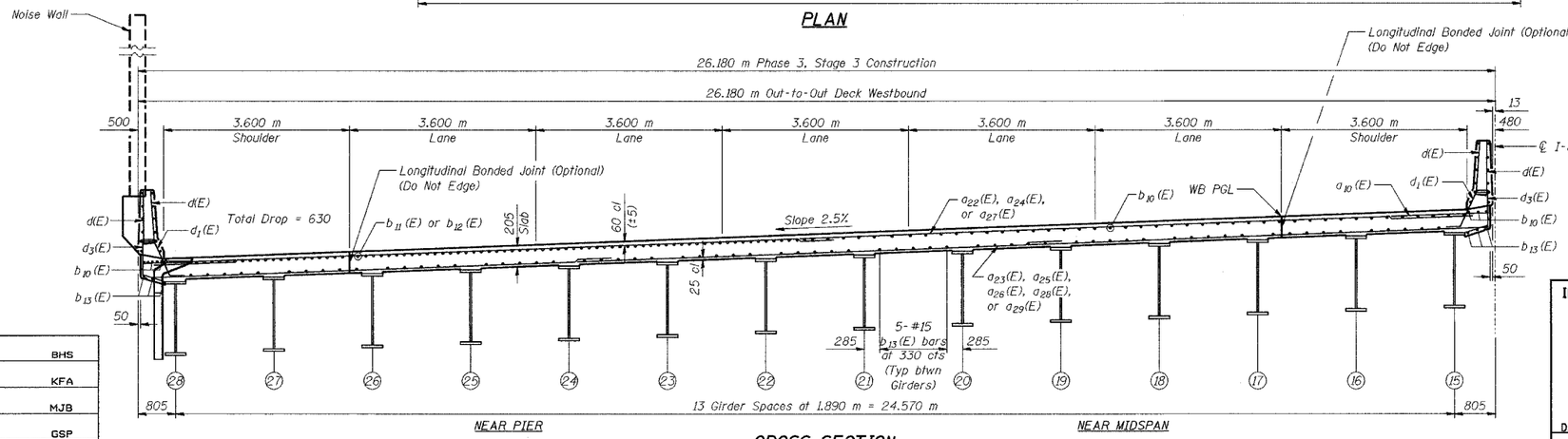
Cut longitudinal reinforcement to clear drainage structures.

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

*Order $a_{24}(E)$ and $a_{27}(E)$ bars full length. Cut bars to fit skew and use remainder in remainder of slope as labeled.



KEY PLAN



CROSS SECTION
(Looking East)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

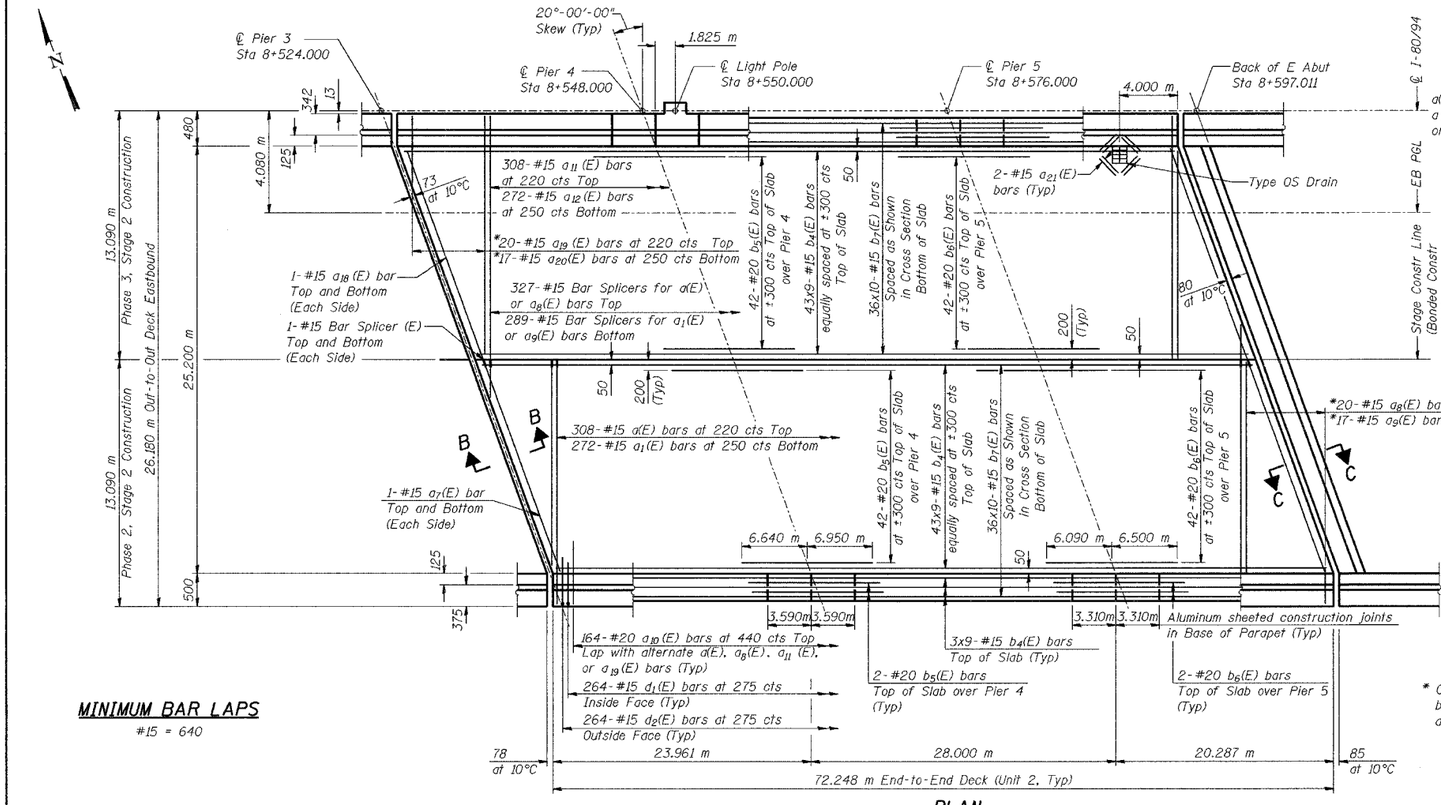
DECK PLAN – UNIT 1 WESTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

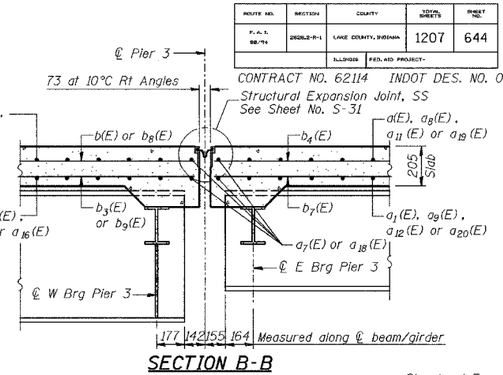
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	644
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-25
72 SHEETS

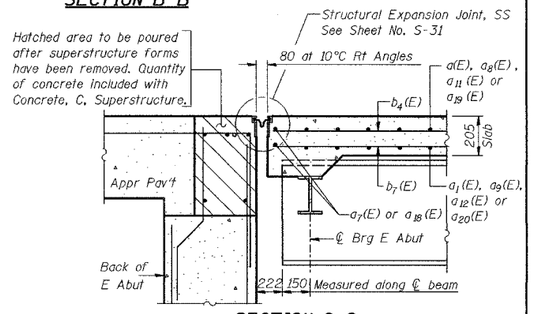
CONTRACT NO. 62114 INDOT DES. NO. 0100987



PLAN



SECTION B-B



SECTION C-C

MINIMUM BAR LAPS

#15 = 640

* Order a8(E), a9(E), a19 (E) and a20(E) bars full length. Cut bars to fit skew and use remainder of bars in opposite end.

NOTES:

See Sheet No. S-28 for parapet reinforcement.

See Sheet No. S-29 for parapet details.

See Sheet No. S-30 for superstructure details, field cutting diagrams, and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

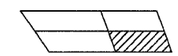
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

Apply Surface Seal to entire top surface of the bridge deck and parapets and the inside vertical faces of the parapets.

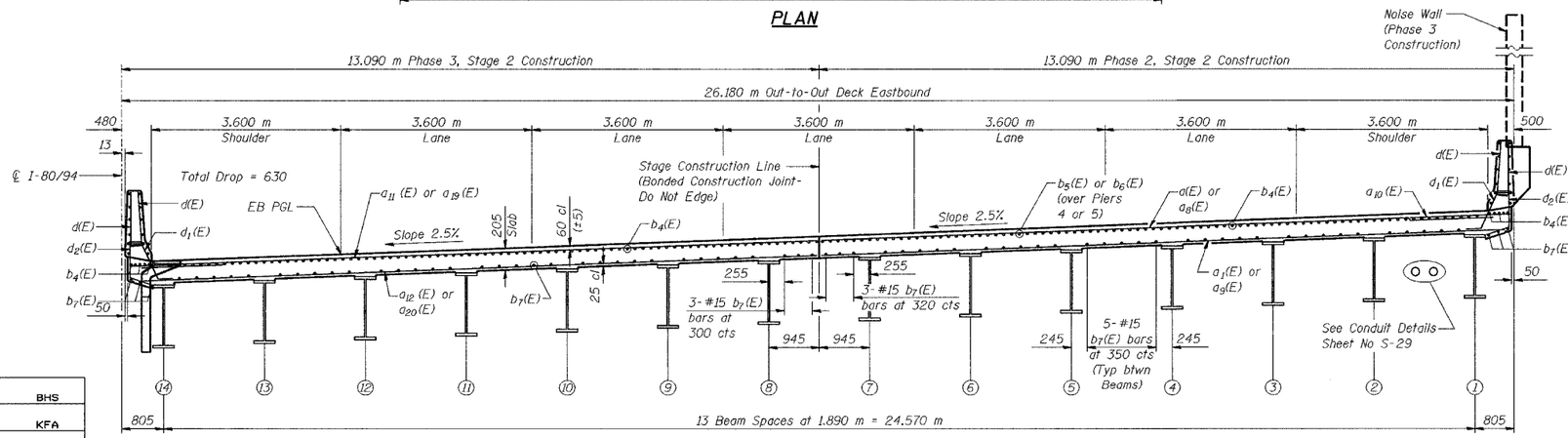
Cut longitudinal reinforcement to clear drainage structures.

Bar Splicers paid for as "Threaded Tie Bar Assembly, Epoxy Coated."

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



KEY PLAN



CROSS SECTION

(Looking East)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

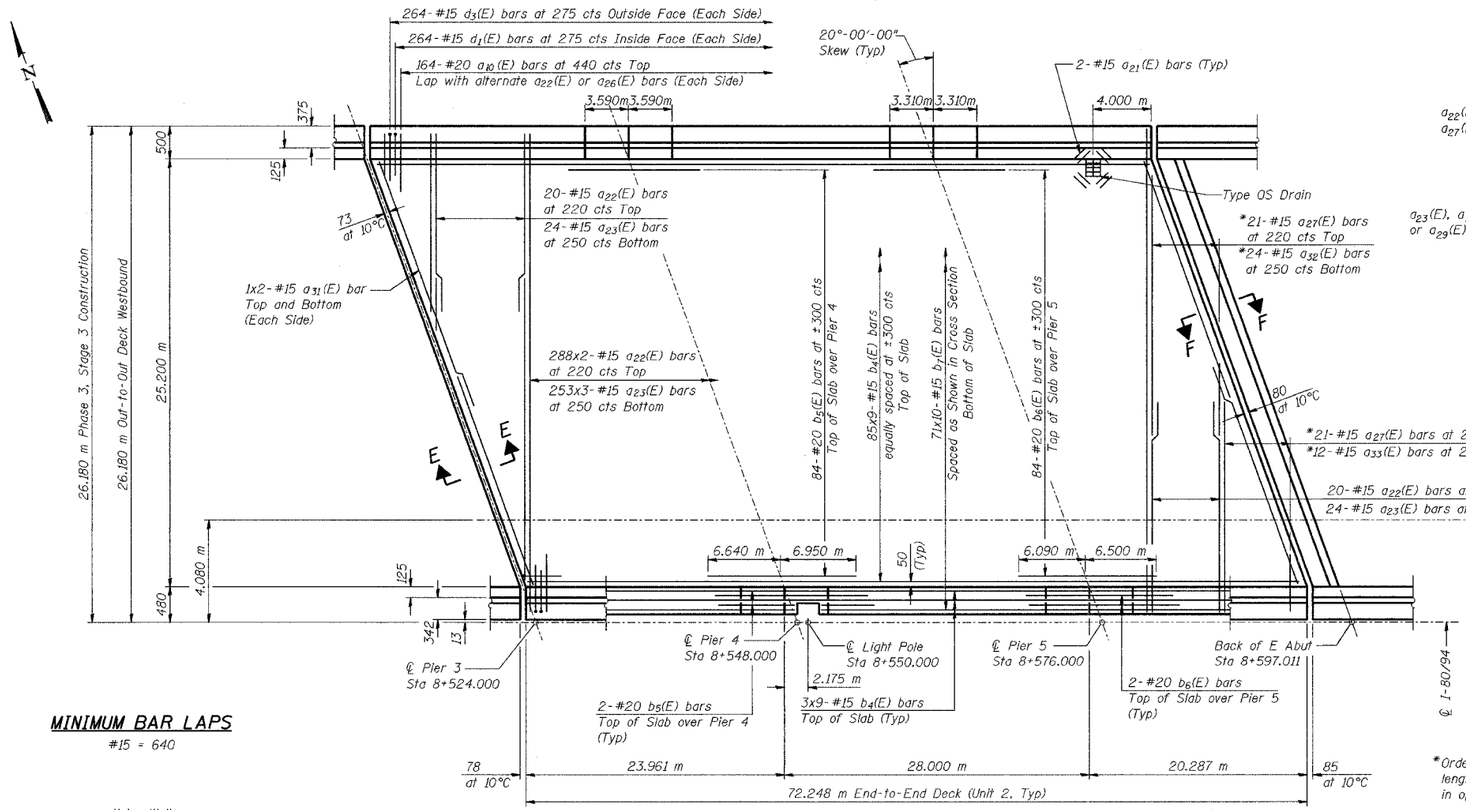
DECK PLAN – UNIT 2 EASTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	645
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-26
72 SHEETS

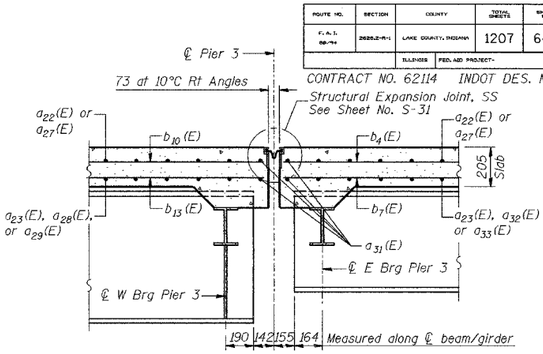
CONTRACT NO. 62114 INDOT DES. NO. 0100987



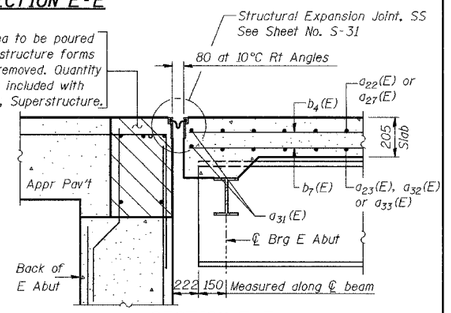
PLAN

MINIMUM BAR LAPS

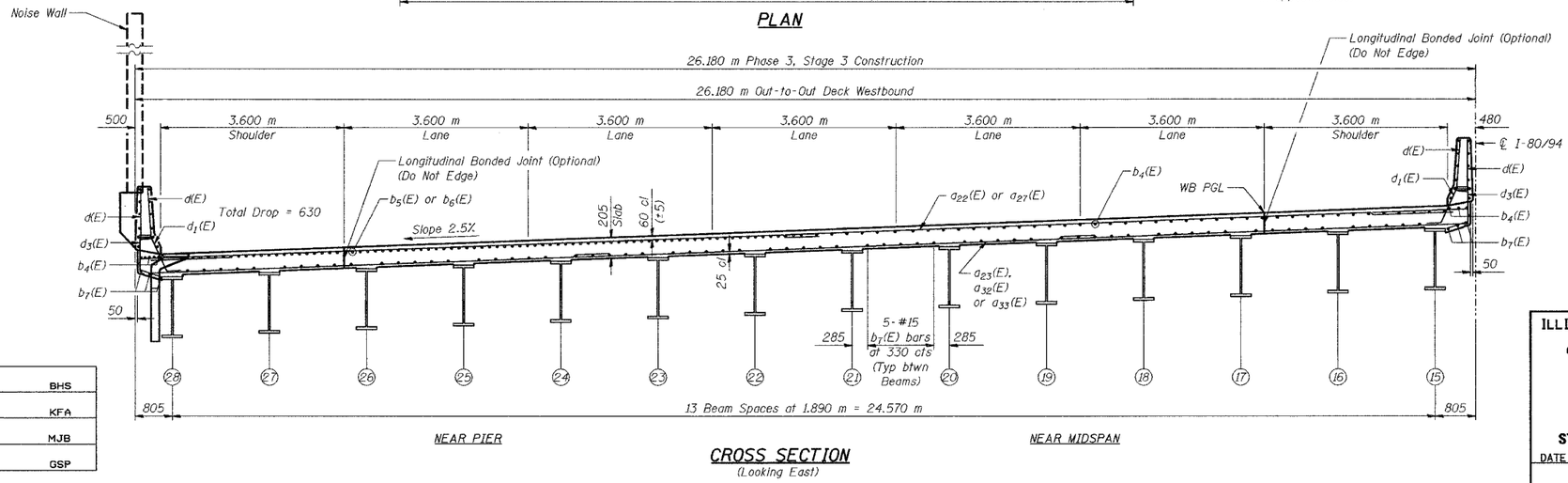
#15 = 640



SECTION E-E



SECTION F-F



NEAR PIER — NEAR MIDSPAN

CROSS SECTION

(Looking East)

*Order a_{27}(E), a_{32}(E), and a_{33}(E) bars full length. Cut bars to fit skew and use remainder in opposite side.

NOTES:

See Sheet No. S-28 for parapet reinforcement.

See Sheet No. S-29 for parapet details.

See Sheet No. S-30 for superstructure details, field cutting diagrams, and Bill of Material.

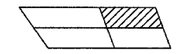
Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

Apply Surface Seal to entire top surface of the bridge deck and parapets and the inside vertical faces of the parapets.

Cut longitudinal reinforcement to clear drainage structures.

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



KEY PLAN

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

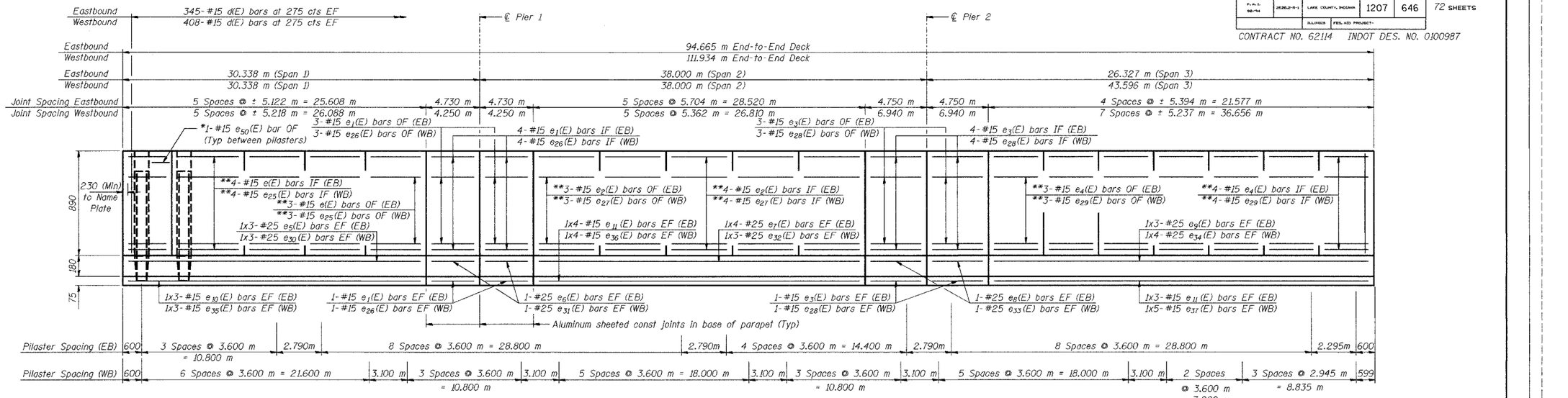
DECK PLAN – UNIT 2 WESTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	646
		ILLINOIS	FED. AID PROJECT-	

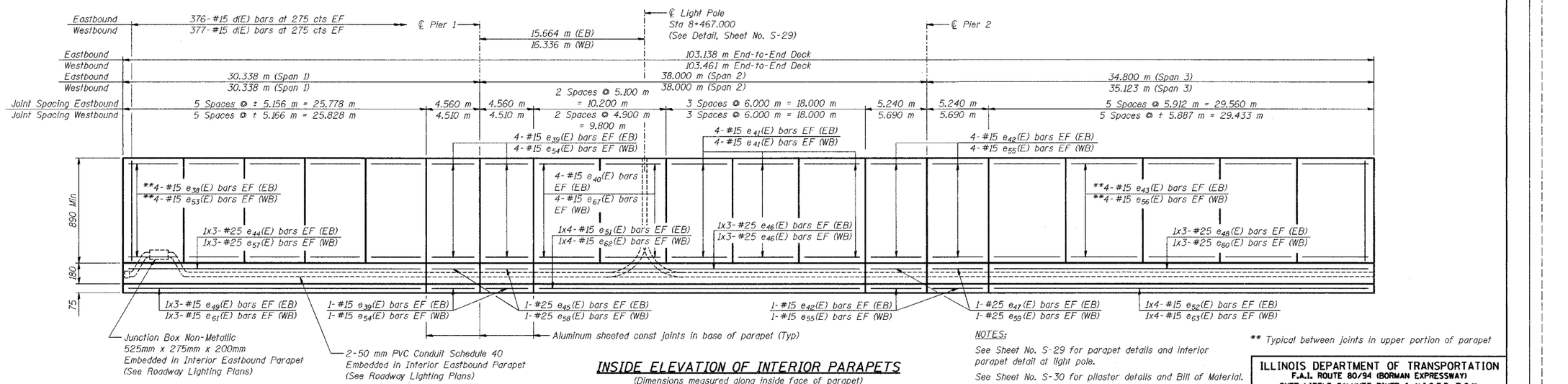
SHEET NO. S-27
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



INSIDE ELEVATION OF EXTERIOR PARAPETS

(Dimensions measured along inside face of parapet)



INSIDE ELEVATION OF INTERIOR PARAPETS

(Dimensions measured along inside face of parapet)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

LEGEND

EF - Each Face
IF - Inside Face
OF - Outside Face
EB - Eastbound Structure
WB - Westbound Structure

MINIMUM BAR LAPS

#15 = 640
#25 = 1.320 m

NOTES:

See Sheet No. S-29 for parapet details and interior parapet detail at light pole.

See Sheet No. S-30 for pilaster details and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

* Cut to fit e59(E) bars at construction joints and at non-standard pilaster spaces (3.600 m).

** Typical between joints in upper portion of parapet

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

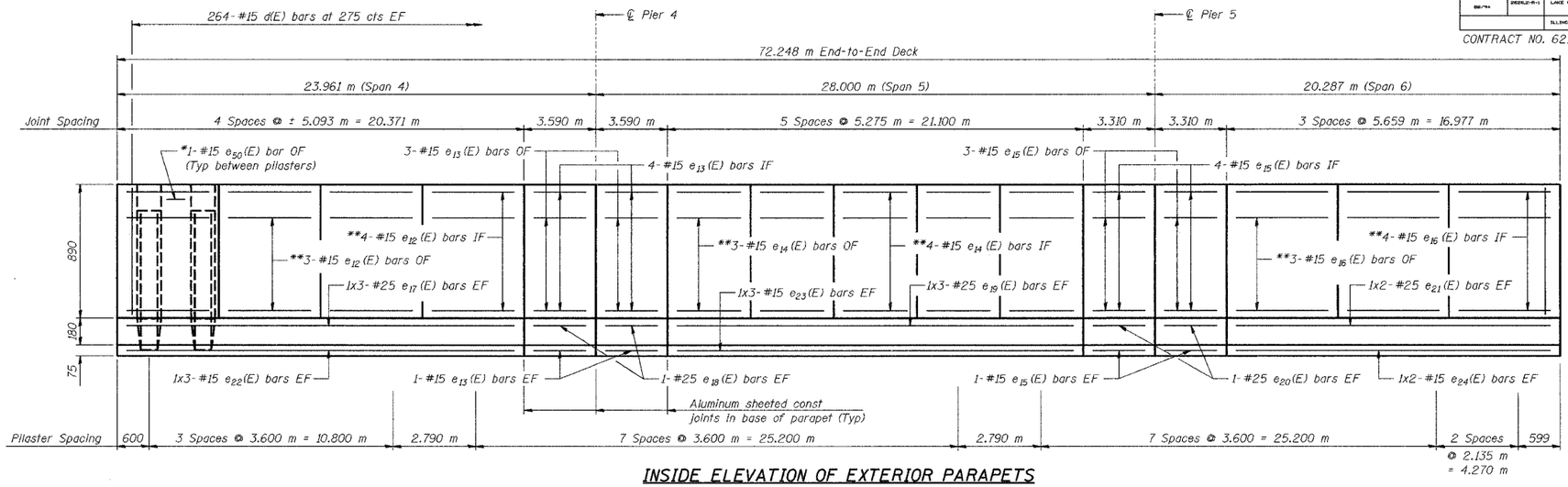
PARAPET ELEVATIONS – UNIT 1
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	647
		ILLINOIS	FED. AID PROJECT-	

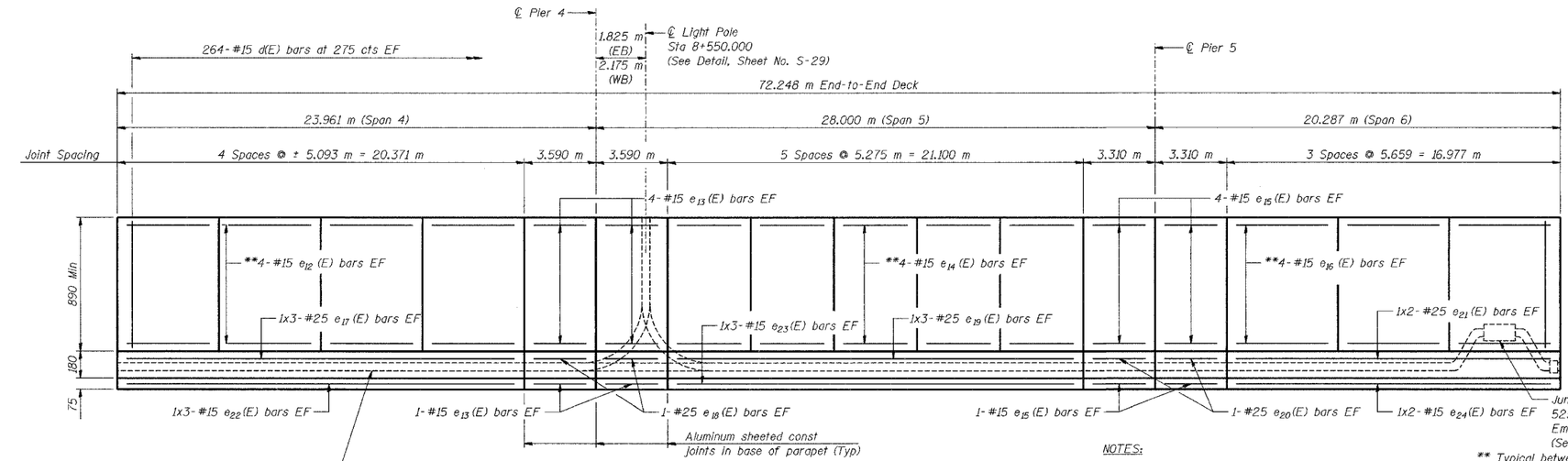
SHEET NO. S-28
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



INSIDE ELEVATION OF EXTERIOR PARAPETS

(Dimensions measured along inside face of parapet)



INSIDE ELEVATION OF INTERIOR PARAPETS

(Dimensions measured along inside face of parapet)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

LEGEND

EF - Each Face
IF - Inside Face
OF - Outside Face
EB - Eastbound Structure
WB - Westbound Structure

MINIMUM BAR LAPS

#15 = 640
#25 = 1.320 m

NOTES:

See Sheet No. S-29 for parapet details and interior parapet detail at light pole.

See Sheet No. S-30 for pilaster details and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

* Cut to fit e_{50}(E) bars at construction joints and at non-standard pilaster spaces (3.600 m).

** Typical between joints in upper portion of parapet.

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

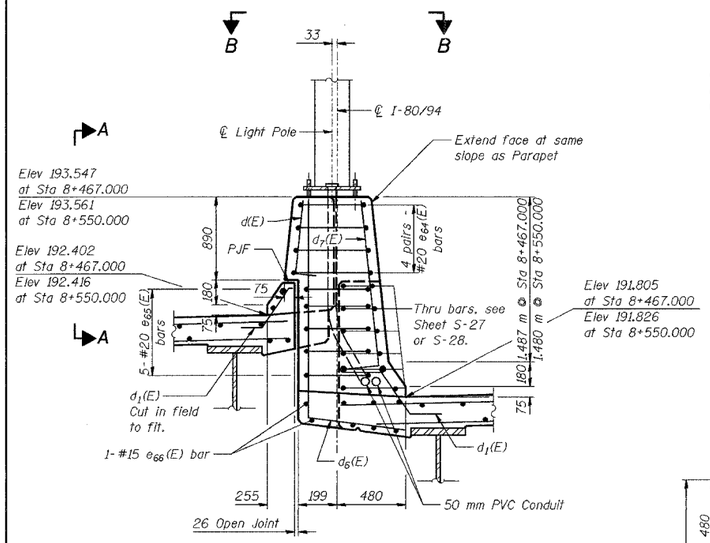
PARAPET ELEVATIONS – UNIT 2
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	648
		ILLINOIS FED. AID PROJECT-		

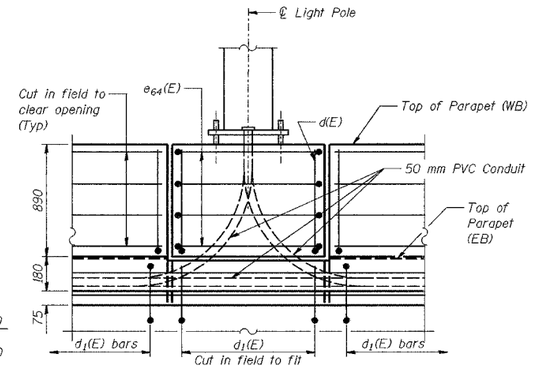
SHEET NO. S-29
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

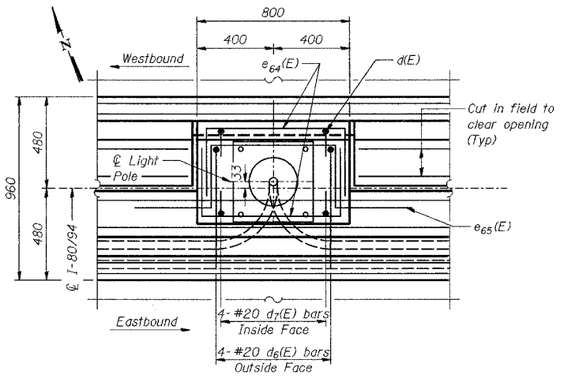


LIGHT POLE SUPPORT DETAIL

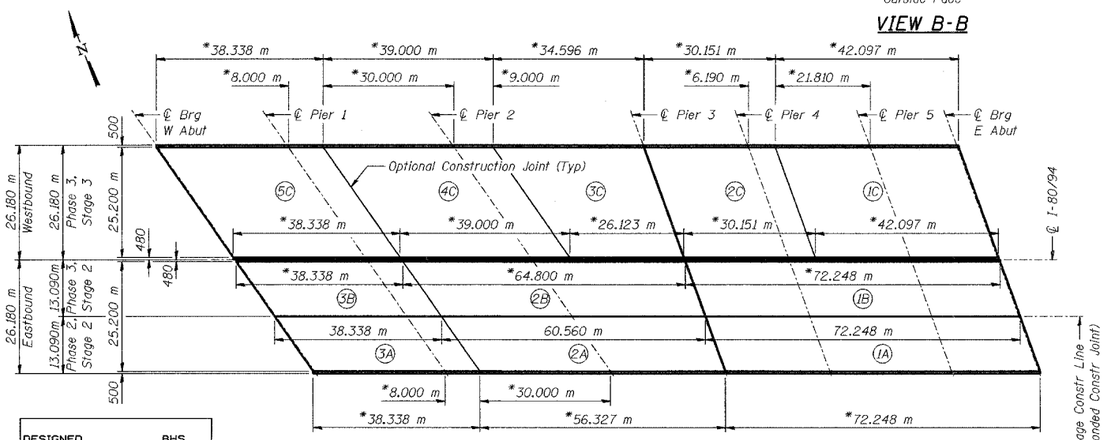
(Looking East)



VIEW A-A



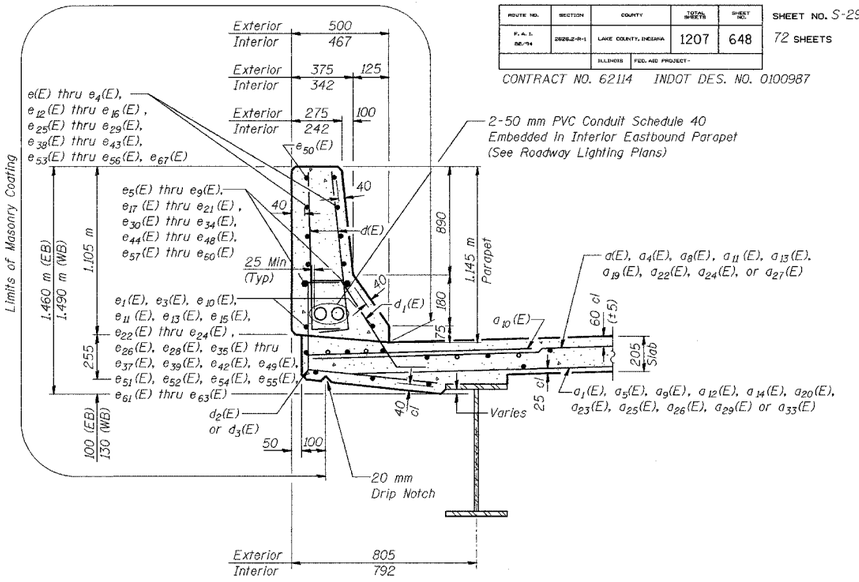
VIEW B-B



DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

DECK POURING SEQUENCE

* Dimensions are measured along inside face of parapet.



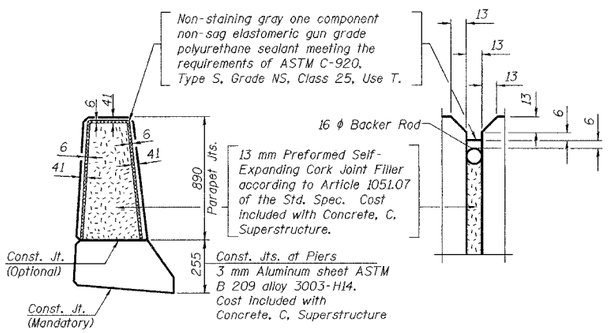
SECTION THRU PARAPETS

All concrete edges shall have a 20 mm chamfer.

2 CONDUITS SUPPORT DETAIL

Max Spacing = 1.05 m

SLAB INSERT DETAIL



PARAPET JOINT DETAILS

PHASE 2 FOR INFORMATION ONLY

LEGEND

EB - Eastbound Structure
WB - Westbound Structure

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

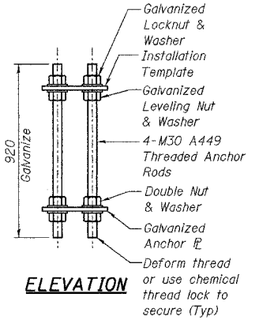
SUPERSTRUCTURE DETAILS (1 OF 2)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

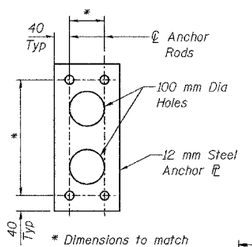
ROUTE NO.	DIRECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	649
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-30
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



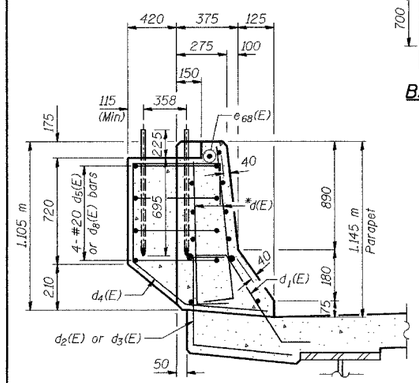
ELEVATION



PLAN

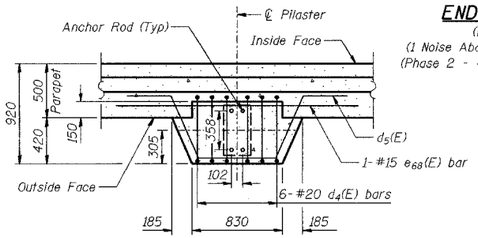
NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY

(Phase 2, Stage 2 - 50 Req'd)
(Phase 3, Stage 3 - 55 Req'd)



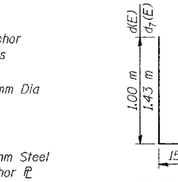
NOISEWALL PILASTER DETAIL

*Cut d(E) bar on Back Face to fit.

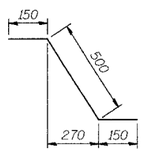


TYPICAL PILASTER SUPPORT - PLAN VIEW

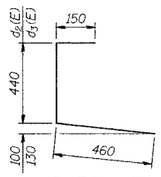
(Reinforcement in Parapet not shown)
(1 Noise Abatement Wall Anchor Rod Assembly per Pilaster)
(Phase 2 - 46 Pilasters Req'd, Phase 3 - 51 Pilasters Req'd)



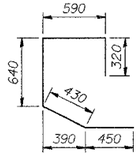
BAR d(E) or d7(E)



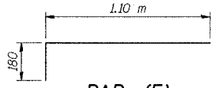
BAR d1(E)



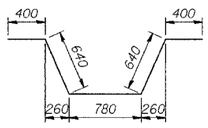
BARS d2(E) or d3(E)



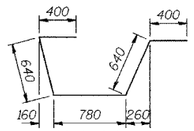
BAR d4(E)



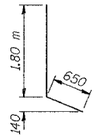
BAR x(E)



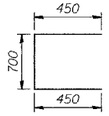
BAR d5(E)



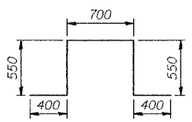
BAR d8(E)



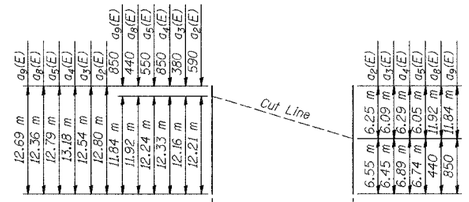
BAR d6(E)

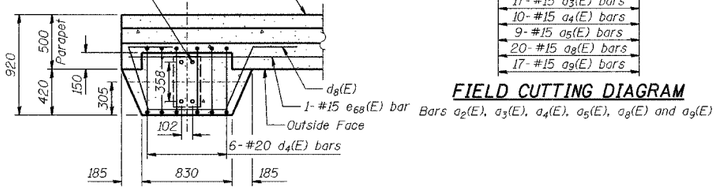


BAR e64(E)



BAR e65(E)



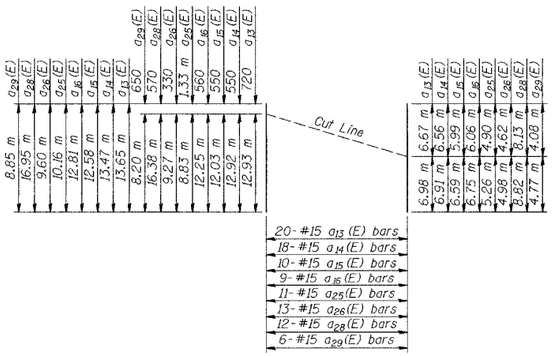


PILASTER SUPPORT AT END OF PARAPET- PLAN VIEW

(Reinforcement in Parapet not shown)
(1 Noise Abatement Wall Anchor Rod Assembly per Pilaster)
(Phase 2 - 4 Pilasters Req'd, Phase 3 - 4 Pilasters Req'd)

FIELD CUTTING DIAGRAM

Bars $a_2(E)$, $a_3(E)$, $a_4(E)$, $a_5(E)$, $a_8(E)$ and $a_9(E)$



FIELD CUTTING DIAGRAM

Bars $a_{13}(E)$, $a_{14}(E)$, $a_{15}(E)$, $a_{16}(E)$, $a_{25}(E)$, $a_{26}(E)$, $a_{28}(E)$ and $a_{29}(E)$.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

SUPERSTRUCTURE BILL OF MATERIAL

PHASE 2

Bar	No.	Size	Length (m)	Shape
d(E)	718	#15	12.94	—
a_1(E)	633	#15	12.77	—
a_2(E)	19	#15	12.80	—
a_3(E)	17	#15	12.54	—
a_4(E)	10	#15	13.18	—
a_5(E)	9	#15	12.79	—
a_6(E)	2	#15	15.59	—
a_7(E)	6	#15	13.34	—
a_8(E)	20	#15	12.36	—
a_9(E)	17	#15	12.69	—
a_{10}(E)	363	#20	1.40	—
b(E)	552	#15	8.82	—
b_1(E)	44	#20	17.42	—
b_2(E)	88	#20	10.23	—
b_3(E)	468	#15	8.20	—
b_4(E)	414	#15	8.59	—
b_5(E)	44	#20	13.59	—
b_6(E)	44	#20	12.59	—
b_7(E)	360	#15	7.80	—
d(E)	1218	#15	1.00	L
d_1(E)	609	#15	0.80	⊂
d_2(E)	609	#15	1.05	⊏
d_4(E)	300	#20	2.43	⊏
d_5(E)	184	#20	2.86	⊂
d_8(E)	16	#20	2.86	⊂
e(E)	35	#15	5.02	—
e_1(E)	18	#15	4.63	—
e_2(E)	35	#15	5.60	—
e_3(E)	18	#15	4.65	—
e_4(E)	28	#15	5.29	—
e_5(E)	6	#25	9.39	—
e_6(E)	4	#25	4.63	—
e_7(E)	8	#25	8.10	—
e_8(E)	4	#25	4.65	—
e_9(E)	6	#25	8.04	—
e_{10}(E)	6	#15	8.93	—
e_{11}(E)	14	#15	7.59	—
e_{12}(E)	28	#15	4.99	—
e_{13}(E)	18	#15	3.49	—
e_{14}(E)	35	#15	5.18	—
e_{15}(E)	18	#15	3.21	—
e_{16}(E)	21	#15	5.56	—
e_{17}(E)	6	#25	7.64	—
e_{18}(E)	4	#25	3.49	—
e_{19}(E)	6	#25	7.88	—
e_{20}(E)	4	#25	3.21	—
e_{21}(E)	4	#25	9.10	—
e_{22}(E)	6	#15	7.19	—
e_{23}(E)	6	#15	7.43	—
e_{24}(E)	4	#15	8.76	—
e_{50}(E)	48	#15	2.67	—
e_{68}(E)	50	#15	2.11	—
x(E)	43	#15	1.28	⌐
Concrete, C, Superstructure		m^3	554.7	
Surface Seal (Estimated)		m^2	2,379	
Reinforcing Bars, Epoxy Coated		kg	71,800	
Threaded Tie Bar Assembly, Epoxy Coated		Each	1,465	
Noise Abatement Wall Anchor Rod Assembly		Each	50	
Masonry Coating (Estimated)		m^2	549	

PHASE 3

Bar	No.	Size	Length (m)	Shape
a_{10}(E)	1216	#20	1.40	—
a_{11}(E)	736	#15	12.97	—
a_{12}(E)	648	#15	12.81	—
a_{13}(E)	21	#15	13.65	—
a_{14}(E)	19	#15	13.47	—
a_{15}(E)	10	#15	12.58	—
a_{16}(E)	9	#15	12.81	—
a_{17}(E)	2	#15	15.40	—
a_{18}(E)	6	#15	13.42	—
a_{19}(E)	20	#15	12.40	—
a_{20}(E)	17	#15	12.73	—
a_{21}(E)	32	#15	0.60	—
a_{22}(E)	1536	#15	13.31	—
a_{23}(E)	2031	#15	8.95	—
a_{24}(E)	39	#15	14.08	—
a_{25}(E)	22	#15	10.16	—
a_{26}(E)	13	#15	9.60	—
a_{27}(E)	63	#15	13.70	—
a_{28}(E)	12	#15	16.95	—
a_{29}(E)	6	#15	8.85	—
a_{30}(E)	4	#15	15.71	—
a_{31}(E)	12	#15	13.73	—
a_{32}(E)	24	#15	16.95	—
a_{33}(E)	12	#15	8.85	—
b_1(E)	44	#20	17.42	—
b_2(E)	88	#20	10.23	—
b_4(E)	1233	#15	8.59	—
b_5(E)	132	#20	13.59	—
b_6(E)	132	#20	12.59	—
b_7(E)	1070	#15	7.80	—
b_8(E)	598	#15	8.52	—
b_9(E)	504	#15	7.96	—
b_{10}(E)	1274	#15	8.59	—
b_{11}(E)	88	#20	16.65	—
b_{12}(E)	176	#20	12.78	—
b_{13}(E)	1065	#15	8.06	—
d(E)	3906	#15	1.00	L
d_1(E)	1953	#15	0.80	⊂
d_2(E)	640	#15	1.05	⊏
d_3(E)	1313	#15	1.05	⊏
d_4(E)	330	#20	2.43	⊏
d_5(E)	204	#20	2.86	⊂
d_6(E)	8	#20	2.45	⊂
d_7(E)	8	#20	1.58	⊂
d_8(E)	16	#20	2.86	⊂
e_{12}(E)	92	#15	4.99	—
e_{13}(E)	58	#15	3.49	—
e_{14}(E)	115	#15	5.18	—
e_{15}(E)	58	#15	3.21	—
e_{16}(E)	69	#15	5.56	—
e_{17}(E)	18	#25	7.64	—
e_{18}(E)	12	#25	3.49	—
e_{19}(E)	18	#25	7.88	—
e_{20}(E)	12	#25	3.21	—
e_{21}(E)	12	#25	9.10	—
e_{22}(E)	18	#15	7.19	—
e_{23}(E)	18	#15	7.43	—
e_{24}(E)	12	#15	8.76	—

PHASE 3 (CONT.)

Bar	No.	Size	Length (m)	Shape
e_{25}(E)	35	#15	5.11	—
e_{26}(E)	18	#15	4.15	—
e_{27}(E)	35	#15	5.26	—
e_{28}(E)	18	#15	6.84	—
e_{29}(E)	49	#15	5.13	—
e_{30}(E)	6	#25	9.55	—
e_{31}(E)	4	#25	4.15	—
e_{32}(E)	6	#25	9.79	—
e_{33}(E)	4	#25	6.84	—
e_{34}(E)	8	#25	10.13	—
e_{35}(E)	6	#15	9.09	—
e_{36}(E)	8	#15	7.16	—
e_{37}(E)	10	#15	7.83	—
e_{38}(E)	40	#15	5.05	—
e_{39}(E)	20	#15	4.46	—
e_{40}(E)	16	#15	5.00	—
e_{41}(E)	48	#15	5.90	—
e_{42}(E)	20	#15	5.14	—
e_{43}(E)	40	#15	5.81	—
e_{44}(E)	6	#25	9.44	—
e_{45}(E)	4	#25	4.46	—
e_{46}(E)	12	#25	10.25	—
e_{47}(E)	4	#25	5.14	—
e_{48}(E)	6	#25	10.70	—
e_{49}(E)	6	#15	8.99	—
e_{50}(E)	53	#15	2.67	—
e_{51}(E)	8	#15	7.51	—
e_{52}(E)	8	#15	7.85	—
e_{53}(E)	40	#15	5.06	—
e_{54}(E)	20	#15	4.41	—
e_{55}(E)	20	#15	5.59	—
e_{56}(E)	40	#15	5.78	—
e_{57}(E)	6	#25	9.46	—
e_{58}(E)	4	#25	4.41	—
e_{59}(E)	4	#25	5.59	—
e_{60}(E)	6	#25	10.65	—
e_{61}(E)	6	#15	9.01	—
e_{62}(E)	8	#15	7.41	—
e_{63}(E)	8	#15	7.82	—
e_{64}(E)	16	#20	1.60	⊏
e_{65}(E)	10	#20	3.00	⊓
e_{66}(E)	4	#20	0.70	—
e_{67}(E)	16	#15	4.80	—
e_{68}(E)	55	#15	2.11	—
x(E)	128	#15	1.28	⌐
Concrete, C, Superstructure		m^3	1,716.2	
Surface Seal (Estimated)		m^2	7,541	
Reinforcing Bars, Epoxy Coated		kg	223,480	
Noise Abatement Wall Anchor Rod Assembly		Each	55	
Masonry Coating (Estimated)		m^2	1,650	

NOTES:
Reinforcement bars designated (E) shall be epoxy coated.
All concrete edges shall have a 20 mm chamfer.
All dimensions are in millimeters (mm) except as noted.

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

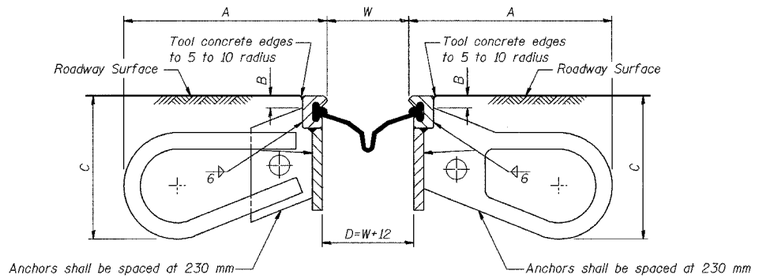
SUPERSTRUCTURE DETAILS (2 OF 2)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	650
		ILLINOIS FED. AID PROJECT.		

SHEET NO. S-31
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



INSTALLATION DETAIL

JOINT SETTING TABLE			
Ambient Temperature °C	DIMENSION W Expansion Length		
	30 m-60 m	60 m-90 m	90 m-120 m
50°	54	33	13
40°	62	44	29
25°	68	55	43
15°	76	67	57
5°	84	78	71
-5°	90	89	86
-15°	98	100	102

DIMENSIONS			
ALTERNATES	A	B	C
A-1	248	25	185
A-2			
B-1	248	25	185
B-2			
C-1	248	30	185
C-2			

GENERAL NOTES

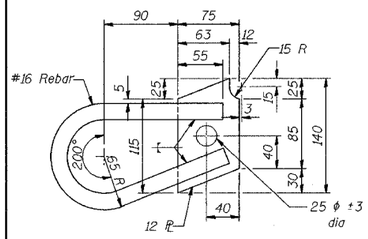
The strip seal shall be made continuous and shall have a minimum thickness of 5 mm. The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

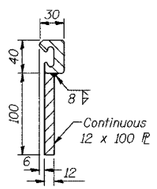
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

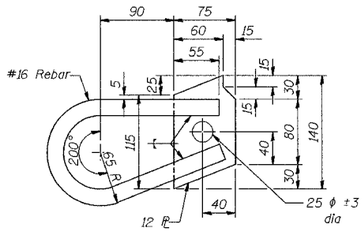
All dimensions are in millimeters (mm) except as noted. Details are in accordance with INDOT Standard Drawing No. 724-BSSJ-01, 724-BSSJ-02, 724-BSSJ-03, 724-BSSJ-04, 724-BSSJ-04A, 724-BSSJ-08 and 724-BSSJ-09.



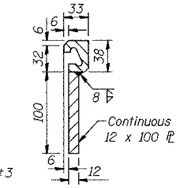
ANCHOR PLATE ALTERNATE A-1



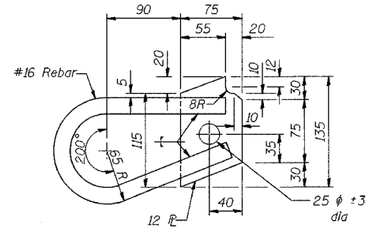
EXTRUSION & PLATE ASSEMBLY DETAIL



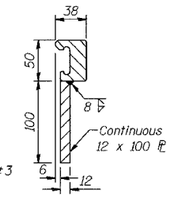
ANCHOR PLATE ALTERNATE B-1



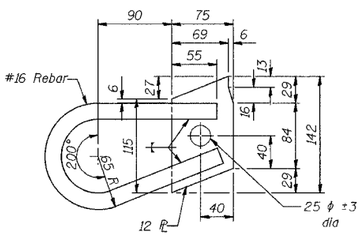
EXTRUSION & PLATE ASSEMBLY DETAIL



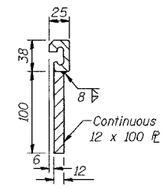
ANCHOR PLATE ALTERNATE C-1



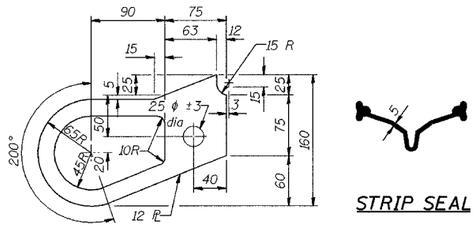
EXTRUSION & PLATE ASSEMBLY DETAIL



ANCHOR PLATE ALTERNATE D-1

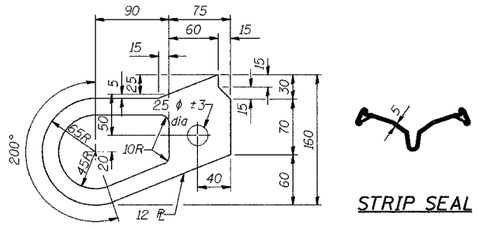


EXTRUSION & PLATE ASSEMBLY DETAIL



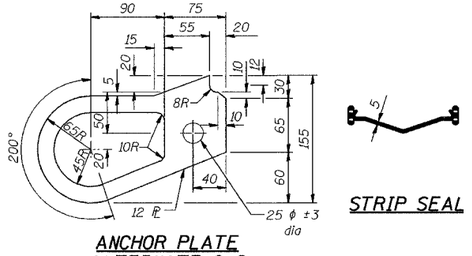
ANCHOR PLATE ALTERNATE A-2

STRIP SEAL



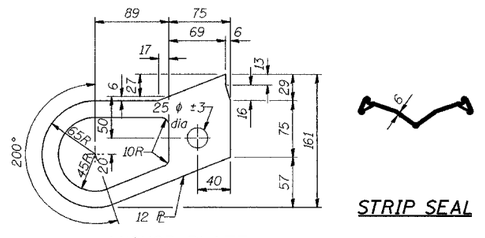
ANCHOR PLATE ALTERNATE B-2

STRIP SEAL



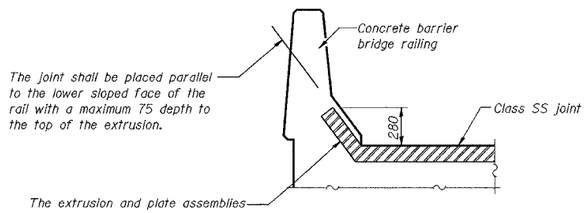
ANCHOR PLATE ALTERNATE C-2

STRIP SEAL

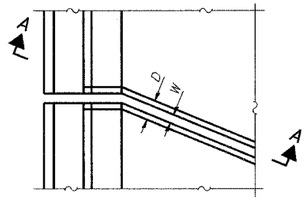


ANCHOR PLATE ALTERNATE D-2

STRIP SEAL



SECTION A-A



PLAN

BILL OF MATERIAL

Item	Unit	Phase 2	Phase 3
Structural Expansion Joint, SS	m	43.7	131.1

PLAN DIMENSIONS AT 10° C

Location	W	D
W Abut	73	85
Pier 3	73	85
E Abut	80	92

CONCRETE BARRIER BRIDGE RAILING

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

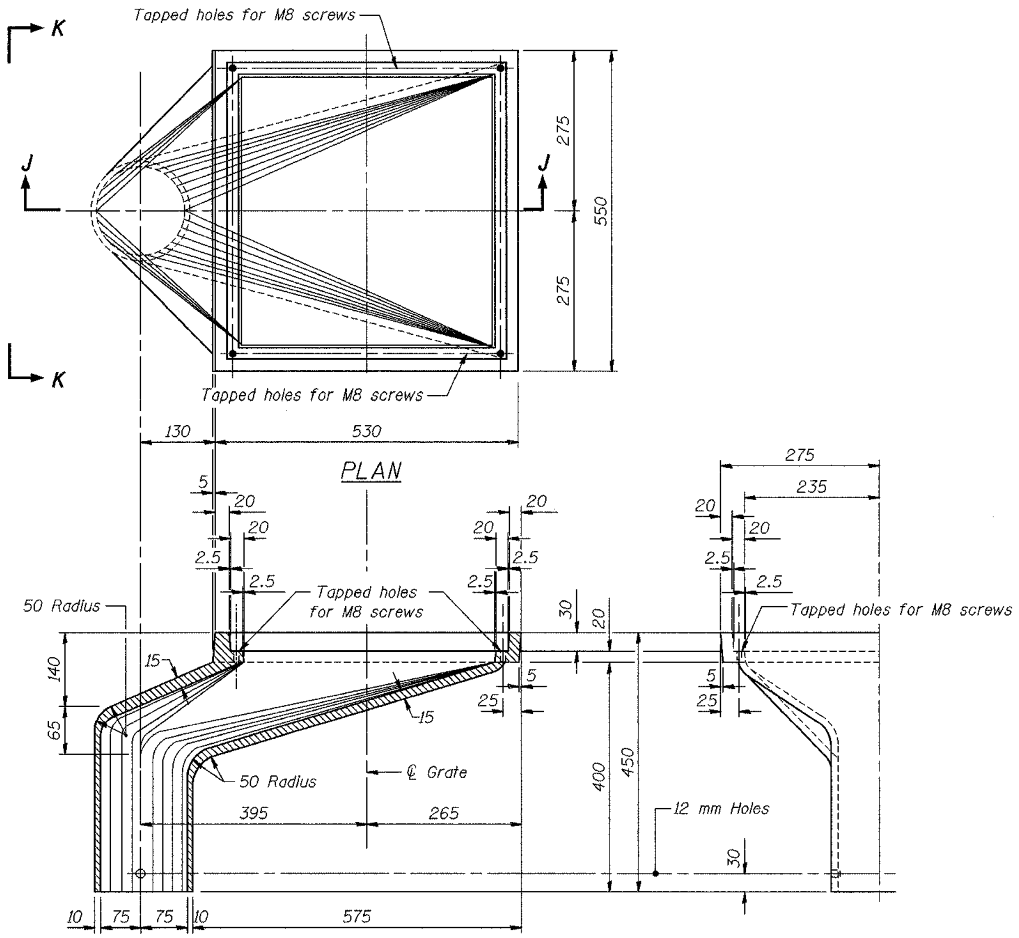
EXPANSION JOINT DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	651
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-32
72 SHEETS

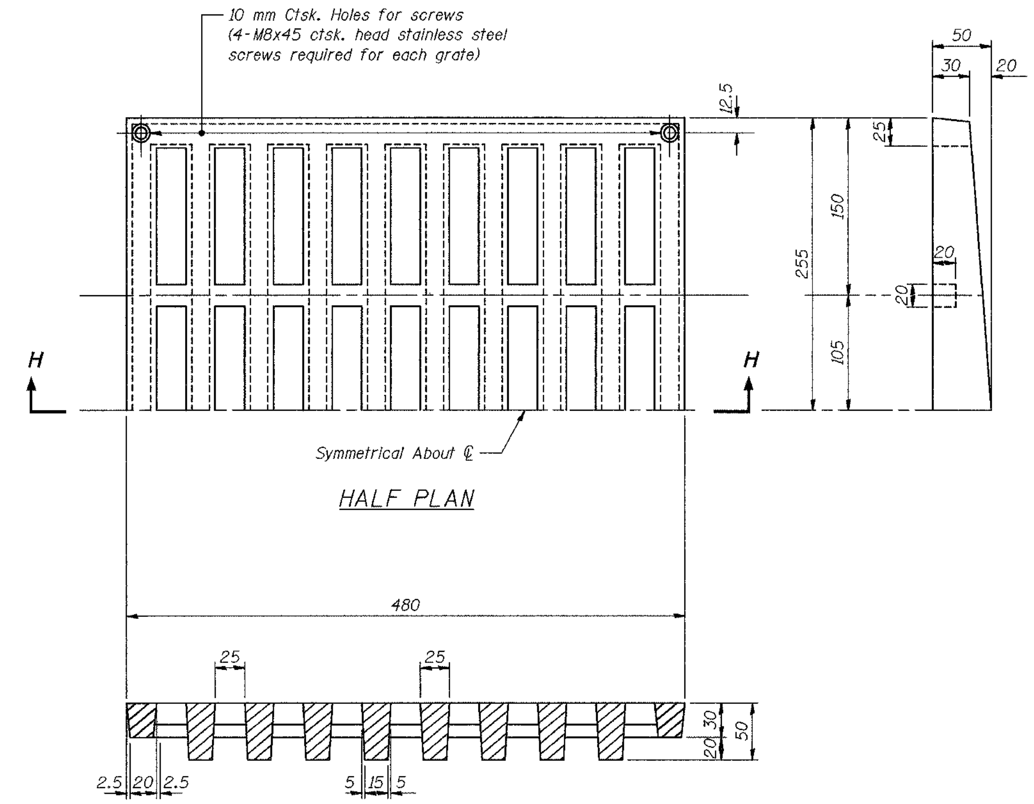
CONTRACT NO. 62114 INDOT DES. NO. 0100987



SECTION J-J

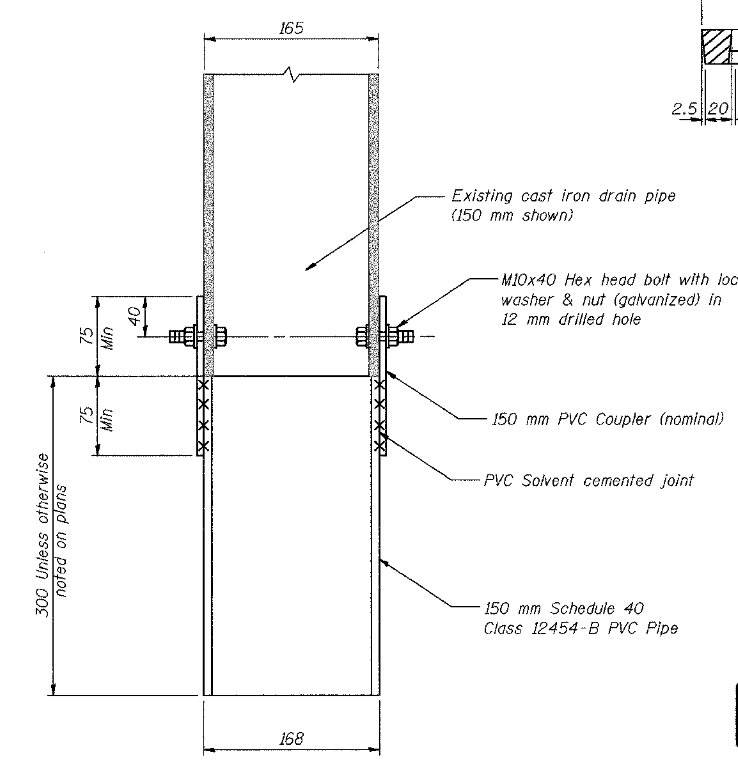
HALF SECTION K-K

ROADWAY DRAIN TYPE OS



SECTION H-H

GRATE D



CAST IRON DRAIN EXTENSION

GENERAL NOTES

1. For attaching pipe to all drains, use M10x40 hex bolts with 2-M10 lock washers and 2-M10 nuts. (All parts galvanized)
2. The approximate weight of the drain is 109.8 kg.
3. Fit grate to box in shop and ship in place.
4. Grate D is used with Roadway Drain Type OS and weighs approximately 36.3 kg.
5. Class 12454-B is an updated ASTM designation for Type I Grade 1 PVC pipe.
6. Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be included with Grates, Basins, and Fittings, Cast Iron.
7. Details are in accordance with INDOT Standard Drawing No. 704-BDCG-02, 704-BDCG-03, and 704-BDCG-05.

BILL OF MATERIAL

Item	Unit	Total
Grates, Basins, and Fittings, Cast Iron	kg	584

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

DRAINAGE SCUPPER DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

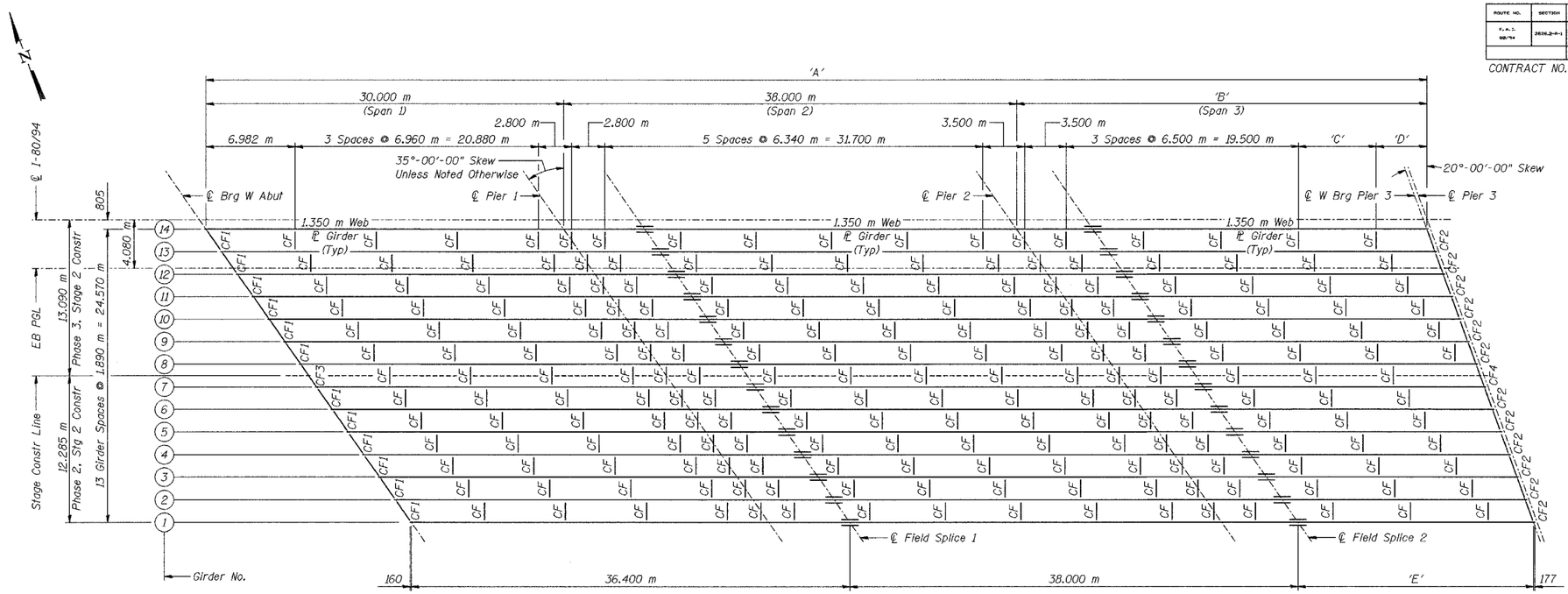
DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	652
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-33
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



TOP OF WEB ELEVATION TABLE

(For Fabrication Use Only)

Girder	℄ Brg W Abut	℄ Pier 1	℄ Field Splice 1	℄ Pier 2	℄ Field Splice 2	℄ Brg Pier 3
14	191.260	191.465	191.511	191.613	191.634	191.648
13	191.319	191.520	191.566	191.663	191.682	191.695
12	191.378	191.575	191.620	191.712	191.730	191.741
11	191.437	191.630	191.674	191.760	191.778	191.787
10	191.495	191.685	191.728	191.809	191.826	191.833
9	191.553	191.740	191.782	191.857	191.873	191.880
8	191.612	191.794	191.835	191.906	191.920	191.926
7	191.670	191.848	191.889	191.954	191.967	191.972
6	191.727	191.902	191.942	192.002	192.014	192.018
5	191.785	191.956	191.995	192.050	192.061	192.064
4	191.842	192.010	192.048	192.098	192.108	192.110
3	191.899	192.063	192.100	192.145	192.154	192.155
2	191.957	192.117	192.153	192.192	192.201	192.201
1	192.013	192.170	192.205	192.240	192.247	192.247

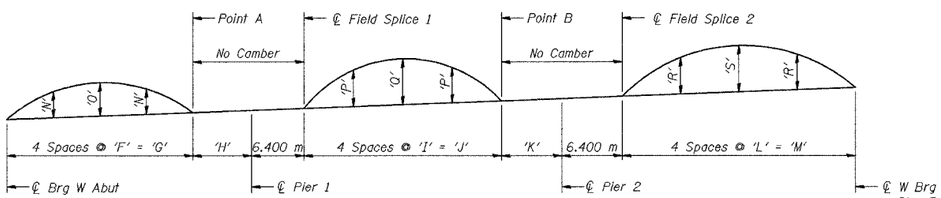
VARIABLE DIMENSION TABLE

(Dimensions in meters)

GIRDER	'A'	'B'	'C'	'D'	'E'
14	102.410	34.410	6.500	4.248	28.010
13	101.775	33.775	6.500	3.613	27.375
12	101.139	33.139	6.500	2.977	26.739
11	100.504	32.504	6.500	2.342	26.104
10	99.868	31.868	6.500	1.706	25.468
9	99.233	31.233	6.500	1.071	24.833
8	98.597	30.597	6.936	-	24.197
7	97.962	29.962	6.300	-	23.562
6	97.326	29.326	5.665	-	22.926
5	96.691	28.691	5.029	-	22.291
4	96.055	28.055	4.394	-	21.655
3	95.420	27.420	3.758	-	21.020
2	94.784	26.784	3.123	-	20.384
1	94.149	26.149	-	-	19.749

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

FRAMING PLAN - UNIT 1 EASTBOUND



CAMBER DIAGRAM

Upward Camber is Positive

CAMBER DIMENSION TABLE

Girder	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	'O'	'P'	'Q'	'R'	'S'
14	±5.640	22.560	7.440	±5.563	22.250	9.350	±7.003	28.010	27	43	36	48	37	53
13	5.630	22.520	7.480	±5.600	22.400	9.200	±6.844	27.375	27	42	37	49	35	50
12	±5.620	22.480	7.520	±5.638	22.550	9.050	±6.685	26.739	26	41	37	51	33	47
11	5.610	22.440	7.560	5.675	22.700	8.900	±6.526	26.104	26	41	38	52	31	44
10	5.600	22.400	7.600	±5.715	22.860	8.740	±6.367	25.468	26	40	39	53	29	41
9	±5.590	22.360	7.640	±5.753	23.010	8.590	6.208	24.833	25	39	39	54	27	39
8	5.580	22.320	7.680	5.790	23.160	8.440	6.049	24.197	25	39	40	55	25	36
7	±5.568	22.270	7.730	±5.828	23.310	8.290	±5.891	23.562	25	38	41	57	23	34
6	5.558	22.230	7.770	±5.865	23.460	8.140	±5.732	22.926	24	38	41	58	22	32
5	±5.548	22.190	7.810	5.903	23.610	7.990	±5.573	22.291	24	37	42	59	20	30
4	±5.538	22.150	7.850	±5.943	23.770	7.830	±5.414	21.655	24	37	42	60	19	29
3	5.528	22.110	7.890	±5.980	23.920	7.680	±5.255	21.020	23	36	43	61	18	27
2	±5.518	22.070	7.930	6.018	24.070	7.530	±5.096	20.384	23	36	43	62	16	25
1	5.508	22.030	7.970	±6.055	24.220	7.380	4.937	19.749	23	35	44	63	15	24

PHASE 2 FOR INFORMATION ONLY

NOTES:

See Sheet No. S-35 for girder elevation.

See Sheet No. S-36 for field splice details and table of moments and shears.

See Sheet No. S-37 for cross frame details.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

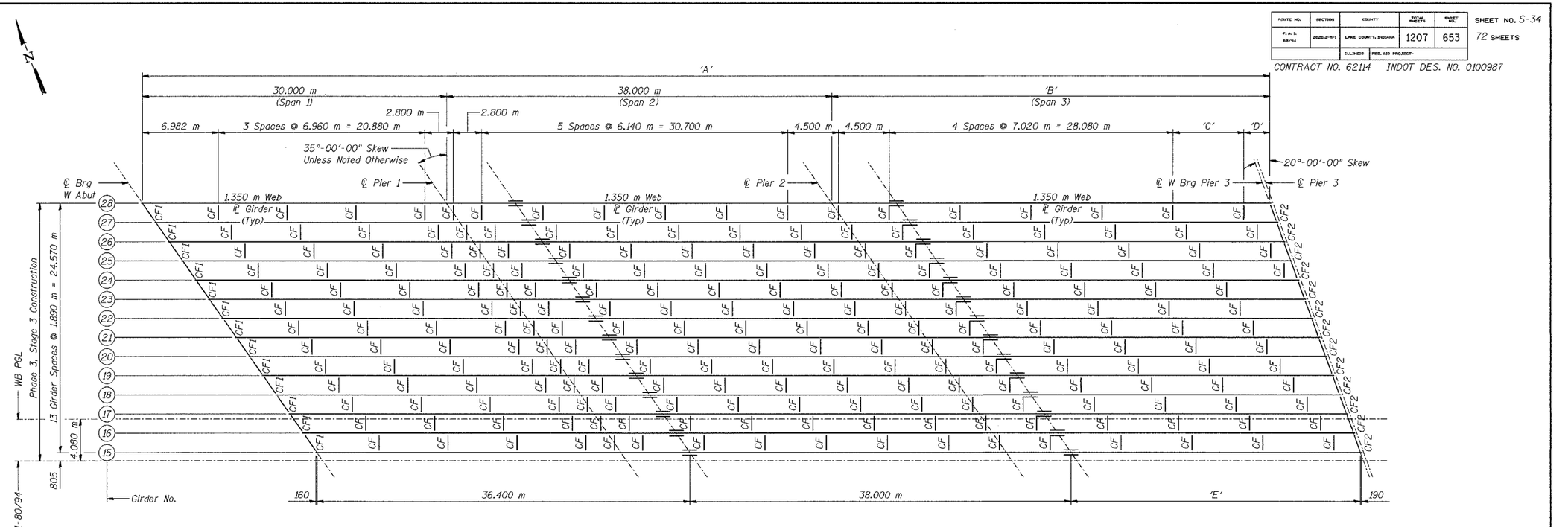
FRAMING PLAN – UNIT 1 EASTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	653
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-34
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



TOP OF WEB ELEVATION TABLE

(For Fabrication Use Only)

Girder	℄ Brg W Abut	℄ Pier 1	℄ Field Splice 1	℄ Pier 2	℄ Field Splice 2	℄ Brg Pier 3
28	191.052	191.303	191.360	191.514	191.546	191.622
27	191.114	191.361	191.417	191.565	191.596	191.669
26	191.175	191.418	191.473	191.616	191.646	191.716
25	191.236	191.476	191.530	191.667	191.695	191.762
24	191.297	191.533	191.587	191.718	191.745	191.809
23	191.357	191.590	191.643	191.768	191.794	191.856
22	191.418	191.647	191.699	191.818	191.843	191.903
21	191.478	191.704	191.755	191.869	191.892	191.949
20	191.538	191.760	191.811	191.919	191.941	191.996
19	191.598	191.817	191.866	191.969	191.990	192.042
18	191.657	191.873	191.922	192.019	192.039	192.089
17	191.717	191.929	191.977	192.069	192.088	192.135
16	191.776	191.984	192.032	192.118	192.136	192.182
15	191.836	192.040	192.086	192.168	192.184	192.228

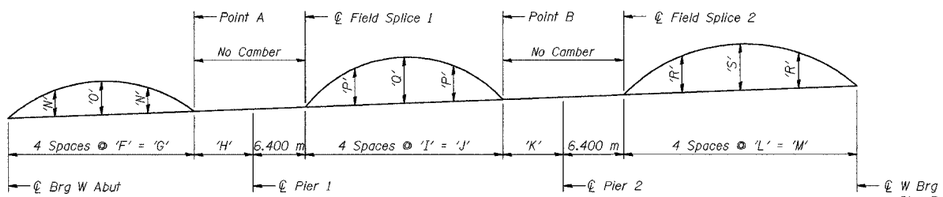
VARIABLE DIMENSION TABLE

(Dimensions in meters)

GIRDER	'A'	'B'	'C'	'D'	'E'
28	111.213	43.213	7.020	2.951	36.813
27	110.577	42.577	7.020	2.316	36.177
26	109.942	41.942	7.020	1.680	35.542
25	109.306	41.306	7.020	1.045	34.906
24	108.671	40.671	7.429	-	34.271
23	108.035	40.035	6.794	-	33.635
22	107.400	39.400	6.158	-	33.000
21	106.764	38.764	5.523	-	32.364
20	106.129	38.129	4.887	-	31.729
19	105.493	37.493	4.251	-	31.093
18	104.858	36.858	3.616	-	30.458
17	104.222	36.222	2.980	-	29.822
16	103.587	35.587	2.345	-	29.187
15	102.951	34.951	-	-	28.551

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

FRAMING PLAN - UNIT 1 WESTBOUND



CAMBER DIAGRAM

Upward Camber is Positive

CAMBER DIMENSION TABLE

Girder	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	'O'	'P'	'Q'	'R'	'S'
28	± 5.918	23.670	6.330	± 4.458	17.830	13.770	± 9.203	36.813	30	46	28	35	85	120
27	5.900	23.600	6.400	± 4.525	18.100	13.500	± 9.044	36.177	29	46	29	36	81	115
26	± 5.883	23.530	6.470	± 4.593	18.370	13.230	± 8.886	35.542	29	45	30	37	77	110
25	5.865	23.460	6.540	4.660	18.640	12.960	± 8.727	34.906	29	45	30	39	73	104
24	5.850	23.400	6.600	± 4.728	18.910	12.690	± 8.568	34.271	29	44	31	40	69	99
23	± 5.833	23.330	6.670	± 4.795	19.180	12.420	8.409	33.635	28	44	32	42	65	94
22	5.815	23.260	6.740	4.863	19.450	12.150	8.250	33.000	28	43	33	43	61	89
21	± 5.798	23.190	6.810	± 4.930	19.720	11.880	± 8.091	32.364	28	43	34	44	58	85
20	5.780	23.120	6.880	± 4.998	19.990	11.610	± 7.932	31.729	28	43	34	46	55	81
19	± 5.763	23.050	6.950	5.065	20.260	11.340	± 7.773	31.093	27	42	35	47	53	78
18	± 5.748	22.990	7.010	± 5.133	20.530	11.070	± 7.615	30.458	27	42	36	48	50	74
17	5.730	22.920	7.080	± 5.200	20.800	10.800	± 7.456	29.822	27	41	36	50	47	71
16	± 5.713	22.850	7.150	5.268	21.070	10.530	± 7.297	29.187	27	41	37	51	45	67
15	5.695	22.780	7.220	± 5.335	21.340	10.260	7.138	28.551	26	40	38	52	42	64

NOTES:

See Sheet No. S-35 for girder elevation.

See Sheet No. S-36 for field splice details and table of moments and shears.

See Sheet No. S-37 for cross frame details.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

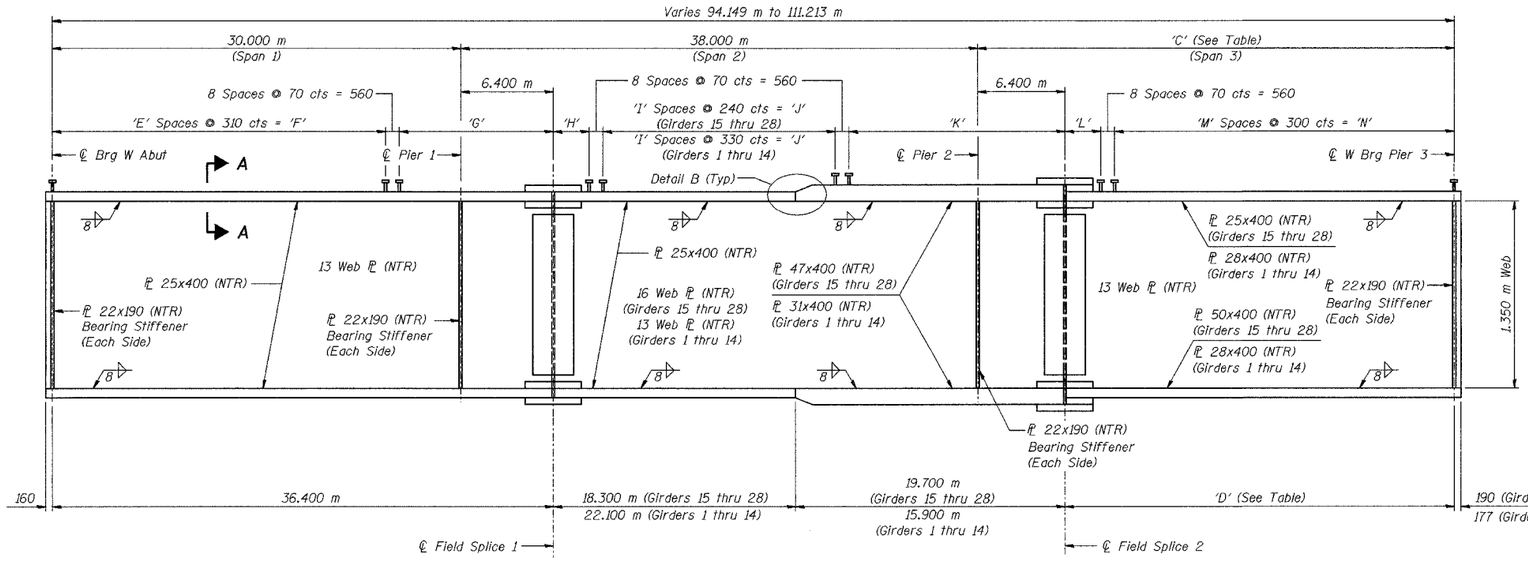
FRAMING PLAN – UNIT 1 WESTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. RTE. 94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	654
		ILLINOIS	FED. AID PROJECT-	

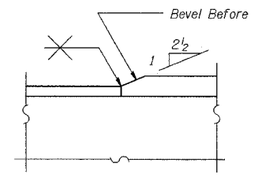
SHEET NO. S-35
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

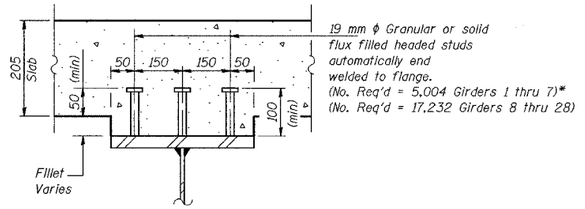


GIRDER ELEVATION

All structural steel on this sheet shall be AASHTO M 270M Grade 345W.



DETAIL B



19 mm ϕ Granular or solid flux filled headed studs automatically end welded to flange.
(No. Req'd = 5.004 Girders 1 thru 7)*
(No. Req'd = 17.232 Girders 8 thru 28)

SECTION A-A

VARIABLE DIMENSION TABLE

	GIRDER	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'
	28	43.213	36.813	76	23.560	12.280	0.690	70	16.800	19.390	2.653	112	33.600
	27	42.577	36.177	75	23.250	12.590	0.690	71	17.040	19.150	2.617	110	33.000
	26	41.942	35.542	75	23.250	12.590	0.690	72	17.280	18.910	2.582	108	32.400
	25	41.306	34.906	75	23.250	12.590	0.700	73	17.520	18.660	2.546	106	31.800
	24	40.671	34.271	75	23.250	12.590	0.700	74	17.760	18.420	2.511	104	31.200
	23	40.035	33.635	74	22.940	12.900	0.700	75	18.000	18.180	2.475	102	30.600
	22	39.400	33.000	74	22.940	12.900	0.700	76	18.240	17.940	2.440	100	30.000
	21	38.764	32.364	74	22.940	12.900	0.710	77	18.480	17.690	2.404	98	29.400
	20	38.129	31.729	74	22.940	12.900	0.710	78	18.720	17.450	2.369	96	28.800
	19	37.493	31.093	73	22.630	13.210	0.710	79	18.960	17.210	2.333	94	28.200
	18	36.858	30.458	73	22.630	13.210	0.710	80	19.200	16.970	2.298	92	27.600
	17	36.222	29.822	73	22.630	13.210	0.720	81	19.440	16.720	2.262	90	27.000
	16	35.587	29.187	73	22.630	13.210	0.720	82	19.680	16.480	2.227	88	26.400
	15	34.951	28.551	73	22.630	13.210	0.720	84	20.160	16.000	1.891	87	26.100
	14	34.410	28.010	73	22.630	13.210	0.860	63	20.790	15.230	1.350	87	26.100
	13	33.775	27.375	72	22.320	13.520	0.860	63	20.790	15.230	1.615	84	25.200
	12	33.139	26.739	72	22.320	13.520	0.860	63	20.790	15.230	1.579	82	24.600
	11	32.504	26.104	72	22.320	13.520	0.860	64	21.120	14.900	1.544	80	24.000
	10	31.868	25.468	72	22.320	13.520	0.860	64	21.120	14.900	1.508	78	23.400
	9	31.233	24.833	72	22.320	13.520	0.860	65	21.450	14.570	1.473	76	22.800
	8	30.597	24.197	72	22.320	13.520	0.860	65	21.450	14.570	1.437	74	22.200
*	7	29.962	23.562	71	22.010	13.830	0.870	66	21.780	14.230	1.702	71	21.300
*	6	29.326	22.926	71	22.010	13.830	0.870	66	21.780	14.230	1.666	69	20.700
*	5	28.691	22.291	71	22.010	13.830	0.870	67	22.110	13.900	1.631	67	20.100
*	4	28.055	21.655	71	22.010	13.830	0.870	67	22.110	13.900	1.595	65	19.500
*	3	27.420	21.020	71	22.010	13.830	0.870	68	22.440	13.570	1.560	63	18.900
*	2	26.784	20.384	71	22.010	13.830	0.870	68	22.440	13.570	1.524	61	18.300
*	1	26.149	19.749	71	22.010	13.830	0.870	69	22.770	13.240	1.489	59	17.700

NOTES:

See Sheet No. S-36 for field splice details and table of moments and shears.

See Sheet No. S-37 for cross frame details.

NTR denotes notch toughness requirements.

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

*FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

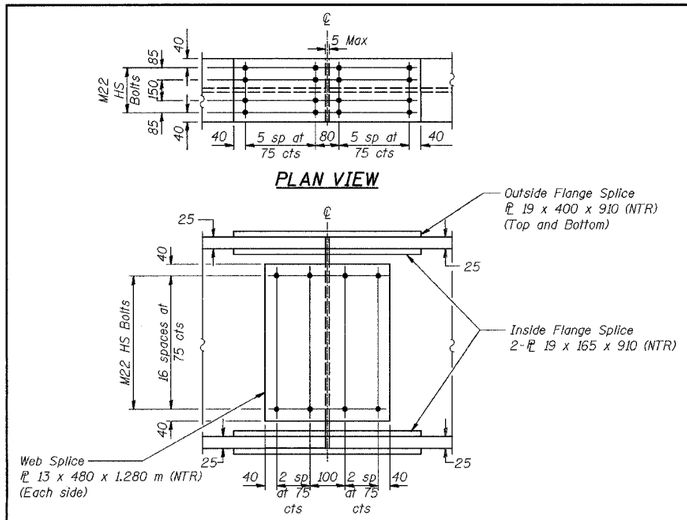
FRAMING DETAILS – UNIT 1 (1 OF 3)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	655
	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-36
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



INTERIOR GIRDER MOMENT TABLE - WESTBOUND

		0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
Is	(10^6 mm⁴)	12058	12058	12714	21612	16058
Ic (n)	(10^6 mm⁴)	23114	———	24351	———	33545
Ic (3n)	(10^6 mm⁴)	17479	———	18272	———	24171
Ss	(10^3 mm³)	17226	17226	18163	29934	27983
Sc (n)	(10^3 mm³)	21448	———	23055	———	34605
Sc (3n)	(10^3 mm³)	19737	———	20990	———	31905
Z	(10^3 mm³)	———	———	———	———	———
℄	(kN/m)	13.37	23.02	13.75	24.96	14.25
M℄	(kN·m)	932	2358	704	4579	2025
s℄	(kN/m)	9.65	———	9.65	———	9.65
Ms℄	(kN·m)	713	———	668	———	1518
M℄	(kN·m)	1189	776	1249	1246	1917
M (Imp)	(kN·m)	266	164	250	241	359
$\frac{5}{3}$[M℄+M(Imp)]	(kN·m)	2426	1566	2498	2479	3794
Ma	(kN·m)	5292	5101	5031	9174	9539
Mu	(kN·m)	6765	———	5603	———	10851
fs℄ non-comp	(MPa)	54	137	39	153	72
fs℄ (comp)	(MPa)	36	———	32	———	48
fs $\frac{5}{3}$(℄+Imp)	(MPa)	113	91	108	83	110
fs (Overload)	(MPa)	203	228	179	236	230
fs (Total)	(MPa)	———	296	———	306	———
VR	(kN)	167	———	189	———	200

INTERIOR GIRDER MOMENT TABLE - EASTBOUND

		0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
Is	(10^6 mm⁴)	12058	12058	12058	14430	13239
Ic (n)	(10^6 mm⁴)	23114	———	23114	———	24713
Ic (3n)	(10^6 mm⁴)	17479	———	17479	———	18781
Ss	(10^3 mm³)	17226	17226	17226	20439	18832
Sc (n)	(10^3 mm³)	21448	———	21448	———	23099
Sc (3n)	(10^3 mm³)	19737	———	19737	———	21328
Z	(10^3 mm³)	———	———	———	———	———
℄	(kN/m)	13.37	23.02	13.37	24.44	13.58
M℄	(kN·m)	852	2573	870	3058	1172
s℄	(kN/m)	9.65	———	9.65	———	9.65
Ms℄	(kN·m)	672	———	792	———	910
M℄	(kN·m)	1186	792	1270	933	1383
M (Imp)	(kN·m)	265	167	254	191	291
$\frac{5}{3}$[M℄+M(Imp)]	(kN·m)	2418	1598	2540	1874	2790
Ma	(kN·m)	5125	5423	5463	6412	6335
Mu	(kN·m)	6605	———	7086	———	7107
fs℄ non-comp	(MPa)	49	149	51	150	62
fs℄ (comp)	(MPa)	34	———	40	———	43
fs $\frac{5}{3}$(℄+Imp)	(MPa)	113	93	118	92	121
fs (Overload)	(MPa)	196	242	209	241	226
fs (Total)	(MPa)	———	315	———	314	———
VR	(kN)	186	———	189	———	185

INT GIRDER RXN TABLE - WESTBOUND

		W Abut	Pier 1	Pier 2	Pier 3
R℄	(kN)	275	839	1157	412
R℄	(kN)	192	284	320	225
Imp.	(kN)	43	60	62	42
R (Total)	(kN)	510	1183	1539	679

INT GIRDER RXN TABLE - EASTBOUND

		W Abut	Pier 1	Pier 2	Pier 3
R℄	(kN)	265	873	948	311
R℄	(kN)	192	284	289	206
Imp.	(kN)	43	60	59	43
R (Total)	(kN)	500	1217	1296	560

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

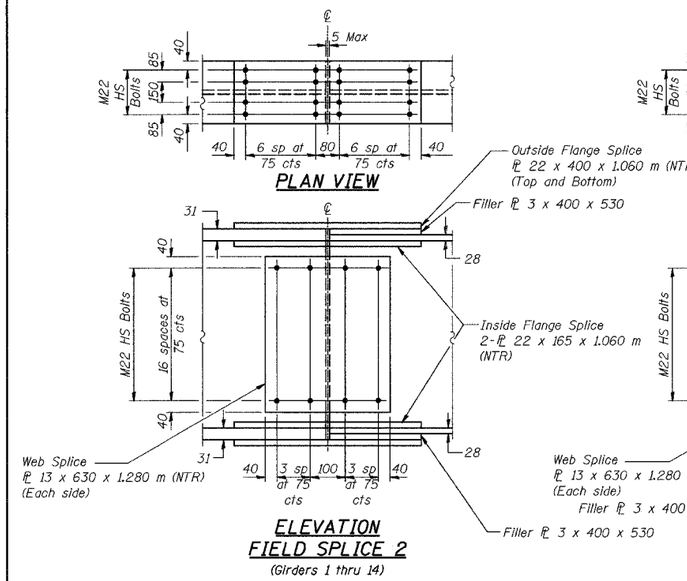
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

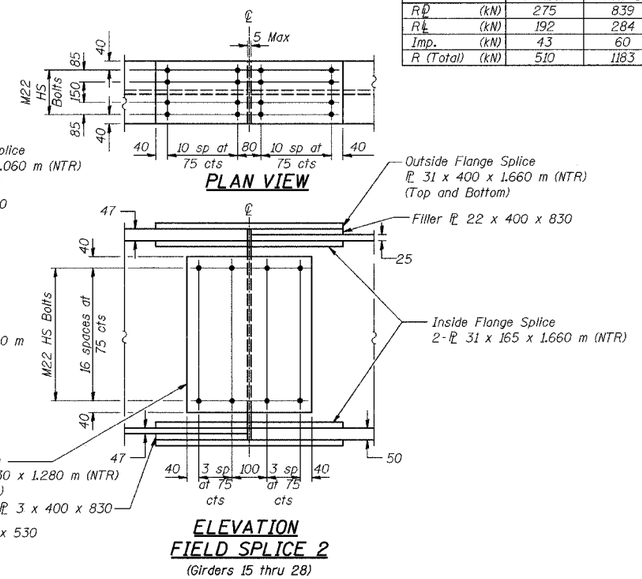
Ma (Applied Moment)=1.3[M℄ + Ms℄ + $\frac{5}{3}$(M℄ + M imp)].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + $\frac{5}{3}$(M℄ + M imp).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + $\frac{5}{3}$(M℄ + M imp)].





DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

NTR denotes notch toughness requirements.

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

All splice plate material shall be AASHTO M 270M, Grade 345W.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

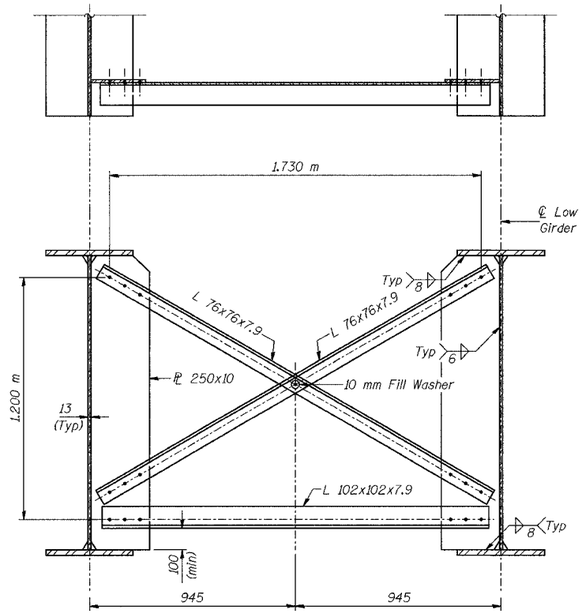
FRAMING DETAILS – UNIT 1 (2 OF 3)
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	656
		ILLINOIS	FED. AID PROJECT-	

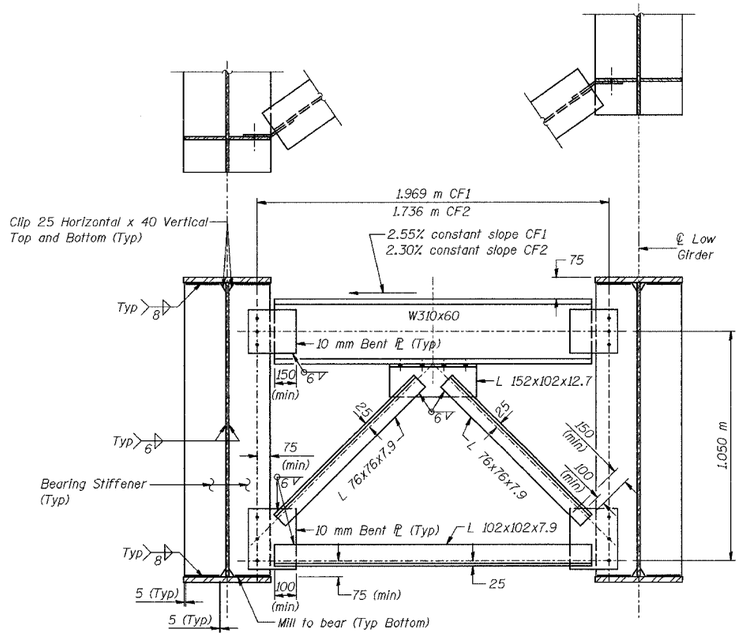
SHEET NO. S-37
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



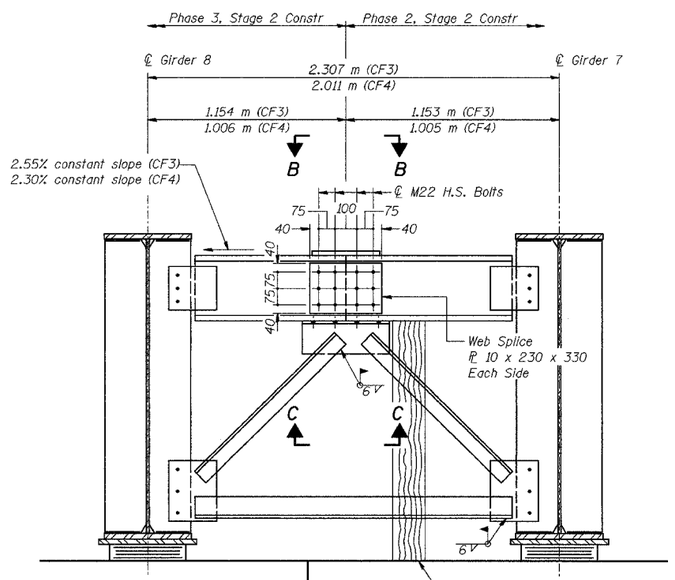
INTERIOR CROSS FRAME CF

439 Required



END CROSS FRAME CF1 OR CF2

CF1 - 25 Required
CF2 - 25 Required

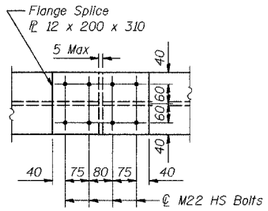


END CROSS FRAME CF3 OR CF4

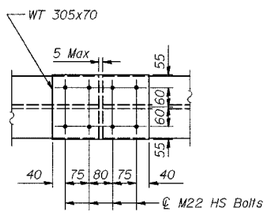
(Looking East)
CF3-1 Required, CF4-1 Required

CROSS FRAME CF3 AND CF4 CONSTRUCTION SEQUENCE

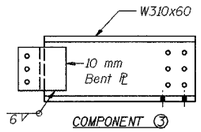
1) Order Cross Frame CF3 and CF4 in three components as shown.
2) Attach component ① to the bearing stiffener on Girder 7 and top flange splice ℄ to component ① during Phase 2, Stage 2 Construction.
3) Place Timber Block Post between component ① and bearing seat.
4) Attach component ③ to the bearing stiffener on Girder 8 and attach component ② to components ① and ③ during Phase 3, Stage 2 Construction.
5) Attach web splice plates to components ① and ③.
6) Remove Timber Block Post.

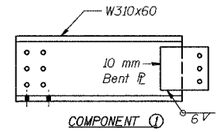


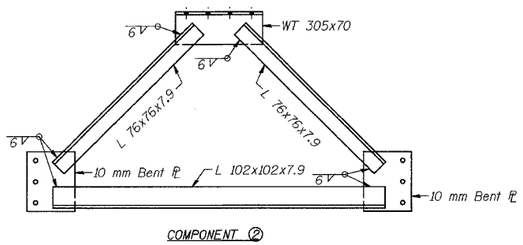
SECTION B-B



SECTION C-C







END CROSS FRAME CF3 OR CF4 COMPONENTS

NOTES:

All open holes shall be 28 mm ϕ for M22 HS bolts

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

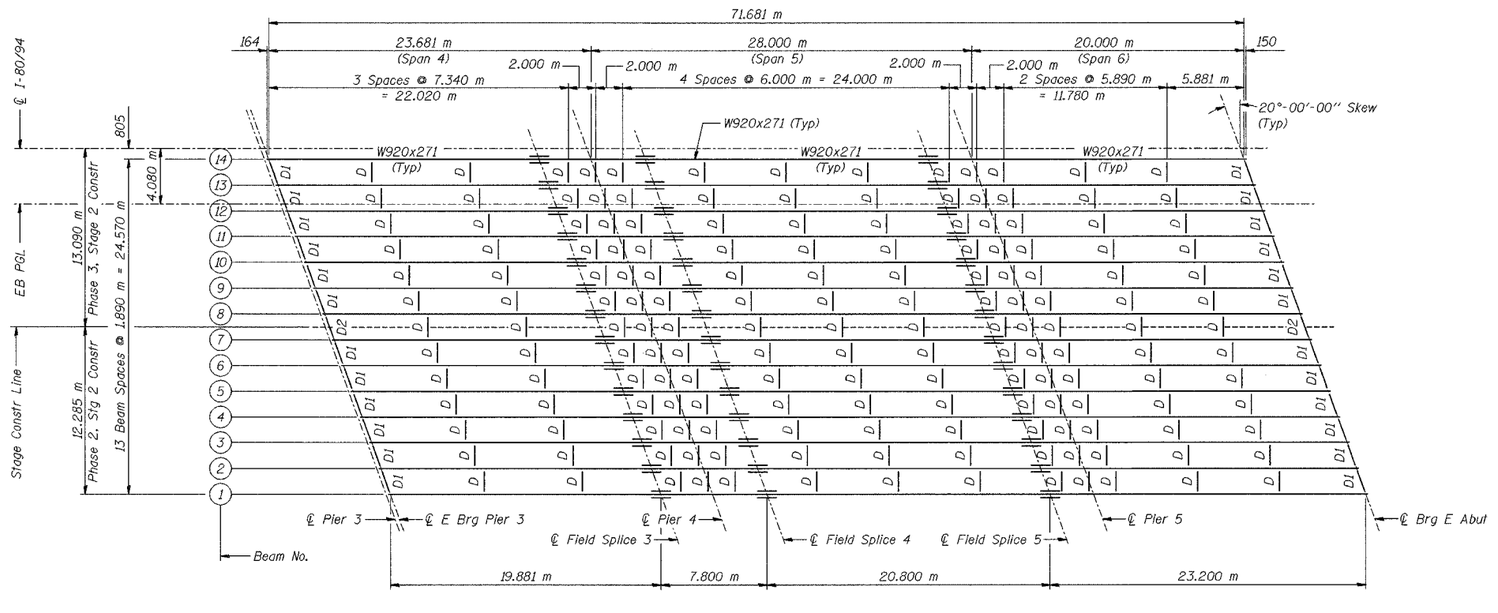
FRAMING DETAILS – UNIT 1 (3 OF 3)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	657
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-38
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



FRAMING PLAN - UNIT 2 EASTBOUND

TOP OF BEAM ELEVATION TABLE

(For Fabrication Use Only)

Beam	℄ Brg Pier 3	℄ Field Splice 3	℄ Pier 4	℄ Field Splice 4	℄ Field Splice 5	℄ Pier 5	℄ Brg E Abut
14	191.681	191.608	191.594	191.580	191.473	191.452	191.327
13	191.727	191.653	191.639	191.624	191.515	191.495	191.368
12	191.773	191.698	191.683	191.668	191.558	191.538	191.410
11	191.819	191.742	191.728	191.713	191.601	191.581	191.451
10	191.865	191.787	191.773	191.757	191.644	191.623	191.492
9	191.911	191.832	191.817	191.801	191.687	191.666	191.533
8	191.958	191.877	191.861	191.845	191.730	191.708	191.574
7	192.004	191.921	191.906	191.890	191.772	191.751	191.616
6	192.050	191.966	191.950	191.934	191.815	191.793	191.657
5	192.095	192.010	191.994	191.978	191.858	191.835	191.698
4	192.141	192.055	192.039	192.022	191.900	191.878	191.739
3	192.187	192.099	192.083	192.065	191.943	191.920	191.779
2	192.233	192.144	192.127	192.109	191.985	191.962	191.820
1	192.279	192.188	192.171	192.153	192.027	192.004	191.861

NOTES:

See Sheet No. S-40 for beam elevation, field splice detail, and table of moments and shears.

See Sheet No. S-41 for diaphragm details.

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

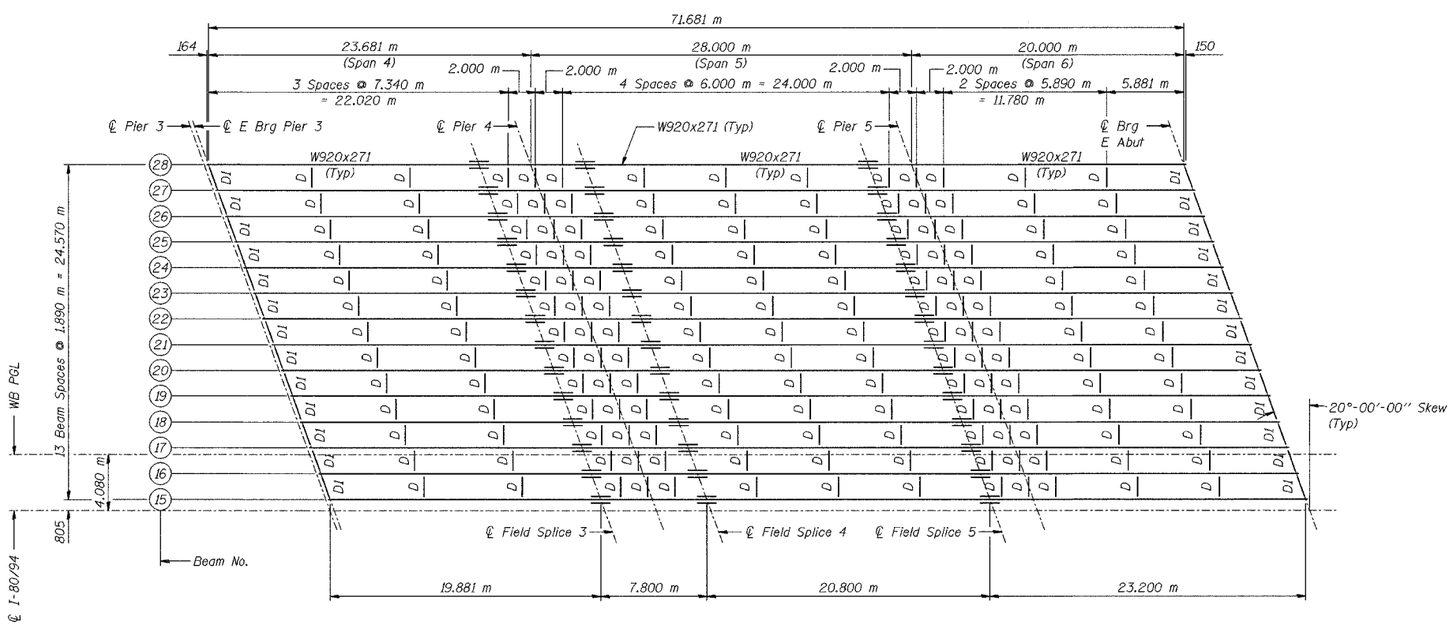
FRAMING PLAN – UNIT 2 EASTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	658
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-39
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



FRAMING PLAN - UNIT 2 WESTBOUND

TOP OF BEAM ELEVATION TABLE

(For Fabrication Use Only)

Beam	℄ Brg Pier 3	℄ Field Splice 3	℄ Pier 4	℄ Field Splice 4	℄ Field Splice 5	℄ Pier 5	℄ Brg E Abut
28	191.652	191.596	191.585	191.574	191.485	191.468	191.359
27	191.698	191.641	191.631	191.619	191.529	191.511	191.401
26	191.745	191.687	191.676	191.664	191.572	191.554	191.443
25	191.792	191.732	191.721	191.709	191.616	191.598	191.485
24	191.839	191.778	191.766	191.754	191.659	191.641	191.527
23	191.885	191.823	191.811	191.799	191.702	191.684	191.569
22	191.932	191.868	191.856	191.844	191.746	191.727	191.610
21	191.979	191.914	191.901	191.888	191.789	191.770	191.652
20	192.025	191.959	191.946	191.933	191.832	191.813	191.694
19	192.072	192.004	191.991	191.978	191.875	191.856	191.735
18	192.118	192.049	192.036	192.022	191.918	191.899	191.777
17	192.165	192.094	192.081	192.067	191.962	191.942	191.818
16	192.211	192.139	192.125	192.111	192.005	191.985	191.860
15	192.257	192.184	192.170	192.156	192.048	192.027	191.901

NOTES:

See Sheet No. S-40 for beam elevation, field splice detail, and table of moments and shears.

See Sheet No. S-41 for diaphragm details.

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

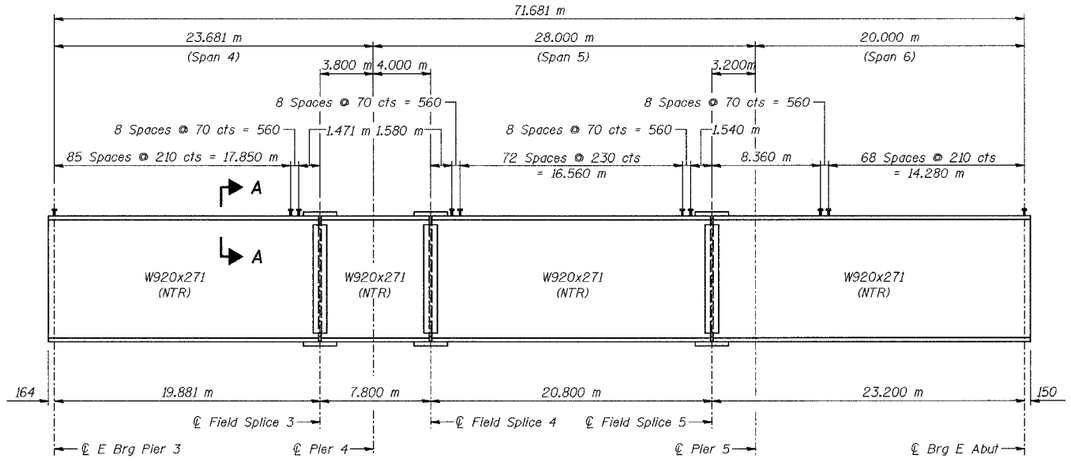
FRAMING PLAN – UNIT 2 WESTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

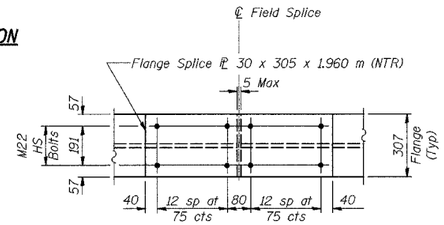
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	659
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-40
72 SHEETS

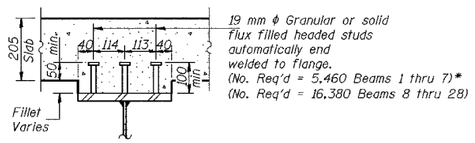
CONTRACT NO. 62114 INDOT DES. NO. 0100987



BEAM ELEVATION

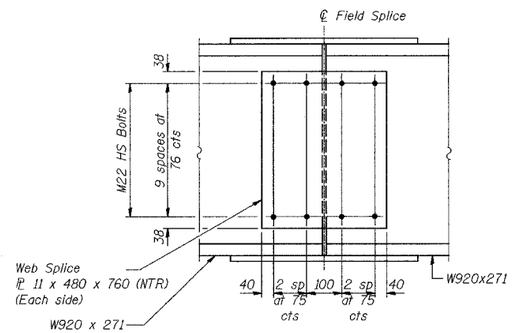


PLAN VIEW TOP AND BOTTOM



19 mm ϕ Granular or solid flux filled headed studs automatically end welded to flange.
(No. Req'd = 5.460 Beams 1 thru 7)*
(No. Req'd = 16.380 Beams 8 thru 28)

SECTION A-A



ELEVATION FIELD SPLICE 3, 4 & 5

INTERIOR BEAM MOMENT TABLE

		0.4 Span 4	Pier 4	0.5 Span 5	Pier 5	0.6 Span 6
Is	(10^6 mm⁴)	4703	4703	4703	4703	4703
Ic (n)	(10^6 mm⁴)	9902	———	9902	———	9902
Ic (3n)	(10^6 mm⁴)	7291	———	7291	———	7291
Ss	(10^3 mm³)	10209	10209	10209	10209	10209
Sc (n)	(10^3 mm³)	13498	———	13498	———	13498
Sc (3n)	(10^3 mm³)	12201	———	12201	———	12201
Z	(10^3 mm³)	———	———	———	———	———
ℙ	(kN/m)	12.92	22.57	12.92	22.57	12.92
Mℙ	(kN·m)	512	1446	446	1209	327
sℙ	(kN/m)	9.65	———	9.65	———	9.65
Msℙ	(kN·m)	430	———	439	———	278
M℔	(kN·m)	883	503	899	487	709
M (Imp)	(kN·m)	218	124	207	128	186
$5/3$[M℔+M(Imp)]	(kN·m)	1835	1045	1845	1024	1492
Ma	(kN·m)	3610	3238	3549	2903	2727
Mu	(kN·m)	5562	———	5562	———	5562
fsℙ non-comp	(MPa)	50	142	44	118	32
fsℙ (comp)	(MPa)	35	———	36	———	23
fs $5/3$(℔+Imp)	(MPa)	136	102	137	100	111
fs (Overload)	(MPa)	221	244	216	219	165
fs (Total)	(MPa)	———	317	———	284	———
VR	(kN)	129	———	139	———	121

INTERIOR BEAM REACTION TABLE

		Pier 3	Pier 4	Pier 5	E Abut
Rℙ	(kN)	206	653	594	165
R℔	(kN)	182	265	260	175
Imp.	(kN)	45	65	68	46
R (Total)	(kN)	433	983	922	386

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[Mℙ + Msℙ + $5/3$(M℔ + M_{imp})].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to Mℙ + Msℙ + $5/3$(M℔ + M_{imp}).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[Mℙ + Msℙ + $5/3$(M℔ + M_{imp})].

DESIGNED	BHS
CHECKED	KFA
DRAWN	BHS
CHECKED	GSP

NOTES:

All structural steel on this sheet shall be AASHTO M 270M, Grade 345W.

See Sheet No. S-41 for diaphragm details.

NTR denotes notch toughness requirements.

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

*FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

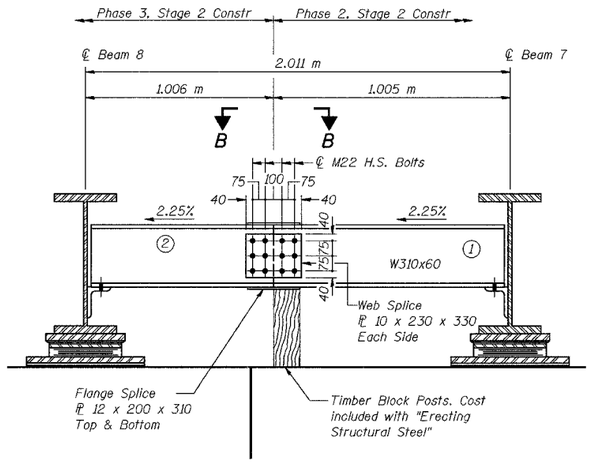
FRAMING DETAILS – UNIT 2 (1 OF 2)
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	660
		ILLINOIS	FED. AID PROJECT=	

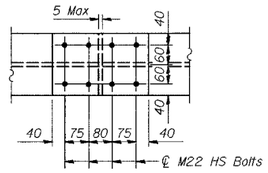
SHEET NO. S-41
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



DIAPHRAGM D2

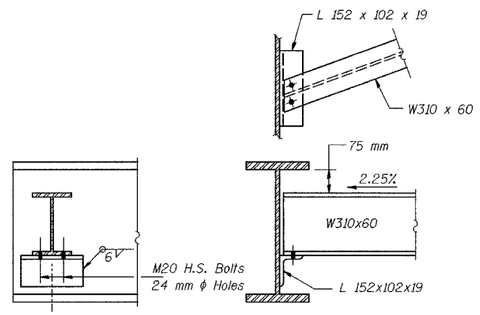
(Looking East)
2 Required
For details of connections to Beams see Diaphragm D6
(All dimensions are along skew)



SECTION B-B

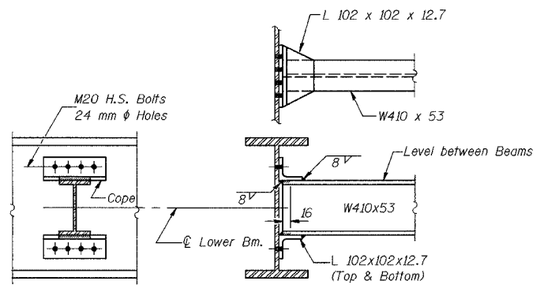
DIAPHRAGM D2 CONSTRUCTION SEQUENCE

1) Order Diaphragm D2 in two sections with lengths of 1.006 m and 1.005 m
2) Attach section (1) of diaphragm to Beam 7 and top flange splice ℄ during Phase 2, Stage 2 Construction.
3) Place Timber Block Post between section (1) of diaphragm and bearing seat.
4) Attach section (2) of diaphragm to both Beam 8 and section (1) of diaphragm during Phase 3, Stage 2 Construction.
5) Attach web splice plates to sections (1) and (2) of diaphragm.
6) Remove Timber Block Post.
7) Attach bottom flange splice plate to sections (1) and (2) of diaphragm.



DIAPHRAGM D1

50 Required



DIAPHRAGM D

338 Required

Note: Two hardened washers shall be required over all oversize holes for diaphragms.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

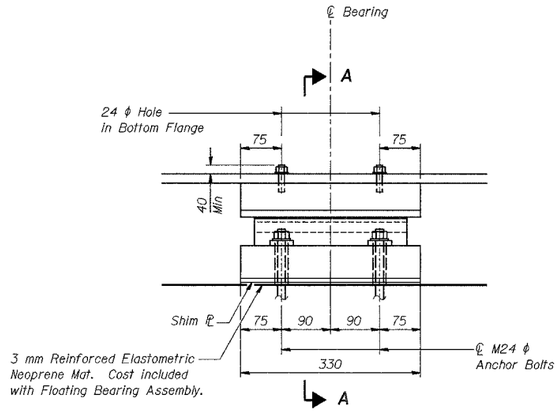
FRAMING DETAILS – UNIT 2 (2 OF 2)
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

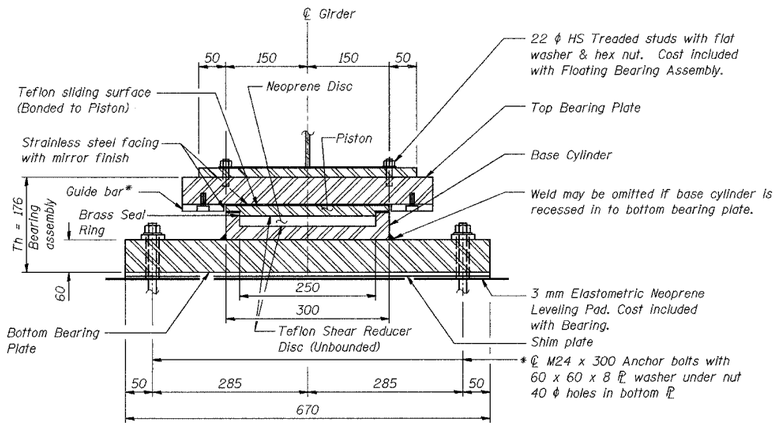
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	661
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-42
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



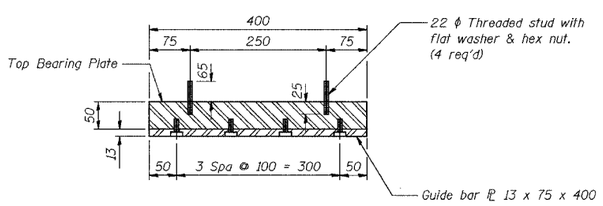
ELEVATION



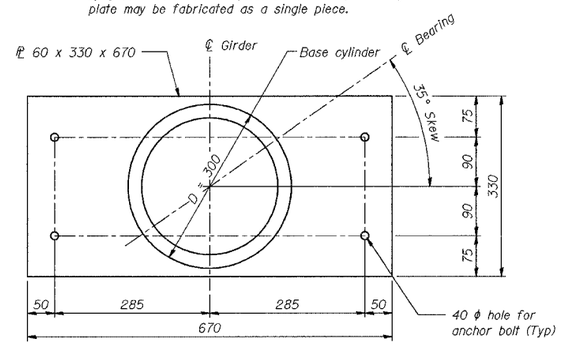
SECTION A-A

FLOATING BEARING AT PIER 1

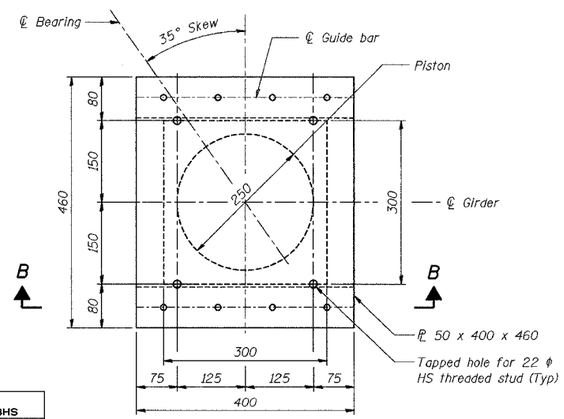
* As alternates to bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



SECTION B-B



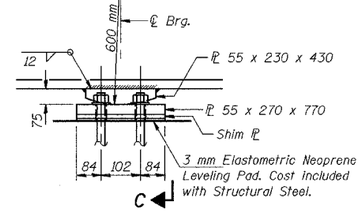
BOTTOM BEARING ℙ AND CYLINDER PLAN



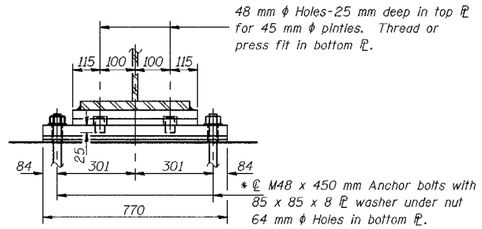
TOP BEARING ℙ AND PISTON PLAN

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

Max expansion length = 30 m
Total dead load + live load without impact = 1157 kN
Lateral load = 231 kN
Rotation capacity = 0.025 radians

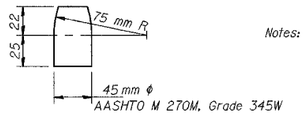


ELEVATION AT PIER



SECTION C-C

FIXED BEARING AT PIER 2



PINTLE

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See Sheet S-47 for Anchor Bolt installation.
All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

	Item	Unit	Total
*	Furnishing Floating Bearings, Guided Expansion, 1250 kN	Each	28

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BEARING DETAILS (1 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

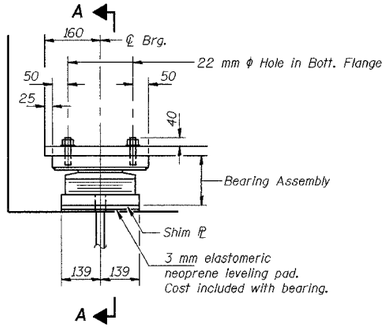
AMERICAN CONSULTING ENGINEERS

***FURNISHING BEARINGS NOT INCLUDED IN THIS CONTRACT**

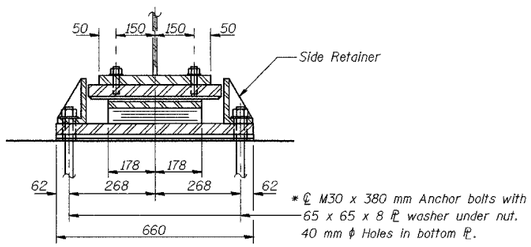
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	662
	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-43
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

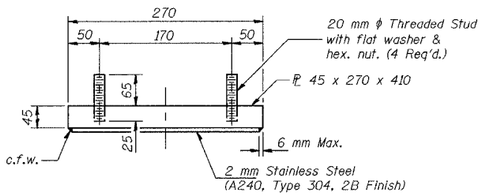


ELEVATION AT ABUT.

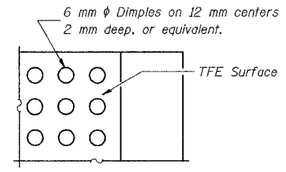


SECTION A-A

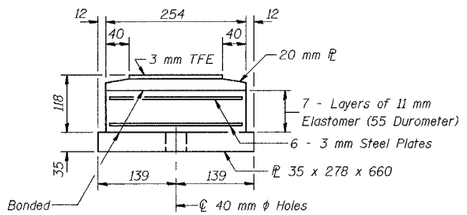
TYPE II ELASTOMERIC EXP. BRG. AT WEST ABUTMENT



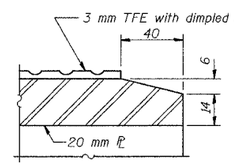
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



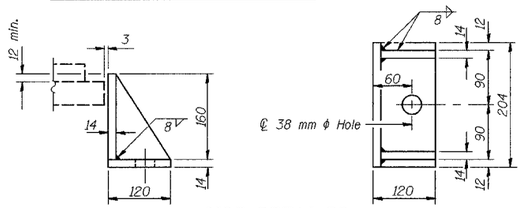
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

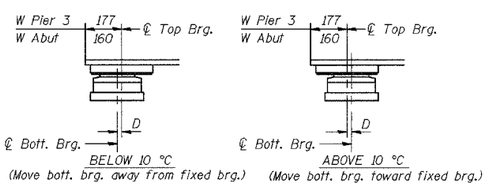
Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER

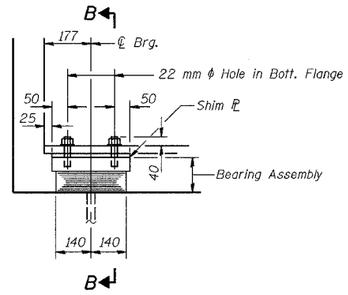
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.



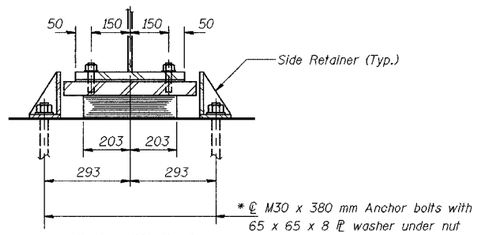
SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

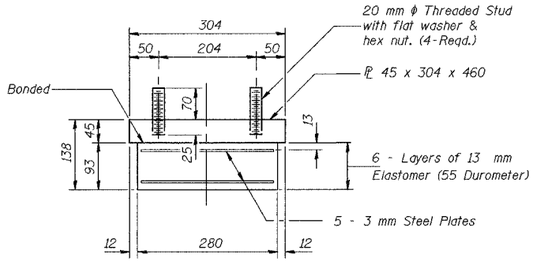


ELEVATION AT ABUT.



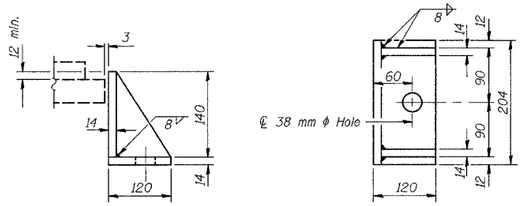
SECTION B-B

TYPE I ELASTOMERIC WEST EXP. BRG. AT PIER 3 GIRDERS 1-14



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.

Notes: See Sheet S-47 for Anchor Bolt installation. All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

	Item	Unit	Total
*	Furnishing Elastomeric Bearing Assembly, Type I	Each	14
*	Furnishing Elastomeric Bearing Assembly, Type II	Each	28

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BEARING DETAILS (2 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

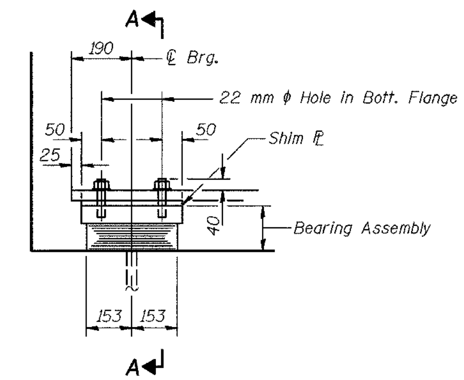
AMERICAN CONSULTING ENGINEERS

***FURNISHING BEARINGS NOT INCLUDED IN THIS CONTRACT**

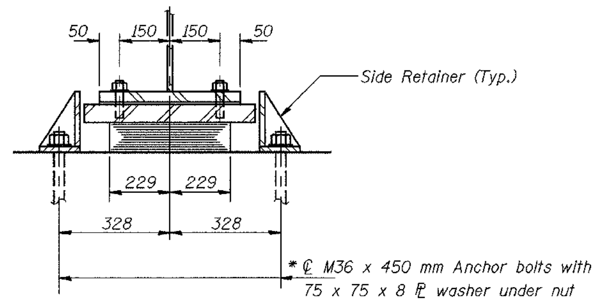
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	663
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-44
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

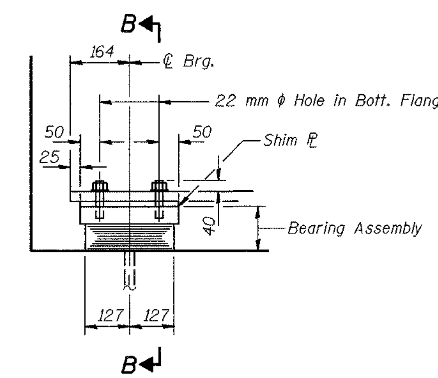


ELEVATION AT ABUT.

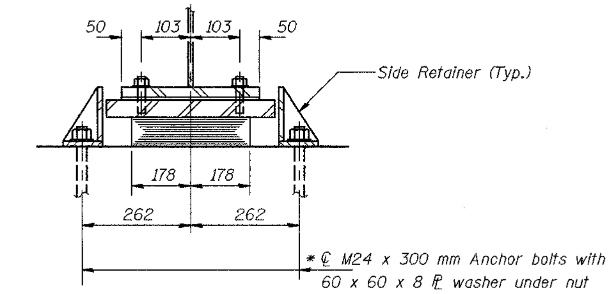


SECTION A-A

TYPE I ELASTOMERIC WEST EXP. BRG. AT PIER 3 GIRDERS 15 - 28



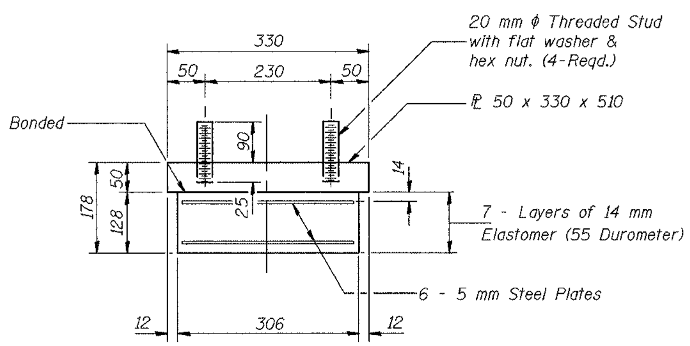
ELEVATION AT ABUT.



SECTION B-B

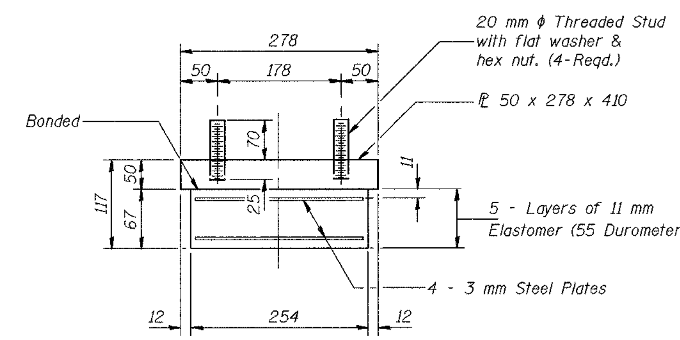
TYPE I ELASTOMERIC EAST EXP. BRG. AT PIER 3

Notes: See Sheet S-47 for Anchor Bolt Installation.
All dimensions are in millimeters (mm) except as noted.



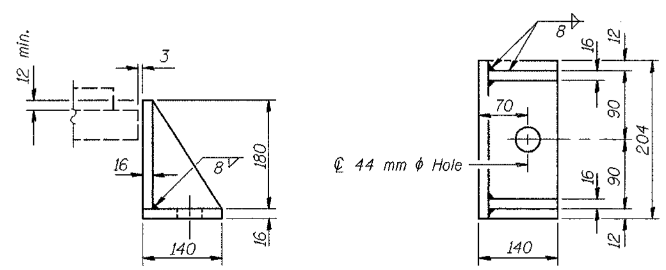
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

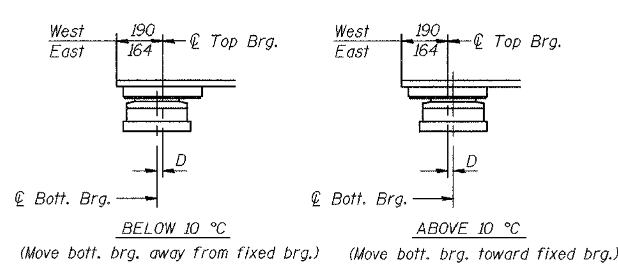


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.

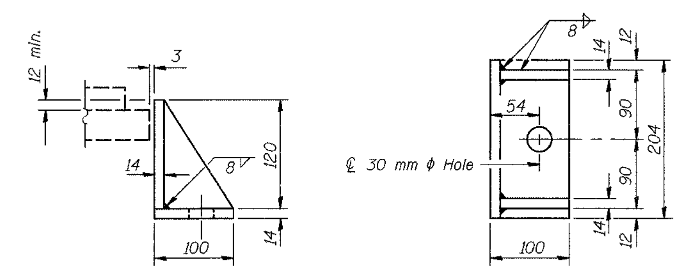
Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.

BILL OF MATERIAL

	Item	Unit	Total
*	Furnishing Elastomeric Bearing Assembly, Type I	Each	42

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

***FURNISHING BEARINGS NOT INCLUDED IN THIS CONTRACT**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

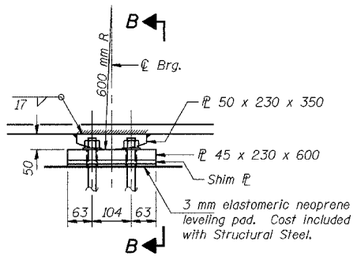
BEARING DETAILS (3 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN
CONSULTING ENGINEERS

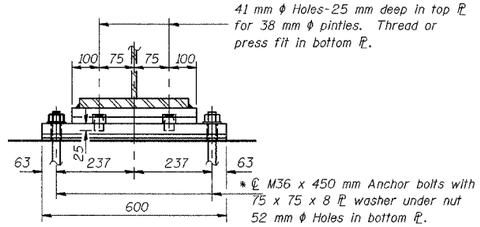
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	664
		BLLI-1003	FED. AID PROJECT-	

SHEET NO. S-45
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

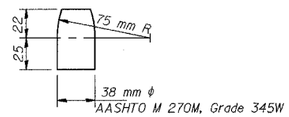


ELEVATION AT PIER

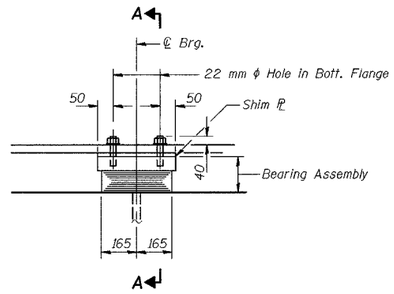


SECTION B-B

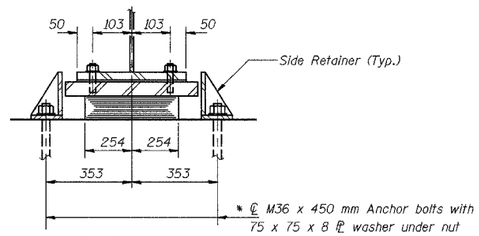
FIXED BEARING AT PIER 4



PINTLE

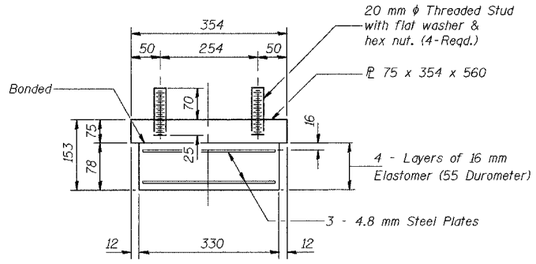


ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT PIER 5



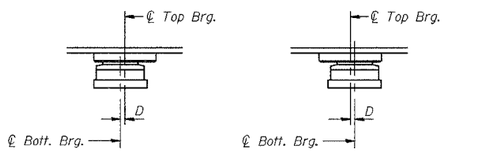
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See Sheet S-47 for Anchor Bolt installation.
All dimensions are in millimeters (mm) except as noted.

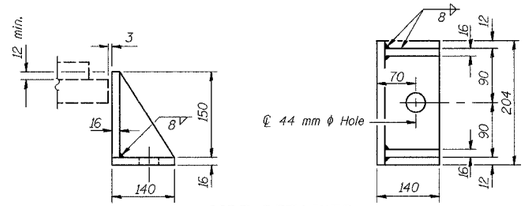
Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.

BILL OF MATERIAL

	Item	Unit	Total
*	Furnishing Elastomeric Bearing Assembly, Type I	Each	28

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

*FURNISHING BEARINGS NOT INCLUDED IN THIS CONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

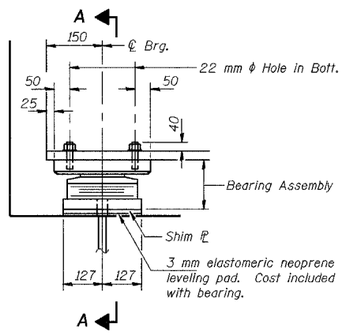
BEARING DETAILS (4 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

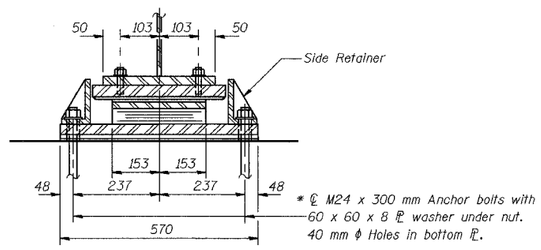
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	665
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-46
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



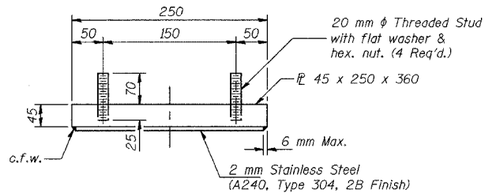
ELEVATION AT ABUT.



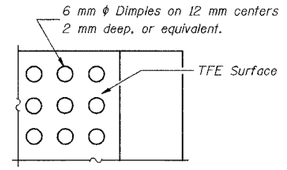
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. AT EAST ABUTMENT

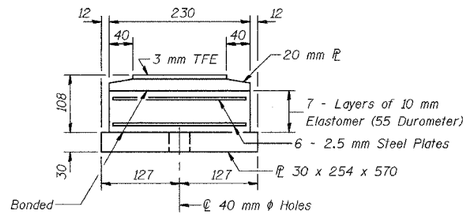
Notes: See Sheet S-47 for Anchor Bolt installation.
All dimensions are in millimeters (mm) except as noted.

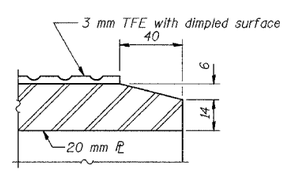


TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



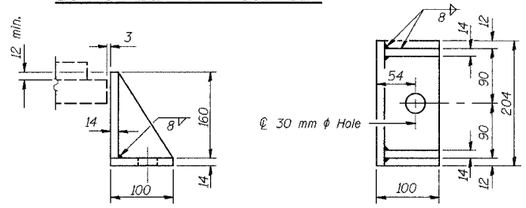


SECTION THRU TFE

Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

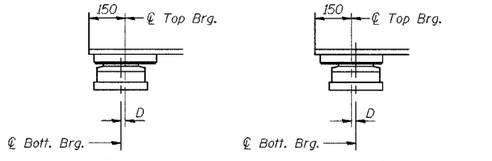
Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BOTTOM BEARING ASSEMBLY



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BILL OF MATERIAL

	Item	Unit	Total
*	Furnishing Elastomeric Bearing Assembly, Type II	Each	28

*FURNISHING BEARINGS NOT INCLUDED IN THIS CONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BEARING DETAILS (5 OF 5)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

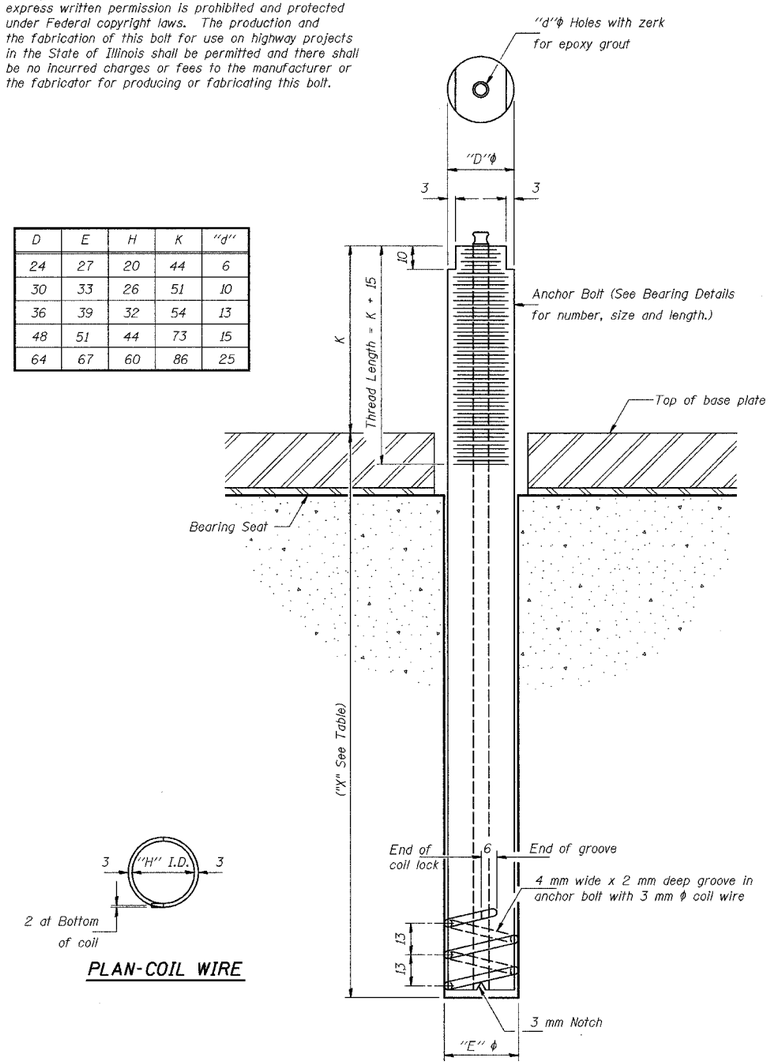
AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	666
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-47
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type	D	X
W. Abut.	A307	30	329
Pier 1	A307	24	256
Pier 2	A307	48	387
SW Pier 3	A307	30	329
NW Pier 3	A307	36	396
E Pier 3	A307	24	256
Pier 4	A307	36	396
Pier 5	A307	36	396
E. Abut.	A307	24	256

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Anchor Bolt.

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

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ABB-1 (M) 4-30-99

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

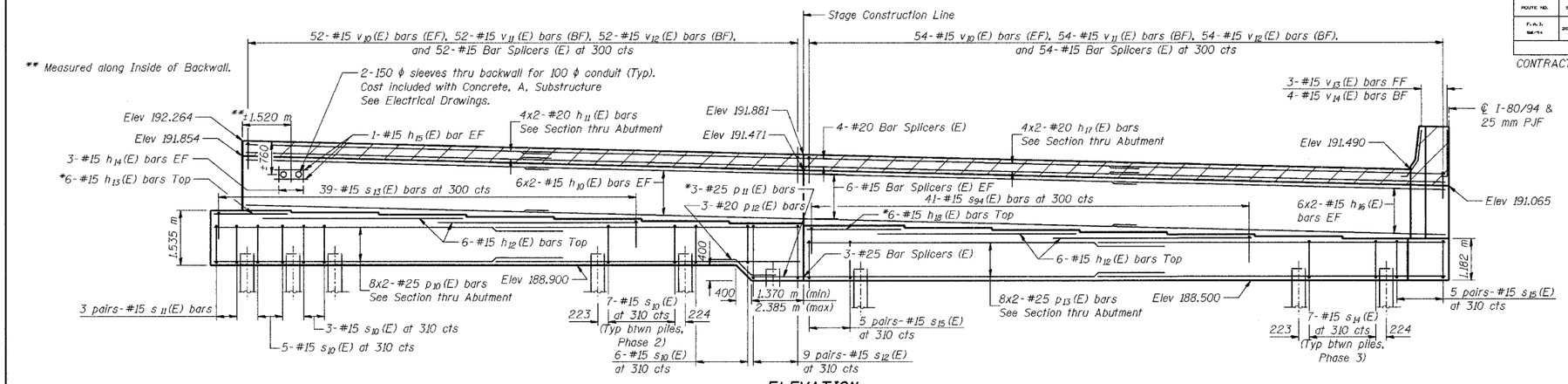
ANCHOR BOLT DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

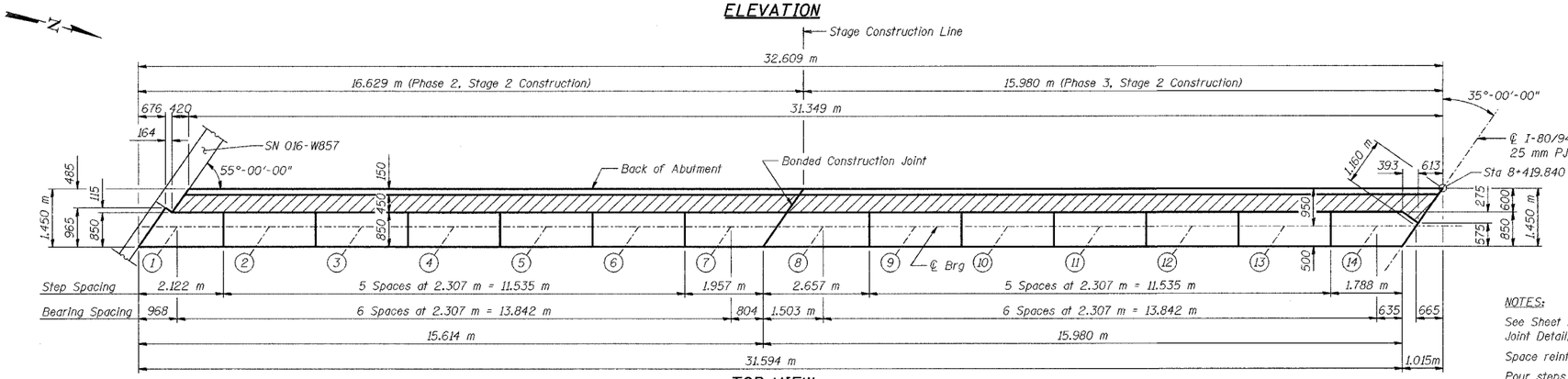
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	667
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-48
72 SHEETS

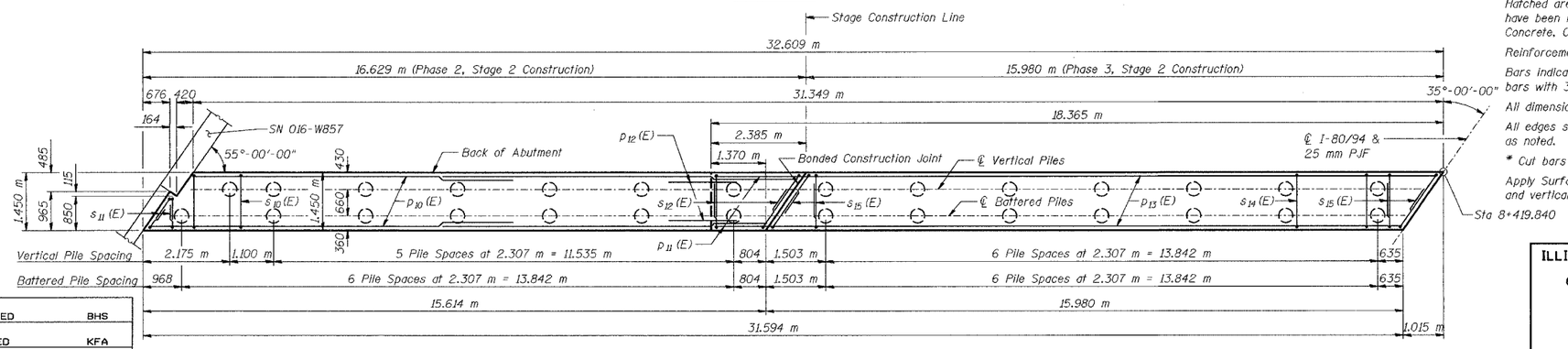
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



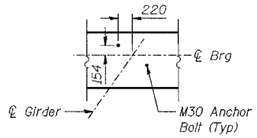
TOP VIEW



PLAN-PILE CAP

BEARING SEAT ELEVATIONS

Girder	Seat Elevation
14	189.682
13	189.741
12	189.800
11	189.859
10	189.917
9	189.975
8	190.034
7	190.092
6	190.149
5	190.207
4	190.264
3	190.321
2	190.379
1	190.435



ANCHOR BOLT LAYOUT

LEGEND

EF - Each Face
FF - Front Face
BF - Back Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

NOTES:

See Sheet No S-50 for abutment details, Expansion Joint Detail, and Bill of Material.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete, C, Superstructure.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

* Cut bars to fit in field.

Apply Surface Seal to top surface of abutment seat and vertical faces of steps.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

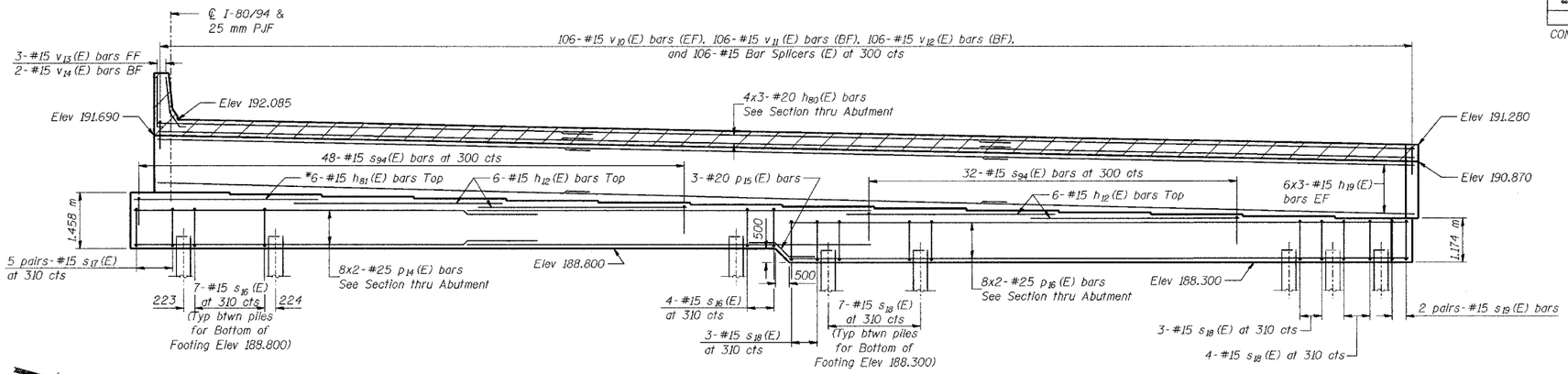
WEST ABUTMENT – EASTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

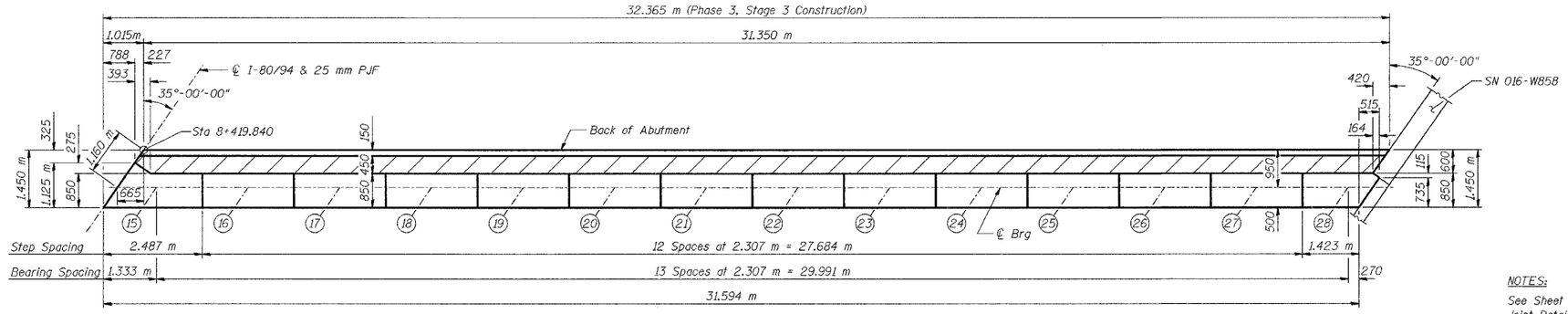
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	668
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-49
72 SHEETS

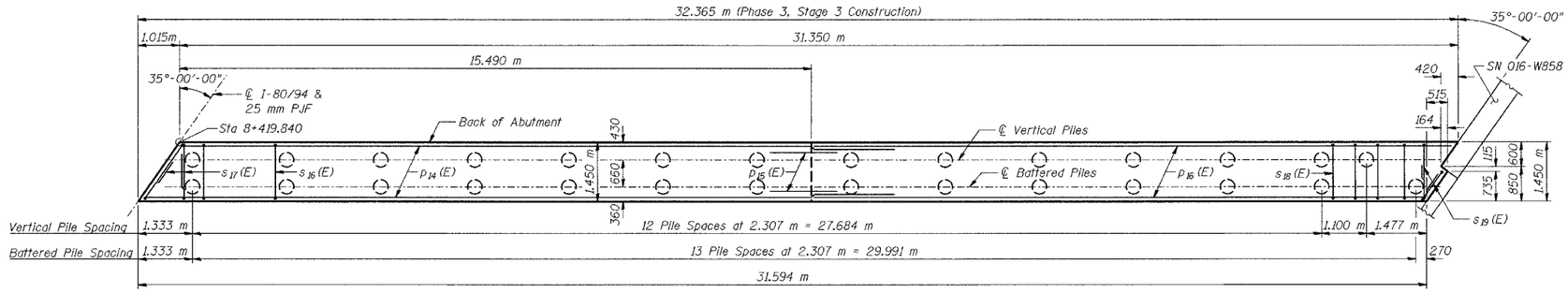
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



TOP VIEW

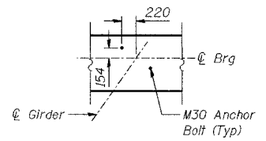


PLAN-PILE CAP

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BEARING SEAT ELEVATIONS

Girder	Seat Elevation
28	189.474
27	189.536
26	189.597
25	189.658
24	189.719
23	189.779
22	189.840
21	189.900
20	189.960
19	190.020
18	190.079
17	190.139
16	190.198
15	190.258



ANCHOR BOLT LAYOUT

LEGEND

EF - Each Face
FF - Front Face
BF - Back Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

NOTES:

See Sheet No S-50 for abutment details, Expansion Joint Detail, and Bill of Material.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete, C, Superstructure.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

* Cut bars to fit in field.

Apply Surface Seal to top surface of abutment seat and vertical faces of steps.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

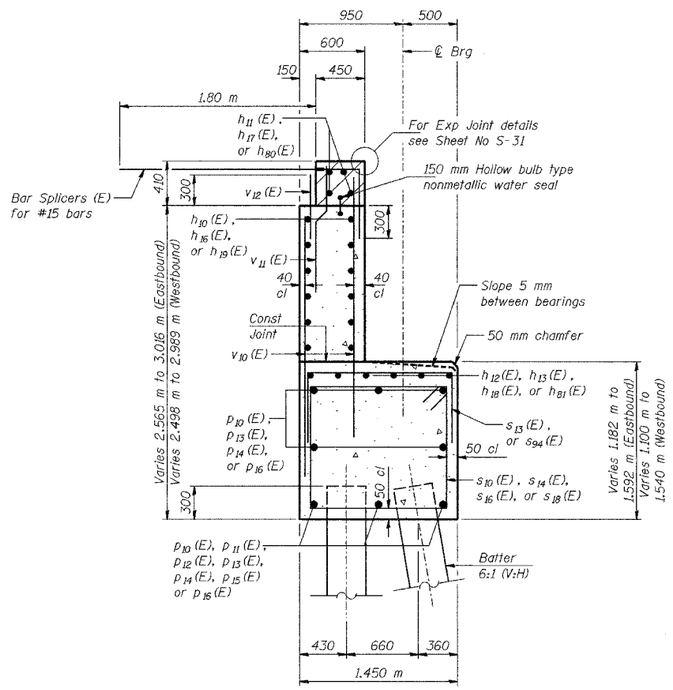
WEST ABUTMENT – WESTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

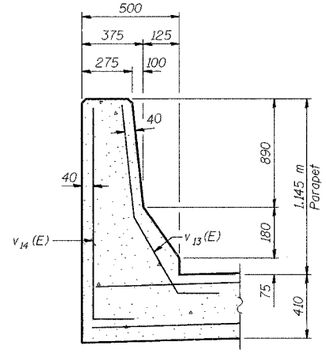
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	669
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-50
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



SECTION THRU ABUTMENT



PARAPET DETAIL

WEST ABUTMENT BILL OF MATERIAL

PHASE 2

Bar	No.	Size	Length (m)	Shape
h10 (E)	24	#15	7.96	——
h11 (E)	8	#20	8.03	——
h16 (E)	12	#15	5.26	——
h13 (E)	6	#15	2.02	——
h14 (E)	6	#15	0.64	——
h15 (E)	4	#15	1.00	——
p10 (E)	16	#25	8.42	——
p11 (E)	3	#25	2.28	——
p12 (E)	3	#20	2.15	⌒
s10 (E)	42	#15	5.16	⊏
s11 (E)	6	#15	2.59	⊓
s12 (E)	18	#15	3.81	⊓
s13 (E)	39	#15	2.63	⊓
v10 (E)	104	#15	2.38	——
v11 (E)	52	#15	1.14	}
v12 (E)	52	#15	0.60	——
Test Pile, 356 mm		Each	1	
Structure Backfill		m^3	97	
Excavation, Foundation, Unclassified		m^3	99	
Concrete, A, Substructure		m^3	44.7	
Reinforcing Bars, Epoxy Coated		kg	2,320	
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm		m	188.5	
Surface Seal (Estimated)		m^2	13	
Threaded Tie Bar Assembly, Epoxy Coated		Each	71	

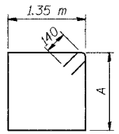
PHASE 3

Bar	No.	Size	Length (m)	Shape
h12 (E)	36	#15	5.26	——
h16 (E)	24	#15	8.26	——
h17 (E)	8	#20	8.34	——
h18 (E)	6	#15	2.55	——
h15 (E)	36	#15	10.85	——
h80 (E)	12	#20	10.95	——
h81 (E)	6	#15	4.69	——
p13 (E)	16	#25	8.60	——
p14 (E)	16	#25	9.93	——
p15 (E)	3	#20	2.29	⌒
p16 (E)	16	#25	8.54	——
s14 (E)	42	#15	5.14	⊏
s15 (E)	20	#15	3.40	⊓
s16 (E)	46	#15	4.98	⊏
s17 (E)	10	#15	3.32	⊓
s18 (E)	45	#15	5.12	⊏
s19 (E)	4	#15	2.65	⊓
s94 (E)	121	#15	2.79	⊓
v10 (E)	320	#15	2.38	——
v11 (E)	160	#15	1.14	}
v12 (E)	160	#15	0.60	——
v13 (E)	6	#15	1.50	J
v14 (E)	6	#15	1.60	J
Structure Backfill		m^3	295	
Excavation, Foundation, Unclassified		m^3	278	
Concrete, A, Substructure		m^3	130.7	
Reinforcing Bars, Epoxy Coated		kg	6,900	
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm		m	609.0	
Surface Seal (Estimated)		m^2	40	
Threaded Tie Bar Assembly, Epoxy Coated		Each	160	

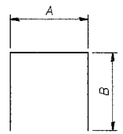
PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 14.5 m
No Reqd - 55 Total*
Test Piles - 1

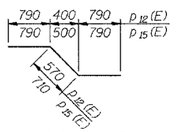
* Phase 2, Stage 2: 13 reqd
Phase 3, Stage 2: 14 reqd
Phase 3, Stage 3: 28 reqd



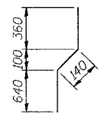
BARS s10 (E), s14 (E), s16 (E) and s18 (E)



BARS s11 (E), s12 (E), s13 (E), s15 (E), s17 (E), s19 (E) and s94 (E)



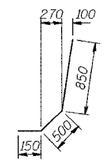
BARS p12 (E) and p15 (E)



BAR v11 (E)

BAR DIMENSIONS

Bar	A	B
s10 (E)	1.09m	——
s11 (E)	1.09m	750
s12 (E)	1.49m	1.16m
s13 (E)	1.35m	640
s14 (E)	1.08m	——
s15 (E)	1.08m	1.16m
s16 (E)	1.00m	——
s17 (E)	1.00m	1.16m
s18 (E)	1.07m	——
s19 (E)	1.07m	790
s94 (E)	1.35m	720



BAR v13 (E)

BAR v14 (E)

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

NOTES:

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete, C. Superstructure.

Reinforcement bars designated (E) shall be epoxy coated.

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

All edges shall have standard 20 mm chamfers except as noted.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

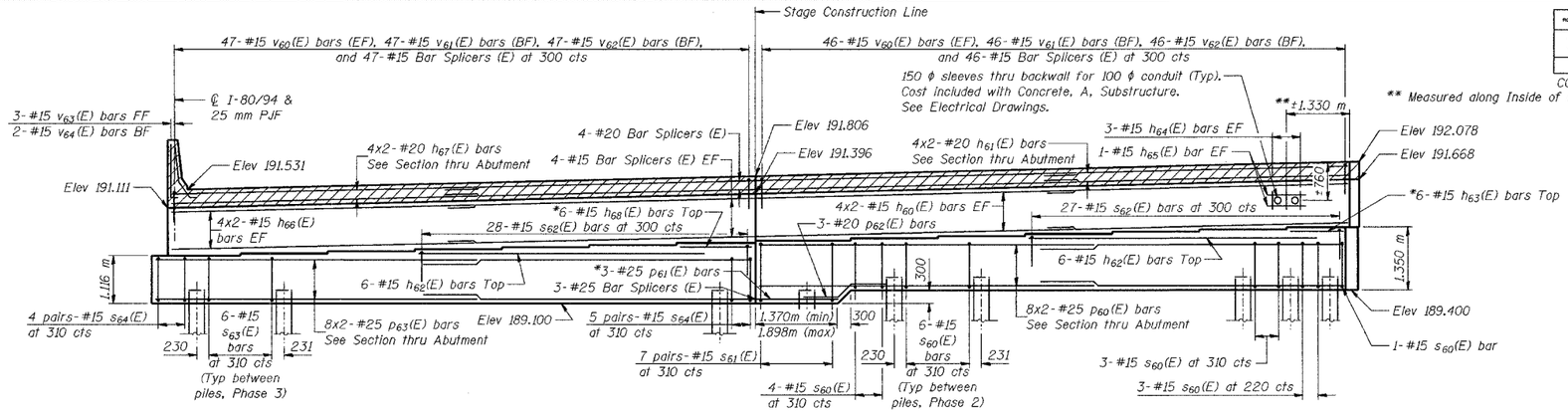
WEST ABUTMENT DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

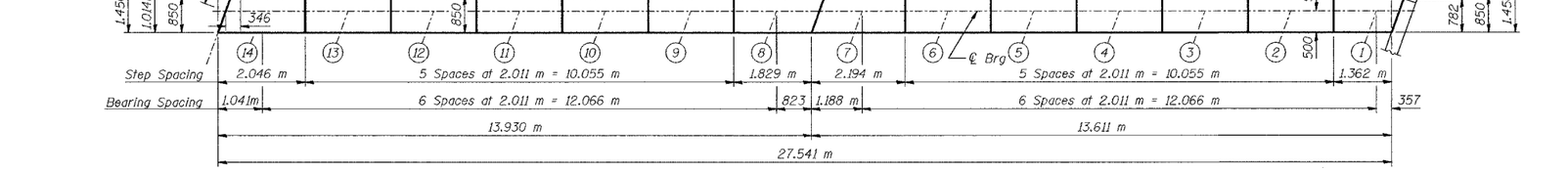
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	670
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-51
72 SHEETS

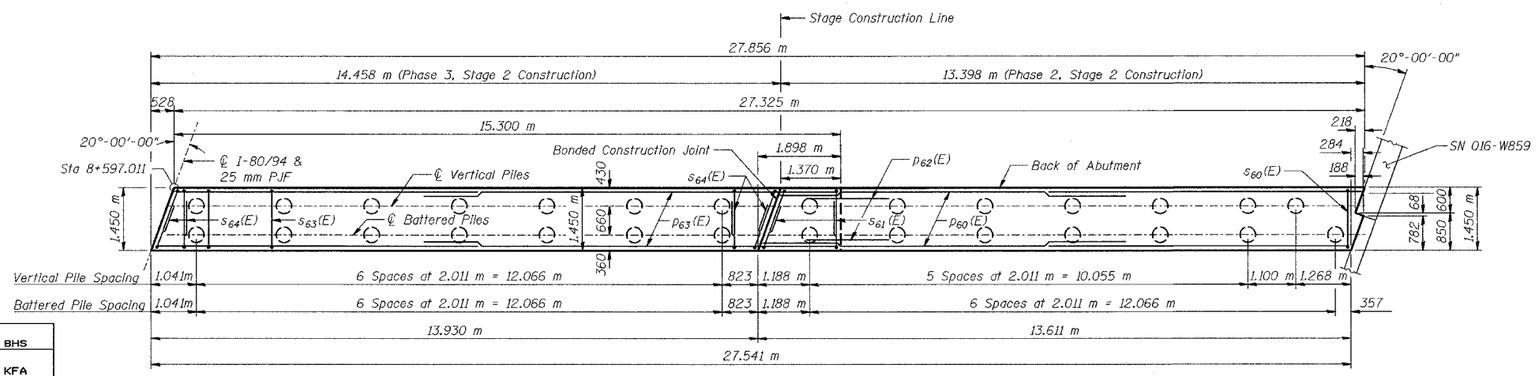
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



TOP VIEW



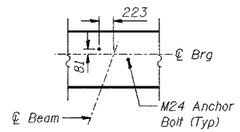
PLAN-PILE CAP

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

BEARING SEAT ELEVATIONS

Beam	Seat Elevation
14	190.216
13	190.257
12	190.299
11	190.340
10	190.381
9	190.422
8	190.463
7	190.505
6	190.546
5	190.587
4	190.628
3	190.668
2	190.709
1	190.750



ANCHOR BOLT LAYOUT

LEGEND

EF - Each Face
FF - Front Face
BF - Back Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

NOTES:

See Sheet No S-53 for abutment details, Expansion Joint Detail, and Bill of Material.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete, C, Superstructure.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

* Cut bars to fit in field.

Apply Surface Seal to top surface of abutment seat and vertical faces of steps.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

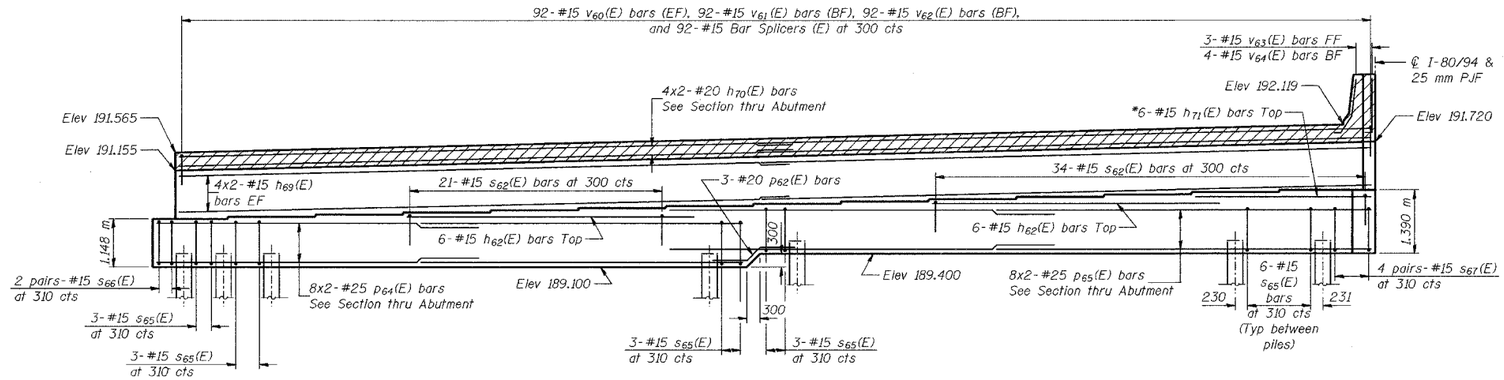
EAST ABUTMENT – EASTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

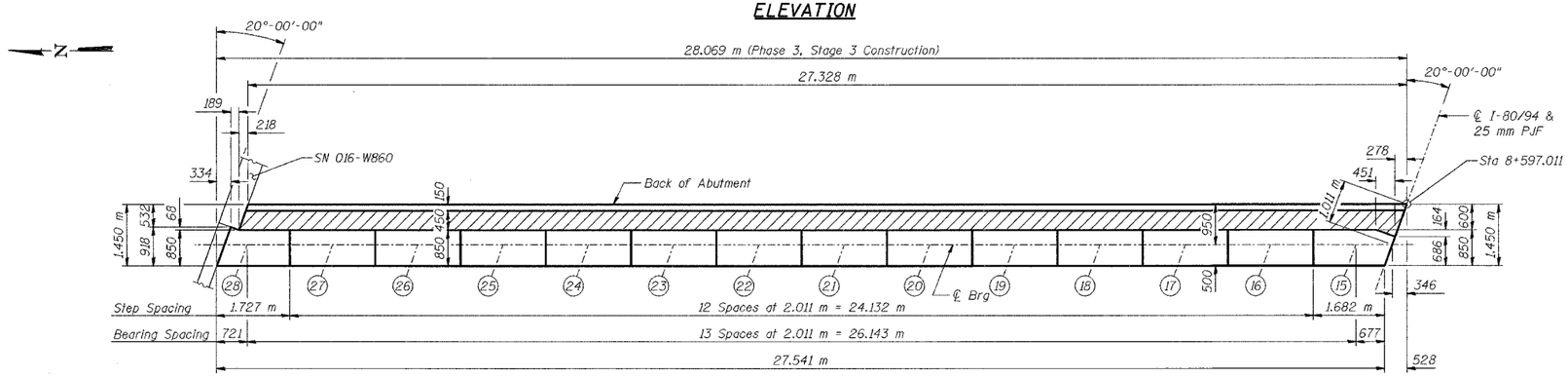
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	671
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-52
72 SHEETS

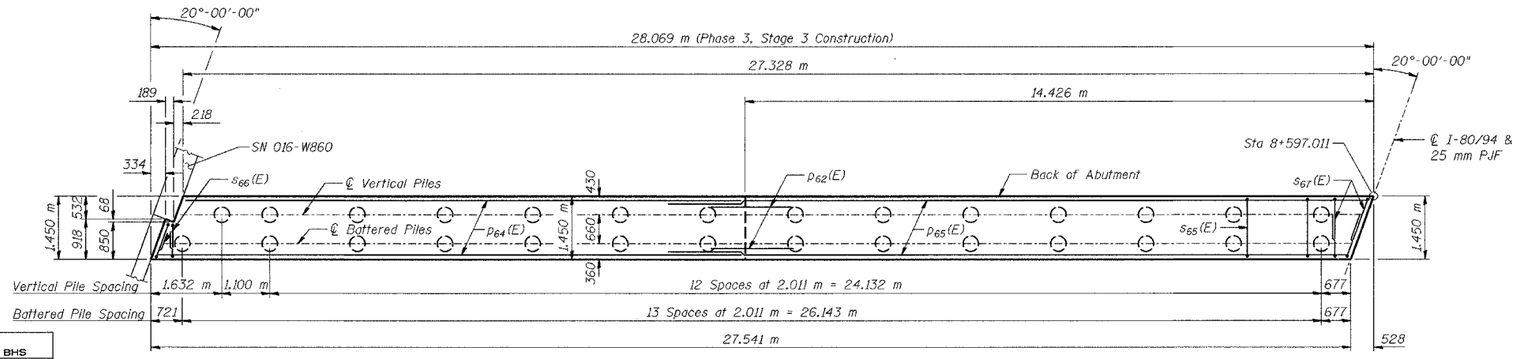
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



TOP VIEW

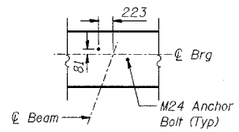


PLAN-PILE CAP

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BEARING SEAT ELEVATIONS

Beam	Seat Elevation
28	190.248
27	190.290
26	190.332
25	190.374
24	190.416
23	190.458
22	190.499
21	190.541
20	190.583
19	190.624
18	190.666
17	190.707
16	190.749
15	190.790



ANCHOR BOLT LAYOUT

LEGEND

EF - Each Face
FF - Front Face
BF - Back Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

NOTES:

See Sheet No S-53 for abutment details, Expansion Joint Detail, and Bill of Material.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete, C, Superstructure.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

All edges shall have standard 20 mm chamfers except as noted.

* Cut bars to fit in field.

Apply Surface Seal to top surface of abutment seat and vertical faces of steps.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

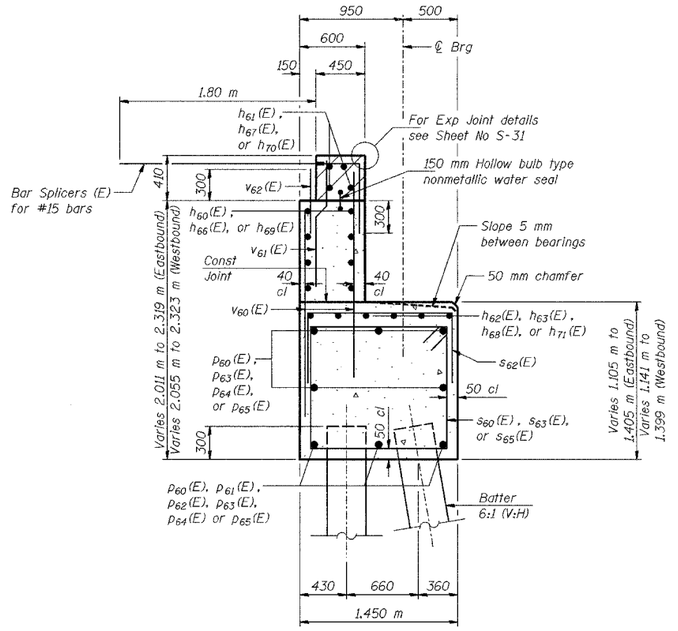
EAST ABUTMENT – WESTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

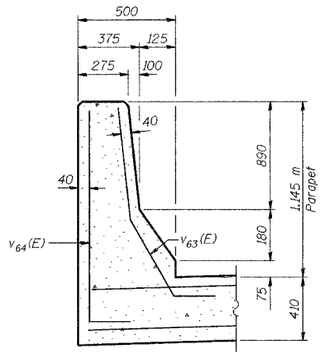
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	672
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-53
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



SECTION THRU ABUTMENT



PARAPET DETAIL

EAST ABUTMENT BILL OF MATERIAL

PHASE 2

Bar	No.	Size	Length (m)	Shape
h60(E)	16	#15	6.97	——
h61(E)	8	#20	7.05	——
h62(E)	6	#15	6.68	——
h63(E)	6	#15	1.54	——
h64(E)	6	#15	0.64	——
h65(E)	4	#15	1.00	——
p60(E)	16	#25	7.42	——
p61(E)	3	#25	1.79	——
p62(E)	3	#20	2.00	⌒
s60(E)	35	#15	4.98	⊡
s61(E)	14	#15	3.40	⊓
s62(E)	27	#15	2.63	⊓
v60(E)	92	#15	1.91	——
v61(E)	46	#15	1.14	}
v62(E)	46	#15	0.60	——
Test Pile, 356 mm		Each	1	
Structure Backfill		m³	56	
Excavation, Foundation, Unclassified		m³	43	
Concrete, A, Substructure		m³	32.1	
Reinforcing Bars, Epoxy Coated		kg	1,760	
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm		m	260.0	
Surface Seal (Estimated)		m²	13	
Threaded Tie Bar Assembly, Epoxy Coated		Each	61	

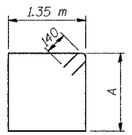
PHASE 3

Bar	No.	Size	Length (m)	Shape
h62(E)	18	#15	6.68	——
h66(E)	16	#15	7.24	——
h67(E)	8	#20	7.31	——
h68(E)	6	#15	2.25	——
h69(E)	16	#15	13.94	——
h70(E)	8	#20	14.01	——
h71(E)	6	#15	4.12	——
p62(E)	3	#20	2.00	⌒
p63(E)	16	#25	7.58	——
p64(E)	16	#25	7.44	——
p65(E)	16	#25	8.76	——
s62(E)	83	#15	2.63	⊓
s63(E)	36	#15	5.00	⊡
s64(E)	18	#15	3.11	⊓
s65(E)	78	#15	5.06	⊡
s66(E)	4	#15	2.54	⊓
s67(E)	8	#15	3.14	⊓
v60(E)	278	#15	1.91	——
v61(E)	139	#15	1.14	}
v62(E)	139	#15	0.60	——
v63(E)	6	#15	1.50	⌡
v64(E)	6	#15	1.60	⌡
Structure Backfill		m³	178	
Excavation, Foundation, Unclassified		m³	128	
Concrete, A, Substructure		m³	98.4	
Reinforcing Bars, Epoxy Coated		kg	5,320	
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm		m	840.0	
Surface Seal (Estimated)		m²	39	
Threaded Tie Bar Assembly, Epoxy Coated		Each	139	

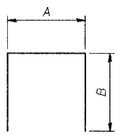
PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 20.0 m
No Reqd - 55 Total*
Test Piles - 1

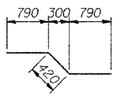
* Phase 2, Stage 2: 13 reqd
Phase 3, Stage 2: 14 reqd
Phase 3, Stage 3: 28 reqd



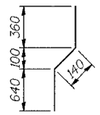
BARS s60(E), s63(E), and s65(E)



BARS s61(E), s62(E), s64(E), s66(E), and s67(E)



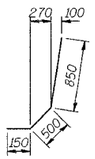
BAR p62(E)



BAR v61(E)

BAR DIMENSIONS

Bar	A	B
s60(E)	1.00m	——
s61(E)	1.30m	1.05m
s62(E)	1.35m	640
s63(E)	1.01m	——
s64(E)	1.01m	1.05m
s65(E)	1.04m	——
s66(E)	1.04m	750
s67(E)	1.04m	1.05m



BAR v63(E)

BAR v64(E)

NOTES:

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete, C, Superstructure.

Reinforcement bars designated (E) shall be epoxy coated.

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

All edges shall have standard 20 mm chamfers except as noted.

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

EAST ABUTMENT DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

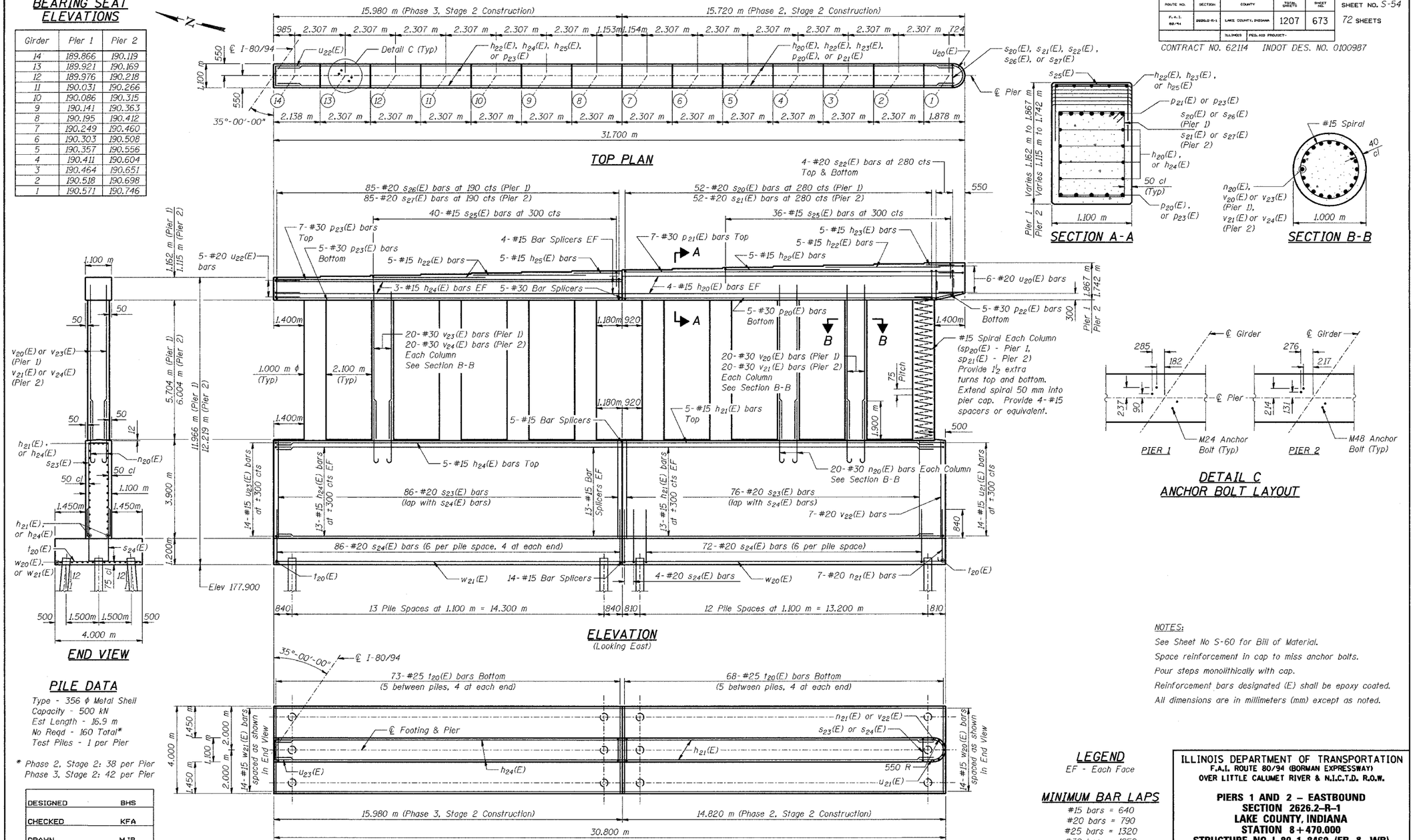
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	673
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-54
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Girder	Pier 1	Pier 2
14	189.866	190.119
13	189.921	190.169
12	189.976	190.218
11	190.031	190.266
10	190.086	190.315
9	190.141	190.363
8	190.195	190.412
7	190.249	190.460
6	190.303	190.508
5	190.357	190.556
4	190.411	190.604
3	190.464	190.651
2	190.518	190.698
1	190.571	190.746



PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 16.9 m
No Reqd - 160 Total*
Test Piles - 1 per Pier

* Phase 2, Stage 2: 38 per Pier
Phase 3, Stage 2: 42 per Pier

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:
See Sheet No S-60 for Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

LEGEND
EF - Each Face

MINIMUM BAR LAPS
#15 bars = 640
#20 bars = 790
#25 bars = 1320
#30 bars = 1850

PHASE 2 FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

PIERS 1 AND 2 – EASTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 (016-1003 & 016-1004)

AMERICAN CONSULTING ENGINEERS

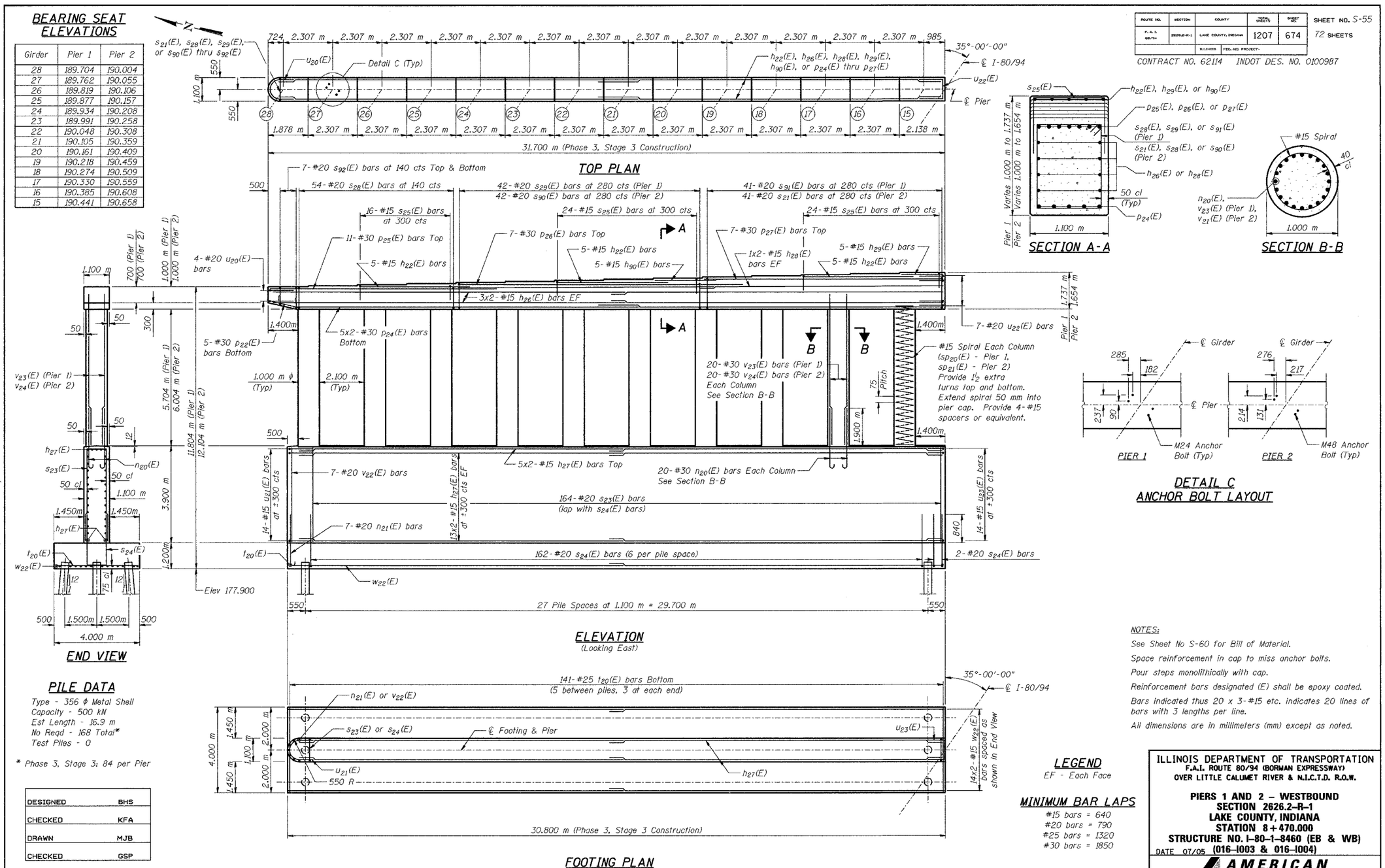
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	674
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-55
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Girder	Pier 1	Pier 2
28	189.704	190.004
27	189.762	190.055
26	189.819	190.106
25	189.877	190.157
24	189.934	190.208
23	189.991	190.258
22	190.048	190.308
21	190.105	190.359
20	190.161	190.409
19	190.218	190.459
18	190.274	190.509
17	190.330	190.559
16	190.385	190.608
15	190.441	190.658



PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 16.9 m
No Reqd - 168 Total*
Test Piles - 0

* Phase 3, Stage 3: 84 per Pier

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-60 for Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
All dimensions are in millimeters (mm) except as noted.

LEGEND
EF - Each Face

MINIMUM BAR LAPS
#15 bars = 640
#20 bars = 790
#25 bars = 1320
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

PIERS 1 AND 2 – WESTBOUND
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

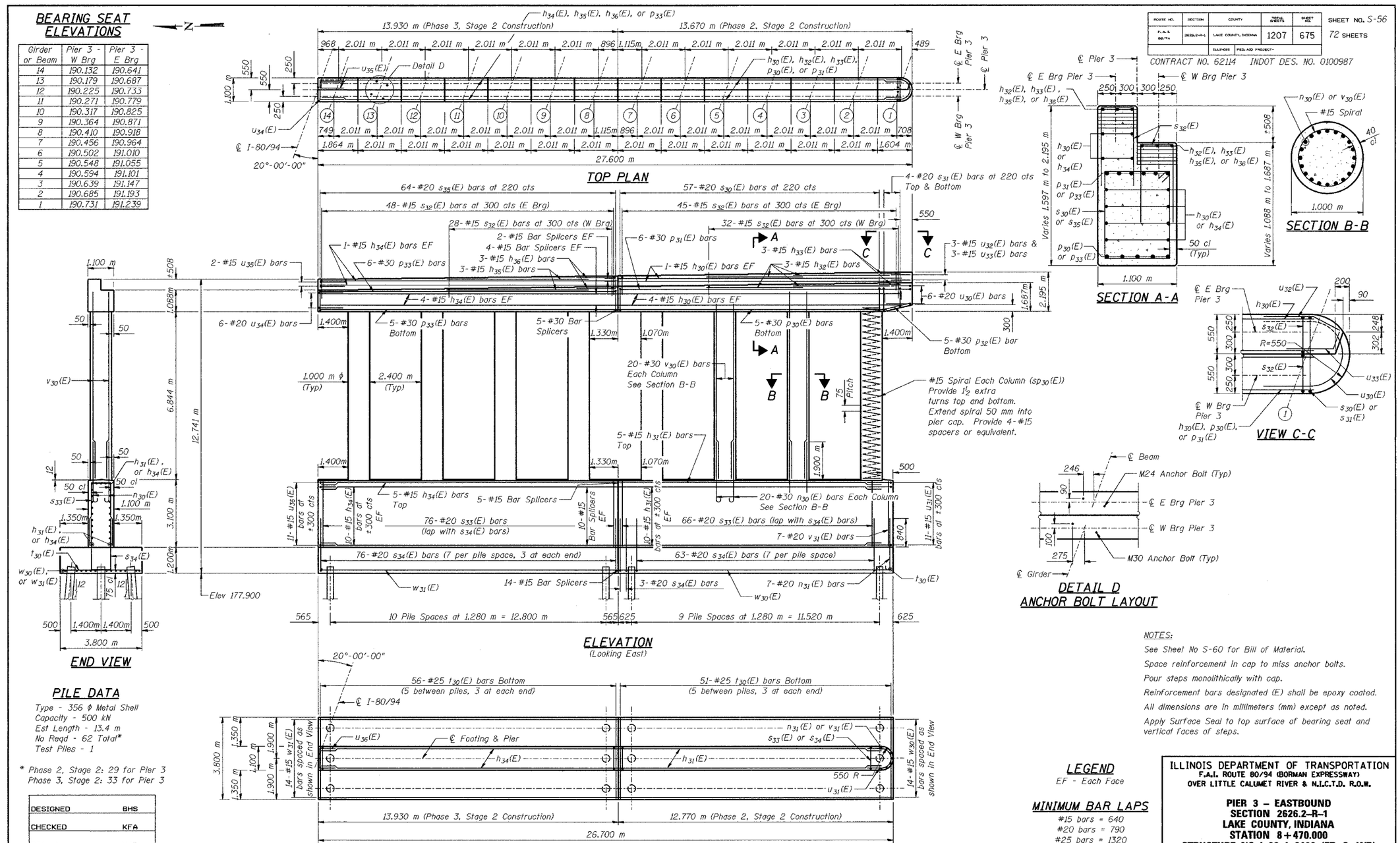
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	675
		ILLINOIS FED. AID PROJECT=		

SHEET NO. S-56
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Girder or Beam	Pier 3 - W Brg	Pier 3 - E Brg
14	190.132	190.641
13	190.179	190.687
12	190.225	190.733
11	190.271	190.779
10	190.317	190.825
9	190.364	190.871
8	190.410	190.918
7	190.456	190.964
6	190.502	191.010
5	190.548	191.055
4	190.594	191.101
3	190.639	191.147
2	190.685	191.193
1	190.731	191.239



PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 13.4 m
No Reqd - 62 Total*
Test Piles - 1

* Phase 2, Stage 2: 29 for Pier 3
Phase 3, Stage 2: 33 for Pier 3

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-60 for Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Apply Surface Seal to top surface of bearing seat and vertical faces of steps.

LEGEND

EF - Each Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

PIER 3 – EASTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–I003 & 016–I004)**

AMERICAN CONSULTING ENGINEERS

PHASE 2 FOR INFORMATION ONLY

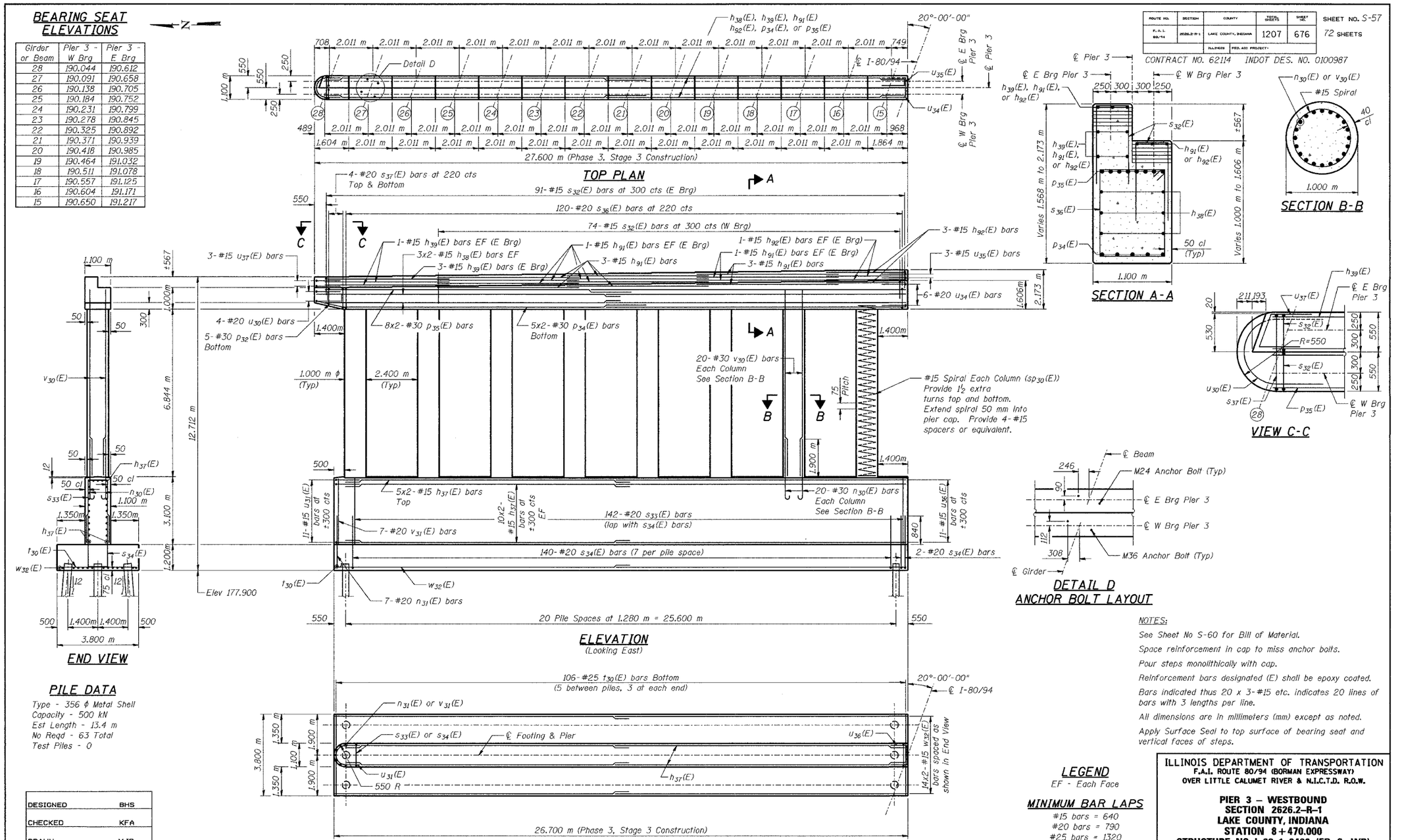
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	676
		ILLINOIS FED. AID PROJECT		

SHEET NO. S-57
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Girder or Beam	Pier 3 - W Brg	Pier 3 - E Brg
28	190.044	190.612
27	190.091	190.658
26	190.138	190.705
25	190.184	190.752
24	190.231	190.799
23	190.278	190.845
22	190.325	190.892
21	190.371	190.939
20	190.418	190.985
19	190.464	191.032
18	190.511	191.078
17	190.557	191.125
16	190.604	191.171
15	190.650	191.217



PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 13.4 m
No Reqd - 63 Total
Test Piles - 0

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-60 for Bill of Material.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3- #15 etc. indicates 20 lines of bars with 3 lengths per line.

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

Apply Surface Seal to top surface of bearing seat and vertical faces of steps.

LEGEND

EF - Each Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

PIER 3 – WESTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

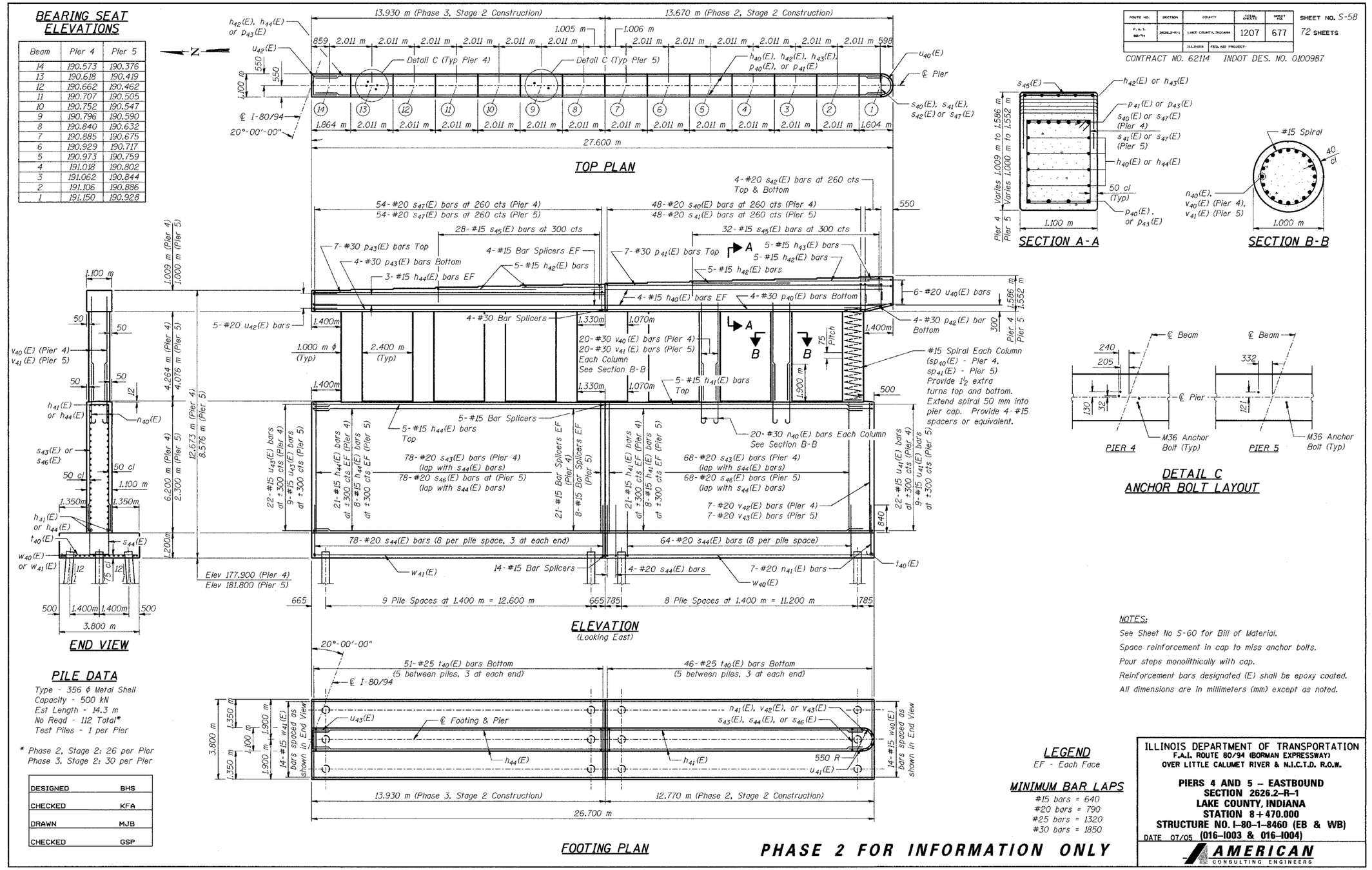
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80-94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	677
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-58
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Beam	Pier 4	Pier 5
14	190.573	190.376
13	190.618	190.419
12	190.662	190.462
11	190.707	190.505
10	190.752	190.547
9	190.796	190.590
8	190.840	190.632
7	190.885	190.675
6	190.929	190.717
5	190.973	190.759
4	191.018	190.802
3	191.062	190.844
2	191.106	190.886
1	191.150	190.928



PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 14.3 m
No Reqd - 112 Total*
Test Piles - 1 per Pier

* Phase 2, Stage 2: 26 per Pier
Phase 3, Stage 2: 30 per Pier

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet No S-60 for Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

LEGEND

EF - Each Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

PIERS 4 AND 5 – EASTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

PHASE 2 FOR INFORMATION ONLY

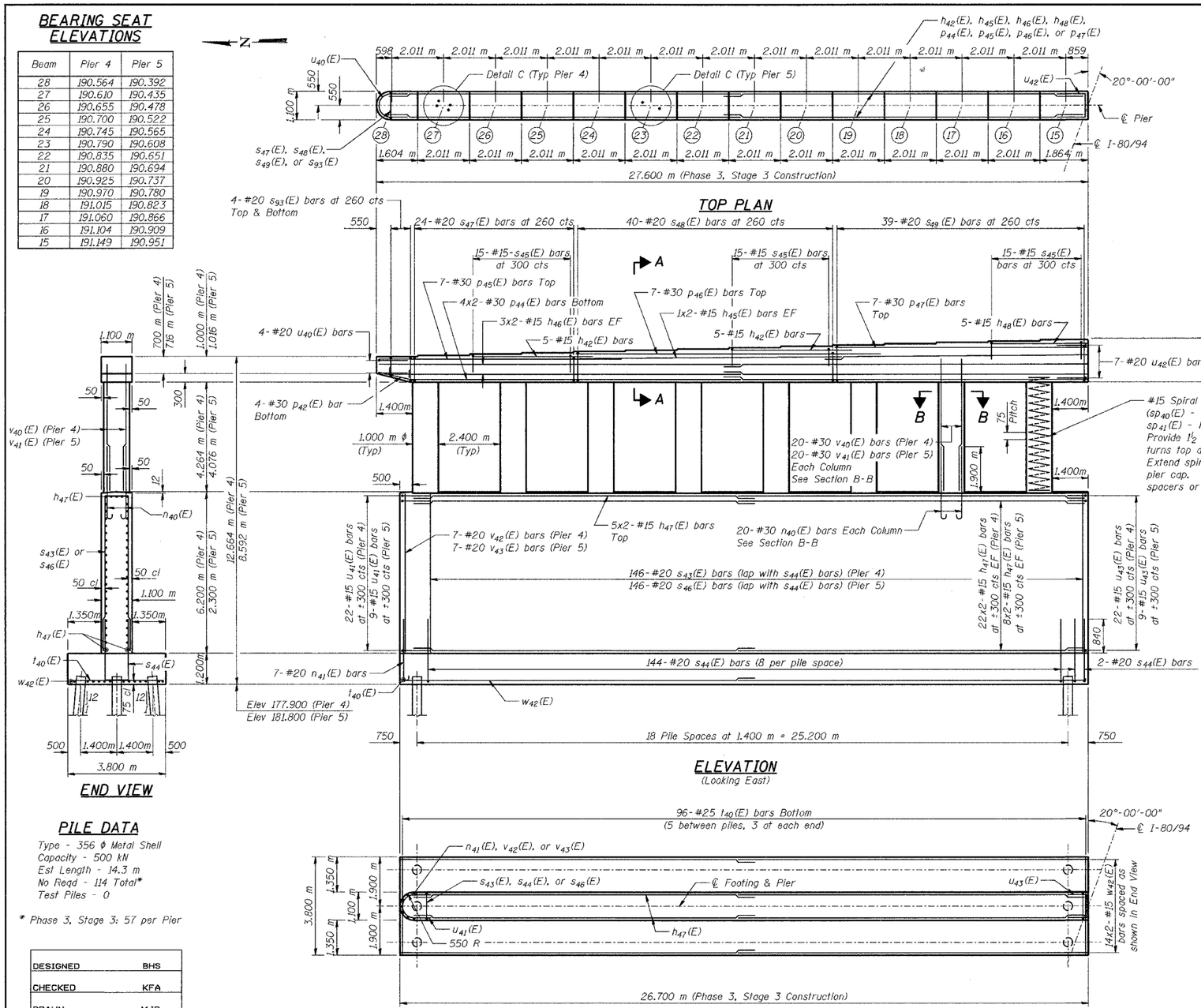
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. RTE. 94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	678
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-59
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BEARING SEAT ELEVATIONS

Beam	Pier 4	Pier 5
28	190.564	190.392
27	190.610	190.435
26	190.655	190.478
25	190.700	190.522
24	190.745	190.565
23	190.790	190.608
22	190.835	190.651
21	190.880	190.694
20	190.925	190.737
19	190.970	190.780
18	191.015	190.823
17	191.060	190.866
16	191.104	190.909
15	191.149	190.951



PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est Length - 14.3 m
No Reqd - 114 Total*
Test Piles - 0

* Phase 3, Stage 3: 57 per Pier

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

DETAIL C ANCHOR BOLT LAYOUT

NOTES:

See Sheet No S-60 for Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
All dimensions are in millimeters (mm) except as noted.

LEGEND

EF - Each Face

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1320
#30 bars = 1850

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

PIERS 4 AND 5 – WESTBOUND
SECTION 2626.2–R–1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I–80–1–8460 (EB & WB)
DATE 07/05 **(016–1003 & 016–1004)**

AMERICAN CONSULTING ENGINEERS

PIERS 1 AND 2 - PHASE 2 BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{20}(E)$	16	#15	15.12	
$h_{21}(E)$	62	#15	14.22	
$h_{22}(E)$	20	#15	5.26	
$h_{23}(E)$	10	#15	1.27	
$n_{20}(E)$	200	#30	2.80	
$n_{21}(E)$	14	#20	2.19	
$p_{20}(E)$	10	#30	14.32	
$p_{21}(E)$	14	#30	15.12	
$p_{22}(E)$	10	#30	1.38	
$s_{20}(E)$	52	#20	5.16	
$s_{21}(E)$	52	#20	4.98	
$s_{22}(E)$	16	#20	3.24	
$s_{23}(E)$	152	#20	8.60	
$s_{24}(E)$	152	#20	4.94	
$s_{25}(E)$	72	#15	2.28	
$sp_{20}(E)$	5	#15	5.75	
$sp_{21}(E)$	5	#15	6.00	
$t_{20}(E)$	136	#25	3.90	
$u_{20}(E)$	12	#20	3.15	
$u_{21}(E)$	28	#15	2.85	
$v_{20}(E)$	100	#30	6.64	
$v_{21}(E)$	100	#30	7.03	
$v_{22}(E)$	14	#20	3.80	
$w_{20}(E)$	28	#15	14.72	

Test Pile, 356 mm	Each	2
Excavation, Wet	m^3	166
Excavation, Dry	m^3	455
Concrete, A, Substructure	m^3	371.7
Reinforcing Bars, Epoxy Coated	kg	27,870
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm	m	1,284.0
Threaded Tie Bar Assembly, Epoxy Coated	Each	116

Above quantities provided are for the total of Pier 1 and Pier 2 in Phase 2.

PIERS 1 AND 2 - PHASE 3 BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{22}(E)$	50	#15	5.26	
$h_{24}(E)$	74	#15	15.88	
$h_{25}(E)$	10	#15	2.20	
$h_{26}(E)$	24	#15	15.85	
$h_{27}(E)$	124	#15	15.40	
$h_{28}(E)$	8	#15	11.73	
$h_{29}(E)$	10	#15	2.03	
$h_{90}(E)$	10	#15	2.95	
$n_{20}(E)$	600	#30	2.80	
$n_{21}(E)$	14	#20	2.19	
$p_{22}(E)$	10	#30	1.38	
$p_{23}(E)$	24	#30	15.88	
$p_{24}(E)$	20	#30	16.03	
$p_{25}(E)$	22	#30	10.10	
$p_{26}(E)$	14	#30	13.39	
$p_{27}(E)$	14	#30	11.26	
$s_{21}(E)$	41	#20	4.98	
$s_{23}(E)$	500	#20	8.60	
$s_{24}(E)$	500	#20	4.94	
$s_{25}(E)$	208	#15	2.28	
$s_{26}(E)$	85	#20	4.40	
$s_{27}(E)$	85	#20	4.30	
$s_{28}(E)$	108	#20	4.08	
$s_{29}(E)$	42	#20	4.54	
$s_{90}(E)$	42	#20	4.48	
$s_{91}(E)$	41	#20	5.10	
$s_{92}(E)$	28	#20	2.42	
$sp_{20}(E)$	15	#15	5.75	
$sp_{21}(E)$	15	#15	6.00	
$t_{20}(E)$	428	#25	3.90	
$u_{20}(E)$	8	#20	3.15	
$u_{21}(E)$	28	#15	2.85	
$u_{22}(E)$	24	#20	2.58	
$u_{23}(E)$	56	#15	2.28	
$v_{22}(E)$	14	#20	3.80	
$v_{23}(E)$	300	#30	6.60	
$v_{24}(E)$	300	#30	6.90	
$w_{21}(E)$	28	#15	15.88	
$w_{22}(E)$	56	#15	15.67	

Excavation, Wet	m^3	498
Excavation, Dry	m^3	1,362
Concrete, A, Substructure	m^3	1,128.0
Reinforcing Bars, Epoxy Coated	kg	86,590
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm	m	4,259.0

Above quantities provided are for the total of Pier 1 and Pier 2 in Phase 3.

PIER 3 - PHASE 2 BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{30}(E)$	4	#15	13.07	
$h_{31}(E)$	25	#15	12.17	
$h_{32}(E)$	20	#15	4.67	
$h_{33}(E)$	10	#15	1.00	
$n_{30}(E)$	80	#30	2.80	
$n_{31}(E)$	7	#20	2.19	
$p_{30}(E)$	5	#30	12.27	
$p_{31}(E)$	6	#30	13.07	
$p_{32}(E)$	5	#30	1.38	
$s_{30}(E)$	57	#20	4.90	
$s_{31}(E)$	8	#20	3.10	
$s_{32}(E)$	77	#15	2.33	
$s_{33}(E)$	66	#20	7.00	
$s_{34}(E)$	66	#20	4.94	
$sp_{30}(E)$	4	#15	6.85	
$t_{30}(E)$	51	#25	3.70	
$u_{30}(E)$	6	#20	3.15	
$u_{31}(E)$	11	#15	2.85	
$u_{32}(E)$	3	#15	1.09	
$u_{33}(E)$	3	#15	0.91	
$v_{30}(E)$	80	#30	7.74	
$v_{31}(E)$	7	#20	3.00	
$w_{30}(E)$	14	#15	12.67	

Test Pile, 356 mm	Each	1
Excavation, Foundation, Unclassified	m^3	217
Concrete, A, Substructure	m^3	149.8
Reinforcing Bars, Epoxy Coated	kg	11,950
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm	m	389.0
Threaded Tie Bar Assembly, Epoxy Coated	Each	56
Surface Seal (Estimated)	m^2	15

PIER 3 - PHASE 3 BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{34}(E)$	37	#15	13.83	
$h_{35}(E)$	6	#15	6.68	
$h_{36}(E)$	6	#15	1.91	
$h_{37}(E)$	50	#15	13.35	
$h_{39}(E)$	12	#15	13.80	
$h_{99}(E)$	7	#15	6.27	
$h_{91}(E)$	30	#15	6.68	
$h_{92}(E)$	10	#15	3.77	
$n_{30}(E)$	240	#30	2.80	
$n_{31}(E)$	7	#20	2.19	
$p_{32}(E)$	5	#30	1.38	
$p_{33}(E)$	11	#30	13.83	
$p_{34}(E)$	10	#30	13.98	
$p_{35}(E)$	16	#30	14.40	
$s_{32}(E)$	241	#15	2.33	
$s_{33}(E)$	218	#20	7.00	
$s_{34}(E)$	218	#20	4.94	
$s_{35}(E)$	64	#20	4.24	
$s_{36}(E)$	120	#20	4.08	
$s_{37}(E)$	8	#20	2.42	
$sp_{30}(E)$	12	#15	6.85	
$t_{30}(E)$	162	#25	3.70	
$u_{30}(E)$	4	#20	3.15	
$u_{31}(E)$	11	#15	2.85	
$u_{34}(E)$	12	#20	2.58	
$u_{35}(E)$	5	#15	1.73	
$u_{36}(E)$	22	#15	2.28	
$u_{37}(E)$	3	#15	1.75	
$v_{30}(E)$	240	#30	7.74	
$v_{31}(E)$	7	#20	3.00	
$w_{31}(E)$	14	#15	13.83	
$w_{32}(E)$	28	#15	13.62	

Excavation, Foundation, Unclassified	m^3	667
Concrete, A, Substructure	m^3	458.9
Reinforcing Bars, Epoxy Coated	kg	37,060
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm	m	1,286.5
Surface Seal (Estimated)	m^2	45

PIERS 4 AND 5 - PHASE 2 BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_{40}(E)$	16	#15	13.07	
$h_{41}(E)$	68	#15	12.17	
$h_{42}(E)$	20	#15	4.67	
$h_{43}(E)$	10	#15	1.00	
$n_{40}(E)$	160	#30	2.80	
$n_{41}(E)$	14	#20	2.19	
$p_{40}(E)$	8	#30	12.27	
$p_{41}(E)$	14	#30	13.07	
$p_{42}(E)$	8	#30	1.38	
$s_{40}(E)$	48	#20	4.72	
$s_{41}(E)$	48	#20	4.66	
$s_{42}(E)$	16	#20	3.02	
$s_{43}(E)$	68	#20	13.20	
$s_{44}(E)$	136	#20	4.94	
$s_{45}(E)$	64	#15	2.28	
$s_{46}(E)$	68	#20	5.40	
$sp_{40}(E)$	4	#15	4.27	
$sp_{41}(E)$	4	#15	4.08	
$t_{40}(E)$	92	#25	3.70	
$u_{40}(E)$	12	#20	3.15	
$u_{41}(E)$	31	#15	2.85	
$v_{40}(E)$	80	#30	5.16	
$v_{41}(E)$	80	#30	4.97	
$v_{42}(E)$	7	#20	6.10	
$v_{43}(E)$	7	#20	2.20	
$w_{40}(E)$	28	#15	12.67	

Test Pile, 356 mm	Each	2
Excavation, Foundation, Unclassified	m^3	519
Concrete, A, Substructure	m^3	304.4
Reinforcing Bars, Epoxy Coated	kg	20,750
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm	m	744.0
Threaded Tie Bar Assembly, Epoxy Coated	Each	120

Above quantities provided are for the total of Pier 4 and 5 in Phase 2.

PIERS 4 AND 5 - PHASE 3 BILL OF MATERIAL

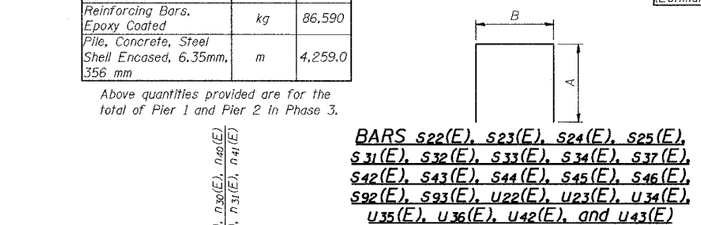
Bar	No.	Size	Length (m)	Shape
$h_{42}(E)$	40	#15	4.67	
$h_{44}(E)$	80	#15	13.83	
$h_{45}(E)$	8	#15	10.26	
$h_{46}(E)$	24	#15	13.80	
$h_{47}(E)$	140	#15	13.35	
$h_{48}(E)$	10	#15	3.77	
$n_{40}(E)$	480	#30	2.80	
$n_{41}(E)$	14	#20	2.19	
$p_{42}(E)$	8	#30	1.38	
$p_{43}(E)$	22	#30	13.83	
$p_{44}(E)$	16	#30	13.98	
$p_{45}(E)$	14	#30	8.94	
$p_{46}(E)$	14	#30	11.91	
$p_{47}(E)$	14	#30	9.80	
$s_{43}(E)$	224	#20	13.20	
$s_{44}(E)$	448	#20	4.94	
$s_{45}(E)$	146	#15	2.28	
$s_{46}(E)$	224	#20	5.40	
$s_{47}(E)$	156	#20	4.08	
$s_{48}(E)$	80	#20	4.44	
$s_{49}(E)$	78	#20	4.88	
$s_{93}(E)$	16	#20	2.42	
$sp_{40}(E)$	12	#15	4.27	
$sp_{41}(E)$	12	#15	4.08	
$t_{40}(E)$	294	#25	3.70	
$u_{40}(E)$	8	#20	3.15	
$u_{41}(E)$	31	#15	2.85	
$u_{42}(E)$	24	#20	2.58	
$u_{43}(E)$	62	#15	2.28	
$v_{40}(E)$	240	#30	5.16	
$v_{41}(E)$	240	#30	4.97	
$v_{42}(E)$	7	#20	6.10	
$v_{43}(E)$	7	#20	2.20	
$w_{41}(E)$	28	#15	13.83	
$w_{42}(E)$	56	#15	13.62	

Excavation, Foundation, Unclassified	m^3	1,598
Concrete, A, Substructure	m^3	945.1
Reinforcing Bars, Epoxy Coated	kg	63,880
Pile, Concrete, Steel Shell Encased, 6.35mm, 356 mm	m	2,488.5

Above quantities provided are for the total of Pier 4 and 5 in Phase 3.

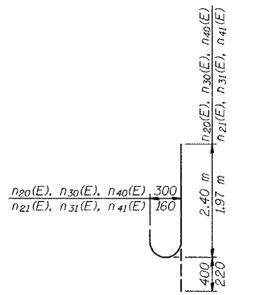
BAR DIMENSIONS

Bar	A	B
$s_{20}(E)$	1.44m	—
$s_{21}(E)$	1.35m	—
$s_{22}(E)$	1.12m	1.00m
$s_{23}(E)$	3.80m	1.00m
$s_{24}(E)$	1.97m	1.00m
$s_{25}(E)$	640	1.00m
$s_{26}(E)$	1.06m	—
$s_{27}(E)$	1.01m	—
$s_{28}(E)$	900	—
$s_{29}(E)$	1.13m	—
$s_{30}(E)$	1.31m	—
$s_{31}(E)$	1.05m	1.00m
$s_{32}(E)$	940	450
$s_{33}(E)$	3.00m	1.00m
$s_{34}(E)$	1.97m	1.00m
$s_{35}(E)$	980	—
$s_{36}(E)$	900	—
$s_{37}(E)$	710	1.00m
$s_{40}(E)$	1.22m	—
$s_{41}(E)$	1.19m	—
$s_{42}(E)$	1.01m	1.00m
$s_{43}(E)$	6.10m	1.00m
$s_{44}(E)$	1.97m	1.00m
$s_{45}(E)$	640	1.00m
$s_{46}(E)$	2.20m	1.00m
$s_{47}(E)$	900	—
$s_{48}(E)$	1.08m	—
$s_{49}(E)$	1.30m	—
$s_{90}(E)$	1.10m	—
$s_{91}(E)$	1.41m	—
$s_{92}(E)$	710	1.00m
$s_{93}(E)$	710	1.00m
$u_{22}(E)$	790	1.00m
$u_{23}(E)$	640	1.00m
$u_{34}(E)$	790	1.00m
$u_{35}(E)$	640	450
$u_{36}(E)$	640	1.00m
$u_{42}(E)$	790	1.00m
$u_{43}(E)$	640	1.00m

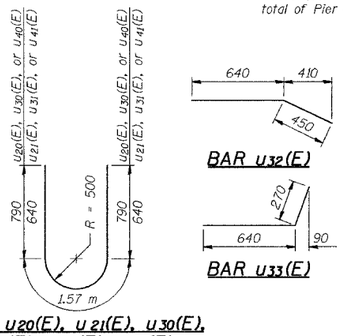


BARS $s_{22}(E)$, $s_{23}(E)$, $s_{24}(E)$, $s_{25}(E)$, $s_{31}(E)$, $s_{32}(E)$, $s_{33}(E)$, $s_{34}(E)$, $s_{37}(E)$, $s_{42}(E)$, $s_{43}(E)$, $s_{44}(E)$, $s_{45}(E)$, $s_{46}(E)$, $s_{92}(E)$, $s_{93}(E)$, $u_{22}(E)$, $u_{23}(E)$, $u_{34}(E)$, $u_{35}(E)$, $u_{36}(E)$, $u_{42}(E)$, and $u_{43}(E)$

BARS $s_{20}(E)$, $s_{21}(E)$, $s_{26}(E)$, $s_{27}(E)$, $s_{28}(E)$, $s_{29}(E)$, $s_{30}(E)$, $s_{35}(E)$, $s_{36}(E)$, $s_{40}(E)$, $s_{41}(E)$, $s_{47}(E)$, $s_{48}(E)$, $s_{49}(E)$, $s_{90}(E)$, or $s_{91}(E)$



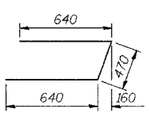
BARS $n_{20}(E)$, $n_{21}(E)$, $n_{30}(E)$, $n_{31}(E)$, $n_{40}(E)$, $n_{41}(E)$



BARS $u_{20}(E)$, $u_{21}(E)$, $u_{30}(E)$, $u_{31}(E)$, $u_{40}(E)$, $u_{41}(E)$

BAR $u_{32}(E)$

BAR $u_{33}(E)$



BAR $u_{37}(E)$

NOTE:
Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PHASE 2 FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	679
	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-60
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

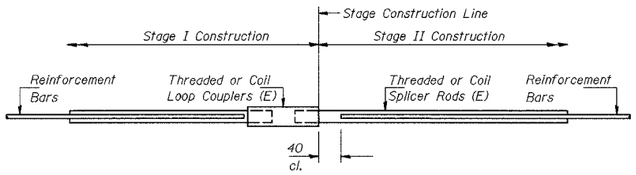
PIER DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	680
		ILLINOIS	FED. AID PROJECT-	

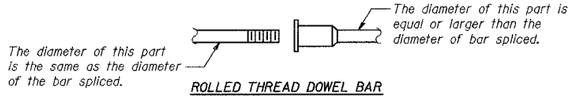
SHEET NO. S-61
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



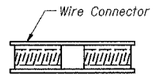
BAR SPLICER ASSEMBLY DETAIL

Bar Size	Phase 2 No. Assemblies Required	Location
15	1,465	Deck
15	12	W Abut
20	4	W Abut
25	3	W Abut
15	53	Pier 1
30	5	Pier 1
15	53	Pier 2
30	5	Pier 2
15	51	Pier 3
30	5	Pier 3
15	69	Pier 4
30	4	Pier 4
15	43	Pier 5
30	4	Pier 5
15	8	E Abut
20	4	E Abut
25	3	E Abut



ROLLED THREAD DOWEL BAR

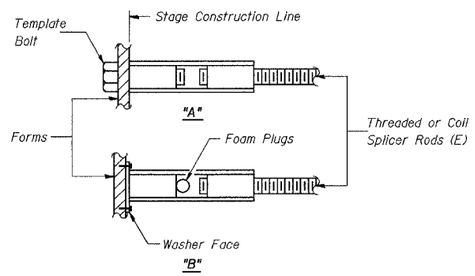
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) $= 1.25 \times 10^{-3} \times f_y \times A_t$,

② Minimum *Pull-out Strength (Tension in kN) $= 1.25 \times 10^{-3} \times fs_{allow} \times A_t$,

Where f_y = Yield strength of lapped reinforcement bars in MPa.

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)

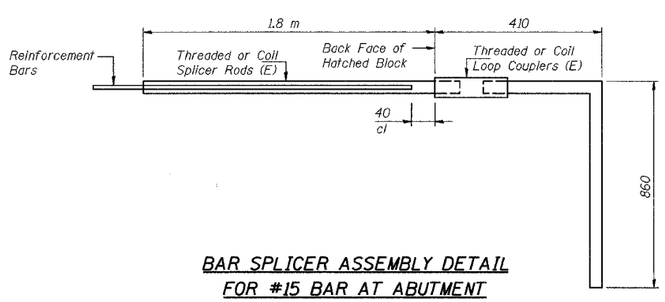
A_t = Tensile stress area of lapped reinforcement bars (mm^2).

* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	640 mm	100	40
#20	790 mm	150	60
#25	1.320 m	250	100
#30	1.850 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for Threaded Tie Bar Assembly, Epoxy Coated.

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



BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR AT ABUTMENT

Min. Capacity = 100kN - tension
Min. Pull-out strength = 40kN tension
No. Required = 98 (Phase 2, Stage 2)
No. Required = 101 (Phase 3, Stage 2)
No. Required = 198 (Phase 3, Stage 3)

NOTE:

The unused half of the bar splicers shall be bundled together and clearly labeled with the structure number, size, and location within the structure. They shall be given to the Engineer for storage and use on a future contract. Cost included with Threaded Tie Bar Assembly, Epoxy Coated.

PHASE 2 FOR INFORMATION ONLY

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BSD-1 (M) 9-01-03

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

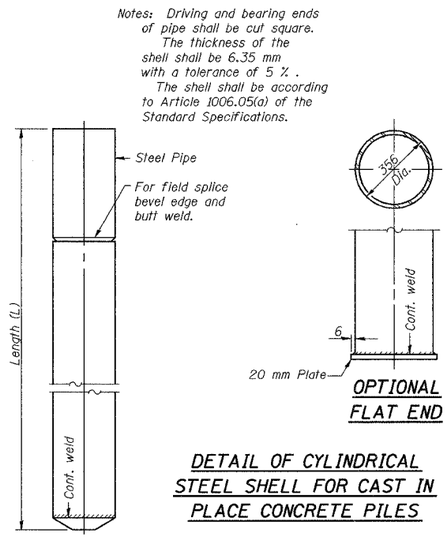
BAR SPLICER (COUPLER) DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	681
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-62
72 SHEETS

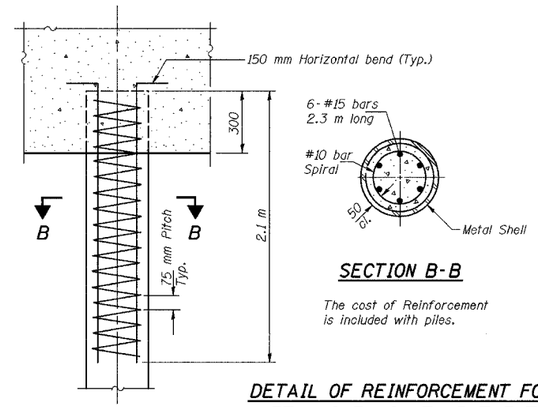
CONTRACT NO. 62114 INDOT DES. NO. 0100987



Notes: Driving and bearing ends of pipe shall be cut square.
The thickness of the shell shall be 6.35 mm with a tolerance of 5 % .
The shell shall be according to Article 1006.05(a) of the Standard Specifications.

OPTIONAL FLAT END

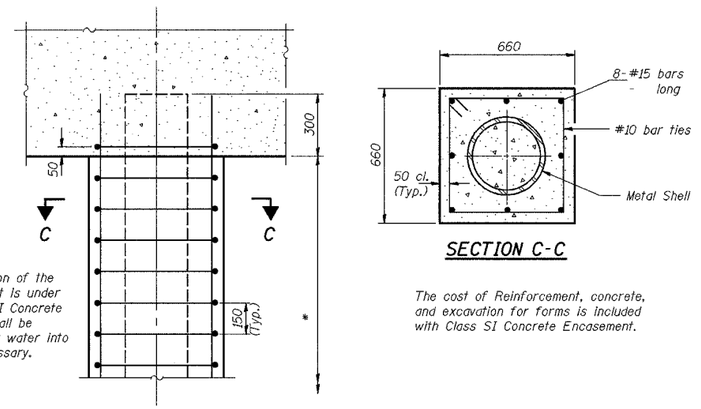
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION B-B

The cost of Reinforcement is included with piles.

DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS



SECTION C-C

The cost of Reinforcement, concrete, and excavation for forms is included with Class SI Concrete Encasement.

* If a portion of the pile encasement is under water, Class SI Concrete Encasement shall be tremmied under water into forms as necessary.

DETAIL OF PROTECTION FOR METAL SHELLS AT PIERS

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

X-PB (M) 10-31-02 (All dimensions are in millimeters (mm) except as noted.)

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

CONCRETE PILE DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

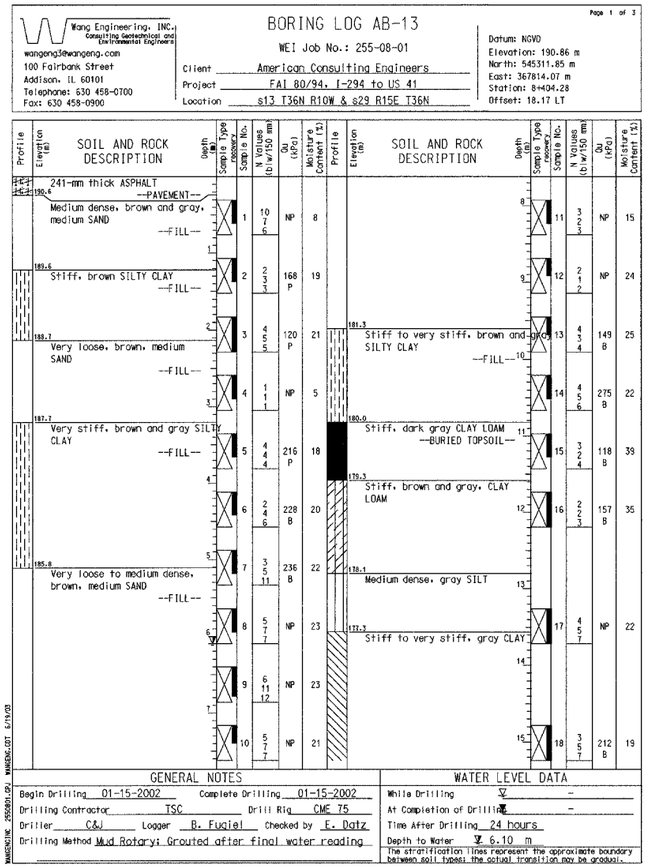
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RTE 94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	682
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-63

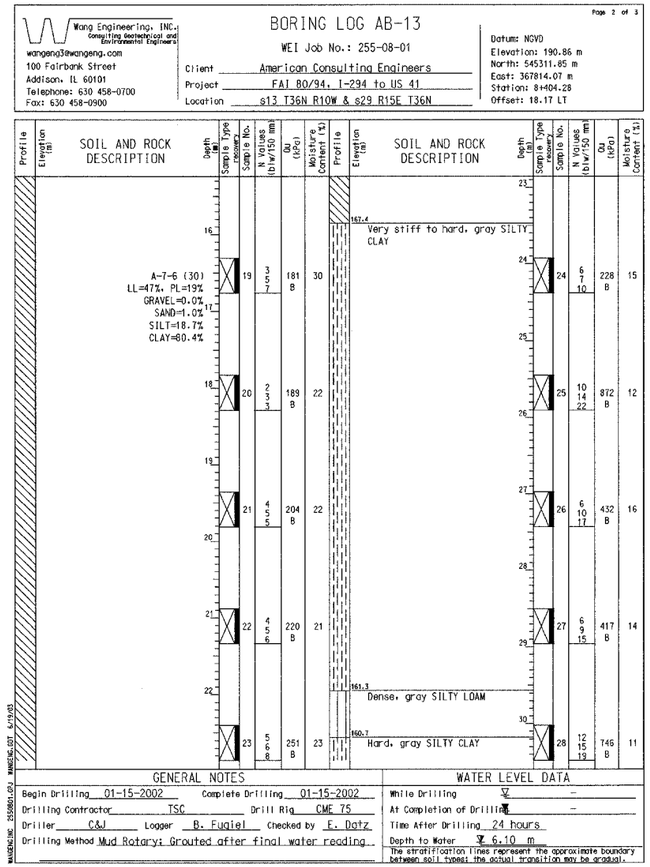
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

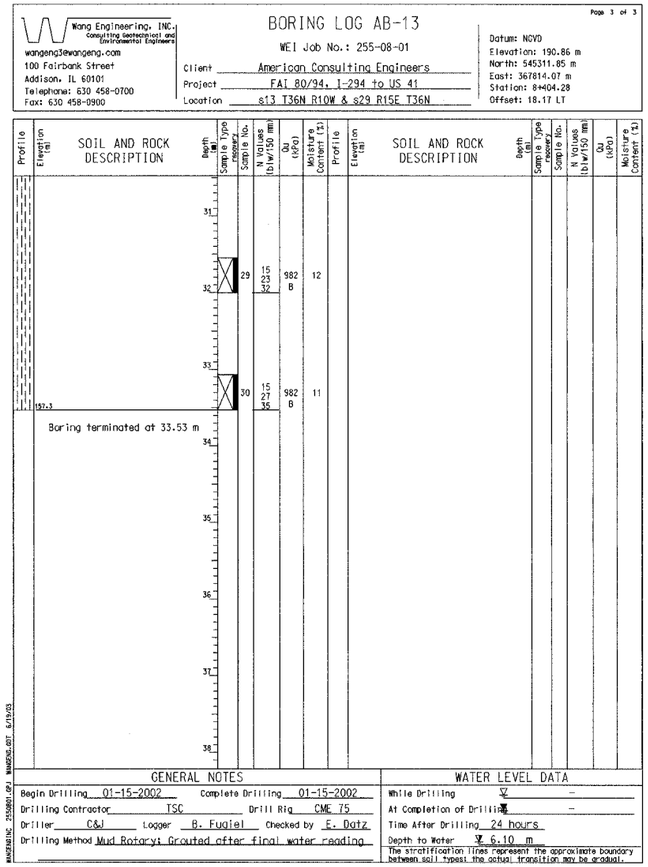
BORING NO. AB-13 (1 OF 3)



BORING NO. AB-13 (2 OF 3)



BORING NO. AB-13 (3 OF 3)



DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (1 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-1003 & 016-1004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	683
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-64
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-14 (1 OF 2)

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BORING LOG AB-14

Page 1 of 2

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.73 m
North: 545289.70 m
East: 367887.88 m
Station: 8+481.25
Offset: 21.98 LT

SOIL AND ROCK DESCRIPTION

- 180.6 Black SILTY LOAM --TOPSOIL--
- Medium stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace cinders --FILL--
- 178.3 Very loose, gray, brown, and green LOAM
- 177.5 Very loose, brown and gray SANDY LOAM
- 176.8 Stiff to very stiff, gray CLAY
- 174.5 Stiff to very stiff, gray SILTY CLAY
- 172.2 Medium dense, gray SILT
- 171.0 Stiff to very stiff, gray CLAY

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
1	3, 5, 6	383 P	16
2	1, 2, 2	55 B	24
3	2, 3, 3	79 B	23
4	2, 1, 2	NP	30
5	2, 1, 1	NP	23
6	3, 4, 6	103 B	20
7	3, 2, 5	142 B	20
8	3, 4, 5	196 B	19
9	9, 8, 9	165 S	22
10	7, 6, 6	283 S	21
11	4, 5, 5	103 B	15
12	4, 5, 5	NP	23
13	4, 6, 7	133 B	21
14	4, 5, 7	172 B	22
15	5, 6, 9	220 B	22
16	5, 6, 9	157 B	21

GENERAL NOTES

Begin Drilling 01-11-2002 Complete Drilling 01-11-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger D. Peterson Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling 3.35 m
At Completion of Drilling 3.05 m
Time After Drilling - hours
Depth to Water m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-14 (2 OF 2)

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BORING LOG AB-14

Page 2 of 2

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.73 m
North: 545289.70 m
East: 367887.88 m
Station: 8+481.25
Offset: 21.98 LT

SOIL AND ROCK DESCRIPTION

- 164.9 Very stiff to hard, gray SILTY CLAY
- 156.3 Boring terminated at 24.38 m

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
17	9, 22, 32	558 B	13
18	13, 13, 16	471 B	15
19	11, 12, 19	354 B	15
20	15, 21, 30	550 S	14
21	13, 24, 31	479 S	13
22	17, 38, 34	⌀431 P	12

GENERAL NOTES

Begin Drilling 01-11-2002 Complete Drilling 01-11-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger D. Peterson Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling 3.35 m
At Completion of Drilling 3.05 m
Time After Drilling - hours
Depth to Water m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-15 (1 OF 3)

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Fax: 630 458-0900

BORING LOG AB-15

Page 1 of 3

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.86 m
North: 545294.99 m
East: 367814.75 m
Station: 8+410.56
Offset: 2.52 LT

SOIL AND ROCK DESCRIPTION

- 229-mm thick CONCRETE --PAVEMENT--
- 190.6 Medium dense, gray CRUSHED STONE --BASE COURSE--
- 190.4 Medium dense, brown SANDY LOAM --FILL--
- 188.9 Medium dense, brown, medium SAND --FILL--
- 186.9 Very stiff, brown and gray CLAY LOAM --FILL--
- 186.1 Medium dense, brown, medium SAND --FILL--
- 183.9 Very stiff, brown and gray CLAY LOAM --FILL--
- 183.1 Very stiff, gray SILTY CLAY to CLAY --FILL--
- 180.5 Loose, black LOAM --BURIED TOPSOIL--
- 180.0 Very stiff, dark gray and brown, CLAY LOAM
- 178.7 Very stiff, brown CLAY
- 176.5 Stiff, gray SILTY CLAY

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
1	13, 10, 9	NP	12
2	7, 7, 8	NP	18
3	5, 6, 8	NP	5
4	5, 5, 6	NP	5
5	7, 9, 9	NP	8
6	4, 5, 5	263 P	18
7	6, 9, 10	NP	20
8	5, 6, 6	NP	24
9	7, 11, 13	NP	21
10	3, 6, 8	196 P	20
11	6, 7, 10	236 S	14
12	5, 6, 7	260 B	22
13	3, 4, 5	314 B	19
14	3, 4, 4	NP	32
15	3, 3, 6	196 B	36
16	3, 3, 5	212 B	30
17	4, 5, 6	236 B	20
18	4, 4, 5	172 B	14

GENERAL NOTES

Begin Drilling 01-21-2002 Complete Drilling 01-21-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling -
At Completion of Drilling -
Time After Drilling 24 hours
Depth to Water 4.88 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (2 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	684
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-65
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-15 (2 OF 3)

Page 2 of 3

BORING LOG AB-15

WEI Job No.: 255-08-01

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Telephone: 630 458-0700
Fax: 630 458-0900

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.86 m
North: 545294.99 m
East: 367814.75 m
Station: 8+410.56
Offset: 2.52 LT

Elevation (m)	Soil and Rock Description	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
175.0	Stiff to very stiff, gray CLAY	19	2, 3, 4	157 B	21
		20	3, 4, 5	299 B	21
		21	3, 4, 5	212 B	20
		22	3, 5, 6	236 B	19
		23	3, 5, 8	330 B	22
167.4	Very stiff to hard, gray SILTY CLAY	24	5, 6, 11	260 B	13
		25	7, 8, 13	377 B	14
		26	9, 10, 13	417 B	14
		27	8, 10, 15	471 B	14
		28	8, 13, 23	574 B	13

Depth (m): 17–30

GENERAL NOTES

Begin Drilling 01-21-2002 Complete Drilling 01-21-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▽ 4.88 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-15 (3 OF 3)

Page 3 of 3

BORING LOG AB-15

WEI Job No.: 255-08-01

Wang Engineering, INC.
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Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.86 m
North: 545294.99 m
East: 367814.75 m
Station: 8+410.56
Offset: 2.52 LT

Elevation (m)	Soil and Rock Description	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		29	13, 16, 24	903 B	13
158.9	Boring terminated at 32.00 m				

Depth (m): 31–38

GENERAL NOTES

Begin Drilling 01-21-2002 Complete Drilling 01-21-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▽ 4.88 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-16 (1 OF 2)

Page 1 of 2

BORING LOG AB-16

WEI Job No.: 255-08-01

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
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100 Fairbank Street
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Telephone: 630 458-0700
Fax: 630 458-0900

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.43 m
North: 545267.58 m
East: 367886.08 m
Station: 8+486.95
Offset: 0.54 LT

Elevation (m)	Soil and Rock Description	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	Very stiff, brown and gray SANDY CLAY LOAM, trace crushed asphalt --FILL--	1	6, 7, 11	335 P	13
		2	8, 10, 27	275 S	15
178.8	Very loose to medium dense, gray, medium SAND	3	7, 8, 11	NP	10
		4	2, 2, 1	NP	25
		5	1, 2, 3	NP	21
176.8	Stiff to very stiff, gray CLAY	6	3, 3, 6	236 B	20
		7	3, 2, 4	236 B	19
		8	3, 3, 4	236 B	22
		9	4, 5, 4	220 B	18
		10	2, 3, 3	157 B	31
		11	3, 3, 4	142 B	21
171.9	Very stiff, gray SILTY CLAY	12	3, 4, 7	260 B	19
170.7	Very stiff, gray CLAY	13	4, 5, 7	240 P	24
		14	5, 5, 8	314 B	22
		15	6, 7, 8	299 B	17
166.1	Hard, gray, SILTY CLAY	16	7, 8, 12	864 B	11

Depth (m): 1–15

GENERAL NOTES

Begin Drilling 01-07-2002 Complete Drilling 01-07-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger B. Fugiel Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ 2.67 m
At Completion of Drilling ▼ 2.44 m
Time After Drilling 24 hours
Depth to Water ▽ 2.13 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (3 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	685
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-66
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-16 (2 OF 2)

Page 2 of 2

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BORING LOG AB-16
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.43 m
North: 545267.58 m
East: 367886.08 m
Station: 84+86.95
Offset: 0.54 LT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
			16			17	6 7 10	675 B	13
			18			18	9 10 11	707 B	14
			19			19	10 10 17	628 B	14
			21			20	16 27 20	903 B	13
			22			21	12 14 15	982 B	13
			23			22	30 27	431 P	12
			25						
	155.1	Gray, finely crystalline, medium bedded, slightly weathered, strong DOLOSTONE with occasional pyrite vugs ---BEDROCK--- ---RQD= 87%--	26						
			27			23			
	152.1	Boring terminated at 28.35 m	28						
			29						
			30						

GENERAL NOTES

Begin Drilling 01-07-2002 Complete Drilling 01-07-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger B. Fugiel Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ 2.67 m
At Completion of Drilling ▽ 2.44 m
Time After Drilling 24 hours
Depth to Water ▽ 2.13 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-17 (1 OF 3)

Page 1 of 3

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BORING LOG AB-17
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 191.12 m
North: 545266.08 m
East: 367829.44 m
Station: 84+34.07
Offset: 19.82 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	190.8	279-mm thick CONCRETE ---PAVEMENT---							
	190.5	Loose, brown, medium SAND ---FILL---	1			1	9 4 4	144 P	15
		Stiff, gray SILTY CLAY ---FILL---							
	189.9	Loose, brown SANDY LOAM ---FILL---	2			2	3 4 4	NP	16
	189.4	Very stiff, brown to gray CLAY LOAM ---FILL---	3			3	3 5 5	287 P	20
	188.4	Very loose to medium dense, brown, medium SAND ---FILL---	4			4	3 3 4	NP	3
			5			5	3 3 3	NP	4
			6			6	1 2 2	NP	25
			7			7	1 1 1	NP	27
			8			8	3 4 5	NP	21
			9			9	2 3 4	NP	24
			10			10	4 6 8	NP	22
	181.1	Very stiff, dark gray CLAY LOAM ---BURIED TOPSOIL--	10			11	5 6 7	408 B	20
	180.3	Hard, brown CLAY	11			12	5 7 7	408 B	20
			12			13	3 5 7	393 B	20
	178.3	Stiff to very stiff, gray CLAY	14			15	6 8 8	287 P	29
			15			16	3 5 6	393 B	20
			17			17	3 4 6	157 B	21
			18			18	3 4 8	212 B	20

GENERAL NOTES

Begin Drilling 01-24-2002 Complete Drilling 01-25-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ --
At Completion of Drilling ▽ --
Time After Drilling - hours
Depth to Water ▽ m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-17 (2 OF 3)

Page 2 of 3

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BORING LOG AB-17
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 191.12 m
North: 545266.08 m
East: 367829.44 m
Station: 84+34.07
Offset: 19.82 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
			19			19	4 5 6	196 B	22
			21			20	3 4 6	243 B	22
			22			21	3 4 6	220 B	20
			23			22	5 6 7	236 B	22
			24			23	4 4 6	236 B	21
	166.1	Very stiff to hard, gray SILTY CLAY	25			24	4 6 6	157 B	18
			26			25	6 8 12	487 B	13
			27			26	12 13 16	314 S	14
			28			27	10 14 11	260 B	14
			30			28	6 9 14	432 B	14

GENERAL NOTES

Begin Drilling 01-24-2002 Complete Drilling 01-25-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ --
At Completion of Drilling ▽ --
Time After Drilling - hours
Depth to Water ▽ m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (4 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

WANGENG 255001.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-17 (3 OF 3)

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Page 3 of 3

BORING LOG AB-17

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 191.12 m
North: 545266.08 m
East: 367829.44 m
Station: 8+434.07
Offset: 19.82 RT

Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		31				
		32	29	9, 16, 20	526 B	14
		33	30	15, 23, 60	746 B	11
157.6	Boring terminated at 33.53 m	34				
		35–38				

GENERAL NOTES

Begin Drilling 01-24-2002 Complete Drilling 01-25-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ -
At Completion of Drilling ▼ -
Time After Drilling - hours
Depth to Water ▽ m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-18 (1 OF 2)

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Page 1 of 2

BORING LOG AB-18

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.23 m
North: 545239.56 m
East: 367893.57 m
Station: 8+503.38
Offset: 23.36 RT

Elevation (m)	SOIL AND ROCK DESCRIPTION	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	Dark brown SILTY LOAM --TOPSOIL--				
180.0	Very stiff, gray CLAY --FILL--	1	4, 4, 4	243 B	21
179.3	Very loose, gray SILTY LOAM	2	1, 1, 1	NP	29
178.6	Loose, gray SANDY LOAM	3	1, 2, 2	NP	27
177.8	Very soft, gray, organic CLAY LOAM	4	1, 0, 0	*24 P	32
176.7	Loose, gray SILT	5	2, 3, 5	NP	23
176.3	Stiff, gray SILTY CLAY	6	3, 4, 4	133 B	20
175.5	Medium stiff to stiff, gray CLAY	7	1, 2, 2	118 B	31
		8	2, 2, 2	157 B	29
		9	1, 1, 2	79 B	20
		10	2, 2, 3	189 B	23
172.5	Medium stiff, gray SILTY CLAY	11	2, 2, 4	94 B	17
172.0	Stiff to very stiff, gray CLAY	12	3, 4, 5	189 B	20
		13	2, 4, 6	172 B	23
		14	3, 5, 7	236 B	21
		15	4, 6, 8	228 B	22
165.9	Hard, gray SILTY CLAY to SILTY CLAY LOAM	16	6, 8, 10	621 B	12

GENERAL NOTES

Begin Drilling 01-08-2002 Complete Drilling 01-08-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger B. Fugiel Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ 1.83 m
At Completion of Drilling ▼ 1.68 m
Time After Drilling 24 hours
Depth to Water ▽ 1.68 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-18 (2 OF 2)

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Page 2 of 2

BORING LOG AB-18

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.23 m
North: 545239.56 m
East: 367893.57 m
Station: 8+503.38
Offset: 23.36 RT

Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		16				
	A-4 (3) LL=23%, PL=15% GRAVEL=1.5% SAND=24.2% SILT=42.9% CLAY=31.5%	17	17	6, 8, 13	487 B	13
		18	18	11, 12, 14	487 S	11
		19	19	7, 12, 17	589 B	11
		21	20	8, 12, 20	722 B	13
157.4		22	21	16, 19, 27	565 S	10
	Boring terminated at 22.86 m	23				
		24–30				

GENERAL NOTES

Begin Drilling 01-08-2002 Complete Drilling 01-08-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger B. Fugiel Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ 1.83 m
At Completion of Drilling ▼ 1.68 m
Time After Drilling 24 hours
Depth to Water ▽ 1.68 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY) OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (5 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB) (016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	687
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-68
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-19 (1 OF 2)

Page 1 of 2

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BORING LOG AB-19

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 181.20 m
North: 545276.68 m
East: 367932.99 m
Station: 8+528.11
Offset: 24.8 LT

SOIL AND ROCK DESCRIPTION

- 181.0 Brown LOAM --TOPSOIL--
- Loose, brown SANDY LOAM, trace crushed asphalt --FILL--
- 180.3 Very stiff to hard, brown and gray SILTY CLAY --FILL--
- 178.0 Hard, brown CLAY
- 177.2 Very stiff, gray SILTY CLAY
- 175.7 Medium dense, gray SILT
- 174.6 Medium stiff to stiff, gray SILTY CLAY LOAM; A-4 (4), LL=25%, PL=17%, GRAVEL=1.1%, SAND=20.5%, SILT=42.1%, CLAY=36.3%
- 173.4 Stiff, gray CLAY
- 168.5 Very stiff to hard, gray SILTY CLAY

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
1	4 4 5	NP	13
2	4 7 9	675 S	17
3	4 7 10	722 S	18
4	5 11 13	369 S	18
5	5 7 9	582 B	18
6	7 8 11	338 B	18
7	9 11 12	346 B	20
8	3 6 8	NP	17
9	4 4 4	103 B	29
10	2 2 3	94 B	33
11	3 4 5	165 B	26
12	3 3 4	189 B	28
13	2 2 3	165 B	24
14	3 4 6	133 B	22
15	4 6 9	267 B	12
16	7 10 12	354 S	12

GENERAL NOTES

Begin Drilling 01-10-2002 Complete Drilling 01-10-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger D. Peterson Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 2.90 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-19 (2 OF 2)

Page 2 of 2

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BORING LOG AB-19

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 181.20 m
North: 545276.68 m
East: 367932.99 m
Station: 8+528.11
Offset: 24.8 LT

SOIL AND ROCK DESCRIPTION

- 159.9 Boring terminated at 21.34 m

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
17	6 7 9	346 B	14
18	8 9 15	377 S	12
19	8 9 17	479 B	14
20	10 16 15	503 B	10

GENERAL NOTES

Begin Drilling 01-10-2002 Complete Drilling 01-10-2002
Drilling Contractor TSC Drill Rig B-61
Driller G&D Logger D. Peterson Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 2.90 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-20 (1 OF 3)

Page 1 of 3

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BORING LOG AB-20

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.76 m
North: 545251.92 m
East: 367988.88 m
Station: 8+589.07
Offset: 20.16 LT

SOIL AND ROCK DESCRIPTION

- 305-mm thick CONCRETE --PAVEMENT--
- 190.5 Medium dense, brown SANDY LOAM --FILL--
- 189.8 Stiff, brown CLAY LOAM to SANDY CLAY LOAM --FILL--
- 188.0 Medium dense, brown, medium SAND --FILL--; A-3 (0), GRAVEL=0.0%, SAND=94.2%, SILT=5.6%, CLAY=0.2%
- 181.5 Stiff, green, brown and dark gray CLAY to CLAY LOAM --BURIED TOPSOIL--
- 180.7 Very stiff to hard, brown CLAY
- 177.4 Very stiff, gray CLAY
- 176.4 Dense, gray SILT

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
1	5 5 8		16
2	4 5 7	96 P	16
3	4 5 9	144 P	16
4	3 5 8	NP	4
5	8 9 12	NP	4
6	4 5 6	NP	17
7	4 5 7	NP	11
8	6 9 12	NP	19
9	6 11 13	NP	22
10	6 7 10	NP	17
11	7 9 10	NP	18
12	3 4 5	NP	20
13	2 3 5	125 B	23
14	5 7 11	479 B	23
15	5 6 8	361 B	20
16	4 4 5	220 B	19
17	12 15 15	NP	19

GENERAL NOTES

Begin Drilling 01-17-2002 Complete Drilling 01-18-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by E. Datz
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 3.05 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (6 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)
DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	688
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-69
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-20 (2 OF 3)

Page 2 of 3

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BORING LOG AB-20
WEI Job No.: 255-08-01

Client American Consulting Engineers
Project FAI 80/94, I-294 to US 41
Location s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.76 m
North: 545251.92 m
East: 367988.88 m
Station: 8+589.07
Offset: 20.16 LT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type / recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	174.8	Stiff to very stiff, gray CLAY						
			18			3 5 6	189	21
			19			4 6 7	157	17
			20			4 6 9	228	22
	170.7	Medium dense, gray, coarse SAND						
			21			6 7 8	NP	17
			22			6 6 6	NP	23
	167.3	Hard, gray SILTY CLAY						
			23			10 14 26	NR	
			24			10 13 23	856	12
			25			11 15 20	604	14
			26			9 14 18	417	15
			27			10 14 18	471	15
	160.3							

GENERAL NOTES

Begin Drilling 01-17-2002 Complete Drilling 01-18-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by E. Datz
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▽ –
Time After Drilling 24 hours
Depth to Water ▽ 3.05 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-20 (3 OF 3)

Page 3 of 3

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BORING LOG AB-20
WEI Job No.: 255-08-01

Client American Consulting Engineers
Project FAI 80/94, I-294 to US 41
Location s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.76 m
North: 545251.92 m
East: 367988.88 m
Station: 8+589.07
Offset: 20.16 LT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type / recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		Boring terminated at 30.48 m						

GENERAL NOTES

Begin Drilling 01-17-2002 Complete Drilling 01-18-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by E. Datz
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▽ –
Time After Drilling 24 hours
Depth to Water ▽ 3.05 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING NO. AB-21 (1 OF 2)

Page 1 of 2

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BORING LOG AB-21
WEI Job No.: 255-08-01

Client American Consulting Engineers
Project FAI 80/94, I-294 to US 41
Location s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.61 m
North: 545246.24 m
East: 367934.56 m
Station: 8+539.78
Offset: 3.36 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type / recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		Very stiff, brown SANDY CLAY LOAM, trace gravel --FILL--						
	179.7		1			6 7 5	359 P	15
		Very stiff, brown to gray SILTY CLAY --FILL--	2			4 6 8	299 S	20
	178.9	Very stiff to hard, brown CLAY	3			4 5 10	565 B	17
			4			5 10 11	688 B	17
			5			8 10 13	613 B	18
			6			3 4 7	369 B	20
	175.4	Stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM	7			4 8 6	157 B	23
			8			4 4 5	157 S	13
			9			4 7 10	236 B	19
	173.6	Very stiff, gray CLAY	10			3 3 9	220 B	18
	172.9	Medium dense, gray SILT	11			6 7 7	220 B	18
			12			3 5 8	236 B	15
			13			5 5 6	NP	20
	169.3	Very stiff, gray SILTY CLAY	14			4 7 9	220 B	26
	167.8	Very stiff, gray CLAY	15			4 5 8	236 B	22
	166.3	Hard, gray SILTY CLAY	16			7 10 15	628 B	12

GENERAL NOTES

Begin Drilling 01-09-2002 Complete Drilling 01-09-2002
Drilling Contractor TSC Drill Rig B-61
Driller C&D Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▽ –
Time After Drilling 24 hours
Depth to Water ▽ 3.05 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (7 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	689
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-70
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-21 (2 OF 2)

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BORING LOG AB-21

Page 2 of 2

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.61 m
North: 545246.24 m
East: 367934.56 m
Station: 8+539.78
Offset: 3.36 RT

Elevation (m)	Soil and Rock Description	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
		16–17	17	12, 14, 15	644 B	12
		18	18	10, 11, 11	565 B	11
		19–20	19	10, 15, 21	456 B	15
		21	20	15, 21, 27	722 B	13
		22–23	21	13, 21, 39	731 B	12
156.7	Gray, finely crystalline, medium grained, slightly weathered, strong DOLOSTONE with occassional vugs filled with pyrite and asphalt --BEDROCK-- --RQD = 87%	24–27	22	CORE		
153.6	Boring terminated at 26.97 m	27				

GENERAL NOTES	
Begin Drilling 01-09-2002	Complete Drilling 01-09-2002
Drilling Contractor TSC	Drill Rig B-61
Driller G&D Logger B. Fugiel	Checked by N. Davis
Drilling Method Mud Rotary: Grouted after final water reading	

WATER LEVEL DATA	
While Drilling ∇	-
At Completion of Drilling ▼	-
Time After Drilling	24 hours
Depth to Water ▼	3.05 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-22 (1 OF 2)

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BORING LOG AB-22

Page 1 of 2

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.68 m
North: 545232.59 m
East: 367989.73 m
Station: 8+596.34
Offset: 2.23 LT

Elevation (m)	Soil and Rock Description	Depth (m)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	330-mm thick ASPHALT over 229-mm thick CONCRETE --PAVEMENT--					
190.1	Hard, brown to gray SILTY CLAY --FILL--	1	1	5, 8, 9	383 P	16
189.5	Medium dense, brown to gray SILTY LOAM --FILL--		2	5, 6, 6	NP	18
189.0	Very stiff, brown to gray CLAY LOAM to SILTY CLAY LOAM --FILL--	2	3	2, 3, 3	240 P	20
		3	4	4, 5, 5	287 P	31
			5	6, 6, 7	311 P	19
186.7	Medium dense, brown medium SAND --FILL--	4	6	10, 11, 13	NP	14
186.0	Medium dense, gray SILT --FILL--	5	7	10, 10, 12	NP	13
185.2	Hard, gray SILTY CLAY --FILL--	6	8	5, 7, 7	507 B	18
184.4	Medium dense, gray SILT to SILTY LOAM --FILL--		9	3, 6, 7	NP	15
		7	10	4, 6, 11	NP	15
182.9	Medium dense, brown, medium SAND --FILL--	8	11	8, 7, 8	NP	20
		9	12	7, 11, 14	NP	22
			13	9, 13, 11	NP	27
180.6	Hard, brown to gray CLAY LOAM	10	14	5, 7, 11	393 B	19
179.4	Hard, brown CLAY	11–12	15	5, 7, 12	624 B	19
		13	16	4, 5, 5	393 B	20
176.4	Very stiff, gray CLAY	14				
	Boring terminated - drilling fluid lost in borehole	15	17	5, 6, 8	196 B	19
175.4						

GENERAL NOTES	
Begin Drilling 01-22-2002	Complete Drilling 01-22-2002
Drilling Contractor TSC	Drill Rig CME 75
Driller C&J Logger B. Fugiel	Checked by N. Davis
Drilling Method Mud Rotary: Grouted upon completion	

WATER LEVEL DATA	
While Drilling ∇	-
At Completion of Drilling ▼	-
Time After Drilling	- hours
Depth to Water ▼	m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-22 (2 OF 2)

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
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Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AB-22

Page 2 of 2

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.68 m
North: 545232.59 m
East: 367989.73 m
Station: 8+596.34
Offset: 2.23 LT

Boring terminated at 15.24 m

GENERAL NOTES	
Begin Drilling 01-22-2002	Complete Drilling 01-22-2002
Drilling Contractor TSC	Drill Rig CME 75
Driller C&J Logger B. Fugiel	Checked by N. Davis
Drilling Method Mud Rotary: Grouted upon completion	

WATER LEVEL DATA	
While Drilling ∇	-
At Completion of Drilling ▼	-
Time After Drilling	- hours
Depth to Water ▼	m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (8 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	690
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-71
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-23 (1 OF 2)

Wang Engineering, INC.
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BORING LOG AB-23

Page 1 of 2

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.39 m
North: 545223.64 m
East: 367935.14 m
Station: 8+547.88
Offset: 24.47 RT

SOIL AND ROCK DESCRIPTION

- 180.3 — Brown CLAY LOAM --TOPSOIL--
- Stiff to hard, brown and gray CLAY --FILL--
- 178.0 — Very stiff to hard, brown CLAY
- 176.4 — Medium stiff to very stiff, gray CLAY
- 166.1 — Hard, gray SILT CLAY

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
1	10, 9, 7	<431 P	16
2	5, 6, 7	212 B	40
3	4, 5, 5	165 B	26
4	4, 6, 8	408 B	19
5	4, 5, 6	322 B	20
6	3, 5, 5	189 B	20
7	5, 5, 6	181 B	23
8	3, 3, 5	125 B	25
9	2, 2, 2	86 B	34
10	2, 2, 3	181 B	32
11	2, 3, 5	103 B	20
12	4, 5, 6	157 B	21
13	4, 5, 7	165 B	22
14	3, 5, 8	196 B	22
15	5, 9, 12	236 B	17
16	9, 14, 15	565 S	12

GENERAL NOTES

Begin Drilling 01-10-2002 Complete Drilling 01-10-2002
Drilling Contractor TSC Drill Rig CME 75
Driller G&D Logger D. Peterson Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ∇ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 0.30 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-23 (2 OF 2)

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BORING LOG AB-23

Page 2 of 2

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 180.39 m
North: 545223.64 m
East: 367935.14 m
Station: 8+547.88
Offset: 24.47 RT

SOIL AND ROCK DESCRIPTION

- 159.1 — Boring terminated at 21.34 m

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
17	9, 13, 18	597 B	14
18	9, 18, 21	<431 P	16
19	13, 16, 22	503 B	13
20	9, 16, 24	535 S	13

GENERAL NOTES

Begin Drilling 01-10-2002 Complete Drilling 01-10-2002
Drilling Contractor TSC Drill Rig CME 75
Driller G&D Logger D. Peterson Checked by N. Davis
Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling ∇ -
At Completion of Drilling ▼ -
Time After Drilling 24 hours
Depth to Water ▼ 0.30 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

BORING NO. AB-24 (1 OF 2)

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BORING LOG AB-24

Page 1 of 2

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.57 m
North: 545209.11 m
East: 367989.76 m
Station: 8+604.21
Offset: 19.89 RT

SOIL AND ROCK DESCRIPTION

- 190.4 — 152-mm thick ASPHALT --PAVEMENT--
- Hard, gray CLAY LOAM --FILL--
- 189.3 — Very stiff, brown SILTY CLAY --FILL--
- 187.7 — Medium dense, brown, medium SAND --FILL--
- 186.6 — Very stiff, gray SILTY CLAY --FILL--
- 185.8 — Medium dense, gray SILT --FILL--
- 185.1 — Medium dense, brown, medium SAND --FILL--
- 181.0 — Very stiff, gray and green CLAY LOAM --BURIED TOPSOIL--
- 180.5 — Hard, brown CLAY
- 177.8 — Very stiff, gray CLAY
- 175.6 — Medium dense, gray SILT

Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
1	4, 4, 4	383 P	15
2	3, 3, 4	216 P	20
3	3, 4, 5	216 P	19
4	4, 5, 5	359 P	14
5	7, 7, 8	NP	4
6	1, 3, 3	260 B	15
7	3, 7, 8	NP	17
8	4, 7, 7	NP	21
9	4, 7, 7	NP	22
10	2, 4, 7	NP	24
11	5, 10, 15	NP	19
12	10, 12, 16	NP	19
13	5, 6, 6	287 P	23
14	5, 7, 10	518 B	19
15	6, 6, 10	574 B	20
16	3, 4, 5	236 B	21
17	6, 13, 11	NP	17

GENERAL NOTES

Begin Drilling 01-23-2002 Complete Drilling 01-23-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ∇ -
At Completion of Drilling ▼ -
Time After Drilling - hours
Depth to Water ▼ m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 2550801.GPJ WANGENG.GDT 6/19/03

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (9 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
(016-I003 & 016-I004)

DATE 07/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	DIRECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	691
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-72
72 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

BORING NO. AB-24 (2 OF 2)

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
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Fax: 630 458-0900

BORING LOG AB-24

Page 2 of 2

WEI Job No.: 255-08-01

Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.57 m
North: 545209.11 m
East: 367989.76 m
Station: 8+604.21
Offset: 19.89 RT

Profile	Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type and recovery	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
	174.7	Stiff to very stiff, gray CLAY						
		A-7-6 (24) LL=41%, PL=18% GRAVEL=0.0% SAND=1.5% SILT=28.1% CLAY=70.4%	18		18	1 2 4	157 B	27
			18		19	2 4 4	196 B	21
			19					
			20		20	3 4 5	196 B	21
			20					
			21		21	3 4 5	220 B	22
			21					
			22		22	4 5 7	236 B	22
	167.1	Very stiff to hard, gray SILTY CLAY	23					
			24		23	4 7 12	354 B	17
			25					
			24		24	14 15 22	707 S	11
			26					
			27		25	7 12 17	731 S	12
			28					
			29		26	8 10 16	NR	
					27	11 19 21 20	628 B	12
	161.0	Boring terminated at 29.57 m	30					

NAME:ENG.INC 255B01.GPJ NAME:ENG.GDT 6/13/05

GENERAL NOTES

Begin Drilling 01-23-2002 Complete Drilling 01-23-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger B. Fugiel Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling ▽ –
At Completion of Drilling ▼ –
Time After Drilling – hours
Depth to Water ▼ m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	BHS
CHECKED	KFA
DRAWN	CAK MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.

BORING LOGS (10 OF 10)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 **(016-I003 & 016-I004)**

AMERICAN CONSULTING ENGINEERS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	692
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-1
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

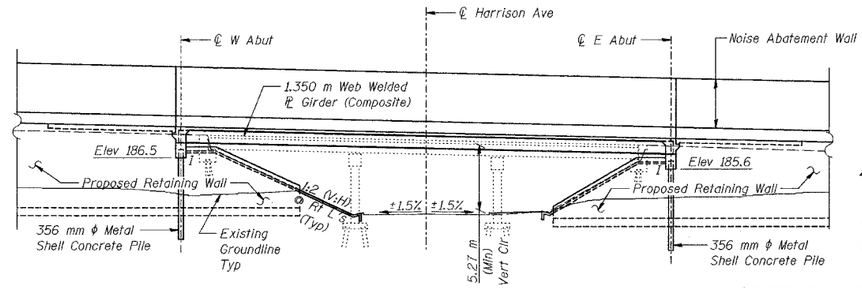
BENCHMARK:
TBM 102: Set cut box at Northeast corner of Northeast wingwall over Little Calumet River Bridge. Westbound I-80/94 mile marker 0.4. Station 8+587.2. Offset 22.4 Lt. Elevation = 191.619.

EXISTING STRUCTURE:
SN I-80-I-3805E (EBL & WBL) originally built in 1949 as FAI Route 80/94 over Harrison Avenue by the State Highway Commission of Indiana. The structure was renovated in 1966, 1982, 1990, and 1996. The existing structure is a three span, dual-structure bridge. 33.657 m back-to-back of abutments, with a reinforced concrete deck superstructure with a maximum total width of 48.330 m. The deck is supported by continuous wide flange steel beams on multi-column concrete piers and open abutments with a 15°-28' left skew angle.

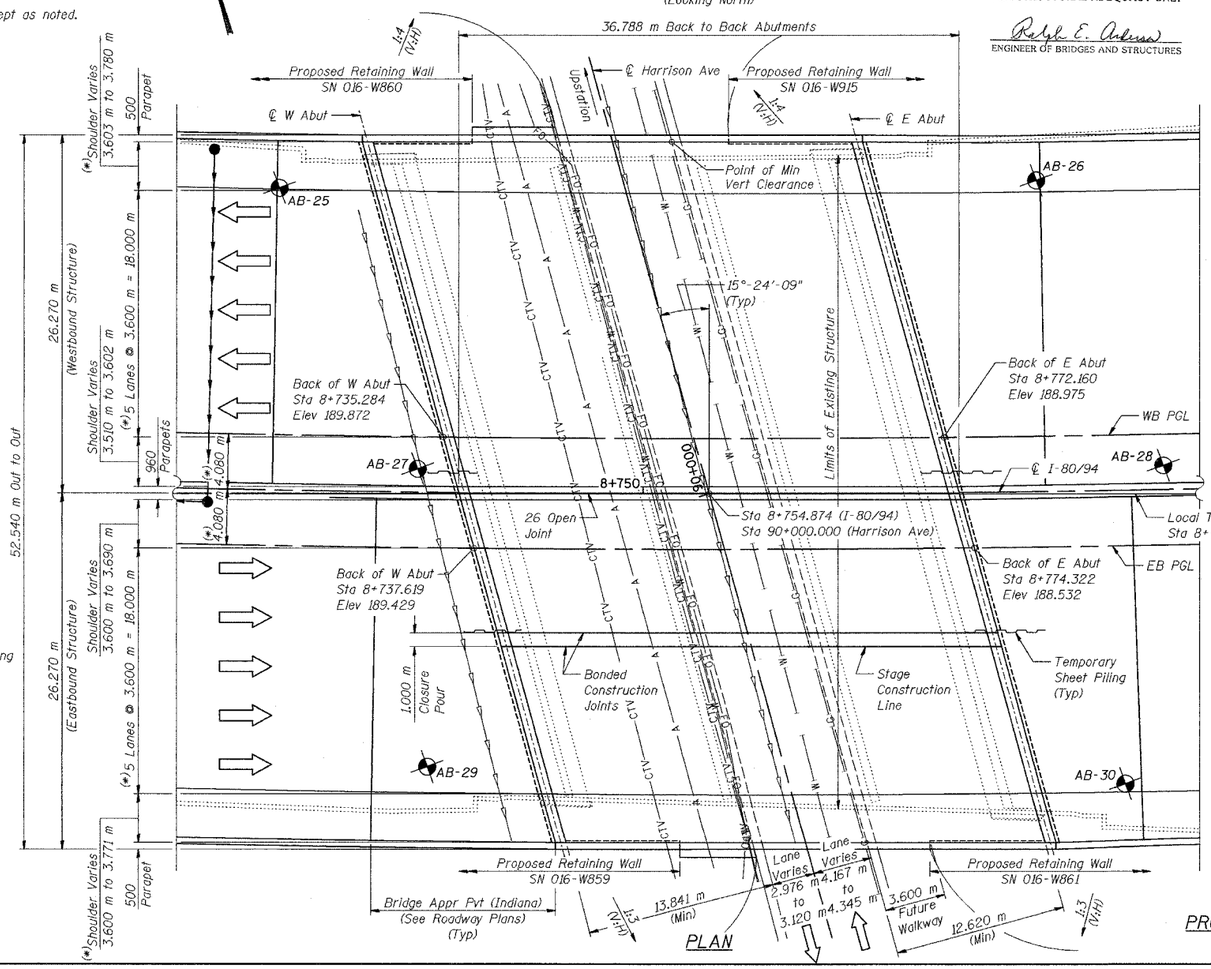
STAGING:
See sections on Sheet No 2 for staging.

SALVAGE:
None.

NOTE:
All dimensions millimeters (mm) except as noted.



ELEVATION
(Looking North)



PLAN

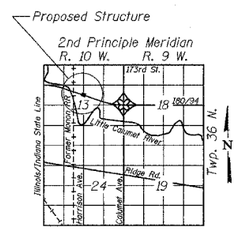
APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

LICENSED STRUCTURAL ENGINEER
GARY S. POWELL
081-004771
CHICAGO
ILLINOIS
STATE OF ILLINOIS

Gary S. Powell
GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771
EXP 11-30-2006
DATE 10-6-2005

GARY S. POWELL
REGISTERED
No. 10403944
STATE OF
INDIANA
PROFESSIONAL ENGINEER

Gary S. Powell
GARY S. POWELL, P. E.
IN. LIC. NO. 10403944
EXP 07-31-2006
DATE 10-6-2005



LOCATION SKETCH

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges.

1989 AASHTO Guide Specifications for Structural Design of Sound Barriers and 1992 Interims.

DESIGN LOADING

Roadway Live Load: MS-18, Alt Military, and Indiana Toll Road Truck Loads
Future Wearing Surface = 2.4 kN/sq m
Wind Load on Noise Wall = 1.7 kPa

DESIGN STRESSES

FIELD UNITS

Concrete, A, Substructure (Indiana): f'c = 24 MPa
Concrete, C, Superstructure (Indiana): f'c = 28 MPa
Reinforcement: fy = 400 MPa
Structural Steel: fy = 345 MPa (M 270M grade 345W)

SEISMIC DATA

Seismic Performance Category (SPC): A
Bedrock Acceleration Coefficient (A): 0.04g
Site Coefficient (S): 1.0

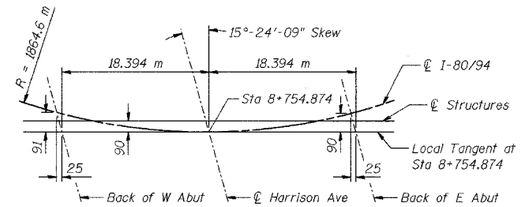
NOTES:

All dimensions measured at right angles to ℄ Structures except as noted.

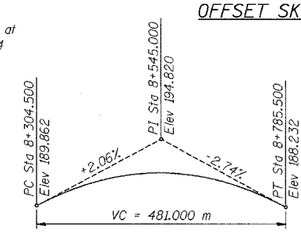
(*) Radial dimensions are normal to I-80/94.

CURVE DATA

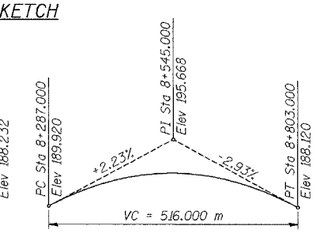
(℄ I-80/94)
Δ = 20°-51'-41"
T = 343.250 m
L = 678.899 m
E = 31.331 m
R = 1,864.600 m
SE = 3.0%
PC = Sta 8+603.684
PT = Sta 9+282.583
PI = Sta 8+946.934



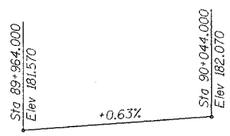
OFFSET SKETCH



PROFILE GRADE I-80/94 EB



PROFILE GRADE I-80/94 WB



PROFILE GRADE ℄ HARRISON AVE

LEGEND

EB - Eastbound Traffic
WB - Westbound Traffic
I - Integral Bearing
- Proposed Sewer
- Soil Borings
- Temporary Sheet Piling
- Drainage Structure
- Existing Sewer
CTV - Cable TV
G - Gas
W - Water Main
FO - Fiber Optic
A - Aerial Line

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE

GENERAL PLAN
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-I-8461 (EB & WB)
DATE 09/05 **(016-I005 & 016-I006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	693
		ILLINOIS FED. AID PROJECT-		

SHEET NO. S-2
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GENERAL NOTES

1. Fasteners shall be high strength bolts (AASHTO M164 type 3). Bolts M22 ϕ, open holes 24 mm ϕ, unless otherwise noted.
2. Calculated mass of Structural Steel (M 270M, Grade 345W) = 334,090 kg
3. All structural steel shall be AASHTO M 270M Grade 345W.
4. Field welding of construction accessories will not be permitted to the girders.
5. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges and webs of plate girders.
6. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M 322M Grade 400.
7. The contractor shall drive 2-356 ϕ Metal Shell test piles in a permanent location. One each at the East and West Abutments. as directed by the Engineer before ordering the remainder of piles.
8. All dimensions are in millimeters (mm) except as noted.
9. The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project. No additional compensation will be made to properly dispose of the existing structure containing lead.
10. AASHTO M 270M Grade 345W structural steel shall only be painted, at the ends of the beams, for a distance equal to 675 mm. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASHTO M 300, Type I. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel". The top of the top flanges shall not be painted.
11. All construction joints shall be bonded.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
(IN)	Present Structure, Str. No. I-80-1-8461, Remove Portions	L. Sum	1		1
(IN)	Slopewall, Concrete, 100 mm	m^2		1,245	1,245
(IN)	Surface Seal	L. Sum	0.12		0.12
(IN)	Excavation, Foundation, Unclassified	m^3		467	467
(IN)	Structure Backfill	m^3		796	796
(IN)	Test Pile, 356 mm	Each		2	2
(IN)	Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m		1,531.5	1,531.5
(IN)	Concrete, A, Substructure	m^3		117.9	117.9
(IN)	Concrete, C, Superstructure	m^3	601.6		601.6
(IN)	Reinforcing Bars, Epoxy Coated	kg	65,790	8,190	73,980
	Noise Abatement Wall Anchor Rod Assembly	Each	28		28
(IN)	Threaded Tie Bar Assembly, Epoxy Coated	Each	695	12	707
(IN)	Field Welded Stud Shear Connector	Each	7,272		7,272
(IN)	Anchor Bolt	Each	96		96
(IN)	Masonry Coat	L. Sum	0.07		0.07
*	Furnishing Structural Steel	L. Sum			0.16
	Erecting Structural Steel	L. Sum	0.21		0.21
*	Storage of Structural Steel	**			501

** For Storage of Structural Steel one unit shall be equal to 5 metric tons. The quantity was calculated based on the assumption that 25% of the steel mass has to be stored for 30 calendar days.

(IN) Indiana Pay Items, denoted by "(Indiana)" in Special Provisions and Summary of Quantities.

DESIGNED	BHS
CHECKED	KFA
DRAWN	BHS
CHECKED	GSP

*FOR INFORMATION ONLY

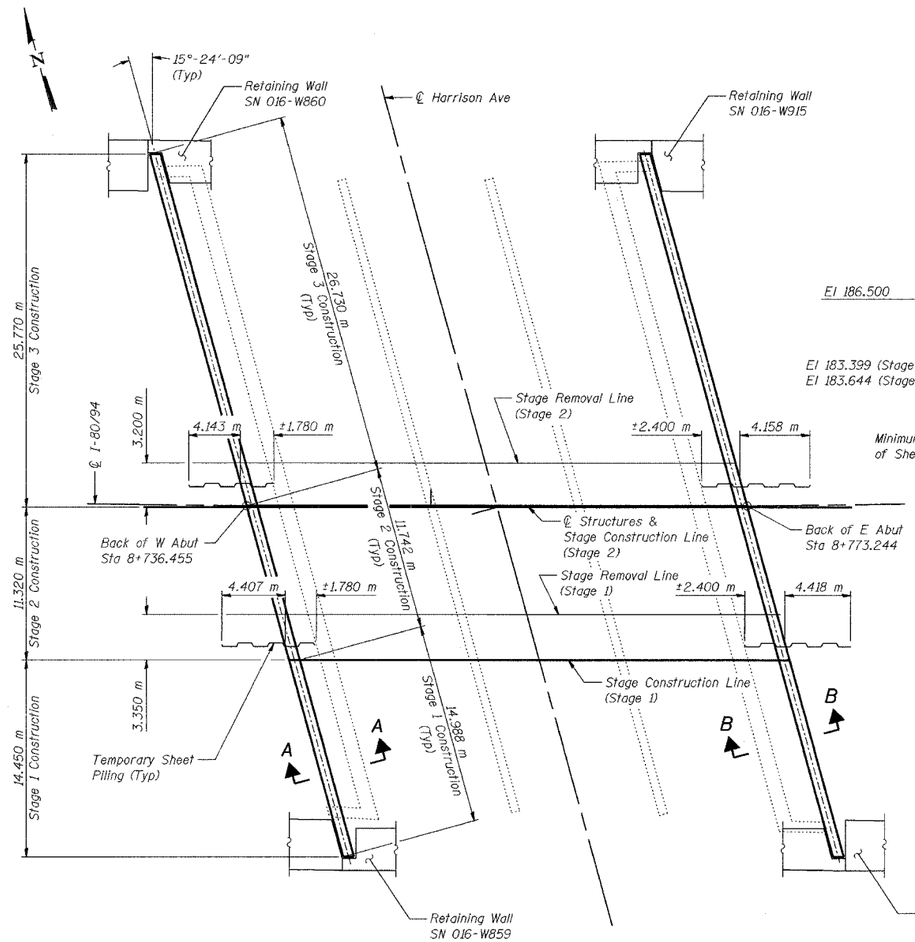
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE
GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 09/05 **(016-I005 & 016-I006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	694
		ILLINOIS FED. AID PROJECT-		

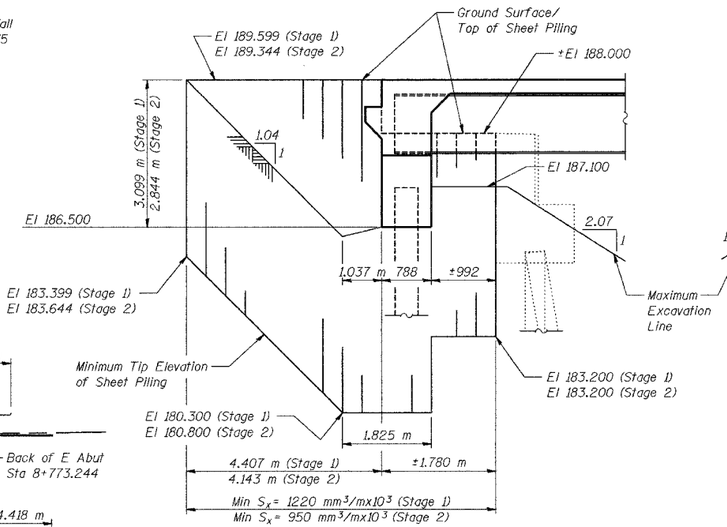
SHEET NO. S-3
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



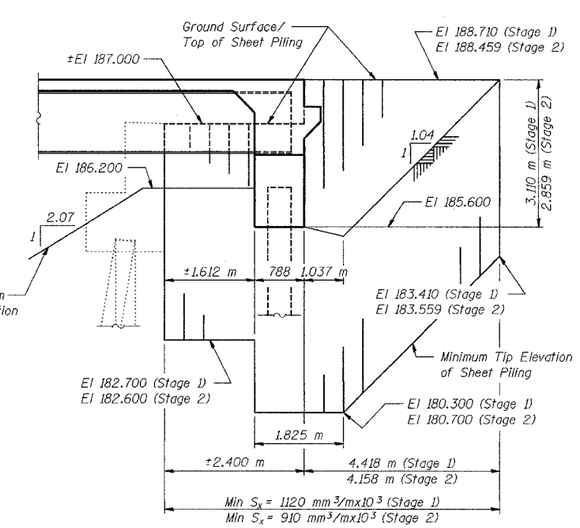
SUBSTRUCTURE LAYOUT

℄ Structures is parallel to Local Tangent at Sta 8+754.874 and offset from Local Tangent by 90 mm Lt. See Offset Sketch, Sheet S-1.



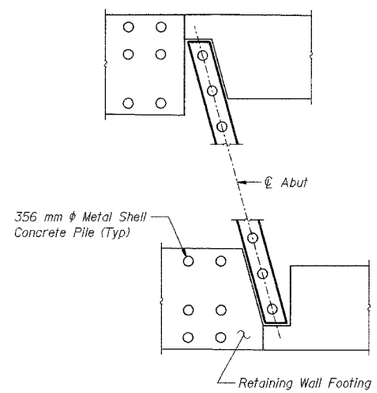
SECTION A-A

Slope and distances shown along alignment of sheeting (for structure with 15°-24'-09" skew)



SECTION B-B

Slope and distances shown along alignment of sheeting (for structure with 15°-24'-09" skew)



ABUTMENT FOOTING AT RETAINING WALLS

Abutment piles shall be driven before construction of the retaining walls. The driven depth shall be equal to or 300 mm below the proposed retaining wall footing.

NOTES:

Estimated Area of Temporary Sheet Piling = 172 m²

If the contractor chooses to alter the temporary cantilevered sheet piling design requirements as shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

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

Cost of Temporary Sheet Piling included with Excavation, Foundation, Unclassified.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

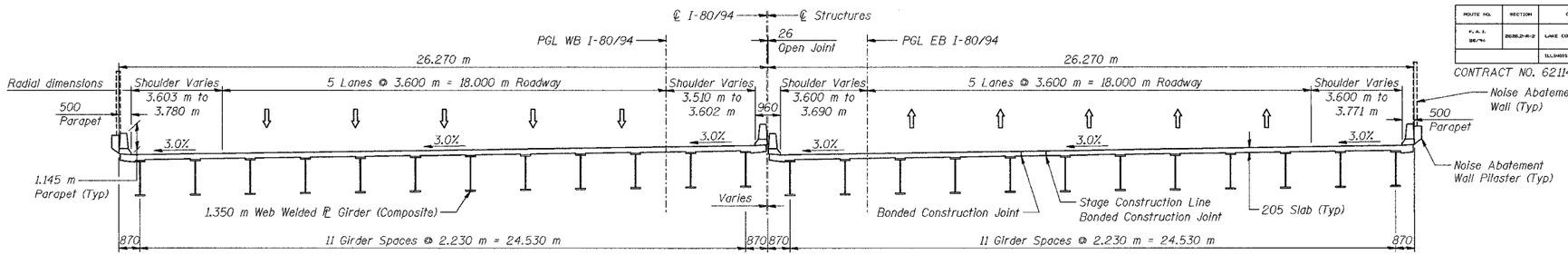
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE
STAGE CONSTRUCTION DETAILS – SUBSTRUCTURE
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 09/05 **(016-1005 & 016-1006)**

AMERICAN CONSULTING ENGINEERS

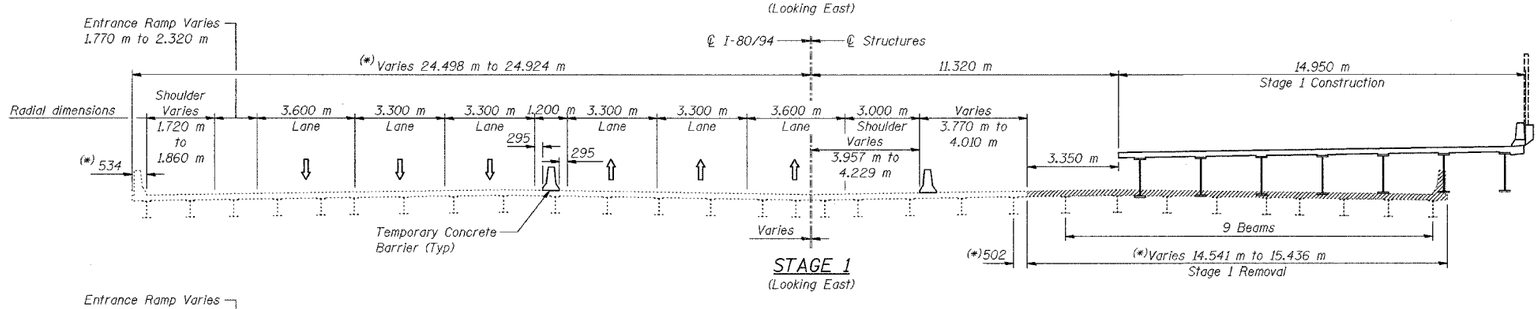
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	695
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-4
28 SHEETS

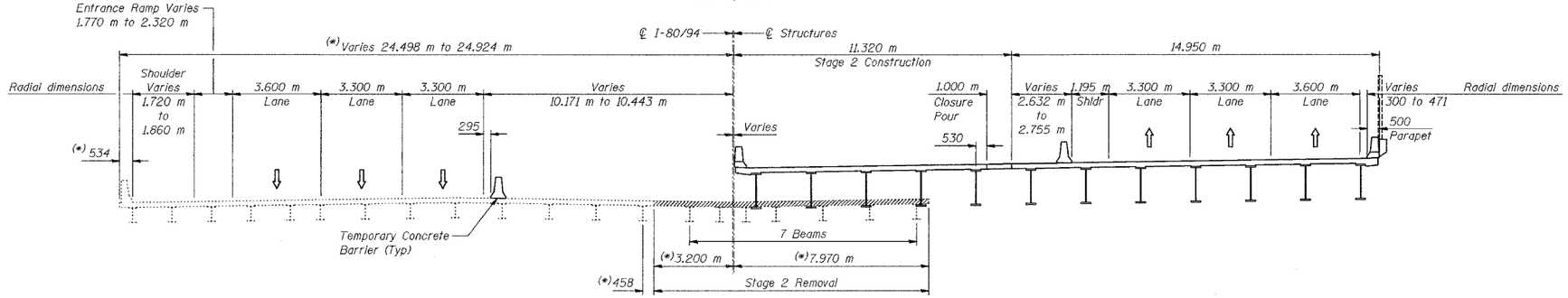
CONTRACT NO. 62114 INDOT DES. NO. 0100987



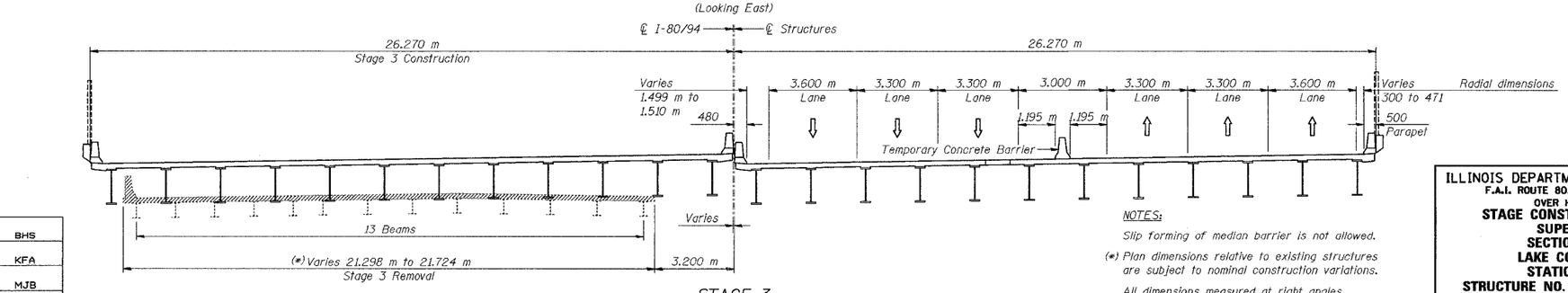
PROPOSED CROSS SECTION
(Looking East)



STAGE 1
(Looking East)



STAGE 2
(Looking East)



STAGE 3
(Looking East)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

Slip forming of median barrier is not allowed.

(*) Plan dimensions relative to existing structures are subject to nominal construction variations.

All dimensions measured at right angles to ℄ Structures except as noted.

Radial dimensions are normal to I-80/94.

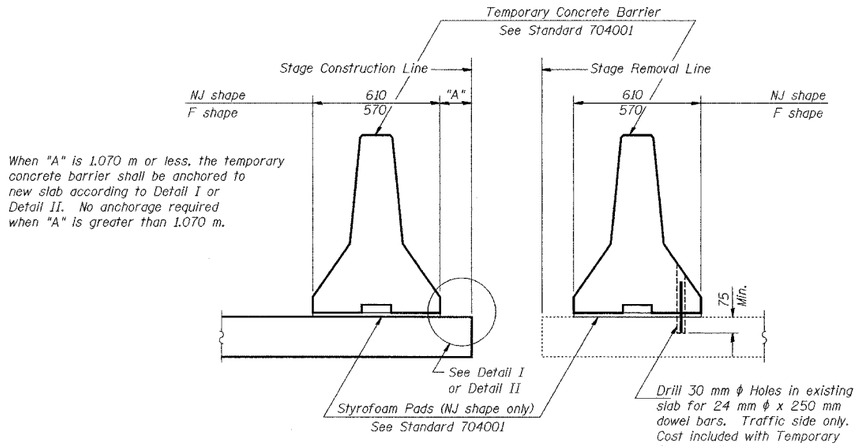
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE
STAGE CONSTRUCTION DETAILS - SUPERSTRUCTURE
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 09/05 **(016-I005 & 016-I006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	696
		R.I.M.S.	FED. AID PROJECT-	

SHEET NO. S-5
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



When "A" is 1.070 m or less, the temporary concrete barrier shall be anchored to new slab according to Detail I or Detail II. No anchorage required when "A" is greater than 1.070 m.

NEW SLAB EXISTING SLAB

SECTIONS THRU SLAB

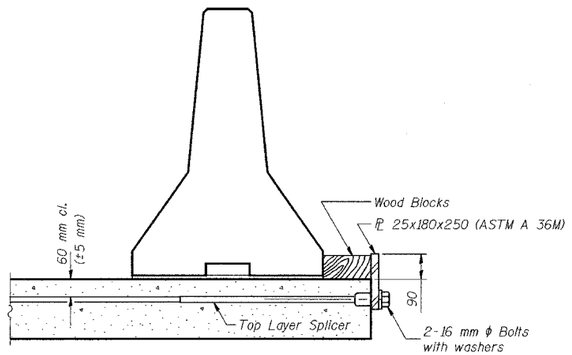
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 25x180x250 steel ℙ to the top layer of couplers with 2-16 mm ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel ℙ to the concrete slab with 2-16 mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

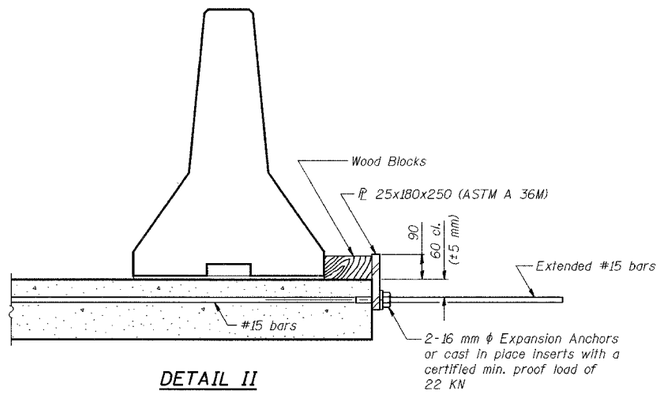
Cost of anchorage is included with Temporary Concrete Barrier.

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



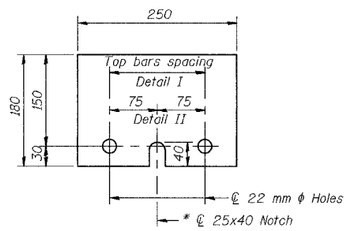
DETAIL I

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.



ℙ 25x180x250

* Required only with Detail II

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

R-27 (M) 9-01-03

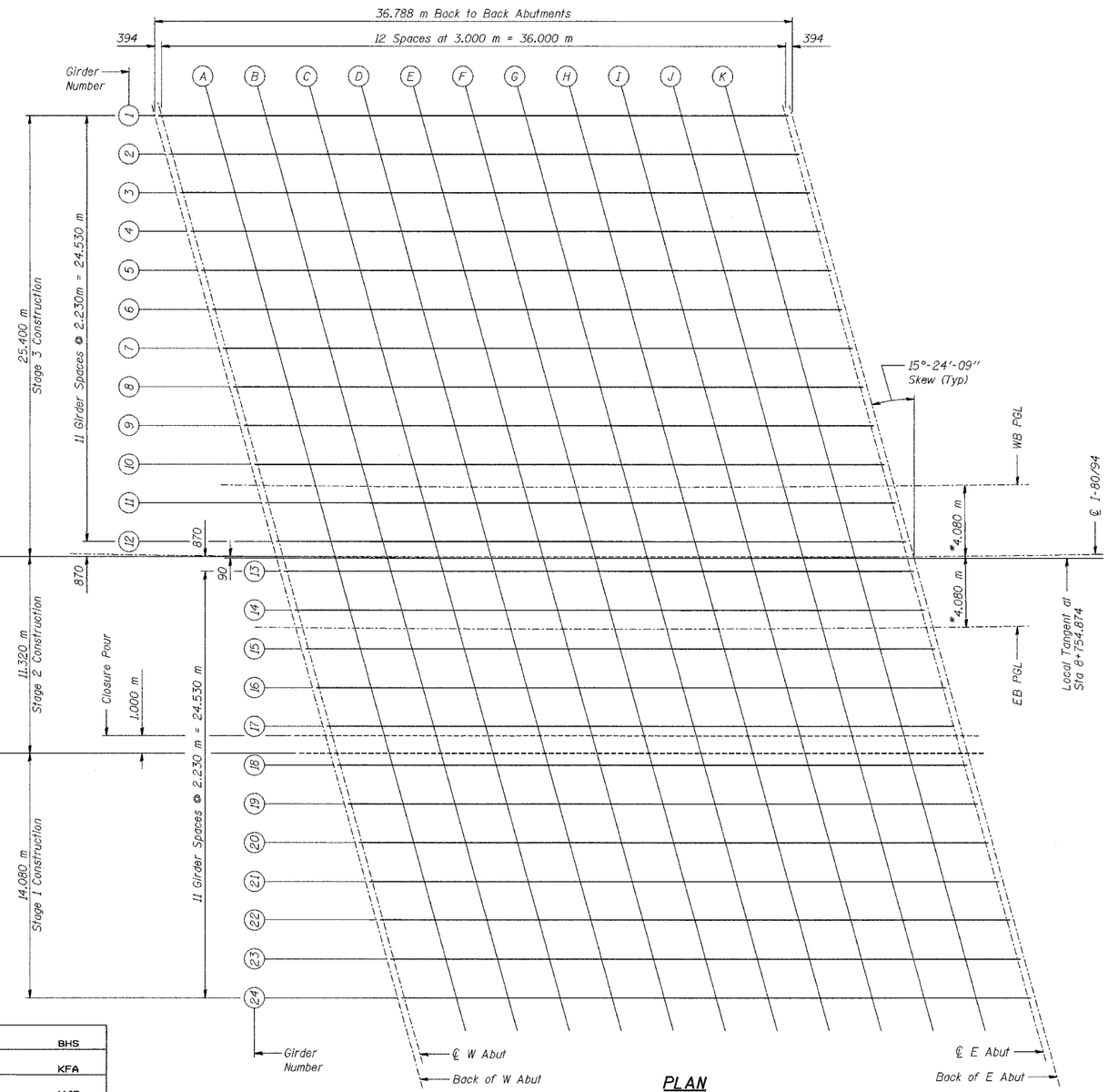
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 09/05 **(016-1005 & 016-1006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	697
		ILLINOIS	FED. AID PROJECT-	

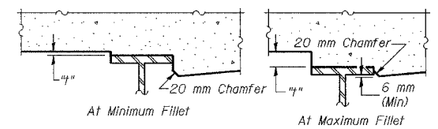
SHEET NO. S-6
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



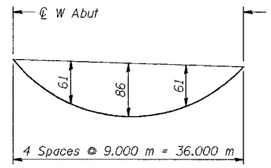
PLAN

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in Tables on Sheet S-7 thru S-10, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

NOTE: *The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections.*

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

NOTES:

* *Measured radial to ℄ I-80/94.*

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE

TOP OF DECK ELEVATIONS – LAYOUT
SECTION 2626.2–R–2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I–80–1–8461 (EB & WB)
DATE 09/05 **(016–I005 & 016–I006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 80-94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	698
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-7
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+729.107	-25.314 m	189.372	189.372
CL W Abut	8+729.506	-25.320 m	189.363	189.363
A	8+732.547	-25.358 m	189.295	189.318
B	8+735.589	-25.392 m	189.226	189.269
C	8+738.630	-25.420 m	189.156	189.217
D	8+741.671	-25.444 m	189.085	189.160
E	8+744.713	-25.463 m	189.014	189.097
F	8+747.754	-25.477 m	188.942	189.028
G	8+750.796	-25.486 m	188.869	188.952
H	8+753.837	-25.490 m	188.795	188.870
I	8+756.879	-25.489 m	188.721	188.782
J	8+759.921	-25.483 m	188.646	188.689
K	8+762.962	-25.473 m	188.570	188.592
CL E Abut	8+766.004	-25.457 m	188.493	188.493
Back of E Abut	8+766.403	-25.455 m	188.483	188.483

GIRDER 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+729.760	-23.093 m	189.424	189.424
CL W Abut	8+730.159	-23.098 m	189.416	189.416
A	8+733.196	-23.136 m	189.347	189.370
B	8+736.234	-23.168 m	189.278	189.321
C	8+739.272	-23.196 m	189.208	189.269
D	8+742.309	-23.218 m	189.137	189.212
E	8+745.347	-23.236 m	189.066	189.149
F	8+748.385	-23.249 m	188.994	189.080
G	8+751.423	-23.257 m	188.921	189.004
H	8+754.461	-23.260 m	188.847	188.922
I	8+757.499	-23.258 m	188.772	188.834
J	8+760.537	-23.252 m	188.697	188.741
K	8+763.574	-23.240 m	188.621	188.644
CL E Abut	8+766.612	-23.224 m	188.544	188.544
Back of E Abut	8+767.011	-23.221 m	188.534	188.534

GIRDER 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+730.412	-20.871 m	189.477	189.477
CL W Abut	8+730.810	-20.876 m	189.468	189.468
A	8+733.844	-20.913 m	189.399	189.422
B	8+736.878	-20.944 m	189.330	189.374
C	8+739.912	-20.971 m	189.260	189.321
D	8+742.946	-20.992 m	189.189	189.264
E	8+745.980	-21.009 m	189.118	189.201
F	8+749.014	-21.021 m	189.046	189.131
G	8+752.048	-21.028 m	188.973	189.056
H	8+755.083	-21.030 m	188.899	188.973
I	8+758.117	-21.027 m	188.824	188.885
J	8+761.151	-21.020 m	188.749	188.792
K	8+764.185	-21.007 m	188.673	188.695
CL E Abut	8+767.219	-20.990 m	188.596	188.596
Back of E Abut	8+767.618	-20.987 m	188.585	188.585

GIRDER 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+731.062	-18.649 m	189.529	189.529
CL W Abut	8+731.460	-18.654 m	189.520	189.520
A	8+734.490	-18.690 m	189.452	189.474
B	8+737.520	-18.720 m	189.382	189.426
C	8+740.550	-18.746 m	189.312	189.373
D	8+743.581	-18.766 m	189.241	189.316
E	8+746.611	-18.782 m	189.170	189.253
F	8+749.642	-18.793 m	189.097	189.183
G	8+752.672	-18.799 m	189.024	189.107
H	8+755.703	-18.800 m	188.950	189.025
I	8+758.734	-18.796 m	188.876	188.937
J	8+761.764	-18.787 m	188.800	188.844
K	8+764.795	-18.774 m	188.724	188.747
CL E Abut	8+767.825	-18.755 m	188.647	188.647
Back of E Abut	8+768.223	-18.753 m	188.637	188.637

GIRDER 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+731.710	-16.427 m	189.581	189.581
CL W Abut	8+732.108	-16.432 m	189.572	189.572
A	8+735.134	-16.466 m	189.504	189.526
B	8+738.161	-16.496 m	189.435	189.478
C	8+741.188	-16.520 m	189.364	189.426
D	8+744.214	-16.540 m	189.293	189.368
E	8+747.241	-16.555 m	189.222	189.305
F	8+750.268	-16.564 m	189.149	189.235
G	8+753.295	-16.569 m	189.076	189.159
H	8+756.322	-16.569 m	189.002	189.077
I	8+759.349	-16.565 m	188.927	188.988
J	8+762.376	-16.555 m	188.852	188.895
K	8+765.402	-16.541 m	188.776	188.798
CL E Abut	8+768.429	-16.521 m	188.698	188.698
Back of E Abut	8+768.827	-16.518 m	188.688	188.688

GIRDER 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+732.357	-14.205 m	189.634	189.634
CL W Abut	8+732.754	-14.210 m	189.625	189.625
A	8+735.777	-14.243 m	189.556	189.579
B	8+738.800	-14.271 m	189.487	189.530
C	8+741.823	-14.295 m	189.416	189.478
D	8+744.846	-14.313 m	189.345	189.420
E	8+747.869	-14.327 m	189.274	189.357
F	8+750.893	-14.336 m	189.201	189.287
G	8+753.916	-14.340 m	189.128	189.211
H	8+756.939	-14.339 m	189.054	189.128
I	8+759.962	-14.333 m	188.979	189.040
J	8+762.986	-14.322 m	188.903	188.947
K	8+766.009	-14.307 m	188.827	188.850
CL E Abut	8+769.032	-14.287 m	188.750	188.750
Back of E Abut	8+769.429	-14.284 m	188.740	188.740

GIRDER 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+733.002	-11.983 m	189.686	189.686
CL W Abut	8+733.399	-11.987 m	189.677	189.677
A	8+736.418	-12.019 m	189.608	189.631
B	8+739.438	-12.047 m	189.539	189.582
C	8+742.457	-12.069 m	189.469	189.530
D	8+745.477	-12.086 m	189.397	189.472
E	8+748.496	-12.099 m	189.326	189.409
F	8+751.516	-12.107 m	189.253	189.339
G	8+754.535	-12.110 m	189.180	189.263
H	8+757.555	-12.108 m	189.106	189.180
I	8+760.575	-12.101 m	189.031	189.092
J	8+763.594	-12.090 m	188.955	188.998
K	8+766.614	-12.073 m	188.879	188.901
CL E Abut	8+769.633	-12.052 m	188.801	188.801
Back of E Abut	8+770.030	-12.049 m	188.791	188.791

GIRDER 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+733.646	-9.760 m	189.738	189.738
CL W Abut	8+734.042	-9.764 m	189.729	189.729
A	8+737.058	-9.795 m	189.661	189.683
B	8+740.074	-9.822 m	189.591	189.634
C	8+743.090	-9.843 m	189.521	189.582
D	8+746.106	-9.859 m	189.449	189.524
E	8+749.122	-9.871 m	189.378	189.461
F	8+752.137	-9.878 m	189.305	189.391
G	8+755.153	-9.880 m	189.231	189.314
H	8+758.169	-9.877 m	189.157	189.232
I	8+761.185	-9.869 m	189.082	189.143
J	8+764.201	-9.857 m	189.007	189.050
K	8+767.217	-9.839 m	188.930	188.953
CL E Abut	8+770.233	-9.817 m	188.853	188.853
Back of E Abut	8+770.629	-9.814 m	188.843	188.843

NOTES:

See Sheet No. S-6 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE

TOP OF DECK ELEVATIONS (1 OF 4)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 09/05 **(016-I005 & 016-I006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	699
		ILLINOIS	FED. AID PROJECT-	

SHEET NO. S-8
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+734.289	-7.537 m	189.791	189.791
CL W Abut	8+734.684	-7.541 m	189.782	189.782
A	8+737.696	-7.571 m	189.713	189.735
B	8+740.708	-7.596 m	189.643	189.687
C	8+743.721	-7.617 m	189.573	189.634
D	8+746.733	-7.632 m	189.501	189.576
E	8+749.745	-7.643 m	189.429	189.512
F	8+752.758	-7.649 m	189.357	189.443
G	8+755.770	-7.650 m	189.283	189.366
H	8+758.782	-7.646 m	189.209	189.284
I	8+761.795	-7.637 m	189.134	189.195
J	8+764.807	-7.624 m	189.058	189.102
K	8+767.819	-7.605 m	188.982	189.004
CL E Abut	8+770.831	-7.582 m	188.904	188.904
Back of E Abut	8+771.227	-7.579 m	188.894	188.894

GIRDER 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+734.929	-5.314 m	189.843	189.843
CL W Abut	8+735.325	-5.318 m	189.834	189.834
A	8+738.333	-5.347 m	189.765	189.788
B	8+741.342	-5.371 m	189.695	189.739
C	8+744.350	-5.390 m	189.625	189.686
D	8+747.359	-5.405 m	189.553	189.628
E	8+750.368	-5.415 m	189.481	189.564
F	8+753.376	-5.419 m	189.409	189.494
G	8+756.385	-5.419 m	189.335	189.418
H	8+759.394	-5.415 m	189.261	189.335
I	8+762.403	-5.405 m	189.186	189.247
J	8+765.411	-5.390 m	189.110	189.153
K	8+768.420	-5.371 m	189.033	189.056
CL E Abut	8+771.428	-5.347 m	188.956	188.956
Back of E Abut	8+771.824	-5.343 m	188.946	188.946

WB PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+735.285	-4.080 m	189.872	189.872
CL W Abut	8+735.681	-4.080 m	189.863	189.863
A	8+738.696	-4.080 m	189.795	189.817
B	8+741.708	-4.080 m	189.726	189.769
C	8+744.720	-4.080 m	189.655	189.717
D	8+747.730	-4.080 m	189.584	189.659
E	8+750.740	-4.080 m	189.513	189.595
F	8+753.747	-4.080 m	189.440	189.526
G	8+756.754	-4.080 m	189.366	189.449
H	8+759.759	-4.080 m	189.292	189.366
I	8+762.762	-4.080 m	189.216	189.277
J	8+765.765	-4.080 m	189.140	189.184
K	8+768.766	-4.080 m	189.063	189.086
CL E Abut	8+771.765	-4.080 m	188.985	188.985
Back of E Abut	8+772.159	-4.080 m	188.975	188.975

GIRDER 11

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+735.569	-3.090 m	189.895	189.895
CL W Abut	8+735.963	-3.094 m	189.886	189.886
A	8+738.968	-3.122 m	189.817	189.840
B	8+741.973	-3.145 m	189.747	189.791
C	8+744.978	-3.164 m	189.677	189.738
D	8+747.983	-3.177 m	189.605	189.680
E	8+750.988	-3.186 m	189.533	189.616
F	8+753.994	-3.190 m	189.461	189.546
G	8+756.999	-3.189 m	189.387	189.470
H	8+760.004	-3.183 m	189.312	189.387
I	8+763.009	-3.172 m	189.237	189.298
J	8+766.014	-3.157 m	189.161	189.205
K	8+769.019	-3.136 m	189.085	189.107
CL E Abut	8+772.024	-3.111 m	189.007	189.007
Back of E Abut	8+772.419	-3.108 m	188.997	188.997

GIRDER 12

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+736.206	-0.867 m	189.948	189.948
CL W Abut	8+736.601	-0.871 m	189.939	189.939
A	8+739.602	-0.897 m	189.870	189.892
B	8+742.603	-0.920 m	189.800	189.843
C	8+745.605	-0.937 m	189.729	189.790
D	8+748.606	-0.949 m	189.658	189.732
E	8+751.608	-0.957 m	189.585	189.668
F	8+754.609	-0.960 m	189.512	189.598
G	8+757.611	-0.958 m	189.439	189.522
H	8+760.612	-0.951 m	189.364	189.439
I	8+763.614	-0.940 m	189.289	189.350
J	8+766.615	-0.923 m	189.213	189.256
K	8+769.617	-0.902 m	189.136	189.159
CL E Abut	8+772.618	-0.876 m	189.059	189.059
Back of E Abut	8+773.012	-0.872 m	189.049	189.049

GIRDER 13

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+736.703	0.869 m	189.354	189.354
CL W Abut	8+737.097	0.865 m	189.345	189.345
A	8+740.095	0.839 m	189.276	189.298
B	8+743.094	0.817 m	189.206	189.249
C	8+746.092	0.801 m	189.136	189.197
D	8+749.091	0.789 m	189.064	189.139
E	8+752.090	0.782 m	188.993	189.076
F	8+755.089	0.780 m	188.920	189.006
G	8+758.087	0.783 m	188.846	188.929
H	8+761.086	0.790 m	188.772	188.847
I	8+764.085	0.803 m	188.697	188.759
J	8+767.083	0.820 m	188.622	188.665
K	8+770.082	0.842 m	188.545	188.568
CL E Abut	8+773.081	0.869 m	188.468	188.468
Back of E Abut	8+773.475	0.873 m	188.458	188.458

GIRDER 14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+737.338	3.093 m	189.406	189.406
CL W Abut	8+737.731	3.089 m	189.397	189.397
A	8+740.726	3.064 m	189.328	189.351
B	8+743.721	3.043 m	189.258	189.302
C	8+746.716	3.028 m	189.188	189.249
D	8+749.711	3.017 m	189.117	189.191
E	8+752.707	3.011 m	189.045	189.128
F	8+755.702	3.010 m	188.972	189.058
G	8+758.697	3.014 m	188.898	188.981
H	8+761.692	3.022 m	188.824	188.899
I	8+764.687	3.036 m	188.749	188.810
J	8+767.682	3.054 m	188.673	188.717
K	8+770.677	3.077 m	188.597	188.620
CL E Abut	8+773.672	3.105 m	188.520	188.520
Back of E Abut	8+774.066	3.109 m	188.510	188.510

EB PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+737.620	4.080 m	189.429	189.429
CL W Abut	8+738.014	4.080 m	189.420	189.420
A	8+741.014	4.080 m	189.352	189.374
B	8+744.013	4.080 m	189.283	189.326
C	8+747.011	4.080 m	189.212	189.274
D	8+750.007	4.080 m	189.141	189.216
E	8+753.002	4.080 m	189.070	189.152
F	8+755.995	4.080 m	188.997	189.083
G	8+758.988	4.080 m	188.923	189.006
H	8+761.979	4.080 m	188.849	188.923
I	8+764.968	4.080 m	188.773	188.835
J	8+767.956	4.080 m	188.697	188.741
K	8+770.943	4.080 m	188.620	188.643
CL E Abut	8+773.929	4.080 m	188.542	188.542
Back of E Abut	8+774.321	4.080 m	188.532	188.532

NOTES:

See Sheet No. S-6 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE

TOP OF DECK ELEVATIONS (2 OF 4)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 09/05 **(016-I005 & 016-I006)**

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	700
		ILLINOIS FED. AID PROJECT		

SHEET NO. S-9
28 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987

GIRDER 15

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+737.971	5.317 m	189.458	189.458
CL W Abut	8+738.364	5.313 m	189.449	189.449
A	8+741.356	5.289 m	189.380	189.403
B	8+744.347	5.270 m	189.310	189.354
C	8+747.339	5.255 m	189.240	189.301
D	8+750.330	5.246 m	189.169	189.243
E	8+753.322	5.241 m	189.097	189.180
F	8+756.313	5.241 m	189.024	189.110
G	8+759.305	5.245 m	188.950	189.033
H	8+762.297	5.255 m	188.876	188.951
I	8+765.288	5.269 m	188.801	188.862
J	8+768.280	5.288 m	188.725	188.769
K	8+771.271	5.312 m	188.649	188.671
CL E Abut	8+774.262	5.341 m	188.571	188.571
Back of E Abut	8+774.655	5.345 m	188.561	188.561

GIRDER 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+738.603	7.541 m	189.511	189.511
CL W Abut	8+738.996	7.538 m	189.502	189.502
A	8+741.984	7.515 m	189.433	189.455
B	8+744.972	7.496 m	189.363	189.406
C	8+747.960	7.483 m	189.292	189.353
D	8+750.948	7.474 m	189.221	189.295
E	8+753.936	7.470 m	189.149	189.232
F	8+756.924	7.471 m	189.076	189.162
G	8+759.912	7.477 m	189.002	189.085
H	8+762.900	7.487 m	188.928	189.002
I	8+765.888	7.503 m	188.853	188.914
J	8+768.875	7.523 m	188.777	188.820
K	8+771.863	7.548 m	188.700	188.723
CL E Abut	8+774.851	7.577 m	188.623	188.623
Back of E Abut	8+775.244	7.582 m	188.613	188.613

GIRDER 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+739.234	9.766 m	189.563	189.563
CL W Abut	8+739.626	9.763 m	189.554	189.554
A	8+742.610	9.741 m	189.485	189.507
B	8+745.594	9.723 m	189.415	189.458
C	8+748.579	9.711 m	189.344	189.405
D	8+751.563	9.703 m	189.273	189.347
E	8+754.548	9.700 m	189.201	189.284
F	8+757.532	9.702 m	189.128	189.214
G	8+760.517	9.709 m	189.054	189.137
H	8+763.501	9.720 m	188.980	189.054
I	8+766.486	9.736 m	188.905	188.966
J	8+769.470	9.757 m	188.829	188.872
K	8+772.454	9.783 m	188.752	188.775
CL E Abut	8+775.438	9.814 m	188.675	188.675
Back of E Abut	8+775.830	9.818 m	188.664	188.664

CLOSURE POUR

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+739.383	10.295 m	189.576	189.576
CL W Abut	8+739.775	10.291 m	189.567	189.567
A	8+742.759	10.270 m	189.497	189.520
B	8+745.742	10.252 m	189.427	189.471
C	8+748.726	10.240 m	189.357	189.418
D	8+751.710	10.233 m	189.285	189.360
E	8+754.693	10.230 m	189.213	189.296
F	8+757.677	10.232 m	189.140	189.226
G	8+760.660	10.239 m	189.066	189.149
H	8+763.644	10.251 m	188.992	189.067
I	8+766.628	10.267 m	188.917	188.978
J	8+769.611	10.289 m	188.841	188.884
K	8+772.594	10.315 m	188.764	188.787
CL E Abut	8+775.578	10.346 m	188.687	188.687
Back of E Abut	8+775.970	10.350 m	188.677	188.677

STAGE CONSTRUCTION LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+739.665	11.292 m	189.599	189.599
CL W Abut	8+740.057	11.289 m	189.590	189.590
A	8+743.039	11.268 m	189.521	189.543
B	8+746.021	11.251 m	189.451	189.494
C	8+749.003	11.239 m	189.380	189.441
D	8+751.985	11.232 m	189.309	189.383
E	8+754.967	11.230 m	189.236	189.319
F	8+757.949	11.233 m	189.163	189.249
G	8+760.931	11.240 m	189.090	189.173
H	8+763.913	11.252 m	189.015	189.090
I	8+766.895	11.269 m	188.940	189.001
J	8+769.877	11.291 m	188.864	188.908
K	8+772.859	11.317 m	188.787	188.810
CL E Abut	8+775.840	11.349 m	188.710	188.710
Back of E Abut	8+776.232	11.353 m	188.700	188.700

GIRDER 18

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+739.863	11.991 m	189.616	189.616
CL W Abut	8+740.254	11.988 m	189.606	189.606
A	8+743.235	11.967 m	189.537	189.560
B	8+746.216	11.950 m	189.467	189.511
C	8+749.197	11.939 m	189.396	189.458
D	8+752.178	11.932 m	189.325	189.400
E	8+755.159	11.930 m	189.253	189.336
F	8+758.140	11.933 m	189.180	189.266
G	8+761.121	11.941 m	189.106	189.189
H	8+764.101	11.953 m	189.032	189.106
I	8+767.082	11.970 m	188.956	189.017
J	8+770.063	11.992 m	188.880	188.924
K	8+773.044	12.019 m	188.804	188.826
CL E Abut	8+776.024	12.051 m	188.726	188.726
Back of E Abut	8+776.416	12.055 m	188.716	188.716

GIRDER 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+740.490	14.216 m	189.668	189.668
CL W Abut	8+740.881	14.213 m	189.659	189.659
A	8+743.859	14.193 m	189.590	189.612
B	8+746.836	14.177 m	189.519	189.563
C	8+749.813	14.167 m	189.449	189.510
D	8+752.791	14.161 m	189.377	189.452
E	8+755.768	14.160 m	189.305	189.388
F	8+758.745	14.164 m	189.232	189.317
G	8+761.723	14.173 m	189.158	189.241
H	8+764.700	14.186 m	189.083	189.158
I	8+767.677	14.204 m	189.008	189.069
J	8+770.655	14.227 m	188.932	188.976
K	8+773.632	14.255 m	188.855	188.878
CL E Abut	8+776.609	14.288 m	188.778	188.778
Back of E Abut	8+777.000	14.292 m	188.768	188.768

GIRDER 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+741.116	16.441 m	189.720	189.720
CL W Abut	8+741.507	16.438 m	189.711	189.711
A	8+744.481	16.419 m	189.642	189.664
B	8+747.454	16.405 m	189.572	189.615
C	8+750.428	16.395 m	189.501	189.562
D	8+753.402	16.391 m	189.429	189.504
E	8+756.376	16.391 m	189.357	189.440
F	8+759.350	16.395 m	189.284	189.369
G	8+762.324	16.405 m	189.210	189.293
H	8+765.297	16.419 m	189.135	189.210
I	8+768.271	16.439 m	189.060	189.121
J	8+771.245	16.463 m	188.984	189.027
K	8+774.218	16.491 m	188.907	188.930
CL E Abut	8+777.192	16.525 m	188.829	188.829
Back of E Abut	8+777.583	16.530 m	188.819	188.819

NOTES:

See Sheet No. S-6 for Plan.

All stations, offsets, and elevations are in meters.

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
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TOP OF DECK ELEVATIONS (3 OF 4)
SECTION 2626.2-R-2
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AMERICAN CONSULTING ENGINEERS