INDEX OF STUB 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 SKEWS
2094	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (R.A.) 7°31-15 SKEWS
2095	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (R.A.) 15°01-30 SKEWS
2096	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (L.A.) 0°01-7°30 SKEWS
2097	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (L.A.) 7°31-15 SKEWS
2098	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (L.A.) 15°01-30 SKEWS
2099	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - 0 SKEW
2100	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (R.A.) 0°01-7°30 SKEWS
2101	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (R.A.) 7°31-15 SKEWS
2102	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (R.A.) 15°01-30 SKEWS
2103	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (L.A.) 0°01-7°30 SKEWS
2104	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (L.A.) 7°31-15 SKEWS
2105	"C" OR "D" BEAMS - STUB ABUTMENT DETAILS - (L.A.) 15°01-30 SKEWS
2106	BEAM BAR LIST FOR 0 SKEW
2107	BEAM BAR LIST FOR 1 - 7 SKEW
2108	BEAM BAR LIST FOR 7 - 15 SKEW
2109	BEAM BAR LIST FOR 15 - 30 SKEW
4305	30'-0 WELDED CROSS SECTION LRFD DESIGN
4305A	ALTERNATE INTERMEDIATE DIAPHRAGM FOR WELDED GIRDER BRIDGES
4308	40'-0 WELDED CROSS SECTION LRFD DESIGN
4309	44'-0 WELDED CROSS SECTION LRFD DESIGN
4310	40'-0 WELDED CROSS SECTION (SYMM. CROWN) LRFD DESIGN
4542	PART PLAN & LONGIT. SECT. - "B", "C", & "D" BEAMS, STUB ABUT., 0 SKEW
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
4545	PART PLAN & LONGIT. SECT. - "B", "C", & "D" BEAMS, STUB ABUT. (L.A.) 15°01 - 30° SKEW
4546	PART PLAN & LONGIT. SECT. - "B", "C", & "D" BEAMS, STUB ABUT. (R.A.) 0°01 - 7°30 SKEW
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
4550	STUB ABUT. "B", "C", & "D" BEAMS, BAR LIST & SUPER. DETAILS - 0°01 - 7°30 SKEW
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)

ENGLISHSTUBBRIDGES.DGN - 100-S - THIS SHEET ISSUED 02-10.

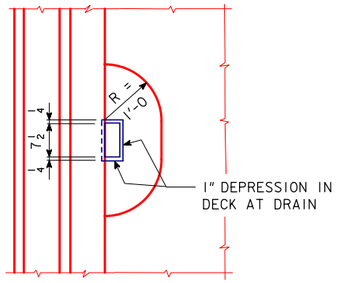
INDEX OF STUB BRIDGE STANDARDS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

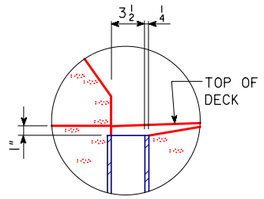
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	INDEX OF STUB ABUTMENT BRIDGE STANDARDS	STANDARD SHEET 100-S	COUNTY	PROJECT NUMBER	SHEET NUMBER

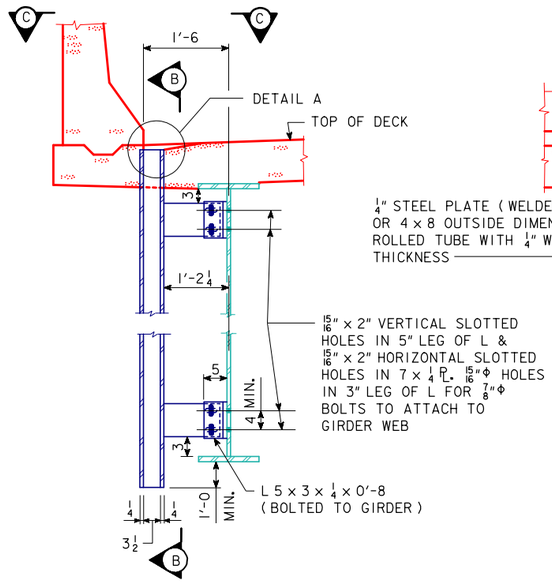
7/31/2018 9:33:39 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 100-S 11x17_pdf.pltcfg

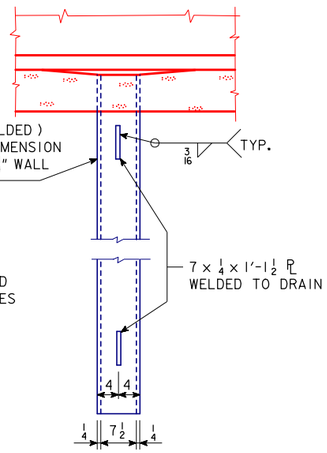


VIEW C-C



DETAIL A



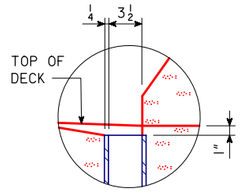


SECTION B-B

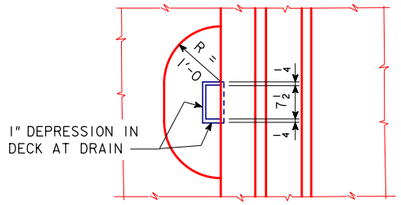
DRAIN DETAILS

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 INCLUDES ANGLES AND PLATES.

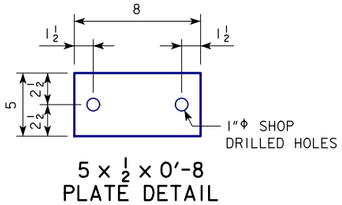
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.



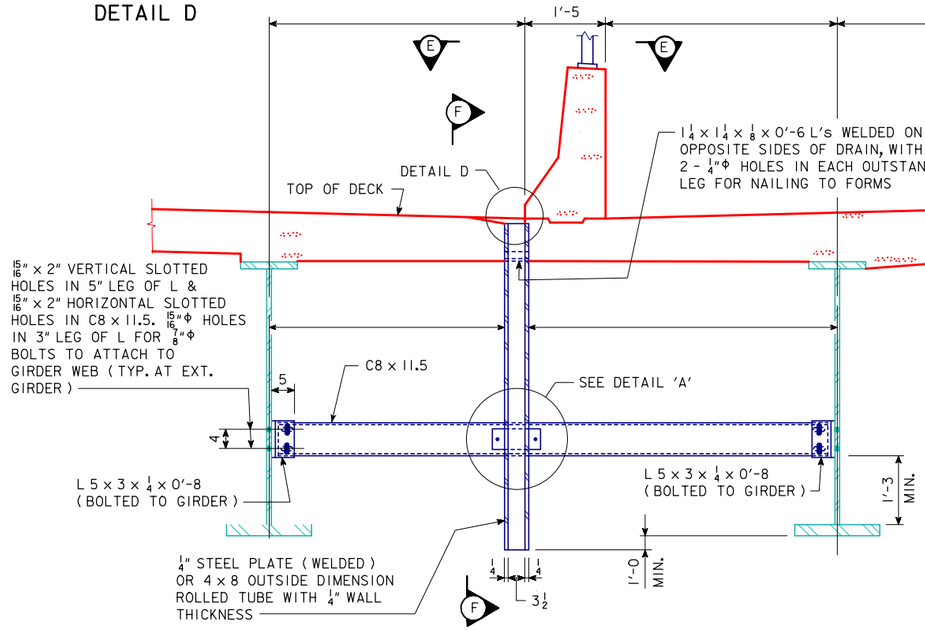
DETAIL D



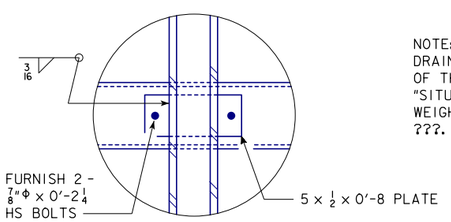
VIEW E-E



5 x 1/2 x 0'-8
PLATE DETAIL



SECTION F-F



DETAIL 'A'

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 INCLUDES ANGLES, PLATES, AND CHANNELS.

NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT.
ENGLISHSTUBBRIDGES.DGN - 1059 - THIS SHEET ISSUED 04-07.

DRAIN DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	DRAIN DETAILS FOR WELDED GIRDER BRIDGES	STANDARD SHEET 1059	COUNTY	PROJECT NUMBER	SHEET NUMBER

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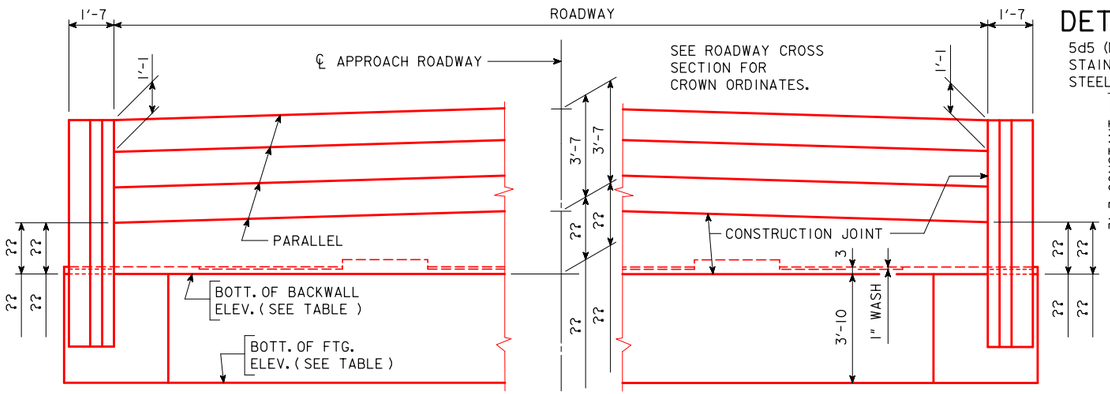
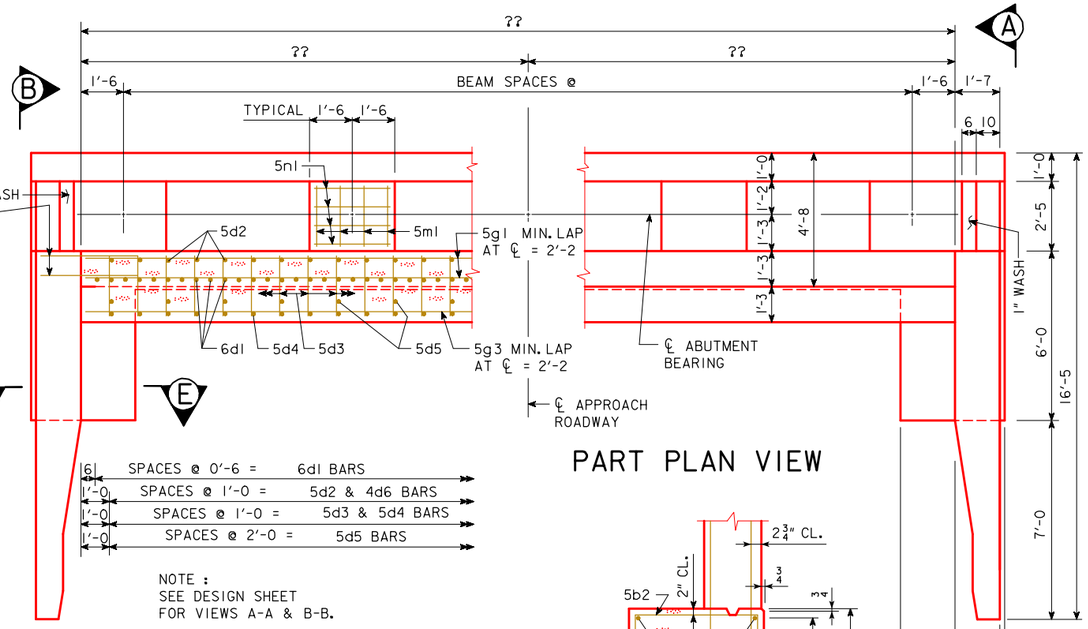


REAR ELEVATION

NOTE :
PLACE 5m1 AND 5n1 BARS
UNDER EACH BEAM.

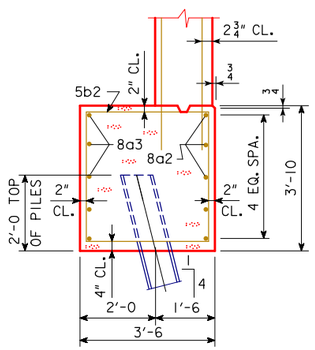


PART PLAN VIEW

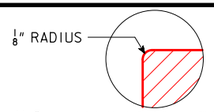
6 SPACES @ 0'-6 =	6d1 BARS
1'-0 SPACES @ 1'-0 =	5d2 & 4d6 BARS
1'-0 SPACES @ 1'-0 =	5d3 & 5d4 BARS
1'-0 SPACES @ 2'-0 =	5d5 BARS

NOTE :
SEE DESIGN SHEET
FOR VIEWS A-A & B-B.

PART SECTION THROUGH BACKWALL

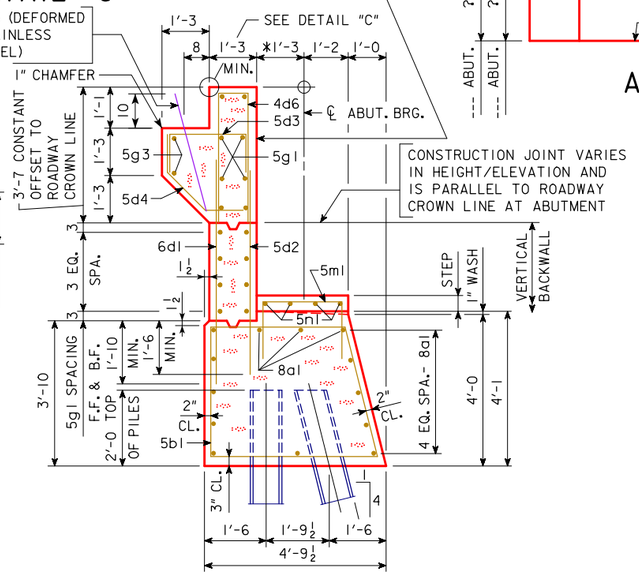


SECTION E-E



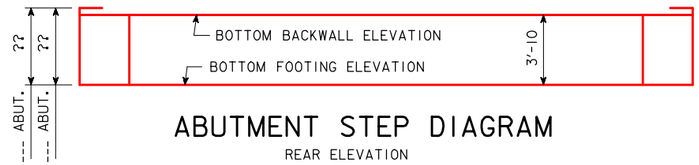
DETAIL "C"

* 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

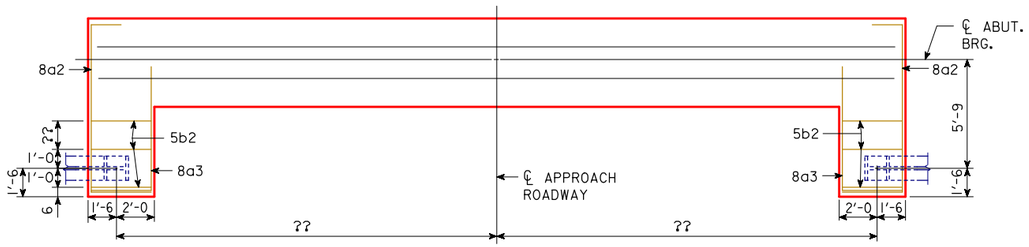
REAR ELEVATION

TABLE OF ABUTMENT ELEVATIONS

POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS

STEP	ABUTMENT	ABUTMENT
a		



PILING LAYOUT

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
---- - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT FOOTING DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2092 - THIS SHEET REDRAWN 5-23-91.

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - 0° SKEW	STANDARD SHEET 2092	COUNTY	PROJECT NUMBER	SHEET NUMBER

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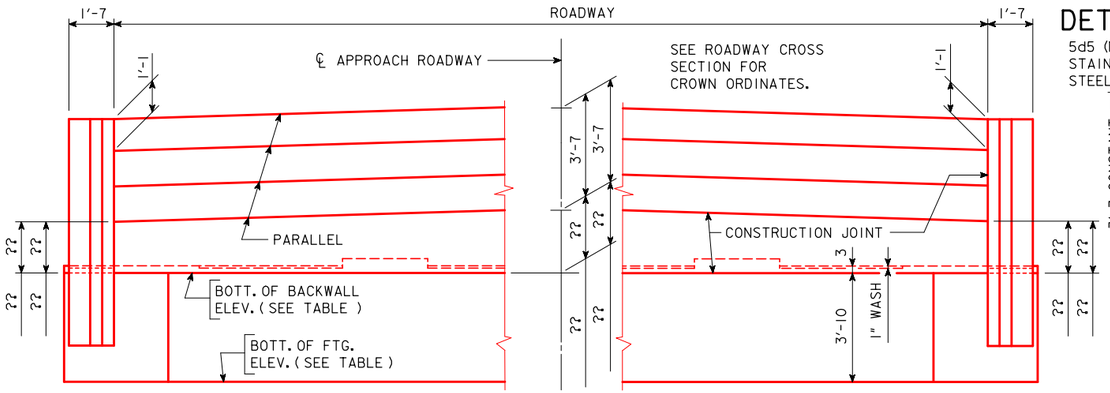
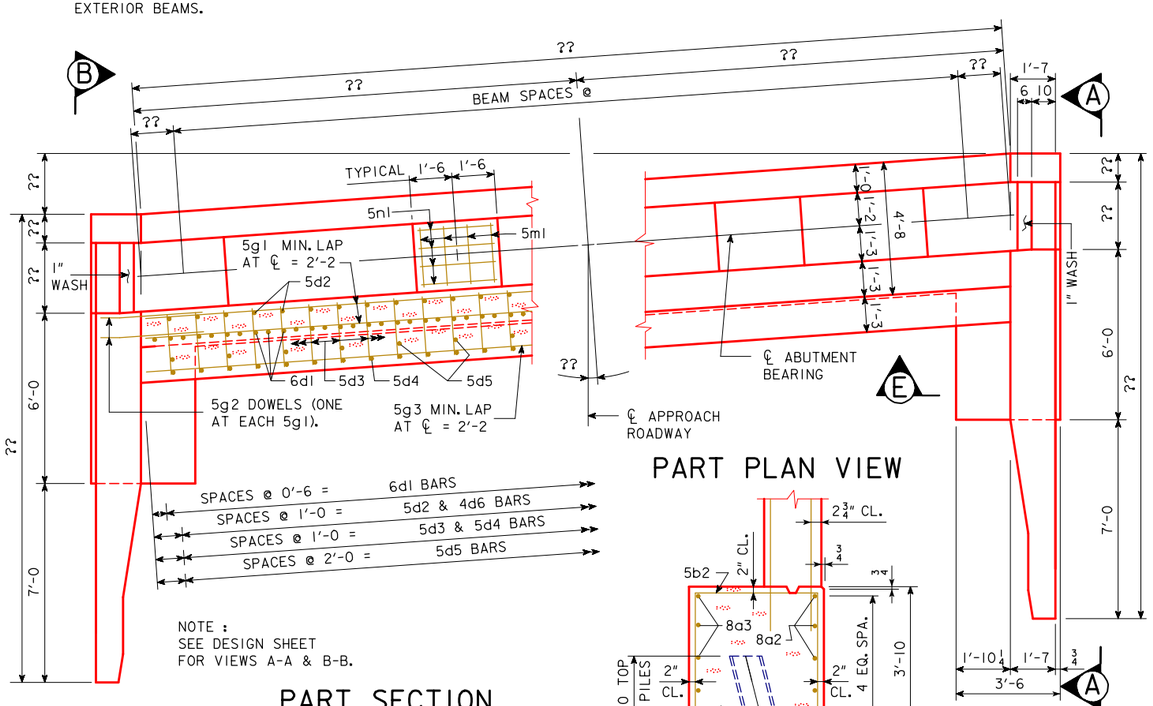


REAR ELEVATION

NOTE :
PLACE 5m1 AND 5n1 BARS UNDER EACH BEAM. FLARE 5m1 BARS AND FIELD CUT 5n1 BARS TO FIT STEPS AT THE EXTERIOR BEAMS.

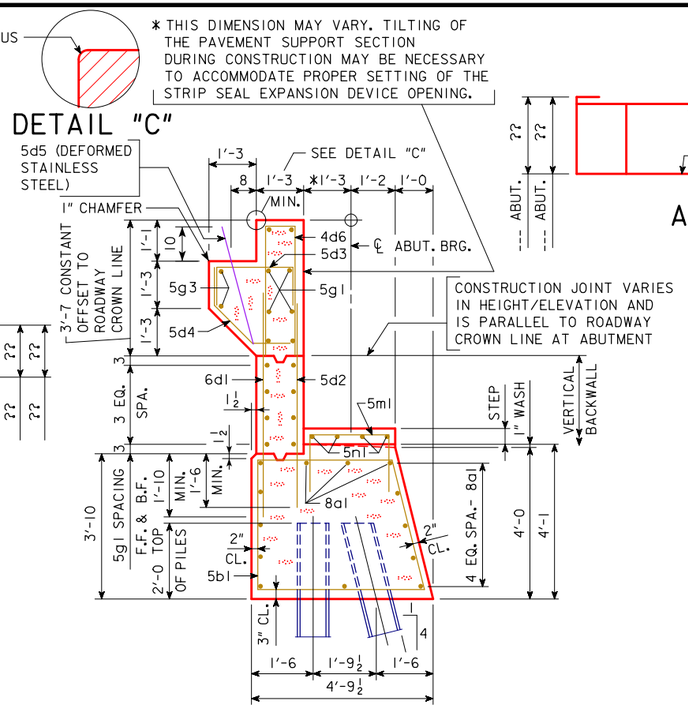


NOTE :
SEE DESIGN SHEET FOR VIEWS A-A & B-B.

PART SECTION THROUGH BACKWALL

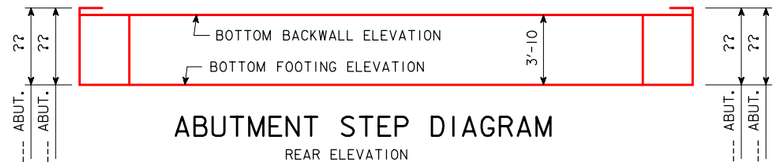
PART PLAN VIEW

SECTION E-E



SECTION THROUGH ABUTMENT

EXPANSION DEVICE NOT SHOWN



ABUTMENT STEP DIAGRAM

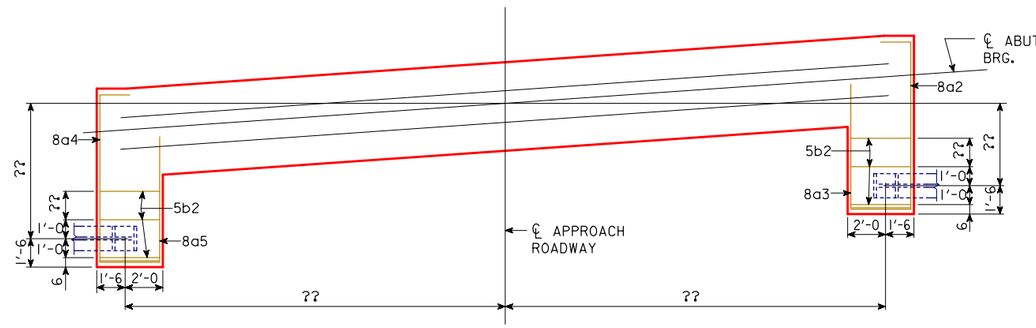
REAR ELEVATION

TABLE OF ABUTMENT ELEVATIONS

POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS

STEP	ABUTMENT	ABUTMENT
a		



PILING LAYOUT

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
---- - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT FOOTING DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2093 - THIS SHEET REDRAWN 5-23-91.

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - (R.A.) 0°01' - 7°30' SKEW	STANDARD SHEET 2093	COUNTY	PROJECT NUMBER	SHEET NUMBER

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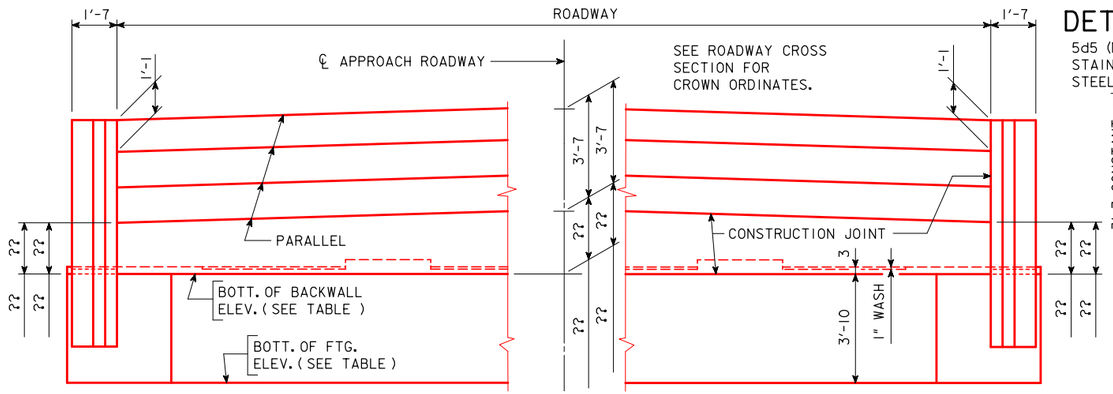
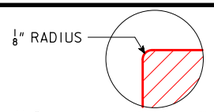
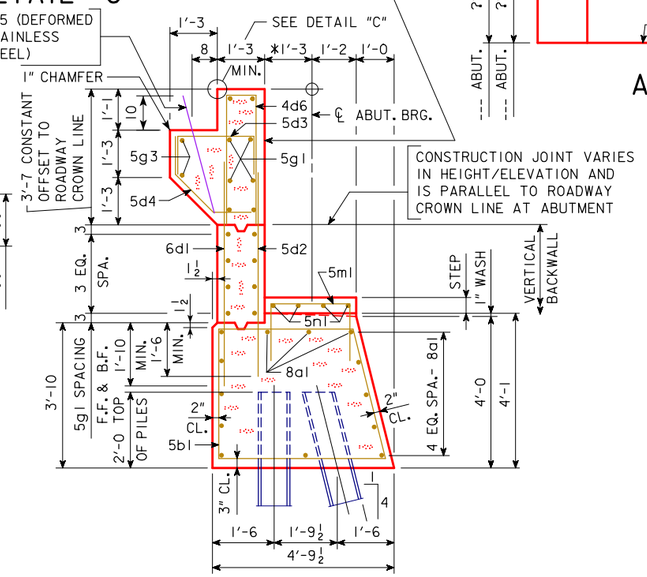


REAR ELEVATION



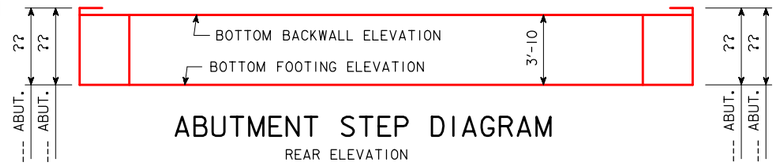
* THIS DIMENSION MAY VARY. TILTING OF THE PAVEMENT SUPPORT SECTION DURING CONSTRUCTION MAY BE NECESSARY TO ACCOMMODATE PROPER SETTING OF THE STRIP SEAL EXPANSION DEVICE OPENING.

DETAIL "C"



SECTION THROUGH ABUTMENT

EXPANSION DEVICE NOT SHOWN



ABUTMENT STEP DIAGRAM

REAR ELEVATION

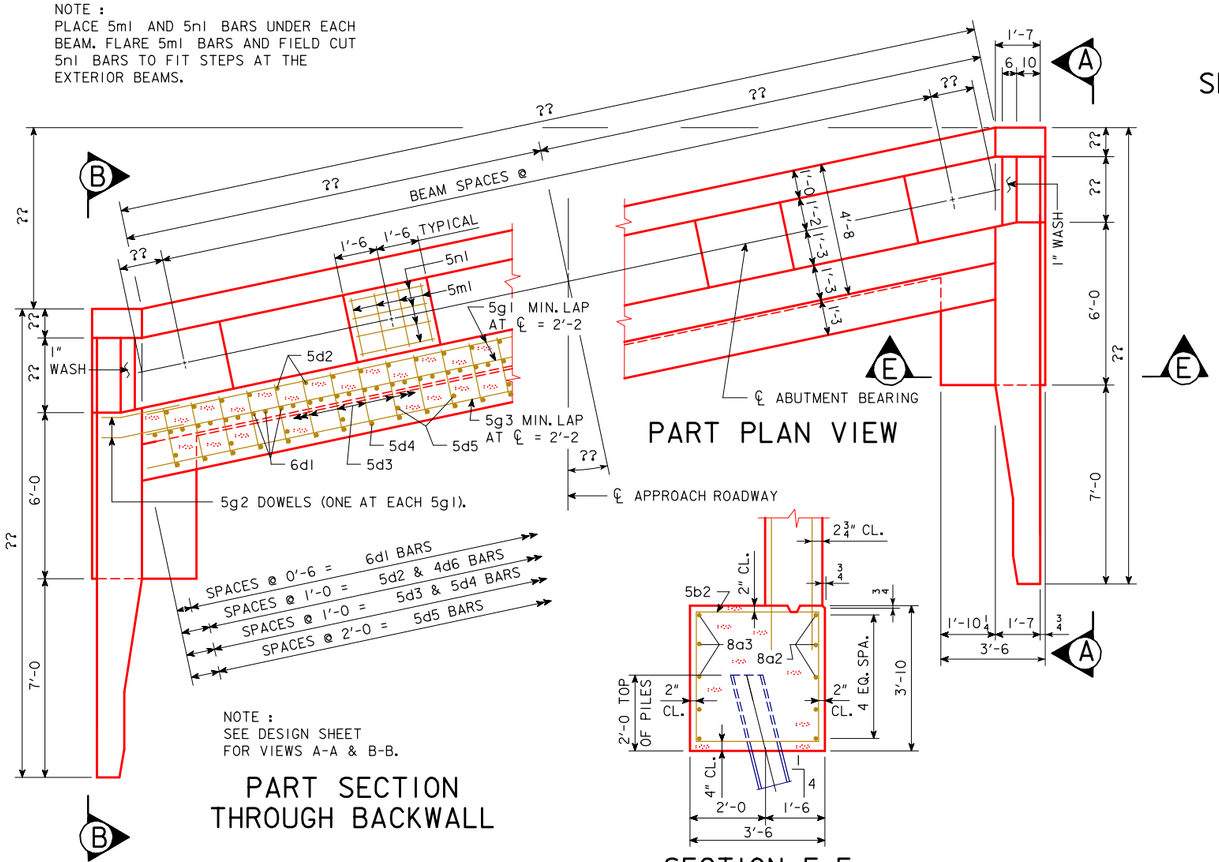
TABLE OF ABUTMENT ELEVATIONS

POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS

STEP	ABUTMENT	ABUTMENT
a		

NOTE :
PLACE 5m1 AND 5n1 BARS UNDER EACH BEAM. FLARE 5m1 BARS AND FIELD CUT 5n1 BARS TO FIT STEPS AT THE EXTERIOR BEAMS.

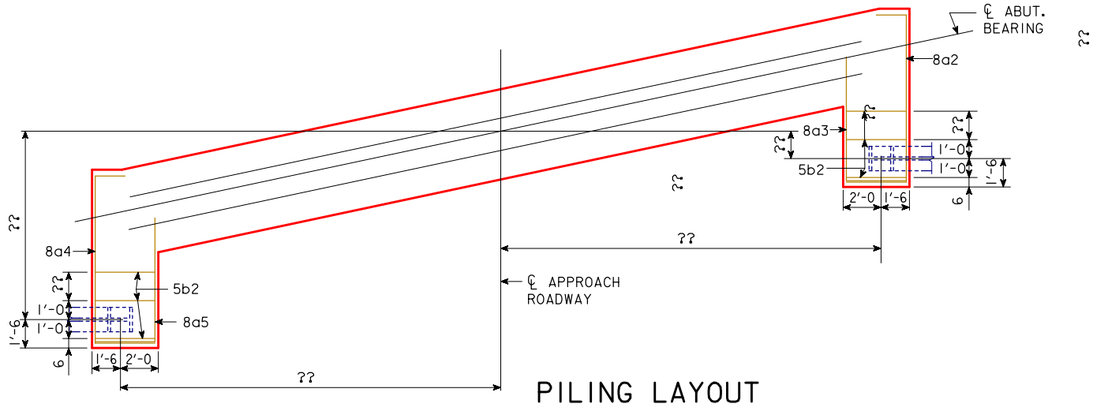


NOTE :
SEE DESIGN SHEET FOR VIEWS A-A & B-B.

PART SECTION THROUGH BACKWALL

PART PLAN VIEW

SECTION E-E



PILING LAYOUT

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
____ - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT FOOTING DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2094 - THIS SHEET REDRAWN 5-23-91.

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - (R.A.) 7°31' - 15° SKEW	STANDARD SHEET 2094	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:33:42 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 2094 11x17_pdf.pltcfg

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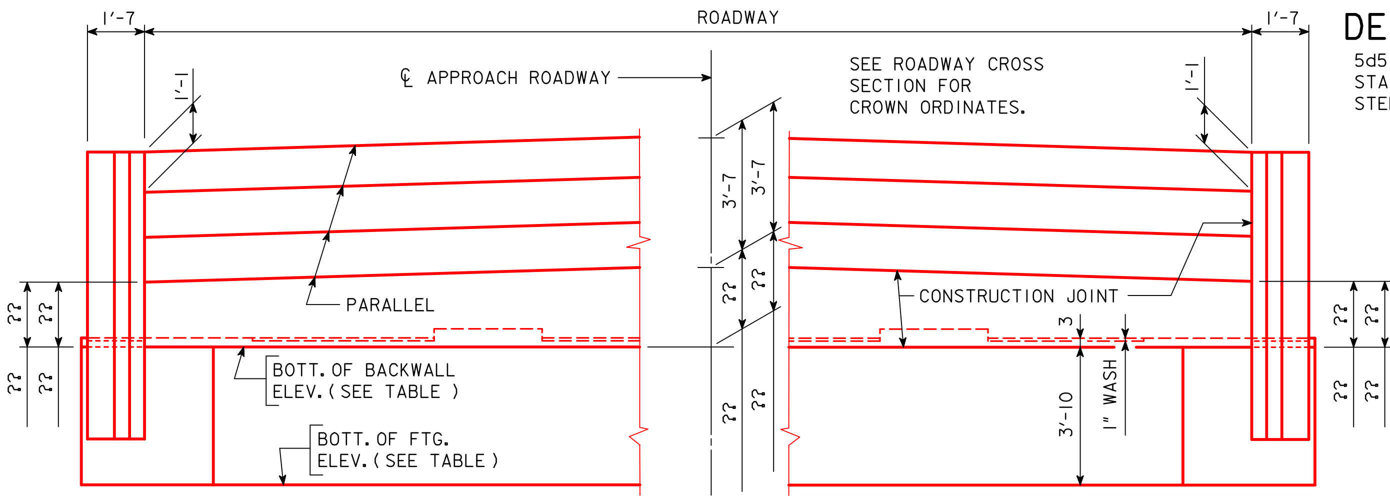
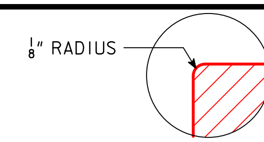
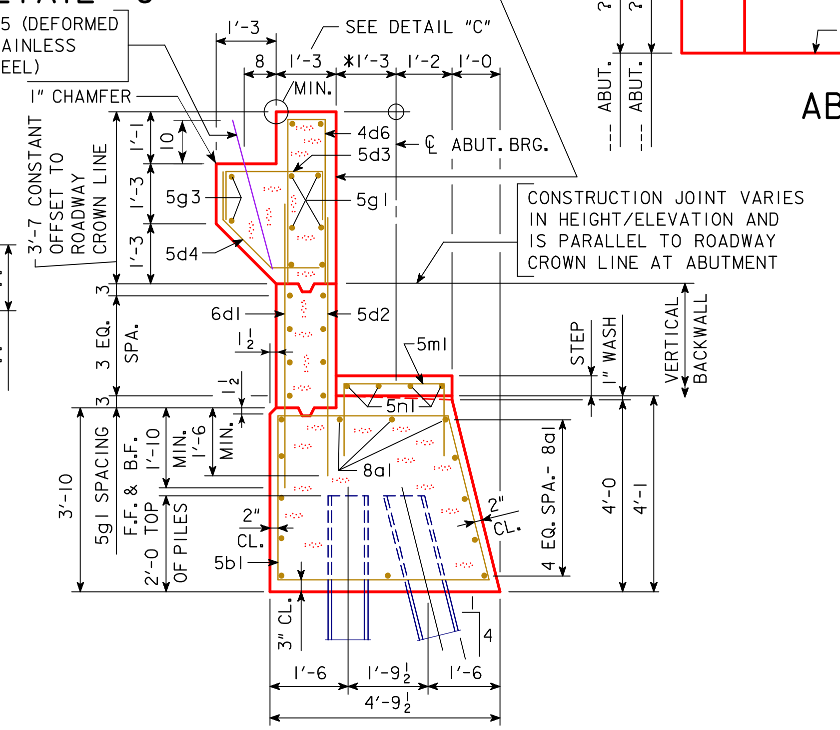


REAR ELEVATION



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

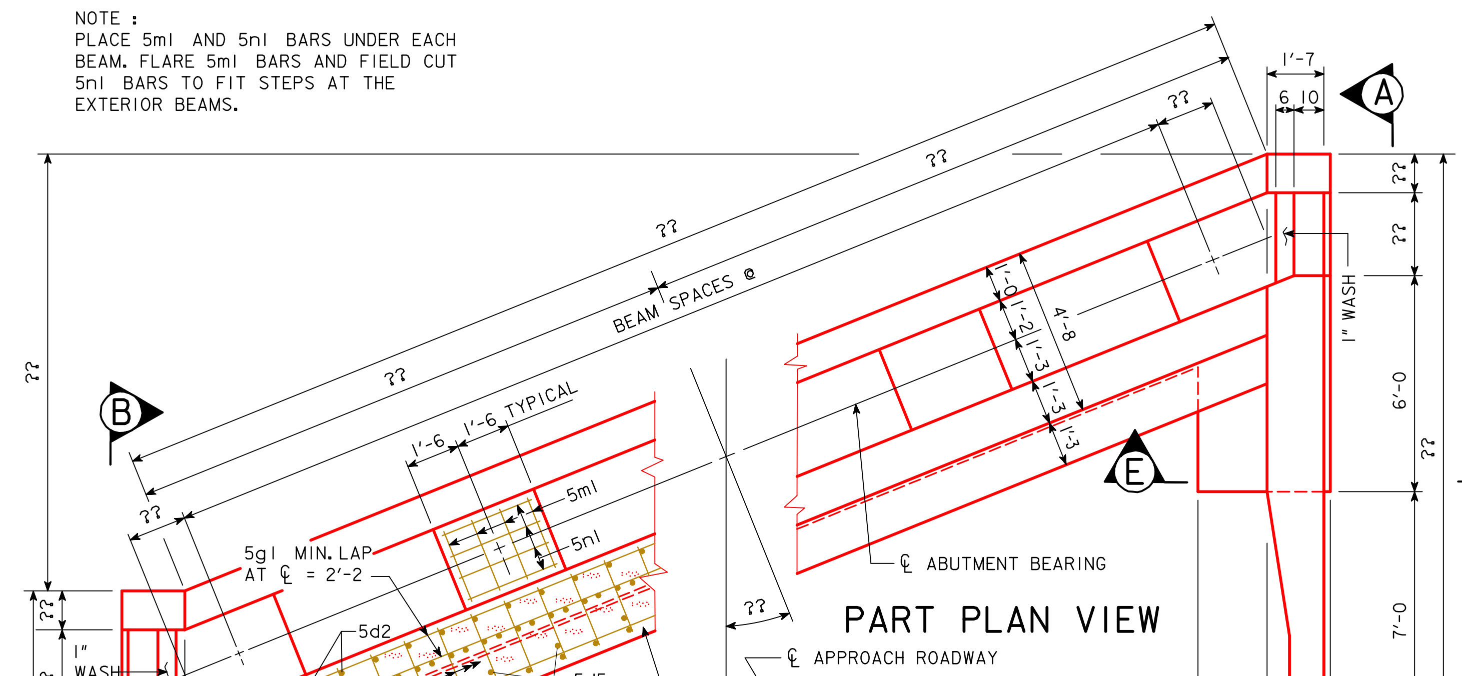
ABUTMENT STEP DIAGRAM

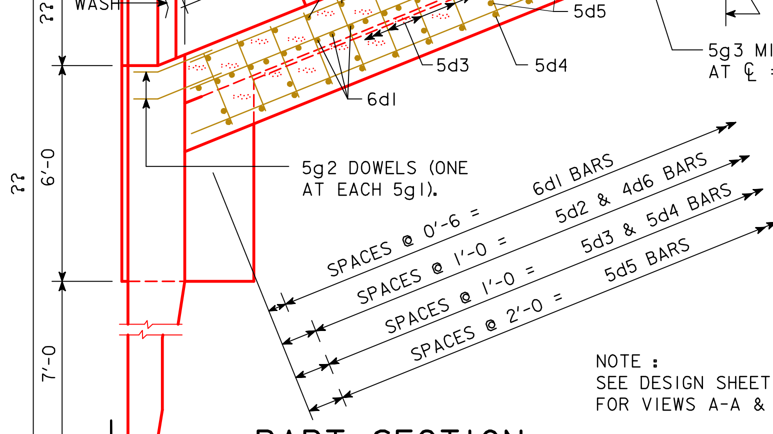
REAR ELEVATION

TABLE OF ABUTMENT ELEVATIONS		
POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS		
STEP	ABUTMENT	ABUTMENT
a		

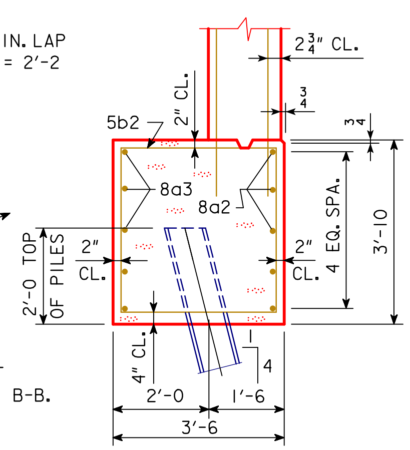
NOTE :
PLACE 5m1 AND 5n1 BARS UNDER EACH BEAM. FLARE 5m1 BARS AND FIELD CUT 5n1 BARS TO FIT STEPS AT THE EXTERIOR BEAMS.





PART SECTION THROUGH BACKWALL

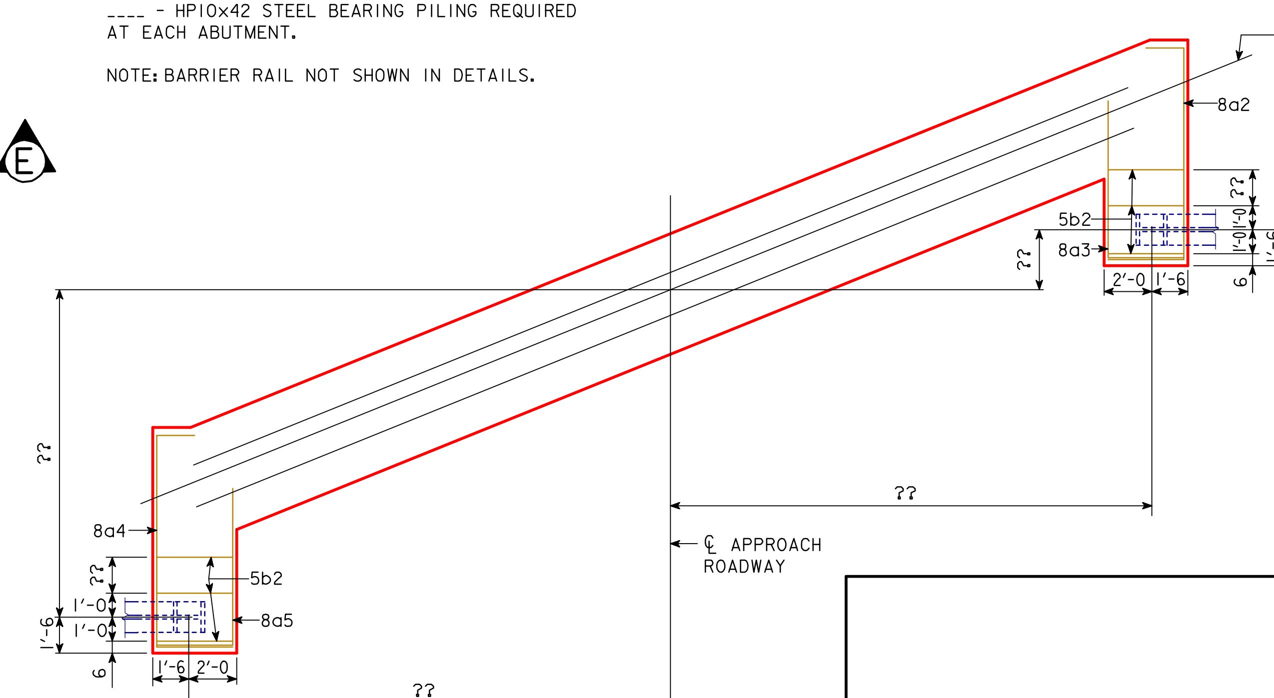
NOTE :
SEE DESIGN SHEET FOR VIEWS A-A & B-B.



SECTION E-E

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
____ - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.



PILING LAYOUT

ABUTMENT FOOTING DETAILS

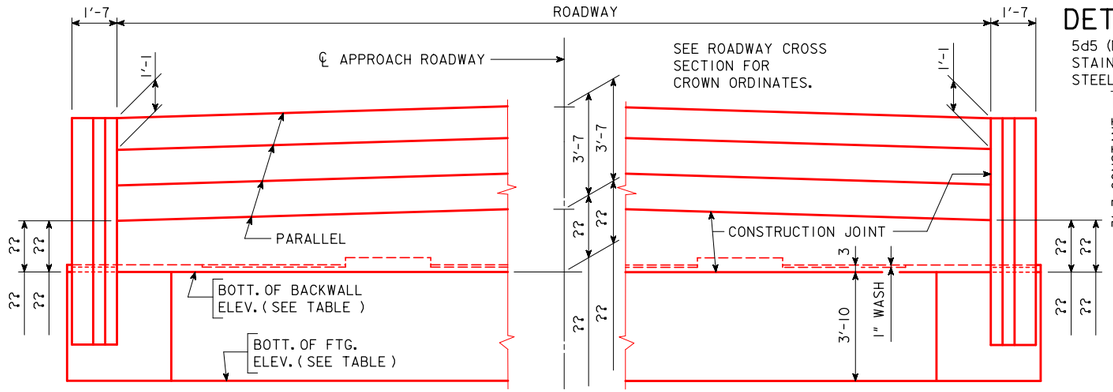
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. ________ DESIGN NO. ________

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2095 - THIS SHEET REDRAWN 5-23-91.

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - (R.A.) 15°01' - 30° SKEW	STANDARD SHEET 2095	COUNTY	PROJECT NUMBER	SHEET NUMBER

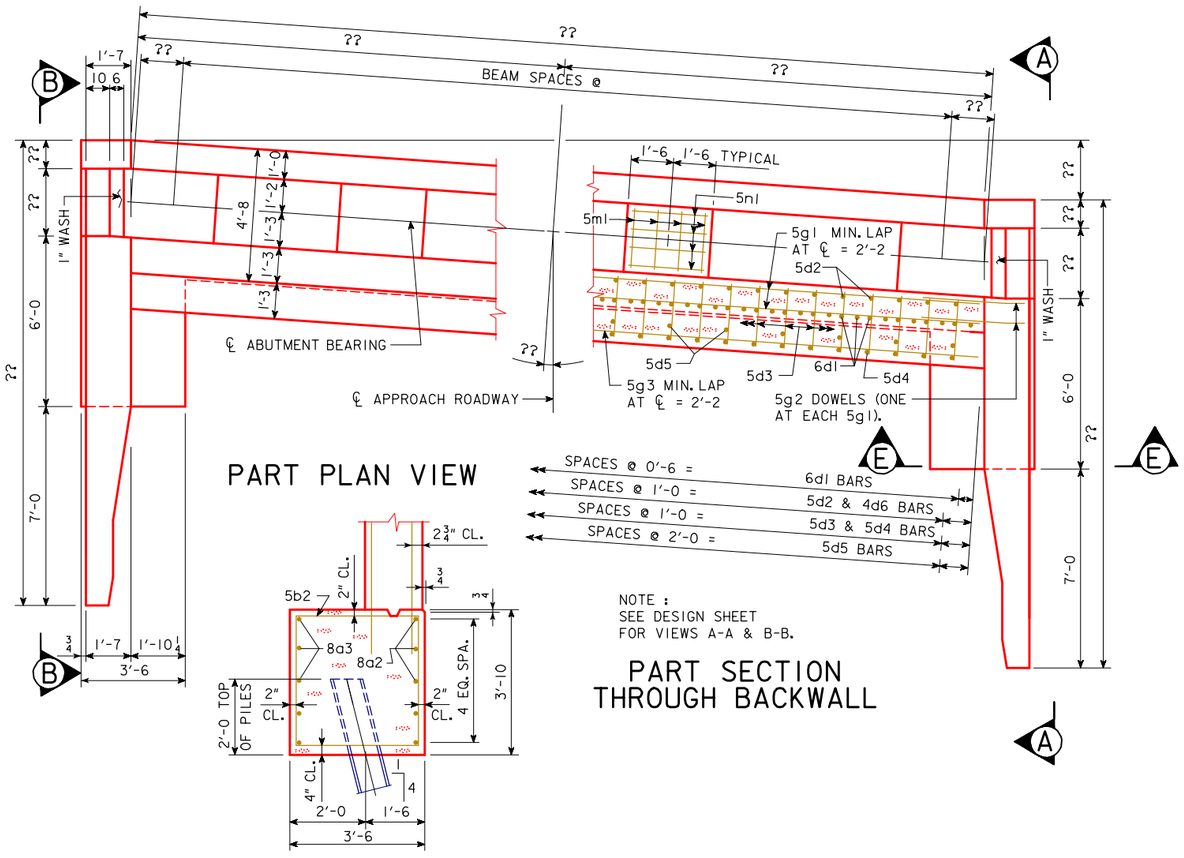
7/31/2018 9:33:43 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 2095 11x17_pdf.pltcfg

BENCH MARK :



REAR ELEVATION

NOTE :
PLACE 5ml AND 5nl BARS UNDER EACH BEAM. FLARE 5ml BARS AND FIELD CUT 5nl BARS TO FIT STEPS AT THE EXTERIOR BEAMS.



PART PLAN VIEW

SECTION E-E

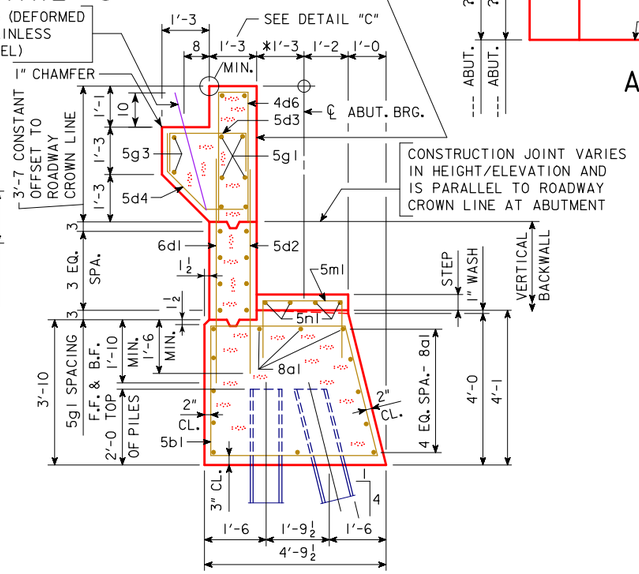
NOTE :
SEE DESIGN SHEET FOR VIEWS A-A & B-B.

PART SECTION THROUGH BACKWALL

1/8" RADIUS

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

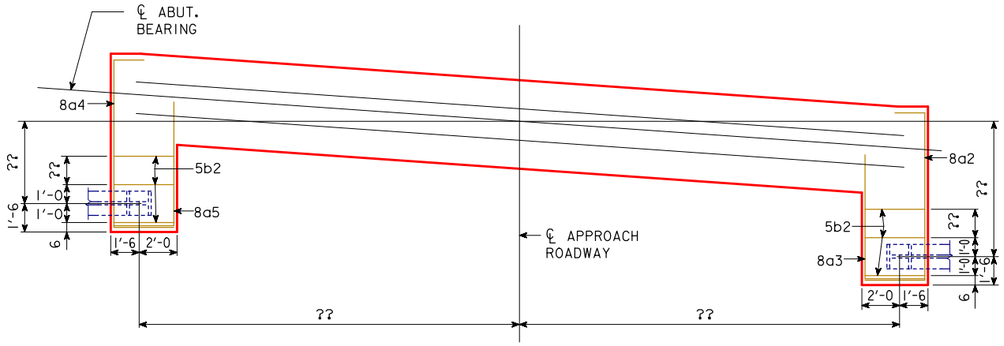
REAR ELEVATION

TABLE OF ABUTMENT ELEVATIONS

POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS

STEP	ABUTMENT	ABUTMENT
a		



PILING LAYOUT

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
____ - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT FOOTING DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2096 - THIS SHEET REDRAWN 5-23-91.

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - (L.A.) 0°01' - 7°30' SKEW	STANDARD SHEET 2096	COUNTY	PROJECT NUMBER	SHEET NUMBER

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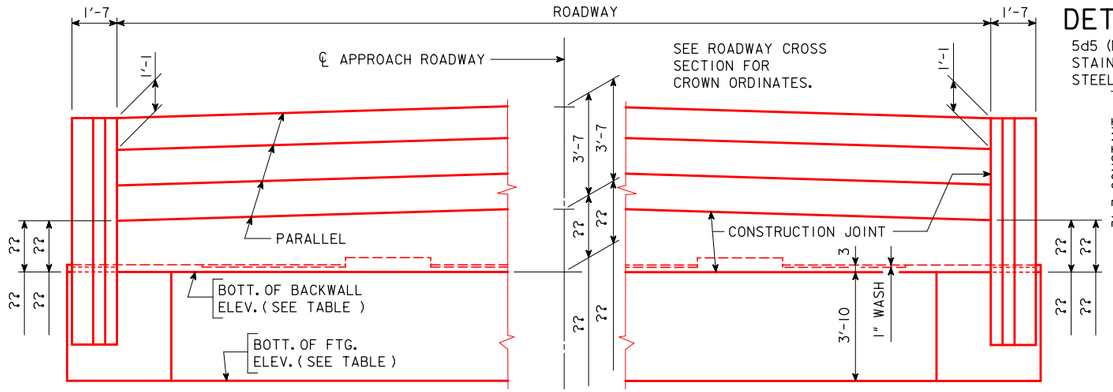
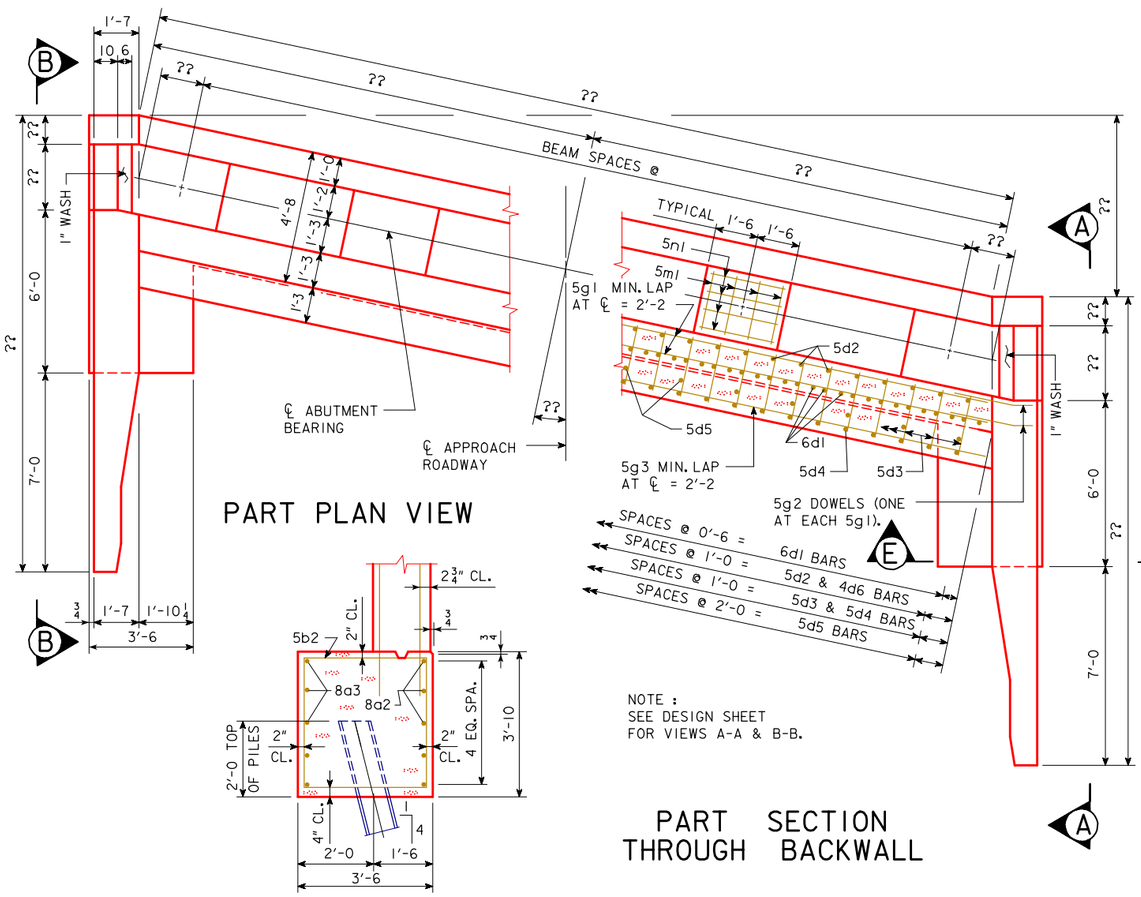


REAR ELEVATION

NOTE :
PLACE 5m1 AND 5n1 BARS UNDER EACH BEAM. FLARE 5m1 BARS AND FIELD CUT 5n1 BARS TO FIT STEPS AT THE EXTERIOR BEAMS.



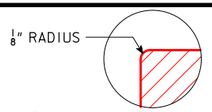
PART PLAN VIEW

NOTE :
SEE DESIGN SHEET FOR VIEWS A-A & B-B.

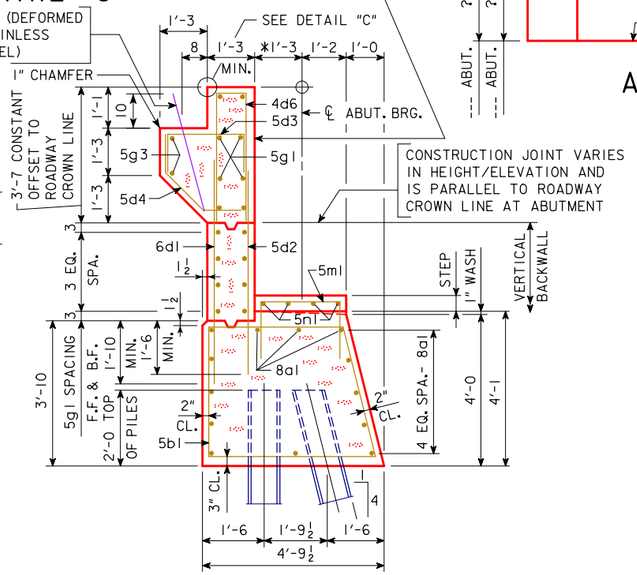
PART SECTION THROUGH BACKWALL

SECTION E-E

DETAIL "C"

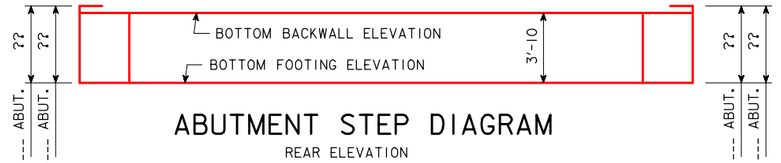


* THIS DIMENSION MAY VARY. TILTING OF THE PAVEMENT SUPPORT SECTION DURING CONSTRUCTION MAY BE NECESSARY TO ACCOMMODATE PROPER SETTING OF THE STRIP SEAL EXPANSION DEVICE OPENING.



SECTION THROUGH ABUTMENT

EXPANSION DEVICE NOT SHOWN



ABUTMENT STEP DIAGRAM

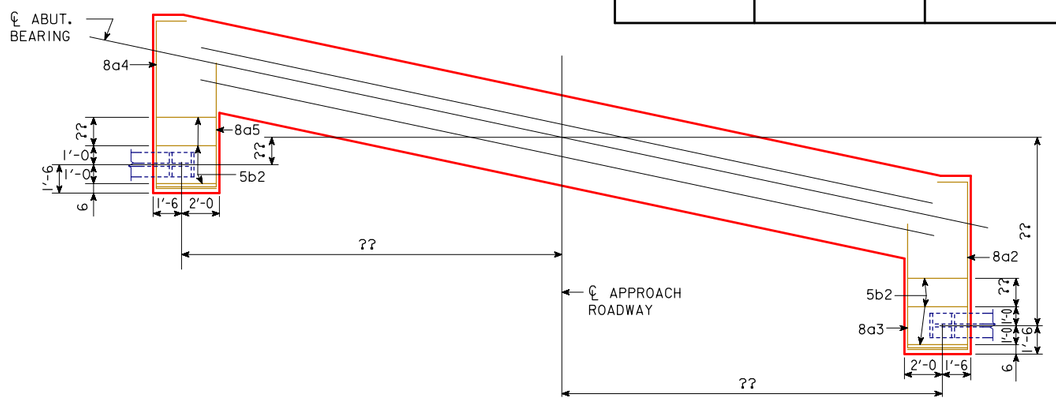
REAR ELEVATION

TABLE OF ABUTMENT ELEVATIONS

POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS

STEP	ABUTMENT	ABUTMENT
a		



PILING LAYOUT

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
____ - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT FOOTING DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2097 - THIS SHEET REDRAWN 5-23-91.

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - (L.A.) 7°31' - 15° SKEW	STANDARD SHEET 2097	COUNTY	PROJECT NUMBER	SHEET NUMBER

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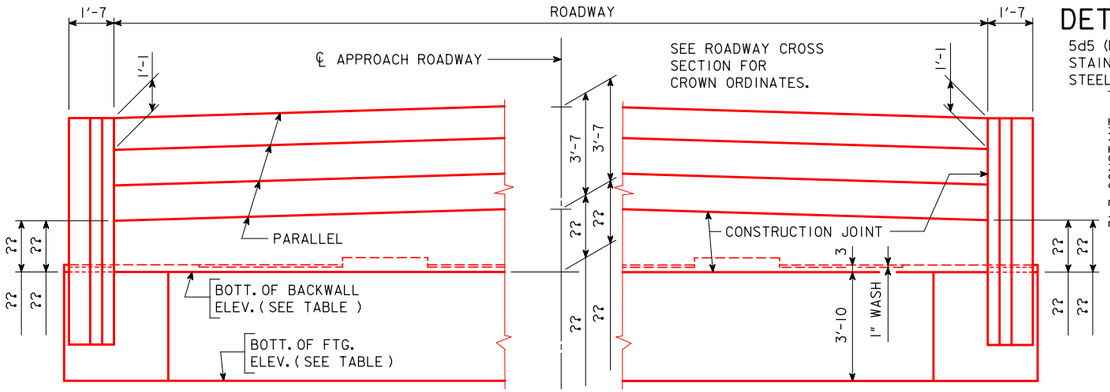
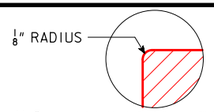
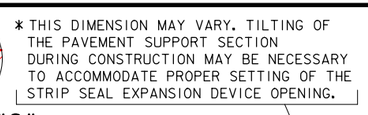
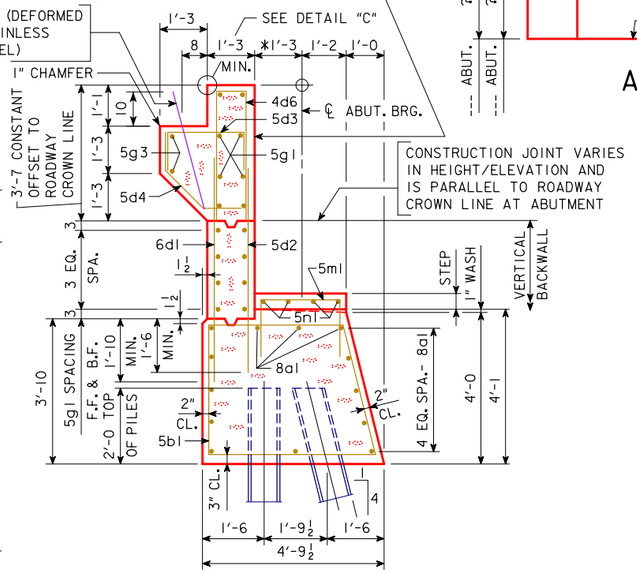


REAR ELEVATION



DETAIL "C"





SECTION THROUGH ABUTMENT

EXPANSION DEVICE NOT SHOWN

ABUTMENT STEP DIAGRAM

REAR ELEVATION

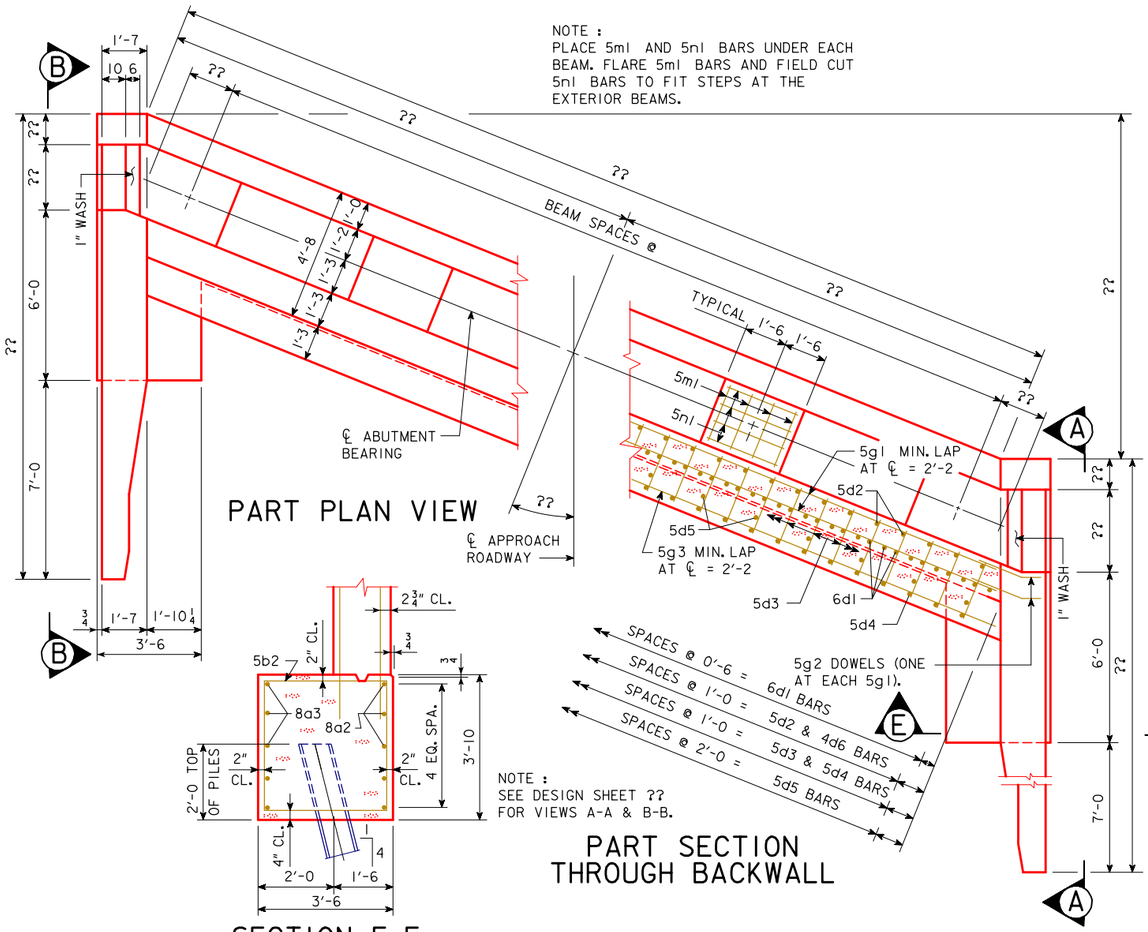
TABLE OF ABUTMENT ELEVATIONS

POINT	ABUTMENT	ABUTMENT
ELEV. A		
BOTT.BACKWALL ELEV.		
BOTT. FTG. ELEV.		

TABLE OF ABUTMENT STEPS

STEP	ABUTMENT	ABUTMENT
a		

NOTE :
PLACE 5m1 AND 5n1 BARS UNDER EACH BEAM. FLARE 5m1 BARS AND FIELD CUT 5n1 BARS TO FIT STEPS AT THE EXTERIOR BEAMS.

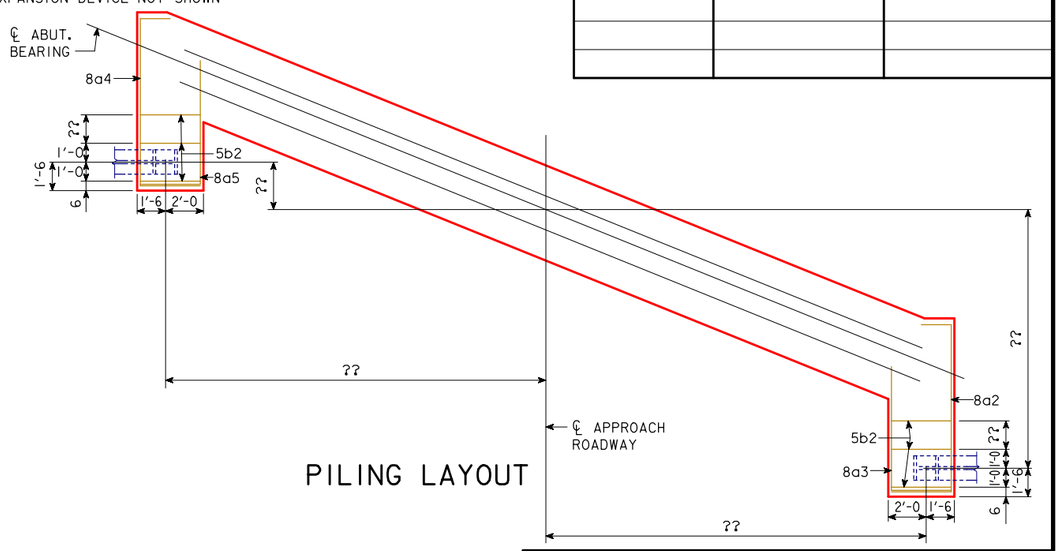


PART PLAN VIEW

PART SECTION THROUGH BACKWALL

SECTION E-E

NOTE :
SEE DESIGN SHEET ?? FOR VIEWS A-A & B-B.



PILING LAYOUT

NOTE :
DIMENSIONS SHOWN ON PILING LAYOUT ARE AT BOTTOM OF FOOTING. BATTER PILES IN THE DIRECTION SHOWN.
____ - HP10x42 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT FOOTING DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C" OR "D" BEAMS - STUB ABUT. DETAILS - (L.A.) 15°01' - 30° SKEW	STANDARD SHEET 2098	COUNTY	PROJECT NUMBER	SHEET NUMBER

REVISED 03-08 - ABUTMENT WING SHAPE CHANGED.
REVISED 07-2018: ADDED 10" DIMENSION TO 5d5 PAVING NOTCH DOWEL PLACEMENT.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2098 - THIS SHEET REDRAWN 5-23-91.

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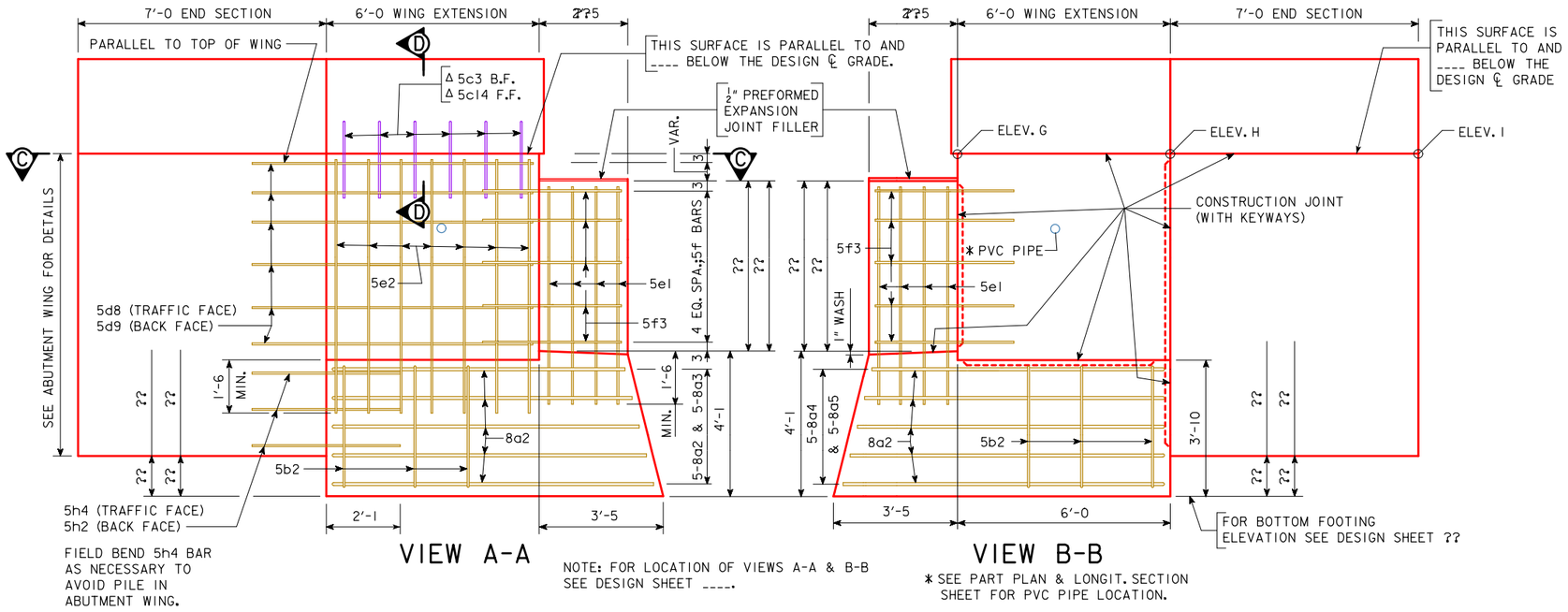
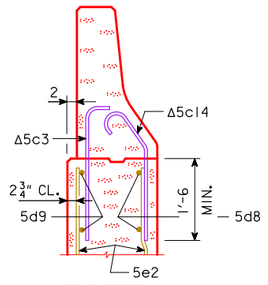
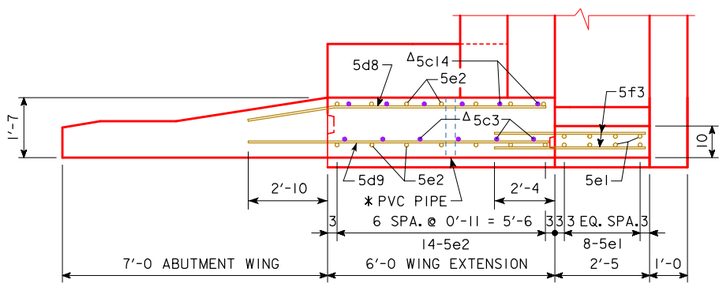
BENCH MARK:





PART SECTION D-D



SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

TABLE OF WINGWALL ELEVATIONS

LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - 0° SKEW	STANDARD SHEET 2099	COUNTY	PROJECT NUMBER	SHEET NUMBER

REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2099 - THIS SHEET REDRAWN 9-8-88.

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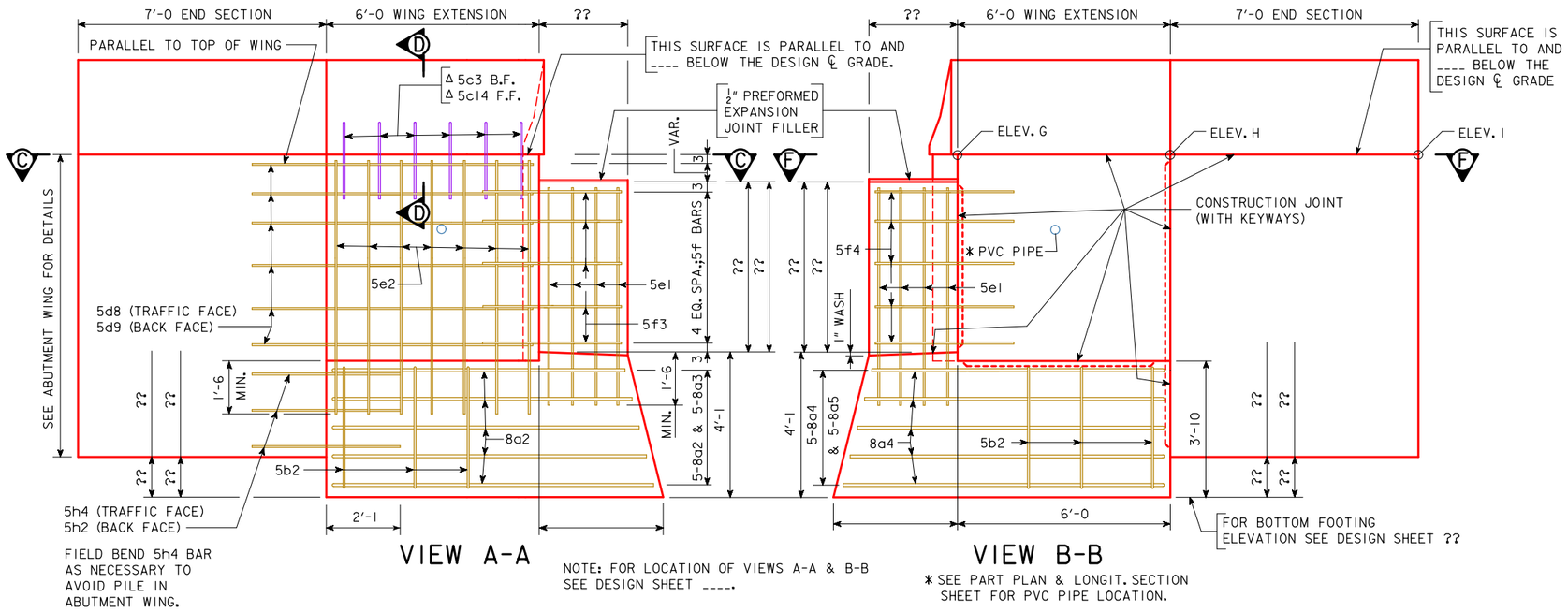
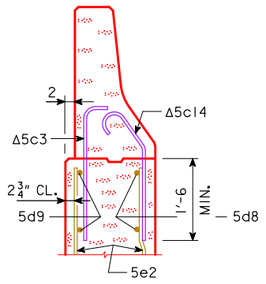
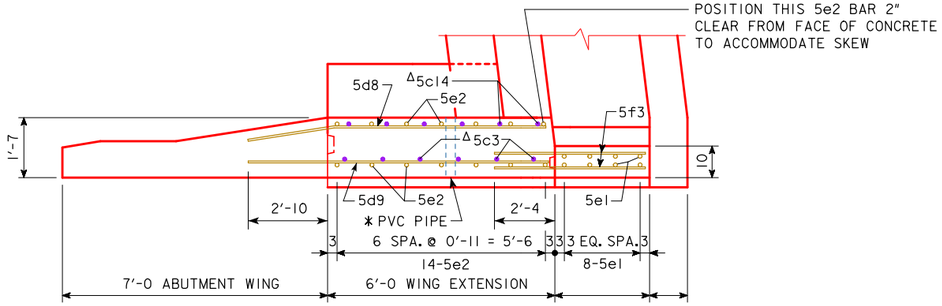
BENCH MARK:





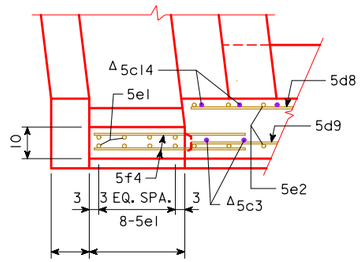
PART SECTION D-D



SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.



PART SECTION F-F

TABLE OF WINGWALL ELEVATIONS

LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - (R.A.) 0°01' - 7°30' SKEW	STANDARD SHEET 2100	COUNTY	PROJECT NUMBER	SHEET NUMBER

REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2100 - THIS SHEET REDRAWN 9-8-88.

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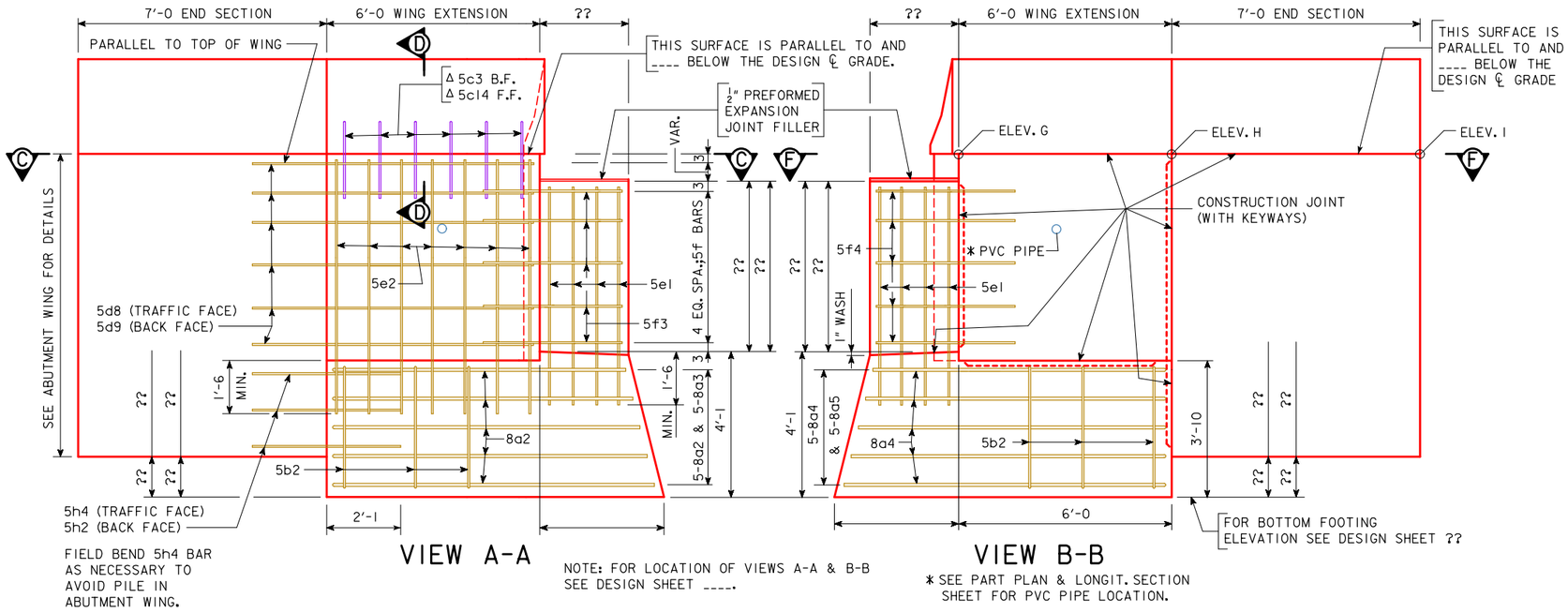
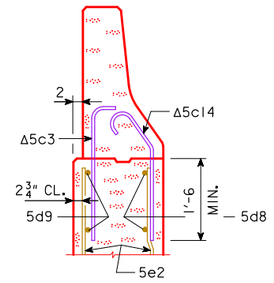


VIEW A-A

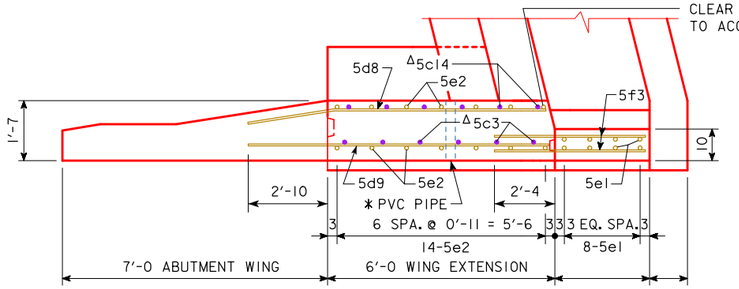
VIEW B-B

NOTE: FOR LOCATION OF VIEWS A-A & B-B SEE DESIGN SHEET ____.

* SEE PART PLAN & LONGIT. SECTION SHEET FOR PVC PIPE LOCATION.

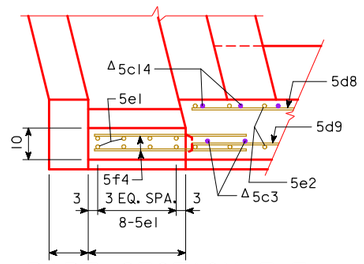


PART SECTION D-D



SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.



PART SECTION F-F

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

TABLE OF WINGWALL ELEVATIONS

LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - (R.A.) 7°31' - 15° SKEW	STANDARD SHEET 2101	COUNTY	PROJECT NUMBER	SHEET NUMBER

REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2101 - THIS SHEET REDRAWN 9-8-88.

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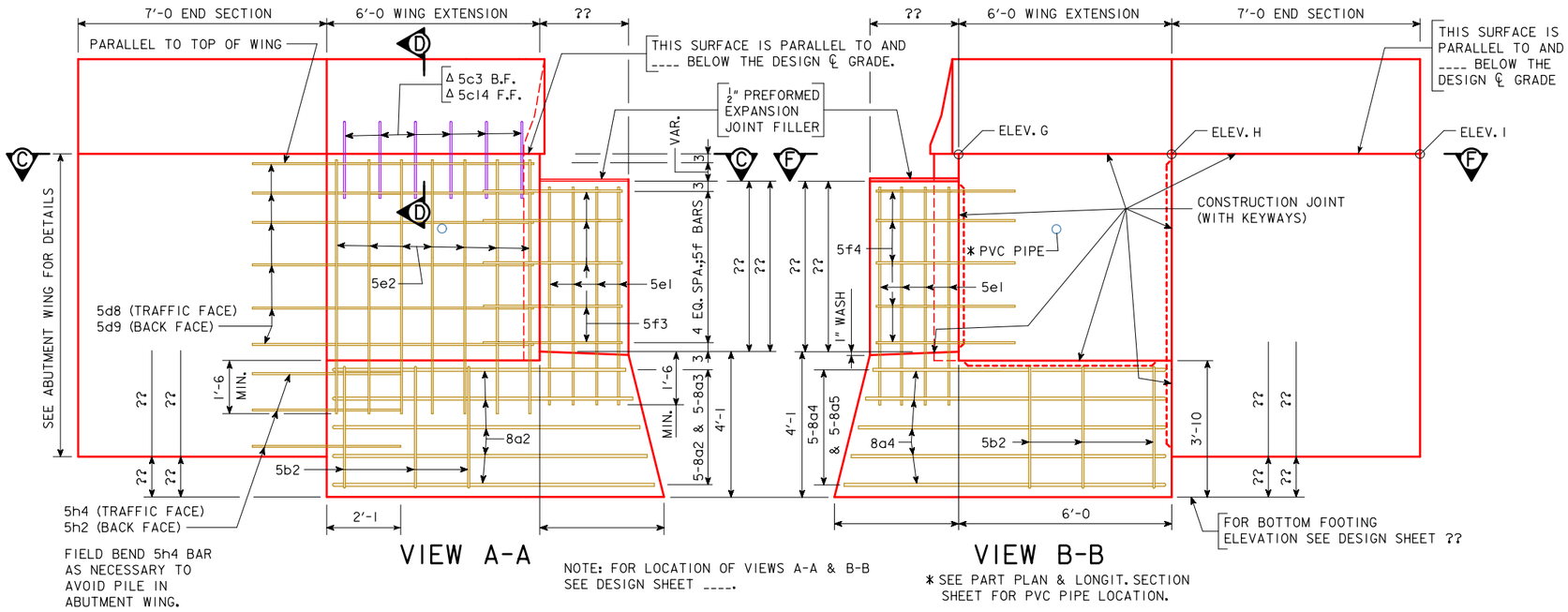
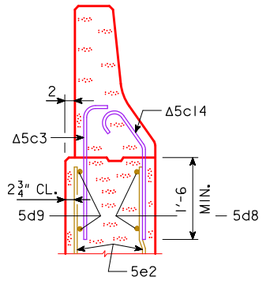
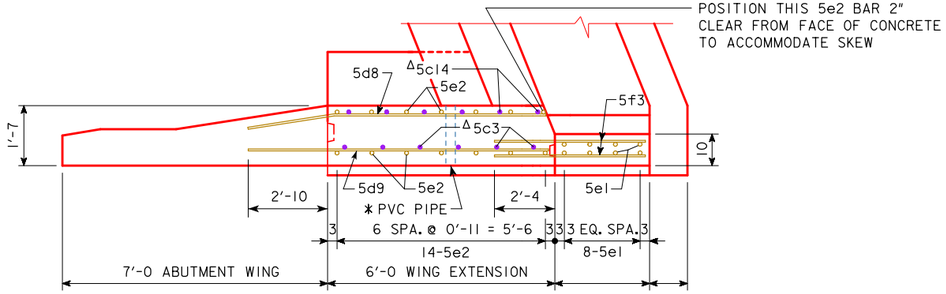




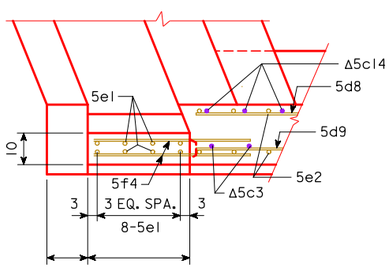
PART SECTION D-D



SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.



PART SECTION F-F

TABLE OF WINGWALL ELEVATIONS			
LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - (R.A.) 15°01' - 30° SKEW	STANDARD SHEET 2102	COUNTY	PROJECT NUMBER	SHEET NUMBER

REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2102 - THIS SHEET REDRAWN 9-8-88.

7/31/2018 9:33:49 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 2102 11x17_pdf.pltcfg

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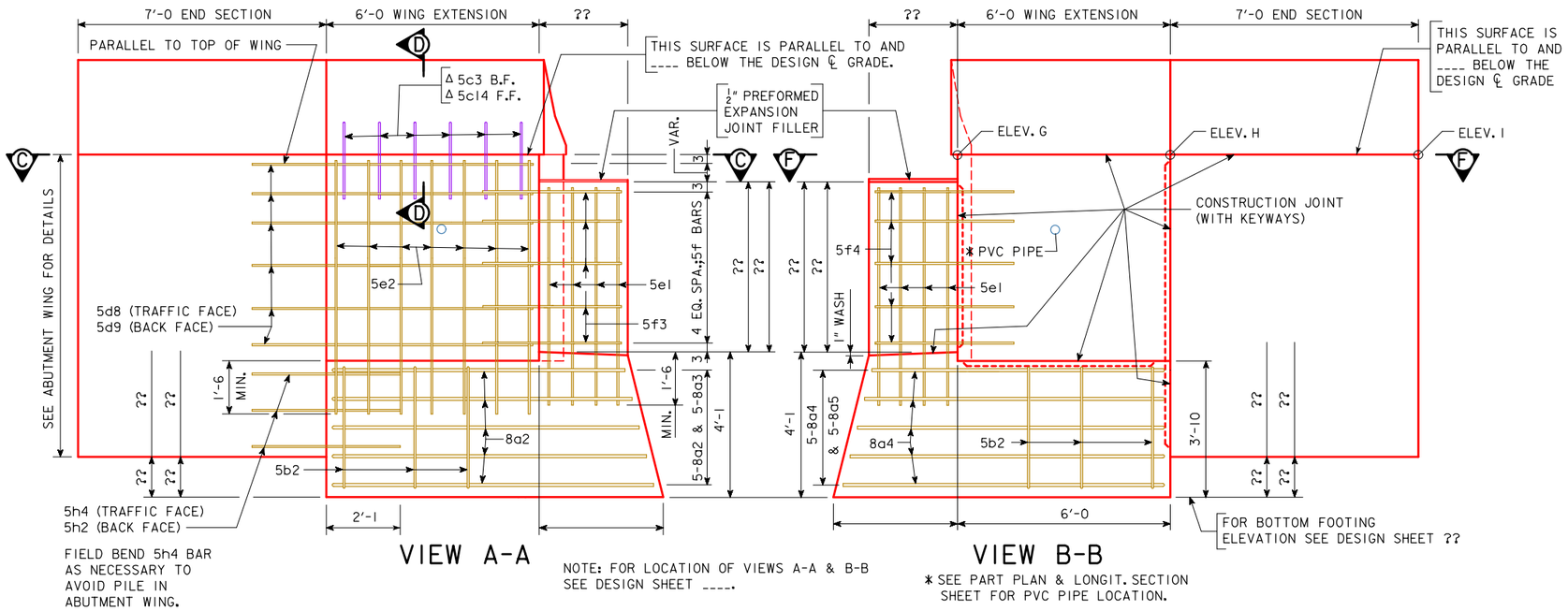
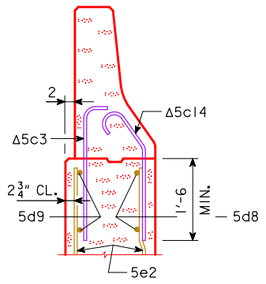
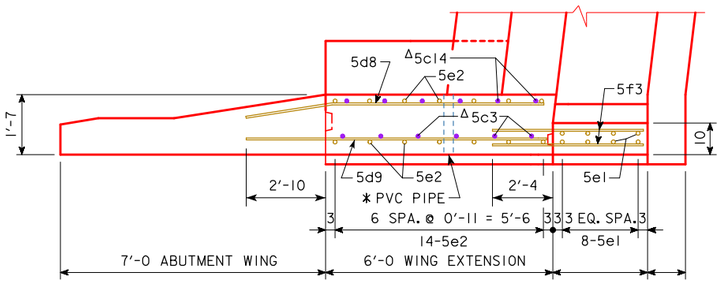




PART SECTION D-D

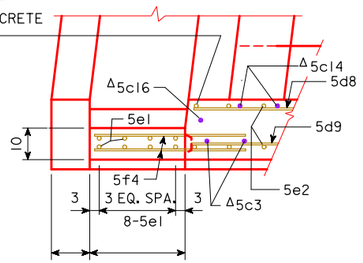


SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

POSITION THIS 5e2 BAR 2" CLEAR FROM FACE OF CONCRETE TO ACCOMMODATE SKEW



PART SECTION F-F

TABLE OF WINGWALL ELEVATIONS

LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2103 - THIS SHEET REDRAWN 9-8-88.

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - (L.A.) 0°01' - 7°30' SKEW	STANDARD SHEET 2103	COUNTY	PROJECT NUMBER	SHEET NUMBER

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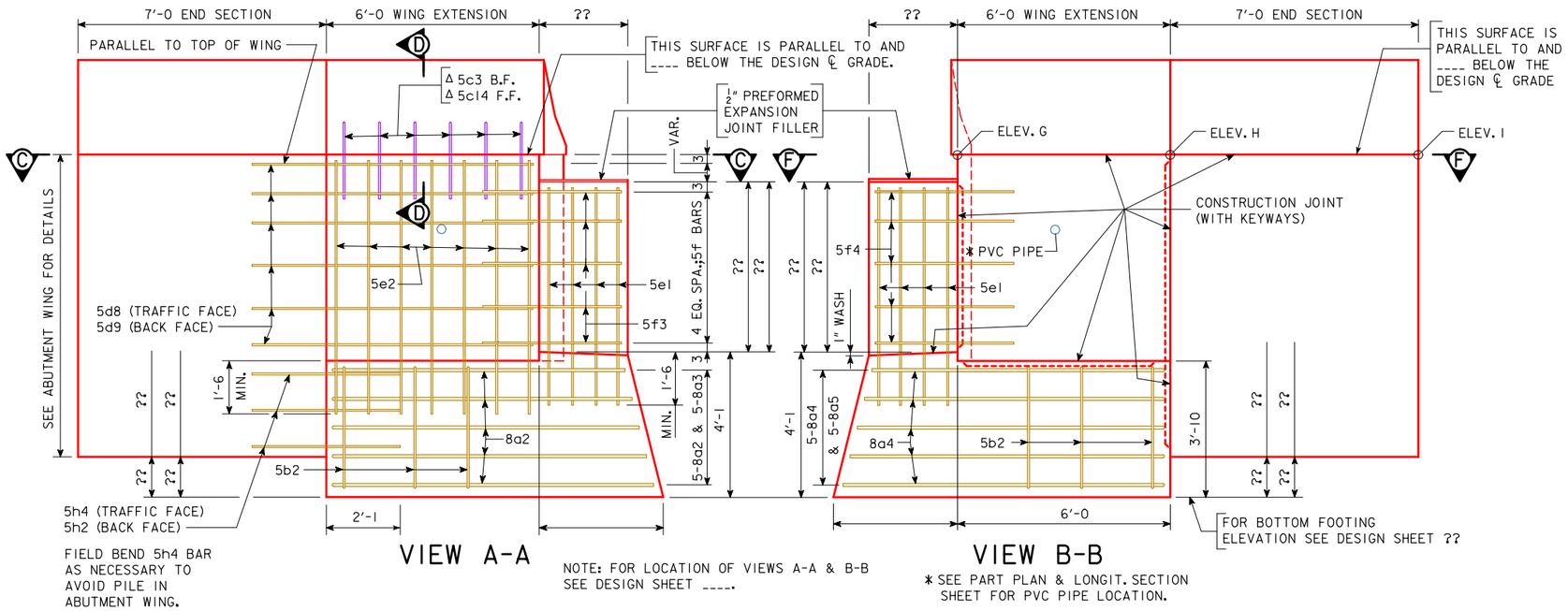
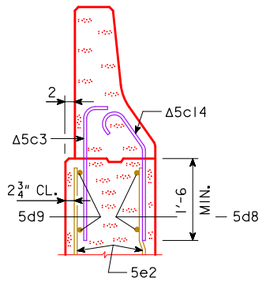
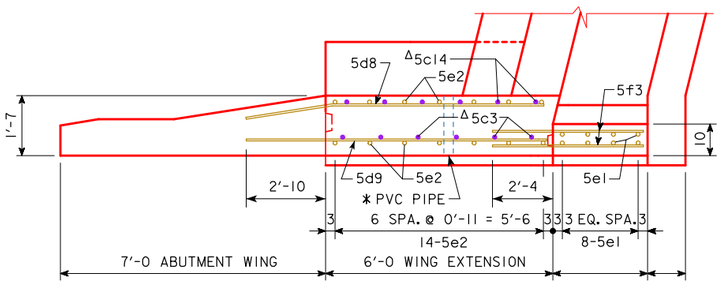




PART SECTION D-D

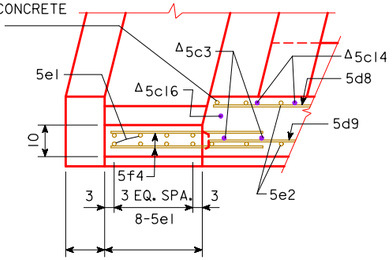


SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

POSITION THIS 5e2 BAR 2" CLEAR FROM FACE OF CONCRETE TO ACCOMMODATE SKEW



PART SECTION F-F

TABLE OF WINGWALL ELEVATIONS

LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

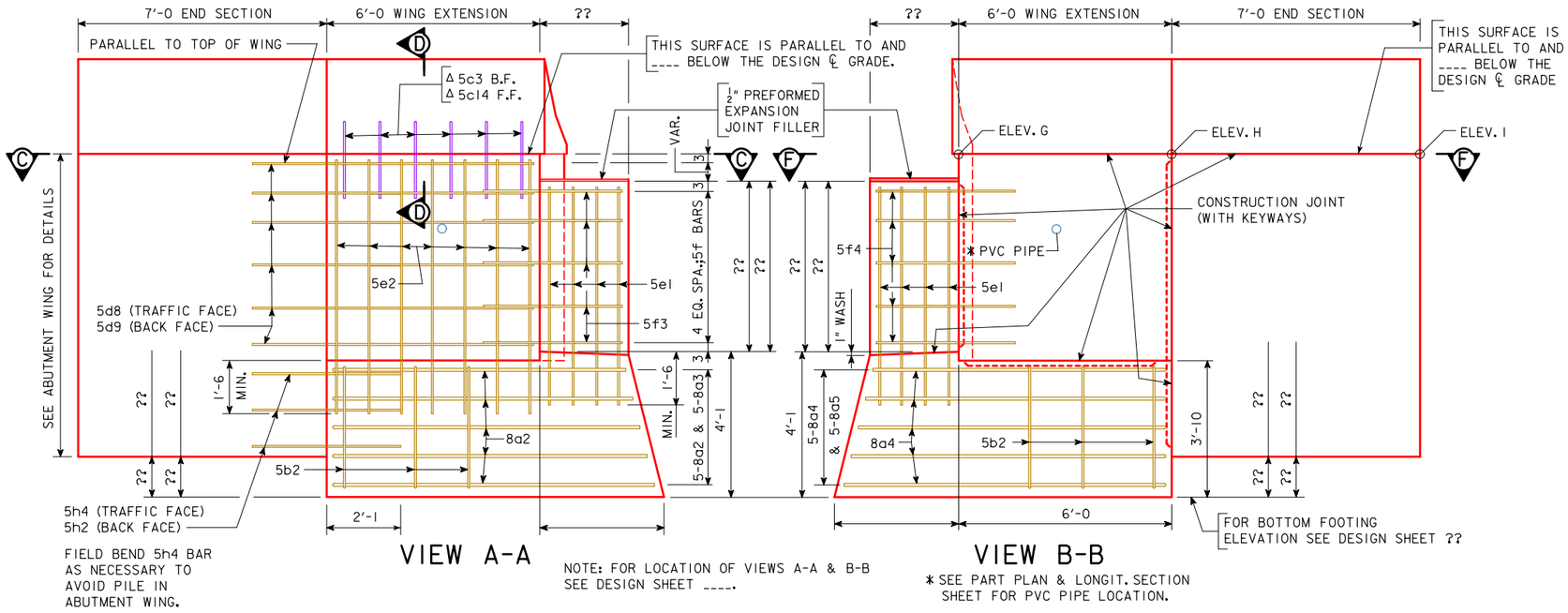
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

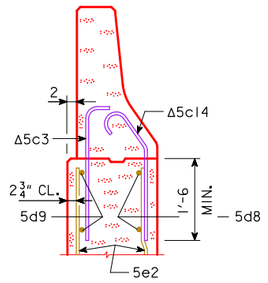
REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2104 - THIS SHEET REDRAWN 9-8-88.

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - (L.A.) 7°31'-15° SKEW	STANDARD SHEET 2104	COUNTY	PROJECT NUMBER	SHEET NUMBER

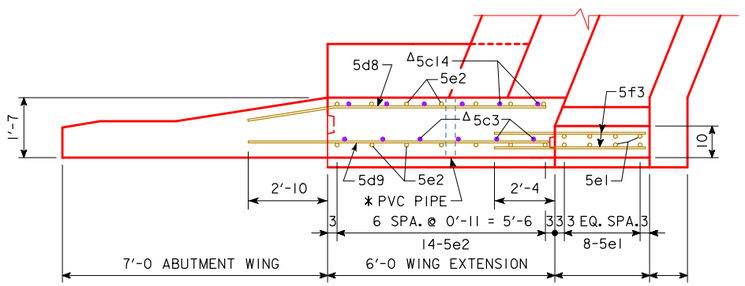
7/31/2018 9:33:51 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 2104 11x17_pdf.pltcfg

BENCH MARK:





PART SECTION D-D

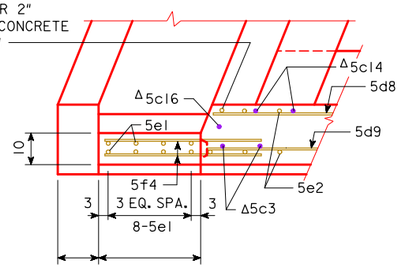


SECTION C-C

NOTE: BARRIER RAIL NOT SHOWN.

Δ NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

POSITION THIS 5e2 BAR 2" CLEAR FROM FACE OF CONCRETE TO ACCOMMODATE SKEW



PART SECTION F-F

TABLE OF WINGWALL ELEVATIONS

LOCATION	ELEV. G	ELEV. H	ELEV. I

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C" OR "D" BEAM STUB ABUT. DETAILS - (L.A.) 15°01'-30° SKEW	STANDARD SHEET 2105	COUNTY	PROJECT NUMBER	SHEET NUMBER

REVISED 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6 INTO THE ABUTMENT FOOTING.
ENGLISHSTUBABUTMENTBRIDGES.DGN 2105 - THIS SHEET REDRAWN 9-8-88.

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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 2x6's.

THE PORTION OF THE BACKWALL CONTAINING THE ABUTMENT ANCHORAGE OF THE EXPANSION DEVICE IS TO BE PLACED AFTER THE BRIDGE DECK IS PLACED.

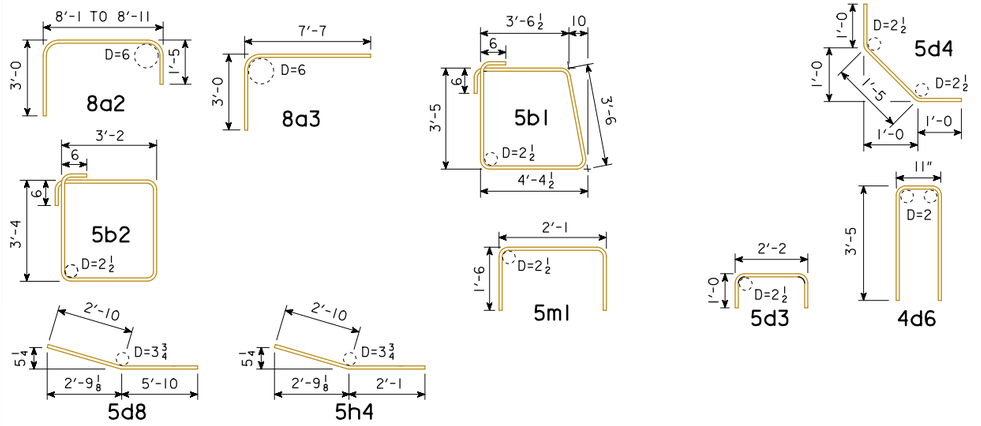
CONCRETE SEALER IS TO BE APPLIED TO THE ABUTMENT BRIDGE SEAT IN ACCORDANCE WITH THE CURRENT IOWA D.O.T. STANDARD SPECIFICATIONS.

THE COST OF PREFORMED EXPANSION JOINT FILLER, 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 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.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIA

REINFORCING BAR LIST - ONE ABUTMENT

	BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
EPOXY COATED BARS	8a1	FOOTING LONGITUDINAL				
	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.				
	5d2	BACKWALL VERTICAL F.F.				
	5d3	PAVING NOTCH			4'-2	
	5d4	PAVING NOTCH			3'-5	
	4d6	BACKWALL VERTICAL HOOP			7'-9	
	5d8	WING EXTENSION FF HORIZONTAL		12	8'-8	108
	5d9	WING EXTENSION BF HORIZONTAL		12	8'-8	108
	5e1	MASKWALL VERTICAL		16		
	5e2	WING EXTENSION VERTICAL		28		
	5f3	MASKWALL HORIZONTAL		20	4'-3	89
	5g1	BACKWALL LONGITUDINAL				
	5g2	BACKWALL DOWELS		28	4'-5	129
	5g3	PAVING NOTCH LONGITUDINAL				
	5h2	WING TO FOOTING ANCHOR BFH		6	4'-11	31
	5h4	WING TO FOOTING ANCHOR FFH		6	4'-11	31
	5m1	BEAM STEPS TRANSVERSE			5'-1	
	5n1	BEAM STEPS LONGITUDINAL			2'-8	
		REINFORCING STEEL - EPOXY COATED - TOTAL (LBS.)				
S.S. BARS	5d5	PAVING NOTCH DOWELS (STAINLESS STEEL)			3'-2	
		STAINLESS STEEL - TOTAL (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 (C.Y.)		

NOTE:
CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

CORRECTION 04-14 - REMOVED ESTIMATED QUANTITIES TABLE. REMOVED WING QUANTITIES. NOTED QUANTITIES ARE TO BE SHOWN ON SUMMARY QUANTITIES SHEET.
REVISED 07-2018: CHANGED BAR 5d5 PAVING NOTCH DOWEL LENGTH TO 3'-2 (WAS 3'-6).
ENGLISHSTUBABUTMENTBRIDGES.DGN - 2106 - THIS SHEET ISSUED 03-08.

ABUTMENT QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C or D" BEAM STUB ABUT. BAR LIST - 0° SKEW	STANDARD SHEET 2106		COUNTY	PROJECT NUMBER	SHEET NUMBER

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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 2x6's.

THE PORTION OF THE BACKWALL CONTAINING THE ABUTMENT ANCHORAGE OF THE EXPANSION DEVICE IS TO BE PLACED AFTER THE BRIDGE DECK IS PLACED.

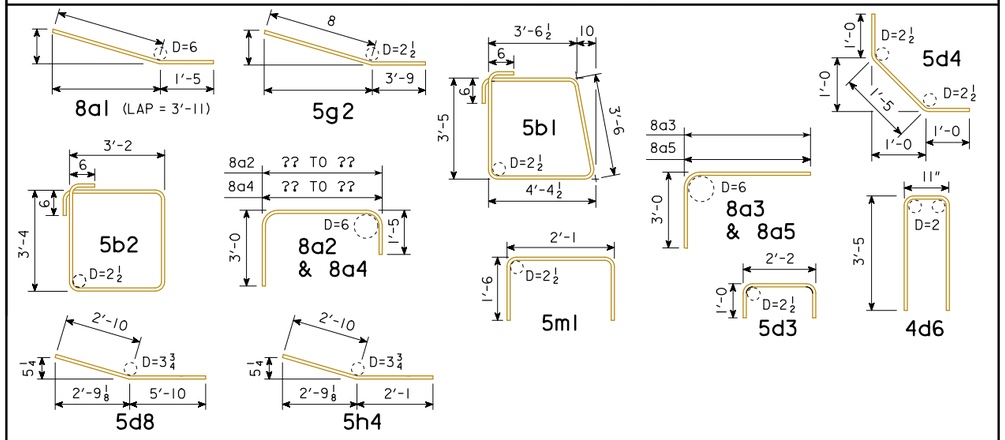
CONCRETE SEALER IS TO BE APPLIED TO THE ABUTMENT BRIDGE SEAT IN ACCORDANCE WITH THE CURRENT IOWA D.O.T. STANDARD SPECIFICATIONS.

THE COST OF PREFORMED EXPANSION JOINT FILLER, 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 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.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIA

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 (C.Y.)		

NOTE:
CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

REINFORCING BAR LIST - ONE ABUTMENT

	BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
EPOXY COATED BARS	8a1	FOOTING LONGITUDINAL	—	26		
	8a2	WING FOOTING	⌐	5	VARIES	
	8a3	WING FOOTING	⌐	5		
	8a4	WING FOOTING	⌐	5	VARIES	
	8a5	WING FOOTING	⌐	5		
	5b1	FOOTING HOOPS	⊓		15'-10	
	5b2	WING FOOTING HOOPS	⊓	6	14'-0	88
	6d1	BACKWALL VERTICAL B.F.	—			
	5d2	BACKWALL VERTICAL F.F.	—			
	5d3	PAVING NOTCH	⊓		4'-2	
	5d4	PAVING NOTCH	⌐		3'-5	
	4d6	BACKWALL VERTICAL HOOP	⊏		7'-9	
	5d8	WING EXTENSION FF HORIZONTAL	⟋	12	8'-8	108
	5d9	WING EXTENSION BF HORIZONTAL	—	12	8'-8	108
	5e1	MASKWALL VERTICAL	—	16		
	5e2	WING EXTENSION VERTICAL	—	28		
	5f3	MASKWALL HORIZONTAL	—	10		
	5f4	MASKWALL HORIZONTAL	—	10		
	5g1	BACKWALL LONGITUDINAL	—			
	5g2	BACKWALL DOWELS	—	28	4'-5	129
	5g3	PAVING NOTCH LONGITUDINAL	—			
	5h2	WING TO FOOTING ANCHOR BFH	—	6	4'-11	31
	5h4	WING TO FOOTING ANCHOR FFH	⟋	6	4'-11	31
	5m1	BEAM STEPS TRANSVERSE	⌐		5'-1	
	5n1	BEAM STEPS LONGITUDINAL	—		2'-8	
		REINFORCING STEEL - EPOXY COATED - TOTAL (LBS.)				
S.S. BARS	5d5	PAVING NOTCH DOWELS (STAINLESS STEEL)	—		3'-2	
		STAINLESS STEEL - TOTAL (LBS.)				

CORRECTION 04-14 - REMOVED ESTIMATED QUANTITIES TABLE. REMOVED WING QUANTITIES. NOTED QUANTITIES ARE TO BE SHOWN ON SUMMARY QUANTITIES SHEET.
REVISED 07-2018: CHANGED BAR 5d5 PAVING NOTCH DOWEL LENGTH TO 3'-2 (WAS 3'-6).
ENGLISHSTUBABUTMENTBRIDGES.DGN - 2107 - THIS SHEET ISSUED 03-08.

ABUTMENT QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C or D" BEAM STUB ABUT. BAR LIST - 0°01' - 7°30' SKEW	STANDARD SHEET 2107	COUNTY	PROJECT NUMBER	SHEET NUMBER

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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 2x6's.

THE PORTION OF THE BACKWALL CONTAINING THE ABUTMENT ANCHORAGE OF THE EXPANSION DEVICE IS TO BE PLACED AFTER THE BRIDGE DECK IS PLACED.

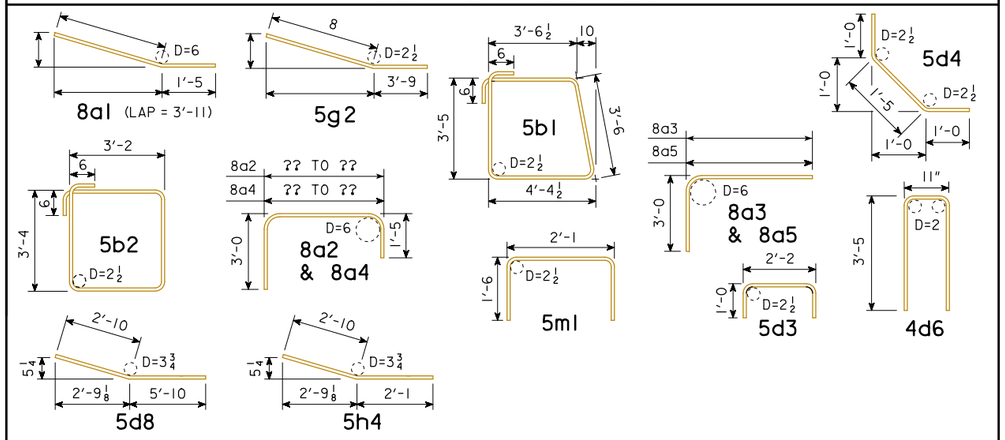
CONCRETE SEALER IS TO BE APPLIED TO THE ABUTMENT BRIDGE SEAT IN ACCORDANCE WITH THE CURRENT IOWA D.O.T. STANDARD SPECIFICATIONS.

THE COST OF PREFORMED EXPANSION JOINT FILLER, 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 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.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIA

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 (C.Y.)		

NOTE:
CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

REINFORCING BAR LIST - ONE ABUTMENT

	BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
EPOXY COATED BARS	8a1	FOOTING LONGITUDINAL	—	26		
	8a2	WING FOOTING	⌐	5	VARIES	
	8a3	WING FOOTING	⌐	5		
	8a4	WING FOOTING	⌐	5	VARIES	
	8a5	WING FOOTING	⌐	5		
	5b1	FOOTING HOOPS	⊓		15'-10	
	5b2	WING FOOTING HOOPS	⊓	6	14'-0	88
	6d1	BACKWALL VERTICAL B.F.	—			
	5d2	BACKWALL VERTICAL F.F.	—			
	5d3	PAVING NOTCH	⌐		4'-2	
	5d4	PAVING NOTCH	⌐		3'-5	
	4d6	BACKWALL VERTICAL HOOP	⊓		7'-9	
	5d8	WING EXTENSION FF HORIZONTAL	⟋	12	8'-8	108
	5d9	WING EXTENSION BF HORIZONTAL	—	12	8'-8	108
	5e1	MASKWALL VERTICAL	—	16		
	5e2	WING EXTENSION VERTICAL	—	28		
	5f3	MASKWALL HORIZONTAL	—	10		
	5f4	MASKWALL HORIZONTAL	—	10		
	5g1	BACKWALL LONGITUDINAL	—			
	5g2	BACKWALL DOWELS	—	28	4'-5	129
	5g3	PAVING NOTCH LONGITUDINAL	—			
	5h2	WING TO FOOTING ANCHOR BFH	—	6	4'-11	31
	5h4	WING TO FOOTING ANCHOR FFH	⟋	6	4'-11	31
	5m1	BEAM STEPS TRANSVERSE	⌐		5'-1	
	5n1	BEAM STEPS LONGITUDINAL	—		2'-8	
		REINFORCING STEEL - EPOXY COATED - TOTAL (LBS.)				
S.S. BARS	5d5	PAVING NOTCH DOWELS (STAINLESS STEEL)	—		3'-2	
		STAINLESS STEEL - TOTAL (LBS.)				

CORRECTION 04-14 - REMOVED ESTIMATED QUANTITIES TABLE. REMOVED WING QUANTITIES. NOTED QUANTITIES ARE TO BE SHOWN ON SUMMARY QUANTITIES SHEET.
REVISED 07-2018: CHANGED BAR 5d5 PAVING NOTCH DOWEL LENGTH TO 3'-2 (WAS 3'-6).
ENGLISHSTUBABUTMENTBRIDGES.DGN - 2108 - THIS SHEET ISSUED 03-08.

ABUTMENT QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	"C or D" BEAM STUB ABUT. BAR LIST - 7°30' - 15° SKEW	STANDARD SHEET 2108	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:33:54 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 2108 11x17_pdf.pltcfg

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 2x6's.

THE PORTION OF THE BACKWALL CONTAINING THE ABUTMENT ANCHORAGE OF THE EXPANSION DEVICE IS TO BE PLACED AFTER THE BRIDGE DECK IS PLACED.

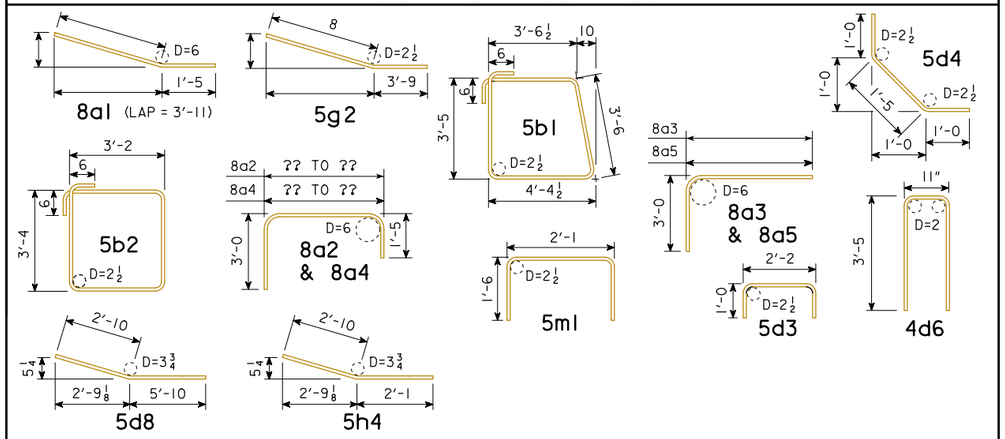
CONCRETE SEALER IS TO BE APPLIED TO THE ABUTMENT BRIDGE SEAT IN ACCORDANCE WITH THE CURRENT IOWA D.O.T. STANDARD SPECIFICATIONS.

THE COST OF PREFORMED EXPANSION JOINT FILLER, 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 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.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIA

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 (C.Y.)		

NOTE:
CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

REINFORCING BAR LIST - ONE ABUTMENT

	BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
EPOXY COATED BARS	8a1	FOOTING LONGITUDINAL		26		
	8a2	WING FOOTING		5	VARIES	
	8a3	WING FOOTING		5		
	8a4	WING FOOTING		5	VARIES	
	8a5	WING FOOTING		5		
	5b1	FOOTING HOOPS			15'-10	
	5b2	WING FOOTING HOOPS		6	14'-0	88
	6d1	BACKWALL VERTICAL B.F.				
	5d2	BACKWALL VERTICAL F.F.				
	5d3	PAVING NOTCH			4'-2	
	5d4	PAVING NOTCH			3'-5	
	4d6	BACKWALL VERTICAL HOOP			7'-9	
	5d8	WING EXTENSION FF HORIZONTAL		12	8'-8	108
	5d9	WING EXTENSION BF HORIZONTAL		12	8'-8	108
	5e1	MASKWALL VERTICAL		16		
	5e2	WING EXTENSION VERTICAL		28		
	5f3	MASKWALL HORIZONTAL		10		
	5f4	MASKWALL HORIZONTAL		10		
	5g1	BACKWALL LONGITUDINAL				
	5g2	BACKWALL DOWELS		28	4'-5	129
	5g3	PAVING NOTCH LONGITUDINAL				
	5h2	WING TO FOOTING ANCHOR BFH		6	4'-11	31
	5h4	WING TO FOOTING ANCHOR FFH		6	4'-11	31
	5m1	BEAM STEPS TRANSVERSE			5'-1	
	5n1	BEAM STEPS LONGITUDINAL			2'-8	
		REINFORCING STEEL - EPOXY COATED - TOTAL (LBS.)				
S.S. BARS	5d5	PAVING NOTCH DOWELS (STAINLESS STEEL)			3'-2	
		STAINLESS STEEL - TOTAL (LBS.)				

ABUTMENT QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

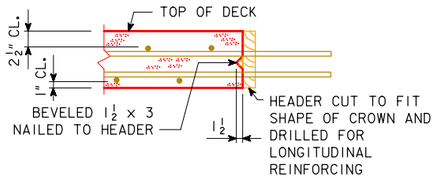
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

CORRECTION 04-14 - REMOVED ESTIMATED QUANTITIES TABLE. REMOVED WING QUANTITIES. NOTED QUANTITIES ARE TO BE SHOWN ON SUMMARY QUANTITIES SHEET.
REVISED 07-2018: CHANGED BAR 5d5 PAVING NOTCH DOWEL LENGTH TO 3'-2 (WAS 3'-6).
ENGLISHSTUBABUTMENTBRIDGES.DGN - 2109 - THIS SHEET ISSUED 03-08.

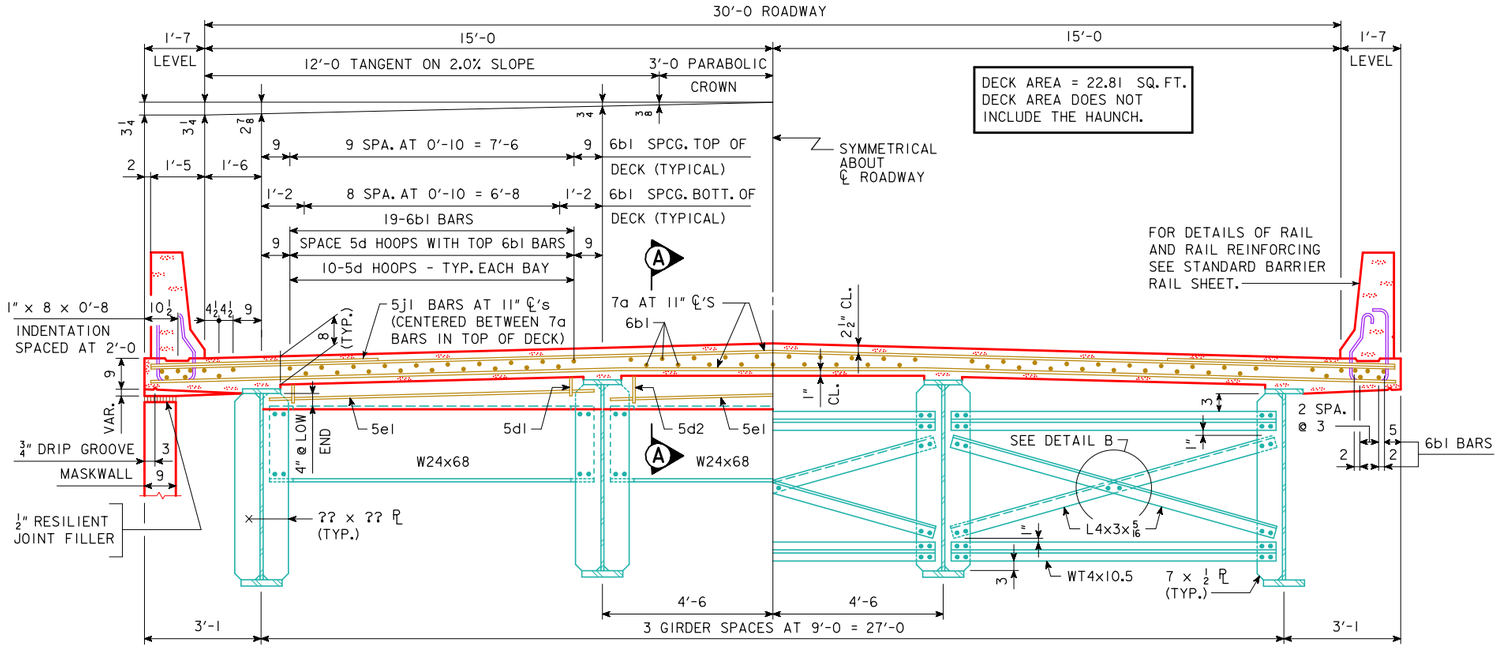
DESIGN TEAM	"C or D" BEAM STUB ABUT. BAR LIST - 15°01' - 30' SKEW	STANDARD SHEET 2109	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:33:55 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 2109 11x17_pdf.pltcfg

REVISED 07-2018: REMOVED LAST PART OF NOTE IN THE FIRST SENTENCE OF THE "TYP. DECK & HAUNCH DETAIL" (WAS "AS SHOWN ON THE "THEORETICAL CONCRETE HAUNCH DIAGRAM" SHOWN ELSEWHERE ON THESE PLANS."). CHANGED NOTE STATING " 1/2" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
REVISED 08-2018: ADDED "REFER TO HAUNCH DETAILS SHOWN ELSEWHERE ON THESE PLANS." TO TYP. DECK AND HAUNCH DETAIL NOTES.
ENGLISHSTUBBRIDGES.DGN - 4305 STANDARD LRFD DESIGN ISSUED ON 04-07.



TRANSVERSE DECK CONSTRUCTION JOINT



HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR INTERMEDIATE DIAPHRAGM

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES ½" 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 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

TOP TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 2½" CLEAR BELOW TOP OF DECK. BOTTOM TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 1" 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"Φ AND ALL BOLTS ARE TO BE 7/8"Φ.

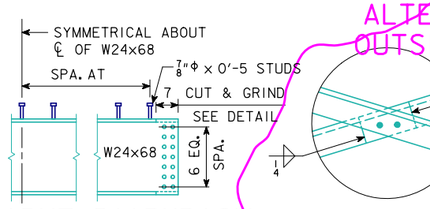
BOTTOM FLANGES ARE TO BE PERPENDICULAR TO WEBS AT THE REACTION POINTS.

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 1/16" IN THICKNESS AND SINGLE PLATES ARE REQUIRED AT EACH FILL LOCATION. GIRDERS ARE TO BE TRULY SQUARE AT SPLICE POINTS WITH FLANGES PERPENDICULAR TO WEBS.

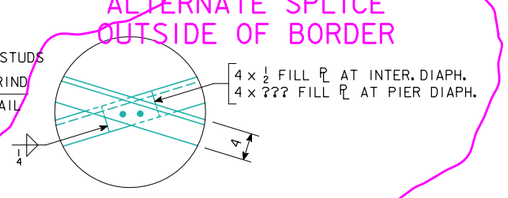
THE DESIGN DRAWINGS INDICATE AWS PREQUALIFIED WELDED JOINTS. ALTERNATE JOINT DETAILS MAY BE SUBMITTED FOR APPROVAL.

MAGNETIC PARTICLE INSPECTION OF WELDS, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, WILL BE REQUIRED.

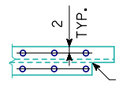
SHOP WELDED FLANGE SPLICES SHALL BE A MINIMUM OF 6 INCHES FROM A STIFFENER, 6 INCHES FROM A WEB SPLICE, AND 4 INCHES FROM A SHEAR CONNECTOR. WEB SPLICES SHALL BE A MINIMUM OF 6 INCHES FROM A STIFFENER. SPLICES SHALL NOT INTERFERE WITH ANY OTHER BRIDGE COMPONENTS. ALL SHOP WELDED BUTT SPLICES SHALL BE SHOWN ON THE SHOP DRAWINGS AND SUBJECT TO APPROVAL BY THE ENGINEER.



ABUT. DIAPHRAGM DETAIL

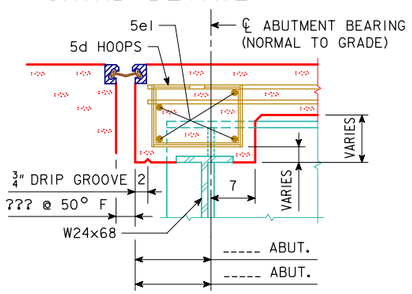


DETAIL B



TYPICAL CUT & GRIND DETAIL

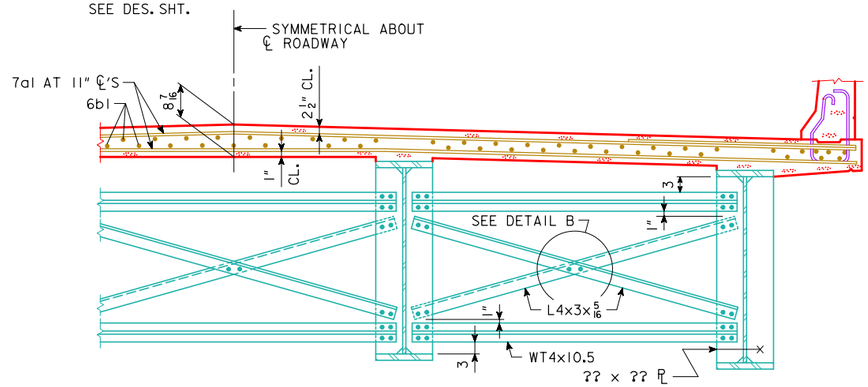
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.



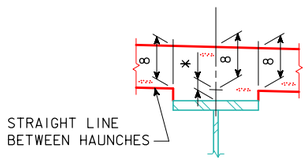
SECTION A-A
(NORMAL TO ABUTMENT)

NOTE: TRANSVERSE DECK REINFORCING NOT SHOWN. PLACE 5d HOOPS PARALLEL TO LONGIT. 6b1 BARS.

NOTE: FOR ADDITIONAL STIFFENER AND WELDING DETAILS SEE DES. SHT.



PART SECTION NEAR PIER



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 ½ INCH. SHEAR STUDS ARE TO HAVE A MINIMUM PENETRATION OF 2 INCHES INTO THE DECK AND BE AT LEAST 2½ INCHES 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: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	30' RDWY. WELDED GIRDER CROSS SECTION - LRFD DESIGN	STANDARD SHEET 4305	COUNTY	PROJECT NUMBER	SHEET NUMBER

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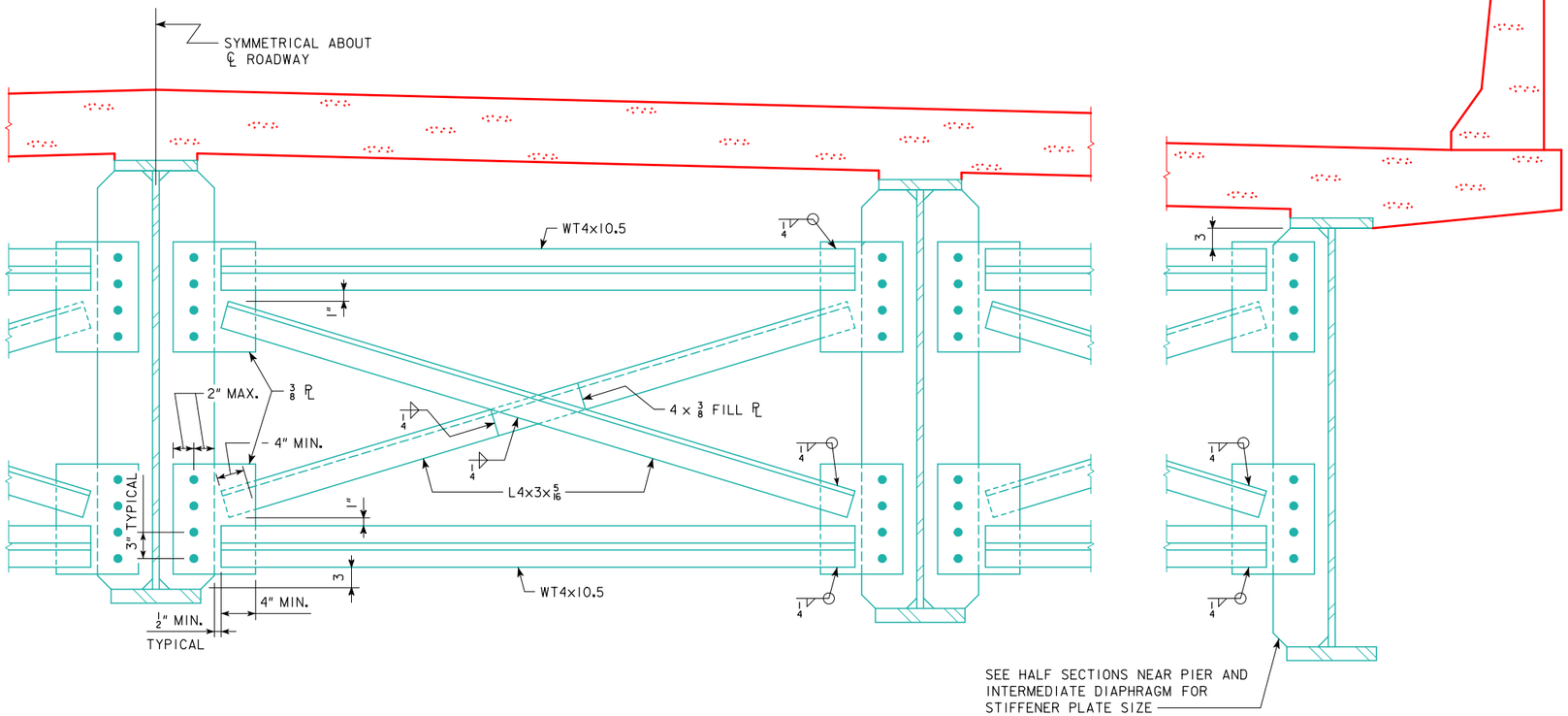


ALTERNATE INTERMEDIATE DIAPHRAGM PART SECTION THRU DECK

(SHOWING ONE DIAPHRAGM BETWEEN GIRDERS)

NOTE:
THIS CANNOT BE WELDED FROM ONE SIDE. CROSS FRAME MUST BE TURNED OVER TO ADD SECOND ANGLE.

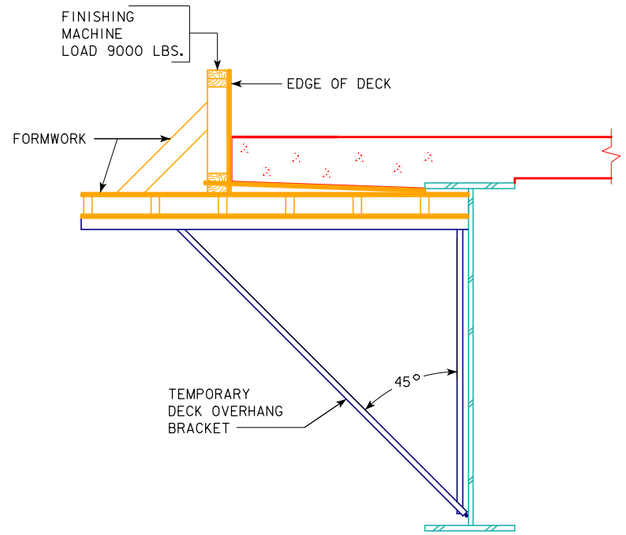
ALTERNATE INTERMEDIATE DIAPHRAGM NOTES:

ALL FIELD CONNECTIONS ARE TO BE BOLTED USING "HIGH TENSILE STRENGTH BOLTS". UNLESS OTHERWISE NOTED, ALL OPEN HOLES ARE TO BE 15/16"Φ AND ALL BOLTS ARE TO BE 7/8"Φ.

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.



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

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

REVISED 08-12 - MAGNETIC PARTICLE INSPECTION OF WELDS NOTE WAS CHANGED.
REVISED 07-2018: FINISHING MACHINE LOAD IN TEMPORARY DECK OVERHANG BRACKET DETAIL CHANGED TO 9000 LBS. (WAS 6000 LBS.).
ENGLISHSTUBBRIDGES.DGN - 4305A THIS SHEET ISSUED 04-07.

DESIGN TEAM	TEMP. OVERHANG BRACKET & ALT. INTERM. DIAPH. FOR WELDED GIRDER BRIDGES - LRFD DESIGN	STANDARD SHEET 4305A	COUNTY	PROJECT NUMBER	SHEET NUMBER

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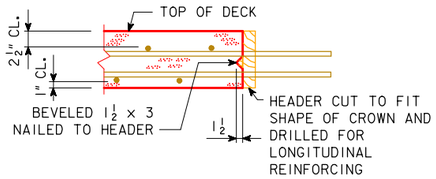
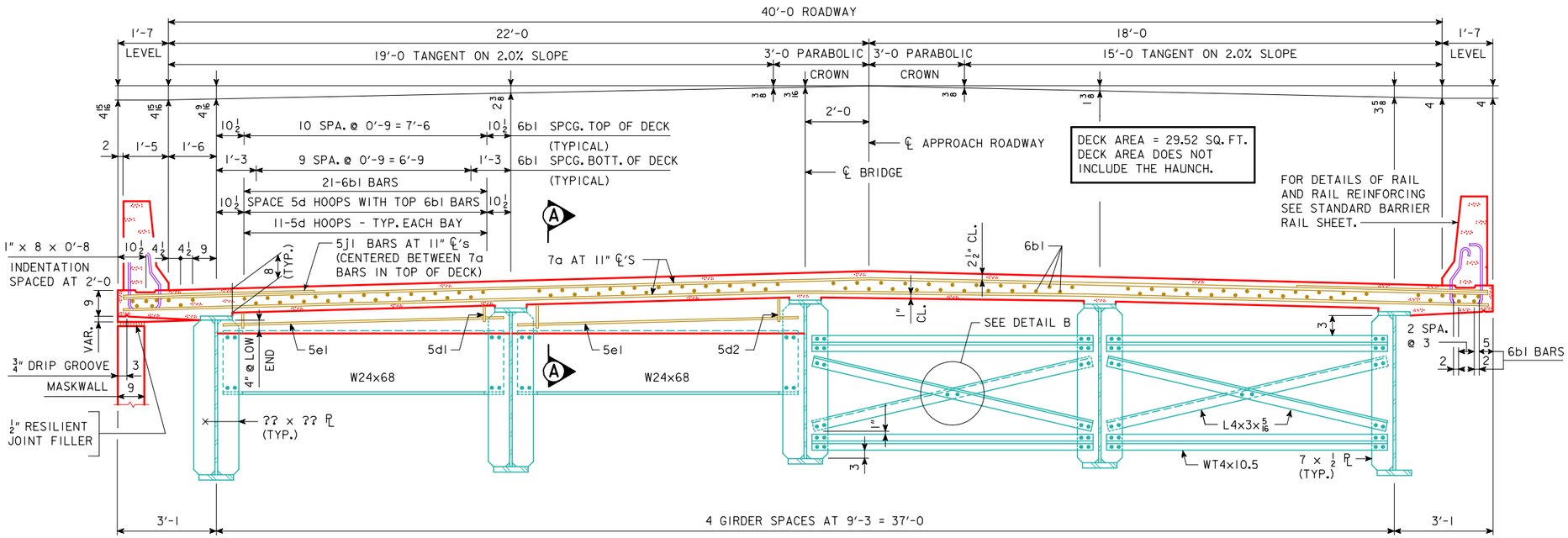


TRANSVERSE DECK CONSTRUCTION JOINT

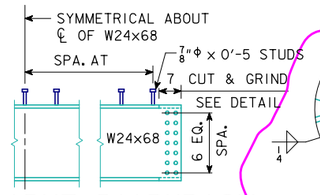


HALF SECTION NEAR ABUTMENT

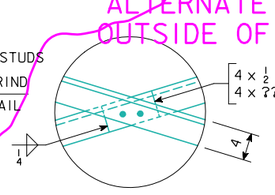
HALF SECTION NEAR INTERMEDIATE DIAPHRAGM

ALTERNATE SPLICE OUTSIDE OF BORDER

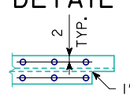
NOTE: FOR ADDITIONAL STIFFENER AND WELDING DETAILS SEE DES. SHT.



ABUT. DIAPHRAGM DETAIL

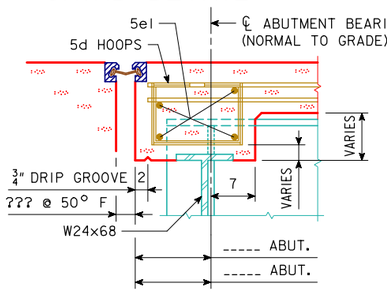


DETAIL B



TYPICAL CUT & GRIND DETAIL

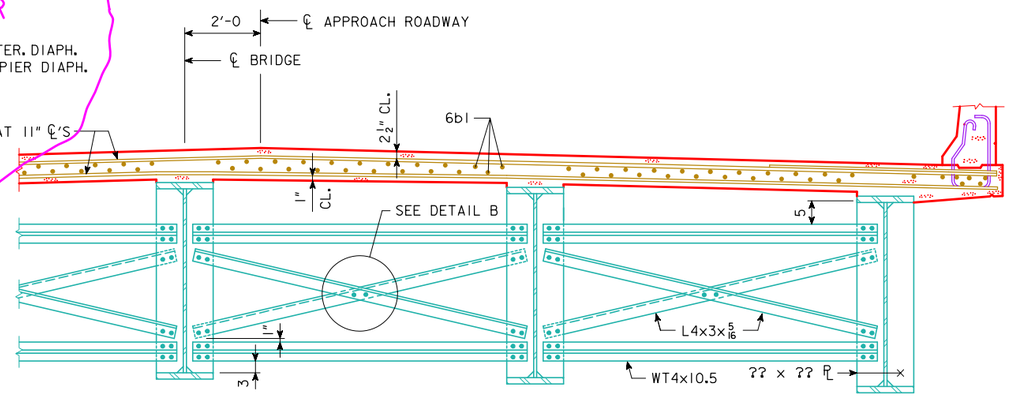
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.



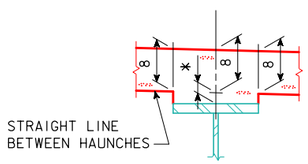
SECTION A-A

(NORMAL TO ABUTMENT)

NOTE: TRANSVERSE DECK REINFORCING NOT SHOWN. PLACE 5d HOOPS PARALLEL TO LONGIT. 6b1 BARS.



PART SECTION NEAR PIER



TYP. DECK & HAUNCH DETAIL

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NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES ½" 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 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

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TRANSVERSE DECK REINFORCING MAY BE SPLICED WITH ONE LAP LOCATED AS FOLLOWS:

TOP BAR - LAP MIDWAY BETWEEN BEAMS (MIN. LAP = 3'-3).
BOTTOM BARS - LAP OVER BEAMS (MIN. LAP = 3'-3).

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 STRENGTH BOLTS". UNLESS OTHERWISE NOTED, ALL OPEN HOLES ARE TO BE 15/16"Φ AND ALL BOLTS ARE TO BE 7/8"Φ.

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 1/16" IN 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, 6 INCHES FROM A WEB SPLICE, AND 4 INCHES FROM A SHEAR CONNECTOR. WEB 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.

REVISED 07-2018: REMOVED LAST PART OF NOTE IN THE FIRST SENTENCE OF THE "TYP. DECK & HAUNCH DETAIL" (WAS "AS SHOWN ON THE "THEORETICAL CONCRETE HAUNCH DIAGRAM" SHOWN ELSEWHERE ON THESE PLANS."). CHANGED NOTE STATING " ½" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
REVISED 08-2018: ADDED "REFER TO HAUNCH DETAILS SHOWN ELSEWHERE ON THESE PLANS." TO TYP. DECK AND HAUNCH DETAIL NOTES.
ENGLISHSTUBBRIDGES.DGN - 4308 STANDARD LRFD DESIGN ISSUED ON 04-07.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	40' RDWY. WELDED GIRDER CROSS SECTION - LRFD DESIGN	STANDARD SHEET 4308		COUNTY	PROJECT NUMBER	SHEET NUMBER

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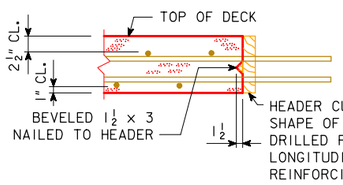
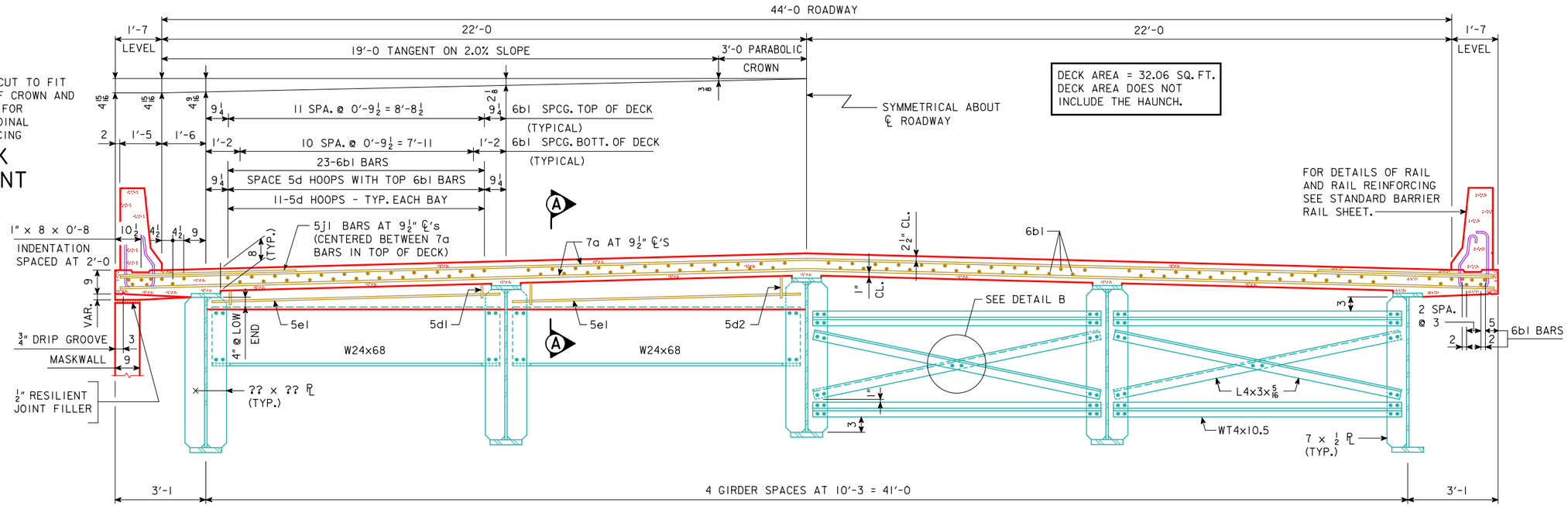
REVISED 07-2018: REMOVED LAST PART OF NOTE IN THE FIRST SENTENCE OF THE "TYP. DECK & HAUNCH DETAIL" (WAS "AS SHOWN ON THE "THEORETICAL CONCRETE HAUNCH DIAGRAM" SHOWN ELSEWHERE ON THESE PLANS."). CHANGED NOTE STATING " $\frac{1}{2}$" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
REVISED 08-2018: ADDED "REFER TO HAUNCH DETAILS SHOWN ELSEWHERE ON THESE PLANS." TO TYP. DECK AND HAUNCH DETAIL NOTES.
ENGLISHSTUBBRIDGES.DGN - 4309 STANDARD LRFD DESIGN ISSUED ON 04-07.



TRANSVERSE DECK CONSTRUCTION JOINT



HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR INTERMEDIATE DIAPHRAGM

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES $\frac{1}{2}$" 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 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

TOP TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND $2\frac{1}{2}$" CLEAR BELOW TOP OF DECK. BOTTOM TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 1" 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, 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 = 3'-3).
BOTTOM BARS - LAP OVER BEAMS (MIN. LAP = 3'-3).

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 STRENGTH BOLTS". UNLESS OTHERWISE NOTED, ALL OPEN HOLES ARE TO BE $\frac{15}{16}$"Φ AND ALL BOLTS ARE TO BE $\frac{7}{8}$"Φ.

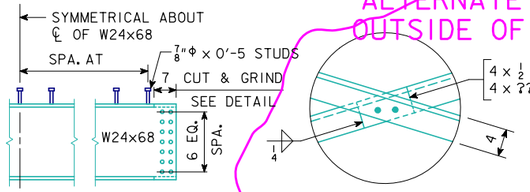
BOTTOM FLANGES ARE TO BE PERPENDICULAR TO WEBS AT THE REACTION POINTS.

FILL ℄ 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 $\frac{1}{16}$" IN 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, 6 INCHES FROM A WEB SPLICE, AND 4 INCHES FROM A SHEAR CONNECTOR. WEB 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.

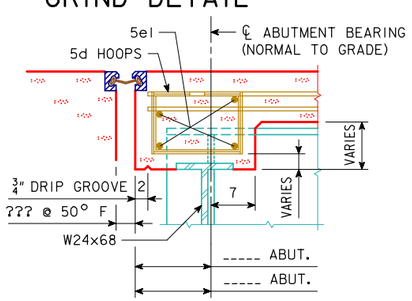


ABUT. DIAPHRAGM DETAIL

DETAIL B

TYPICAL CUT & GRIND DETAIL

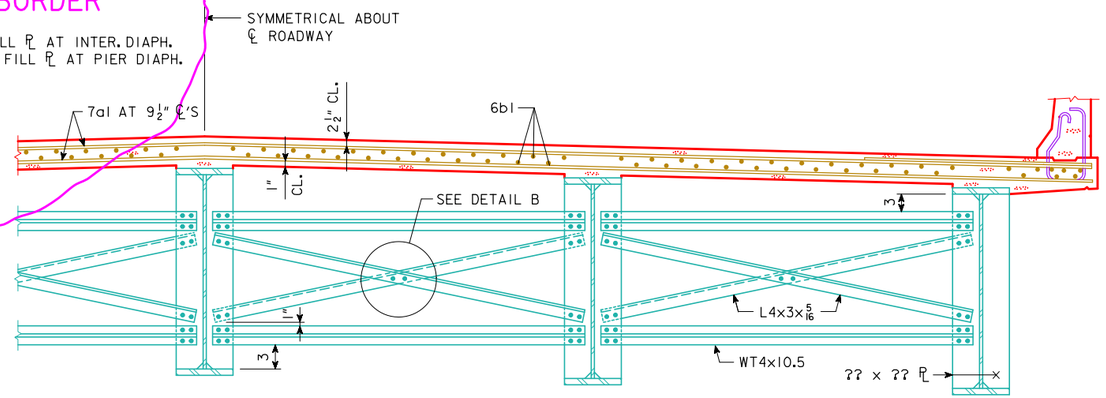
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.



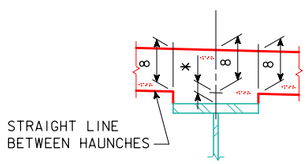
SECTION A-A

(NORMAL TO ABUTMENT)

NOTE: TRANSVERSE DECK REINFORCING NOT SHOWN. PLACE 5d HOOPS PARALLEL TO LONGIT. 6b1 BARS.



PART SECTION NEAR PIER



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 ½ INCH. SHEAR STUDS ARE TO HAVE A MINIMUM PENETRATION OF 2 INCHES INTO THE DECK AND BE AT LEAST $2\frac{1}{2}$ INCHES 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: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

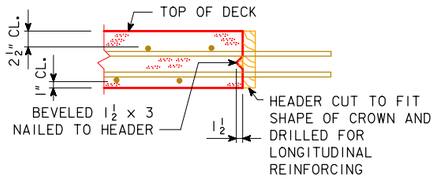
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

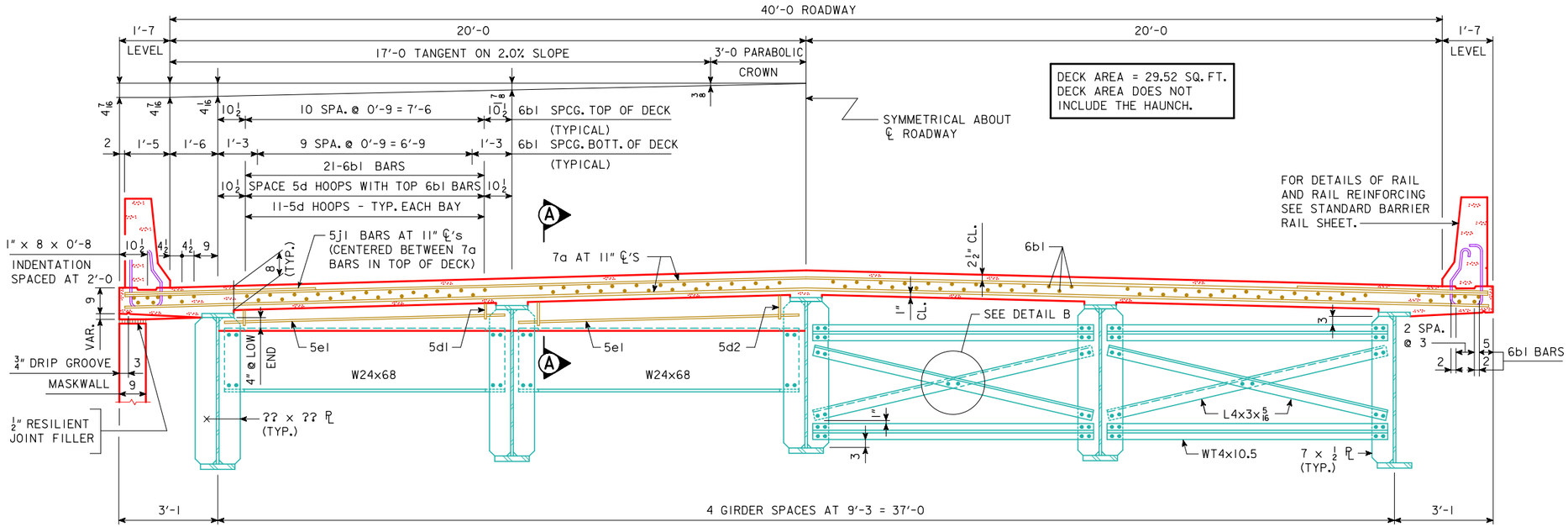
DESIGN TEAM	44' RDWY. WELDED GIRDER CROSS SECTION - LRFD DESIGN	STANDARD SHEET 4309	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:33:58 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4309 11x17_pdf.pltcfg

REVISED 07-2018: REMOVED LAST PART OF NOTE IN THE FIRST SENTENCE OF THE "TYP. DECK & HAUNCH DETAIL" (WAS "AS SHOWN ON THE "THEORETICAL CONCRETE HAUNCH DIAGRAM" SHOWN ELSEWHERE ON THESE PLANS."). CHANGED NOTE STATING " $\frac{1}{2}$" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
REVISED 08-2018: ADDED "REFER TO HAUNCH DETAILS SHOWN ELSEWHERE ON THESE PLANS." TO TYP. DECK AND HAUNCH DETAIL NOTES.
ENGLISHSTUBBRIDGES.DGN - 4310 STANDARD LRFD DESIGN ISSUED ON 04-07.



TRANSVERSE DECK CONSTRUCTION JOINT

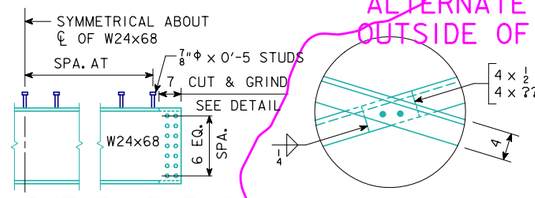


HALF SECTION NEAR ABUTMENT

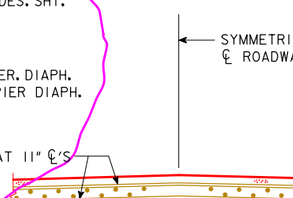
HALF SECTION NEAR INTERMEDIATE DIAPHRAGM

NOTE: FOR ADDITIONAL STIFFENER AND WELDING DETAILS SEE DES. SHT.

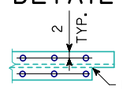
ALTERNATE SPLICE OUTSIDE OF BORDER



ABUT. DIAPHRAGM DETAIL

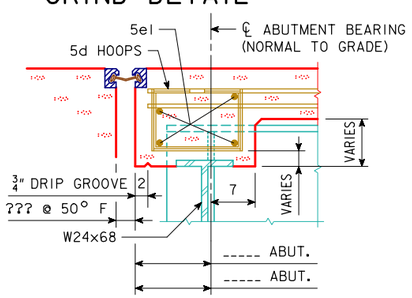


DETAIL B



TYPICAL CUT & GRIND DETAIL

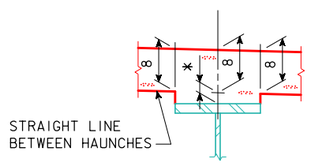
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.



SECTION A-A
(NORMAL TO ABUTMENT)

NOTE: TRANSVERSE DECK REINFORCING NOT SHOWN. PLACE 5d HOOPS PARALLEL TO LONGIT. 6b1 BARS.

PART SECTION NEAR PIER



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IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	40' RDWY. WELDED GIRDER CROSS SECTION (SYMM. CROWN) - LRFD DESIGN	STANDARD SHEET 4310	COUNTY	PROJECT NUMBER	SHEET NUMBER

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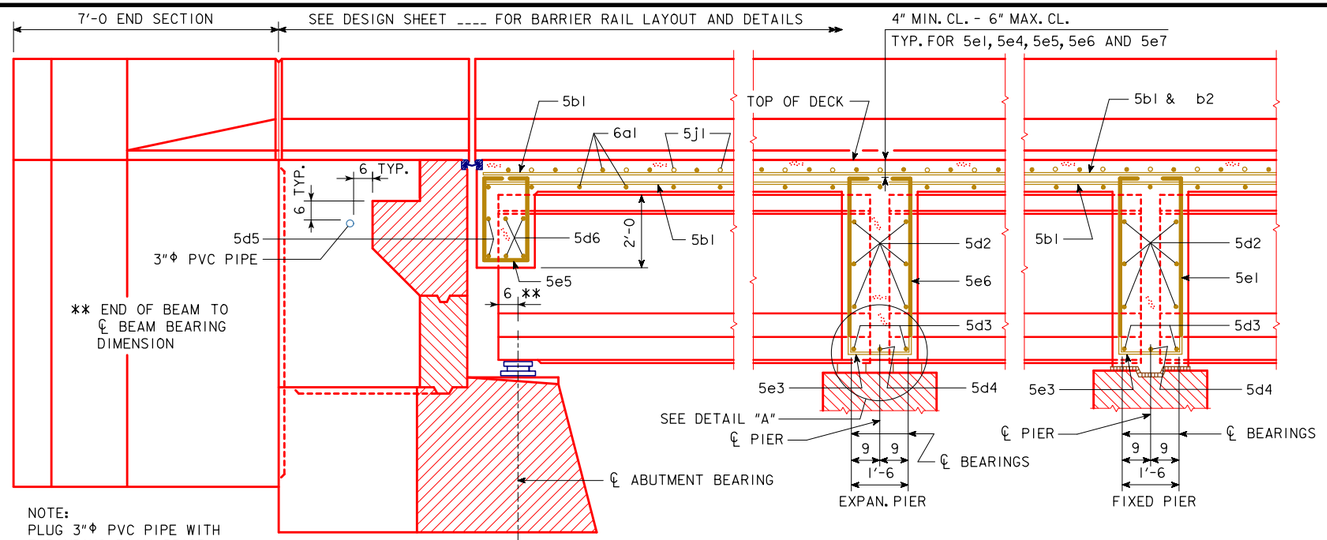
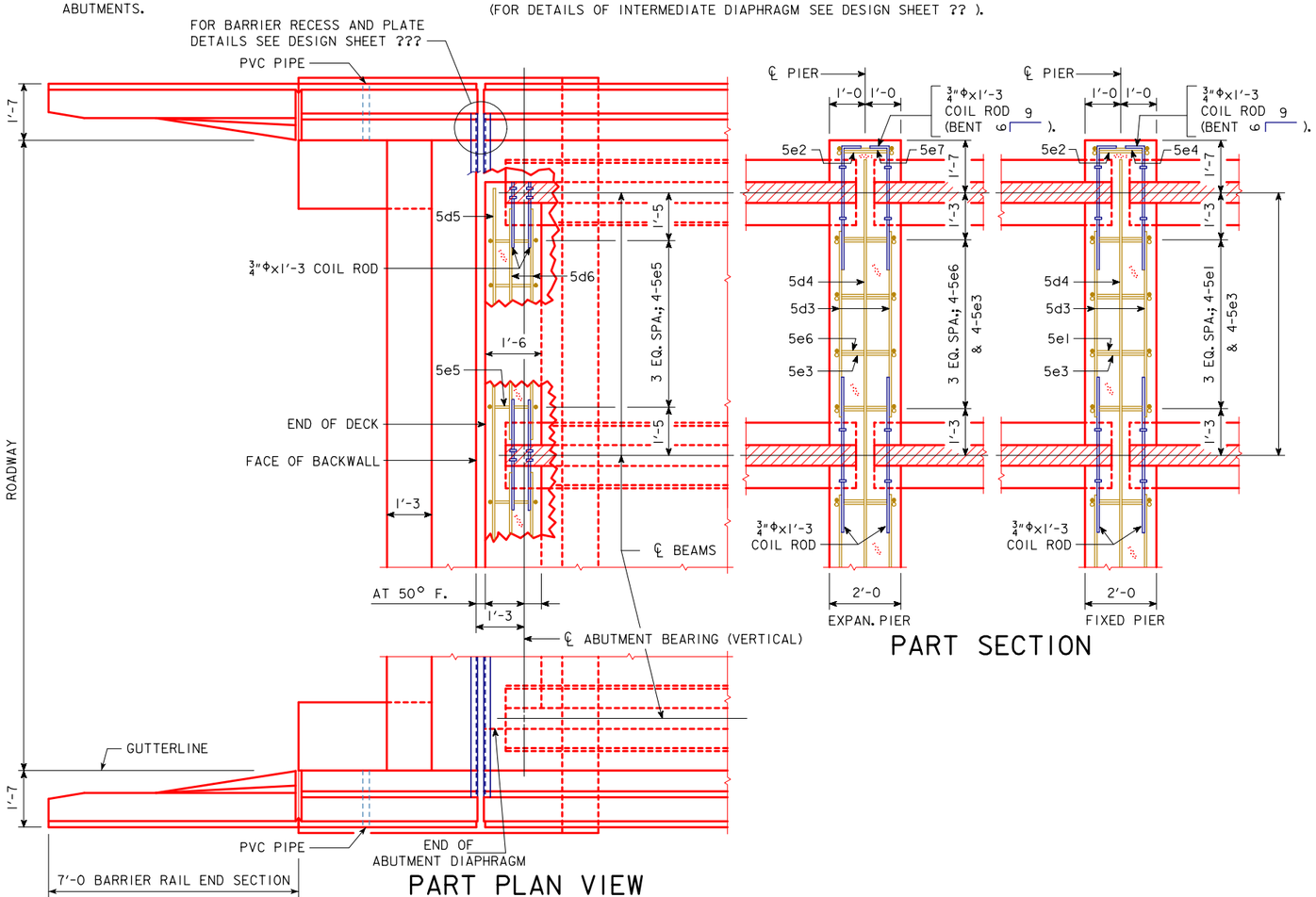


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

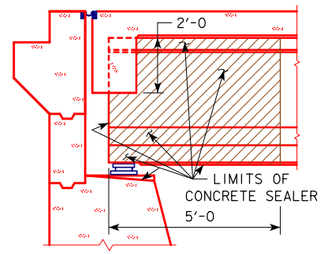
PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).



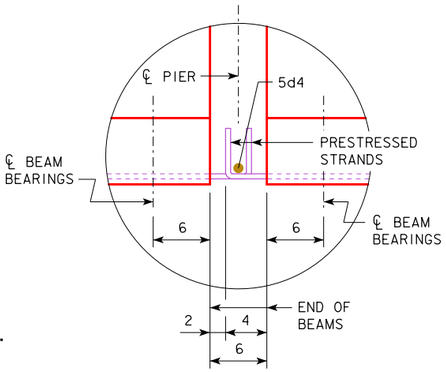
PART PLAN VIEW

PART SECTION

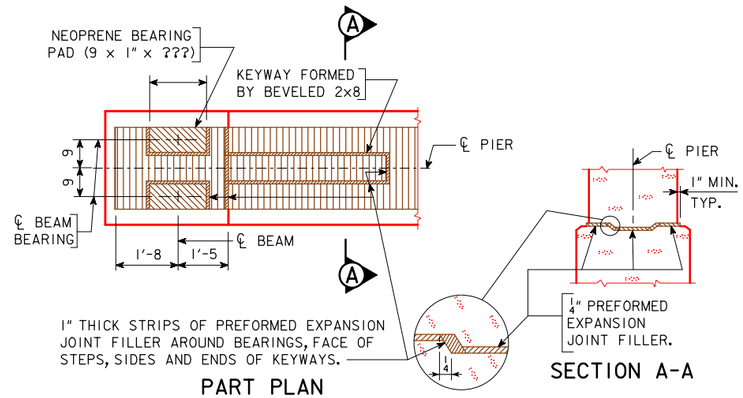


CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM



DETAIL "A"



TOP OF FIXED PIER DETAILS

CORRECTION 10-10 - CHANGED CONCRETE SEALER ARTICLE 2403.21,D TO ARTICLE 2403.03,P,3.
REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4542 - THIS SHEET REDRAWN 9-8-88.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	PART PLAN & LONGIT. SECTION - "B", "C", OR "D" BEAMS, STUB ABUT., 0° SKEW	STANDARD SHEET 4542	COUNTY	PROJECT NUMBER	SHEET NUMBER

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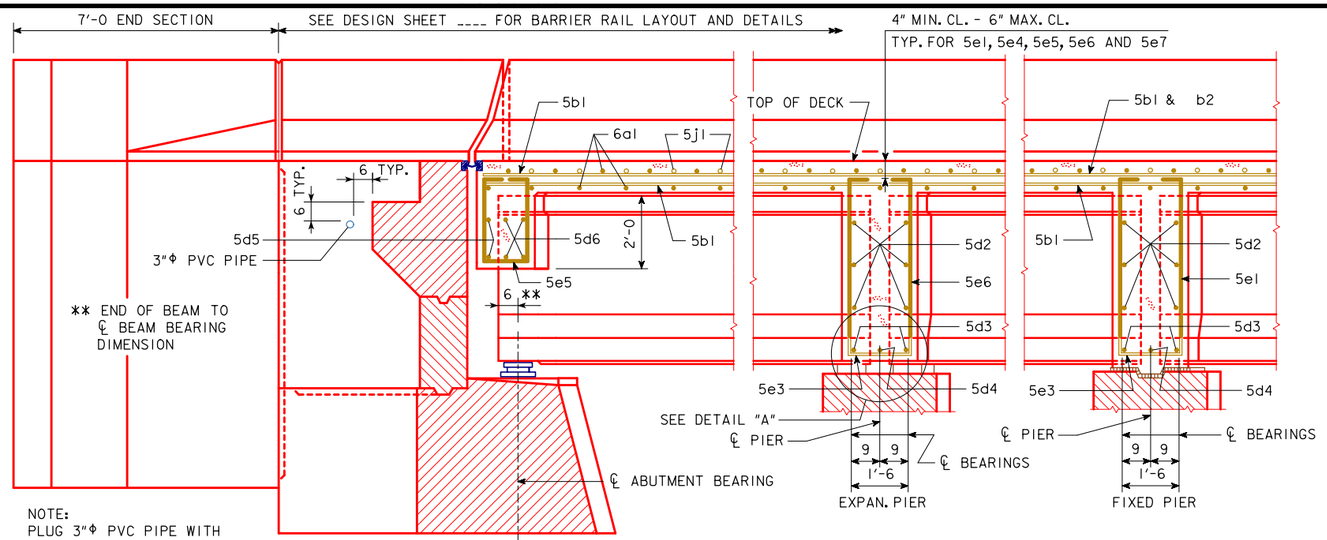
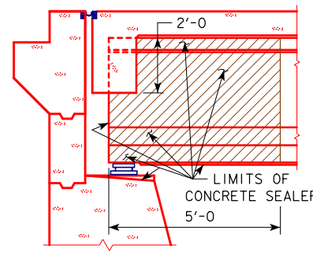


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

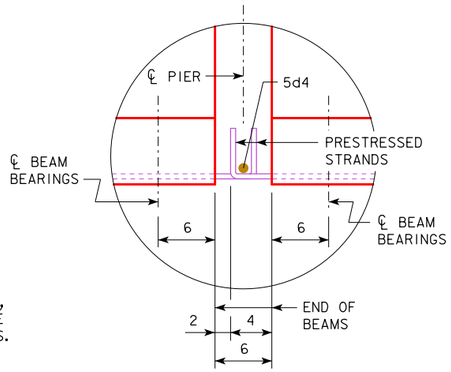
PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).

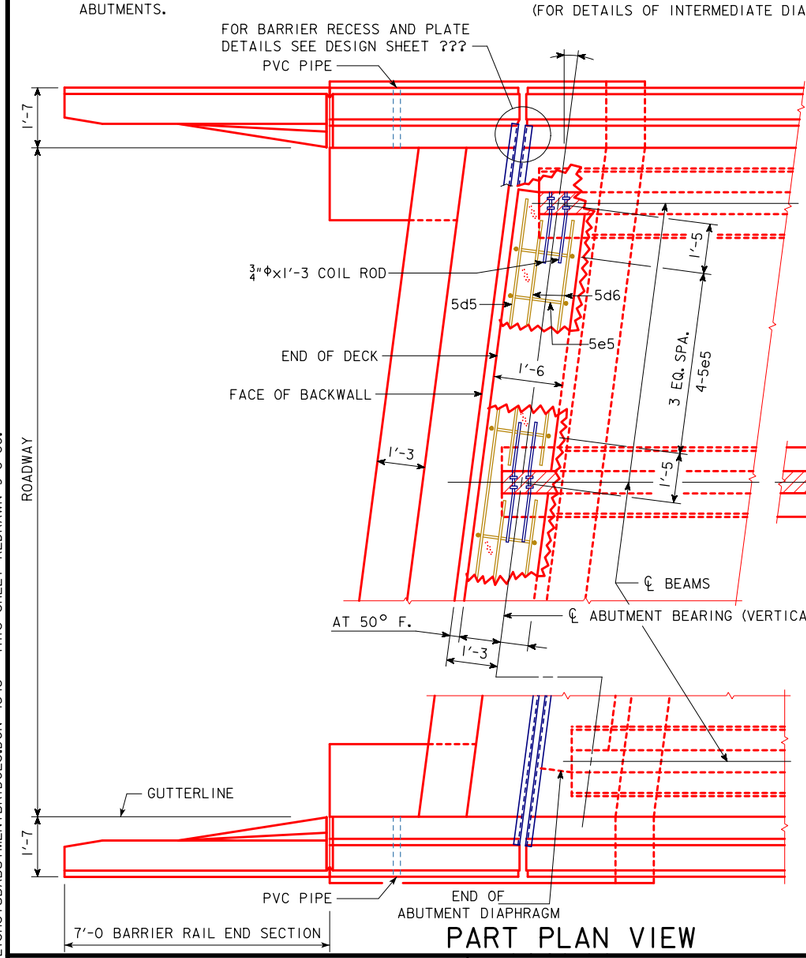


CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

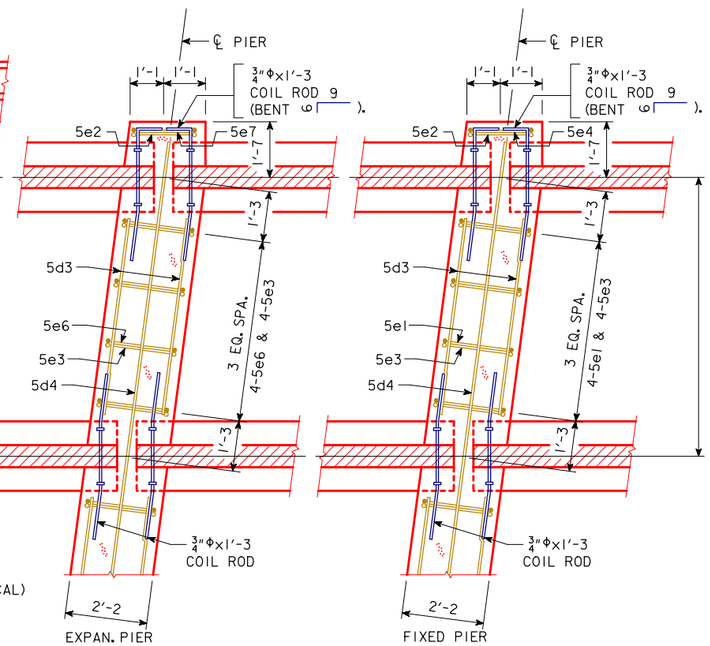
CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM



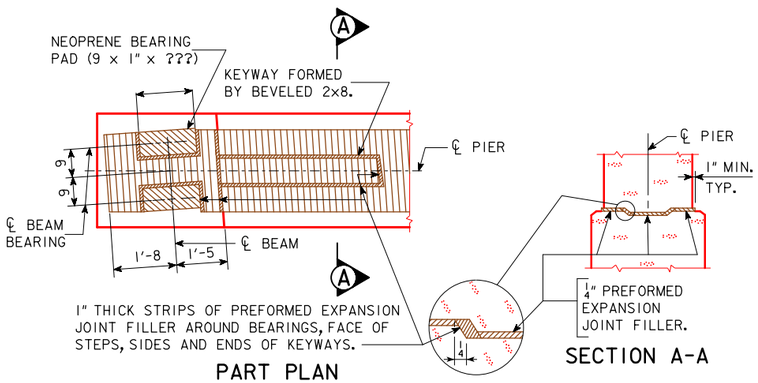
DETAIL "A"



PART PLAN VIEW



PART SECTION



TOP OF FIXED PIER DETAILS

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REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4543 - THIS SHEET REDRAWN 9-8-88.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

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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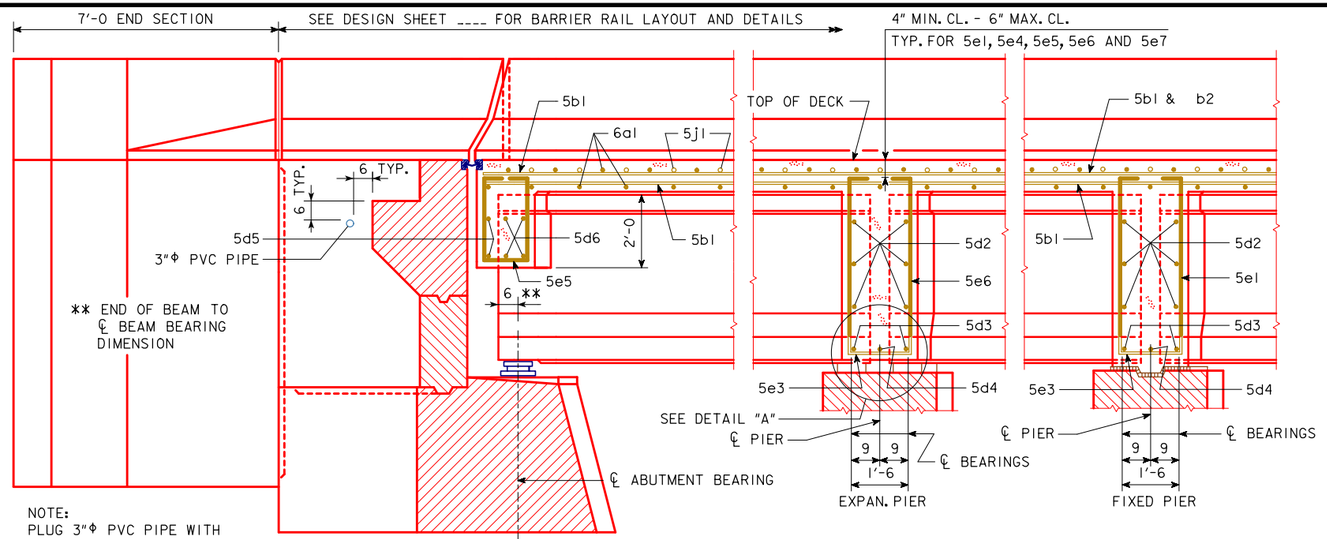
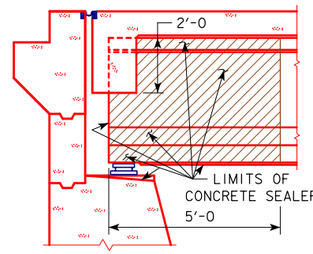


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).



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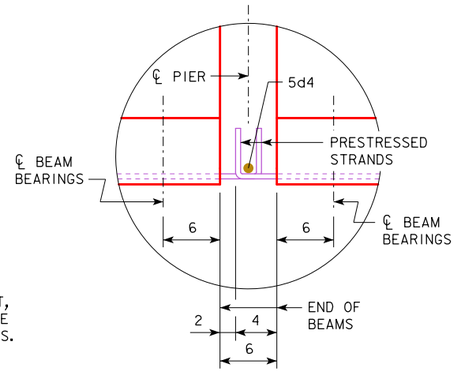
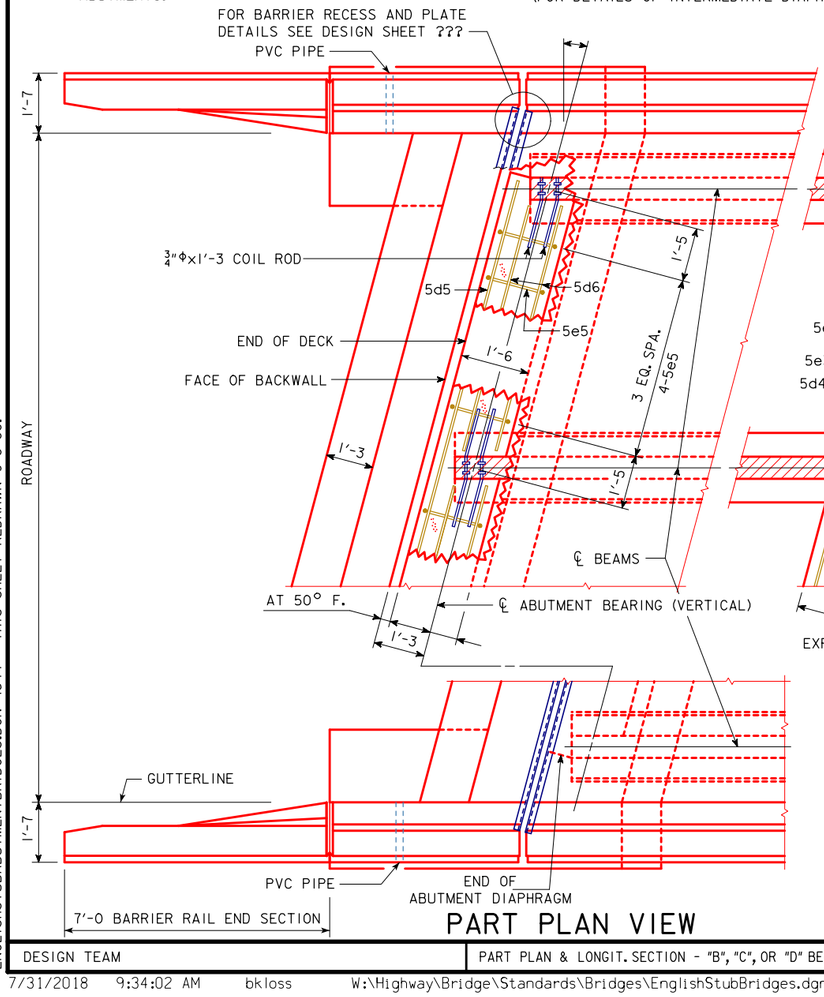
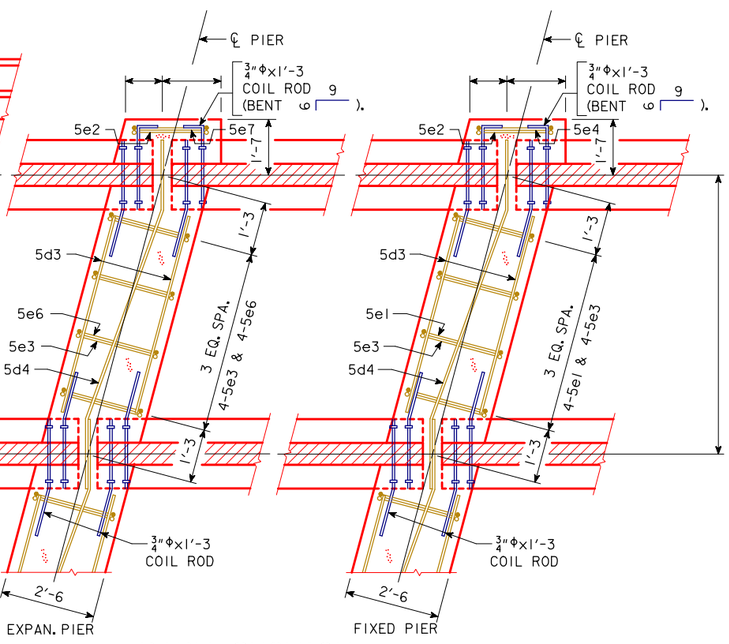


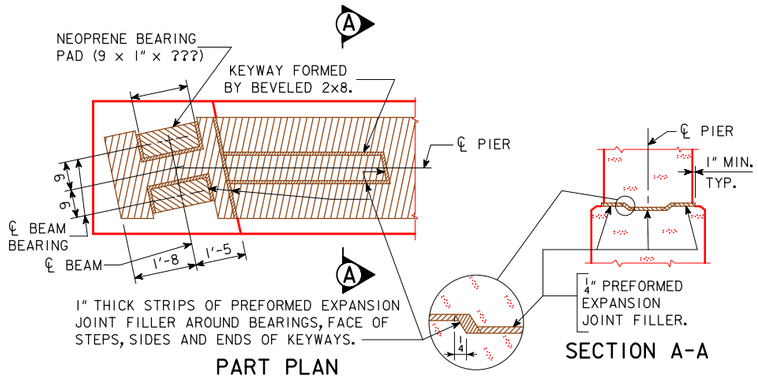
DETAIL "A"





PART SECTION

PART PLAN VIEW



PART PLAN

SECTION A-A

TOP OF FIXED PIER DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	PART PLAN & LONGIT. SECTION - "B", "C", OR "D" BEAMS, STUB ABUT., 7°31' - 15° SKEW L. A.	STANDARD SHEET 4544	COUNTY	PROJECT NUMBER	SHEET NUMBER

CORRECTION 10-10 - CHANGED CONCRETE SEALER ARTICLE 2403.21, D TO ARTICLE 2403.03, P, 3.
REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4544 - THIS SHEET REDRAWN 9-8-88.

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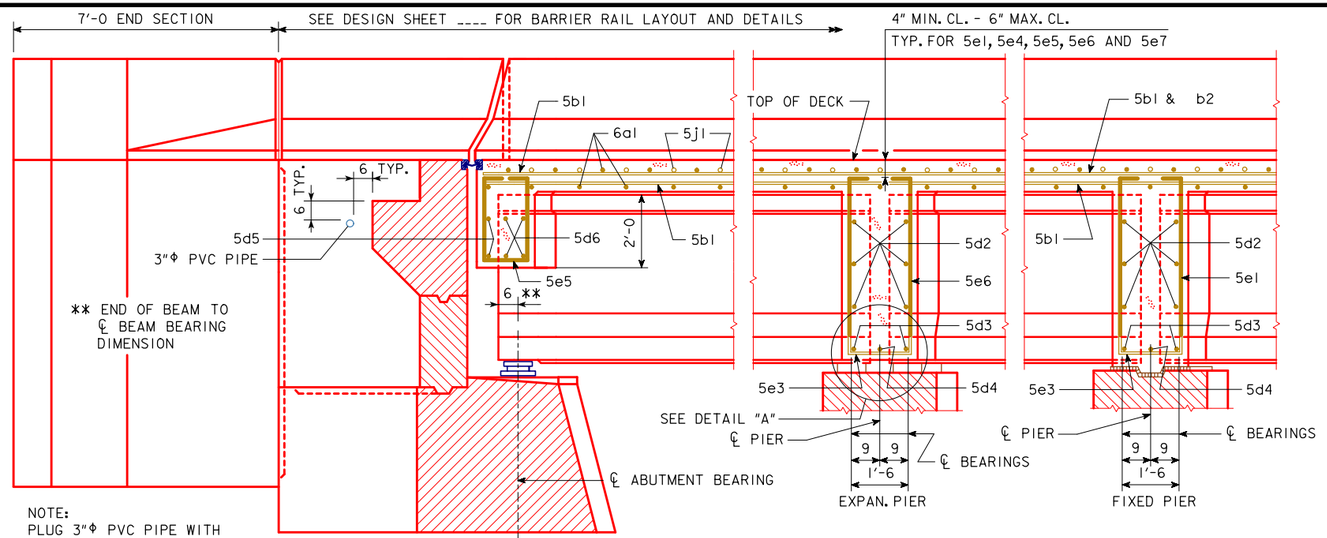
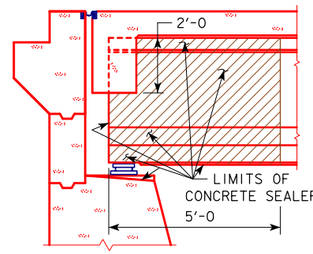


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

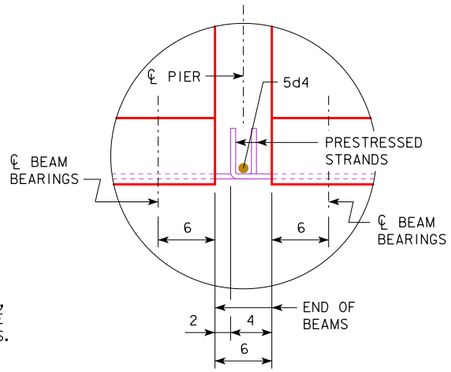
PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).

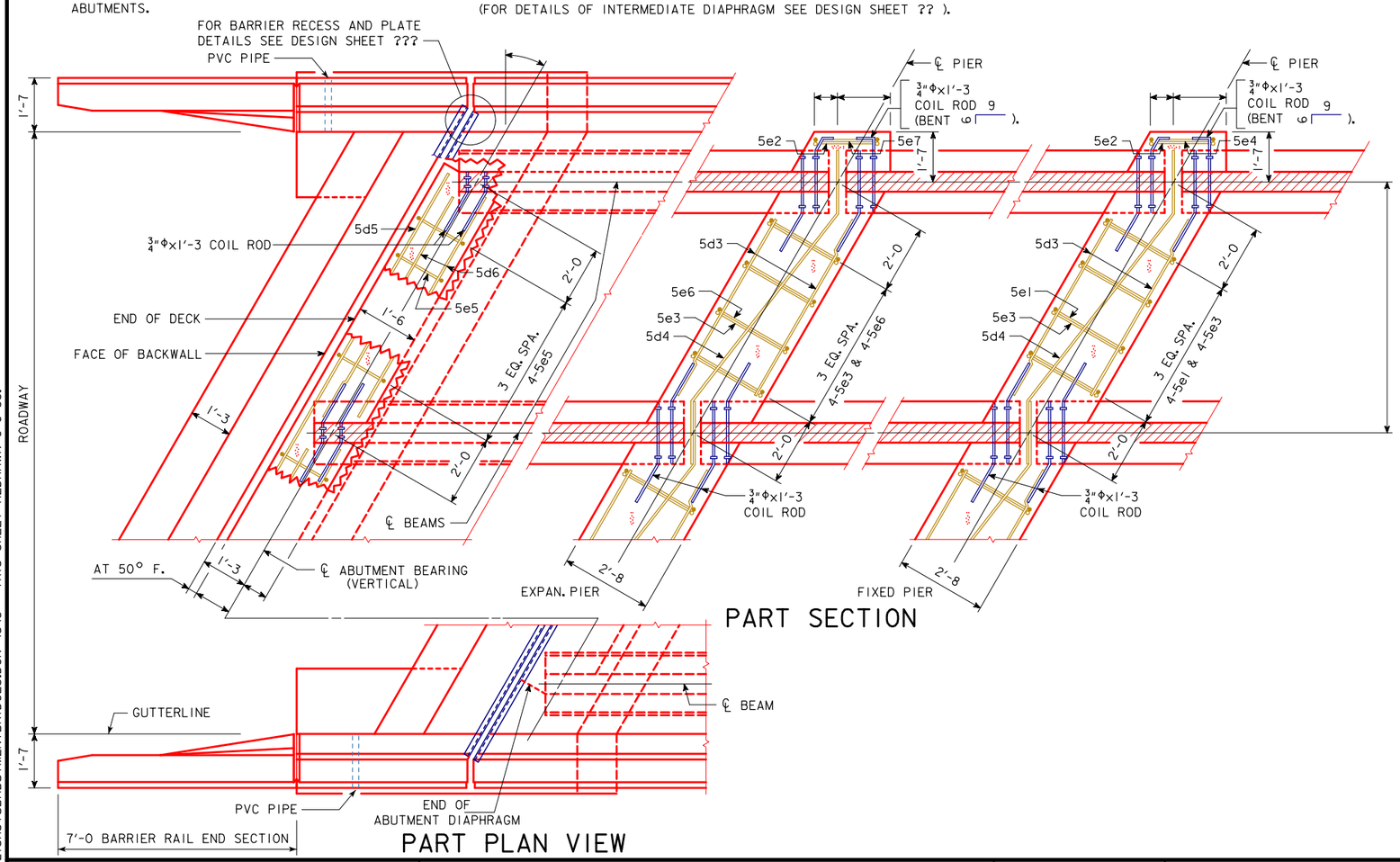


CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM

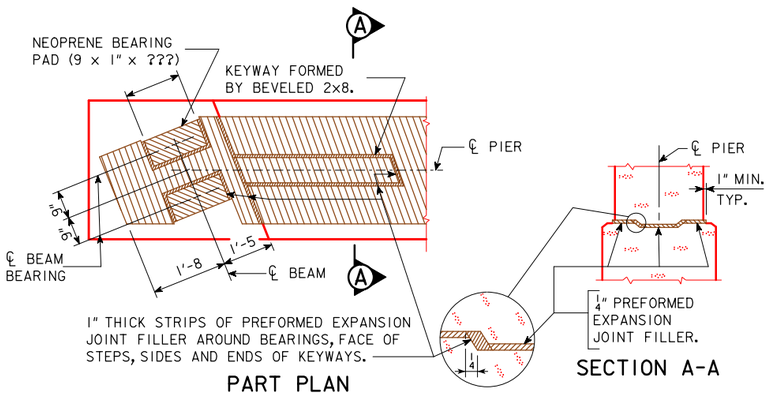


DETAIL "A"



PART SECTION

PART PLAN VIEW



PART PLAN

SECTION A-A

TOP OF FIXED PIER DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

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

CORRECTION 10-10 - CHANGED CONCRETE SEALER ARTICLE 2403.21, D TO ARTICLE 2403.03, P, 3.
REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4545 - THIS SHEET REDRAWN 9-8-88.

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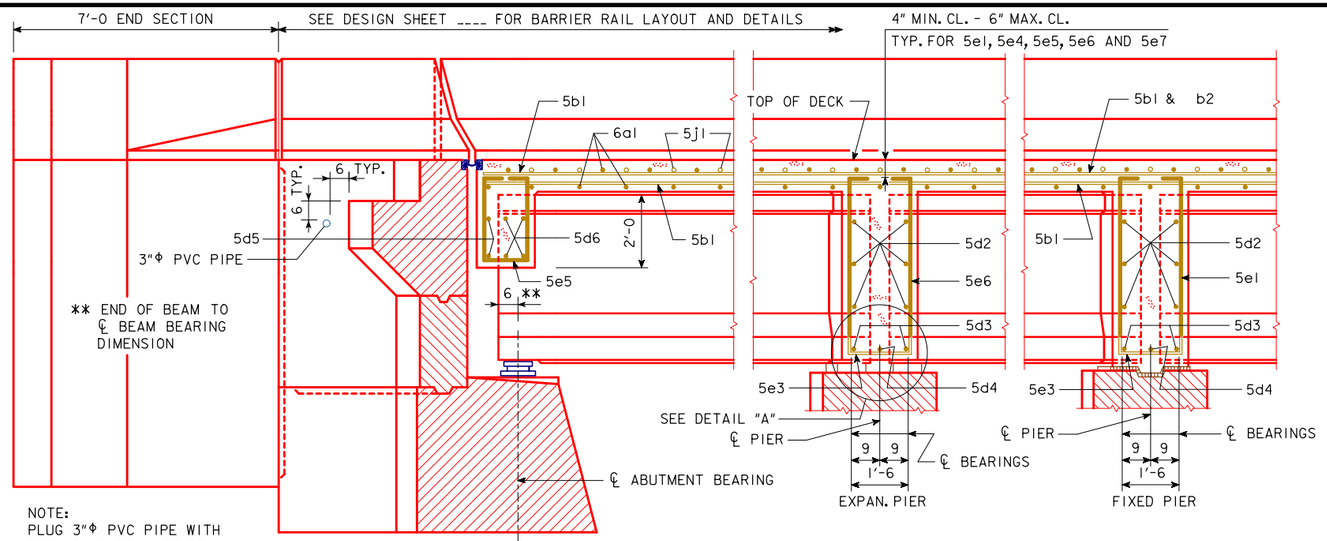
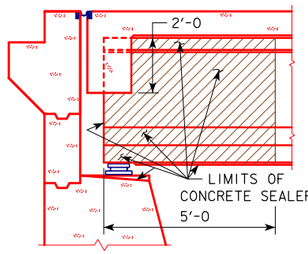


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

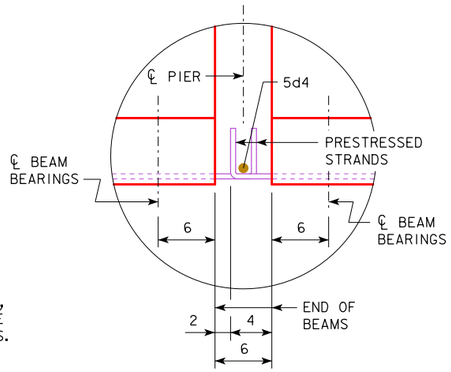
PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).

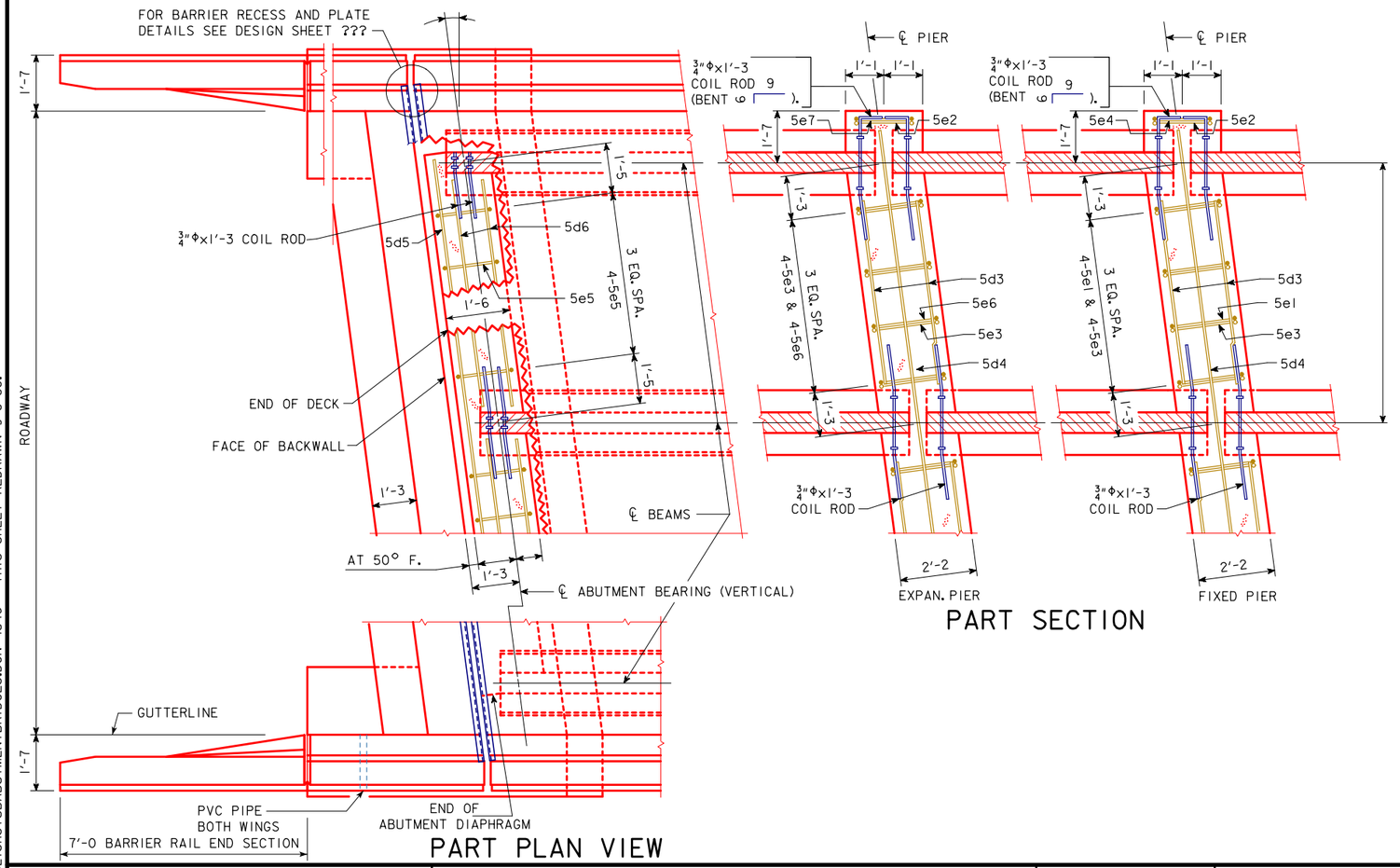


CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM

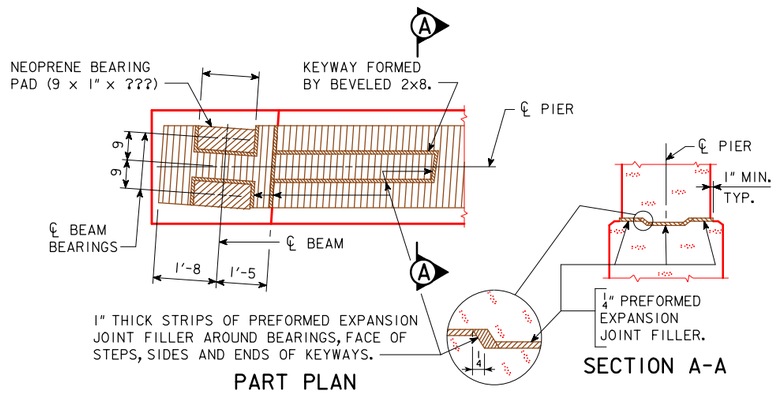


DETAIL "A"



PART SECTION

PART PLAN VIEW



TOP OF FIXED PIER DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	PART PLAN & LONGIT. SECTION - "B", "C", OR "D" BEAMS, STUB ABUT., 0°01' - 7°30' SKEW R.A.	STANDARD SHEET 4546	COUNTY	PROJECT NUMBER	SHEET NUMBER

CORRECTION 10-10 - CHANGED CONCRETE SEALER ARTICLE 2403.21, D TO ARTICLE 2403.03, P, 3.
REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4546 - THIS SHEET REDRAWN 9-8-88.

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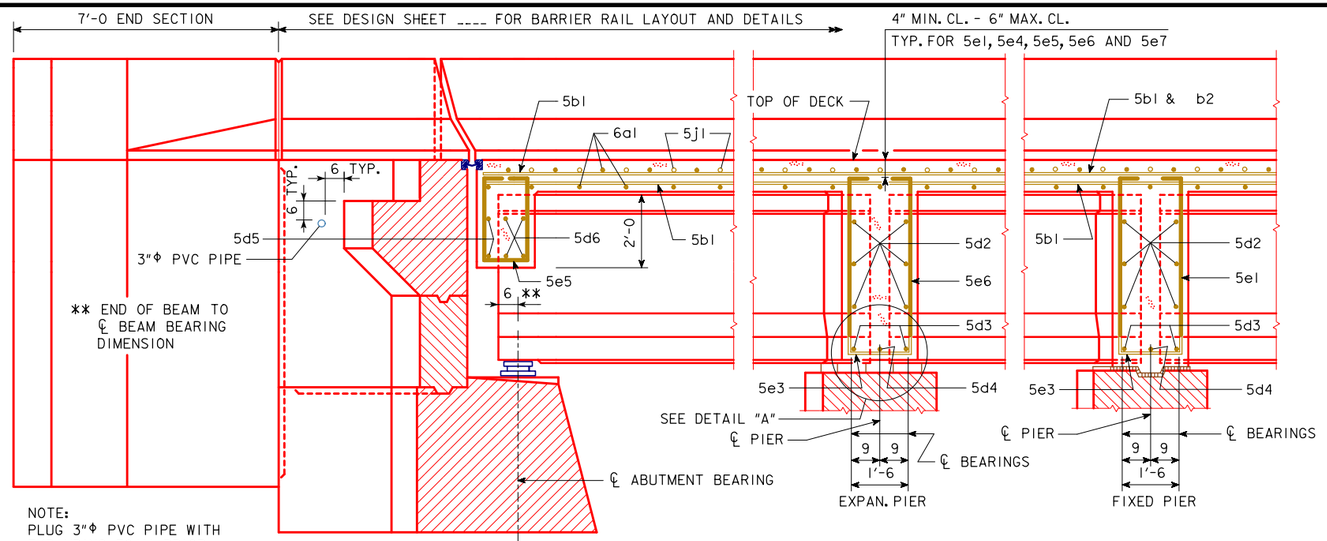
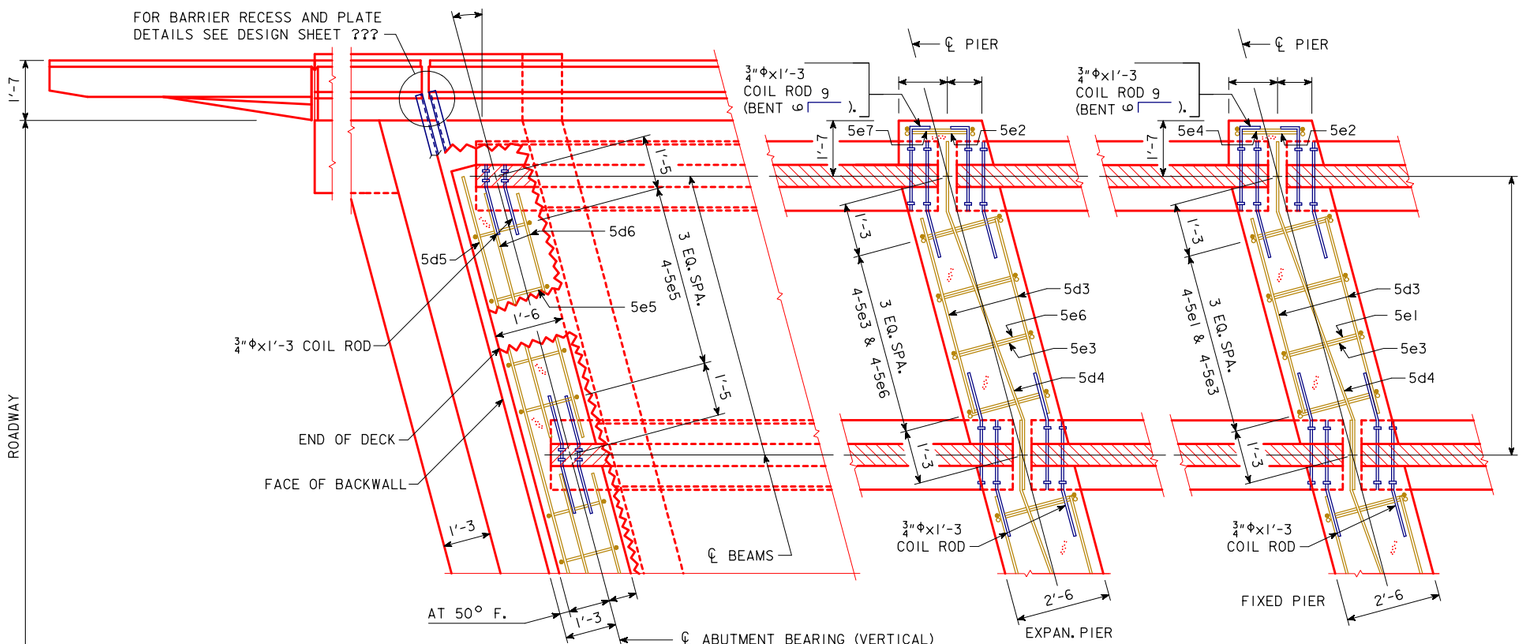


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

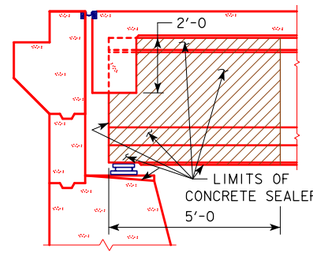
PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).



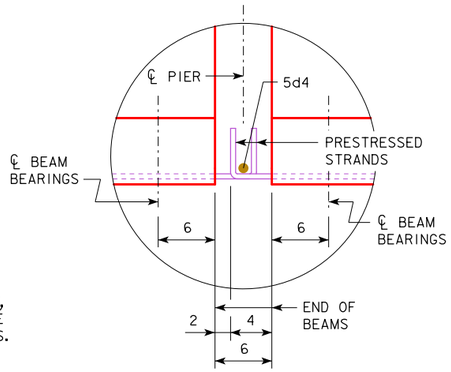
PART PLAN VIEW

PART SECTION

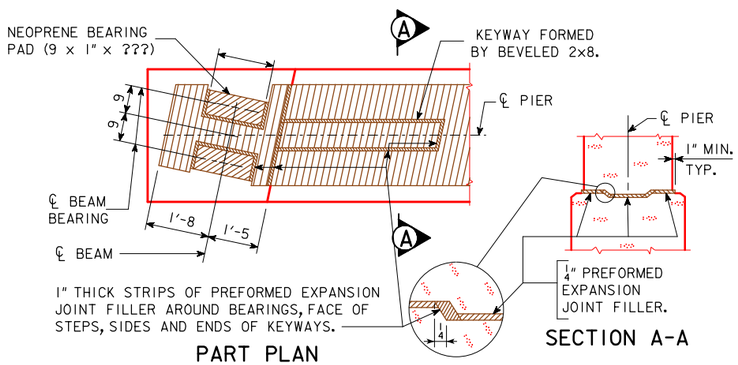


CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM



DETAIL "A"



TOP OF FIXED PIER DETAILS

CORRECTION 10-10 - CHANGED CONCRETE SEALER ARTICLE 2403.21, D TO ARTICLE 2403.03, P, 3.
REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4547 - THIS SHEET REDRAWN 9-8-88.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

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

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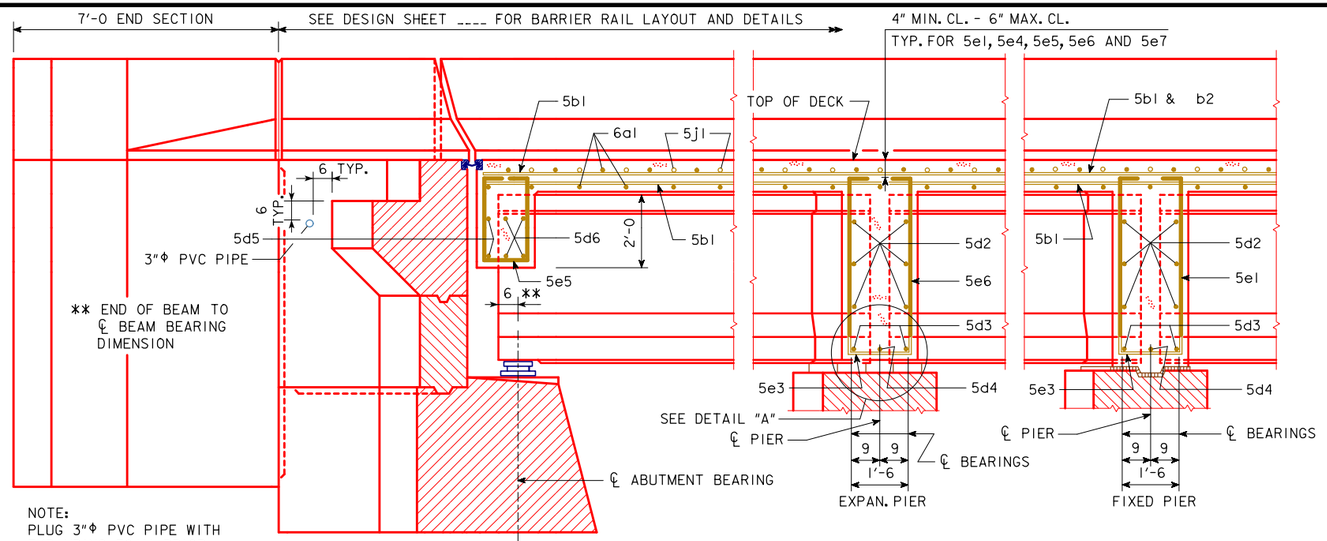
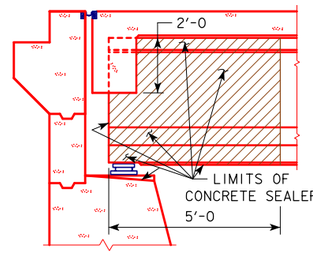


NOTE:
PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

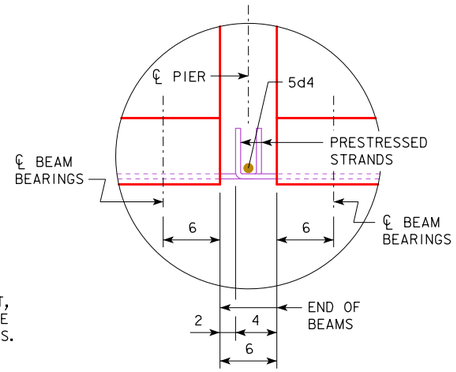
PART LONGITUDINAL SECTION NEAR GUTTER

(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??).

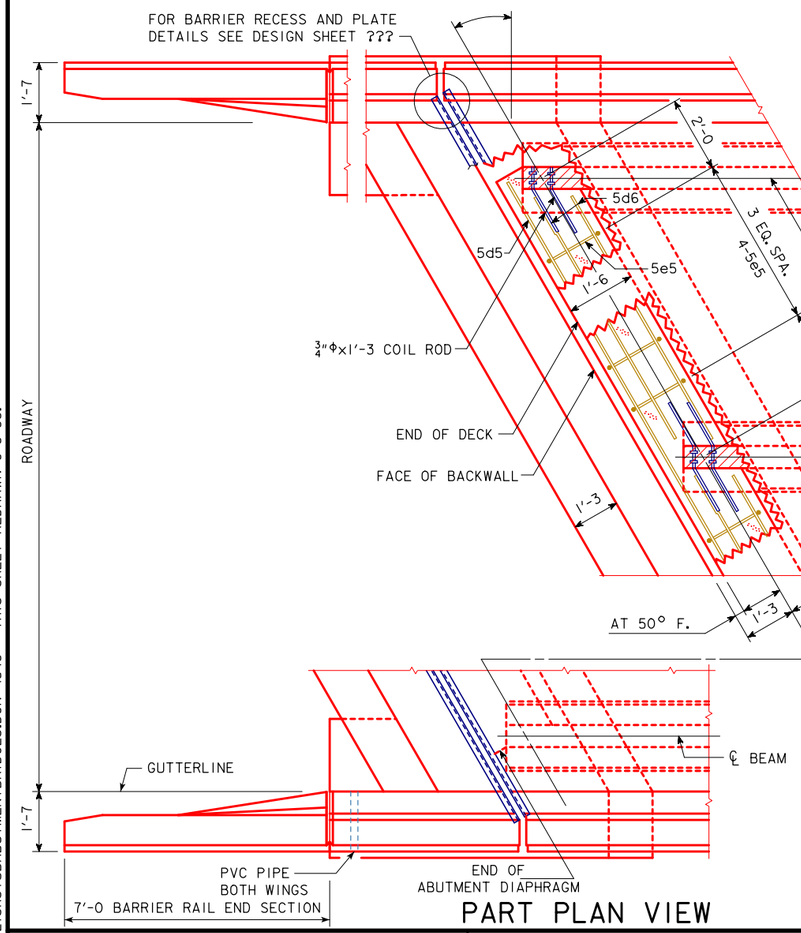


CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

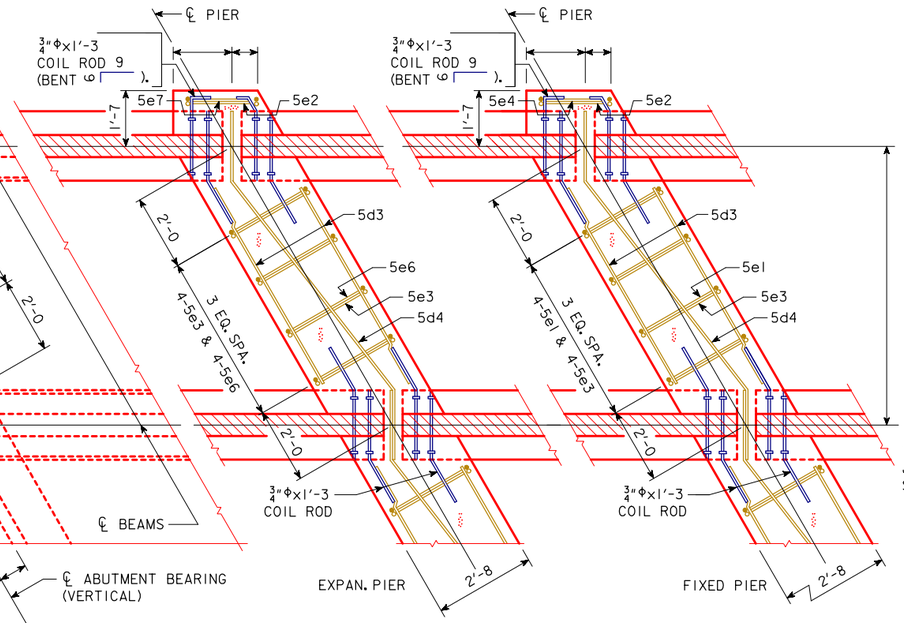
CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM



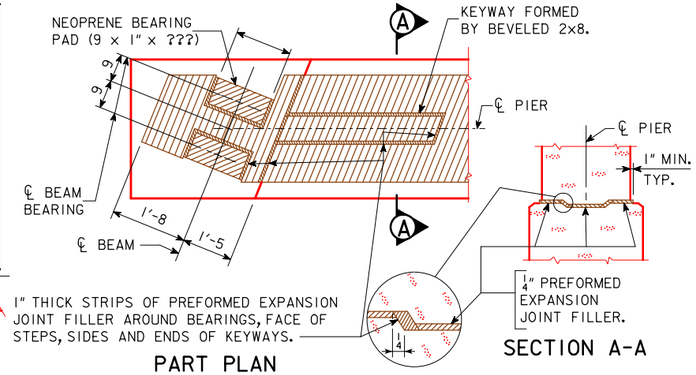
DETAIL "A"



PART PLAN VIEW



PART SECTION



PART PLAN

SECTION A-A

TOP OF FIXED PIER DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

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

CORRECTION 10-10 - CHANGED CONCRETE SEALER ARTICLE 2403.2|,D TO ARTICLE 2403.03,P,3.
REVISED 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4548 - THIS SHEET REDRAWN 9-8-88.

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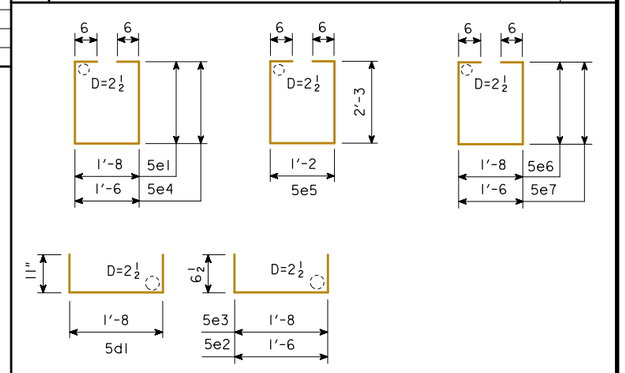
REVISED 07-2015 - CHANGED CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4549 - THIS SHEET REDRAWN 9-8-88.

REINFORCING BAR LIST - BRIDGE DECK

EPOXY COATED REINFORCING

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
6a1	DECK TRANSV. TOP & 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				
5j1	DECK TRANSV. TOP (AT RAIL)			6'-3	
	REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D= PIN DIAMETER.

BENT BAR DETAILS

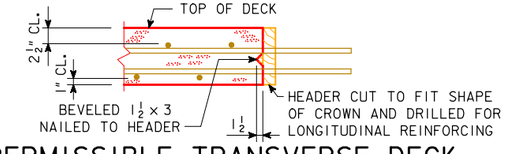
CONCRETE PLACEMENT QUANTITIES

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.

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.



PERMISSIBLE TRANSVERSE DECK CONSTRUCTION JOINT

DECK, ABUT. & DIAPH. QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	STUB ABUT. B, C, & D BEAMS - BAR LIST & SUPER. DETAILS - 0° SKEW	STANDARD SHEET 4549	COUNTY	PROJECT NUMBER	SHEET NUMBER

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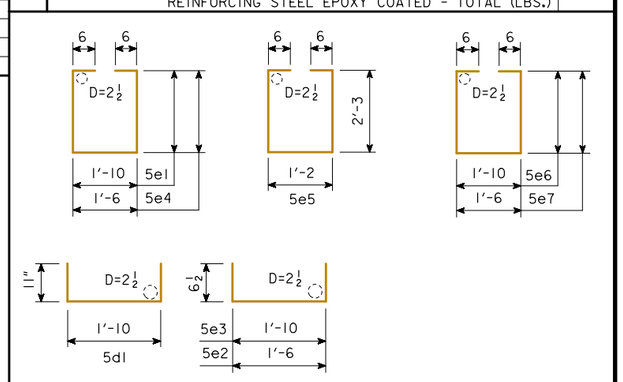
REVISED 07-2015 - CHANGED CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4550 - THIS SHEET REDRAWN 9-8-88.

REINFORCING BAR LIST - BRIDGE DECK

EPOXY COATED REINFORCING

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
6a1	DECK TRANSV. TOP & BOTT.				
5b1	DECK LONGIT. TOP & BOTT.				
b2	DECK LONGIT. TOP AT PIERS				
5d1	PIER DIAPH. ENDS			3'-8	
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'-11	
5e4	PIER DIAPH. HOOPS ENDS				
5e5	ABUT. DIAPH. HOOPS			6'-8	
5e6	EXPAN. PIER DIAPH. HOOPS				
5e7	EXPAN. PIER DIAPH. HOOPS ENDS				
5j1	DECK TRANSV. TOP (AT RAIL)			6'-3	
	REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D= PIN DIAMETER.

BENT BAR DETAILS

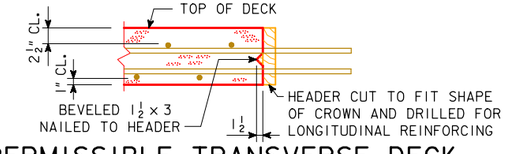
CONCRETE PLACEMENT QUANTITIES

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.

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.



PERMISSIBLE TRANSVERSE DECK CONSTRUCTION JOINT

DECK, ABUT. & DIAPH. QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	STUB ABUT. B, C, & D BEAMS - BAR LIST & SUPER. DETAILS - 0°01' - 7°30' SKEW	STANDARD SHEET 4550	COUNTY	PROJECT NUMBER	SHEET NUMBER

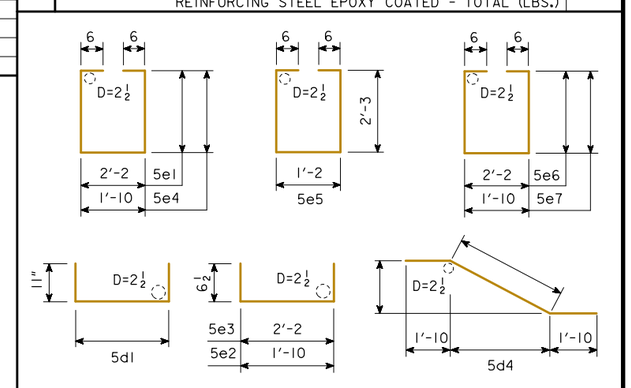
7/31/2018 9:34:11 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4550 11x17_pdf.pltcfg

REVISED 07-2015 - CHANGED CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4551 - THIS SHEET REDRAWN 9-8-88.

REINFORCING BAR LIST - BRIDGE DECK

EPOXY COATED REINFORCING

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
6a1	DECK TRANSV. TOP & BOTT.				
6a2	DECK TRANSV. TOP ENDS				
6a3	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				
5j1	DECK TRANSV. TOP (AT RAIL)			6'-3	
	REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D= PIN DIAMETER.

BENT BAR DETAILS

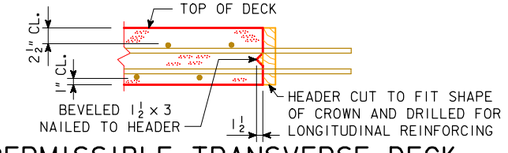
CONCRETE PLACEMENT QUANTITIES

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.

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.



PERMISSIBLE TRANSVERSE DECK CONSTRUCTION JOINT

DECK, ABUT. & DIAPH. QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	STUB ABUT. B, C, & D BEAMS - BAR LIST & SUPER. DETAILS - 7°31' - 15° SKEW	STANDARD SHEET 4551	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:34:12 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4551 11x17_pdf.pltcfg

REVISED 07-2015 - CHANGED CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4552 - THIS SHEET REDRAWN 9-8-88.

REINFORCING BAR LIST - BRIDGE DECK

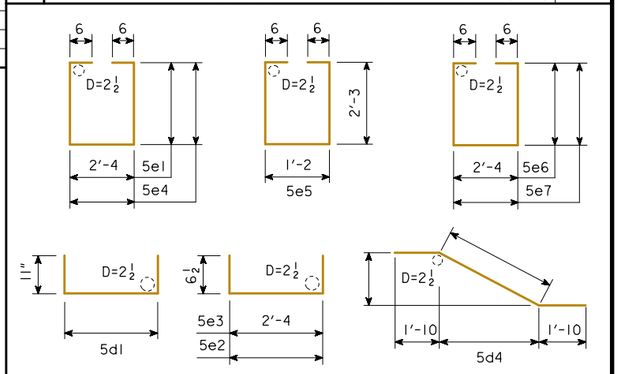
EPOXY COATED REINFORCING

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
6a1	DECK TRANSV. TOP & BOTT.				
6a2	DECK TRANSV. TOP ENDS				
6a3	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				
5e3	PIER DIAPH. TIES			3'-5	
5e4	PIER DIAPH. HOOPS ENDS				
5e5	ABUT. DIAPH. HOOPS			6'-8	
5e6	EXPAN. PIER DIAPH. HOOPS				
5e7	EXPAN. PIER DIAPH. HOOPS ENDS				
5j1	DECK TRANSV. TOP (AT RAIL)			6'-3	
	REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				

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.

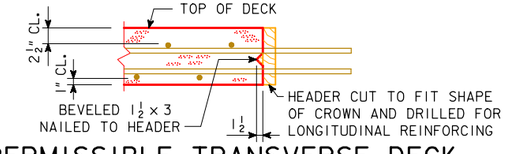


NOTE: ALL DIMENSIONS ARE OUT TO OUT. D= PIN DIAMETER.

BENT BAR DETAILS

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.



PERMISSIBLE TRANSVERSE DECK CONSTRUCTION JOINT

DECK, ABUT. & DIAPH. QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	STUB ABUT. B, C, & D BEAMS - BAR LIST & SUPER. DETAILS - 15°01' - 30° SKEW	STANDARD SHEET 4552	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:34:13 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4552 11x17_pdf.pltcfg

REVISED 07-2015 - CHANGED CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.
ENGLISHSTUBABUTMENTBRIDGES.DGN 4553 - THIS SHEET ISSUED 11-10.

REINFORCING BAR LIST - BRIDGE DECK

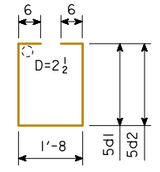
EPOXY COATED REINFORCING

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
7a1	DECK TRANSV. TOP & BOTT.	——			
6b1	DECK LONGIT. TOP & BOTT.	——			
5d1	ABUT. DIAPH. HOOPS	⌐¬			
5d2	ABUT. DIAPH. HOOPS	⌐¬			
5e1	ABUT. DIAPH. LONGIT.	——			
5j1	DECK TRANSV. TOP (AT RAIL)	——		6'-10	
	REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				

CONCRETE PLACEMENT QUANTITIES

LOCATION	QUANTITY
SECTION 1, DECK & ABUT. DIAPH.	
SECTION 2, DECK & ABUT. DIAPH.	
SECTION 3, DECK	
SECTION 4, DECK	
SECTION 5, DECK	
TOTAL (CU. YDS.)	

NOTE:
CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMERY QUANTITIES SHEET.

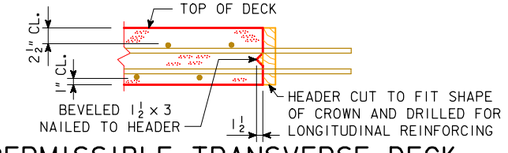


NOTE: ALL DIMENSIONS ARE OUT TO OUT. D= PIN DIAMETER.

BENT BAR DETAILS

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.



PERMISSIBLE TRANSVERSE DECK CONSTRUCTION JOINT

DECK, ABUT. & DIAPH. QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	STUB ABUT. WELDED GIRDER - BAR LIST & SUPER. DETAILS	STANDARD SHEET 4553	COUNTY	PROJECT NUMBER	SHEET NUMBER

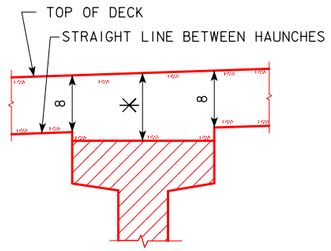
7/31/2018 9:34:13 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4553 11x17_pdf.pltcfg

CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS.
REVISED 07-2018: CHANGED NOTE STATING " $\frac{1}{2}$" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
ENGLISHSTUBABUTMENTBRIDGES.DGN 4556 - THIS SHEET ISSUED 11-06. LRFD DESIGNED DECK.

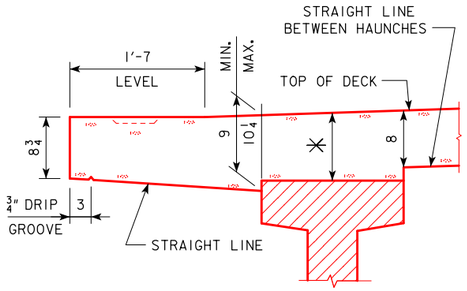
TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN BEAM B & C	LONGEST ADJACENT SPAN BEAM D	BAR SIZE
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		7
67'-6		7
71'-8	70'-0	7
75'-10	75'-0	8
80'-0	80'-0	8
	85'-0	8
	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 ℄ OF PIER.



INTERIOR BEAMS

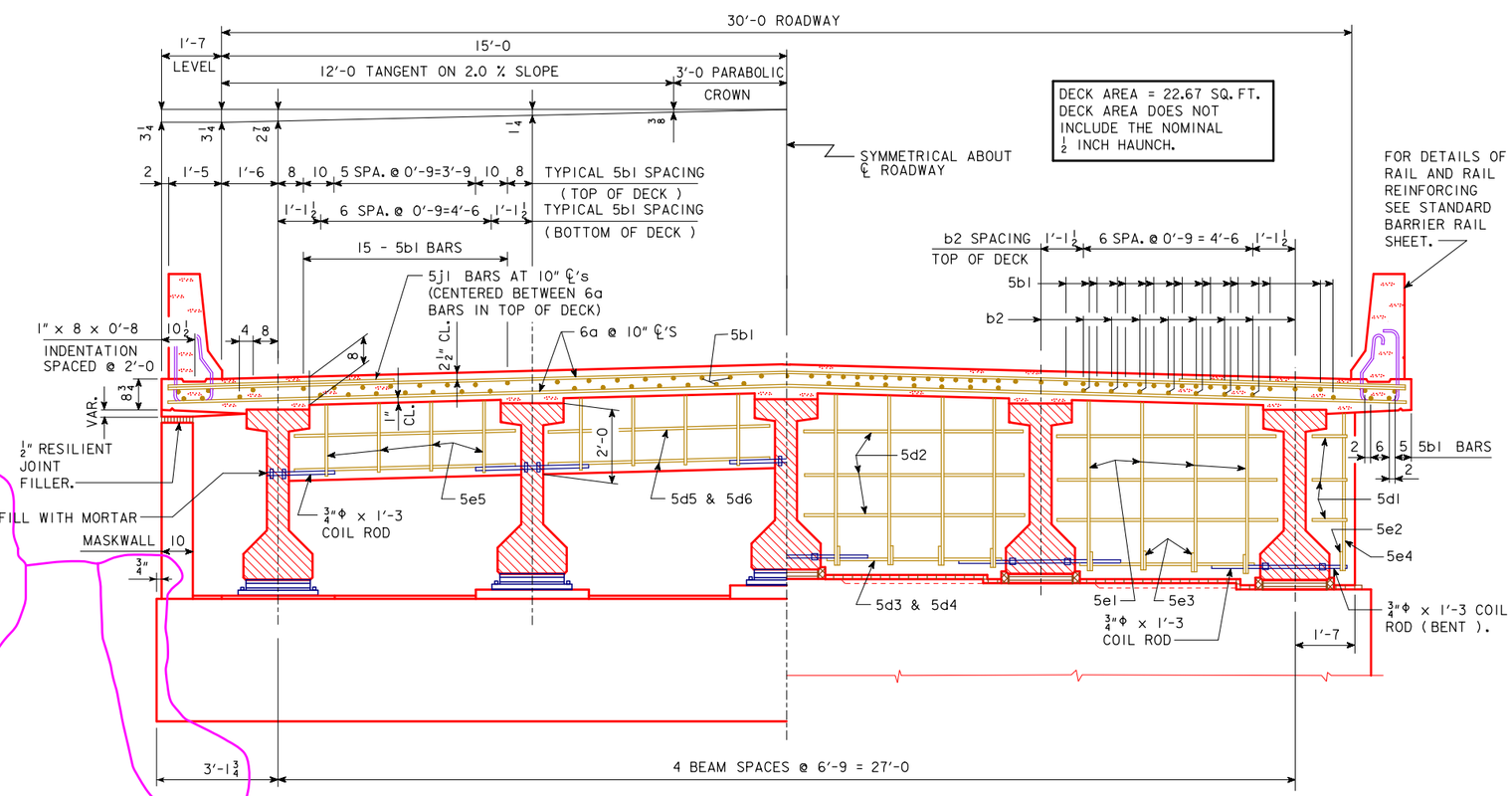


EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE "DECK THICKNESS DETAILS" ON DESIGN SHEET NO. ____.

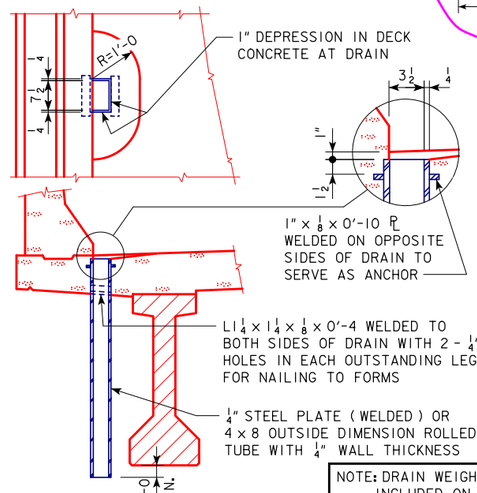
REDRAW FOR 'B' BEAMS TO ALIGN FOOTING & BACKWALL FACES. DIMENSION 3'-1¾ BECOMES 3'-1.



HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR FIXED PIER

NOTE : FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ??.



DRAIN DETAILS

NOTE: DRAINS ARE TO BE GALVANIZED. ____ DRAINS REQUIRED. SEE "SITUATION PLAN" ON DESIGN SHEET ____ FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "STRUCTURAL STEEL". WEIGHT IS BASED ON ROLLED TUBE.

NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

DATA FOR ONE DRAIN			
BEAM SIZE	B	C	D
WT. LBS.	96	106	120
LENGTH FT.	4'-11¾	5'-5¾	6'-2¾

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES ½" INTEGRAL WEARING SURFACE.

THE PIER AND ABUTMENT DIAPHRAGM CONCRETE IS TO BE PLACED MONOLITHICALLY WITH THE BRIDGE DECK.

COST OF ALL PREFORMED EXPANSION JOINT FILLER MATERIAL IS TO BE INCLUDED IN THE PRICE BID FOR "STRUCTURAL CONCRETE (BRIDGE)".

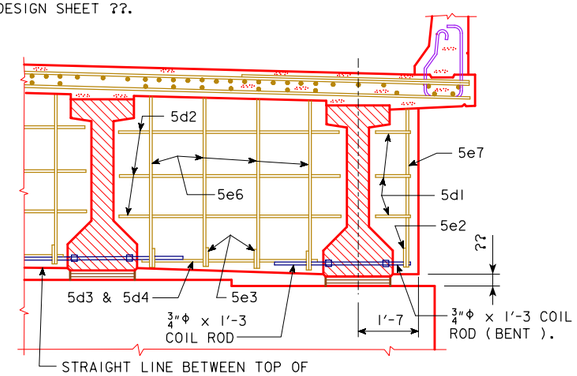
ALL BEAMS ARE TO BE SET VERTICAL.

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 INCHES 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 2½" CLEAR BELOW TOP OF DECK. BOTTOM TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 1" 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.



PART SECTION NEAR EXPANSION PIER

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	30' RDWY. PPCB (B, C & D BEAMS - STUB ABUT.) CROSS SECTION - LRFD DESIGN	STANDARD SHEET 4556	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:34:14 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4556 11x17_pdf.pltcfg

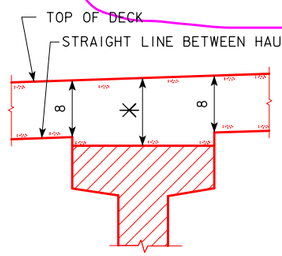
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS.
REVISED 07-2018: CHANGED NOTE STATING "½" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
ENGLISHSTUBABUTMENTBRIDGES.DGN 4559 - THIS SHEET ISSUED 11-06. LRFD DESIGNED DECK.

TABLE OF SIZE OF 'b2' BAR

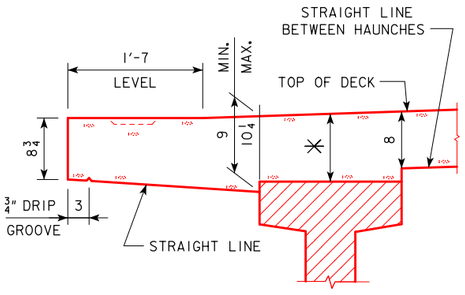
LONGEST ADJACENT SPAN BEAM B & C	LONGEST ADJACENT SPAN BEAM D	BAR SIZE
34'-2	35'-0	5
38'-4	40'-0	5
42'-6	45'-0	5
46'-8	50'-0	5
50'-10	55'-0	6
55'-0	60'-0	6
59'-2	65'-0	6
63'-4		7
67'-6		7
71'-8	70'-0	7
75'-10	75'-0	8
80'-0	80'-0	8
	85'-0	8
	90'-0	8
	95'-0	8
	100'-0	9
	105'-0	9
	110'-0	9

THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE ℄ OF PIER.

REDRAW FOR 'B' BEAMS TO ALIGN FOOTING & BACKWALL FACES. DIMENSION 3'-1¾ BECOMES 3'-1.



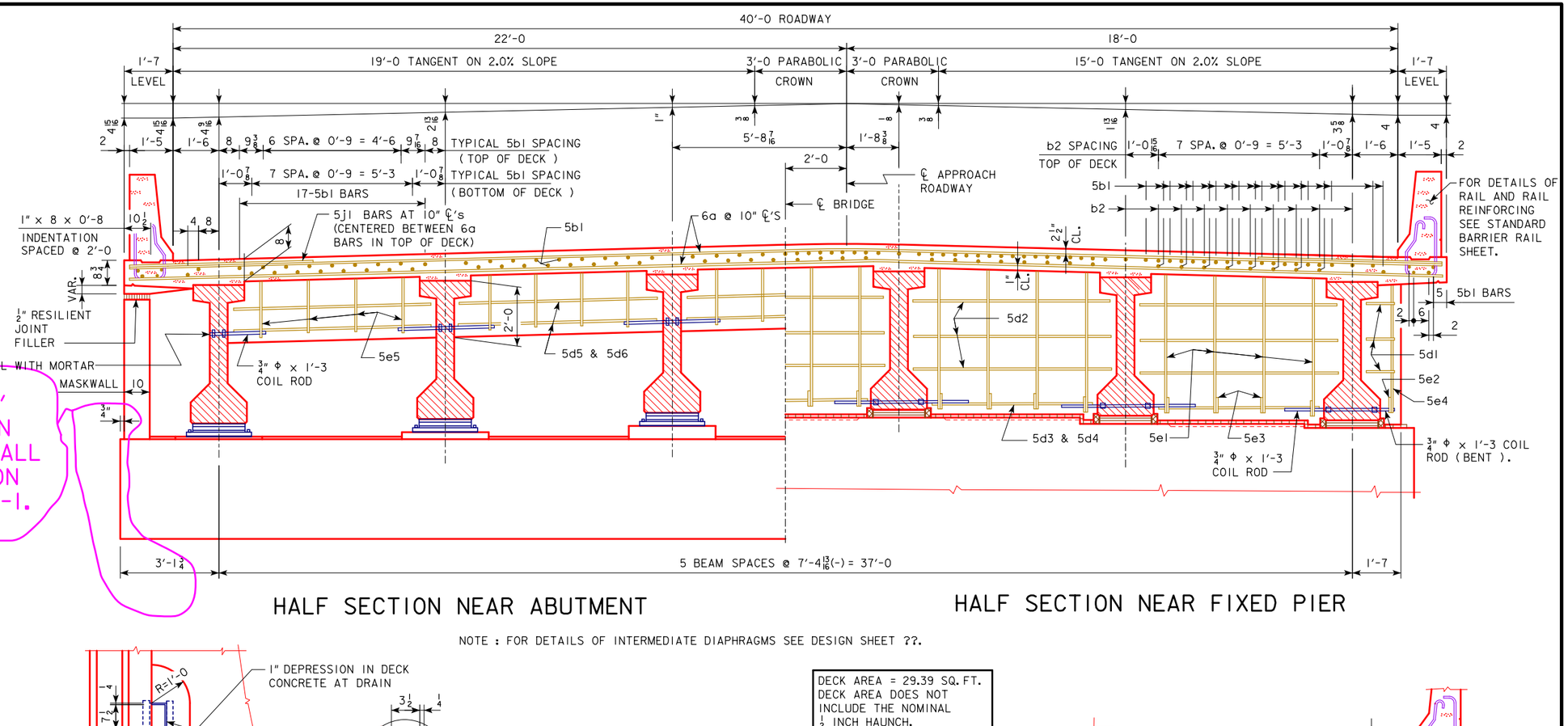
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE "DECK THICKNESS DETAILS" ON DESIGN SHEET NO. ____.

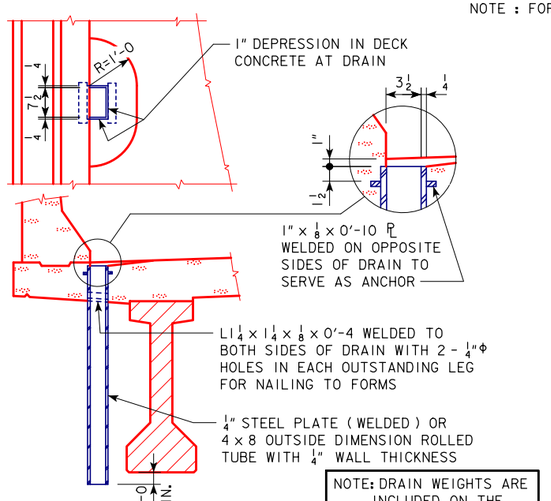


HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR FIXED PIER

NOTE : FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ??.

DECK AREA = 29.39 SQ. FT.
DECK AREA DOES NOT INCLUDE THE NOMINAL ½ INCH HAUNCH.



NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

DRAIN DETAILS

NOTE:
DRAINS ARE TO BE GALVANIZED. ____ DRAINS REQUIRED. SEE "SITUATION PLAN" ON DESIGN SHEET ____ 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
WT. LBS.	96	106	120
LENGTH FT.	4'-11¾	5'-5¾	6'-2¾

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES ½" INTEGRAL WEARING SURFACE.

THE PIER AND ABUTMENT DIAPHRAGM CONCRETE IS TO BE PLACED MONOLITHICALLY WITH THE BRIDGE DECK.

COST OF ALL PREFORMED EXPANSION 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 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

ALL DECK AND DIAPHRAGM REINFORCING IS TO BE WIRED IN PLACE AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED.

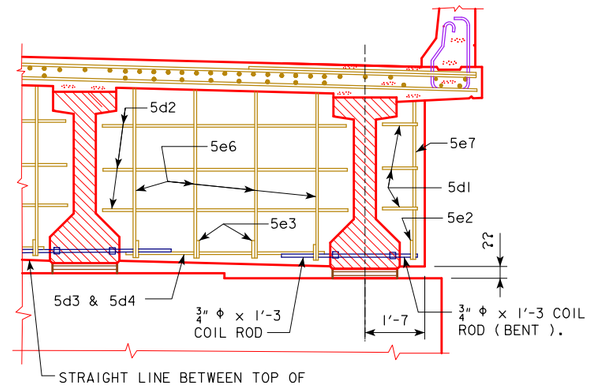
TOP TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 2½" CLEAR BELOW TOP OF DECK. BOTTOM TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 1" CLEAR ABOVE BOTTOM OF DECK. TOP AND BOTTOM REINFORCING STEEL IS TO BE SUPPORTED BY INDIVIDUAL BAR CHAIRS SPACED AT NOT MORE THAN 3'-0 CENTERS LONGITUDINALLY 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 = 1'-10).

BOTTOM BARS - LAP OVER BEAMS (MIN. LAP = 1'-10).

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

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	40' RDWY. PPCB (B, C & D BEAMS - STUB ABUT.) CROSS SECTION - LRFD DESIGN	STANDARD SHEET 4559	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:34:15 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4559 11x17_pdf.pltcfg

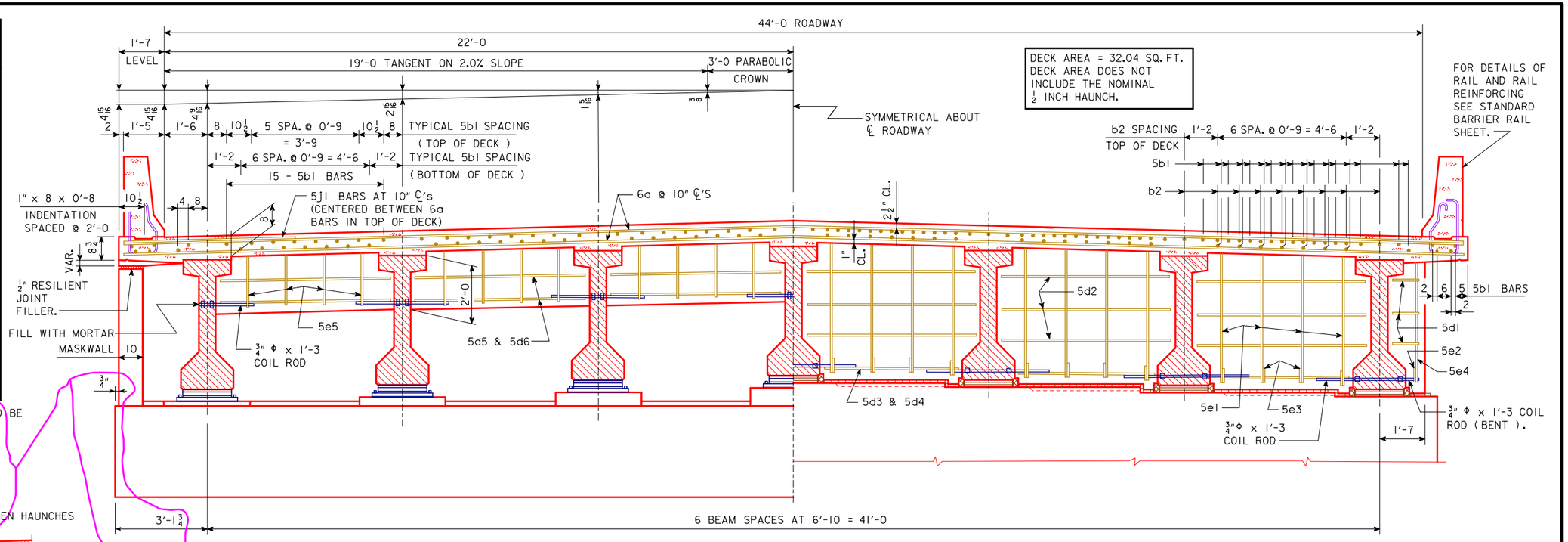
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE REVISED 07-2018: CHANGED NOTE STATING " $\frac{1}{2}$" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER). ENGLISHSTUBABUTMENTBRIDGES.DGN 4560 - THIS SHEET ISSUED 11-06. LRFD DESIGNED DECK.

TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN BEAM B & C	LONGEST ADJACENT SPAN BEAM D	BAR SIZE
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		7
67'-6		7
71'-8	70'-0	7
75'-10	75'-0	8
80'-0	80'-0	8
	85'-0	8
	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 ℄ OF PIER.

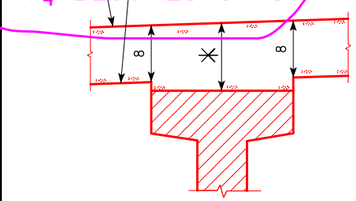
REDRAW FOR 'B' BEAMS TO ALIGN FOOTING & BACKWALL FACES. DIMENSION $3'-1\frac{3}{4}$ BECOMES 3'-1.



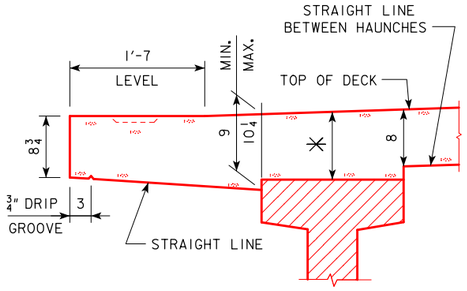
HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR FIXED PIER

NOTE : FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ??.



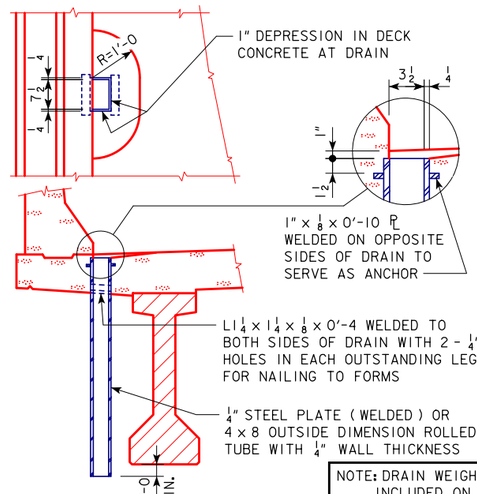
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE "DECK THICKNESS DETAILS" ON DESIGN SHEET NO. ____.



DRAIN DETAILS

NOTE: DRAINS ARE TO BE GALVANIZED. ____ DRAINS REQUIRED. SEE "SITUATION PLAN" ON DESIGN SHEET ____ FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "STRUCTURAL STEEL". WEIGHT IS BASED ON ROLLED TUBE.

NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

DATA FOR ONE DRAIN			
BEAM SIZE	B	C	D
WT. LBS.	96	106	120
LENGTH FT.	4'-11¾	5'-5¾	6'-2¾

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES $\frac{1}{2}$" INTEGRAL WEARING SURFACE.

THE PIER AND ABUTMENT DIAPHRAGM CONCRETE IS TO BE PLACED MONOLITHICALLY WITH THE BRIDGE DECK.

COST OF ALL PREFORMED EXPANSION 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 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

ALL DECK AND DIAPHRAGM REINFORCING IS TO BE WIRED IN PLACE AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED.

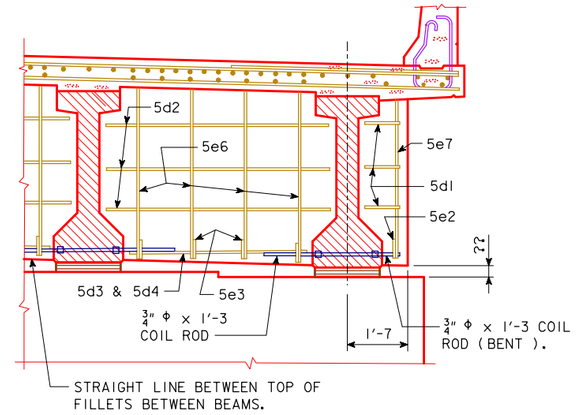
TOP TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND $2\frac{1}{2}$" CLEAR BELOW TOP OF DECK. BOTTOM TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 1" CLEAR ABOVE BOTTOM OF DECK. TOP AND BOTTOM REINFORCING STEEL IS TO BE SUPPORTED BY INDIVIDUAL BAR CHAIRS SPACED AT NOT MORE THAN 3'-0 CENTERS 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 = 1'-10).

BOTTOM BARS - LAP OVER BEAMS (MIN. LAP = 1'-10).

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

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	44' RDWY. PPCB (B, C & D BEAMS - STUB ABUT.) CROSS SECTION - LRFD DESIGN	STANDARD SHEET 4560	COUNTY	PROJECT NUMBER	SHEET NUMBER

7/31/2018 9:34:16 AM bkloss W:\Highway\Bridge\Standards\Bridges\EnglishStubBridges.dgn 4560 11x17_pdf.pltcfg

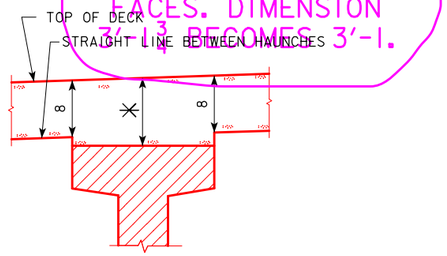
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS.
REVISED 07-2018: CHANGED NOTE STATING "½" RESILIENT JOINT FILLER" (WAS PREFORMED EXPANSION JOINT FILLER).
ENGLISHSTUBABUTMENTBRIDGES.DGN 4561 - THIS SHEET ISSUED 11-06. LRFD DESIGNED DECK.

TABLE OF SIZE OF 'b2' BAR

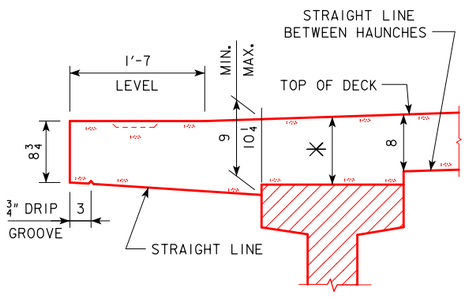
LONGEST ADJACENT SPAN BEAM B & C	LONGEST ADJACENT SPAN BEAM D	BAR SIZE
34'-2	35'-0	5
38'-4	40'-0	5
42'-6	45'-0	5
46'-8	50'-0	5
50'-10	55'-0	6
55'-0	60'-0	6
59'-2	65'-0	6
63'-4		7
67'-6		7
71'-8	70'-0	7
75'-10	75'-0	8
80'-0	80'-0	8
	85'-0	8
	90'-0	8
	95'-0	8
	100'-0	9
	105'-0	9
	110'-0	9

THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE ℄ OF PIER.

REDRAW FOR 'B' BEAMS TO ALIGN FOOTING & BACKWALL FACES. DIMENSION 3'-1¾ BECOMES 3'-1.



INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

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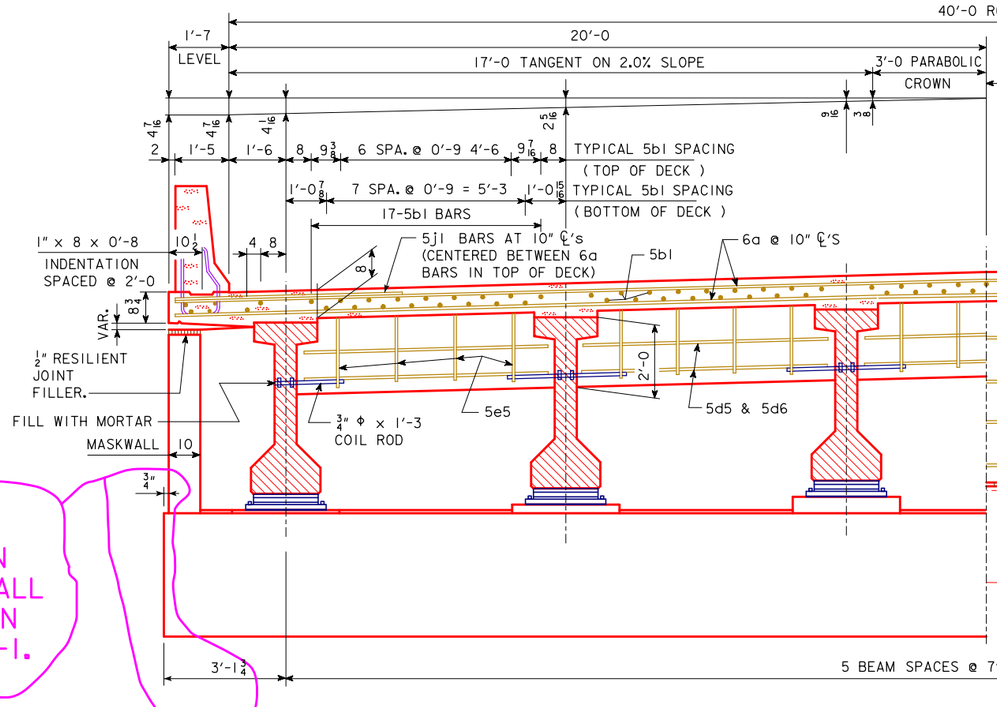
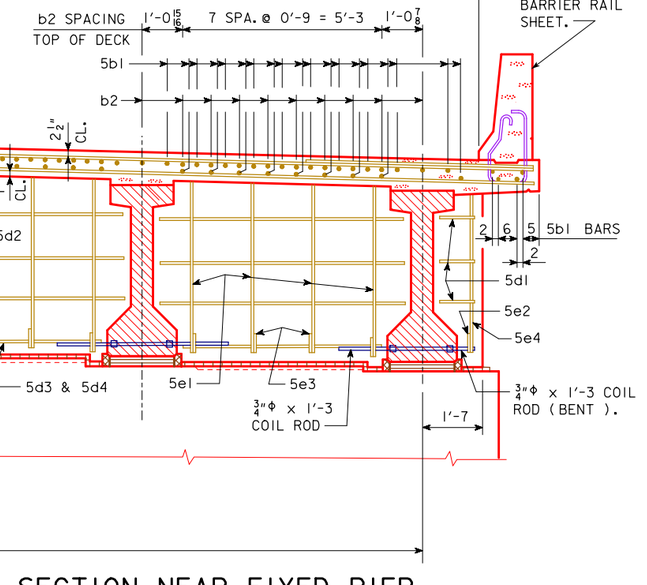


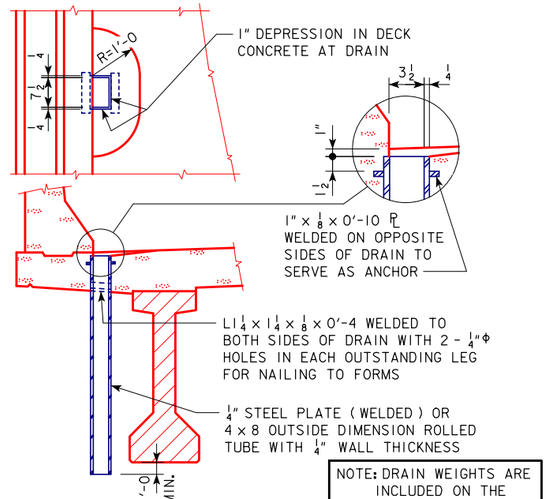
HALF SECTION NEAR ABUTMENT

DECK AREA = 29.39 SQ. FT. DECK AREA DOES NOT INCLUDE THE NOMINAL ½ INCH HAUNCH.



HALF SECTION NEAR FIXED PIER

NOTE : FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ??.



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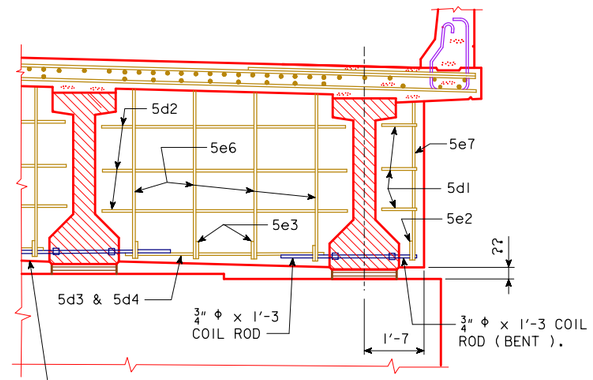

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IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	40' RDWY. PPCB (B, C & D BEAMS - STUB ABUT.) CROSS SECTION (SYMM. CROWN) - LRFD DESIGN	STANDARD SHEET 4561	COUNTY	PROJECT NUMBER	SHEET NUMBER

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