

Index of Stub Abutment Bridge Standards

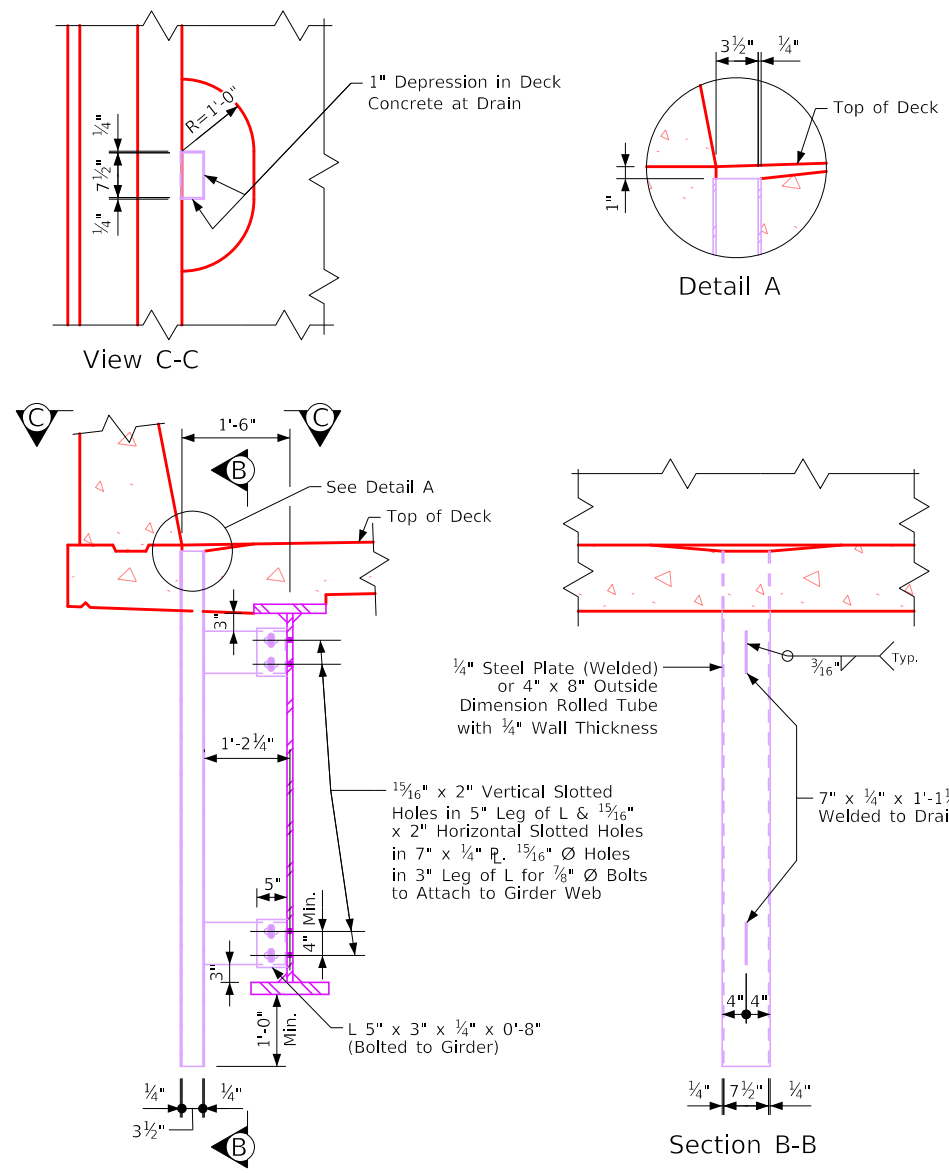
Standard	Description
1059	Drain Details for Welded Girder Bridges
2092	"C" or "D" Beams - Stub Abutment Details - 0° Skew
2093	"C" or "D" Beams - Stub Abutment Details - (R.A.) 0°01'-7°30' Skew
2094	"C" or "D" Beams - Stub Abutment Details - (R.A.) 7°31'-15° Skew
2095	"C" or "D" Beams - Stub Abutment Details - (R.A.) 15°01'-30° Skew
2096	"C" or "D" Beams - Stub Abutment Details - (L.A.) 0°01'-7°30' Skew
2097	"C" or "D" Beams - Stub Abutment Details - (L.A.) 7°31'-15° Skew
2098	"C" or "D" Beams - Stub Abutment Details - (L.A.) 15°01'-30° Skew
2099	"C" or "D" Beams - Stub Abutment Details - 0° Skew
2100	"C" or "D" Beams - Stub Abutment Details - (R.A.) 0°01'-7°30' Skew
2101	"C" or "D" Beams - Stub Abutment Details - (R.A.) 7°31'-15° Skew
2102	"C" or "D" Beams - Stub Abutment Details - (R.A.) 15°01'-30° Skew
2103	"C" or "D" Beams - Stub Abutment Details - (L.A.) 0°01'-7°30' Skew
2104	"C" or "D" Beams - Stub Abutment Details - (L.A.) 7°31'-15° Skew
2105	"C" or "D" Beams - Stub Abutment Details - (L.A.) 15°01'-30° Skew
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4305A	Alternate Intermediate Diaphragm for Welded Girder Bridges
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4309	44'-0" Welded Cross Section LRF Design
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4543	Part Plan & Longit. Sect. - "B", "C", & "D" Beams, Stub Abut. (L.A.) 0°01' - 7°30' Skew
4544	Part Plan & Longit. Sect. - "B", "C", & "D" Beams, Stub Abut. (L.A.) 7°31' - 15° Skew
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4547	Part Plan & Longit. Sect. - "B", "C", & "D" Beams, Stub Abut. (R.A.) 7°31' - 15° Skew
4548	Part Plan & Longit. Sect. - "B", "C", & "D" Beams, Stub Abut. (R.A.) 15°01' - 30° Skew
4549	Stub Abut. "B", "C", & "D" Beams, Bar List & Super. Details - 0° Skew
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4551	Stub Abut. "B", "C", & "D" Beams, Bar List & Super. Details - 7°31' - 15° Skew
4552	Stub Abut. "B", "C", & "D" Beams, Bar List & Super. Details - 15°01' - 30° Skew
4553	Stub Abut. Welded Girder Beams, Bar List & Super. Details - All Skews
4556	30'-0" Rdwy. PPCB ("B", "C", & "D" Beams - Stub Abut.) Cross Section
4559	40'-0" Rdwy. PPCB ("B", "C", & "D" Beams - Stub Abut.) Cross Section
4560	44'-0" Rdwy. PPCB ("B", "C", & "D" Beams - Stub Abut.) Cross Section
4561	40'-0" Rdwy. PPCB ("B", "C", & "D" Beams - Stub Abut.) Cross Section (Symm. Crown)

Index of Stub Abutment Bridge Standards

Revised 07-19: Changed Standards 1065 & 1066 titled referring to "Slab" to "Deck"
Issued 02-10.
StubBridges.dgn - 100-5 - This Sheet Re-Issued 11-2023. Sheet Format Update.

FILE NO.	ENGLISH	DESIGN TEAM	Index of Stub Abutment Bridge Standards	Standard Sheet 100-5	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:22 PM	11/8/2023	bkloss	pw:\NTP\wint1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				

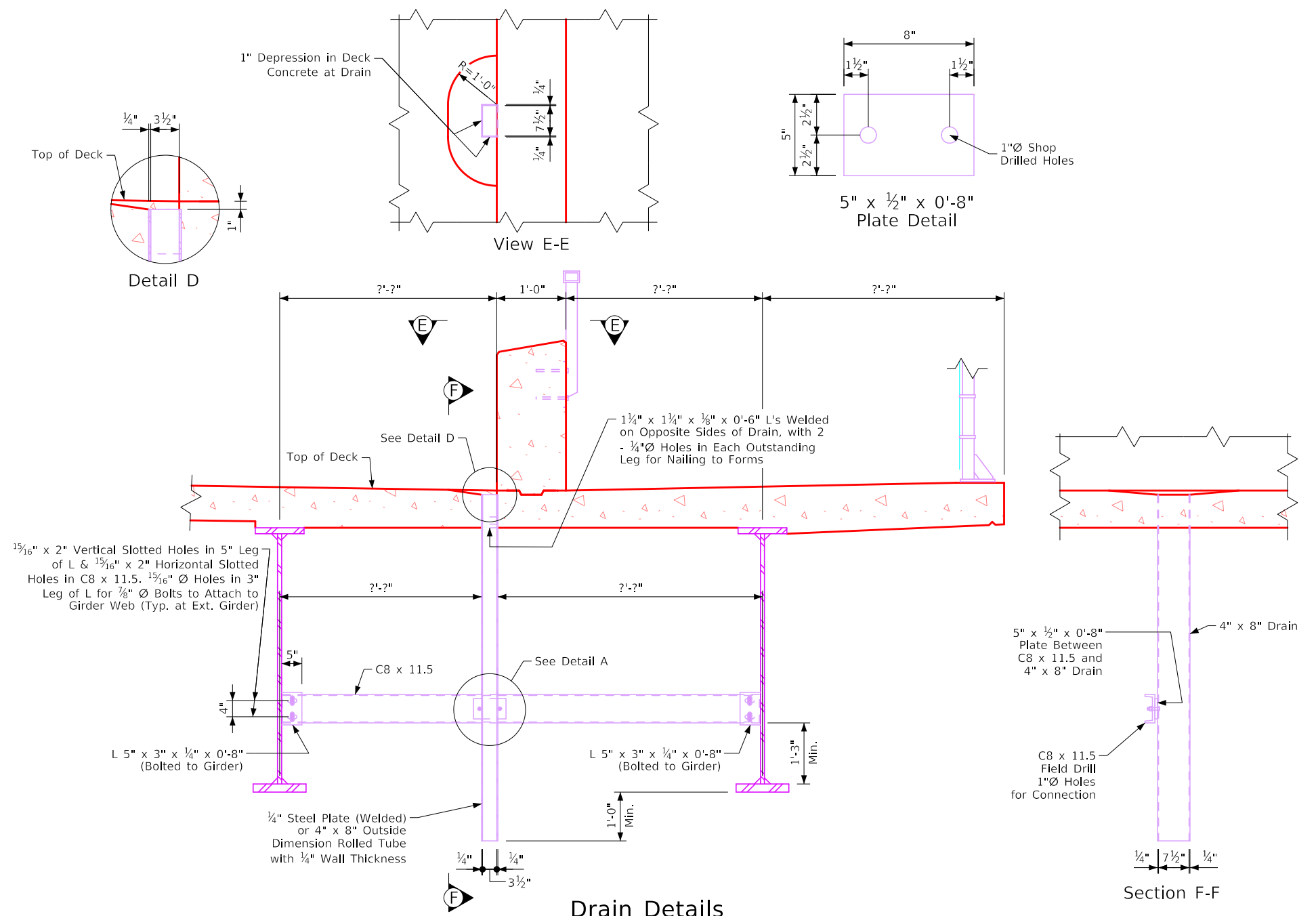
Correction 04-14: Added Referral Note to Summary Quantities Sheet for the Drain Weight.
 Issued 04-08.
 StubBridges.dgn - 1059 - This Sheet Re-Issued 11-2023. Sheet Format Update.



Drain Details

Note: Drains are to be galvanized and painted according to Section 2509 of the Standard Specifications. ??? drains are required. See "Situation Plan" sheet for location. Weight of one drain = ??? lbs. Weight of drains is based on rolled tube. Length of drain is to be ?'-? ". Weight of drain included angles, plates.

Note: Drain Weights are Included on the Summary Quantities Sheet.



Drain Details

Note: Drains are to be galvanized and painted according to Section 2509 of the Standard Specifications. ??? drains are required. See "Situation Plan" sheet for location. Weight of one drain = ??? lbs. Weight of drains is based on rolled tube. Length of drain is to be ?'-? ". Weight of drain included angles, plates, and channels.

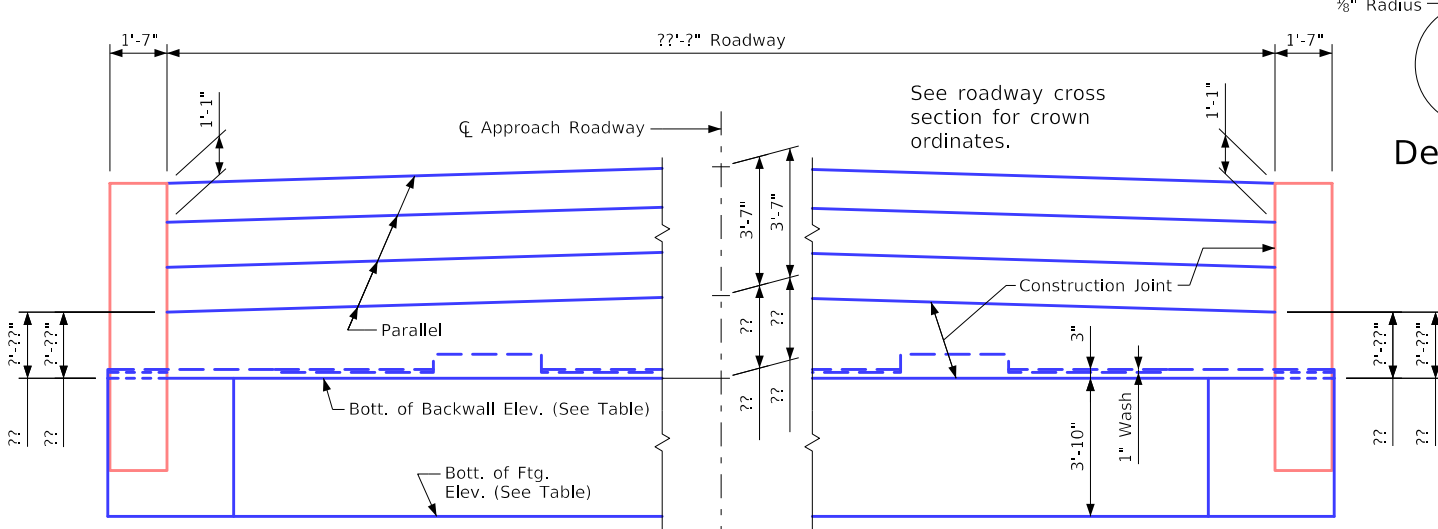
Note: Drain Weights are Included on the Summary Quantities Sheet.

Note to Detailer: BMBR (Back-Mounted Bicycle Railing) Separation Barrier shown. Designer shall verify applicability to project requirements. See Bridge Design Manual Section 5.8.1.2.4 for guidance.

Welded Girder Drain Details

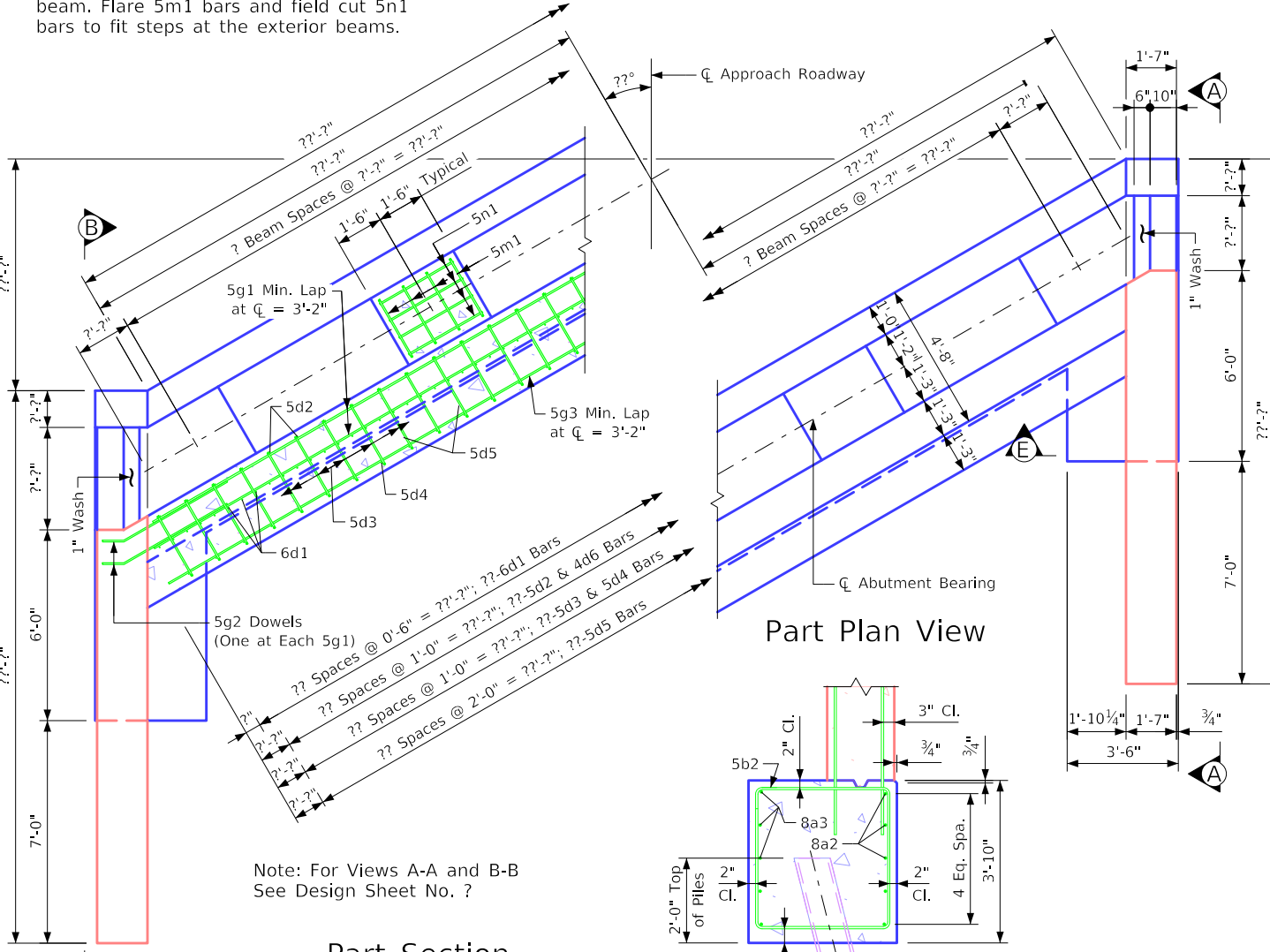
FILE NO.	ENGLISH	DESIGN TEAM	Drain Details for Welded Girder Bridges	Standard Sheet 1059	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:22 PM	11/8/2023	bkloss	pw:\NTP\wint1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				

Bench Mark: ??



Rear Elevation

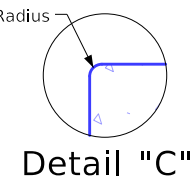
Note: Place 5m1 and 5n1 bars under each beam. Flare 5m1 bars and field cut 5n1 bars to fit steps at the exterior beams.



Part Section Through Backwall

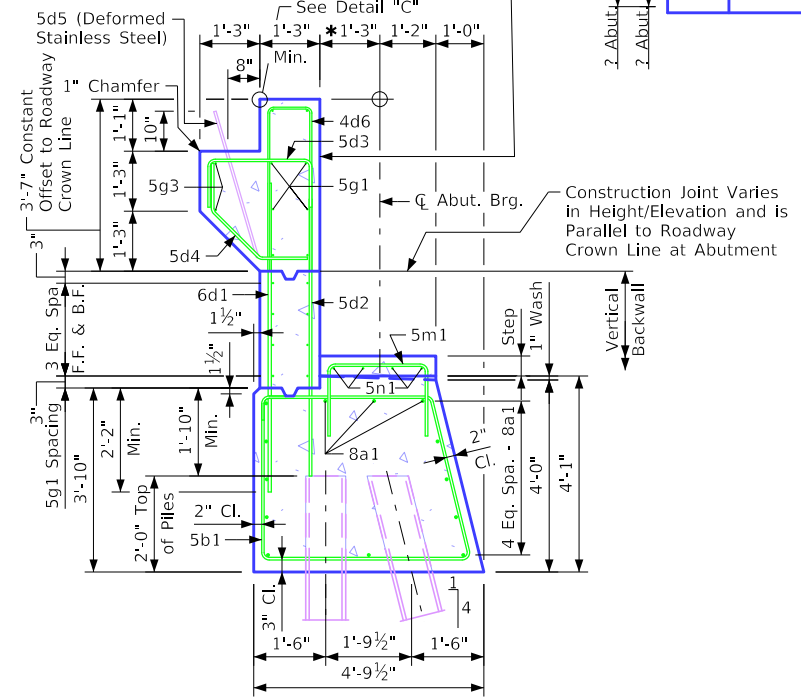
Part Plan View

Note: For Views A-A and B-B See Design Sheet No. ?

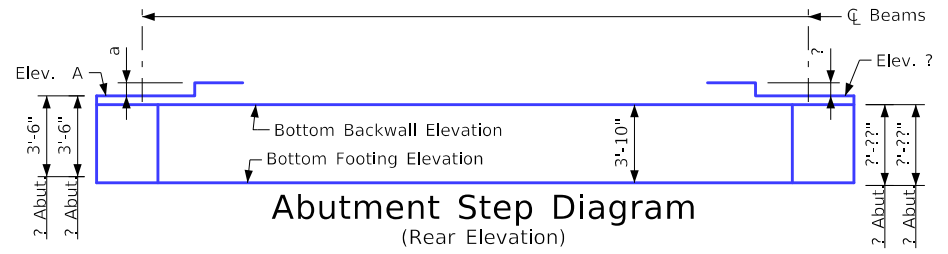


Detail "C"

*This Dimension May Vary. Tilting of the Pavement Support Section During Construction May be Necessary to Accommodate Proper Setting of the Strip Seal Expansion Device Opening.



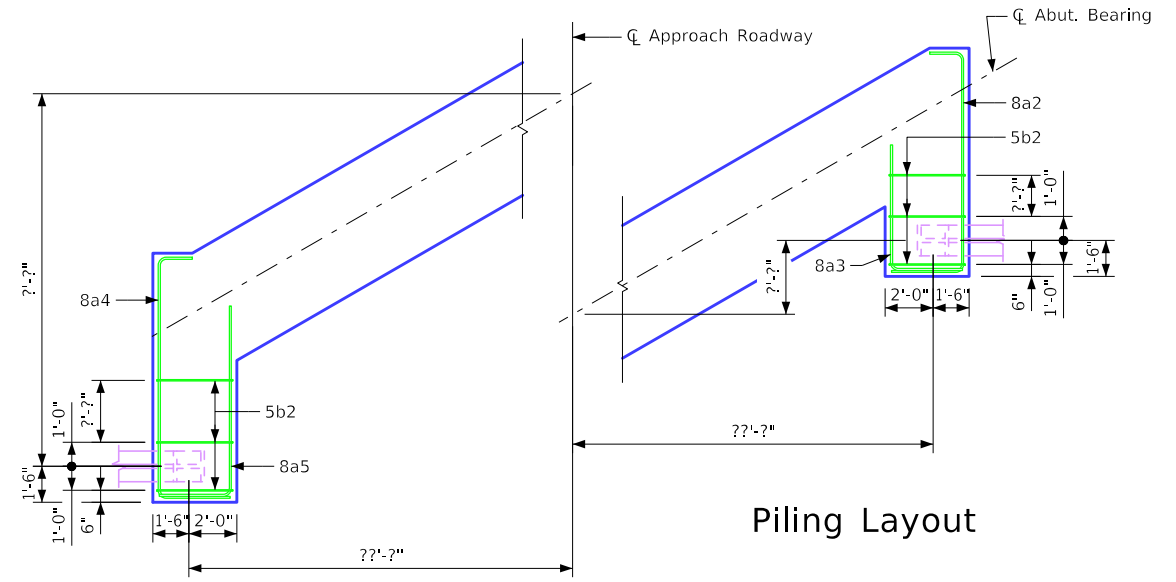
Section Through Abutment
Expansion Device not Shown



Abutment Step Diagram
(Rear Elevation)

Table of Abutment Elevations		
Point	? Abutment	? Abutment
Elev. A	???.??	???.??
Bottom Backwall Elev.	???.??	???.??
Bottom Footing Elev.	???.??	???.??

Table of Abutment Steps		
Step	? Abutment	? Abutment
a	???.??	???.??



Piling Layout

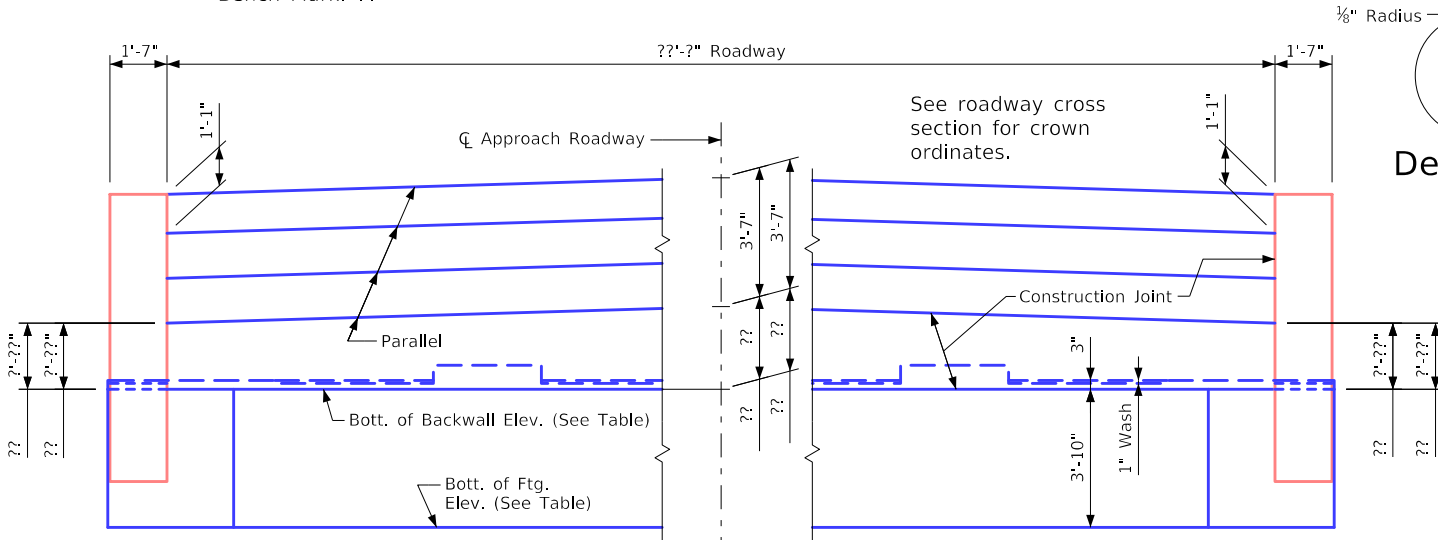
Notes: Dimensions shown on Piling Layout are at bottom of footing. Batter piles in the direction shown. ?? - HP 10x42 steel bearing piling required at each abutment. Barrier Rail not shown in details.



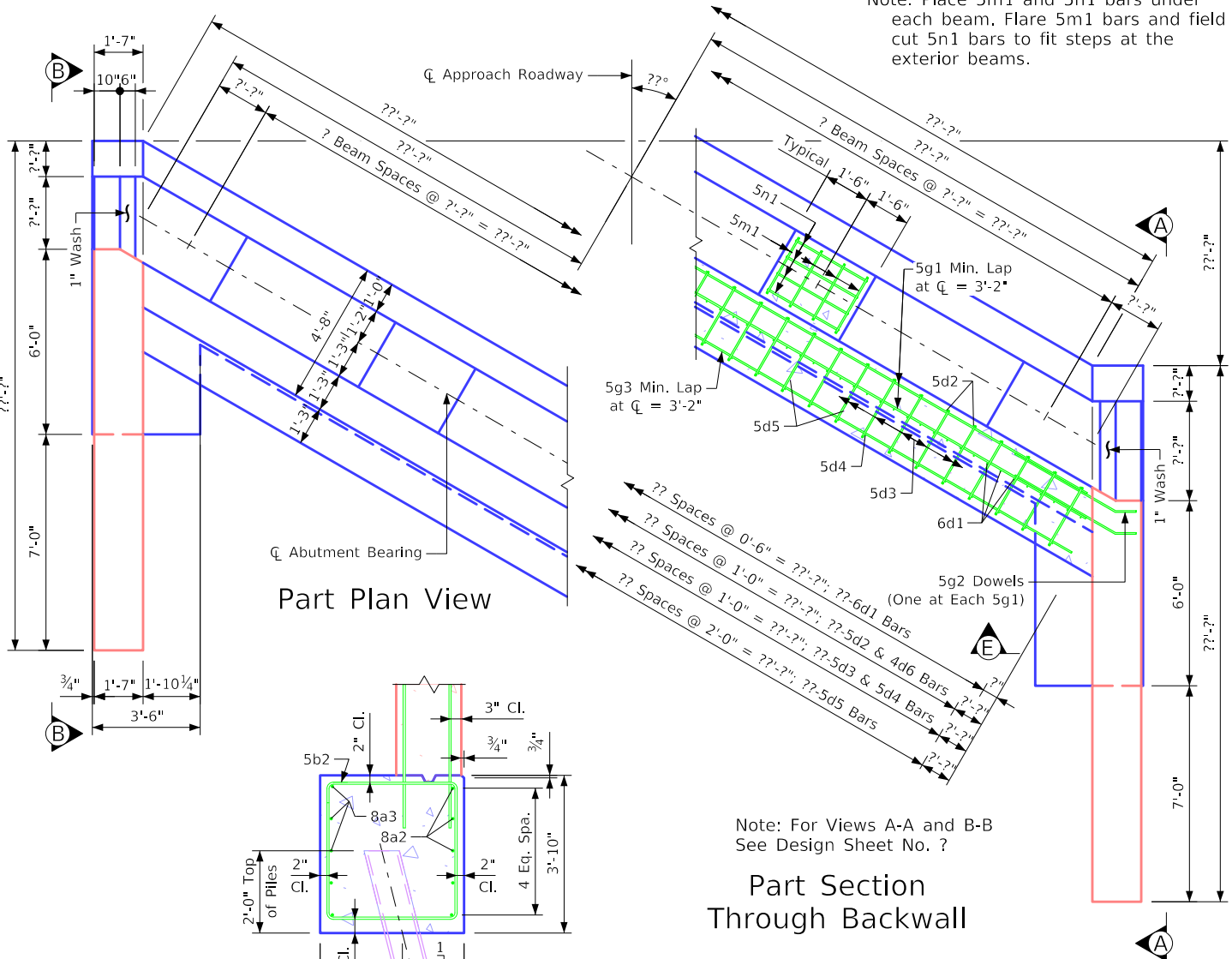
Abutment Footing Details

Revised 07-18: Added 10" Dimension to 5d5 Paving Notch Dowel Placement.
 Redrawn 05-23-91.
 StubBridges.dgn - 2095 - This Sheet Re-Issued 11-2023. Sheet Format Update.

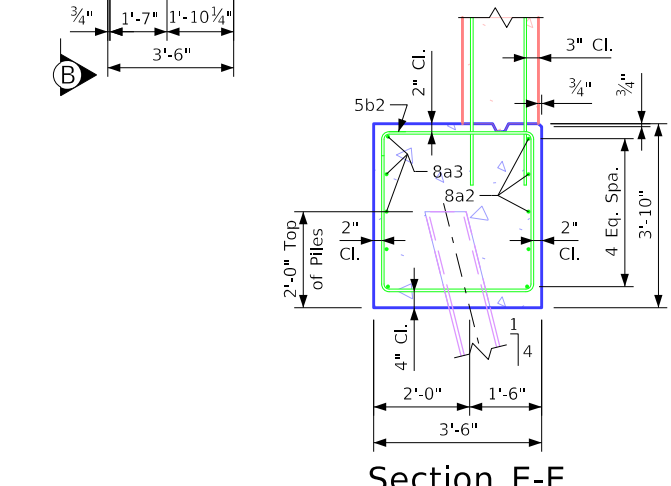
Bench Mark: ??



Rear Elevation

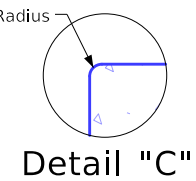


Part Plan View



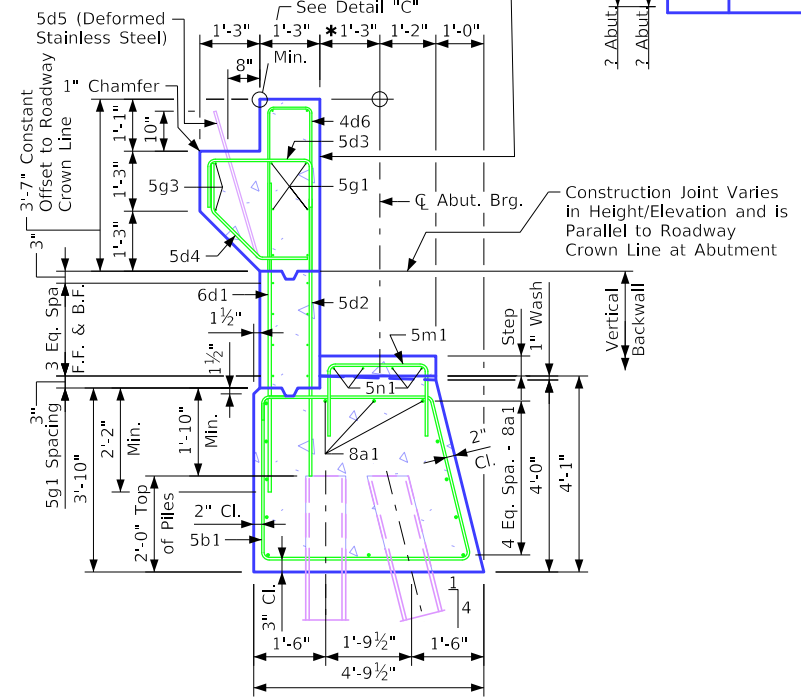
Section E-E

Part Section Through Backwall

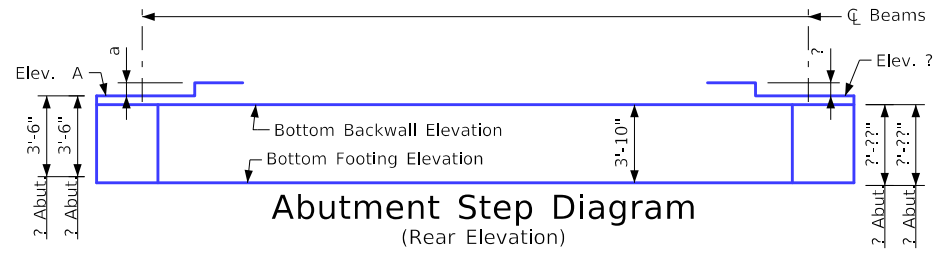


Detail "C"

*This Dimension May Vary. Tilting of the Pavement Support Section During Construction May be Necessary to Accommodate Proper Setting of the Strip Seal Expansion Device Opening.



Section Through Abutment
Expansion Device not Shown



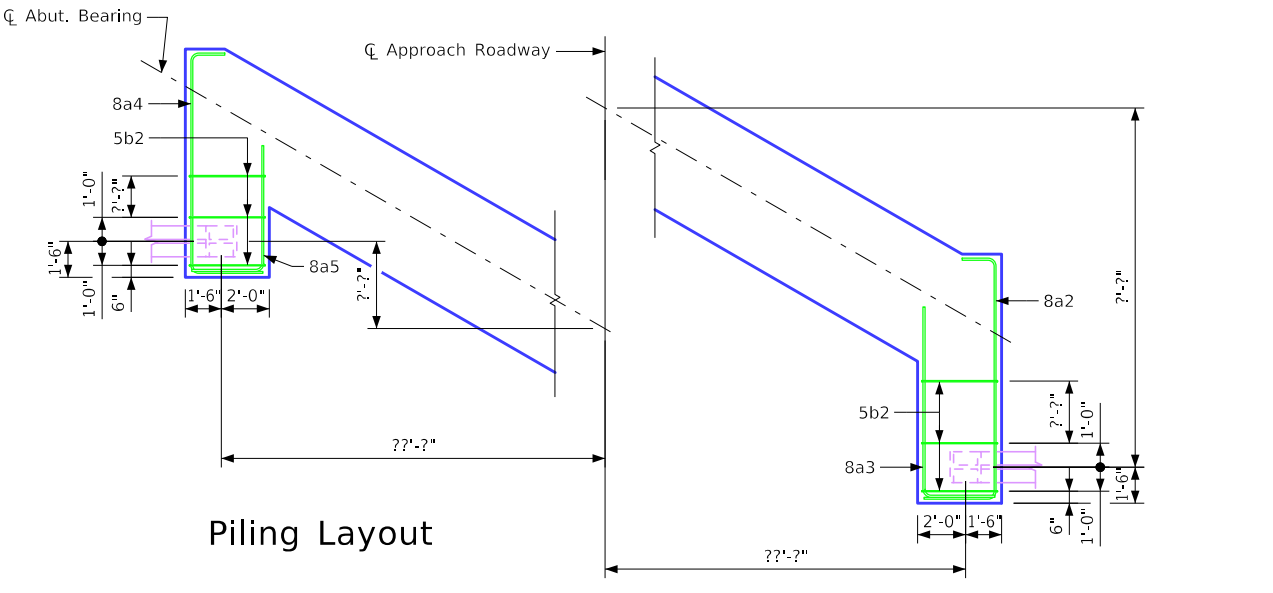
Abutment Step Diagram
(Rear Elevation)

Table of Abutment Elevations

Point	? Abutment	? Abutment
Elev. A	???.??	???.??
Bottom Backwall Elev.	???.??	???.??
Bottom Footing Elev.	???.??	???.??

Table of Abutment Steps

Step	? Abutment	? Abutment
a	???.??	???.??

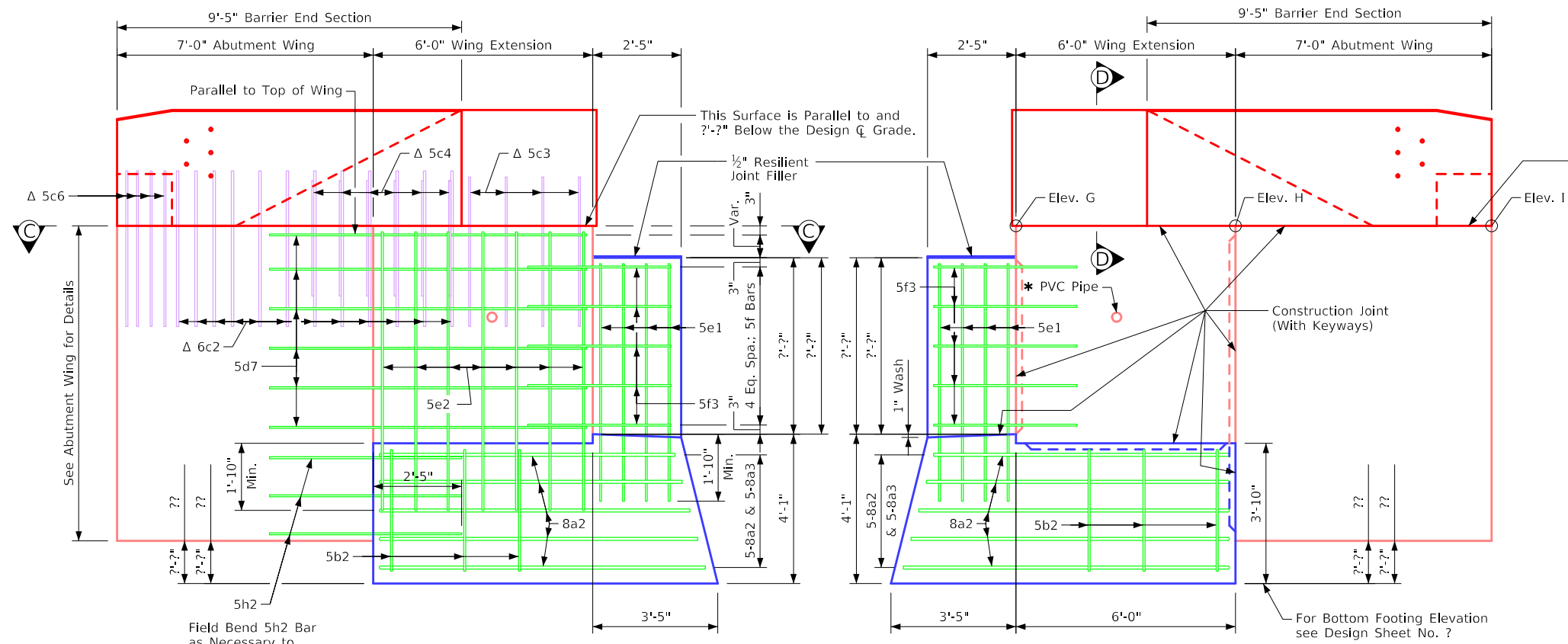


Piling Layout

Notes: Dimensions shown on Piling Layout are at bottom of footing. Batter piles in the direction shown. ?? - HP 10x42 steel bearing piling required at each abutment. Barrier Rail not shown in details.

Abutment Footing Details

Revised 07-18: Added 10" Dimension to 5d5 Paving Notch Dowel Placement.
Redrawn 05-23-91.
Revised 11-2023: Sheet format update.



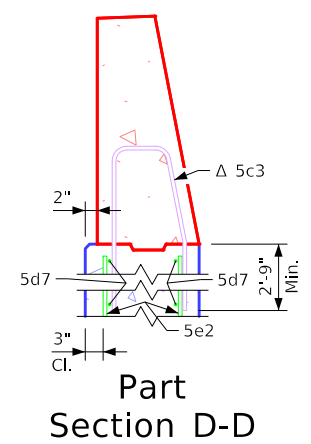
View A-A

View B-B

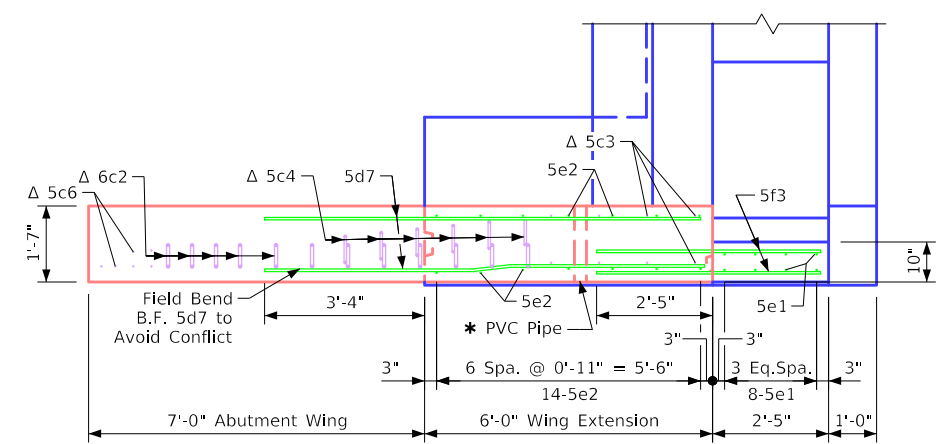
Note: For Location of Views A-A & B-B see Design Sheet No. ?

* See Part Plan & Longit. Section Sheet for PVC Pipe Location

Table of Wingwall Elevations			
Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?



Part Section D-D



Section C-C
Note: Barrier Rail not shown

Δ Note: See Design Sheet No. ? for details of barrier rail wing extensions. Reinforcing bars 6c2, 5c3, 5c4, 5c6 are included in the Barrier Rail quantities.

Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Abutment Longitudinal Section

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5c2 bars to 1'-6" into the Abutment Footing. Redrawn 09-08-88. StubBridges.dgn - 2099 - This Sheet Re-Issued 11-2023. Sheet Format Update.

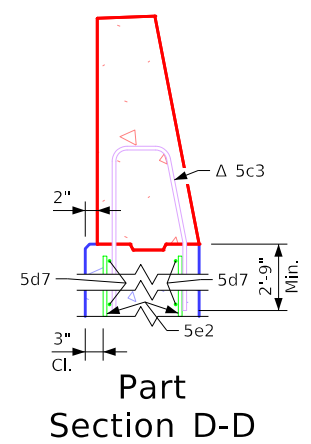
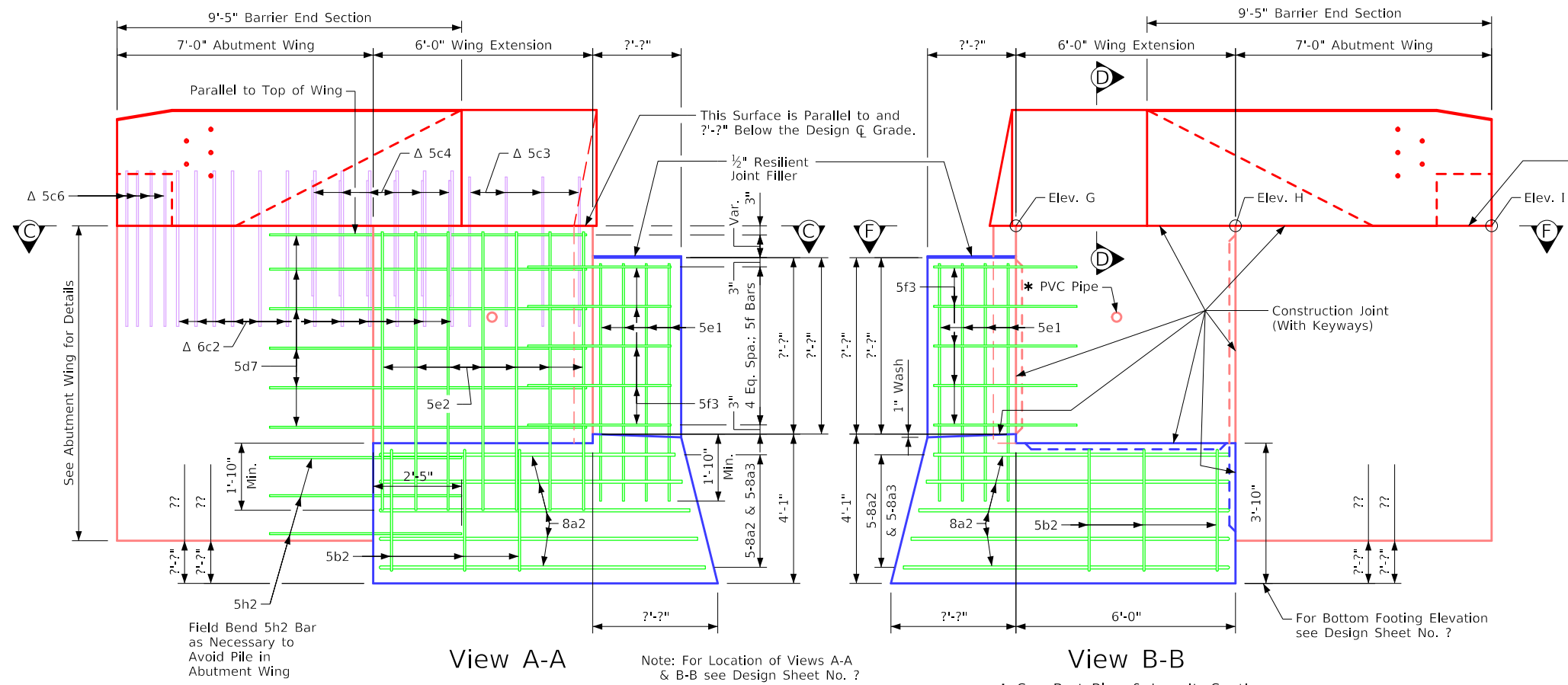
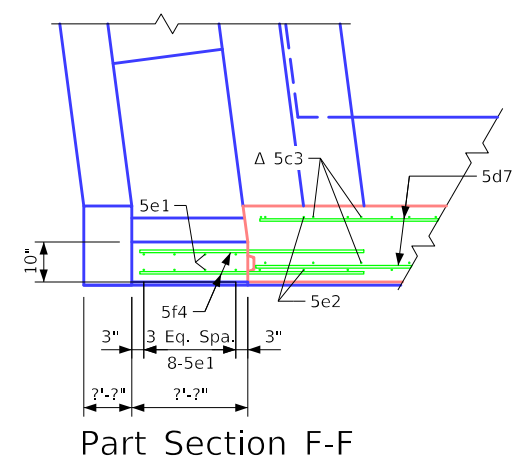
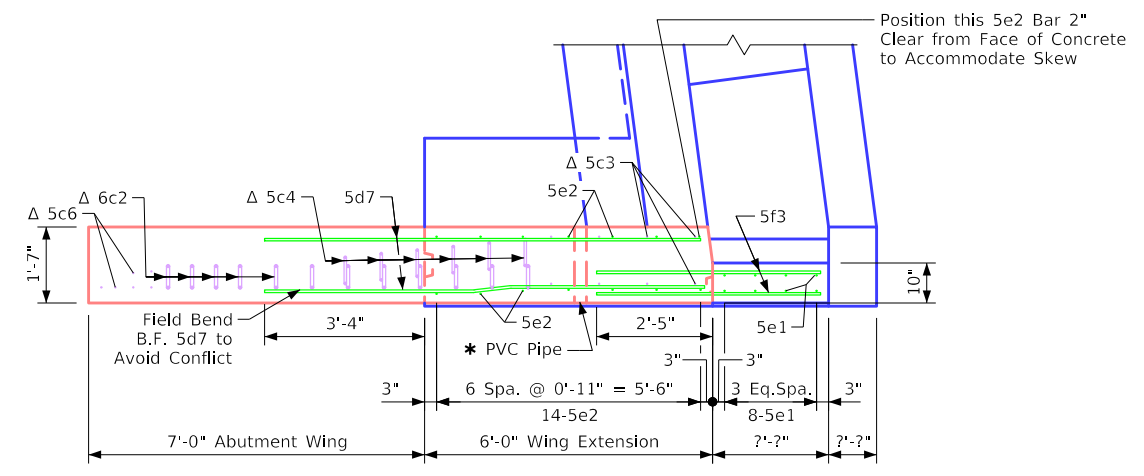


Table of Wingwall Elevations			
Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?

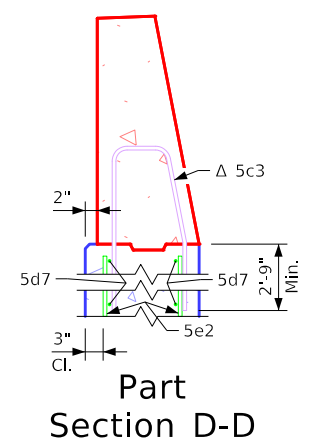
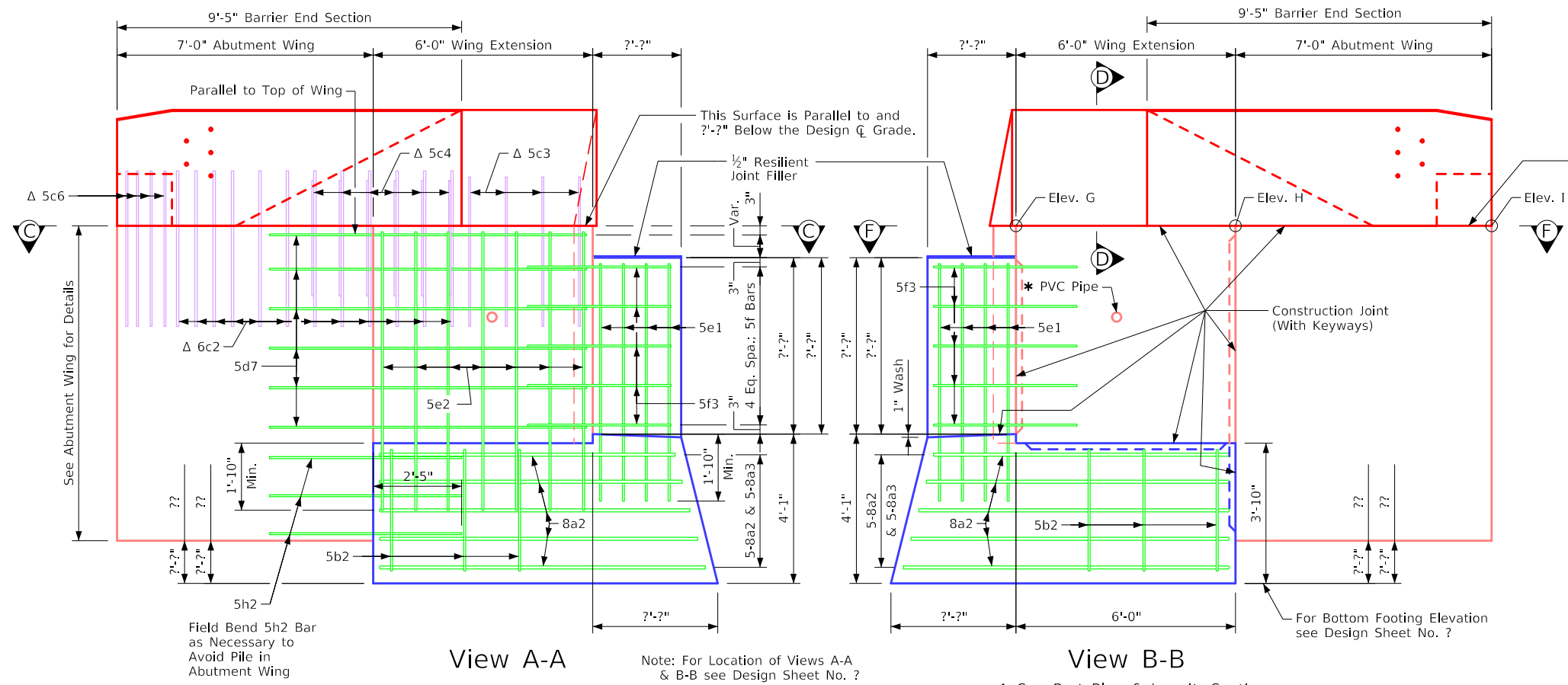


Section C-C
Note: Barrier Rail not shown

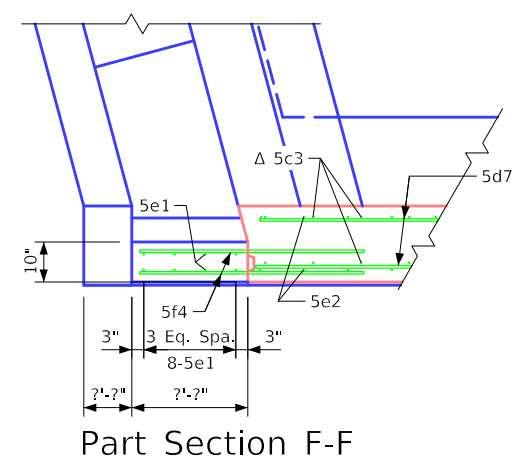
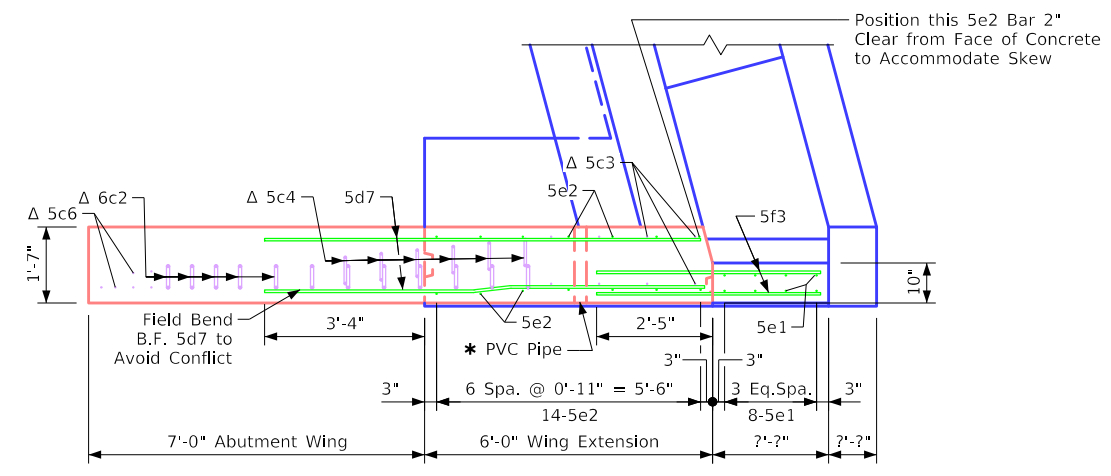
Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Abutment Longitudinal Section

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Issued 09-08-88. StubBridges.dgn - 2100 - This Sheet Re-Issued 11-2023. Sheet Format Update.



Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?

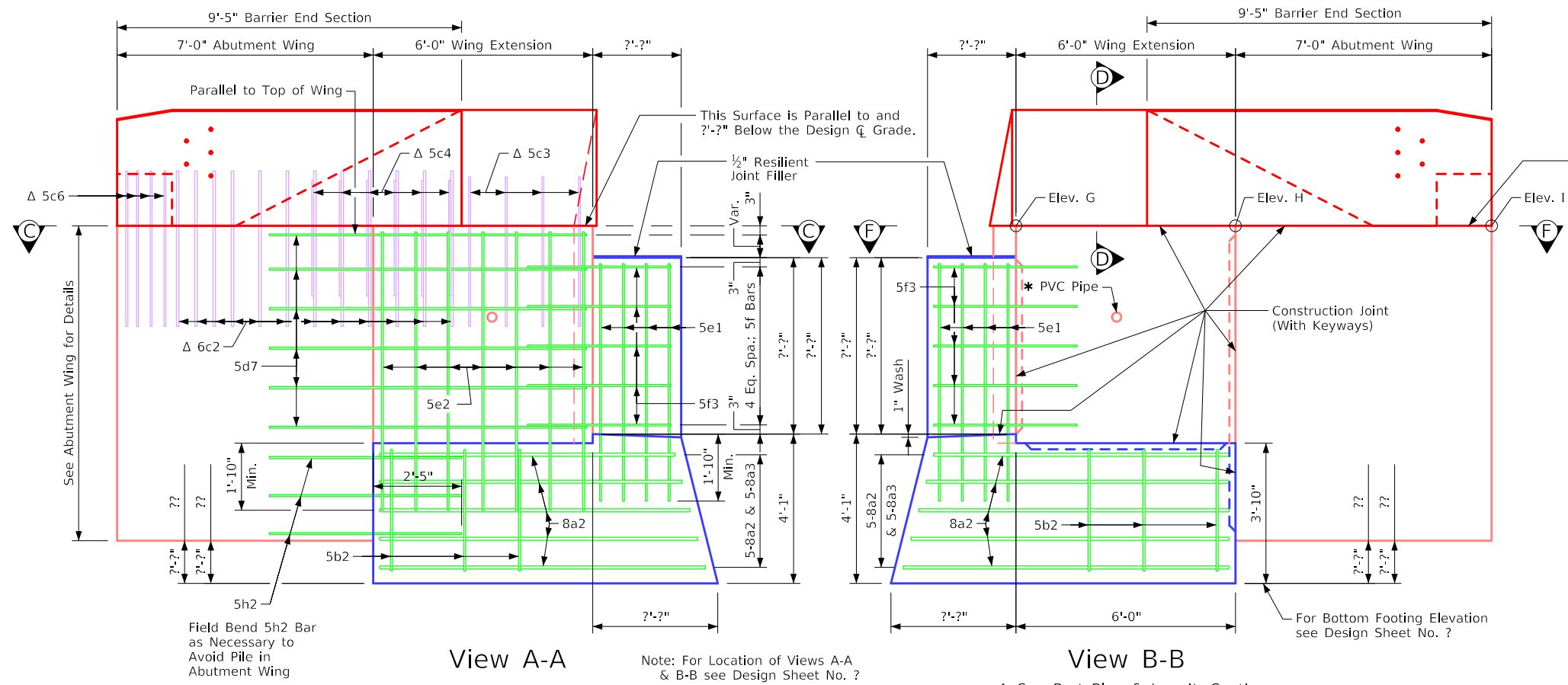


Section C-C
Note: Barrier Rail not shown

Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

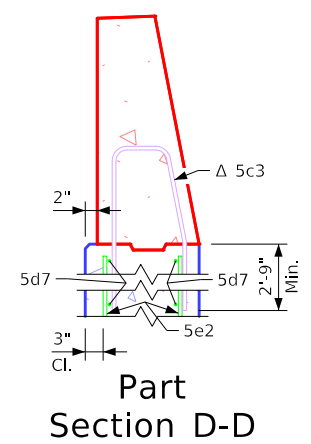
Abutment Longitudinal Section

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Issued 09-08-88. StubBridges.dgn - 2101 - This Sheet Re-Issued 11-2023. Sheet Format Update.



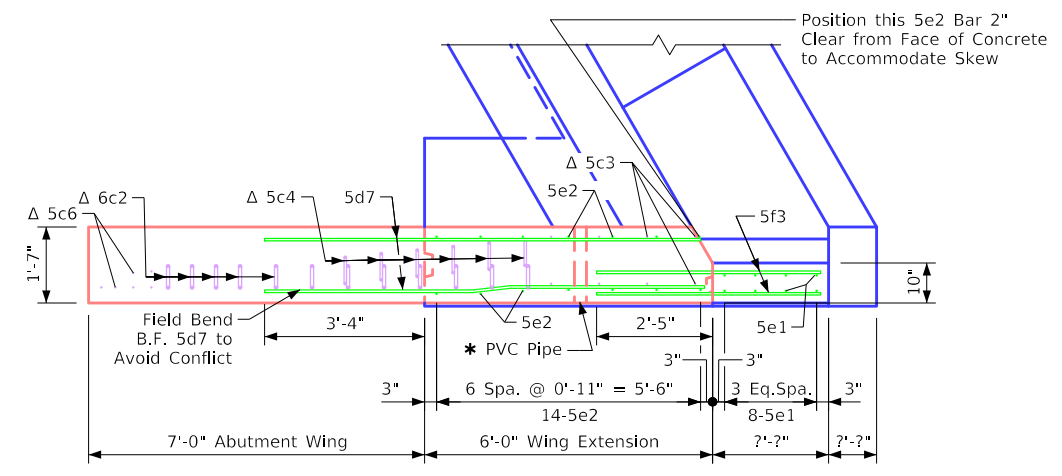
View A-A

View B-B



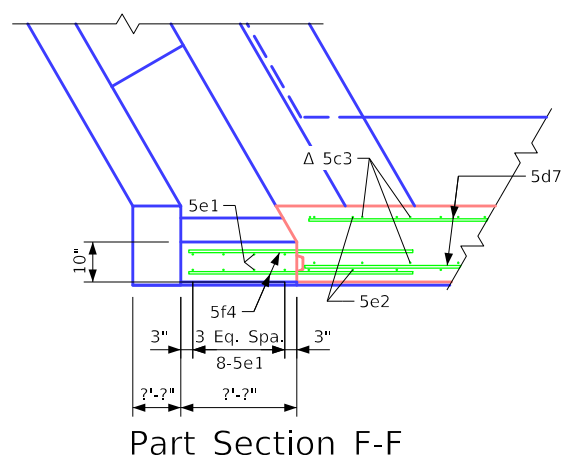
Part Section D-D

Table of Wingwall Elevations			
Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?



Section C-C

Note: Barrier Rail not shown



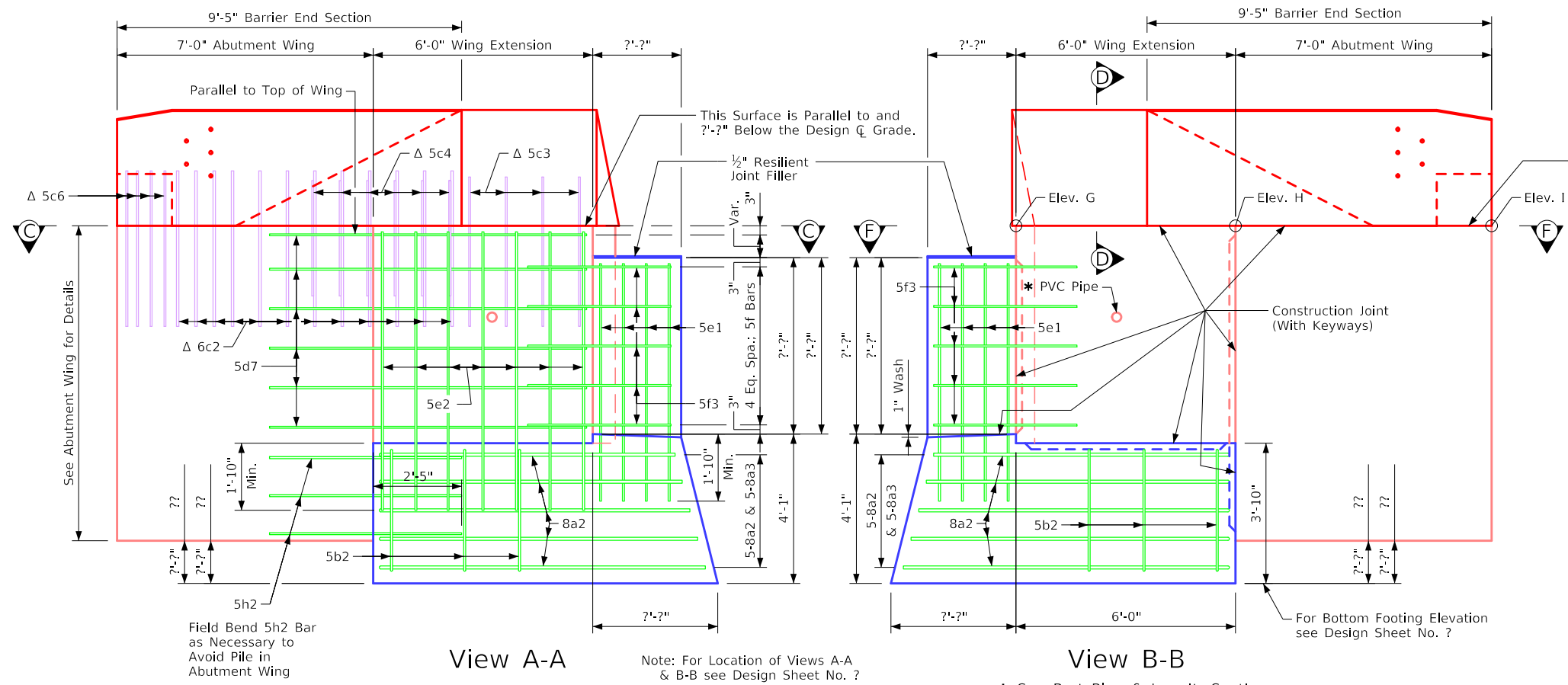
Part Section F-F

Note to Detailer:
 "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Abutment Longitudinal Section

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing.
 Issued 09-08-88.
 StubBridges.dgn - 2102 - This Sheet Re-Issued 11-2023. Sheet Format Update.

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing.
 Issued 09-08-88.
 StubBridges.dgn - 2103 - This Sheet Re-Issued 11-2023. Sheet Format Update.



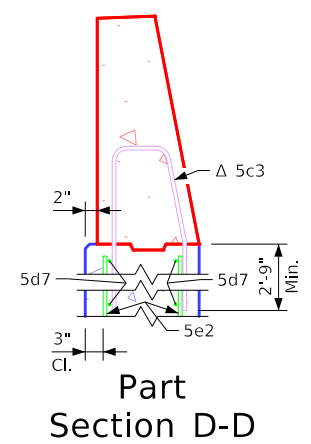
View A-A

View B-B

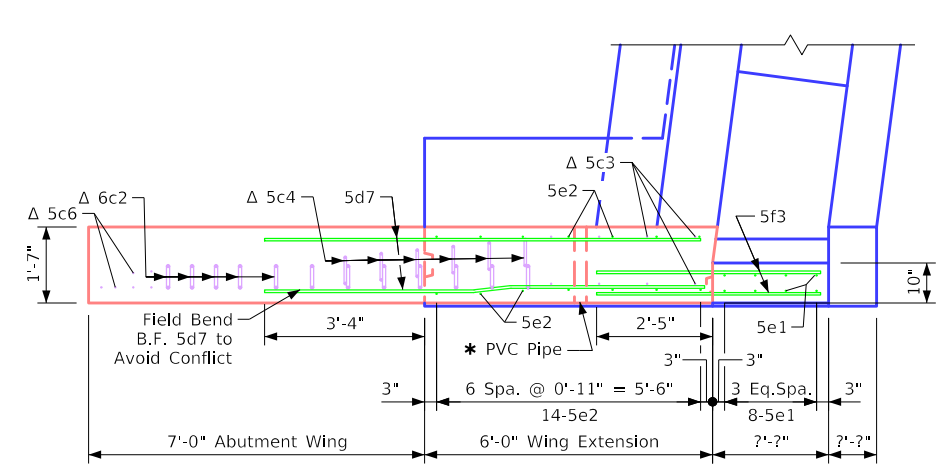
Note: For Location of Views A-A & B-B see Design Sheet No. ?

* See Part Plan & Longit. Section Sheet for PVC Pipe Location

Table of Wingwall Elevations			
Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?

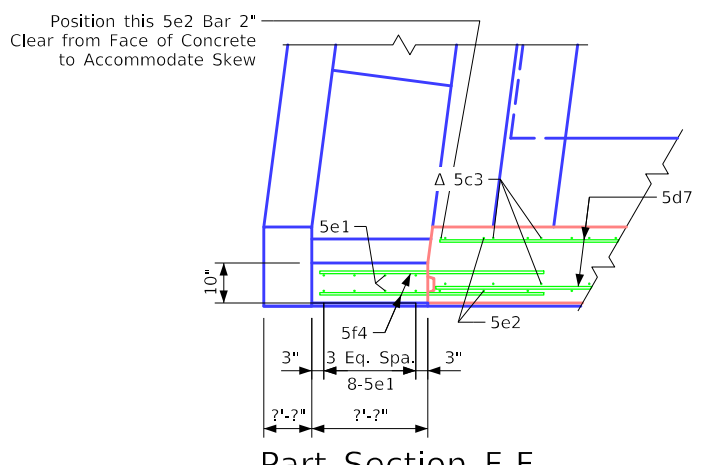


Part Section D-D



Section C-C

Note: Barrier Rail not shown

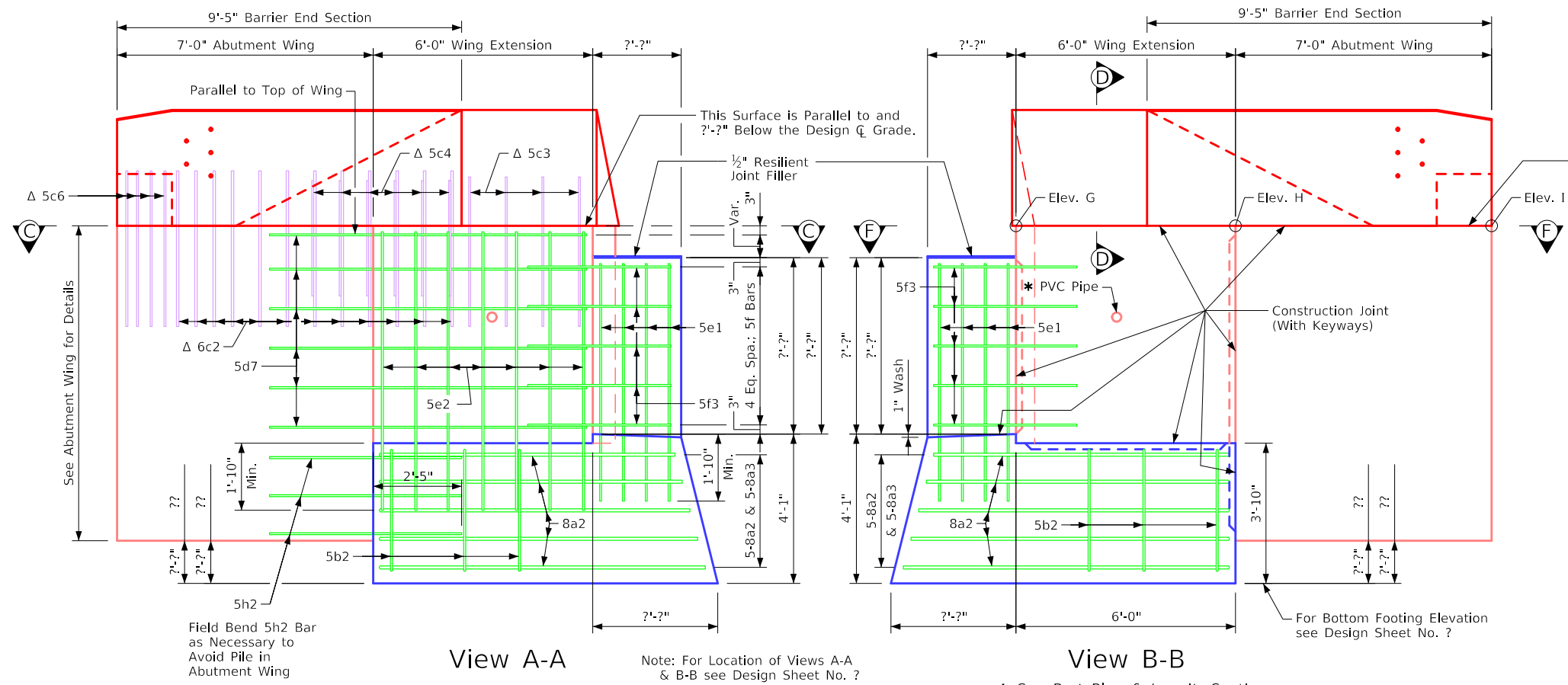


Part Section F-F

Note to Detailer:
 "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

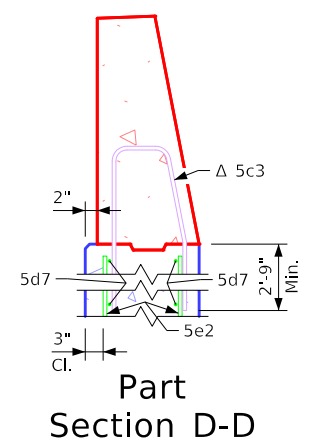
Abutment Longitudinal Section

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing.
 Issued 09-08-88.
 StubBridges.dgn - 2104 - This Sheet Re-Issued 11-2023. Sheet Format Update.



View A-A

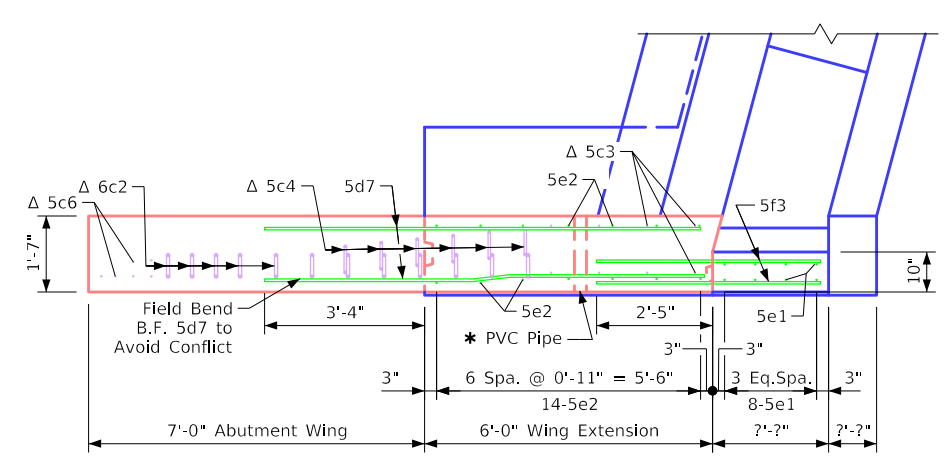
View B-B



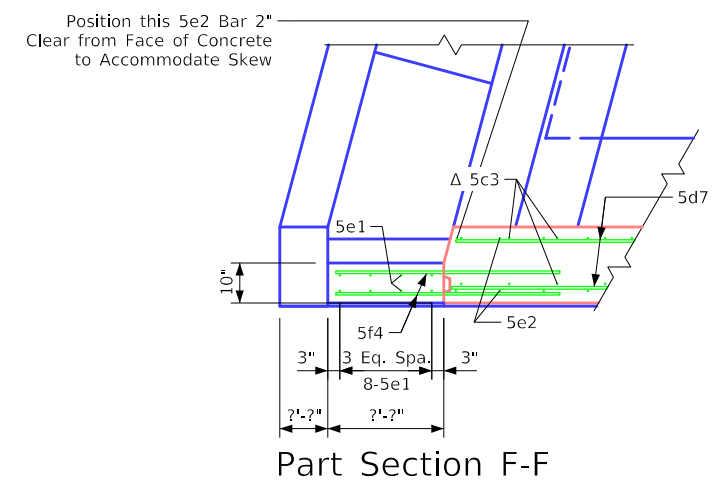
Part Section D-D

Table of Wingwall Elevations			
Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?

* See Part Plan & Longit. Section Sheet for PVC Pipe Location



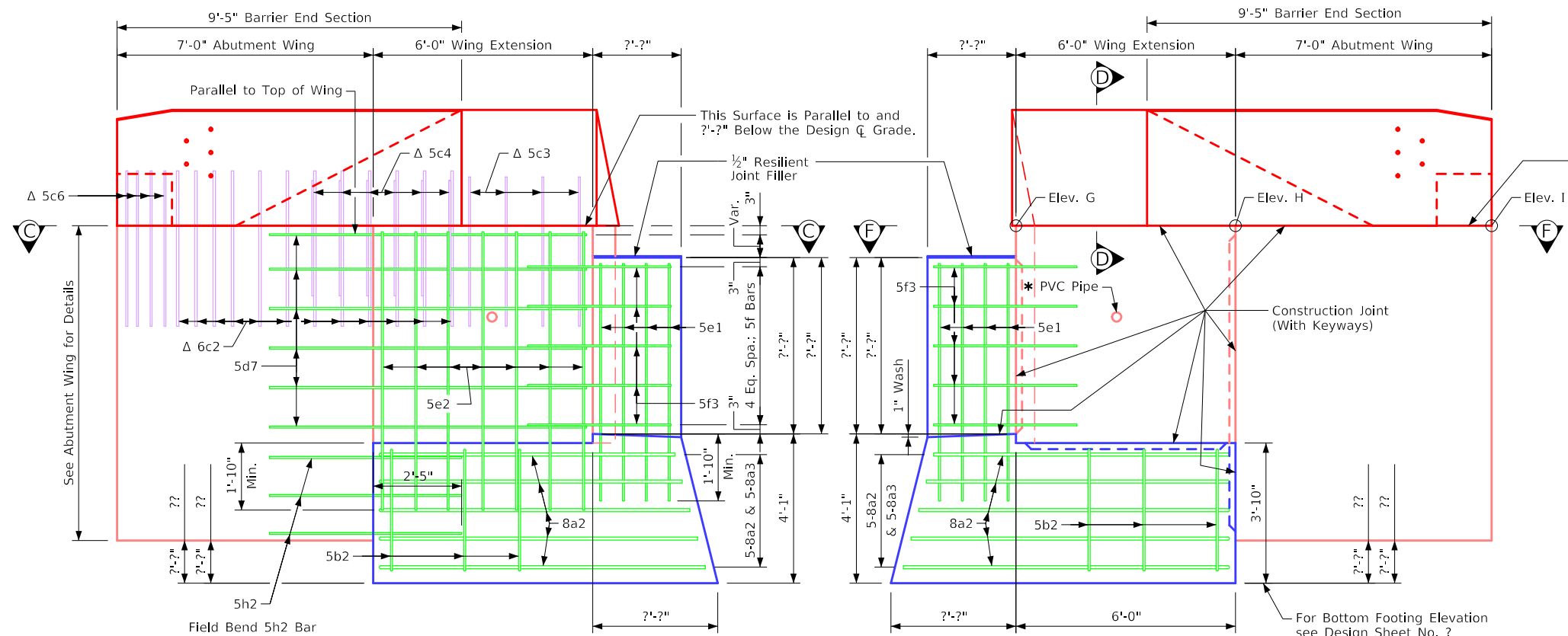
Section C-C
 Note: Barrier Rail not shown



Part Section F-F

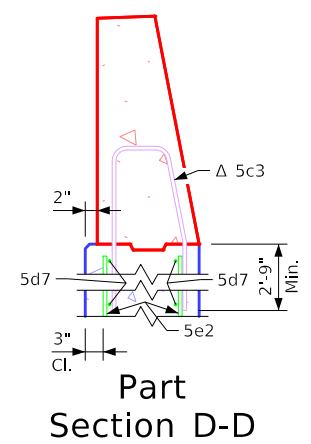
Note to Detailer:
 "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Abutment Longitudinal Section



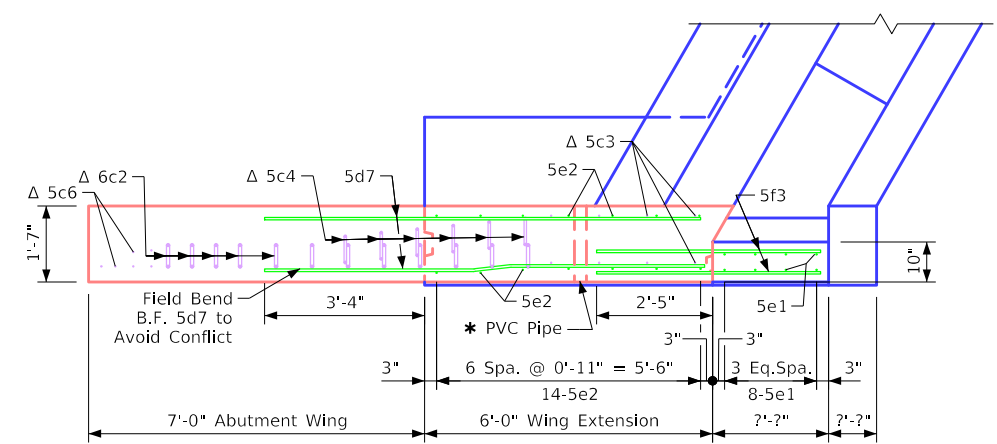
View A-A

View B-B

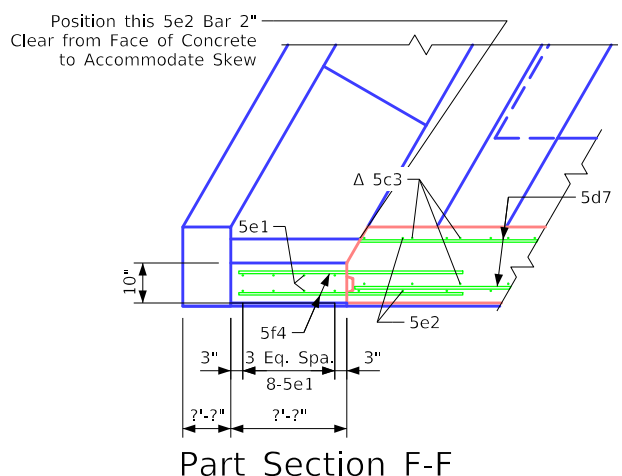


Part Section D-D

Table of Wingwall Elevations			
Location	Elev. G	Elev. H	Elev. I
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?
?	???.?	???.?	???.?



Section C-C
Note: Barrier Rail not shown



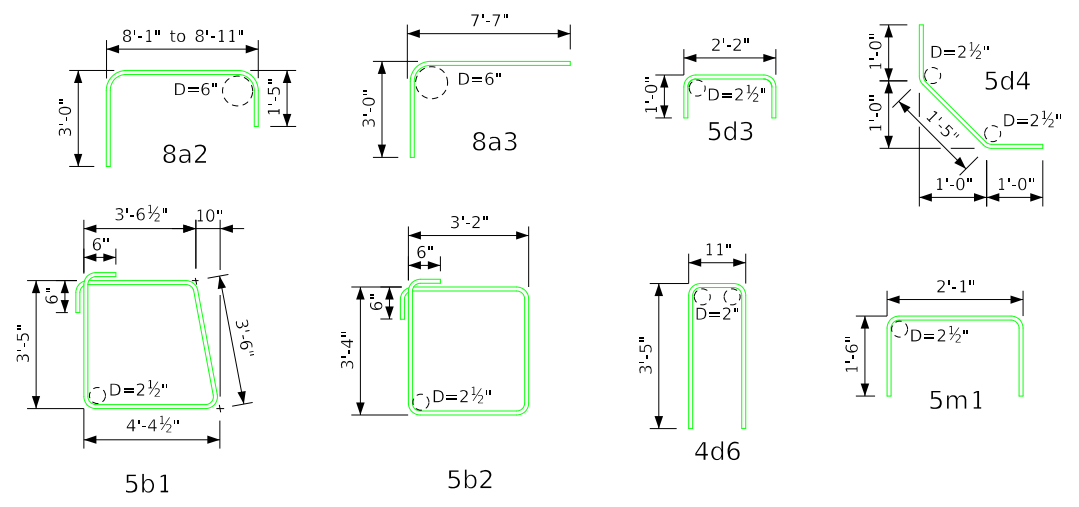
Part Section F-F

Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Abutment Longitudinal Section

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Issued 09-08-88. StubBridges.dgn - 2105 - This Sheet Re-Issued 11-2023. Sheet Format Update.

Bent Bar Details



Note: All dimensions are out to out. D = Pin Diameter

Stainless Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
5d5	Paving Notch Dowels		??	3'-2"	???
Stainless Steel - Total Weight (lbs.)					???

Epoxy Coated Reinforcing Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
8a1	Footing Longitudinal		??	7'-7"	???
8a2	Wing Footing		10	Varies	345
8a3	Wing Footing		10	10'-7"	283
5b1	Footing Hoops		??	15'-10"	???
5b2	Wing Footing Hoops		6	14'-0"	88
6d1	Backwall Vertical B.F.		??	7'-7"	???
5d2	Backwall Vertical F.F.		??	7'-7"	???
5d3	Paving Notch		??	4'-2"	???
5d4	Paving Notch		??	3'-5"	???
4d6	Backwall Vertical Hoop		??	7'-9"	???
5d7	Wing Extension Horizontal		24	9'-2"	230
5e1	Maskwall Vertical		16	7'-7"	???
5e2	Wing Extension Vertical		28	7'-7"	???
5f3	Maskwall Horizontal		20	4'-8"	98
5g1	Backwall Longitudinal		??	7'-7"	???
5g2	Backwall Dowels		28	4'-10"	142
5g3	Paving Notch Longitudinal		??	7'-7"	???
5h2	Abut. to Wing Anchor		12	5'-9"	72
5h5	Abut. to Wing Anchor		4	4'-0"	17
5h7	Abut. to Wing Anchor		6	5'-9"	36
5m1	Beam Step Transverse		??	5'-1"	???
5n1	Beam Step Longitudinal		??	2'-8"	???
Epoxy Coated Reinforcing Steel - Total Weight (lbs.)					???

Abutment Notes:

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

The maskwall is to be poured before the bridge deck is poured.

Construction joint keyways are to be formed with beveled 2"x6"s.

The portion of the backwall containing the abutment anchorage of the expansion device is to be placed after the bridge deck is placed.

Concrete sealer is to be applied to the abutment bridge seat in accordance with the current Iowa D.O.T. Standard Specifications.

The cost of resilient joint filler material, and cost of furnishing and placing concrete sealer is to be included in the price bid for "Structural Concrete (Bridge)".

Paving notch dowels shall be stainless steel deformed bar Grade 60, meeting the requirements of Construction and Materials I.M. 452.

If necessary to prevent damage to the end of the bridge deck and backwall from construction equipment, an appropriate method of protection approved by the Engineer shall be provided by the Bridge Contractor at no extra cost to the State.

Concrete Placement Quantities

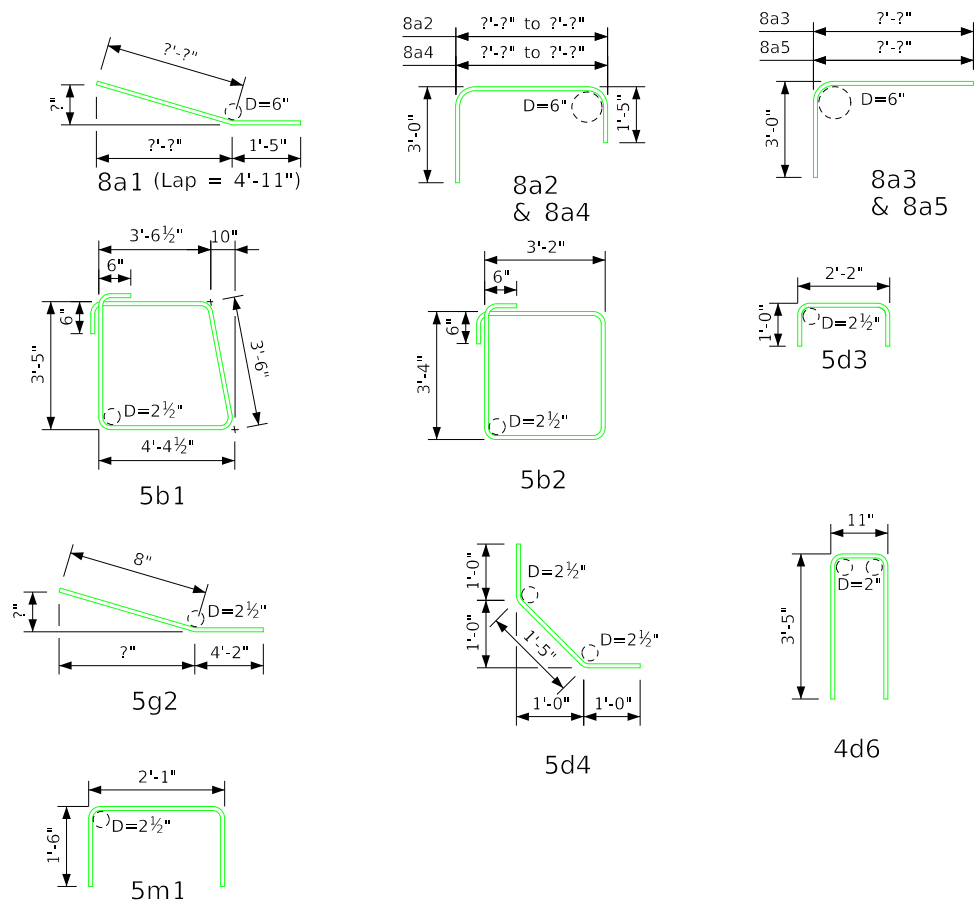
Location	? Abut.	? Abut.
Footing and Steps	???	???
Backwall Below Constr. Joint	???	???
Backwall Above Constr. Joint	???	???
? Wing Extension	???	???
? Wing Extension	???	???
? Wing Maskwall	???	???
? Wing Maskwall	???	???
Total (cu. yd.)	???	???

Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

Abutment Quantities

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Redrawn 09-08-88. StubBridges.dgn - 2106 - This Sheet Re-issued 11-2023. Sheet Format Update.

Bent Bar Details



Note: All dimensions are out to out. D = Pin Diameter

Abutment Notes:

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

The maskwall is to be poured before the bridge deck is poured.

Construction joint keyways are to be formed with beveled 2"x6"s.

The portion of the backwall containing the abutment anchorage of the expansion device is to be placed after the bridge deck is placed.

Concrete sealer is to be applied to the abutment bridge seat in accordance with the current Iowa D.O.T. Standard Specifications.

The cost of resilient joint filler material, and cost of furnishing and placing concrete sealer is to be included in the price bid for "Structural Concrete (Bridge)".

Paving notch dowels shall be stainless steel deformed bar Grade 60, meeting the requirements of Construction and Materials I.M. 452.

If necessary to prevent damage to the end of the bridge deck and backwall from construction equipment, an appropriate method of protection approved by the Engineer shall be provided by the Bridge Contractor at no extra cost to the State.

Stainless Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
5d5	Paving Notch Dowels		??	3'-2"	???
Stainless Steel - Total Weight (lbs.)					???

Epoxy Coated Reinforcing Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
8a1	Footing Longitudinal		26	7'-7"	???
8a2	Wing Footing		5	Varies	???
8a3	Wing Footing		5	7'-7"	???
8a4	Wing Footing		5	Varies	???
8a5	Wing Footing		5	7'-7"	???
5b1	Footing Hoops		??	15'-10"	???
5b2	Wing Footing Hoops		6	14'-0"	88
6d1	Backwall Vertical B.F.		??	7'-7"	???
5d2	Backwall Vertical F.F.		??	7'-7"	???
5d3	Paving Notch		??	4'-2"	???
5d4	Paving Notch		??	3'-5"	???
4d6	Backwall Vertical Hoop		??	7'-9"	???
5d7	Wing Extension Horizontal		24	9'-2"	230
5e1	Maskwall Vertical		16	7'-7"	???
5e2	Wing Extension Vertical		28	7'-7"	???
5f3	Maskwall Horizontal		10	7'-7"	???
5f4	Maskwall Horizontal		10	7'-7"	???
5g1	Backwall Longitudinal		??	7'-7"	???
5g2	Backwall Dowels		28	4'-10"	142
5g3	Paving Notch Longitudinal		??	7'-7"	???
5h2	Abut. to Wing Anchor		12	5'-9"	72
5h5	Abut. to Wing Anchor		4	4'-0"	17
5h7	Abut. to Wing Anchor		6	5'-9"	36
5m1	Beam Step Transverse		??	5'-1"	???
5n1	Beam Step Longitudinal		??	2'-8"	???
Reinforcing Steel - Epoxy Coated - Total Weight (lbs.)					???

Concrete Placement Quantities

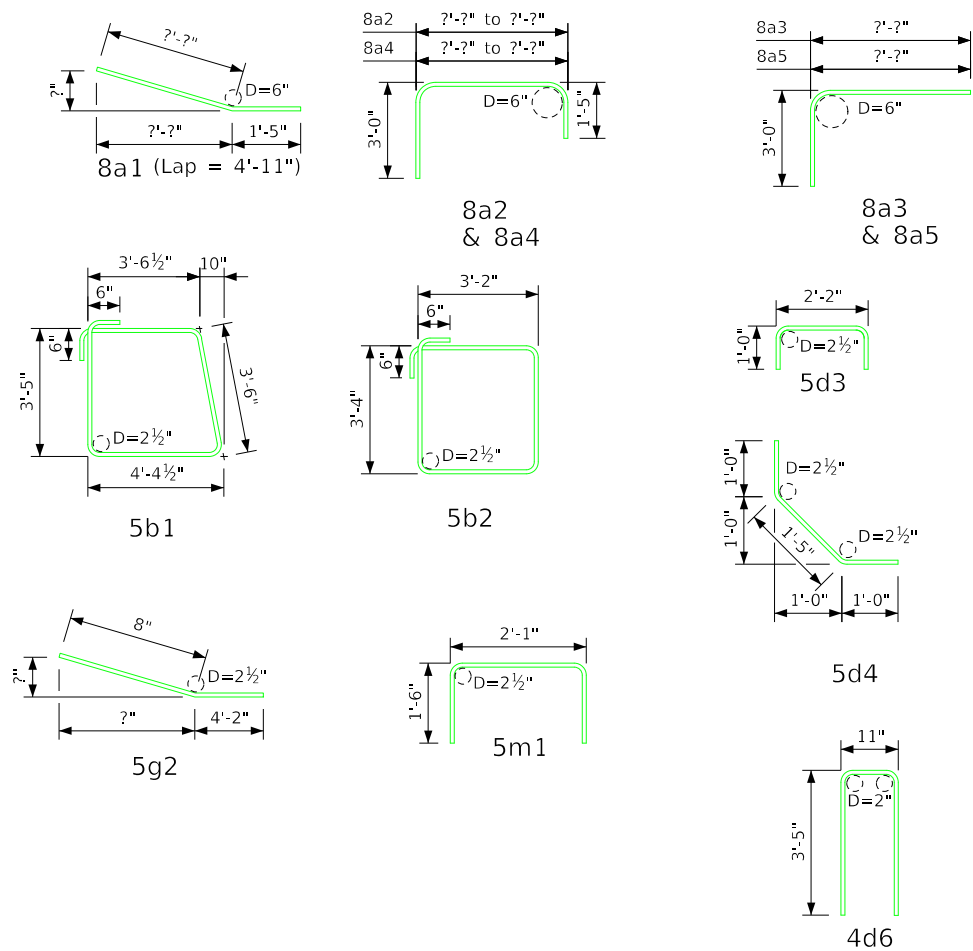
Location	? Abut.	? Abut.
Footing and Steps	???	???
Backwall Below Constr. Joint	???	???
Backwall Above Constr. Joint	???	???
? Wing Extension	???	???
? Wing Extension	???	???
? Wing Maskwall	???	???
? Wing Maskwall	???	???
Total (cu. yd.)	???	???

Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

Abutment Quantities

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Redrawn 09-08-88. StubBridges.dgn - 2107 - This Sheet Re-Issued 11-2023. Sheet Format Update.

Bent Bar Details



Note: All dimensions are out to out. D = Pin Diameter

Abutment Notes:

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

The maskwall is to be poured before the bridge deck is poured.

Construction joint keyways are to be formed with beveled 2"x6"s.

The portion of the backwall containing the abutment anchorage of the expansion device is to be placed after the bridge deck is placed.

Concrete sealer is to be applied to the abutment bridge seat in accordance with the current Iowa D.O.T. Standard Specifications.

The cost of resilient joint filler material, and cost of furnishing and placing concrete sealer is to be included in the price bid for "Structural Concrete (Bridge)".

Paving notch dowels shall be stainless steel deformed bar Grade 60, meeting the requirements of Construction and Materials I.M. 452.

If necessary to prevent damage to the end of the bridge deck and backwall from construction equipment, an appropriate method of protection approved by the Engineer shall be provided by the Bridge Contractor at no extra cost to the State.

Stainless Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
5d5	Paving Notch Dowels		??	3'-2"	???
Stainless Steel - Total Weight (lbs.)					???

Epoxy Coated Reinforcing Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
8a1	Footing Longitudinal		26	7'-7"	???
8a2	Wing Footing		5	Varies	???
8a3	Wing Footing		5	7'-7"	???
8a4	Wing Footing		5	Varies	???
8a5	Wing Footing		5	7'-7"	???
5b1	Footing Hoops		??	15'-10"	???
5b2	Wing Footing Hoops		6	14'-0"	88
6d1	Backwall Vertical B.F.		??	7'-7"	???
5d2	Backwall Vertical F.F.		??	7'-7"	???
5d3	Paving Notch		??	4'-2"	???
5d4	Paving Notch		??	3'-5"	???
4d6	Backwall Vertical Hoop		??	7'-9"	???
5d7	Wing Extension Horizontal		24	9'-2"	230
5e1	Maskwall Vertical		16	7'-7"	???
5e2	Wing Extension Vertical		28	7'-7"	???
5f3	Maskwall Horizontal		10	7'-7"	???
5f4	Maskwall Horizontal		10	7'-7"	???
5g1	Backwall Longitudinal		??	7'-7"	???
5g2	Backwall Dowels		28	4'-10"	142
5g3	Paving Notch Longitudinal		??	7'-7"	???
5h2	Abut. to Wing Anchor		12	5'-9"	72
5h5	Abut. to Wing Anchor		4	4'-0"	17
5h7	Abut. to Wing Anchor		6	5'-9"	36
5m1	Beam Step Transverse		??	5'-1"	???
5n1	Beam Step Longitudinal		??	2'-8"	???
Reinforcing Steel - Epoxy Coated - Total Weight (lbs.)					???

Concrete Placement Quantities

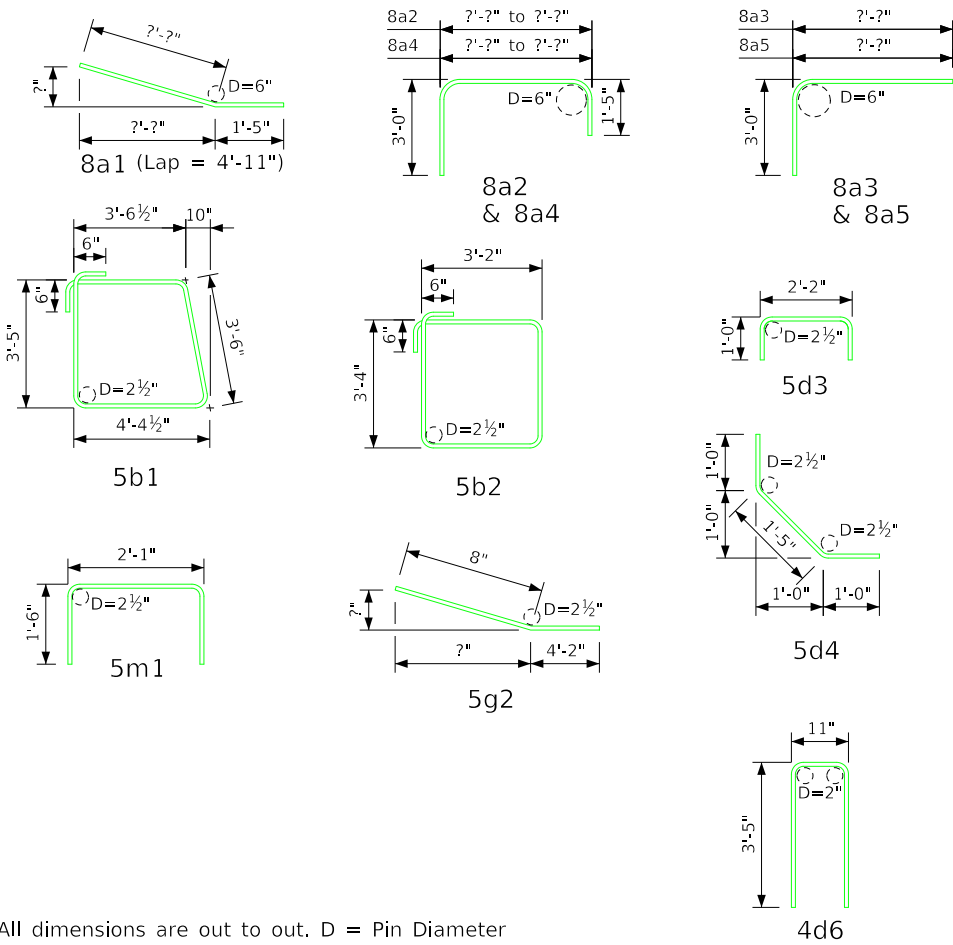
Location	? Abut.	? Abut.
Footing and Steps	???	???
Backwall Below Constr. Joint	???	???
Backwall Above Constr. Joint	???	???
? Wing Extension	???	???
? Wing Extension	???	???
? Wing Maskwall	???	???
? Wing Maskwall	???	???
Total (cu. yd.)	???	???

Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

Abutment Quantities

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Redrawn 09-08-88. StubBridges.dgn - 2108 - This Sheet Re-Issued 11-2023. Sheet Format Update.

Bent Bar Details



Note: All dimensions are out to out. D = Pin Diameter

Abutment Notes:

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

The maskwall is to be poured before the bridge deck is poured.

Construction joint keyways are to be formed with beveled 2"x6"ns.

The portion of the backwall containing the abutment anchorage of the expansion device is to be placed after the bridge deck is placed.

Concrete sealer is to be applied to the abutment bridge seat in accordance with the current Iowa D.O.T. Standard Specifications.

The cost of resilient joint filler material, and cost of furnishing and placing concrete sealer is to be included in the price bid for "Structural Concrete (Bridge)".

Paving notch dowels shall be stainless steel deformed bar Grade 60, meeting the requirements of Construction and Materials I.M. 452.

If necessary to prevent damage to the end of the bridge deck and backwall from construction equipment, an appropriate method of protection approved by the Engineer shall be provided by the Bridge Contractor at no extra cost to the State.

Stainless Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
5d5	Paving Notch Dowels		??	3'-2"	???
Stainless Steel - Total Weight (lbs.)					???

Epoxy Coated Reinforcing Steel Bar List - One Abutment

Bar	Location	Shape	No.	Length	Weight
8a1	Footing Longitudinal		26	7'-7"	???
8a2	Wing Footing		5	Varies	???
8a3	Wing Footing		5	7'-7"	???
8a4	Wing Footing		5	Varies	???
8a5	Wing Footing		5	7'-7"	???
5b1	Footing Hoops		??	15'-10"	???
5b2	Wing Footing Hoops		6	14'-0"	88
6d1	Backwall Vertical B.F.		??	7'-7"	???
5d2	Backwall Vertical F.F.		??	7'-7"	???
5d3	Paving Notch		??	4'-2"	???
5d4	Paving Notch		??	3'-5"	???
4d6	Backwall Vertical Hoop		??	7'-9"	???
5d7	Wing Extension Horizontal		24	9'-2"	230
5e1	Maskwall Vertical		16	7'-7"	???
5e2	Wing Extension Vertical		28	7'-7"	???
5f3	Maskwall Horizontal		10	7'-7"	???
5f4	Maskwall Horizontal		10	7'-7"	???
5g1	Backwall Longitudinal		??	7'-7"	???
5g2	Backwall Dowels		28	4'-10"	142
5g3	Paving Notch Longitudinal		??	7'-7"	???
5h2	Abut. to Wing Anchor		12	5'-9"	72
5h5	Abut. to Wing Anchor		4	4'-0"	17
5h7	Abut. to Wing Anchor		6	5'-9"	36
5m1	Beam Step Transverse		??	5'-1"	???
5n1	Beam Step Longitudinal		??	2'-8"	???
Reinforcing Steel - Epoxy Coated - Total Weight (lbs.)					???

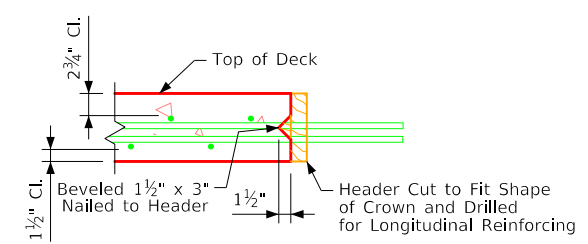
Concrete Placement Quantities

Location	? Abut.	? Abut.
Footing and Steps	???	???
Backwall Below Constr. Joint	???	???
Backwall Above Constr. Joint	???	???
? Wing Extension	???	???
? Wing Extension	???	???
? Wing Maskwall	???	???
? Wing Maskwall	???	???
Total (cu. yd.)		
	???	???

Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

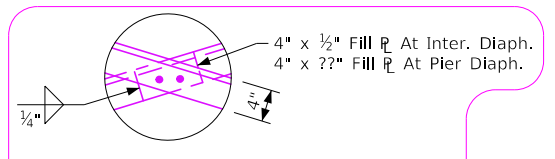
Abutment Quantities

Revised 05-14: Changed the Minimum Embedment of the 5e1 & 5e2 Bars to 1'-6" into the Abutment Footing. Redrawn 09-08-88. StubBridges.dgn - 2106 - This Sheet Re-Issued 11-2023. Sheet Format Update.



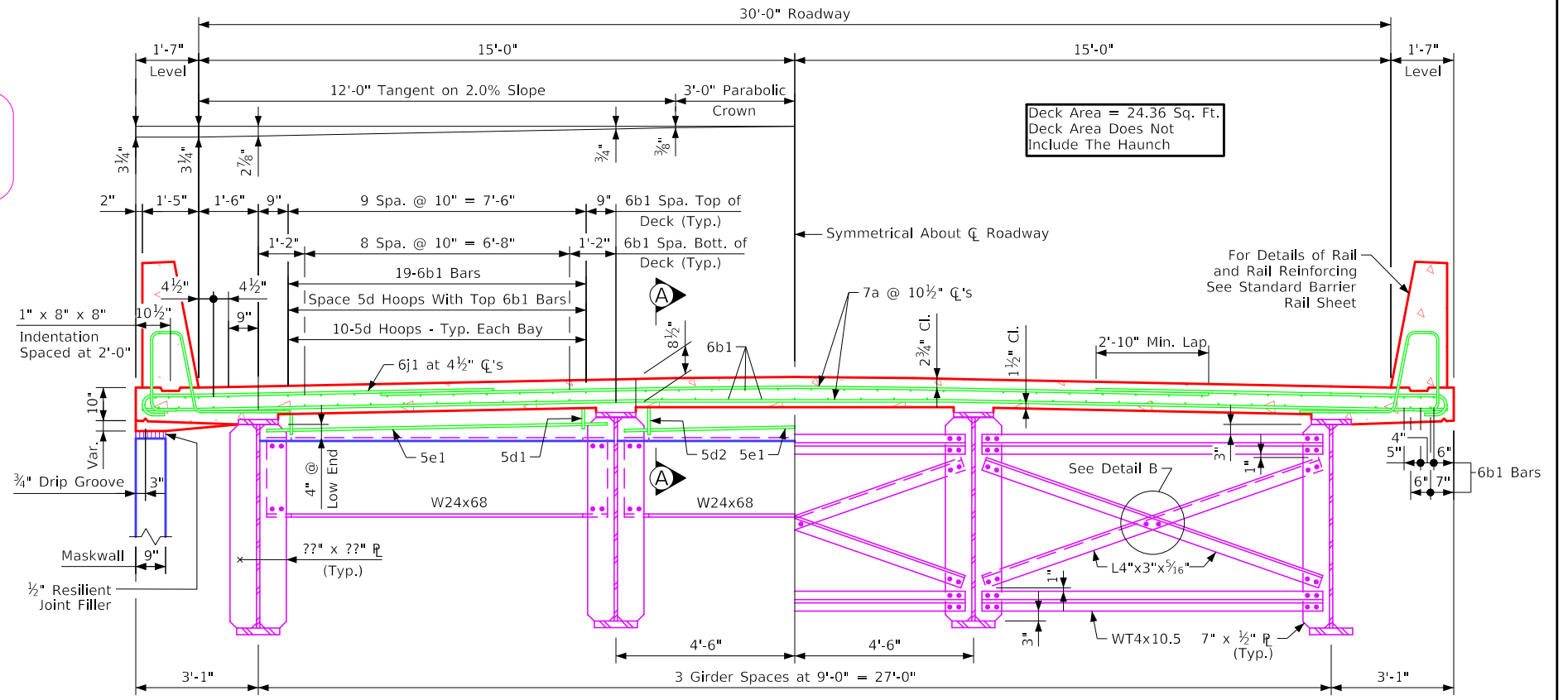
Permissible Transverse Deck Construction Joint

Note to Designer:
6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.



Detail B

Note to Detailer:
Detail B alternate splice drawing model is reference outside of border. Either move in place or modify "orientation" in reference dialog.



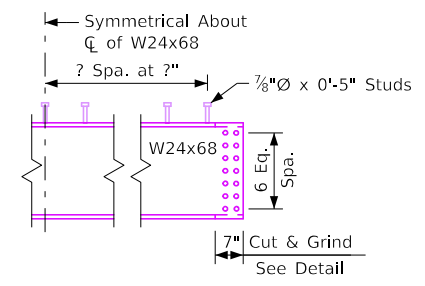
Half Section Near Abutment

Half Section Near Intermediate Diaphragm

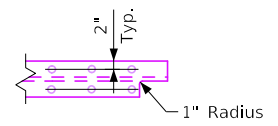
Note: For Additional Stiffener and Welding Details See Design Sheet No. ?

Superstructure Notes:

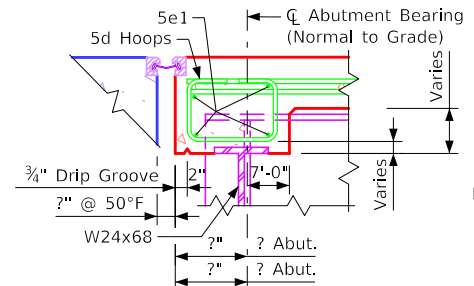
The bridge deck as shown includes 3/4" integral wearing surface. Forms for the bridge deck and barrier rail are to be supported by the girders. Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown. Top transverse reinforcing steel is to be parallel to and 2 3/4" clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and 1 1/2" clear above bottom of deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, high bar chairs, and deck bolsters. All field connections are to be bolted using "high tensile strength bolts". Unless otherwise noted, all open holes are to be 15/16" Ø and all bolts are to be 7/8" Ø. Bottom flanges are to be perpendicular to webs at the reaction points. Fill R thicknesses shown on plans are based on nominal girder dimensions. These thicknesses are to be verified or adjusted during fabrication to secure a close fit. Each fill plate shall fit to the nearest 1/16" thickness and single plates are required at each fill location. Girders are to be truly square at splice points with flanges perpendicular to webs. The design drawings indicate AWS prequalified welded joints. Alternate joint details may be submitted for approval. Magnetic particle inspection of welds, in accordance with the Standard Specifications, will be required. Shop welded flange splices shall be a minimum of 6 inches from a stiffener. Splices shall not interfere with any other bridge components. All shop welded butt splices shall be shown on the shop drawings and subject to approval by the Engineer.



Abut. Diaphragm Detail



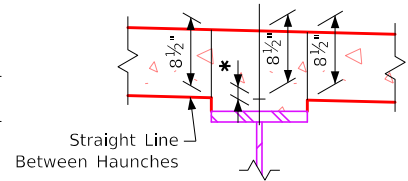
Typical Cut & Grind Detail



Section A-A

(Normal to abutment)
Note: Transverse deck reinforcing not shown. Place 5d hoops parallel to longit. 6b1 bars.

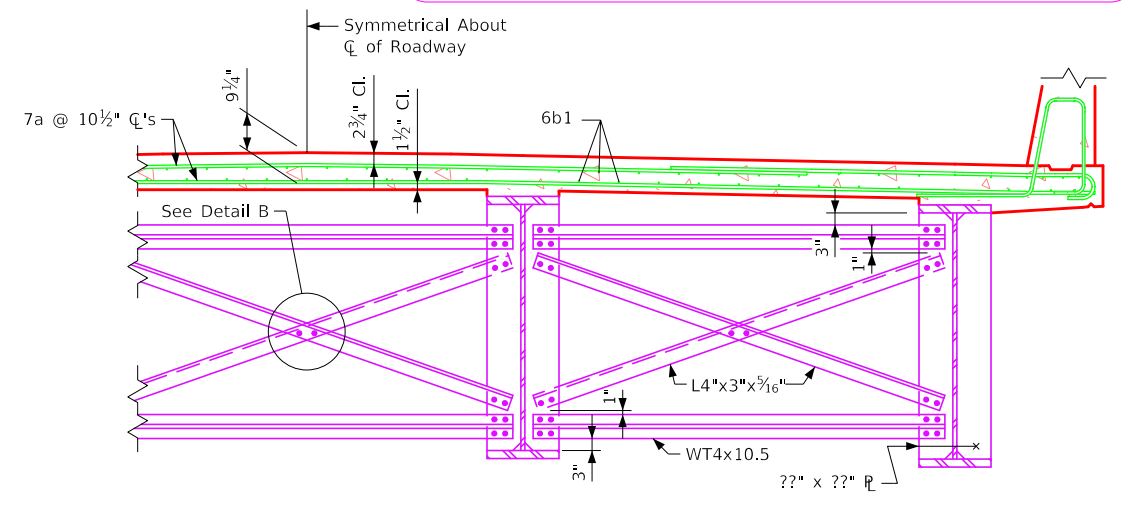
Note: Drain weight are included on the Summary Quantities Sheet.



Typ. Deck & Haunch Detail

* Concrete haunch dimension measured between bottom of deck and top of top flange plate. Refer to haunch details shown elsewhere in these plans. The maximum embedment of the edge of the top flange in the deck shall be 1/2". Shear studs are to have a minimum penetration of 2" into the deck and be at least 2 1/2" clear of the top of the deck. These requirements were used in setting the maximum and minimum allowable field haunch values shown in the "Miscellaneous Data Table" shown elsewhere on these plans.

Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck



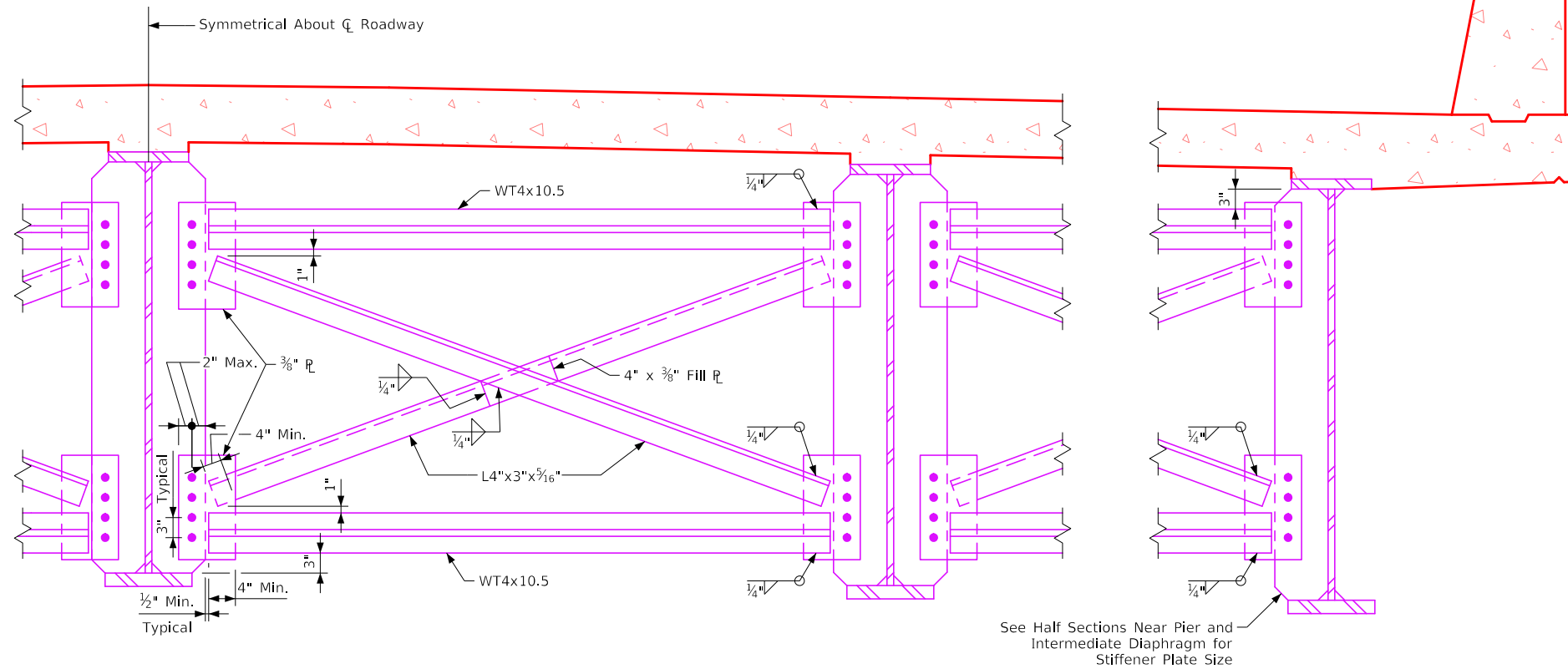
Part Section Near Pier

Welded Girder Bridge Deck Cross Section

Revised 08-18: Added "Refer to Haunch Details Shown Elsewhere on These Plans." to Typ. Deck and Haunch Detail Notes. Issued 04-07. StubBridges.dgn - 4305 - This Sheet Re-Issued 11-2023. Sheet Format Update.

FILE NO.	ENGLISH	DESIGN TEAM	30' Rdwy. Welded Girder Cross Section - LRFD Design	Standard Sheet 4305	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:35 PM	11/8/2023	bkloss	pw:\NTP\wint1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				

Revised 07-18: Finishing Machine Load in Temporary Deck Overhang Bracket Detail Changed to 9000 lbs. (Was 6000 lbs.)
 Issued 04-07.
 StubBridges.dgn - 4305A - This Sheet Re-Issued 11-2023. Sheet Format Update.



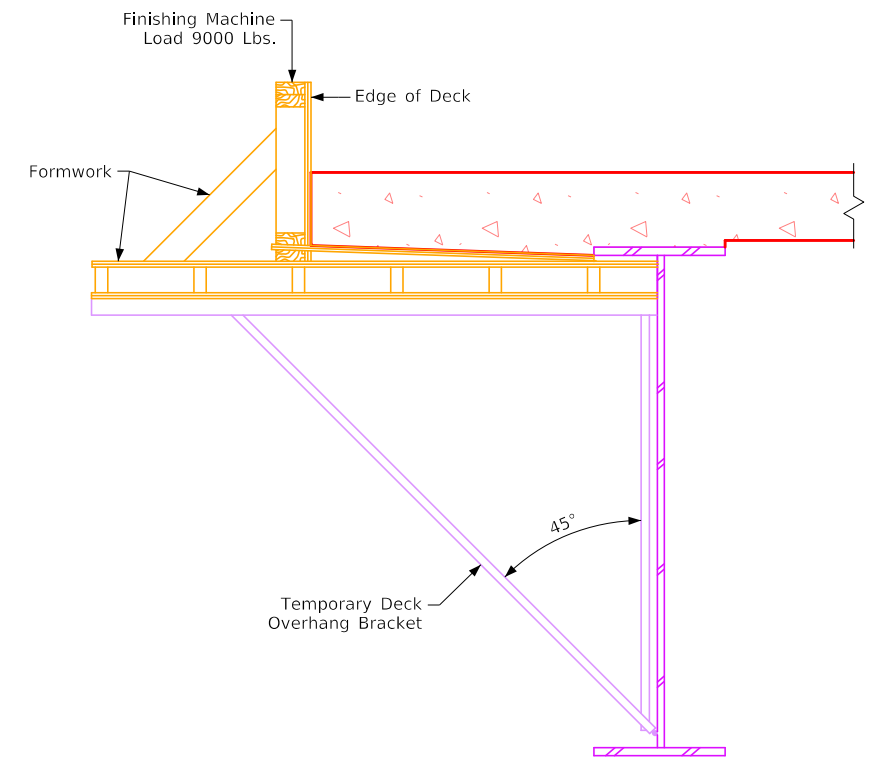
Alternate Intermediate Diaphragm Part Section Thru Deck
 (Showing One Diaphragm Between Girders)

Note: This cannot be welded from one side.
 Cross frame must be turned over to add second angle.

Alternate Intermediate Diaphragm Notes:

All field connections are to be bolted using "High Tensile Strength Bolts". Unless otherwise noted, all open holes are to be $1\frac{5}{16}$ " \varnothing and all bolts are to be $\frac{7}{8}$ " \varnothing .
 The design drawings indicate AWS prequalified welded joints. Alternate joint details may be submitted for approval.
 Magnetic particle inspection of welds shall be in accordance with Article 2408.03, B, of the Standard Specifications.
 Structural steel quantities are based on the intermediate diaphragm shown on typical cross section elsewhere in these plans. No adjustment to quantities will be made if the Contractor uses this alternate intermediate diaphragm detail.

Note To Detailer:
 If pier diaphragms are perpendicular to girders, add the $\frac{1}{2}$ " \varnothing 's at the top of the pier diaphragm stiffeners and clip diaphragm material to show that it does not continue directly across.
 If case I live load is used, show $\frac{1}{2}$ " \varnothing 's at the top and bottom of intermediate stiffeners.
 If skew angle is over 30°, show bent plates to connect abutment diaphragms to girders in addition to bearing stiffeners.

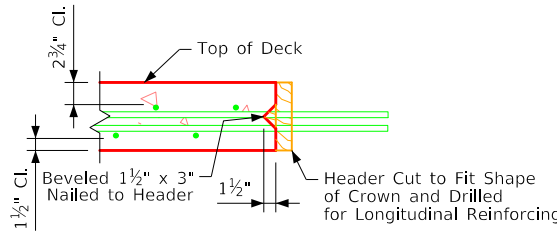


Temporary Deck Overhang Bracket Detail

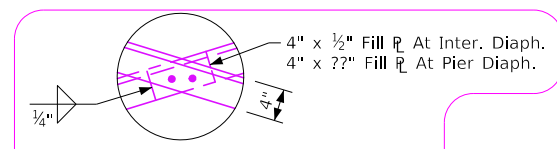
Overhang Bracket Notes:

A maximum finishing machine load and the angle of the diagonal member of the overhang bracket shown were assumed by the Designer. These assumptions, in addition to other construction loadings, were used to check the strength of the exterior girder during critical stages of construction. If the finishing machine load or angle of the diagonal member of the overhang bracket deviate significantly from values shown, the Contractor shall submit to the Engineer this information on proposed construction equipment to be used.
 If the vertical height of the overhang bracket is adjustable, the base of the bracket is to be located as close as possible to the bottom flange of the girder.

Alt. Diaph. & Temp. Overhang Bracket

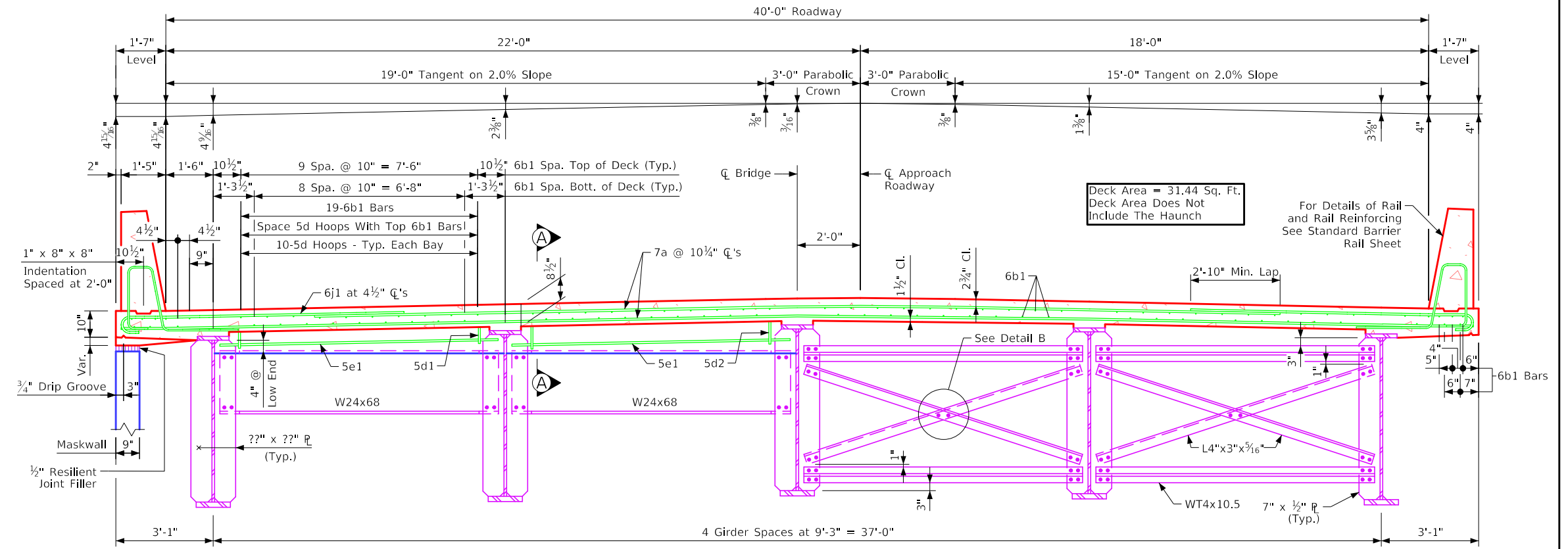


Permissible Transverse Deck Construction Joint



Detail B

Note to Detailer:
Detail B alternate splice drawing model is reference outside of border. Either move in place or modify "orientation" in reference dialog.



Half Section Near Abutment

Half Section Near Intermediate Diaphragm

Note: For Additional Stiffener and Welding Details See Design Sheet No. ?

Superstructure Notes:

The bridge deck as shown includes 3/4 inch integral wearing surface. Forms for the bridge deck and barrier rail are to be supported by the girders.

Clear distance from face of concrete to near reinforcing bar shall be 2 inch unless otherwise noted or shown. Top transverse reinforcing steel is to be parallel to and 2 3/4 inch clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and 1 1/2 inch clear above bottom of deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3 feet 0 inch centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4 feet 0 inch apart. I.M. 451.01 requirements shall apply for bar chairs, high bar chairs, and deck bolsters.

Transverse deck reinforcing may be spliced with one lap located as follows:

- Top bar - Lap midway between beams (min. lap = 3 feet 10 inch)
- Bottom bars - Lap over beams (min. lap = 4 feet 8 inch)

Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices.

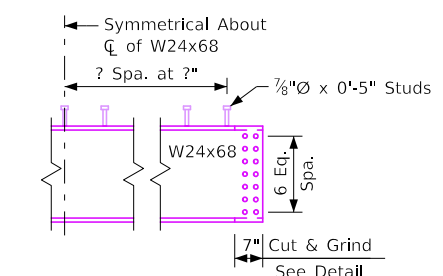
All field connections are to be bolted using "high tensile strength bolts". Unless otherwise noted, all open holes are to be 15/16 inch diameter and all bolts are to be 7/8 inch diameter.

Bottom flanges are to be perpendicular to webs at the reaction points. Fill plate thicknesses shown on plans are based on nominal girder dimensions. These thicknesses are to be verified or adjusted during fabrication to secure a close fit. Each fill plate shall fit to the nearest 1/16 inch thickness and single plates are required at each fill location. Girders are to be truly square at splice points with flanges perpendicular to webs.

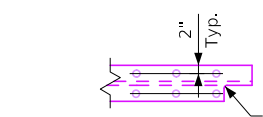
The design drawings indicate AWS prequalified welded joints. Alternate joint details may be submitted for approval.

Magnetic particle inspection of welds, in accordance with the Standard Specifications, will be required.

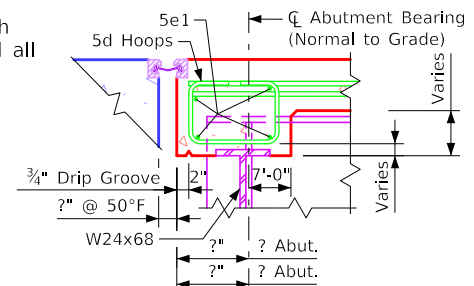
Shop welded flange splices shall be a minimum of 6 inches from a stiffener. Splices shall not interfere with any other bridge components. All shop welded butt splices shall be shown on the shop drawings and subject to approval by the Engineer.



Abut. Diaphragm Detail

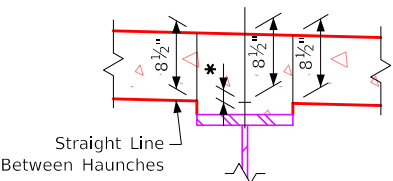


Typical Cut & Grind Detail



Section A-A

(Normal to abutment)
Note: Transverse deck reinforcing not shown. Place 5d hoops parallel to longit. 6b1 bars.



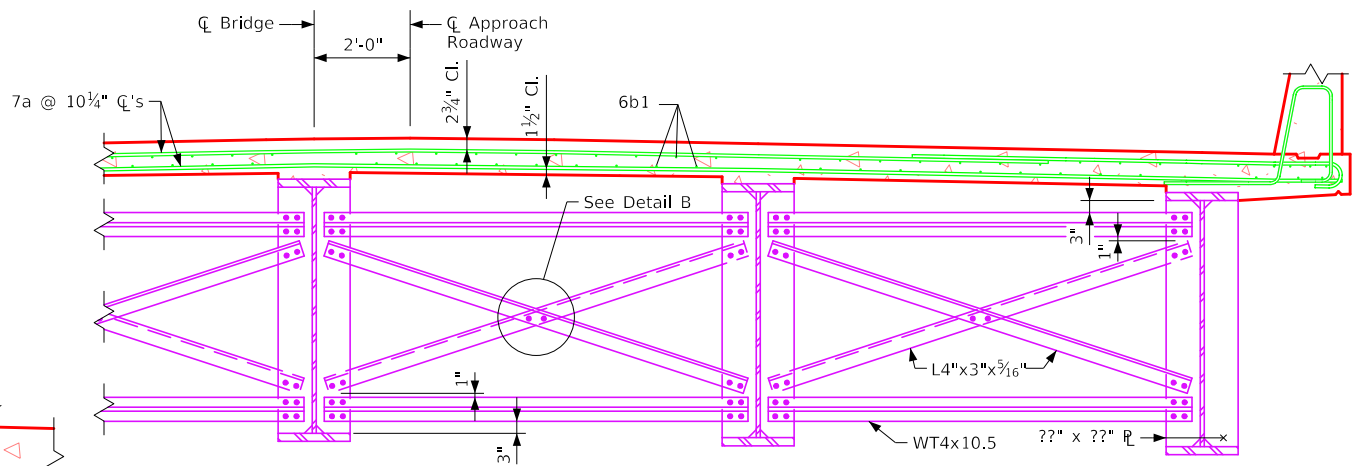
Typ. Deck & Haunch Detail

* Concrete haunch dimension measured between bottom of deck and top of top flange plate. Refer to haunch details shown elsewhere in these plans.

The maximum embedment of the edge of the top flange in the deck shall be 1/2 inch. Shear studs are to have a minimum penetration of 2 inch into the deck and be at least 2 1/2 inch clear of the top of the deck. These requirements were used in setting the maximum and minimum allowable field haunch values shown in the "Miscellaneous Data Table" shown elsewhere on these plans.

Note to Designer:
6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

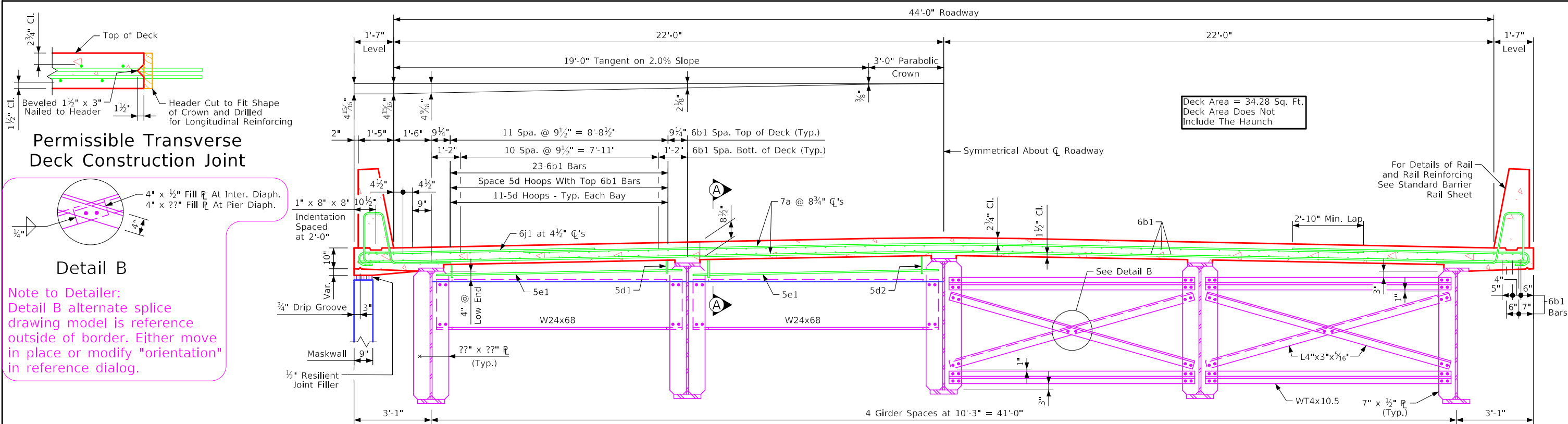


Part Section Near Pier

Welded Girder Bridge Deck Cross Section

Revised 08-18: Added "Refer to Haunch Details Shown Elsewhere on these Plans." To Typ. Deck and Haunch Detail Notes. Issued 04-07. Stubbridges.dgn - 4308 - This Sheet Re-issued 11-2023. Sheet Format Update.

FILE NO.	ENGLISH	DESIGN TEAM	40' Rdwy. Welded Girder Cross Section - LRFD Design	Standard Sheet 4308	COUNTY	PROJECT NUMBER	SHEET NUMBER
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Superstructure Notes:

The bridge deck as shown includes $\frac{3}{4}$ " integral wearing surface. Forms for the bridge deck and barrier rail are to be supported by the girders. Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown. Top transverse reinforcing steel is to be parallel to and $2\frac{3}{4}$ " clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and $1\frac{1}{2}$ " clear above bottom of deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, high bar chairs, and deck bolsters. Transverse deck reinforcing may be spliced with one lap located as follows:
 Top bar - Lap midway between beams (min. lap = 3'-10")
 Bottom bars - Lap over beams (min. lap = 4'-8")
 Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices. All field connections are to be bolted using "high tensile strength bolts". Unless otherwise noted, all open holes are to be $\frac{15}{16}$ " \varnothing and all bolts are to be $\frac{7}{8}$ " \varnothing . Bottom flanges are to be perpendicular to webs at the reaction points. Fill \bar{r} thicknesses shown on plans are based on nominal girder dimensions. These thicknesses are to be verified or adjusted during fabrication to secure a close fit. Each fill plate shall fit to the nearest $\frac{1}{16}$ " thickness and single plates are required at each fill location. Girders are to be truly square at splice points with flanges perpendicular to webs. The design drawings indicate AWS prequalified welded joints. Alternate joint details may be submitted for approval. Magnetic particle inspection of welds, in accordance with the Standard Specifications, will be required. Shop welded flange splices shall be a minimum of 6 inches from a stiffener. Splices shall not interfere with any other bridge components. All shop welded butt splices shall be shown on the shop drawings and subject to approval by the Engineer.

Note to Designer: 6j1 Spacing shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

Note to Detailer: "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Note: Drain weight are included on the Summary Quantities Sheet.

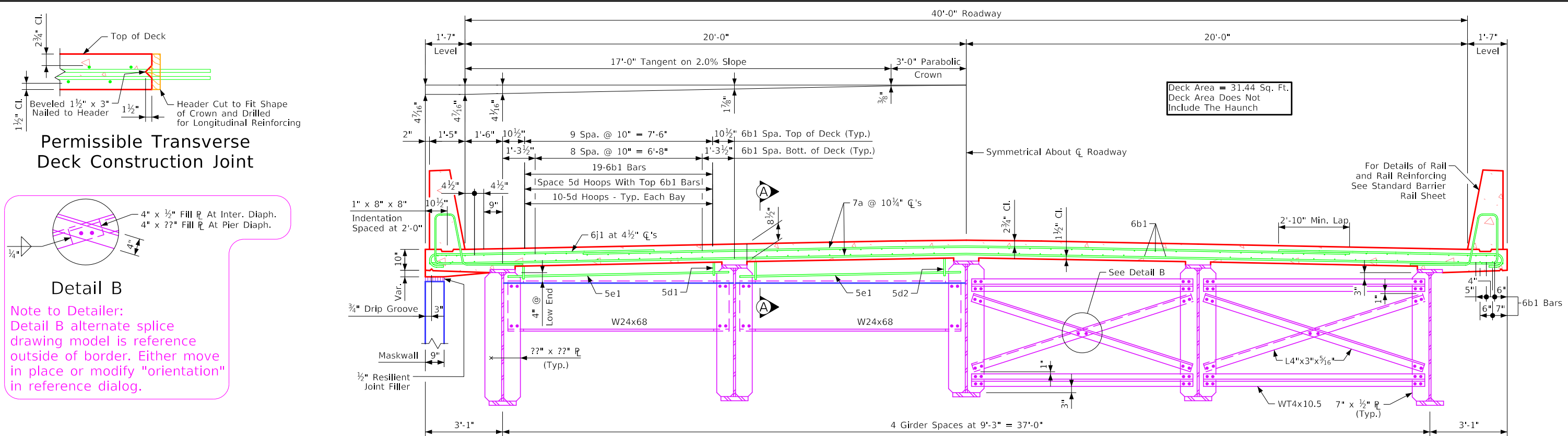
Typ. Deck & Haunch Detail

* Concrete haunch dimension measured between bottom of deck and top of top flange plate. Refer to haunch details shown elsewhere in these plans. The maximum embedment of the edge of the top flange in the deck shall be $\frac{1}{2}$ ". Shear studs are to have a minimum penetration of 2" into the deck and be at least $2\frac{1}{2}$ " clear of the top of the deck. These requirements were used in setting the maximum and minimum allowable field haunch values shown in the "Miscellaneous Data Table" shown elsewhere on these plans.

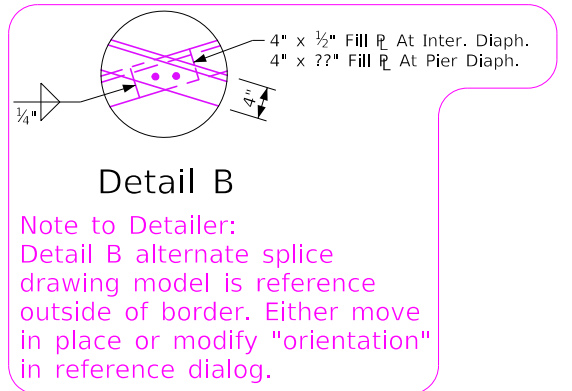
Welded Girder Bridge Deck Cross Section

Revised 08-18: Added "Refer to Haunch Details Shown Elsewhere on these Plans." To Typ. Deck and Haunch Detail Notes. Issued 04-07. Stubbridges.dgn - 4309 - This Sheet Re-issued 11-2023. Sheet Format Update.

FILE NO.	ENGLISH	DESIGN TEAM	44' Rdwy. Welded Girder Cross Section - LRFD Design	Standard Sheet 4309	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:37 PM	11/8/2023	bkloss	pw:\NTP\wint1.dot.int.lan:PWM\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				



Permissible Transverse Deck Construction Joint

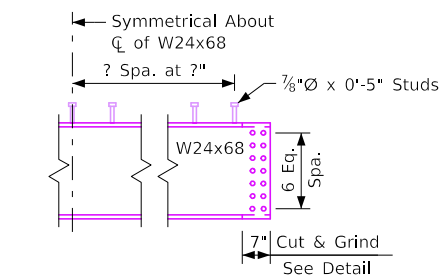


Half Section Near Abutment

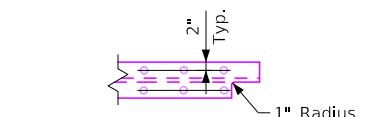
Half Section Near Intermediate Diaphragm

Superstructure Notes:

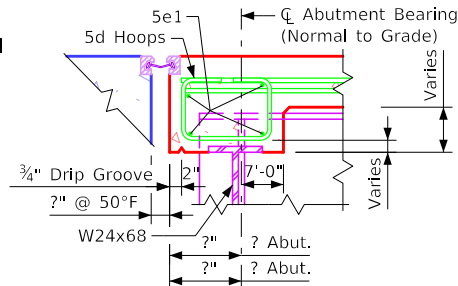
The bridge deck as shown includes $\frac{3}{4}$ " integral wearing surface. Forms for the bridge deck and barrier rail are to be supported by the girders. Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown. Top transverse reinforcing steel is to be parallel to and $2\frac{3}{4}$ " clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and $1\frac{1}{2}$ " clear above bottom of deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, high bar chairs, and deck bolsters. Transverse deck reinforcing may be spliced with one lap located as follows:
 Top bar - Lap midway between beams (min. lap = 3'-10")
 Bottom bars - Lap over beams (min. lap = 4'-8")
 Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices. All field connections are to be bolted using "high tensile strength bolts". Unless otherwise noted, all open holes are to be $\frac{15}{16}$ " \emptyset and all bolts are to be $\frac{7}{8}$ " \emptyset . Bottom flanges are to be perpendicular to webs at the reaction points. Fill PL thicknesses shown on plans are based on nominal girder dimensions. These thicknesses are to be verified or adjusted during fabrication to secure a close fit. Each fill plate shall fit to the nearest $\frac{1}{16}$ " thickness and single plates are required at each fill location. Girders are to be truly square at splice points with flanges perpendicular to webs. The design drawings indicate AWS prequalified welded joints. Alternate joint details may be submitted for approval. Magnetic particle inspection of welds, in accordance with the Standard Specifications, will be required. Shop welded flange splices shall be a minimum of 6 inches from a stiffener. Splices shall not interfere with any other bridge components. All shop welded butt splices shall be shown on the shop drawings and subject to approval by the Engineer.



Abut. Diaphragm Detail



Typical Cut & Grind Detail

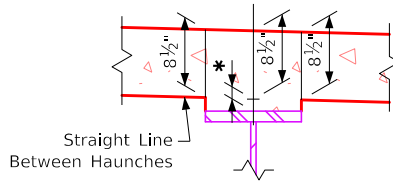


Section A-A

Note to Designer:
6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

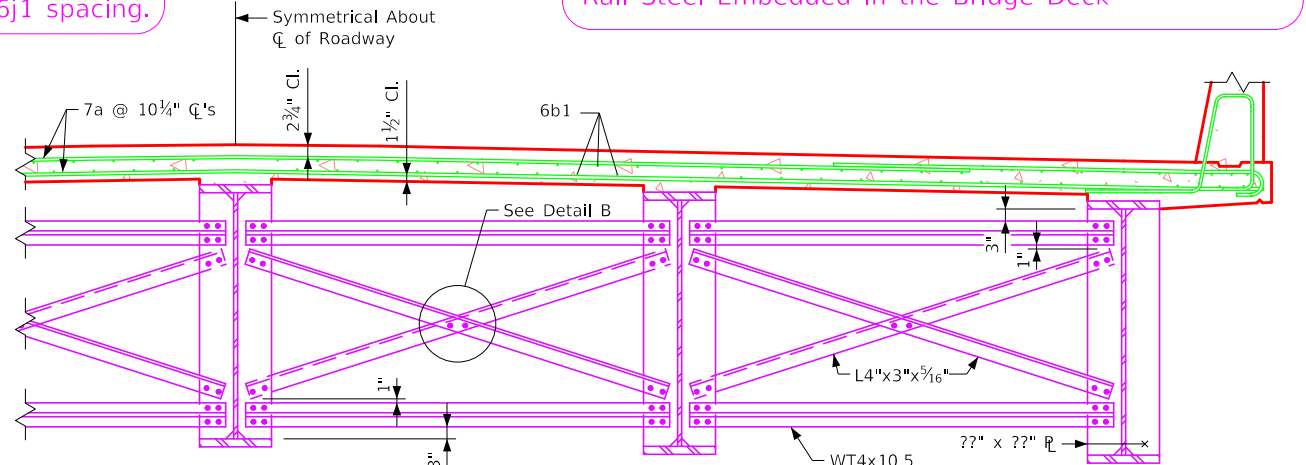
Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Note: Drain weight are included on the Summary Quantities Sheet.



Typ. Deck & Haunch Detail

* Concrete haunch dimension measured between bottom of deck and top of top flange plate. Refer to haunch details shown elsewhere in these plans. The maximum embedment of the edge of the top flange in the deck shall be $\frac{1}{2}$ ". Shear studs are to have a minimum penetration of 2" into the deck and be at least $2\frac{1}{2}$ " clear of the top of the deck. These requirements were used in setting the maximum and minimum allowable field haunch values shown in the "Miscellaneous Data Table" shown elsewhere on these plans.

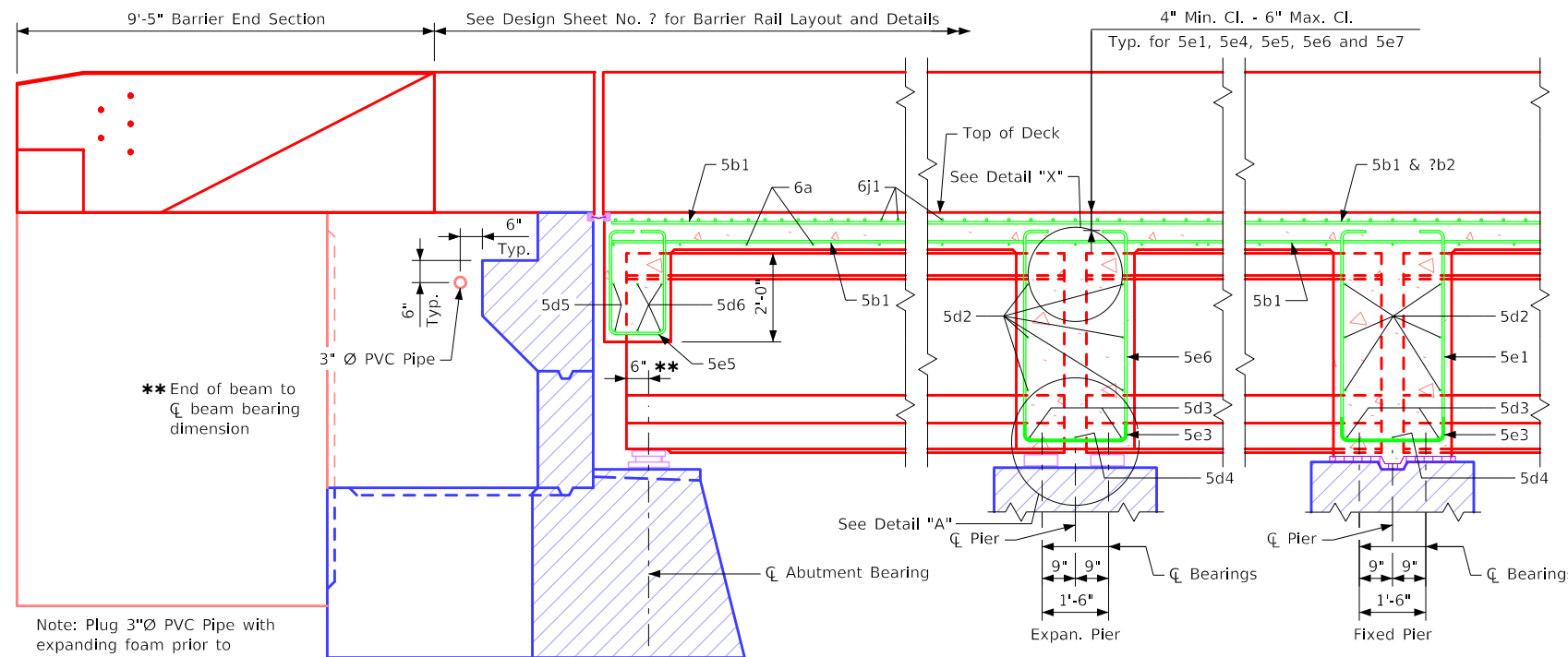


Part Section Near Pier

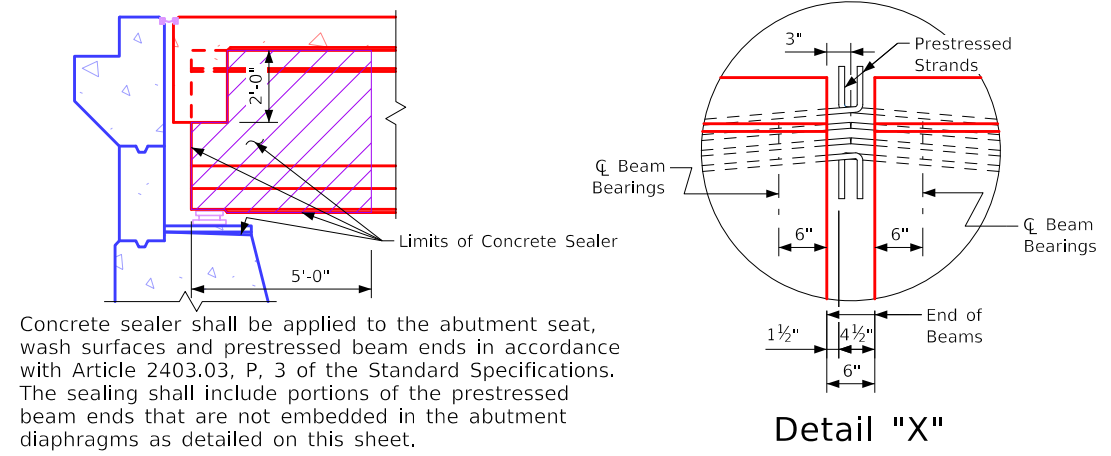
Welded Girder Bridge Deck Cross Section

Revised 08-18: Added "Refer to Haunch Details Shown Elsewhere on these Plans." To Typ. Deck and Haunch Detail Notes. Issued 04-07. Stubbridges.dgn - 4310 - This Sheet Re-issued 11-2023. Sheet Format Update.

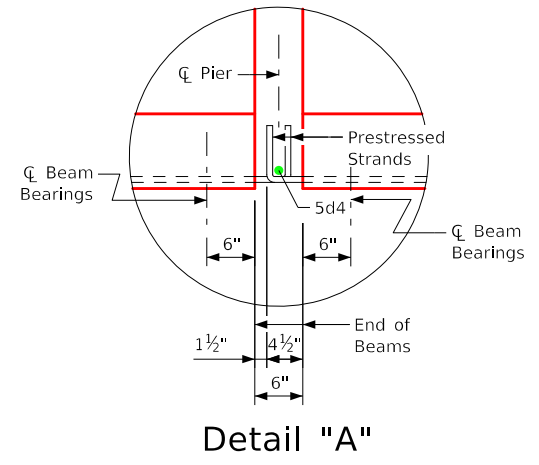
FILE NO.	ENGLISH	DESIGN TEAM	40' Rdwy. Welded Girder Cross Section (Symm. Crown) - LRF Design	Standard Sheet 4310	COUNTY	PROJECT NUMBER	SHEET NUMBER
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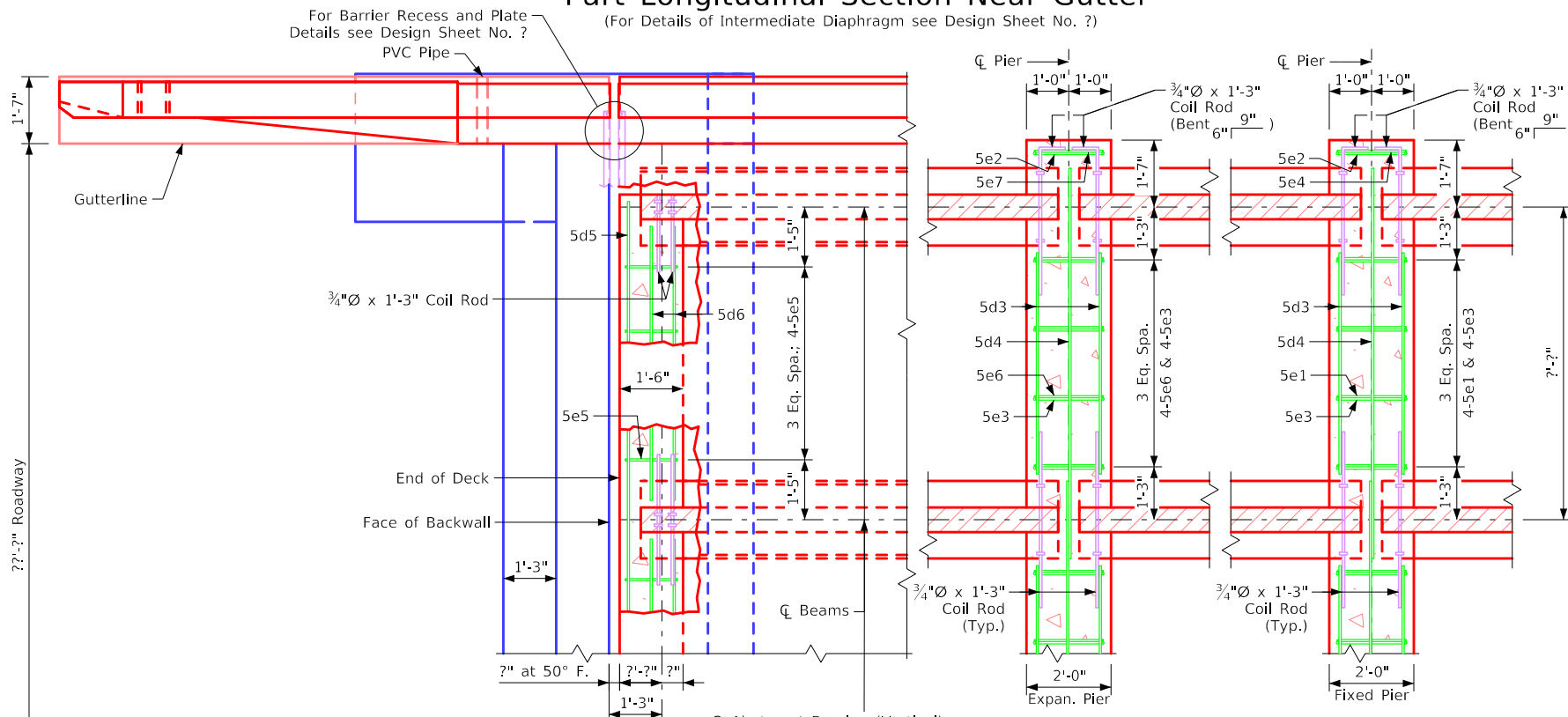
Part Longitudinal Section Near Gutter
(For Details of Intermediate Diaphragm see Design Sheet No. ?)



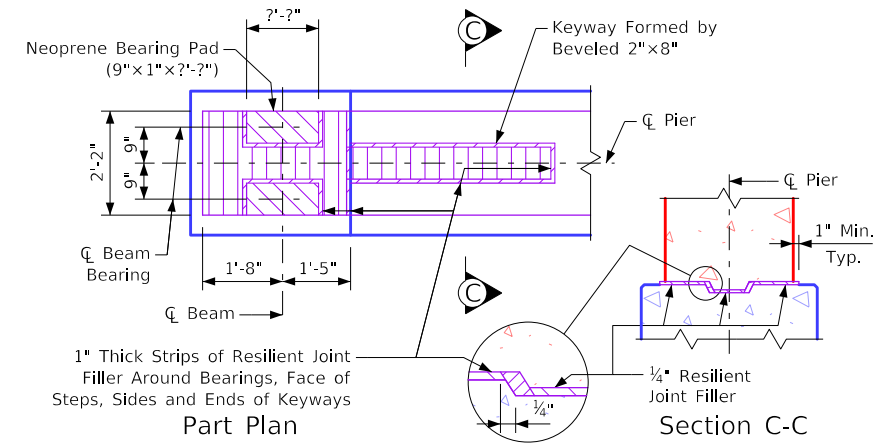
Concrete Sealer Limits for Prestressed Beam



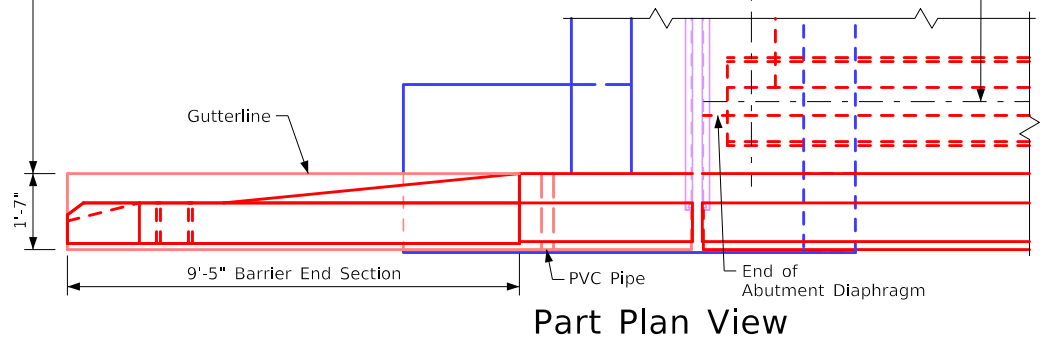
Detail "A"



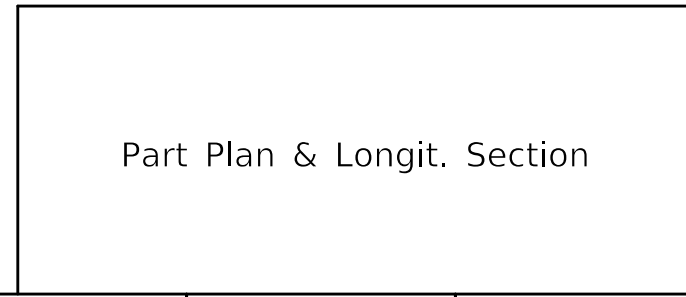
Part Section



Top of Fixed Pier Details



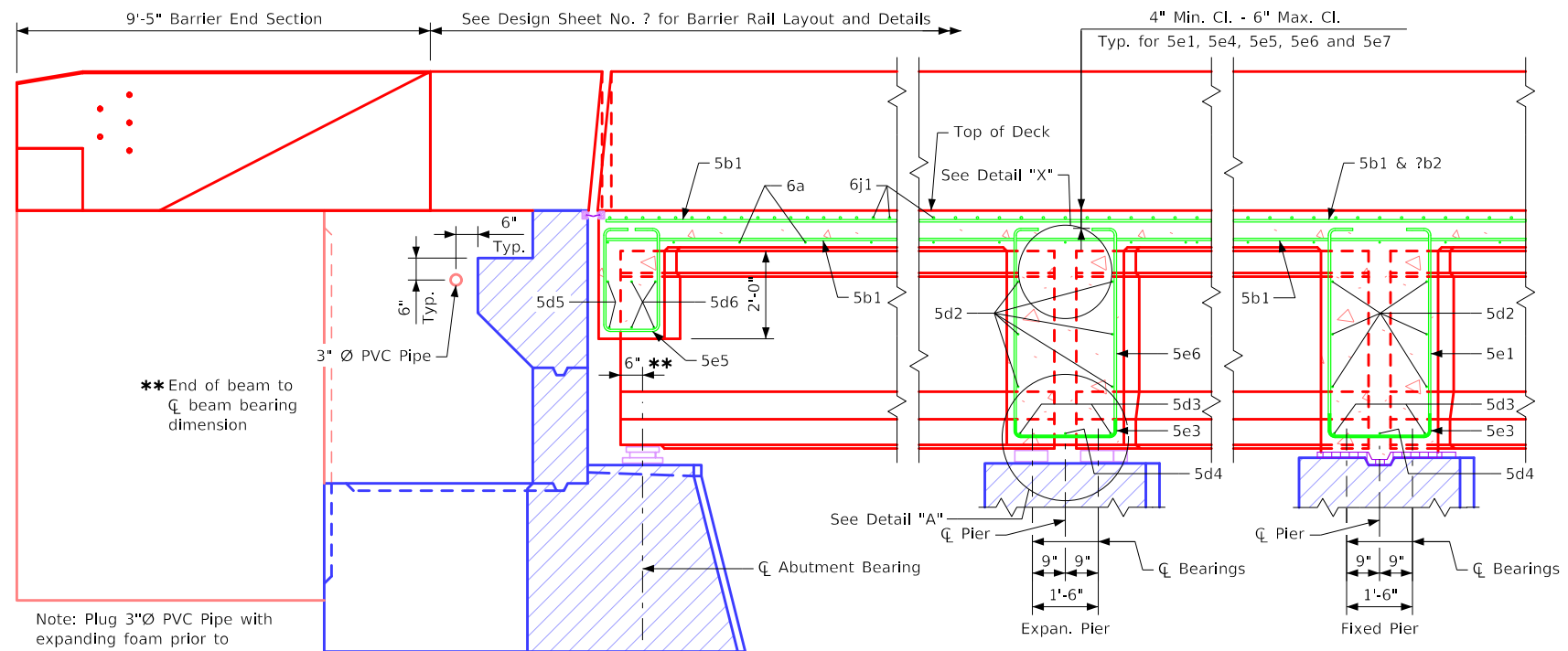
Part Plan View



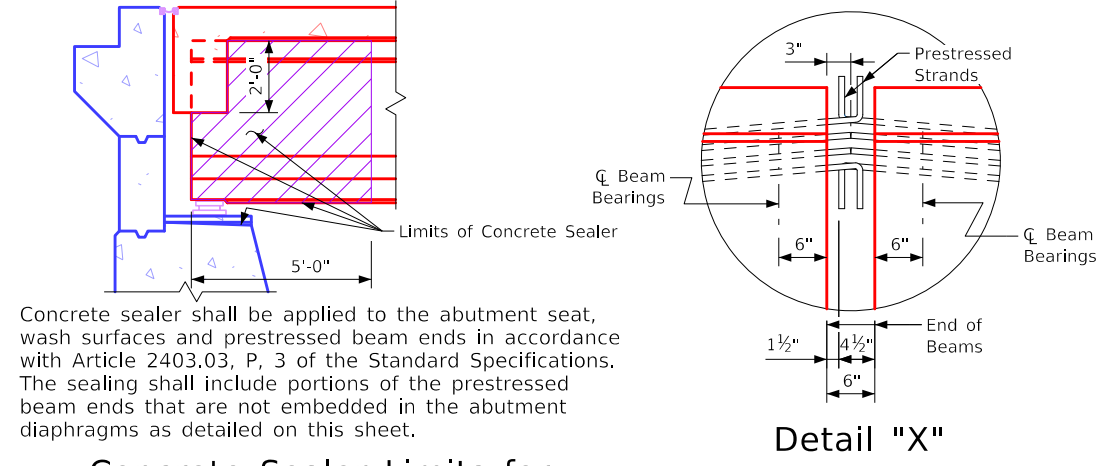
Part Plan & Longit. Section

Revised 07-18: Added "Wash Surfaces" and Leader Line to "Concrete Sealer Limits" Detail.
 Redrawn 09-08-88.
 StubBridges.dgn - 4542 - This Sheet Re-Issued 11-2023. Sheet Format Update.

FILE NO.	ENGLISH	DESIGN TEAM	Part Plan & Longit. Section - "B", "C", or "D" Beams, Stub Abut., 0° Skew	Standard Sheet 4542	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:39 PM	11/8/2023	bkloss	pw:\NTP\int1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				

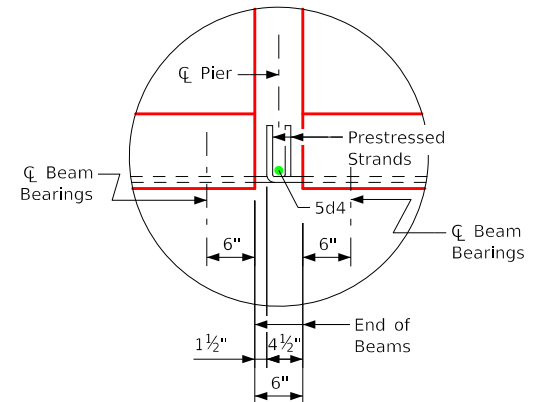


Part Longitudinal Section Near Gutter
(For Details of Intermediate Diaphragm see Design Sheet No. ?)



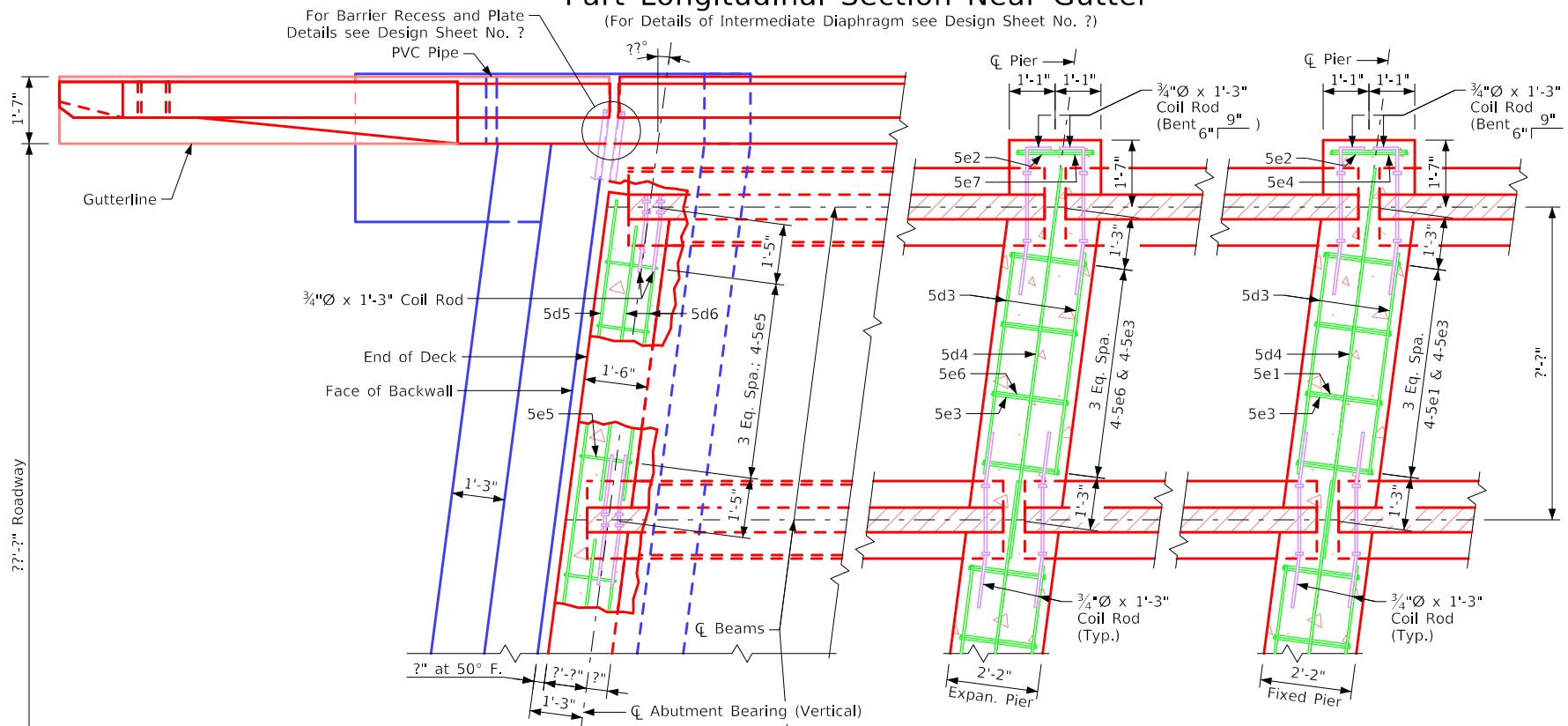
Concrete Sealer Limits for Prestressed Beam

Concrete sealer shall be applied to the abutment seat, wash surfaces and prestressed beam ends in accordance with Article 2403.03, P, 3 of the Standard Specifications. The sealing shall include portions of the prestressed beam ends that are not embedded in the abutment diaphragms as detailed on this sheet.

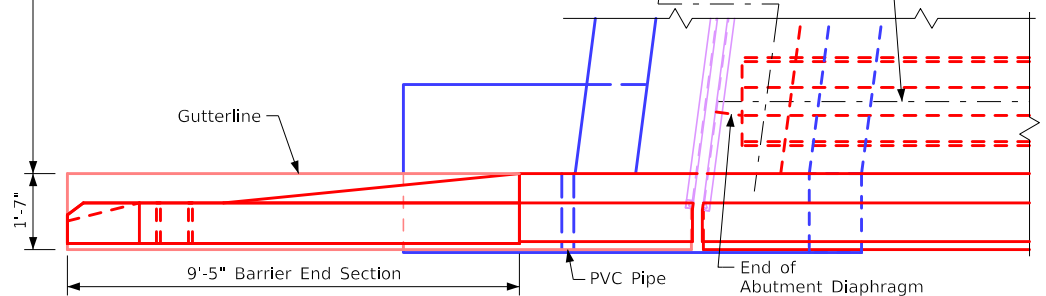


Detail "X"

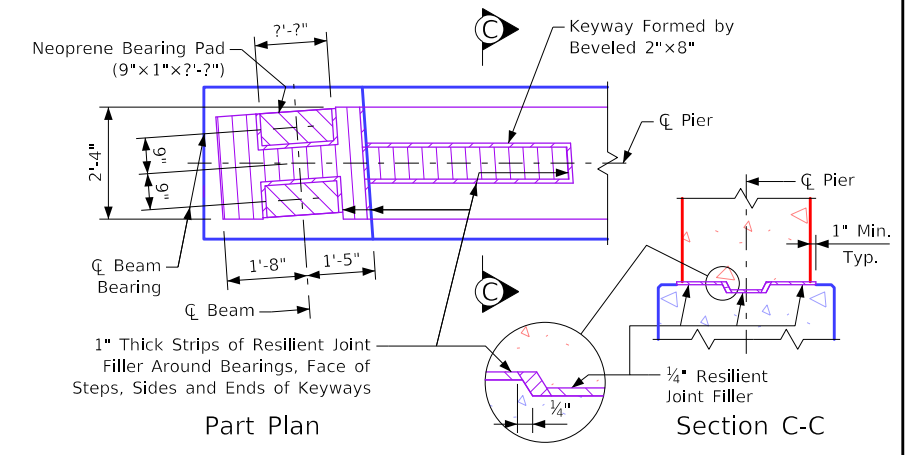
Detail "A"



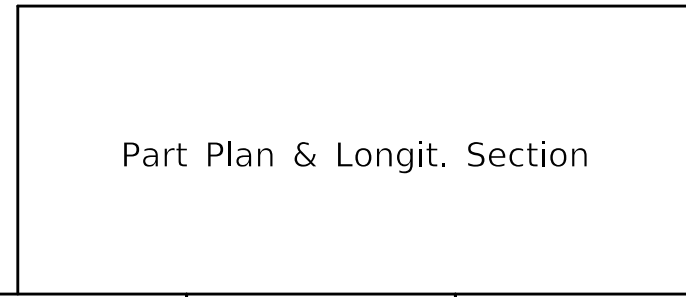
Part Section



Part Plan View



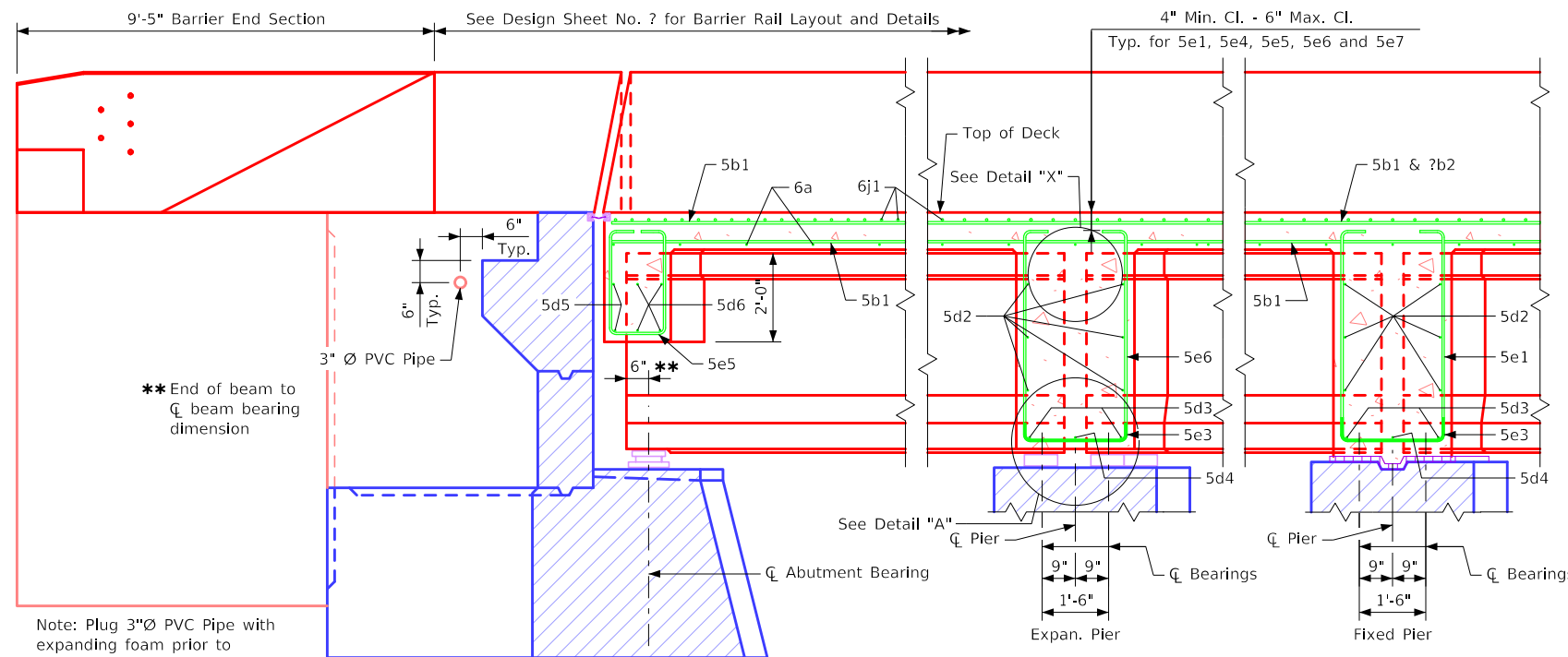
Top of Fixed Pier Details



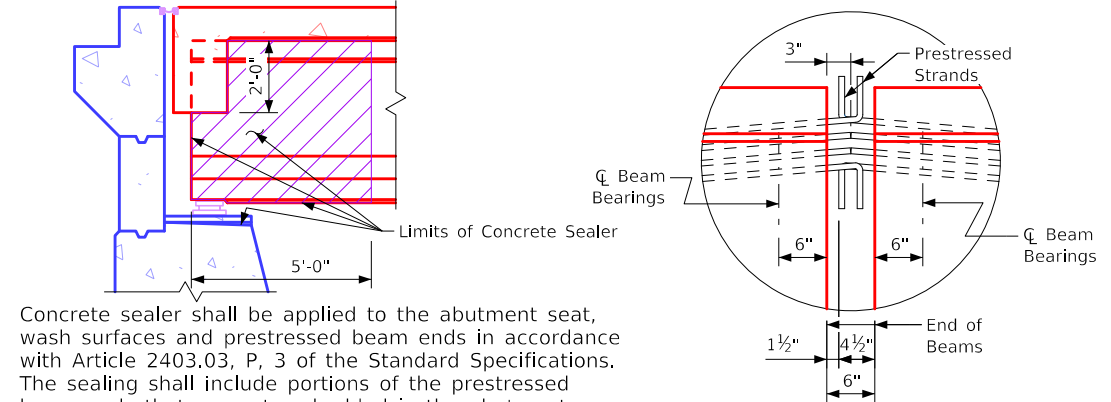
Part Plan & Longit. Section

Revised 07-18: Added "Wash Surfaces" and Leader Line to "Concrete Sealer Limits" Detail.
 Redrawn 09-08-88.
 StubBridges.dgn - 4543 - This Sheet Re-Issued 11-2023. Sheet Format Update.

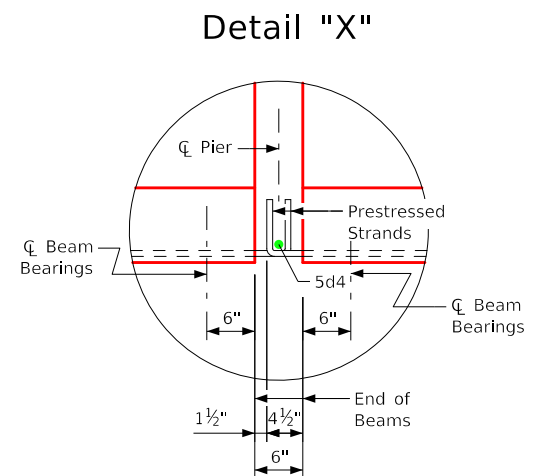
FILE NO.	ENGLISH	DESIGN TEAM	Part Plan & Longit. Section - "B", "C", or "D" Beams, Stub Abut., 0°01' - 7°30' Skew L.A.	Standard Sheet 4543	COUNTY	PROJECT NUMBER	SHEET NUMBER
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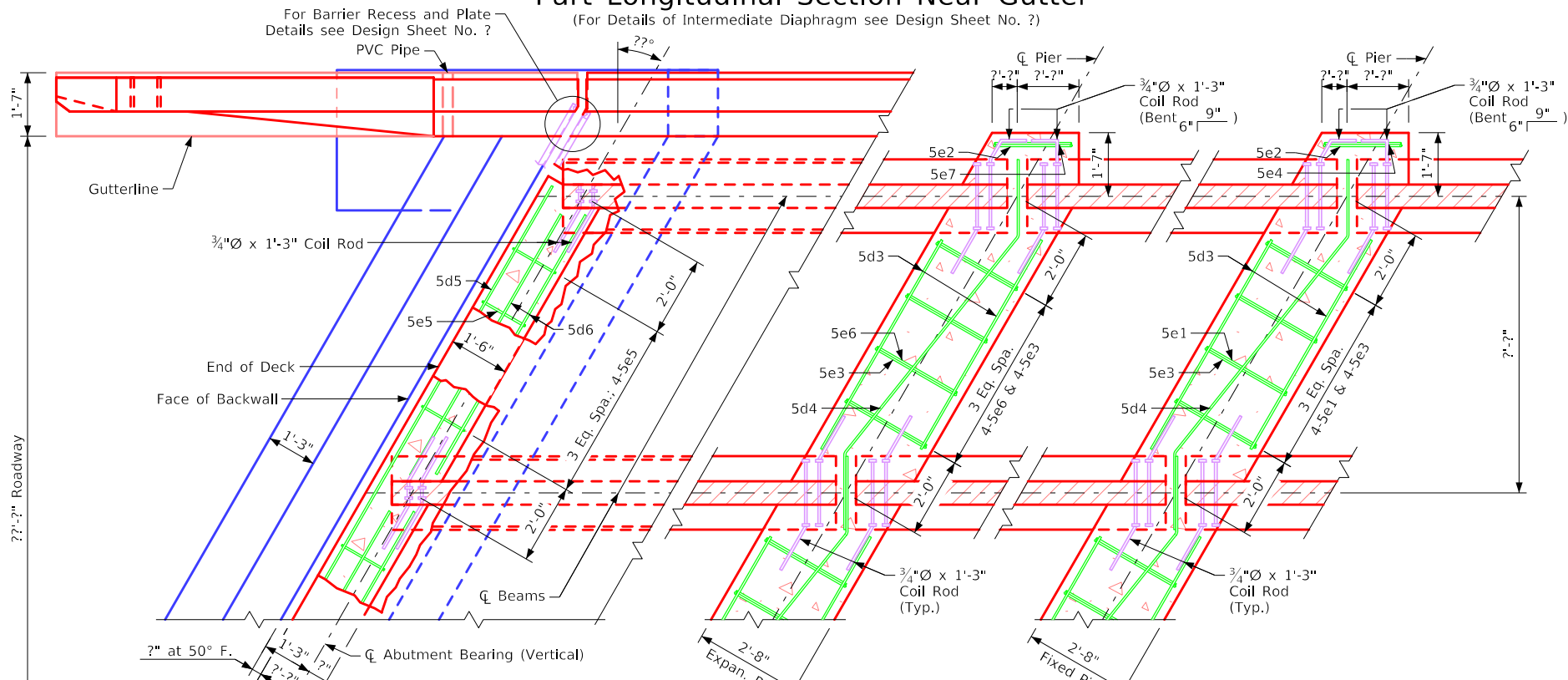
Part Longitudinal Section Near Gutter
(For Details of Intermediate Diaphragm see Design Sheet No. ?)



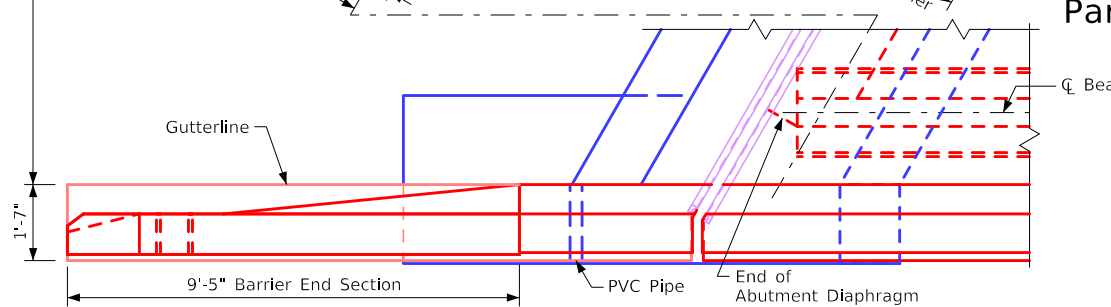
Concrete Sealer Limits for Prestressed Beam



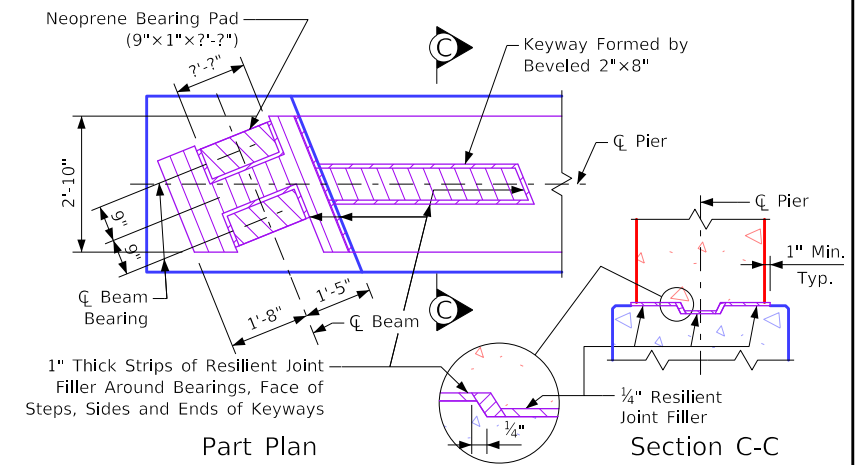
Detail "A"



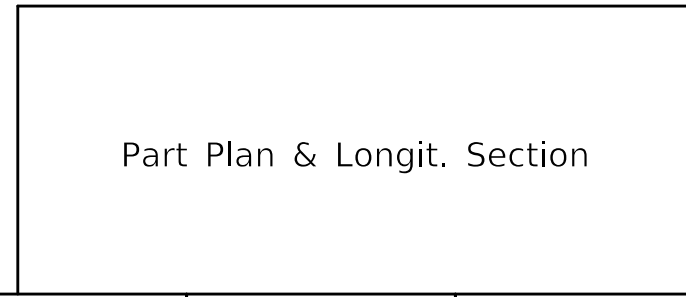
Part Section



Part Plan View



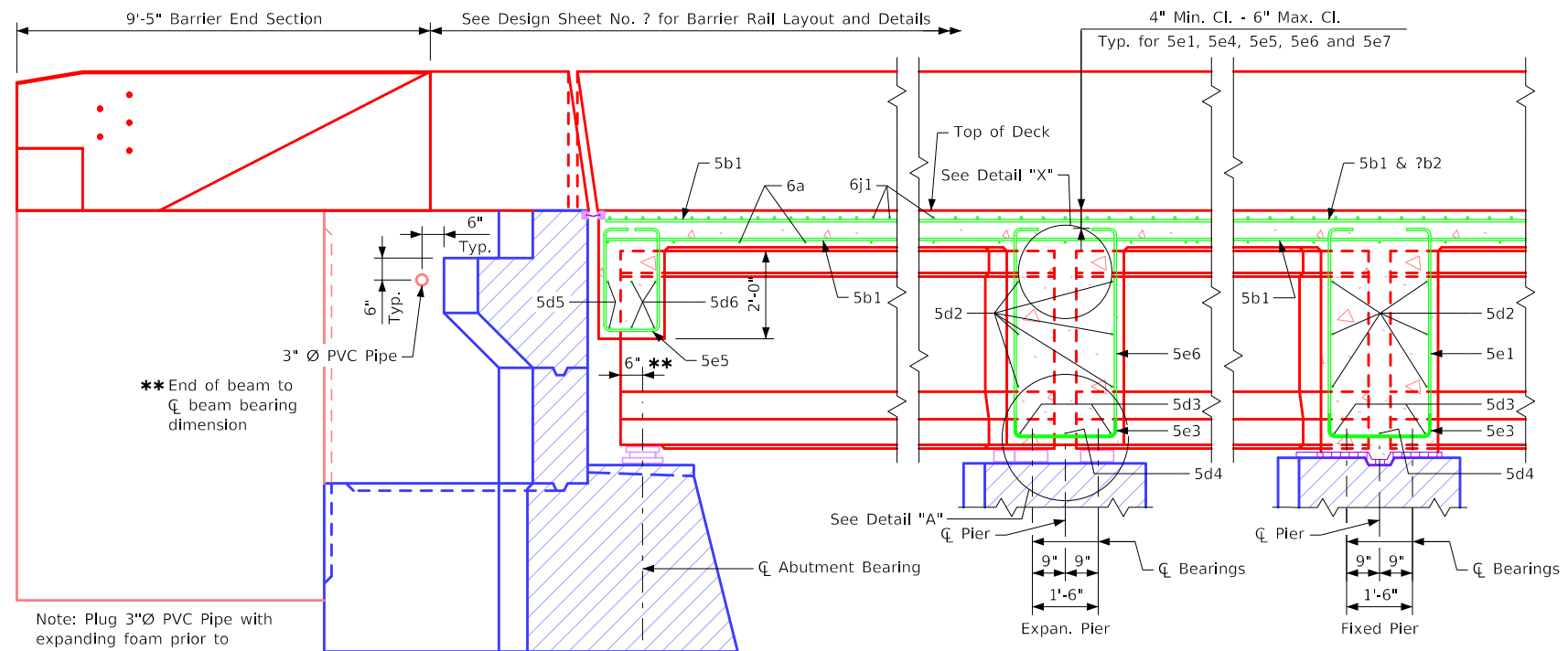
Top of Fixed Pier Details



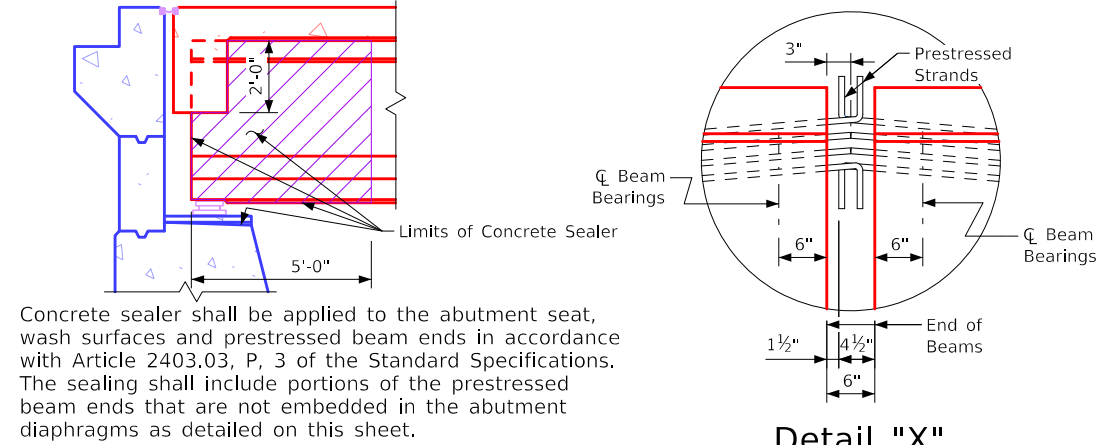
Part Plan & Longit. Section

Revised 07-18: Added "Wash Surfaces" and Leader Line to "Concrete Sealer Limits" Detail.
 Redrawn 09-08-88.
 StubBridges.dgn - 4545 - This Sheet Re-Issued 11-2023. Sheet Format Update.

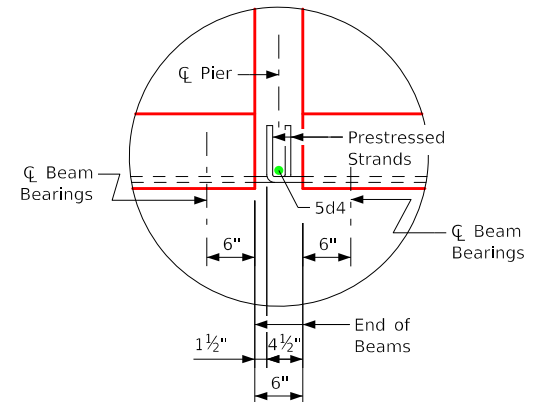
FILE NO.	ENGLISH	DESIGN TEAM	Part Plan & Longit. Section - "B", "C", or "D" Beams, Stub Abut., 15°01' - 30° Skew L.A.	Standard Sheet 4545	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:41 PM	11/8/2023	bkloss	pw:\NTP\pint1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				



Part Longitudinal Section Near Gutter
(For Details of Intermediate Diaphragm see Design Sheet No. ?)

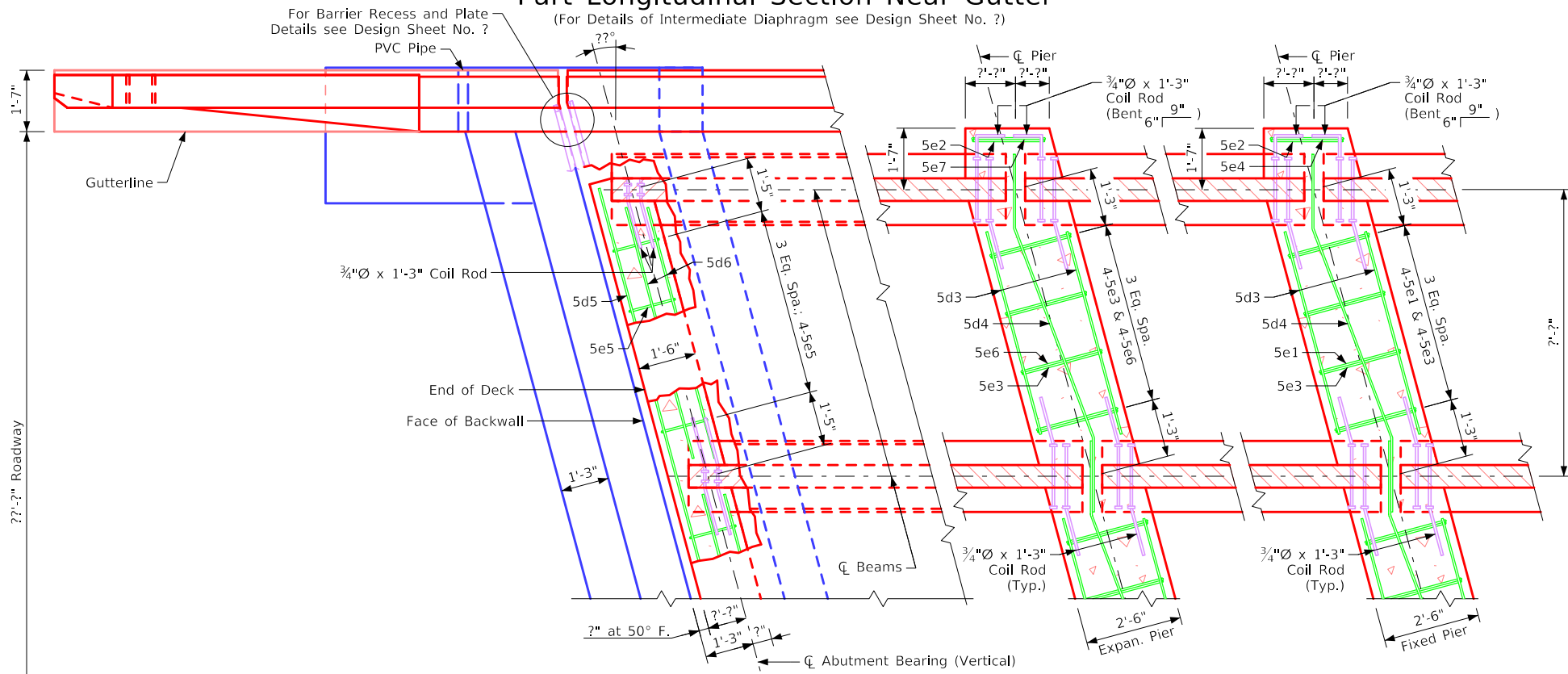


Concrete Sealer Limits for Prestressed Beam
Concrete sealer shall be applied to the abutment seat, wash surfaces and prestressed beam ends in accordance with Article 2403.03, P, 3 of the Standard Specifications. The sealing shall include portions of the prestressed beam ends that are not embedded in the abutment diaphragms as detailed on this sheet.

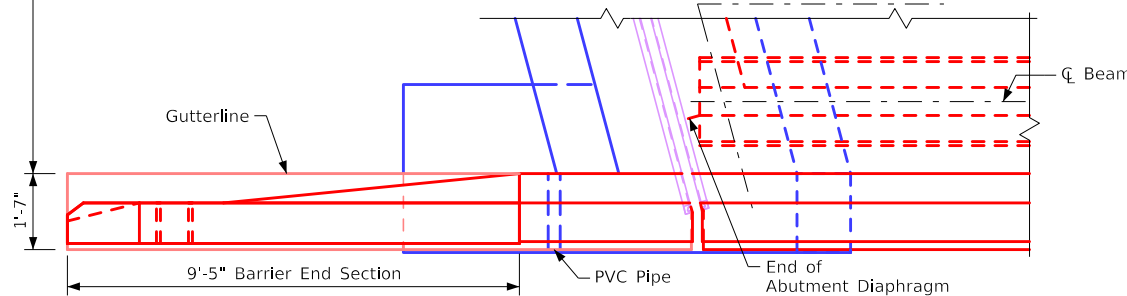


Detail "X"

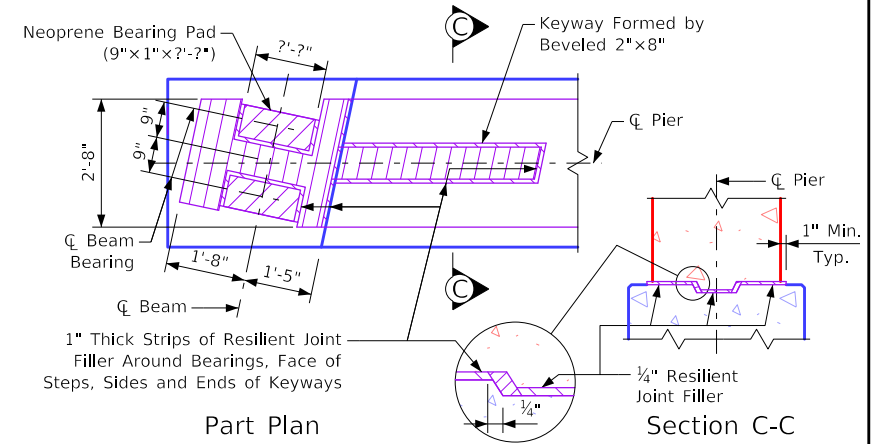
Detail "A"



Part Section



Part Plan View



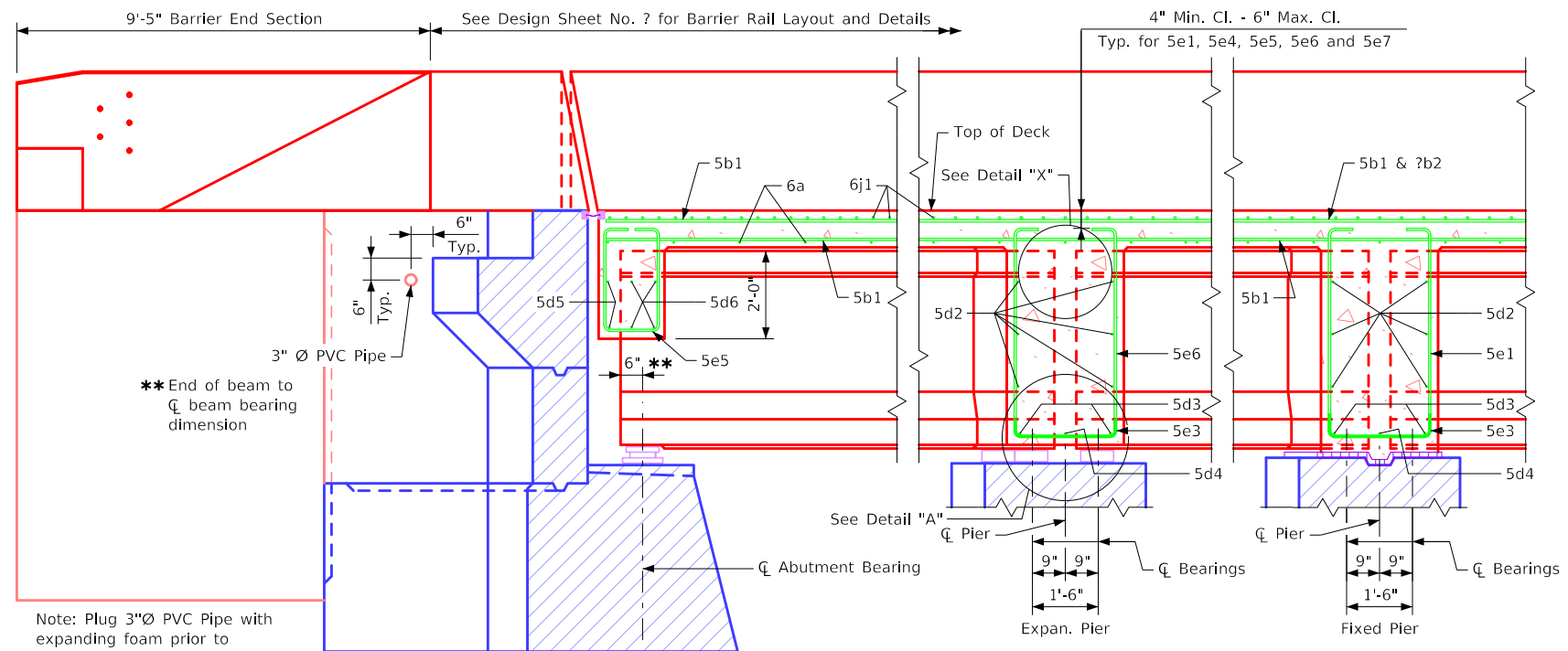
Top of Fixed Pier Details



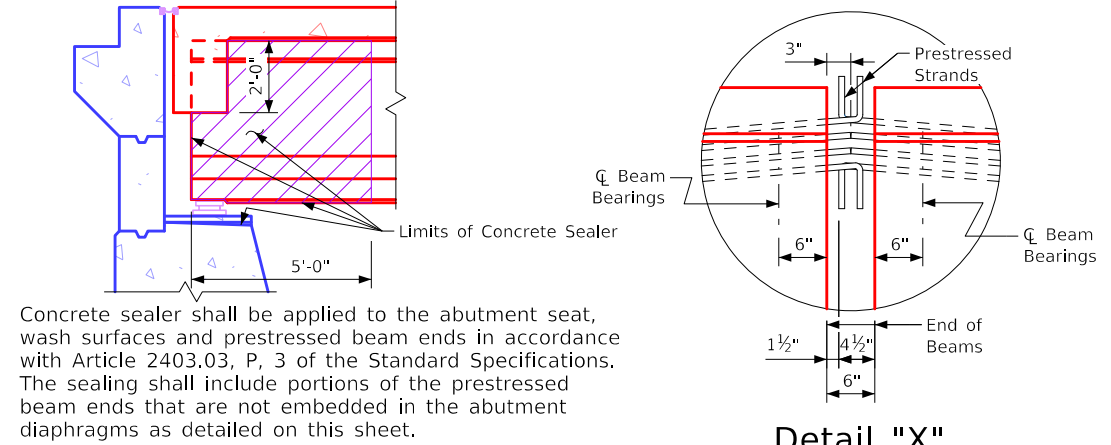
Part Plan & Longit. Section

Revised 07-18: Added "Wash Surfaces" and Leader Line to "Concrete Sealer Limits" Detail. Redrawn 09-08-88. StubBridges.dgn - 4547 - This Sheet Re-issued 11-2023. Sheet Format Update.

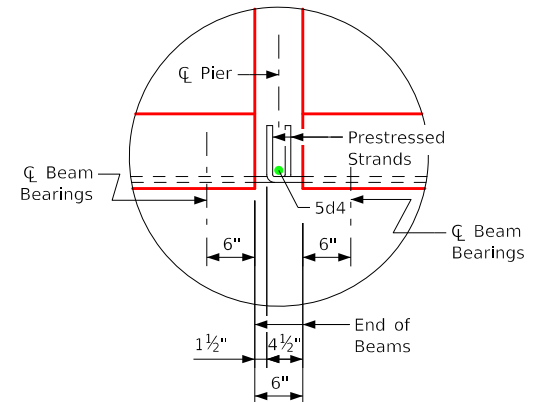
FILE NO.	ENGLISH	DESIGN TEAM	Part Plan & Longit. Section - "B", "C", or "D" Beams, Stub Abut., 7°31' - 15° Skew R.A.	Standard Sheet 4547	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:43 PM	11/8/2023	bkloss	pw:\NTP\wint1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				



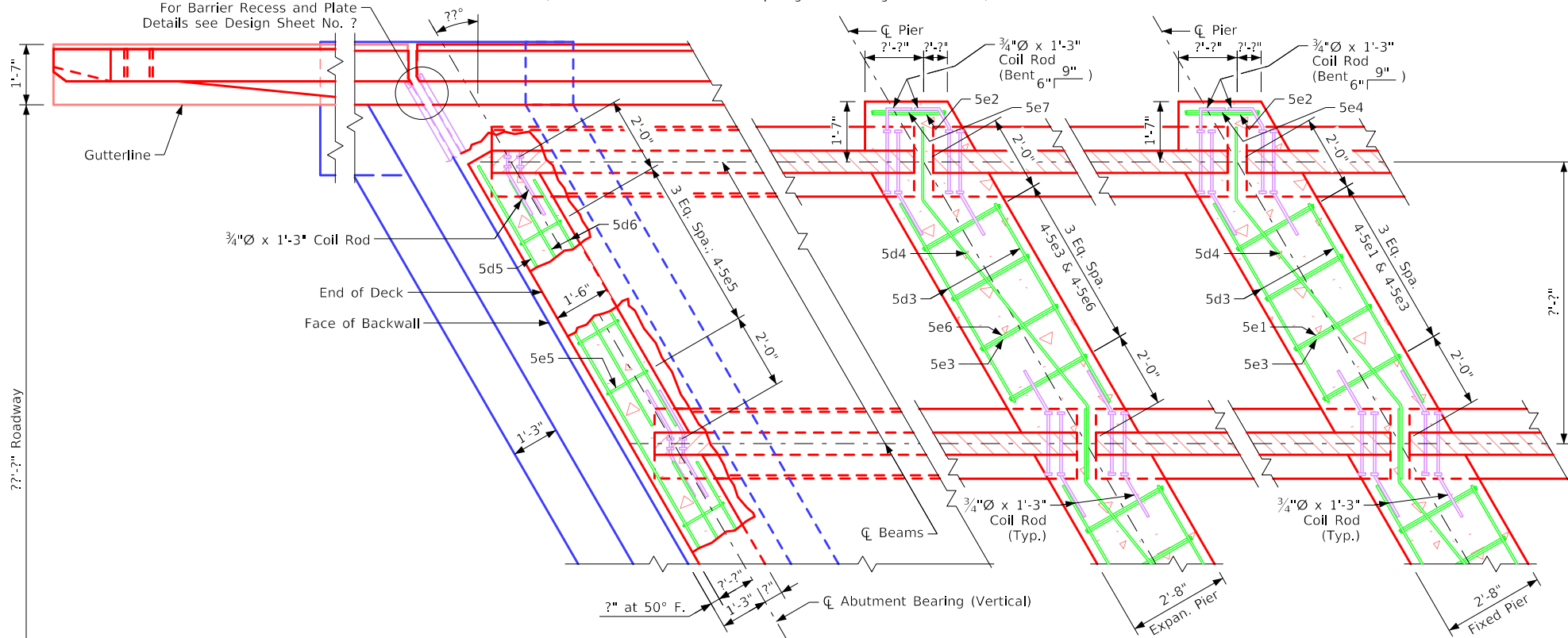
Part Longitudinal Section Near Gutter
(For Details of Intermediate Diaphragm see Design Sheet No. ?)



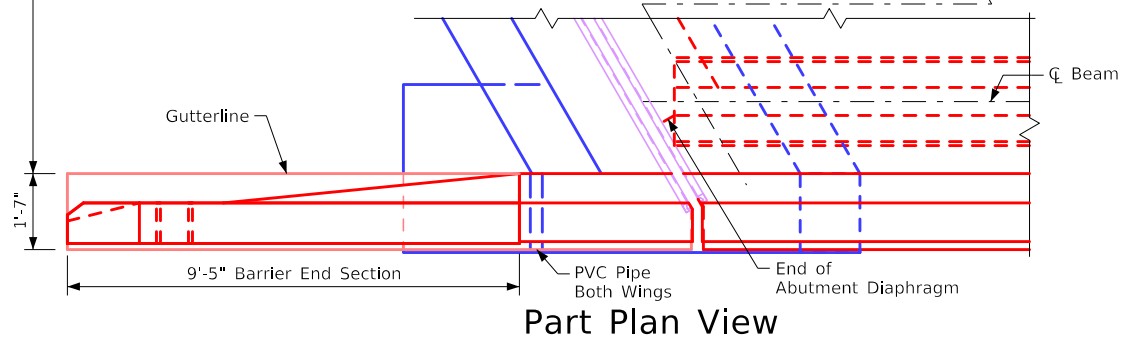
Concrete Sealer Limits for Prestressed Beam



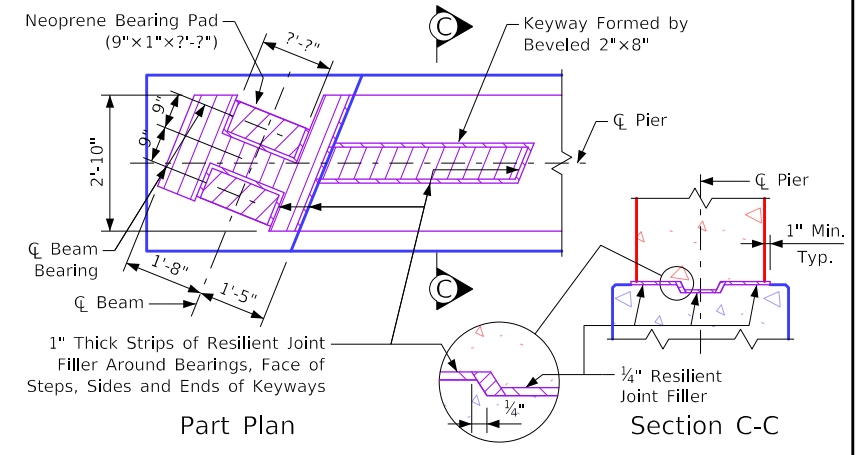
Detail "A"



Part Section



Part Plan View



Top of Fixed Pier Details

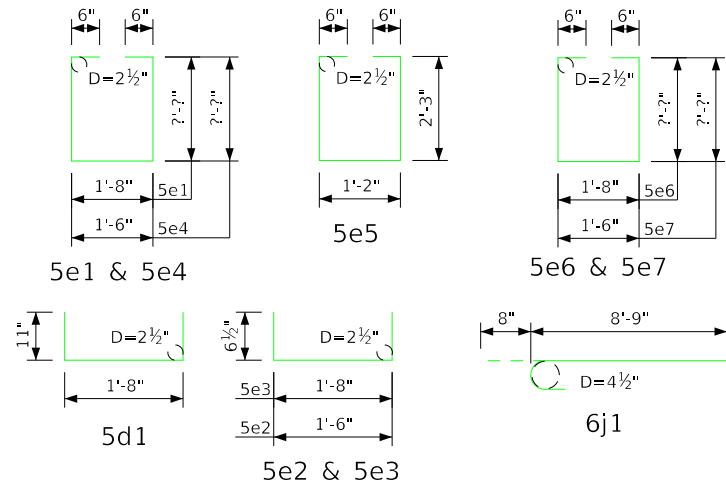


Part Plan & Longit. Section

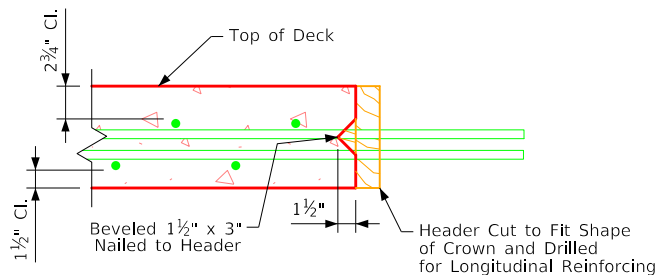
Revised 07-18: Added "Wash Surfaces" and Leader Line to "Concrete Sealer Limits" Detail.
 Redrawn 09-08-88.
 StubBridges.dgn - 4548 - This Sheet Re-Issued 11-2023. Sheet Format Update.

FILE NO.	ENGLISH	DESIGN TEAM	Part Plan & Longit. Section - "B", "C", or "D" Beams, Stub Abut., 15'01' - 30' Skew R.A.	Standard Sheet 4548	COUNTY	PROJECT NUMBER	SHEET NUMBER
6:18:43 PM	11/8/2023	bkloss	pw:\NTP\wint1.dot.int.lan:PWMain\Documents\Highway\Bridge\Standards\Bridges\StubBridges.dgn				

Bent Bar Details



Note: All dimensions are out to out. D= Pin diameter



Permissible Transverse Deck Construction Joint

Concrete Placement Diagram

Note: Concrete deck shall be placed in sections and sequences indicated. Alternate procedures for placing deck concrete may be submitted for approval together with a statement of the proposed method and evidence that the contractor possesses the necessary equipment and facilities to accomplish the required results. For approved alternate procedures the Engineer shall determine if a retarding admixture is required to maintain plasticity of the concrete deck during placement.

Concrete Placement Quantities

Location	Quantity
Section 1, Deck & Abut. Diaph.	???
Section 2, Deck	???
Section 3, Deck & Abut. Diaph.	???
Section 4, Deck & Pier Diaph.	???
Section 5, Deck & Pier Diaph.	???
Total (cu. yds.)	???

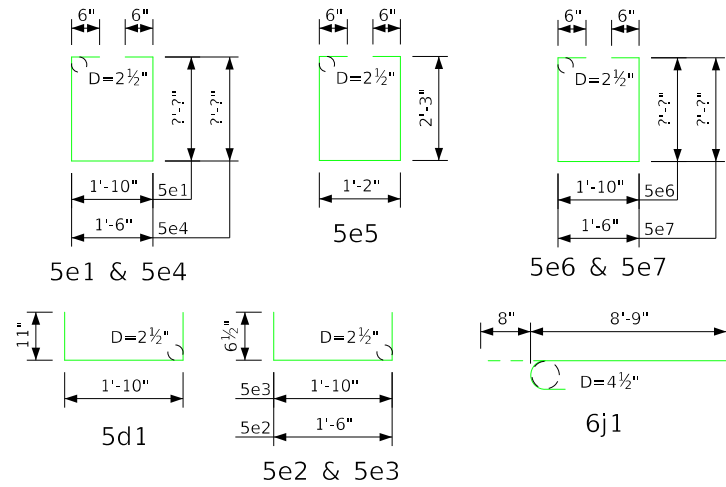
Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

Epoxy Coated Reinforcing Steel Bar List - Bridge Deck

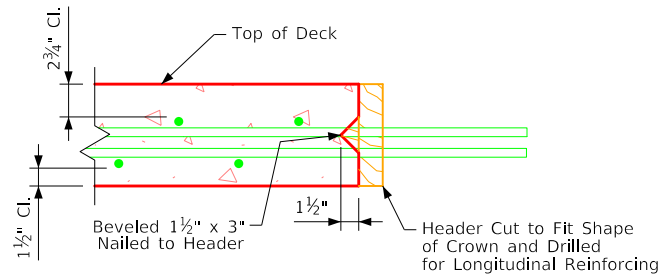
Bar	Location	Shape	No.	Length	Weight
6a1	Deck Transv. Top	—	??	?'-?''	???
6a2	Deck Transv. Bott.	—	??	?'-?''	???
5b1	Deck Longit. Top & Bott.	—	??	?'-?''	???
?b2	Deck Longit. Top at Piers	—	??	?'-?''	???
5d1	Pier Diaph. Ends	⌊	??	3'-6''	???
5d2	Pier Diaph. Longit.	—	??	?'-?''	???
5d3	Pier Diaph. Longit.	—	??	?'-?''	???
5d4	Pier Diaph. Longit.	—	??	?'-?''	???
5d5	Abut. Diaph. Longit.	—	??	?'-?''	???
5d6	Abut. Diaph. Longit.	—	??	?'-?''	???
5e1	Pier Diaph. Hoops	⌈	??	?'-?''	???
5e2	Pier Diaph. Ties Ends	⌊	??	2'-7''	???
5e3	Pier Diaph. Ties	⌊	??	2'-9''	???
5e4	Pier Diaph. Hoops Ends	⌈	??	?'-?''	???
5e5	Abut. Diaph. Hoops	⌈	??	6'-8''	???
5e6	Expan. Pier Diaph. Hoops	⌈	??	?'-?''	???
5e7	Expan. Pier Diaph. Hoops Ends	⌈	??	?'-?''	???
6j1	Deck Transv. Top (at Rail)	—	??	9'-5''	???
Epoxy Coated Reinforcing Steel - Total Weight (lbs.)					???

Deck, Abut. & Diaph. Quantities

Bent Bar Details



Note: All dimensions are out to out. D= Pin diameter



Permissible Transverse Deck Construction Joint

Concrete Placement Diagram

Note: Concrete deck shall be placed in sections and sequences indicated. Alternate procedures for placing deck concrete may be submitted for approval together with a statement of the proposed method and evidence that the contractor possesses the necessary equipment and facilities to accomplish the required results. For approved alternate procedures the Engineer shall determine if a retarding admixture is required to maintain plasticity of the concrete deck during placement.

Concrete Placement Quantities	
Location	Quantity
Section 1, Deck & Abut. Diaph.	???
Section 2, Deck	???
Section 3, Deck & Abut. Diaph.	???
Section 4, Deck & Pier Diaph.	???
Section 5, Deck & Pier Diaph.	???
Total (cu. yds.)	???

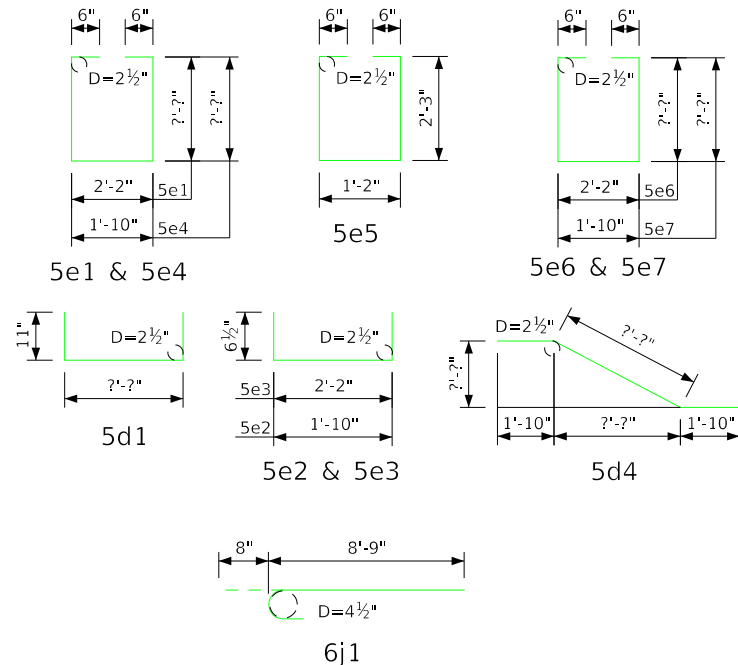
Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

Epoxy Coated Reinforcing Steel Bar List - Bridge Deck

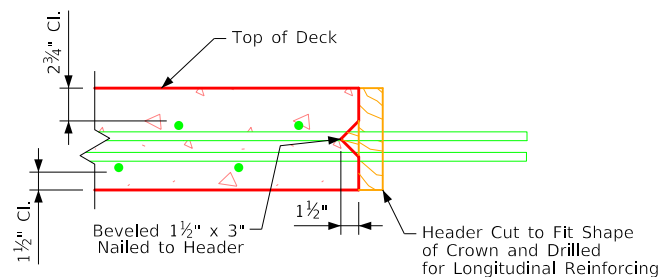
Bar	Location	Shape	No.	Length	Weight
6a1	Deck Transv. Top	—	??	?'-?'	???
6a2	Deck Transv. Bott.	—	??	?'-?'	???
5b1	Deck Longit. Top & Bott.	—	??	?'-?'	???
?b2	Deck Longit. Top at Piers	—	??	?'-?'	???
5d1	Pier Diaph. Ends	U	??	3'-6"	???
5d2	Pier Diaph. Longit.	—	??	?'-?'	???
5d3	Pier Diaph. Longit.	—	??	?'-?'	???
5d4	Pier Diaph. Longit.	—	??	?'-?'	???
5d5	Abut. Diaph. Longit.	—	??	?'-?'	???
5d6	Abut. Diaph. Longit.	—	??	?'-?'	???
5e1	Pier Diaph. Hoops	□	??	?'-?'	???
5e2	Pier Diaph. Ties Ends	U	??	2'-7"	???
5e3	Pier Diaph. Ties	U	??	2'-9"	???
5e4	Pier Diaph. Hoops Ends	□	??	?'-?'	???
5e5	Abut. Diaph. Hoops	□	??	6'-8"	???
5e6	Expan. Pier Diaph. Hoops	□	??	?'-?'	???
5e7	Expan. Pier Diaph. Hoops Ends	□	??	?'-?'	???
6j1	Deck Transv. Top (at Rail)	—	??	9'-5"	???
Epoxy Coated Reinforcing Steel - Total Weight (lbs.)					???

Deck, Abut. & Diaph. Quantities

Bent Bar Details



Note: All dimensions are out to out. D= Pin diameter



Permissible Transverse Deck Construction Joint

Concrete Placement Diagram

Note: Concrete deck shall be placed in sections and sequences indicated. Alternate procedures for placing deck concrete may be submitted for approval together with a statement of the proposed method and evidence that the contractor possesses the necessary equipment and facilities to accomplish the required results. For approved alternate procedures the Engineer shall determine if a retarding admixture is required to maintain plasticity of the concrete deck during placement.

Concrete Placement Quantities

Location	Quantity
Section 1, Deck & Abut. Diaph.	???
Section 2, Deck	???
Section 3, Deck & Abut. Diaph.	???
Section 4, Deck & Pier Diaph.	???
Section 5, Deck & Pier Diaph.	???
Total (cu. yds.)	???

Note: Concrete and reinforcing steel quantities are included on the Summary Quantities Sheet.

Epoxy Coated Reinforcing Steel Bar List - Bridge Deck

Bar	Location	Shape	No.	Length	Weight
6a1	Deck Transv. Top	—	??	?'-?''	???
6a2	Deck Transv. Bott.	—	??	?'-?''	???
6a3	Deck Transv. Top Ends	—	??	?'-?''	???
6a4	Deck Transv. Bott. Ends	—	??	?'-?''	???
5b1	Deck Longit. Top & Bott.	—	??	?'-?''	???
?b2	Deck Longit. Top at Piers	—	??	?'-?''	???
5d1	Pier Diaph. Ends	⌊	??	?'-?''	???
5d2	Pier Diaph. Longit.	—	??	?'-?''	???
5d3	Pier Diaph. Longit.	—	??	?'-?''	???
5d4	Pier Diaph. Longit.	⌋	??	?'-?''	???
5d5	Abut. Diaph. Longit.	—	??	?'-?''	???
5d6	Abut. Diaph. Longit.	—	??	?'-?''	???
5e1	Pier Diaph. Hoops	⌈	??	?'-?''	???
5e2	Pier Diaph. Ties Ends	⌊	??	2'-11''	???
5e3	Pier Diaph. Ties	⌊	??	3'-3''	???
5e4	Pier Diaph. Hoops Ends	⌈	??	?'-?''	???
5e5	Abut. Diaph. Hoops	⌈	??	6'-8''	???
5e6	Expan. Pier Diaph. Hoops	⌈	??	?'-?''	???
5e7	Expan. Pier Diaph. Hoops Ends	⌈	??	?'-?''	???
6j1	Deck Transv. Top (at Rail)	—	??	9'-5''	???
Epoxy Coated Reinforcing Steel - Total Weight (lbs.)					???

Deck, Abut. & Diaph. Quantities

Revised 07-15: Changed Concrete Placement Note to Account for the Possible Addition of a Retarding Admixture to the Concrete. Redrawn 09-08-88. StubBridges.dgn - 4551 - This Sheet Re-Issued 11-2023. Sheet Format Update.

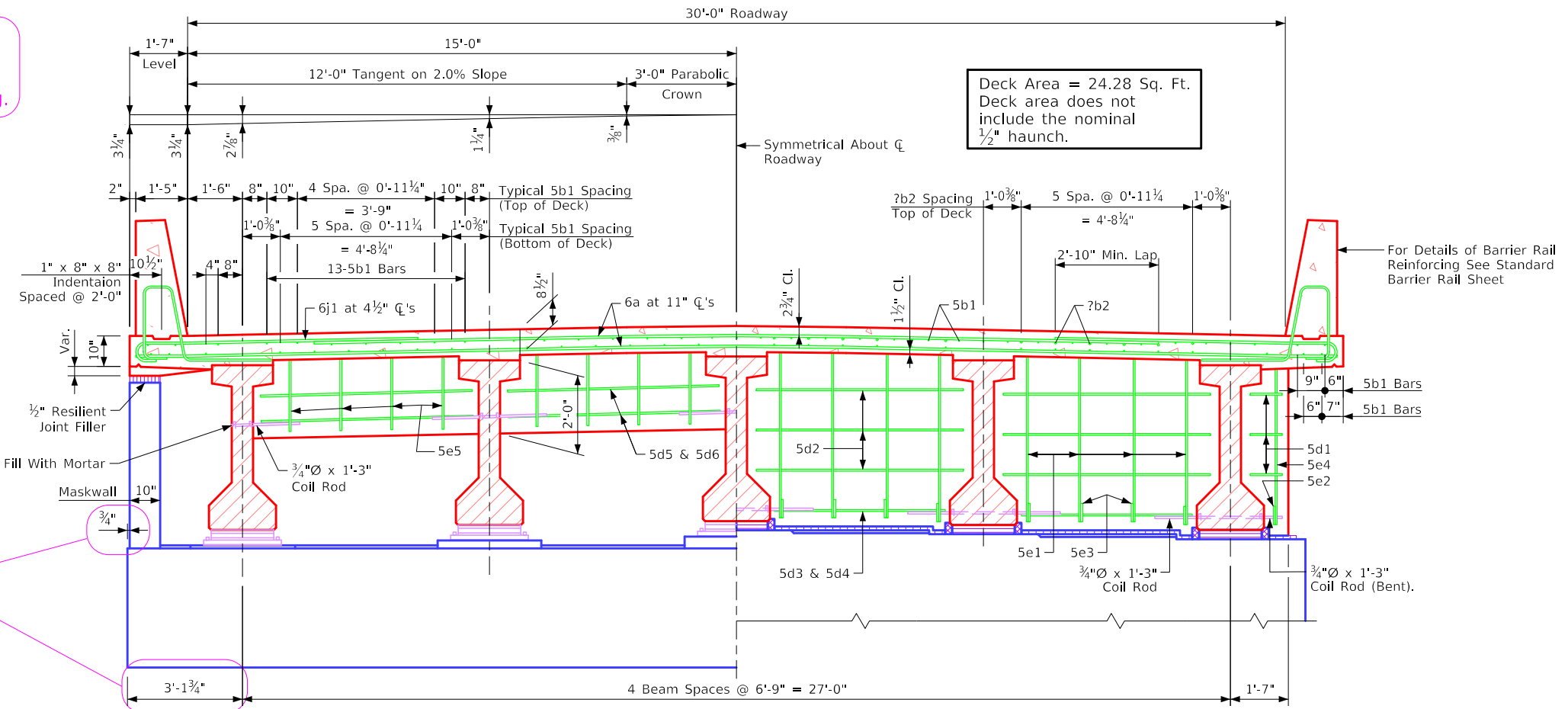
Table of Size of "b2" Bar

Longest Adjacent Span Beam		Bar Size
B & C	D	
34'-2"	35'-0"	5
38'-4"	40'-0"	5
42'-6"	45'-0"	5
46'-8"	50'-0"	5
50'-10"	55'-0"	6
55'-0"	60'-0"	6
59'-2"	65'-0"	6
63'-4"	70'-0"	7
67'-6"	75'-0"	7
71'-8"	80'-0"	8
75'-10"	85'-0"	8
80'-0"	90'-0"	8
	95'-0"	8
	100'-0"	9
	105'-0"	9
	110'-0"	9

Note to Designer:
6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

The midpoint of the "b2" bar is to be placed at the \bar{C} of pier.

Note to Detailer:
Redraw for 'B' Beams to Align Footing & Backwall Faces. Dimension 3'-1 $\frac{3}{4}$ " Becomes 3'-1"



Half Section Near Abutment

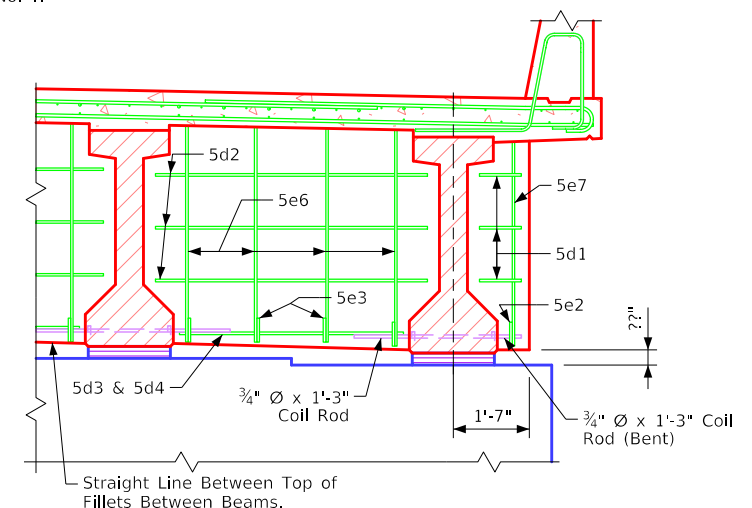
Half Section Near Fixed Pier

Note: For Details of Intermediate Diaphragms See Design Sheet No. ?.

Note to Detailer:
"PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

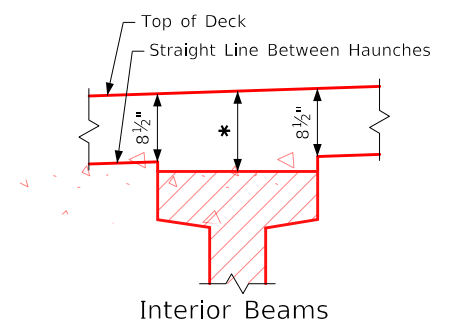
Superstructure Notes:

- The bridge deck as shown includes $\frac{3}{4}$ " integral wearing surface.
- The pier and abutment diaphragm concrete is to be placed monolithically with the bridge deck.
- Cost of all resilient joint filler material is to be included in the price bid for "Structural Concrete (Bridge)".
- All beams are to be set vertical.
- Forms for the deck and barrier rail are to be supported by the prestressed concrete beams.
- Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown.
- All deck and diaphragm reinforcing is to be wired in place and adequately supported before concrete is placed.
- Top transverse reinforcing steel is to be parallel to and $2\frac{3}{4}$ " clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and $1\frac{1}{2}$ " clear above bottom of the deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, bar high chairs, and deck bolsters.

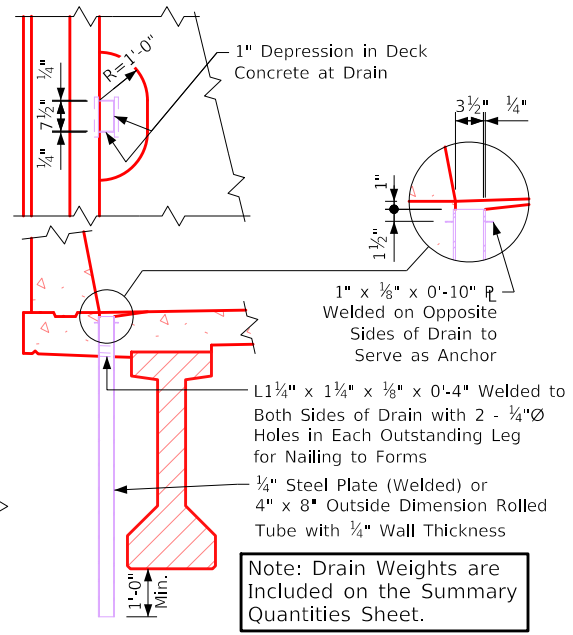


Part Section Near Expansion Pier

PPCB Bridge Deck Cross Section



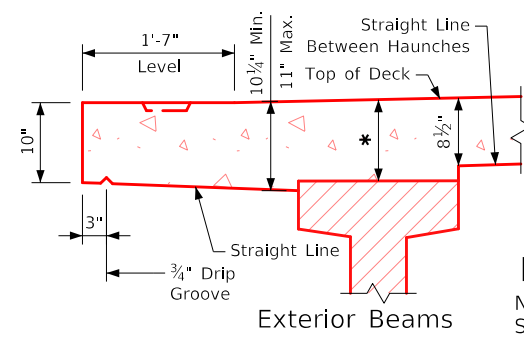
Interior Beams



Drain Details

Note: Drains are to be galvanized. ?? Drains required. See "Situation Plan" on Design Sheet No. ? for location. Weight of drains is included in the quantity for "Structural Steel". Weight is based on rolled tube.

Data for One Drain			
Beam Size	B	C	D
Drain Weight (lbs.)	96	106	120
Drain Length (ft.)	5'-0 $\frac{3}{4}$ "	5'-6 $\frac{3}{4}$ "	6'-3 $\frac{3}{4}$ "



Exterior Beams

Typical Deck and Haunch Detail

* For Deck Thickness Over Beams See "Haunch And Camber Details" on Design Sheet No. ?.

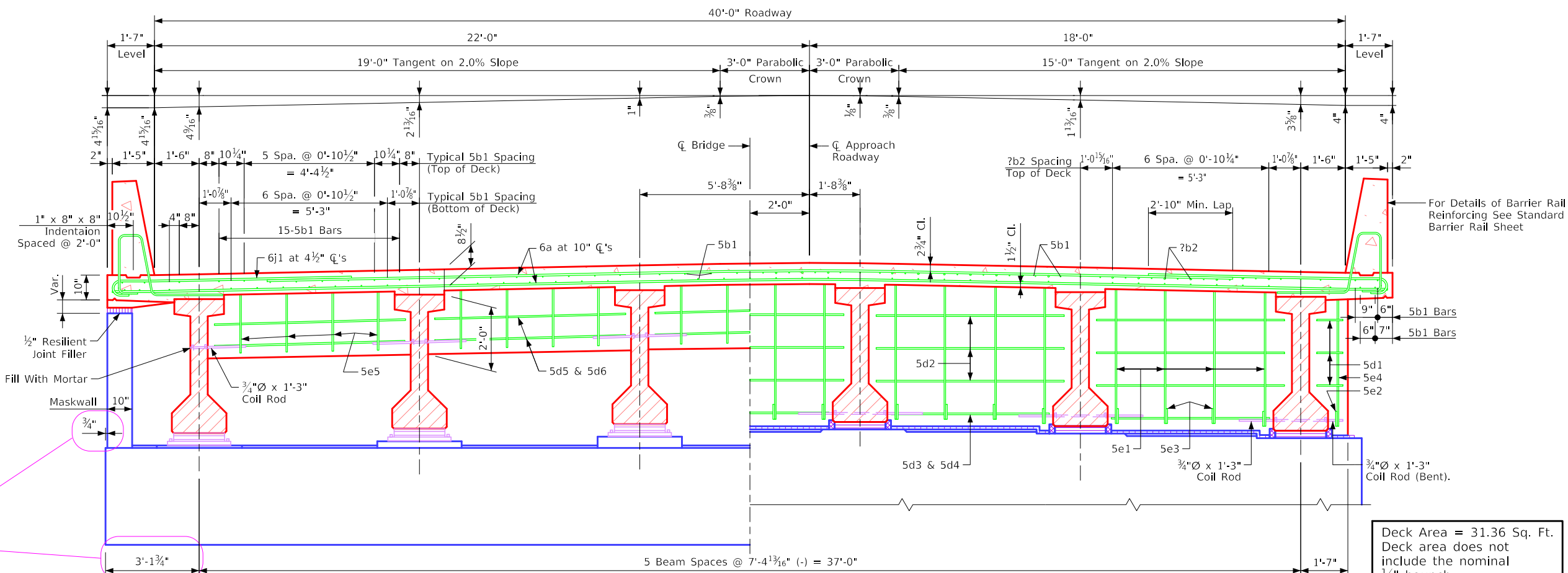
Revised 07-18: Changed Note Strating "1/2" Resilient Joint Filler" (Was Performed Expansion Joint Filler). Issued 11-06. StubBridges.dgn - This Sheet Re-Issued 11-2023. Sheet Format Update.

Table of Size of "b2" Bar

Longest Adjacent Span Beam		Bar Size
B & C	D	
34'-2"	35'-0"	5
38'-4"	40'-0"	5
42'-6"	45'-0"	5
46'-8"	50'-0"	5
50'-10"	55'-0"	6
55'-0"	60'-0"	6
59'-2"	65'-0"	6
63'-4"	70'-0"	7
67'-6"	75'-0"	7
71'-8"	80'-0"	8
75'-10"	85'-0"	8
80'-0"	90'-0"	8
	95'-0"	8
	100'-0"	9
	105'-0"	9
	110'-0"	9

The midpoint of the "b2" bar is to be placed at the \bar{C} of pier.

Note to Detailer: Redraw for 'B' Beams to Align Footing & Backwall Faces. Dimension 3'-1 3/4" Becomes 3'-1"



Half Section Near Abutment

Half Section Near Fixed Pier

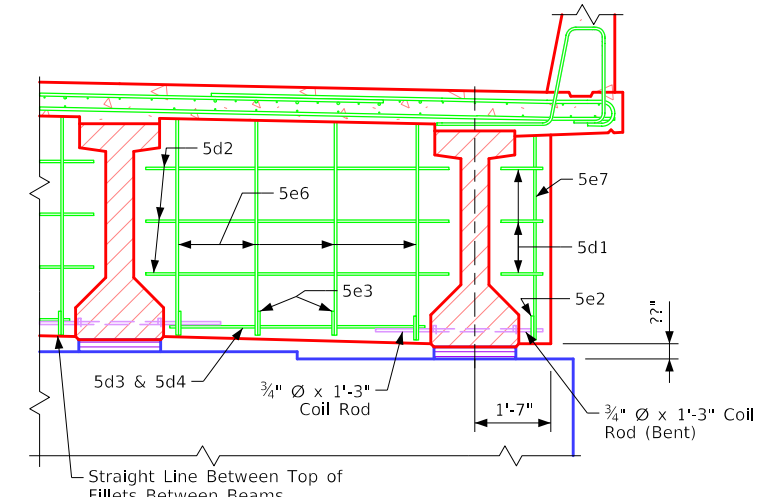
Note: For Details of Intermediate Diaphragms See Design Sheet No. ?.

Note to Designer: 6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

Note to Detailer: "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

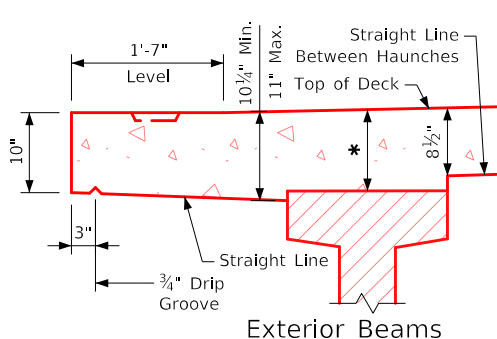
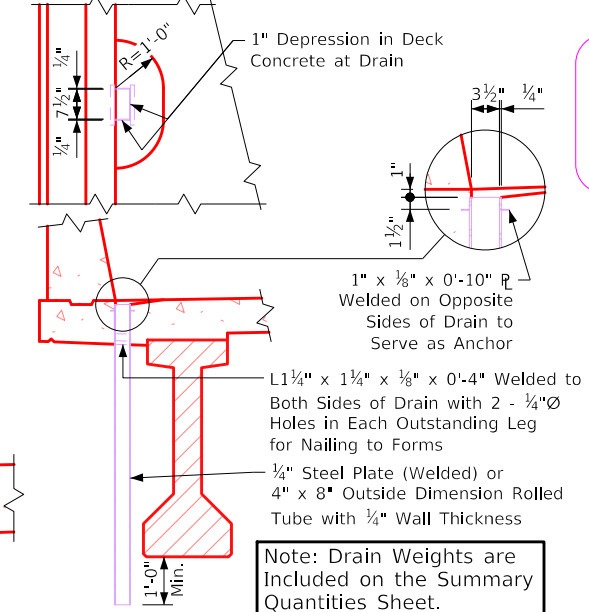
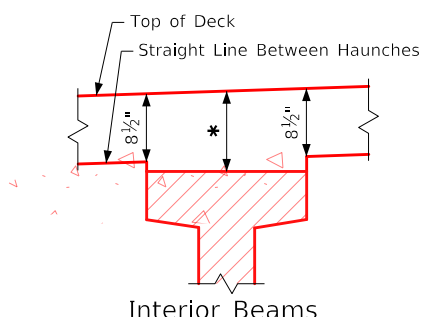
Superstructure Notes:

The bridge deck as shown includes 3/4" integral wearing surface. The pier and abutment diaphragm concrete is to be placed monolithically with the bridge deck. Cost of all resilient joint filler material is to be included in the price bid for "Structural Concrete (Bridge)". All beams are to be set vertical. Forms for the deck and barrier rail are to be supported by the prestressed concrete beams. Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown. All deck and diaphragm reinforcing is to be wired in place and adequately supported before concrete is placed. Top transverse reinforcing steel is to be parallel to and 2 3/4" clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and 1 1/2" clear above bottom of the deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, bar high chairs, and deck bolsters. Transverse deck reinforcing may be spliced with one lap located as follows: Top bar - Lap midway between beams (min. lap = 2'-10"). Bottom bars - Lap over beams (min. lap = 3'-7"). Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices.



Part Section Near Expansion Pier

PPCB Bridge Deck Cross Section



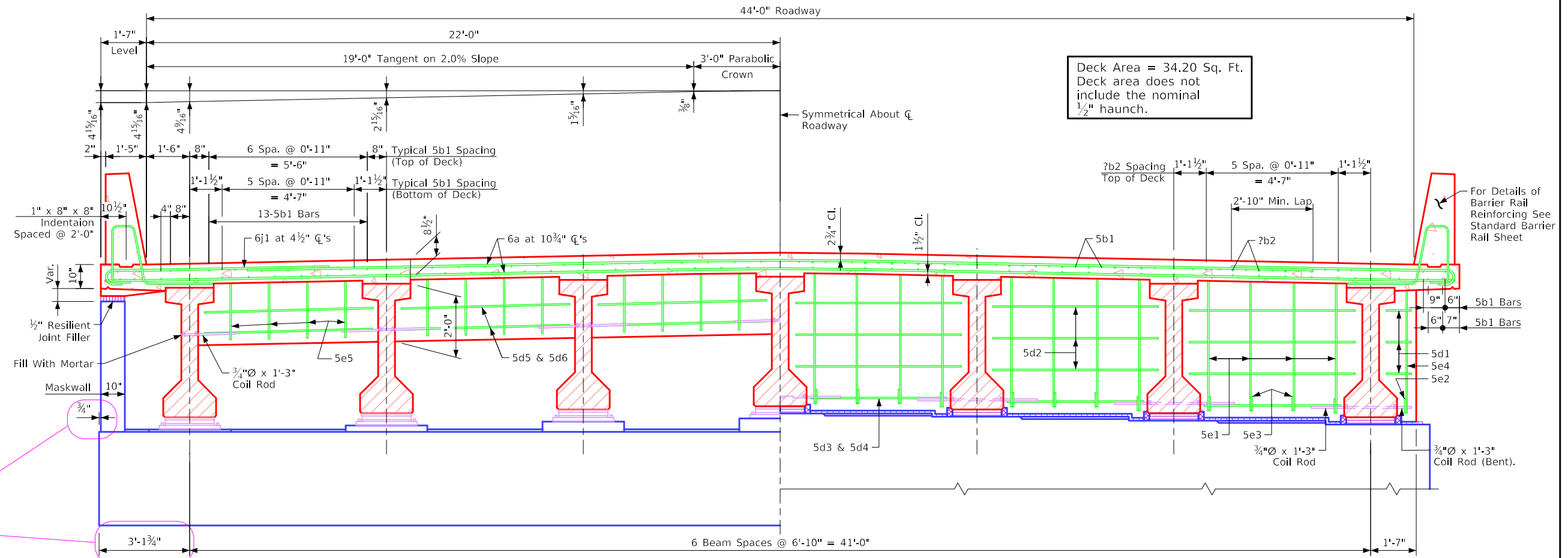
* For Deck Thickness Over Beams See "Haunch And Camber Details" on Design Sheet No. ?.

Data for One Drain			
Beam Size	B	C	D
Drain Weight (lbs.)	96	106	120
Drain Length (ft.)	5'-0 3/4"	5'-6 3/4"	6'-3 3/4"

Revised 07-18: Changed Note Strating "1/2" Resilient Joint Filler" (Was Performed Expansion Joint Filler). Issued 11-06. StubBridges.dgn - 4559 - This Sheet Re-Issued 11-2023. Sheet Format Update.

Table of Size of "b2" Bar		
Longest Adjacent Span Beam		Bar Size
B & C	D	
34'-2"	35'-0"	5
38'-4"	40'-0"	5
42'-6"	45'-0"	5
46'-8"	50'-0"	5
50'-10"	55'-0"	6
55'-0"	60'-0"	6
59'-2"	65'-0"	6
63'-4"	70'-0"	7
67'-6"	75'-0"	7
71'-8"	80'-0"	8
75'-10"	85'-0"	8
80'-0"	90'-0"	8
	95'-0"	8
	100'-0"	9
	105'-0"	9
	110'-0"	9

The midpoint of the "b2" bar is to be placed at the \bar{C} of pier.

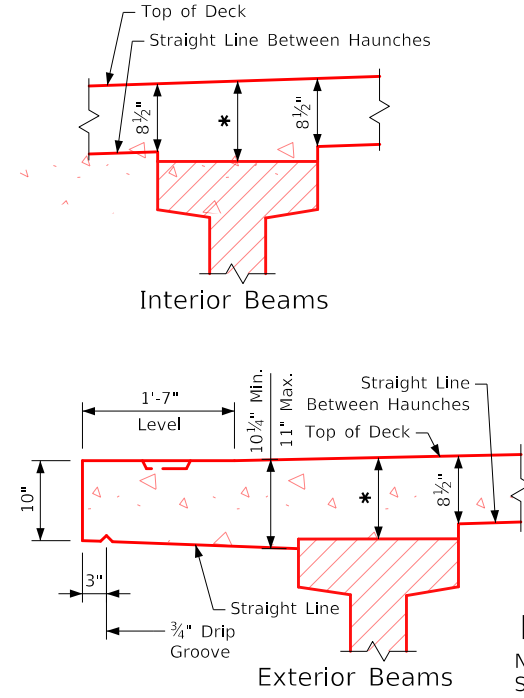


Note to Detailer: Redraw for 'B' Beams to Align Footing & Backwall Faces. Dimension 3'-1 3/4" Becomes 3'-1"

Half Section Near Abutment

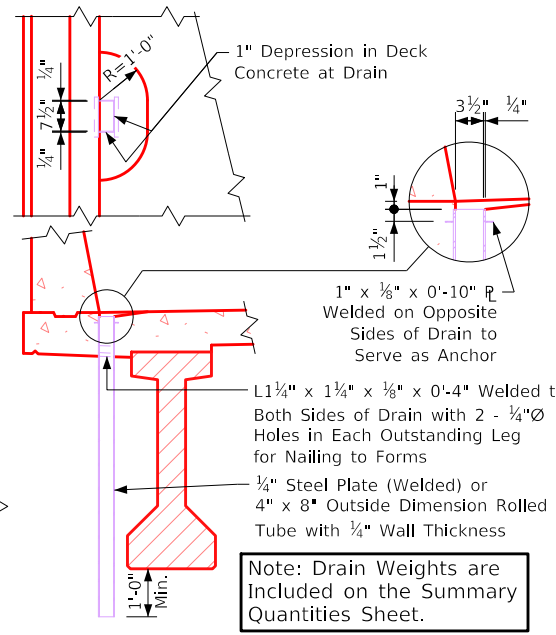
Half Section Near Fixed Pier

Note: For Details of Intermediate Diaphragms See Design Sheet No. ?.



Typical Deck and Haunch Detail

* For Deck Thickness Over Beams See "Haunch And Camber Details" on Design Sheet No. ?.



Drain Details

Note: Drains are to be galvanized. ?? Drains required. See "Situation Plan" on Design Sheet No. ? for location. Weight of drains is included in the quantity for "Structural Steel". Weight is based on rolled tube.

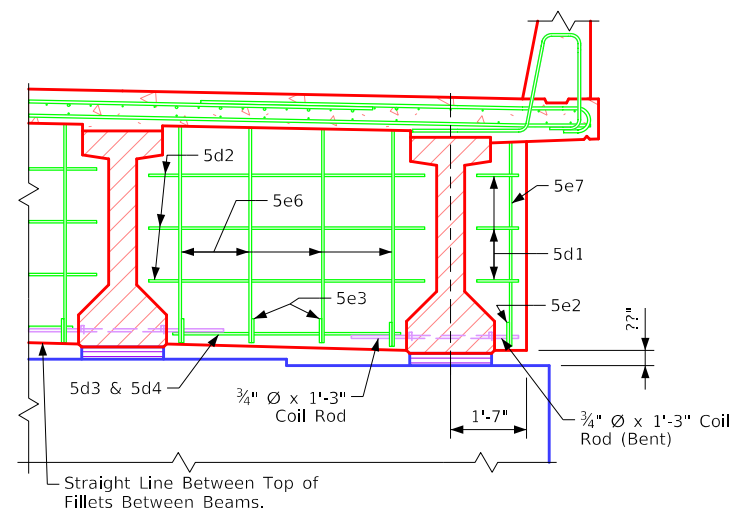
Data for One Drain			
Beam Size	B	C	D
Drain Weight (lbs.)	96	106	120
Drain Length (ft.)	5'-0 3/4"	5'-6 3/4"	6'-3 3/4"

Note to Designer: 6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

Note to Detailer: "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Superstructure Notes:

The bridge deck as shown includes 3/4" integral wearing surface. The pier and abutment diaphragm concrete is to be placed monolithically with the bridge deck. Cost of all resilient joint filler material is to be included in the price bid for "Structural Concrete (Bridge)". All beams are to be set vertical. Forms for the deck and barrier rail are to be supported by the prestressed concrete beams. Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown. All deck and diaphragm reinforcing is to be wired in place and adequately supported before concrete is placed. Top transverse reinforcing steel is to be parallel to and 2 3/4" clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and 1 1/2" clear above bottom of the deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, bar high chairs, and deck bolsters. Transverse deck reinforcing may be spliced with one lap located as follows: Top bar - Lap midway between beams (min. lap = 2'-10"). Bottom bars - Lap over beams (min. lap = 3'-7"). Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices.



Part Section Near Expansion Pier

PPCB Bridge Deck Cross Section

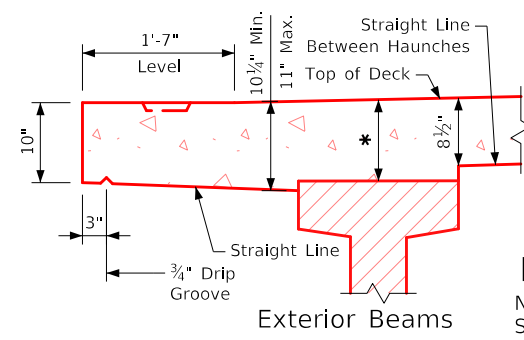
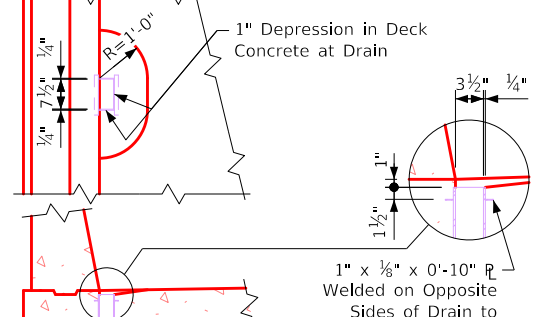
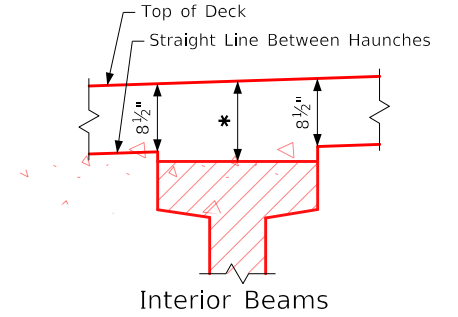
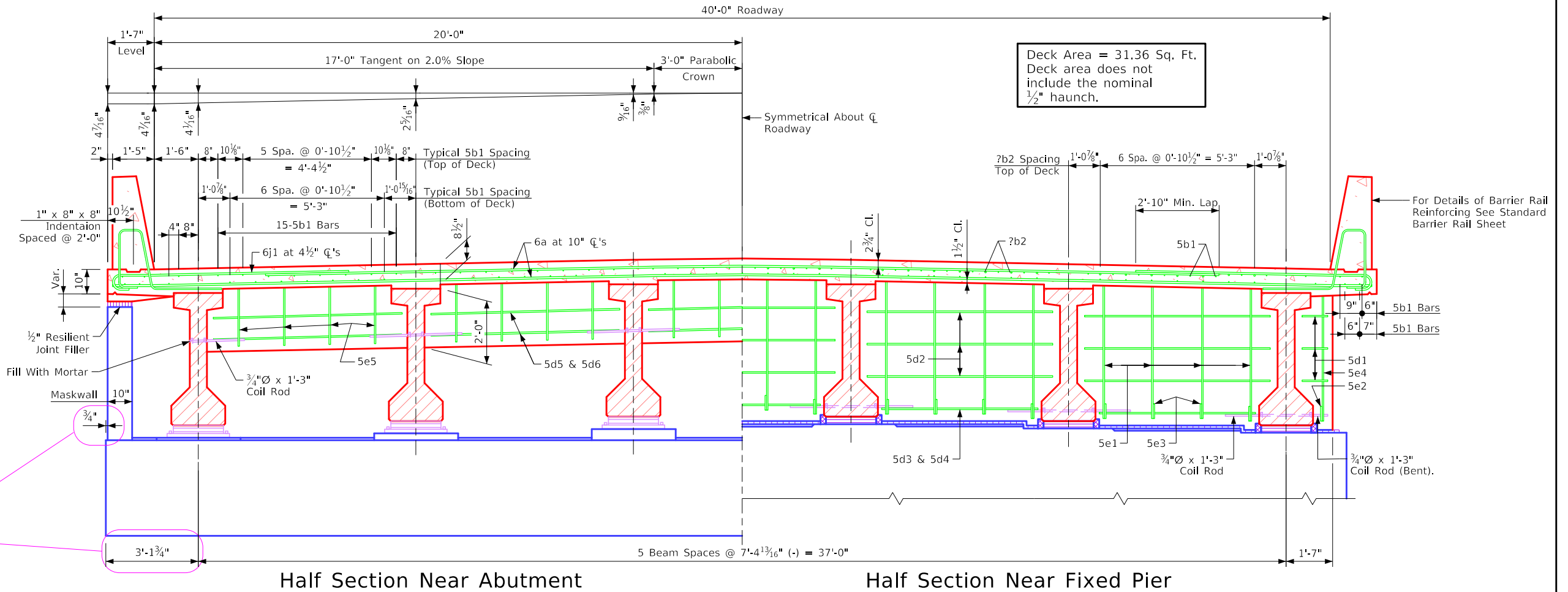
Revised 07-18: Changed Note Strating "1/2" Resilient Joint Filler" (Was Performed Expansion Joint Filler). Issued 11-06. StubBridges.dgn - This Sheet Re-Issued 11-2023. Sheet Format Update.

Table of Size of "b2" Bar

Longest Adjacent Span Beam		Bar Size
B & C	D	
34'-2"	35'-0"	5
38'-4"	40'-0"	5
42'-6"	45'-0"	5
46'-8"	50'-0"	5
50'-10"	55'-0"	6
55'-0"	60'-0"	6
59'-2"	65'-0"	6
63'-4"	70'-0"	7
67'-6"	75'-0"	7
71'-8"	80'-0"	8
75'-10"	85'-0"	8
80'-0"	90'-0"	8
	95'-0"	8
	100'-0"	9
	105'-0"	9
	110'-0"	9

The midpoint of the "b2" bar is to be placed at the ζ of pier.

Note to Detailer: Redraw for 'B' Beams to Align Footing & Backwall Faces. Dimension 3'-1 $\frac{3}{4}$ " Becomes 3'-1"



* For Deck Thickness Over Beams See "Haunch And Camber Details" on Design Sheet No. ?.

Data for One Drain

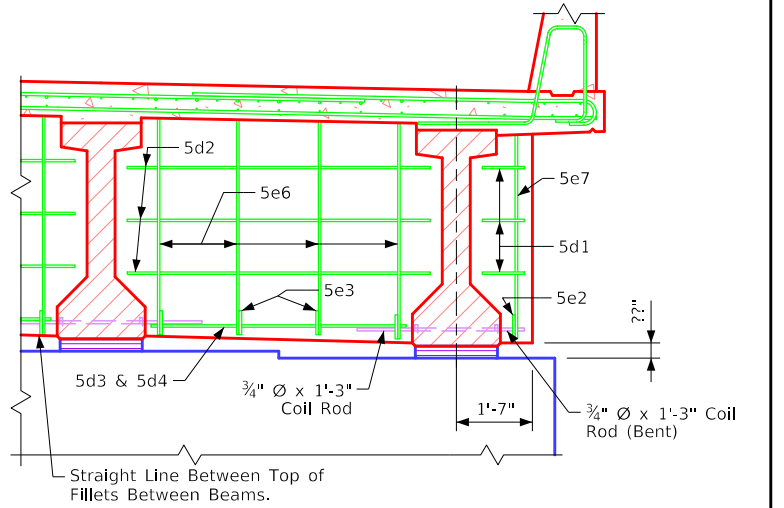
Beam Size	B	C	D
Drain Weight (lbs.)	96	106	120
Drain Length (ft.)	5'-0 $\frac{3}{4}$ "	5'-6 $\frac{3}{4}$ "	6'-3 $\frac{3}{4}$ "

Note to Designer: 6j1 Spacing Shown for TL-4 Barrier. See Design Manual Section 5.2 for TL-5 6j1 spacing.

Note to Detailer: "PC_REBAR_BARRIER" Level or "PC_REBAR_STAINLESS" Level Should be On or Off Depending on Barrier Rail Steel Embedded in the Bridge Deck

Superstructure Notes:

- The bridge deck as shown includes $\frac{3}{4}$ " integral wearing surface.
- The pier and abutment diaphragm concrete is to be placed monolithically with the bridge deck.
- Cost of all resilient joint filler material is to be included in the price bid for "Structural Concrete (Bridge)".
- All beams are to be set vertical.
- Forms for the deck and barrier rail are to be supported by the prestressed concrete beams.
- Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown.
- All deck and diaphragm reinforcing is to be wired in place and adequately supported before concrete is placed.
- Top transverse reinforcing steel is to be parallel to and 2 $\frac{3}{4}$ " clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and 1 $\frac{1}{2}$ " clear above bottom of the deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, bar high chairs, and deck bolsters.
- Transverse deck reinforcing may be spliced with one lap located as follows:
 - Top bar - Lap midway between beams (min. lap = 2'-10").
 - Bottom bars - Lap over beams (min. lap = 3'-7").
- Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices.



PPCB Bridge Deck Cross Section

Revised 07-18: Changed Note Strating "1/2" Resilient Joint Filler" (Was Performed Expansion Joint Filler). Issued 11-06. StubBridges.dgn - 4561 - This Sheet Re-Issued 11-2023. Sheet Format Update.