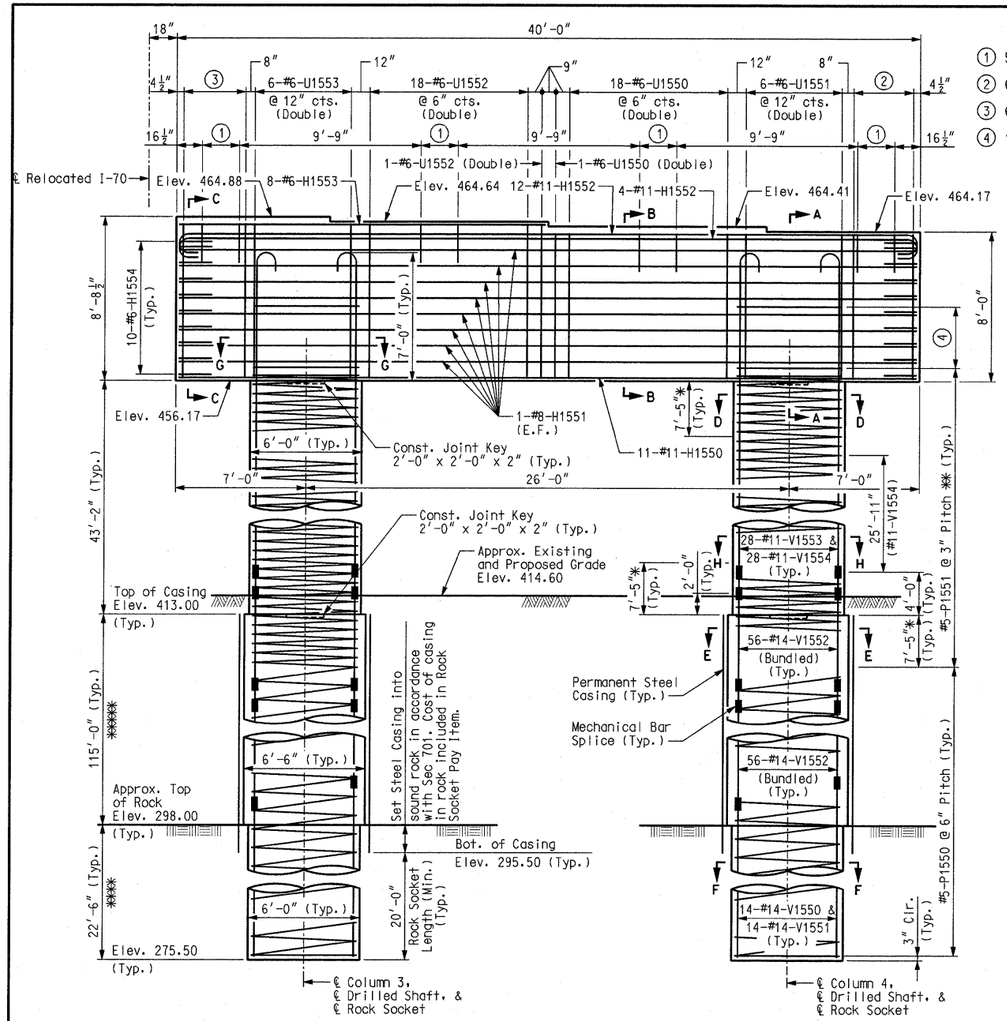
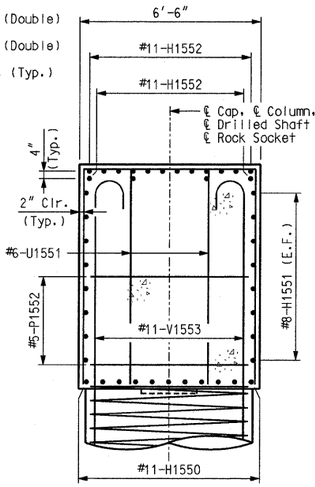
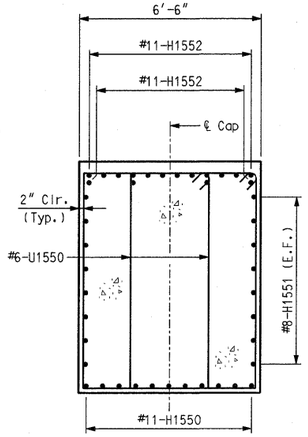


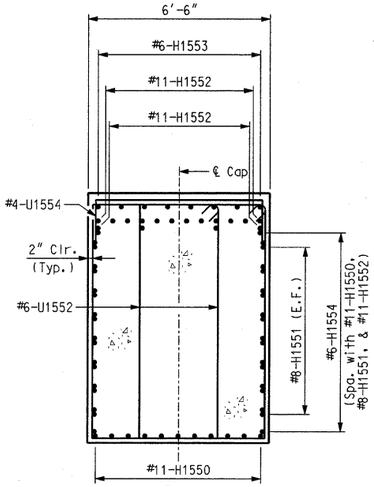
① 5-#4-U1554 @ 6" cts.
② 6-#6-U1550 @ 8" cts. (Double)
③ 6-#6-U1552 @ 8" cts. (Double)
④ 18-#5-P1552 @ 3" cts. (Typ.)



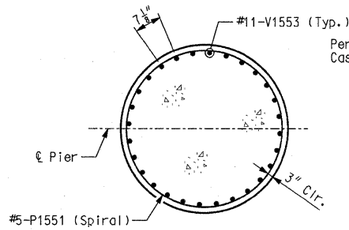
SECTION A-A



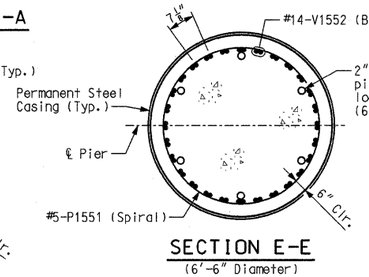
SECTION B-B



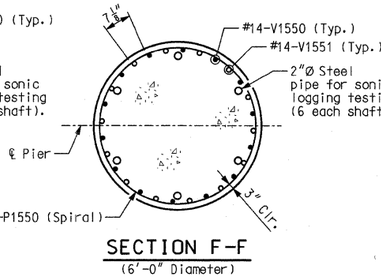
SECTION C-C



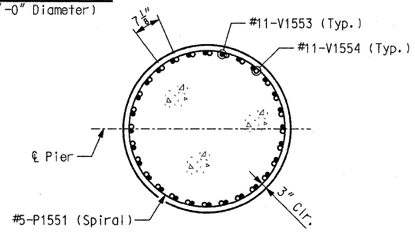
SECTION D-D
(6'-0" Diameter)



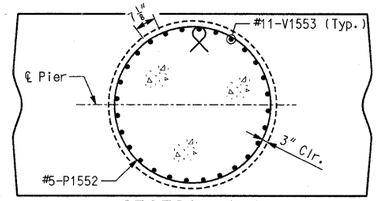
SECTION E-E
(6'-6" Diameter)



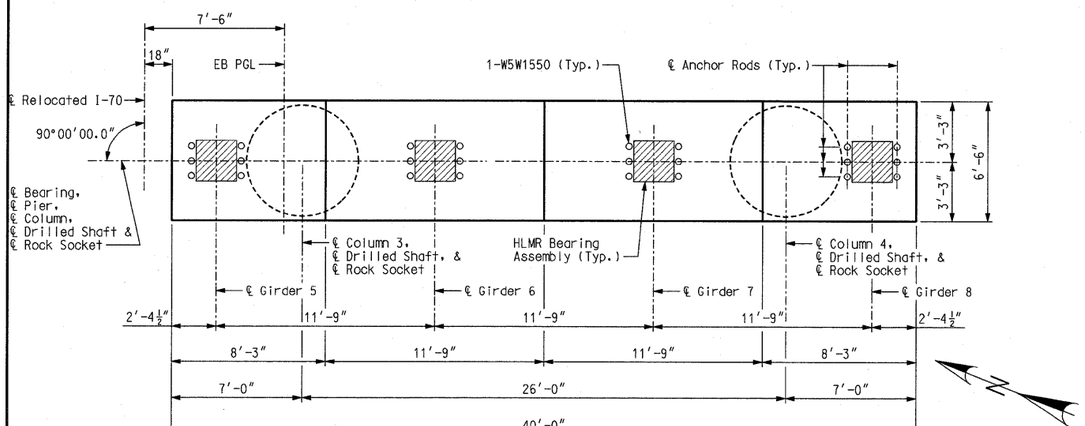
SECTION F-F
(6'-0" Diameter)



SECTION H-H
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)



PLAN

Note: This drawing is not to scale. Follow dimensions.

Detailed JUL 2009
Checked JUL 2009

SUBSTRUCTURE QUANTITY TABLE FOR PIER 15 EB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	230.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	45.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	65.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	170.9
Reinforcing Steel (Bridges)	pound	162,080
Mechanical Bar Splice	each	280

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:

An additional 4 feet has been added to #5-P1550, #14-V1550 and #14-V1551 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 43.

For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 45.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 15 EB

Sheet No. 20 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

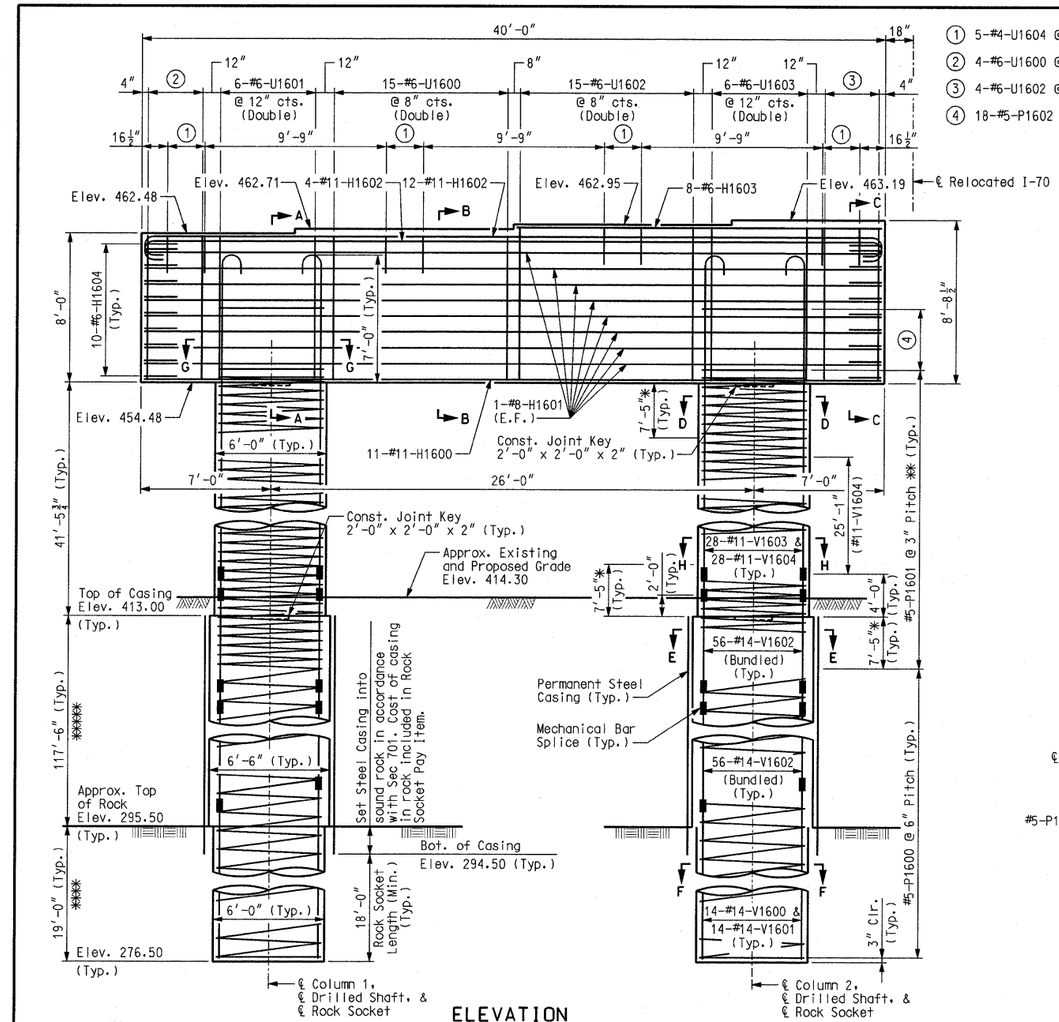
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

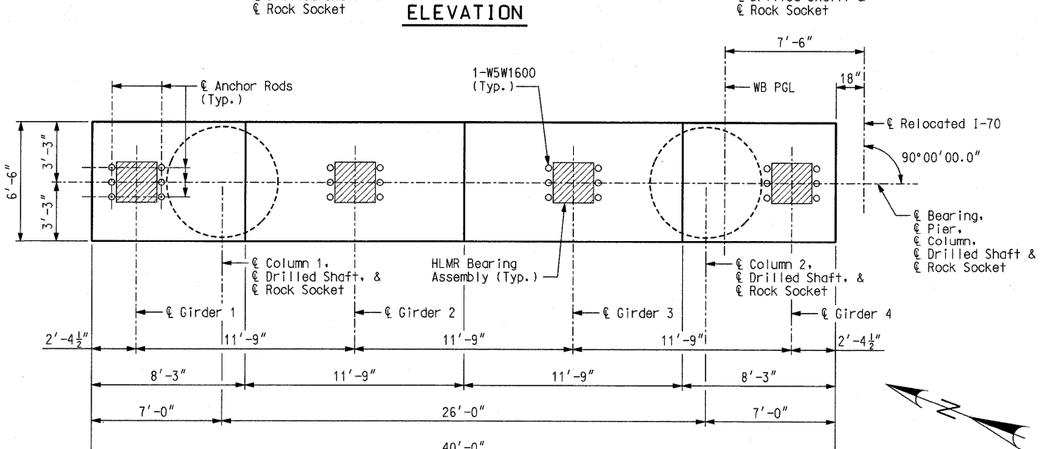
MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



ELEVATION

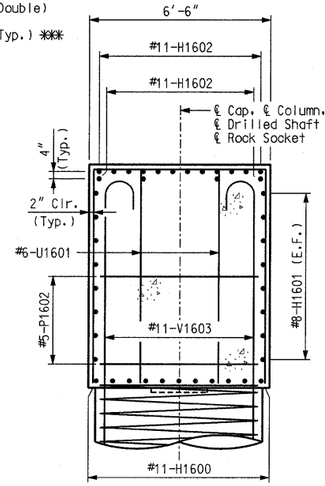


PLAN

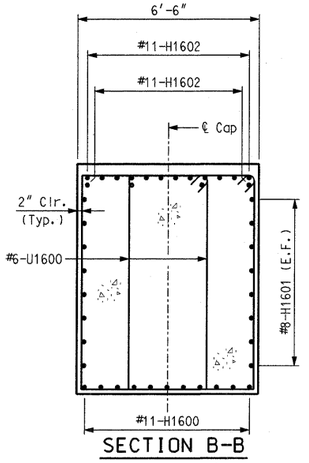
Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

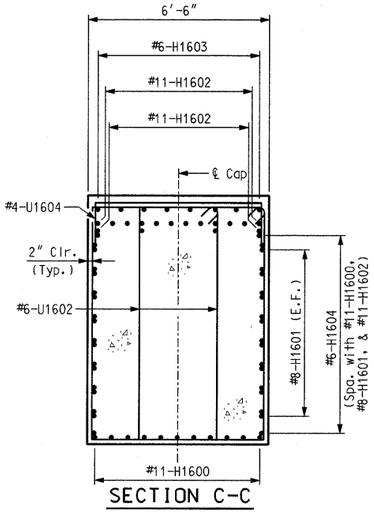
① 5-#4-U1604 @ 6" cts.
② 4-#6-U1600 @ 12" cts. (Double)
③ 4-#6-U1602 @ 12" cts. (Double)
④ 18-#5-P1602 @ 3" cts. (Typ.) ***



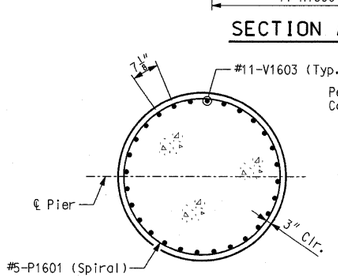
SECTION A-A



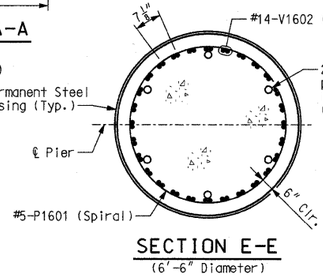
SECTION B-B



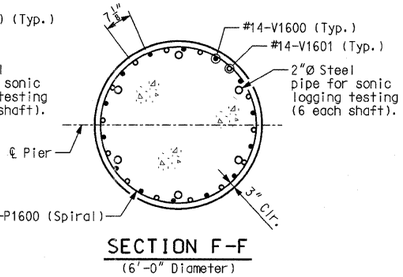
SECTION C-C



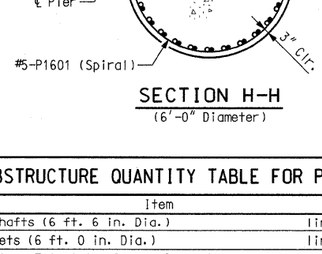
SECTION D-D
(6'-0" Diameter)



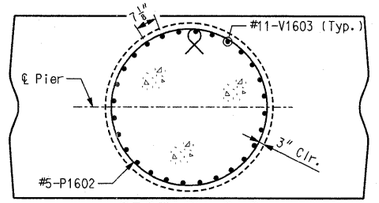
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION H-H
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)

SUBSTRUCTURE QUANTITY TABLE FOR PIER 16 WB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	235.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	38.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	58.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	167.3
Reinforcing Steel (Bridges)	pound	159,670
Mechanical Bar Splice	each	280

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P1600, #14-V1600 and #14-V1601 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 44.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 16 WB

Sheet No. 21 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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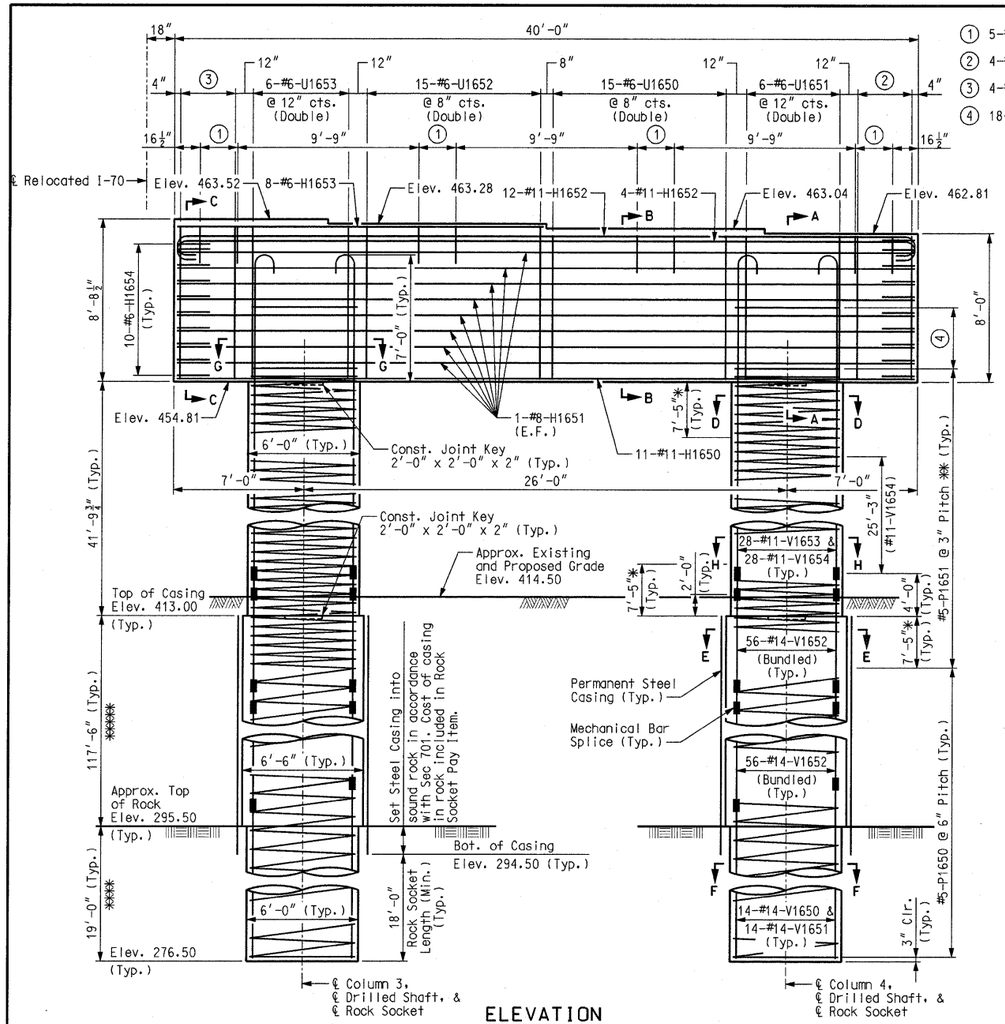

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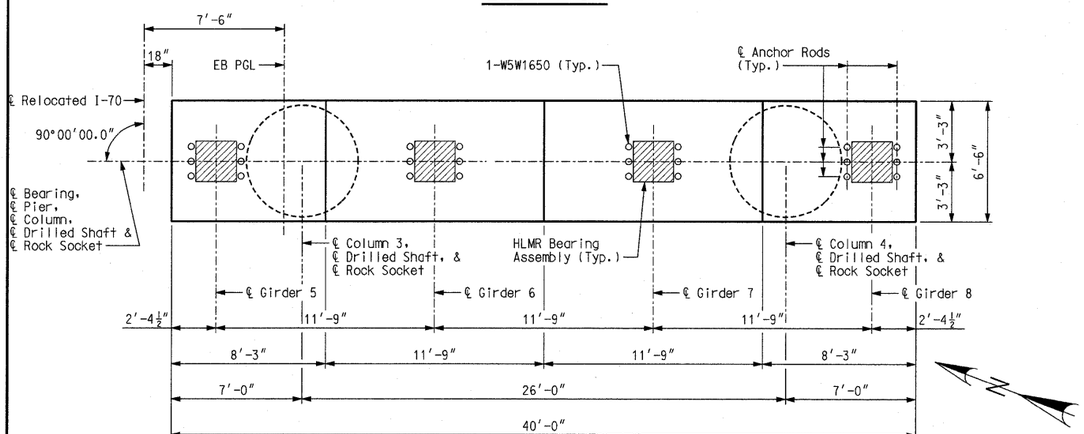
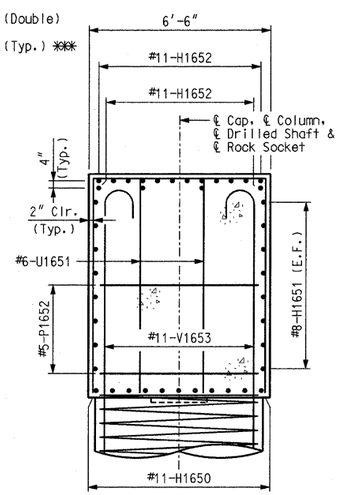


PLAN

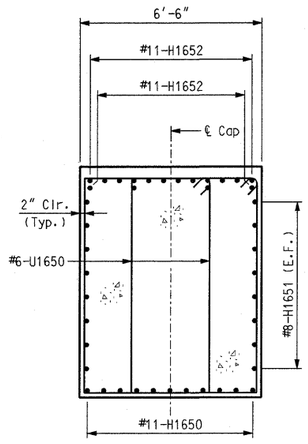
Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

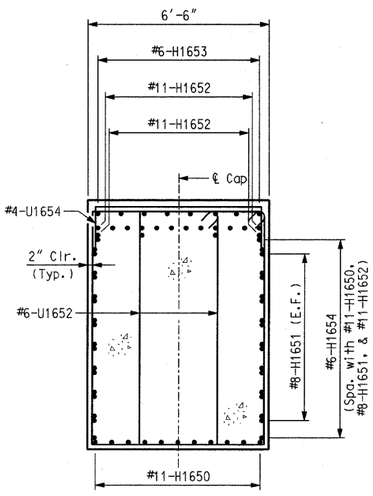
① 5-#4-U1654 @ 6" cts.
② 4-#6-U1650 @ 12" cts. (Double)
③ 4-#6-U1652 @ 12" cts. (Double)
④ 18-#5-P1652 @ 3" cts. (Typ.) ***



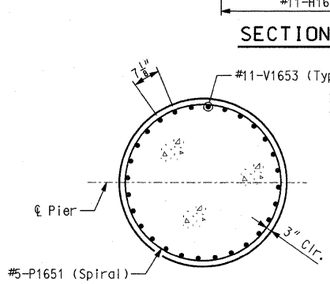
SECTION A-A



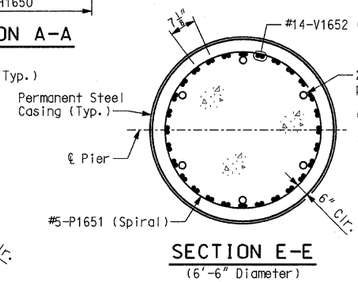
SECTION B-B



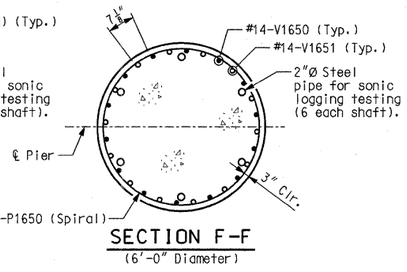
SECTION C-C



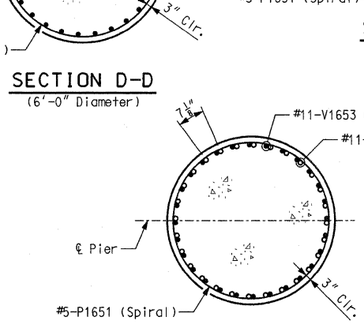
SECTION D-D
(6'-0" Diameter)



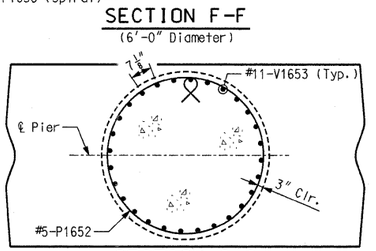
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION H-H
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)

SUBSTRUCTURE QUANTITY TABLE FOR PIER 16 EB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	235.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	38.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	58.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	168.1
Reinforcing Steel (Bridges)	pound	159,870
Mechanical Bar Splice	each	280

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P1650, #14-V1650 and #14-V1651 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 45.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 16 EB

Sheet No. 22 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

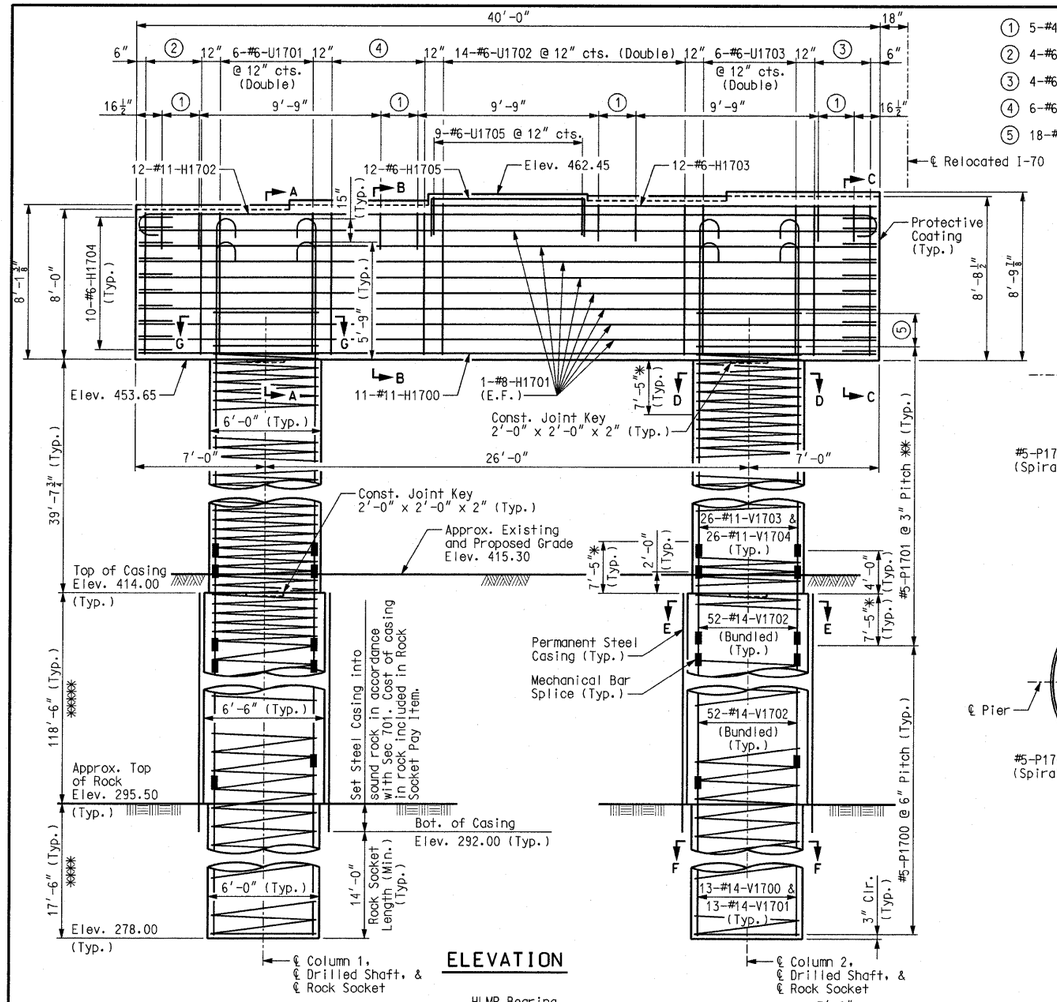
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

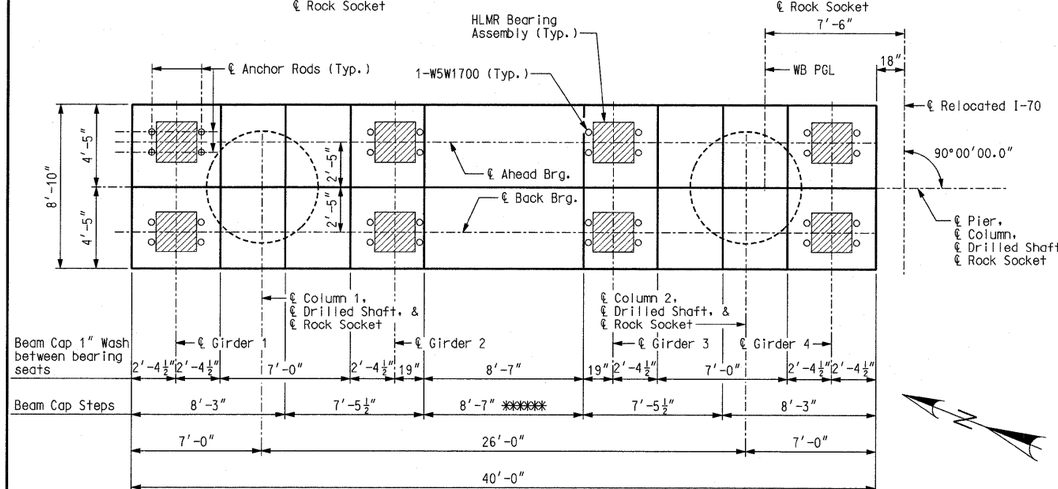
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



ELEVATION

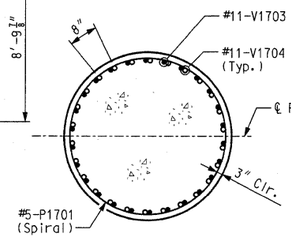


PLAN

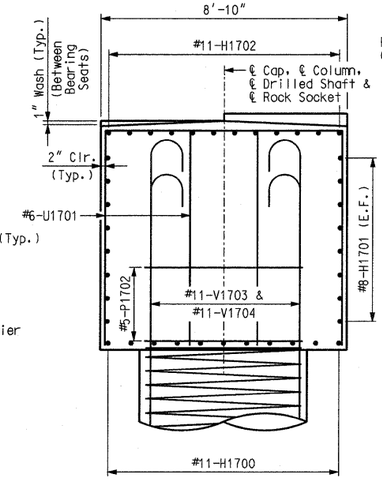
Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

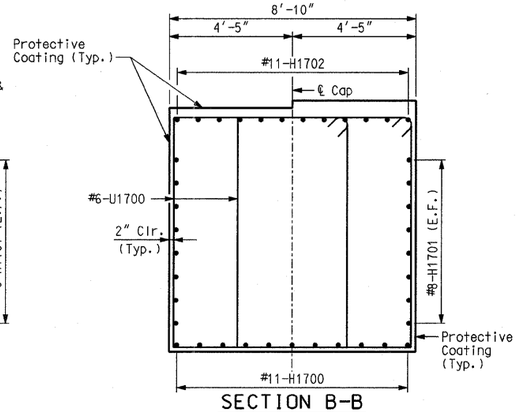
1. 5-#4-U1704 @ 6" cts.
2. 4-#6-U1700 @ 12" cts. (Double)
3. 4-#6-U1702 @ 12" cts. (Double)
4. 6-#6-U1700 @ 12" cts. (Double)
5. 18-#5-P1702 @ 3" cts. (Typ.) ***



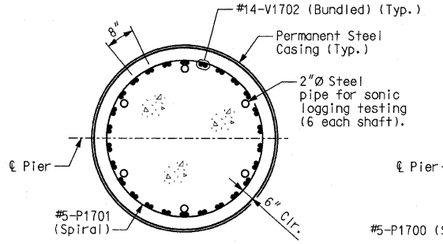
SECTION D-D
(6'-0" Diameter)



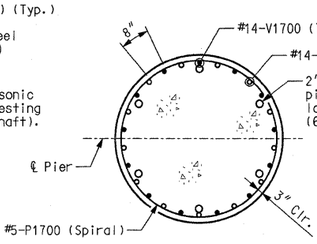
SECTION A-A



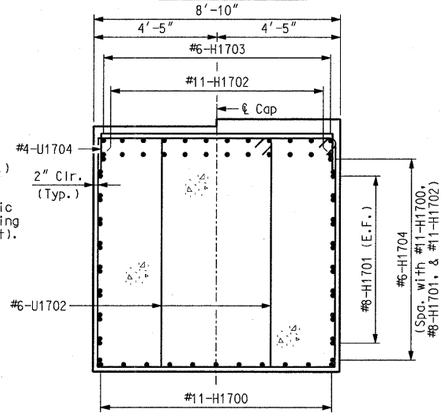
SECTION B-B



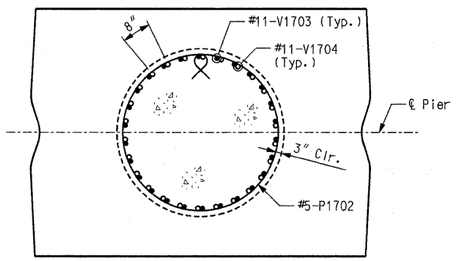
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION C-C



SECTION G-G
(Beam Cap reinforcement not shown)

GIRDER SEAT ELEVATIONS		
Girder	Back Brg.	Ahead Brg.
1	461.76	461.65
2	462.00	461.89
3	462.23	462.12
4	462.47	462.36

SUBSTRUCTURE QUANTITY TABLE FOR PIER 17 WB		
Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	237.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	35.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	55.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	194.4
Reinforcing Steel (Bridges)	pound	116,940
Mechanical Bar Splice	each	260
Reinforcing Steel (Epoxy Coated)	pound	37,350

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P1700, #14-V1700 and #14-V1701 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 42.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet Nos. 44 and 46.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).
****** Shear Block Dimension assumes masonry plate width of 3'-0" and 1" clear on either side to shear block. If Masonry plate is wider than 3'-0" contractor shall adjust the shear block dimension to provide 1" clear.
Seal back face of beam, top of beam, ends of beam, and front face of beam with Protective Coating - Concrete Bents and Piers (Epoxy).

PIER 17 WB

Sheet No. 23 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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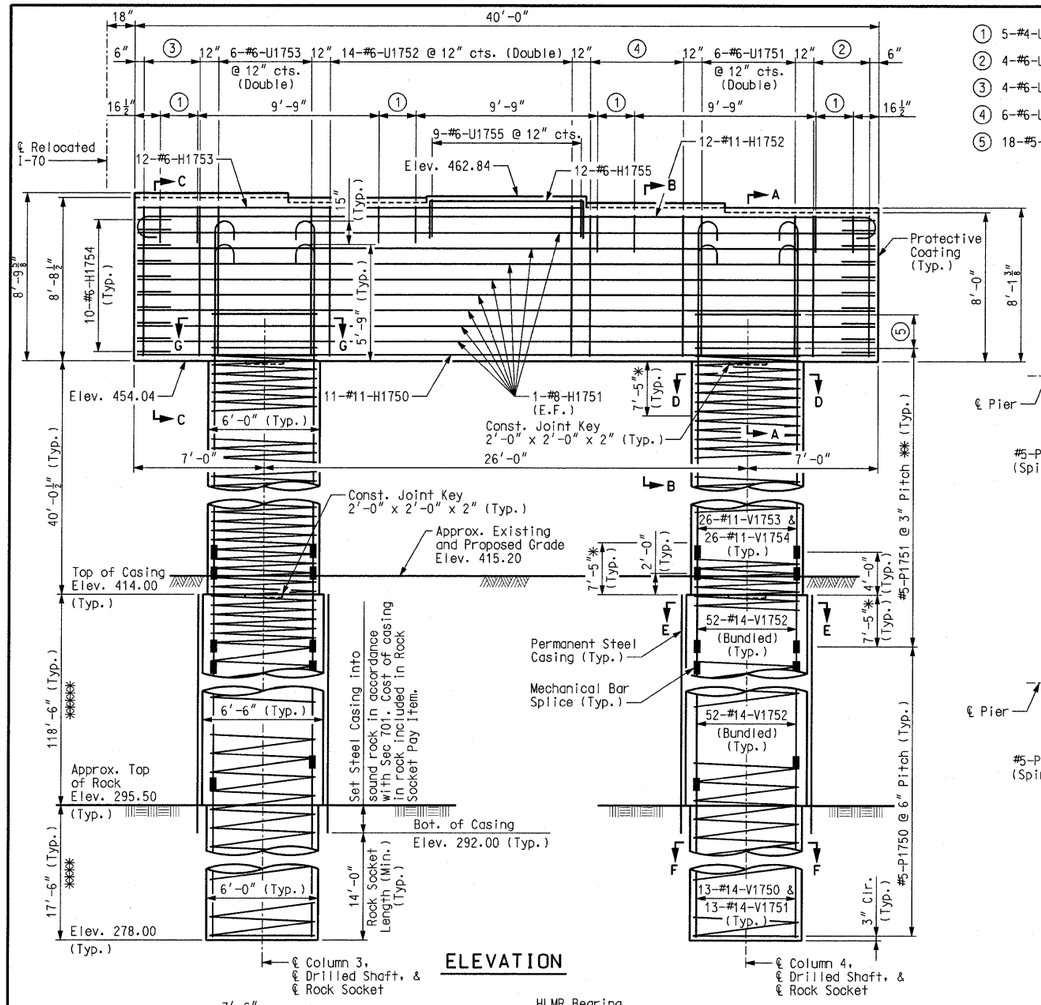
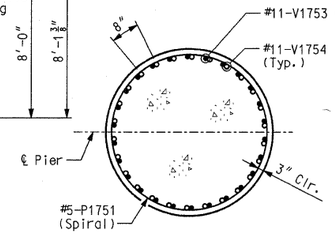
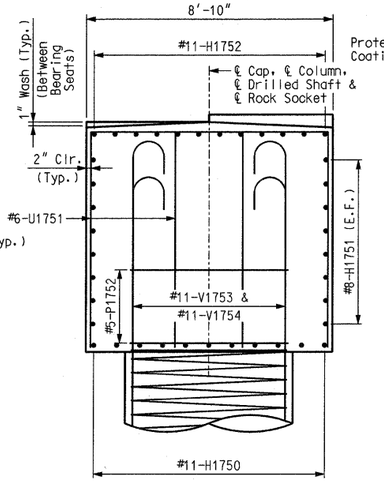


ELEVATION

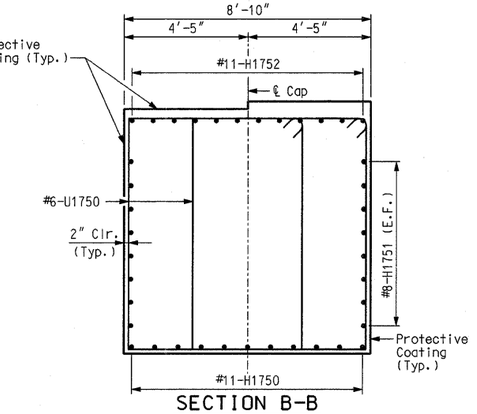
① 5-#4-U1754 @ 6″ cts.
② 4-#6-U1750 @ 12″ cts. (Double)
③ 4-#6-U1752 @ 12″ cts. (Double)
④ 6-#6-U1750 @ 12″ cts. (Double)
⑤ 18-#5-P1752 @ 3″ cts. (Typ.) ***



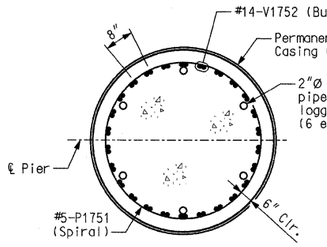
SECTION D-D
(6′-0″ Diameter)



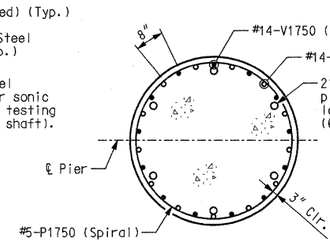
SECTION A-A



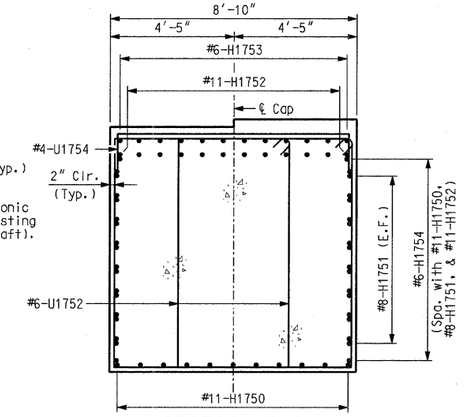
SECTION B-B



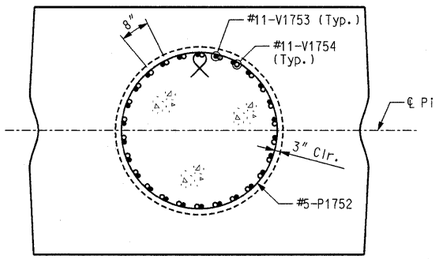
SECTION E-E
(6′-6″ Diameter)



SECTION F-F
(6′-0″ Diameter)



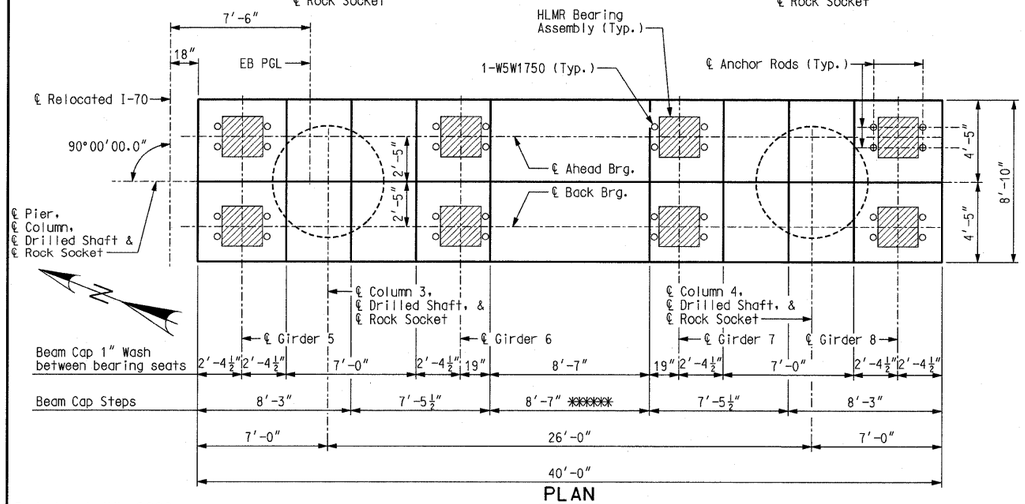
SECTION C-C



SECTION G-G
(Beam Cap reinforcement not shown)

GIRDER SEAT ELEVATIONS

Girder	Back Brg.	Ahead Brg.
5	462.84	462.75
6	462.61	462.51
7	462.37	462.27
8	462.14	462.04



PLAN

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

SUBSTRUCTURE QUANTITY TABLE FOR PIER 17 EB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	237.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	35.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	55.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	195.1
Reinforcing Steel (Bridges)	pound	116,990
Mechanical Bar Splice	each	260
Reinforcing Steel (Epoxy Coated)	pound	36,930

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P1750, #14-V1750 and #14-V1751 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2″.
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 42.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet Nos. 45 and 47.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).
****** Shear Block Dimension assumes masonry plate width of 3′-0″ and 1″ clear on either side to shear block. If Masonry plate is wider than 3′-0″ contractor shall adjust the shear block dimension to provide 1″ clear.
Seal back face of beam, top of beam, ends of beam, and front face of beam with Protective Coating - Concrete Bents and Piers (Epoxy).

PIER 17 EB

Sheet No. 24 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

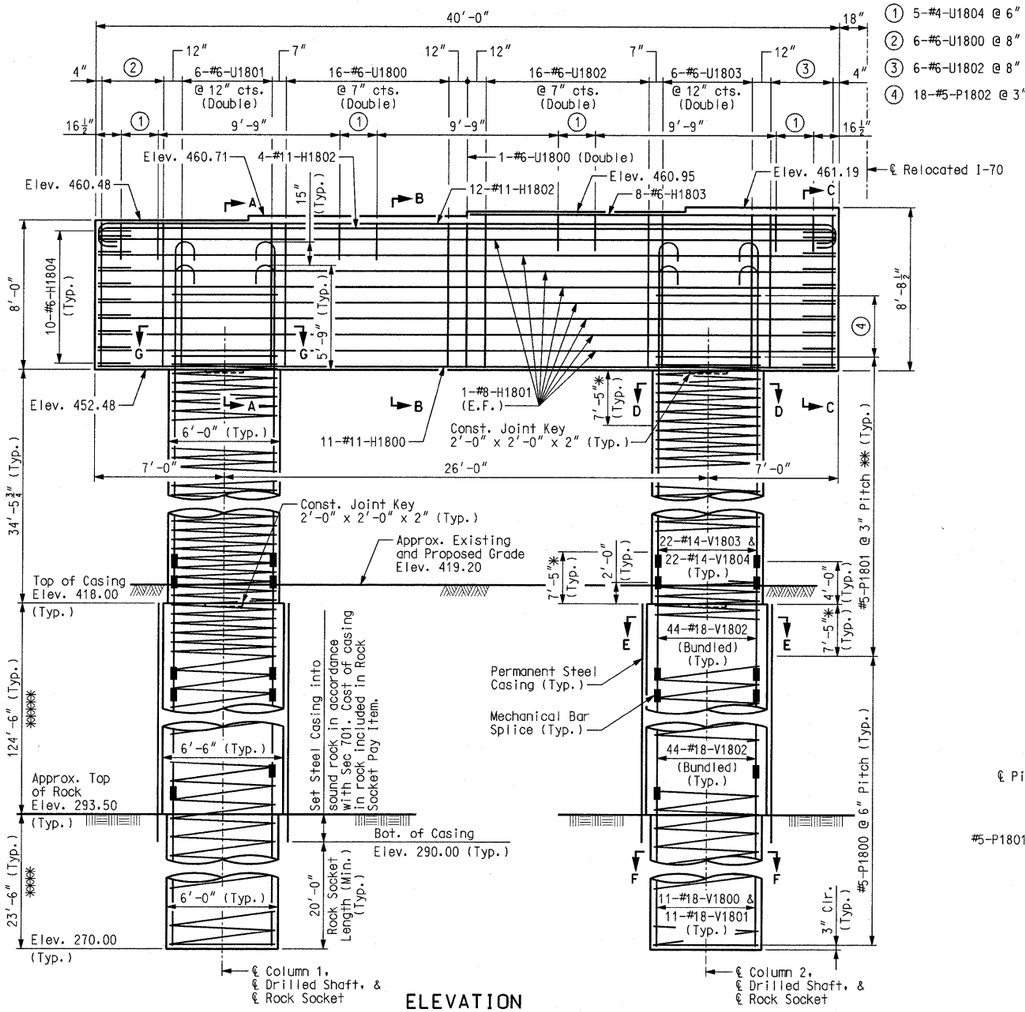
ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

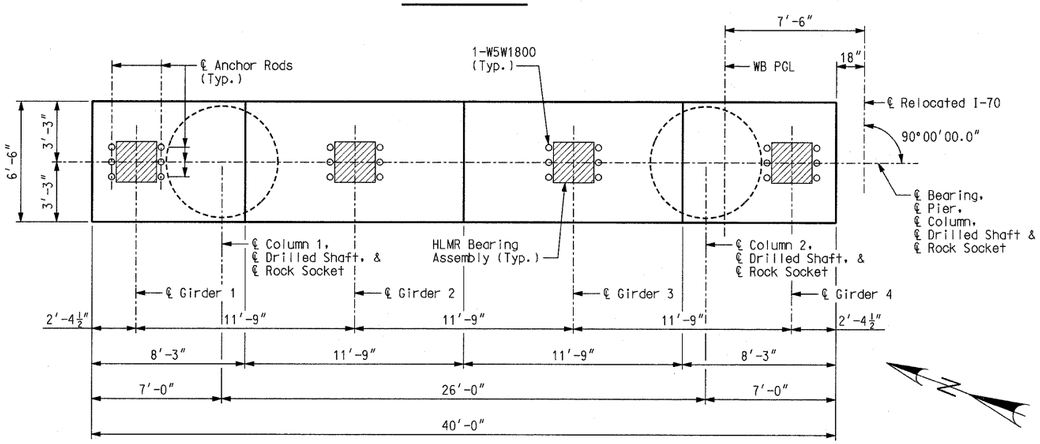
MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



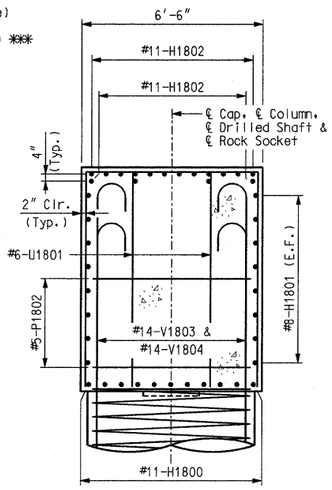
ELEVATION



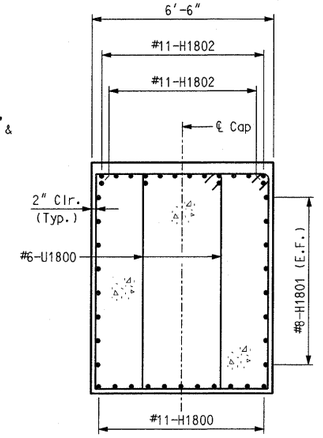
PLAN

Note: This drawing is not to scale. Follow dimensions.

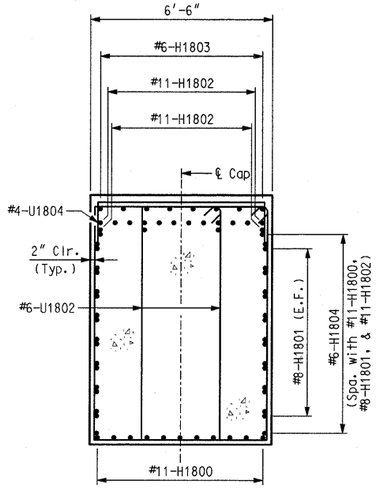
① 5-#4-U1804 @ 6" cts.
② 6-#6-U1800 @ 8" cts. (Double)
③ 6-#6-U1802 @ 8" cts. (Double)
④ 18-#5-P1802 @ 3" cts. (Typ.) ***



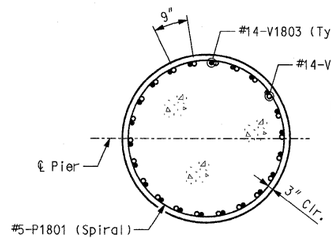
SECTION A-A



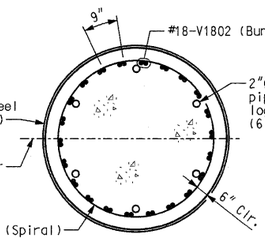
SECTION B-B



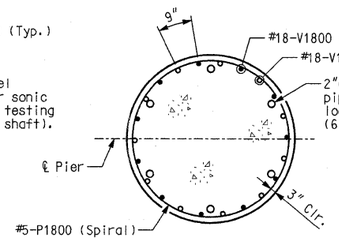
SECTION C-C



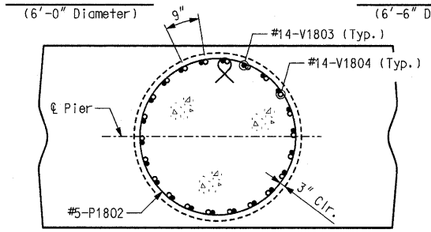
SECTION D-D
(6'-0" Diameter)



SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)

SUBSTRUCTURE QUANTITY TABLE FOR PIER 18 WB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	249.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	47.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	67.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	152.7
Reinforcing Steel (Bridges)	pound	215,210
Mechanical Bar Splice	each	220
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P1800, #18-V1800 and #18-V1801 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 46.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 18 WB

Detailed JUL 2009
Checked JUL 2009

Sheet No. 25 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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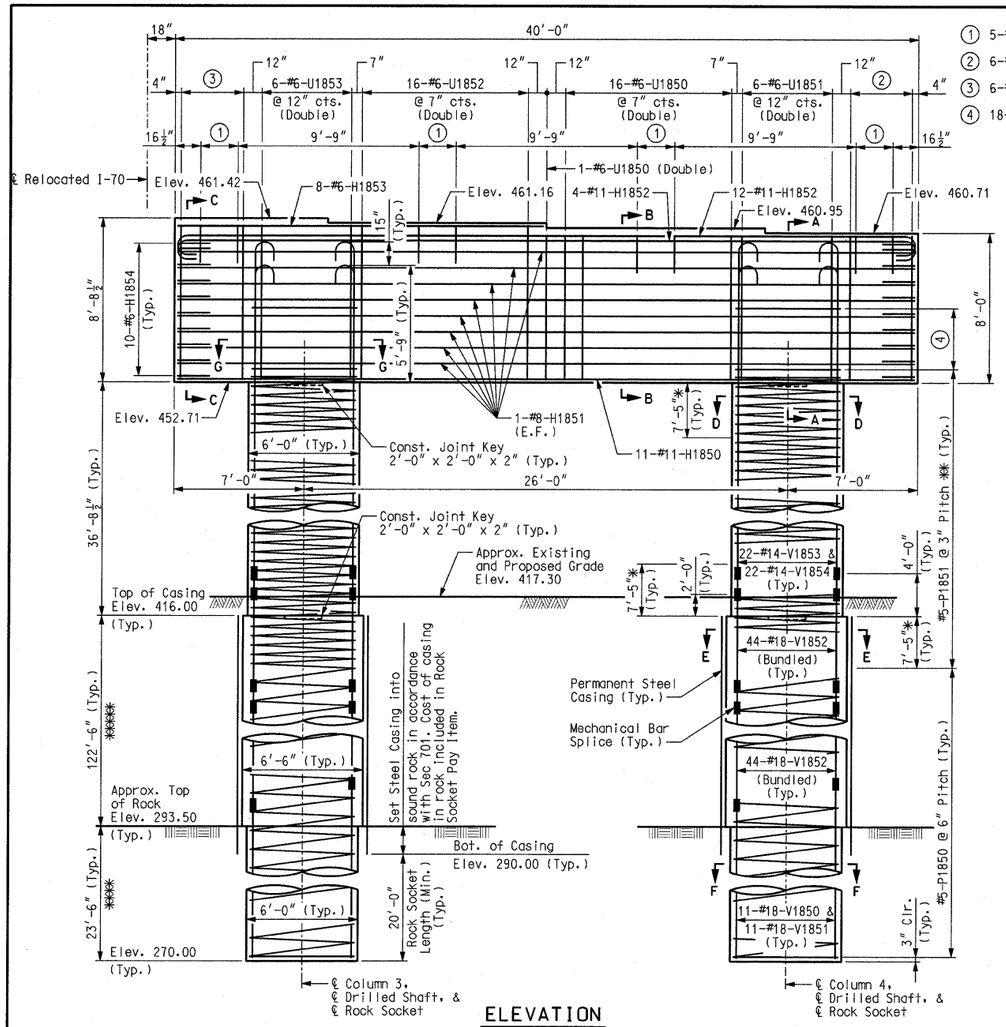
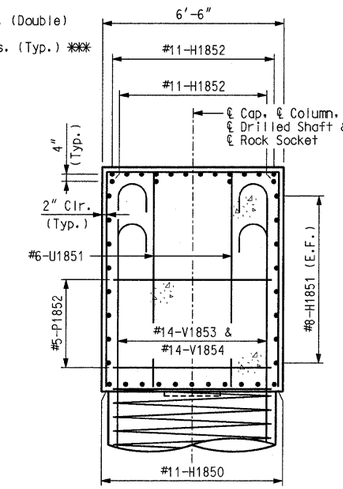
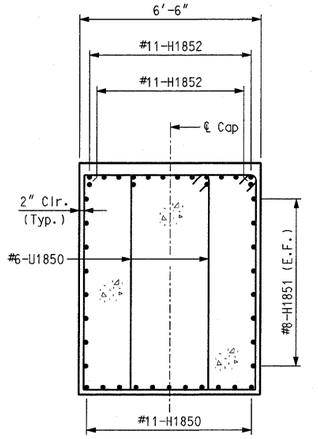


ELEVATION

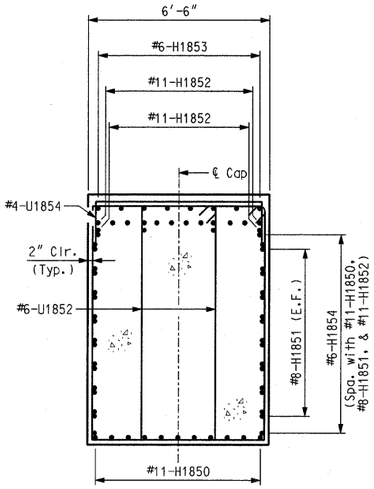
① 5-#4-U1854 @ 6" cts.
② 6-#6-U1850 @ 8" cts. (Double)
③ 6-#6-U1852 @ 8" cts. (Double)
④ 18-#5-P1852 @ 3" cts. (Typ.) ***



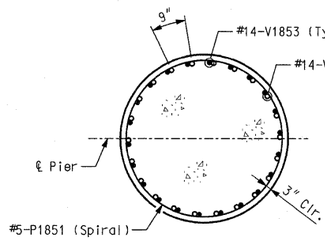
SECTION A-A



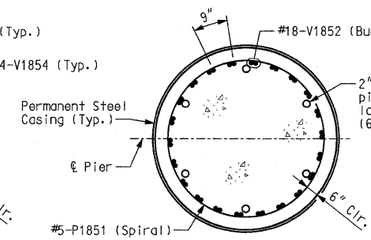
SECTION B-B



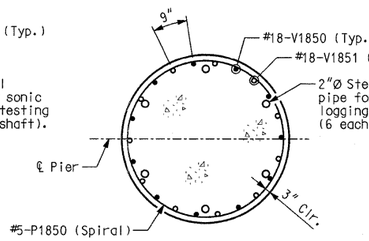
SECTION C-C



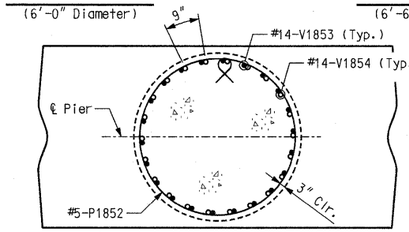
SECTION D-D
(6'-0" Diameter)



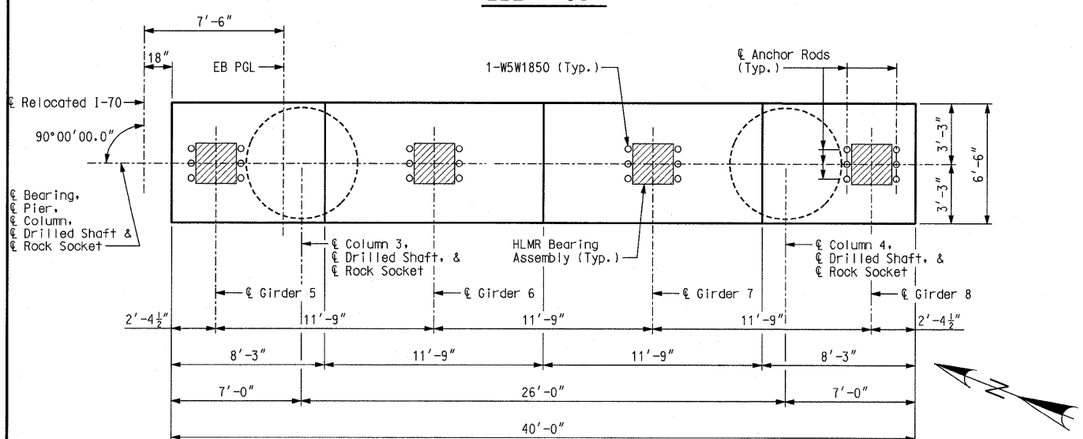
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)



PLAN

Note: This drawing is not to scale. Follow dimensions.

SUBSTRUCTURE QUANTITY TABLE FOR PIER 18 EB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	245.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	47.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	67.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	157.3
Reinforcing Steel (Bridges)	pound	215,640
Mechanical Bar Splice	each	220
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P1850, #18-V1850 and #18-V1851 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 47.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 18 EB

Detailed JUL 2009
Checked JUL 2009

Sheet No. 26 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

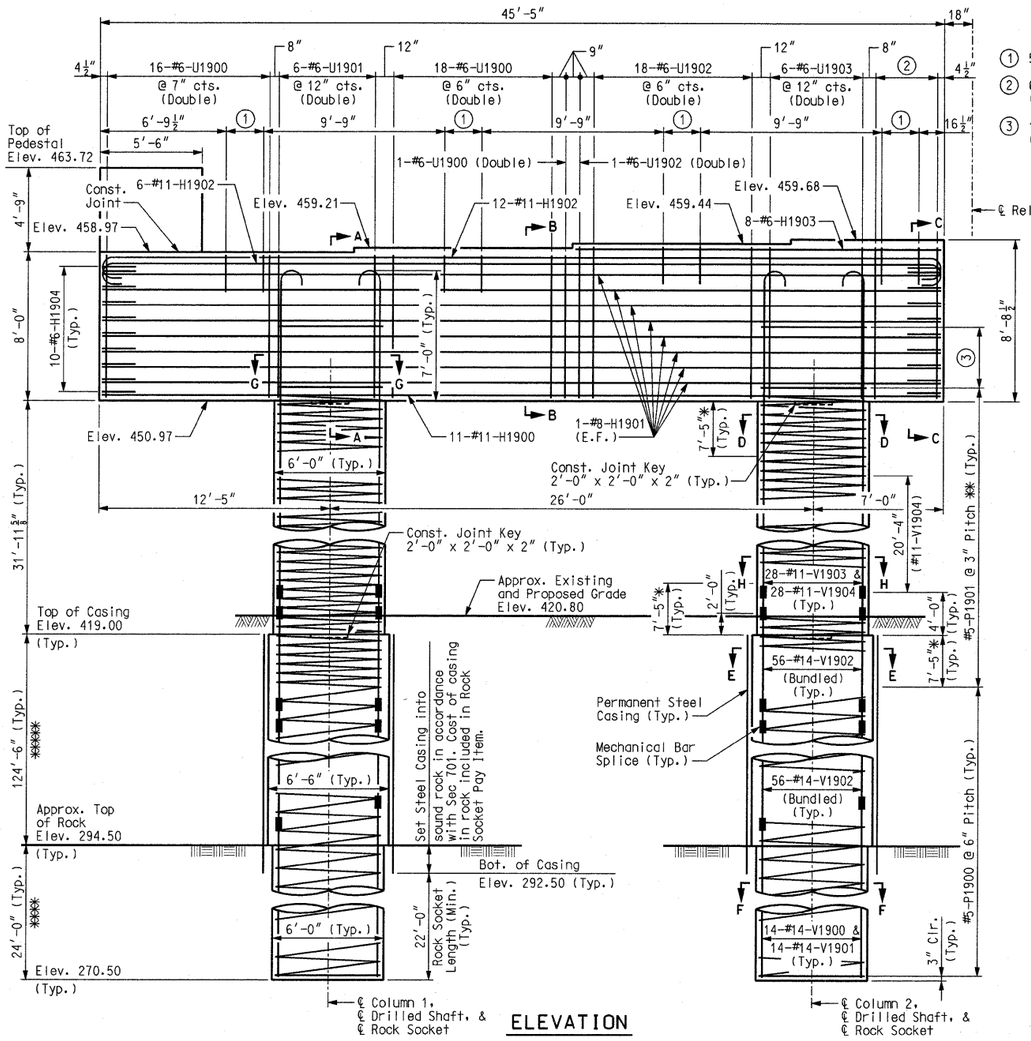
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

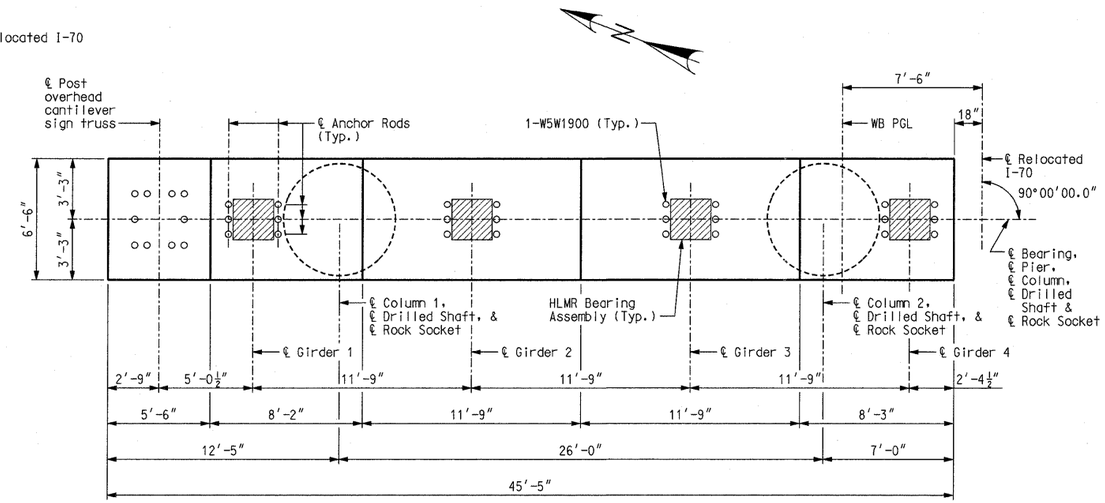
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



ELEVATION



PLAN

Notes:

An additional 4 feet has been added to #5-P1900, #14-V1900 and #14-V1901 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 43.

For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 46.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

For Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H, Detail of Cap Beam Pedestal, and Substructure Quantity Table, see Sheet No. 28.

PIER 19 WB

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjollff
PLOT SCALE = \$SCALE\$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

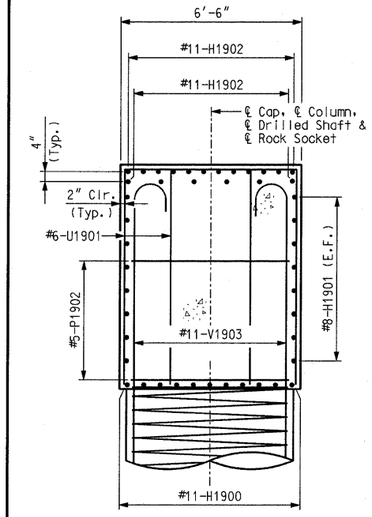
HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

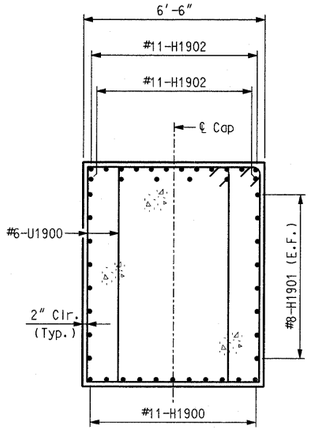
Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_027-152_J610984C_027.dgn



SECTION A-A



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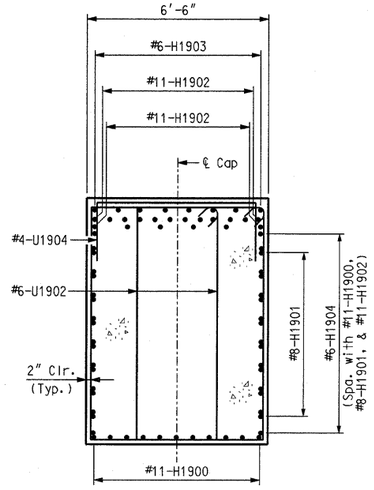
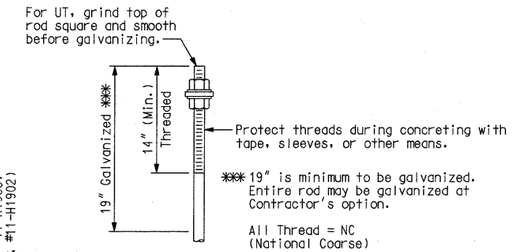
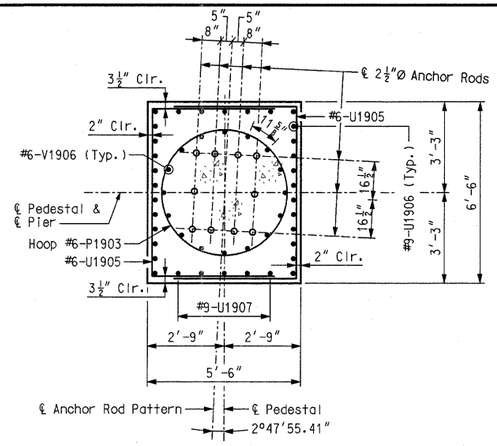


SECTION C-C

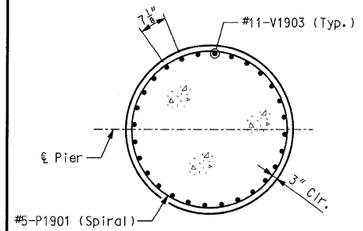


ANCHOR ASSEMBLY DETAIL *

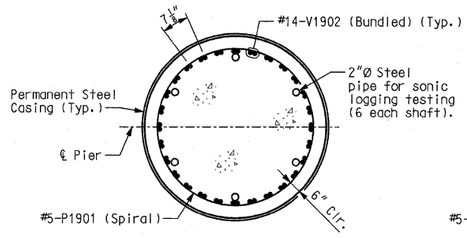
Note:
Anchor rods shall be ASTM F1554, Grade 55.



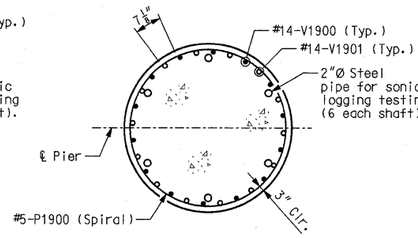
SECTION I-I



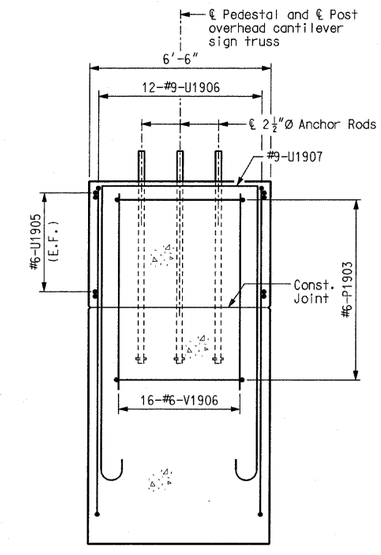
SECTION D-D
(6'-0" Diameter)



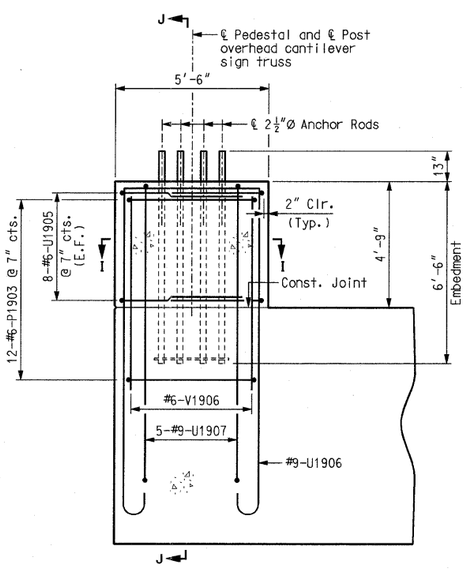
SECTION E-E
(6'-6" Diameter)



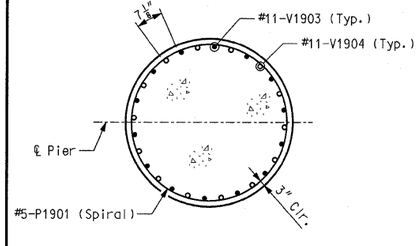
SECTION F-F
(6'-0" Diameter)



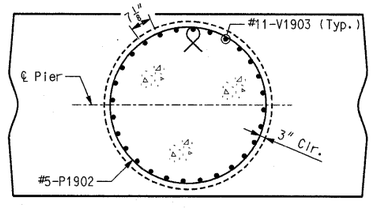
SECTION J-J
(Not all Beam Cap reinforcement shown)



DETAIL OF BEAM CAP PEDESTAL
(Not all Beam Cap reinforcement shown)
(Looking East)

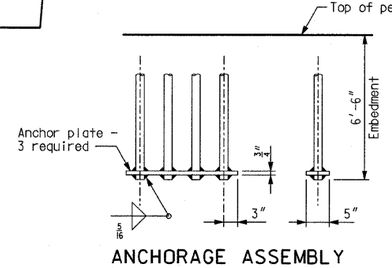


SECTION H-H
(6'-0" Diameter)

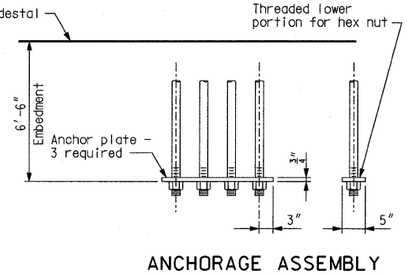


SECTION G-G
(Beam Cap reinforcement not shown)

Notes:
For locations of Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H, and for additional notes, see Sheet No. 27.
Overhead cantilever sign truss for DMS sign included in contract J6I0984, (By Others).
* Anchorage Assembly including anchor rods, nuts, washers and other hardware shall be included in the cost of Reinforcing Steel (Bridges).



ANCHORAGE ASSEMBLY
DETAIL A



ANCHORAGE ASSEMBLY
DETAIL B
(Optional)

SUBSTRUCTURE QUANTITY TABLE FOR PIER 19 WB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	249.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	48.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	68.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	164.1
Reinforcing Steel (Bridges)	pound	163,240
Mechanical Bar Splice	each	280
Reinforcing Steel (Epoxy Coated)	pound	2,470
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

PIER 19 WB - DETAILS

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

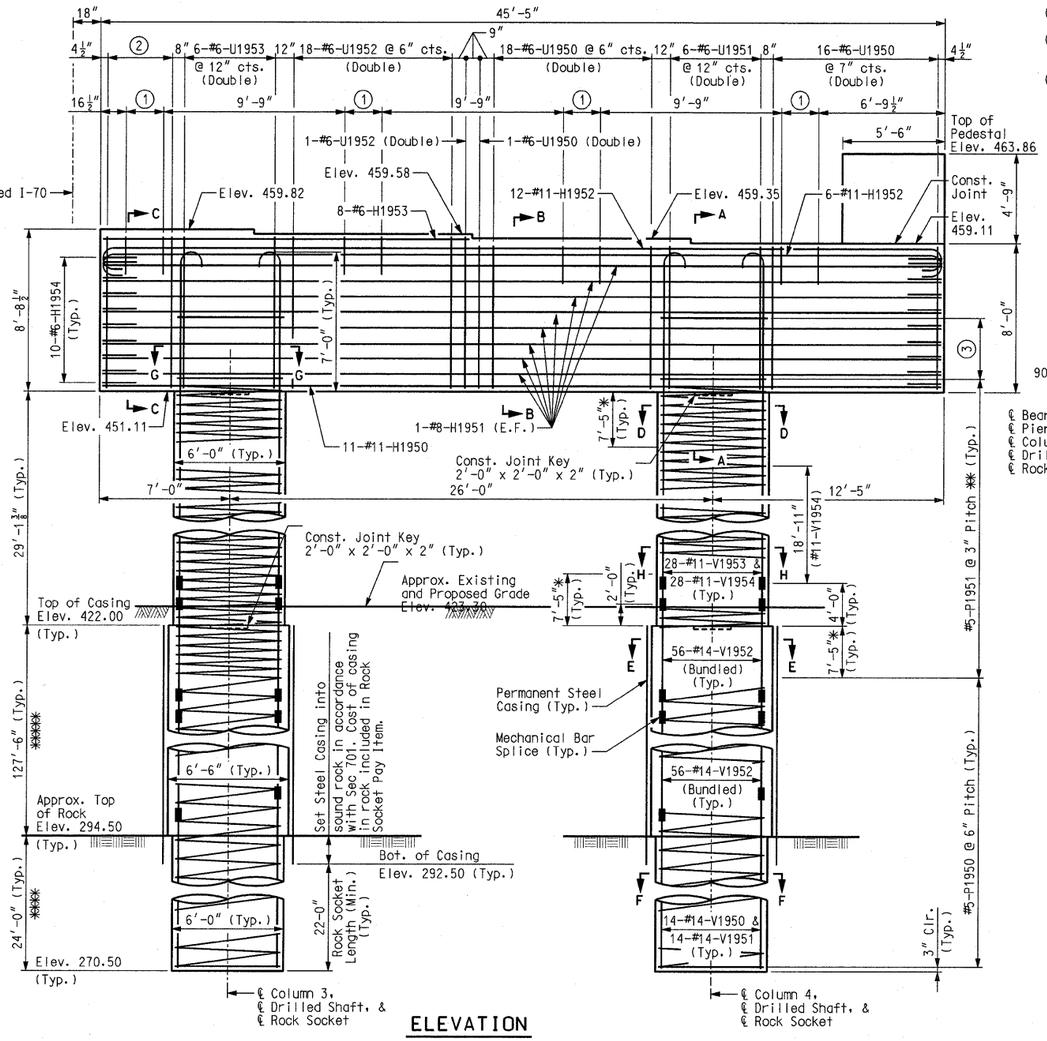
ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

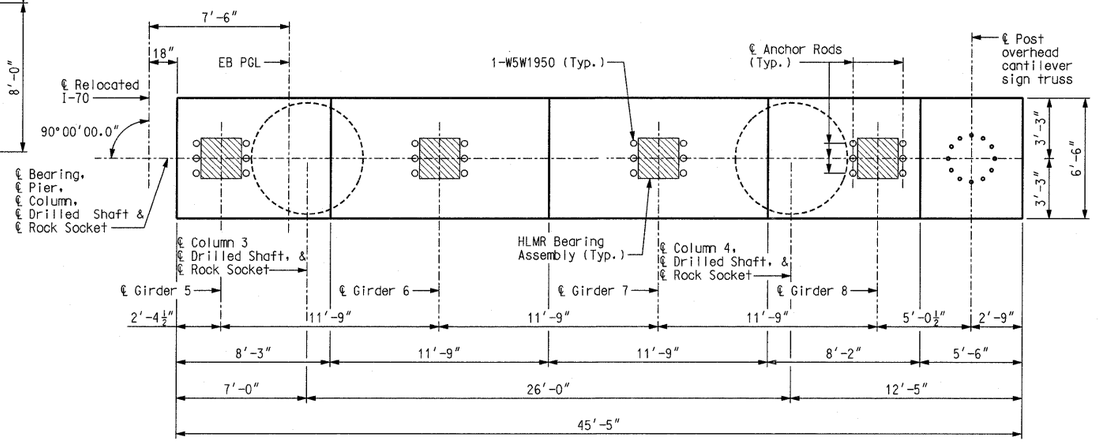


ELEVATION

① 5-#4-U1954 @ 6″ cts.

② 6-#6-U1952 @ 8″ cts. (Double)

③ 18-#5-P1952 @ 3″ cts. (Typ.) ***



PLAN

Notes:

An additional 4 feet has been added to #5-P1950, #14-V1950 and #14-V1951 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2″.

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 43.

For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 47.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

For Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H, Detail of Cap Beam Pedestal, and Substructure Quantity Table, see Sheet No. 30.

PIER 19 EB

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_029-152_J610984C_029.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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REVISED -
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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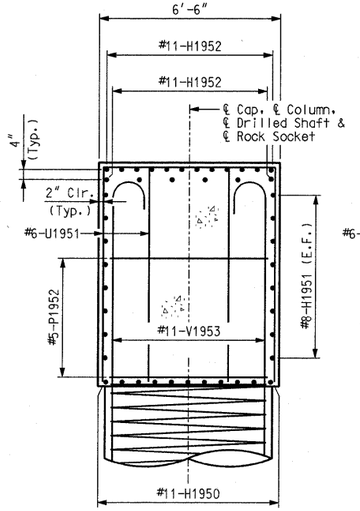
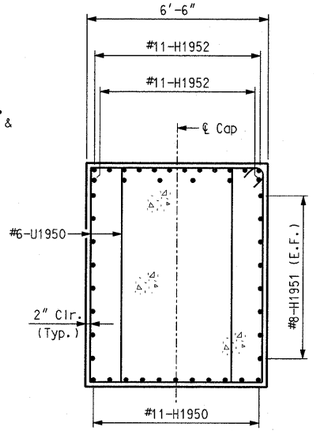
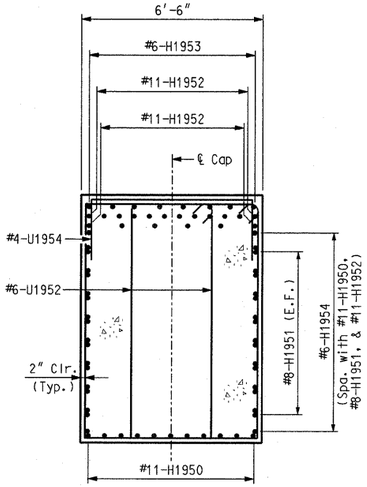
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



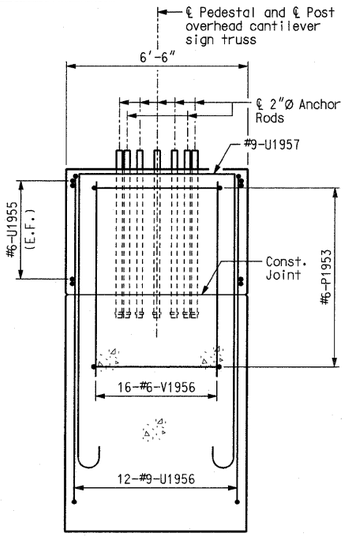
SECTION A-A



SECTION B-B

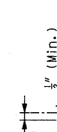


SECTION C-C



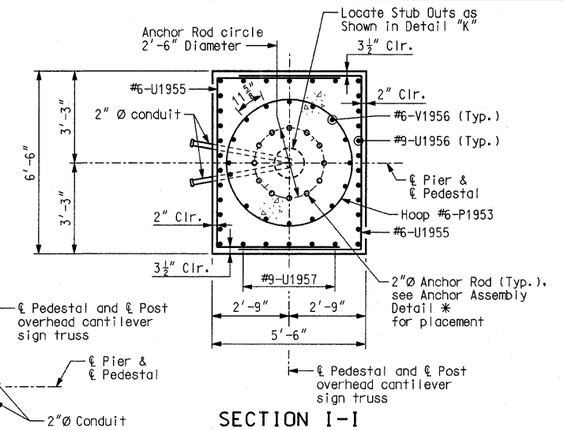
SECTION J-J

(Not All Beam Cap reinforcement shown)



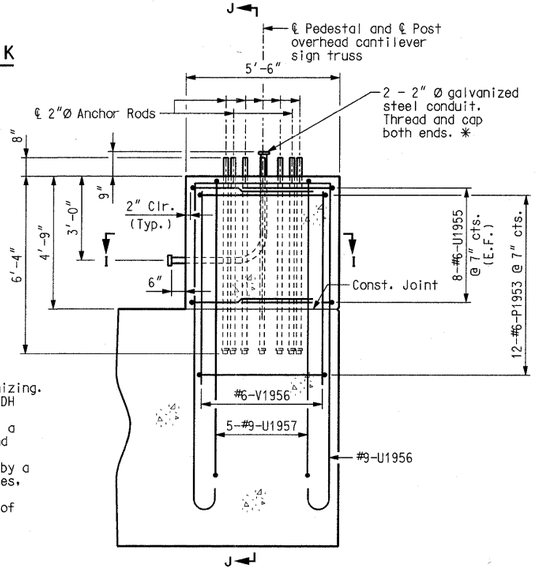
SUGGESTED POSITIONING PLATE

Anchor rods shall conform to AASHTO M314 Grade 105 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° F. before galvanizing. Galvanize the upper 18" (***) and associated M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide an unfinished nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, using a straight beam, 1/2"Ø 3.5 mhz. transducer, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Reinforcing Steel (Bridges).



SECTION I-I

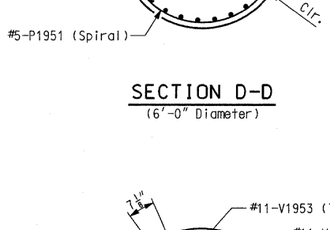
DETAIL K



DETAIL OF BEAM CAP PEDESTAL

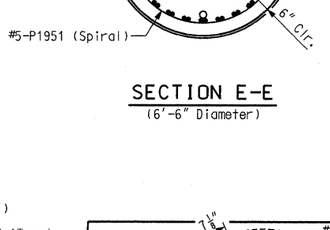
(All Beam Cap reinforcement not shown)

Notes:
For location of Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, and H-H, and for additional notes, see Sheet No. 29.
Overhead Cantilever Sign truss for DMS sign included in IDOT contract (By Others).
* Conduit and Anchor Assembly shall be included in the cost of Reinforcing steel (Bridges)



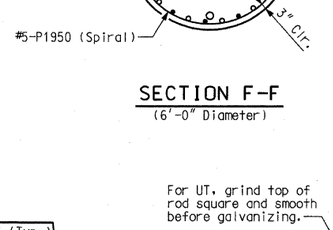
SECTION D-D

(6'-0" Diameter)



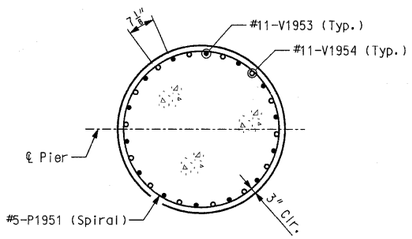
SECTION E-E

(6'-6" Diameter)



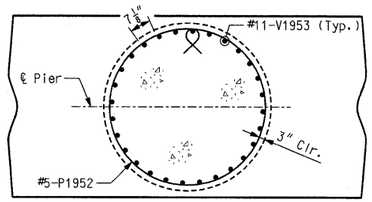
SECTION F-F

(6'-0" Diameter)



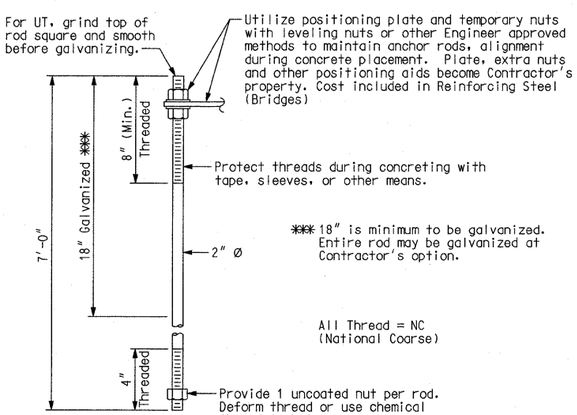
SECTION H-H

(6'-0" Diameter)



SECTION G-G

(Beam Cap reinforcement not shown)



ANCHOR ASSEMBLY DETAIL *

SUBSTRUCTURE QUANTITY TABLE FOR PIER 19 EB		
Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	255.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	48.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	68.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	158.1
Reinforcing Steel (Bridges)	pound	163,070
Mechanical Bar Splice	each	280
Reinforcing Steel (Epoxy Coated)	pound	2,280
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

PIER 19 EB - DETAILS

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE$
PLOT DATE = 4/14/2010

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REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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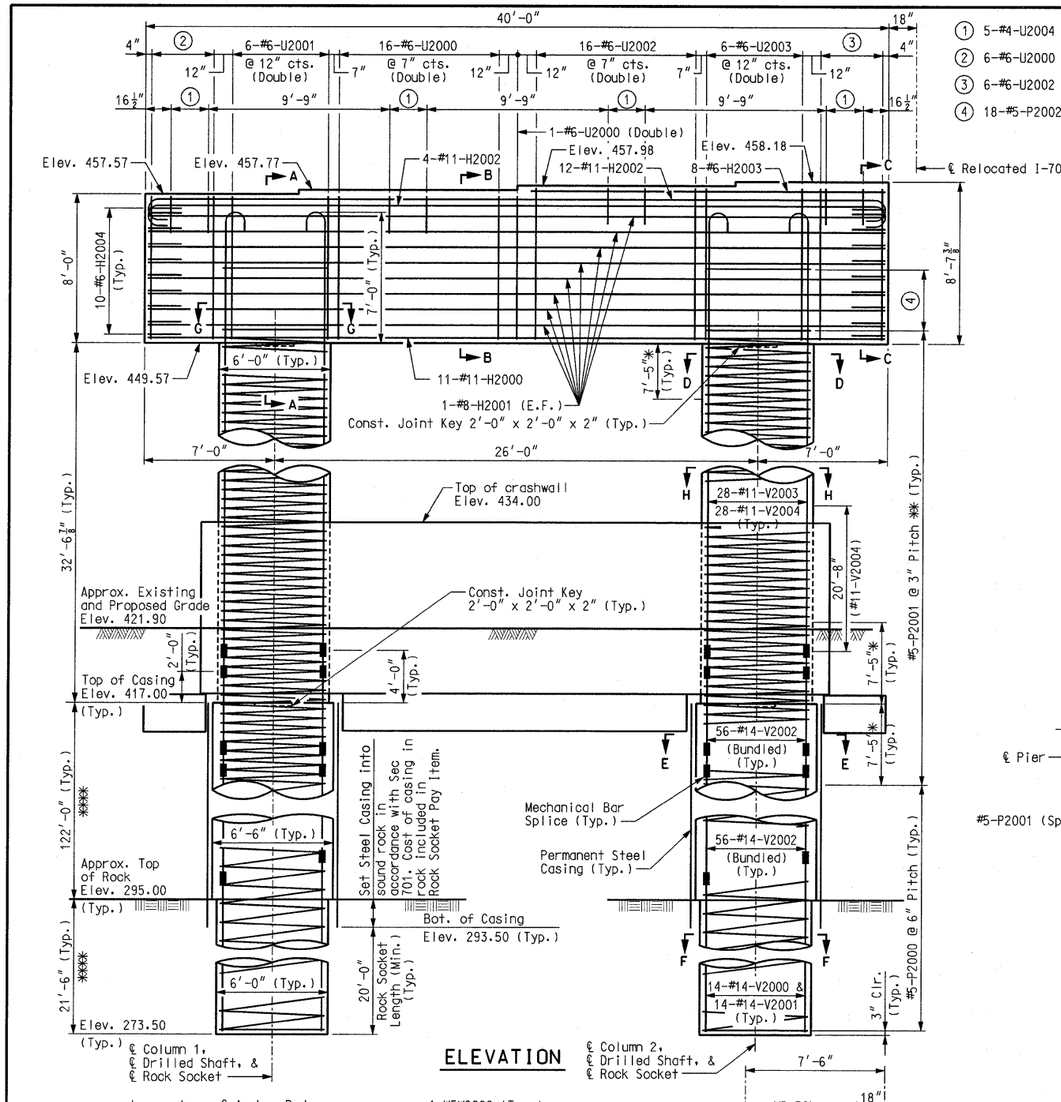
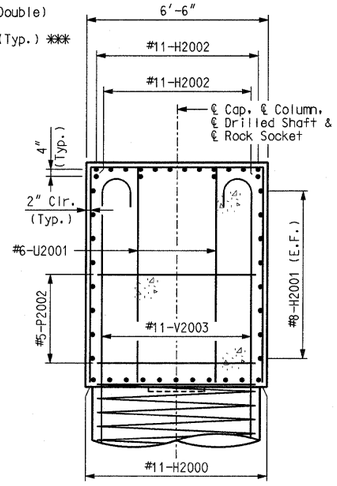
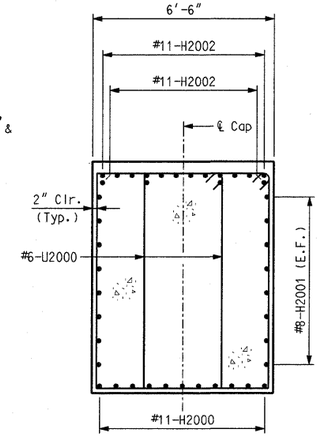


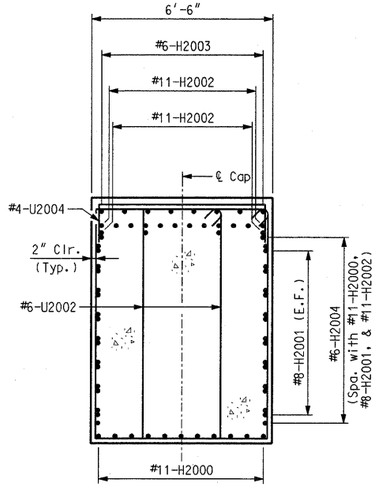
① 5-#4-U2004 @ 6" cts.
② 6-#6-U2000 @ 8" cts. (Double)
③ 6-#6-U2002 @ 8" cts. (Double)
④ 18-#5-P2002 @ 3" cts. (Typ.) ***



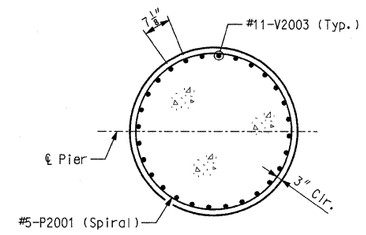
SECTION A-A



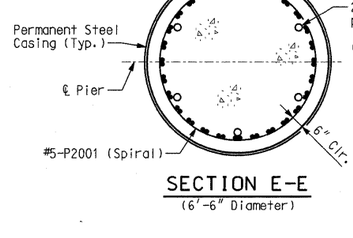
SECTION B-B



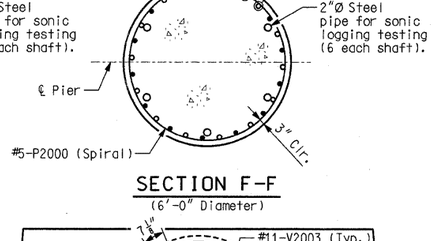
SECTION C-C



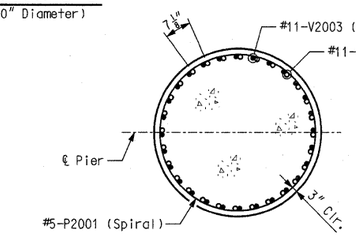
SECTION D-D
(6'-0" Diameter)



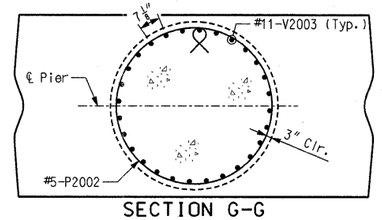
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION H-H
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)

SUBSTRUCTURE QUANTITY TABLE FOR PIER 20 WB

Item		Quantity
Class 1 Excavation	cu. yard	25
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	244.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	43.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	63.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	306.5
Reinforcing Steel (Bridges)	pound	169,890
Mechanical Bar Splice	each	280
Non-Special Waste Disposal	cu. yard	122.6

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P2000, #14-V2000 and #14-V2001 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Required excavation to the top of the drilled shafts is included in the contract unit price for Class 1 Excavation.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Details and Anchor Rod Setting Plan, see Sheet No. 46.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).
For Pier Crashwall Details, see Sheet No. 35.
If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

PIER 20 WB

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 31 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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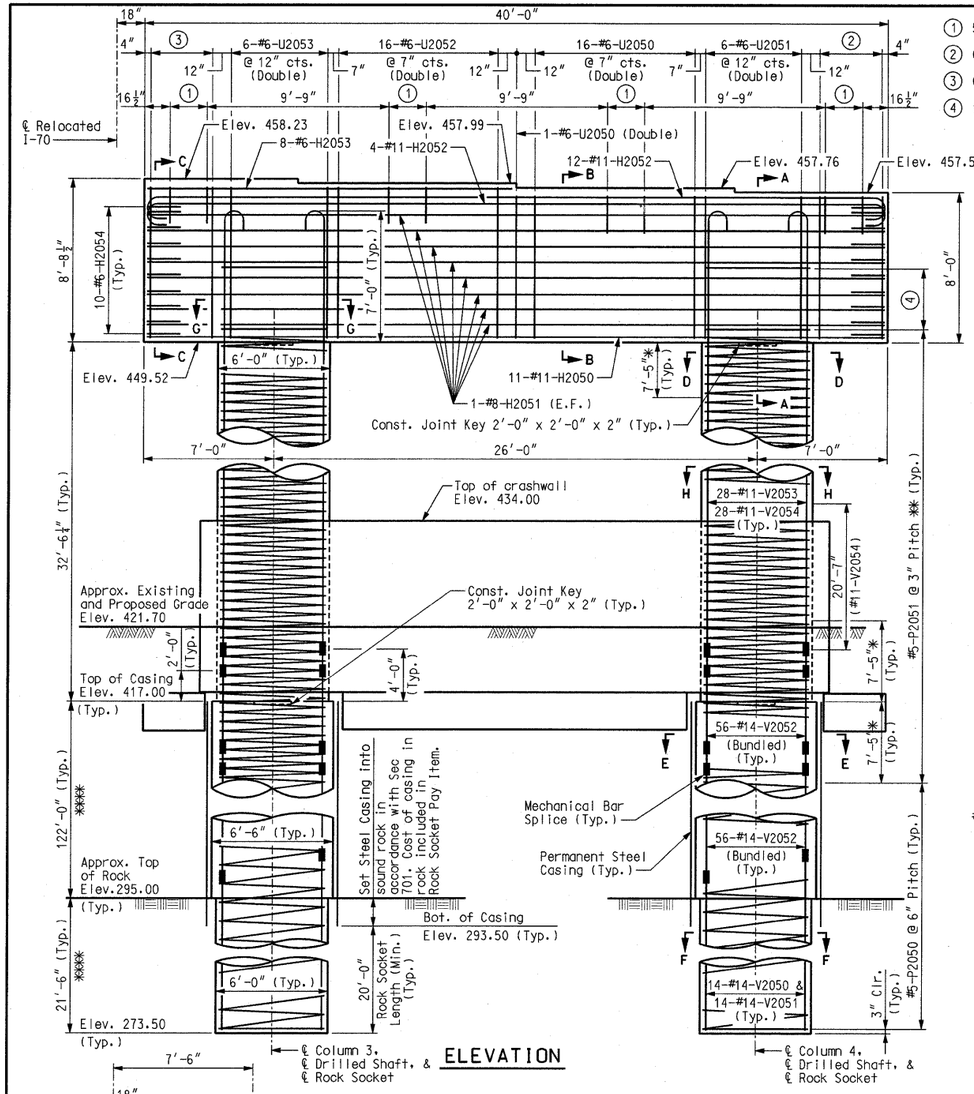
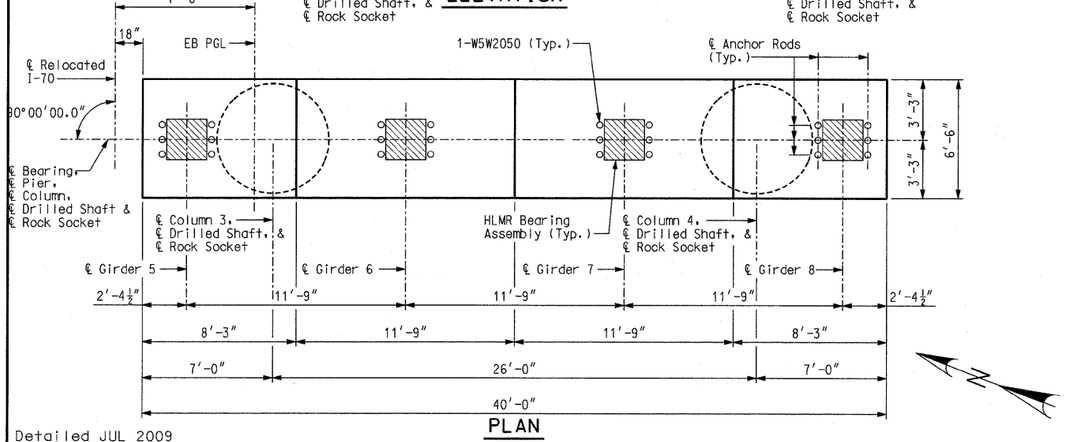


ELEVATION

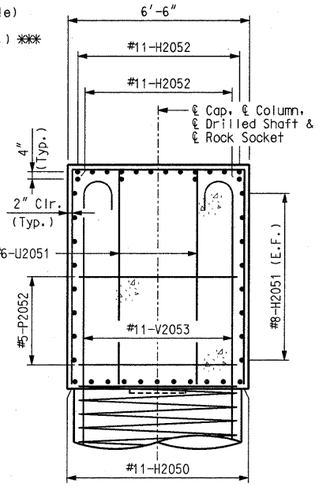


PLAN

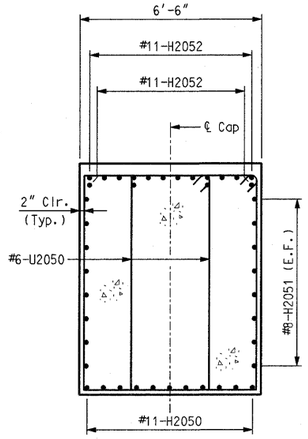
Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

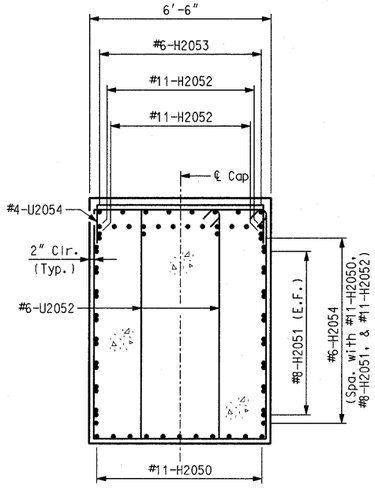
1. 5-#4-U2054 @ 6" cts.
2. 6-#6-U2050 @ 8" cts. (Double)
3. 6-#6-U2052 @ 8" cts. (Double)
4. 18-#5-P2052 @ 3" cts. (Typ.) ***



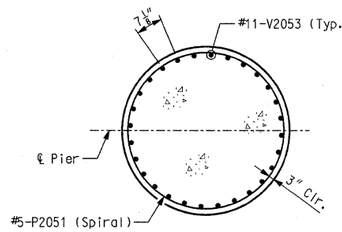
SECTION A-A



SECTION B-B

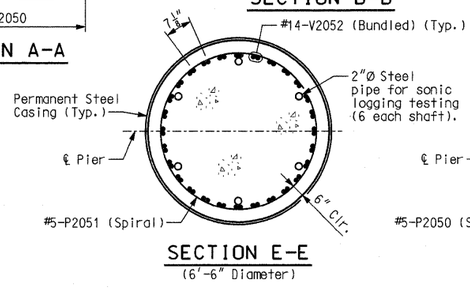


SECTION C-C



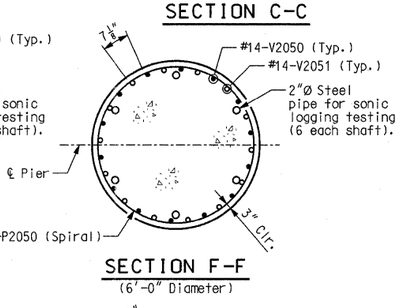
SECTION D-D

(6'-0" Diameter)



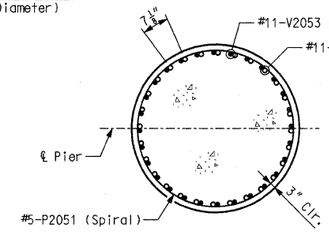
SECTION E-E

(6'-6" Diameter)



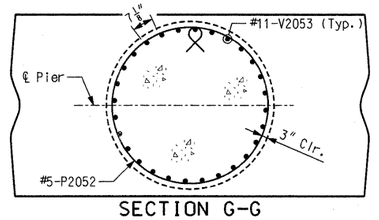
SECTION F-F

(6'-0" Diameter)



SECTION H-H

(6'-0" Diameter)



SECTION G-G

(Beam Cap reinforcement not shown)

SUBSTRUCTURE QUANTITY TABLE FOR PIER 20 EB

Item		Quantity
Class 1 Excavation	cu. yard	20
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	244.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	43.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	63.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	306.9
Reinforcing Steel (Bridges)	pound	169,870
Mechanical Bar Splice	each	280
Non-Special Waste Disposal	cu. yard	121.9

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P2050, #14-V2050 and #14-V2051 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Required excavation to the top of the drilled shafts is included in the contract unit price for Class 1 Excavation.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 43.

For Anchor Rod Details and Anchor Rod Setting Plan, see Sheet No. 47.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

For Pier Crashwall Details see Sheet No. 35.

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

PIER 20 EB

Sheet No. 32 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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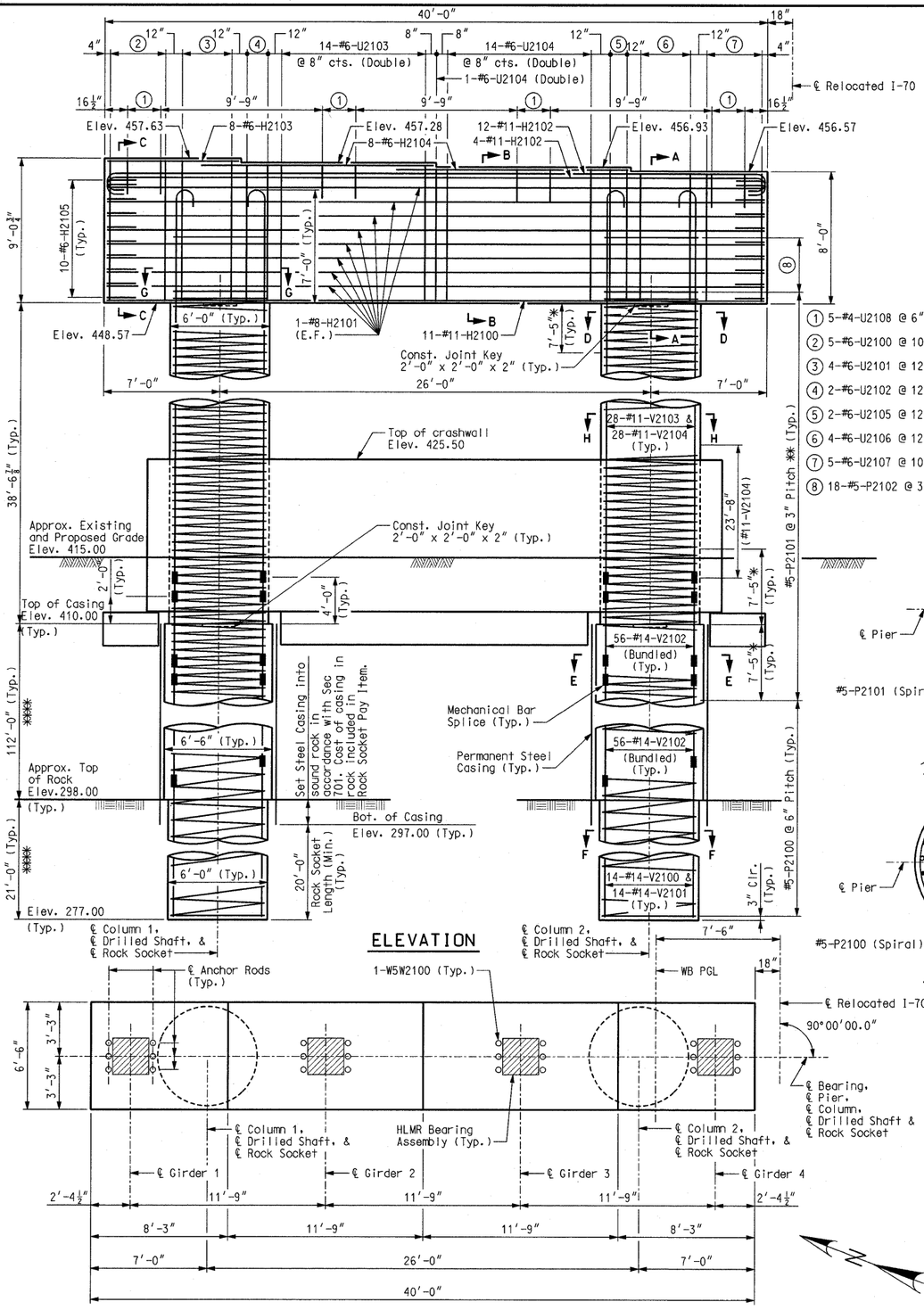
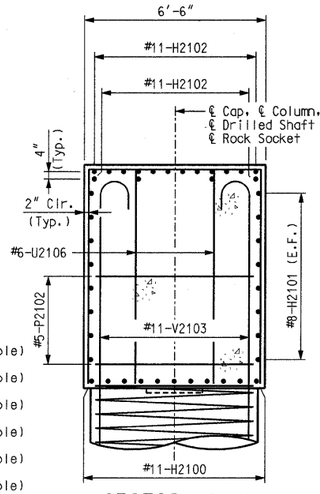
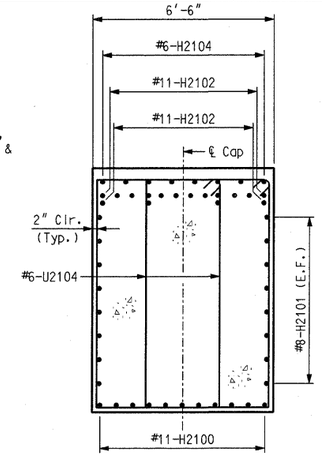


ELEVATION

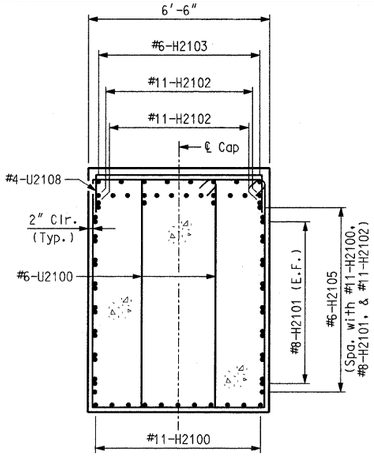
1. 5-#4-U2108 @ 6" cts.
2. 5-#6-U2100 @ 10" cts. (Double)
3. 4-#6-U2101 @ 12" cts. (Double)
4. 2-#6-U2102 @ 12" cts. (Double)
5. 2-#6-U2105 @ 12" cts. (Double)
6. 4-#6-U2106 @ 12" cts. (Double)
7. 5-#6-U2107 @ 10" cts. (Double)
8. 18-#5-P2102 @ 3" cts. (Typ.) ***



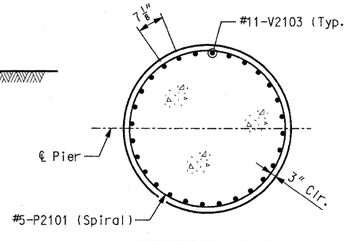
SECTION A-A



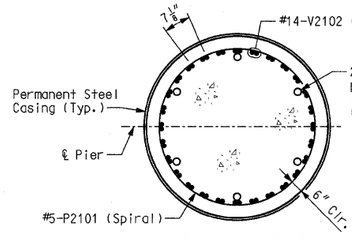
SECTION B-B



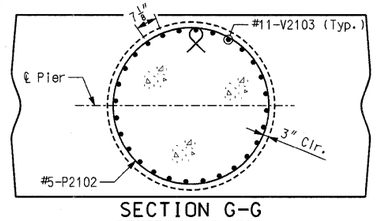
SECTION C-C



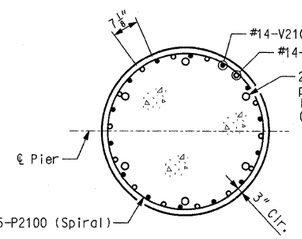
SECTION D-D
(6'-0" Diameter)



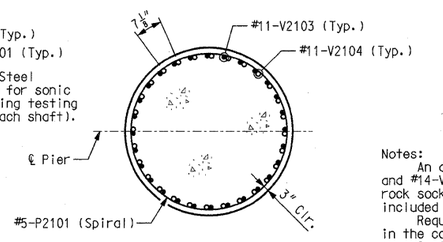
SECTION E-E
(6'-6" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)



SECTION F-F
(6'-0" Diameter)



SECTION H-H
(6'-0" Diameter)

PLAN

SUBSTRUCTURE QUANTITY TABLE FOR PIER 21 WB

Item		Quantity
Class 1 Excavation	cu. yard	30
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	224.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	42.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	62.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	300.4
Reinforcing Steel (Bridges)	pound	167,490
Mechanical Bar Splice	each	280
Non-Special Waste Disposal	cu. yard	126.7

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P2100, #14-V2100 and #14-V2101 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Required excavation to the top of the drilled shafts is included in the contract unit price for Class 1 Excavation.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2 ".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 46.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).
For Pier Crashwall Details, see Sheet No. 35.
If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

PIER 21 WB

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

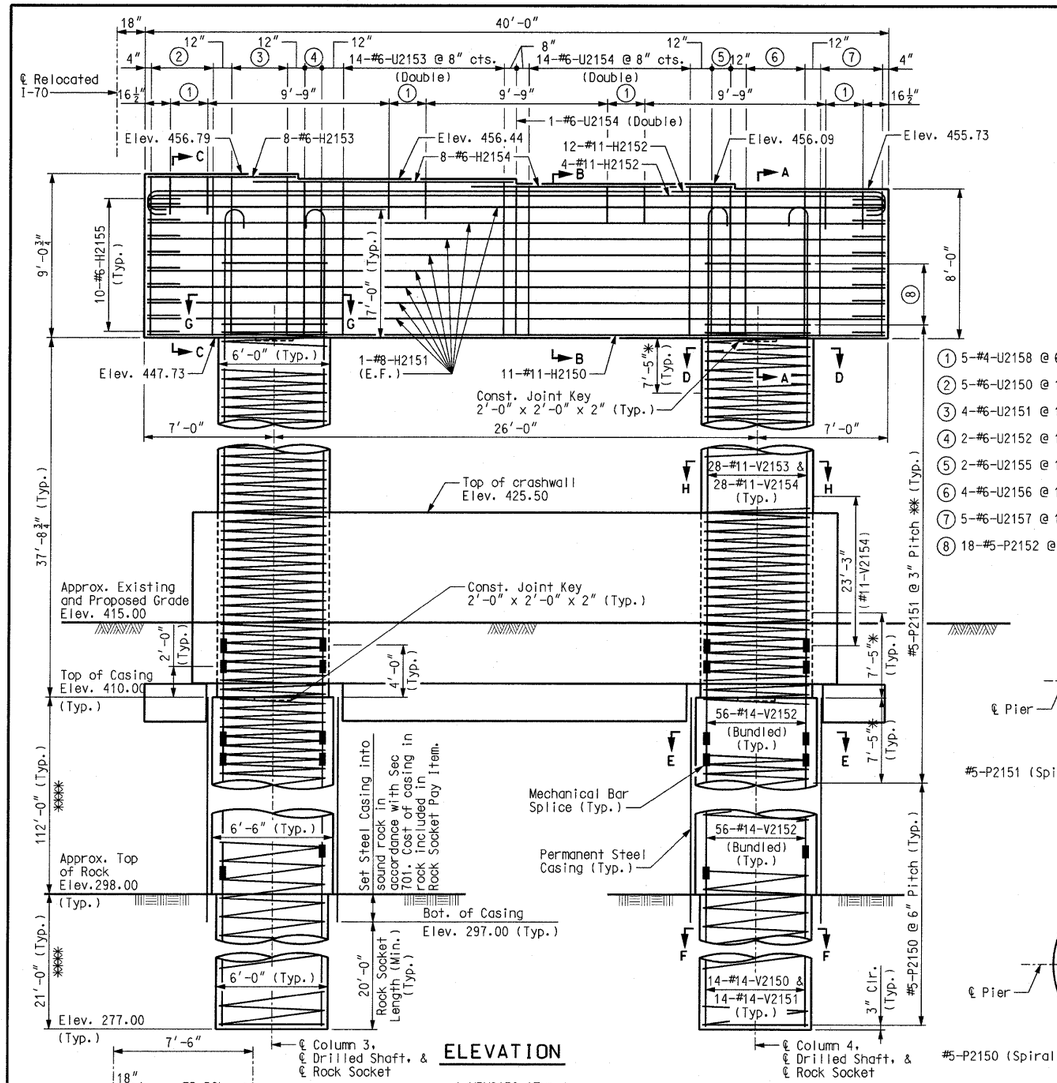
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



Notes:

An additional 4 feet has been added to #5-P2150, #14-V2150 and #14-V2151 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Required excavation to the top of the drilled shafts is included in the contract unit price for Class 1 Excavation.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 43.

For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 47.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

For Pier Crashwall Details, see Sheet No. 35.

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

SUBSTRUCTURE QUANTITY TABLE FOR PIER 21 EB

Item		Quantity
Class 1 Excavation	cu. yard	30
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	224.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	42.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	62.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	299.3
Reinforcing Steel (Bridges)	pound	167,000
Mechanical Bar Splice	each	280
Non-Special Waste Disposal	cu. yard	126.7

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

PIER 21 EB

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 34 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

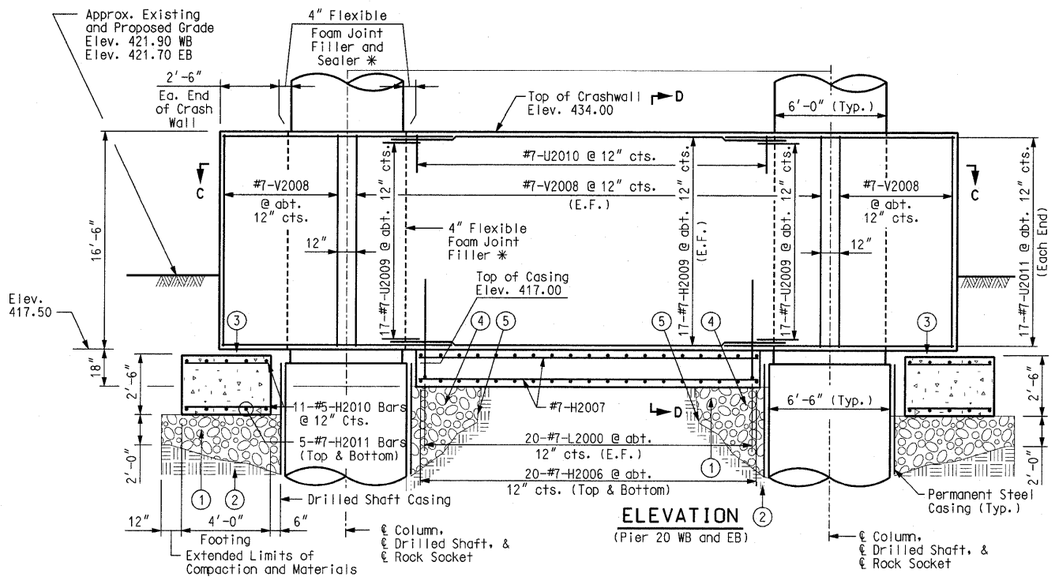
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

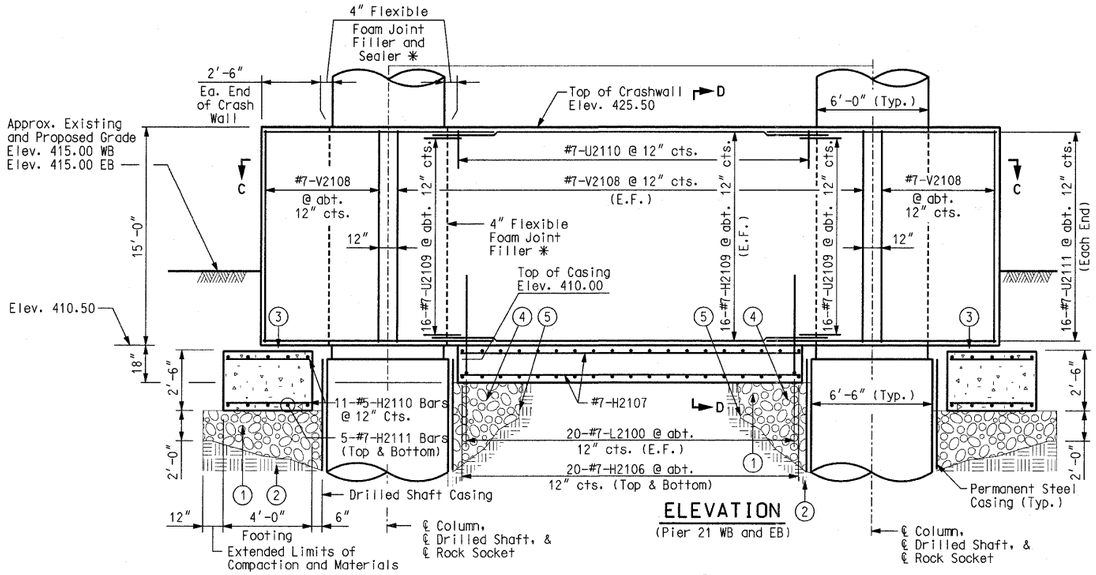
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631





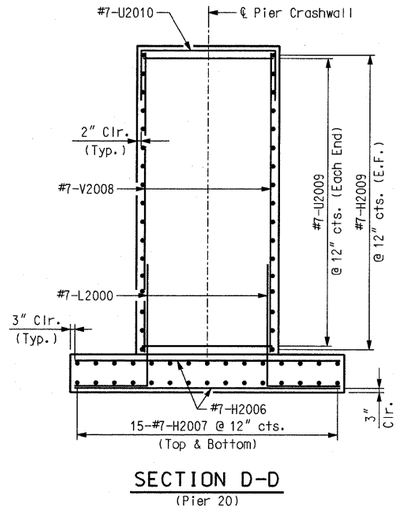
(1) Type 5 Aggregate, Min. 2' Thick Compacted to 100% Std. Proctor Density in Accordance with ASTM D698

(2) Compact Existing Subgrade to 100% Std. Proctor Density in Accordance with ASTM D698

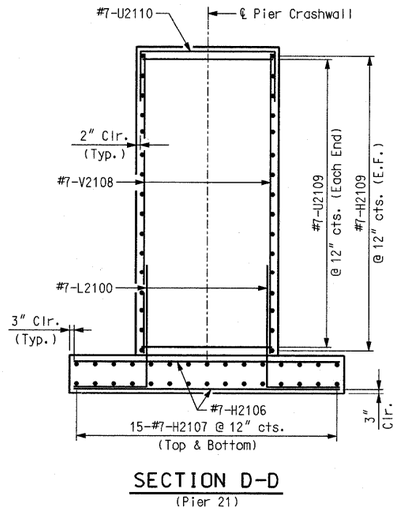
(3) 2 Layers of Kraft Paper (Bond Breaker) Full Contact Surface of End Crash Wall

(4) Type 5 Aggregate Min. 2 ft. or to Limits of Excavation for Drilled Shaft-Compact to 100% Std. Proctor Density in Accordance with ASTM D698

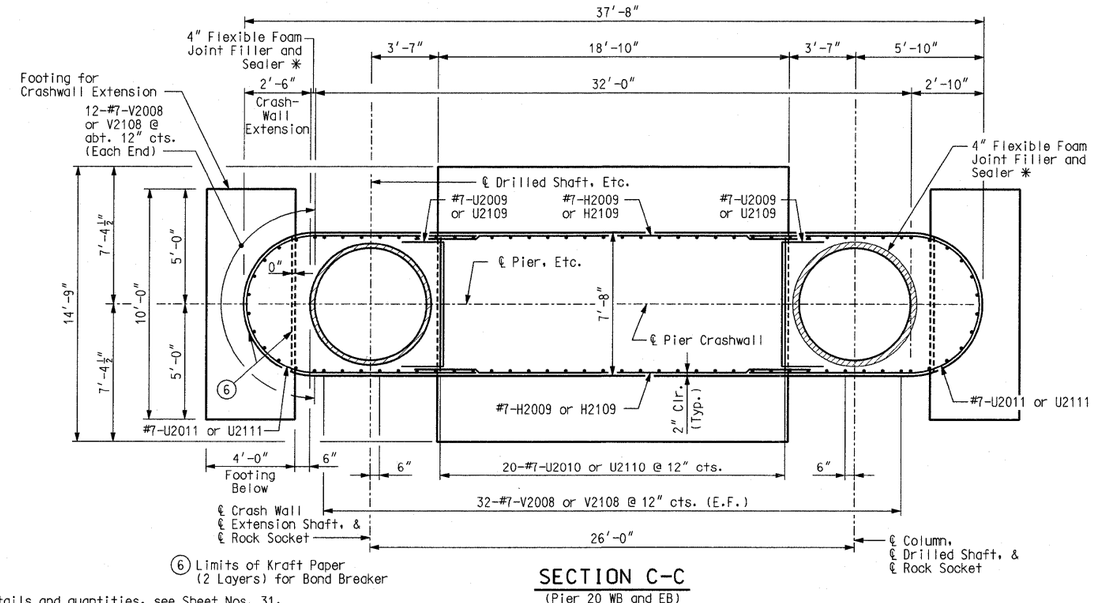
(5) Limits of Excavation for Drilled Shaft-Compact to 100% Std. Proctor Density in Accordance with ASTM D698



SECTION D-D
(Pier 20)



SECTION D-D
(Pier 21)



(6) Limits of Kraft Paper (2 Layers) for Bond Breaker

SECTION C-C
(Pier 20 WB and EB)
(Pier 21 WB and EB)

Notes:
For Pier details and quantities, see Sheet Nos. 31, 32, 33, and 34.
* The 4" flexible foam joint filler shall be installed the full height of the interface between the crashwall and columns and shall be in accordance with IDOT Standard Specification Art. 1051.09. The joint filler shall be compatible with sealer meeting the requirements of IDOT Standard Specification Art. 1050.02. The cost of the 4" flexible foam joint filler and sealer shall be included in the total cost of Class B Concrete (Substructure).

PIER CRASHWALL DETAIL SHEET

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 35 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
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CERTIFICATE OF AUTHORITY NO. 001270

CMT
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2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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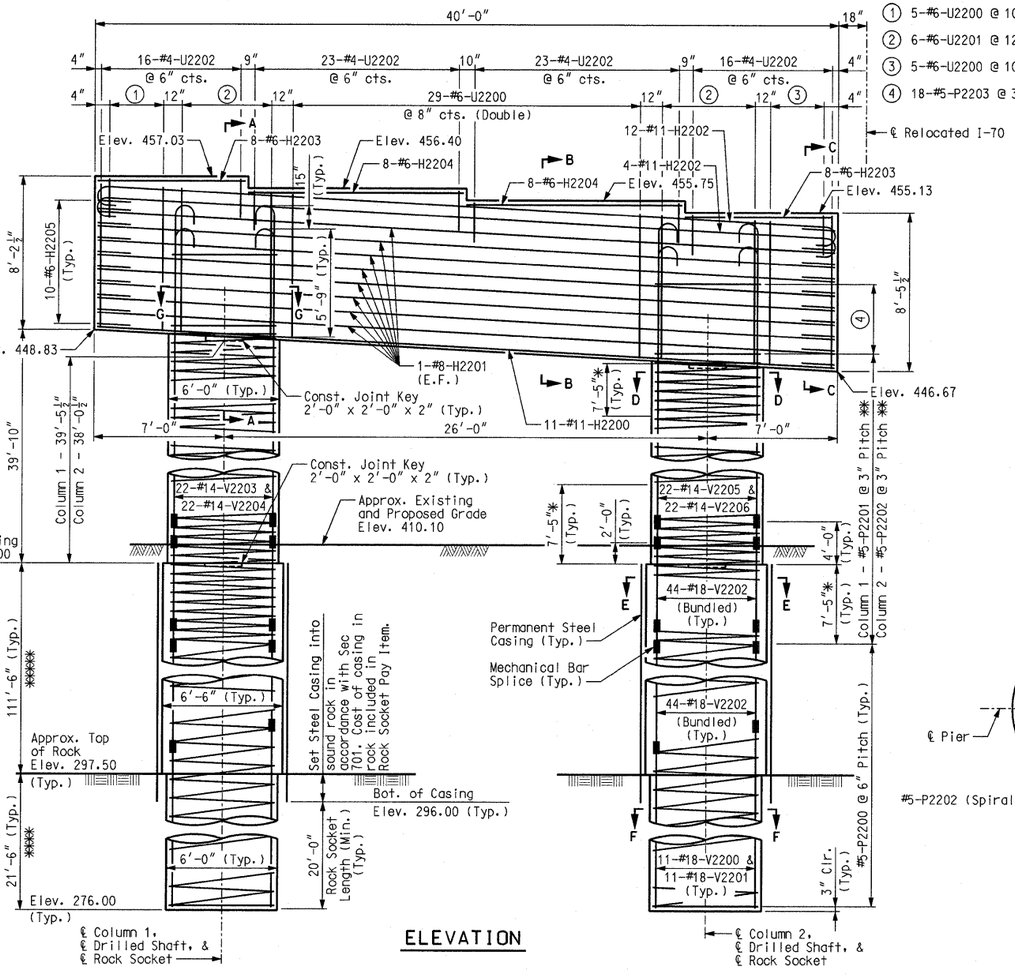
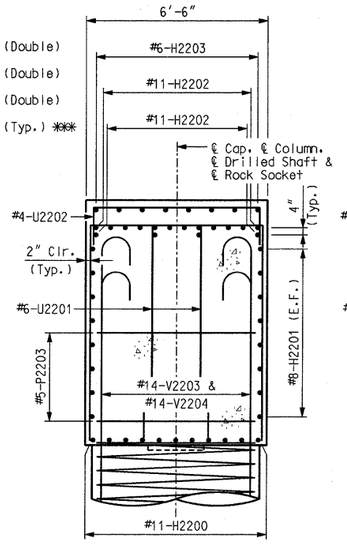
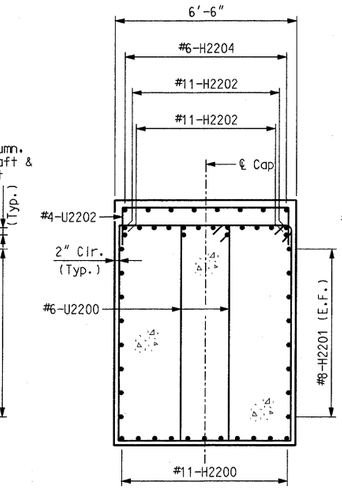
116



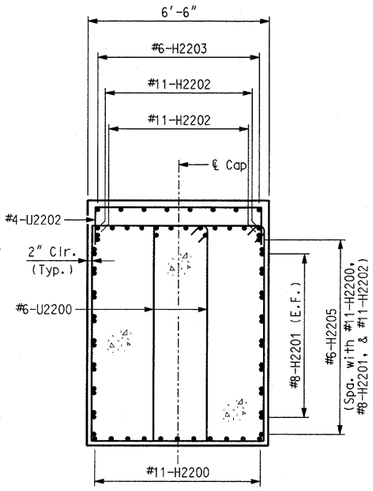
ELEVATION



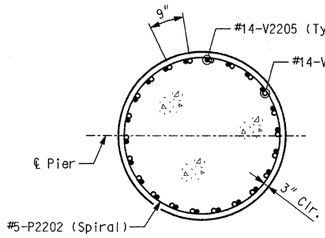
SECTION A-A



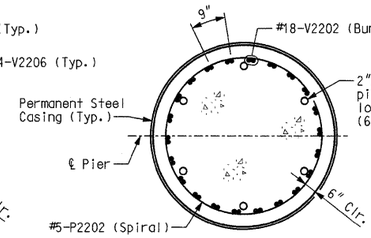
SECTION B-B



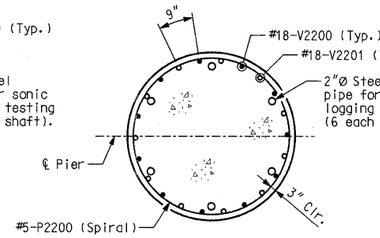
SECTION C-C



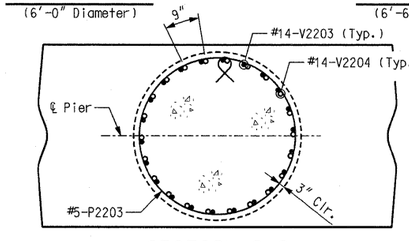
SECTION D-D
(6'-0" Diameter)



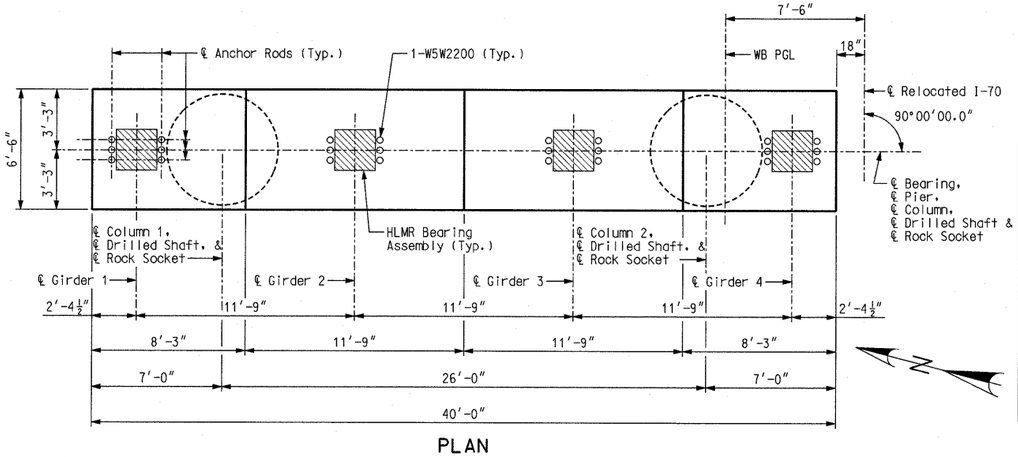
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)



PLAN

Note: This drawing is not to scale. Follow dimensions.

Detailed JUL 2009
Checked JUL 2009

SUBSTRUCTURE QUANTITY TABLE FOR PIER 22 WB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	223.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	43.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	63.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	161.3
Reinforcing Steel (Bridges)	pound	208,650
Mechanical Bar Splice	each	220
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P2200, #18-V2200 and #18-V2201 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor bolt wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 46.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 22 WB

Sheet No. 36 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
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CERTIFICATE OF AUTHORITY NO. 001270

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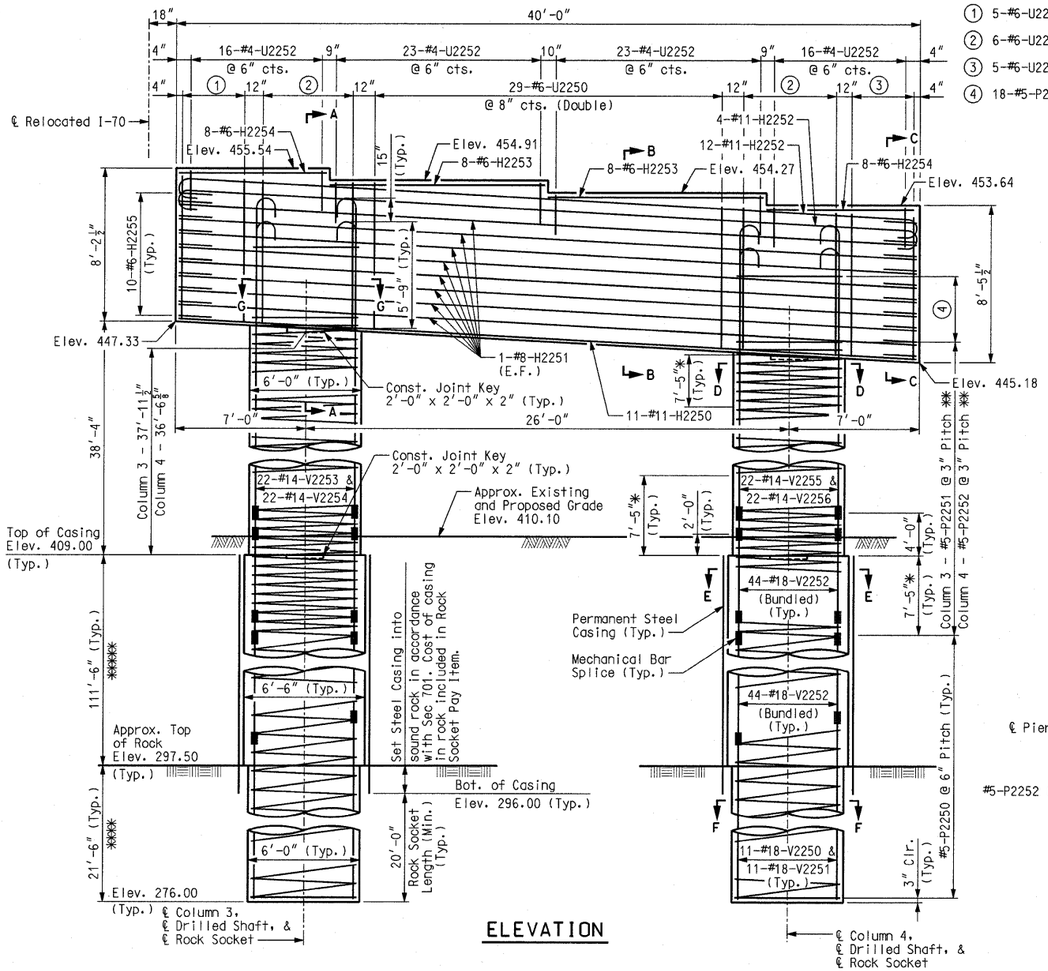
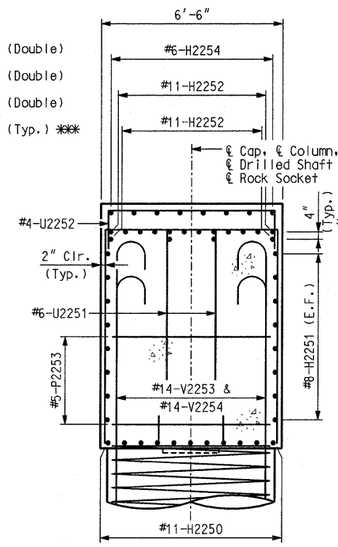
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

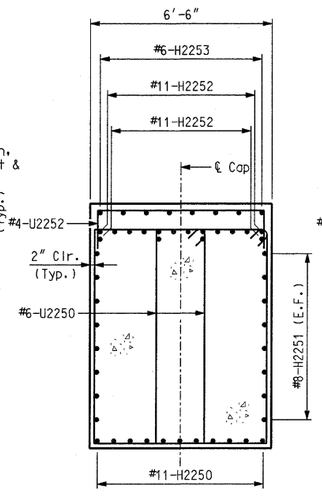


ELEVATION

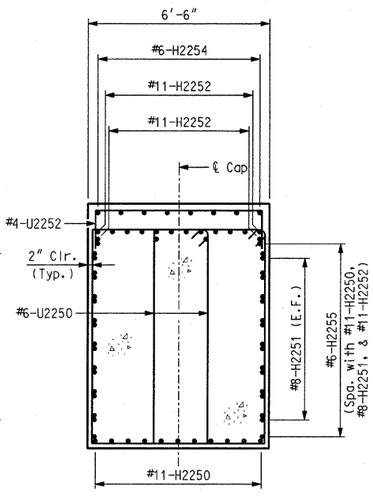
① 5-#6-U2250 @ 10" cts. (Double)
② 6-#6-U2251 @ 12" cts. (Double)
③ 5-#6-U2250 @ 10" cts. (Double)
④ 18-#5-P2253 @ 3" cts. (Typ.) ***



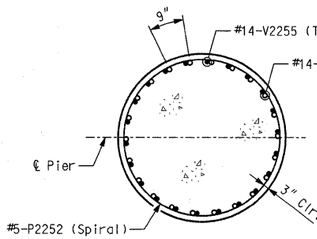
SECTION A-A



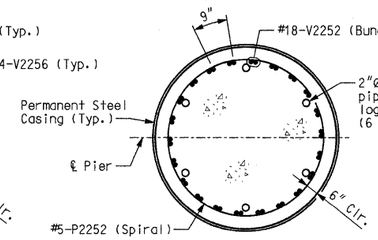
SECTION B-B



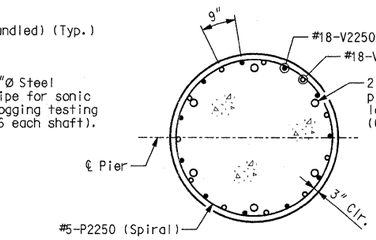
SECTION C-C



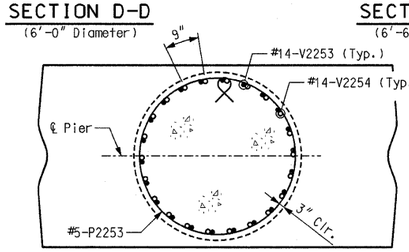
SECTION D-D
(6'-0" Diameter)



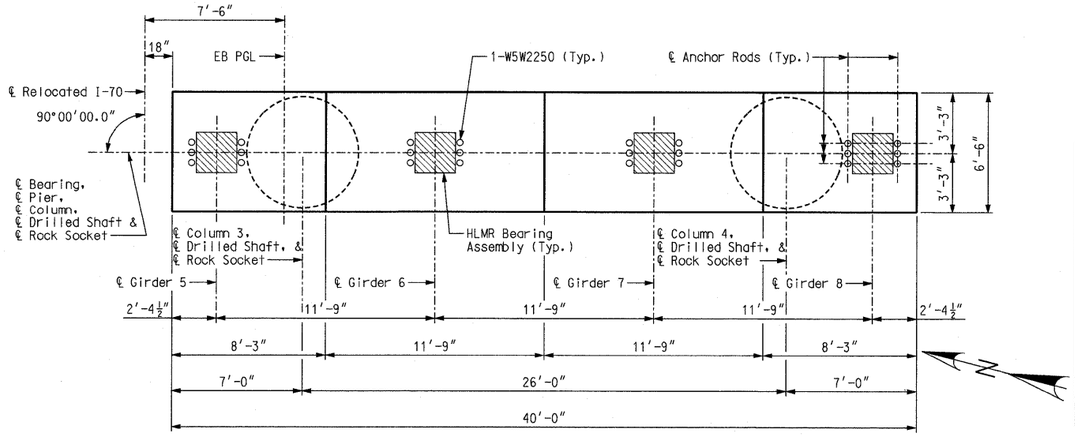
SECTION E-E
(6'-6" Diameter)



SECTION F-F
(6'-0" Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)



PLAN

Note: This drawing is not to scale. Follow dimensions.

Detailed JUL 2009
Checked JUL 2009

SUBSTRUCTURE QUANTITY TABLE FOR PIER 22 EB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	223.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	43.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	63.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	158.3
Reinforcing Steel (Bridges)	pound	207,420
Mechanical Bar Splice	each	220
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

Notes:
An additional 4 feet has been added to #5-P2250, #18-V2250 and #18-V2251 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.
Sonic logging testing shall be performed on all drilled shafts and rock sockets.
All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".
The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.
The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.
For details of HLMR Bearing Assembly, see Sheet No. 43.
For Anchor Rod Well Details and Anchor Rod Setting Plan, see Sheet No. 47.
For details of seismic stirrup bars, see Sheet No. 7.
* Lapping of spiral reinforcement in this region not permitted.
** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.
*** Splice locations shall be staggered.
Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.
**** Pay Items Rock Socket (6 ft. 0 in. Dia.).
***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

PIER 22 EB

Sheet No. 37 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
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TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

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CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-9050
ENGINEERING CORPORATION - 000631

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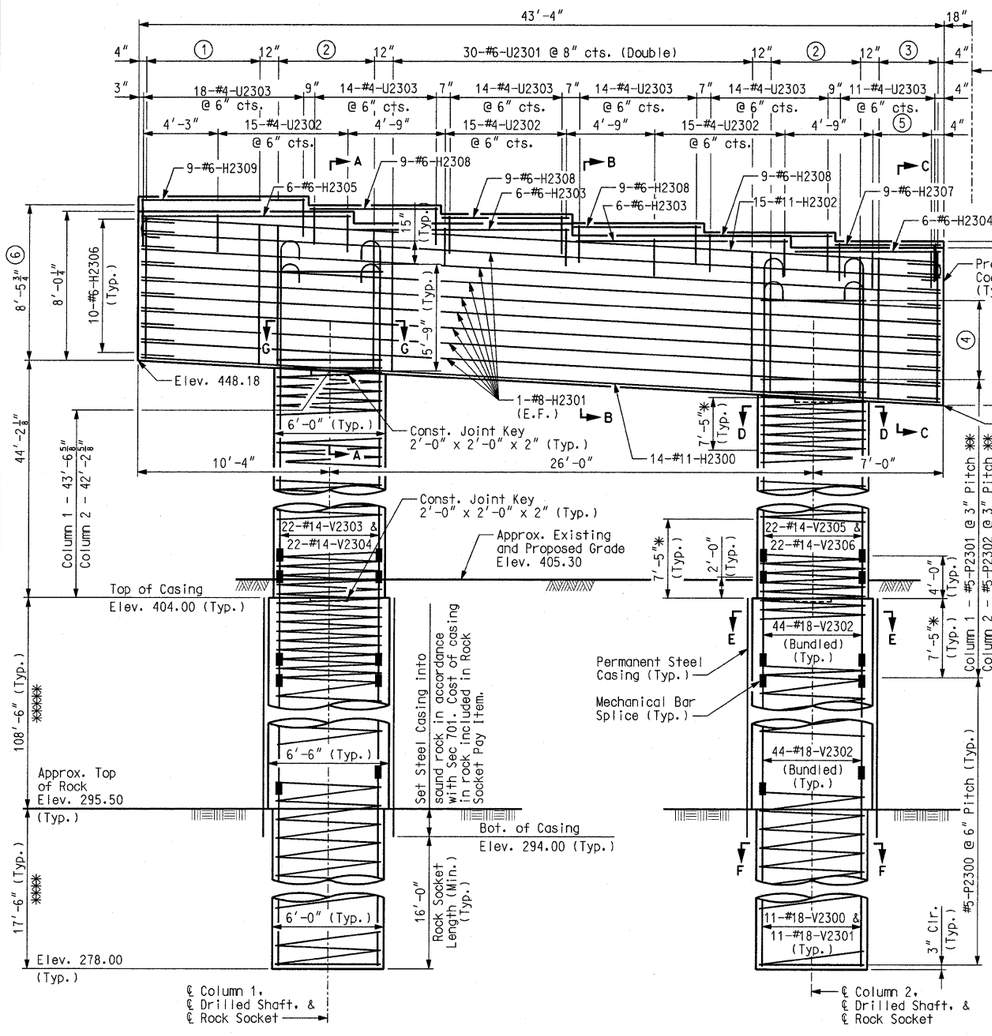
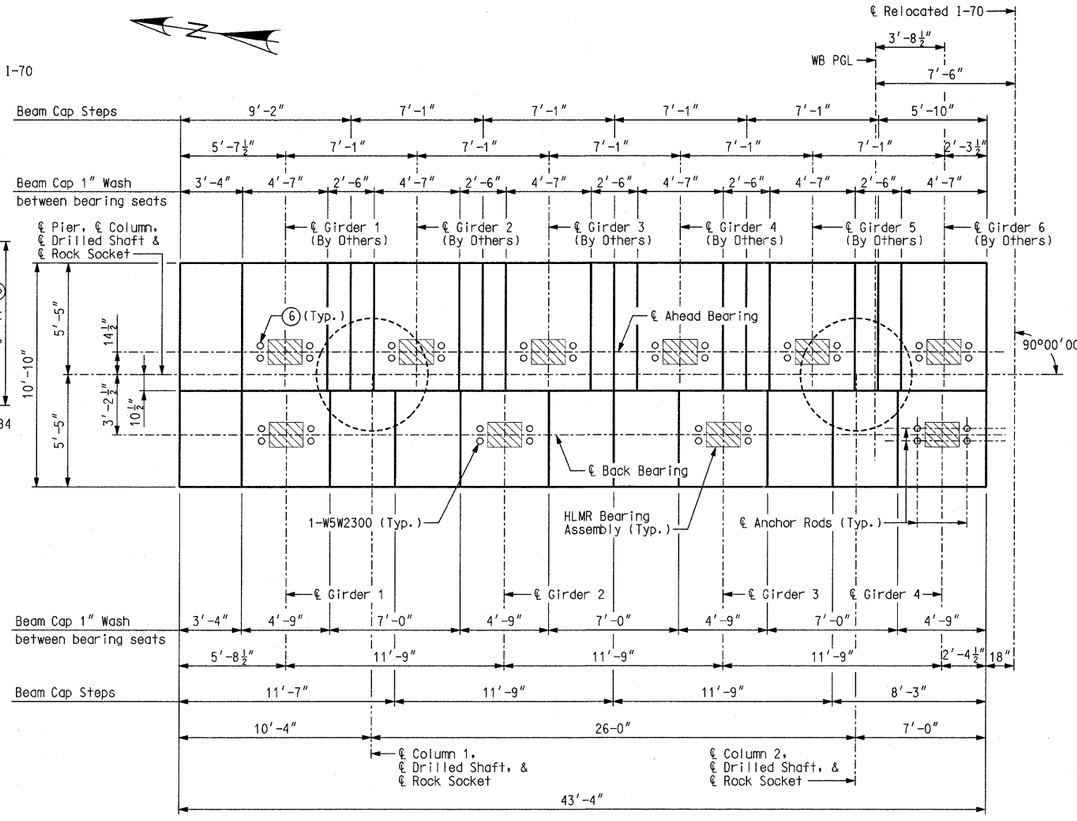


ELEVATION

GIRDER SEAT ELEVATIONS						
Girder No.	1	2	3	4	5	6
⑥ Ahead Bearing	456.56	456.18	455.80	455.42	455.03	454.65
Back Bearing	456.20	455.56	454.93	454.30	-	-



PLAN

① 10-#6-U2301 @ abt. 9" cts. (Double)

② 6-#6-U2300 @ 12" cts. (Double)

③ 5-#6-U2301 @ 9" cts. (Double)

④ 18-#5-P2303 @ 3" cts. (Typ.) ***

⑤ 8-#4-U2302 @ 6" cts.

⑥ Ahead bearing seat elevations, anchor rod setting plan, spiral reinforcing, and dimensions indicated are subject to change under separate IDOT contract (By Others). Contractor shall coordinate with IDOT to obtain final ahead bearing details prior to construction.

Notes:

An additional 4 feet has been added to #5-P2300, #18-V2300 and #18-V2301 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2".

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 42.

For Anchor Rod Well Details and Back Bearing Anchor Rod Setting Plan, see Sheet No. 46.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

For Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, and Substructure Quantity Table, see Sheet No. 39.

PIER 23 WB

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
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CERTIFICATE OF AUTHORITY NO. 001270

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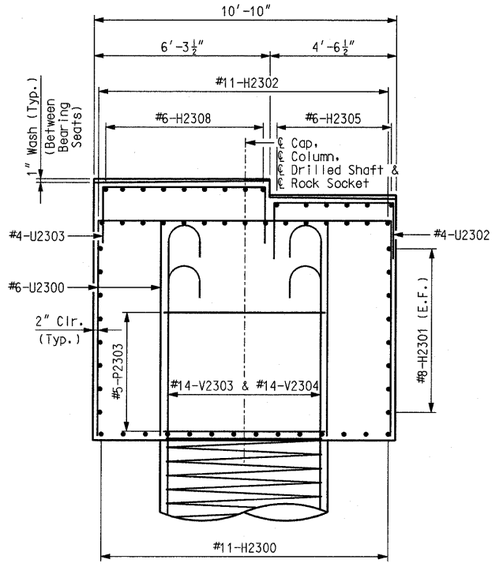
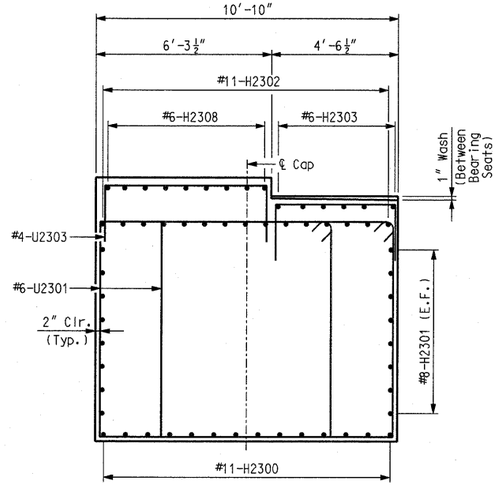
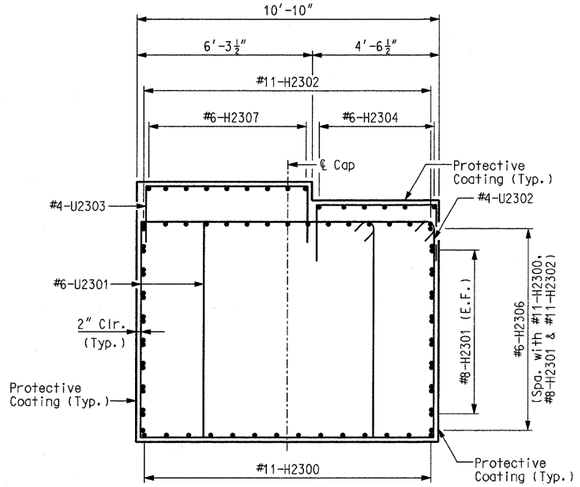
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-6050
ENGINEERING CORPORATION - 000631



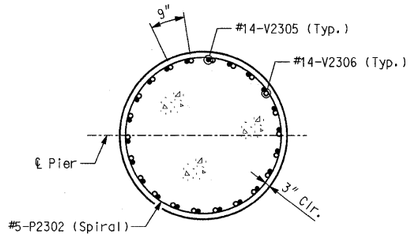
SECTION A-A



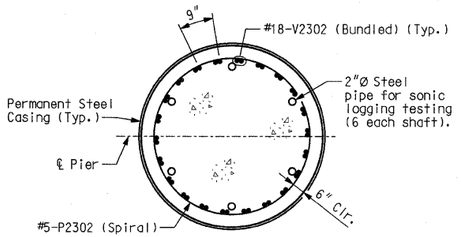
SECTION B-B



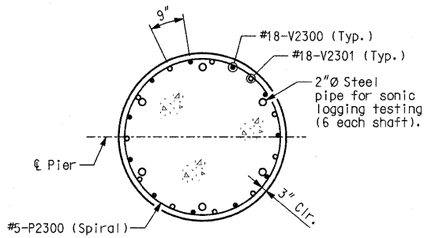
SECTION C-C



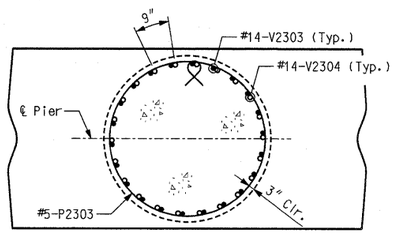
SECTION D-D
(6′-0″ Diameter)



SECTION E-E
(6′-6″ Diameter)



SECTION F-F
(6′-0″ Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)

Note:
Seal back face of beam, top of beam, ends of beam, and front face of beam with Protective Coating - Concrete Bents and Piers (Epoxy).
For location of Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, and additional notes, see Sheet No. 38.

SUBSTRUCTURE QUANTITY TABLE FOR PIER 23 WB

Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	217.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	35.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	55.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	237.3
Reinforcing Steel (Bridges)	pound	155,420
Mechanical Bar Splice	each	220
Reinforcing Steel (Epoxy Coated)	pound	49,660
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

PIER 23 WB - DETAILS

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 39 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB

REVISED -
REVISED -
REVISED -
REVISED -

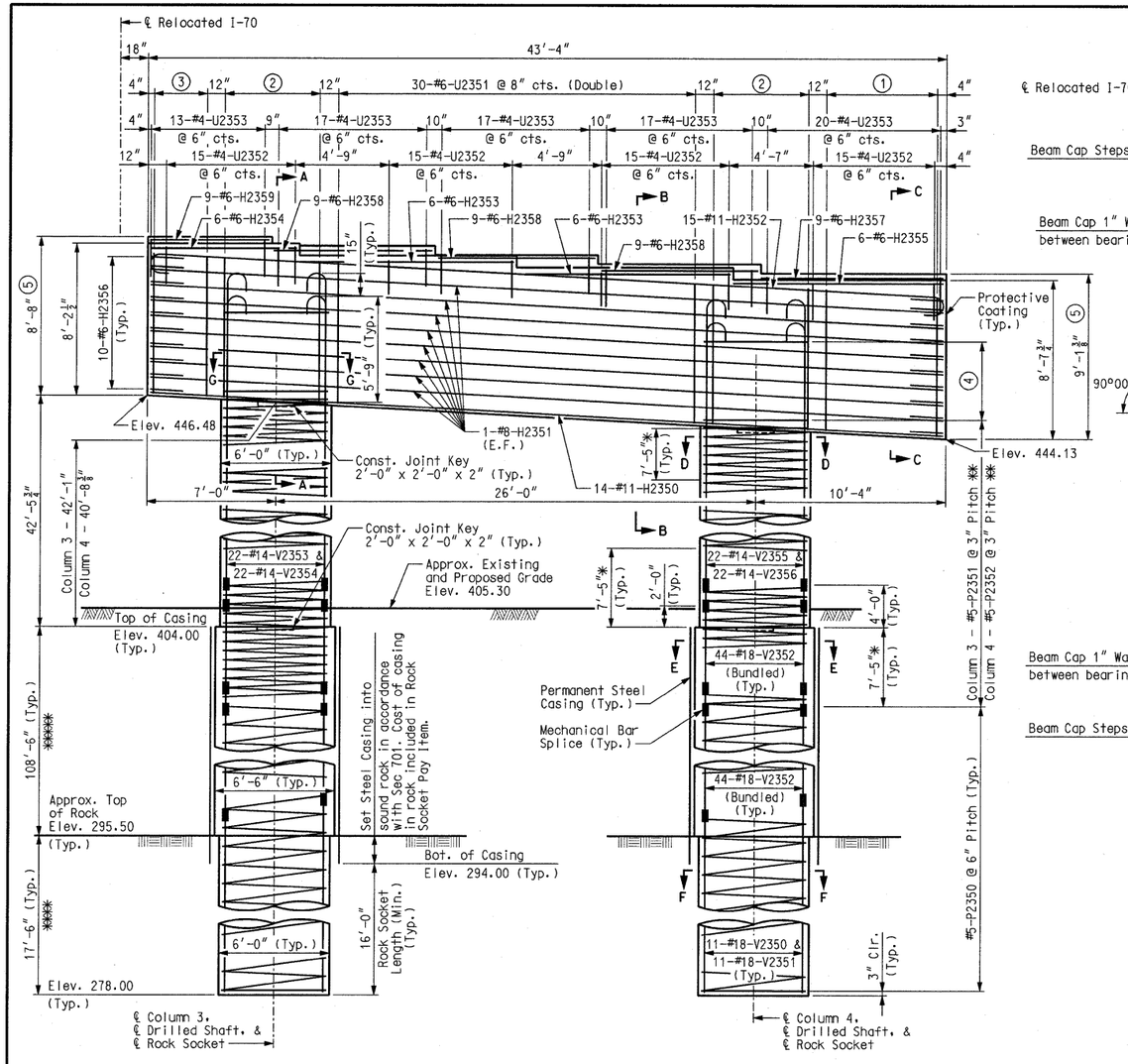
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

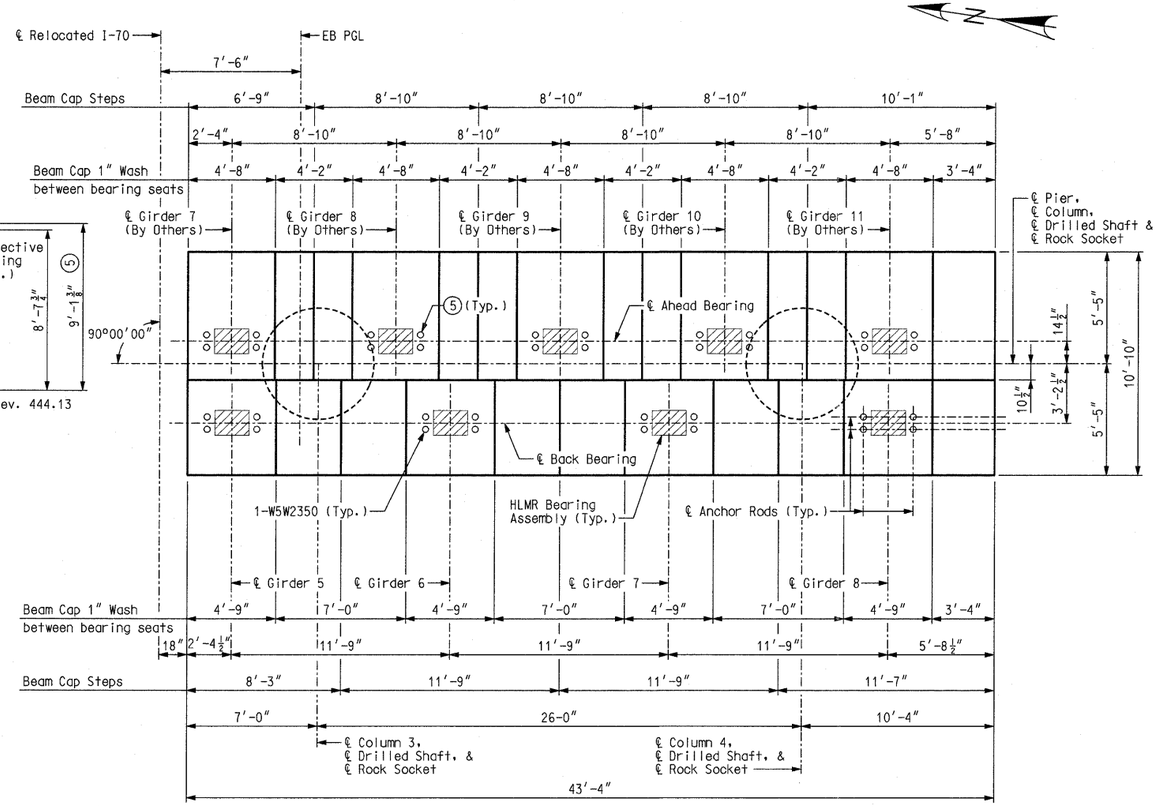
MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



ELEVATION



PLAN

GIRDER SEAT ELEVATIONS							
Girder No.	5	6	7	8	9	10	11
⑤ Ahead Bearing	-	-	455.15	454.68	454.20	453.72	453.24
Back Bearing	454.69	454.05	453.42	452.78	-	-	-

① 10-#6-U2351 @ abt.9″ cts. (Double)

② 6-#6-U2350 @ 12″ cts. (Double)

③ 5-#6-U2351 @ 9″ cts. (Double)

④ 18-#5-P2353 @ 3″ cts. (Typ.) ***

⑤ Ahead bearing seat elevations, anchor rod setting plan, spiral reinforcing, and dimensions indicated are subject to change under separate IDOT contract (By Others). Contractor shall coordinate with IDOT to obtain final ahead bearing details prior to construction.

Notes:

An additional 4 feet has been added to #5-P2350, #18-V2350 and #18-V2351 lengths for possible change in drilled shaft or rock socket depth. This excess length shall be cut off or included in the reinforcement lap if not required.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

All reinforcing bars in the tops of substructure beams or caps shall be spaced to clear anchor rod wells for bearings by at least 1/2″.

The hooks of V-Bars embedded in the beam cap shall be oriented inward. Bending the hook outward, away from the column core, is not allowed.

The thickness of steel casing shall meet all the requirements of Sec 701 with minimum thickness being 3/8 inch. Thicker casing may be required for installation.

For details of HLMR Bearing Assembly, see Sheet No. 42.

For Anchor Rod Well Details and Back Bearing Anchor Rod Setting Plan, see Sheet No. 47.

For details of seismic stirrup bars, see Sheet No. 7.

* Lapping of spiral reinforcement in this region not permitted.

** Continue spiral bars to the bottom of the beam cap stirrup reinforcing bar.

*** Splice locations shall be staggered.

Anchorage of spiral reinforcement shall be provided by 1-1/2 extra turns of spiral bar at each end of spiral unit.

**** Pay Items Rock Socket (6 ft. 0 in. Dia.).

***** Pay Items Drilled Shaft (6 ft. 6 in. Dia.).

For Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, and Substructure Quantity Table, see Sheet No. 41.

PIER 23 EB

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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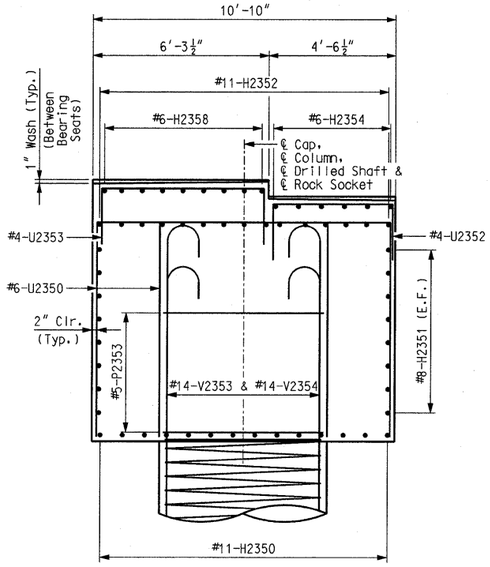
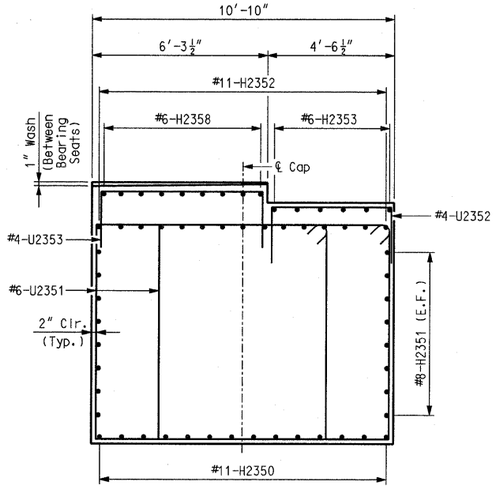
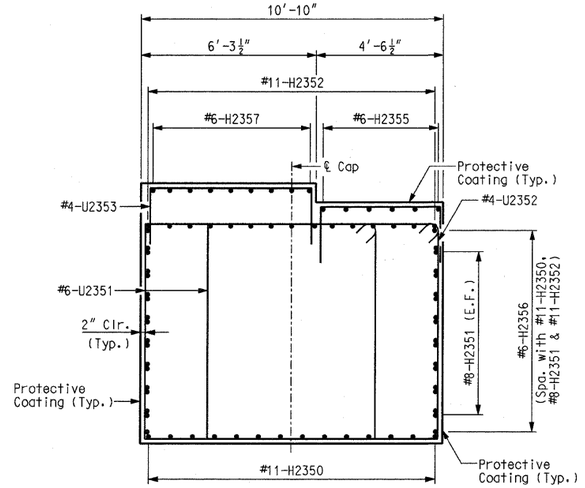


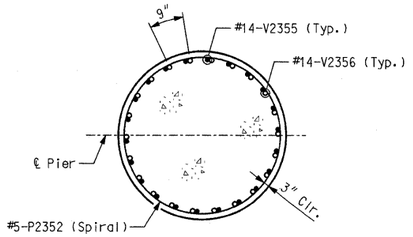
SECTION A-A



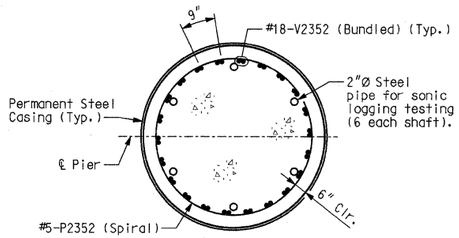
SECTION B-B



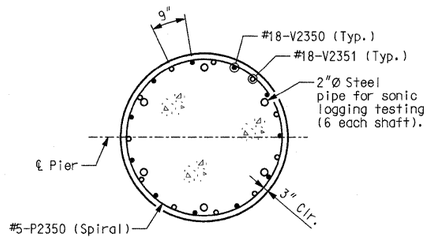
SECTION C-C



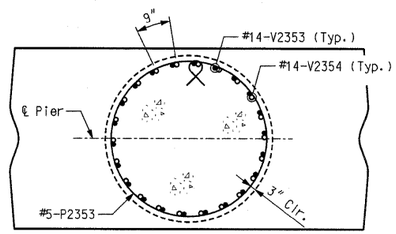
SECTION D-D
(6′-0″ Diameter)



SECTION E-E
(6′-6″ Diameter)



SECTION F-F
(6′-0″ Diameter)



SECTION G-G
(Beam Cap reinforcement not shown)

Note:
Seal back face of beam, top of beam, ends of beam, and front face of beam with Protective Coating - Concrete Bents and Piers (Epoxy).
For location of Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, and additional notes, see Sheet No. 38.

SUBSTRUCTURE QUANTITY TABLE FOR PIER 23 EB		
Item		Quantity
Drilled Shafts (6 ft. 6 in. Dia.)	linear foot	217.0
Rock Sockets (6 ft. 0 in. Dia.)	linear foot	35.0
Supplementary Television Camera Inspection	each	1
Foundation Inspection Holes	linear foot	55.0
Sonic Logging Testing	each	2
Class B Concrete (Substructure)	cu. yard	235.7
Reinforcing Steel (Bridges)	pound	155,200
Mechanical Bar Splice	each	220
Reinforcing Steel (Epoxy Coated)	pound	48,600
Non-Special Waste Disposal	cu. yard	26.2

Note:
These quantities are included in the estimated quantities table on Sheet No. 7.

PIER 23 EB - DETAILS

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
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SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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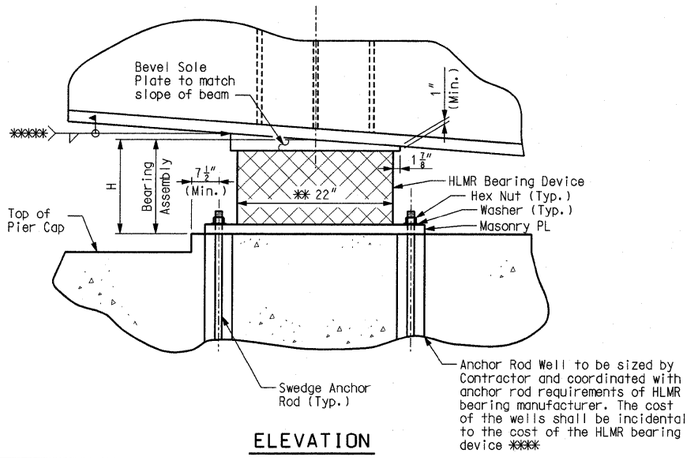
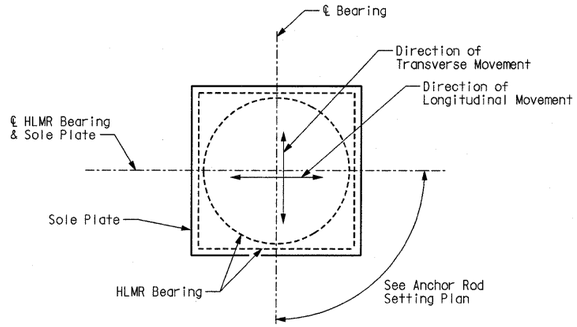


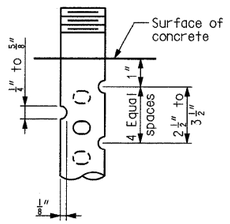
ELEVATION



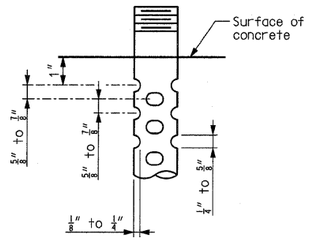
BEARING PLAN

BEARING DATA TABLE

Location				Pier 13	Pier 17	Pier 23
Fix/Exp.				Guided	Guided	Guided
Quantity. Required				8	16	8
Design load (Kip)	Service limit state	Vertical	max.	347	384	410
			perm.	164	184	193
			min.	164	184	193
		Transverse		10	11	18
		Longitudinal		15	15	15
	Strength limit state	Vertical		570	617	664
		Transverse		32	36	34
		Longitudinal		20	20	20
	Extreme Event limit state	Vertical		255	275	297
		Transverse		105	74	67
		Longitudinal		32	34	37
Rotation (rad.)	Strength limit state	Transverse		0	0	0
		Longitudinal		0.014	0.020	0.020
*** One Way Longit. Movement (inch)				12	15	15
(G) Guide Clearance (inch)				¼	¼	¼
Masonry Plate	Lm					
	Wm					
	Tm					
Auxiliary Plate	La			0	0	0
	Wa			0	0	0
	Ta			0	0	0
Sole Plate	Ls					
	Ws					
	T1					
	T2					
Bearing H (inch)				8 *	8 *	8 *
Anchor Rods	d			1¼	1¼	1¼
	Rods / Brg.			4	4	4
Weld Size	W1					
	W2					



DETAIL OF 3/4"Ø THRU 2 1/2"Ø ANCHOR RODS



OPTIONAL DETAIL OF 1 3/8"Ø THRU 2 1/2"Ø ANCHOR RODS

SWEDGE ANCHOR ROD DETAILS

Notes:

T2 is upstation of T1.

* Maximum vertical dimension of the complete bearing. If the actual bearing dimension differs, adjustments shall be made in the thickness of the sole plate, masonry plate and concrete pad as needed by the contractor at no additional cost to the owner. Contractor shall submit proposed method of adjustment to Engineer for approval.

** Estimated horizontal dimension of the bearing device. If the actual dimension differs, adjust the size of the sole plate and masonry plate as needed by the contractor at no additional cost to the owner.

*** One Way Longitudinal Movement is the maximum one way movement (expansion or contraction) of the superstructure when bearings are set at 60 degrees F plus 1" tolerance.

**** At the contractor's option the anchor bolt wells may be omitted, and in lieu thereof, holes drilled into the substructure. The anchor bolt holes shall be drilled in the exact location shown, to the required depth and perpendicular to the plane of the bridge seat. The drilled holes shall be no smaller than the diameter of the holes in the steel bearing plates or castings. The contractor shall not interfere with the beam cap reinforcing steel in any manner. The reinforcing steel shall not be cut or lanced in the event that the drilling for anchor rods interferes with the bars. When the anchor bolts are set in holes or wells, the hole or well shall be clean and dry prior to grouting with an expansive mortar in accordance with Sec 1066. Excess mortar forced out of holes shall be removed.

***** The bearing device, sole plate and masonry plate shall be assembled in the shop. If the bearing assembly is field welded to the bottom flange of the steel girder, the welds shall be designed by the contractor in coordination with the bearing manufacturer for the load capacities indicated in the Bearing Data Table. The temperature of the steel adjacent to the elastomer shall be kept below 250°F. All field welding shall be in accordance with Sec 712.6. A bolted connection (designed by the contractor's Illinois licensed structural engineer) may be used in lieu of a field welded connection.

Indicates parts designed by the manufacturer.

Notes:

The bearing design shall conform to the provisions of AASHTO LRFD Bridge Design Specifications, 4th, ed. with 2008 Interims.

The contractor, in coordination with the bearing manufacturer, shall be responsible for sizing the sole plate and masonry plate, weld sizes and lengths and determining the size, number, embedment and location of anchor rods based on the load and movement capacities, indicated in the Bearing Data Table.

The contractor shall submit calculations sealed by a licensed structural engineer, registered in the State of Illinois, indicating conformance with design load and material criteria in the contract documents.

The dimension "H" in the Bearing Data Table represents the assumed total height of bearing mechanism between the sole plate and masonry plate used by the designer to establish the pedestal elevations.

The bearings shall be manufactured HLMR bearings, designed for the load and movement capacities indicated in the Bearing Data Table.

All expansion Bearings shall be guided and shall have a maximum friction coefficient of 3%.

Steel for bearings except for sole plate and masonry plates shall be ASTM A709 Grade 50W and shall be galvanized in accordance with Sec 1080.. Steel for sole plate and masonry plates shall be ASTM A709 Grade 50W. The anchor rods and welds shall have corrosion resistance and weathering characteristics compatible with the base material.

Anchor rods shall conform to ASTM F1554 Grade 55. The anchor rods shall be swedge-type, shall have a minimum diameter of 1 1/4 inches and extend a minimum of 12 inches into the concrete. Hex or Heavy Hex nuts for anchor rods shall conform to AASHTO M291 (ASTM A563) Grade C3 or DH3. Swedging shall be 1-inch less than the extension into the concrete.

Anchor rods shall be installed using a hardened steel washer at each exposed location.

Washers shall conform to ASTM F436, Type 3.

Certified mill test reports, conforming to the requirements of the specifications, for the metals of the bearing device, sole plate, masonry plate and anchor rods (including nuts and washers) shall be submitted.

The masonry plate shall be prepared per the specifications and shop-coated with one coat of inorganic zinc primer (5 mils minimum).

The sole plate shall be prepared per the specifications and shop-coated with two coats of inorganic zinc primer (5 mils minimum).

After installation of the bearings, any uncoated or damaged surfaces of the masonry and sole plates shall be prepared in accordance with the specifications and field-coated with inorganic zinc primer (5 mils minimum)

After installation of the bearings and field-applied prime coats, the surfaces of the masonry and sole plates shall be field-coated with System H intermediate and finish coat.

All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge and a direction arrow that points up-station. All marks shall be permanent and be visible after the bearing is installed.

The bearing device, sole plate, masonry plate, anchor rods, washers, anchor rod wells and any other appurtenances included in the fabrication and installation of the bearing device shall be incidental to the pay item "POT Bearing".

Whenever jacking of the Superstructure is needed to reset the bearings, the contractor shall submit a jacking sequence for approval.

DETAILS OF HIGH LOAD MULTI-ROTATIONAL BEARING ASSEMBLY - UNI-DIRECTIONAL EXPANSION

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
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Detailed JUL 2009
Checked JUL 2009

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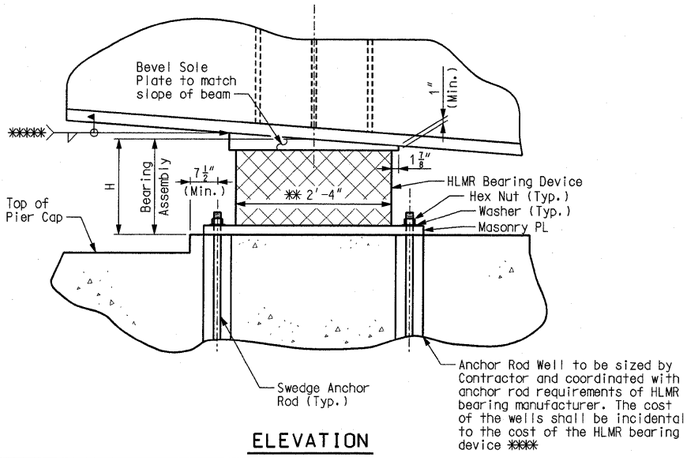
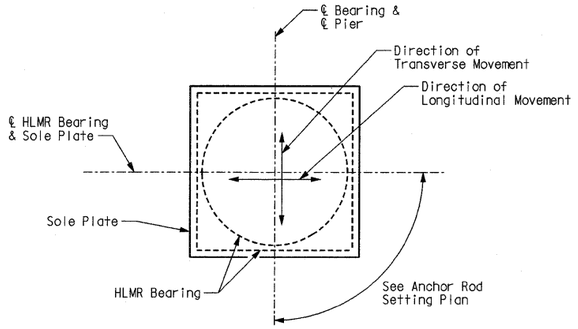


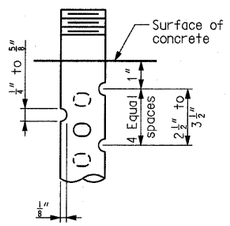
ELEVATION



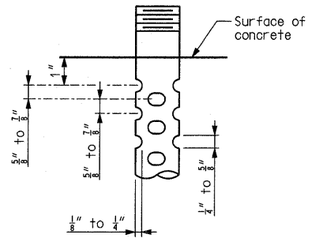
BEARING PLAN

BEARING DATA TABLE

Location				Piers 14-16	Piers 18-22
Fix/Exp.				Fixed	Fixed
Quantity Required				24	40
Design load (kip)	Service limit state	Vertical	max.	1191	1268
			perm.	812	861
			min.	812	861
		Transverse		31	32
		Longitudinal		48	97
	Strength limit state	Vertical		1871	1980
		Transverse		100	97
		Longitudinal		66	124
	Extreme Event limit state	Vertical		1148	1300
		Transverse		279	341
		Longitudinal		114	234
Rotation (rad.)	Strength limit state	Transverse		0.00	0.00
		Longitudinal		0.02	0.02
*** One Way Longit. Movement (inch)				0	0
(G) Guide Clearance (inch)				0	0
Masonry Plate	Lm				
	Wm				
	Tm				
Auxiliary Plate	La			0	0
	Wa			0	0
	Ta			0	0
Sole Plate	Ls				
	Ws				
	T1				
	T2				
Bearing H (inch)				10 *	10 *
Anchor Rods	d			2	2
	Rods / Brg.			6	6
Weld Size	W1				
	W2				



DETAIL OF 3/4"Ø THRU 2 1/2"Ø ANCHOR RODS



OPTIONAL DETAIL OF 1 3/8"Ø THRU 2 1/2"Ø ANCHOR RODS

SWEDGE ANCHOR ROD DETAILS

Notes:

T2 is upstation of T1.

* Maximum vertical dimension of the complete bearing. If the actual bearing dimension differs, adjustments shall be made in the thickness of the sole plate, masonry plate and concrete pad as needed by the contractor at no additional cost to the owner. Contractor shall submit proposed method of adjustment to Engineer for approval.

** Estimated horizontal dimension of the bearing device. If the actual dimension differs, adjust the size of the sole plate, weld sizes and lengths and masonry plate as needed by the contractor at no additional cost to the owner.

*** One Way Longitudinal Movement is the maximum one way movement (expansion or contraction) of the superstructure when bearings are set at 60 degrees F plus 1" tolerance.

**** At the contractor's option the anchor bolt wells may be omitted, and in lieu thereof, holes drilled into the substructure. The anchor bolt holes shall be drilled in the exact location shown, to the required depth and perpendicular to the plane of the bridge seat. The drilled holes shall be no smaller than the diameter of the holes in the steel bearing plates or castings. The contractor shall not interfere with the beam cap reinforcing steel in any manner. The reinforcing steel shall not be cut or lanced in the event that the drilling for anchor rods interferes with the bars. When the anchor bolts are set in holes or wells, the hole or well shall be clean and dry prior to grouting with an expansive mortar in accordance with Sec 1066. Excess mortar forced out of holes shall be removed.

***** The bearing device, sole plate and masonry plate shall be assembled in the shop. If the bearing assembly is field welded to the bottom flange of the steel girder, the welds shall be designed by the contractor in coordination with the bearing manufacturer for the load capacities indicated in the Bearing Data Table. The temperature of the steel adjacent to the elastomer shall be kept below 250°F. All field welding shall be in accordance with Sec 712.6. A bolted connection (designed by the contractor's Illinois licensed structural engineer) may be used in lieu of a field welded connection.

Indicates parts designed by the manufacturer.

Notes:

The bearing design shall conform to the provisions of AASHTO LRFD Bridge Design Specifications, 4th, ed. with 2008 Interims.

The contractor, in coordination with the bearing manufacturer, shall be responsible for sizing the sole plate and masonry plate, weld sizes and lengths and determining the size, number, embedment and location of anchor rods based on the load and movement capacities, indicated in the Bearing Data Table.

The contractor shall submit calculations sealed by a licensed structural engineer, registered in the State of Illinois, indicating conformance with design load and material criteria in the contract documents.

The dimension "H" in the Bearing Data Table represents the assumed total height of bearing mechanism between the sole plate and masonry plate used by the designer to establish the pedestal elevations.

The bearings shall be manufactured HLMR bearings, designed for the load and movement capacities indicated in the Bearing Data Table.

Steel for bearings except for sole plate and masonry plates shall be ASTM A709 Grade 50W and shall be galvanized in accordance with Sec 1080. Steel for sole plate and masonry plates shall be ASTM A709 Grade 50W. The anchor rods and welds shall have corrosion resistance and weathering characteristics compatible with the base material.

Anchor rods shall conform to ASTM F1554 Grade 55. The anchor rods shall be swedge-type, shall have a minimum diameter of 2 inches and extend a minimum of 18 inches into the concrete. Hex or Heavy Hex nuts for anchor rods shall conform to AASHTO M291 (ASTM A563) Grade C3 or DH3. Swedging shall be 1-inch less than the extension into the concrete.

Anchor rods shall be installed using a hardened steel washer at each exposed location.

Washers shall conform to ASTM F436, Type 3.

Certified mill test reports, conforming to the requirements of the specifications, for the metals of the bearing device, sole plate, masonry plate and anchor rods (including nuts and washers) shall be submitted.

The masonry plate shall be prepared per the specifications and shop-coated with one coat of inorganic zinc primer (5 mils minimum).

The sole plate shall be prepared per the specifications and shop-coated with two coats of inorganic zinc primer (5 mils minimum).

After installation of the bearings, any uncoated or damaged surfaces of the masonry and sole plates shall be prepared in accordance with the specifications and field-coated with inorganic zinc primer (5 mils minimum)

After installation of the bearings and field-applied prime coats, the surfaces of the masonry and sole plates shall be field-coated with System H intermediate and finish coat.

All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge and a direction arrow that points up-station. All marks shall be permanent and be visible after the bearing is installed.

The bearing device, sole plate, masonry plate, anchor rods, washers, anchor rod wells and any other appurtenances included in the fabrication and installation of the bearing device shall be incidental to the pay item "POT Bearing".

Whenever jacking of the Superstructure is needed to reset the bearings, the contractor shall submit a jacking sequence for approval.

DETAILS OF HIGH LOAD MULTI-ROTATIONAL BEARING ASSEMBLY - FIXED

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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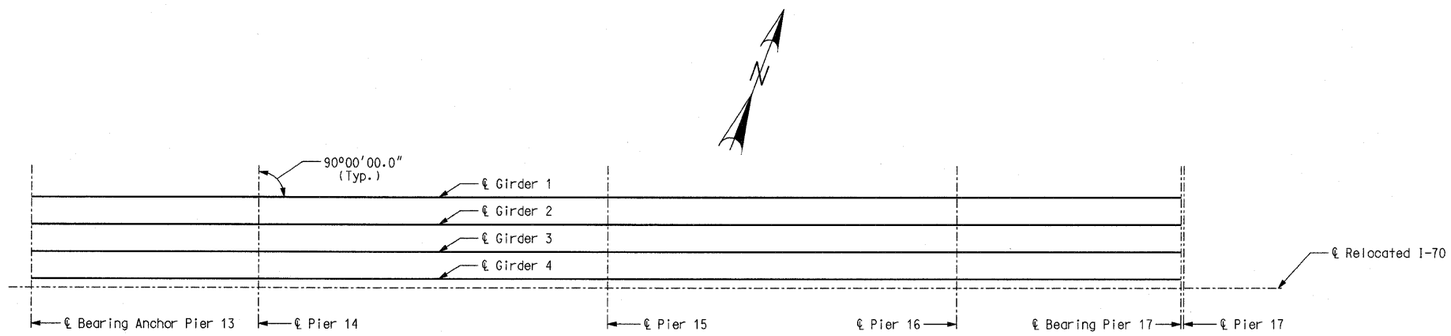
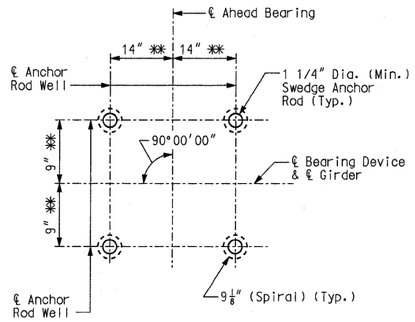
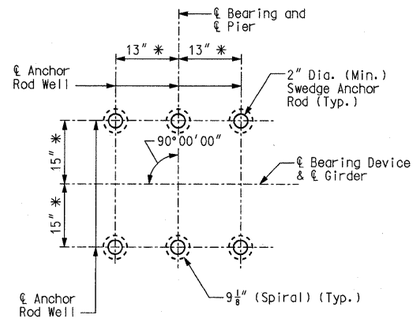


BEARING DEVICE ALIGNMENT PLAN

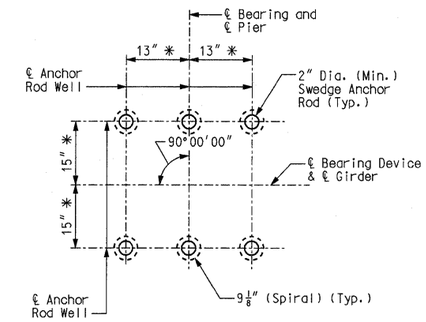


ANCHOR ROD SETTING PLAN
ANCHOR PIER 13

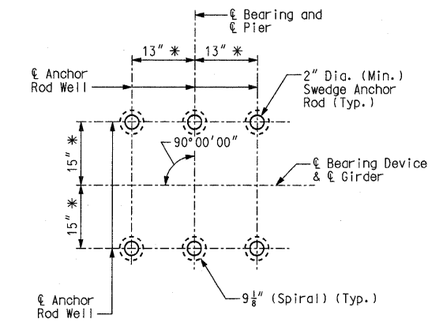
Note:
Anchor Rod Wells will be provided by others (Pier 13 Only).



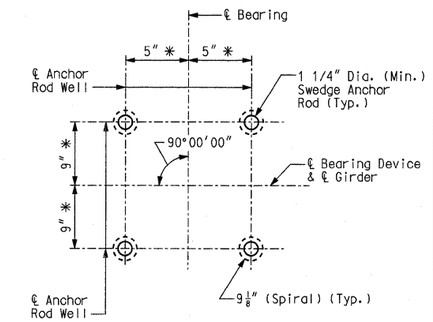
ANCHOR ROD SETTING PLAN
PIER 14



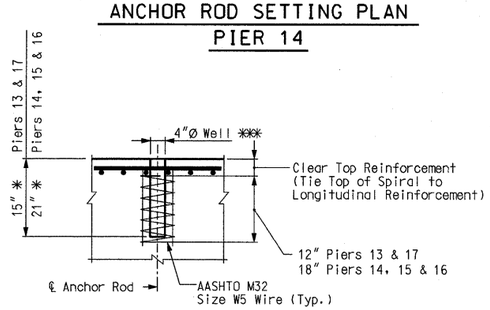
ANCHOR ROD SETTING PLAN
PIER 15



ANCHOR ROD SETTING PLAN
PIER 16



ANCHOR ROD SETTING PLAN
PIER 17 (SPAN 16-17)



ANCHOR ROD WELL DETAIL

Notes:

Anchor Rod Well sizes are conceptual and shall be sized by Contractor and coordinated with anchor rod requirements of the multi-rotational bearing manufacturer.

* The contractor, in coordination with the bearing manufacturer, shall be responsible for determining the size, number, and location of anchor rods based on the load and movement capacities, as indicated in the Bearing Data shown on Sheet Nos. 42 and 43.

** Anchor rods at Pier 13 have been located to avoid conflict with reinforcement steel in pier cap. Locations of these anchor rods are not subject to adjustment during design of bearing components by bearing manufacturer.

*** At the contractor's option the anchor bolt wells may be omitted, and in lieu thereof, holes drilled into the substructure. The anchor bolt holes shall be drilled in the exact location shown, to the required depth and perpendicular to the plane of the bridge seat. The drilled holes shall be no smaller than the diameter of the holes in the steel bearing plates or castings. The contractor shall not interfere with the beam cap reinforcing steel in any manner. The reinforcing steel shall not be cut or lanced in the event that the drilling for anchor rods interferes with the bars. When the anchor bolts are set in holes or wells, the hole or well shall be clean and dry prior to grouting with an expansive mortar in accordance with Sec 1066. Excess mortar forced out of holes shall be removed.

BEARING DEVICE ALIGNMENT AND ANCHOR ROD SETTING PLAN WB - UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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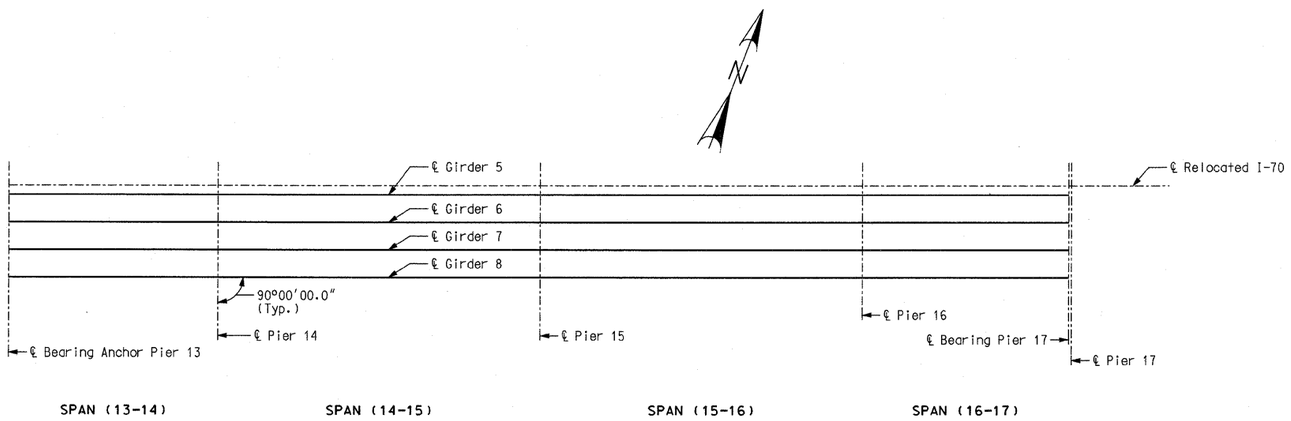
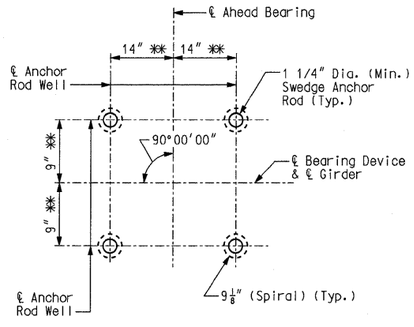
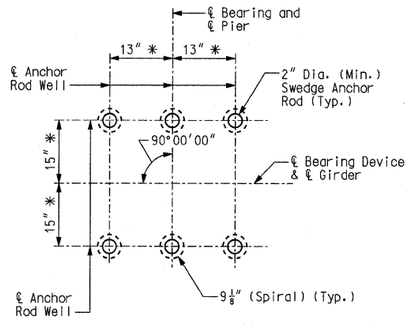


BEARING DEVICE ALIGNMENT PLAN

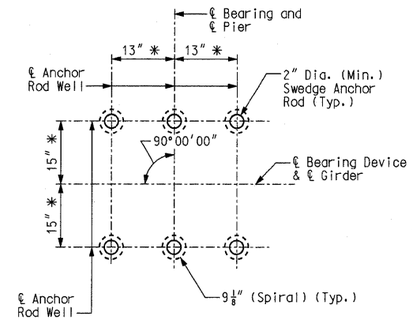


ANCHOR ROD SETTING PLAN
ANCHOR PIER 13

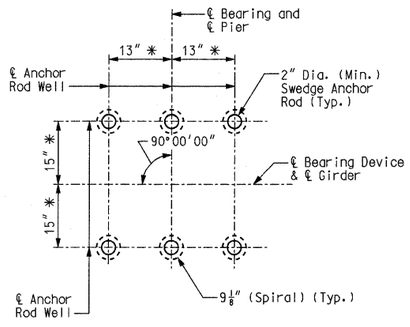
Note:
Anchor Rod Wells will be provided by others (Pier 13 Only).



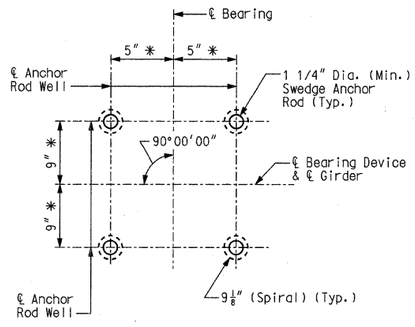
ANCHOR ROD SETTING PLAN
PIER 14



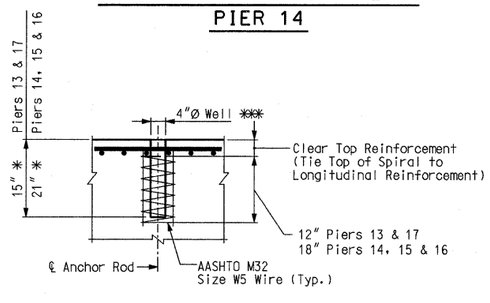
ANCHOR ROD SETTING PLAN
PIER 15



ANCHOR ROD SETTING PLAN
PIER 16



ANCHOR ROD SETTING PLAN
PIER 17 (SPAN 16-17)



ANCHOR ROD WELL DETAIL

Notes:

Anchor Rod Well sizes are conceptual and shall be sized by Contractor and coordinated with anchor rod requirements of the multi-rotational bearing manufacturer.

* The contractor, in coordination with the bearing manufacturer, shall be responsible for determining the size, number, and location of anchor rods based on the load and movement capacities, as indicated in the Bearing Data shown on Sheet Nos. 42 and 43.

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BEARING DEVICE ALIGNMENT AND ANCHOR ROD SETTING PLAN EB - UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
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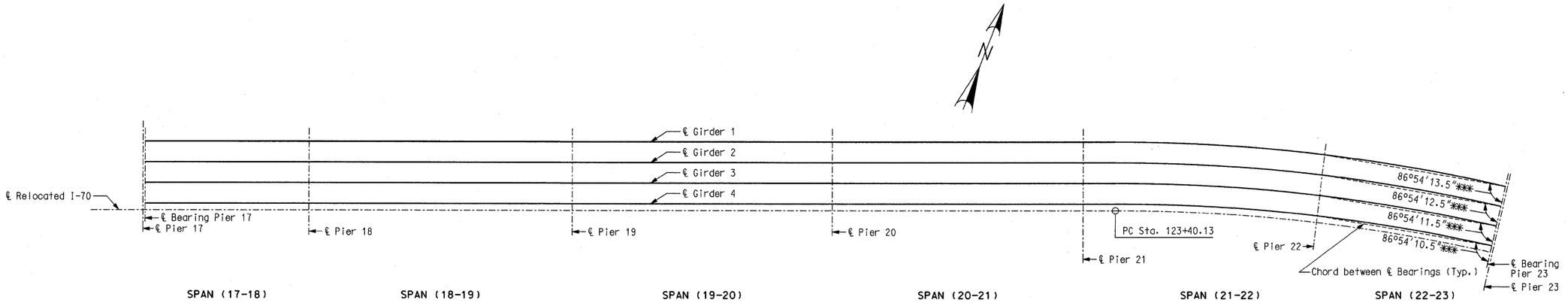
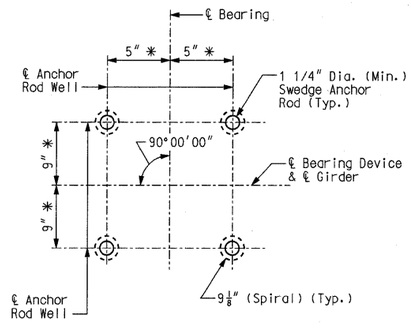
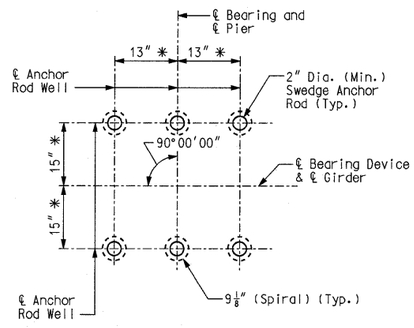


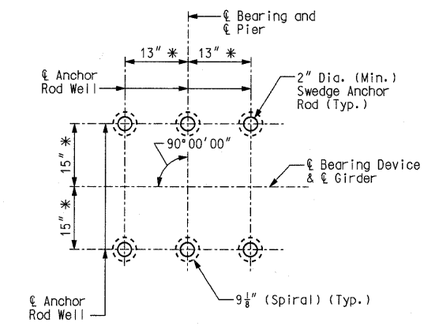
BEARING DEVICE ALIGNMENT PLAN



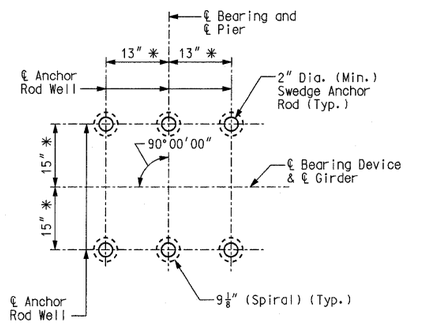
ANCHOR ROD SETTING PLAN
PIER 17 (SPAN 17-18)



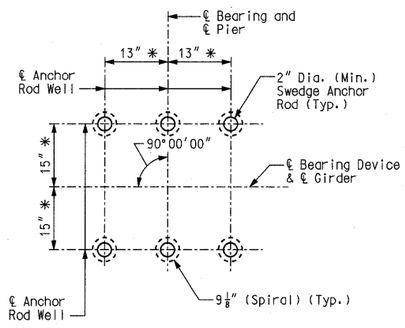
ANCHOR ROD SETTING PLAN
PIER 18



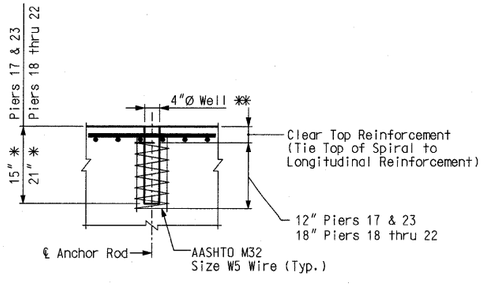
ANCHOR ROD SETTING PLAN
PIER 19



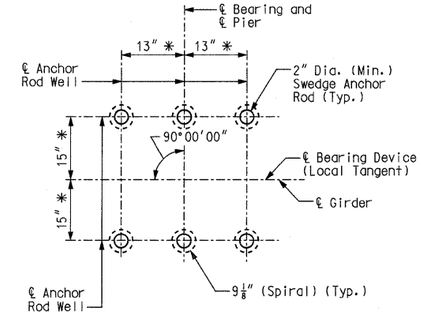
ANCHOR ROD SETTING PLAN
PIER 20



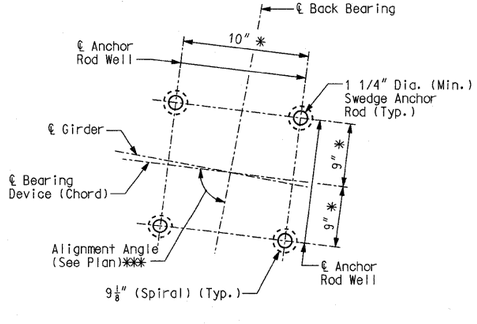
ANCHOR ROD SETTING PLAN
PIER 21



ANCHOR ROD WELL DETAIL



ANCHOR ROD SETTING PLAN
PIER 22



ANCHOR ROD SETTING PLAN
PIER 23

Notes:

* The contractor, in coordination with the bearing manufacturer, shall be responsible for determining the size, number, and location of anchor rods based on the load and movement capacities, as indicated in the Bearing Data shown on Sheet Nos. 42 and 43.

** At the contractor's option the anchor bolt wells may be omitted, and in lieu thereof, holes drilled into the substructure. The anchor bolt holes shall be drilled in the exact location shown, to the required depth and perpendicular to the plane of the bridge seat. The drilled holes shall be no smaller than the diameter of the holes in the steel bearing plates or castings. The contractor shall not interfere with the beam cap reinforcing steel in any manner. The reinforcing steel shall not be cut or lanced in the event that the drilling for anchor rods interferes with the bars. When the anchor bolts are set in holes or wells, the hole or well shall be clean and dry prior to grouting with an expansive mortar in accordance with Sec 1066. Excess mortar forced out of holes shall be removed.

*** Alignment angle measured from ℄ Bearing to ℄ Bearing Device. Anchor Rod Well sizes are conceptual and shall be sized by Contractor and coordinated with anchor rod requirements of the multi-rotational bearing manufacturer.

BEARING DEVICE ALIGNMENT AND ANCHOR ROD SETTING PLAN WB - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
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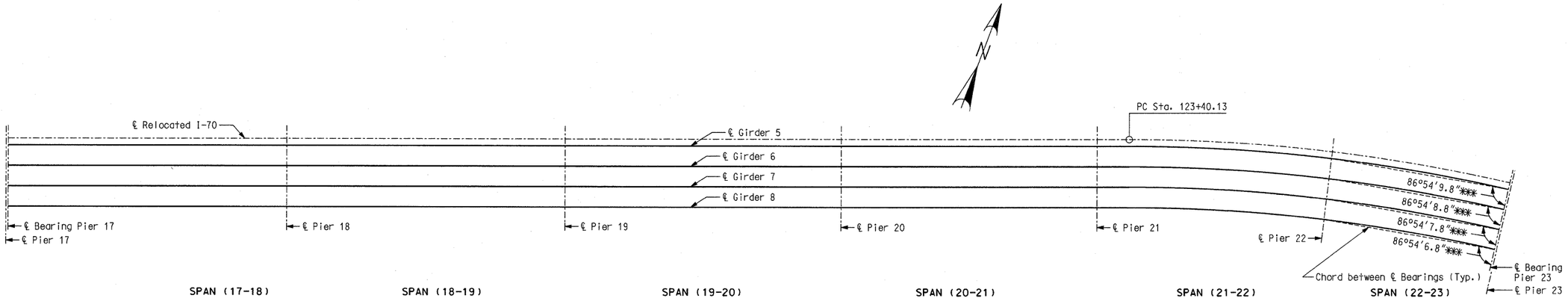
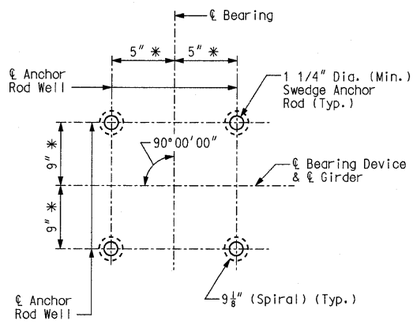
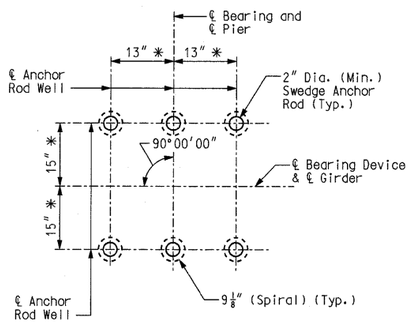


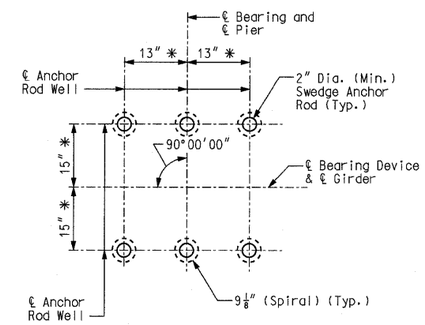
BEARING DEVICE ALIGNMENT PLAN



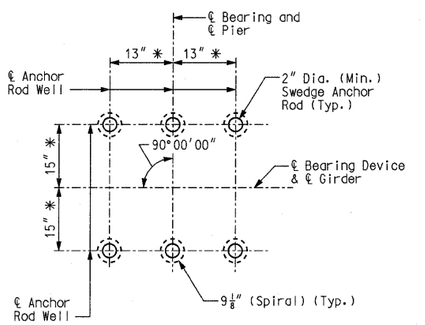
ANCHOR ROD SETTING PLAN
PIER 17 (SPAN 17-18)



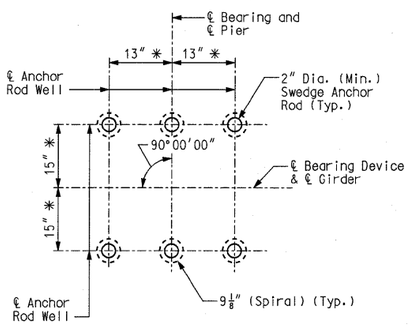
ANCHOR ROD SETTING PLAN
PIER 18



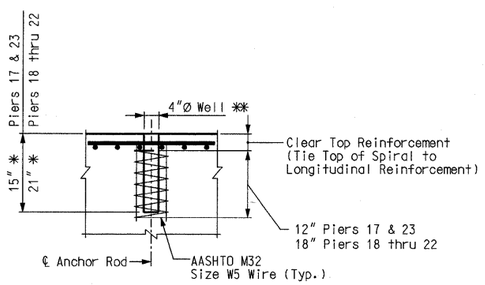
ANCHOR ROD SETTING PLAN
PIER 19



ANCHOR ROD SETTING PLAN
PIER 20



ANCHOR ROD SETTING PLAN
PIER 21



ANCHOR ROD WELL DETAIL

Note:
Anchor Rod Well sizes are conceptual and shall be sized by Contractor and coordinated with anchor rod requirements of the multi-rotational bearing manufacturer.

Notes:

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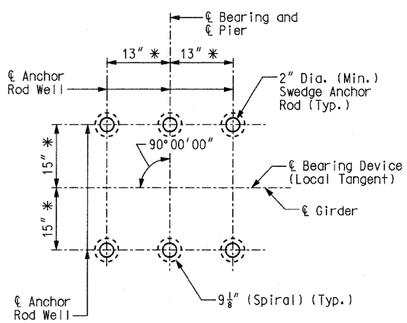
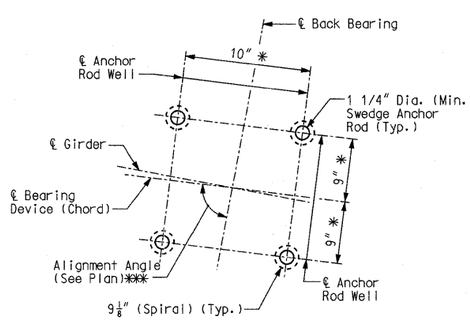


ANCHOR ROD SETTING PLAN
PIER 22



ANCHOR ROD SETTING PLAN
PIER 23

BEARING DEVICE ALIGNMENT AND ANCHOR BOLT SETTING PLAN EB - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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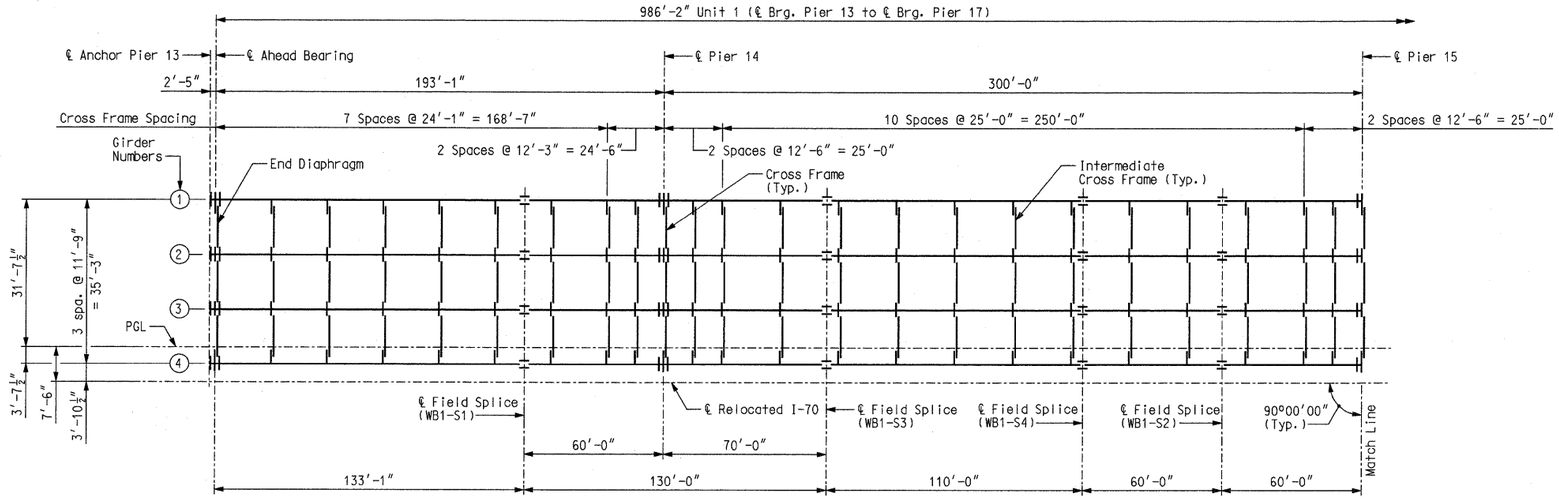
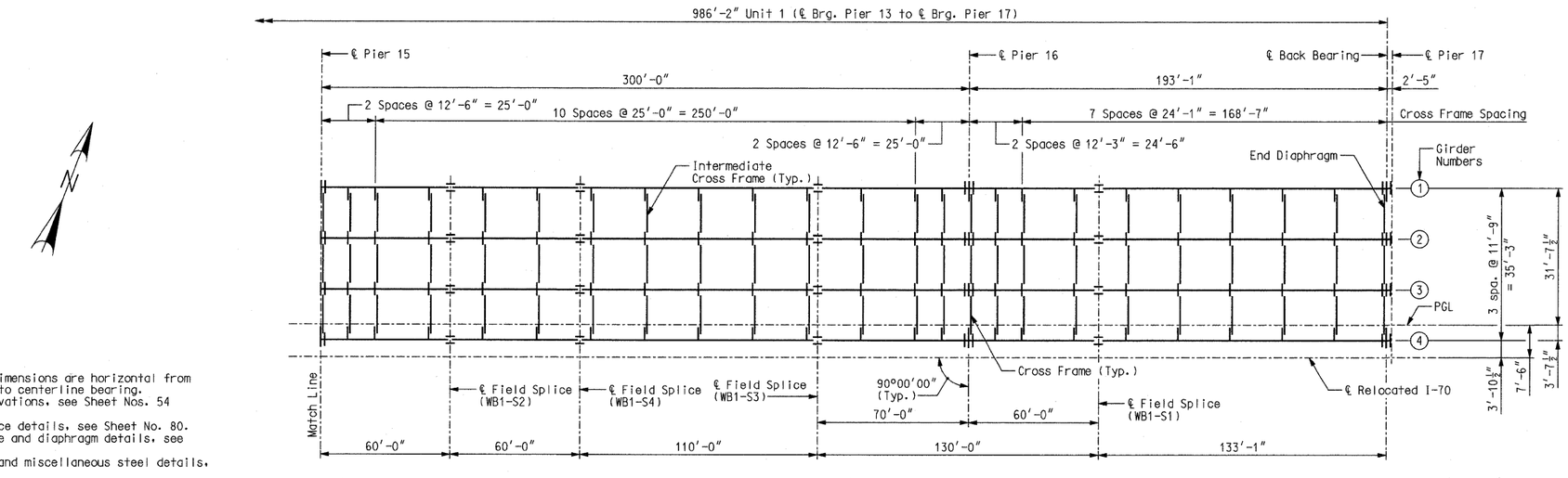
ENGINEERING CORPORATION - 000631



FRAMING PLAN
Span (13-14) & (14-15)



FRAMING PLAN
Span (15-16) & (16-17)

Notes:
Longitudinal dimensions are horizontal from centerline bearing to centerline bearing.
For girder elevations, see Sheet Nos. 54 and 55.
For field splice details, see Sheet No. 80.
For cross frame and diaphragm details, see Sheet No. 86.
For stiffener and miscellaneous steel details, see Sheet No. 88.

Notes:
Longitudinal dimensions are horizontal from centerline bearing to centerline bearing.
For girder elevation, see Sheet Nos. 54 and 55.
For field splice detail, see Sheet No. 80.
For cross frame and diaphragm details, see Sheet No. 86.
For stiffener and miscellaneous steel details, see Sheet No. 88.

FRAMING PLAN WB - UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
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2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
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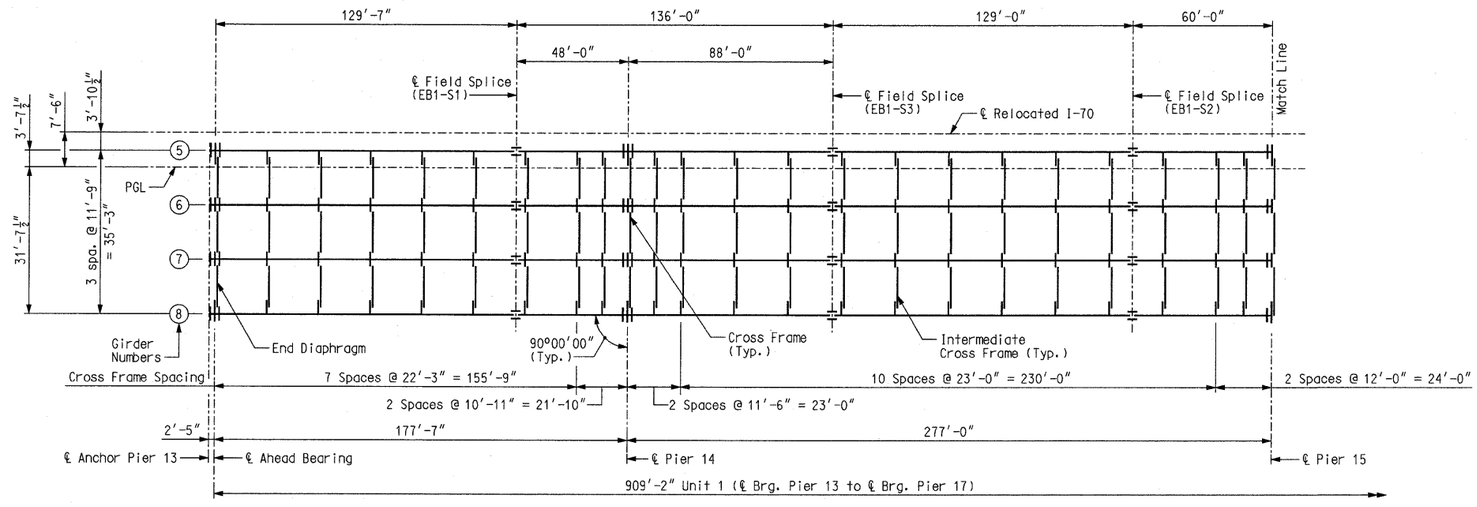
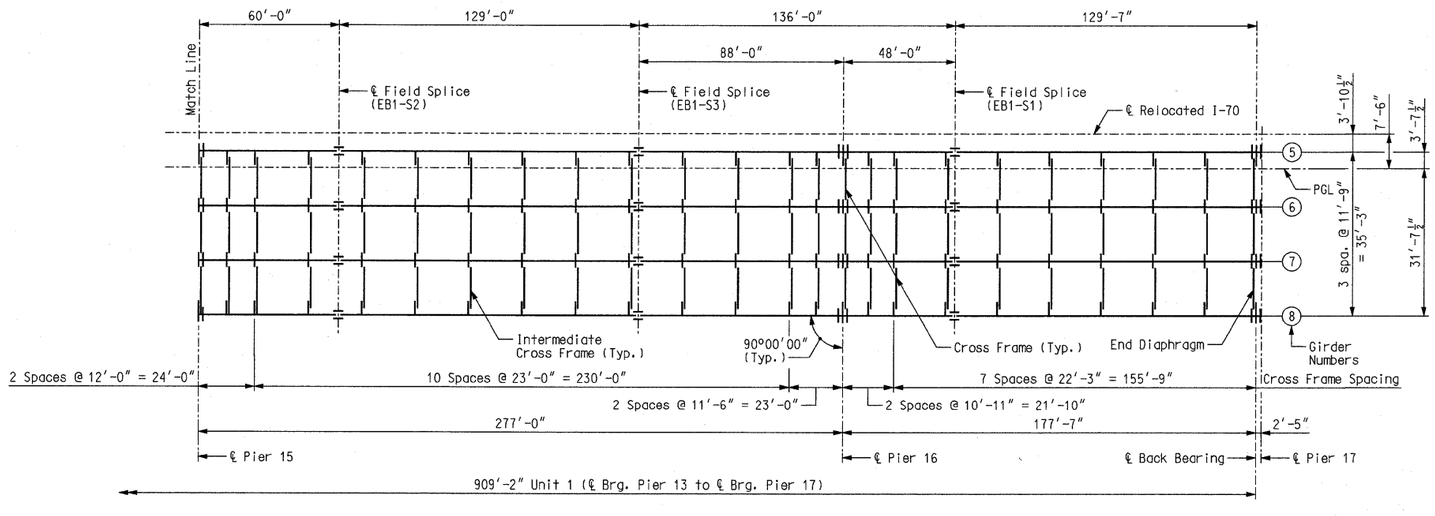


FRAMING PLAN
Span (13-14) & (14-15)



FRAMING PLAN
Span (15-16) & (16-17)

Notes:
Longitudinal dimensions are horizontal from centerline bearing to centerline bearing.
For girder elevation, see Sheet Nos. 56 and 57.
For field splice detail, see Sheet No. 81.
For cross frame and diaphragm details, see Sheet No. 86.
For stiffener and miscellaneous steel details, see Sheet No. 88.

FRAMING PLAN EB - UNIT 1

CONTRACT NO. 76D61	
F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR
USER NAME = jjolliff	
PLOT SCALE = @SCALE@	
PLOT DATE = 4/14/2010	
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REVISED -	

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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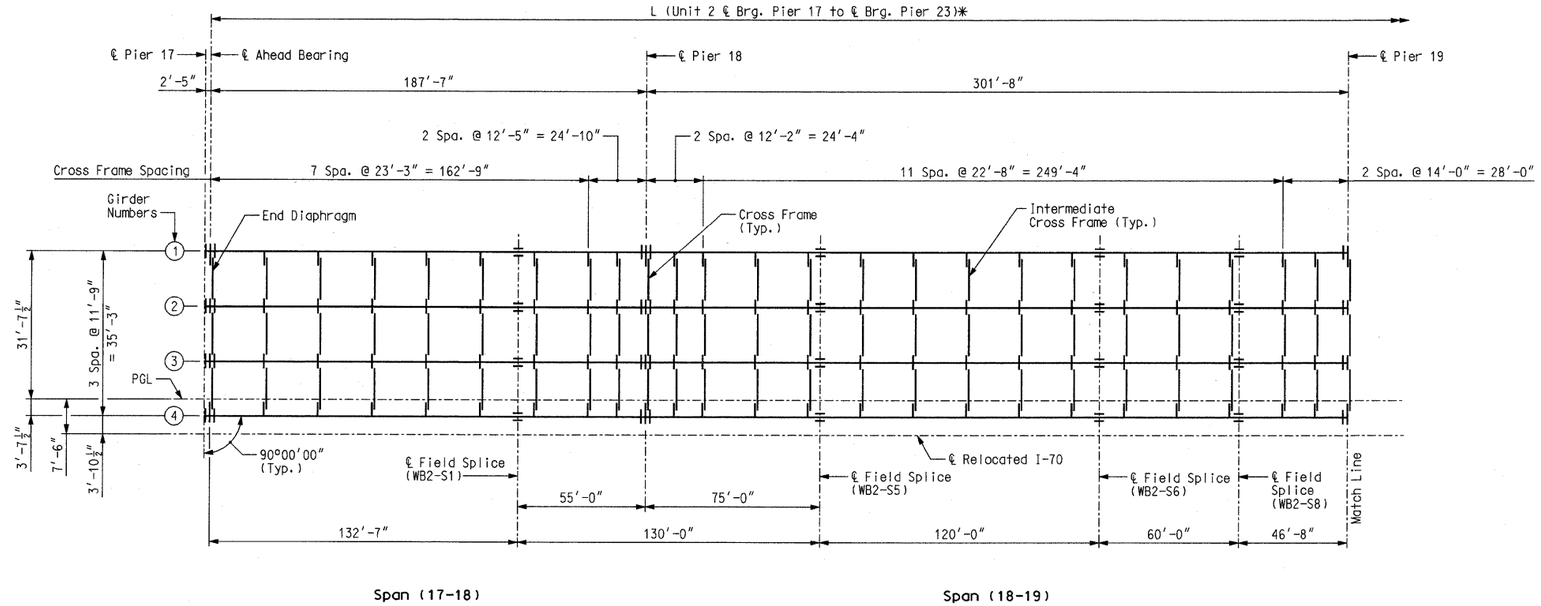
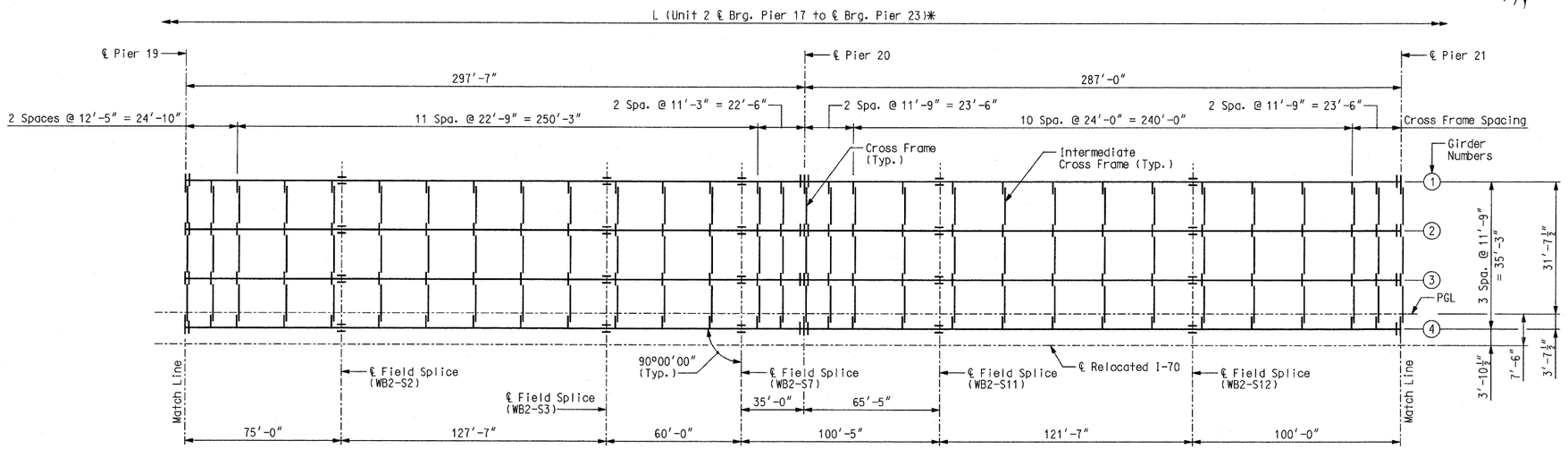


FRAMING PLAN
Span (17-18) & (18-19)



FRAMING PLAN
Span (19-20) & (20-21)

Notes:
Longitudinal dimensions are horizontal from centerline bearing to centerline bearing.
For girder elevation, see Sheet Nos. 58 thru 60.
For field splice detail, see Sheet Nos. 82 and 83.
For cross frame and diaphragm details, see Sheet No. 87.
For stiffener and miscellaneous steel details, see Sheet No. 88.
* For dimension L see Girder Dimensions table on Sheet No. 51.

FRAMING PLAN WB - UNIT 2 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 50 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

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ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
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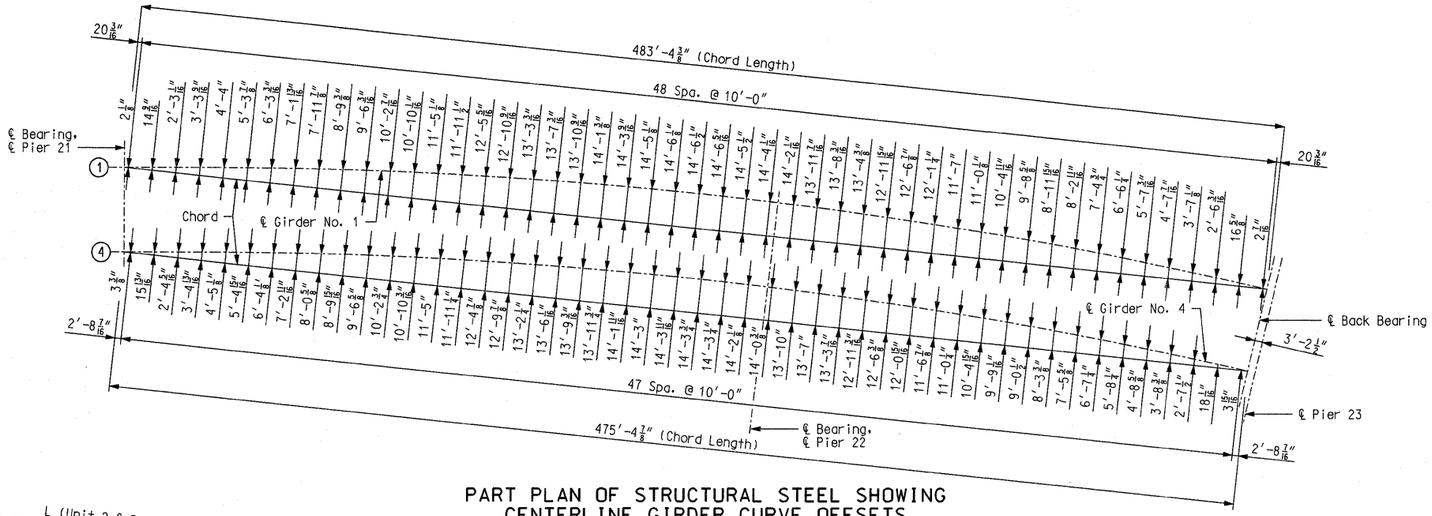
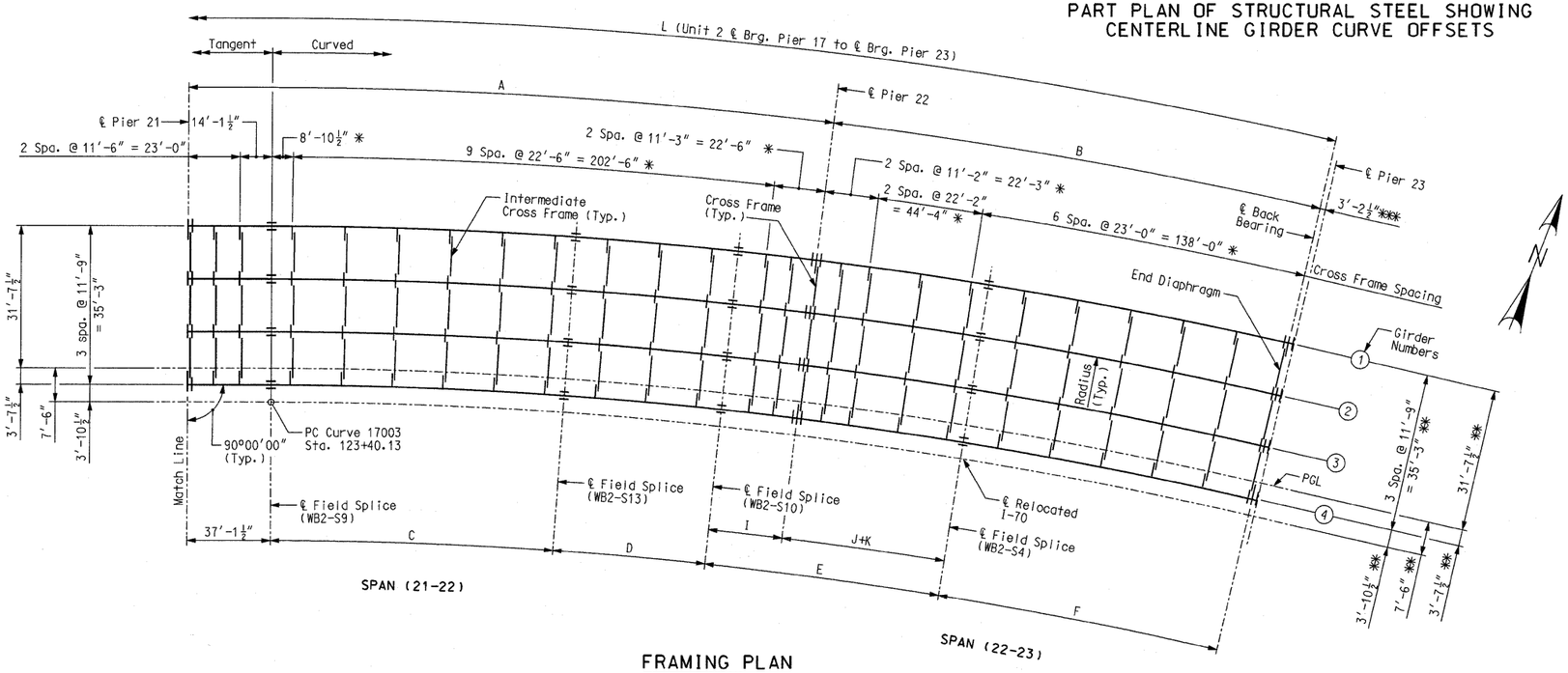


PART PLAN OF STRUCTURAL STEEL SHOWING
CENTERLINE GIRDER CURVE OFFSETS



FRAMING PLAN
Span (21-22) & (22-23)

* Measured along ℄ Relocated I-70.
** Dimensions shown are measured radially.
*** ℄ Back Bearing is measured parallel to ℄ Pier 23.

GIRDER DIMENSIONS

Girder	Radius (Feet)	Girder Length		Flange Length									Total Length L
		A	B	C	D	E	F	G	H	I	J	K	
Girder 1	1991.625	275′-8 1/4″	208′-10″	132′-7 3/8″	71′-4 7/8″	107′-10 5/8″	135′-5 7/8″	43′-1 5/8″	89′-5 3/4″	34′-6 1/2″	35′-2 1/2″	38′-1 5/8″	1558′-4 1/4″
Girder 2	1979.875	274′-3 3/8″	207′-7″	131′-10″	70′-11 3/4″	107′-3″	134′-8 1/8″	42′-10 3/8″	88′-11 5/8″	34′-4 5/8″	35′-0″	37′-10 3/4″	1555′-8 3/8″
Girder 3	1968.125	272′-10 1/2″	206′-3 7/8″	131′-0 5/8″	70′-6 3/4″	106′-7 3/8″	133′-10 1/4″	42′-7 1/2″	88′-5″	34′-1 5/8″	34′-9 1/2″	37′-8 1/4″	1553′-0 3/8″
Girder 4	1956.375	271′-5 5/8″	205′-0 3/8″	130′-3 1/8″	70′-1 3/4″	105′-11 3/4″	133′-0 1/2″	42′-4 3/8″	87′-10 3/4″	33′-11 1/4″	34′-7″	37′-5 1/2″	1550′-4 1/2″
℄ I-70	1952.500	271′-0″	204′-8″	–	–	–	–	–	–	–	–	–	–

Notes:
Longitudinal dimensions are horizontal arc dimensions from centerline bearing to centerline bearing.
For girder elevation and additional flange transition dimension information, see Sheet No. 60.
Diaphragms in curved portion of girders shall be placed radially.
For field splice detail, see Sheet Nos. 82 and 83.
For cross frame and diaphragm details, see Sheet No. 87.
For stiffener and miscellaneous steel details, see Sheet No. 88.

FRAMING PLAN WB - UNIT 2 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 51 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010
DESIGNED - HNTB
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DRAWN - CMT / HNTB
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REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
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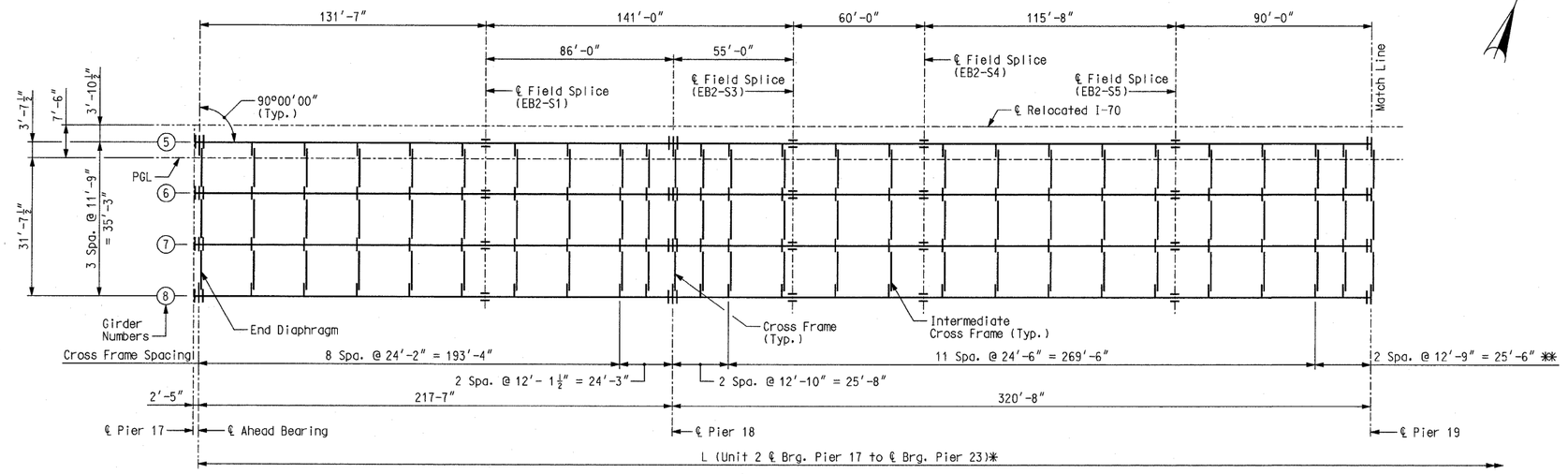
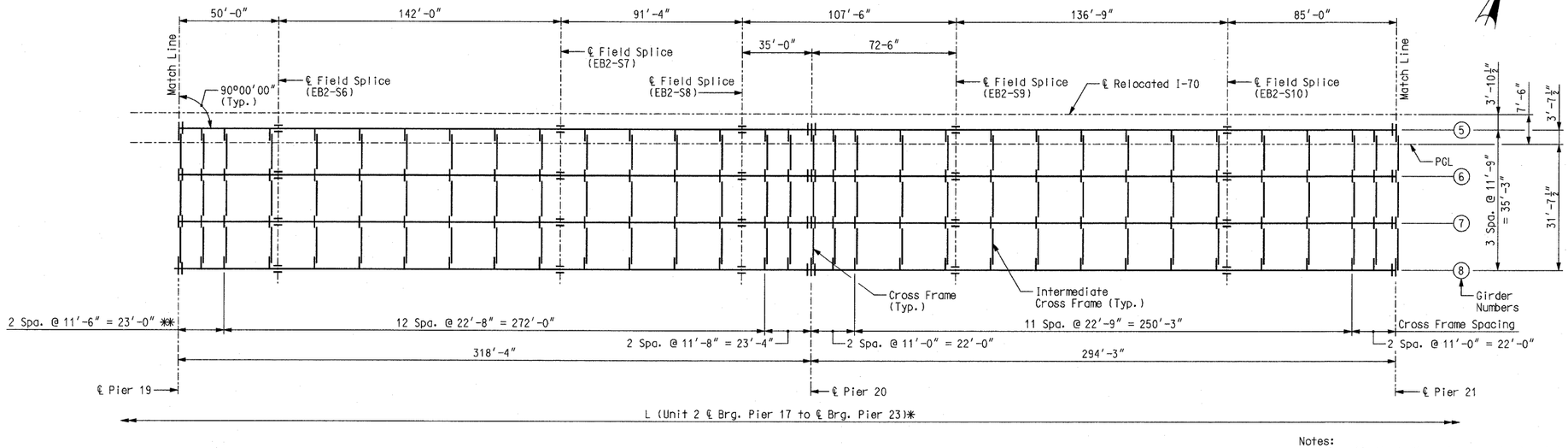
ENGINEERING CORPORATION - 000631



Span (17-18) Span (18-19)

FRAMING PLAN
Span (17-18) & (18-19)



Span (19-20) Span (20-21)

FRAMING PLAN
Span (19-20) & (20-21)

Notes:
Longitudinal dimensions are horizontal from centerline bearing to centerline bearing.
For girder elevation, see Sheet Nos. 61 thru 63.
For field splice detail, see Sheet Nos. 84 and 85.
For cross frame and diaphragm details, see Sheet No. 87.
For stiffener and miscellaneous steel details, see Sheet No. 88.
* For dimension L see Girder Dimensions table on Sheet No. 53.
** Intermediate Cross Frame Connection Plates shall be PL 5/8 x 9 1/2.

FRAMING PLAN EB - UNIT 2 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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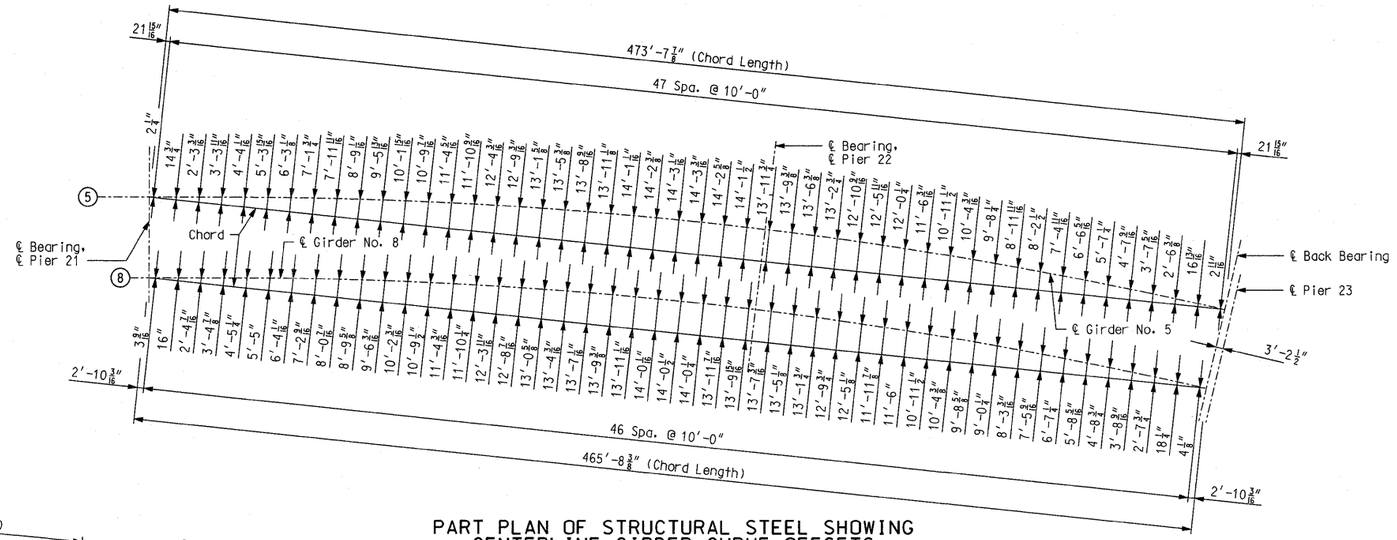
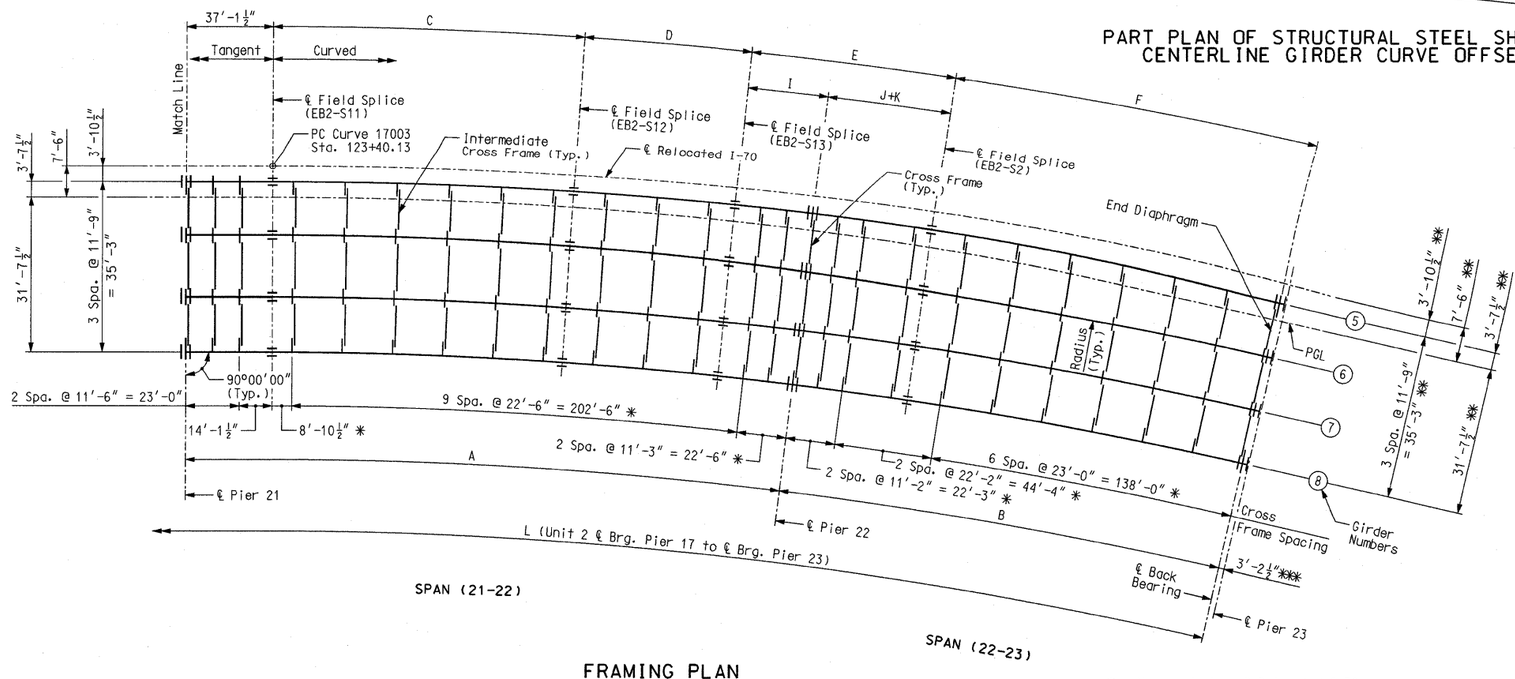


PART PLAN OF STRUCTURAL STEEL SHOWING CENTERLINE GIRDER CURVE OFFSETS



FRAMING PLAN
Span (21-22) & (22-23)

* Measured along ℄ Relocated I-70.
** Dimensions shown are measured radially.
*** ℄ Back Bearing is measured parallel to ℄ Pier 23

GIRDER DIMENSIONS

Girder	Radius (Feet)	Girder Length A	Girder Length B	Flange Length C	D	E	F	G	H	I	J	K	Total Length L
℄ I-70	1952.500	271'-0"	204'-8"	–	–	–	–	–	–	–	–	–	–
Girder 5	1948.625	270'-6⅜"	204'-3"	129'-8⅞"	69'-10⅜"	104'-2⅞"	133'-9⅞"	52'-11⅝"	76'-9⅜"	33'-9⅝"	35'-2⅝"	35'-2⅝"	1625'-7½"
Girder 6	1936.875	269'-1½"	203'-0"	128'-11½"	69'-5⅜"	103'-7¼"	132'-11⅞"	52'-7¾"	76'-3¾"	33'-7¼"	35'-0"	35'-0"	1622'-11⅝"
Girder 7	1925.125	267'-8⅝"	201'-9"	128'-2⅛"	69'-0¼"	102'-11¾"	132'-2"	52'-4"	75'-10¼"	33'-4¾"	34'-9½"	34'-9½"	1620'-3⅝"
Girder 8	1913.375	266'-3¾"	200'-6"	127'-4¾"	68'-7¼"	102'-4¼"	131'-4⅛"	52'-0⅛"	75'-4⅝"	33'-2¼"	34'-7"	34'-7"	1617'-7¾"

Notes:
Longitudinal dimensions are horizontal arc dimensions from centerline bearing to centerline bearing.
For girder elevation and additional flange transition dimension information, see Sheet No. 63.
Diaphragms in curved portion of girders shall be placed radially.
For field splice detail, see Sheet Nos. 84 and 85.
For cross frame and diaphragm details, see Sheet No. 87.
For stiffener and miscellaneous steel details, see Sheet No. 88.

FRAMING PLAN EB - UNIT 2 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 53 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
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ENGINEERING CORPORATION - 000631

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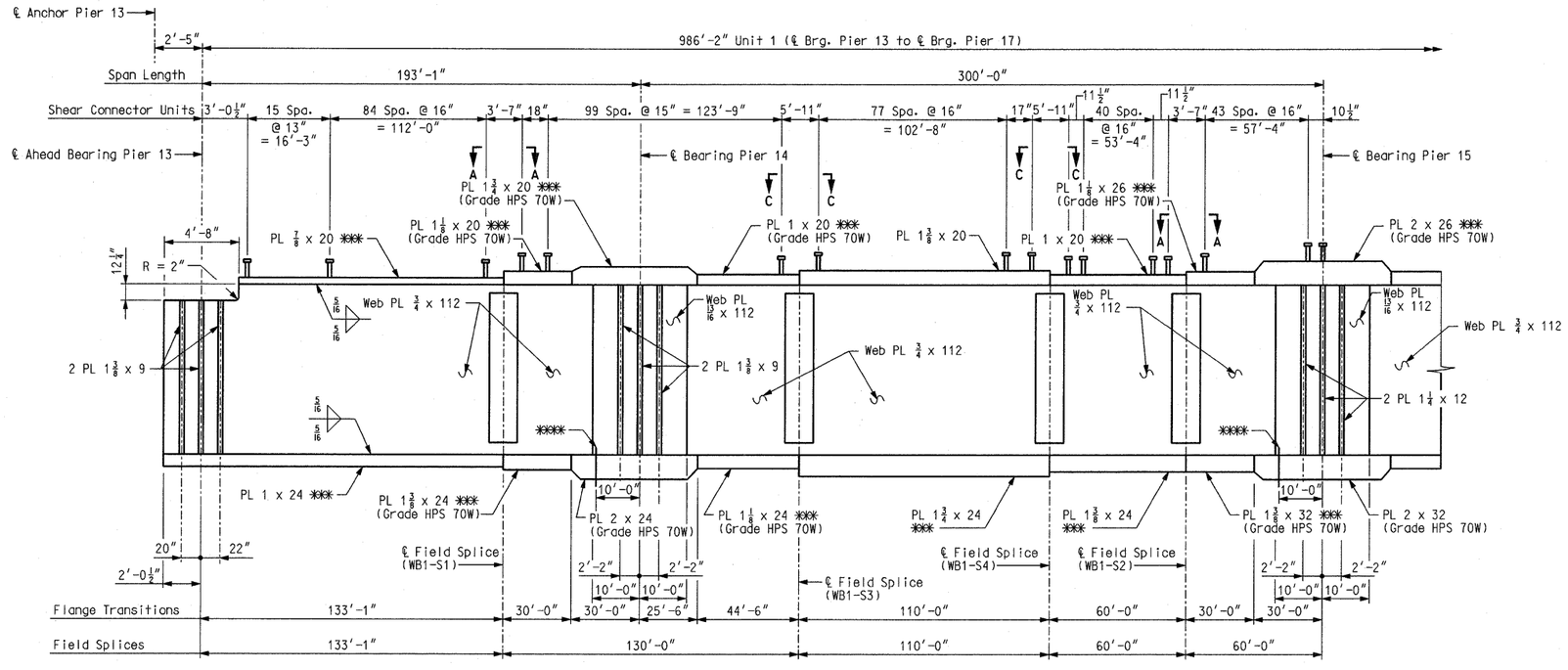
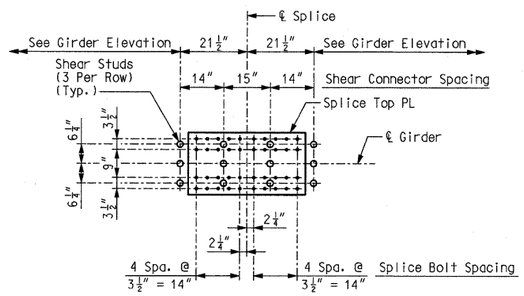
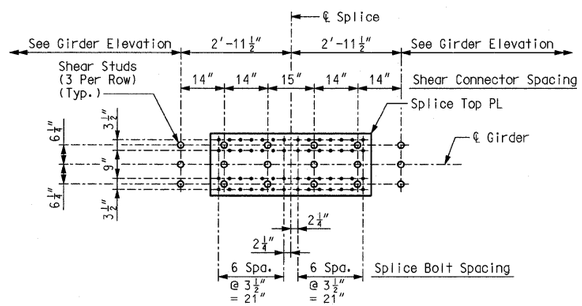


GIRDER ELEVATION
Spans (13-14) & (14-15)



SPLICE PLATE PLAN VIEW A-A
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)

Notes:
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 66.
*** Indicates flange plates subject to notch toughness requirements. All web plates shall be subject to notch toughness requirements. All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 48.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 13, see Sheet No. 88.
**** Drip plate, girder 1 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

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ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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GIRDER ELEVATION WB - UNIT 1 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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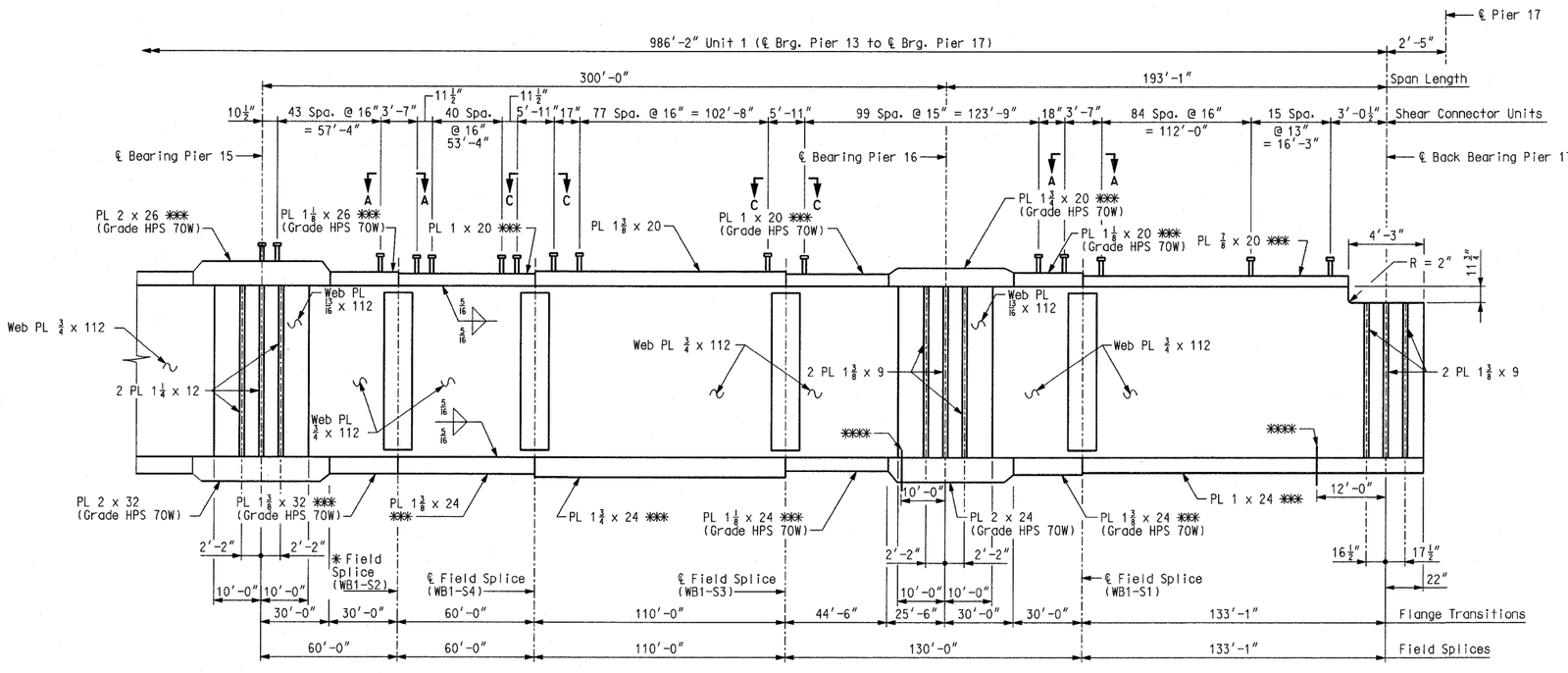
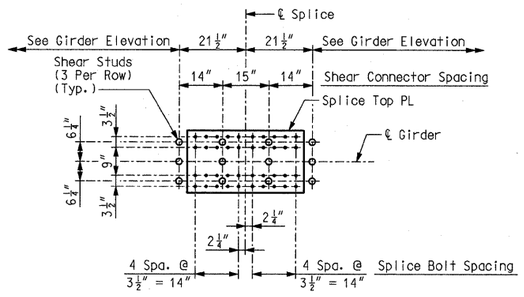
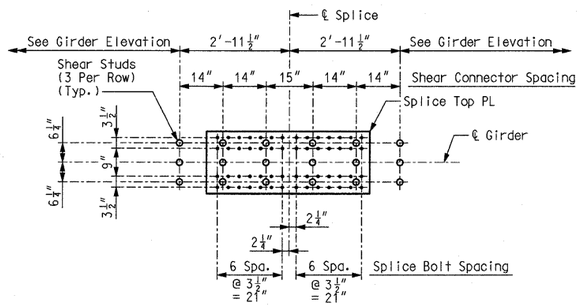


GIRDER ELEVATION
Spans (15-16) & (16-17)



SPLICE PLATE PLAN VIEW A-A
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)

Notes:
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 67.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 48.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 17, see Sheet No. 88.
**** Drip plate, girder 1 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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AND

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GIRDER ELEVATION WB - UNIT 1 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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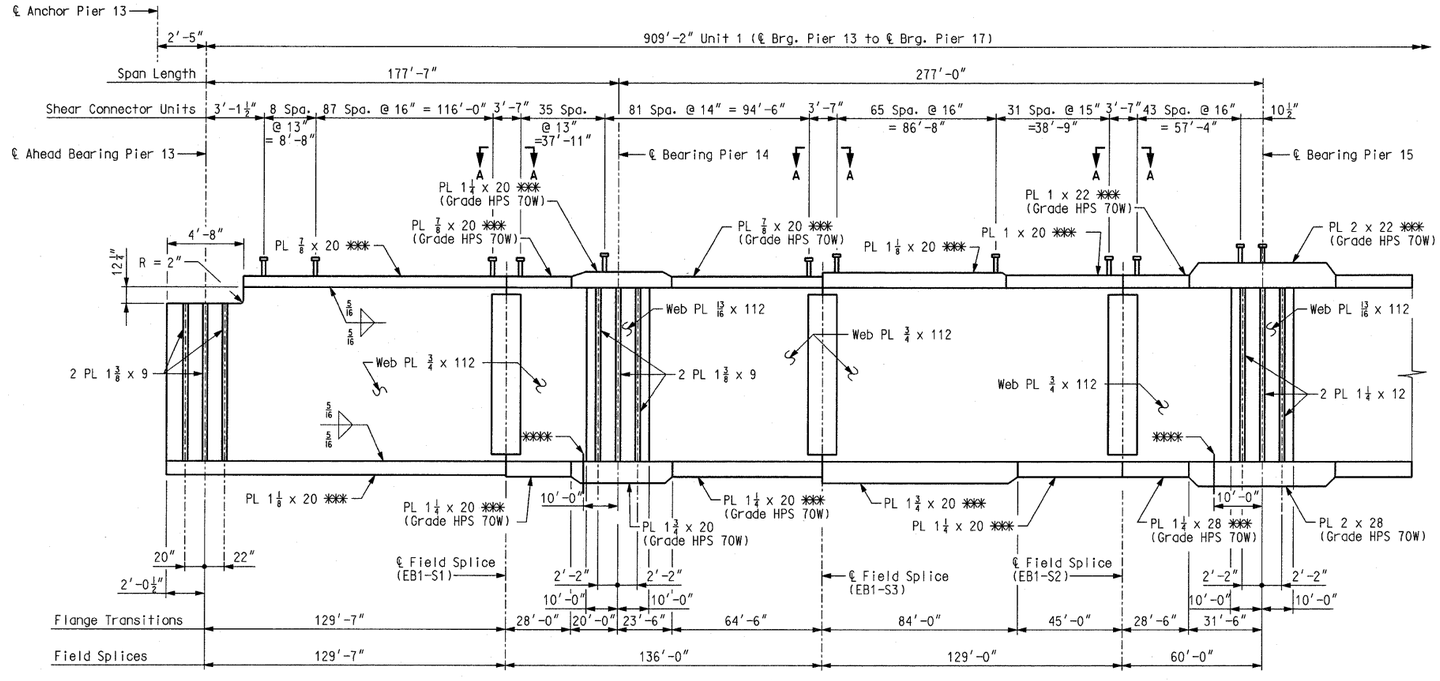
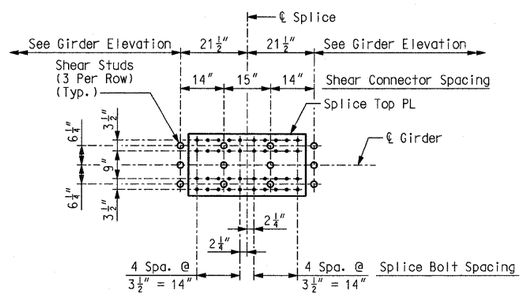


GIRDER ELEVATION
Spans (13-14) & (14-15)



SPLICE PLATE PLAN VIEW A-A
(Field Splice Detail with Shear Studs)

Notes:
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 68.
*** Indicates flange plates subject to notch toughness requirements. All web plates shall be subject to notch toughness requirements. All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 49.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 13, see Sheet No. 88.
**** Drip plate, girder 8 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

GIRDER ELEVATION EB - UNIT 1 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 56 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
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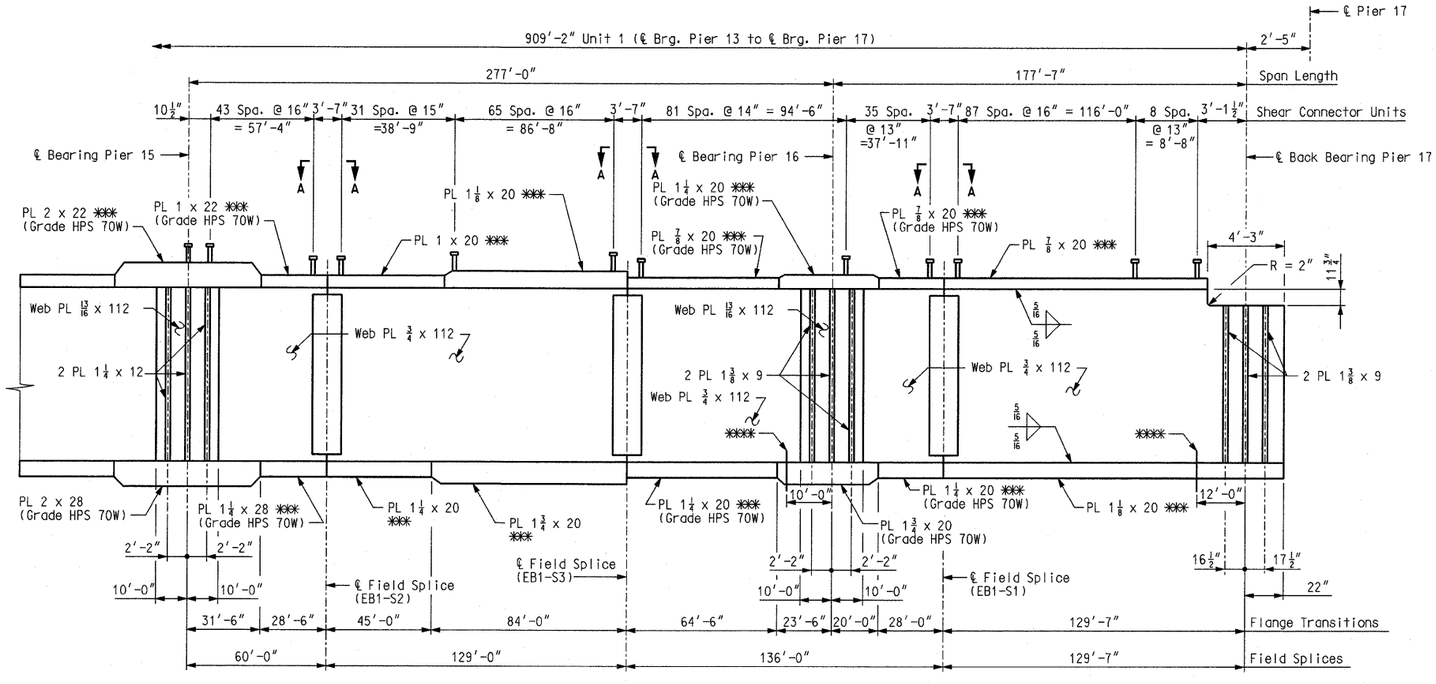
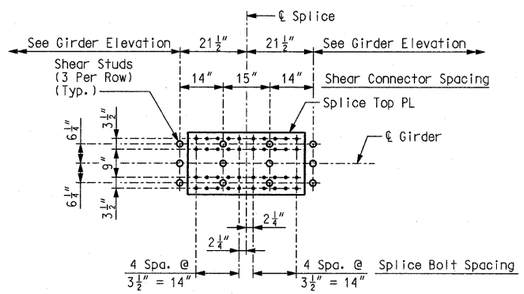
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



GIRDER ELEVATION
Spans (15-16) & (16-17)



SPLICE PLATE PLAN VIEW A-A
(Field Splice Detail with Shear Studs)

Notes:
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 69.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 49.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 17, see Sheet No. 88.
**** Drip plate, girder 8 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

GIRDER ELEVATION EB - UNIT 1 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 57 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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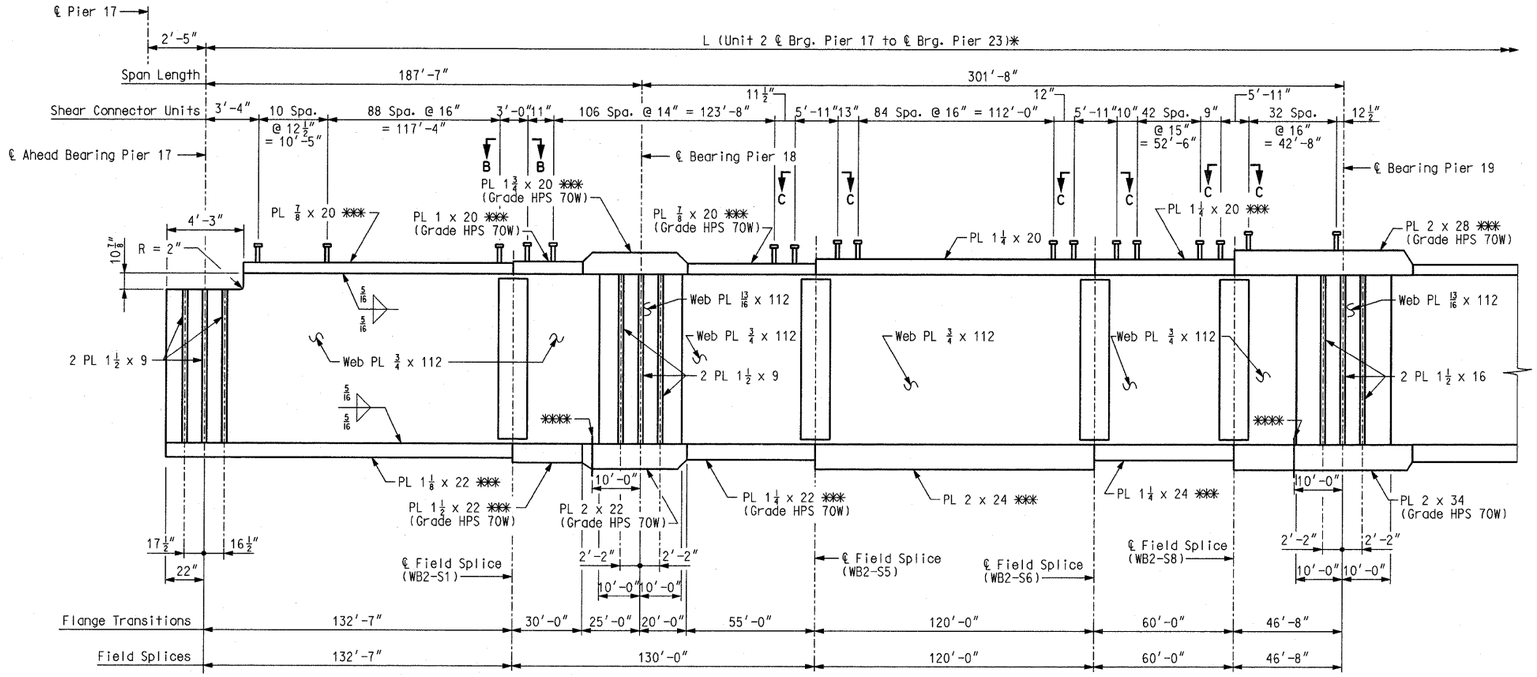
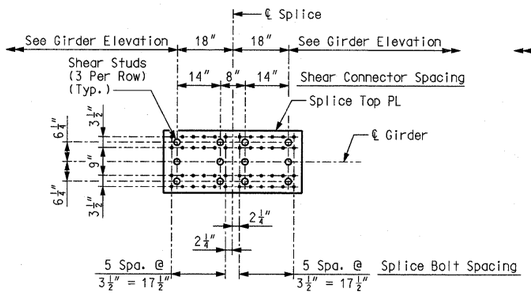
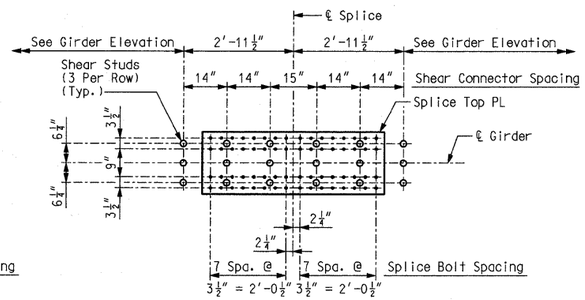
ENGINEERING CORPORATION - 000631



GIRDER ELEVATION
Spans (17-18) & (18-19)



SPLICE PLATE PLAN VIEW B-B
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)
(8 rows of Bolts Each Side of Splice Shown; 7 Row Configuration Similar)

Notes:
* For table of girder dimensions, see Sheet No. 51.
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 70.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 50.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 17, see Sheet No. 88.
**** Drip plate, girder 1 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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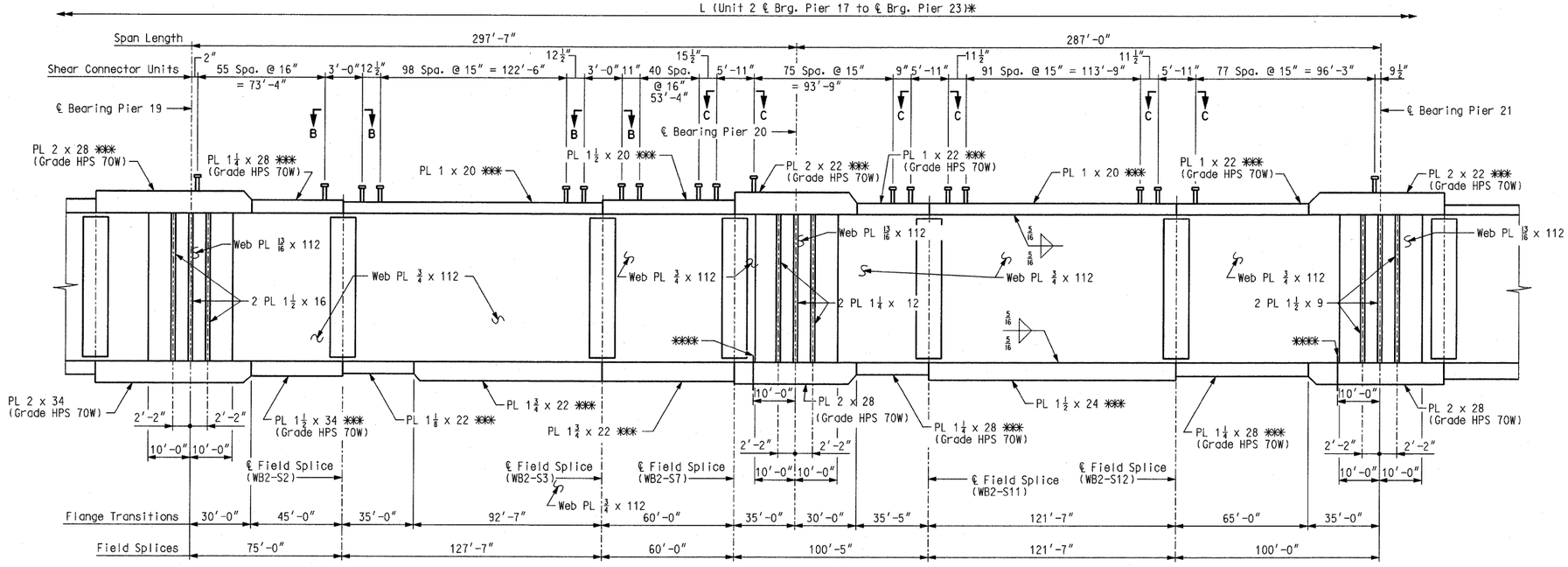
ENGINEERING CORPORATION - 000631

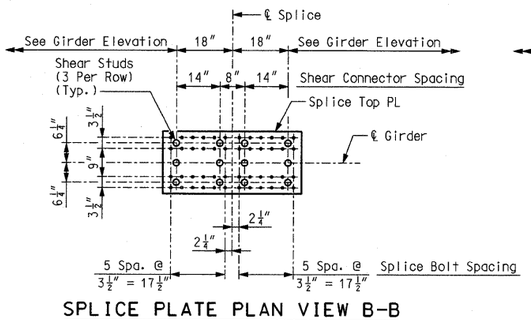
GIRDER ELEVATION WB - UNIT 2 (1 OF 3)

Detailed JUL 2009
Checked JUL 2009

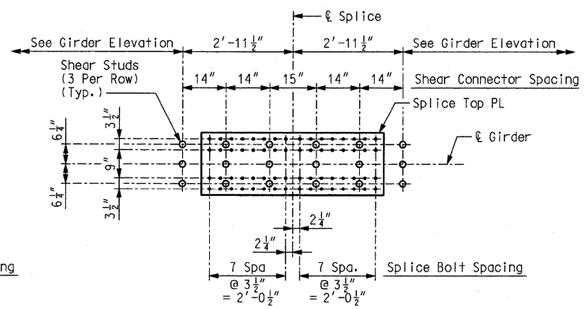
Note: This drawing is not to scale. Follow dimensions.



GIRDER ELEVATION
Spans (19-20) & (20-21)



SPLICE PLATE PLAN VIEW B-B
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)
(8 rows of Bolts Each Side of Splice Shown; 7 Row Configuration Similar)

Notes:
* For table of girder dimensions, see Sheet No. 51.
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 71.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates execpt fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 50.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
**** Drip plate, girder 1 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 59 of 152

GIRDER ELEVATION WB - UNIT 2 (2 OF 3)

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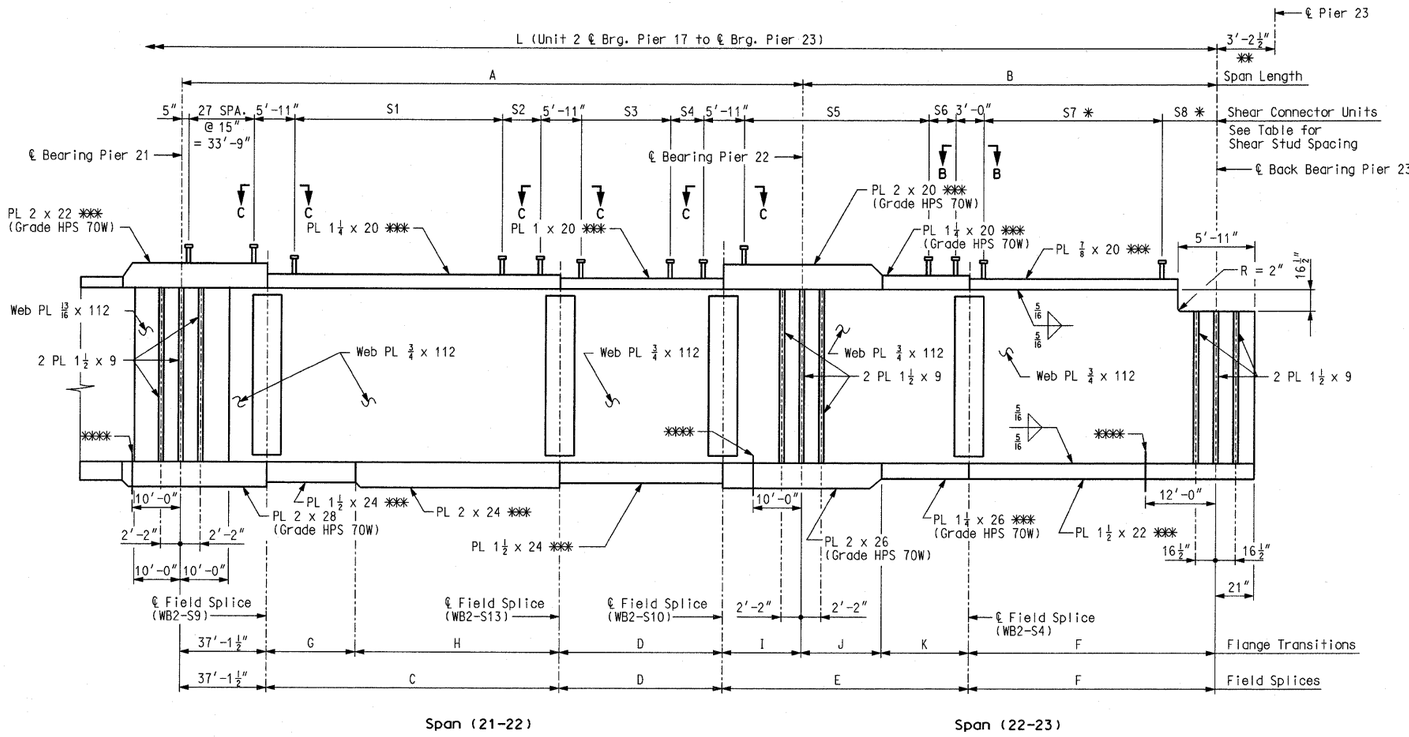
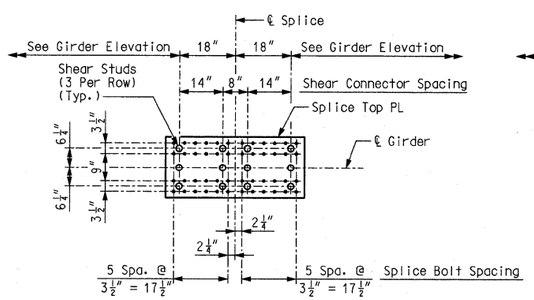
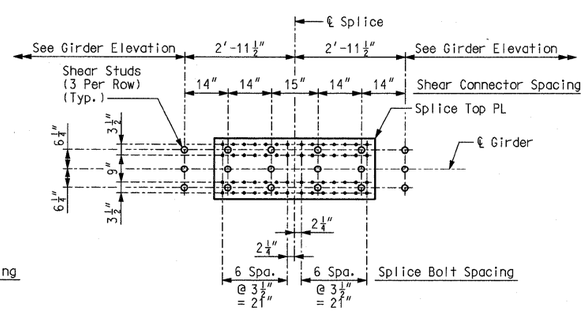


GIRDER ELEVATION
Spans (21-22) & (22-23)

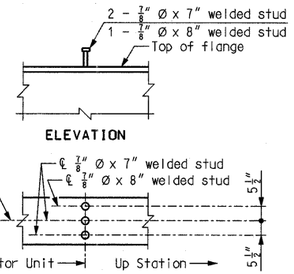
SHEAR STUD SPACING							
Location	S1	S2	S3	S4	S5	S6	S7 *	S8 *
Girder 1	94 Spa. @ 16″ = 125′-4″	16⅜″	48 Spa. @ 16″ = 64′-0″	17⅞″	82 Spa. @ 15″ = 102′-6″	11⅛″	111 Spa. @ 14″ = 129′-6″	4′-5⅞″
Girder 2	94 Spa. @ 16″ = 125′-4″	7″	48 Spa. @ 16″ = 64′-0″	12¾″	81 Spa. @ 15″ = 101′-3″	18½″	110 Spa. @ 14″ = 128′-4″	4′-10⅛″
Girder 3	93 Spa. @ 16″ = 124′-0″	13⅝″	48 Spa. @ 16″ = 64′-0″	7¼″	81 Spa. @ 15″ = 101′-3″	10⅞″	109 Spa. @ 14″ = 127′-2″	5′-2¼″
Girder 4	92 Spa. @ 16″ = 122′-8″	20⅛″	47 Spa. @ 16″ = 62′-8″	18¾″	80 Spa. @ 15″ = 100′-0″	18¼″	109 Spa. @ 14″ = 127′-2″	4′-4½″



SPLICE PLATE PLAN VIEW B-B
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)



* DETAILS OF SHEAR CONNECTORS FOR S7 AND S8

For total weight of shear connectors, see Sheet No. 88.
Shear connectors shall be in accordance with Sec 712, 1037, and 1080.

Notes:
** ℄ Back Bearing is measured parallel to ℄ Pier 23.
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 72.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates except fill plates shall be subject to notch toughness requirement.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal arc dimensions from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 51.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 23, see Sheet No. 88.
**** Drip plate, girder 1 only. See Sheet No. 88 for details.
For table of Girder Dimensions, see Sheet No. 51.
For details of shear connectors not shown, see Sheet No. 88.

GIRDER ELEVATION WB - UNIT 2 (3 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010
DESIGNED - HNTB
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REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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715 KIRK DRIVE
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2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
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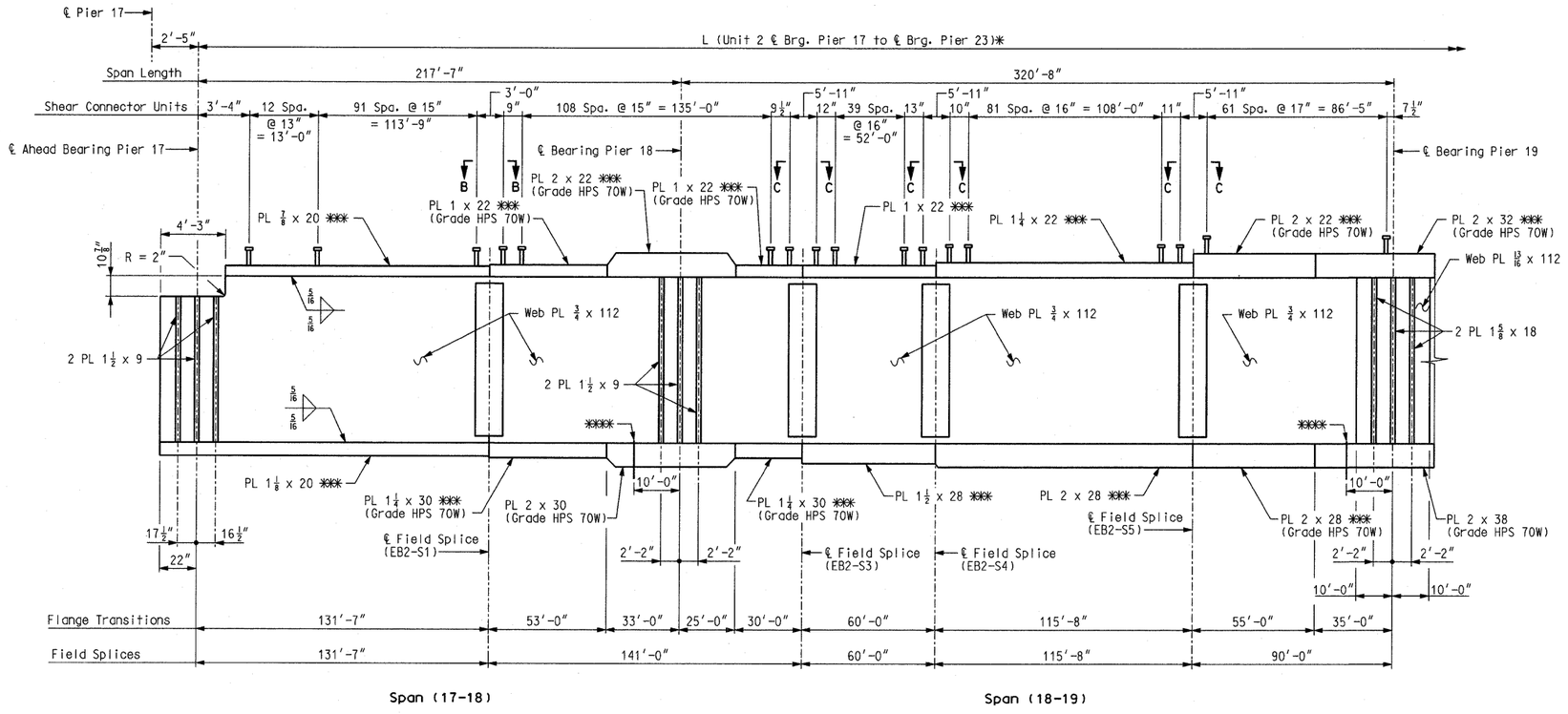
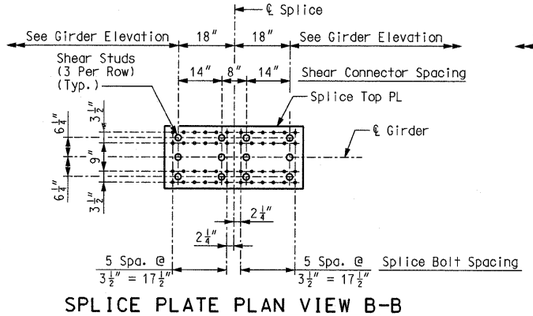
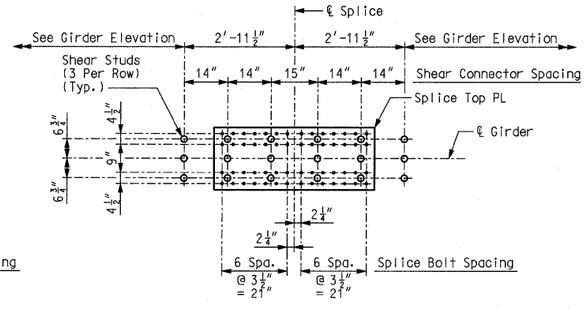
ENGINEERING CORPORATION - 000631



GIRDER ELEVATION
Spans (17-18) & (18-19)



SPLICE PLATE PLAN VIEW B-B
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)

Notes:
* For Table of Dimensions, see Sheet No. 53.
All dimensions measured along ℄ Relocated I-70.
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 73.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 52.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 17, see Sheet No. 88.
**** Drip plate, girder 8 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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ENGINEERING CORPORATION - 000631

GIRDER ELEVATION EB - UNIT 2 (1 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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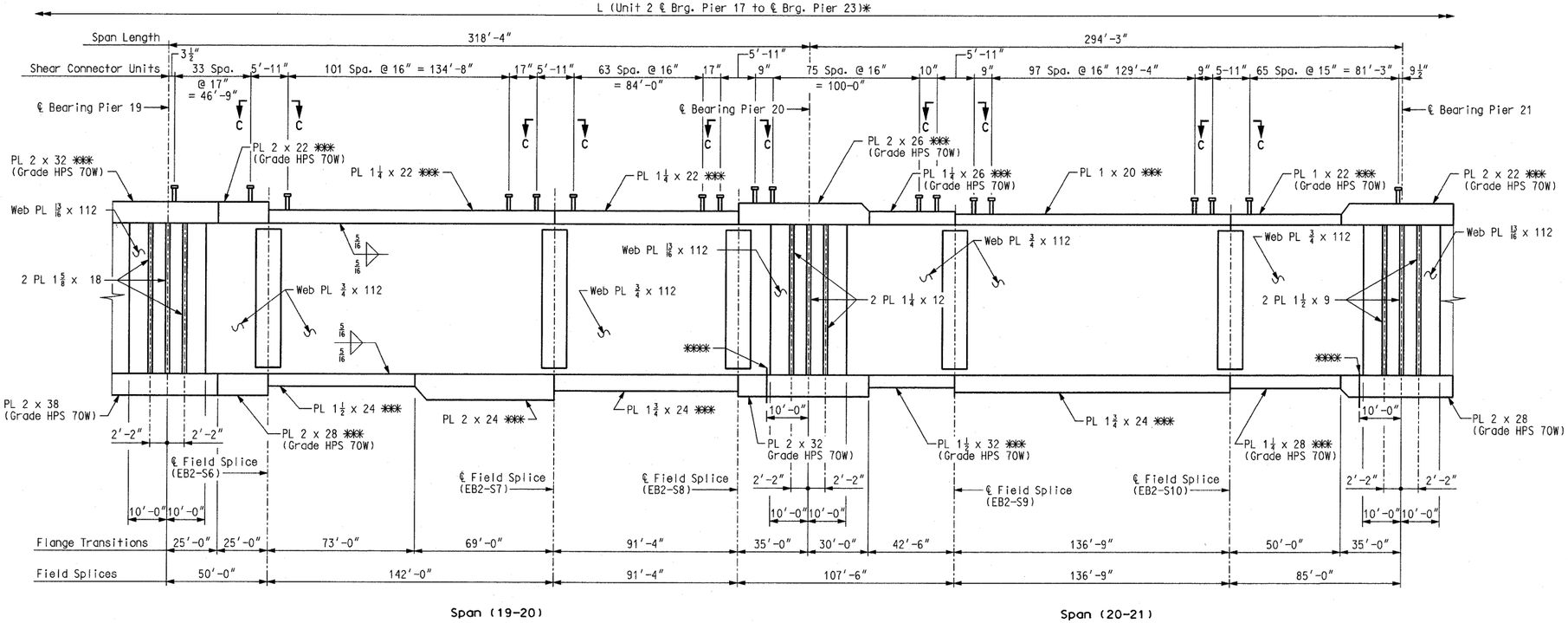
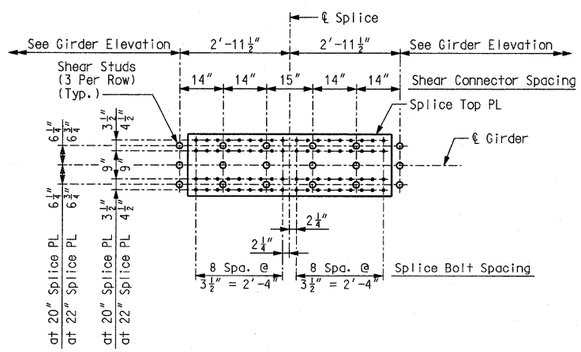


GIRDER ELEVATION
Spans (19-20) & (20-21)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)
(9 rows of Bolts Each Side of Splice Shown;
7 Row Configuration Similar)

Notes:
* For table of Girder Dimension, see Sheet No. 53.
All dimensions measured along ℄ Relocated I-70.
Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 74.
*** Indicates flange plates subject to notch toughness requirements.
All web plates shall be subject to notch toughness requirements.
All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
Longitudinal dimensions are horizontal from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 52.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
**** Drip plate, girder 8 only. See Sheet No. 88 for details.
For details of shear connectors, see Sheet No. 88.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
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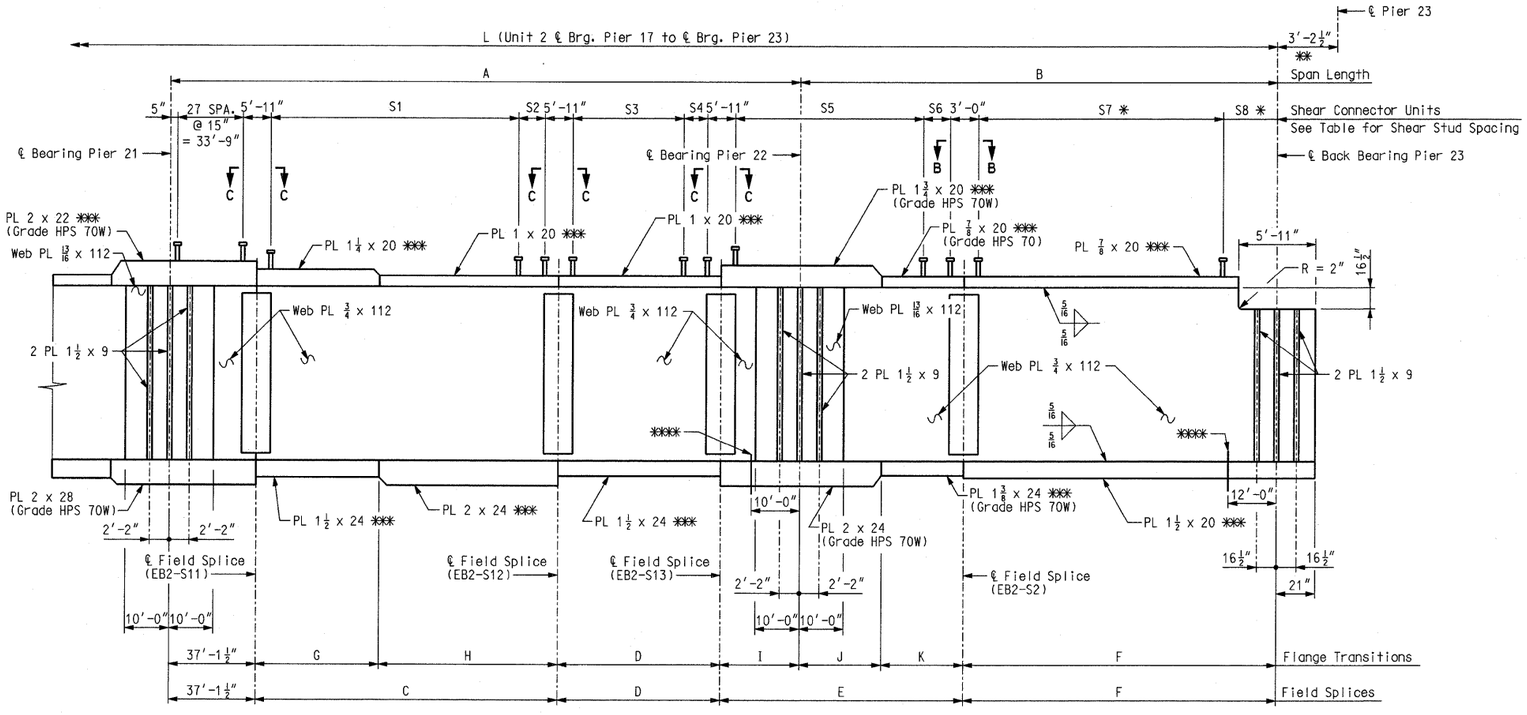
ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

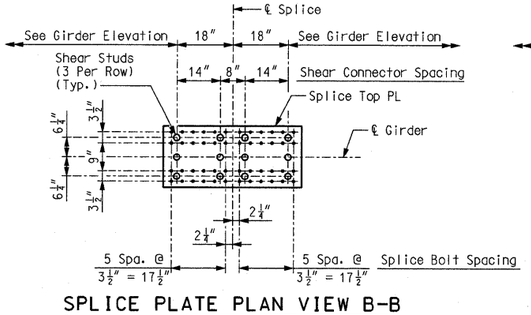
Sheet No. 62 of 152

GIRDER ELEVATION EB - UNIT 2 (2 OF 3)

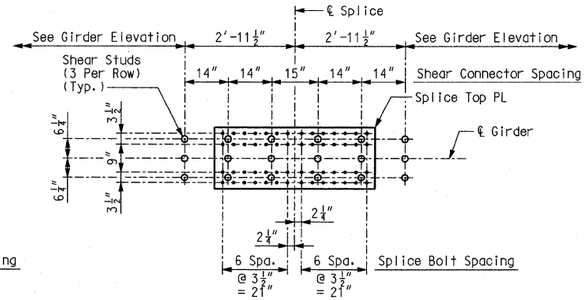


GIRDER ELEVATION
Spans (21-22) & (22-23)

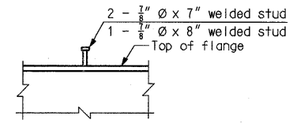
SHEAR STUD SPACING								
Location	S1	S2	S3	S4	S5	S6	S7 *	S8 *
Girder 5	92 Spa. @ 16″ = 122′-8″	14″	50 Spa. @ 15″ = 62′-6″	17⅜″	79 Spa. @ 15″ = 98′-9″	12⅜″	109 Spa. @ 14″ = 127′-2″	5′-1⅞″
Girder 6	91 Spa. @ 16″ = 121′-4″	20⅝″	50 Spa. @ 15″ = 62′-6″	12⅜″	78 Spa. @ 15″ = 97′-6″	19¾″	108 Spa. @ 14″ = 126′-0″	5′-5⅞″
Girder 7	91 Spa. @ 16″ = 121′-4″	11¼″	50 Spa. @ 15″ = 62′-6″	7¼″	78 Spa. @ 15″ = 97′-6″	12¼″	108 Spa. @ 14″ = 126′-0″	4′-8″
Girder 8	90 Spa. @ 16″ = 120′-0″	17¾″	49 Spa. @ 15″ = 61′-3″	17¼″	77 Spa. @ 15″ = 96′-3″	19¾″	107 Spa. @ 14″ = 124′-10″	5′-0⅛″



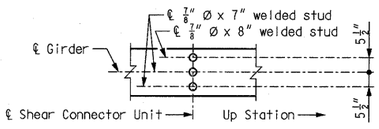
SPLICE PLATE PLAN VIEW B-B
(Field Splice Detail with Shear Studs)



SPLICE PLATE PLAN VIEW C-C
(Field Splice Detail with Shear Studs)



ELEVATION



PLAN OF STUD CONN. (3 STUDS PER UNIT)

* DETAILS OF SHEAR CONNECTORS FOR S7 AND S8

For total weight of shear connectors, see Sheet No. 88. Shear connectors shall be in accordance with Sec 712, 1037, and 1080.

Notes:
** ℄ Back Bearing is measured parallel to ℄ Pier 23. Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 75.
*** Indicates flange plates subject to notch toughness requirements. All web plates shall be subject to notch toughness requirements. All flange and web splice plates except fill plates shall be subject to notch toughness requirements. Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted. Longitudinal dimensions are horizontal arc dimensions from ℄ bearing to ℄ bearing.
For Framing Plan, see Sheet No. 53.
For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
For detail of expansion device stiffener at Pier 23, see Sheet No. 88.
For table of Girder Dimensions, see Sheet No. 53.
**** Drip plate, girder 8 only. See Sheet No. 88 for details.
For details of shear connectors not shown, see Sheet No. 88.

GIRDER ELEVATION EB - UNIT 2 (3 OF 3)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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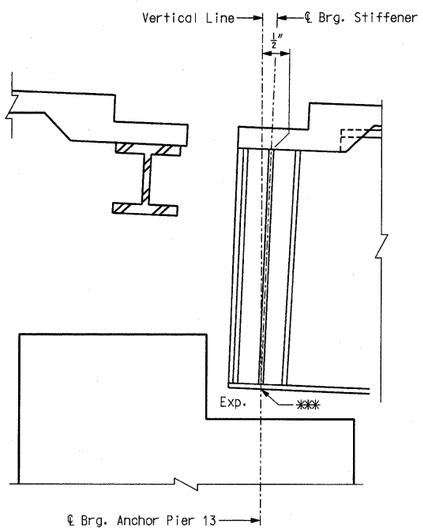
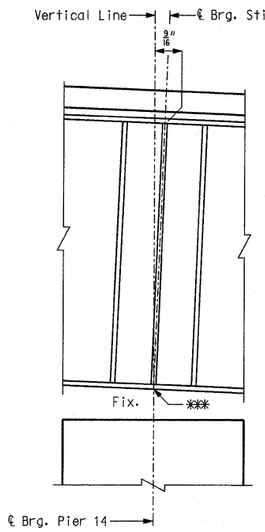
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-9050
ENGINEERING CORPORATION - 000631

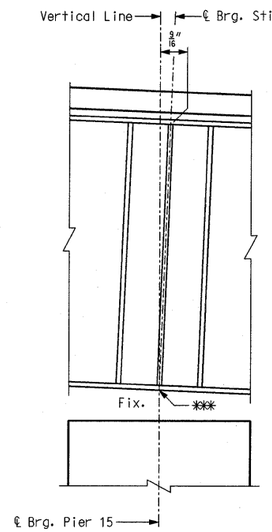
Detailed JUL 2009
Checked JUL 2009

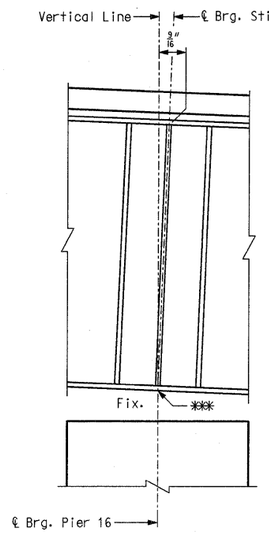
Note: This drawing is not to scale. Follow dimensions.

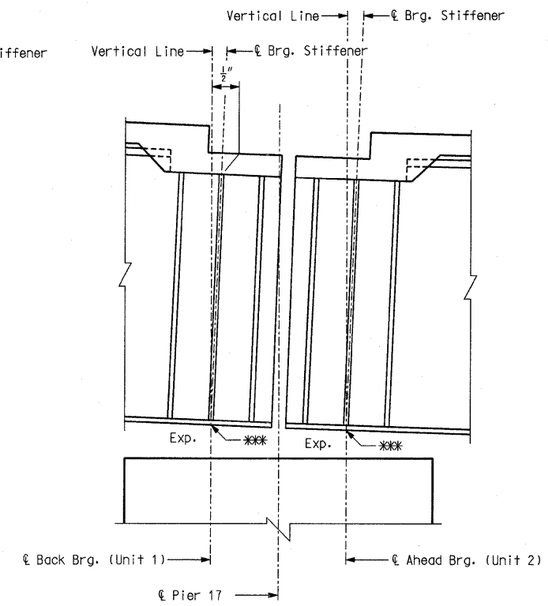
s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_063-152_J610984C_063.dgn











PART LONGITUDINAL SECTION

Notes:
*** Point of Rotation located at bottom of flange.
Dimensions shown are the horizontal dimension at the top of web.

PART LONGITUDINAL SECTION - UNIT 1 EB AND WB

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
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ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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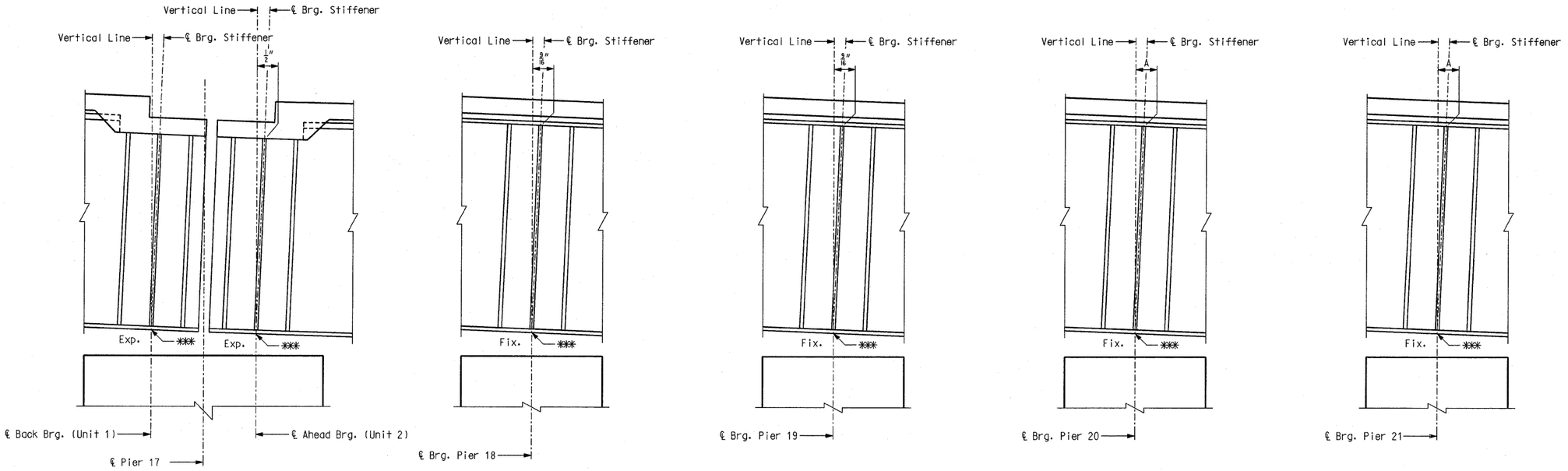
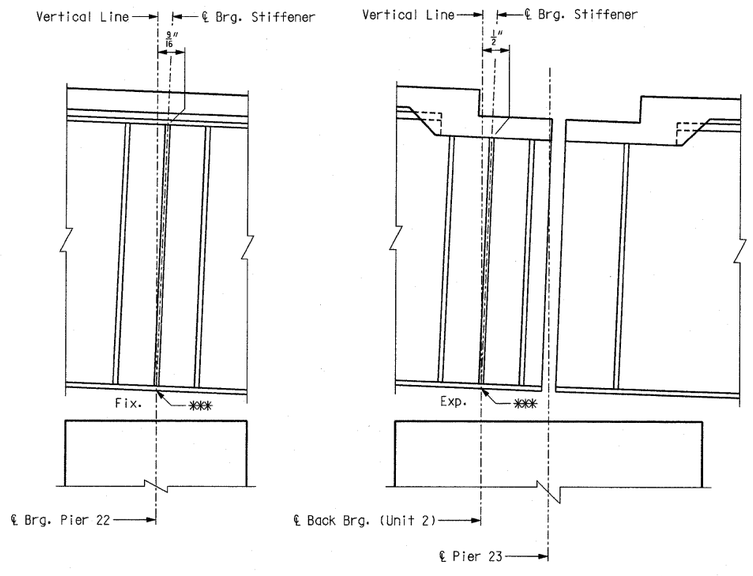


PART LONGITUDINAL SECTION



PART LONGITUDINAL SECTION

TABLE OF TILT DIMENSIONS "A"		
Location	Pier 20	Pier 21
Girder 1	0"	0"
Girder 2	3/16"	3/16"
Girder 3	7/16"	7/16"
Girder 4	5/8"	5/8"
Girder 5	9/16"	1/2"
Girder 6	9/16"	3/4"
Girder 7	9/16"	15/16"
Girder 8	9/16"	1 3/16"

Notes:
*** Point of Rotation located at bottom of flange. Dimensions shown and Dimension "A" are the horizontal dimension at the top of web.

PART LONGITUDINAL SECTION - UNIT 2 EB AND WB

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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REVISED -
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Detailed JUL 2009
Checked JUL 2009

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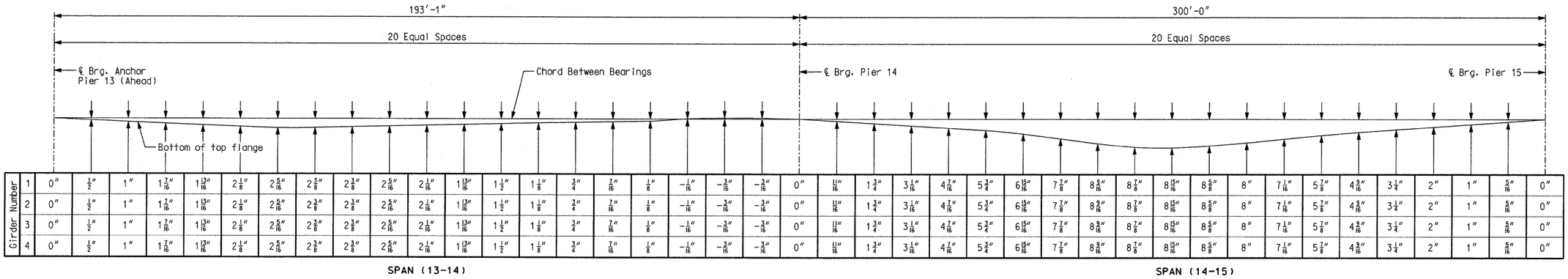
s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_065-152_J6I0984C_065.dgn

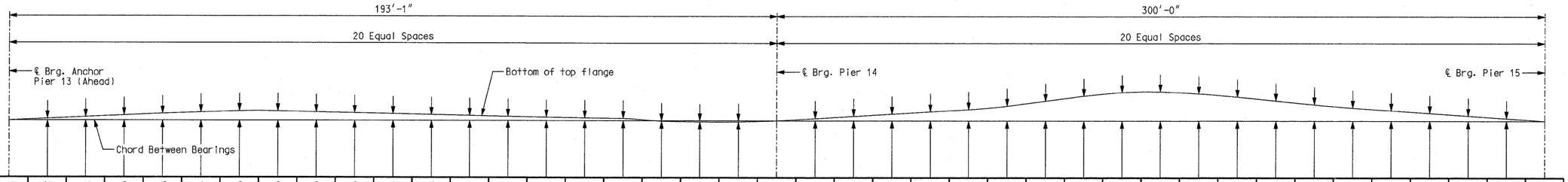


Girder Number	1	2	3	4
	0"	0"	0"	0"
	1/2"	1/2"	1/2"	1/2"
	1"	1"	1"	1"
	1 7/16"	1 7/16"	1 7/16"	1 7/16"
	1 13/16"	1 13/16"	1 13/16"	1 13/16"
	2 1/8"	2 1/8"	2 1/8"	2 1/8"
	2 5/16"	2 5/16"	2 5/16"	2 5/16"
	2 3/8"	2 3/8"	2 3/8"	2 3/8"
	2 3/8"	2 3/8"	2 3/8"	2 3/8"
	2 5/16"	2 5/16"	2 5/16"	2 5/16"
	2 1/16"	2 1/16"	2 1/16"	2 1/16"
	1 13/16"	1 13/16"	1 13/16"	1 13/16"
	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	1 1/8"	1 1/8"	1 1/8"	1 1/8"
	3/4"	3/4"	3/4"	3/4"
	7/16"	7/16"	7/16"	7/16"
	1/8"	1/8"	1/8"	1/8"
	-1/16"	-1/16"	-1/16"	-1/16"
	-3/16"	-3/16"	-3/16"	-3/16"
	-3/16"	-3/16"	-3/16"	-3/16"
	0"	0"	0"	0"
	1 1/16"	1 1/16"	1 1/16"	1 1/16"
	1 3/4"	1 3/4"	1 3/4"	1 3/4"
	3 1/16"	3 1/16"	3 1/16"	3 1/16"
	4 7/16"	4 7/16"	4 7/16"	4 7/16"
	5 3/4"	5 3/4"	5 3/4"	5 3/4"
	6 15/16"	6 15/16"	6 15/16"	6 15/16"
	7 7/8"	7 7/8"	7 7/8"	7 7/8"
	8 3/16"	8 3/16"	8 3/16"	8 3/16"
	8 7/8"	8 7/8"	8 7/8"	8 7/8"
	8 15/16"	8 15/16"	8 15/16"	8 15/16"
	8 5/8"	8 5/8"	8 5/8"	8 5/8"
	8"	8"	8"	8"
	7 1/16"	7 1/16"	7 1/16"	7 1/16"
	5 7/8"	5 7/8"	5 7/8"	5 7/8"
	4 9/16"	4 9/16"	4 9/16"	4 9/16"
	3 1/4"	3 1/4"	3 1/4"	3 1/4"
	2"	2"	2"	2"
	1"	1"	1"	1"
	5/16"	5/16"	5/16"	5/16"
	0"	0"	0"	0"

SPAN (13-14) SPAN (14-15)

DEAD LOAD DEFLECTIONS

Notes:
23% of dead load deflection in span (13-14) and 30% of dead load deflection in span (14-15) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.

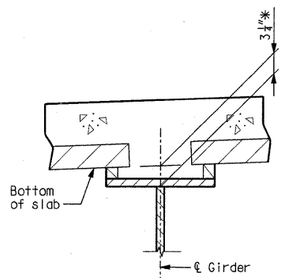


Girder Number	1	2	3	4
	0"	0"	0"	0"
	1/2"	1/2"	1/2"	1/2"
	1"	1"	1"	1"
	1 7/16"	1 7/16"	1 7/16"	1 7/16"
	1 13/16"	1 13/16"	1 13/16"	1 13/16"
	2 1/8"	2 1/8"	2 1/8"	2 1/8"
	2 5/16"	2 5/16"	2 5/16"	2 5/16"
	2 3/8"	2 3/8"	2 3/8"	2 3/8"
	2 3/8"	2 3/8"	2 3/8"	2 3/8"
	2 5/16"	2 5/16"	2 5/16"	2 5/16"
	2 1/16"	2 1/16"	2 1/16"	2 1/16"
	1 13/16"	1 13/16"	1 13/16"	1 13/16"
	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	1 1/8"	1 1/8"	1 1/8"	1 1/8"
	3/4"	3/4"	3/4"	3/4"
	7/16"	7/16"	7/16"	7/16"
	1/8"	1/8"	1/8"	1/8"
	-1/16"	-1/16"	-1/16"	-1/16"
	-3/16"	-3/16"	-3/16"	-3/16"
	-3/16"	-3/16"	-3/16"	-3/16"
	0"	0"	0"	0"
	1 1/16"	1 1/16"	1 1/16"	1 1/16"
	1 3/4"	1 3/4"	1 3/4"	1 3/4"
	3 1/16"	3 1/16"	3 1/16"	3 1/16"
	4 7/16"	4 7/16"	4 7/16"	4 7/16"
	5 3/4"	5 3/4"	5 3/4"	5 3/4"
	6 15/16"	6 15/16"	6 15/16"	6 15/16"
	7 7/8"	7 7/8"	7 7/8"	7 7/8"
	8 3/16"	8 3/16"	8 3/16"	8 3/16"
	8 7/8"	8 7/8"	8 7/8"	8 7/8"
	8 15/16"	8 15/16"	8 15/16"	8 15/16"
	8 5/8"	8 5/8"	8 5/8"	8 5/8"
	8"	8"	8"	8"
	7 1/16"	7 1/16"	7 1/16"	7 1/16"
	5 7/8"	5 7/8"	5 7/8"	5 7/8"
	4 9/16"	4 9/16"	4 9/16"	4 9/16"
	3 1/4"	3 1/4"	3 1/4"	3 1/4"
	2"	2"	2"	2"
	1"	1"	1"	1"
	5/16"	5/16"	5/16"	5/16"
	0"	0"	0"	0"

SPAN (13-14) SPAN (14-15)

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM WB - UNIT 1 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 66 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010
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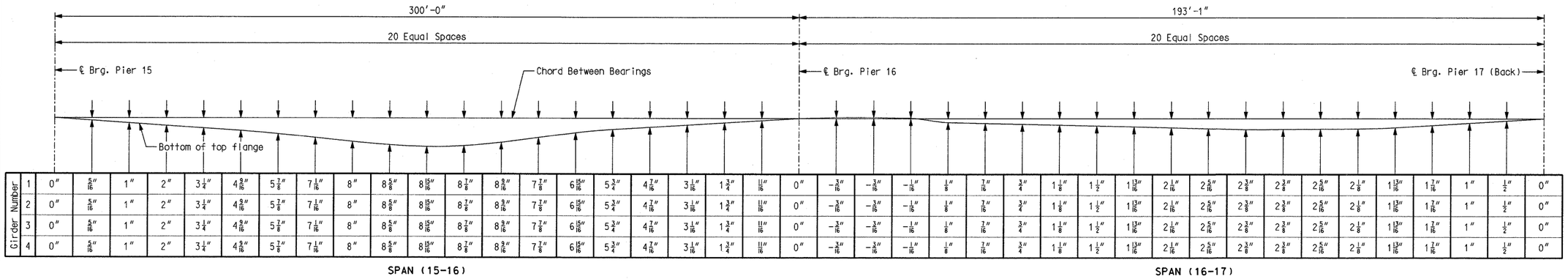
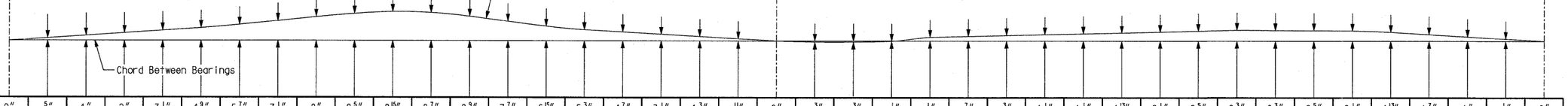


Girder Number																																						
	1	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″
	2	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″
	3	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″
	4	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″

SPAN (15-16) SPAN (16-17)

DEAD LOAD DEFLECTIONS

Notes:
30% of dead load deflection in span (15-16) and 23% of dead load deflection in span (16-17) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.

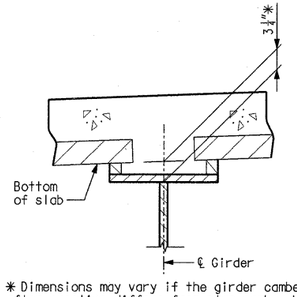


Girder Number																																						
	1	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″
	2	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″
	3	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″
	4	0″	$\frac{5}{16}$″	1″	2″	$3\frac{1}{4}$″	$4\frac{9}{16}$″	$5\frac{7}{8}$″	$7\frac{1}{16}$″	8″	$8\frac{5}{8}$″	$8\frac{15}{16}$″	$8\frac{7}{8}$″	$8\frac{9}{16}$″	$7\frac{7}{8}$″	$6\frac{15}{16}$″	$5\frac{3}{4}$″	$4\frac{7}{16}$″	$3\frac{1}{16}$″	$1\frac{3}{4}$″	$\frac{11}{16}$″	0″	$-\frac{3}{16}$″	$-\frac{3}{16}$″	$-\frac{1}{16}$″	$\frac{1}{8}$″	$\frac{7}{16}$″	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	$1\frac{13}{16}$″	$2\frac{1}{16}$″	$2\frac{5}{16}$″	$2\frac{3}{8}$″	$2\frac{3}{8}$″	$2\frac{5}{16}$″	$2\frac{1}{8}$″	$1\frac{13}{16}$″	$1\frac{7}{16}$″	1″	$\frac{1}{2}$″	0″

SPAN (15-16) SPAN (16-17)

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM WB - UNIT 1 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_067-152_J6I0984C_067.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

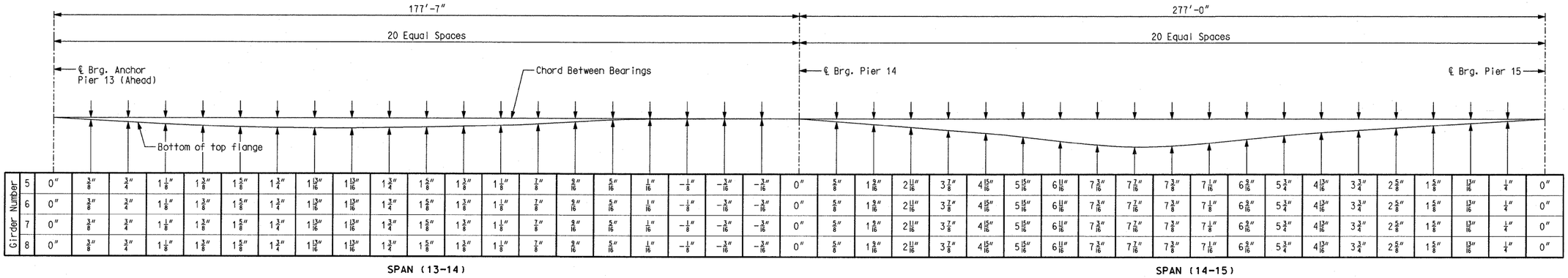
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

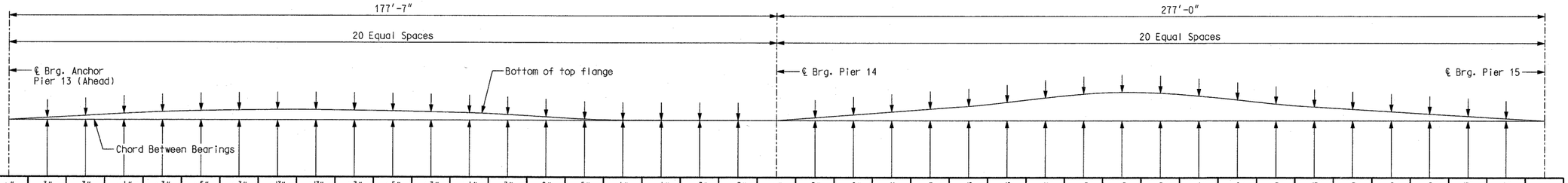


Girder Number																																		
5	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"
6	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"
7	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"
8	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"

SPAN (13-14) SPAN (14-15)

DEAD LOAD DEFLECTIONS

Notes:
24% of dead load deflection in span (13-14) and 29% of dead load deflection in span (14-15) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.

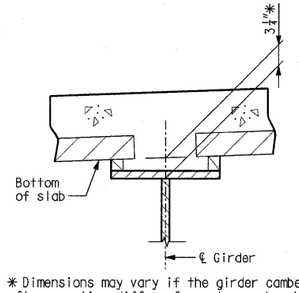


Girder Number																																		
5	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"
6	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"
7	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"
8	0"	3/8"	3/4"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	7/8"	9/16"	5/16"	1/16"	-1/8"	-3/16"	-3/16"	0"	5/8"	1 9/16"	2 11/16"	3 7/8"	4 15/16"	5 15/16"	6 11/16"	7 3/16"	7 7/16"	7 3/8"	7 1/8"	6 9/16"	5 3/4"	4 13/16"	3 3/4"	2 5/8"	1 5/8"	13/16"	1/4"	0"

SPAN (13-14) SPAN (14-15)

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



*Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM EB - UNIT 1 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
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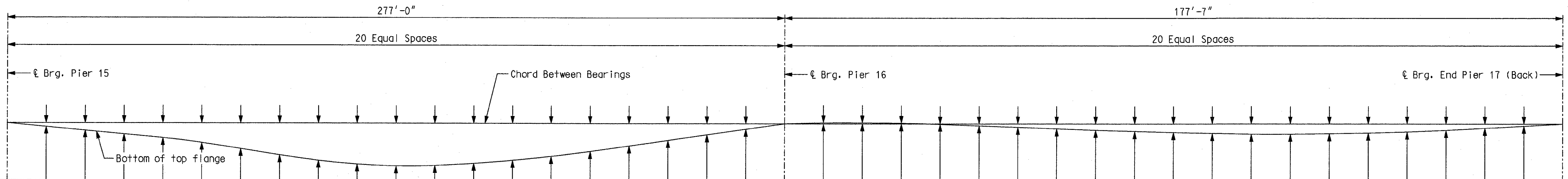
ENGINEERING CORPORATION - 000631



Girder Number																					
5	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 5/8"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"
6	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 11/16"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"
7	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 11/16"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"
8	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 11/16"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"

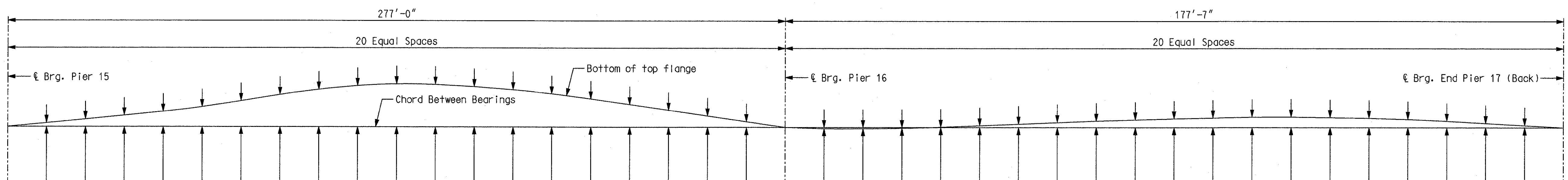
SPAN (15-16)

Girder Number																				
5	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"
6	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"
7	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"
8	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"

SPAN (16-17)

DEAD LOAD DEFLECTIONS

Notes:
29% of dead load deflection in span (15-16) and 24% of dead load deflection in span (16-17) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



Girder Number																					
5	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 5/8"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"
6	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 11/16"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"
7	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 11/16"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"
8	0"	1/4"	13/16"	1 5/8"	2 5/8"	3 3/4"	4 13/16"	5 3/4"	6 9/16"	7 1/16"	7 3/8"	7 7/16"	7 3/16"	6 11/16"	5 15/16"	4 15/16"	3 7/8"	2 11/16"	1 9/16"	5/8"	0"

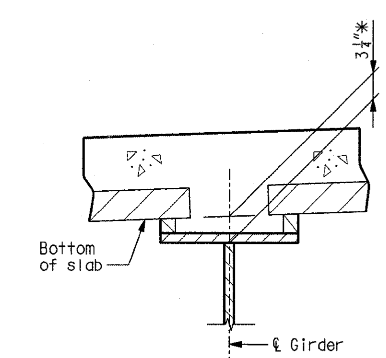
SPAN (15-16)

Girder Number																				
5	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"
6	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"
7	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"
8	-3/16"	-3/16"	-1/8"	1/16"	5/16"	9/16"	7/8"	1 1/8"	1 3/8"	1 5/8"	1 3/4"	1 13/16"	1 13/16"	1 3/4"	1 5/8"	1 3/8"	1 1/8"	3/4"	3/8"	0"

SPAN (16-17)

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM EB - UNIT 1 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_069-152_J6I0984C_069.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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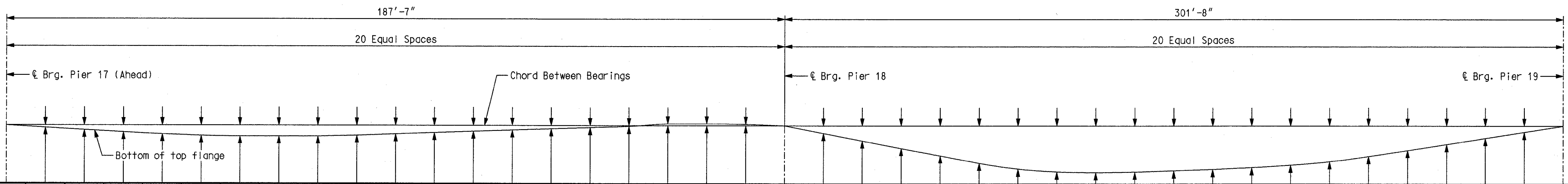
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



SPAN (17-18)

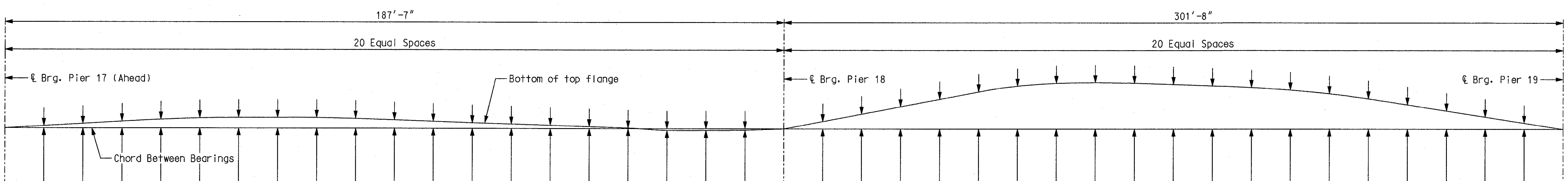
Girder Number																					
1	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 7/8″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-1/8″	-5/16″	-5/16″	-1/4″	0″
2	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 7/8″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-1/8″	-5/16″	-5/16″	-1/4″	0″
3	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 13/16″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-1/8″	-5/16″	-5/16″	-1/4″	0″
4	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 13/16″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-3/16″	-5/16″	-5/16″	-1/4″	0″

SPAN (18-19)

Girder Number																				
1	7/8″	2 1/16″	3 1/2″	5 1/16″	6 1/2″	7 3/4″	8 13/16″	9 1/2″	9 7/8″	9 7/8″	9 9/16″	8 7/8″	7 15/16″	6 11/16″	5 5/16″	3 7/8″	2 9/16″	1 3/8″	1/2″	0″
2	7/8″	2 1/16″	3 1/2″	5 1/16″	6 1/2″	7 13/16″	8 13/16″	9 1/2″	9 7/8″	9 15/16″	9 9/16″	8 7/8″	7 15/16″	6 3/4″	5 5/16″	3 7/8″	2 9/16″	1 7/16″	1/2″	0″
3	7/8″	2 1/16″	3 1/2″	5 1/16″	6 1/2″	7 13/16″	8 13/16″	9 9/16″	9 15/16″	9 15/16″	9 5/8″	8 15/16″	7 15/16″	6 3/4″	5 3/8″	3 15/16″	2 9/16″	1 7/16″	1/2″	0″
4	7/8″	2 1/16″	3 1/2″	5 1/16″	6 9/16″	7 13/16″	8 13/16″	9 9/16″	9 15/16″	9 15/16″	9 5/8″	8 15/16″	8″	6 3/4″	5 3/8″	3 15/16″	2 9/16″	1 7/16″	1/2″	0″

DEAD LOAD DEFLECTIONS

Notes:
23% of dead load deflection in span (17-18) and 32% of dead load deflection in Span (18-19) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



SPAN (17-18)

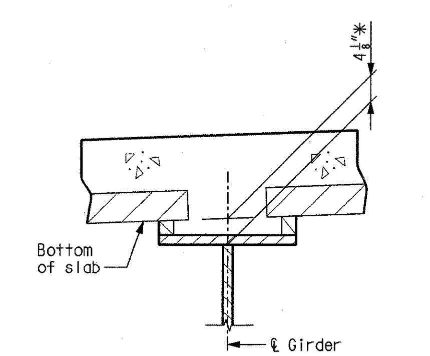
Girder Number																					
1	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 7/8″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-1/8″	-5/16″	-5/16″	-1/4″	0″
2	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 7/8″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-1/8″	-5/16″	-5/16″	-1/4″	0″
3	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 13/16″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-1/8″	-5/16″	-5/16″	-1/4″	0″
4	0″	7/16″	13/16″	1 3/16″	1 1/2″	1 11/16″	1 13/16″	1 7/8″	1 7/8″	1 3/4″	1 9/16″	1 5/16″	1″	11/16″	3/8″	1/16″	-3/16″	-5/16″	-5/16″	-1/4″	0″

SPAN (18-19)

Girder Number																				
1	7/8″	2 1/16″	3 1/2″	5 1/16″	6 1/2″	7 3/4″	8 13/16″	9 1/2″	9 7/8″	9 7/8″	9 9/16″	8 7/8″	7 15/16″	6 11/16″	5 5/16″	3 7/8″	2 9/16″	1 3/8″	1/2″	0″
2	7/8″	2 1/16″	3 1/2″	5 1/16″	6 1/2″	7 13/16″	8 13/16″	9 1/2″	9 7/8″	9 15/16″	9 9/16″	8 7/8″	7 15/16″	6 3/4″	5 5/16″	3 7/8″	2 9/16″	1 7/16″	1/2″	0″
3	7/8″	2 1/16″	3 1/2″	5 1/16″	6 1/2″	7 13/16″	8 13/16″	9 9/16″	9 15/16″	9 15/16″	9 5/8″	8 15/16″	7 15/16″	6 3/4″	5 3/8″	3 15/16″	2 9/16″	1 7/16″	1/2″	0″
4	7/8″	2 1/16″	3 1/2″	5 1/16″	6 9/16″	7 13/16″	8 13/16″	9 9/16″	9 15/16″	9 15/16″	9 5/8″	8 15/16″	8″	6 3/4″	5 3/8″	3 15/16″	2 9/16″	1 7/16″	1/2″	0″

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM WB - UNIT 2 (1 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_070-152_J6I0984C_070.dgn

CONTRACT NO. 76D61
F.A. ROUTE 999 | SECTION 82-1B-2
FED. AID PROJECT | ILLINOIS
COUNTY ST. CLAIR
USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

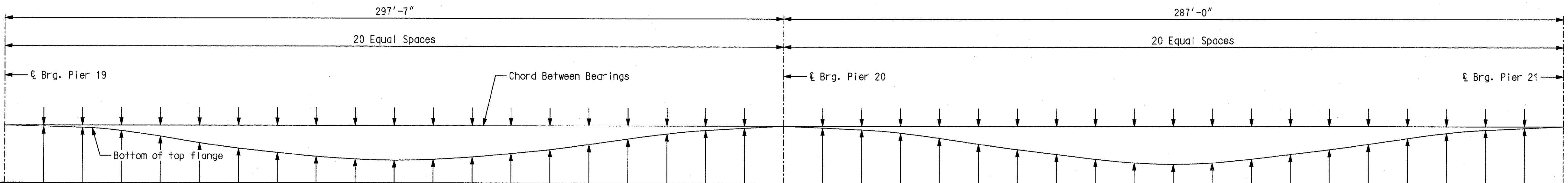
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



SPAN (19-20)

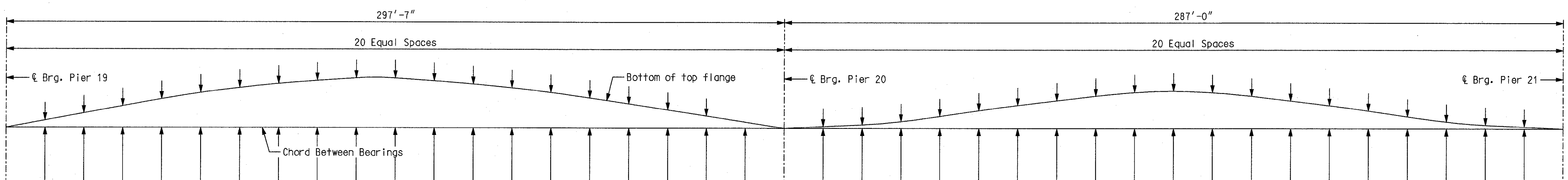
Girder Number																					
1	0"	1/16"	1/2"	1 1/4"	2 1/4"	3 5/16"	4 3/8"	5 3/8"	6 1/8"	6 11/16"	6 15/16"	6 7/8"	6 1/2"	5 7/8"	5"	4"	2 7/8"	1 13/16"	15/16"	5/16"	0"
2	0"	1/16"	1/2"	1 1/4"	2 3/16"	3 1/4"	4 3/8"	5 5/16"	6 1/16"	6 5/8"	6 7/8"	6 13/16"	6 7/16"	5 13/16"	4 15/16"	3 7/8"	2 13/16"	1 13/16"	15/16"	1/4"	0"
3	0"	1/16"	1/2"	1 3/16"	2 3/16"	3 1/4"	4 5/16"	5 1/4"	6"	6 9/16"	6 3/4"	6 11/16"	6 5/16"	5 11/16"	4 13/16"	3 13/16"	2 3/4"	1 3/4"	7/8"	1/4"	0"
4	0"	1/16"	7/16"	1 3/16"	2 1/8"	3 3/16"	4 1/4"	5 3/16"	5 15/16"	6 7/16"	6 11/16"	6 5/8"	6 1/4"	5 5/8"	4 3/4"	3 3/4"	2 11/16"	1 11/16"	13/16"	1/4"	0"

SPAN (20-21)

Girder Number																				
1	3/16"	3/4"	1 9/16"	2 1/2"	3 9/16"	4 9/16"	5 7/16"	6 1/16"	6 1/2"	6 5/8"	6 1/2"	6 1/16"	5 3/8"	4 1/2"	3 9/16"	2 1/2"	1 9/16"	3/4"	3/16"	0"
2	1/4"	13/16"	1 5/8"	2 5/8"	3 11/16"	4 3/4"	5 5/8"	6 5/16"	6 3/4"	6 7/8"	6 3/4"	6 3/8"	5 11/16"	4 13/16"	3 13/16"	2 3/4"	1 3/4"	7/8"	5/16"	0"
3	1/4"	7/8"	1 11/16"	2 3/4"	3 7/8"	4 7/8"	5 13/16"	6 9/16"	7"	7 3/16"	7 1/16"	6 5/8"	5 15/16"	5 1/16"	4 1/16"	2 15/16"	1 15/16"	1"	3/8"	0"
4	5/16"	7/8"	1 13/16"	2 7/8"	4"	5 1/16"	6"	6 3/4"	7 1/4"	7 7/16"	7 5/16"	6 15/16"	6 1/4"	5 3/8"	4 5/16"	3 3/16"	2 1/8"	1 3/16"	7/16"	0"

DEAD LOAD DEFLECTIONS

Notes:
30% of dead load deflection in span (19-20) and 27% of dead load deflection in span (20-21) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



SPAN (19-20)

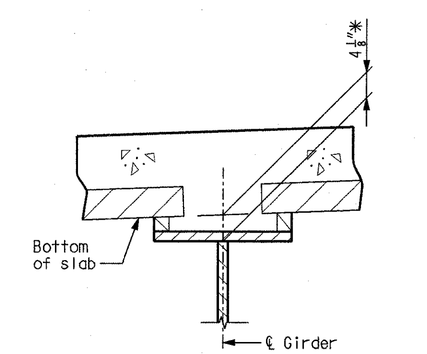
Girder Number																					
1	0"	0"	7/16"	1 1/8"	2 1/16"	3 1/16"	4 1/8"	5"	5 3/4"	6 1/4"	6 7/16"	6 5/16"	5 7/8"	5 3/16"	4 5/16"	3 3/16"	2 1/16"	1"	1/16"	-9/16"	0"
2	0"	0"	7/16"	1 1/8"	2 1/16"	3 1/8"	4 3/16"	5 1/8"	5 13/16"	6 5/16"	6 1/2"	6 7/16"	6 1/16"	5 3/8"	4 1/2"	3 7/16"	2 5/16"	1 1/4"	5/16"	-1/4"	0"
3	0"	1/16"	7/16"	1 3/16"	2 1/8"	3 3/16"	4 1/4"	5 3/16"	5 15/16"	6 7/16"	6 5/8"	6 9/16"	6 3/16"	5 1/2"	4 5/8"	3 5/8"	2 9/16"	1 1/2"	5/8"	0"	0"
4	0"	1/16"	1/2"	1 3/16"	2 3/16"	3 1/4"	4 5/16"	5 1/4"	6"	6 1/2"	6 3/4"	6 11/16"	6 5/16"	5 11/16"	4 13/16"	3 13/16"	2 13/16"	1 3/4"	15/16"	5/16"	0"

SPAN (20-21)

Girder Number																				
1	1/4"	3/4"	1 9/16"	2 9/16"	3 5/8"	4 5/8"	5 1/2"	6 1/8"	6 9/16"	6 11/16"	6 9/16"	6 1/8"	5 7/16"	4 9/16"	3 9/16"	2 1/2"	1 9/16"	3/4"	1/4"	0"
2	1/4"	13/16"	1 5/8"	2 11/16"	3 3/4"	4 3/4"	5 11/16"	6 3/8"	6 13/16"	6 15/16"	6 13/16"	6 3/8"	5 11/16"	4 13/16"	3 13/16"	2 3/4"	1 3/4"	7/8"	5/16"	0"
3	1/4"	7/8"	1 11/16"	2 3/4"	3 7/8"	4 15/16"	5 13/16"	6 9/16"	7"	7 3/16"	7 1/16"	6 5/8"	6"	5 1/16"	4 1/16"	3"	1 15/16"	1 1/16"	3/8"	0"
4	5/16"	7/8"	1 3/4"	2 7/8"	4"	5 1/16"	6"	6 3/4"	7 1/4"	7 7/16"	7 5/16"	6 15/16"	6 1/4"	5 3/8"	4 5/16"	3 3/16"	2 1/8"	1 3/16"	7/16"	0"

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM WB - UNIT 2 (2 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61
F.A. ROUTE 999 | SECTION 82-1B-2
FED. AID PROJECT | ILLINOIS
COUNTY ST. CLAIR
USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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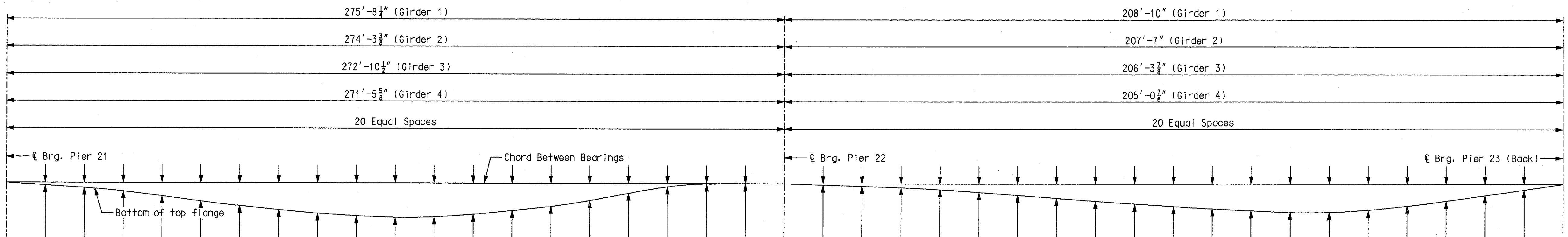


Girder Number																					
1	0"	1/4"	7/8"	1 5/8"	2 5/8"	3 5/8"	4 9/16"	5 7/16"	6 1/8"	6 9/16"	6 11/16"	6 5/8"	6 5/16"	5 11/16"	4 7/8"	3 7/8"	2 7/8"	1 13/16"	1"	5/16"	0"
2	0"	3/16"	11/16"	1 3/8"	2 1/4"	3 1/8"	4 1/16"	4 13/16"	5 7/16"	5 7/8"	6"	5 15/16"	5 11/16"	5 1/8"	4 7/16"	3 1/2"	2 9/16"	1 11/16"	7/8"	5/16"	0"
3	0"	1/8"	1/2"	1 1/8"	1 7/8"	2 11/16"	3 1/2"	4 3/16"	4 3/4"	5 1/8"	5 5/16"	5 5/16"	5 1/16"	4 5/8"	3 15/16"	3 3/16"	2 5/16"	1 1/2"	13/16"	1/4"	0"
4	0"	0"	5/16"	13/16"	1 1/2"	2 1/4"	2 15/16"	3 9/16"	4 1/8"	4 7/16"	4 5/8"	4 5/8"	4 7/16"	4 1/16"	3 1/2"	2 13/16"	2 1/16"	1 5/16"	11/16"	1/4"	0"

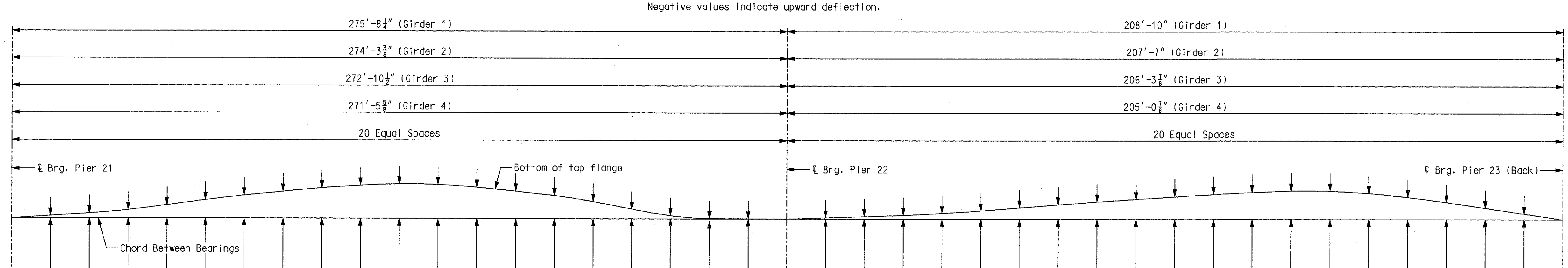
SPAN (21-22)

Girder Number																				
1	1/16"	5/16"	11/16"	1 1/4"	1 13/16"	2 1/2"	3 1/8"	3 3/4"	4 1/4"	4 5/8"	4 7/8"	5"	4 7/8"	4 5/8"	4 3/16"	3 5/8"	2 7/8"	2"	1"	0"
2	1/16"	5/16"	11/16"	1 3/16"	1 3/4"	2 3/8"	3"	3 9/16"	4"	4 3/8"	4 5/8"	4 11/16"	4 9/16"	4 3/8"	3 15/16"	3 3/8"	2 11/16"	1 7/8"	15/16"	0"
3	1/16"	5/16"	11/16"	1 3/16"	1 11/16"	2 1/4"	2 13/16"	3 3/8"	3 3/4"	4 1/8"	4 5/16"	4 3/8"	4 1/4"	4 1/16"	3 5/8"	3 1/8"	2 1/2"	1 11/16"	7/8"	0"
4	1/8"	5/16"	11/16"	1 1/8"	1 5/8"	2 3/16"	2 11/16"	3 1/8"	3 9/16"	3 13/16"	4"	4 1/16"	3 15/16"	3 3/4"	3 3/8"	2 7/8"	2 1/4"	1 9/16"	13/16"	0"

SPAN (22-23)

DEAD LOAD DEFLECTIONS

Notes:
34% of dead load deflection in span (21-22) and 27% of dead load deflection in span (22-23) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



Girder Number																					
1	0"	11/16"	1 5/8"	2 13/16"	4 1/8"	5 9/16"	6 7/8"	8 1/8"	9 3/16"	10"	10 9/16"	10 3/4"	9 15/16"	8 7/8"	7 5/8"	6 3/16"	4 11/16"	3 3/16"	1 7/8"	13/16"	0"
2	0"	7/16"	1 3/16"	2 1/8"	3 3/16"	4 3/8"	5 1/2"	6 1/2"	7 3/8"	8"	8 7/16"	8 9/16"	7 15/16"	7 3/16"	6 1/8"	4 15/16"	3 3/4"	2 1/2"	1 7/16"	9/16"	0"
3	0"	3/16"	11/16"	1 7/16"	2 1/4"	3 3/16"	4 1/16"	4 7/8"	5 9/16"	6 1/16"	6 5/16"	6 3/8"	6"	5 7/16"	4 11/16"	3 3/4"	2 13/16"	1 13/16"	1"	3/8"	0"
4	0"	0"	1/4"	11/16"	1 5/16"	2"	2 11/16"	3 1/4"	3 3/4"	4 1/16"	4 3/16"	4 3/16"	4"	3 11/16"	3 3/16"	2 1/2"	1 13/16"	1 1/8"	9/16"	3/16"	0"

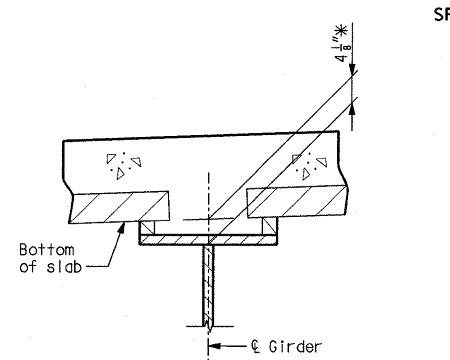
SPAN (21-22)

Girder Number																				
1	1/16"	5/16"	11/16"	1 1/4"	1 13/16"	2 1/2"	3 1/8"	3 3/4"	4 1/4"	4 5/8"	4 7/8"	5"	4 7/8"	4 5/8"	4 3/16"	3 5/8"	2 7/8"	2"	1"	0"
2	1/16"	5/16"	11/16"	1 3/16"	1 3/4"	2 3/8"	3"	3 9/16"	4"	4 3/8"	4 5/8"	4 11/16"	4 9/16"	4 3/8"	3 15/16"	3 3/8"	2 11/16"	1 7/8"	15/16"	0"
3	1/16"	5/16"	11/16"	1 3/16"	1 11/16"	2 1/4"	2 13/16"	3 3/8"	3 3/4"	4 1/8"	4 5/16"	4 3/8"	4 1/4"	4 1/16"	3 5/8"	3 1/8"	2 1/2"	1 11/16"	7/8"	0"
4	1/8"	5/16"	11/16"	1 1/8"	1 5/8"	2 3/16"	2 11/16"	3 1/8"	3 9/16"	3 13/16"	4"	4 1/16"	3 15/16"	3 3/4"	3 3/8"	2 7/8"	2 1/4"	1 9/16"	13/16"	0"

SPAN (22-23)

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_072-152_J6I0984C_072.dgn

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM WB - UNIT 2 (3 OF 3)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

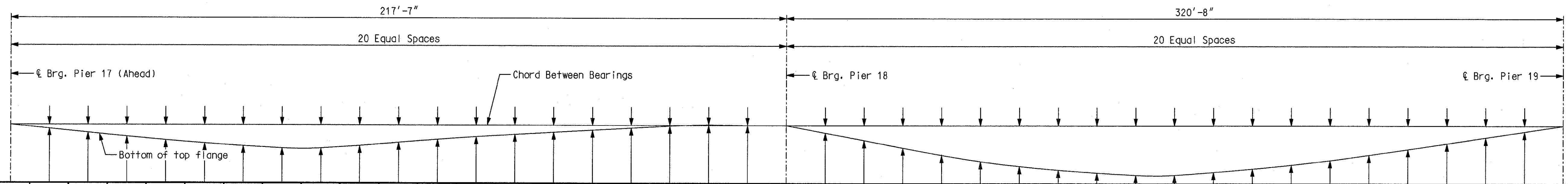
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



Girder Number																					
5	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 13/16″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″
6	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 13/16″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″
7	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 13/16″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″
8	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 3/4″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″

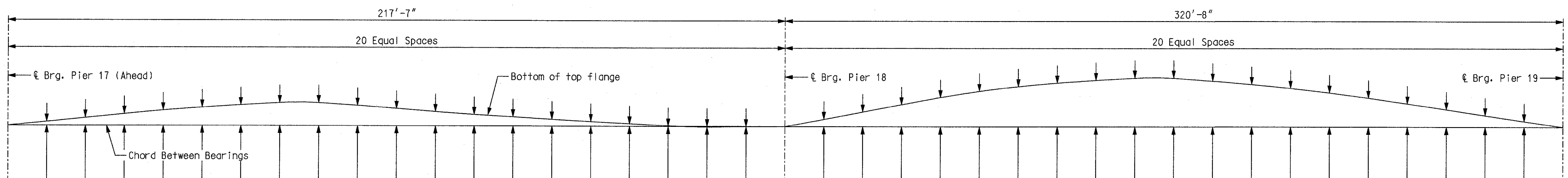
SPAN (17-18)

Girder Number																				
5	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 5/8″	10 7/16″	10 15/16″	10 15/16″	10 5/8″	9 7/8″	8 13/16″	7 7/16″	5 7/8″	4 5/16″	2 13/16″	1 1/2″	9/16″	0″
6	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 5/8″	10 1/2″	10 15/16″	11″	10 5/8″	9 7/8″	8 13/16″	7 7/16″	5 15/16″	4 3/8″	2 13/16″	1 9/16″	9/16″	0″
7	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 5/8″	10 1/2″	10 15/16″	11″	10 11/16″	9 15/16″	8 13/16″	7 1/2″	5 15/16″	4 3/8″	2 7/8″	1 9/16″	9/16″	0″
8	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 11/16″	10 1/2″	11″	11″	10 11/16″	9 15/16″	8 7/8″	7 1/2″	5 15/16″	4 3/8″	2 7/8″	1 9/16″	9/16″	0″

SPAN (18-19)

DEAD LOAD DEFLECTIONS

Notes:
22% of dead load deflection in span (17-18) and 35% of dead load deflection in span (18-19) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



Girder Number																					
5	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 13/16″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″
6	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 13/16″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″
7	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 13/16″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″
8	0″	7/8″	1 3/4″	2 1/2″	3 3/16″	3 11/16″	4″	4 3/16″	4 3/16″	4 1/16″	3 3/4″	3 5/16″	2 3/4″	2 3/16″	1 9/16″	1″	1/2″	1/8″	−1/8″	−3/16″	0″

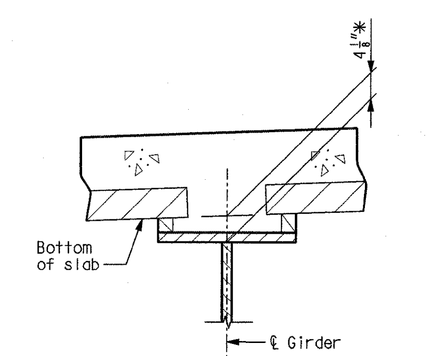
SPAN (17-18)

Girder Number																				
5	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 5/8″	10 7/16″	10 15/16″	10 15/16″	10 5/8″	9 7/8″	8 13/16″	7 7/16″	5 7/8″	4 5/16″	2 13/16″	1 1/2″	9/16″	0″
6	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 5/8″	10 1/2″	10 15/16″	11″	10 5/8″	9 7/8″	8 13/16″	7 7/16″	5 15/16″	4 3/8″	2 13/16″	1 9/16″	9/16″	0″
7	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 5/8″	10 1/2″	10 15/16″	11″	10 11/16″	9 15/16″	8 13/16″	7 1/2″	5 15/16″	4 3/8″	2 7/8″	1 9/16″	9/16″	0″
8	13/16″	2″	3 9/16″	5 1/4″	6 15/16″	8 7/16″	9 11/16″	10 1/2″	11″	11″	10 11/16″	9 15/16″	8 7/8″	7 1/2″	5 15/16″	4 3/8″	2 7/8″	1 9/16″	9/16″	0″

SPAN (18-19)

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM EB - UNIT 2 (1 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 73 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
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REVISED -

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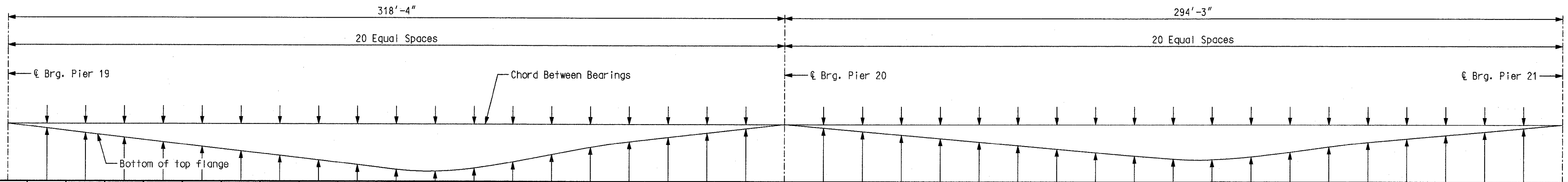


SPAN (19-20)

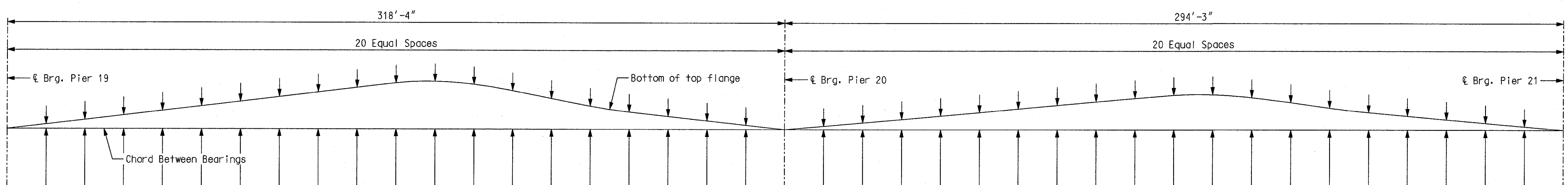
Girder Number																					
5	0"	1/8"	11/16"	1 5/8"	2 13/16"	4 3/16"	5 1/2"	6 11/16"	7 5/8"	8 1/4"	8 9/16"	8 1/2"	8 1/8"	7 3/8"	6 5/16"	5 1/16"	3 11/16"	2 3/8"	1 1/4"	7/16"	0"
6	0"	1/8"	11/16"	1 9/16"	2 13/16"	4 1/8"	5 7/16"	6 5/8"	7 9/16"	8 3/16"	8 1/2"	8 7/16"	8"	7 1/4"	6 1/4"	5"	3 5/8"	2 5/16"	1 1/4"	7/16"	0"
7	0"	1/8"	5/8"	1 9/16"	2 3/4"	4 1/8"	5 7/16"	6 9/16"	7 1/2"	8 1/8"	8 7/16"	8 3/8"	7 15/16"	7 3/16"	6 1/8"	4 15/16"	3 9/16"	2 1/4"	1 3/16"	3/8"	0"
8	0"	1/8"	5/8"	1 9/16"	2 3/4"	4 1/16"	5 3/8"	6 1/2"	7 7/16"	8 1/16"	8 3/8"	8 5/16"	7 7/8"	7 1/8"	6 1/16"	4 13/16"	3 1/2"	2 1/4"	1 1/8"	3/8"	0"

SPAN (20-21)

Girder Number																				
5	1/8"	11/16"	1 7/16"	2 7/16"	3 1/2"	4 9/16"	5 1/2"	6 1/4"	6 11/16"	6 15/16"	6 13/16"	6 7/16"	5 13/16"	4 15/16"	3 7/8"	2 13/16"	1 3/4"	7/8"	1/4"	0"
6	3/16"	11/16"	1 9/16"	2 9/16"	3 5/8"	4 3/4"	5 11/16"	6 7/16"	6 15/16"	7 3/16"	7 1/16"	6 11/16"	6 1/16"	5 3/16"	4 1/8"	3"	1 15/16"	1"	3/8"	0"
7	3/16"	3/4"	1 5/8"	2 5/8"	3 3/4"	4 7/8"	5 7/8"	6 5/8"	7 3/16"	7 7/16"	7 3/8"	7"	6 5/16"	5 7/16"	4 3/8"	3 1/4"	2 1/8"	1 3/16"	7/16"	0"
8	1/4"	13/16"	1 11/16"	2 3/4"	3 7/8"	5 1/16"	6 1/16"	6 7/8"	7 7/16"	7 11/16"	7 5/8"	7 1/4"	6 9/16"	5 11/16"	4 5/8"	3 7/16"	2 5/16"	1 5/16"	1/2"	0"

DEAD LOAD DEFLECTIONS

Notes:
30% of dead load deflection in span (19-20) and 30% of dead load deflection in span (20-21) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



SPAN (19-20)

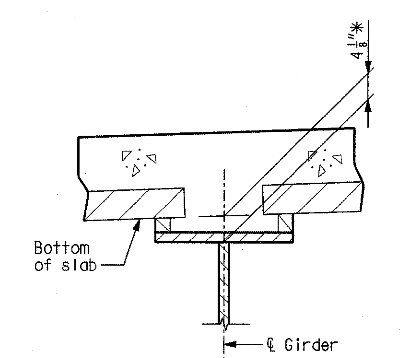
Girder Number																					
5	0"	1/8"	11/16"	1 5/8"	2 13/16"	4 3/16"	5 1/2"	6 11/16"	7 5/8"	8 1/4"	8 9/16"	8 1/2"	8 1/8"	7 3/8"	6 5/16"	5 1/16"	3 11/16"	2 3/8"	1 1/4"	7/16"	0"
6	0"	1/8"	11/16"	1 9/16"	2 13/16"	4 1/8"	5 7/16"	6 5/8"	7 9/16"	8 3/16"	8 1/2"	8 7/16"	8"	7 1/4"	6 1/4"	5"	3 5/8"	2 5/16"	1 1/4"	7/16"	0"
7	0"	1/8"	5/8"	1 9/16"	2 3/4"	4 1/8"	5 7/16"	6 9/16"	7 1/2"	8 1/8"	8 7/16"	8 3/8"	7 15/16"	7 3/16"	6 1/8"	4 15/16"	3 9/16"	2 1/4"	1 3/16"	3/8"	0"
8	0"	1/8"	5/8"	1 9/16"	2 3/4"	4 1/16"	5 3/8"	6 1/2"	7 7/16"	8 1/16"	8 3/8"	8 5/16"	7 7/8"	7 1/8"	6 1/16"	4 13/16"	3 1/2"	2 1/4"	1 1/8"	3/8"	0"

SPAN (20-21)

Girder Number																				
5	1/8"	5/8"	1 3/8"	2 3/8"	3 3/8"	4 7/16"	5 5/16"	6 1/16"	6 1/2"	6 11/16"	6 9/16"	6 3/16"	5 1/2"	4 5/8"	3 9/16"	2 7/16"	1 1/2"	3/4"	3/16"	0"
6	1/4"	13/16"	1 11/16"	2 3/4"	3 7/8"	5"	6"	6 13/16"	7 3/8"	7 5/8"	7 5/8"	7 5/16"	6 11/16"	5 7/8"	4 7/8"	3 3/4"	2 1/2"	1 3/8"	9/16"	0"
7	5/16"	1"	1 15/16"	3 1/8"	4 3/8"	5 9/16"	6 11/16"	7 5/8"	8 1/4"	8 5/8"	8 5/8"	8 3/8"	7 7/8"	7 1/8"	6 3/16"	5 1/16"	3 1/2"	2 1/16"	7/8"	0"
8	7/16"	1 3/16"	2 1/4"	3 1/2"	4 7/8"	6 3/16"	7 3/8"	8 3/8"	9 1/8"	9 9/16"	9 11/16"	9 1/2"	9 1/16"	8 3/8"	7 7/16"	6 3/8"	4 1/2"	2 3/4"	1 3/16"	0"

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



✱ Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM EB - UNIT 2 (2 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 74 of 152

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_074-152_J6I0984C_074.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

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REVISED -

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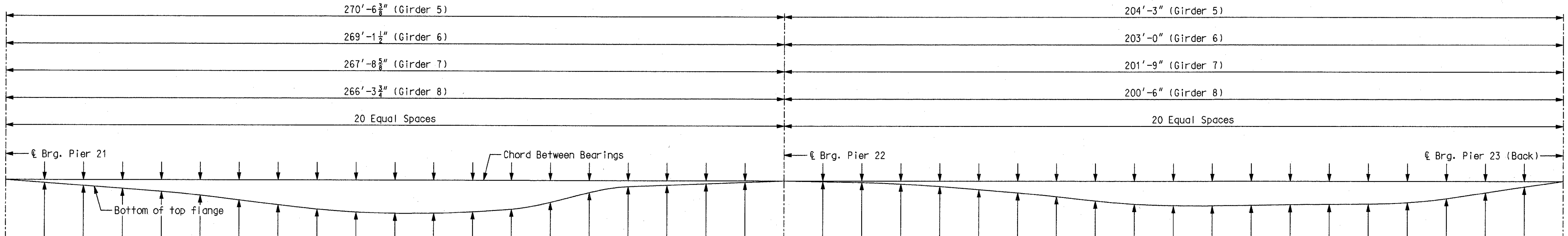


SPAN (21-22)

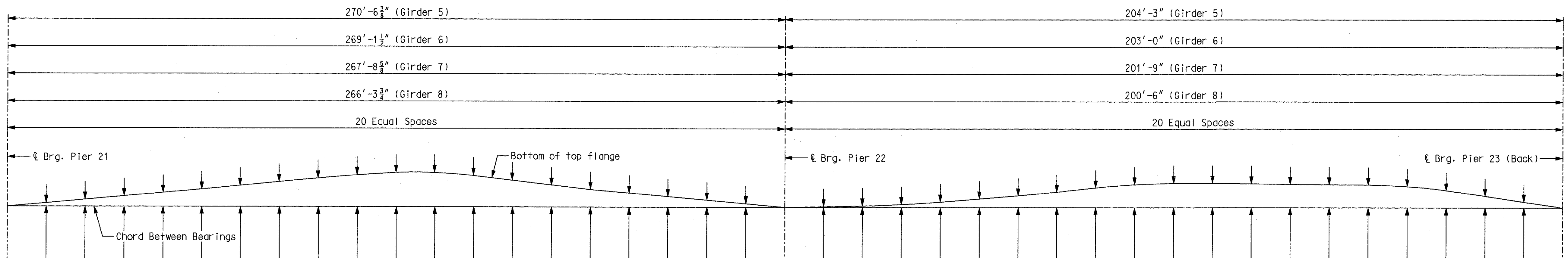
Girder Number																					
5	0"	3/16"	3/4"	1 7/16"	2 5/16"	3 5/16"	4 3/16"	5 1/16"	5 11/16"	6 1/8"	6 5/16"	6 1/4"	5 15/16"	5 3/8"	4 5/8"	3 11/16"	2 11/16"	1 3/4"	15/16"	5/16"	0"
6	0"	1/8"	9/16"	1 3/16"	2"	2 7/8"	3 11/16"	4 7/16"	5 1/16"	5 1/2"	5 11/16"	5 5/8"	5 3/8"	4 7/8"	4 3/16"	3 3/8"	2 7/16"	1 9/16"	13/16"	5/16"	0"
7	0"	1/16"	7/16"	15/16"	1 5/8"	2 7/16"	3 3/16"	3 7/8"	4 7/16"	4 13/16"	5"	5"	4 13/16"	4 3/8"	3 3/4"	3"	2 3/16"	1 7/16"	3/4"	1/4"	0"
8	0"	0"	1/4"	11/16"	1 5/16"	2"	2 11/16"	3 5/16"	3 13/16"	4 3/16"	4 3/8"	4 3/8"	4 3/16"	3 7/8"	3 5/16"	2 11/16"	1 15/16"	1 1/4"	5/8"	3/16"	0"

SPAN (22-23)

Girder Number																				
5	1/16"	5/16"	11/16"	1 1/4"	1 13/16"	2 7/16"	3 1/16"	3 11/16"	4 1/8"	4 9/16"	4 3/4"	4 7/8"	4 3/4"	4 1/2"	4 1/16"	3 1/2"	2 3/4"	1 7/8"	1"	0"
6	1/16"	5/16"	11/16"	1 3/16"	1 3/4"	2 3/8"	2 15/16"	3 7/16"	3 15/16"	4 1/4"	4 7/16"	4 9/16"	4 7/16"	4 3/16"	3 13/16"	3 1/4"	2 9/16"	1 3/4"	15/16"	0"
7	1/16"	5/16"	11/16"	1 3/16"	1 11/16"	2 1/4"	2 3/4"	3 1/4"	3 11/16"	4"	4 3/16"	4 1/4"	4 1/8"	3 7/8"	3 1/2"	3"	2 3/8"	1 5/8"	13/16"	0"
8	1/8"	5/16"	11/16"	1 1/8"	1 5/8"	2 1/8"	2 5/8"	3 1/16"	3 7/16"	3 3/4"	3 7/8"	3 15/16"	3 13/16"	3 5/8"	3 1/4"	2 3/4"	2 3/16"	1 1/2"	3/4"	0"

DEAD LOAD DEFLECTIONS

Notes:
32% of dead load deflection in span (21-22) and 27% of dead load deflection in Span (22-23) is due to the weight of structural steel.
Dead load deflection includes weight of structural steel, concrete slab, and barrier curbs.
Negative values indicate upward deflection.



SPAN (21-22)

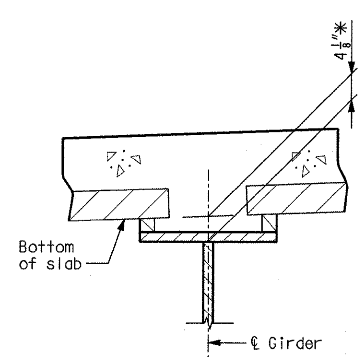
Girder Number																					
5	0"	1/4"	13/16"	1 9/16"	2 1/2"	3 1/2"	4 1/2"	5 5/16"	6 1/16"	6 1/2"	6 3/4"	6 11/16"	6 3/8"	5 3/4"	4 15/16"	3 15/16"	2 15/16"	1 15/16"	1 1/16"	3/8"	0"
6	0"	1/16"	3/8"	7/8"	1 9/16"	2 3/8"	3 1/8"	3 3/4"	4 1/4"	4 9/16"	4 11/16"	4 9/16"	4 7/16"	4 1/16"	3 1/2"	2 3/4"	2"	1 1/4"	5/8"	3/16"	0"
7	0"	-3/16"	-1/16"	1/4"	11/16"	1 1/4"	1 3/4"	2 3/16"	2 1/2"	2 11/16"	2 5/8"	2 7/16"	2 1/2"	2 3/8"	2 1/16"	1 9/16"	1 1/16"	9/16"	3/16"	-1/16"	0"
8	0"	-3/8"	-1/2"	-7/16"	-1/4"	1/16"	3/8"	5/8"	3/4"	3/4"	9/16"	5/16"	9/16"	11/16"	5/8"	3/8"	1/8"	-1/8"	-1/4"	-1/4"	0"

SPAN (22-23)

Girder Number																				
5	1/16"	5/16"	11/16"	1 1/4"	1 13/16"	2 7/16"	3 1/16"	3 11/16"	4 1/8"	4 9/16"	4 3/4"	4 7/8"	4 3/4"	4 1/2"	4 1/16"	3 1/2"	2 3/4"	1 7/8"	1"	0"
6	1/16"	5/16"	11/16"	1 3/16"	1 3/4"	2 3/8"	2 15/16"	3 7/16"	3 15/16"	4 1/4"	4 7/16"	4 9/16"	4 7/16"	4 3/16"	3 13/16"	3 1/4"	2 9/16"	1 3/4"	15/16"	0"
7	1/16"	5/16"	11/16"	1 3/16"	1 11/16"	2 1/4"	2 3/4"	3 1/4"	3 11/16"	4"	4 3/16"	4 1/4"	4 1/8"	3 7/8"	3 1/2"	3"	2 3/8"	1 5/8"	13/16"	0"
8	1/8"	5/16"	11/16"	1 1/8"	1 5/8"	2 1/8"	2 5/8"	3 1/16"	3 7/16"	3 3/4"	3 7/8"	3 15/16"	3 13/16"	3 5/8"	3 1/4"	2 3/4"	2 3/16"	1 1/2"	3/4"	0"

CAMBER DIAGRAM

Notes:
Camber includes allowance for dead load deflection due to concrete slab, curbs, and structural steel.
Positive values are above the chord between bents and negative values are below the chord between bents.



* Dimensions may vary if the girder camber after erection differs from plan camber by more or less than the % of Dead Load Deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.

THEORETICAL SLAB HAUNCH

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 75 of 152

DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM EB - UNIT 2 (3 OF 3)

CONTRACT NO. 76D61	
F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
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KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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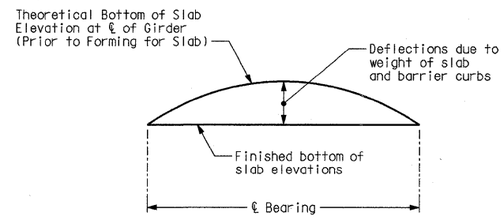
** THEORETICAL BOTTOM OF SLAB ELEVATIONS AT ℄ OF GIRDER (PRIOR TO FORMING FOR SLAB)

	Span (13-14) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	477.05	477.03	477.01	476.99	476.97	476.94	476.90	476.86	476.81	476.76	476.70	476.64	476.57	476.50	476.43	476.36	476.29	476.23	476.17	476.12	476.08
Girder 2	477.28	477.27	477.25	477.23	477.20	477.17	477.14	477.10	477.05	476.99	476.94	476.87	476.80	476.73	476.66	476.59	476.52	476.46	476.40	476.36	476.32
Girder 3	477.52	477.50	477.48	477.46	477.44	477.41	477.37	477.33	477.28	477.23	477.17	477.11	477.04	476.97	476.90	476.83	476.76	476.70	476.64	476.59	476.55
Girder 4	477.75	477.74	477.72	477.70	477.67	477.64	477.61	477.57	477.52	477.46	477.40	477.34	477.27	477.20	477.13	477.06	476.99	476.93	476.87	476.83	476.79
	Span (14-15) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	476.08	476.05	476.03	476.03	476.04	476.04	476.03	476.01	475.98	475.92	475.85	475.76	475.65	475.52	475.38	475.22	475.07	474.92	474.79	474.67	474.58
Girder 2	476.32	476.28	476.27	476.27	476.27	476.27	476.27	476.25	476.21	476.16	476.08	475.99	475.88	475.75	475.61	475.46	475.31	475.16	475.02	474.91	474.82
Girder 3	476.55	476.52	476.50	476.50	476.51	476.51	476.50	476.48	476.45	476.39	476.32	476.23	476.12	475.99	475.85	475.69	475.54	475.39	475.26	475.14	475.05
Girder 4	476.79	476.75	476.74	476.74	476.74	476.74	476.74	476.72	476.68	476.63	476.55	476.46	476.35	476.22	476.08	475.93	475.78	475.63	475.49	475.38	475.29
	Span (15-16) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	474.58	474.52	474.49	474.47	474.47	474.47	474.48	474.47	474.45	474.41	474.35	474.27	474.18	474.06	473.93	473.79	473.64	473.48	473.33	473.20	473.08
Girder 2	474.82	474.76	474.72	474.71	474.71	474.71	474.71	474.70	474.68	474.64	474.58	474.51	474.41	474.30	474.17	474.02	473.87	473.72	473.57	473.43	473.32
Girder 3	475.05	474.99	474.96	474.94	474.94	474.94	474.95	474.94	474.92	474.88	474.82	474.74	474.65	474.53	474.40	474.26	474.11	473.95	473.80	473.67	473.55
Girder 4	475.29	475.23	475.19	475.18	475.18	475.18	475.18	475.17	475.15	475.11	475.05	474.98	474.88	474.77	474.64	474.49	474.34	474.19	474.04	473.90	473.79
	Span (16-17) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	473.08	473.02	472.98	472.94	472.90	472.87	472.85	472.82	472.79	472.77	472.73	472.70	472.66	472.61	472.55	472.49	472.42	472.35	472.28	472.20	472.12
Girder 2	473.32	473.26	473.21	473.17	473.14	473.11	473.08	473.06	473.03	473.00	472.97	472.93	472.89	472.84	472.79	472.73	472.66	472.59	472.51	472.43	472.35
Girder 3	473.55	473.49	473.45	473.41	473.37	473.34	473.32	473.29	473.27	473.24	473.20	473.17	473.13	473.08	473.02	472.96	472.90	472.82	472.75	472.67	472.59
Girder 4	473.79	473.73	473.68	473.64	473.61	473.58	473.55	473.53	473.50	473.47	473.44	473.40	473.36	473.31	473.26	473.20	473.13	473.06	472.98	472.90	472.82

** Elevations are based on a constant slab thickness of 9" and include allowance for theoretical dead load deflections due to weight of Slab (including Prestressed Panel) and Barrier Curbs.



TYPICAL SLAB ELEVATIONS DIAGRAM

THEORETICAL BOTTOM OF SLAB ELEVATIONS WB - UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 76 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
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2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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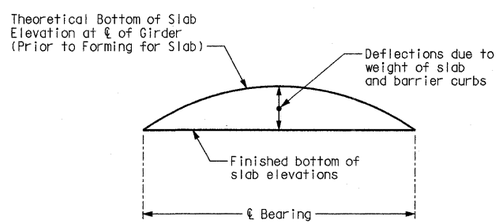
** THEORETICAL BOTTOM OF SLAB ELEVATIONS AT ℄ OF GIRDER (PRIOR TO FORMING FOR SLAB)

	Span (13-14) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	477.75	477.73	477.71	477.69	477.66	477.63	477.60	477.56	477.51	477.46	477.41	477.35	477.29	477.23	477.17	477.11	477.05	476.99	476.94	476.90	476.86
Girder 6	477.52	477.50	477.48	477.45	477.43	477.40	477.36	477.32	477.28	477.23	477.17	477.12	477.06	477.00	476.93	476.87	476.81	476.76	476.71	476.66	476.63
Girder 7	477.28	477.26	477.24	477.22	477.19	477.16	477.13	477.09	477.04	476.99	476.94	476.88	476.82	476.76	476.70	476.64	476.58	476.52	476.47	476.43	476.39
Girder 8	477.05	477.03	477.01	476.98	476.96	476.93	476.89	476.85	476.81	476.76	476.70	476.65	476.59	476.53	476.46	476.40	476.34	476.29	476.24	476.19	476.16
	Span (14-15) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	476.86	476.83	476.82	476.82	476.82	476.81	476.80	476.78	476.74	476.68	476.61	476.53	476.42	476.31	476.18	476.05	475.91	475.78	475.67	475.56	475.48
Girder 6	476.63	476.60	476.58	476.58	476.58	476.58	476.57	476.54	476.50	476.45	476.38	476.29	476.19	476.07	475.95	475.81	475.68	475.55	475.43	475.33	475.24
Girder 7	476.39	476.36	476.35	476.35	476.35	476.34	476.33	476.31	476.27	476.21	476.14	476.06	475.95	475.84	475.71	475.58	475.44	475.31	475.20	475.09	475.01
Girder 8	476.16	476.13	476.11	476.11	476.11	476.11	476.10	476.07	476.03	475.98	475.91	475.82	475.72	475.60	475.48	475.34	475.21	475.08	474.96	474.86	474.77
	Span (15-16) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	475.48	475.42	475.39	475.37	475.36	475.36	475.35	475.34	475.32	475.28	475.23	475.16	475.07	474.98	474.86	474.73	474.60	474.46	474.33	474.20	474.09
Girder 6	475.24	475.19	475.15	475.13	475.12	475.12	475.12	475.10	475.08	475.04	474.99	474.92	474.84	474.74	474.63	474.50	474.36	474.23	474.09	473.97	473.86
Girder 7	475.01	474.95	474.92	474.90	474.89	474.89	474.88	474.87	474.85	474.81	474.76	474.69	474.60	474.51	474.39	474.26	474.13	473.99	473.86	473.73	473.62
Girder 8	474.77	474.72	474.68	474.66	474.65	474.65	474.65	474.63	474.61	474.57	474.52	474.45	474.37	474.27	474.16	474.03	473.89	473.76	473.62	473.50	473.39
	Span (16-17) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	474.09	474.04	473.99	473.96	473.92	473.89	473.87	473.84	473.81	473.78	473.75	473.72	473.68	473.63	473.58	473.53	473.47	473.41	473.34	473.27	473.21
Girder 6	473.86	473.80	473.76	473.72	473.69	473.66	473.63	473.60	473.58	473.55	473.52	473.48	473.44	473.40	473.35	473.29	473.24	473.17	473.11	473.04	472.97
Girder 7	473.62	473.57	473.52	473.49	473.45	473.42	473.40	473.37	473.34	473.31	473.28	473.25	473.21	473.16	473.11	473.06	473.00	472.94	472.87	472.81	472.74
Girder 8	473.39	473.33	473.29	473.25	473.22	473.19	473.16	473.13	473.11	473.08	473.05	473.01	472.97	472.93	472.88	472.82	472.77	472.70	472.64	472.57	472.50

** Elevations are based on a constant slab thickness of 9" and include allowance for theoretical dead load deflections due to weight of Slab (including Prestressed Panel) and Barrier Curbs.



TYPICAL SLAB ELEVATIONS DIAGRAM

THEORETICAL BOTTOM OF SLAB ELEVATIONS EB - UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
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TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
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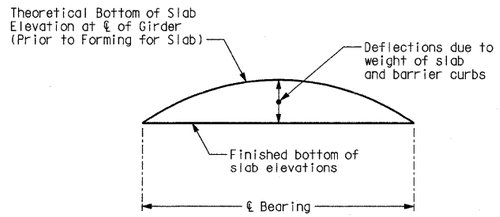
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

✳✳ THEORETICAL BOTTOM OF SLAB ELEVATIONS AT ℄ OF GIRDER
(PRIOR TO FORMING FOR SLAB)

	Span (17-18) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	472.09	472.07	472.05	472.03	472.00	471.97	471.93	471.89	471.84	471.79	471.73	471.67	471.60	471.53	471.47	471.40	471.34	471.28	471.23	471.19	471.15
Girder 2	472.33	472.31	472.29	472.26	472.23	472.20	472.16	472.12	472.07	472.02	471.96	471.90	471.84	471.77	471.70	471.64	471.57	471.52	471.47	471.42	471.39
Girder 3	472.56	472.54	472.52	472.50	472.47	472.44	472.40	472.36	472.31	472.26	472.20	472.14	472.07	472.00	471.94	471.87	471.81	471.75	471.70	471.66	471.62
Girder 4	472.80	472.78	472.76	472.73	472.70	472.67	472.63	472.59	472.54	472.49	472.43	472.37	472.31	472.24	472.17	472.11	472.04	471.99	471.94	471.89	471.86
	Span (18-19) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	471.15	471.12	471.12	471.12	471.14	471.14	471.14	471.12	471.09	471.03	470.96	470.86	470.75	470.62	470.48	470.32	470.16	470.01	469.87	469.75	469.65
Girder 2	471.39	471.36	471.35	471.36	471.37	471.38	471.37	471.36	471.32	471.27	471.19	471.10	470.99	470.86	470.71	470.56	470.40	470.25	470.11	469.98	469.88
Girder 3	471.62	471.59	471.59	471.59	471.61	471.61	471.61	471.59	471.56	471.50	471.43	471.34	471.22	471.09	470.95	470.79	470.64	470.49	470.35	470.22	470.12
Girder 4	471.86	471.83	471.82	471.83	471.84	471.85	471.85	471.83	471.79	471.74	471.67	471.57	471.46	471.33	471.18	471.03	470.87	470.72	470.58	470.45	470.35
	Span (19-20) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	469.65	469.58	469.53	469.50	469.48	469.47	469.46	469.44	469.41	469.37	469.30	469.23	469.13	469.02	468.89	468.76	468.62	468.48	468.36	468.25	468.24
Girder 2	469.88	469.81	469.76	469.73	469.71	469.70	469.69	469.67	469.64	469.60	469.54	469.46	469.36	469.25	469.12	468.99	468.85	468.72	468.59	468.49	468.45
Girder 3	470.12	470.05	470.00	469.97	469.95	469.94	469.92	469.90	469.87	469.83	469.77	469.69	469.59	469.48	469.35	469.22	469.08	468.95	468.82	468.72	468.65
Girder 4	470.35	470.28	470.23	470.20	470.18	470.17	470.16	470.14	470.10	470.06	470.00	469.92	469.82	469.71	469.58	469.45	469.31	469.18	469.06	468.95	468.85
	Span (20-21) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	468.24	468.26	468.30	468.35	468.41	468.48	468.54	468.60	468.64	468.67	468.68	468.67	468.65	468.61	468.56	468.51	468.45	468.39	468.35	468.31	468.30
Girder 2	468.45	468.44	468.45	468.47	468.51	468.55	468.59	468.62	468.63	468.63	468.62	468.58	468.53	468.47	468.39	468.31	468.22	468.13	468.06	467.99	467.95
Girder 3	468.65	468.61	468.60	468.60	468.61	468.62	468.63	468.63	468.62	468.60	468.56	468.50	468.42	468.33	468.22	468.11	467.99	467.87	467.77	467.67	467.60
Girder 4	468.85	468.79	468.75	468.72	468.70	468.69	468.67	468.65	468.61	468.56	468.49	468.41	468.30	468.18	468.05	467.91	467.76	467.62	467.48	467.35	467.25
	Span (21-22) (℄ Brg. - ℄ Brg.)✳																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	468.30	468.32	468.35	468.40	468.45	468.51	468.57	468.62	468.66	468.68	468.69	468.68	468.60	468.50	468.38	468.26	468.13	468.01	467.89	467.79	467.71
Girder 2	467.95	467.93	467.94	467.95	467.97	468.00	468.03	468.05	468.06	468.06	468.04	468.01	467.93	467.83	467.72	467.60	467.48	467.37	467.26	467.16	467.07
Girder 3	467.60	467.55	467.52	467.51	467.50	467.49	467.49	467.48	467.46	467.43	467.39	467.34	467.26	467.17	467.06	466.95	466.84	466.72	466.62	466.52	466.44
Girder 4	467.25	467.17	467.11	467.06	467.02	466.99	466.95	466.91	466.87	466.81	466.74	466.67	466.59	466.50	466.40	466.30	466.19	466.08	465.98	465.88	465.80
	Span (22-23) (℄ Brg. - ℄ Brg.)✳																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 1	467.71	467.66	467.63	467.60	467.58	467.57	467.56	467.54	467.53	467.51	467.48	467.44	467.40	467.34	467.26	467.19	467.10	467.00	466.90	466.79	466.68
Girder 2	467.07	467.03	466.99	466.97	466.95	466.93	466.91	466.90	466.88	466.86	466.83	466.79	466.74	466.69	466.62	466.54	466.45	466.36	466.26	466.16	466.05
Girder 3	466.44	466.39	466.36	466.33	466.31	466.29	466.27	466.25	466.23	466.21	466.18	466.14	466.09	466.03	465.97	465.88	465.80	465.71	465.62	465.52	465.42
Girder 4	465.80	465.76	465.72	465.69	465.67	465.65	465.63	465.61	465.59	465.56	465.52	465.48	465.43	465.37	465.30	465.23	465.15	465.07	464.97	464.88	464.78

✳ Measured along ℄ girder.
✳✳ Elevations are based on a constant slab thickness of 9" and include allowance for theoretical dead load deflections due to weight of Slab (including Prestressed Panel) and Barrier Curbs.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 78 of 152

THEORETICAL BOTTOM OF SLAB ELEVATIONS WB - UNIT 2

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_078-152_J610984C_078.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
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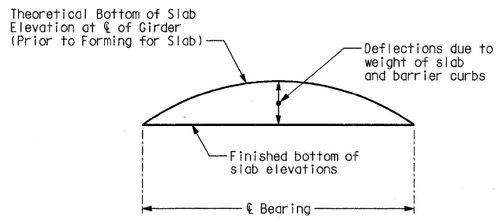
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

** THEORETICAL BOTTOM OF SLAB ELEVATIONS AT ℄ OF GIRDER (PRIOR TO FORMING FOR SLAB)

	Span (17-18) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	473.18	473.18	473.19	473.18	473.17	473.15	473.11	473.07	473.02	472.96	472.89	472.81	472.72	472.63	472.54	472.44	472.36	472.28	472.21	472.14	472.09
Girder 6	472.95	472.95	472.95	472.94	472.93	472.91	472.88	472.84	472.79	472.72	472.65	472.57	472.48	472.39	472.30	472.21	472.12	472.04	471.97	471.91	471.86
Girder 7	472.71	472.71	472.71	472.71	472.70	472.68	472.64	472.60	472.55	472.49	472.42	472.34	472.25	472.16	472.07	471.97	471.89	471.81	471.74	471.67	471.62
Girder 8	472.48	472.48	472.48	472.47	472.46	472.44	472.41	472.37	472.32	472.25	472.18	472.10	472.01	471.92	471.83	471.74	471.65	471.57	471.50	471.44	471.39
	Span (18-19) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	472.09	472.05	472.04	472.04	472.05	472.06	472.07	472.05	472.02	471.96	471.88	471.78	471.66	471.52	471.37	471.20	471.04	470.88	470.73	470.60	470.49
Girder 6	471.86	471.82	471.80	471.80	471.82	471.83	471.83	471.82	471.78	471.73	471.65	471.55	471.43	471.29	471.13	470.97	470.80	470.64	470.49	470.36	470.26
Girder 7	471.62	471.58	471.57	471.57	471.58	471.59	471.60	471.58	471.55	471.49	471.42	471.32	471.20	471.06	470.90	470.74	470.57	470.41	470.26	470.13	470.02
Girder 8	471.39	471.35	471.33	471.34	471.35	471.36	471.36	471.35	471.31	471.26	471.18	471.08	470.96	470.82	470.67	470.50	470.34	470.17	470.02	469.89	469.79
	Span (19-20) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	470.49	470.42	470.38	470.35	470.34	470.34	470.34	470.33	470.30	470.26	470.19	470.11	470.01	469.88	469.74	469.59	469.43	469.27	469.13	469.00	468.90
Girder 6	470.26	470.19	470.14	470.12	470.11	470.11	470.10	470.09	470.06	470.02	469.96	469.87	469.77	469.64	469.50	469.35	469.19	469.04	468.89	468.77	468.66
Girder 7	470.02	469.95	469.91	469.88	469.87	469.87	469.87	469.85	469.83	469.78	469.72	469.63	469.53	469.40	469.26	469.11	468.95	468.80	468.66	468.53	468.43
Girder 8	469.79	469.72	469.67	469.64	469.63	469.63	469.63	469.62	469.59	469.54	469.48	469.39	469.29	469.16	469.02	468.87	468.71	468.56	468.42	468.29	468.19
	Span (20-21) (℄ Brg. - ℄ Brg.)																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	468.90	468.83	468.79	468.76	468.75	468.74	468.72	468.71	468.68	468.63	468.57	468.49	468.39	468.28	468.16	468.03	467.89	467.76	467.65	467.55	467.46
Girder 6	468.66	468.60	468.56	468.53	468.52	468.51	468.50	468.48	468.45	468.41	468.35	468.27	468.17	468.06	467.94	467.80	467.66	467.51	467.36	467.23	467.11
Girder 7	468.43	468.37	468.33	468.30	468.29	468.28	468.27	468.26	468.23	468.19	468.13	468.05	467.95	467.84	467.72	467.58	467.44	467.25	467.07	466.91	466.76
Girder 8	468.19	468.13	468.09	468.07	468.06	468.05	468.05	468.03	468.00	467.96	467.91	467.83	467.73	467.62	467.50	467.36	467.21	466.99	466.78	466.59	466.41
	Span (21-22) (℄ Brg. - ℄ Brg.)*																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	467.46	467.41	467.38	467.36	467.35	467.35	467.34	467.33	467.30	467.27	467.22	467.16	467.07	466.97	466.86	466.74	466.62	466.49	466.38	466.28	466.20
Girder 6	467.11	467.03	466.97	466.92	466.88	466.84	466.81	466.76	466.71	466.65	466.57	466.49	466.40	466.31	466.20	466.09	465.97	465.85	465.74	465.64	465.56
Girder 7	466.76	466.65	466.56	466.48	466.40	466.34	466.27	466.20	466.12	466.03	465.93	465.82	465.74	465.65	465.54	465.43	465.32	465.21	465.10	465.01	464.93
Girder 8	466.41	466.27	466.14	466.03	465.93	465.83	465.73	465.63	465.52	465.41	465.28	465.15	465.07	464.99	464.89	464.78	464.67	464.57	464.46	464.37	464.29
	Span (22-23) (℄ Brg. - ℄ Brg.)*																				
	℄ Brg.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ Brg.
Girder 5	466.20	466.15	466.12	466.09	466.07	466.06	466.04	466.03	466.01	465.99	465.96	465.92	465.88	465.82	465.75	465.68	465.59	465.49	465.39	465.28	465.17
Girder 6	465.56	465.52	465.48	465.45	465.43	465.42	465.40	465.38	465.37	465.34	465.31	465.27	465.22	465.17	465.10	465.02	464.94	464.85	464.75	464.64	464.54
Girder 7	464.93	464.88	464.85	464.82	464.79	464.78	464.76	464.74	464.72	464.69	464.66	464.62	464.57	464.51	464.45	464.37	464.29	464.20	464.10	464.01	463.90
Girder 8	464.29	464.25	464.21	464.18	464.16	464.14	464.11	464.09	464.07	464.04	464.00	463.96	463.91	463.86	463.79	463.72	463.64	463.55	463.46	463.37	463.27

* Measured along ℄ girder.
** Elevations are based on a constant slab thickness of 9" and include allowance for theoretical dead load deflections due to weight of Slab (including Prestressed Panel) and Barrier Curbs.



TYPICAL SLAB ELEVATIONS DIAGRAM

THEORETICAL BOTTOM OF SLAB ELEVATIONS EB - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61
F.A. ROUTE 999 | SECTION 82-1B-2
FED. AID PROJECT | ILLINOIS
COUNTY ST. CLAIR
USER NAME = jjelliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010
DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

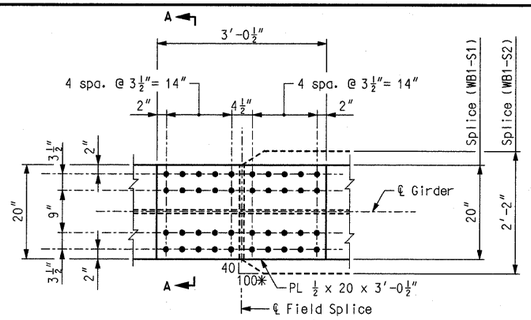
ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

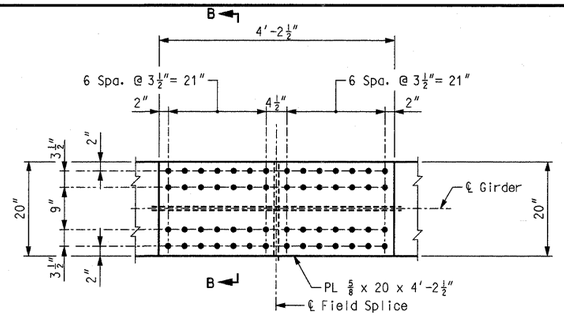
HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

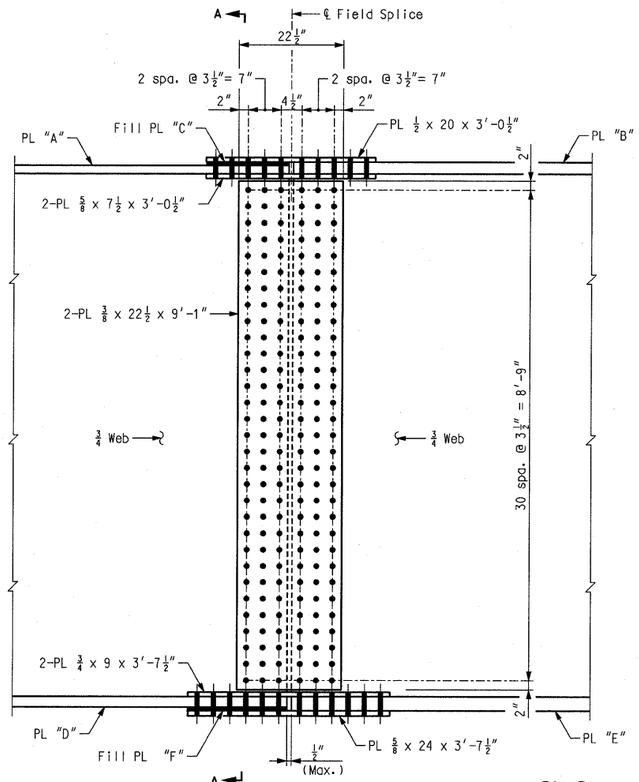


PLAN - TOP FLANGE

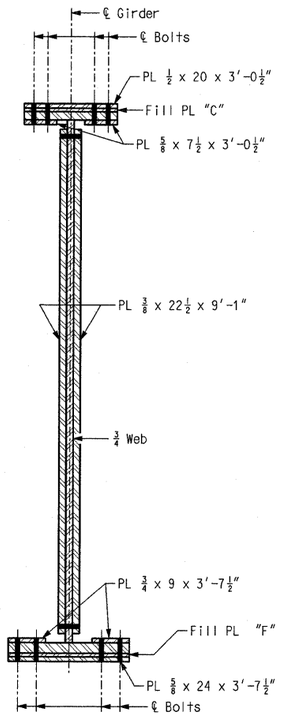
TABLE OF DIMENSIONS - FIELD SPLICE						
Splice	Top Flange			Bottom Flange		
	PL"A"	PL"B"	FILL PL"C"	PL"D"	PL"E"	FILL PL"F"
(WB1-S1)	⅞ x 20	1⅛ x 20	¼ x 20 x 18"	1 x 24	1⅜ x 24	⅜ x 24 x 21½"
(WB1-S2)	1 x 20	1⅛ x 26	⅛ x 20 x 18"	1⅜ x 24	1⅜ x 32	-
(WB1-S3)	1 x 20	1⅜ x 20	⅜ x 20 x 2'-1"	1⅛ x 24	1¾ x 24	⅝ x 24 x 2'-8"
(WB1-S4)	1 x 20	1⅜ x 20	⅜ x 20 x 2'-1"	1⅜ x 24	1¾ x 24	⅝ x 24 x 2'-8"



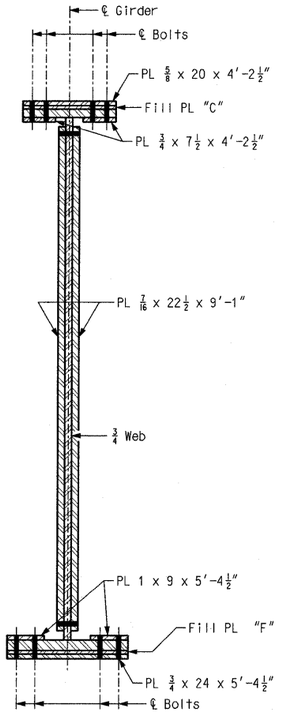
PLAN - TOP FLANGE



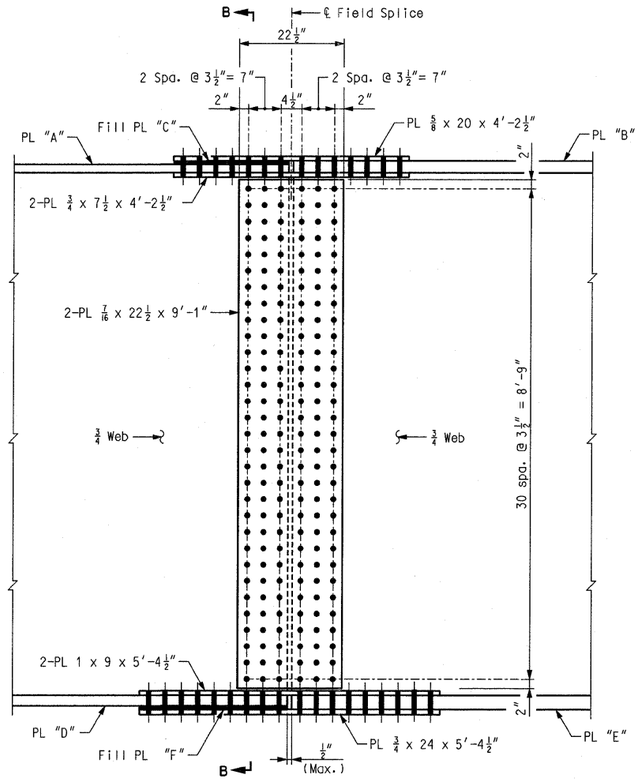
ELEVATION



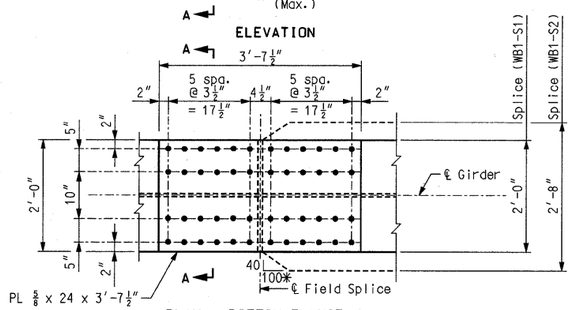
SECTION A-A



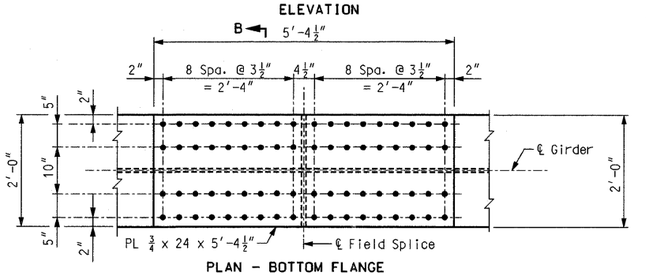
SECTION B-B



ELEVATION



PLAN - BOTTOM FLANGE



PLAN - BOTTOM FLANGE

Notes:
Use 1" Ø A325 high strength bolts with 1 1/16" Ø holes.
Faying surfaces shall be in accordance with Sec.1080.4 for weathering steel and Sec. 1081 for surface preparation.
All splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel for splice plates and fill plates shall be ASTM A709 Grade 50W.
For location of field splices, see Sheet Nos. 49 and 55.
* When width of flanges being spliced differs by more than 2", the larger flange shall be beveled as indicated.

FIELD SPLICE (WB1-S1) & (WB1-S2)

FIELD SPLICE (WB1-S3) AND (WB1-S4)

BOLTED FIELD SPLICE DETAILS - WB UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB

REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
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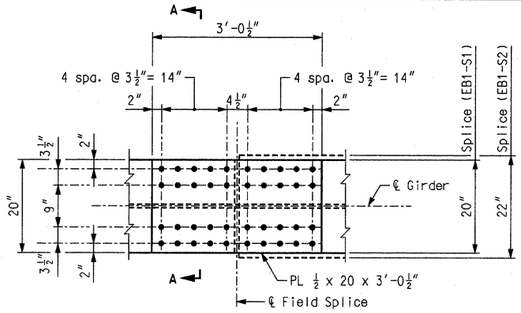
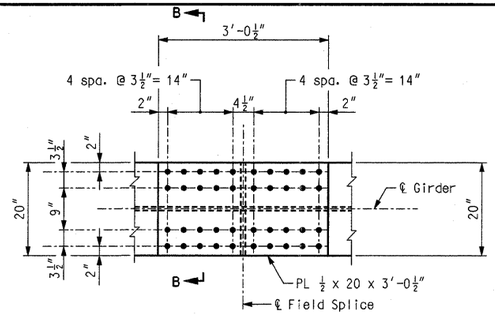
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

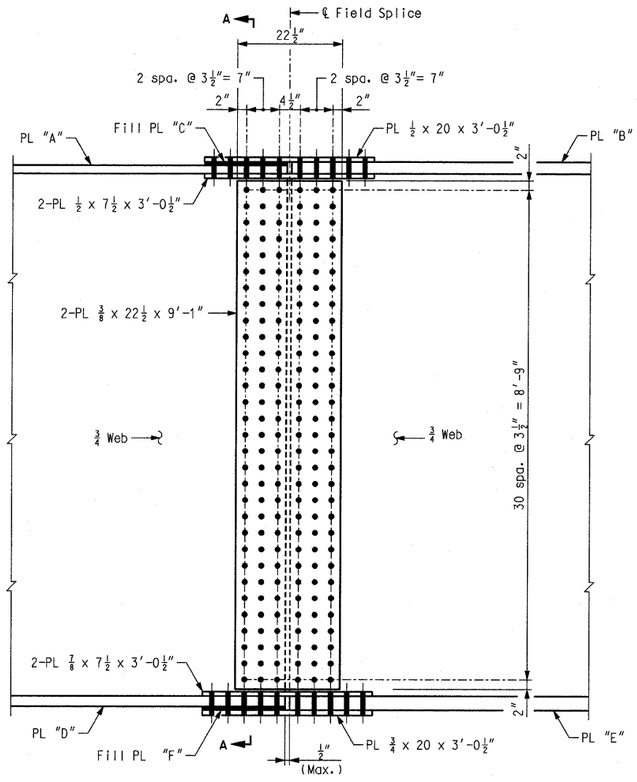


PLAN - TOP FLANGE

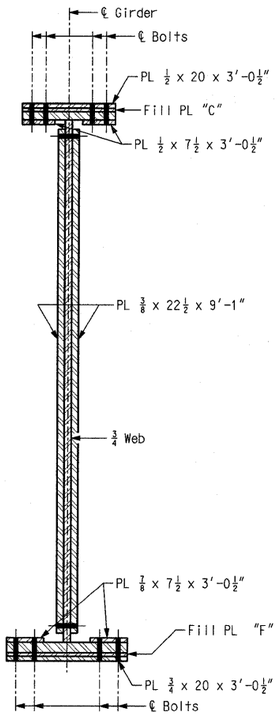
TABLE OF DIMENSIONS - FIELD SPLICE						
Splice	Top Flange			Bottom Flange		
	PL"A"	PL"B"	FILL PL"C"	PL"D"	PL"E"	FILL PL"F"
(EB1-S1)	⅞ x 20	⅞ x 20	-	1⅛ x 20	1¼ x 20	⅛ x 20 x 18"
(EB1-S2)	1 x 20	1 x 22	-	1¼ x 20	1¼ x 28	-



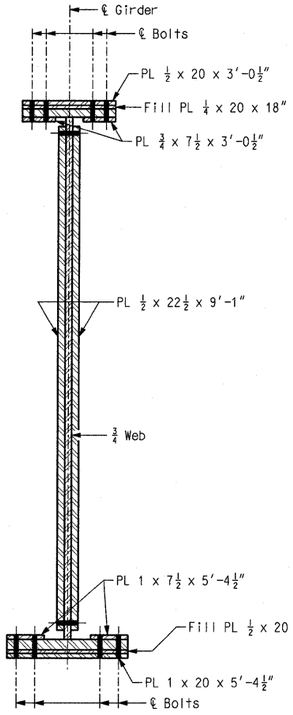
PLAN - TOP FLANGE



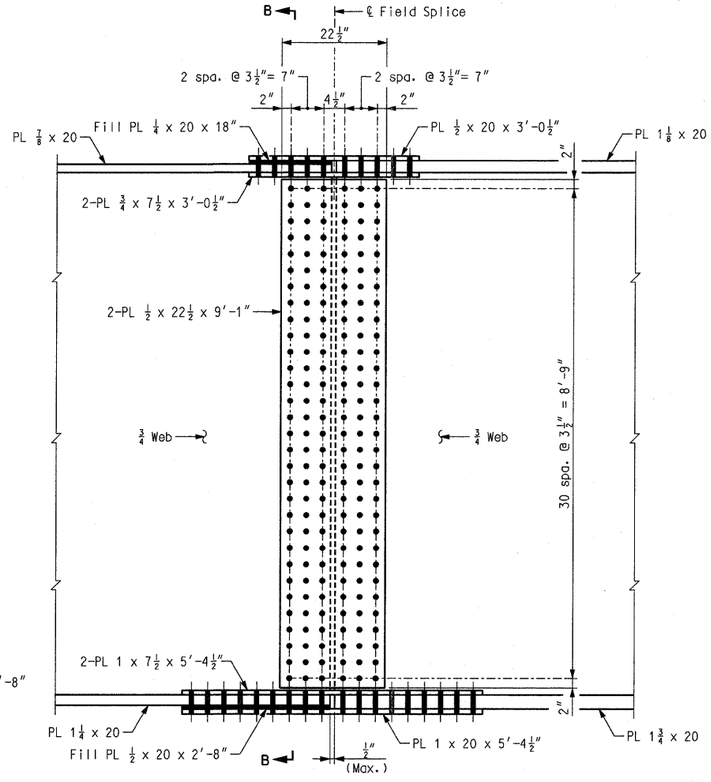
ELEVATION



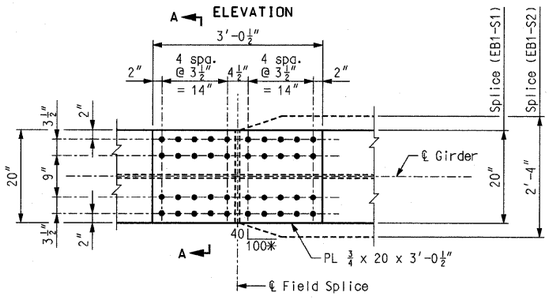
SECTION A-A



SECTION B-B

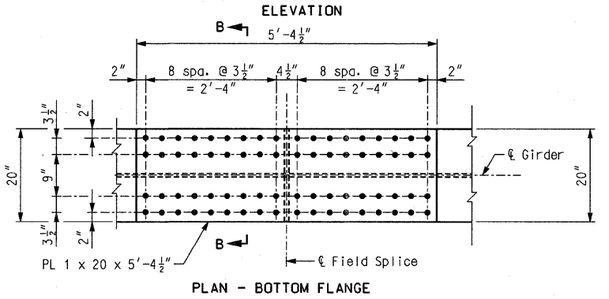


ELEVATION



PLAN - BOTTOM FLANGE

Notes:
Use 1" Ø A325 high strength bolts with 1 1/16" Ø holes.
Faying surfaces shall be in accordance with Sec. 1080.4 for weathering steel and Sec 1081 for surface preparation.
All splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel for splice plates and fill plates shall be ASTM A709 Grade 50W.
For location of field splices, see Sheet Nos. 56 and 57.
* When width of flanges being spliced differs by more than 2", the larger flange shall be beveled as indicated.



ELEVATION

PLAN - BOTTOM FLANGE

FIELD SPLICE (EB1-S1) & (EB1-S2)

FIELD SPLICE (EB1-S3)

BOLTED FIELD SPLICE DETAILS - EB UNIT 1

Note: This drawing is not to scale. Follow dimensions.

Detailed JUL 2009
Checked JUL 2009

Sheet No. 81 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjollff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

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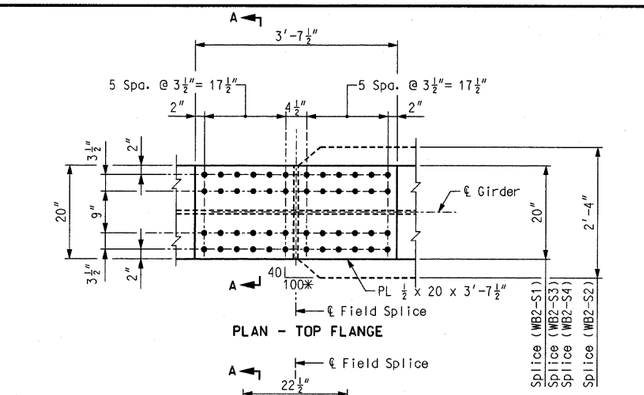
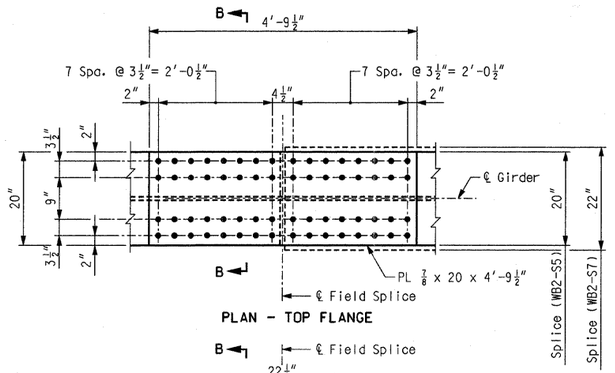
162

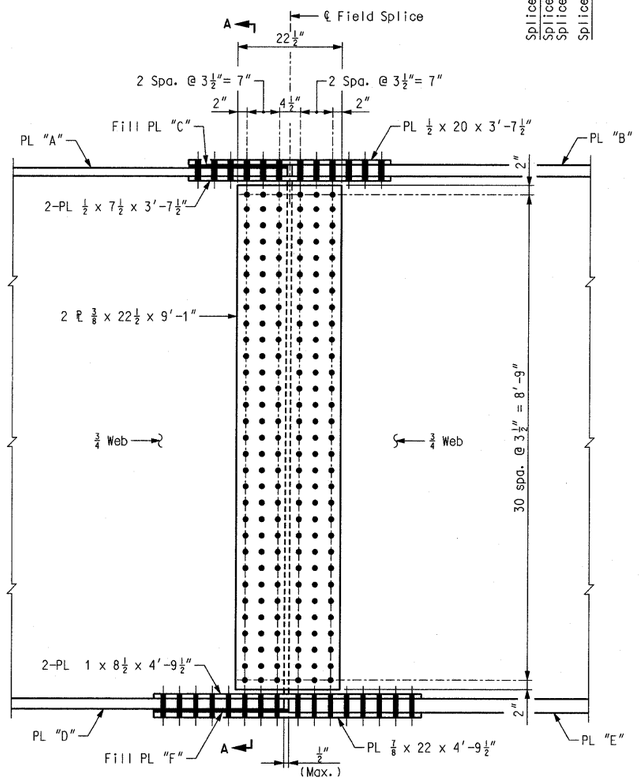


PLAN - TOP FLANGE

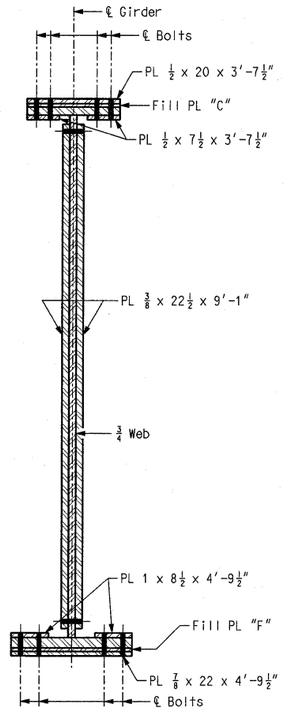
TABLE OF DIMENSIONS - FIELD SPLICE						
Splice	Top Flange			Bottom Flange		
	PL "A"	PL "B"	FILL PL "C"	PL "D"	PL "E"	FILL PL "F"
(WB2-S1)	⅞ x 20	1 x 20	⅛ x 20 x 21½"	1⅛ x 22	1½ x 22	⅜ x 22 x 2'-4½"
(WB2-S2)	1 x 20	1¼ x 28	¼ x 20 x 21½"	1⅛ x 22	1½ x 34	⅜ x 22 x 2'-4½"
(WB2-S3)	1 x 20	1½ x 20	½ x 20 x 21½"	1¾ x 22	1¾ x 22	-
(WB2-S4)	⅞ x 20	1¼ x 20	⅜ x 20 x 21½"	1½ x 22	1¼ x 26	¼ x 22 x 2'-4½" **
(WB2-S5)	⅞ x 20	1¼ x 20	⅜ x 20 x 2'-4½"	1¼ x 22	2 x 24	¾ x 22 x 2'-11½"
(WB2-S7)	1½ x 20	2 x 22	½ x 20 x 2'-4½"	1¾ x 22	2 x 28	¼ x 22 x 2'-11½"



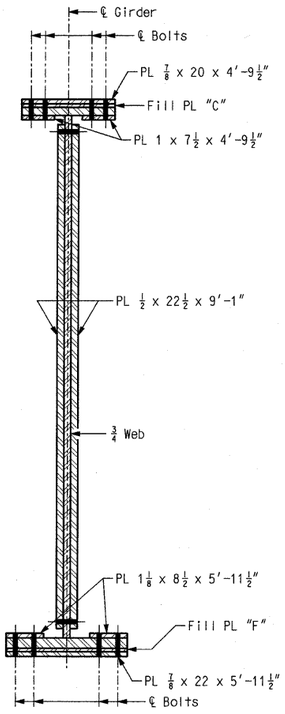
PLAN - TOP FLANGE



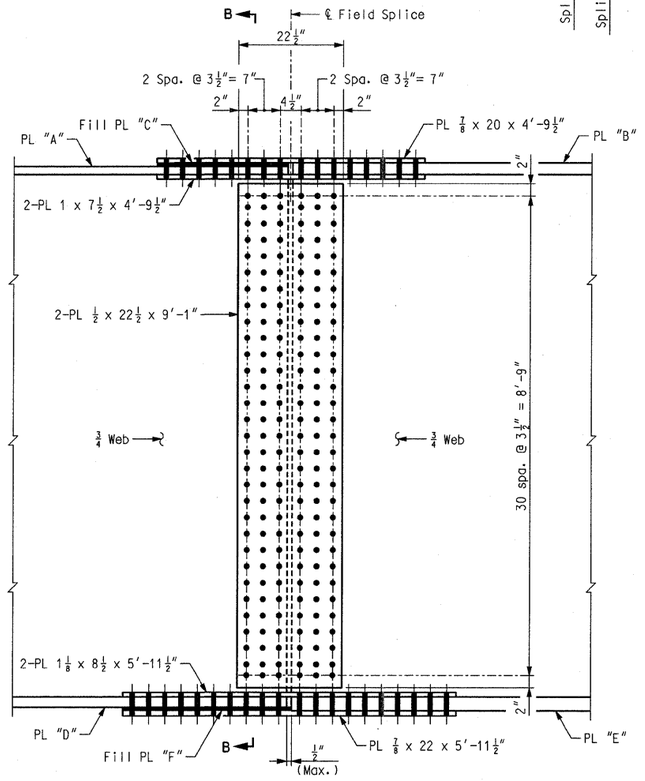
ELEVATION



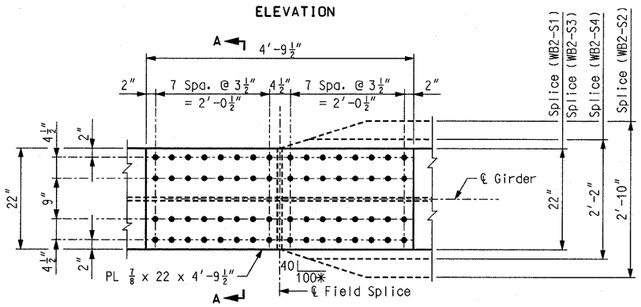
SECTION A-A



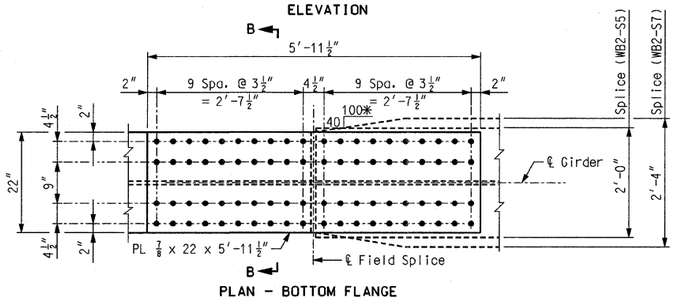
SECTION B-B



ELEVATION



PLAN - BOTTOM FLANGE



PLAN - BOTTOM FLANGE

Notes:
Use 1" Ø A325 high strength bolts with 1 1/16" Ø holes.
Faying surfaces shall be in accordance with Sec. 1080.4 for weathering steel and Sec. 1081 for surface preparation.
All splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel for splice plates and fill plates shall be ASTM A709 Grade 50W.
For locations of field splices, see Sheet Nos. 58 thru 60.
* When width of flanges being spliced differs by more than 2", the larger flanges shall be beveled as indicated.
** Fill PL "F" placed with PL "E" at Splice (WB2-S4).

FIELD SPLICE (WB2-S1) THRU (WB2-S4)

FIELD SPLICE (WB2-S5) AND (WB2-S7)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 82 of 152

BOLTED FIELD SPLICE DETAILS - WB UNIT 2 (1 OF 2)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB

REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
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KANSAS CITY, MO 64105
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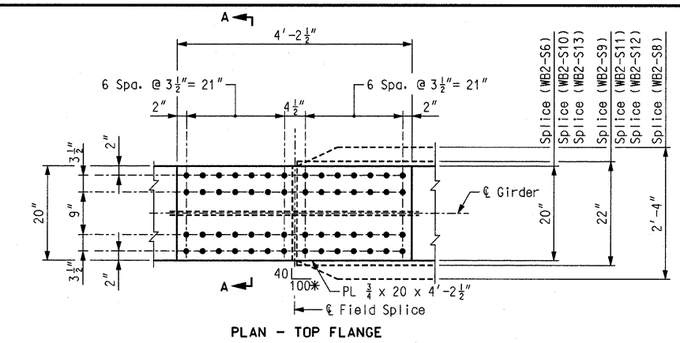
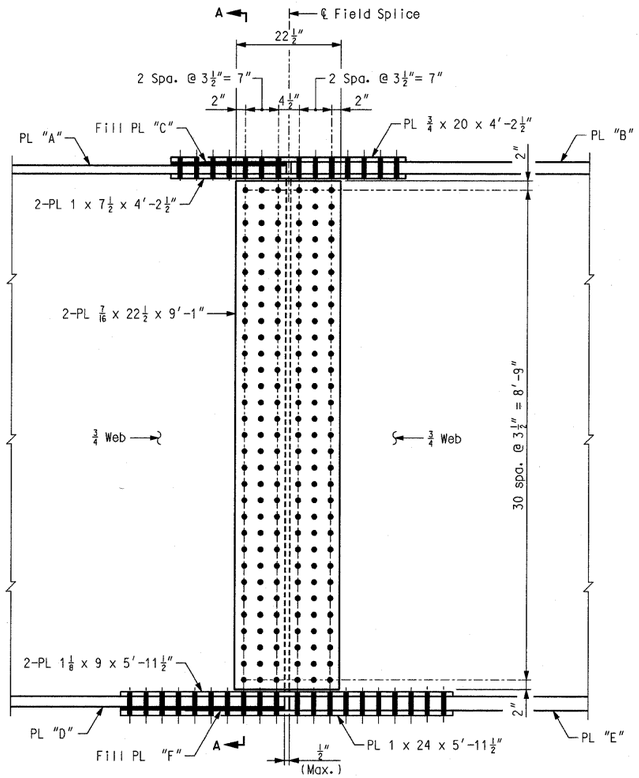
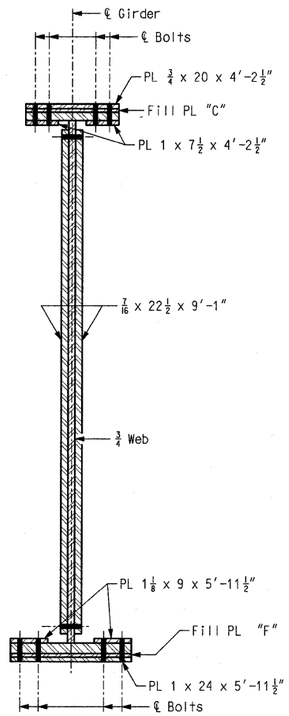
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



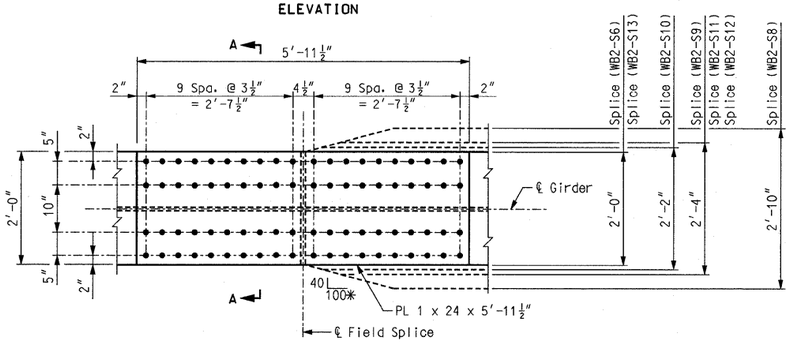
PLAN – TOP FLANGE



ELEVATION



SECTION A-A



PLAN – BOTTOM FLANGE

TABLE OF DIMENSIONS – FIELD SPLICE

Splice	Top Flange			Bottom Flange		
	PL "A"	PL "B"	FILL PL "C"	PL "D"	PL "E"	FILL PL "F"
(WB2-S6)	1¼ x 20	1¼ x 20	–	1¼ x 24	2 x 24	¾ x 24 x 2′-11½″
(WB2-S8)	1¼ x 20	2 x 28	¾ x 20 x 2′-1″	1¼ x 24	2 x 34	¾ x 24 x 2′-11½″
(WB2-S9)	1¼ x 20	2 X 22	¾ x 20 x 2′-1″	1½ x 24	2 x 28	½ x 24 x 2′-11½″
(WB2-S10)	1 x 20	2 x 20	1 x 20 x 2′-1″	1½ x 24	2 x 26	½ x 24 x 2′-11½″
(WB2-S11)	1 x 20	1 X 22	–	1½ x 24	1¼ x 28	¼ x 24 x 2′-11½″ **
(WB2-S12)	1 x 20	1 X 22	–	1½ x 24	1¼ x 28	¼ x 24 x 2′-11½″ **
(WB2-S13)	1 x 20	1¼ x 20	¼ x 20 x 2′-1″	1½ x 24	2 x 24	½ x 24 x 2′-11½″

Notes:
Use 1″ Ø A325 high strength bolts with 1 1/16″ Ø holes.
Faying surfaces shall be in accordance with Sec. 1080.4 for weathering steel and Sec. 1081 for surface preparation.
All splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel for splice plates and fill plates shall be ASTM A709 Grade 50W.
For location of field splices, see Sheet Nos. 58 thru 60.
* When width of flanges being spliced differs by more than 2″, the larger flange shall be beveled as indicated.
** Fill PL "F" placed with PL "E" at Splice (WB2-S11) and Splice (WB2-S12).

FIELD SPLICE (WB2-S6), (WB2-S8), (WB2-S9), (WB2-S10), (WB2-S11), (WB2-S12), & (WB2-S13)

BOLTED FIELD SPLICE DETAILS – WB UNIT 2 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 83 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010
DESIGNED – HNTB
CHECKED – CMT
DRAWN – CMT / HNTB
REVISED –
REVISED –
REVISED –
REVISED –

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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2750 WEST WASHINGTON STREET
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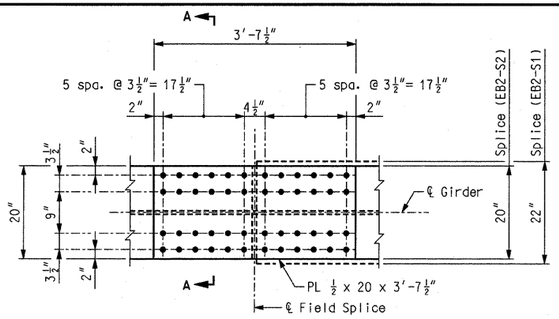
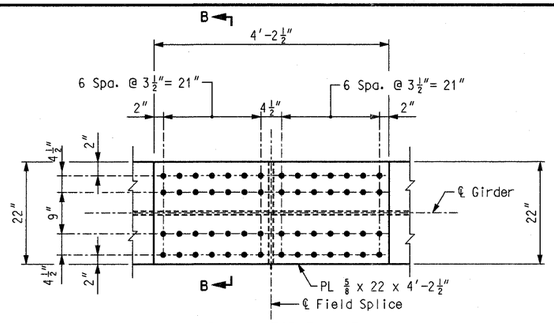
ENGINEERING CORPORATION – 000631

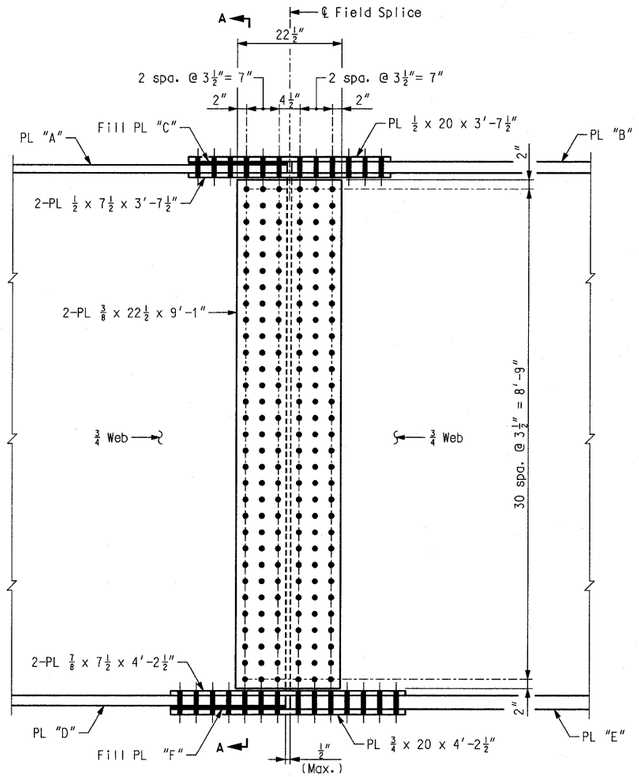


PLAN - TOP FLANGE

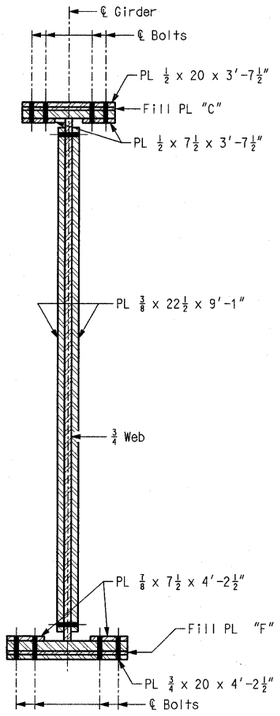
TABLE OF DIMENSIONS - FIELD SPLICE						
Splice	Top Flange			Bottom Flange		
	PL "A"	PL "B"	FILL PL "C"	PL "D"	PL "E"	FILL PL "F"
(EB2-S1)	⅞ x 20	1 x 22	⅛ x 20 x 21½"	1⅛ x 20	1¼ x 30	⅛ x 20 x 2'-1"
(EB2-S2)	⅞ x 20	⅞ x 20	-	1½ x 20	1⅜ x 24	⅛ x 20 x 2'-1" **
(EB2-S3)	1 x 22	1 x 22	-	1½ x 28	1¼ x 30	¼ x 28 x 3'-6½" **
(EB2-S4)	1 x 22	1¼ x 22	¼ x 22 x 2'-1"	1½ x 28	2 x 28	½ x 28 x 3'-6½"
(EB2-S5)	1¼ x 22	2 x 22	¾ x 22 x 2'-1"	2 x 28	2 x 28	-



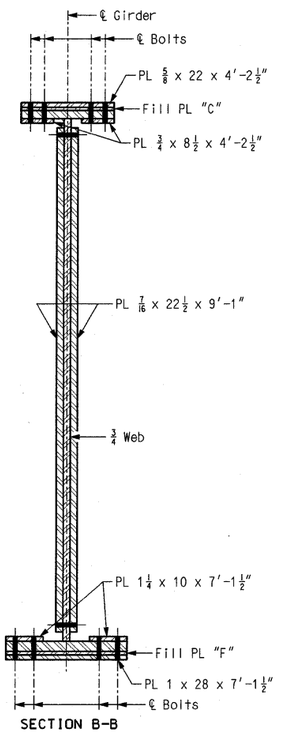
PLAN - TOP FLANGE



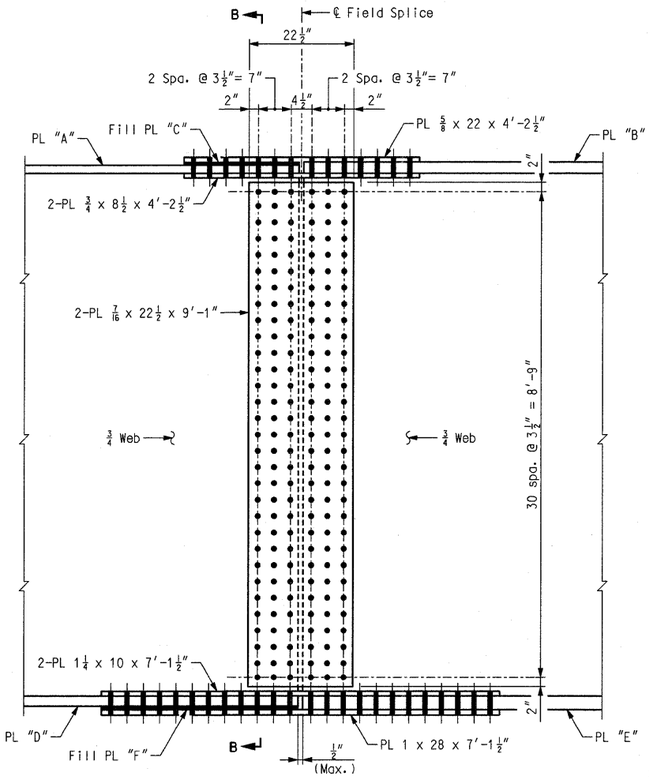
ELEVATION



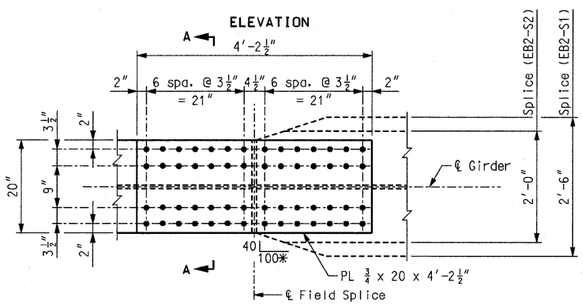
SECTION A-A



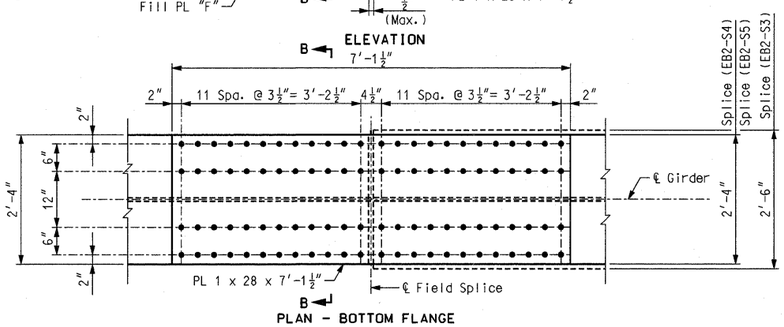
SECTION B-B



ELEVATION



PLAN - BOTTOM FLANGE



PLAN - BOTTOM FLANGE

Notes:
Use 1" Ø A325 high strength bolts with 1 1/16" Ø holes.
Faying surfaces shall be in accordance with Sec. 1080.4 for weathering steel and Sec. 1081 for surface preparation.
All splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel for splice plates and fill plates shall be ASTM A709 Grade 50W.
For location of field splices, see Sheet Nos. 61 thru 63.
* When width of flanges being spliced differs by more than 2", the larger flange shall be beveled as indicated.
** Fill PL "F" placed with PL "E" at Splice (EB2-S2) and Splice (EB2-S3).

FIELD SPLICE (EB2-S1) AND (EB2-S2)

FIELD SPLICE (EB2-S3), (EB2-S4), AND (EB2-S5)

BOLTED FIELD SPLICE DETAILS - EB UNIT 2 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 84 of 152

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_084-152_J610984C_084.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
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CERTIFICATE OF AUTHORITY
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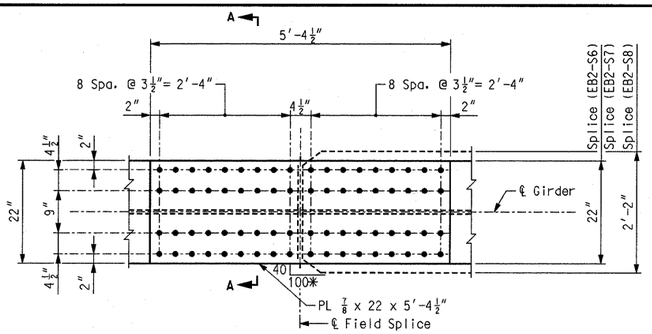
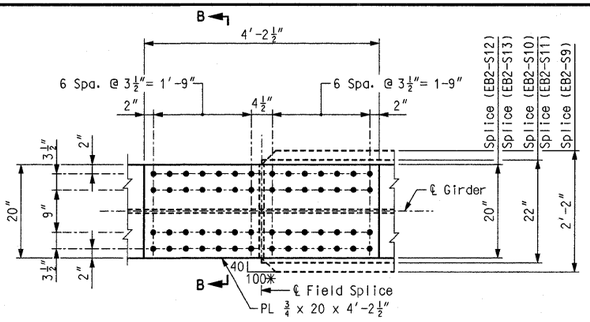
ENGINEERING CORPORATION - 000631

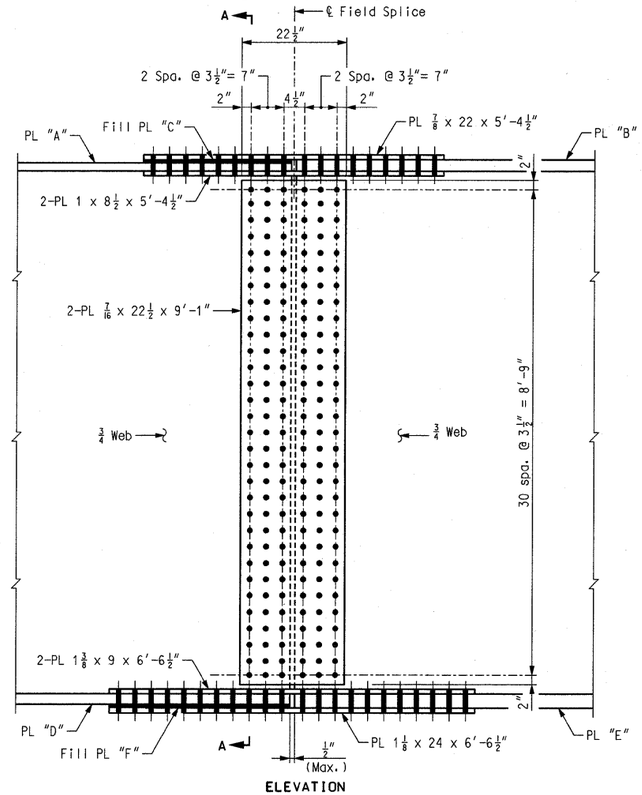


PLAN - TOP FLANGE

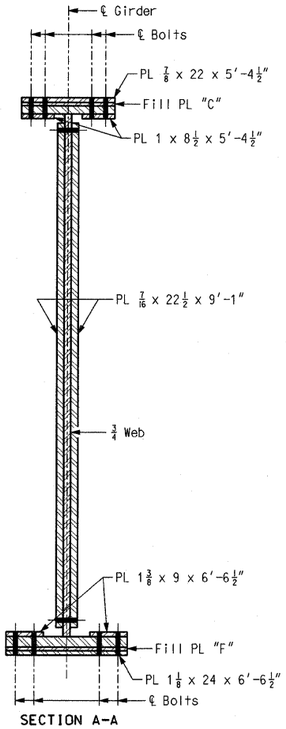
TABLE OF DIMENSIONS - FIELD SPLICE						
Splice	Top Flange			Bottom Flange		
	PL "A"	PL "B"	FILL PL "C"	PL "D"	PL "E"	FILL PL "F"
(EB2-S6)	1¼ x 22	2 x 22	¾ x 22 x 2'-8"	1½ x 24	2 x 28	½ x 24 x 3'-3"
(EB2-S7)	1½ x 22	1¼ x 22	-	1¾ x 24	2 x 24	¼ x 24 x 3'-3"
(EB2-S8)	1¼ x 22	2 x 26	¾ x 22 x 2'-8"	1¾ x 24	2 x 32	¼ x 24 x 3'-3"
(EB2-S9)	1 x 20	1¼ x 26	¼ x 20 x 2'-1"	1¾ x 24	1½ x 32	¼ x 24 x 2'-11½" **
(EB2-S10)	1 x 20	1 x 22	-	1¾ x 24	1¼ x 28	½ x 24 x 2'-11½" **
(EB2-S11)	1¼ x 20	2 x 22	¾ x 20 x 2'-1"	1½ x 24	2 x 28	½ x 24 x 2'-11½"
(EB2-S12)	1 x 20	1 x 20	-	1½ x 24	2 x 24	½ x 24 x 2'-11½"
(EB2-S13)	1 x 20	1¾ x 20	¾ x 20 x 2'-1"	1½ x 24	2 x 24	½ x 24 x 2'-11½"



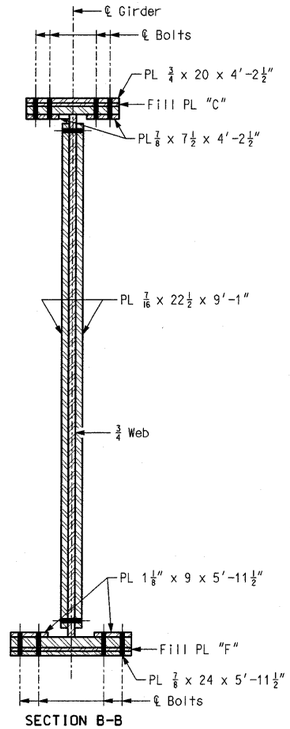
PLAN - TOP FLANGE



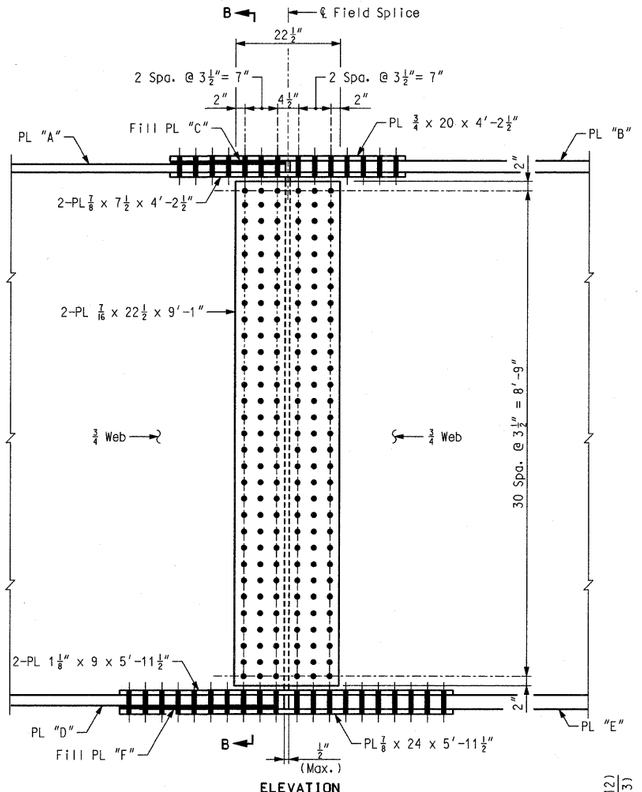
ELEVATION



SECTION A-A



SECTION B-B



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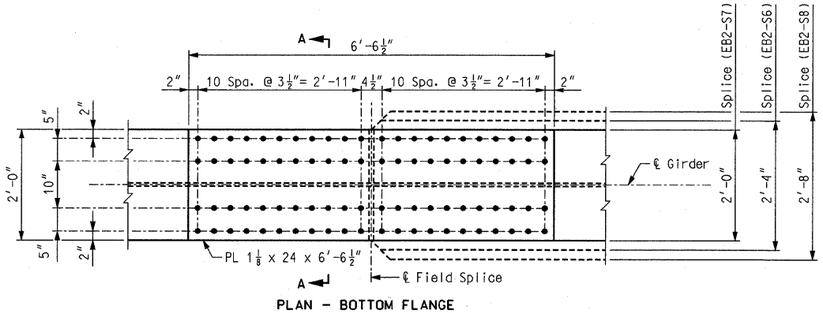
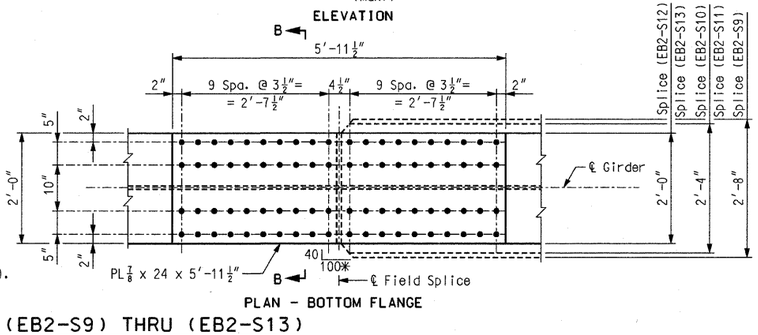


PLAN - BOTTOM FLANGE



PLAN - BOTTOM FLANGE

Notes:
Use 1" Ø A325 high strength bolts with 1 1/16" Ø holes.
Faying surfaces shall be in accordance with Sec. 1080.4 for weathering steel and Sec 1081 for surface preparation.
All splice plates except fill plates shall be subject to notch toughness requirements.
Fabricated structural steel for splice plates and fill plates shall be ASTM A709 Grade 50W.
For location of field splices, see Sheet Nos. 61 thru 63.
* When width of flanges being spliced differs by more than 2", the larger flange shall be beveled as indicated.
** Fill PL "F" placed with PL "E" at Splice (EB2-S9) and Splice (EB2-S10).

FIELD SPLICE (EB2-S6) THRU (EB2-S8)

FIELD SPLICE (EB2-S9) THRU (EB2-S13)

BOLTED FIELD SPLICE DETAILS - EB UNIT 2 (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 85 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
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2750 WEST WASHINGTON STREET
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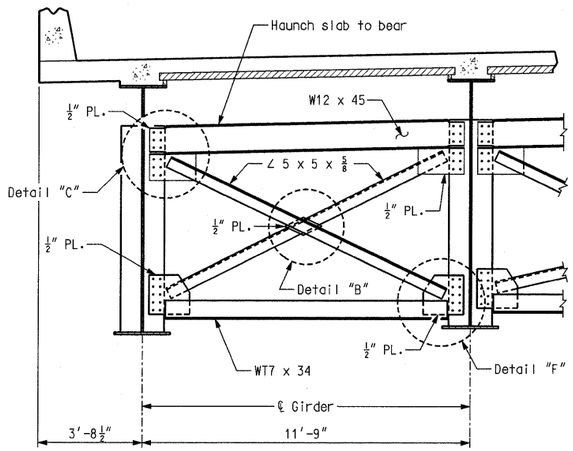
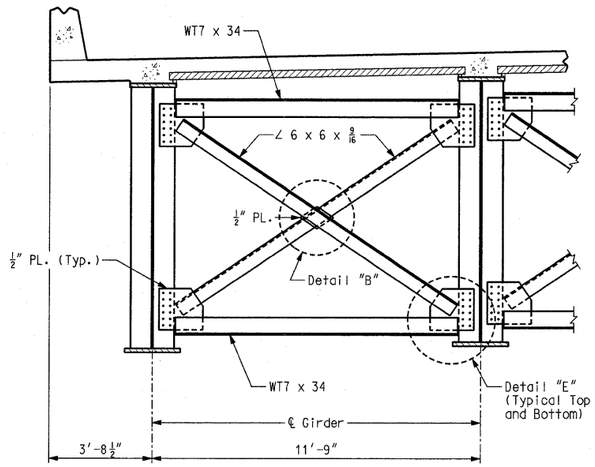
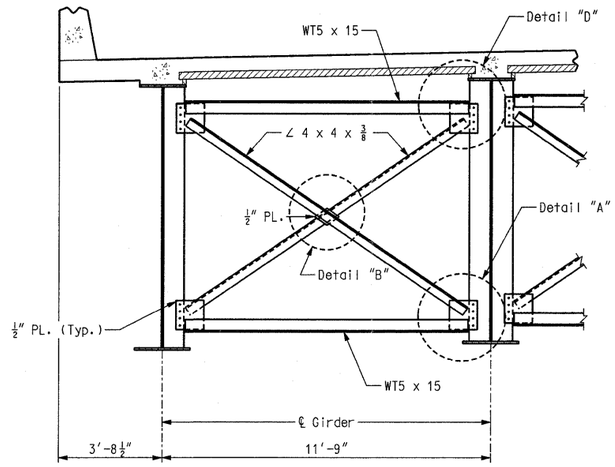
ENGINEERING CORPORATION - 000631



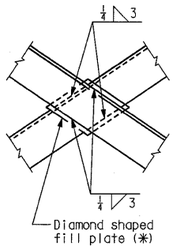
TYPICAL PART SECTION SHOWING
END DIAPHRAGM AT PIERS 13 AND 17



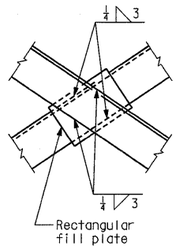
TYPICAL PART SECTION SHOWING
CROSS FRAME AT PIERS 14, 15, AND 16



TYPICAL PART SECTION SHOWING
INTERMEDIATE CROSS FRAMES



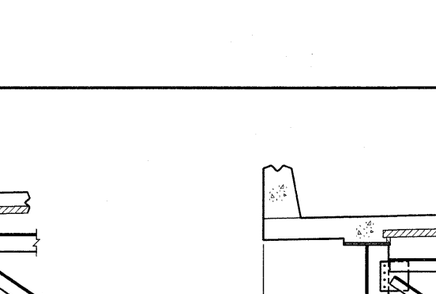
DETAIL "B"



OPTIONAL
DETAIL "B"

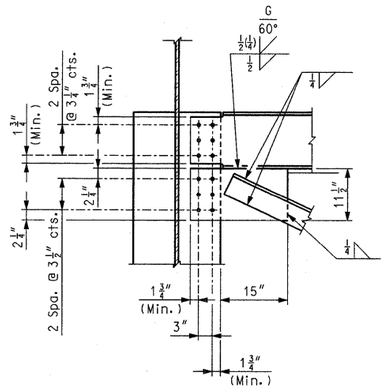
(*) At the contractor's option, rectangular fill plates may be used in lieu of diamond fill plates as shown in Optional Detail "B".

DETAIL "A"

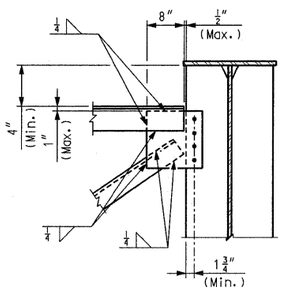


DETAIL "F"

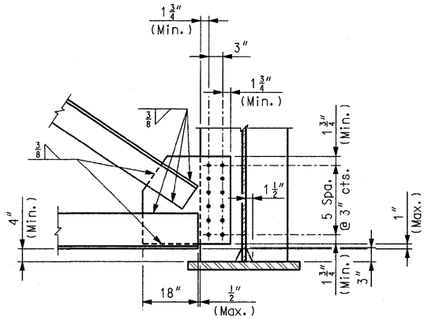
Note:
All bolts shall be 1" Ø ASTM A325 High Strength Bolts.
All steel shall be ASTM A709 Grade 50W.



DETAIL "C"



DETAIL "D"



DETAIL "E"

CROSS FRAME AND DIAPHRAGM DETAILS - UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 86 of 152

CONTRACT NO. 76D61	
F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR
USER NAME = jjolliff	
PLOT SCALE = $SCALE$	
PLOT DATE = 4/14/2010	
DESIGNED - HNTB	
CHECKED - CMT	
DRAWN - CMT / HNTB	
REVISED -	
REVISED -	
REVISED -	
REVISED -	

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
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715 KIRK DRIVE
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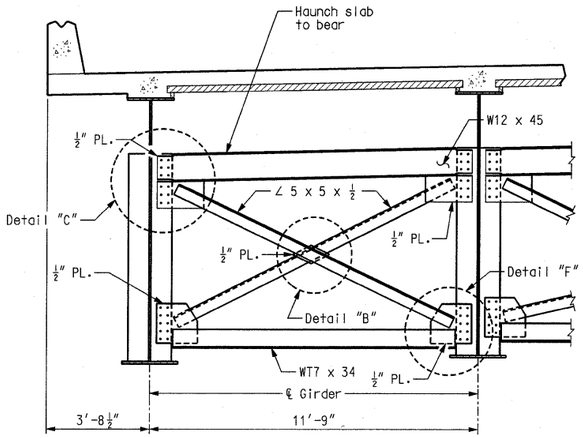
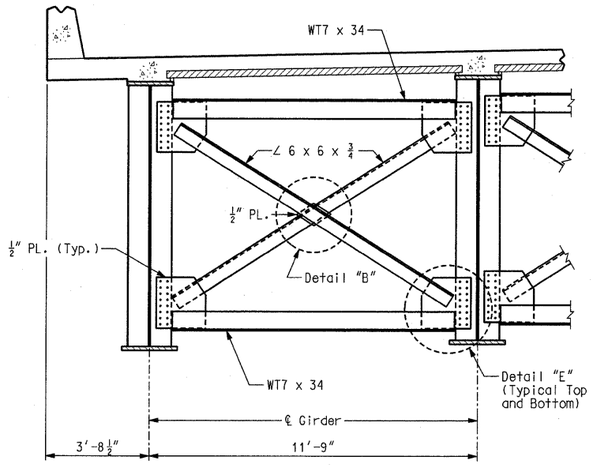
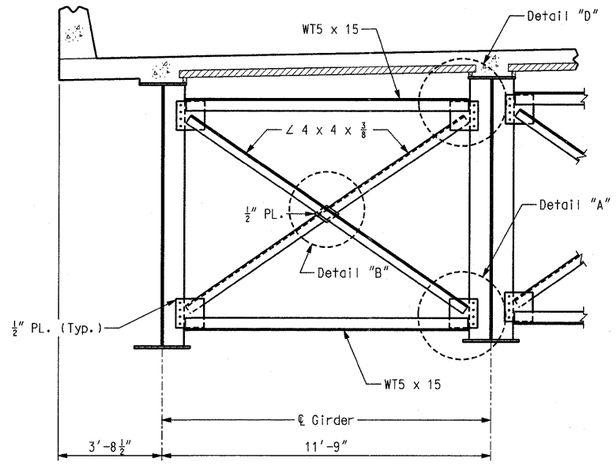
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-9050
ENGINEERING CORPORATION - 000631



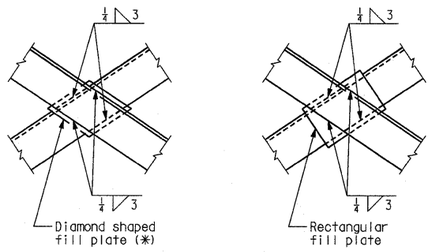
TYPICAL PART SECTION SHOWING
END DIAPHRAGM AT PIERS 17 AND 23



TYPICAL PART SECTION SHOWING
CROSS FRAME AT PIERS 18, 19, 20, 21, AND 22



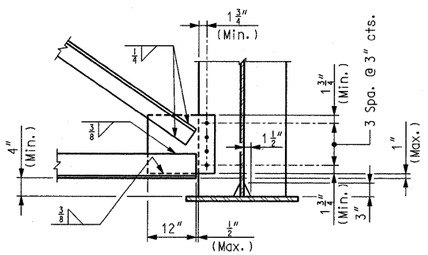
TYPICAL PART SECTION SHOWING
INTERMEDIATE CROSS FRAMES



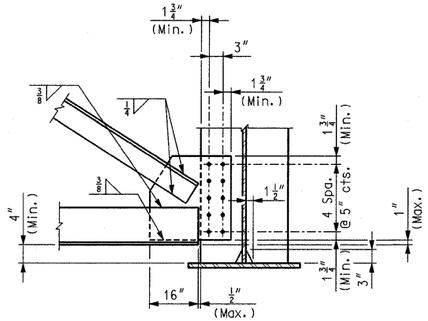
DETAIL "B"

OPTIONAL
DETAIL "B"

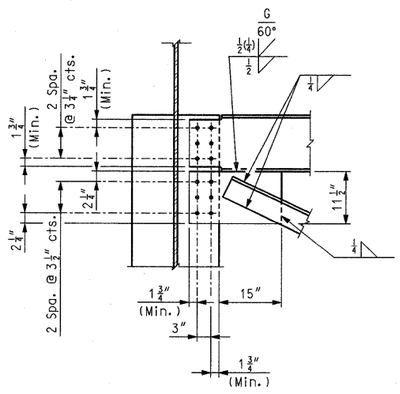
(*) At the contractor's option, rectangular fill plates may be used in lieu of diamond fill plates as shown in Optional Detail "B".



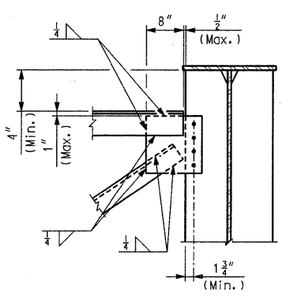
DETAIL "A"



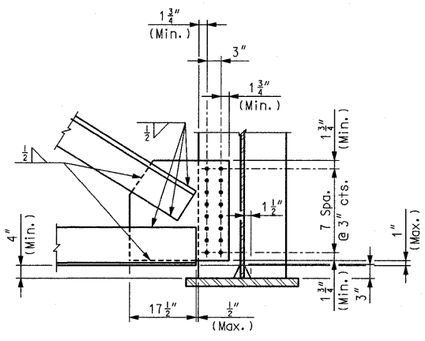
DETAIL "F"



DETAIL "C"



DETAIL "D"



DETAIL "E"

Note:
All bolts shall be 1" Ø ASTM A325 High Strength Bolts.
All steel shall be ASTM A709 Grade 50W.

CROSS FRAME AND DIAPHRAGM DETAILS - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 87 of 152

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_087-152_J610984C_087.dgn

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
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PLOT DATE = 4/14/2010

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REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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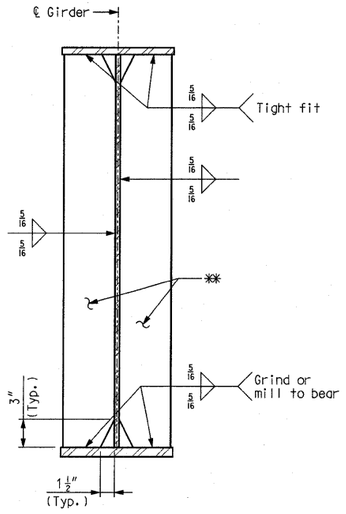
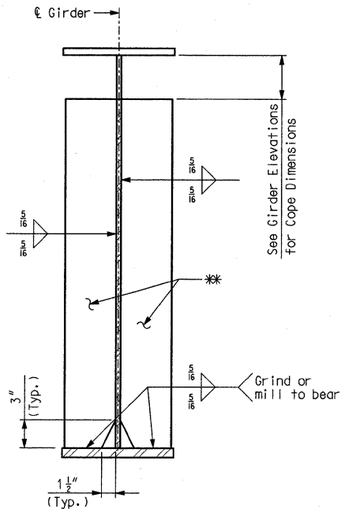
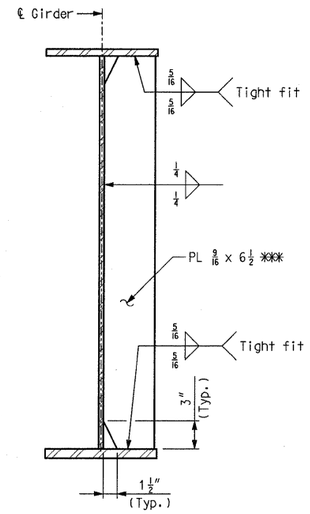


BEARING AND JACKING STIFFENER
PIERS 14, 15, 16, 18,
19, 20, 21, AND 22



BEARING, JACKING AND
EXPANSION DEVICE STIFFENERS
PIERS 13, 17, AND 23

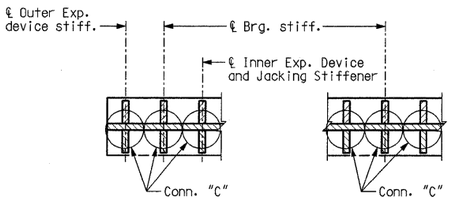


INTERMEDIATE STIFFENER AND
INTERMEDIATE CROSS FRAME
CONNECTION PLATE

WELDING DETAILS

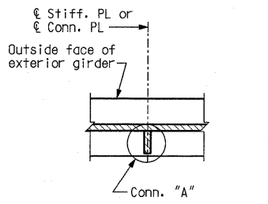
*** Except as shown on Sheet No. 52.

Notes:
** For stiffener dimensions, see Girder Elevation Sheet Nos. 54 thru 63.
Fabricated structural steel for bearing stiffeners, intermediate stiffeners, and connection plates, shall be ASTM A709 Grade 50W.
Transverse web stiffeners shall be located as shown on the Framing Plan.

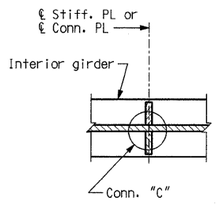


BEARING STIFFENER
PIERS 13, 17, AND 23

BEARING STIFFENER
PIERS 14, 15, 16, 18,
19, 20, 21, AND 22

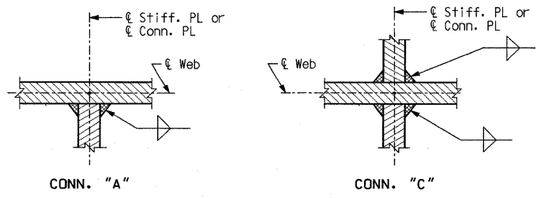


INTERMEDIATE STIFFENER AND
INTERMEDIATE CROSS FRAME
CONNECTION PLATE

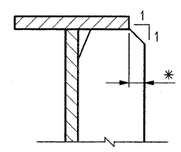


INTERMEDIATE STIFFENER AND
INTERMEDIATE CROSS FRAME
CONNECTION PLATE

TYPICAL LOCATION DETAILS

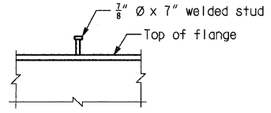


WELDING DETAILS

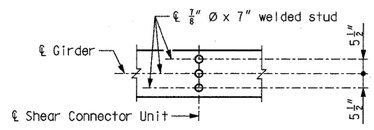


STIFFENER BEVEL DETAIL

* When dimension exceeds ½", bevel stiffener plate.



ELEVATION



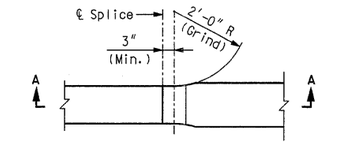
PLAN OF STUD CONN. (3 STUDS PER UNIT)

DETAILS OF SHEAR CONNECTORS

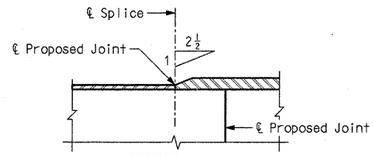
(Except as shown on Sheet Nos. 60 and 63)

Weight of 63,050 pounds of shear connectors is included in the weight of Fabricated Structural Low Alloy (Plate Girder) A709 Grade 50W.
Shear connectors shall be in accordance with Sec 712, 1037, and 1080.

DRIP PLATE DETAIL

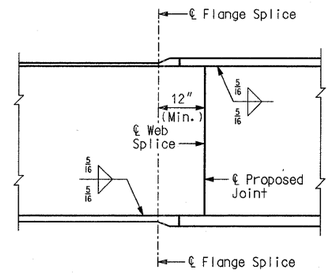


PLAN SHOWING
2'-0" RADIUS TRANSITION



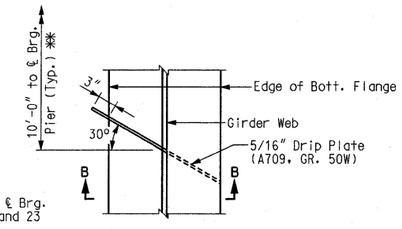
SECTION A-A

WELDED SHOP FLANGE SPLICE



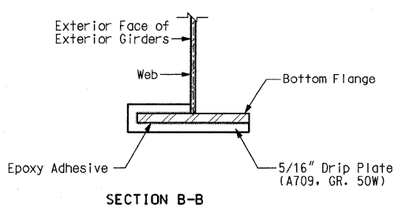
WELDED SHOP WEB SPLICE

Note:
Welded shop web and flange splices may be permitted when detailed on the shop drawings and approved by the engineer. No additional payment will be made for optional welded shop web and flange splices.



** 12'-0" to ℄ Brg.
Piers 17 and 23

PLAN - DRIP PLATE



SECTION B-B

DRIP PLATE DETAILS

Notes:
Girder 1 shown, Girder 8 opposite hand.
Drip plates shall be installed on suitably prepared surfaces after shop priming, using a two component epoxy suitable for structural steel under prolonged exposure. Plates shall be painted with the paint specified for structural steel.

STIFFENER AND MISCELLANEOUS STEEL DETAILS

CONTRACT NO. 76D61	
F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR
USER NAME = jjolliff	
PLOT SCALE = @SCALE@	
PLOT DATE = 4/14/2010	
DESIGNED - HNTB	
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DRAWN - CMT / HNTB	
REVISED -	
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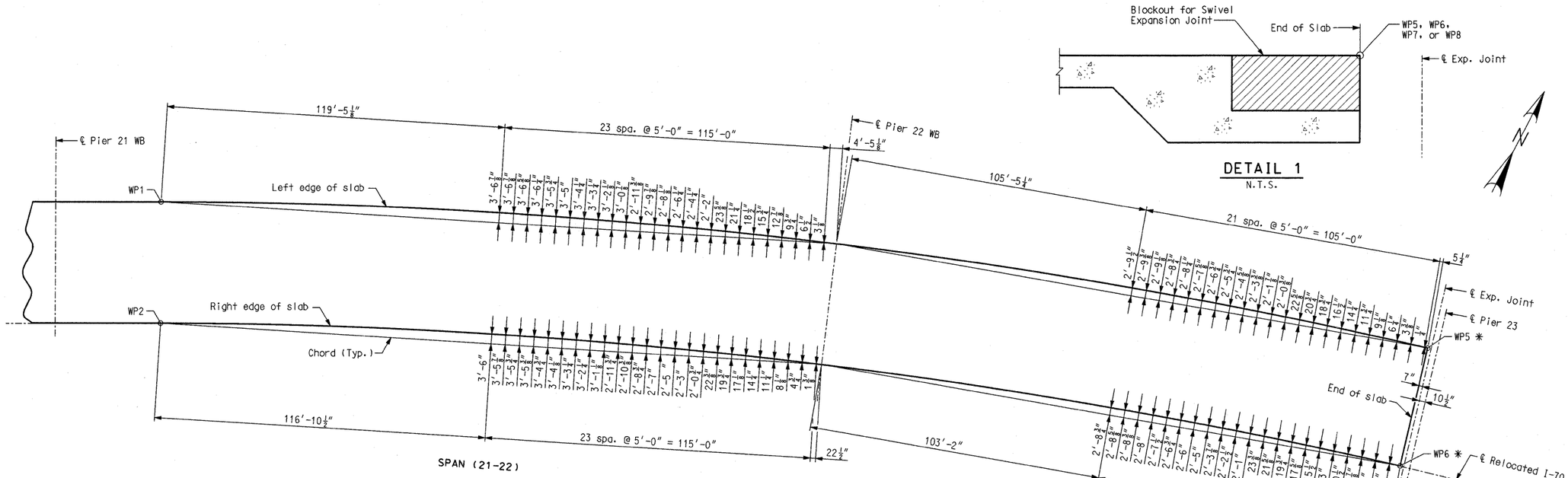
Detailed JUL 2009
Checked JUL 2009

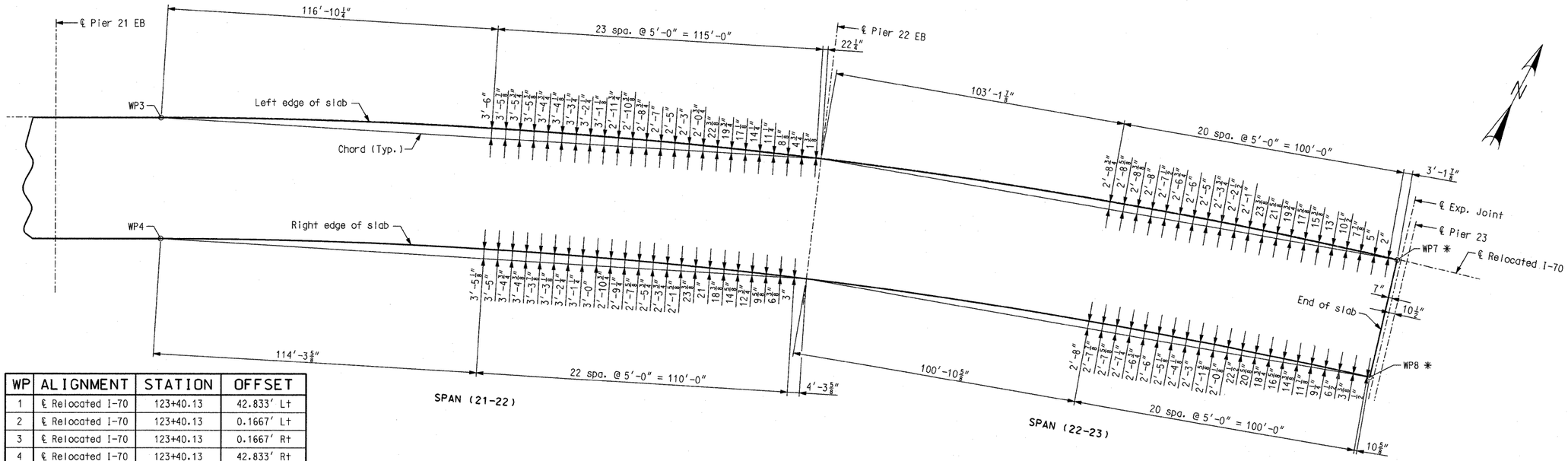
Note: This drawing is not to scale. Follow dimensions.

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_088-152_J610984C_088.dgn



PLAN OF SLAB SHOWING CURVE ORDINATES - WB

DETAIL 1
N.T.S.



PLAN OF SLAB SHOWING CURVE ORDINATES - EB

WP	ALIGNMENT	STATION	OFFSET
1	℄ Relocated I-70	123+40.13	42.833′ Lt
2	℄ Relocated I-70	123+40.13	0.1667′ Lt
3	℄ Relocated I-70	123+40.13	0.1667′ Rt
4	℄ Relocated I-70	123+40.13	42.833′ Rt
5	℄ Relocated I-70	127+80.45	42.833′ Lt
6	℄ Relocated I-70	127+80.42	0.1667′ Lt
7	℄ Relocated I-70	127+80.42	0.1667′ Rt
8	℄ Relocated I-70	127+80.39	42.833′ Rt

Note:
* Workpoints are located at end of slab. See Detail 1, this sheet.

SLAB OFFSET - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 89 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB

REVISED -
REVISED -
REVISED -
REVISED -

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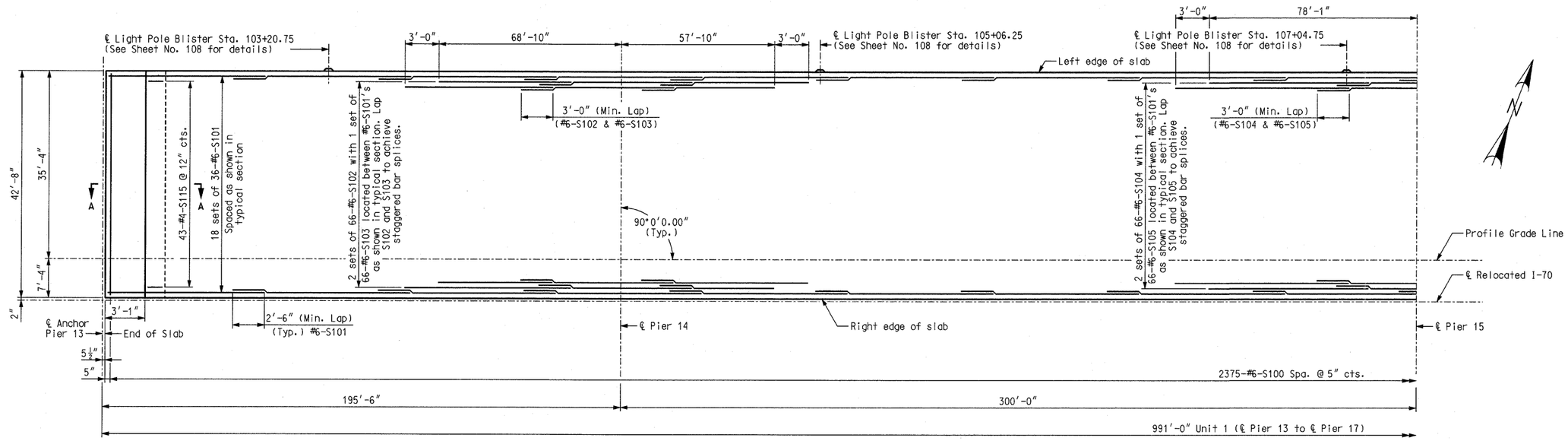
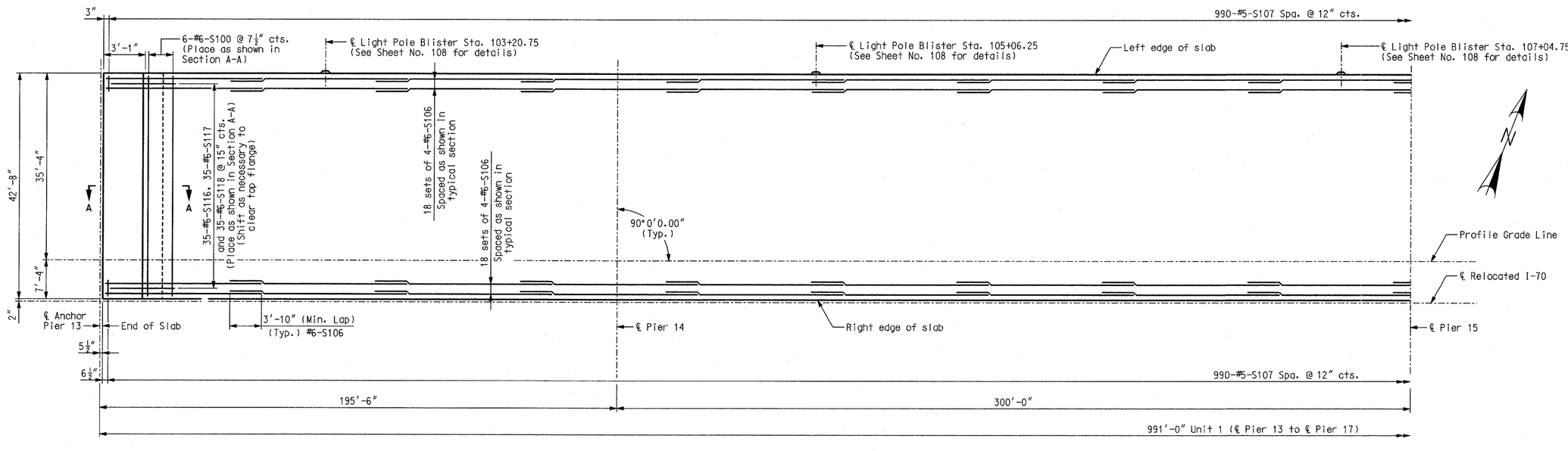
s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_089-152_J610984C_089.dgn



SPAN (13-14) SPAN (14-15)

TOP REINFORCING



SPAN (13-14) SPAN (14-15)

BOTTOM REINFORCING

Notes:
For typical bridge section and reinforcing, see Sheet No. 102.
For location of slab drains, see Sheet No. 127.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 106.
Longitudinal slab dimensions are measured horizontally. See Sheet No. 100 for Section A-A.
Light poles, lights and other electrical appurtenances are by others. See electrical details in contract J6I0984 - MoDOT.

SLAB PLAN SHOWING REINFORCING WB - UNIT 1 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 90 of 152

s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_090-152_J6I0984C_090.dgn

CONTRACT NO. 76D61

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999	82-1B-2
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PLOT SCALE = $SCALE$
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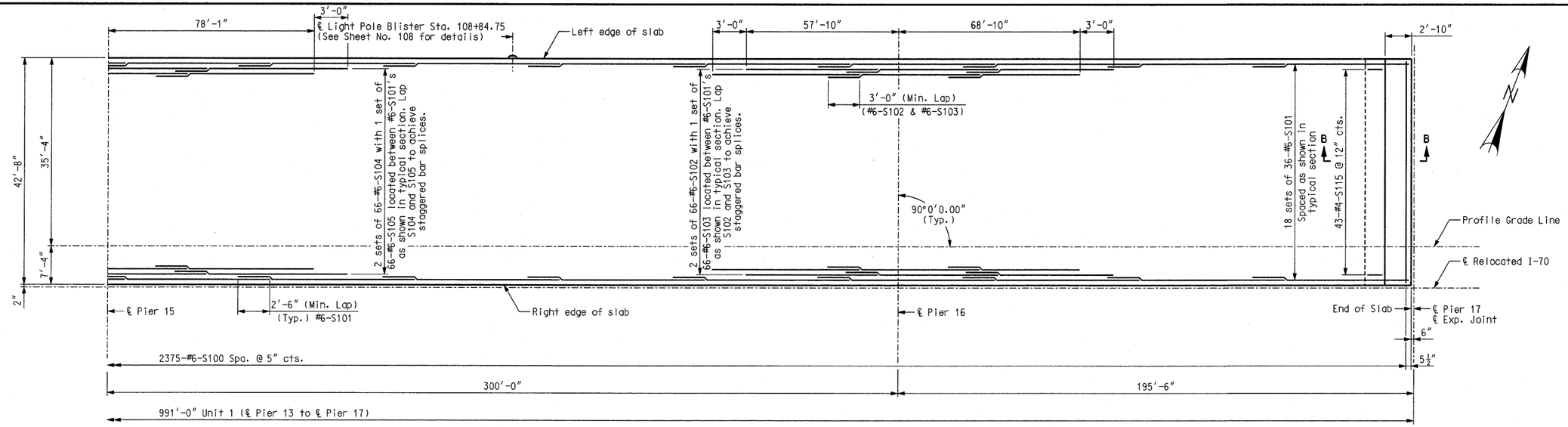
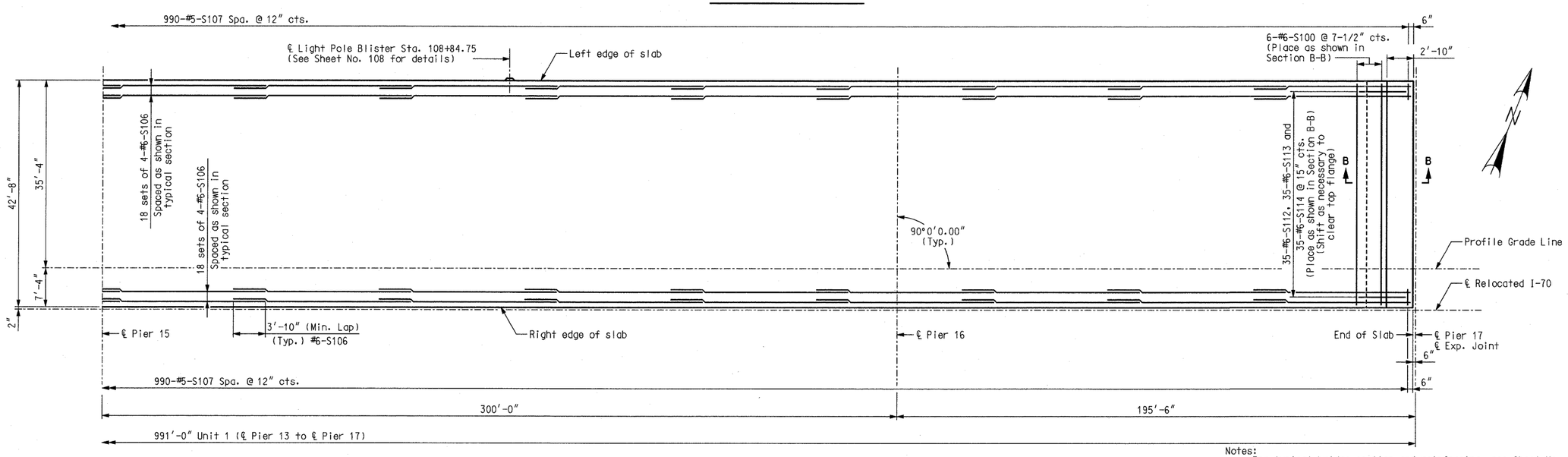


TOP REINFORCING



BOTTOM REINFORCING

Notes:

For typical bridge section and reinforcing, see Sheet No. 102.

For location of slab drains, see Sheet No. 127.

For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.

For slab pouring sequence, see Sheet No. 106.

Longitudinal slab dimensions are measured horizontally.

Longitudinal reinforcing steel shall be placed so that ends shall not be more than 1″± from the vertical plate and the vertical leg of the angle at expansion device (Pier 17).

Concrete shall be forced under and around the joint members and hardware. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12″ spacing.

See Sheet No. 100 for Section B-B.

Light poles, lights and other electrical appurtenances are by others. See electrical details in contract J6I0984 - MoDOT.

SLAB PLAN SHOWING REINFORCING WB - UNIT 1 (2 OF 2)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
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ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

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CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
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Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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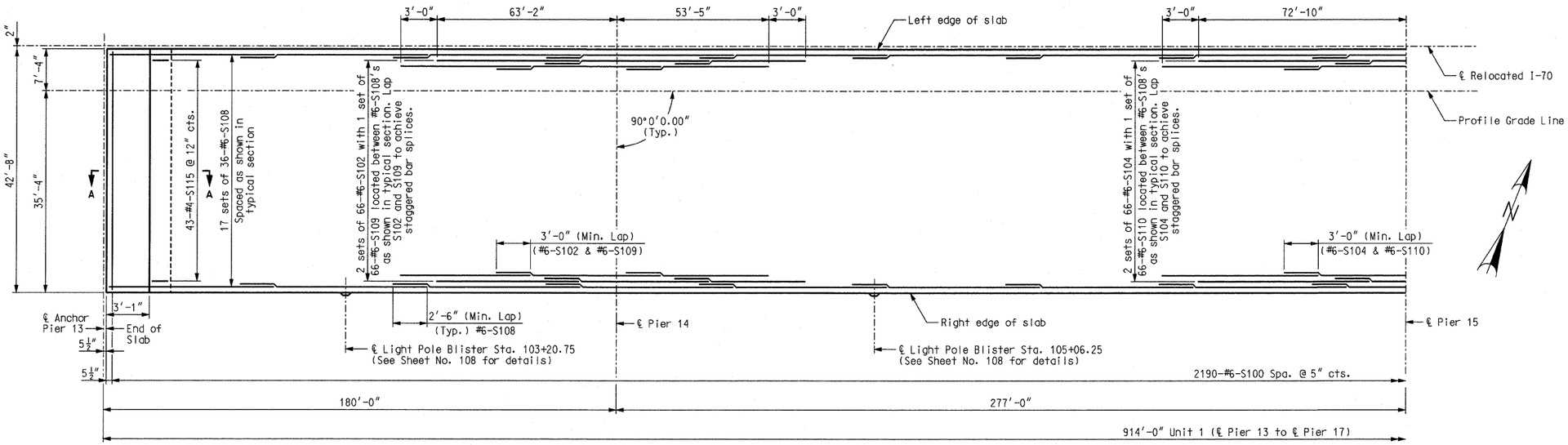

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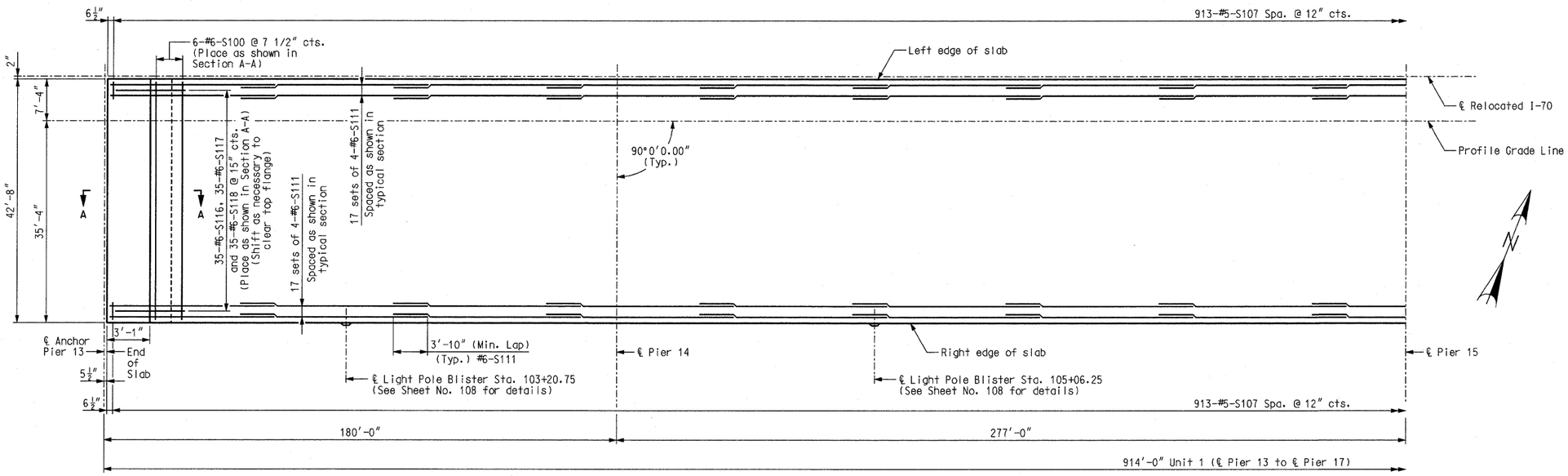

BOTTOM REINFORCING

Notes:
For typical bridge section and reinforcing, see Sheet No. 103.
For location of slab drains, see Sheet No. 127.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 106.
Longitudinal slab dimensions are measured horizontally. See Sheet No. 100 for Section A-A.
Light poles, lights and other electrical appurtenances are by others. See electrical details in contract J6I0984 - MoDOT.

SLAB PLAN SHOWING REINFORCING EB - UNIT 1 (1 OF 2)

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Note: This drawing is not to scale. Follow dimensions.

Sheet No. 92 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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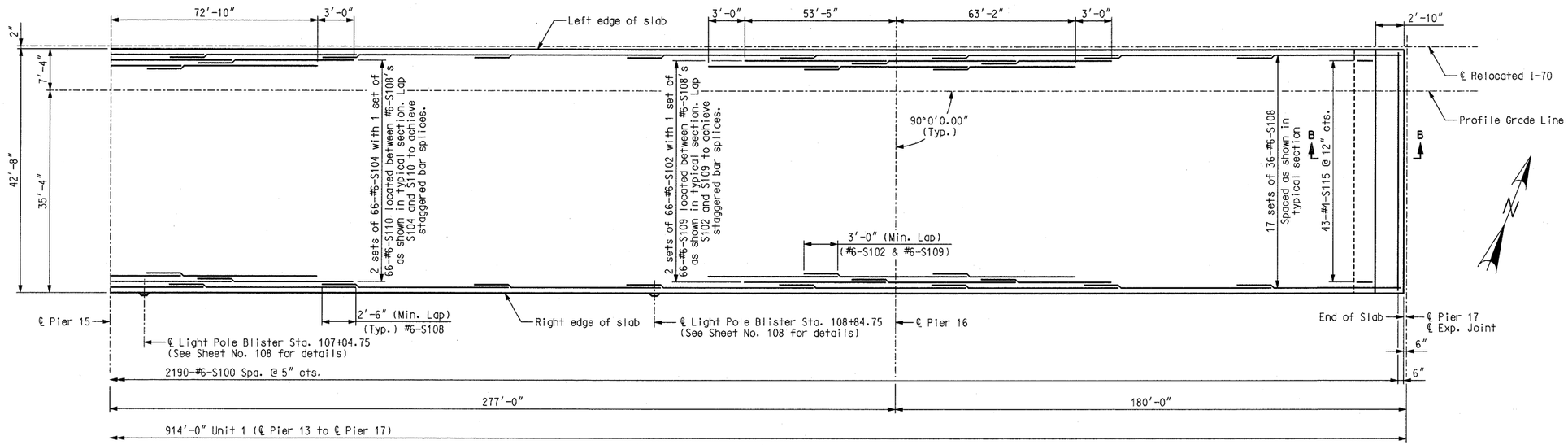

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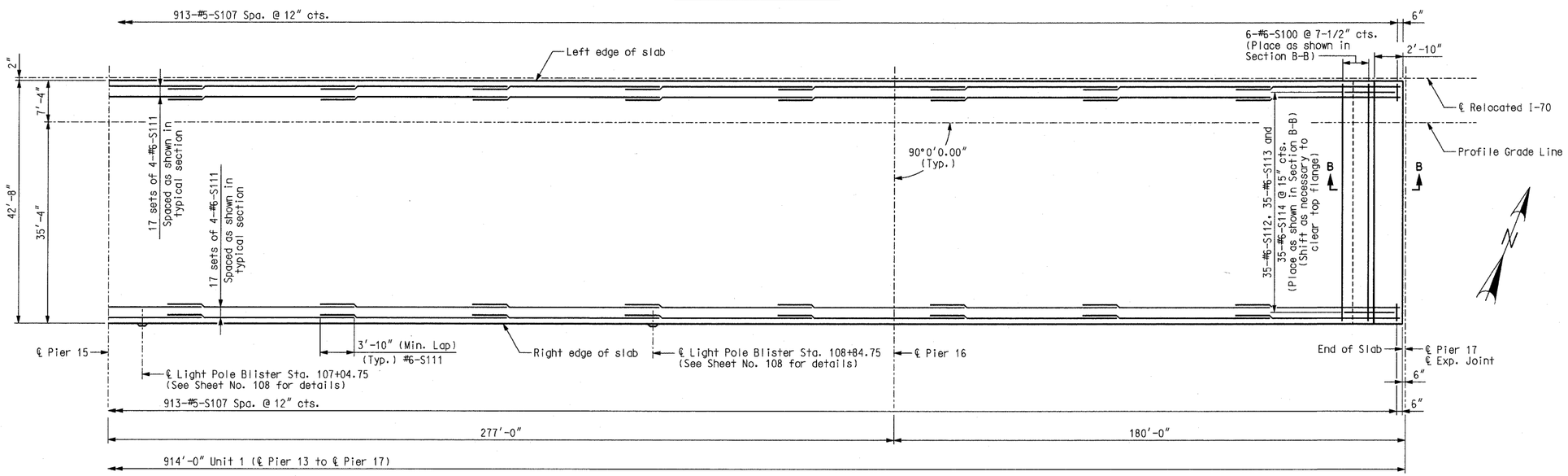

BOTTOM REINFORCING

Notes:

For typical bridge section and reinforcing, see Sheet No. 103.

For location of slab drains, see Sheet No. 127.

For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.

For slab pouring sequence, see Sheet No. 106.

Longitudinal slab dimensions are measured horizontally.

Longitudinal reinforcing steel shall be placed so that ends shall not be more than 1"± from the vertical plate and the vertical leg of the angle at expansion device (Pier 17).

Concrete shall be forced under and around the joint members and hardware. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12" spacing.

See Sheet No. 100 for Section B-B.

Light poles, lights and other electrical appurtenances are by others. See electrical details in contract J6I0984 - MoDOT.

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 93 of 152

SLAB PLAN SHOWING REINFORCING EB - UNIT 1 (2 OF 2)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

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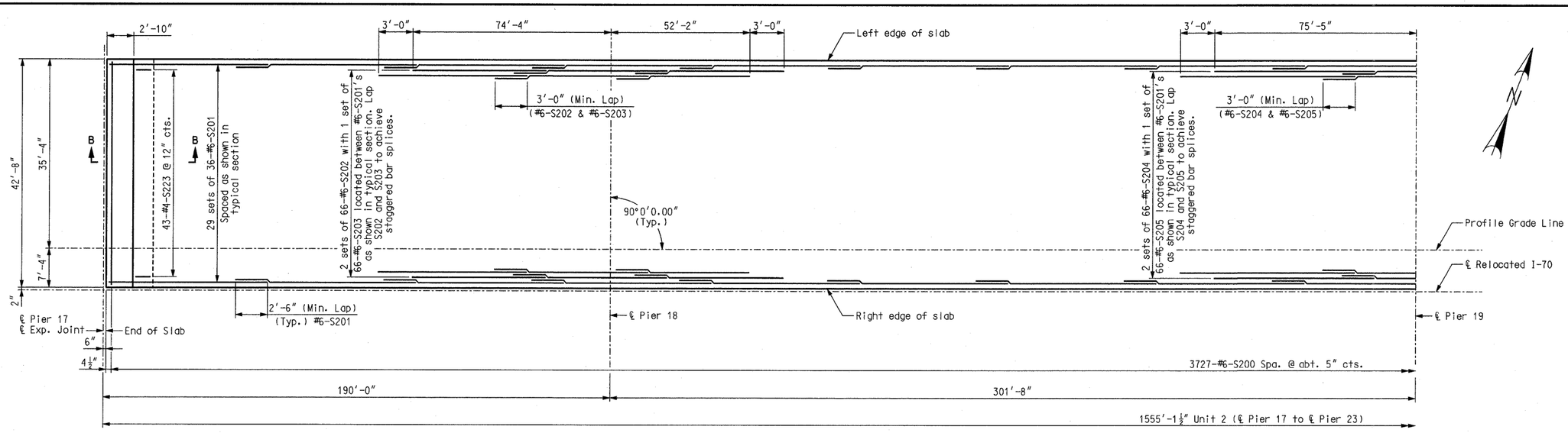

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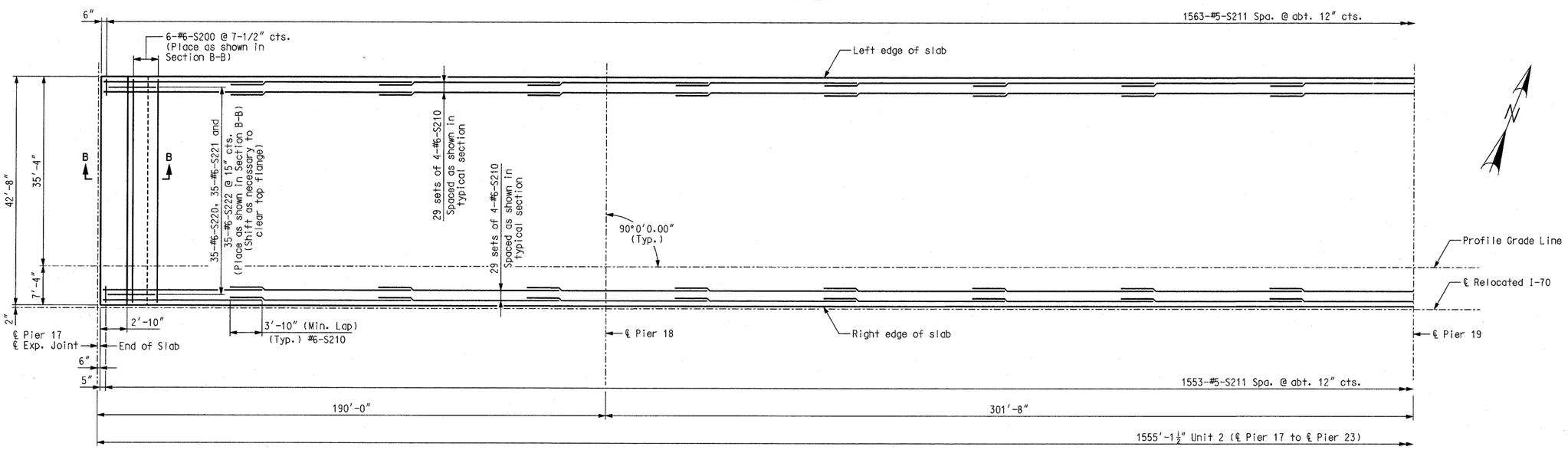

BOTTOM REINFORCING

Notes:
For typical bridge section and reinforcing, see Sheet No. 104.
For location of slab drains, see Sheet No. 127 and 128.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 107.
Longitudinal slab dimensions are measured horizontally.
Longitudinal reinforcing steel shall be placed so that ends shall not be more than 1"± from the vertical plate and the vertical leg of the angle at expansion device (Pier 17).
Concrete shall be forced under and around the joint members and hardware. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12" spacing.
See Sheet No. 100 for Section B-B.

SLAB PLAN SHOWING REINFORCING WB - UNIT 2 (1 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 94 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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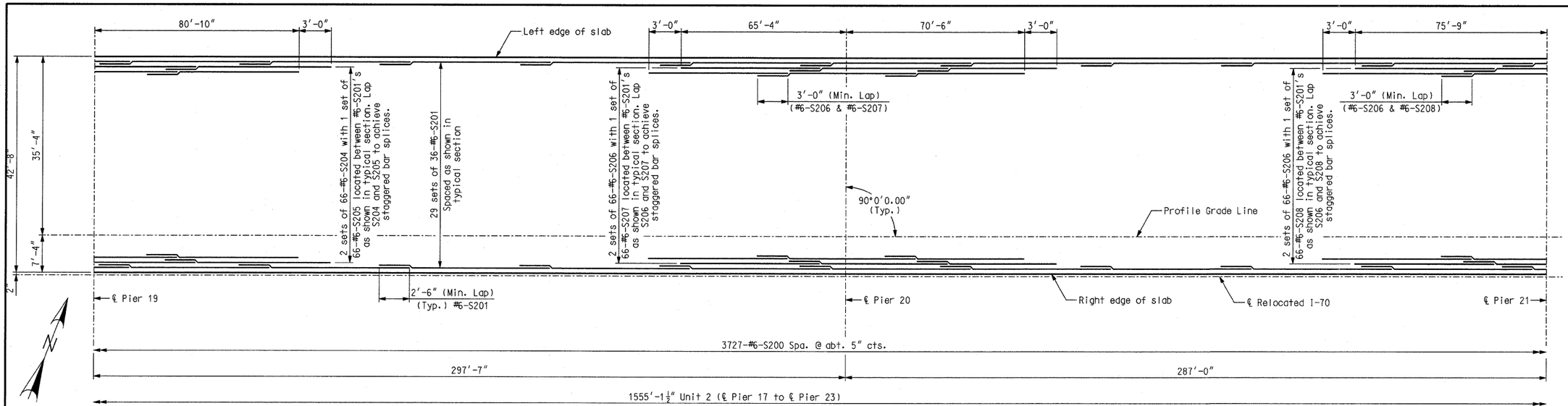

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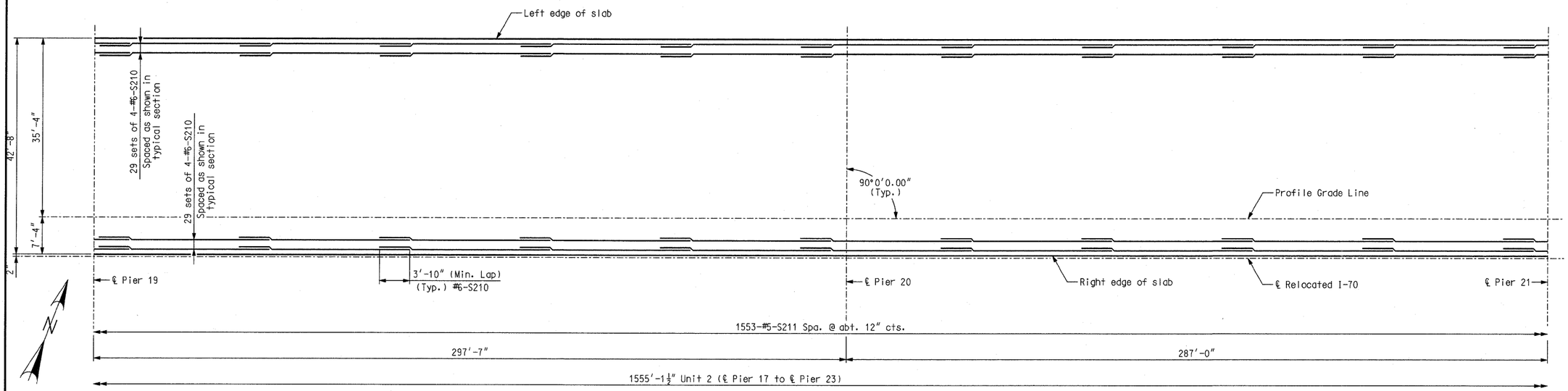

BOTTOM REINFORCING

Notes:
For typical bridge section and reinforcing, see Sheet No. 104.
For location of slab drains, see Sheet No. 128.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 107.
Longitudinal slab dimensions are measured horizontally.

SLAB PLAN SHOWING REINFORCING WB - UNIT 2 (2 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 95 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
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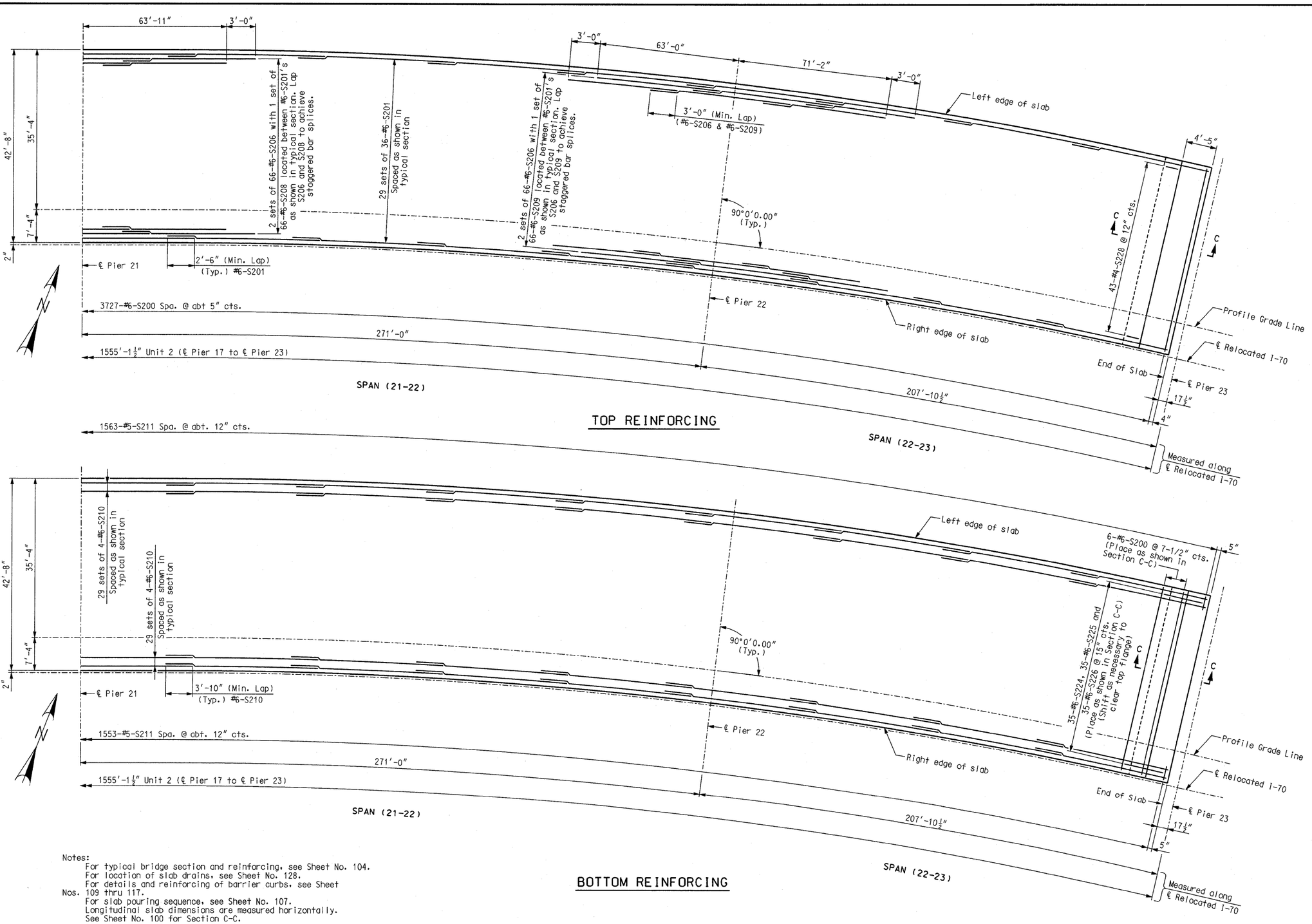

Notes:
For typical bridge section and reinforcing, see Sheet No. 104.
For location of slab drains, see Sheet No. 128.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 107.
Longitudinal slab dimensions are measured horizontally. See Sheet No. 100 for Section C-C.

SLAB PLAN SHOWING REINFORCING WB - UNIT 2 (3 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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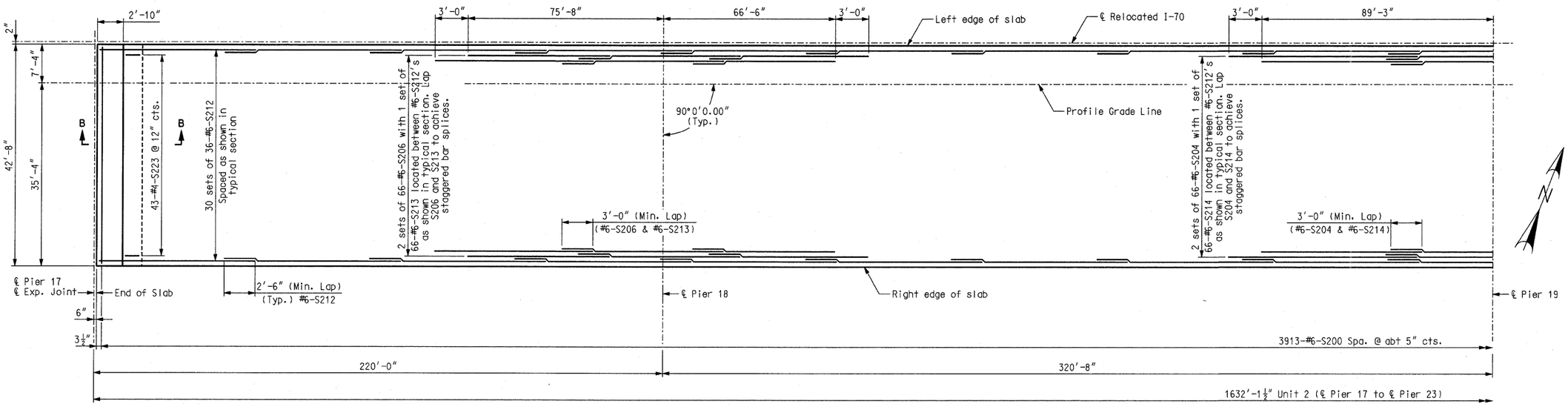
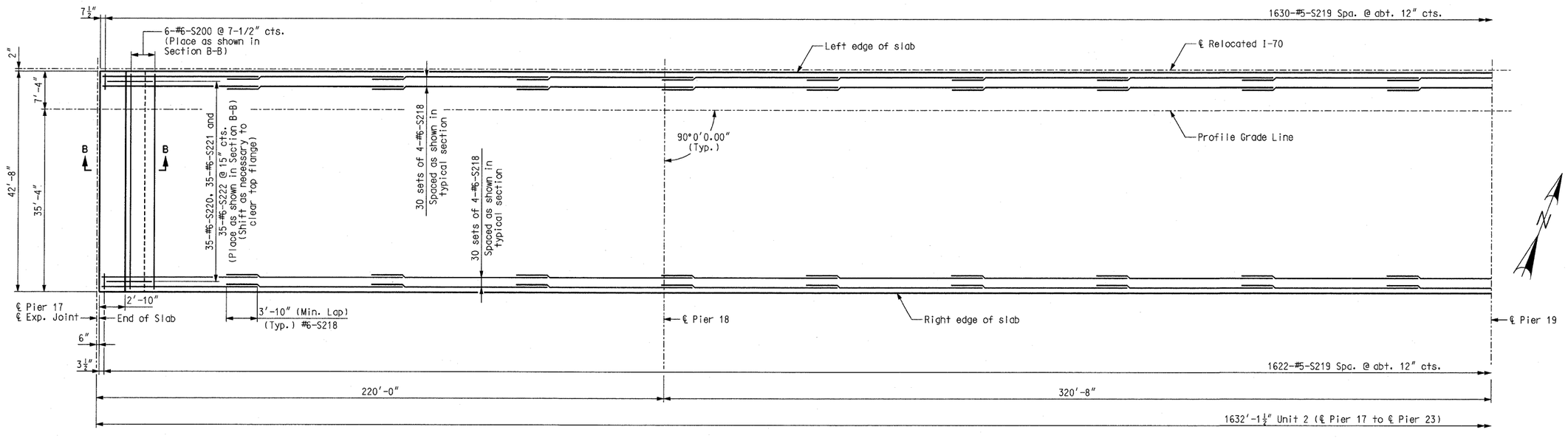


SPAN (17-18) SPAN (18-19)

TOP REINFORCING



SPAN (17-18) SPAN (18-19)

BOTTOM REINFORCING

Notes:
For typical bridge section and reinforcing, see Sheet No. 105.
For location of slab drains, see Sheet Nos. 127 and 128.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 107.
Longitudinal slab dimensions are measured horizontally.
Longitudinal reinforcing steel shall be placed so that ends shall not be more than 1"± from the vertical plate and the vertical leg of the angle at expansion device (Pier 17).
Concrete shall be forced under and around the joint members and hardware. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12" spacing.
See Sheet No. 100 for Section B-B.

SLAB PLAN SHOWING REINFORCING EB - UNIT 2 (1 OF 3)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
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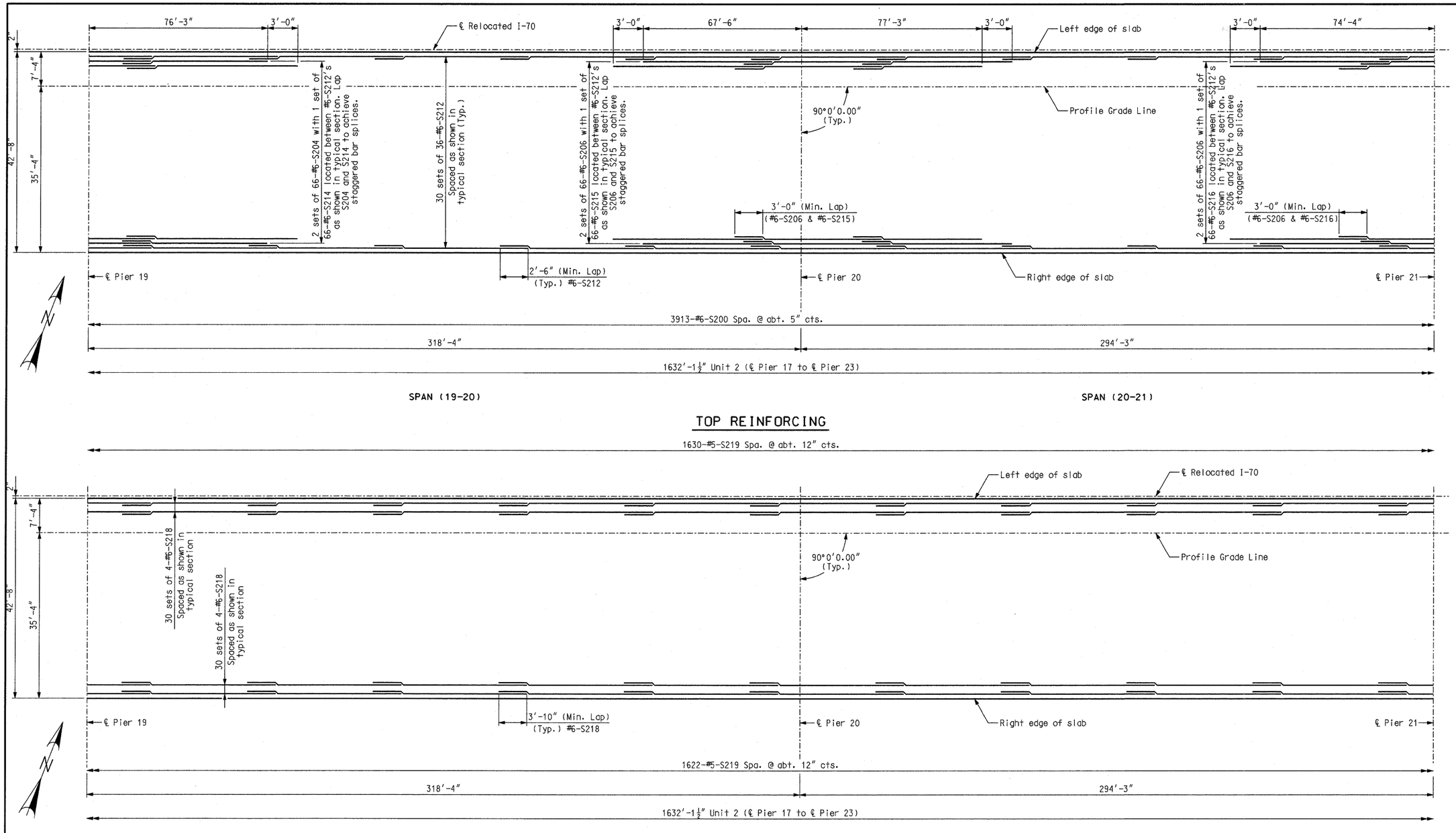

TOP REINFORCING

BOTTOM REINFORCING

Notes:
For typical bridge section and reinforcing, see Sheet No. 105.
For location of slab drains, see Sheet No. 128.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 107.
Longitudinal slab dimensions are measured horizontally.

SLAB PLAN SHOWING REINFORCING EB - UNIT 2 (2 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 98 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
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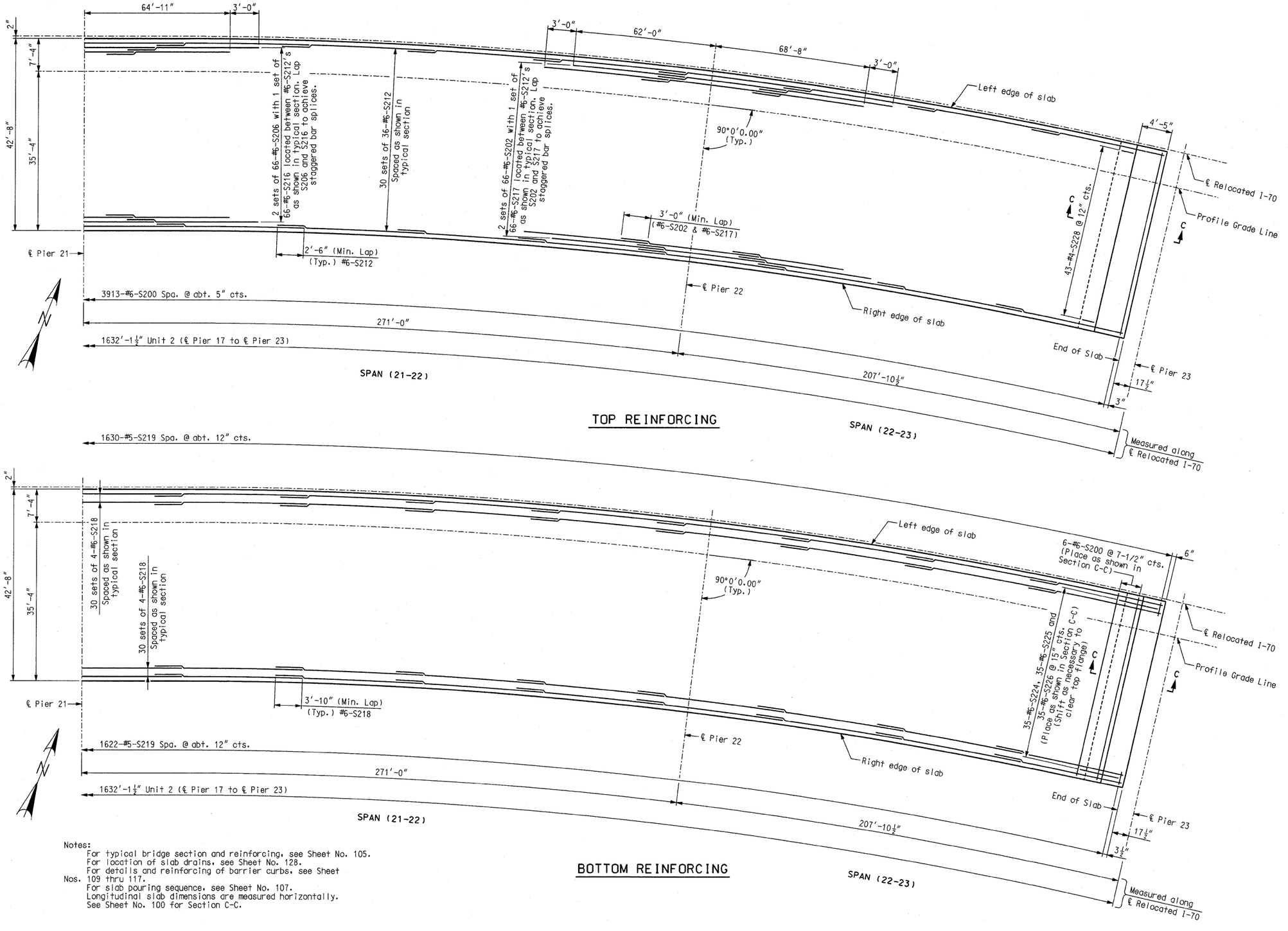

Notes:
For typical bridge section and reinforcing, see Sheet No. 105.
For location of slab drains, see Sheet No. 128.
For details and reinforcing of barrier curbs, see Sheet Nos. 109 thru 117.
For slab pouring sequence, see Sheet No. 107.
Longitudinal slab dimensions are measured horizontally.
See Sheet No. 100 for Section C-C.

SLAB PLAN SHOWING REINFORCING EB - UNIT 2 (3 OF 3)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 99 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
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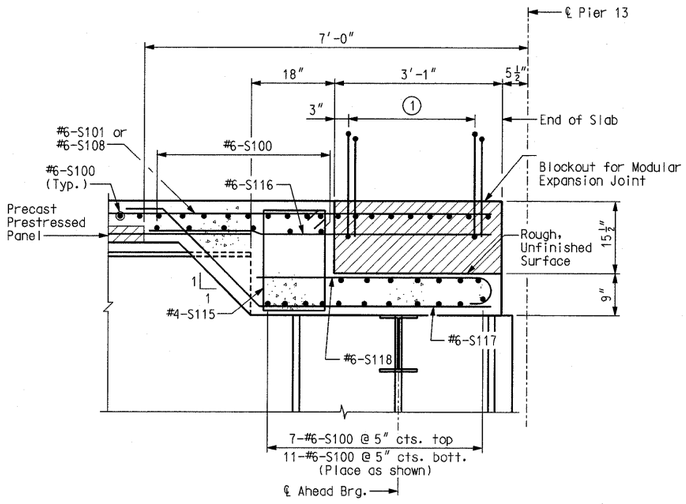
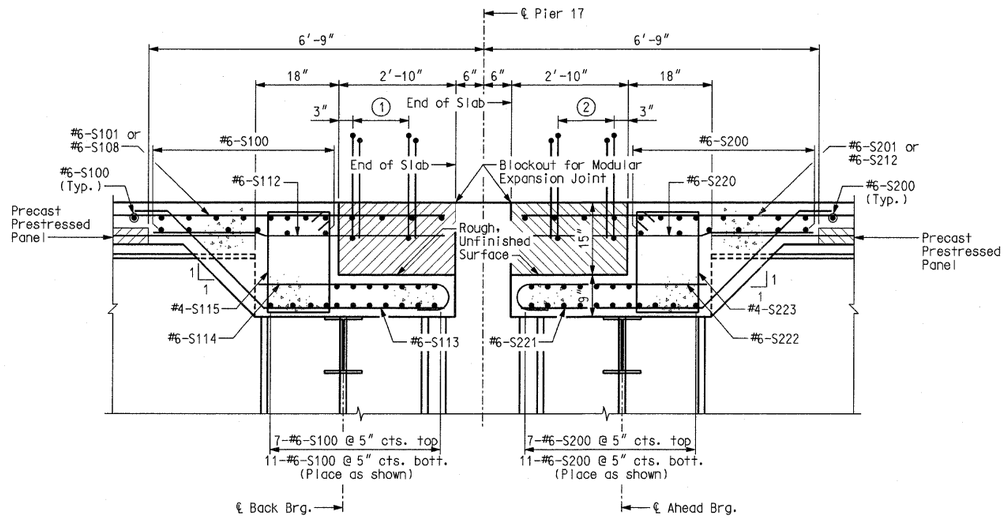
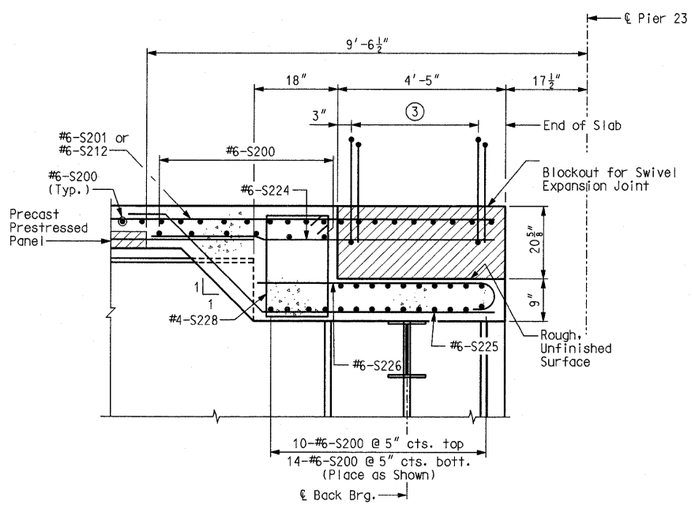


SECTION A-A
(at Pier 13)
(Looking South)

Note:
Modular Expansion Joint to be provided by others.



SECTION B-B
(at Pier 17)
(Looking North)



SECTION C-C
(at Pier 23)
(Looking North)

Note:
Modular Swivel Expansion Joint to be provided by others.

① 3 pairs of #5-R102 and #5-R103 bars @ 12″ cts. shall be embedded in blockout concrete after expansion joint is in place ✱

② 3 pairs of #5-R202 and #5-R203 bars @ 12″ cts. shall be embedded in blockout concrete after expansion joint is in place ✱

③ 4 pairs of #5-R202 and #5-R203 bars @ 12″ cts. shall be embedded in blockout concrete after expansion joint is in place ✱

Notes:
For location of Section A-A, see Sheet Nos. 90 and 92.
For location of Section B-B, see Sheet Nos. 91, 93, 94 and 97.
For location of Section C-C, see Sheet Nos. 96 and 99.
Rotate #6-S114, #6-S118, #6-S222 and #6-S226 bars to maintain min. clearance.
Bars which interfere with the modular expansion joint boxes, shall be saw cut within 1 1/2″ of expansion joint box(s). All other reinforcing steel between expansion joint box(s) shall remain and shall be incorporated in the concrete pour with the modular expansion joint.
✱ For Part Section A-A showing placement of #5-R102, #5-R103, #5-R202, and #5-R203 bars, see Sheet No. 117. For bar callouts, see Sheet Nos. 109 thru 116.

SLAB DETAILS

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

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CMT
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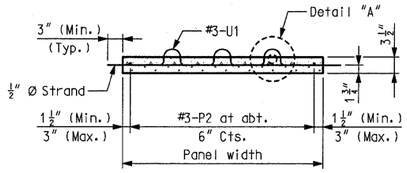
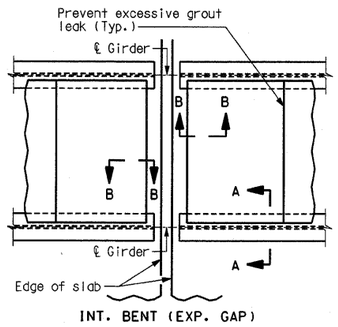
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



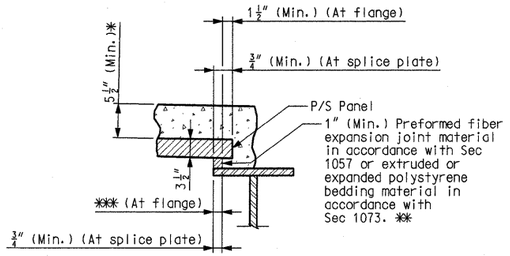
SECTION C-C



INT. BENT (EXP. GAP)

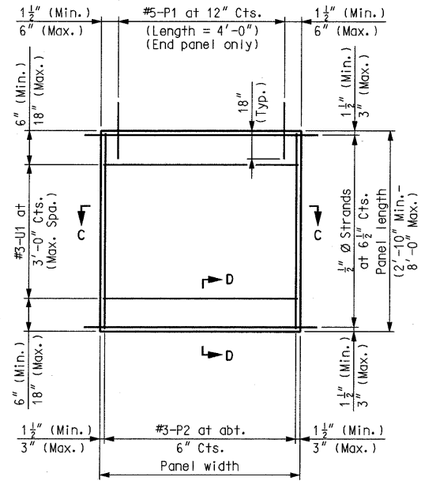
PANELS-SQUARED ENDS

PLAN OF PRECAST PRESTRESSED PANELS PLACEMENT

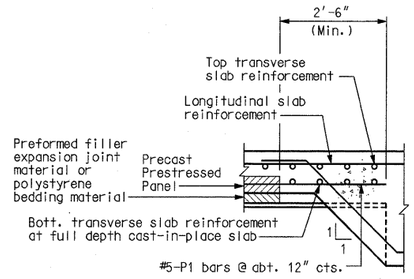


SECTION A-A

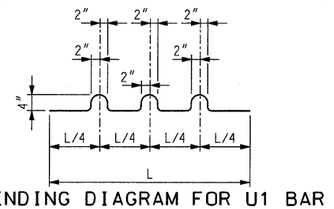
Note:
The thickness of the preformed fiber expansion joint material or polystyrene bedding material shall be adjusted to achieve the slab haunching dimension found on Sheet Nos. 66 thru 75. These adjustments shall be within the limits noted in general notes.



PLAN OF PRECAST PRESTRESSED PANEL

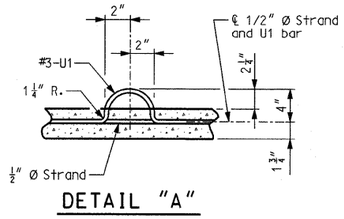


PART SECTION B-B

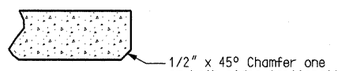


BENDING DIAGRAM FOR U1 BAR

(U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars).



DETAIL "A"



SECTION D-D

Notes:
The thickness of the preformed fiber expansion joint material or polystyrene bedding material shall be adjusted to achieve the slab haunching dimension found on sheet 66 thru 75. These adjustments shall be within the limits noted in general notes.
* Adjustment in the slab thickness, preformed fiber expansion joint material or polystyrene bedding material thickness, or grade will be necessary if the girder camber after erection differs from plan camber by more than the % of dead load deflection due to the weight of structural steel. No payment will be made for additional labor or materials for the adjustment.
Minimum reinforcement steel length shall be 2'-0".
** All panel support pads shall be glued to the girder. When support thickness exceeds 1 1/2 inches, the pads shall be glued top and bottom. The glue used shall be the type recommended by the panel support pads manufacturer.
*** 2 1/2" in tangent regions (normal crown) of girders.
3" in superelevated and transition regions.

GENERAL NOTES

Prestressed Panel Notes:

Precast panels shall be in accordance with Sec 1029.

Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels with a maximum spacing of 1".

Prestressing tendons shall be high-tensile strength uncoated seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 1/2" and nominal area = 0.153 sq. in. and minimum ultimate strength = 41.31 kips (270 ksi).

Initial prestressing force = 30.9 kips/strand. The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

Minimum preformed fiber expansion joint material or polystyrene bedding material thickness shall be 1 inch, except over splice plates where minimum thickness shall be 1/4 inch. When the material is less than 1/2 inch thick over a splice plate, the width of material at the splice shall be the same width as panel on splice. Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances. No more than 3" total thickness shall be used in the tangent regions of the girder and no more than 4" total thickness shall be used in superelevation transition and full superelevation regions of the girder.

The same thickness of material shall be used under any one edge of any panel except at splices, and the maximum change in thickness between adjacent panels shall be 1/4 inch to correct for variations from girder camber diagram. The polystyrene bedding material may be cut to match haunch height above top of flange.

Reinforcing Steel Notes:

All dimensions are out to out.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures. Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.

The prestressed panel quantities are not included in the table of estimated quantities for slab.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Welded wire fabric or welded deformed bar mats providing a minimum area of reinforcing perpendicular to strands of 0.22 sq. in./ft., with spacing parallel to strands sufficient to insure proper handling, may be used in lieu of the #3-P2 bars shown. Wire or bar diameter shall not be larger than 0.375 inches.

The reinforcing steel shall be tied securely to the 1/2"Ø strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
Welded wire fabric or welded deformed bar mats at 2'-0".

Tie the #3-U1 bars to the #3-P2 bars, to the welded wire fabric or the welded deformed bar mats at about 3'-0" centers.

All reinforcement other than prestressing strands shall be epoxy coated.

DETAILS OF PRECAST PRESTRESSED PANELS

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 101 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

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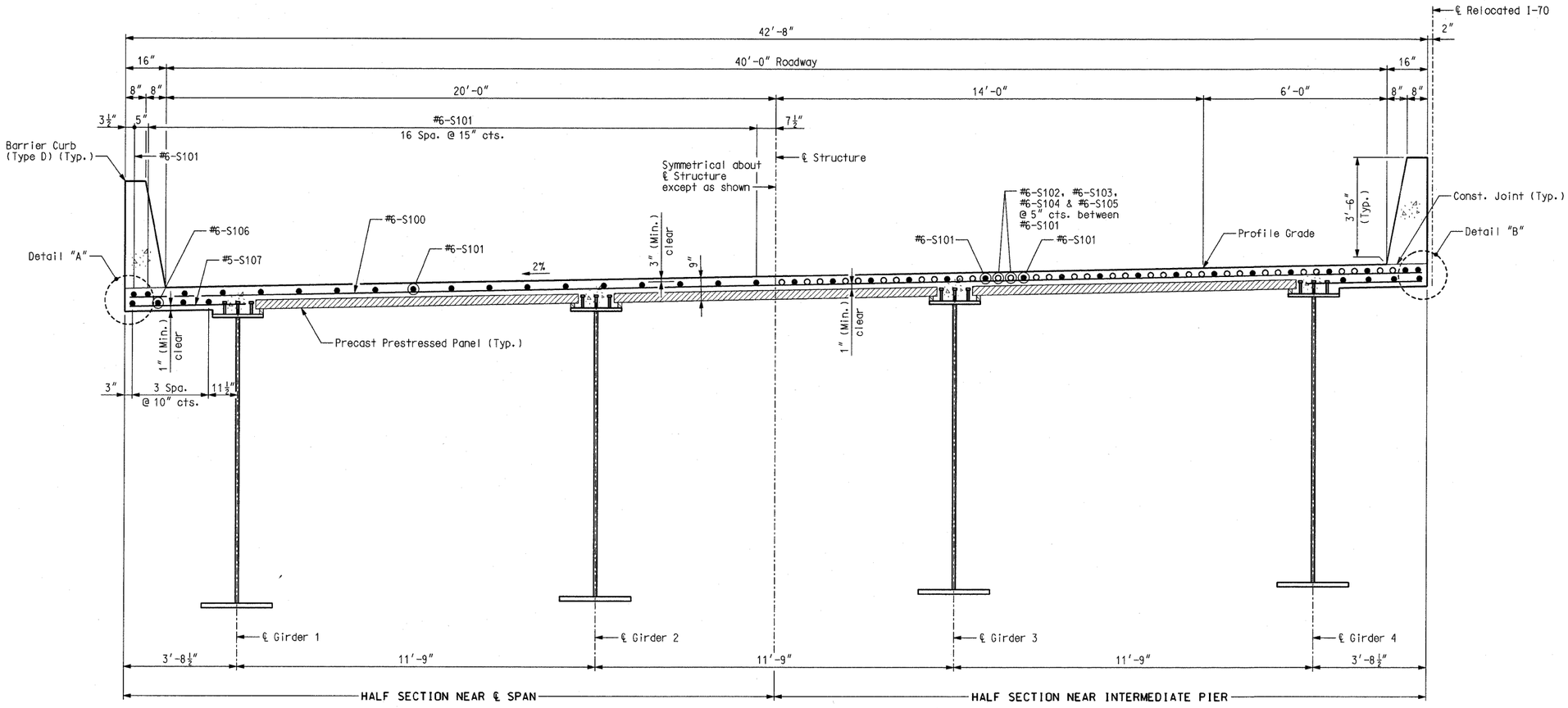
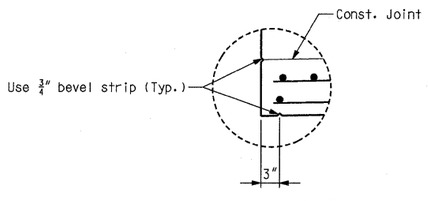


TYPICAL BRIDGE SECTION



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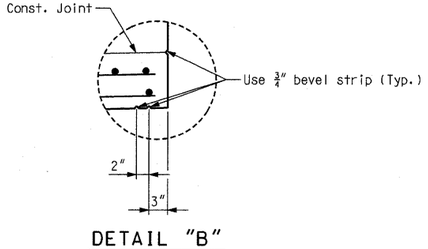

DETAIL "B"

Notes:
Longitudinal slab dimensions are measured horizontally.
For slab pouring sequence, see Sheet No. 106.
For theoretical slab haunch, see Sheet Nos. 66 and 67.
For details and reinforcement of barrier curbs not shown, see Sheet Nos. 109 thru 117.
For details of precast panels, see Sheet No. 101.
For plan of slab showing reinforcement, see Sheet Nos. 90 and 91.

SLAB CROSS SECTION WB – UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

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PLOT SCALE = $SCALE$
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REVISED –
REVISED –
REVISED –

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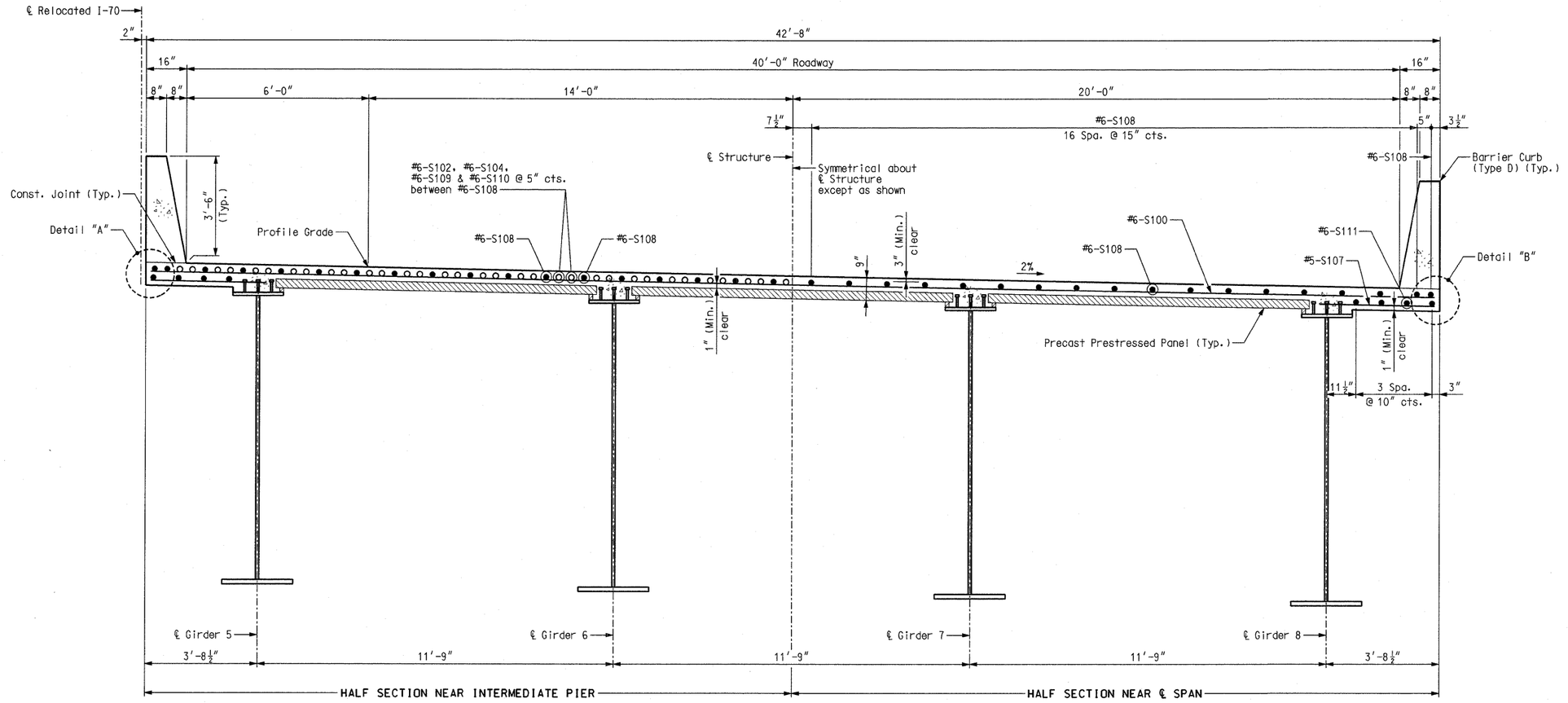

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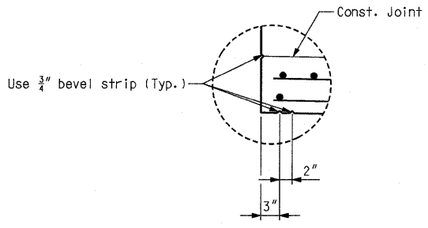

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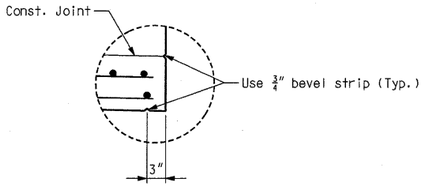

DETAIL "B"

Notes:
Longitudinal slab dimensions are measured horizontally.
For slab pouring sequence, see Sheet No. 106.
For theoretical slab haunch, see Sheet Nos. 68 and 69.
For details and reinforcement of barrier curbs not shown, see Sheet Nos. 109 thru 117.
For details of precast panels, see Sheet No. 101.
For plan of slab showing reinforcement, see Sheet Nos. 92 and 93.

SLAB CROSS SECTION EB – UNIT 1

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
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FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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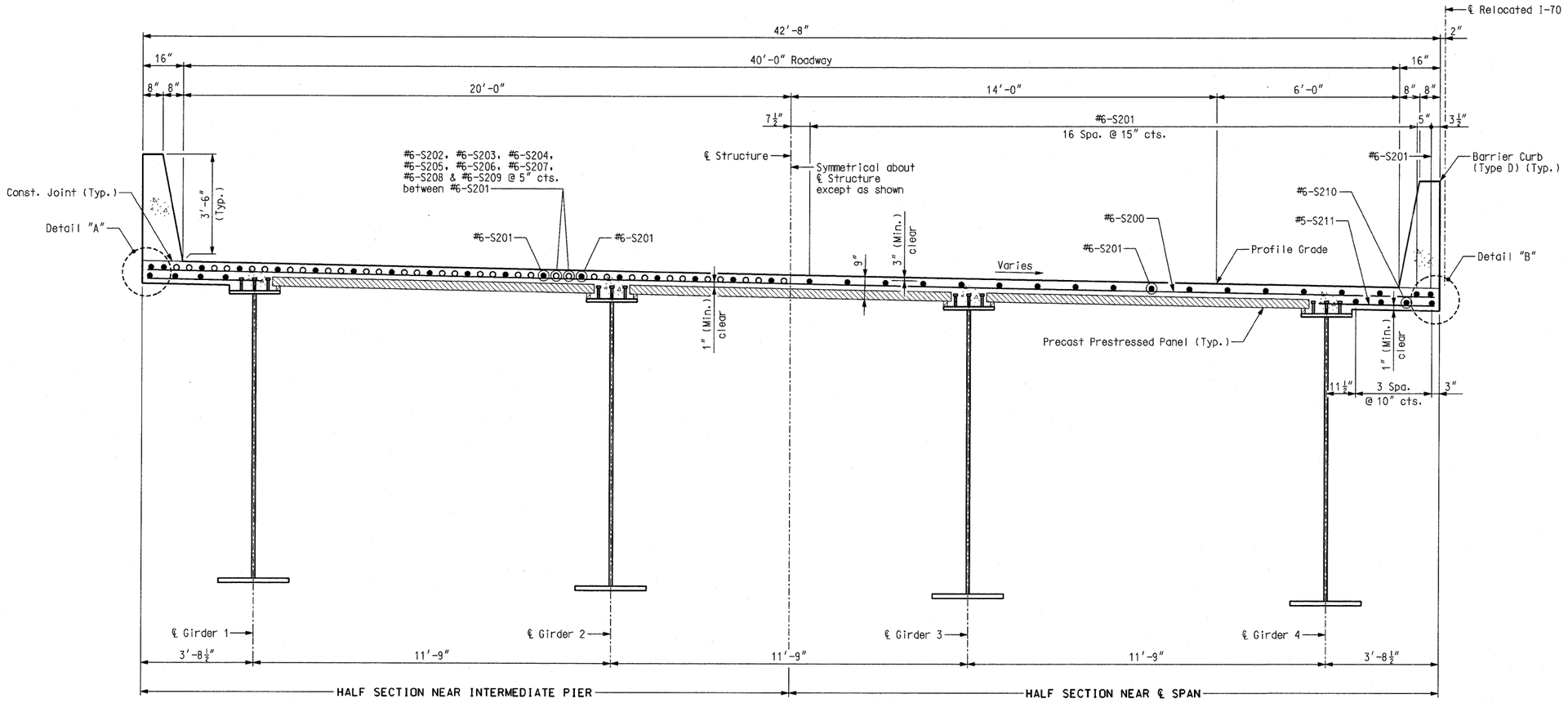

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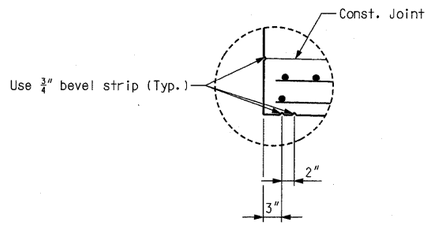

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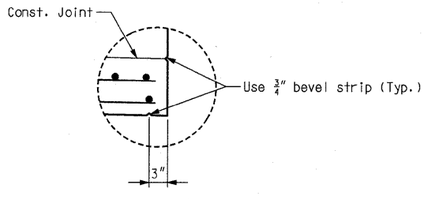

DETAIL "B"

Notes:
Longitudinal slab dimensions are measured horizontally.
For slab pouring sequence, see Sheet No. 107.
For theoretical slab haunch, see Sheet Nos. 70 thru 72.
For details and reinforcement of barrier curbs not shown, see Sheet Nos. 109 thru 117.
For details of precast panels, see Sheet No. 101.
For plan of slab showing reinforcement, see Sheet Nos. 94, 95, and 96.

SLAB CROSS SECTION WB - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
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ILLINOIS APPROACH STRUCTURE
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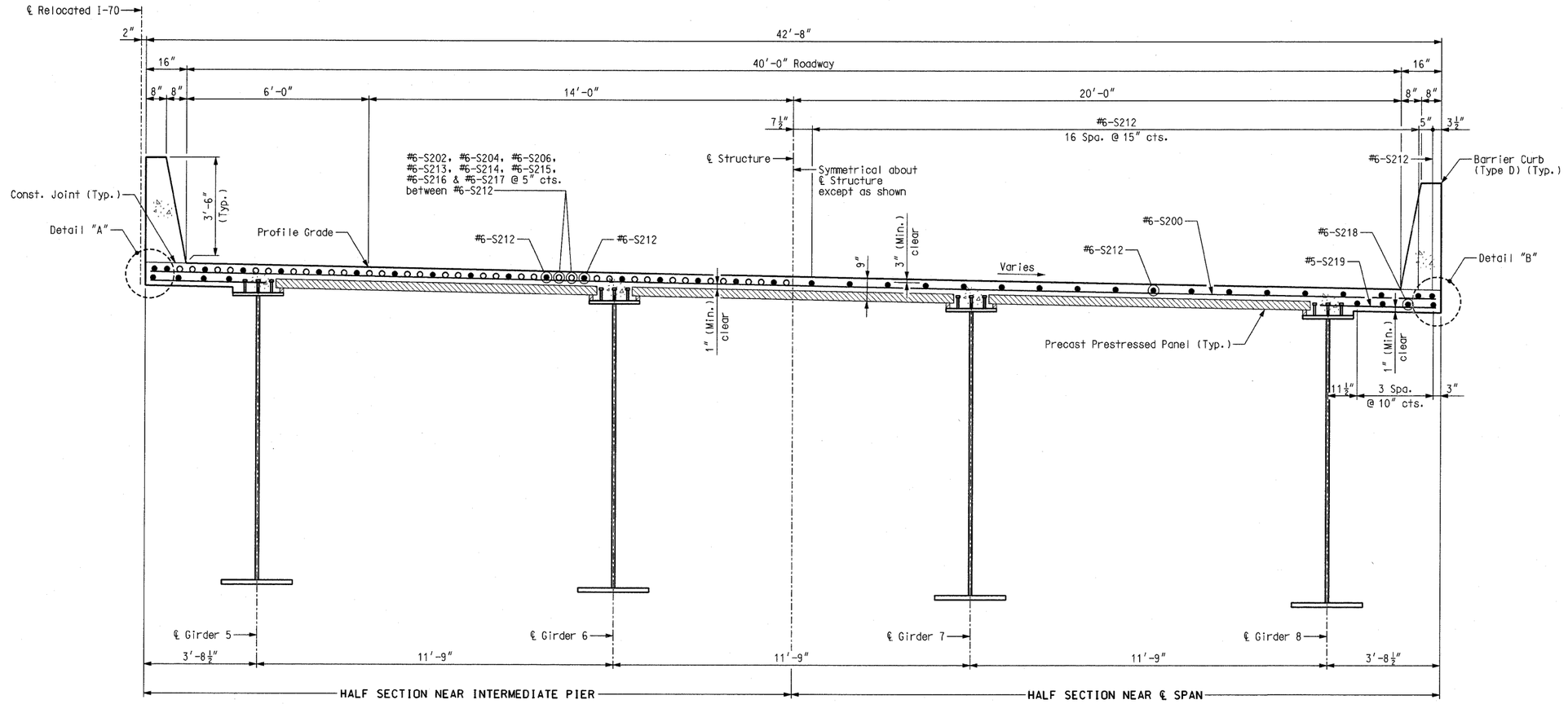

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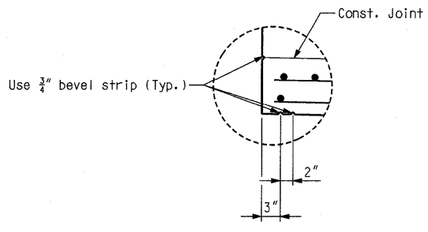

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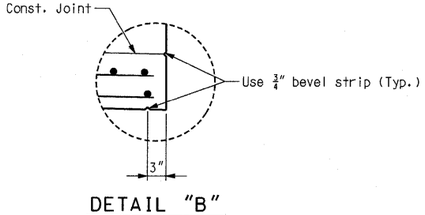

DETAIL "B"

Notes:
Longitudinal slab dimensions are measured horizontally.
For slab pouring sequence, see Sheet No. 107.
For theoretical slab haunch, see Sheet No. 73 thru 75.
For details and reinforcement of barrier curbs not shown, see Sheet Nos. 109 thru 117.
For details of precast panels, see Sheet No. 101.
For plan of slab showing reinforcement, see Sheet Nos. 97, 98, and 99.

SLAB CROSS SECTION EB - UNIT 2

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

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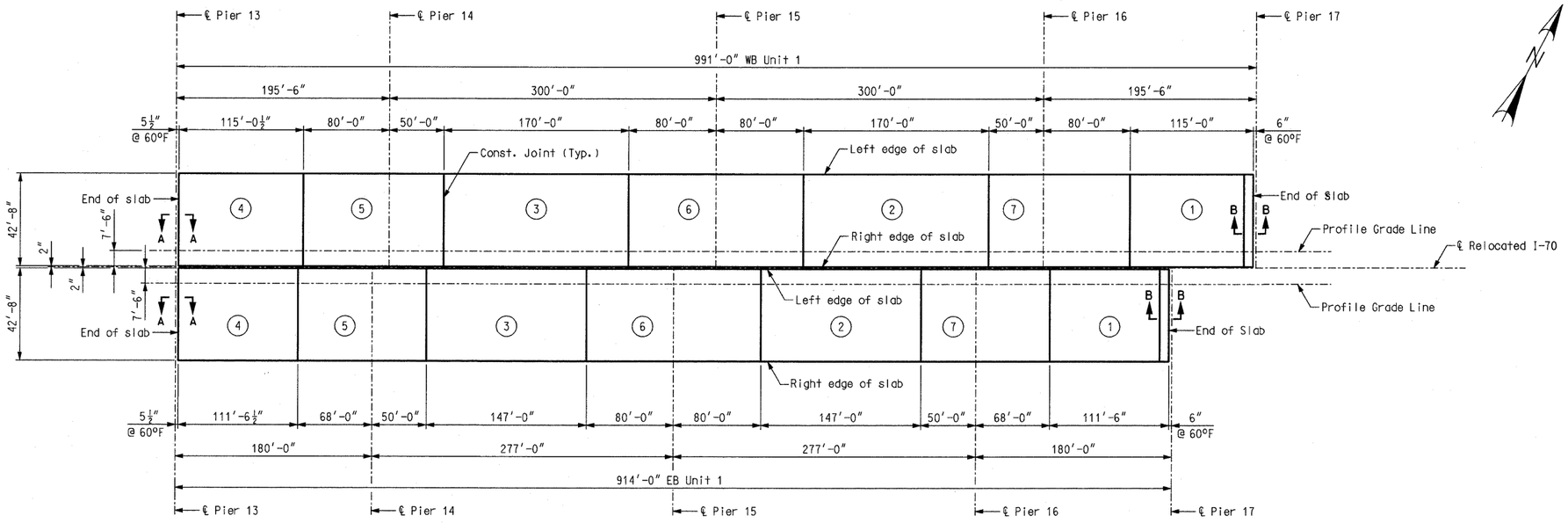
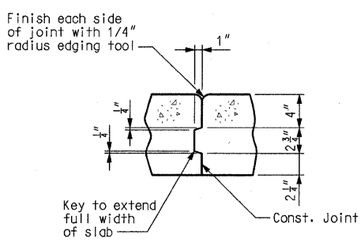
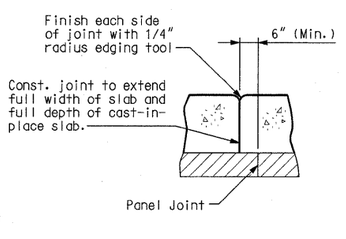


SPAN (13-14) SPAN (14-15) SPAN (15-16) SPAN (16-17)

SLAB POURING SEQUENCE



(SLAB CANTILEVER)



(SLAB ON PRECAST PANELS)

SLAB CONSTRUCTION JOINT DETAILS

	Sequence of Pours							Min. rate of pour cu. yds./hr.	
	Direction							With Retarder	No Retarder
Basic sequence	1	2	3	4	5	6	7	65	65
	Either Direction								
Alternate pours to the basic skip sequence are subject to the approval of the engineer in accordance with Sec 703.									
Alternate "A" pours	1		7 + 2		6 + 3		5 + 4	65	65
	End to 7		1 to 6		2 to 5		3 to End		
Alternate "B" pours	1 + 7 + 2			6 + 3			5 + 4	65	65
	End to 6			2 to 5			3 to End		
Alternate "C" pours	1 + 7 + 2				6 + 3 + 5 + 4			65	65
	End to 6				2 to End				
Alternate "D" pours	1 + 7 + 2 + 6 + 3 + 5 + 4							65	65
	End to End								

For Section A-A, see Sheet No. 100
For Section B-B, see Sheet No. 100

Notes:
Longitudinal and transverse dimensions are measured horizontally. Transverse construction joints shall be placed normal to Bridge ℄. The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

SLAB POURING SEQUENCE - UNIT 1

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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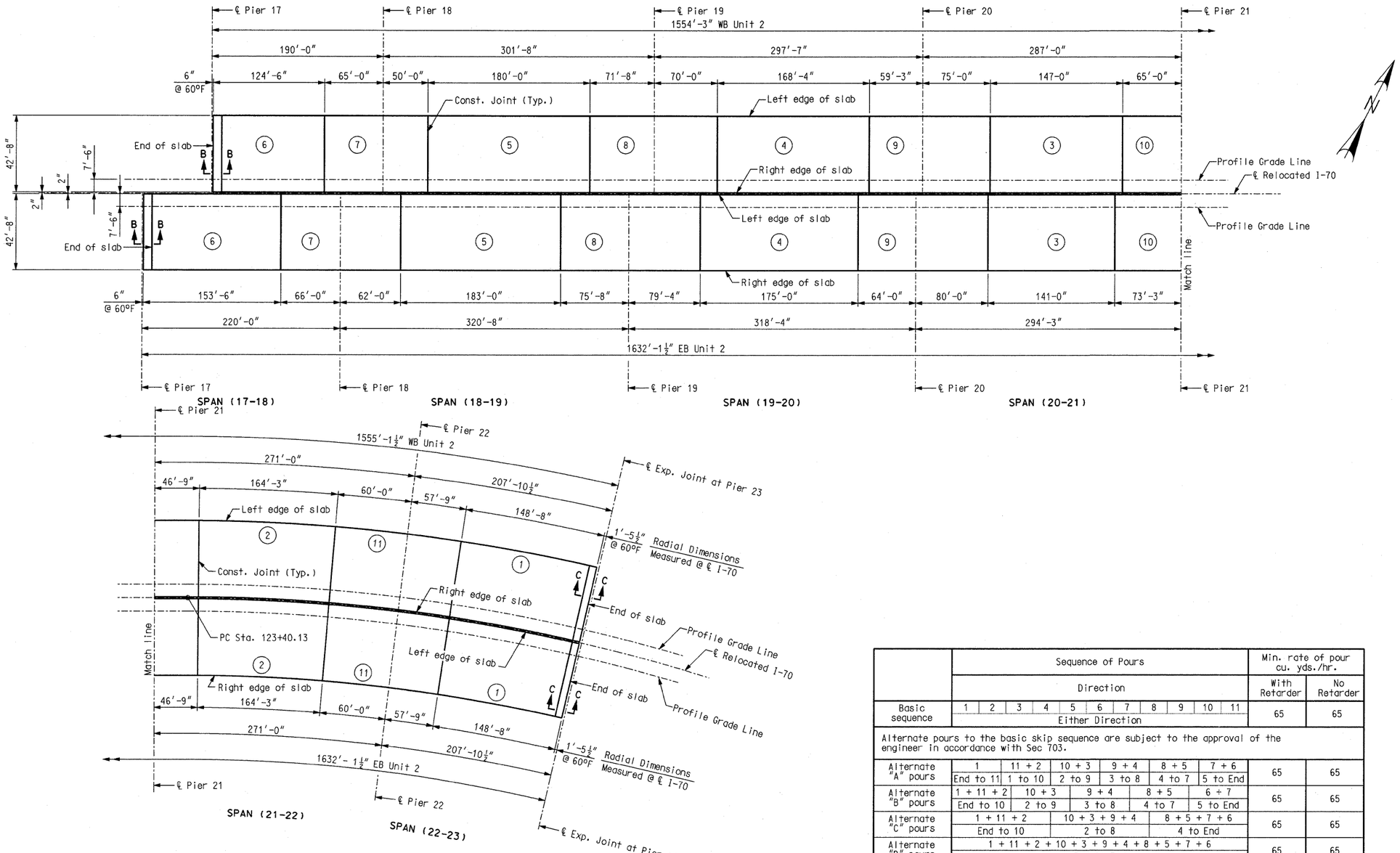


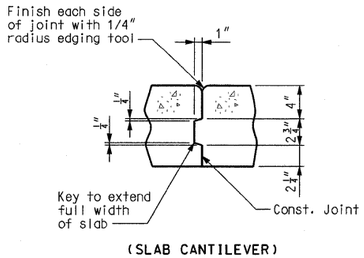
SLAB POURING SEQUENCE

	Sequence of Pours											Min. rate of pour cu. yds./hr.	
	Direction											With Retarder	No Retarder
Basic sequence	1	2	3	4	5	6	7	8	9	10	11	65	65
	Either Direction												
Alternate pours to the basic skip sequence are subject to the approval of the engineer in accordance with Sec 703.													
Alternate "A" pours	1		11 + 2		10 + 3		9 + 4		8 + 5		7 + 6	65	65
	End to 11		1 to 10		2 to 9		3 to 8		4 to 7		5 to End		
Alternate "B" pours	1 + 11 + 2		10 + 3		9 + 4		8 + 5		6 + 7			65	65
	End to 10		2 to 9		3 to 8		4 to 7		5 to End				
Alternate "C" pours	1 + 11 + 2		10 + 3 + 9 + 4				8 + 5 + 7 + 6					65	65
	End to 10		2 to 8				4 to End						
Alternate "D" pours	1 + 11 + 2 + 10 + 3 + 9 + 4 + 8 + 5 + 7 + 6											65	65
	End to End												

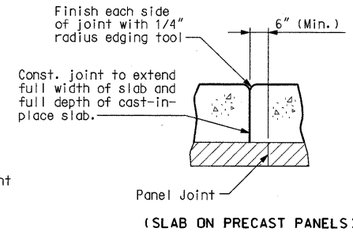
For Section B-B, see Sheet No. 100
For Section C-C, see Sheet No. 100

Notes:
Longitudinal and transverse dimensions are measured horizontally.
Transverse construction joints shall be placed normal to Bridge ℄.
The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

SLAB POURING SEQUENCE - UNIT 2



(SLAB CANTILEVER)



(SLAB ON PRECAST PANELS)

SLAB CONSTRUCTION JOINT DETAILS

Note: This drawing is not to scale. Follow dimensions.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
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Detailed JUL 2009
Checked JUL 2009

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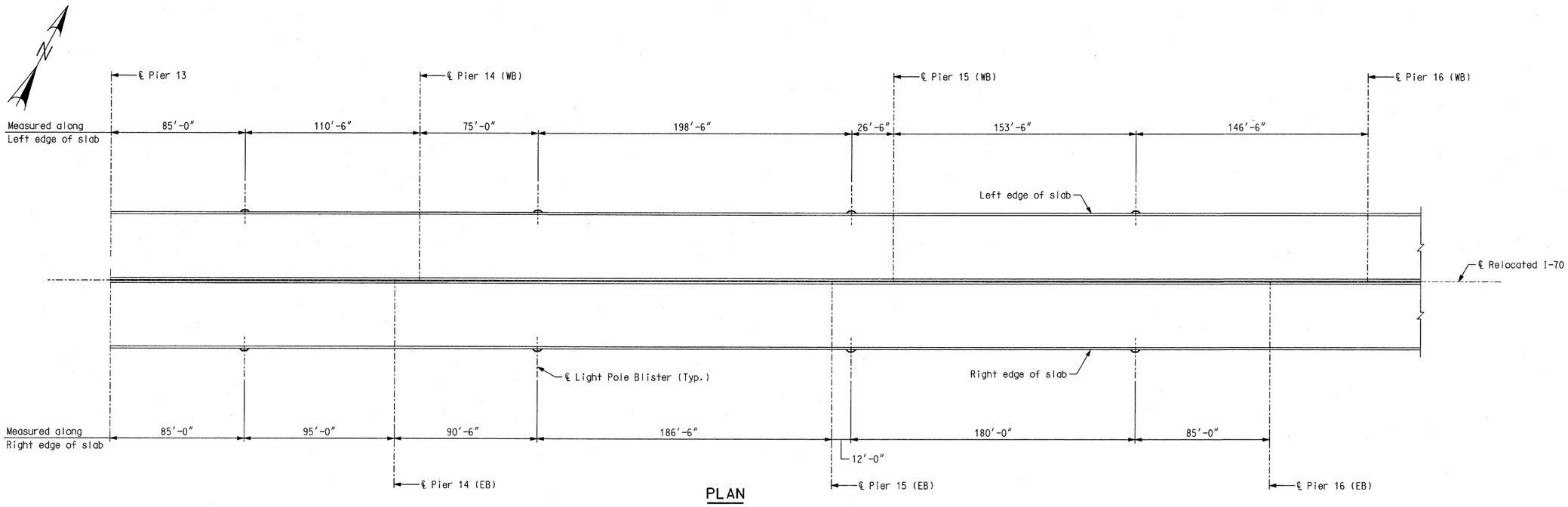
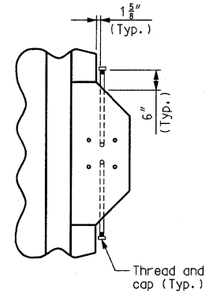
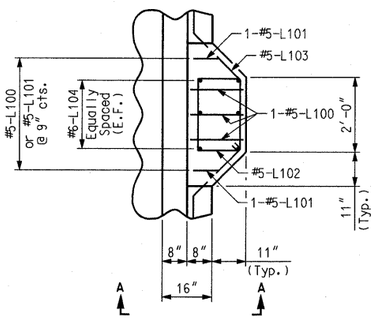


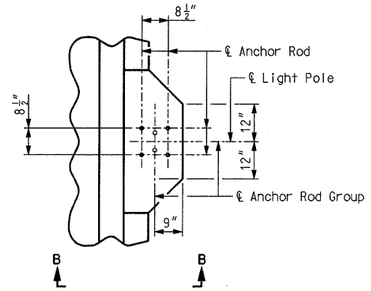
PLAN



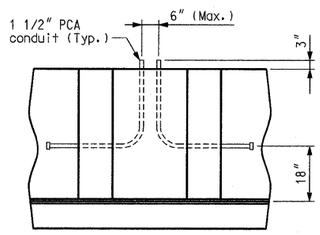
PLAN SHOWING CONDUIT



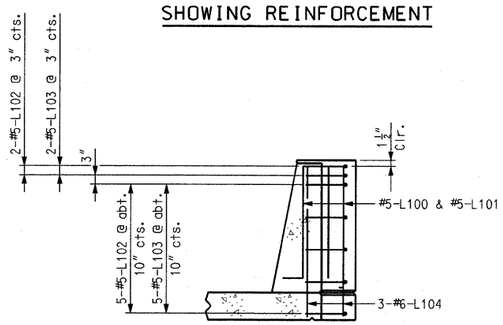
LIGHT POLE MOUNTING PLAN SHOWING REINFORCEMENT



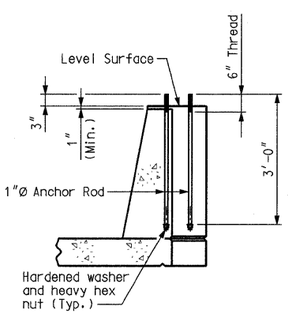
LIGHT POLE MOUNTING PLAN



ELEVATION SHOWING CONDUIT



ELEVATION A-A



ELEVATION B-B

Notes:
Anchor rods and nuts shall be AASHTO M314-90 Grade 55. Anchor rods, nuts and washers shall be fully galvanized.
Anchor rods shall be placed vertically.
Light poles and wiring are to be furnished in contract J6I0984, by Others.
Cost of steel reinforcement, anchor rods, nuts, washers and conduits will be considered completely covered by contract unit price for "Barrier Curb (Type D)" per linear foot.
See sheet no.s 4 thru 5 for surface mounted light units for railroad tracks.

LIGHT POLE BLISTER LAYOUT

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 108 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
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REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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715 KIRK DRIVE
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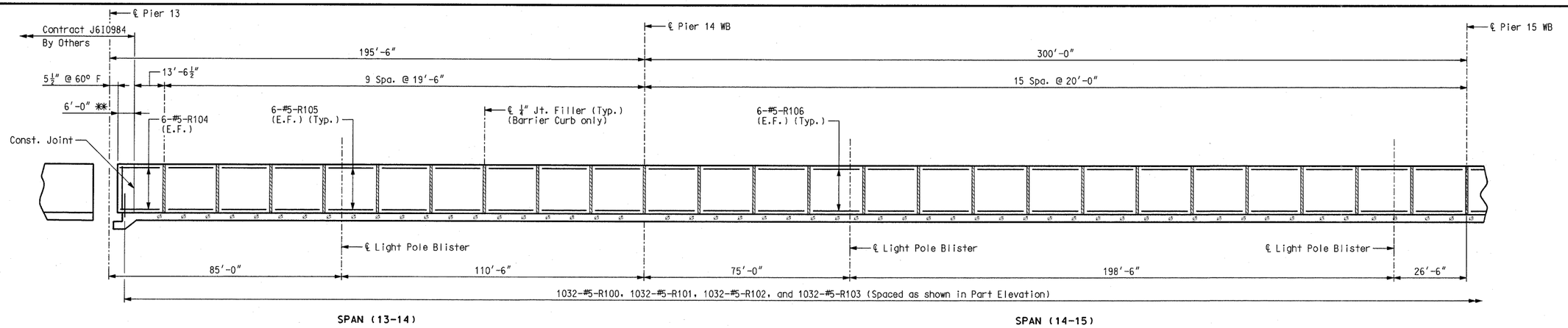
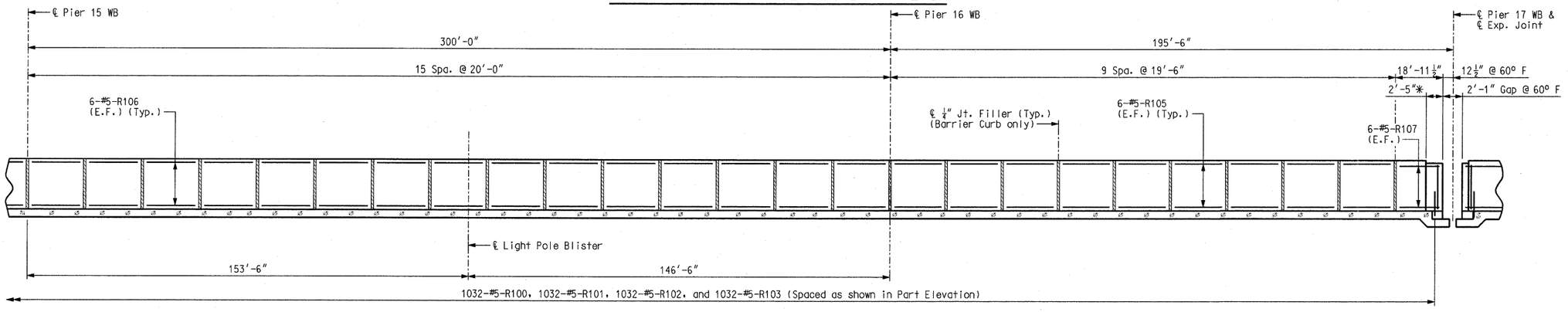
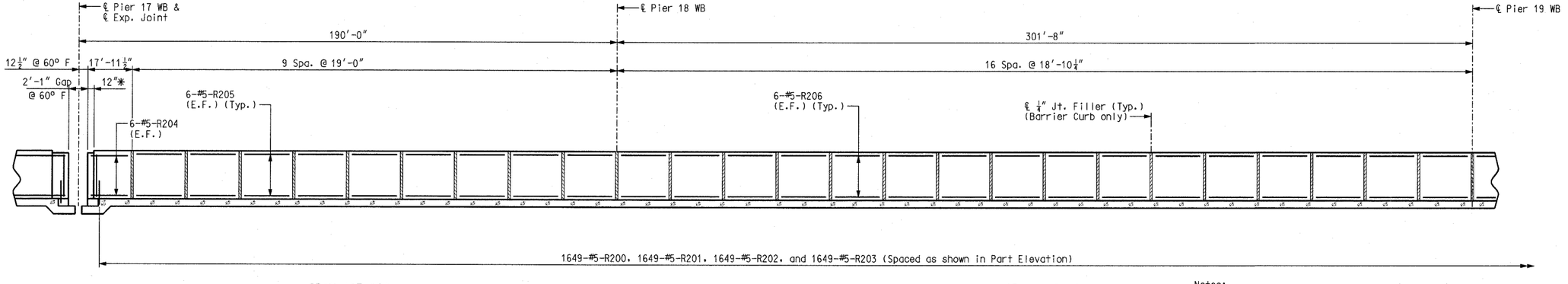
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
* Limits of recess for expansion joint cover PL. For barrier cover plate details, see Sheet No. 119.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract J6I0984, by Others. For reinforcement at light pole blisters, see Sheet No. 108.

LEFT BARRIER CURB (TYPE D) WB - SECTIONS (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 109 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
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ILLINOIS APPROACH STRUCTURE
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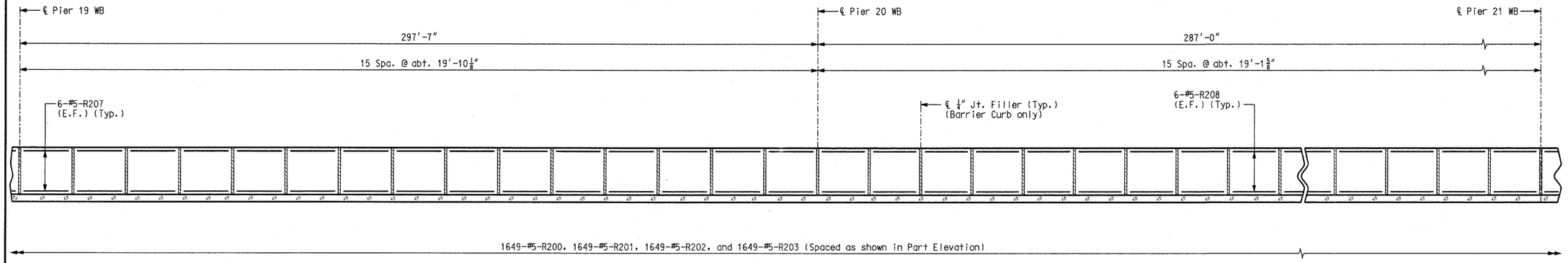
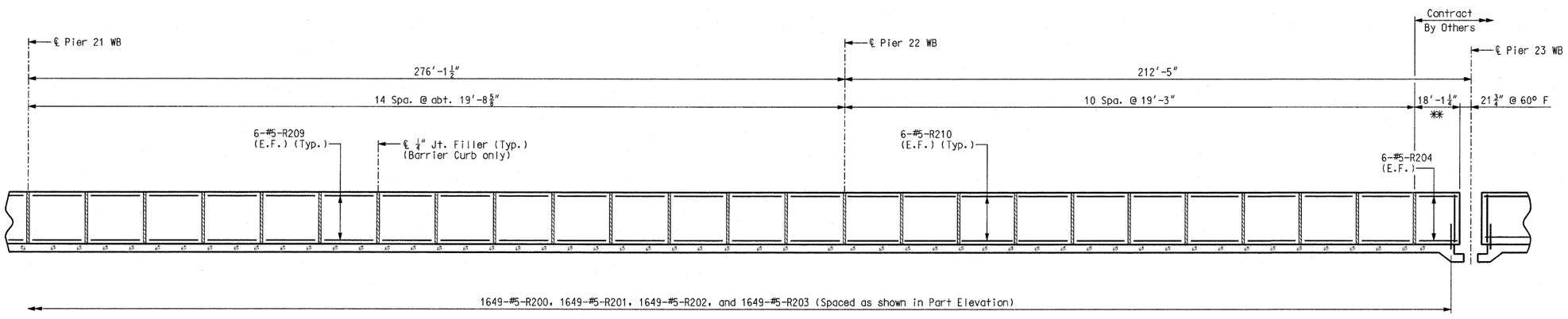
ENGINEERING CORPORATION - 000631



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract by Others.

LEFT BARRIER CURB (TYPE D) WB - SECTIONS (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 110 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

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ENGINEERING CORPORATION - 000631

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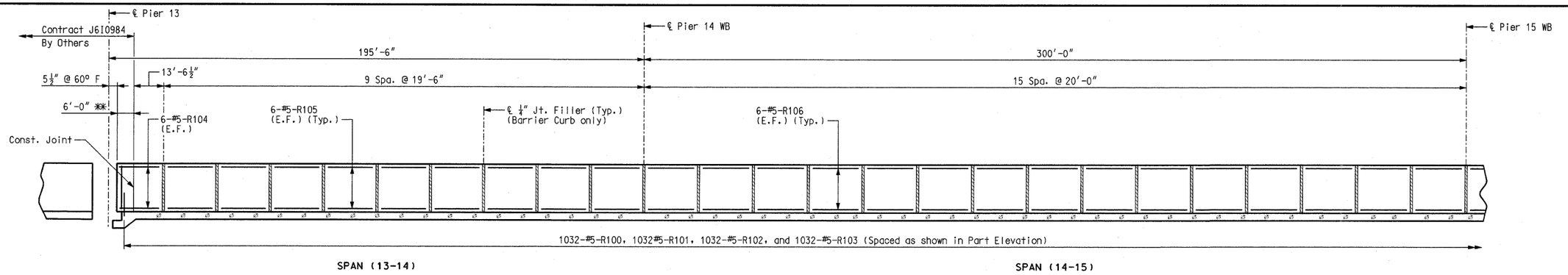
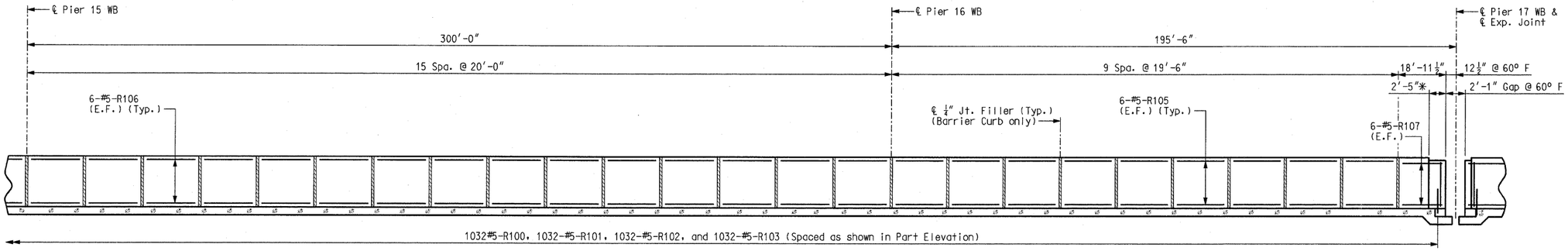
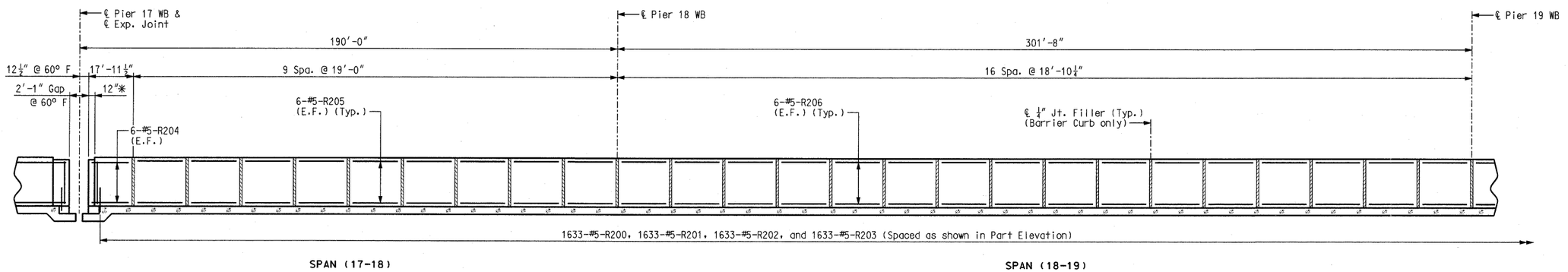


SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
* Limits of recess for expansion joint cover PL. For barrier cover plate details, see Sheet No. 120.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract J6I0984, by Others. For reinforcement at light pole blisters, see Sheet No. 108.

RIGHT BARRIER CURB (TYPE D) WB - SECTIONS (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 111 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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REVISED -
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REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
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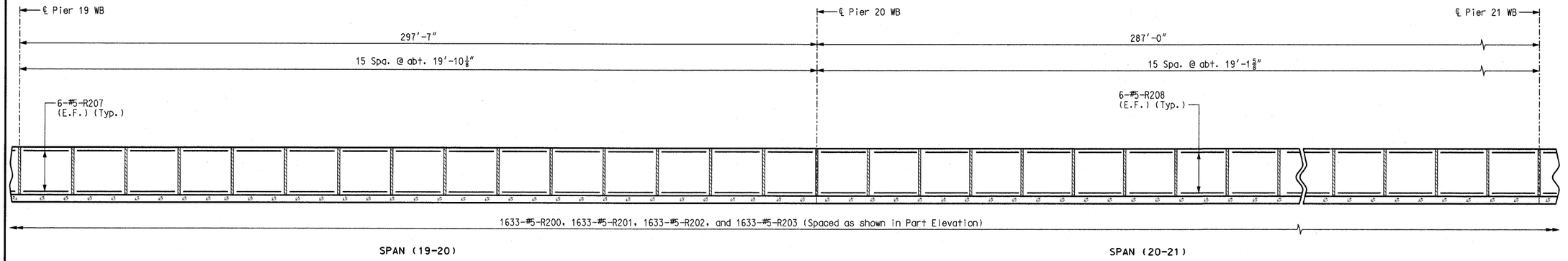
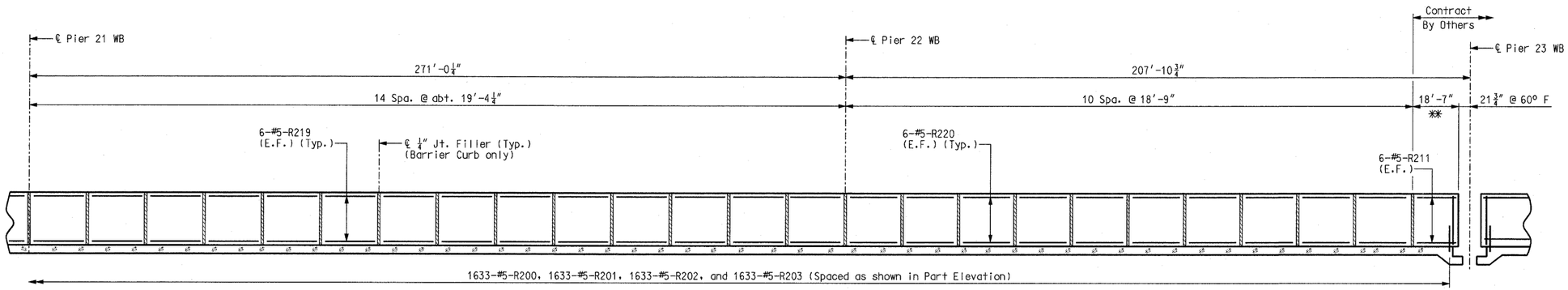
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract by Others.

RIGHT BARRIER CURB (TYPE D) WB - SECTIONS (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 112 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = #SCALE#
PLOT DATE = 4/14/2010

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ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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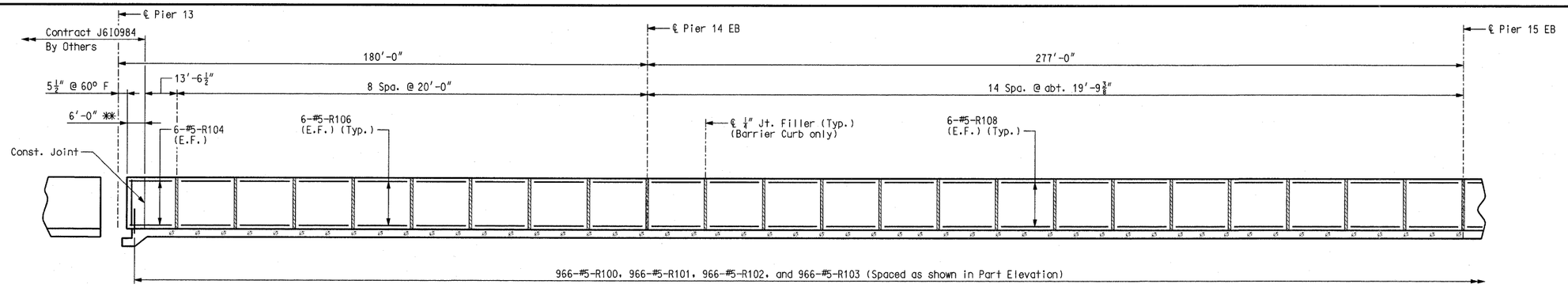
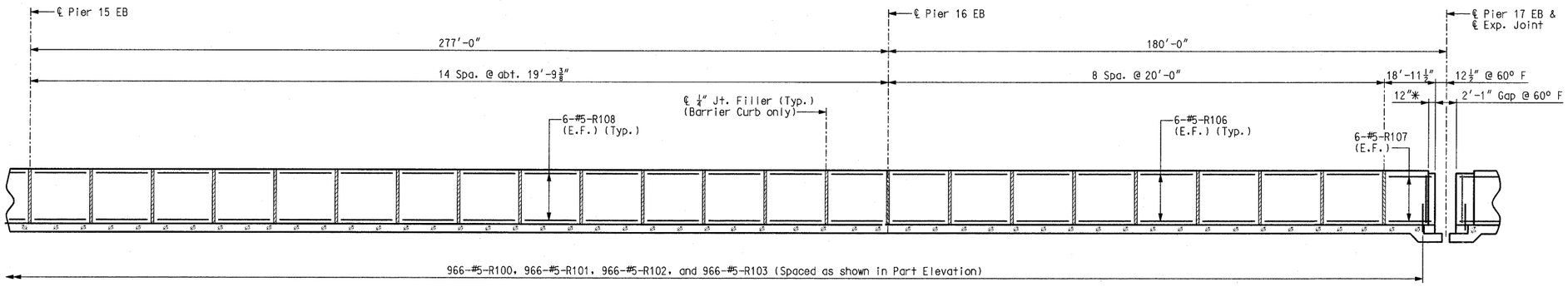
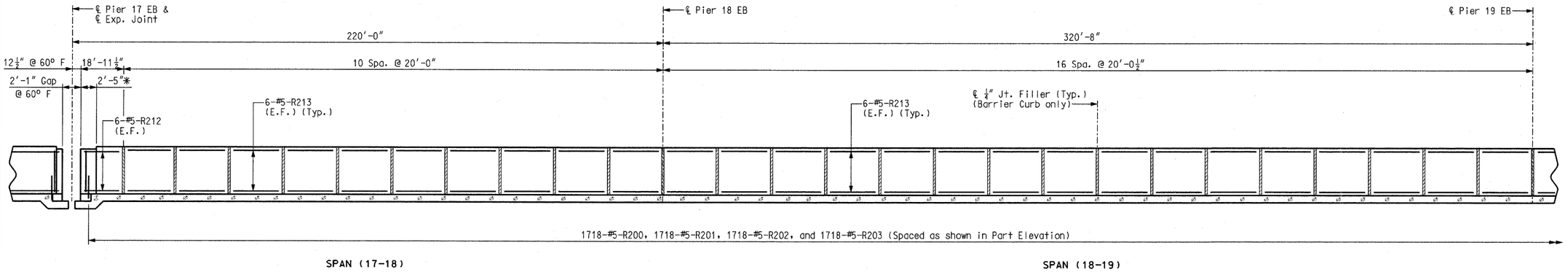
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 00063



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
* Limits of recess for expansion joint cover PL. For barrier cover plate details, see Sheet No. 120.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract J6I0984, by Others. For reinforcement at light pole blisters, see Sheet No. 108.

LEFT BARRIER CURB (TYPE D) EB - SECTIONS (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 113 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = @SCALE@
PLOT DATE = 4/14/2010

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REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

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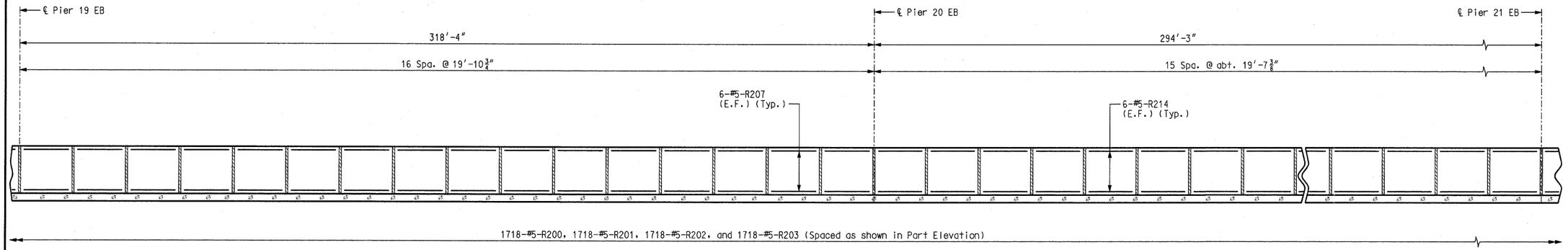
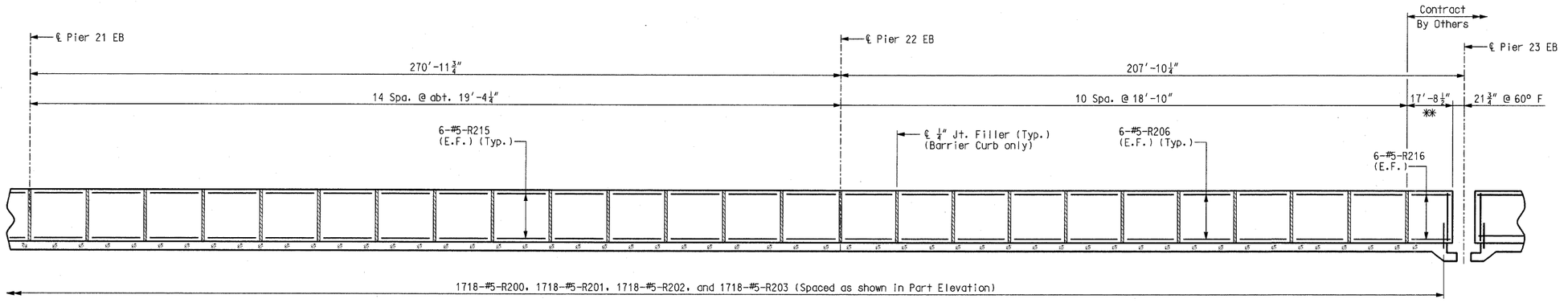


SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract by Others.

LEFT BARRIER CURB (TYPE D) EB - SECTIONS (2 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 114 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
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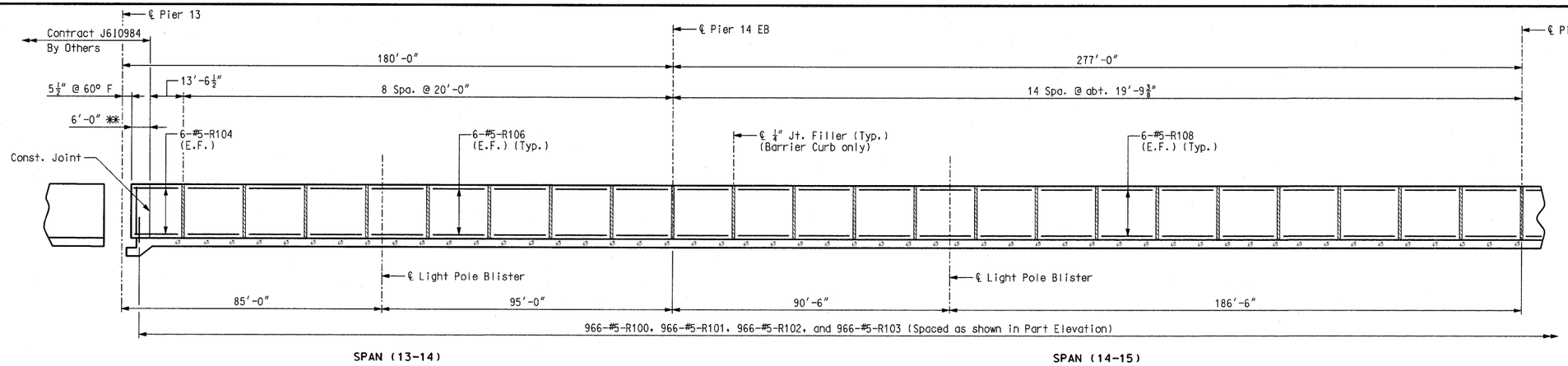
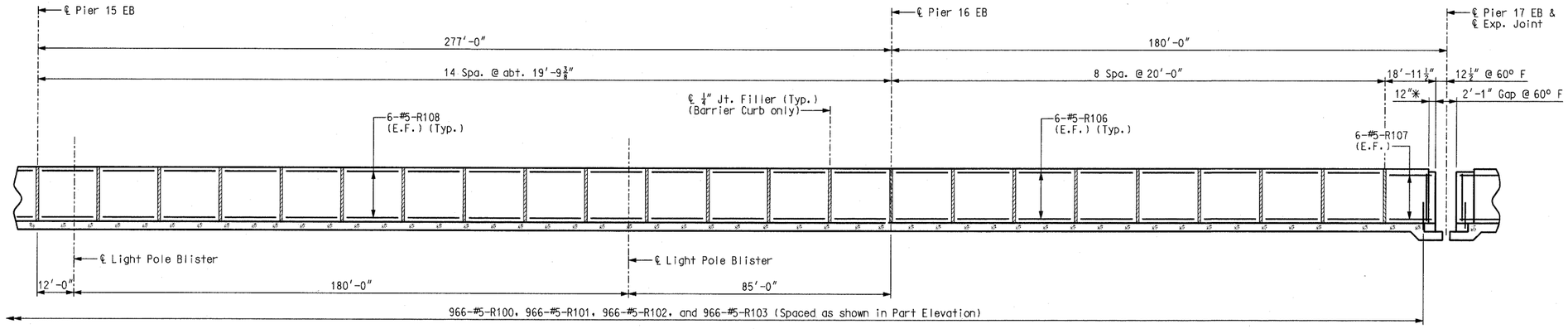
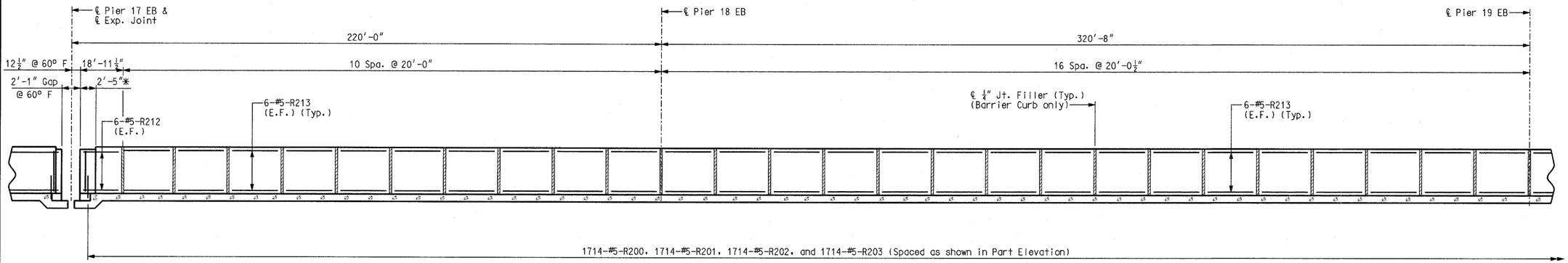


SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
* Limits of recess for expansion joint cover PL. For barrier cover plate details, see Sheet No. 119.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract J6I0984, by Others. For reinforcement at light pole blisters, see Sheet No. 108.

RIGHT BARRIER CURB (TYPE D) EB - SECTIONS (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 115 of 152

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CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
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ILLINOIS APPROACH STRUCTURE
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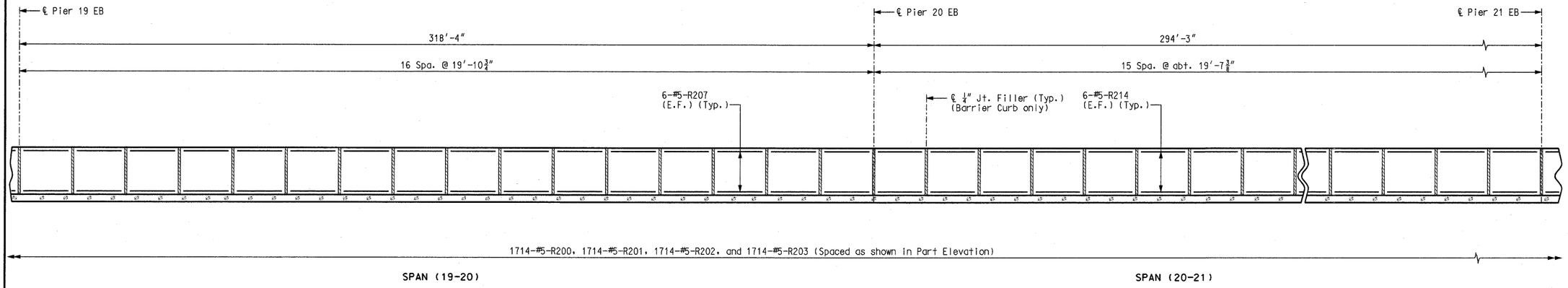
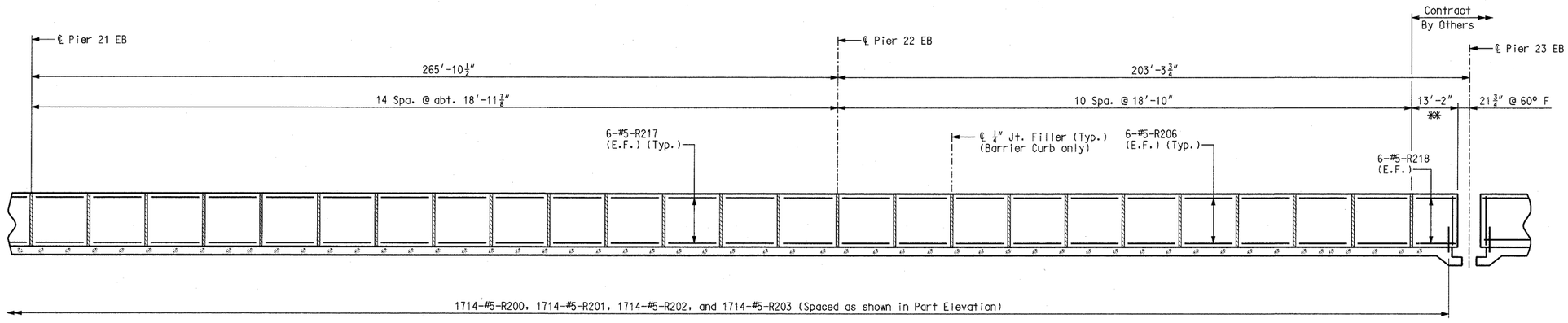


SECTION NEAR BARRIER CURB (TYPE D)



SECTION NEAR BARRIER CURB (TYPE D)

Notes:
Longitudinal dimensions are horizontal.
** Barrier segment reinforcement included in this contract. Forming and concrete placement for barrier included in Contract by Others. Cost of furnishing and installing name plate will be considered completely covered by the contract unit price of "Barrier Curb (Type D)"

RIGHT BARRIER CURB (TYPE D) EB - SECTIONS (2 OF 2)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB

REVISED -
REVISED -
REVISED -
REVISED -

ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

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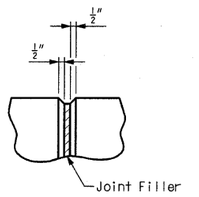
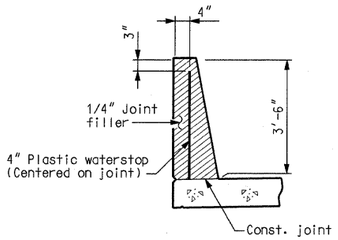
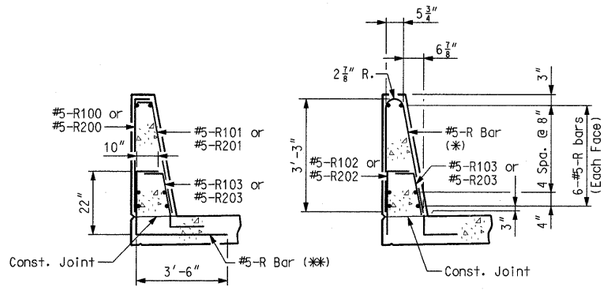


FILLED JOINT DETAIL



DETAILS OF PLASTIC WATERSTOP

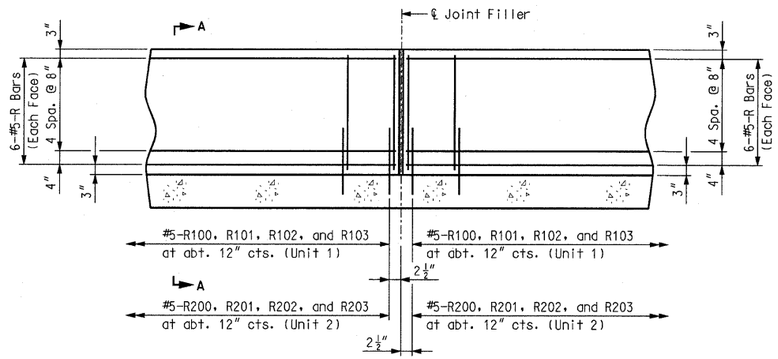
Notes:
Plastic waterstop shall be placed in all filled joints - lower side barriers only.
Cost of plastic waterstop, complete-in-place, will be considered completely covered by the contract unit price for Barrier Curb (Type D).



R-BAR PERMISSIBLE ALTERNATE SHAPES

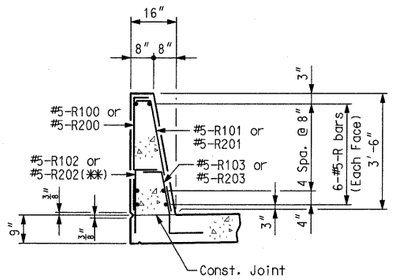
(*) The R100 and R101 or R200 and R201 bar combination may be furnished as one bar, as shown, at the contractor's option. (All dimensions are out to out.)

(**) The R102 or R102 bar and #5 bottom transverse slab bar in cantilever (P/S panels only) combination may be furnished as one bar as shown, at the contractor's option.



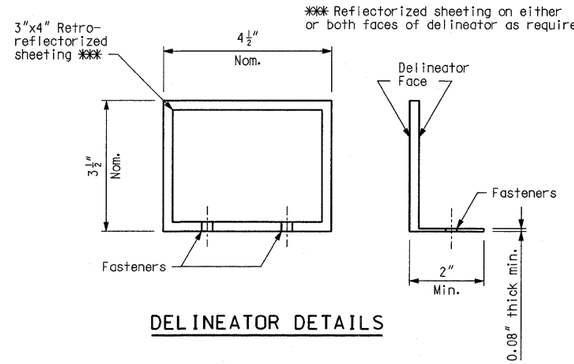
PART ELEVATION

(Cast-in-place Conventional Forming Option)



PART SECTION A-A

Notes:
Use a minimum lap of 2'-11" for #5 horizontal barrier curb (Type D) bars.
The cross-sectional area above the slab = 3.49 sq. ft.



*** Reflectorized sheeting on either or both faces of delineator as required.

DELINEATOR DETAILS

Notes:
Concrete in the barrier curb (Type D) shall be Class B-1.
Top of barrier curb (Type D) shall be built parallel to grade with barrier curb joints normal to grade.
All exposed edges of barrier curb (Type D) shall have either a 1/2 " radius or a 3/8" bevel, unless otherwise noted.
Payment for all concrete and reinforcement, complete-in-place, will be completely covered by the contract unit price for Barrier Curb (Type D) per linear foot.
Measured length includes sections at modular expansion joints with reinforcing steel provided under this contract, but formed and poured by others.
Measurement of Barrier Curb (Type D) is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.
Concrete traffic barrier delineators shall be placed on top of the Barrier Curb (Type D) as shown in the Delineator Details and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Barrier Curb (Type D)".
The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 is not required. Application of linseed oil at the contractor's expense is permitted.

BARRIER CURB (TYPE D) - DETAILS

CONTRACT NO. 76D61	
F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR
USER NAME = jjollff	
PLOT SCALE = $SCALE$	
PLOT DATE = 4/14/2010	
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DRAWN - CMT / HNTB	
REVISED -	
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ILLINOIS APPROACH STRUCTURE
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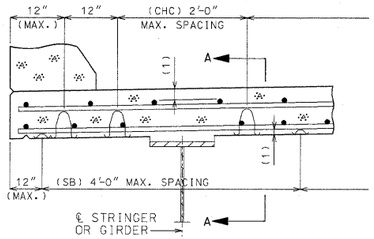
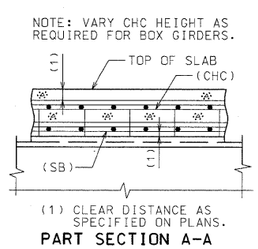
s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_117-152_J6I0984C_117.dgn



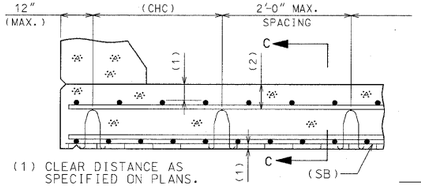
PART CROSS SECTION



PART SECTION A-A

W BEAM SPANS
PLATE GIRDER SPANS
PRESTRESSED GIRDER SPANS
DECK GIRDER SPANS
BOX GIRDER SPANS (TOP SLAB ONLY)

SLABS ON STRINGERS AND GIRDERS



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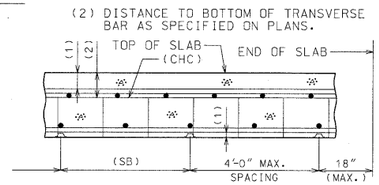
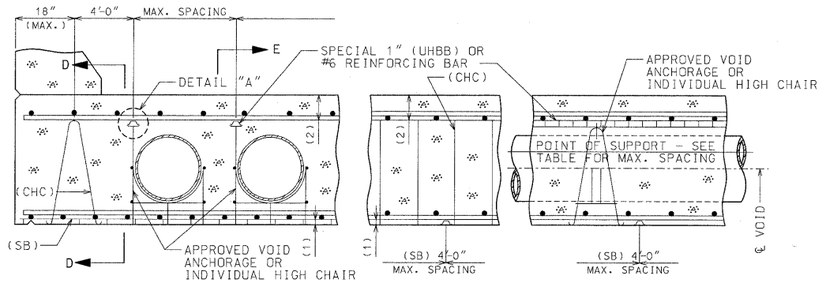


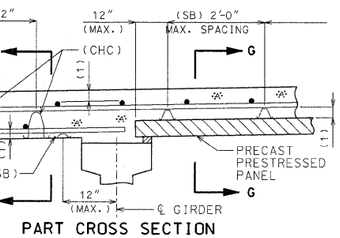
PART SECTION C-C

SLAB SPANS - NO VOIDS (SOLID)
TRUSSES - NO LONGITUDINAL STRINGERS



PART CROSS SECTION | PART SECTION D-D | PART SECTION E-E

SLAB SPANS - WITH VOIDS



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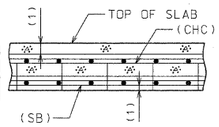
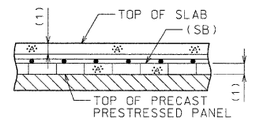
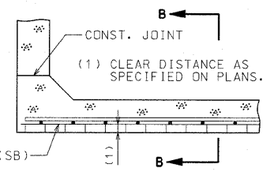


PART SECTION F-F



PART SECTION G-G

SLABS ON PRECAST PRESTRESSED PANELS



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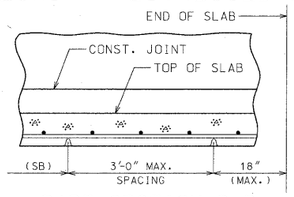
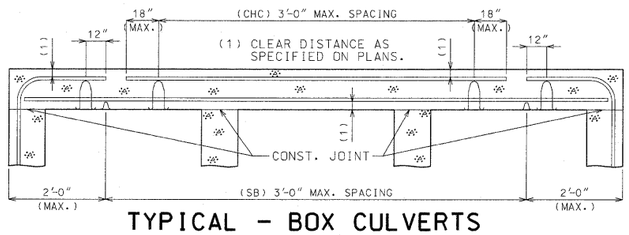
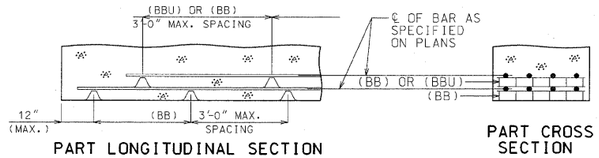


PART SECTION B-B

BOX GIRDER - BOTTOM SLAB



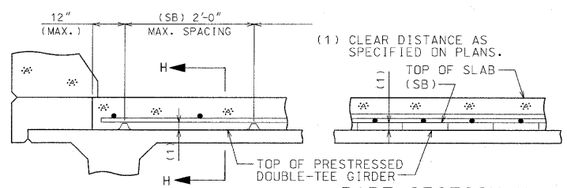
TYPICAL - BOX CULVERTS



PART LONGITUDINAL SECTION | PART CROSS SECTION

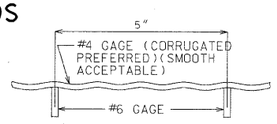
DECK GIRDERS
SUBSTRUCTURE BEAMS
VOIDED SLAB DROP PANELS
BOX GIRDER CROSS BEAMS
} RECOMMENDED METHOD

TYPICAL - BEAMS & GIRDERS

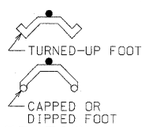


PART CROSS SECTION | PART SECTION H-H

SLABS ON P/S DOUBLE-TEE GIRDER

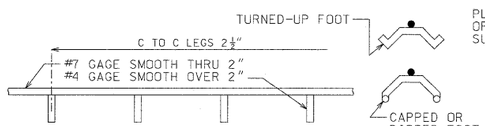


ELEVATION



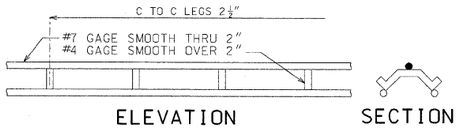
SECTION

SLAB BOLSTER - SB



ELEVATION | SECTION

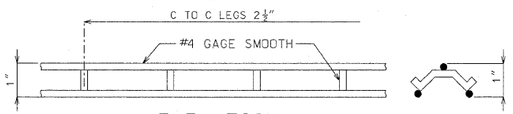
BEAM BOLSTER - BB



ELEVATION

SECTION

BEAM BOLSTER UPPER - BBU

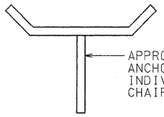


ELEVATION | SECTION

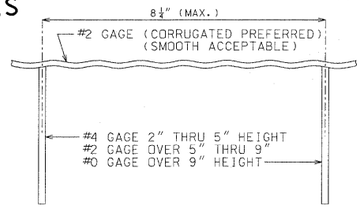
SPECIAL 1" UPPER HEAVY BEAM BOLSTER (SPECIAL 1" UHBB)

PART SECTION G-G

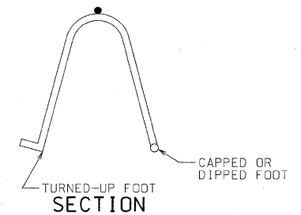
VOIDS	MAX. SPACING
14" & LESS	4'-0"
16" & 17"	3'-0"
19"	2'-6"
21"	2'-0"
22"	21"
23" & UP	18"



PART DETAIL "A"



ELEVATION



SECTION

CONTINUOUS HIGH CHAIR - CHC

ALL CONTACT POINTS ON WIRE BAR SUPPORTS SHALL BE SECURELY WELDED.

A TURNED-UP, CAPPED OR DIPPED FOOT SHALL BE ON ALL BAR SUPPORTS BEARING ON FORMS. WHERE BAR SUPPORTS ARE USED ON EARTH OR AGGREGATE SUBGRADES, SUITABLE PLATES, CONTINUOUS BARS OR PRECAST CONCRETE BAR SUPPORTS SHALL BE PROVIDED TO PREVENT DISPLACEMENT OF THE SUPPORT FOOT.

ALL DIMENSIONS TO REINFORCING STEEL ARE TO ℄ BAR EXCEPT WHERE CLEAR DISTANCE FROM FACE OF CONCRETE IS INDICATED. HEIGHT OF BAR SUPPORTS TO BE THAT REQUIRED TO SUPPORT BARS IN EXACT POSITIONS SHOWN ON PLANS.

SPIRAL REINFORCING SHALL BE SUPPORTED BY USE OF APPROVED SPIRAL SPACERS AT NOT MORE THAN 3'-0" CENTERS. PAYMENT FOR SPACERS AND ALL OTHER BAR SUPPORTS WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.

WHEN BARS OF DIFFERENT SIZES ARE USED IN THE SAME MEMBERS, THE SELECTION OF BAR SUPPORTS SHALL BE BASED ON THE LARGER SIZE.

SUPPORTS FOR THE UPPER LAYERS NEED NOT BE DIRECTLY OVER THE SUPPORTS BELOW.

ALL BAR SUPPORTS SHALL BE IN ACCORDANCE WITH C.R.S.I. MANUAL OF STANDARD PRACTICE, EXCEPT AS SHOWN.

WIRE BAR AND REINFORCING BAR SUPPORTS USED WITH EPOXY COATED REINFORCING STEEL SHALL BE COATED ENTIRELY WITH AN EPOXY OR PLASTIC MATERIAL.

ALL UNCOATED WIRE BAR SUPPORTS SHALL HAVE CAPPED OR DIPPED FEET FOR THOSE APPLICATIONS WHERE MINIMIZING RUST SPOTS AND SURFACE BLEMISHES ARE EXPECTED TO BECOME VISIBLE. COLOR SHALL MATCH CONCRETE.

INDIVIDUAL HIGH CHAIRS AND SPACING WILL BE PERMITTED AS APPROVED BY THE ENGINEER. INDIVIDUAL HIGH CHAIRS SHALL NOT BE PERMITTED FOR USE ON SOLID SLAB AND VOIDED SLAB BRIDGES, EXCEPT AS SHOWN.

PLASTIC BAR SUPPORTS SHALL MEET OR EXCEED THE LOAD CARRYING CAPACITY OF AND BE PLACED AT THE SAME SPACING FOR STEEL WIRE BAR SUPPORTS AS SHOWN.

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = $SCALE$
PLOT DATE = 4/14/2010

DESIGNED - HNTB
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ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS
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ENGINEERING CORPORATION - 000631

Detailed JUL 2009
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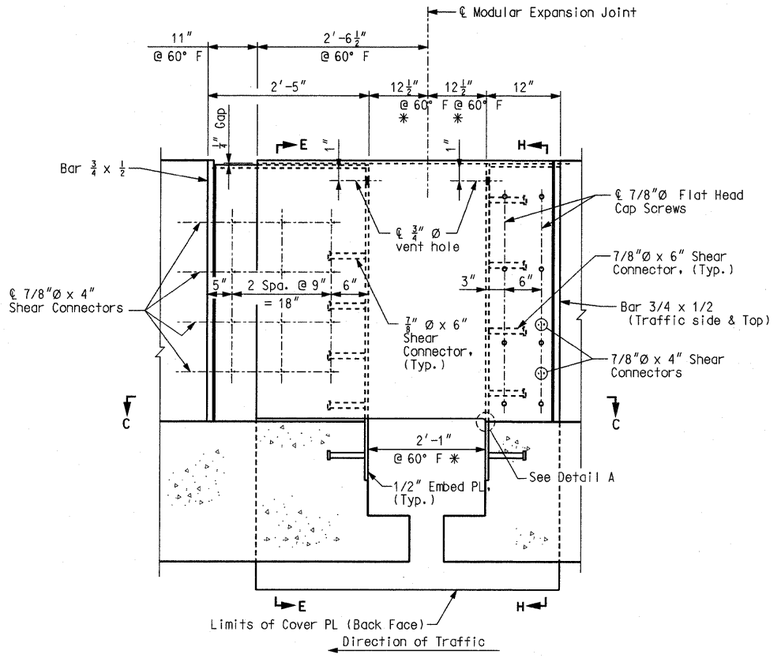
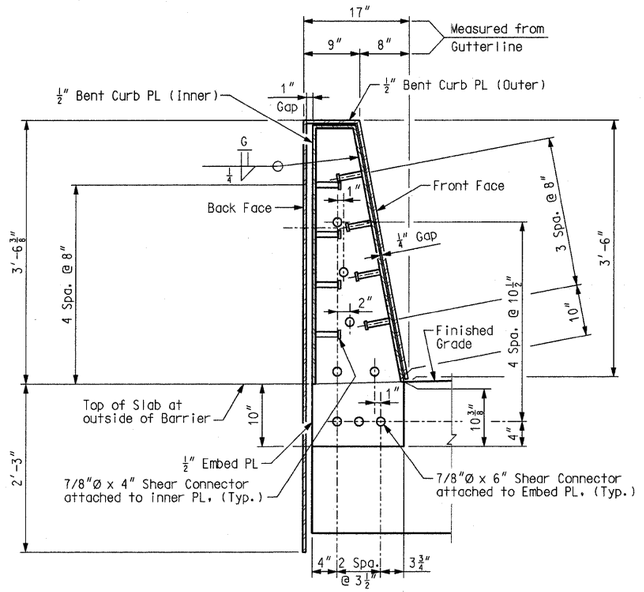
s:\idot\0906601\draw_idot\cadd_sheets\structural\B_A6500_118-152_J610984C_118.dgn

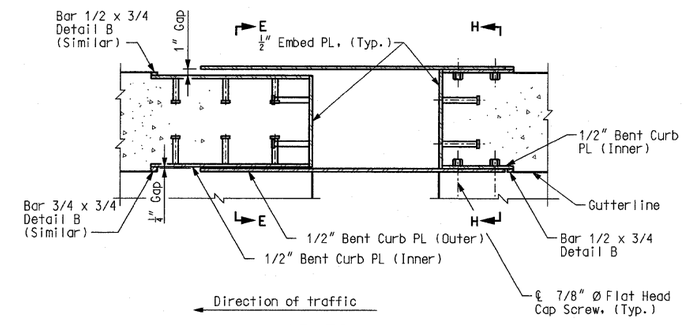


ELEVATION - BARRIER CURB COVER PLATES

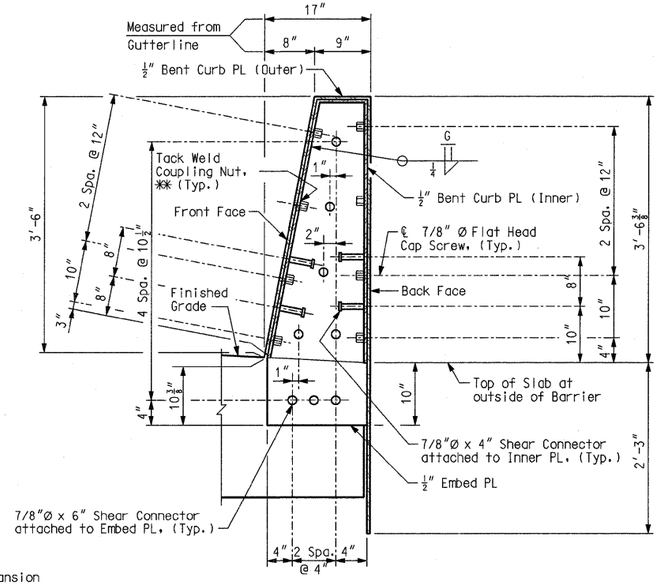
WB - Left Barrier
EB - Right Barrier



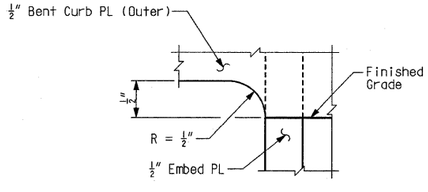
SECTION E-E



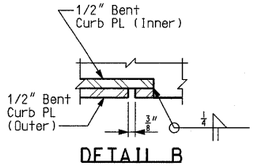
SECTION C-C



SECTION H-H



DETAIL A



DETAIL B

Notes:

* Gap dimension @ 60°F is dependent upon modular expansion joint selection. Contractor is responsible for coordinating any revisions required due to deviations from dimensions shown.

Barrier curb cover plates shall be ASTM A240 Type 304 stainless steel.

Payment for furnishing and installing the barrier curb cover plates will be considered completely covered by the contract unit price for Modular Expansion Joint per linear foot.

** Plug end of coupling nut to maintain void for screw placement. Flat head cap screws shall be in accordance with ASTM A449.

BARRIER CURB COVER PLATE DETAILS - PIER 17 (1 OF 2)

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 119 of 152

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = jjolliff
PLOT SCALE = *SCALE*
PLOT DATE = 4/14/2010

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REVISED -

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