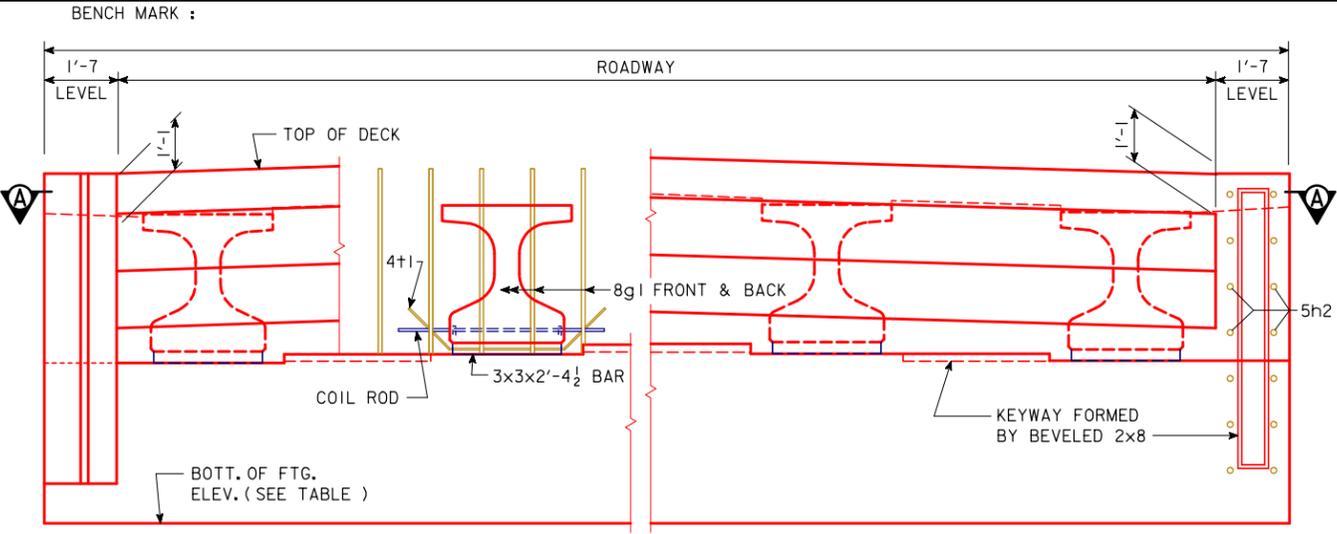
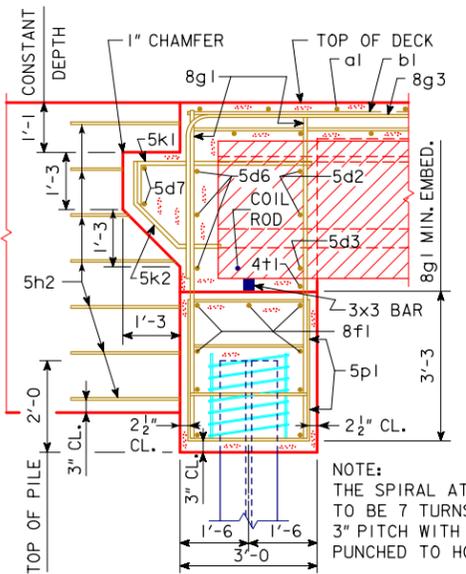


CORRECTION 04-14 - ADDED CONCRETE QUANTITY TABLE & REFERRAL NOTE TO SUMMARY QUANTITY SHEET. REMOVED DESIGN BEARING NOTE FOR ABUT. PILING FROM ABUTMENT NOTES. ENGLISHBTINTEGRALBRIDGES.DGN - 2079-BTB - THIS SHEET ISSUED 02-08.



PART REAR ELEVATION AT ABUTMENT

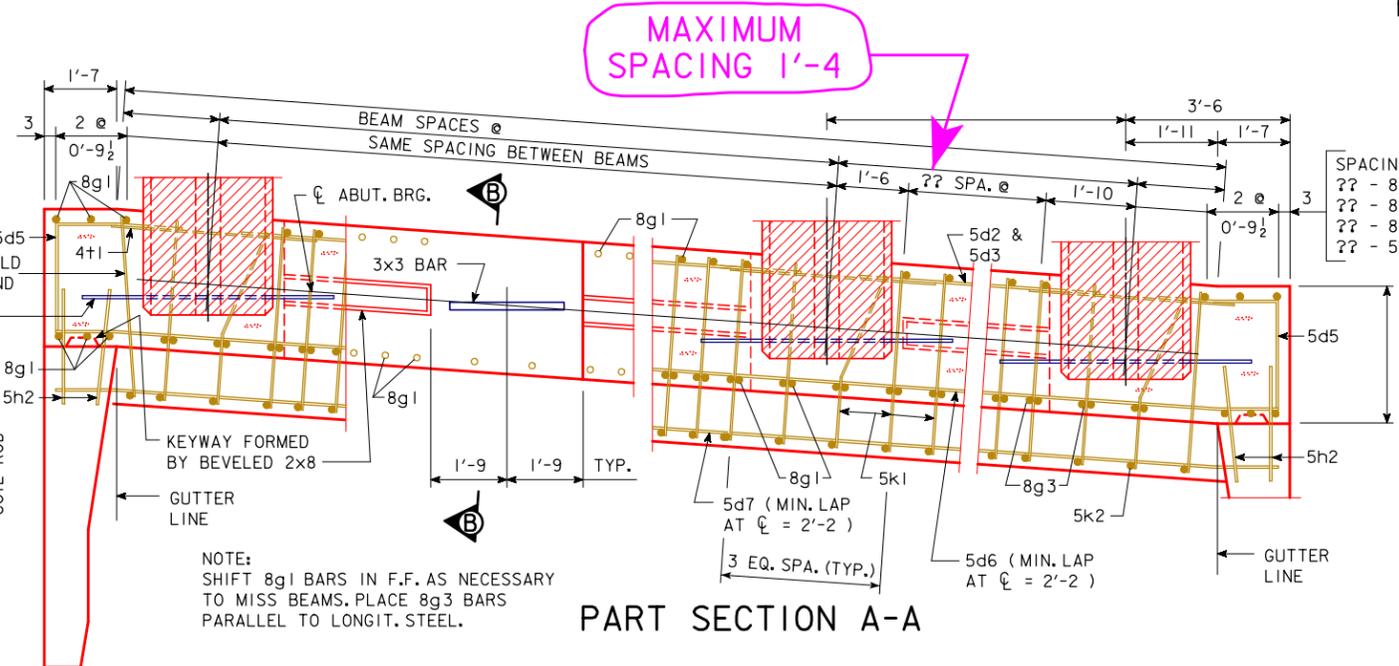


PART SECTION B-B



ABUTMENT STEP DIAGRAM
(REAR ELEVATION)

POINT	ABUT.	ABUT.
ELEV. A		
BOTT. FTG. ELEV.		



PART SECTION A-A

MAXIMUM SPACING 1'-4

SPACING FOR :
 ?? - 8g1 BACK FACE
 ?? - 8g1 FRONT FACE
 ?? - 8g3 BACK FACE
 ?? - 5k1 & 5k2 BACK FACE

NOTE: PLACE 5h2 BAR AT 1:6 SLOPE TO MATCH TRAFFIC SIDE OF ABUTMENT WING FACE (BOTH SIDES TYPICAL).

STEP	ABUT.	ABUT.
a		

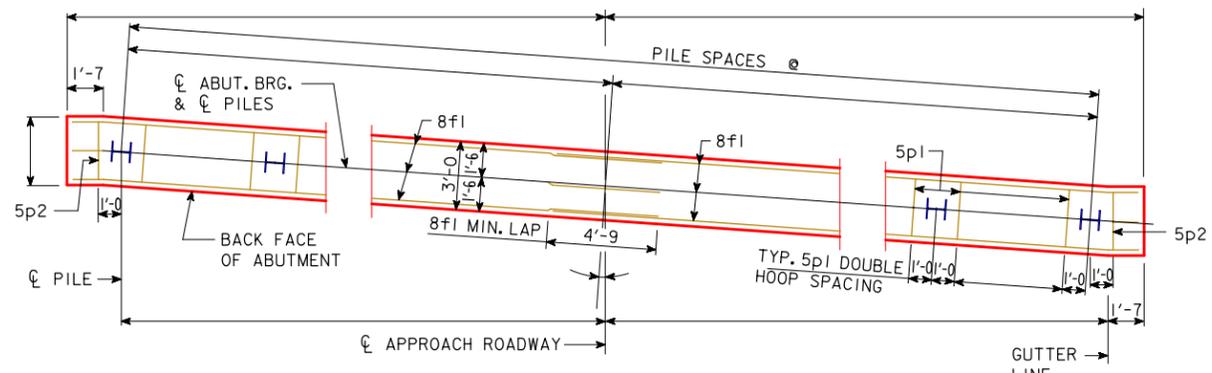
LOCATION	QUANTITY
----- ABUTMENT FOOTING	
----- ABUTMENT FOOTING	
TOTAL (CU. YDS.)	

NOTE: CONCRETE QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

NOTE: ?? - HP 10 x 57 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

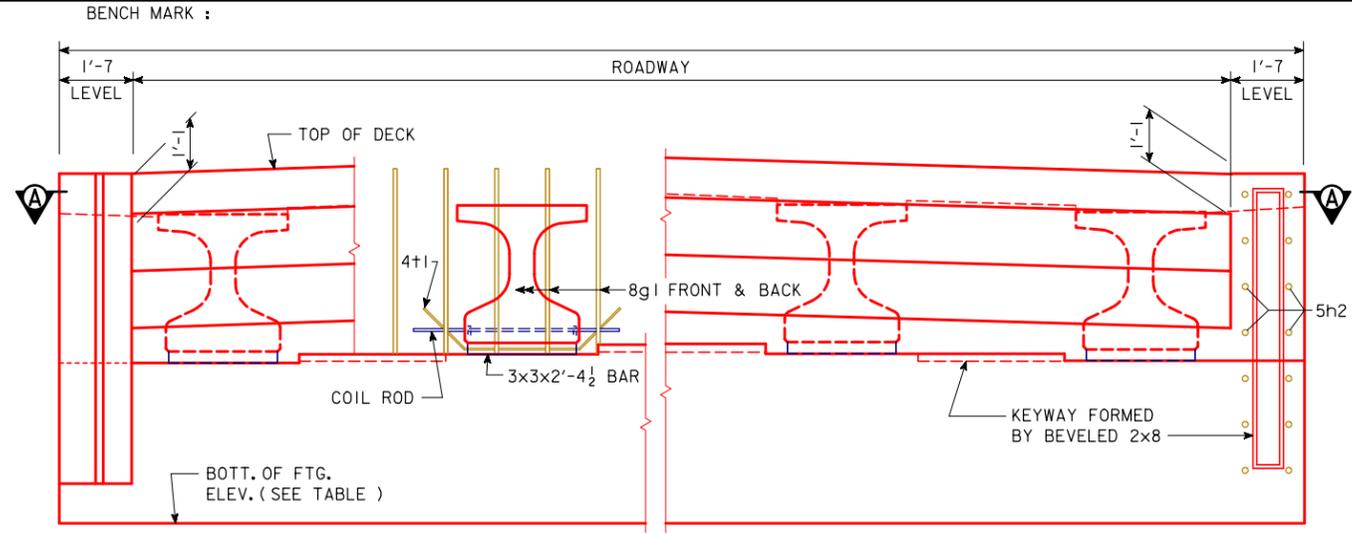
ABUTMENT NOTES:
 MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
 IF NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK OR BACKWALL FROM CONSTRUCTION EQUIPMENT, AN APPROPRIATE METHOD OF PROTECTION APPROVED BY THE ENGINEER SHALL BE PROVIDED BY THE BRIDGE CONTRACTOR AT NO EXTRA COST TO THE STATE.



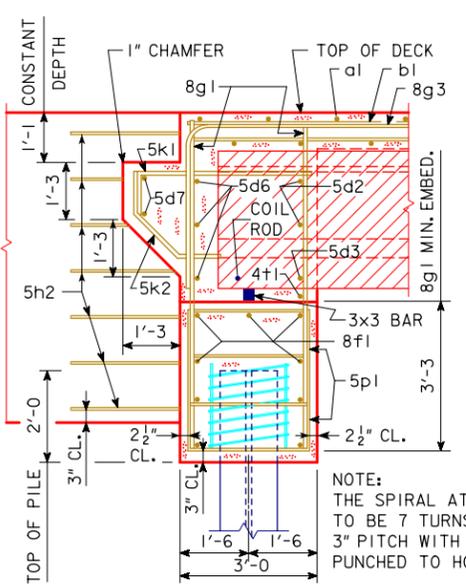
ABUTMENT PILE PLAN

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

CORRECTION 04-14 - ADDED CONCRETE QUANTITY TABLE & REFERRAL NOTE TO SUMMARY QUANTITY SHEET. REMOVED DESIGN BEARING NOTE FOR ABUT. PILING FROM ABUTMENT NOTES. ENGLISHBTINTEGRALBRIDGES.DGN - 2081-BTB - THIS SHEET ISSUED 02-08.



PART REAR ELEVATION AT ABUTMENT

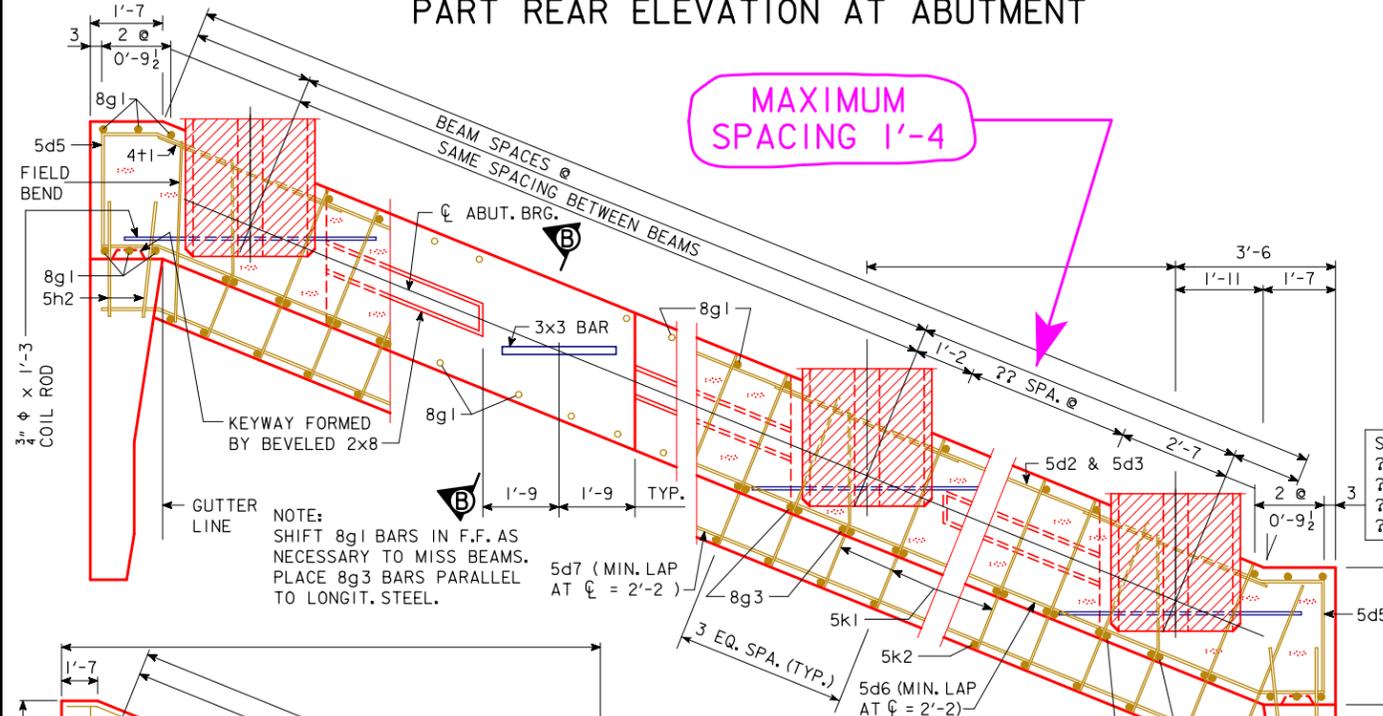


PART SECTION B-B

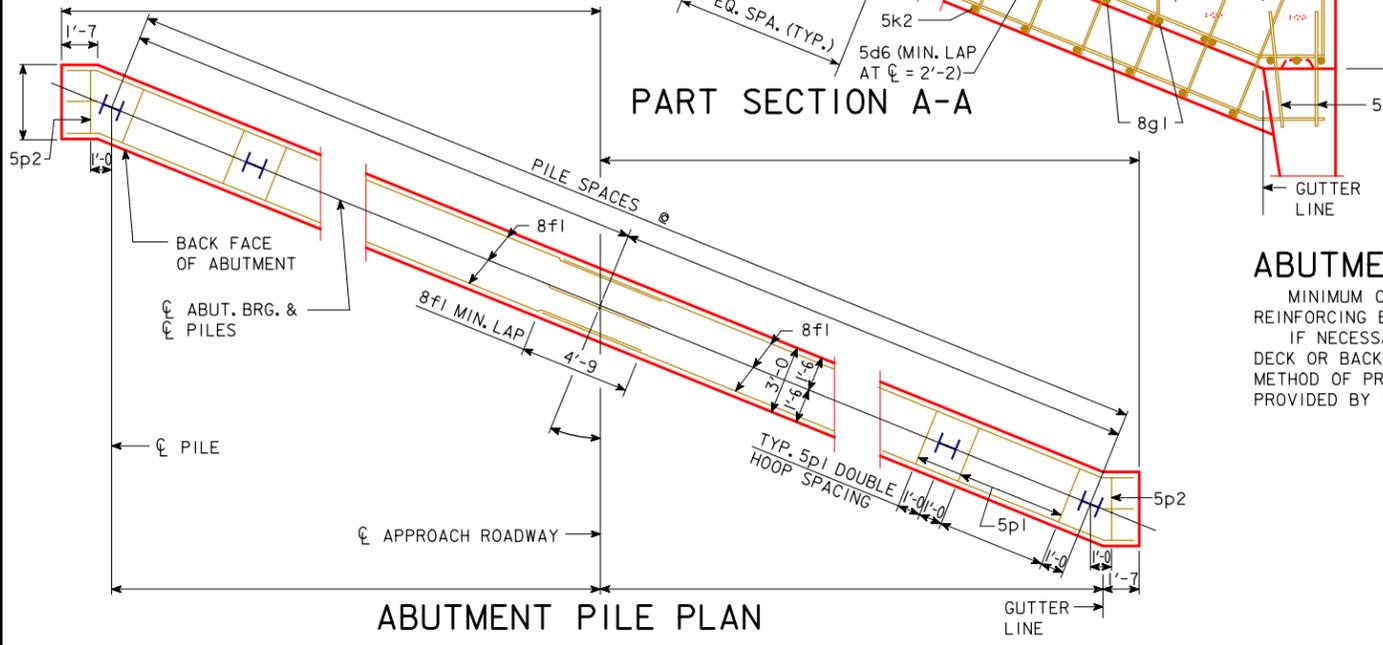


ABUTMENT STEP DIAGRAM
(REAR ELEVATION)

POINT	ABUT.	ABUT.
ELEV. A		
BOTT. FTG. ELEV.		



PART SECTION A-A



ABUTMENT PILE PLAN

NOTE:
THE SPIRAL AT THE TOP OF EACH PILE TO BE 7 TURNS OF No. 2 BAR, 21" DIAMETER, 3" PITCH WITH 3 - 1 1/8 x 7/8 x 1/8 SPACERS PUNCHED TO HOLD SPIRAL.

SPACING FOR :
 ?? - 8g1 BACK FACE
 ?? - 8g1 FRONT FACE
 ?? - 8g3 BACK FACE
 ?? - 5k1 & 5k2 BACK FACE

NOTE: PLACE 5h2 BAR AT 1:6 SLOPE TO MATCH TRAFFIC SIDE OF ABUTMENT WING FACE (BOTH SIDES TYPICAL).

ABUTMENT NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
 IF NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK OR 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.

STEP	ABUT.	ABUT.
a		

LOCATION	QUANTITY
----- ABUTMENT FOOTING	
----- ABUTMENT FOOTING	
TOTAL (CU. YDS.)	

NOTE: CONCRETE QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

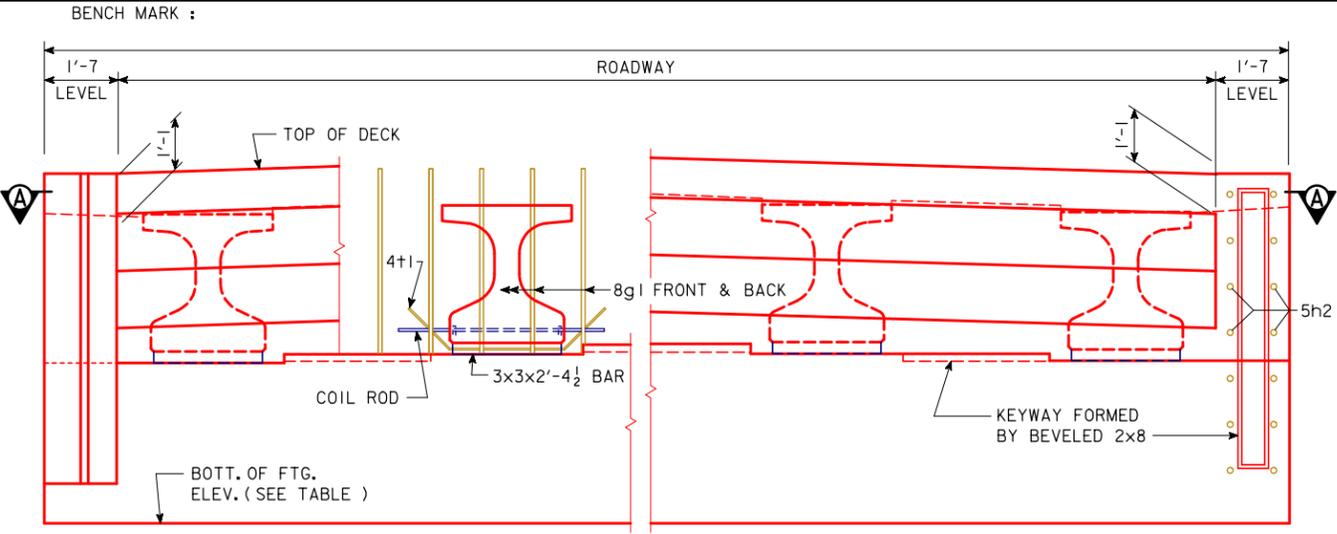
NOTE:
?? - HP 10 x 57 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

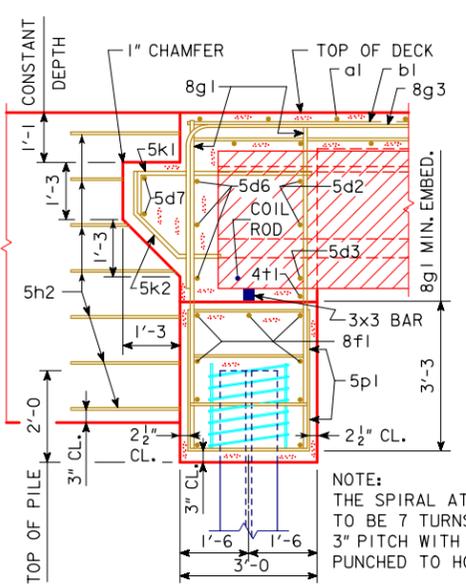
ABUTMENT FOOTING DETAILS

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

CORRECTION 04-14 - ADDED CONCRETE QUANTITY TABLE & REFERRAL NOTE TO SUMMARY QUANTITY SHEET. REMOVED DESIGN BEARING NOTE FOR ABUT. PILING FROM ABUTMENT NOTES. ENGLISHBTINTEGRALBRIDGES.DGN - 2080-BTB - THIS SHEET ISSUED 02-08.



PART REAR ELEVATION AT ABUTMENT



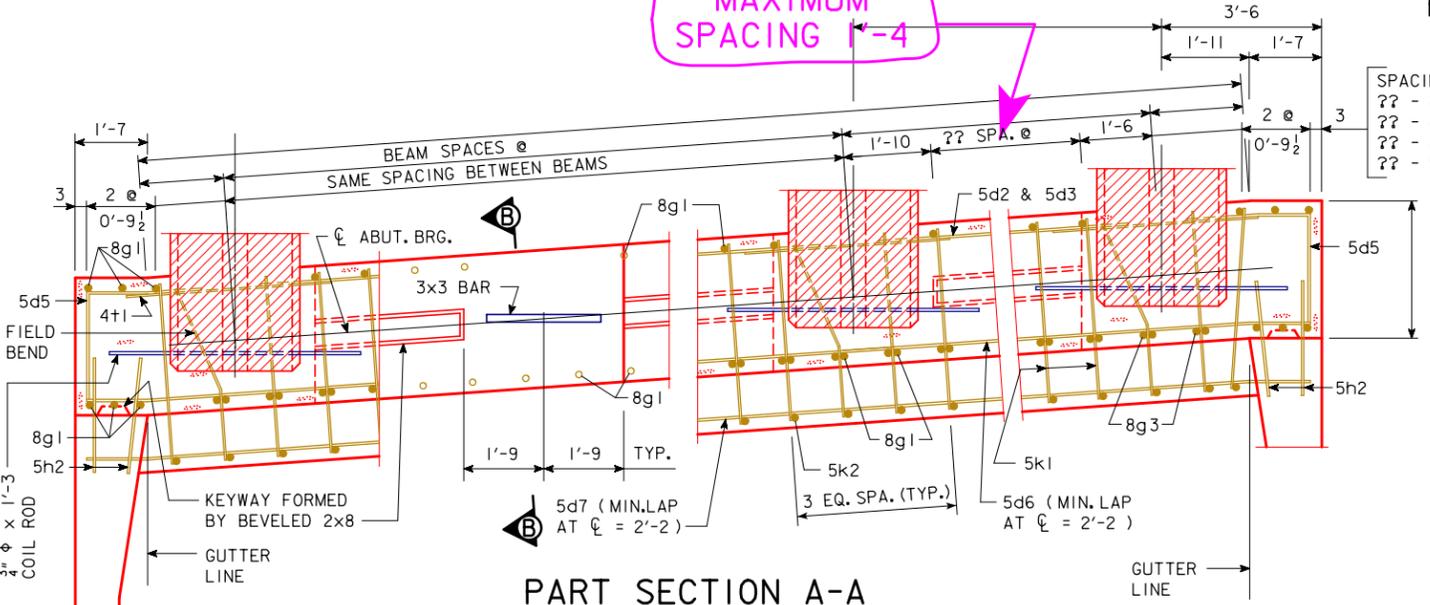
PART SECTION B-B



ABUTMENT STEP DIAGRAM
(REAR ELEVATION)

POINT	ABUT.	ABUT.
ELEV. A		
BOTT. FTG. ELEV.		

MAXIMUM SPACING 1'-4



PART SECTION A-A

- SPACING FOR :
- ?? - 8g1 BACK FACE
 - ?? - 8g1 FRONT FACE
 - ?? - 8g3 BACK FACE
 - ?? - 5k1 & 5k2 BACK FACE

NOTE: PLACE 5h2 BAR AT 1:6 SLOPE TO MATCH TRAFFIC SIDE OF ABUTMENT WING FACE (BOTH SIDES TYPICAL).

STEP	ABUT.	ABUT.
a		

NOTE: SHIFT 8g1 BARS IN F.F. AS NECESSARY TO MISS BEAMS. PLACE 8g3 BARS PARALLEL TO LONGIT. STEEL.

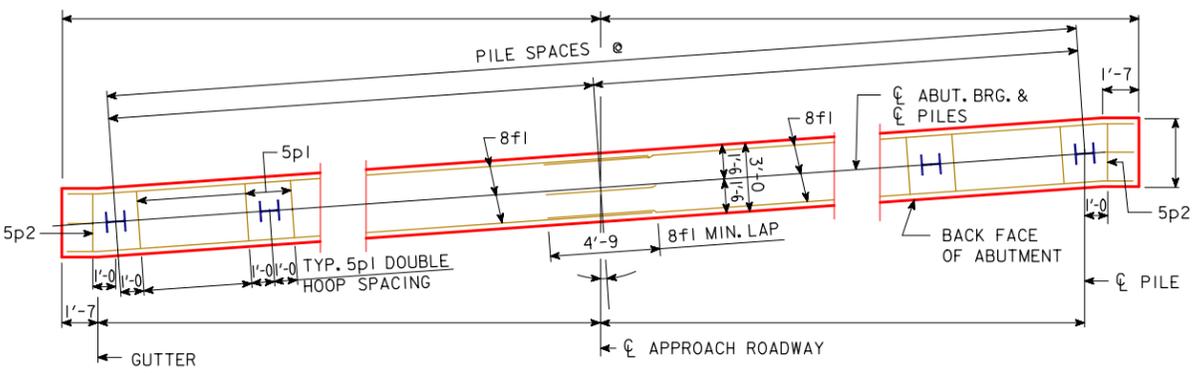
LOCATION	QUANTITY
----- ABUTMENT FOOTING	
----- ABUTMENT FOOTING	
TOTAL (CU. YDS.)	

NOTE: CONCRETE QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

NOTE: ?? - HP 10 x 57 STEEL BEARING PILING REQUIRED AT EACH ABUTMENT.

NOTE: BARRIER RAIL NOT SHOWN IN DETAILS.

ABUTMENT NOTES:
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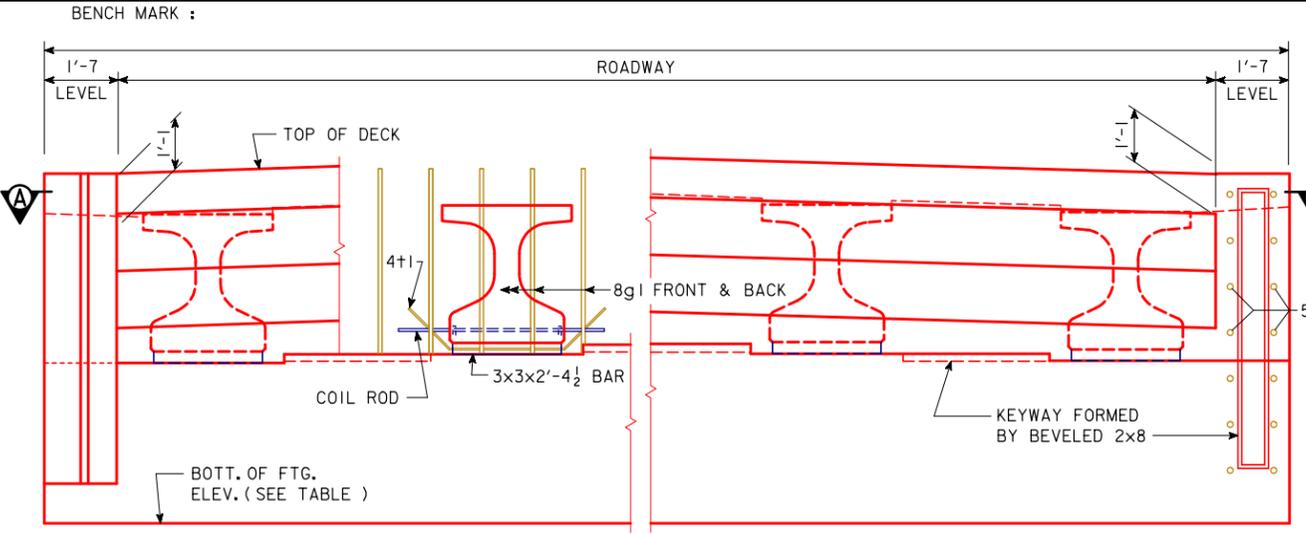


ABUTMENT PILE PLAN

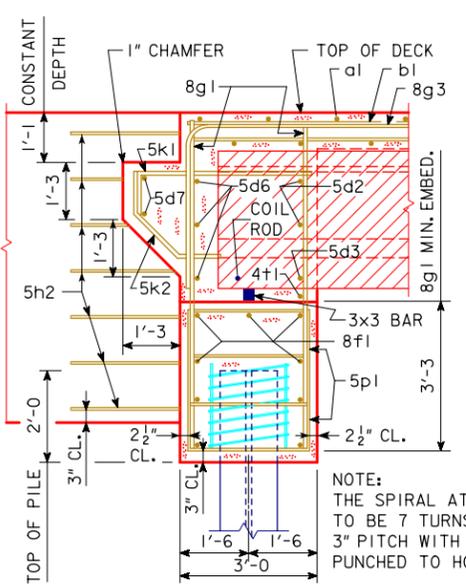
ABUTMENT FOOTING DETAILS

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

CORRECTION 04-14 - ADDED CONCRETE QUANTITY TABLE & REFERRAL NOTE TO SUMMARY QUANTITY SHEET. REMOVED DESIGN BEARING NOTE FOR ABUT. PILING FROM ABUTMENT NOTES. ENGLISHBTINTEGRALBRIDGES.DGN - 2084-BTB - THIS SHEET ISSUED 02-08.



PART REAR ELEVATION AT ABUTMENT



PART SECTION B-B



ABUTMENT STEP DIAGRAM
(REAR ELEVATION)

POINT	ABUT.	ABUT.
ELEV. A		
BOTT. FTG. ELEV.		

STEP	ABUT.	ABUT.
a		

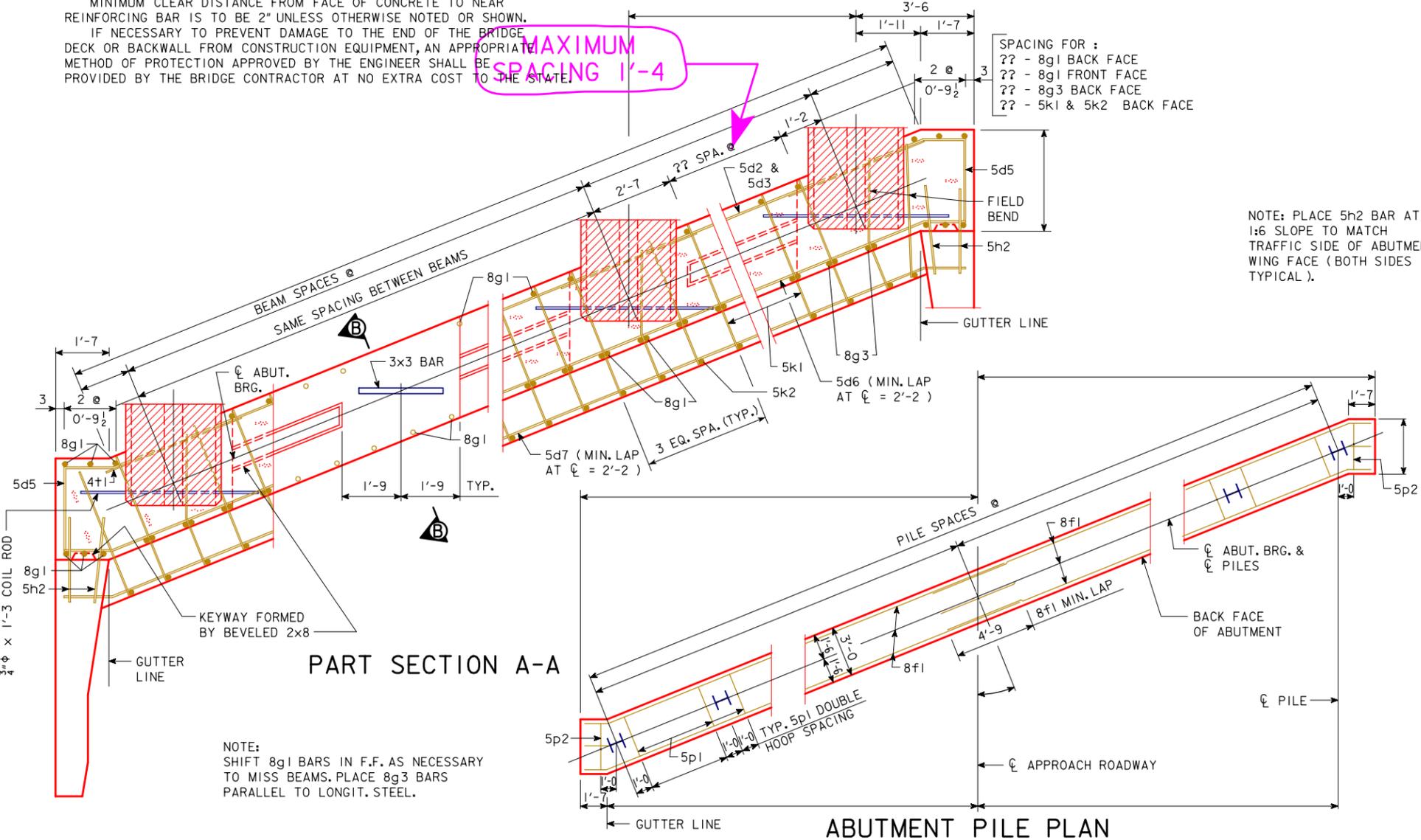
ABUTMENT NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
IF NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK OR 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.

MAXIMUM SPACING 1'-4"

- SPACING FOR :
- ?? - 8g1 BACK FACE
 - ?? - 8g1 FRONT FACE
 - ?? - 8g3 BACK FACE
 - ?? - 5k1 & 5k2 BACK FACE

NOTE: PLACE 5h2 BAR AT 1:6 SLOPE TO MATCH TRAFFIC SIDE OF ABUTMENT WING FACE (BOTH SIDES TYPICAL).



PART SECTION A-A

ABUTMENT PILE PLAN

LOCATION	QUANTITY
----- ABUTMENT FOOTING	
----- ABUTMENT FOOTING	
TOTAL (CU. YDS.)	

NOTE: CONCRETE QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

NOTE: ?? - HP 10 x 57 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. _____

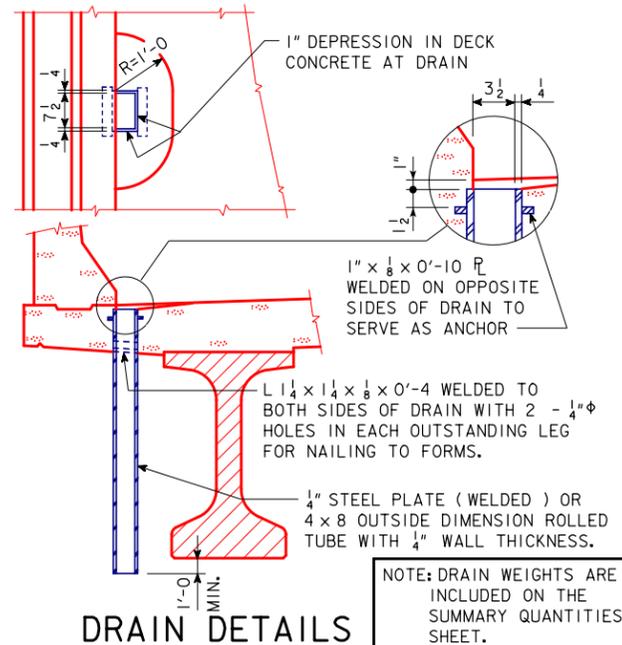
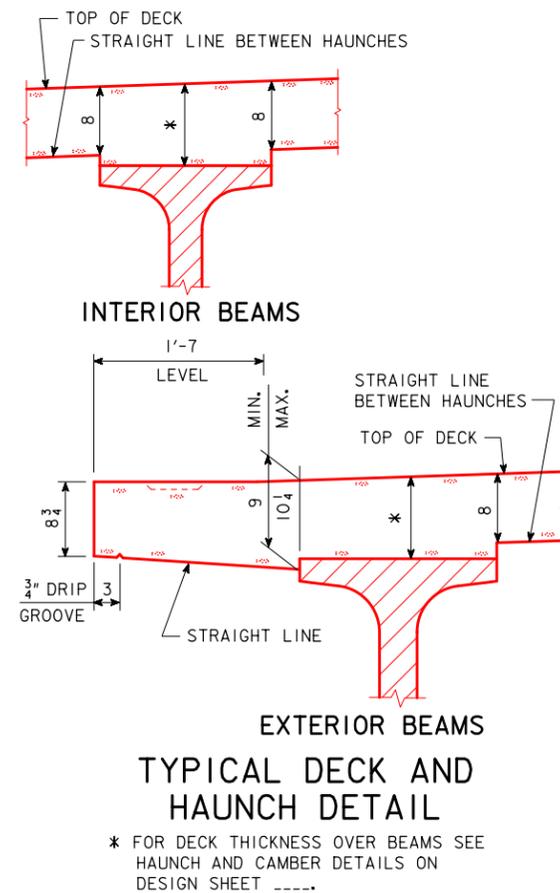
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS. ENGLISHBTINTEGRALBRIDGES.DGN - 4380-BTB-4 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

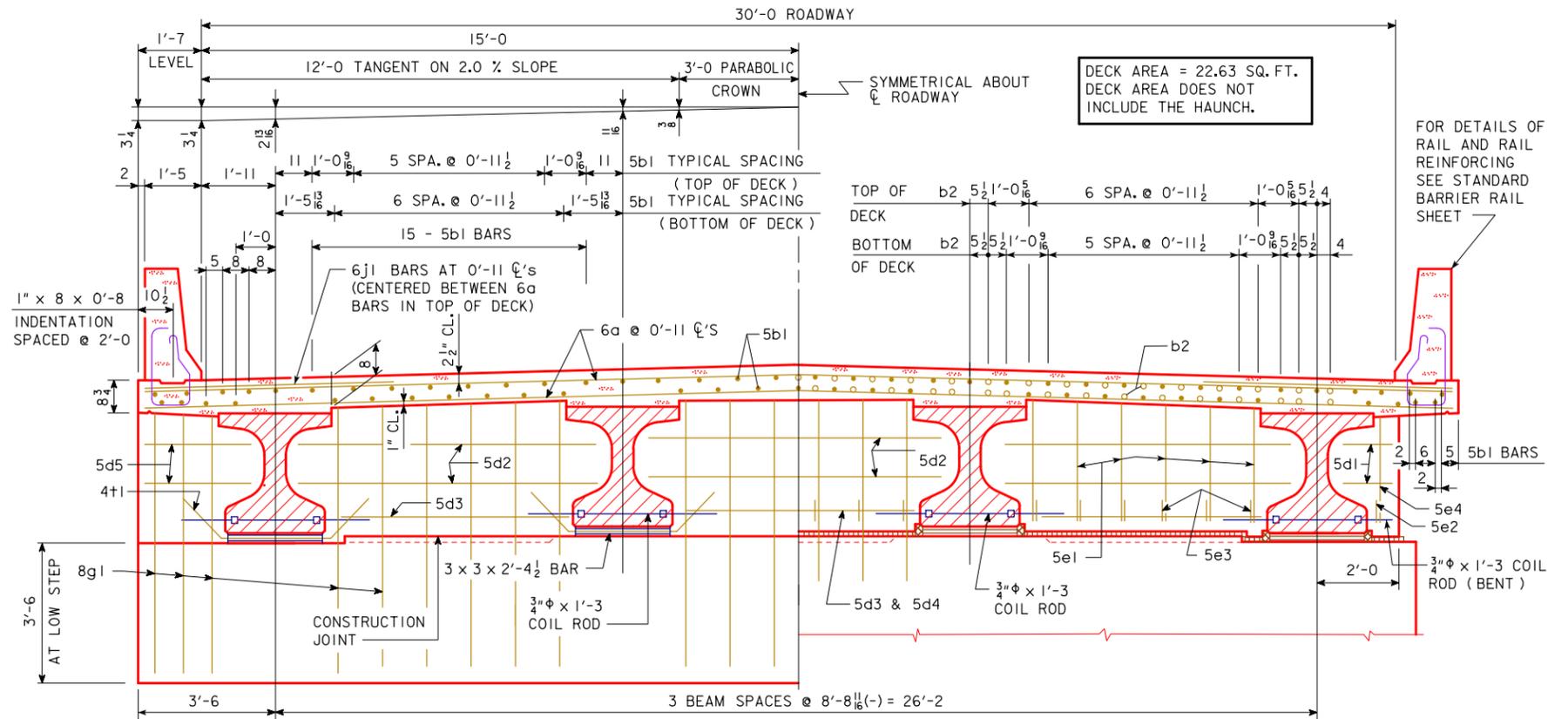
THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



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

DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4



NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

- THE BRIDGE DECK AS SHOWN INCLUDES 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 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.
- COST OF BEARING MATERIAL IS TO BE INCLUDED IN THE PRICE BID FOR "PRETENSIONED PRESTRESSED CONCRETE BEAMS".

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

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

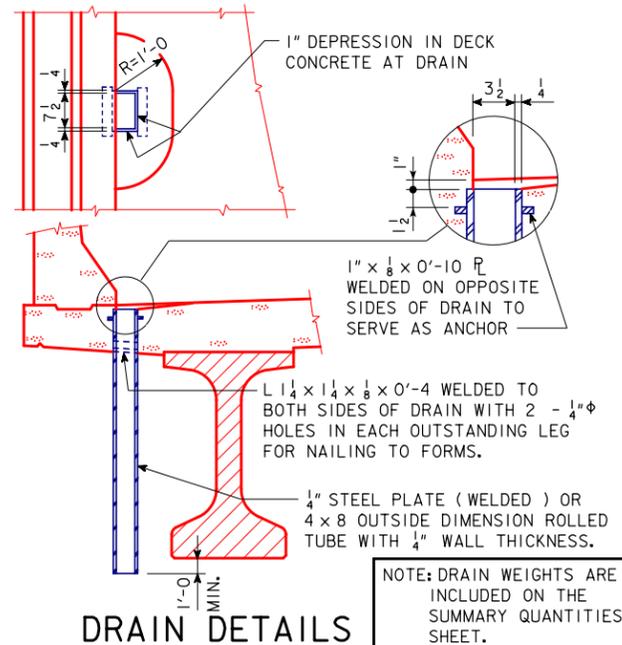
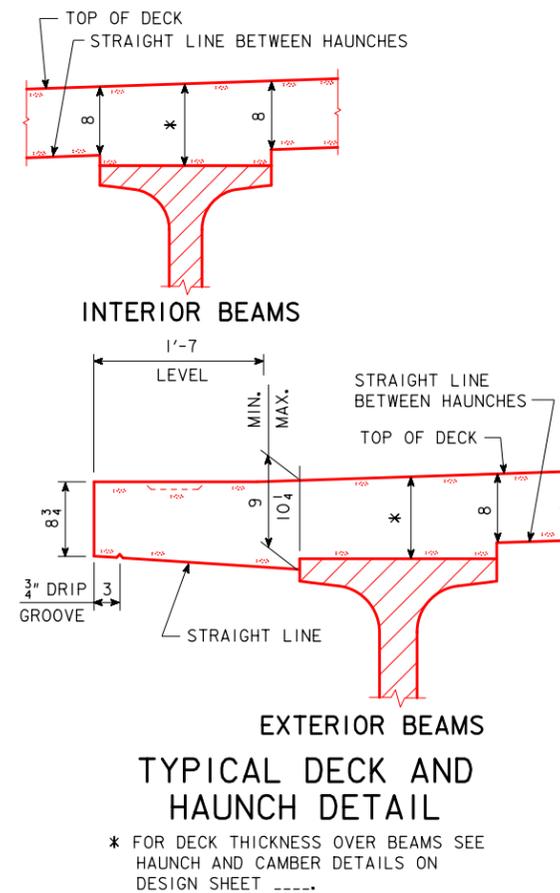
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS. ENGLISHBTIntegralBridges.dgn - 4380-BTB-5 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

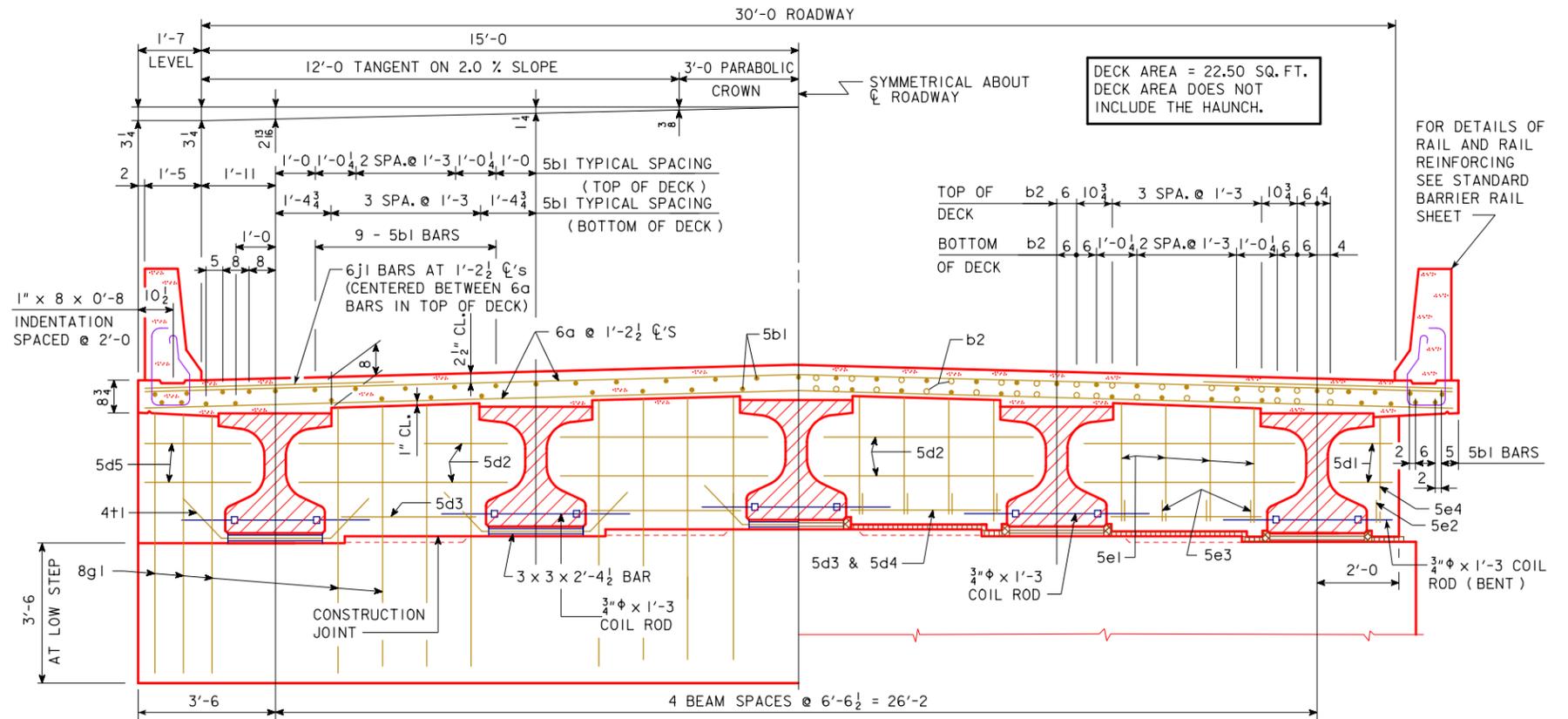
THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



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

DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4



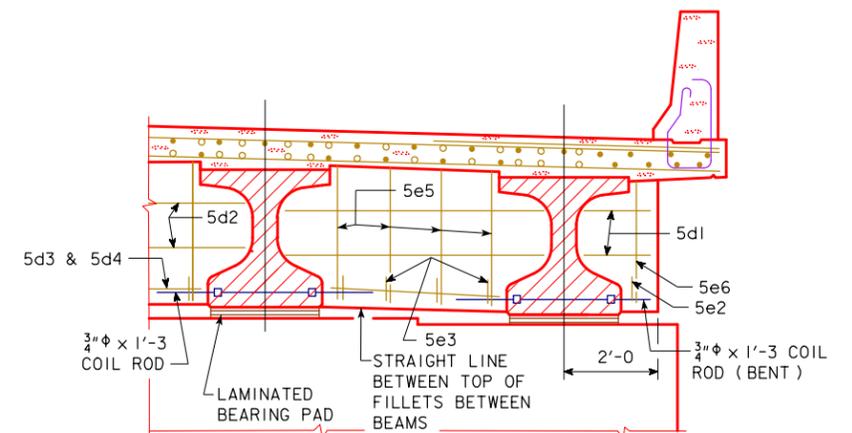
HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

- THE BRIDGE DECK AS SHOWN INCLUDES 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.
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- COST OF BEARING MATERIAL IS TO BE INCLUDED IN THE PRICE BID FOR "PRETENSIONED PRESTRESSED CONCRETE BEAMS".



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

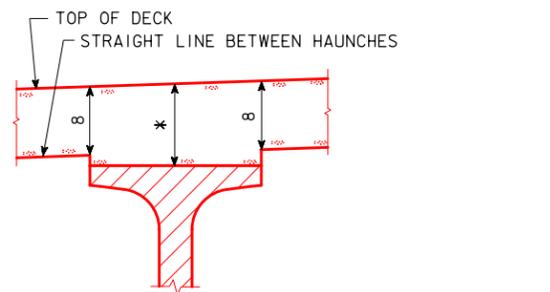
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. _____ OF _____ FILE NO. _____ DESIGN NO. _____

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. ENGLISHBTINTEGRALBRIDGES.DGN - 4380-BTD-4 - THIS SHEET ISSUED 02-08.

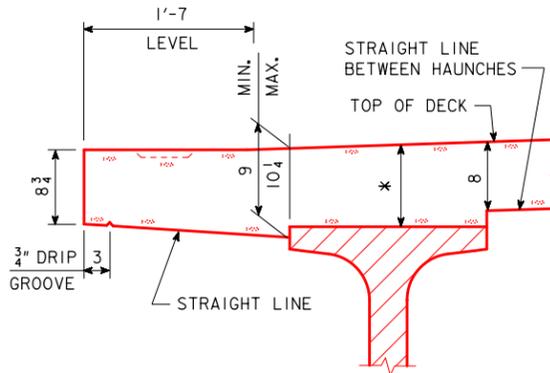
TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTD BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	** 4
55'-0	** 4
60'-0	** 5
65'-0	** 6
70'-0	** 6
75'-0	** 7
80'-0	** 8
85'-0	** 8
90'-0	** 9
95'-0	** 9
100'-0	7
105'-0	7
110'-0	8
115'-0	8
120'-0	8
125'-0	8
130'-0	9
135'-0	9

THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.
 ** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



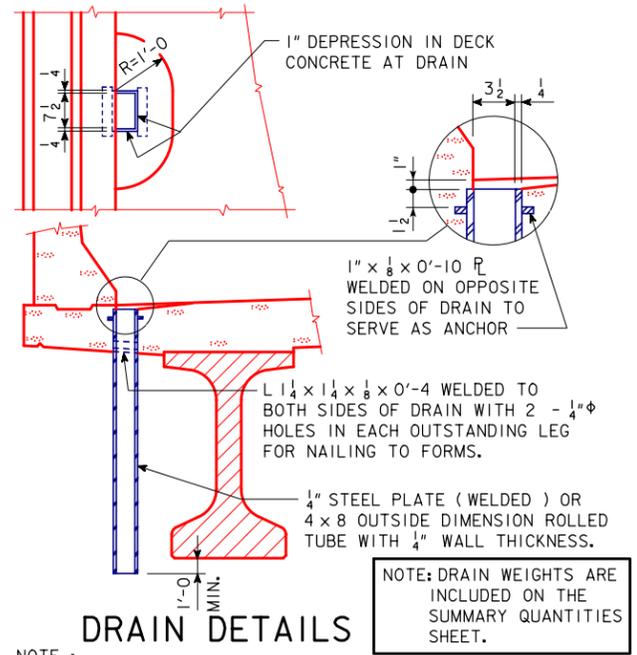
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

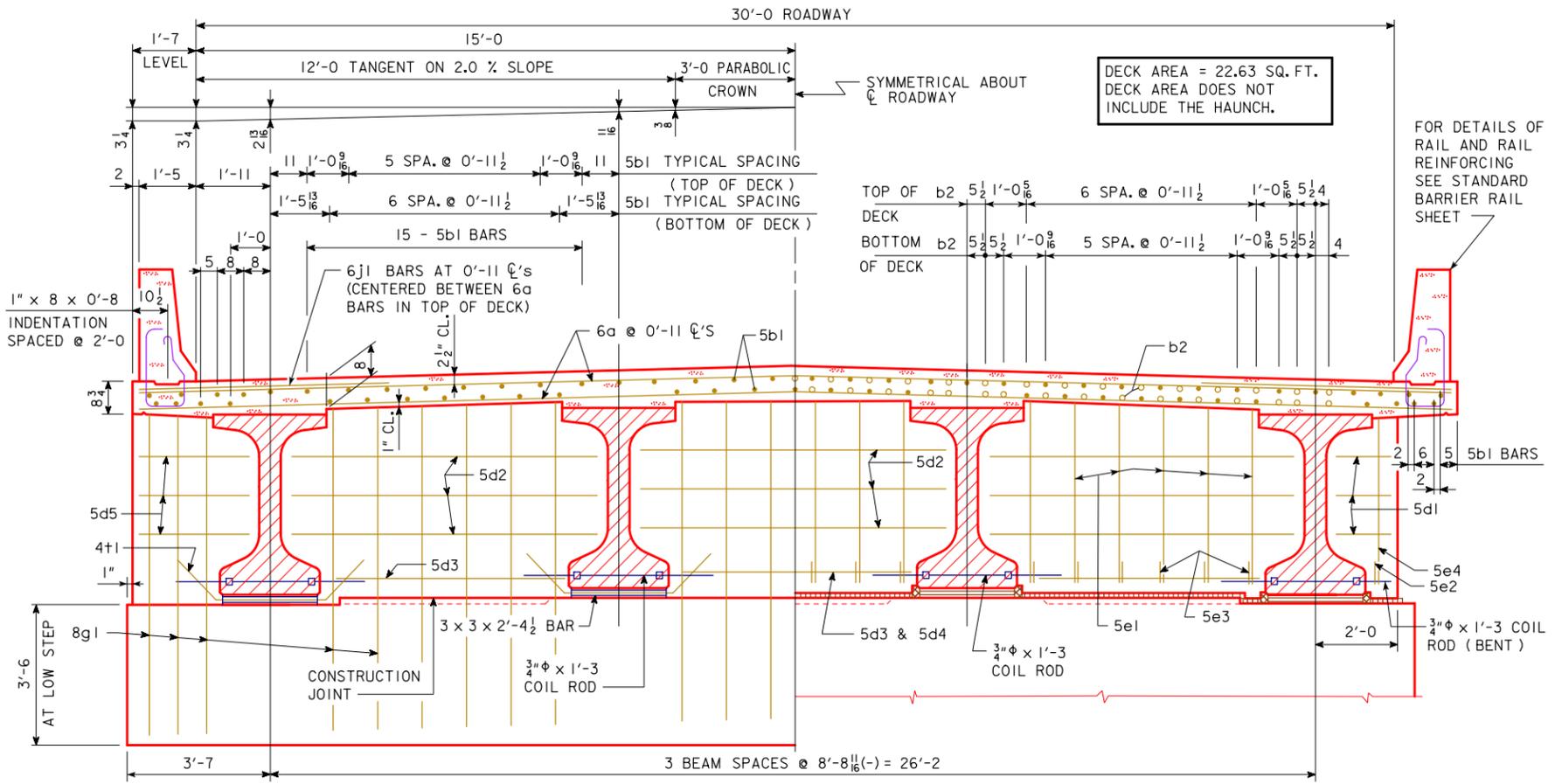
* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----



DRAIN DETAILS

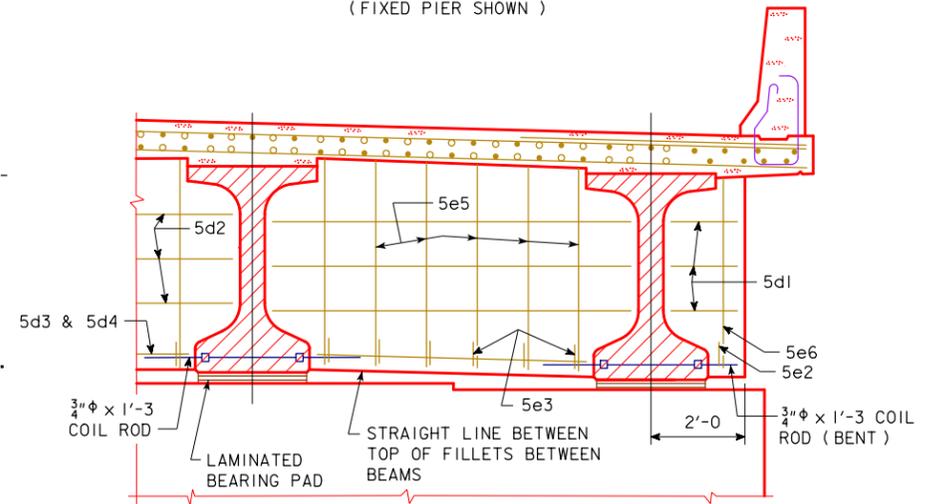
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
 NOTE: DRAINS ARE TO BE GALVANIZED. ---- DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "----". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTD
DRAIN WEIGHT (LBS.)	120
DRAIN LENGTH (FT.)	6'-2 3/4



HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 1/2" INTEGRAL WEARING SURFACE.
 THE PIER AND ABUTMENT DIAPHRAGM CONCRETE IS TO BE PLACED MONOLITHICALLY WITH THE BRIDGE DECK.
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NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF BRIDGE DECK CROSS SECTION DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

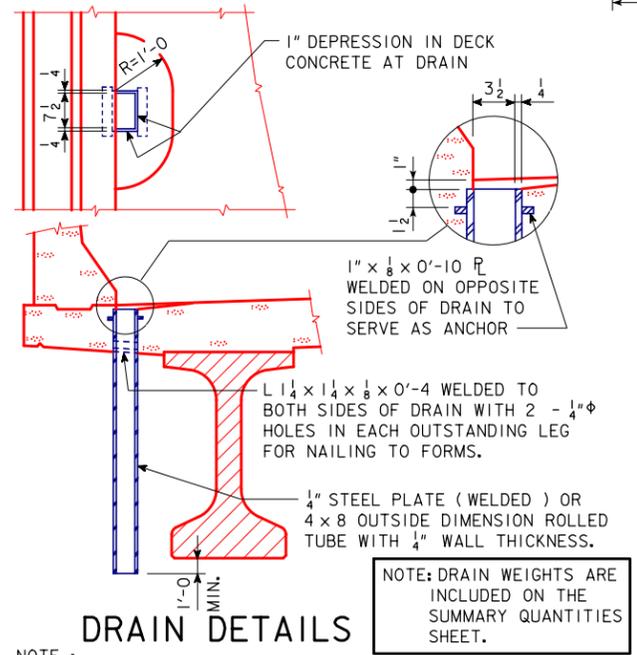
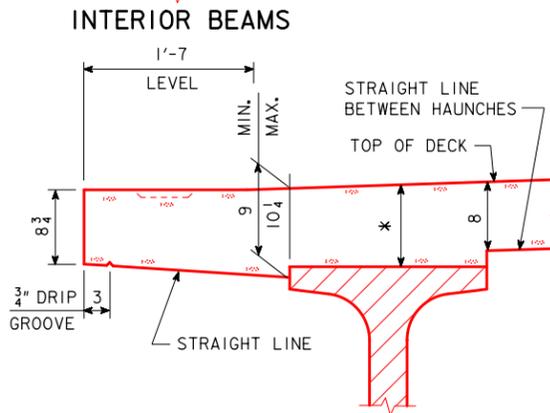
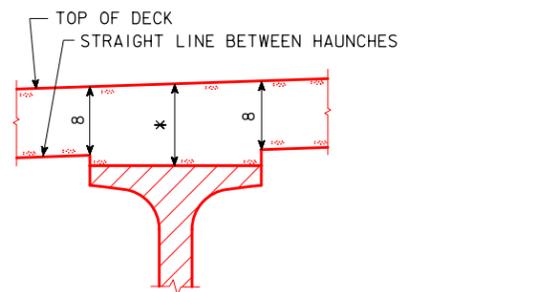
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS. ENGLISHBTINTEGRALBRIDGES.DGN - 4380-BTE-5 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

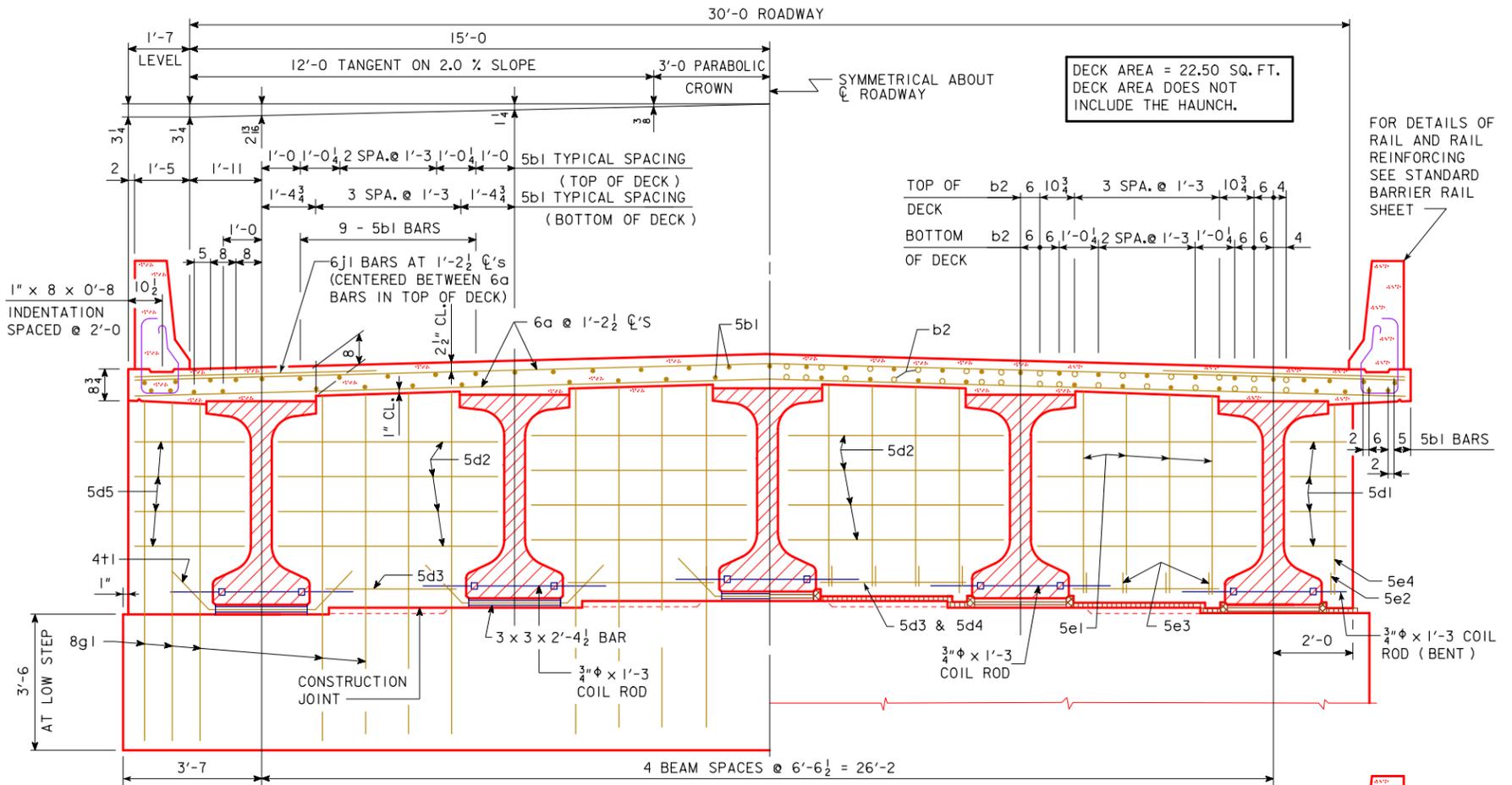
LONGEST ADJACENT SPAN	BTE BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	
55'-0	
60'-0	** 4
65'-0	** 5
70'-0	** 6
75'-0	** 6
80'-0	** 7
85'-0	** 7
90'-0	** 8
95'-0	** 8
100'-0	** 9
105'-0	** 9
110'-0	7
115'-0	7
120'-0	7
125'-0	8
130'-0	8
135'-0	8
140'-0	9
145'-0	9
150'-0	9
155'-0	9

THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.
 ** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



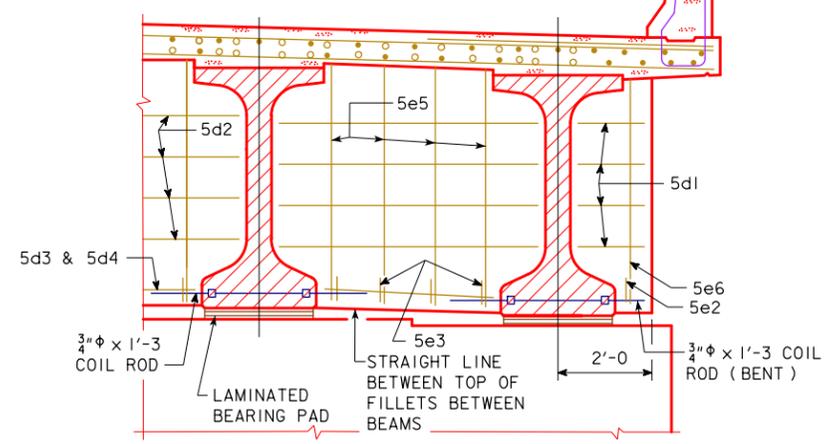
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
 NOTE: DRAINS ARE TO BE GALVANIZED. ---- DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "----". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTE
DRAIN WEIGHT (LBS.)	136
DRAIN LENGTH (FT.)	6'-11 3/4



HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:
 THE BRIDGE DECK AS SHOWN INCLUDES 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.
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NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF BRIDGE DECK CROSS SECTION DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

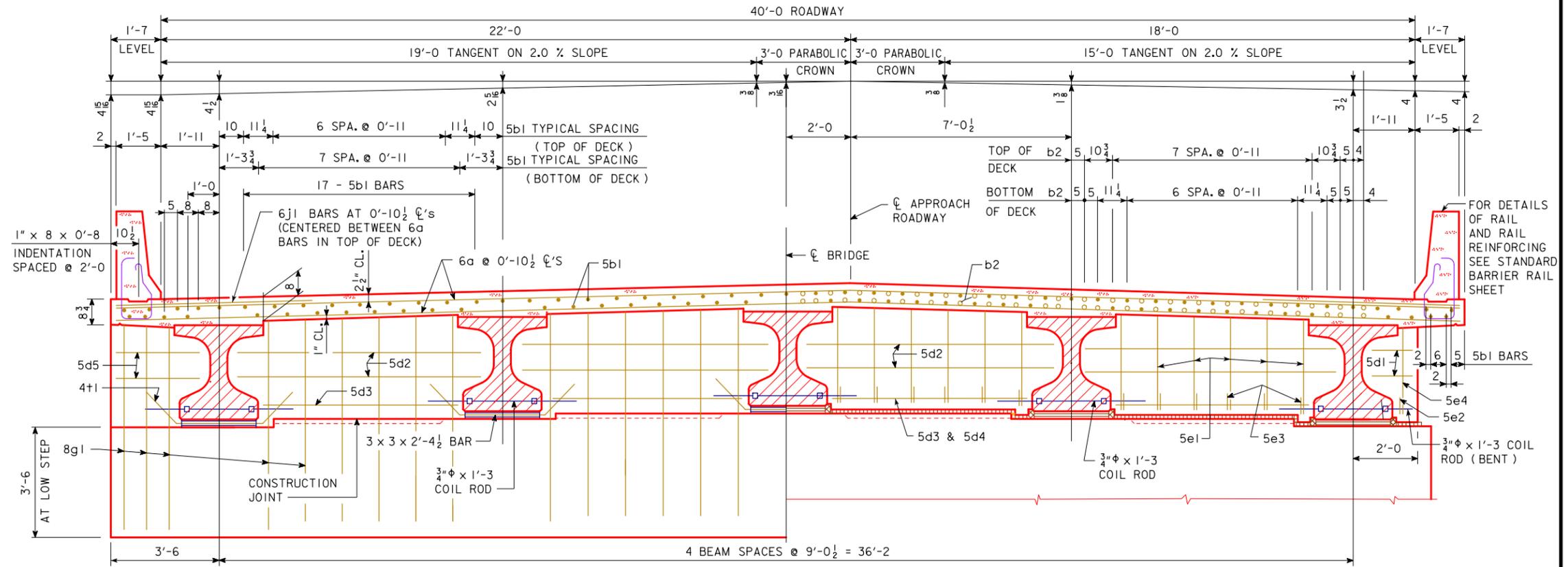
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TABLE OF SIZE OF 'b2' BAR	
LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

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

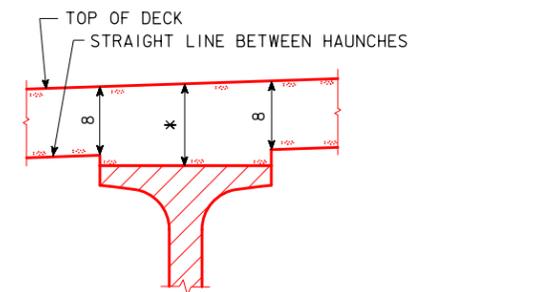
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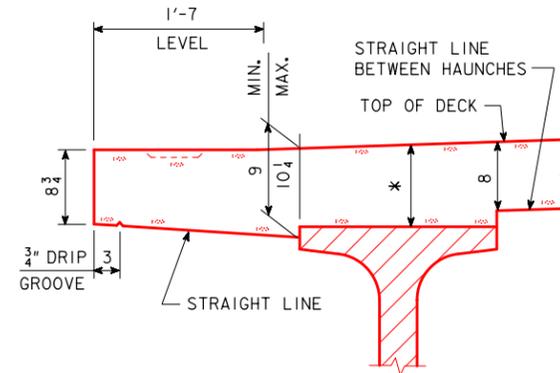
HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)

DECK AREA = 29.27 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.



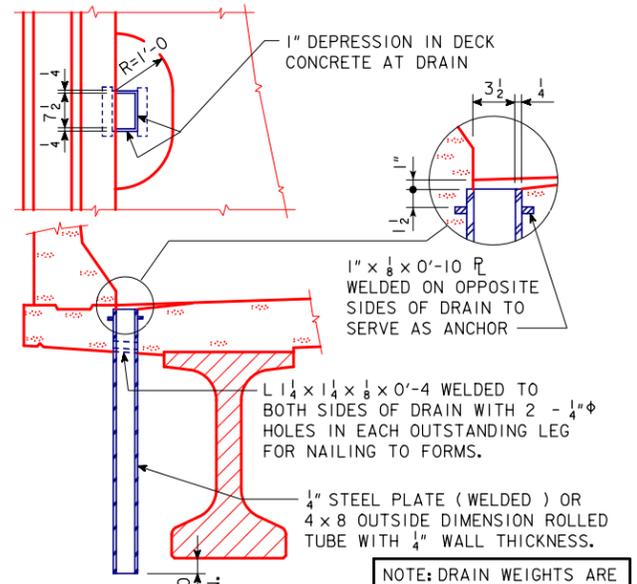
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----



DRAIN DETAILS

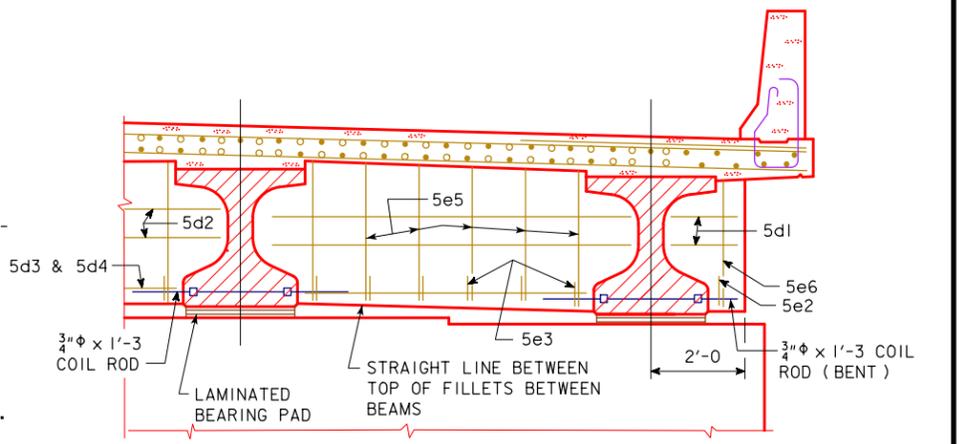
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DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 1/2" INTEGRAL WEARING SURFACE.
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TRANSVERSE DECK REINFORCING MAY BE SPLICED WITH ONE LAP LOCATED AS FOLLOWS:
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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.



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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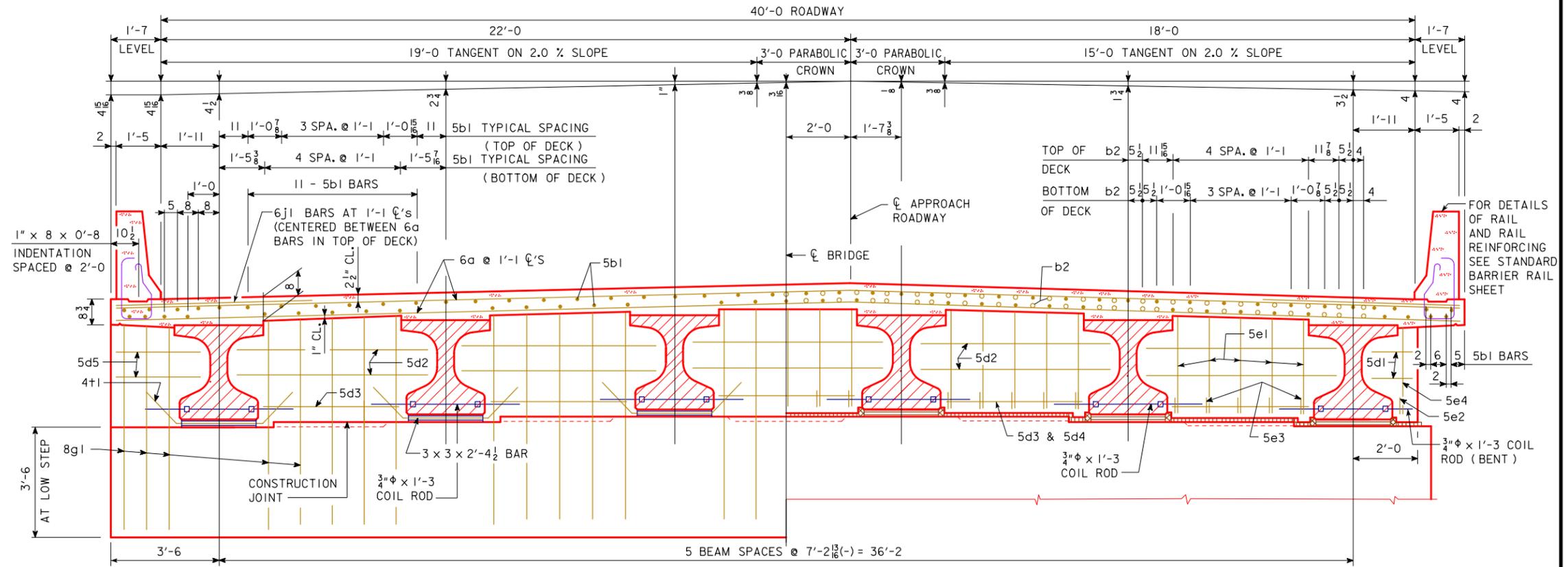
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

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

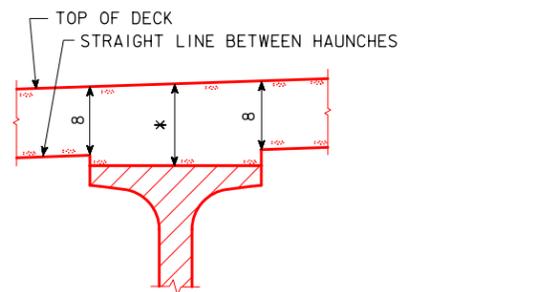
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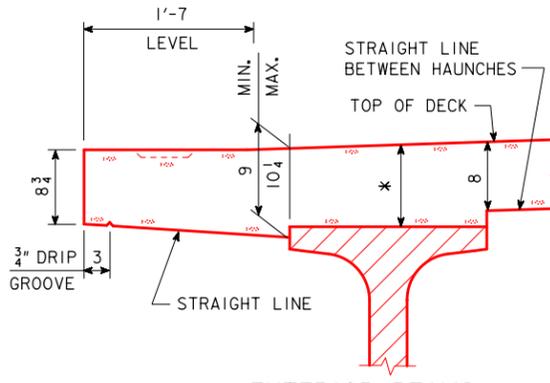
HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)

DECK AREA = 29.24 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.



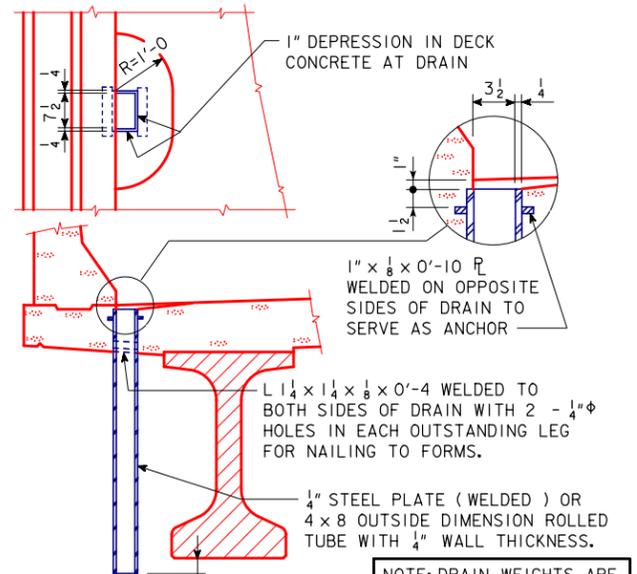
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET



DRAIN DETAILS

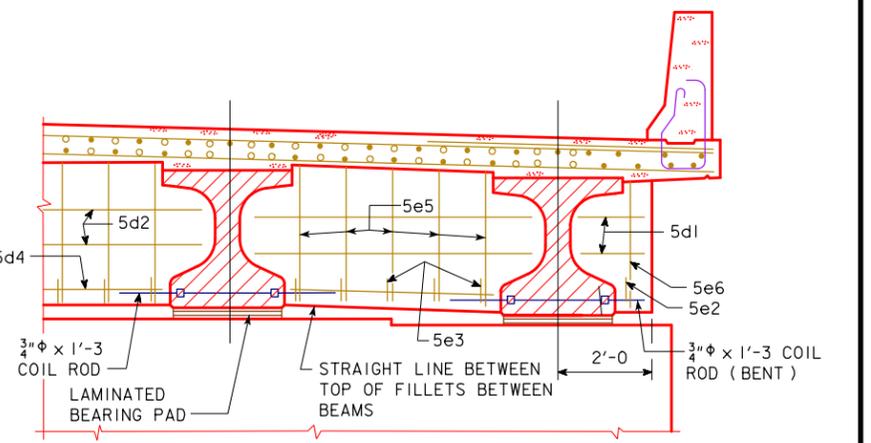
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DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET

SUPERSTRUCTURE NOTES:

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HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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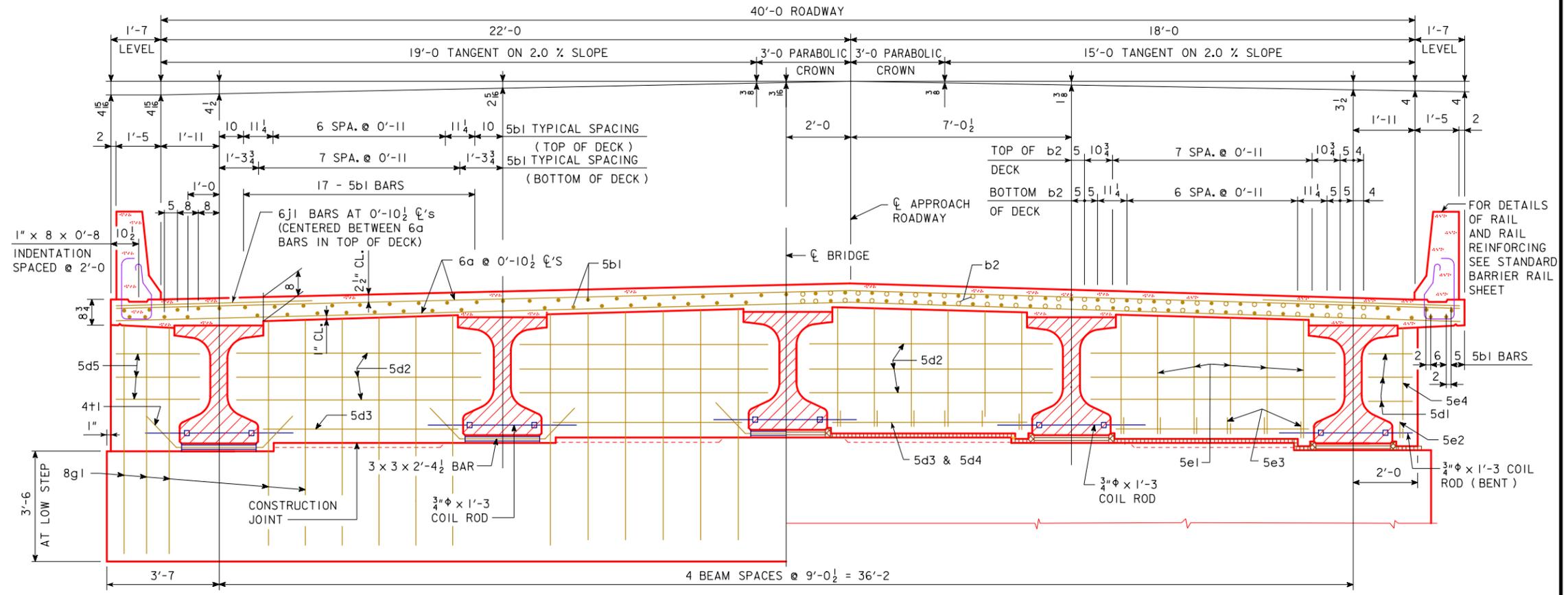
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTC BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 4
50'-0	** 4
55'-0	** 4
60'-0	** 6
65'-0	** 7
70'-0	** 7
75'-0	** 8
80'-0	** 9
85'-0	** 9
90'-0	7
95'-0	7
100'-0	8
105'-0	8
110'-0	8
115'-0	8
120'-0	8

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

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



FOR DETAILS OF RAIL AND RAIL REINFORCING SEE STANDARD BARRIER RAIL SHEET

HALF SECTION NEAR ABUTMENT

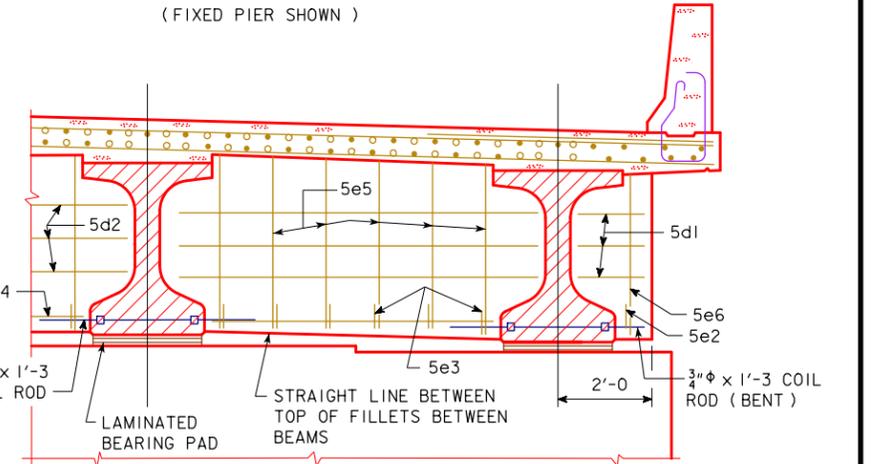
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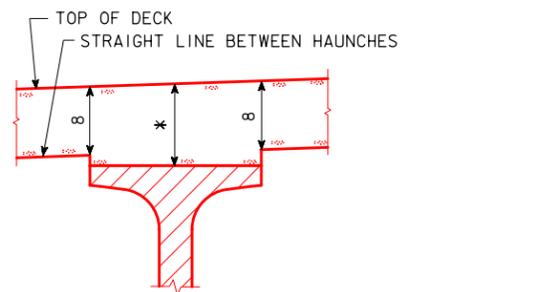
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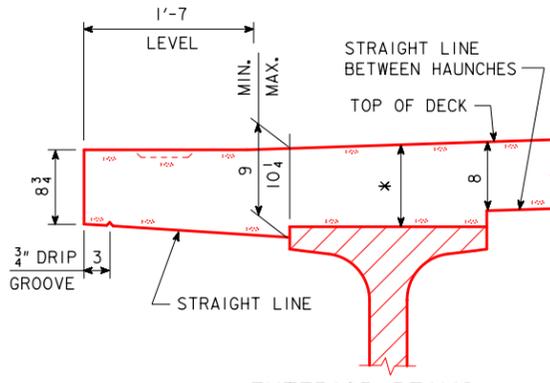


HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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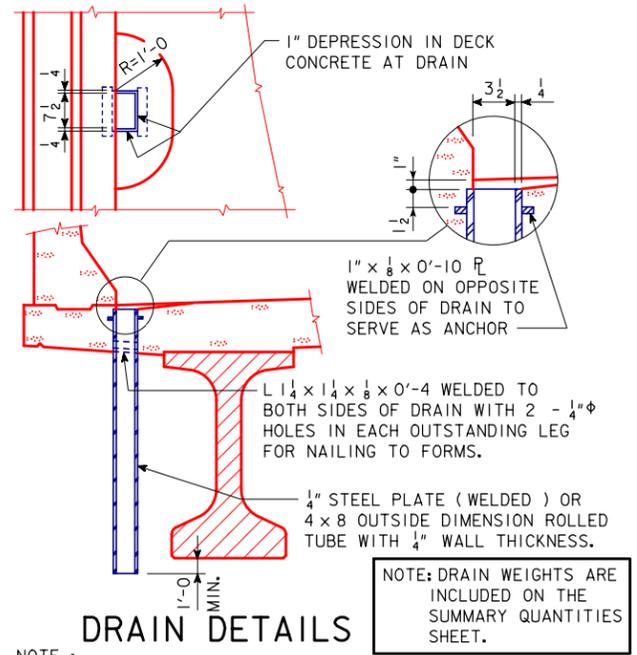
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET ----



DRAIN DETAILS

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

DATA FOR ONE DRAIN	
BEAM SIZE	BTC
DRAIN WEIGHT (LBS.)	106
DRAIN LENGTH (FT.)	5'-5 3/4

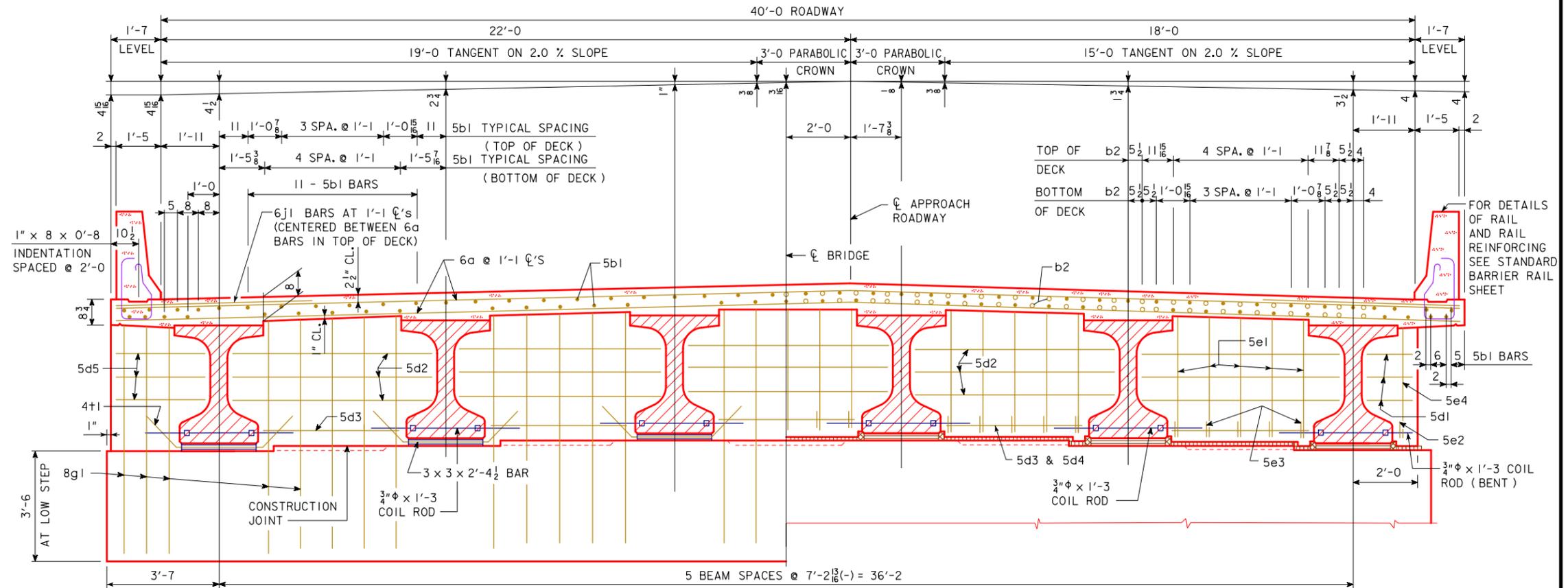
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTC BEAM BAR SIZE
30'-0	** 4
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55'-0	** 4
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95'-0	7
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115'-0	8
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HALF SECTION NEAR ABUTMENT

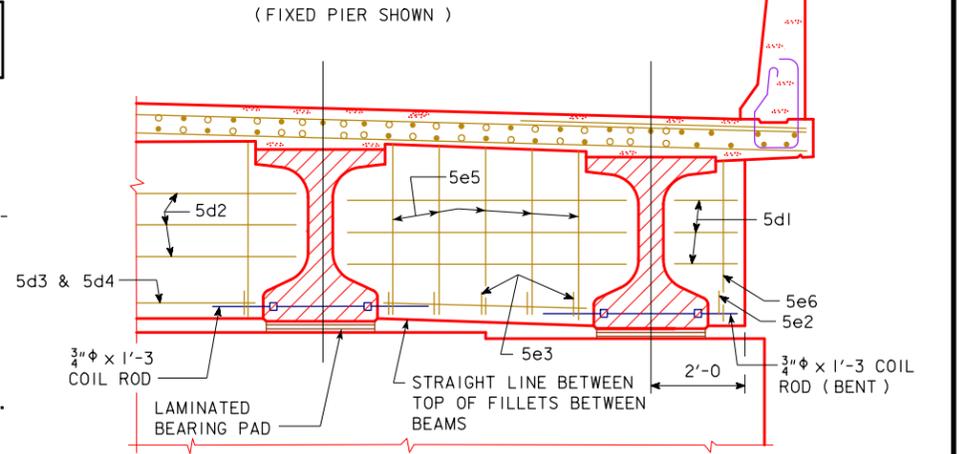
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SUPERSTRUCTURE NOTES:

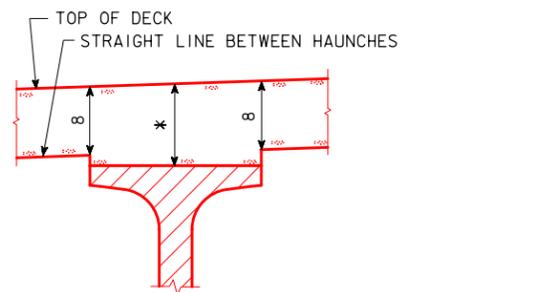
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 PAYMENT FOR REINFORCING BARS SHALL BE BASED ON NO SPLICES, AND NO ALLOWANCE SHALL BE MADE FOR THE ADDITIONAL LENGTH OF BAR REQUIRED FOR THE USE OF SPLICES.



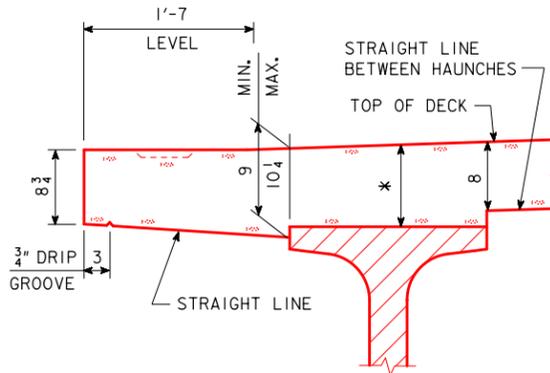
HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

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



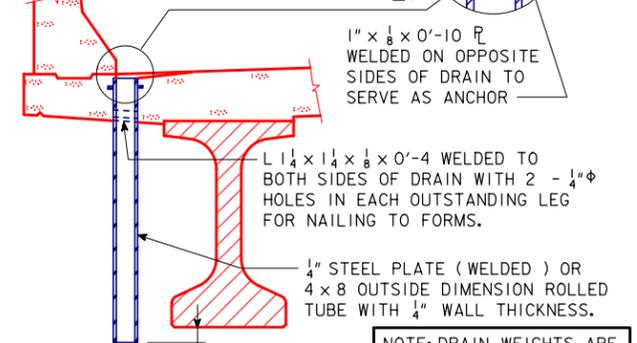
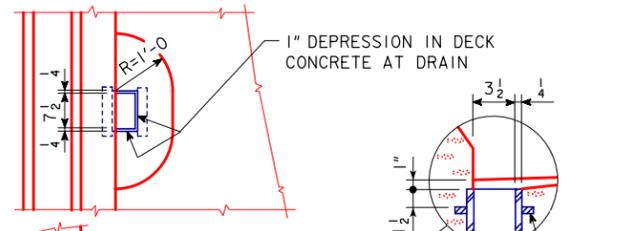
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET ----



DRAIN DETAILS

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

DATA FOR ONE DRAIN	
BEAM SIZE	BTC
DRAIN WEIGHT (LBS.)	106
DRAIN LENGTH (FT.)	5'-5 3/4

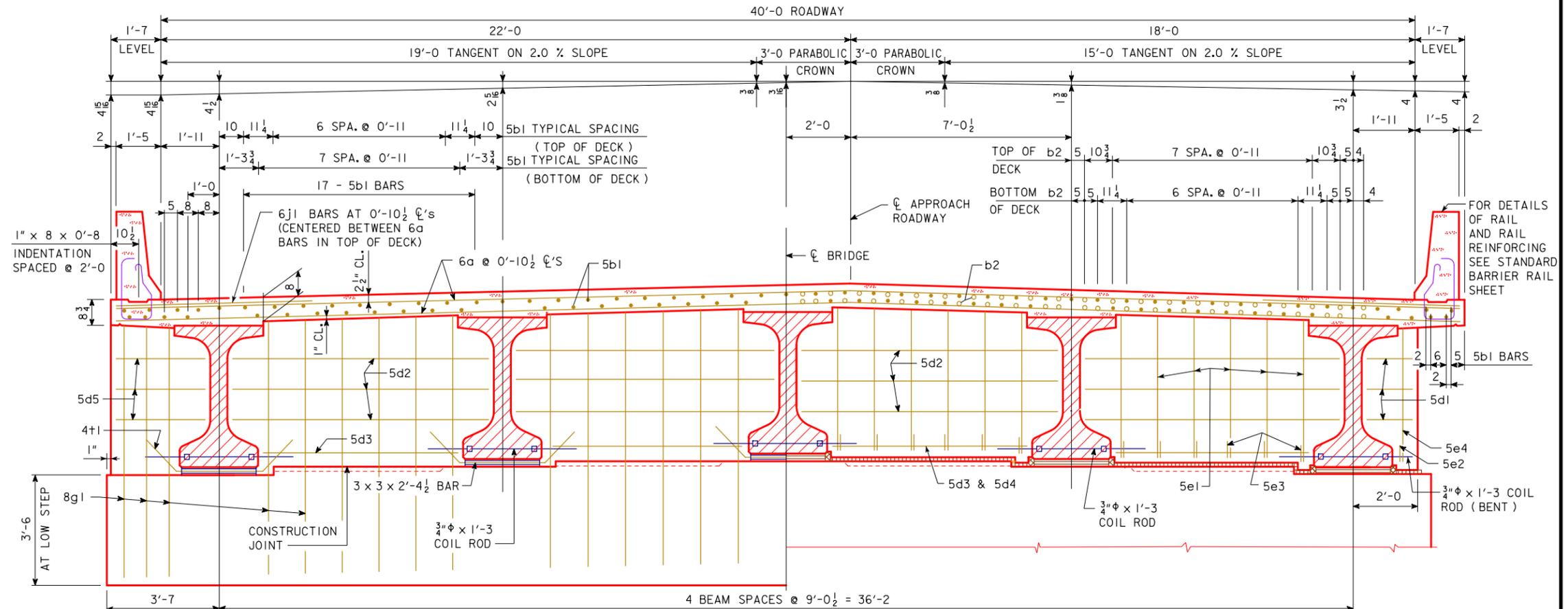
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS. ENGLISHBTINTEGRALBRIDGES.DGN - 4383-BTD-5 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

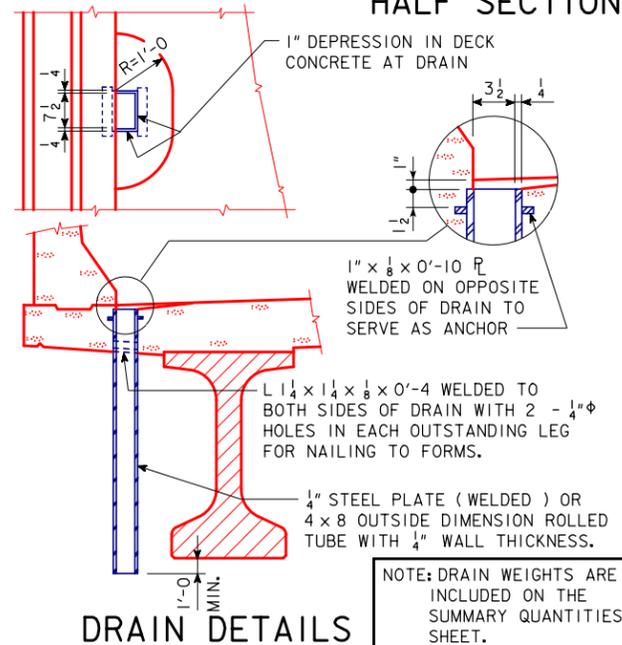
LONGEST ADJACENT SPAN	BTD BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	** 4
55'-0	** 4
60'-0	** 5
65'-0	** 6
70'-0	** 6
75'-0	** 7
80'-0	** 8
85'-0	** 8
90'-0	** 9
95'-0	** 9
100'-0	7
105'-0	7
110'-0	8
115'-0	8
120'-0	8
125'-0	8
130'-0	9
135'-0	9

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

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



HALF SECTION NEAR ABUTMENT



DRAIN DETAILS

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

DATA FOR ONE DRAIN	
BEAM SIZE	BTD
DRAIN WEIGHT (LBS.)	120
DRAIN LENGTH (FT.)	6'-2 3/4

DECK AREA = 29.27 SQ. FT. DECK AREA DOES NOT INCLUDE THE HAUNCH.

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 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 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.

COST OF BEARING MATERIAL IS TO BE INCLUDED IN THE PRICE BID FOR "PRETENSIONED PRESTRESSED CONCRETE BEAMS".

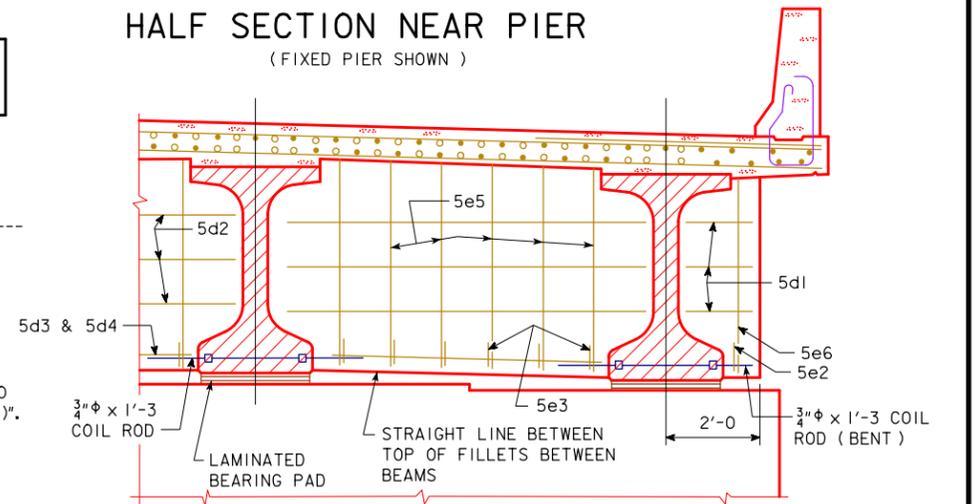
TRANSVERSE DECK REINFORCING MAY BE SPLICED WITH ONE LAP LOCATED AS FOLLOWS:

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.

HALF SECTION NEAR PIER (FIXED PIER SHOWN)



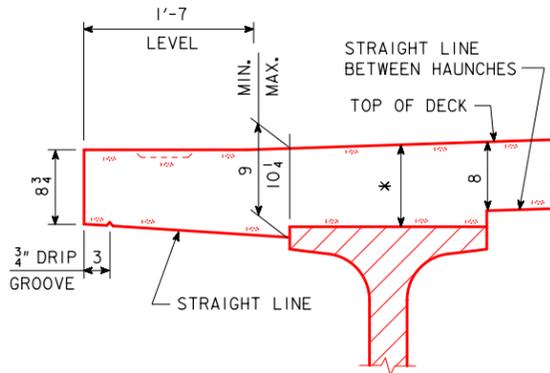
HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

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

INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

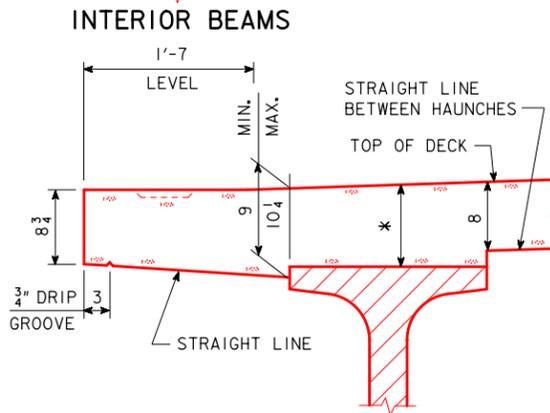
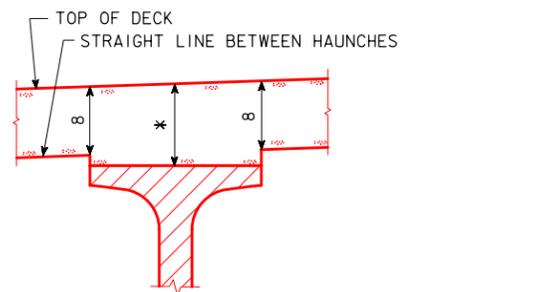
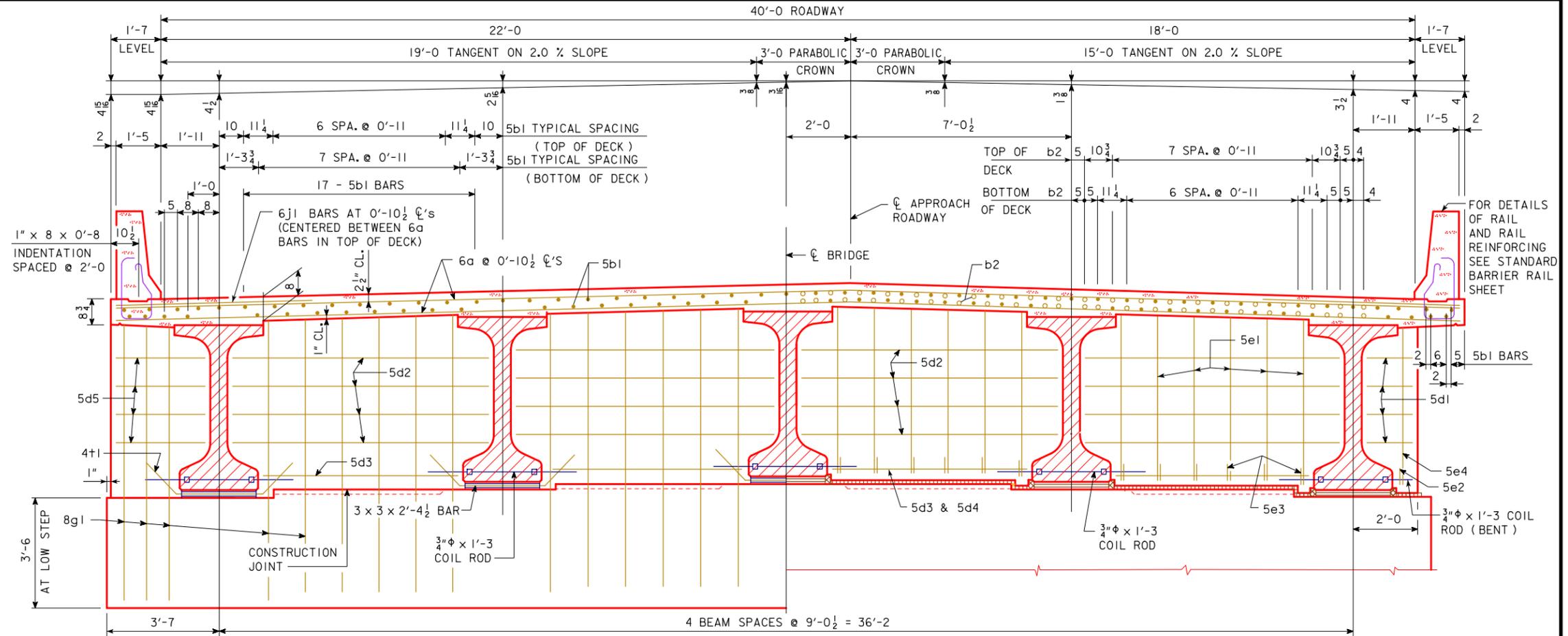
* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----

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. ENGLISHBTINTEGRALBRIDGES.DGN - 4383-BTE-5 - THIS SHEET ISSUED 02-08.

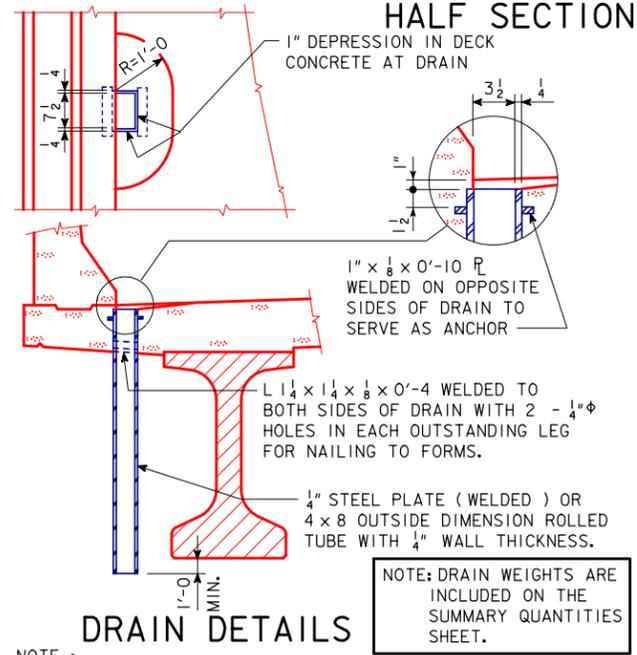
TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTE BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	
55'-0	
60'-0	** 4
65'-0	** 5
70'-0	** 6
75'-0	** 6
80'-0	** 7
85'-0	** 7
90'-0	** 8
95'-0	** 8
100'-0	** 9
105'-0	** 9
110'-0	7
115'-0	7
120'-0	7
125'-0	8
130'-0	8
135'-0	8
140'-0	9
145'-0	9
150'-0	9
155'-0	9

THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.
 ** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



TYPICAL DECK AND HAUNCH DETAIL
 * FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET ----



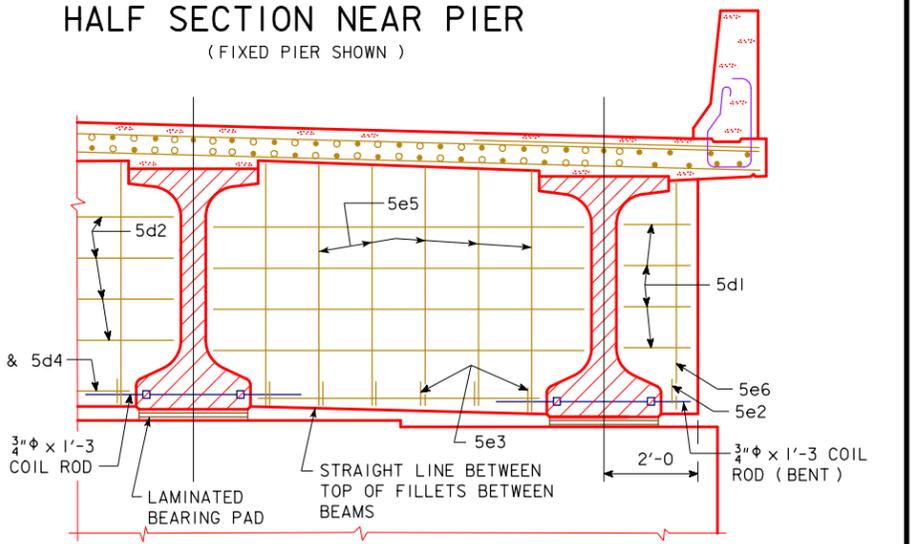
DRAIN DETAILS
 NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
 NOTE: DRAINS ARE TO BE GALVANIZED. ---- DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "----". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTE
DRAIN WEIGHT (LBS.)	136
DRAIN LENGTH (FT.)	6'-11 3/4

HALF SECTION NEAR ABUTMENT
 DECK AREA = 29.27 SQ. FT. DECK AREA DOES NOT INCLUDE THE HAUNCH.

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:
 THE BRIDGE DECK AS SHOWN INCLUDES 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.
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 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.



NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF BRIDGE DECK CROSS SECTION DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. ____ OF ____ FILE NO. ____ DESIGN NO. ____

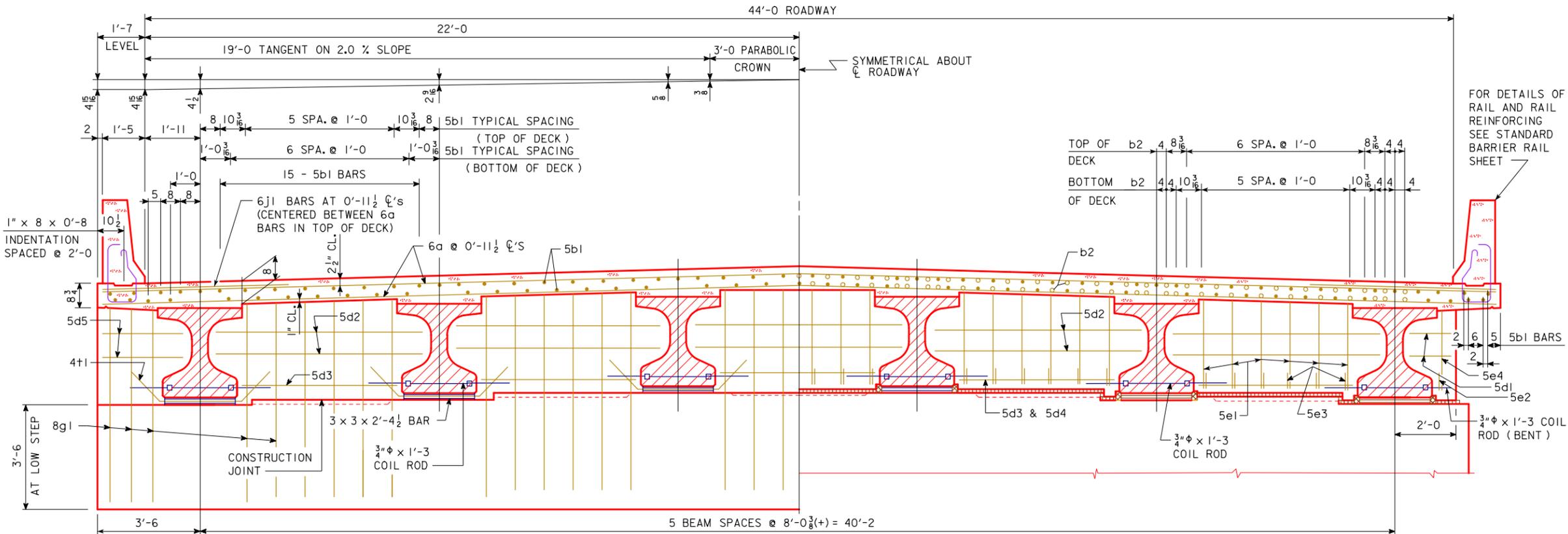
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

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

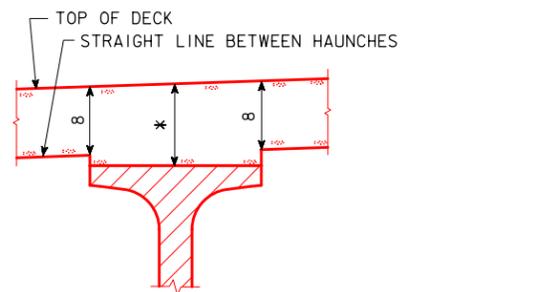
** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



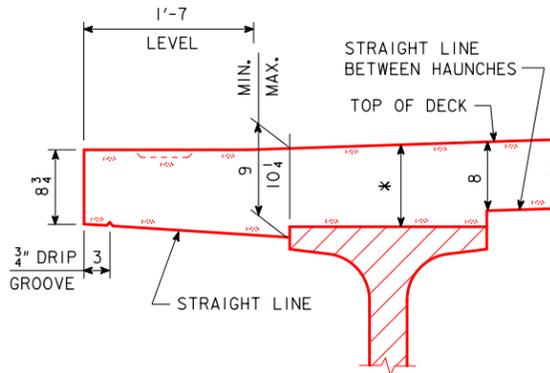
HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)

DECK AREA = 31.93 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.



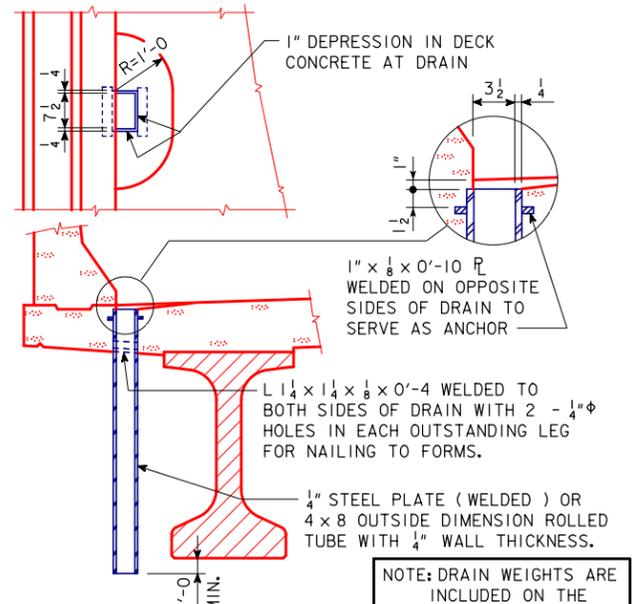
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET



DRAIN DETAILS

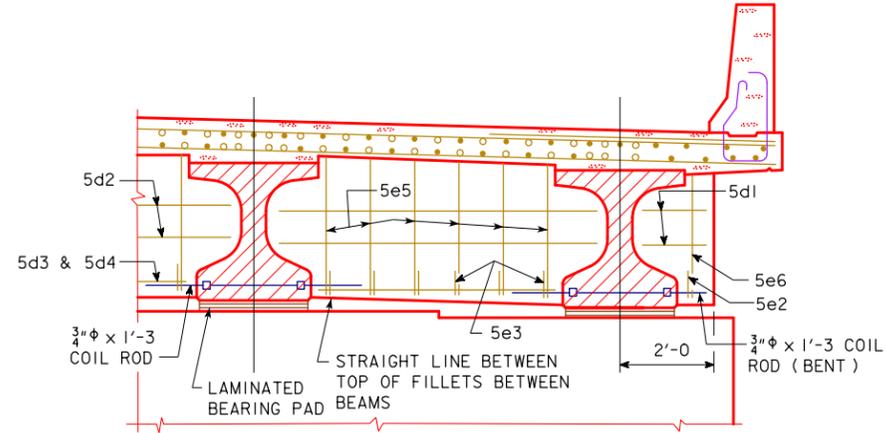
NOTE: DRAINS ARE TO BE GALVANIZED. DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR ".....". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 1/2" INTEGRAL WEARING SURFACE.
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 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.



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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
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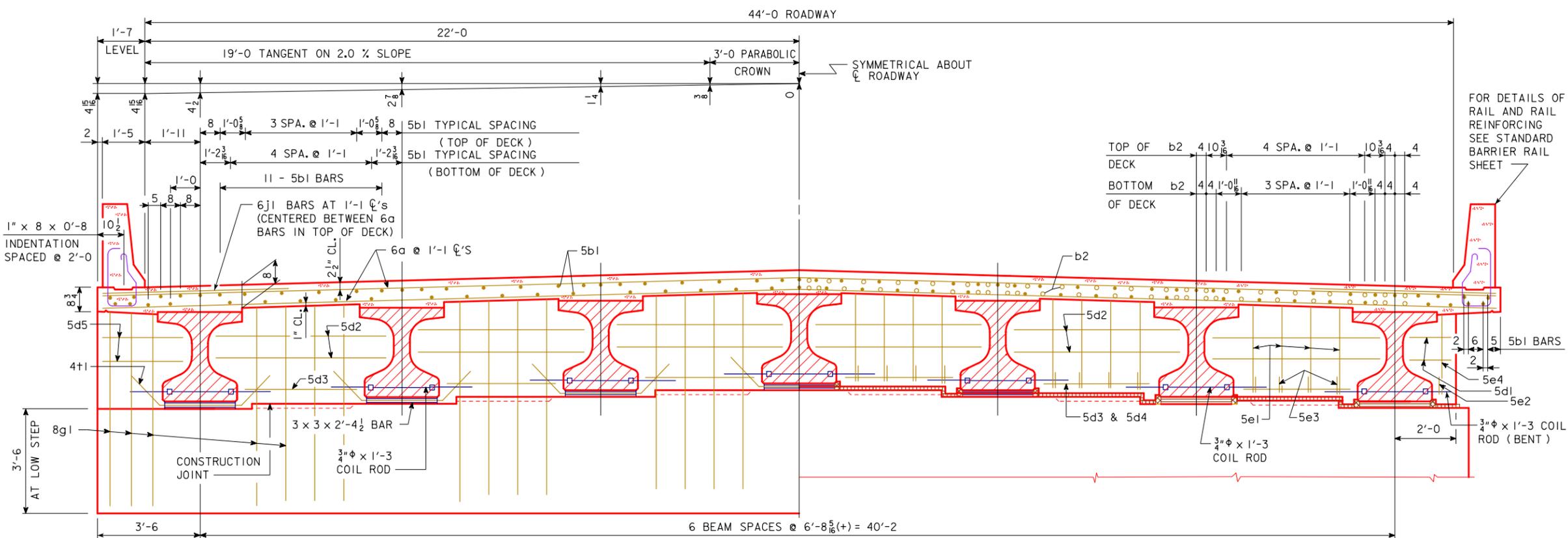
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

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

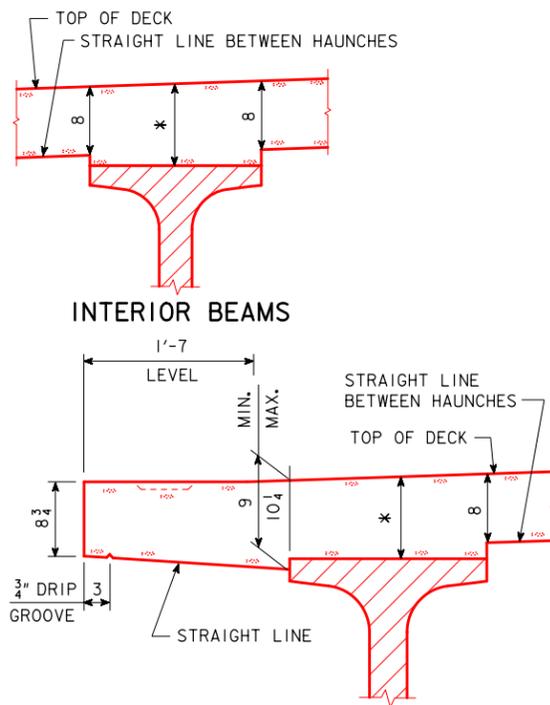
** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



HALF SECTION NEAR ABUTMENT

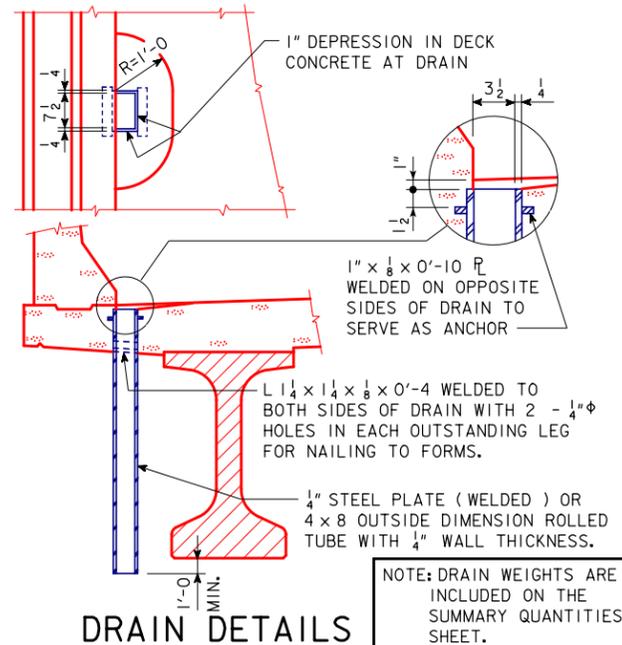
HALF SECTION NEAR PIER (FIXED PIER SHOWN)

DECK AREA = 31.79 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.



INTERIOR BEAMS
EXTERIOR BEAMS
TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----



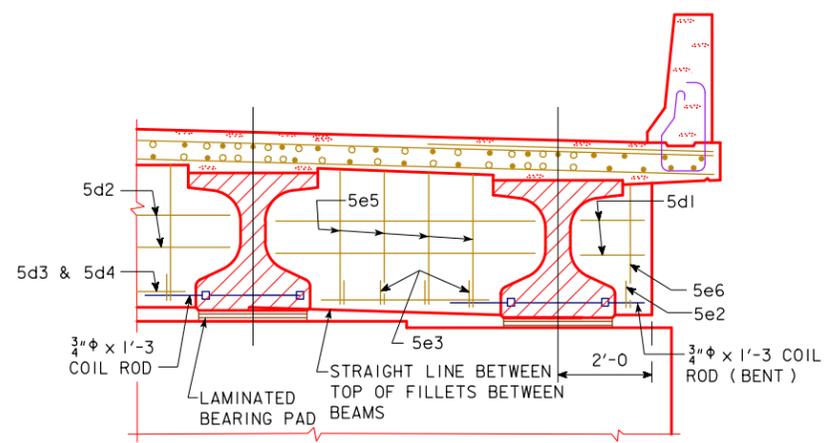
DRAIN DETAILS
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DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 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.
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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.



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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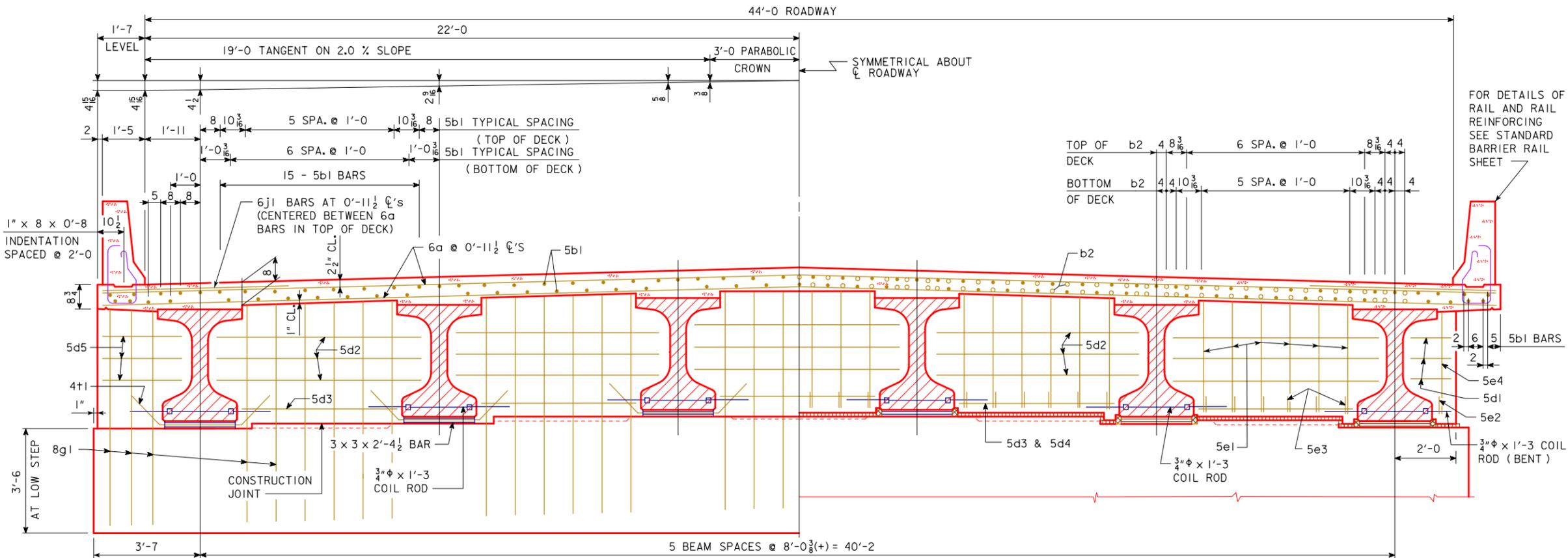
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTC BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 4
50'-0	** 4
55'-0	** 4
60'-0	** 6
65'-0	** 7
70'-0	** 7
75'-0	** 8
80'-0	** 9
85'-0	** 9
90'-0	7
95'-0	7
100'-0	8
105'-0	8
110'-0	8
115'-0	8
120'-0	8

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

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER

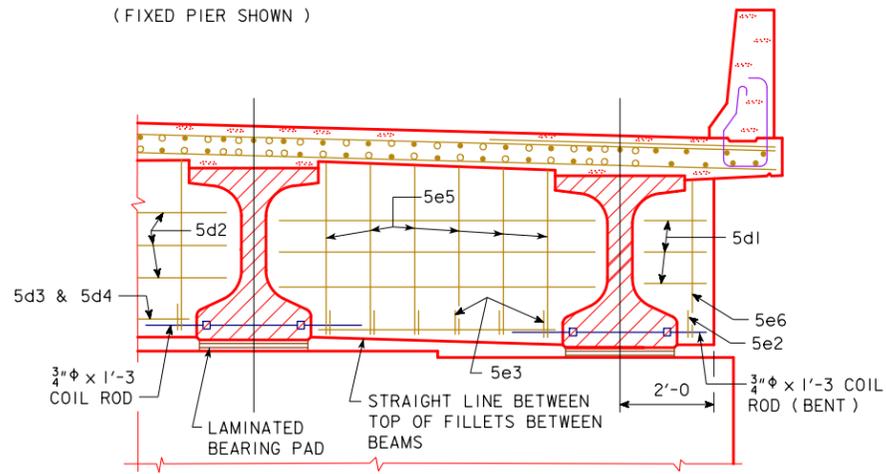
(FIXED PIER SHOWN)

DECK AREA = 31.93 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 1/2" INTEGRAL WEARING SURFACE.
THE PIER AND ABUTMENT DIAPHRAGM CONCRETE IS TO BE PLACED MONOLITHICALLY WITH THE BRIDGE DECK.
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TOP TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 2 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.
COST OF BEARING MATERIAL IS TO BE INCLUDED IN THE PRICE BID FOR "PRETENSIONED PRESTRESSED CONCRETE BEAMS".
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.

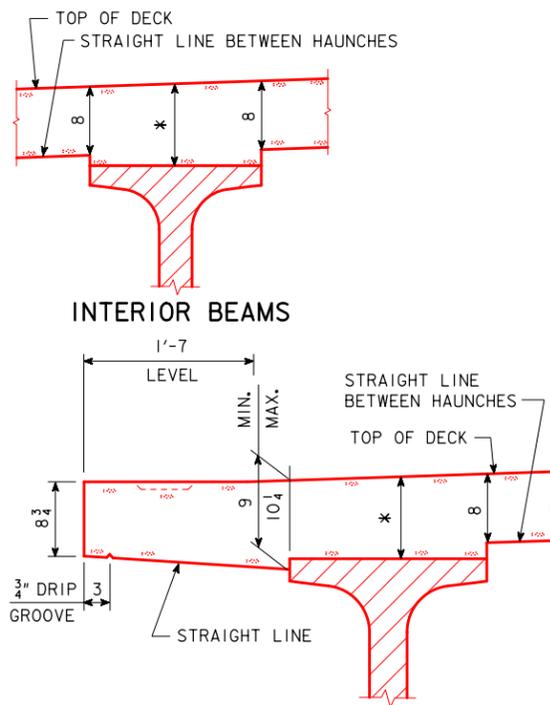


HALF SECTION NEAR PIER

(EXPANSION PIER SHOWN)

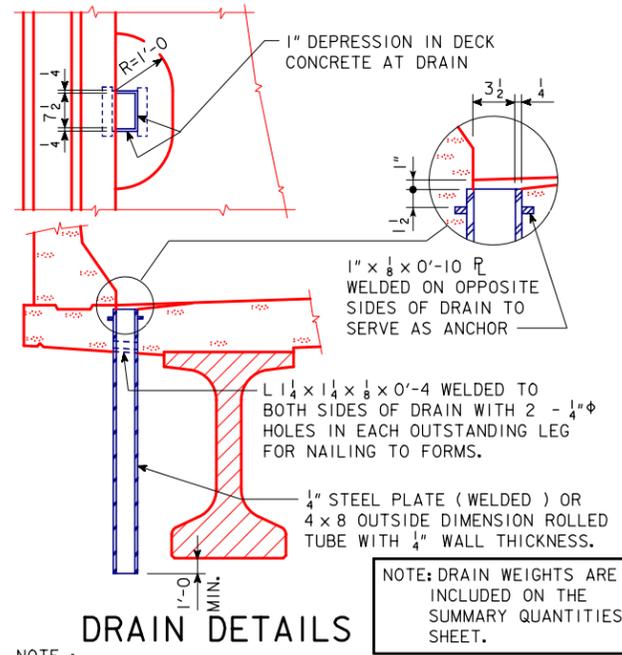
NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF BRIDGE DECK CROSS SECTION DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

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



TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET ----



DRAIN DETAILS

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

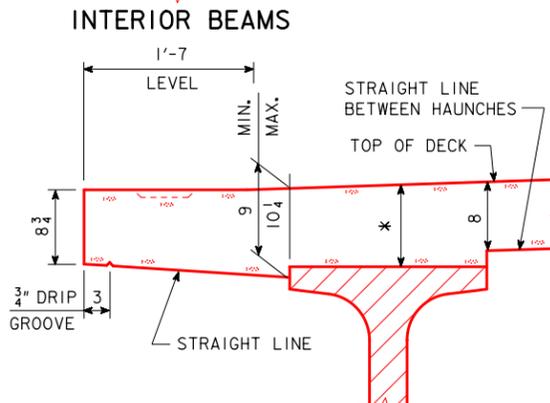
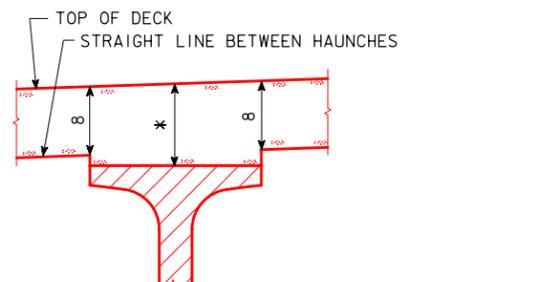
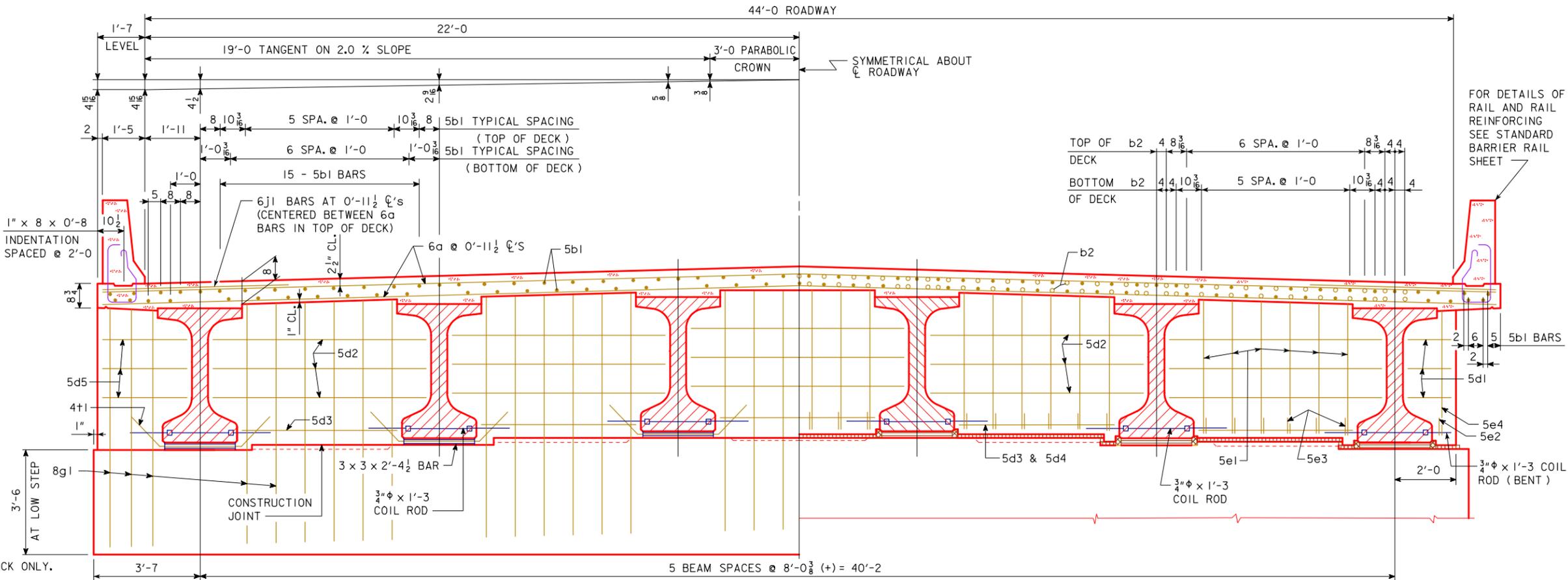
DATA FOR ONE DRAIN	
BEAM SIZE	BTC
DRAIN WEIGHT (LBS.)	106
DRAIN LENGTH (FT.)	5'-5 3/4

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. ENGLISHBTINTEGRALBRIDGES.DGN - 4384-BTD-6 - THIS SHEET ISSUED 02-08.

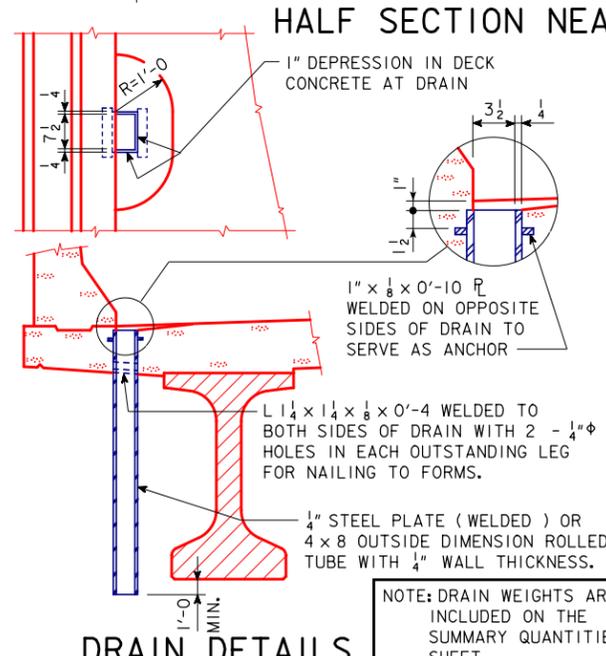
TABLE OF SIZE OF 'b2' BAR	
LONGEST ADJACENT SPAN	BTD BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	** 4
55'-0	** 4
60'-0	** 5
65'-0	** 6
70'-0	** 6
75'-0	** 7
80'-0	** 8
85'-0	** 8
90'-0	** 9
95'-0	** 9
100'-0	7
105'-0	7
110'-0	8
115'-0	8
120'-0	8
125'-0	8
130'-0	9
135'-0	9

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

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



TYPICAL DECK AND HAUNCH DETAIL
 * FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----



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

DATA FOR ONE DRAIN	
BEAM SIZE	BTD
DRAIN WEIGHT (LBS.)	120
DRAIN LENGTH (FT.)	6'-2 1/4

DECK AREA = 31.93 SQ. FT.
 DECK AREA DOES NOT INCLUDE THE HAUNCH.

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:
 THE BRIDGE DECK AS SHOWN INCLUDES 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.
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 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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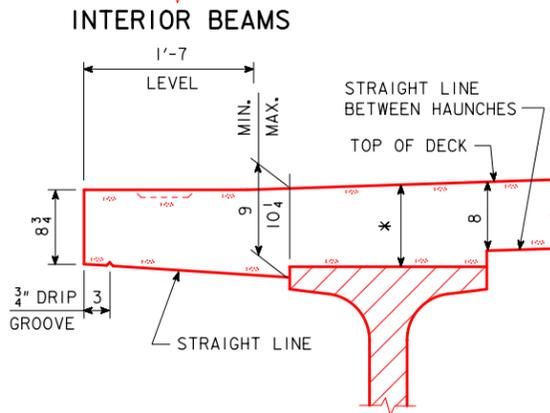
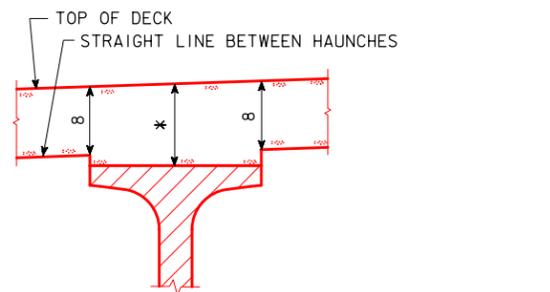
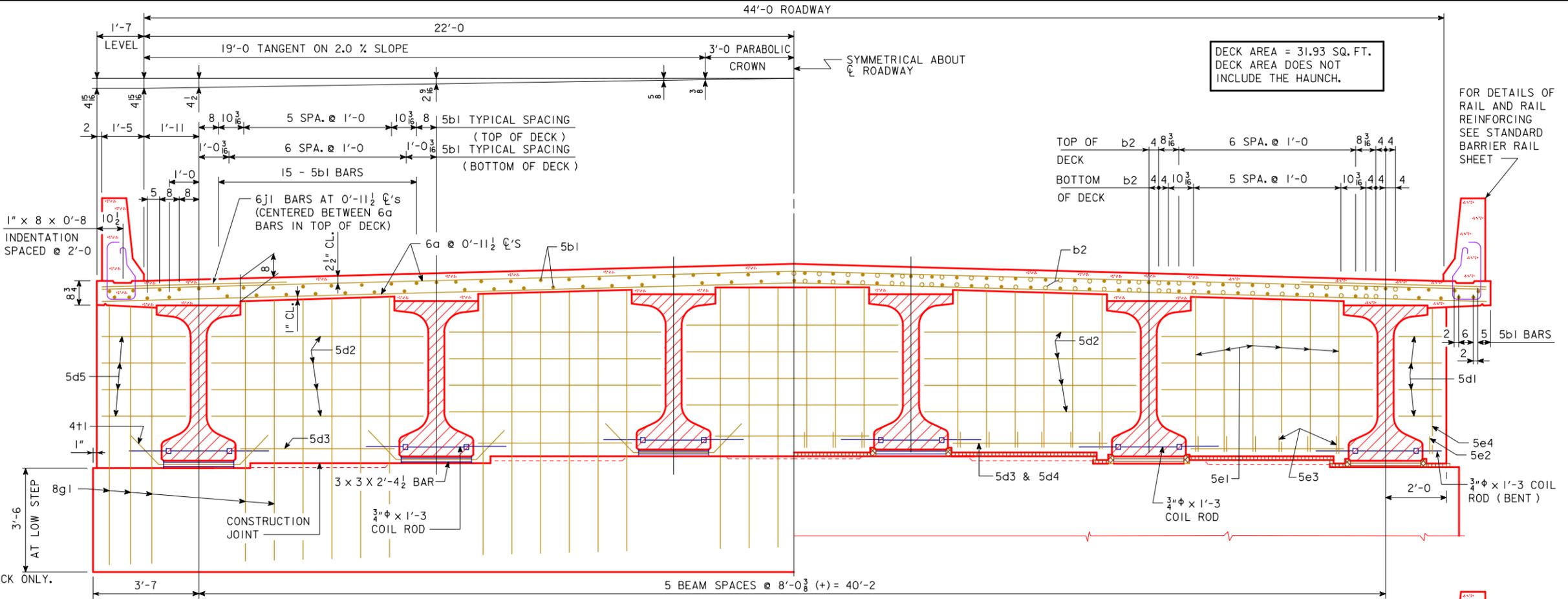
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS. ENGLISHBTINTEGRALBRIDGES.DGN - 4384-BTE-6 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

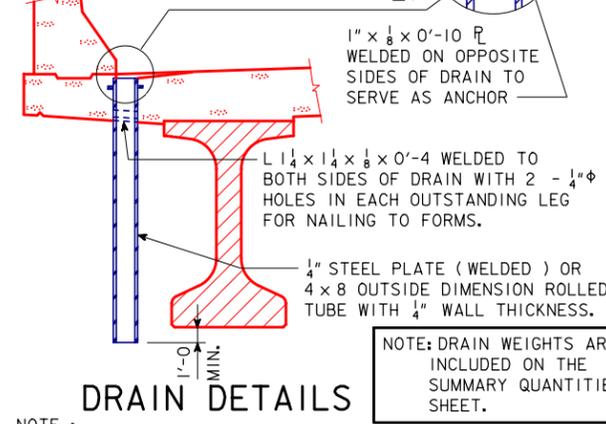
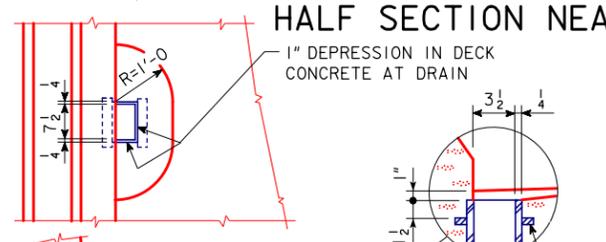
LONGEST ADJACENT SPAN	BTE BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	
55'-0	
60'-0	** 4
65'-0	** 5
70'-0	** 6
75'-0	** 6
80'-0	** 7
85'-0	** 7
90'-0	** 8
95'-0	** 8
100'-0	** 9
105'-0	** 9
110'-0	7
115'-0	7
120'-0	7
125'-0	8
130'-0	8
135'-0	8
140'-0	9
145'-0	9
150'-0	9
155'-0	9

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

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----



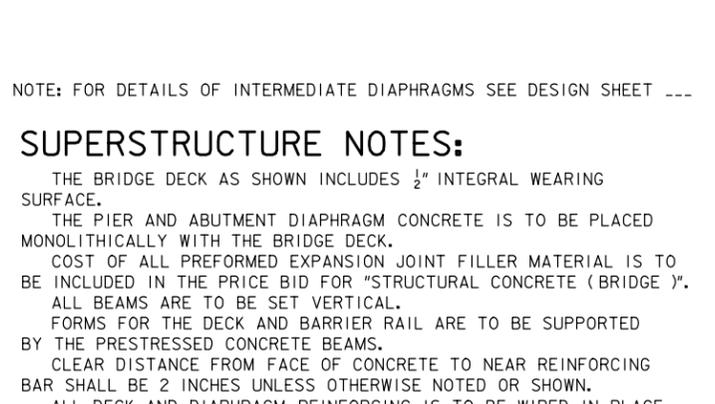
NOTE: DRAINS ARE TO BE GALVANIZED. ----- DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "-----". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTE
DRAIN WEIGHT (LBS.)	136
DRAIN LENGTH (FT.)	6'-11 3/4

HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER

(FIXED PIER SHOWN)



HALF SECTION NEAR PIER

(EXPANSION PIER SHOWN)

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 1/2" INTEGRAL WEARING SURFACE.
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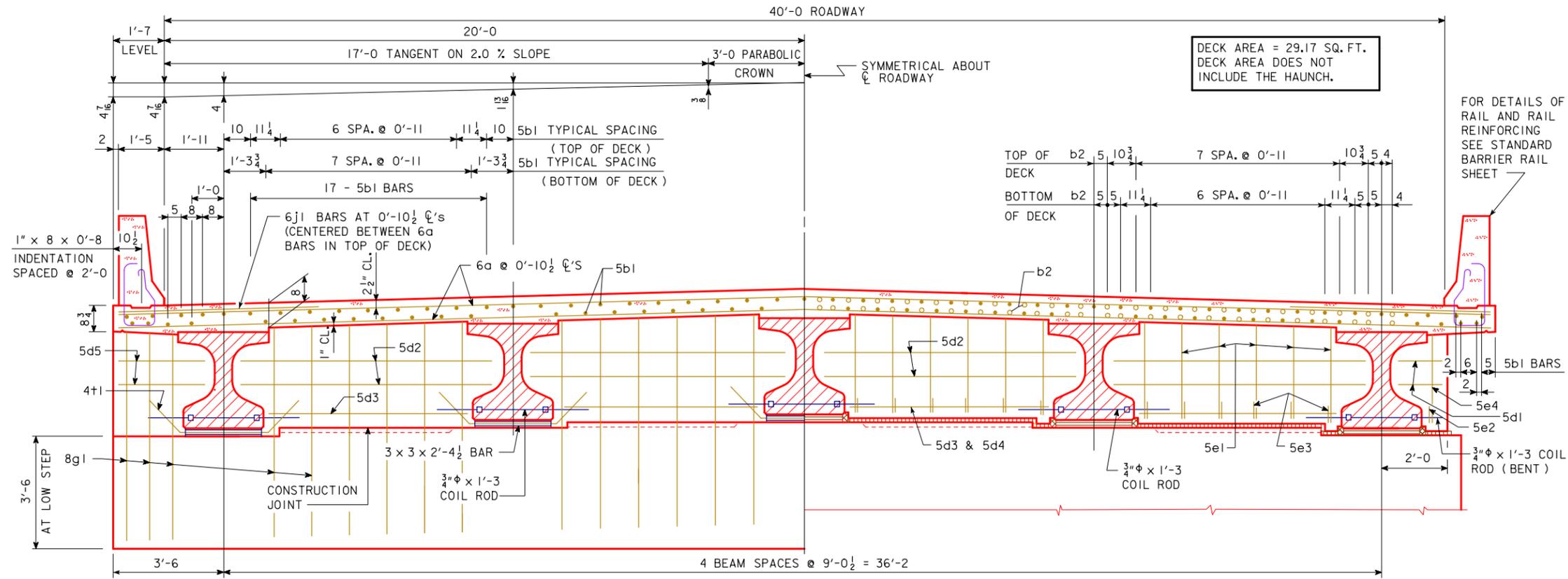
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

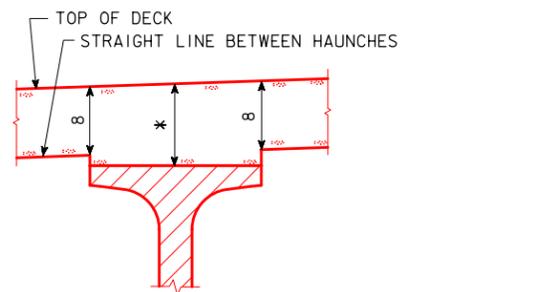
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** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.

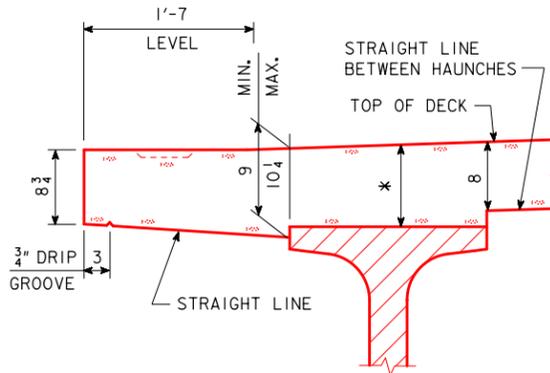


HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER
(FIXED PIER SHOWN)



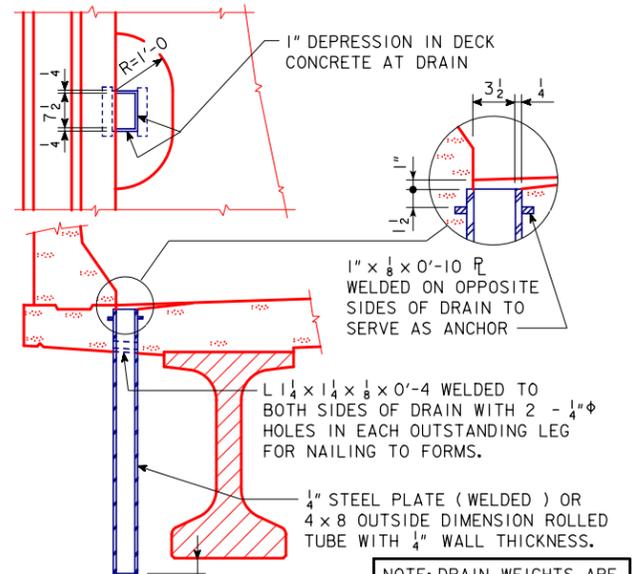
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET



DRAIN DETAILS

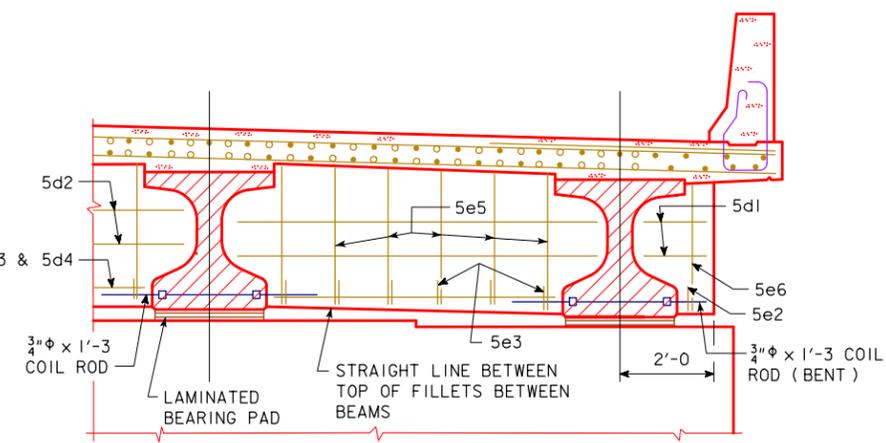
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DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 1/2" INTEGRAL WEARING SURFACE.
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HALF SECTION NEAR PIER
(EXPANSION PIER SHOWN)

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

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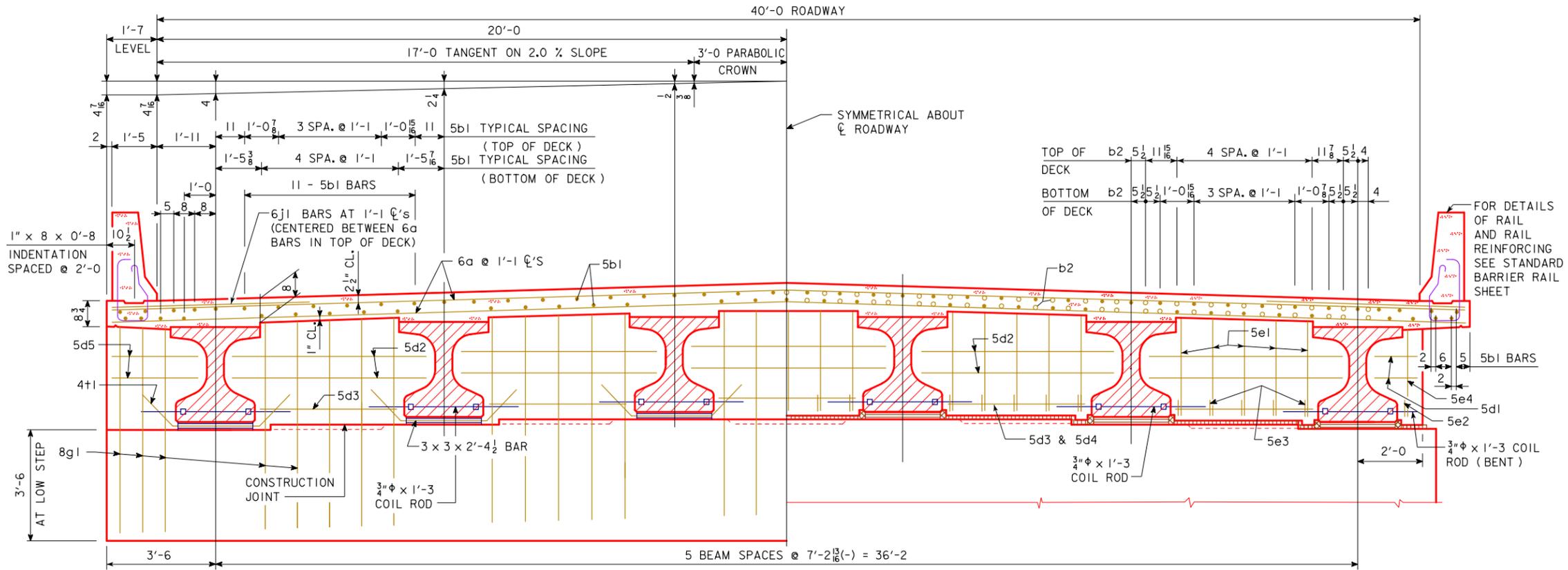
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTB BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 5
50'-0	** 6
55'-0	** 6
60'-0	** 6
65'-0	** 7
70'-0	** 8
75'-0	** 8
80'-0	** 9
85'-0	7
90'-0	8
95'-0	8
100'-0	8
105'-0	9

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

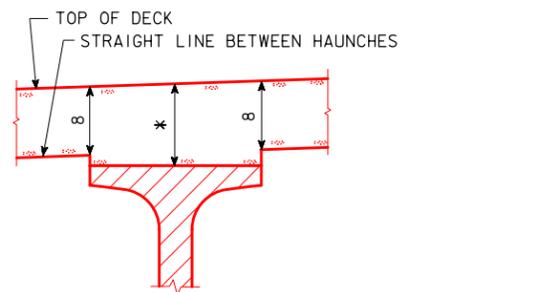
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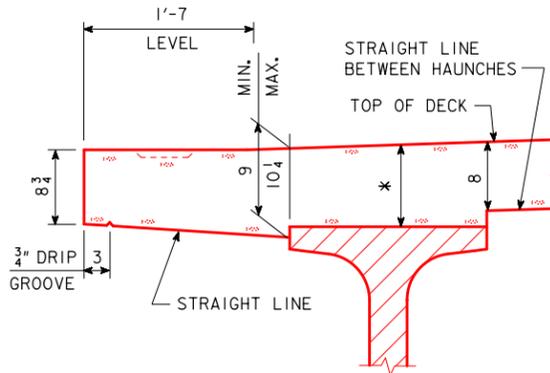
HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)

DECK AREA = 29.22 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.



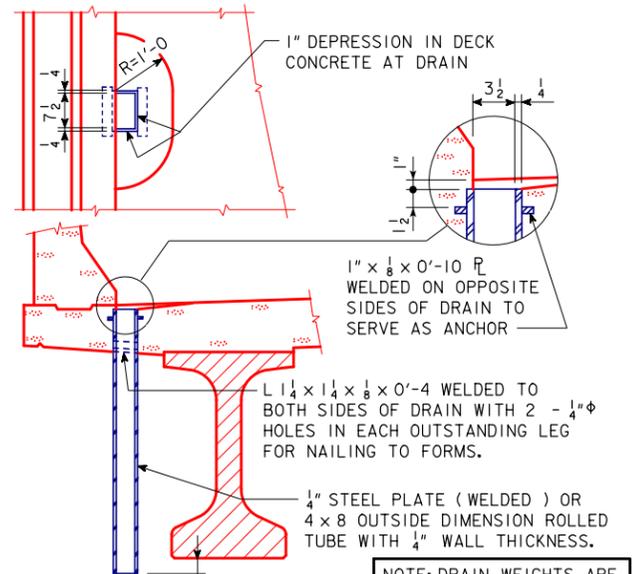
INTERIOR BEAMS



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TYPICAL DECK AND HAUNCH DETAIL

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DRAIN DETAILS

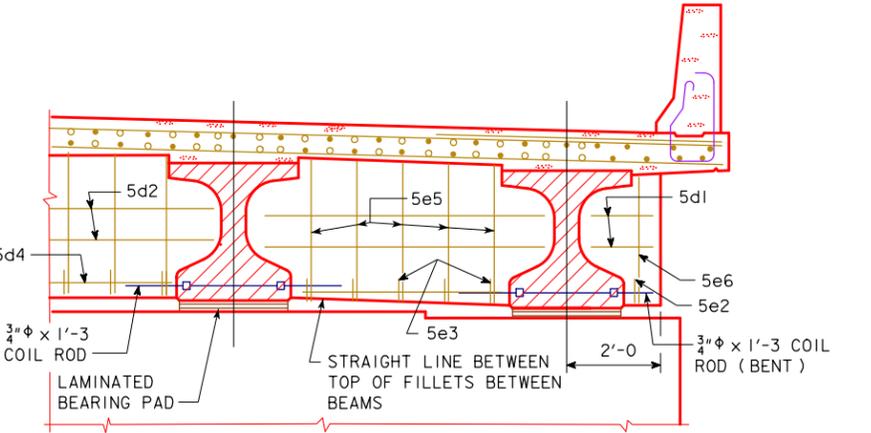
NOTE: DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
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DATA FOR ONE DRAIN	
BEAM SIZE	BTB
DRAIN WEIGHT (LBS.)	92
DRAIN LENGTH (FT.)	4'-8 1/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET

SUPERSTRUCTURE NOTES:

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HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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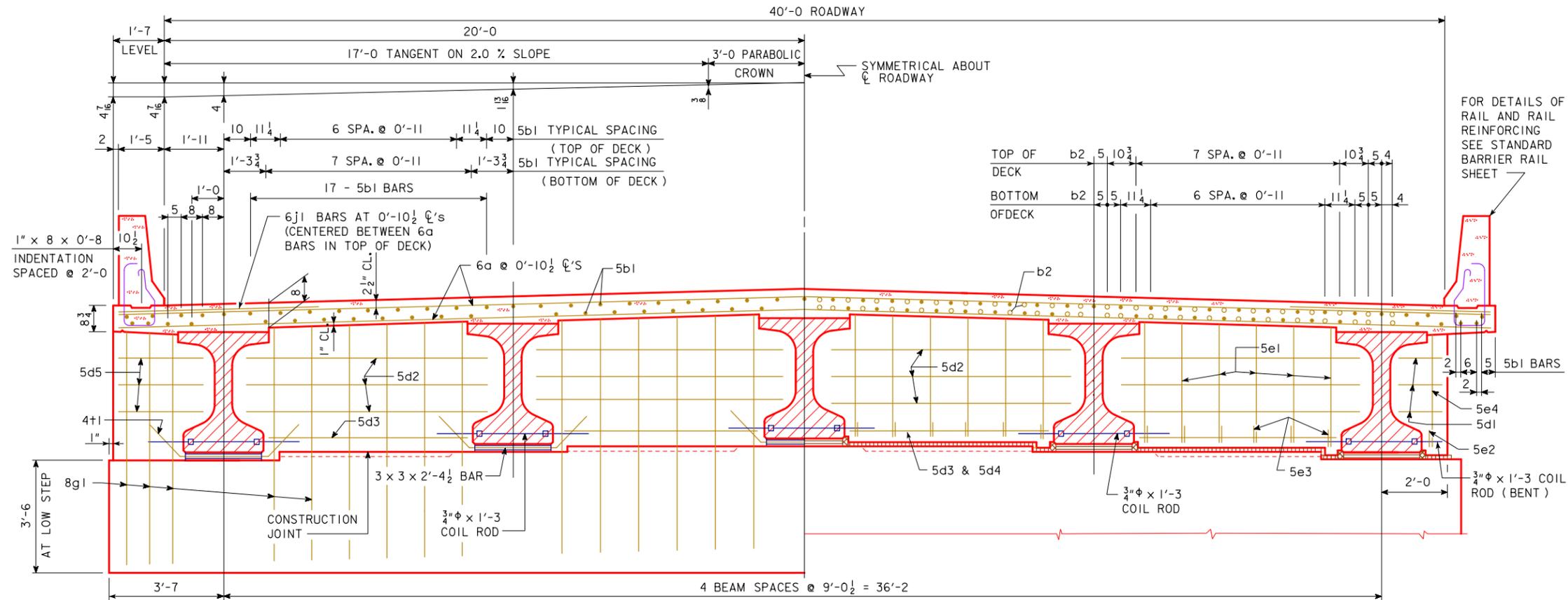
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTC BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 4
50'-0	** 4
55'-0	** 4
60'-0	** 6
65'-0	** 7
70'-0	** 7
75'-0	** 8
80'-0	** 9
85'-0	** 9
90'-0	7
95'-0	7
100'-0	8
105'-0	8
110'-0	8
115'-0	8
120'-0	8

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

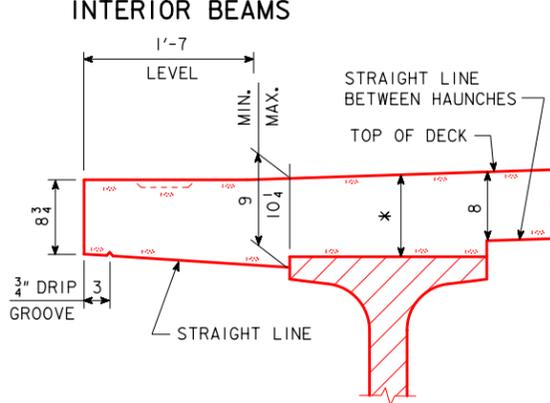
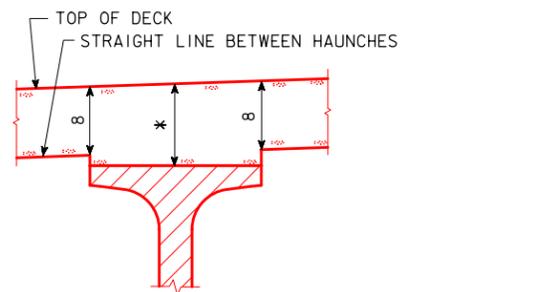
** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



HALF SECTION NEAR ABUTMENT

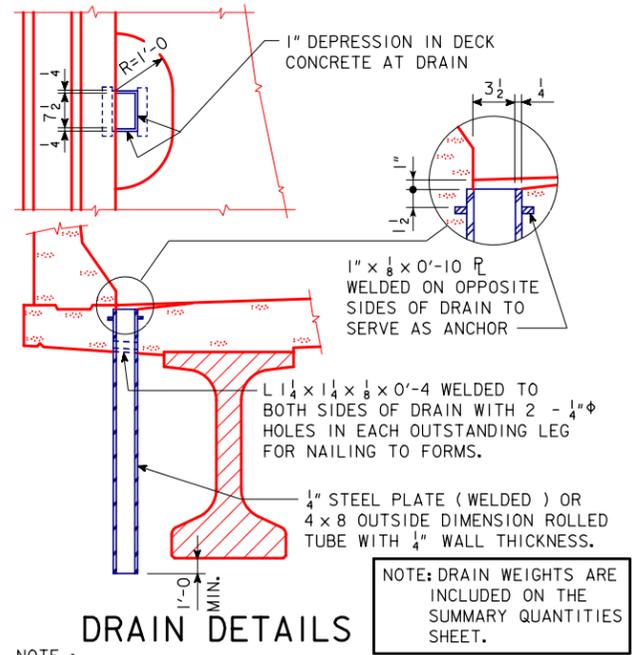
HALF SECTION NEAR PIER

DECK AREA = 29.17 SQ. FT.
DECK AREA DOES NOT INCLUDE THE HAUNCH.



TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET



DRAIN DETAILS

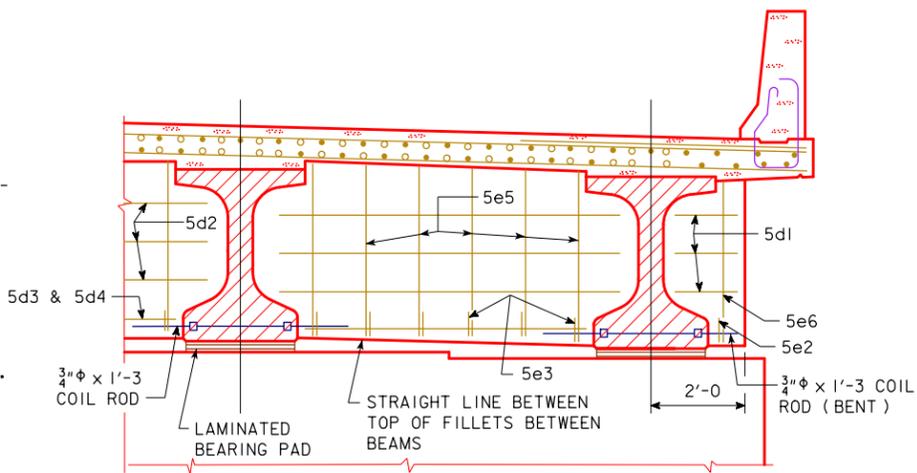
NOTE: DRAINS ARE TO BE GALVANIZED. DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR ".....". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTC
DRAIN WEIGHT (LBS.)	106
DRAIN LENGTH (FT.)	5'-5 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES 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.
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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.



HALF SECTION NEAR PIER

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

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

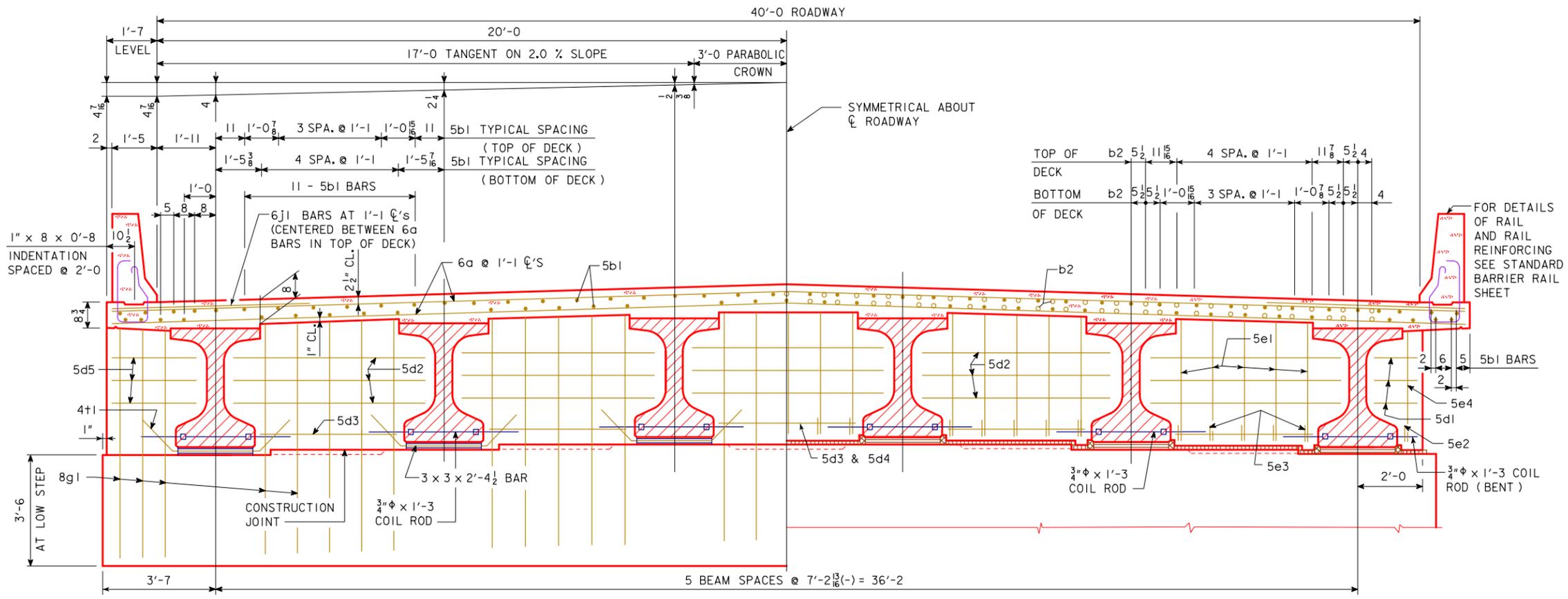
CORRECTION 04-14 - ADDED REFERRAL NOTE TO SUMMARY QUANTITIES SHEET FOR THE DRAIN WEIGHT. NOTE ABOUT CHOICE OF EPOXY OR STAINLESS STEEL DECK TO BARRIER RAIL BARS. ENGLISHBTINTEGRALBRIDGES.DGN - 4385-BTC-6 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTC BEAM BAR SIZE
30'-0	** 4
35'-0	** 4
40'-0	** 4
45'-0	** 4
50'-0	** 4
55'-0	** 4
60'-0	** 6
65'-0	** 7
70'-0	** 7
75'-0	** 8
80'-0	** 9
85'-0	** 9
90'-0	7
95'-0	7
100'-0	8
105'-0	8
110'-0	8
115'-0	8
120'-0	8

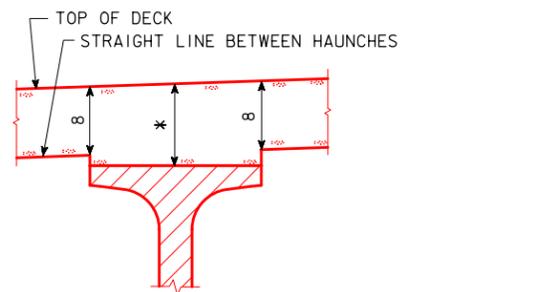
THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.

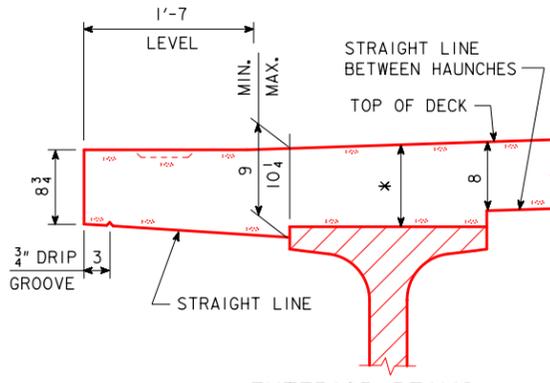


HALF SECTION NEAR ABUTMENT

HALF SECTION NEAR PIER (FIXED PIER SHOWN)



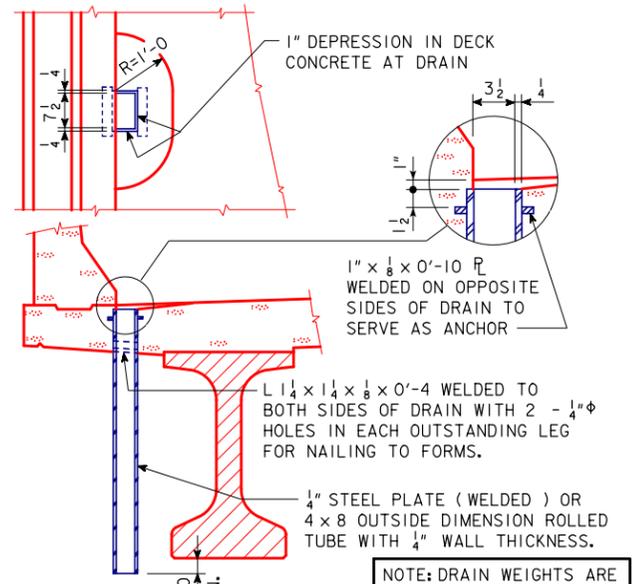
INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET -----



DRAIN DETAILS

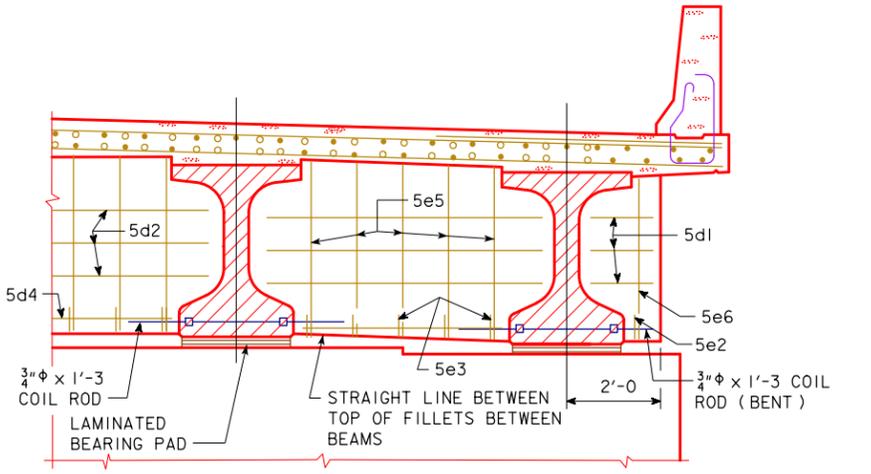
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DATA FOR ONE DRAIN	
BEAM SIZE	BTC
DRAIN WEIGHT (LBS.)	106
DRAIN LENGTH (FT.)	5'-5 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

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HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

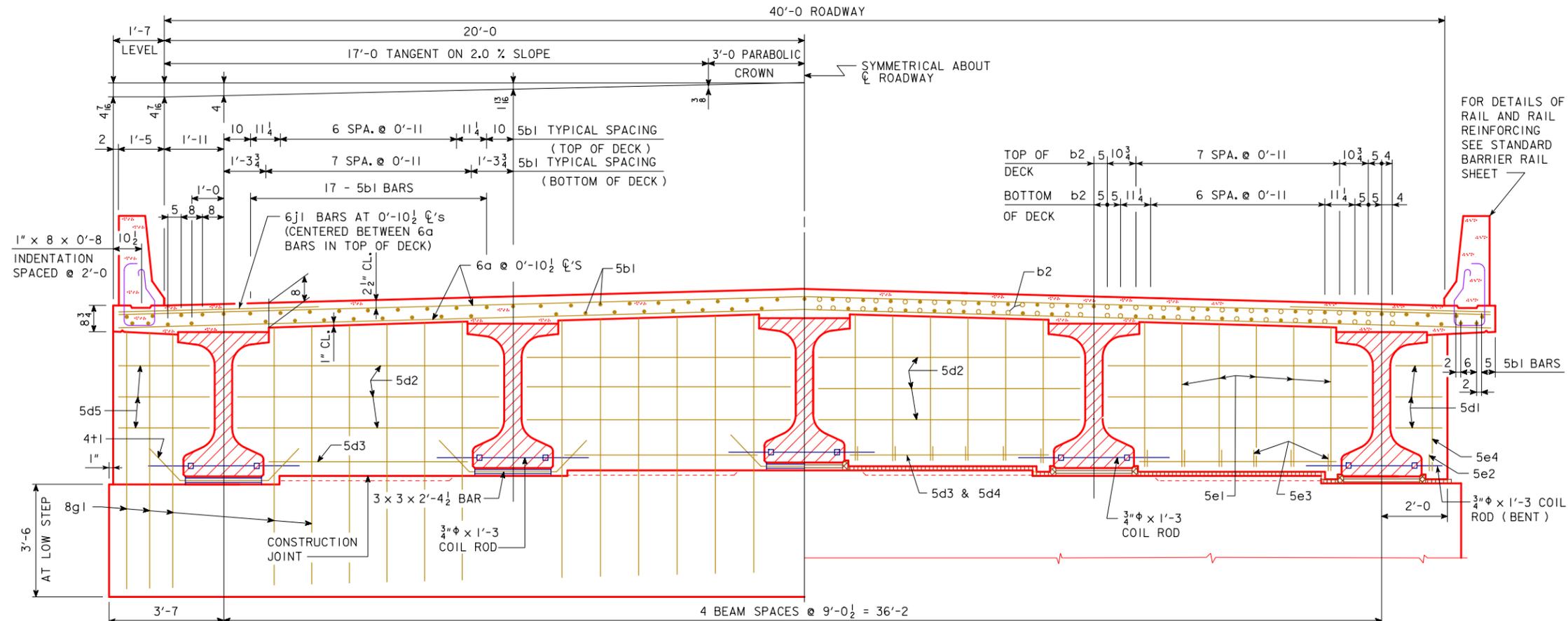
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. _____ OF _____ FILE NO. _____ DESIGN NO. _____

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. ENGLISHBTINTEGRALBRIDGES.DGN - 4385-BTD-5 - THIS SHEET ISSUED 02-08.

TABLE OF SIZE OF 'b2' BAR

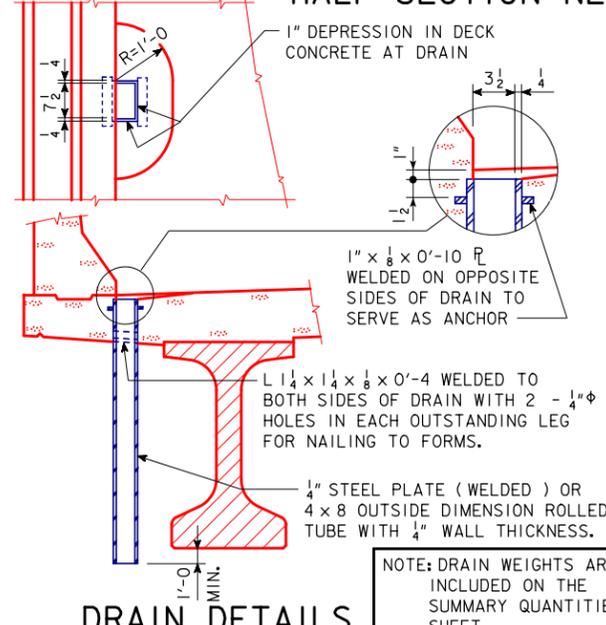
LONGEST ADJACENT SPAN	BTD BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	** 4
55'-0	** 4
60'-0	** 5
65'-0	** 6
70'-0	** 6
75'-0	** 7
80'-0	** 8
85'-0	** 8
90'-0	** 9
95'-0	** 9
100'-0	7
105'-0	7
110'-0	8
115'-0	8
120'-0	8
125'-0	8
130'-0	9
135'-0	9

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 ** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



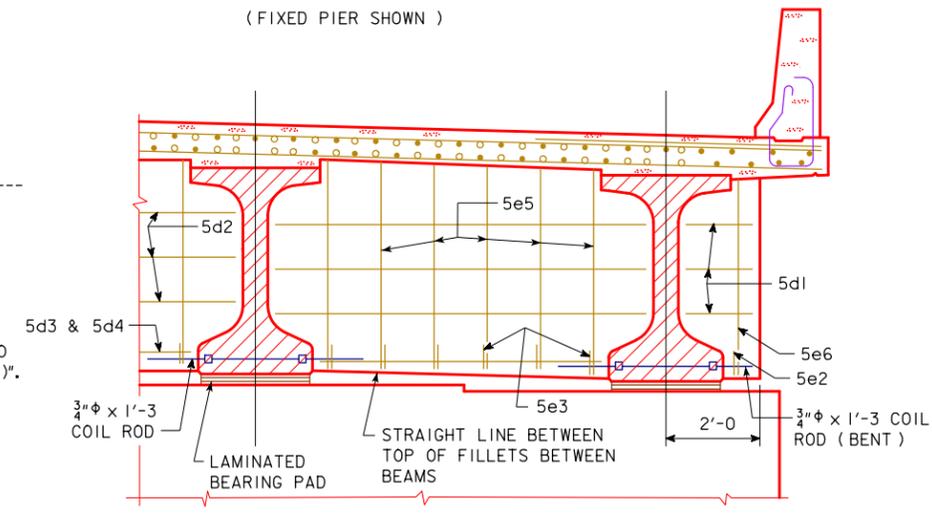
FOR DETAILS OF RAIL AND RAIL REINFORCING SEE STANDARD BARRIER RAIL SHEET

HALF SECTION NEAR ABUTMENT



DECK AREA = 29.17 SQ. FT.
 DECK AREA DOES NOT INCLUDE THE HAUNCH.

HALF SECTION NEAR PIER (FIXED PIER SHOWN)



HALF SECTION NEAR PIER (EXPANSION PIER SHOWN)

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

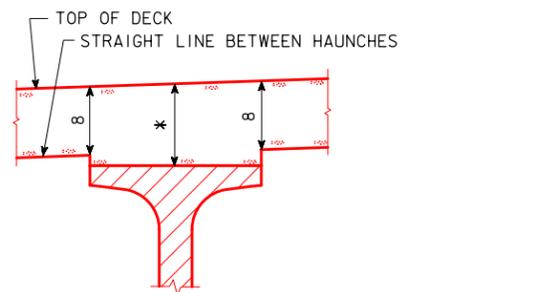
NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

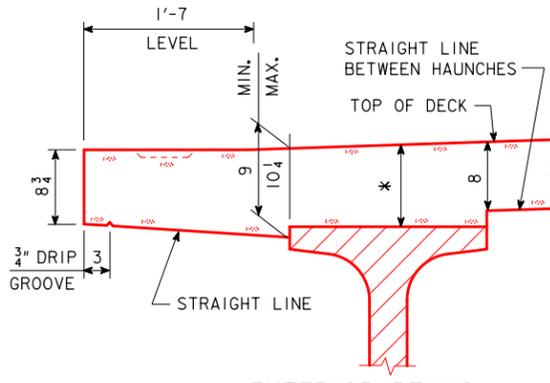
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NOTE: DRAINS ARE TO BE GALVANIZED. ---- DRAINS REQUIRED. SEE "SITUATION PLAN" FOR LOCATION. WEIGHT OF DRAINS IS INCLUDED IN THE QUANTITY FOR "----". WEIGHT IS BASED ON ROLLED TUBE.

DATA FOR ONE DRAIN	
BEAM SIZE	BTD
DRAIN WEIGHT (LBS.)	120
DRAIN LENGTH (FT.)	6'-2 3/4



INTERIOR BEAMS



EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

* FOR DECK THICKNESS OVER BEAMS SEE HAUNCH AND CAMBER DETAILS ON DESIGN SHEET ----

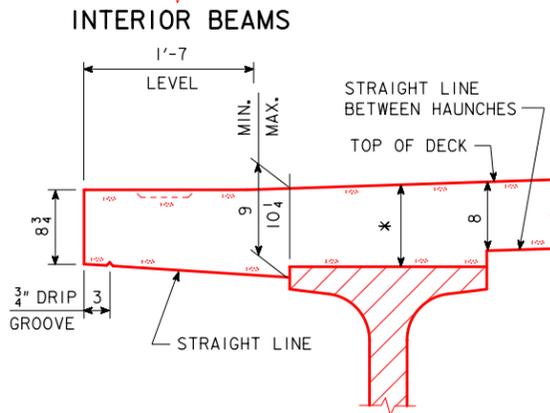
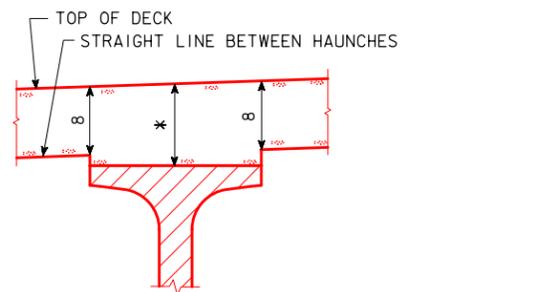
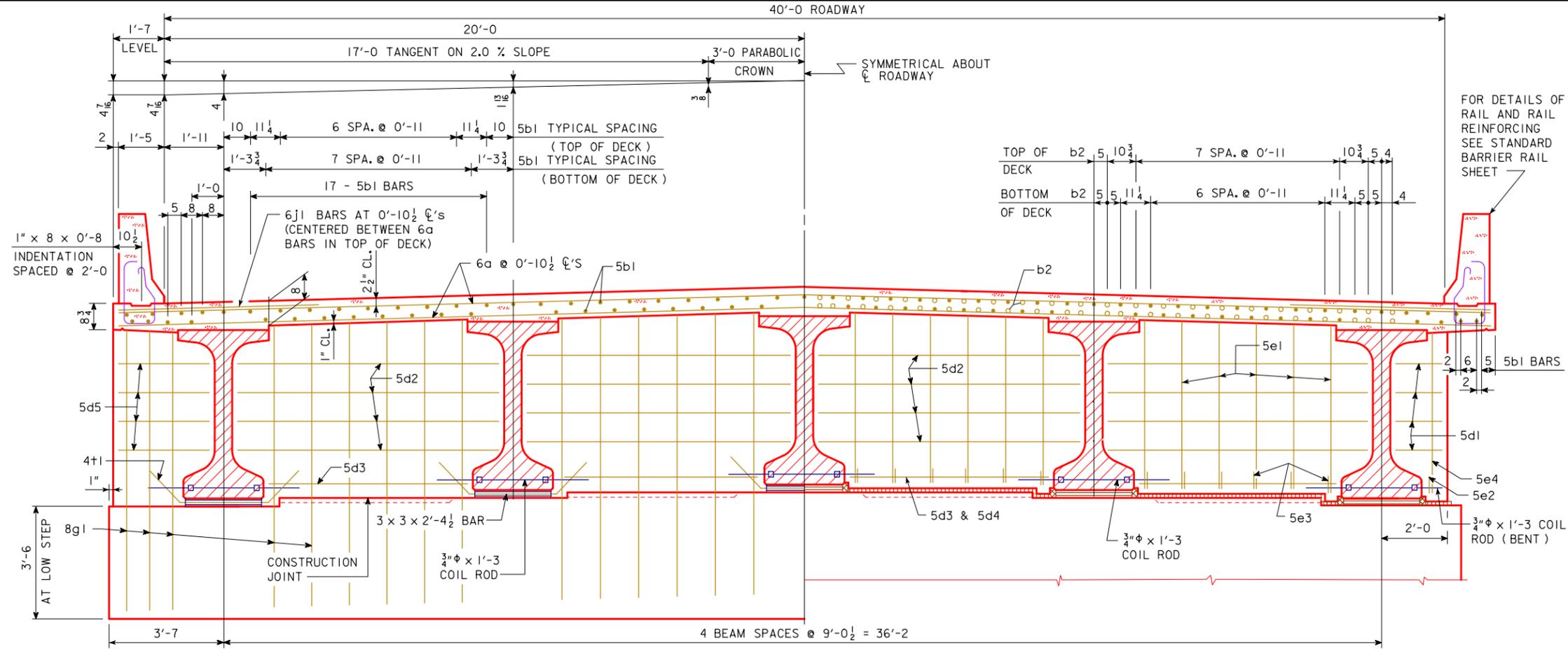
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTE BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	
55'-0	
60'-0	** 4
65'-0	** 5
70'-0	** 6
75'-0	** 6
80'-0	** 7
85'-0	** 7
90'-0	** 8
95'-0	** 8
100'-0	** 9
105'-0	** 9
110'-0	7
115'-0	7
120'-0	7
125'-0	8
130'-0	8
135'-0	8
140'-0	9
145'-0	9
150'-0	9
155'-0	9

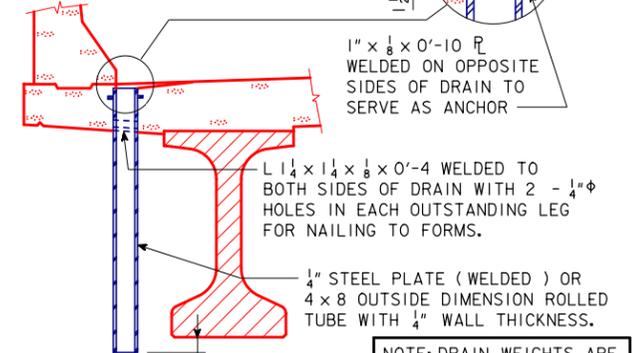
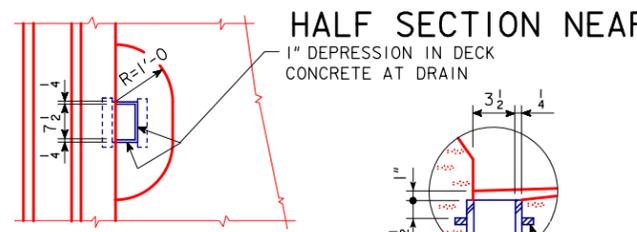
THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE CL OF PIER.

** INDICATES 'b2' BAR PLACED IN TOP DECK ONLY.



TYPICAL DECK AND HAUNCH DETAIL

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

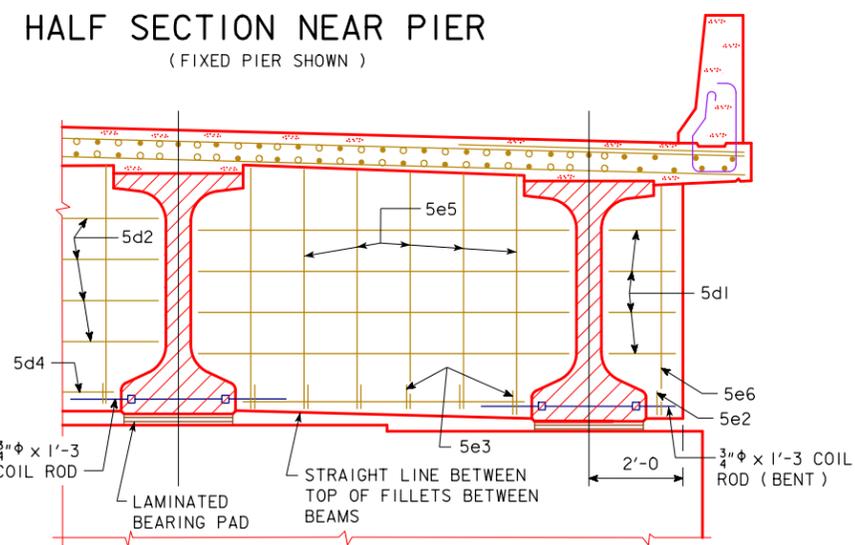
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DATA FOR ONE DRAIN	
BEAM SIZE	BTE
DRAIN WEIGHT (LBS.)	136
DRAIN LENGTH (FT.)	6'-11 3/4

NOTE: FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET ---

SUPERSTRUCTURE NOTES:

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IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
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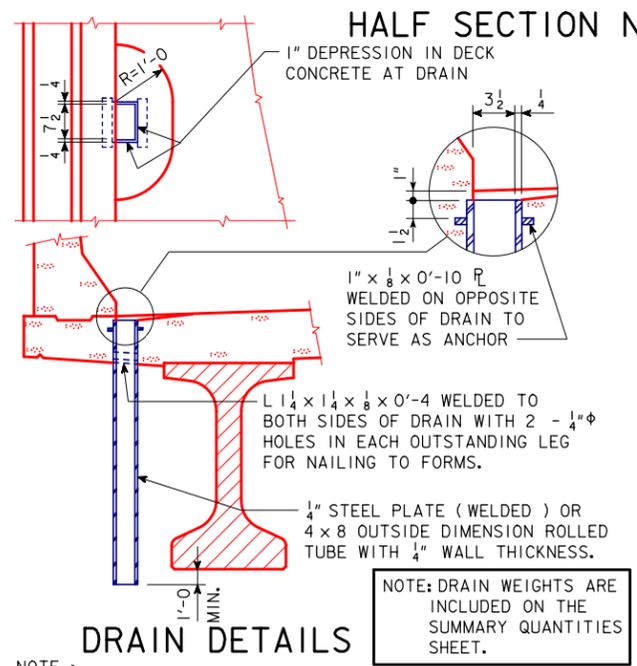
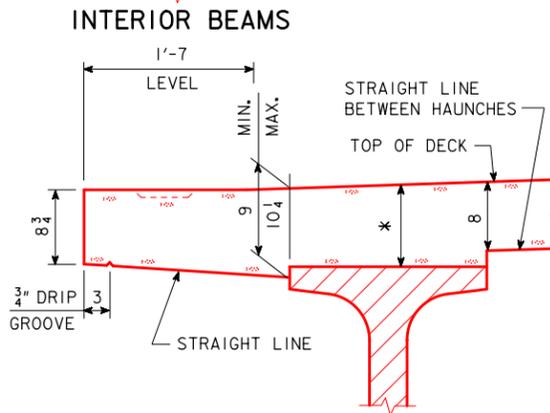
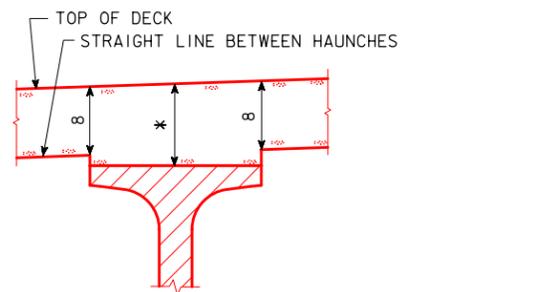
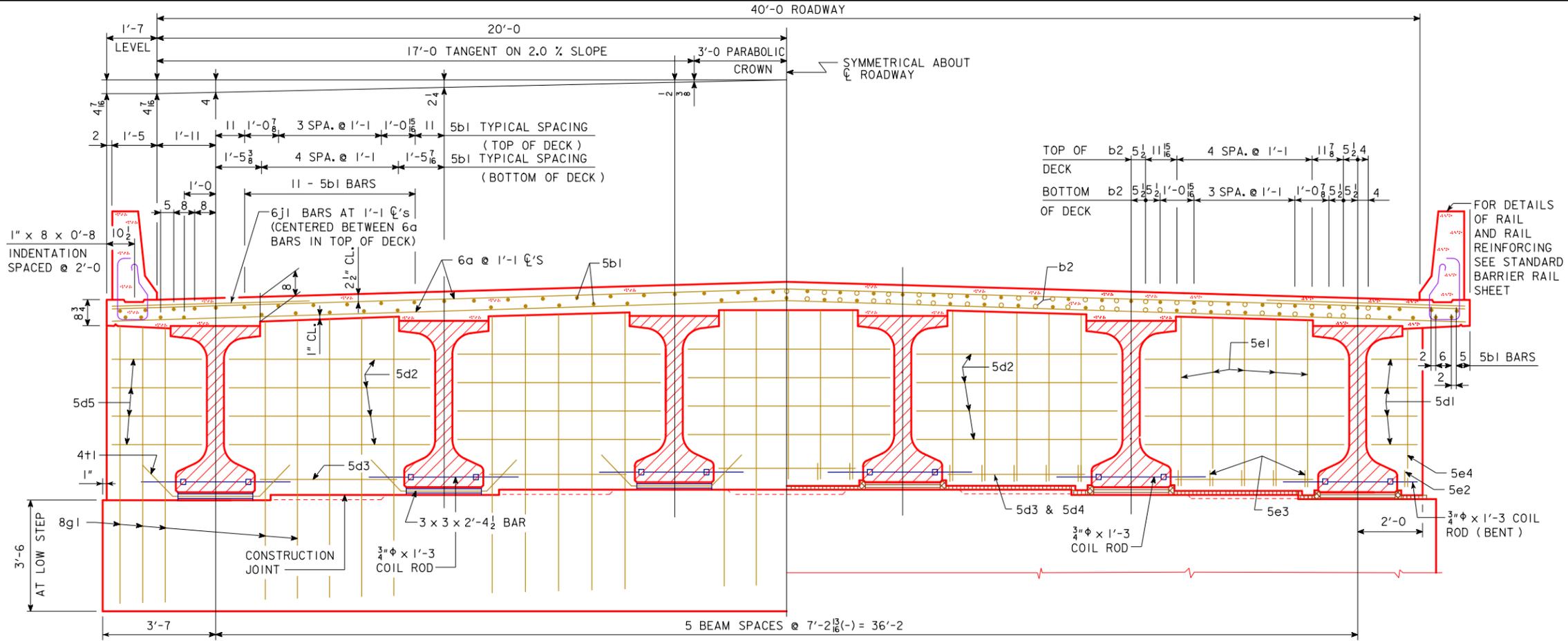
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TABLE OF SIZE OF 'b2' BAR

LONGEST ADJACENT SPAN	BTE BEAM BAR SIZE
30'-0	
35'-0	
40'-0	
45'-0	
50'-0	
55'-0	
60'-0	** 4
65'-0	** 5
70'-0	** 6
75'-0	** 6
80'-0	** 7
85'-0	** 7
90'-0	** 8
95'-0	** 8
100'-0	** 9
105'-0	** 9
110'-0	7
115'-0	7
120'-0	7
125'-0	8
130'-0	8
135'-0	8
140'-0	9
145'-0	9
150'-0	9
155'-0	9

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

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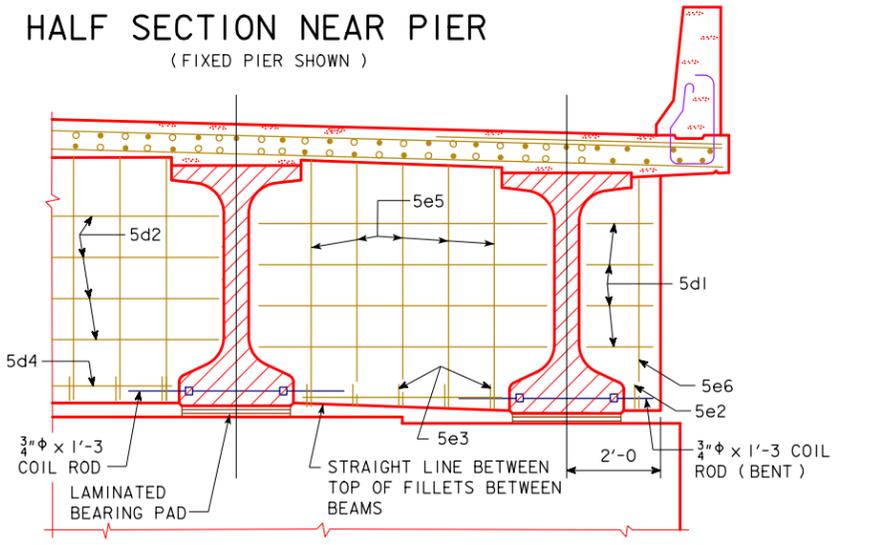
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DATA FOR ONE DRAIN	
BEAM SIZE	BTE
DRAIN WEIGHT (LBS.)	136
DRAIN LENGTH (FT.)	6'-11 3/4

HALF SECTION NEAR ABUTMENT
 DECK AREA = 29.22 SQ. FT.
 DECK AREA DOES NOT INCLUDE THE HAUNCH.

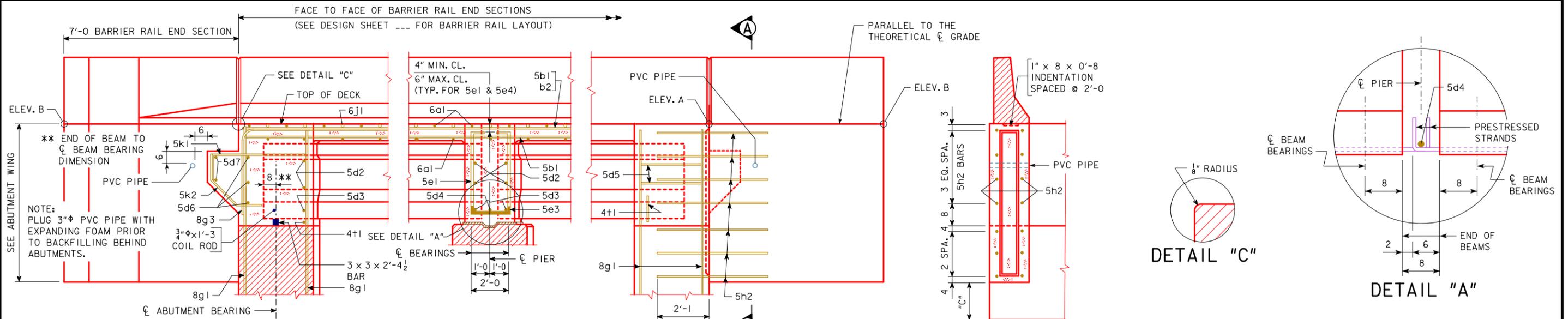
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 TRANSVERSE DECK REINFORCING MAY BE SPLICED WITH ONE LAP LOCATED AS FOLLOWS:
 TOP BAR - LAP MIDWAY BETWEEN BEAMS (MIN. LAP = 1'-10).
 BOTTOM BARS - LAP OVER BEAMS (MIN. LAP = 1'-10).
 PAYMENT FOR REINFORCING BARS SHALL BE BASED ON NO SPLICES, AND NO ALLOWANCE SHALL BE MADE FOR THE ADDITIONAL LENGTH OF BAR REQUIRED FOR THE USE OF SPLICES.



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. _____

ENGLISHBTINTEGRALBRIDGES.DGN - 4501-BTB - THIS SHEET ISSUED 02-08.

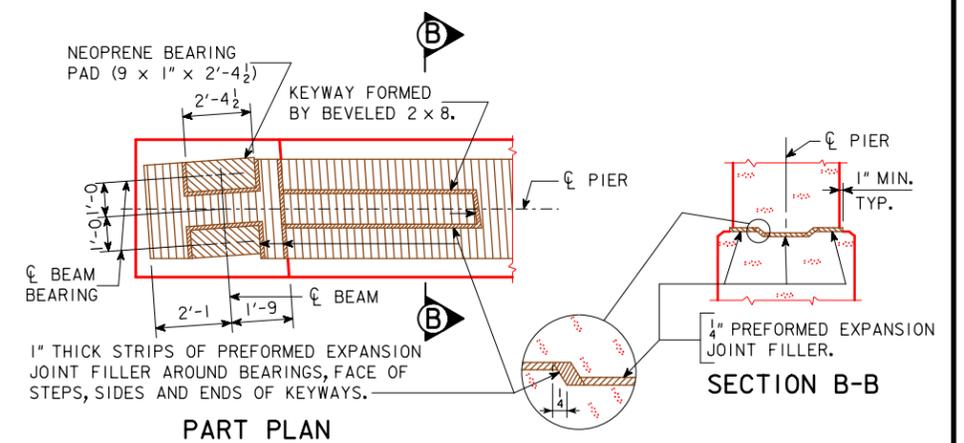
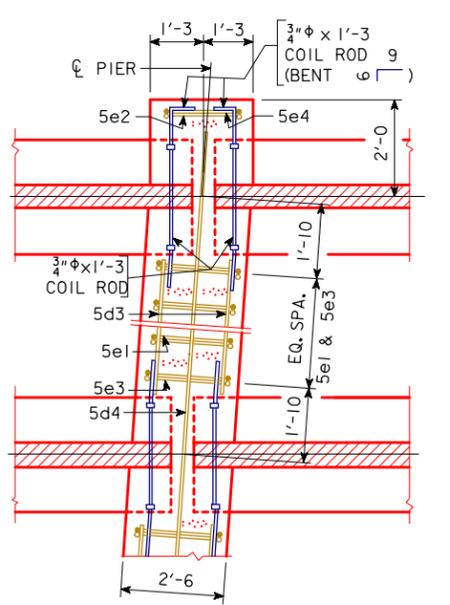
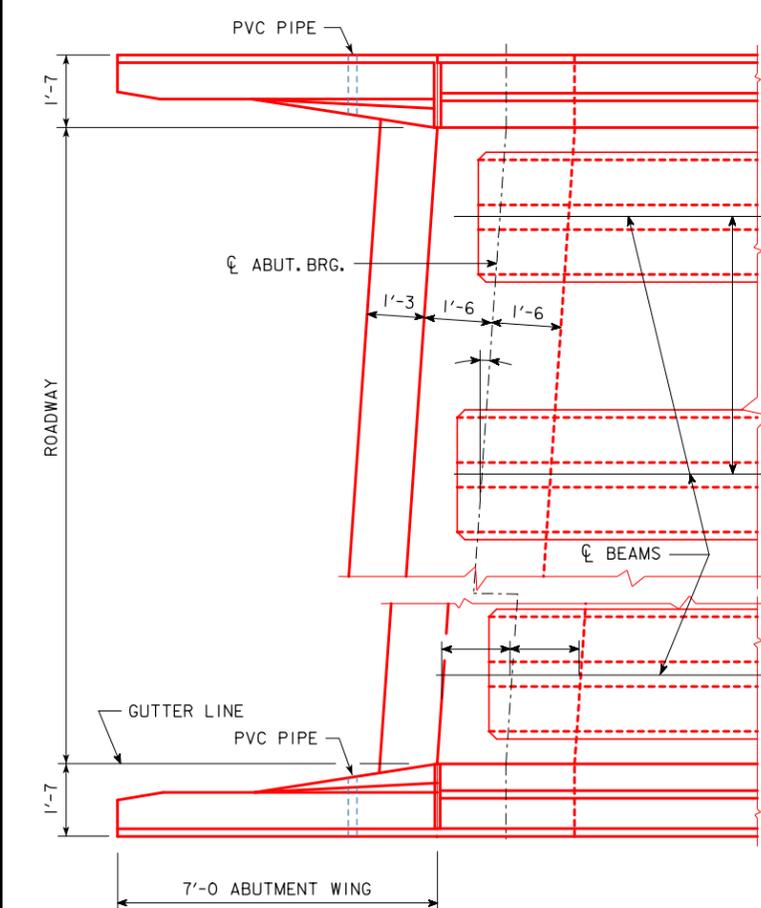


PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

PART END VIEW AT ABUTMENT

SECTION A-A

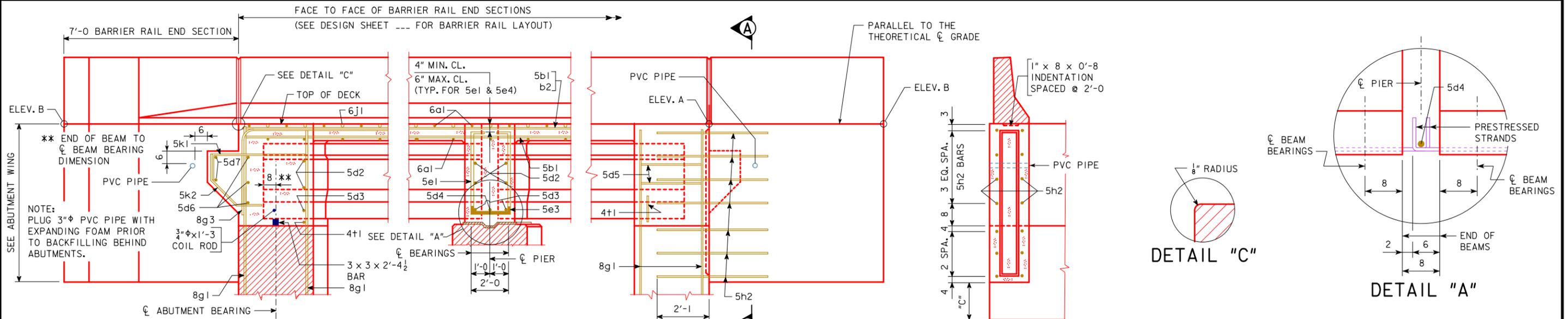
TABLE OF WING ELEVATIONS			
LOCATION	DIM "C"	ELEV. A	ELEV. B
S.W. CORNER			
N.W. CORNER			
S.E. CORNER			
N.E. CORNER			



ABUT. & PIER DIAPHRAGM DETAILS

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

ENGLISHBTINTEGRALBRIDGES.DGN - 4503-BTB - THIS SHEET ISSUED 02-08.

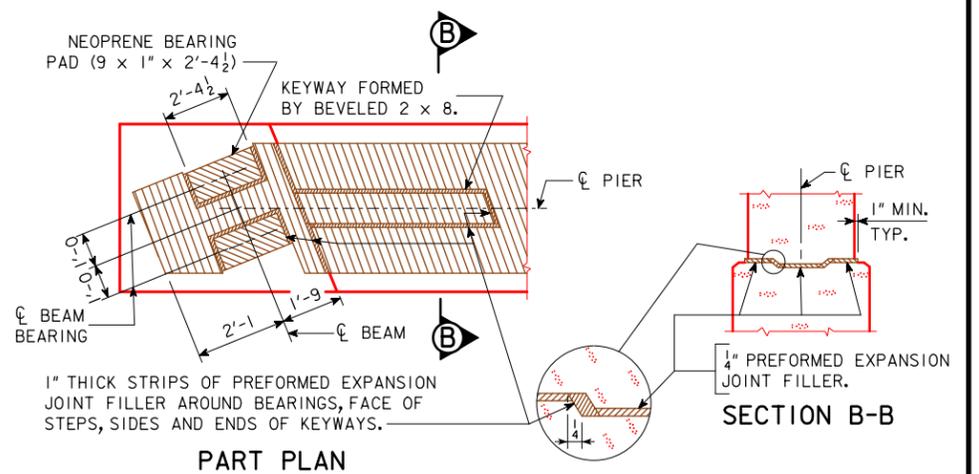
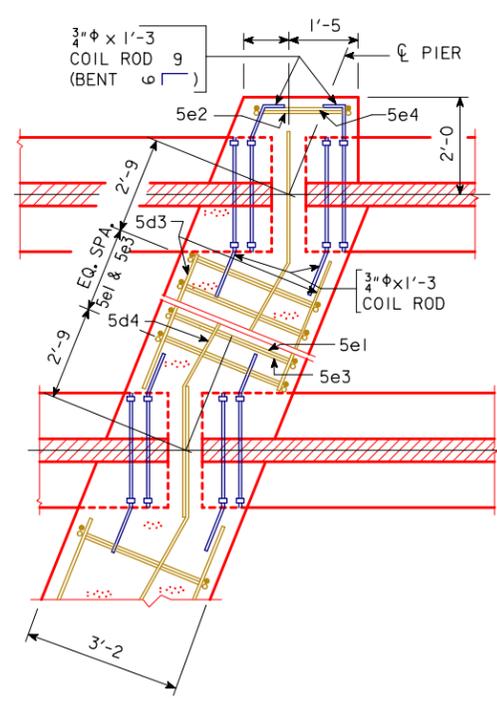
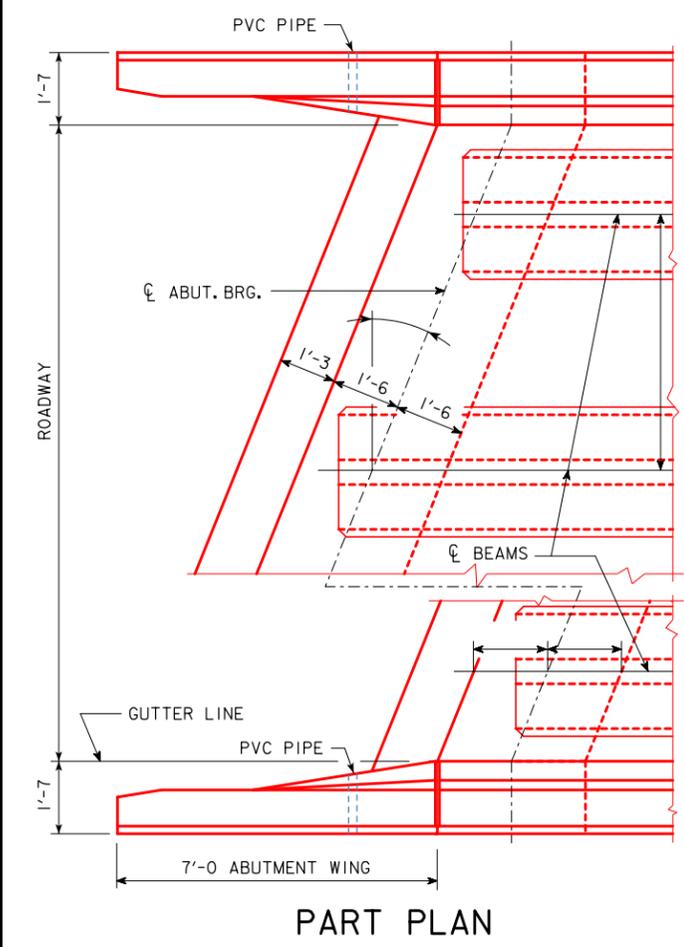


PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

PART END VIEW AT ABUTMENT

SECTION A-A

TABLE OF WING ELEVATIONS			
LOCATION	DIM "C"	ELEV. A	ELEV. B
S.W. CORNER			
N.W. CORNER			
S.E. CORNER			
N.E. CORNER			

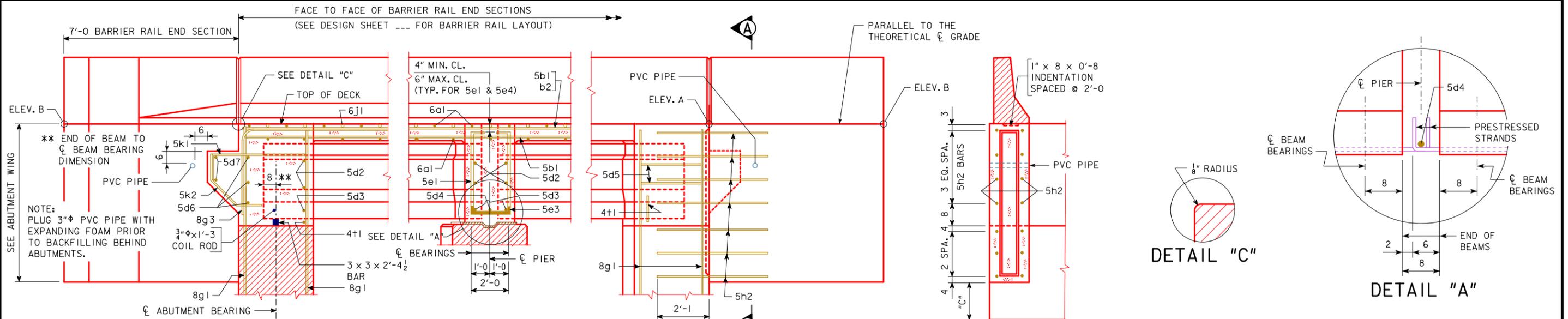


TOP OF PIER DETAILS

ABUT. & PIER DIAPHRAGM DETAILS

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

ENGLISHBTINTEGRALBRIDGES.DGN - 4505-BTB - THIS SHEET ISSUED 02-08.

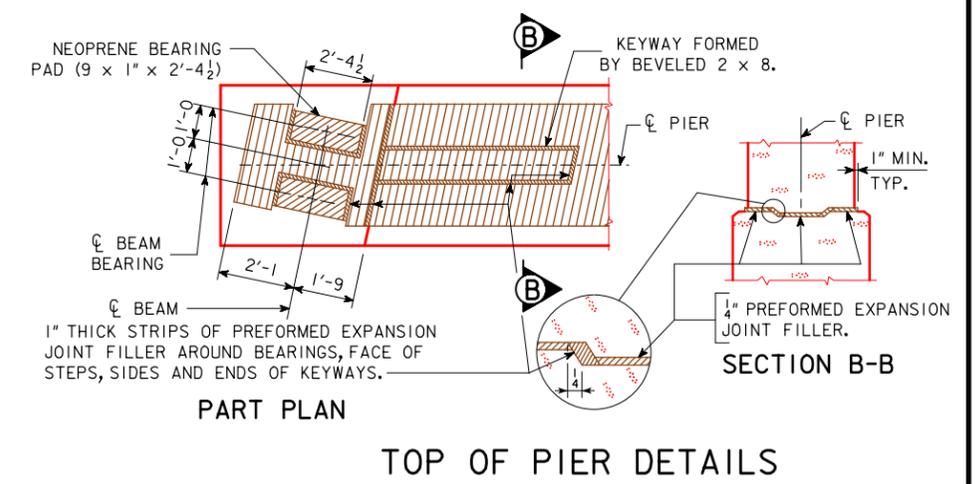
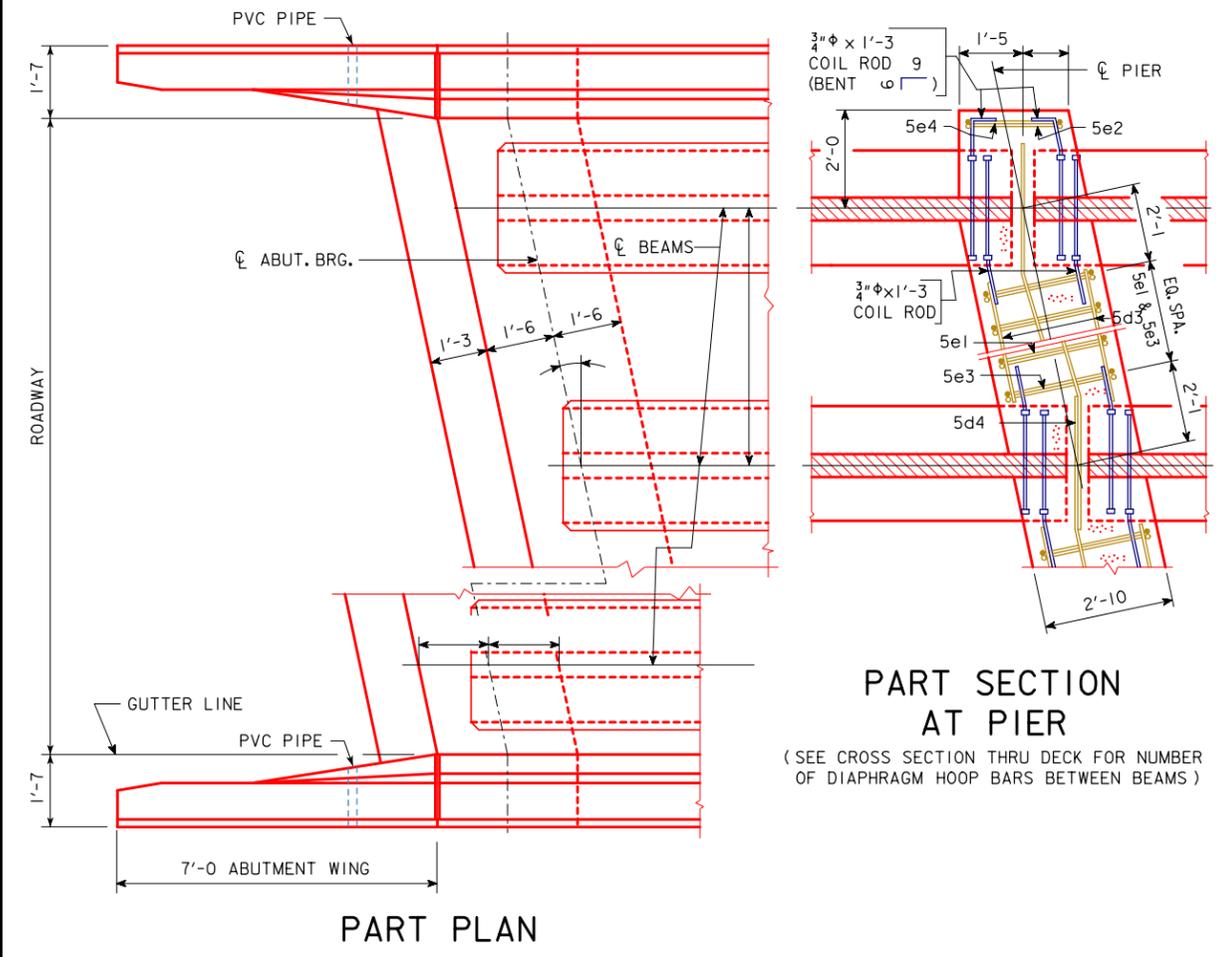


PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

PART END VIEW AT ABUTMENT

SECTION A-A

TABLE OF WING ELEVATIONS			
LOCATION	DIM "C"	ELEV. A	ELEV. B
S.W. CORNER			
N.W. CORNER			
S.E. CORNER			
N.E. CORNER			



ABUT. & PIER DIAPHRAGM DETAILS

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

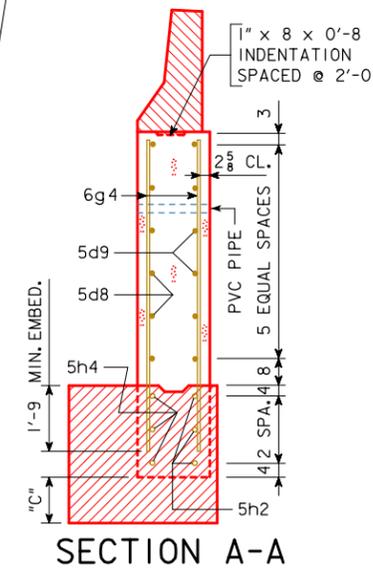
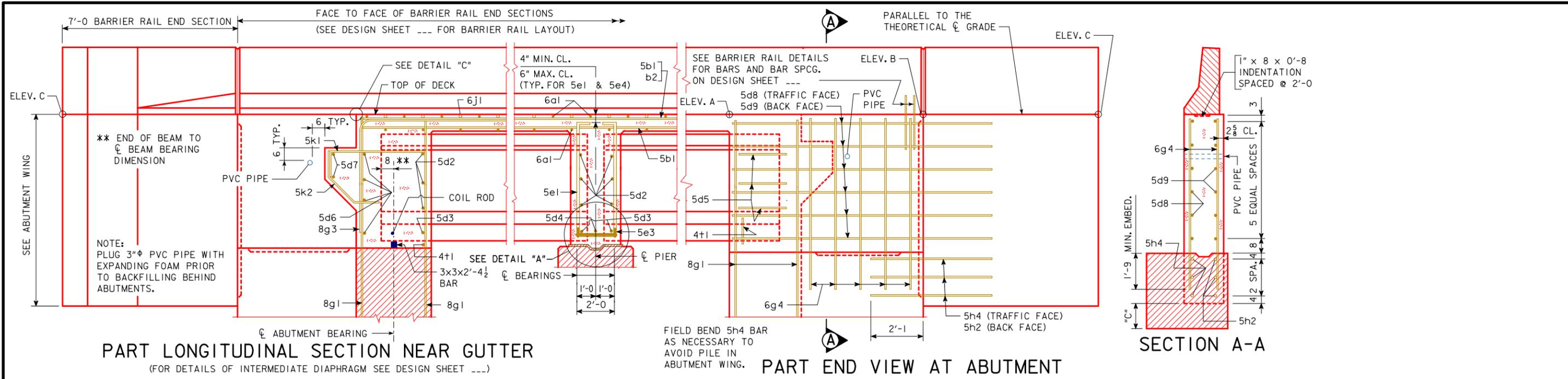
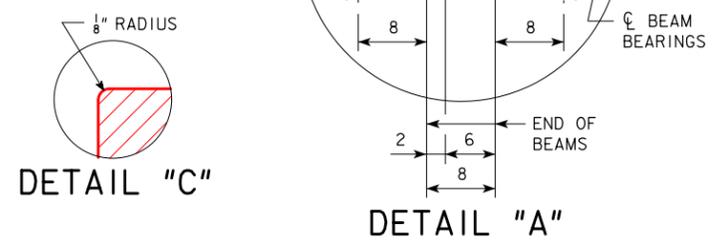
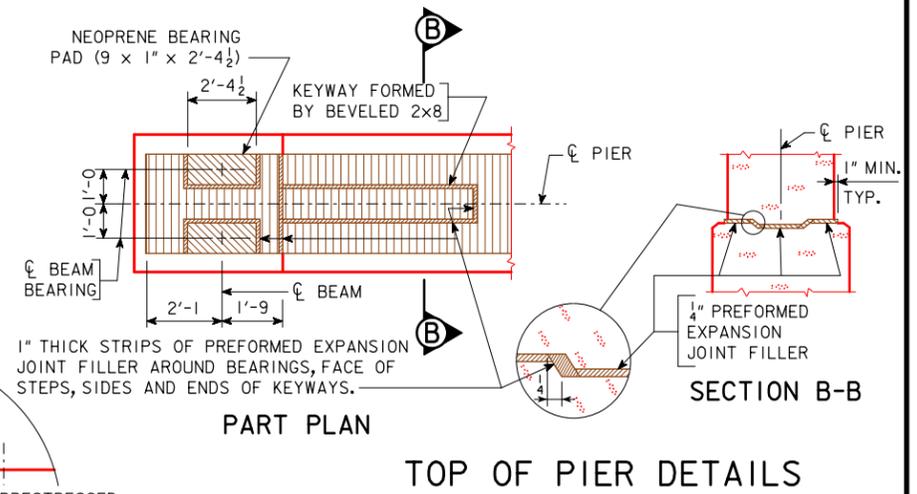
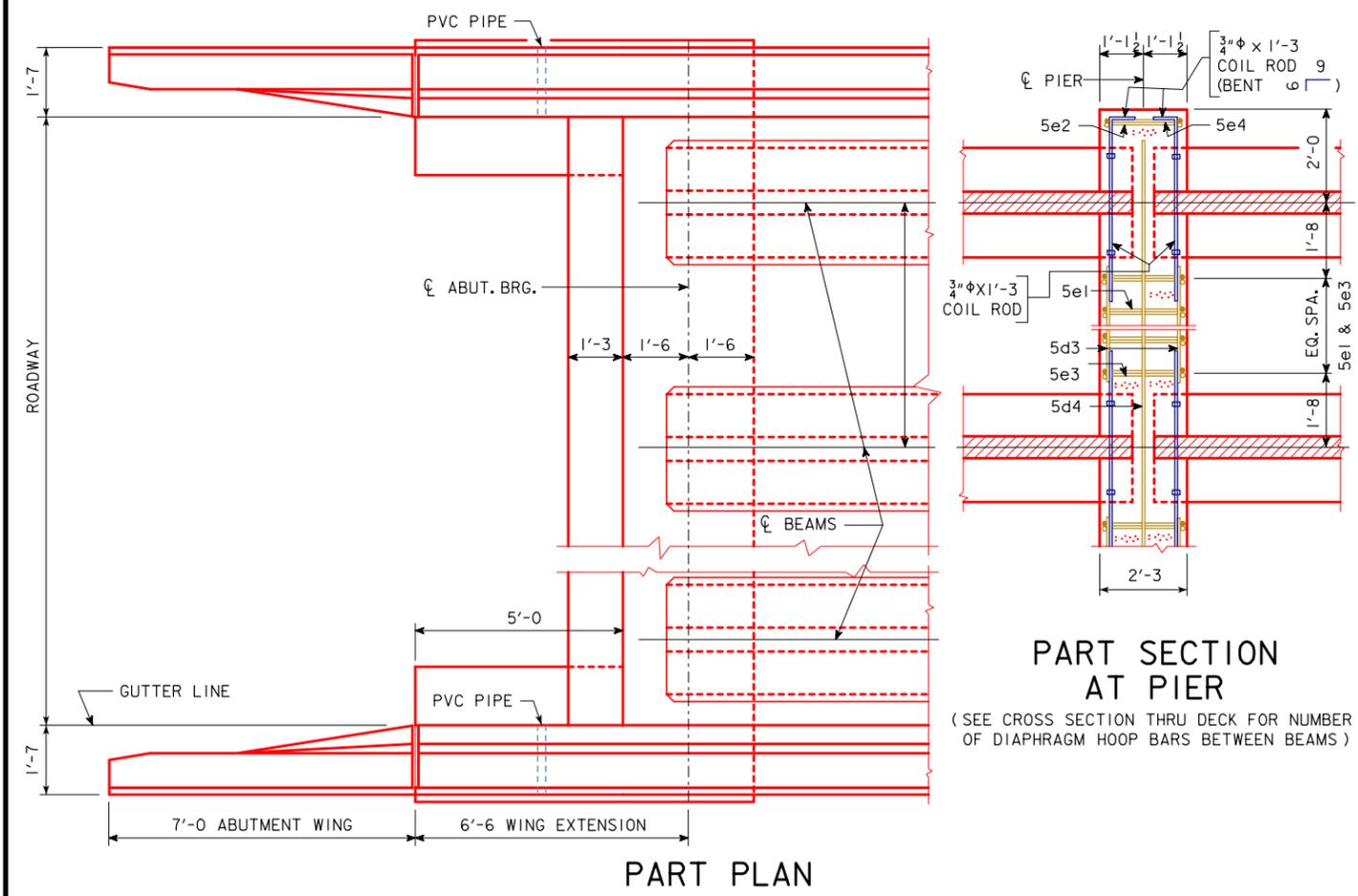


TABLE OF WINGWALL ELEVATIONS

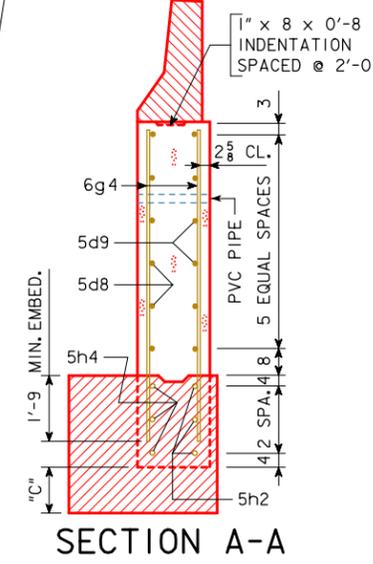
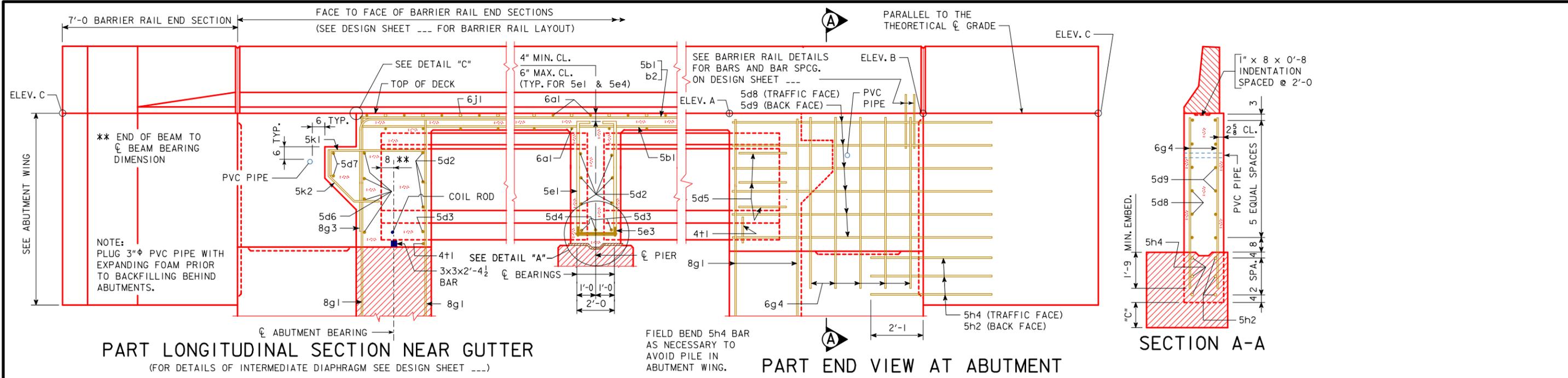
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



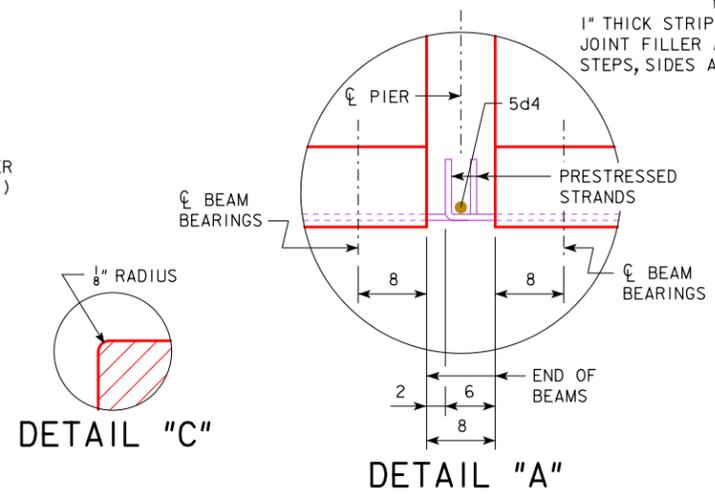
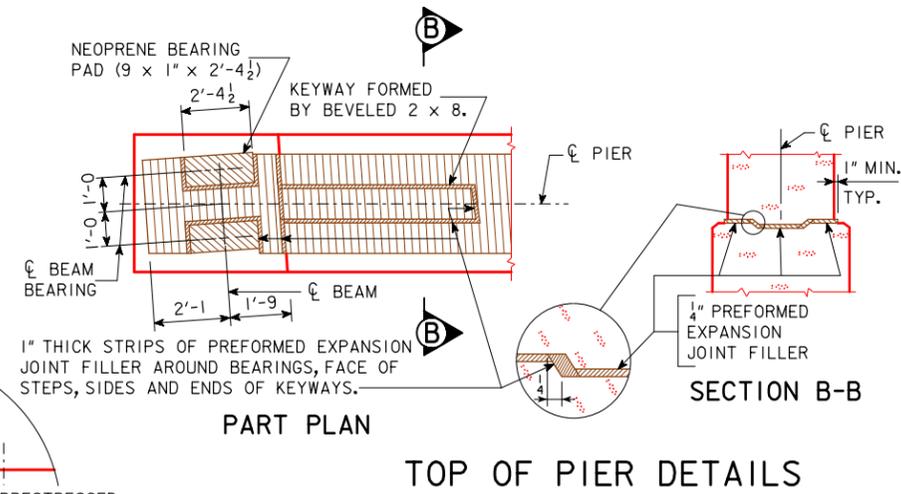
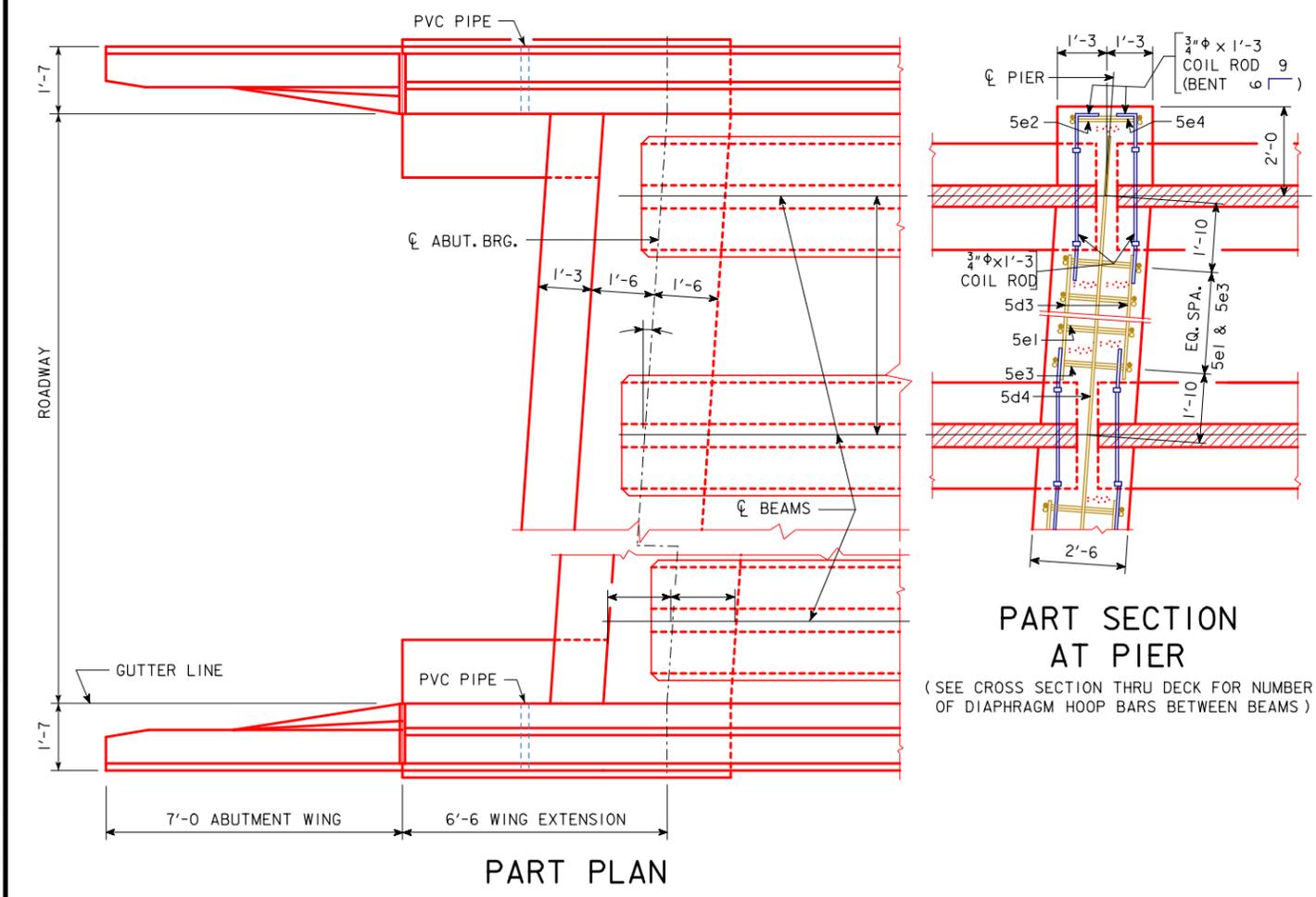
ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE: ENGLISHBTINTEGRALBRIDGES.DGN - 4507-BTCD - THIS SHEET ISSUED 02-08.



LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4508-BTCD - THIS SHEET ISSUED 02-08.

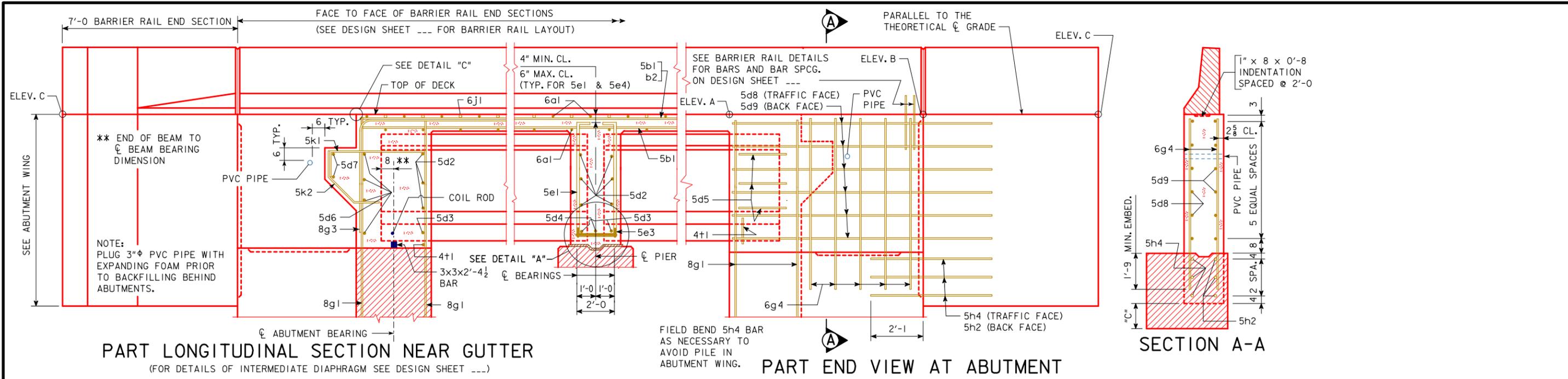
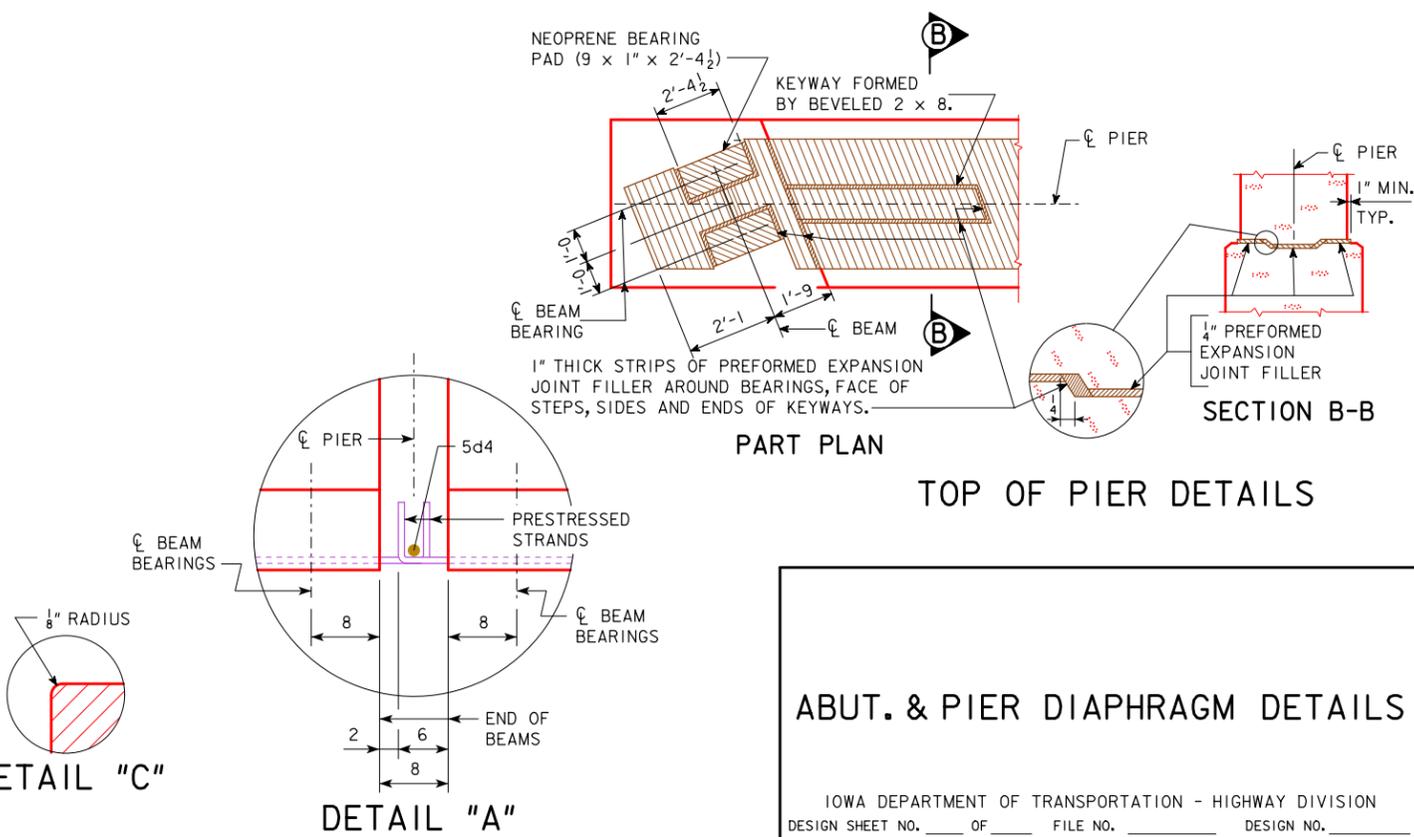
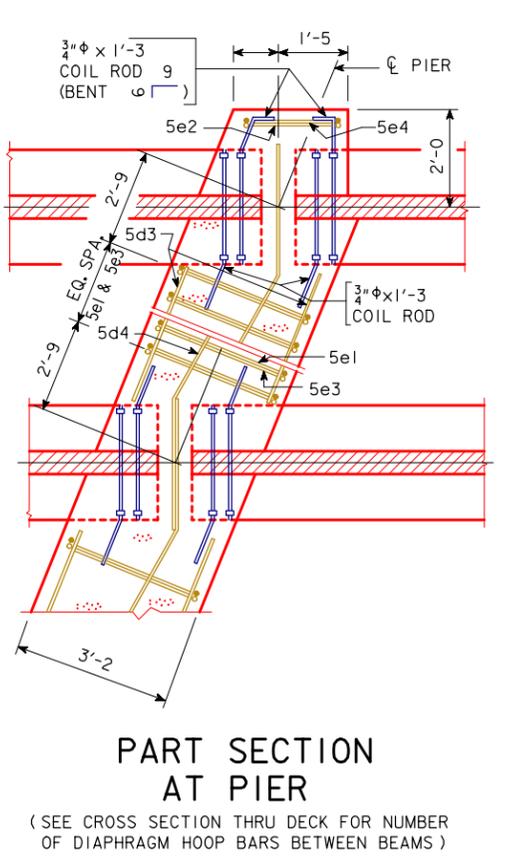
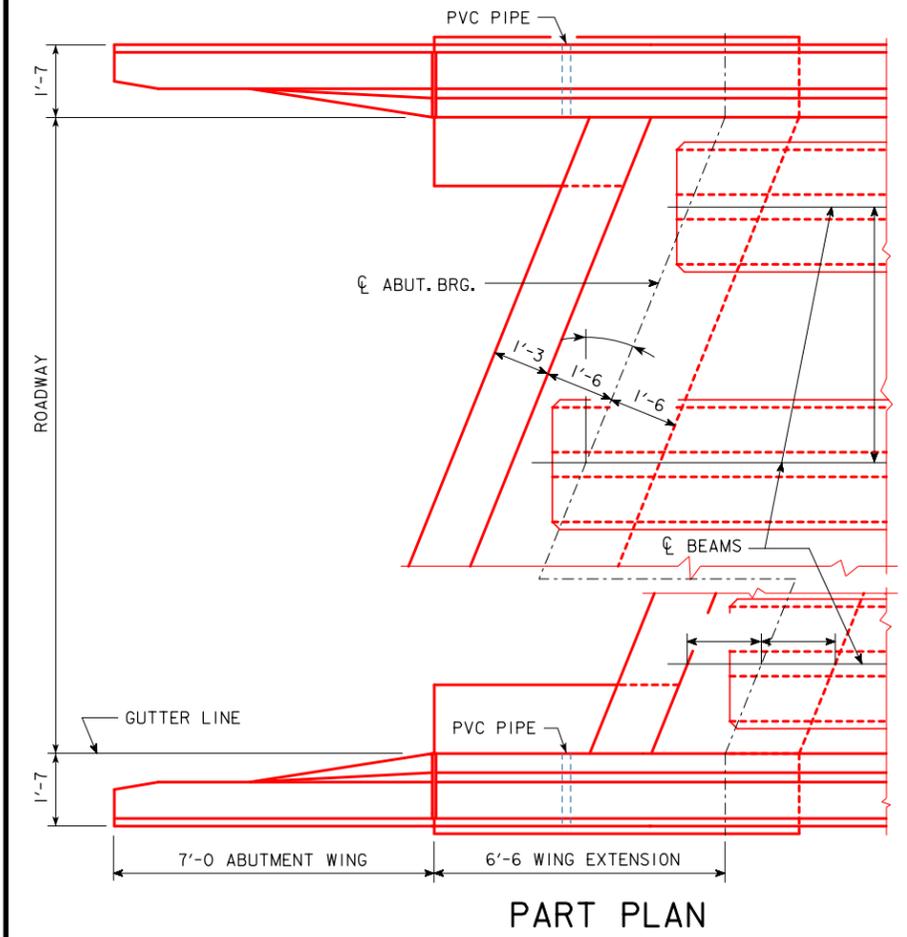


TABLE OF WINGWALL ELEVATIONS

LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



ABUT. & PIER DIAPHRAGM DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ___ FILE NO. ___ DESIGN NO. ___

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4510-BTCD - THIS SHEET ISSUED 02-08.

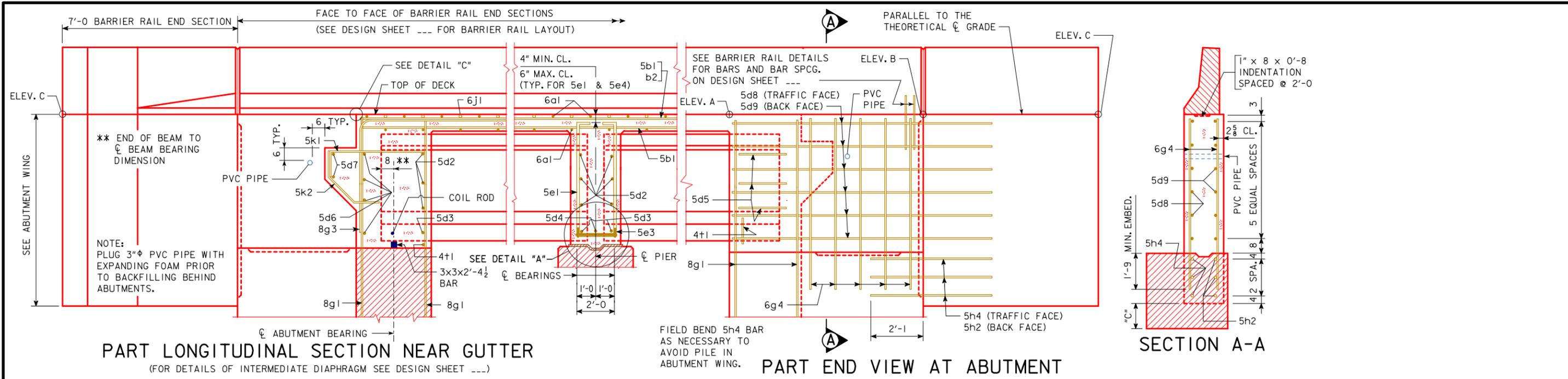
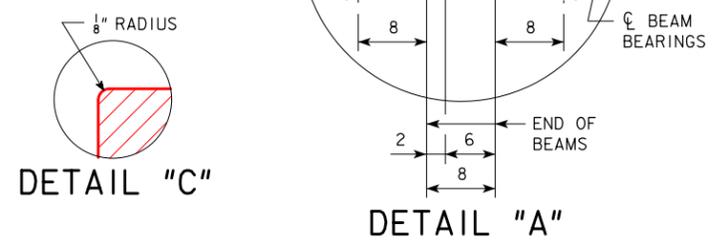
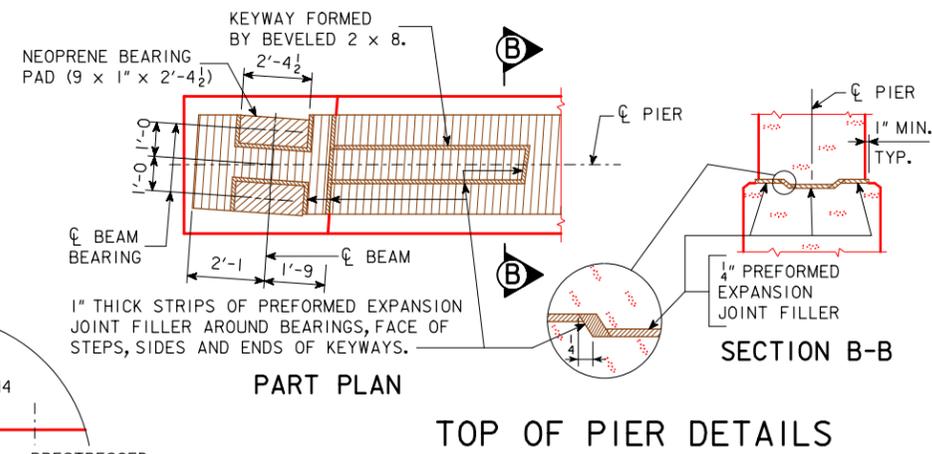
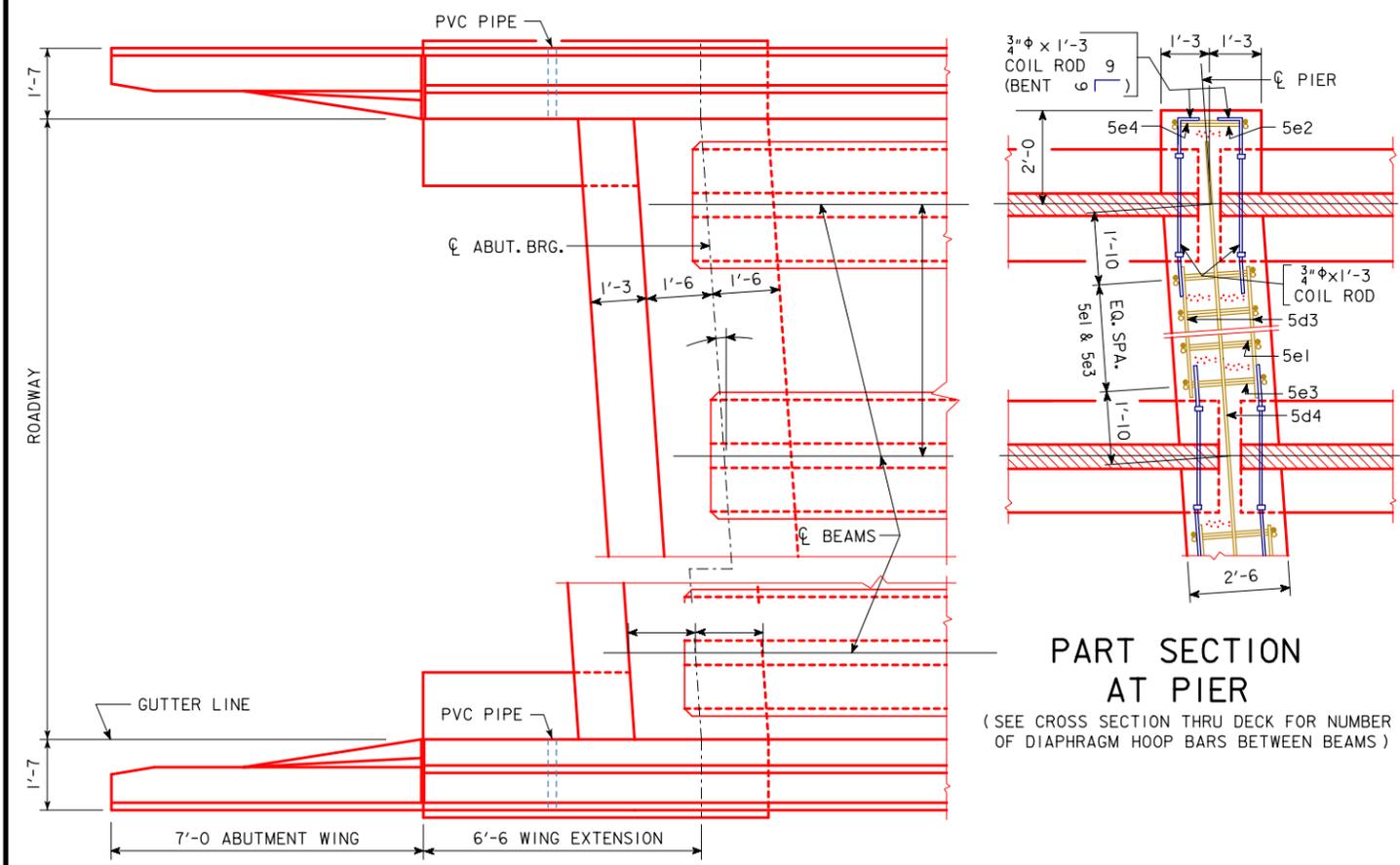


TABLE OF WINGWALL ELEVATIONS

LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				

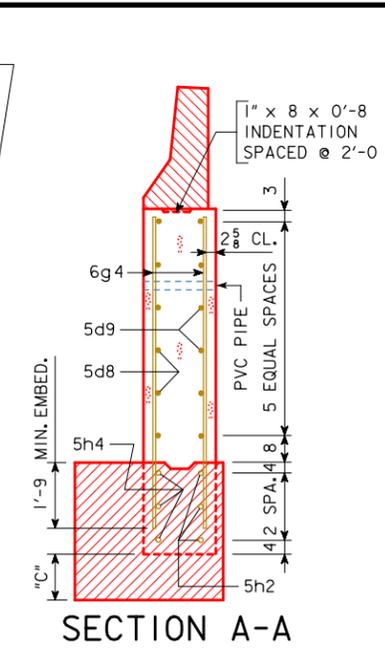
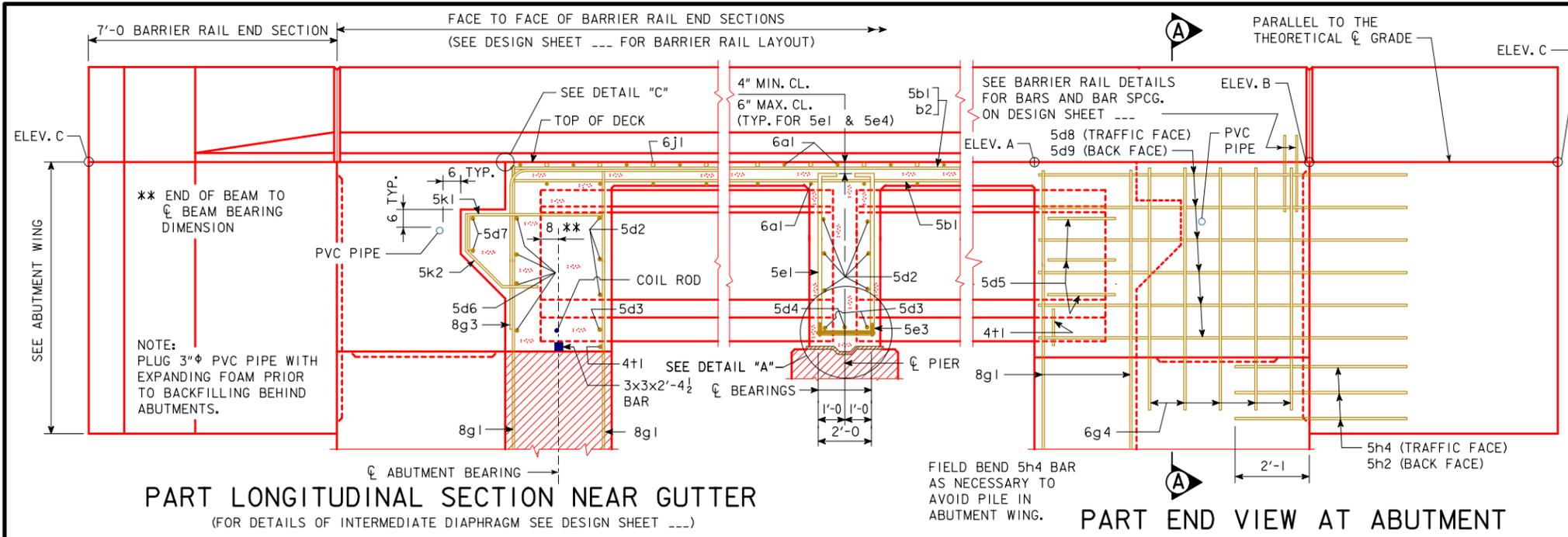


ABUT. & PIER DIAPHRAGM DETAILS

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ___ FILE NO. ___ DESIGN NO. ___

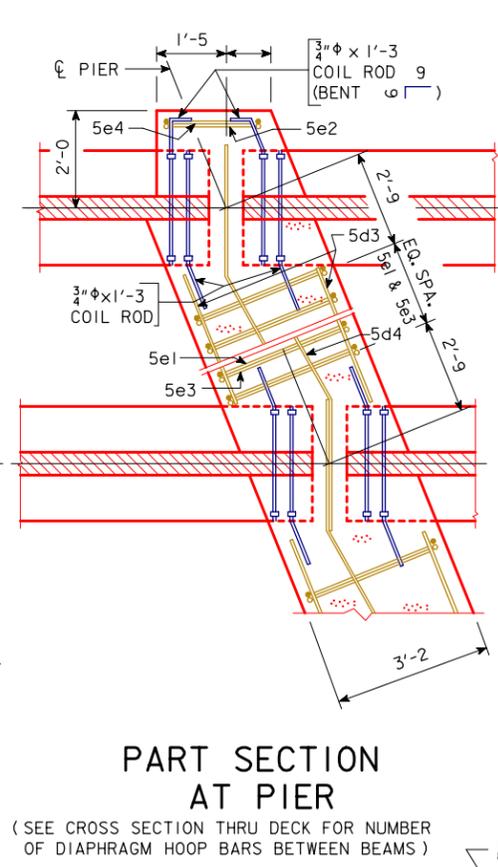
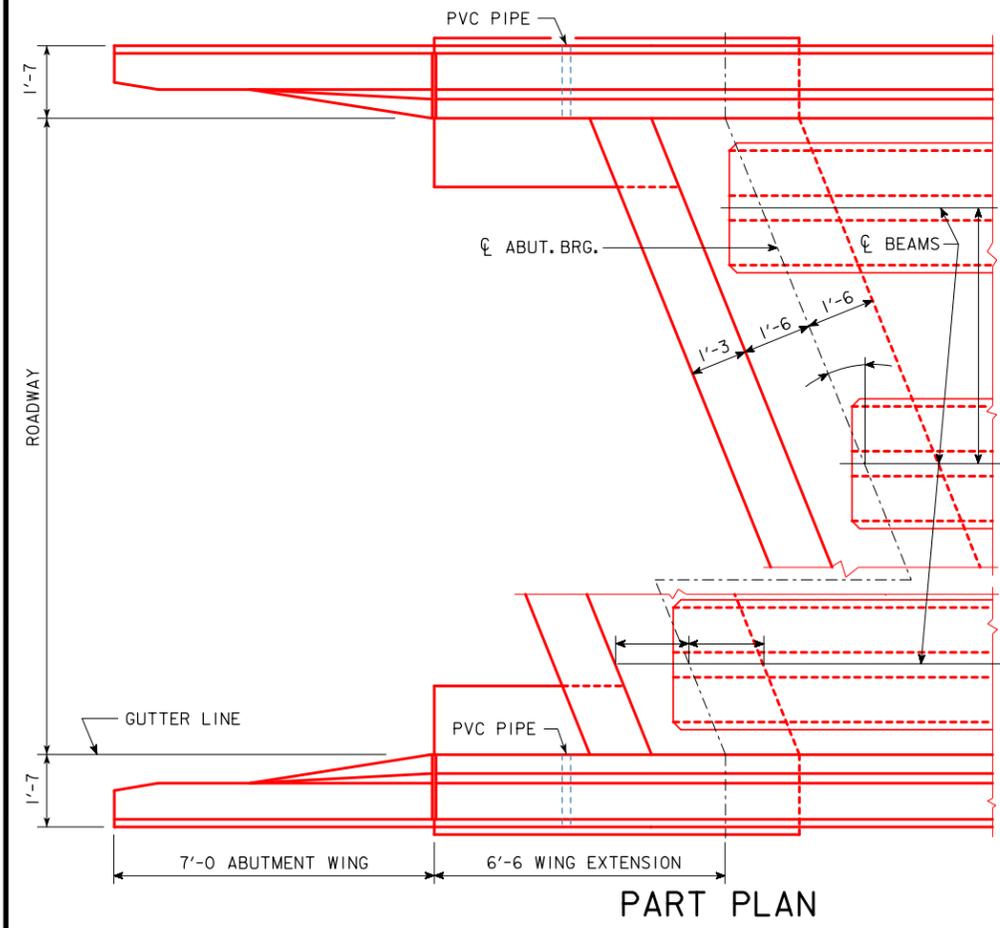
REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4511-BTCD - THIS SHEET ISSUED 02-08.



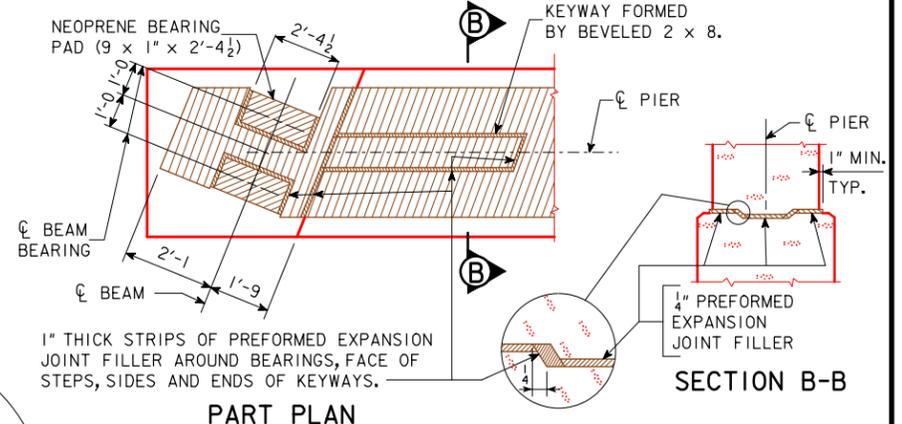
PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

PART END VIEW AT ABUTMENT

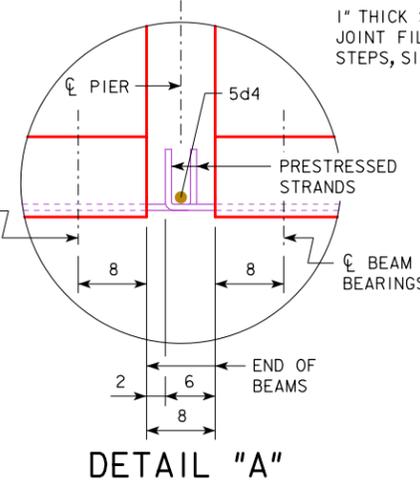
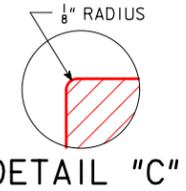
TABLE OF WINGWALL ELEVATIONS				
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



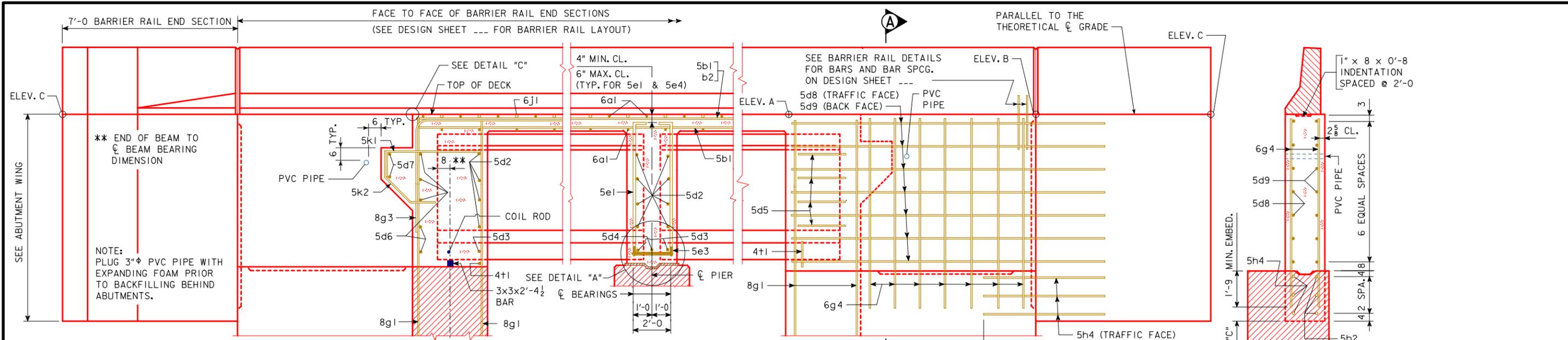
PART PLAN
TOP OF PIER DETAILS



ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4513-BTCD - THIS SHEET ISSUED 02-08.

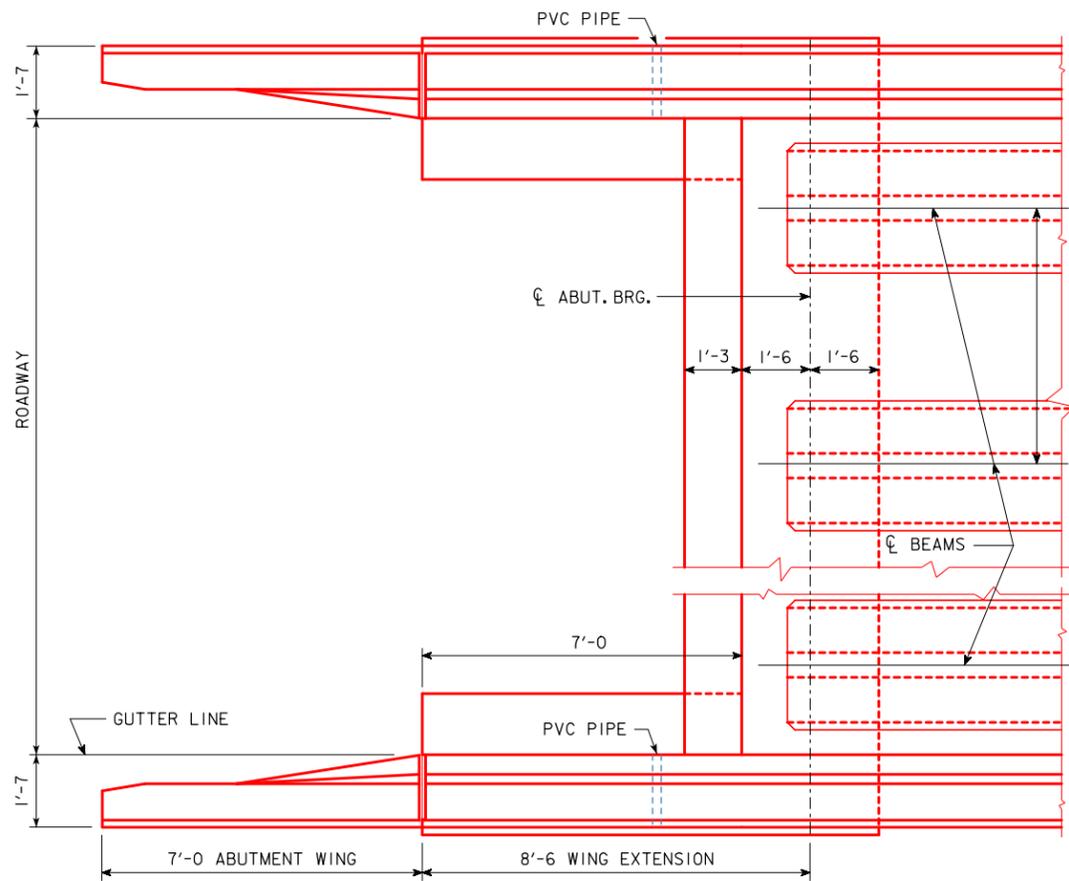


PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

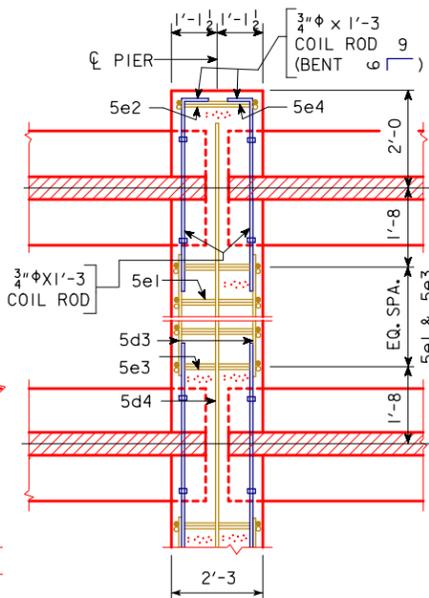
PART END VIEW AT ABUTMENT

SECTION A-A

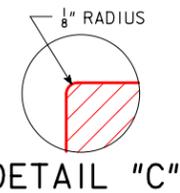
TABLE OF WINGWALL ELEVATIONS				
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



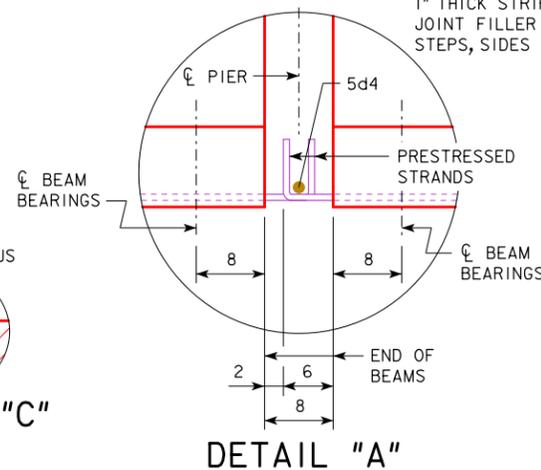
PART PLAN



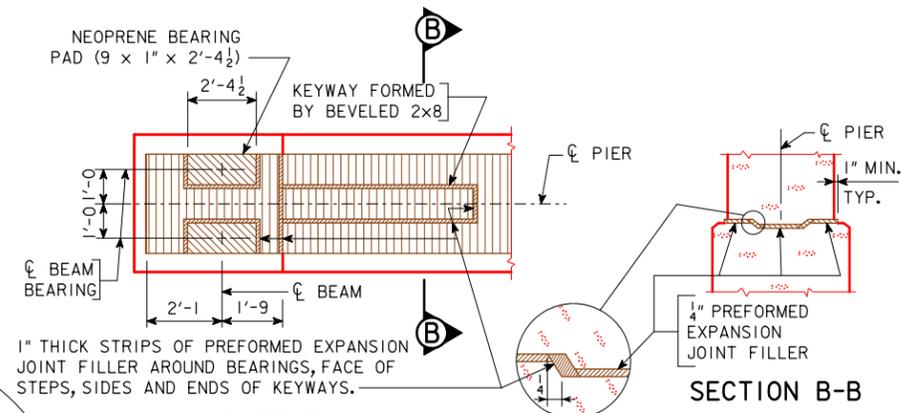
PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



DETAIL "C"



DETAIL "A"



PART PLAN

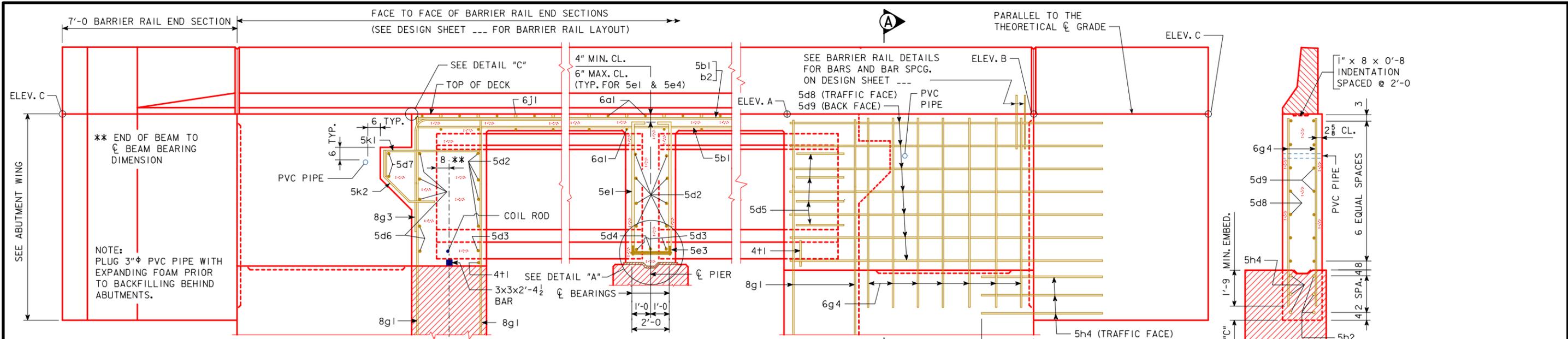
TOP OF PIER DETAILS

SECTION B-B

ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE: ENGLISHBTINTEGRALBRIDGES.DGN - 4507-BTE - THIS SHEET ISSUED 02-08.

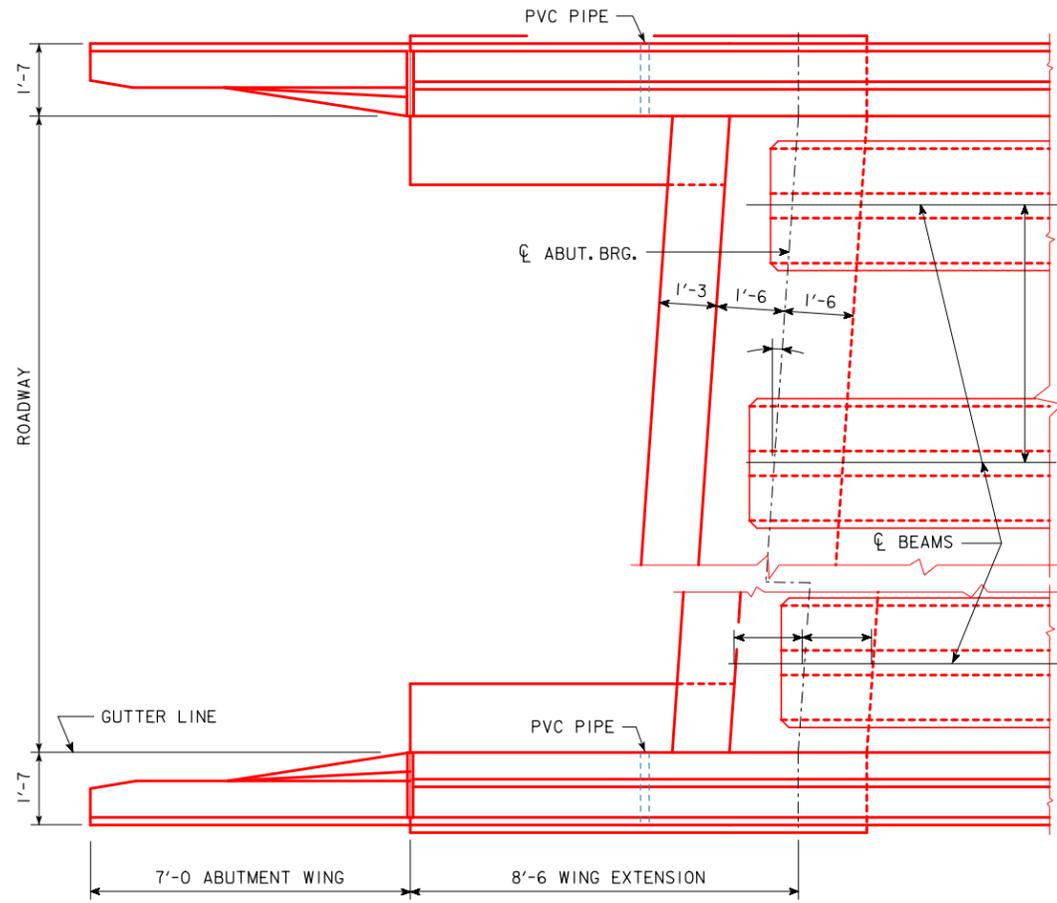


PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

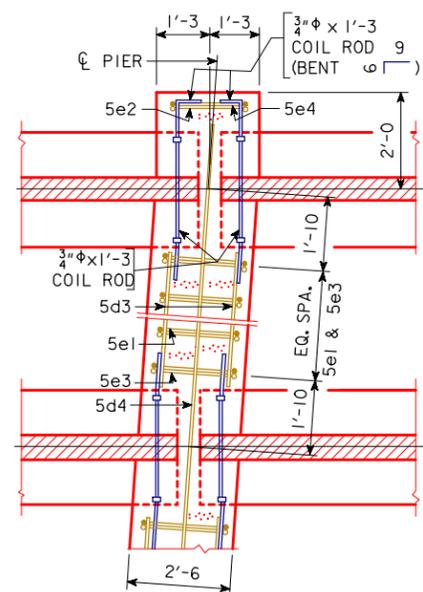
PART END VIEW AT ABUTMENT

SECTION A-A

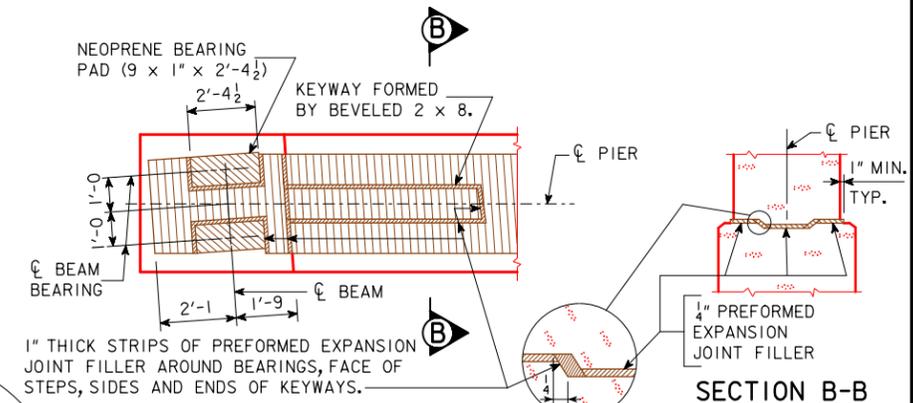
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



PART PLAN



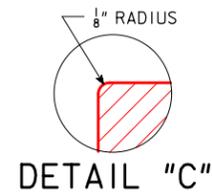
PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



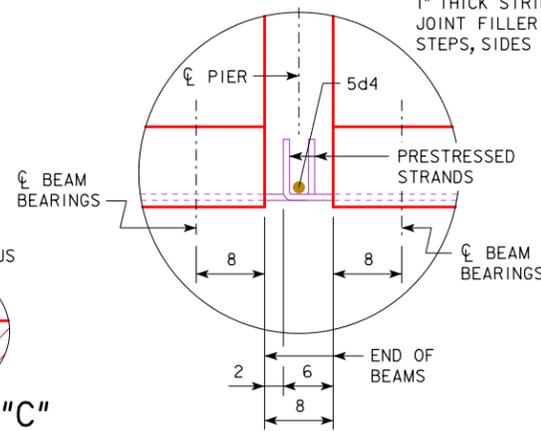
PART PLAN

TOP OF PIER DETAILS

SECTION B-B



DETAIL "C"

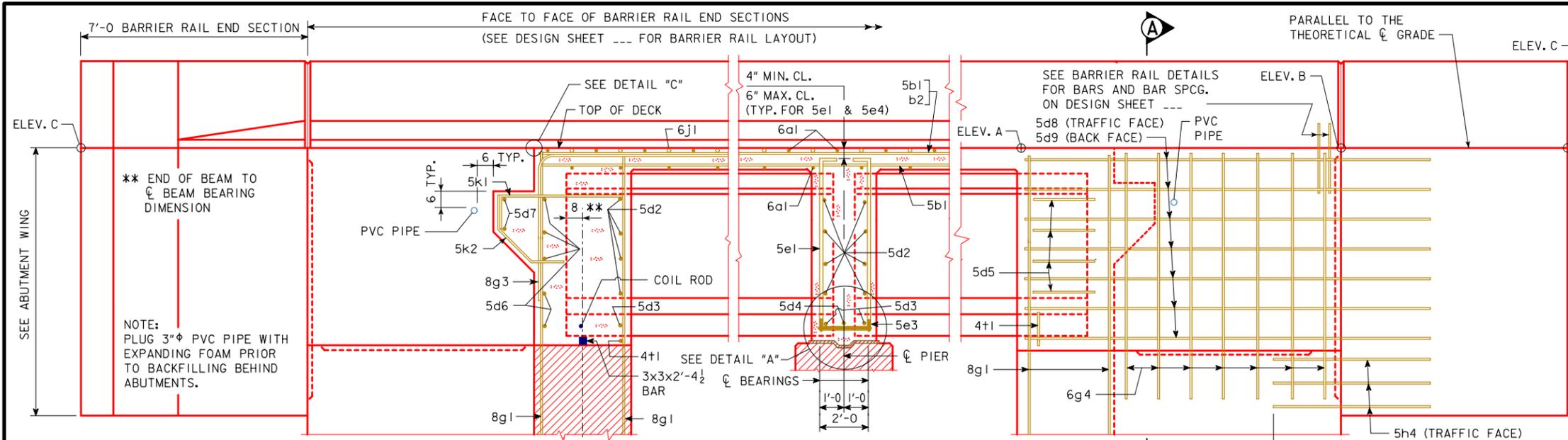


DETAIL "A"

ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4508-BTE - THIS SHEET ISSUED 02-08.



PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

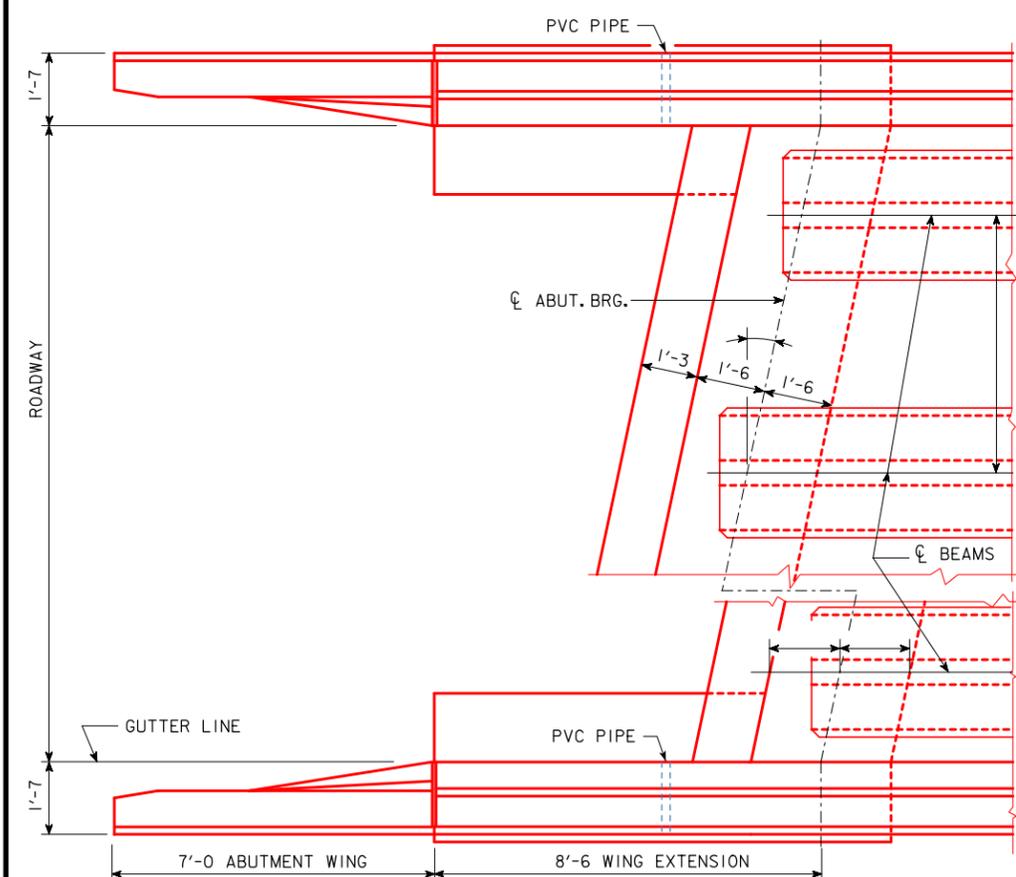
FIELD BEND 5h4 BAR AS NECESSARY TO AVOID PILE IN ABUTMENT WING.

PART END VIEW AT ABUTMENT

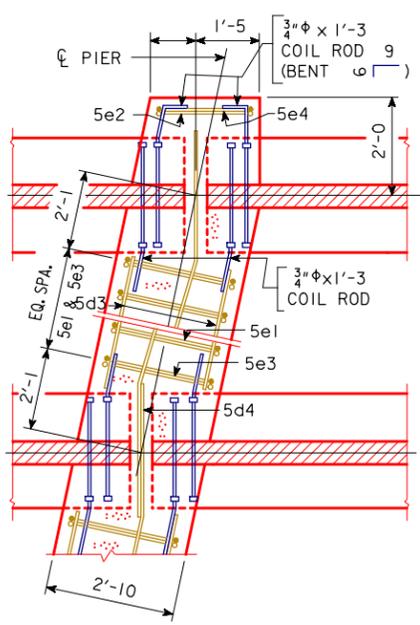
SECTION A-A

TABLE OF WINGWALL ELEVATIONS

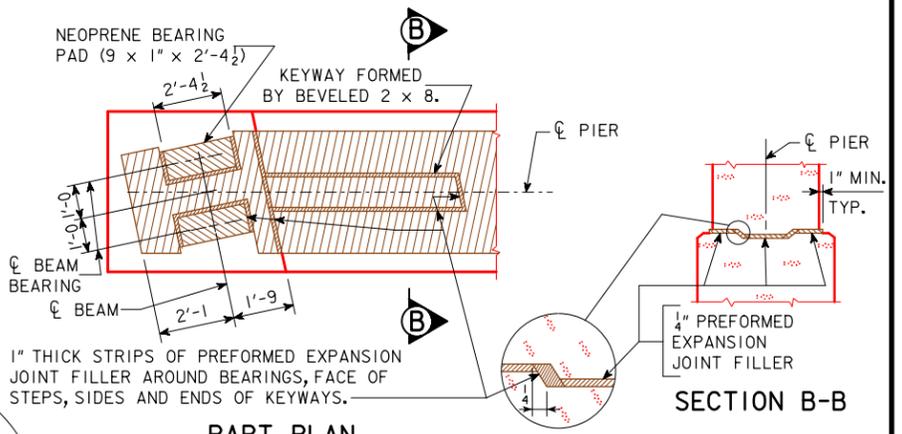
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



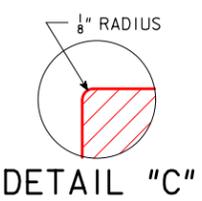
PART PLAN



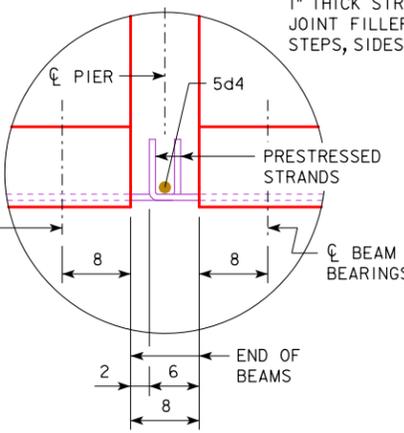
PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



PART PLAN TOP OF PIER DETAILS



DETAIL "C"

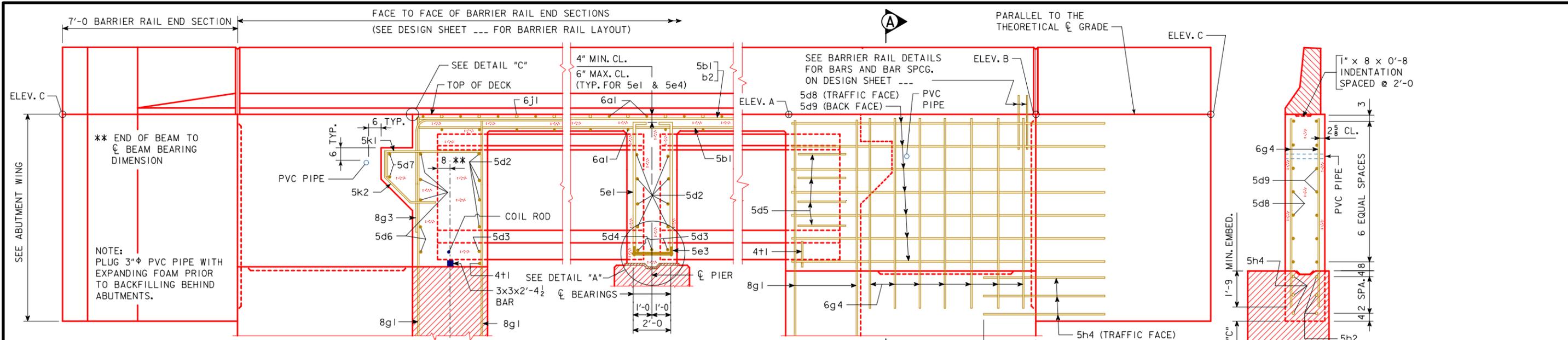


DETAIL "A"

ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4509-BTE - THIS SHEET ISSUED 02-08.



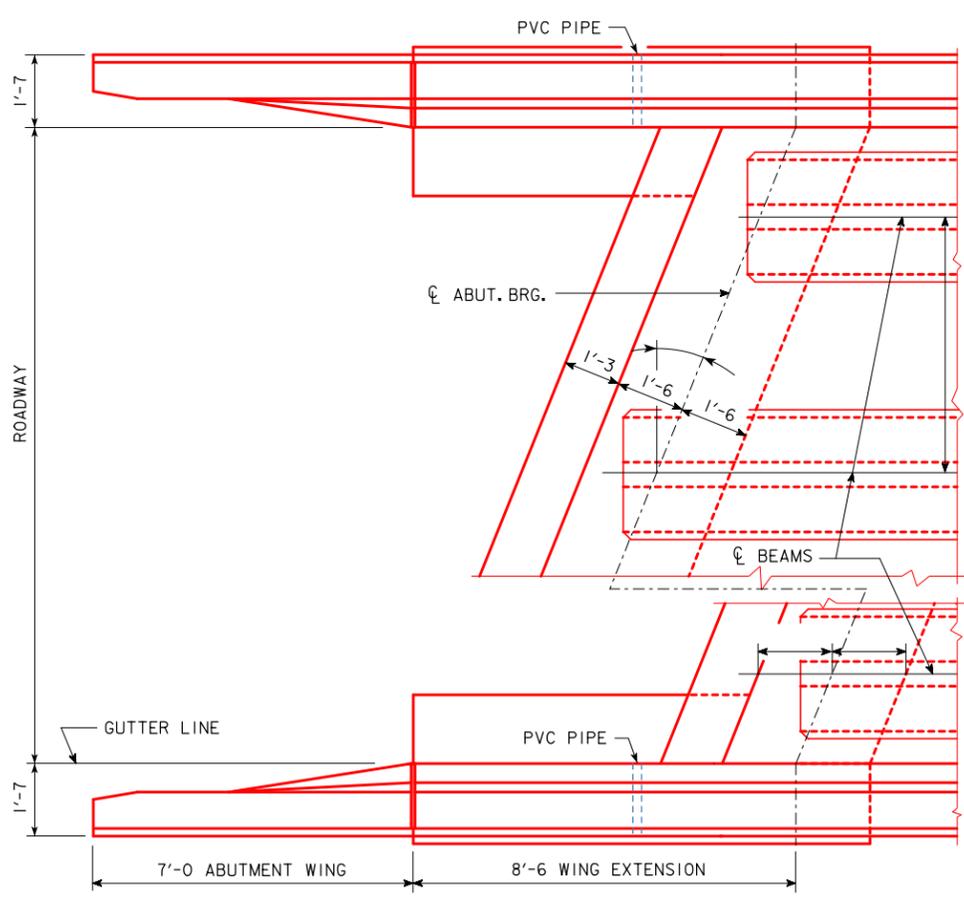
PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

PART END VIEW AT ABUTMENT

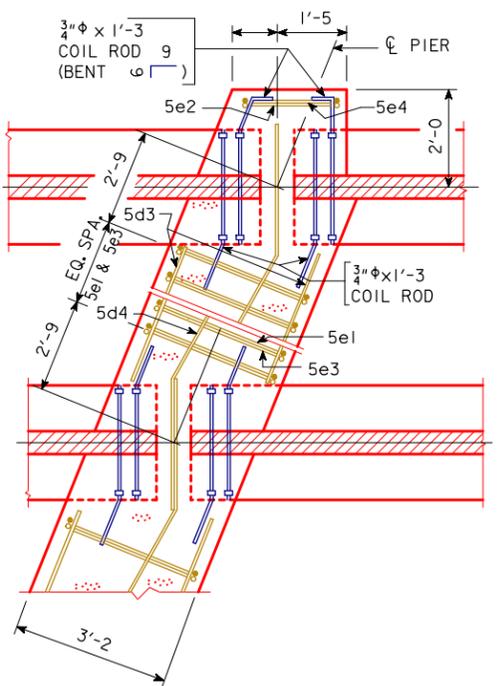
SECTION A-A

TABLE OF WINGWALL ELEVATIONS

LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				

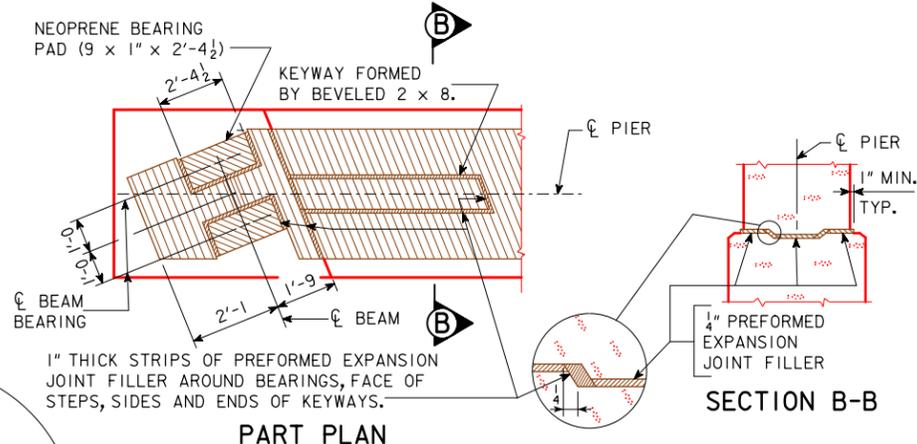


PART PLAN



PART SECTION AT PIER

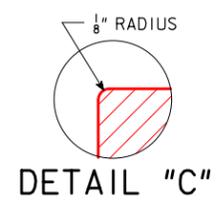
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



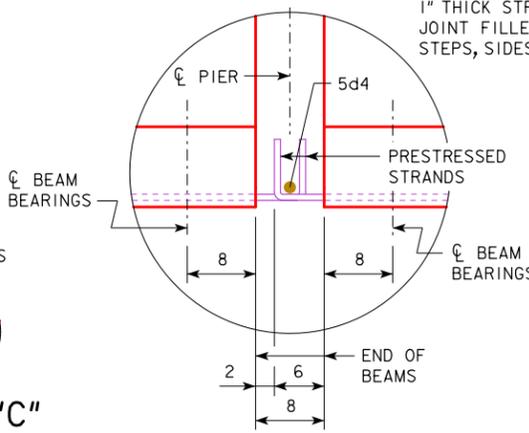
PART PLAN

TOP OF PIER DETAILS

SECTION B-B



DETAIL "C"

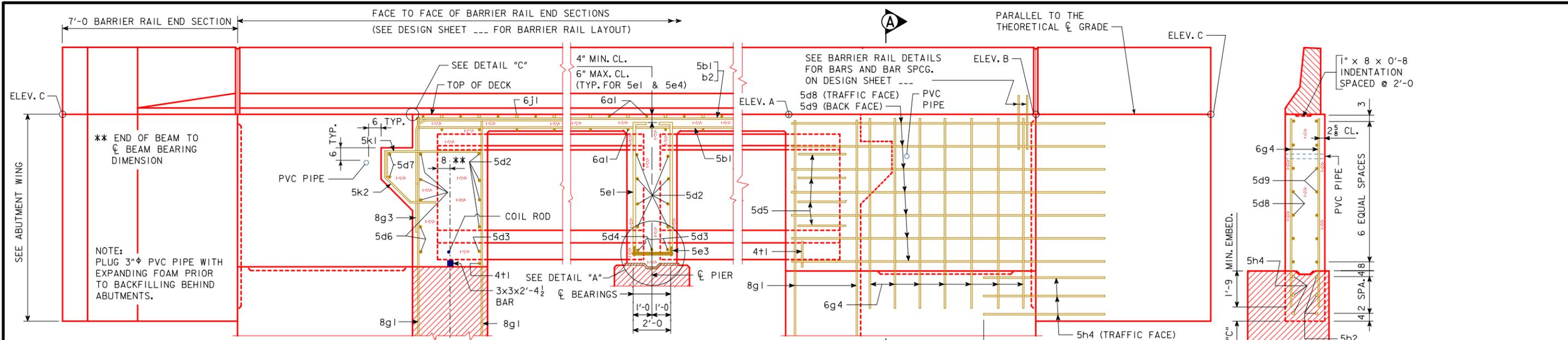


DETAIL "A"

ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4510-BTE - THIS SHEET ISSUED 02-08.



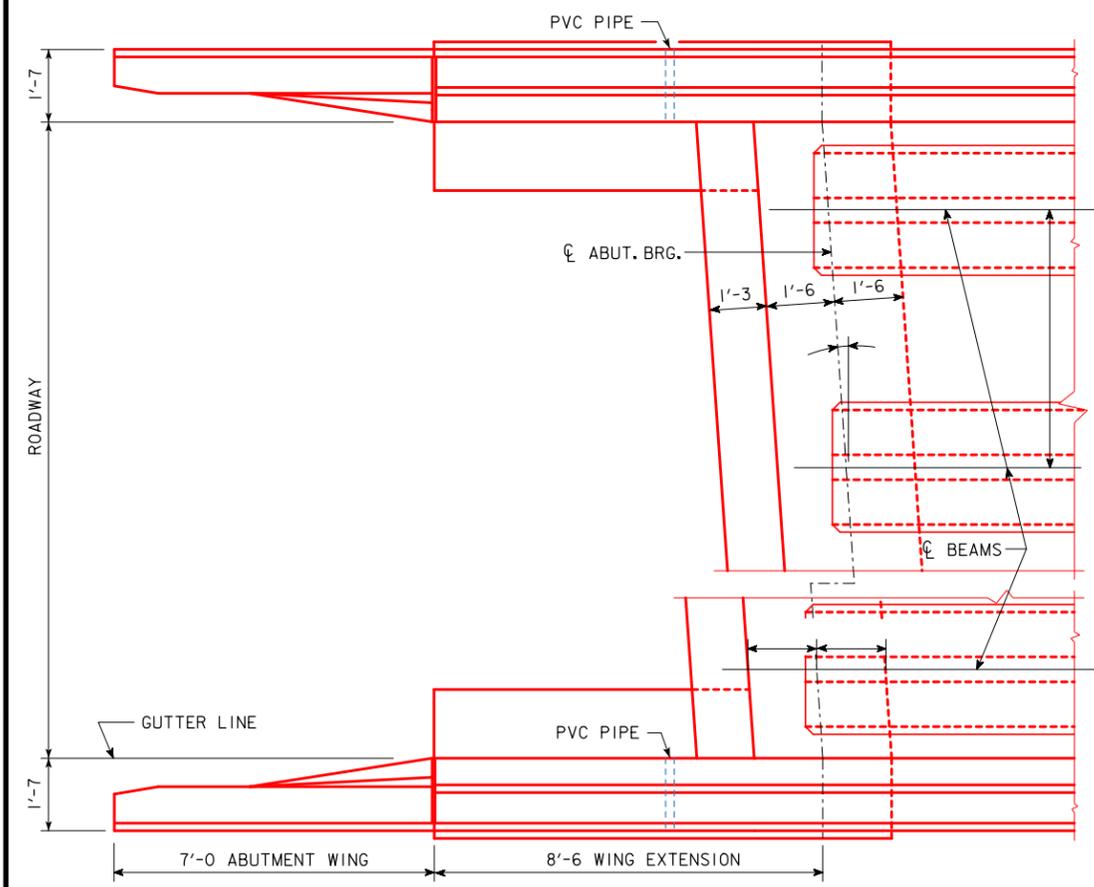
PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

PART END VIEW AT ABUTMENT

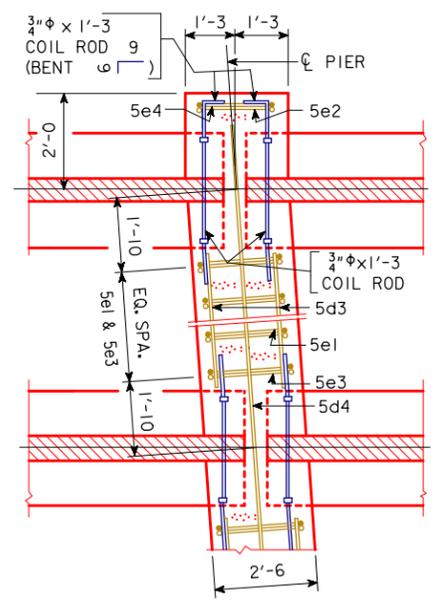
SECTION A-A

TABLE OF WINGWALL ELEVATIONS

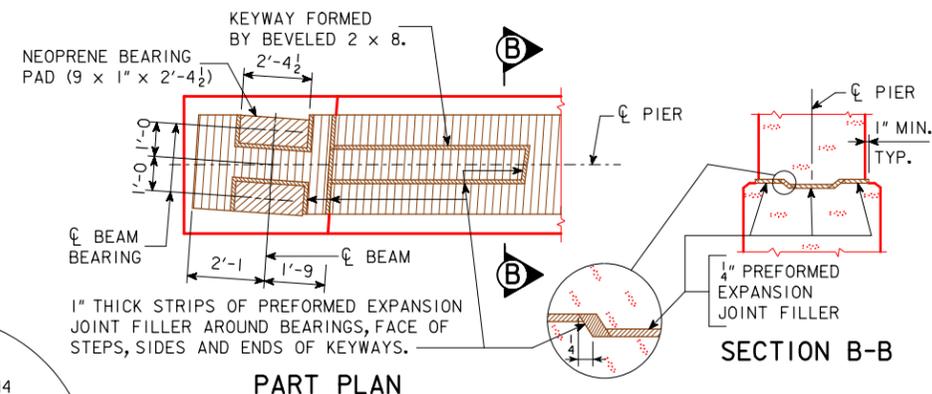
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



PART PLAN



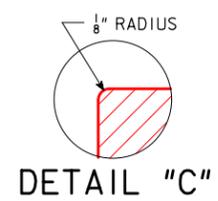
PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



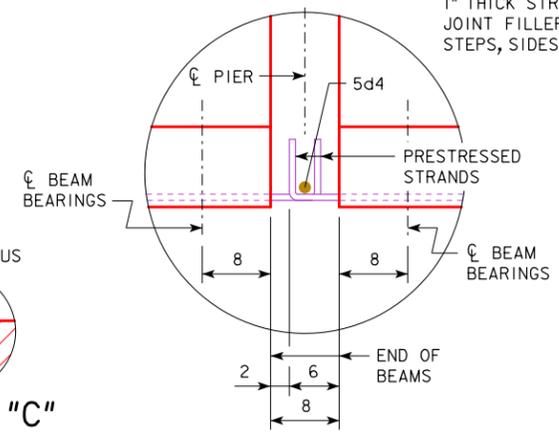
PART PLAN

TOP OF PIER DETAILS

SECTION B-B



DETAIL "C"

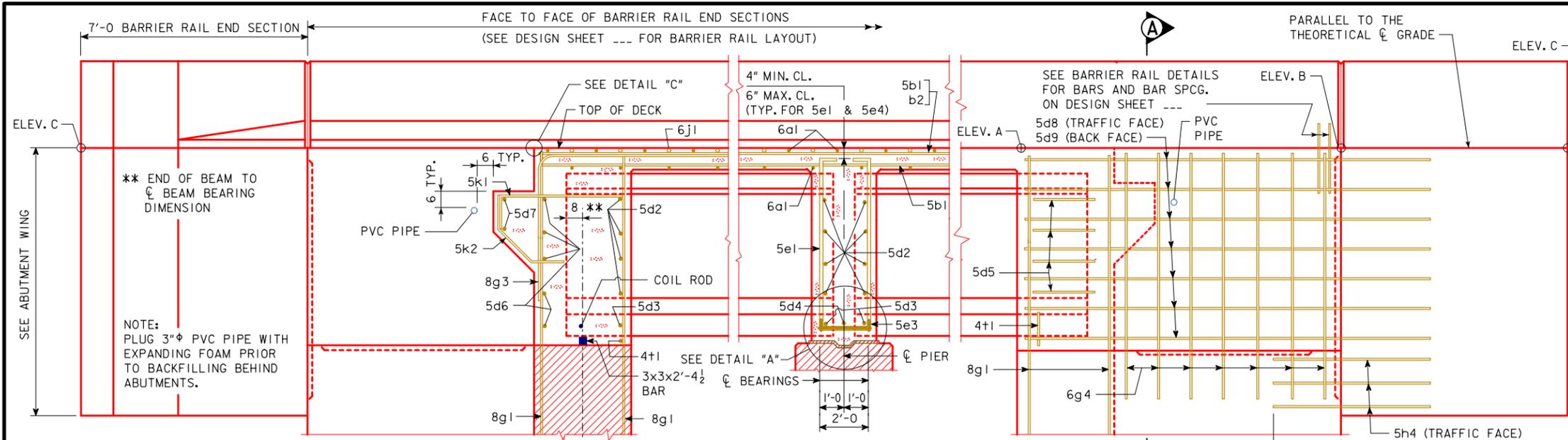


DETAIL "A"

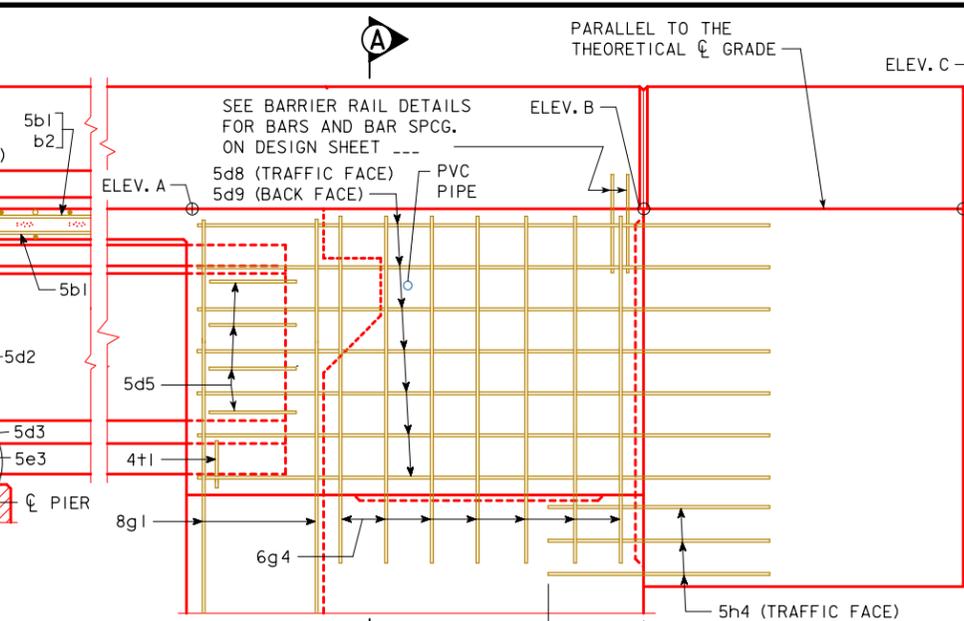
ABUT. & PIER DIAPHRAGM DETAILS

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

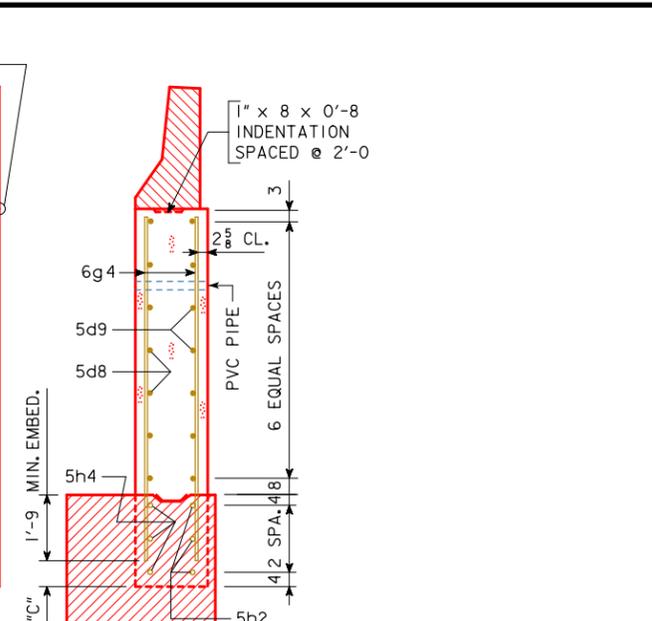
REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4511-BTE - THIS SHEET ISSUED 02-08.



PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)

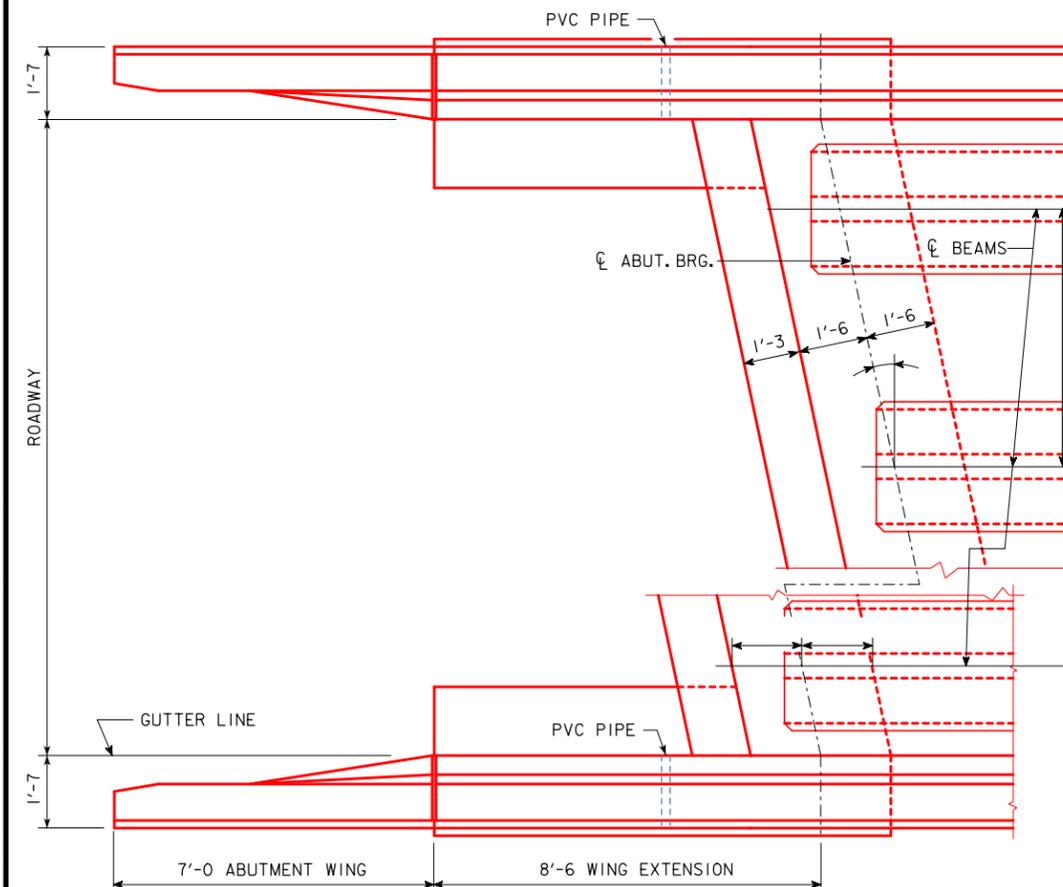


PART END VIEW AT ABUTMENT

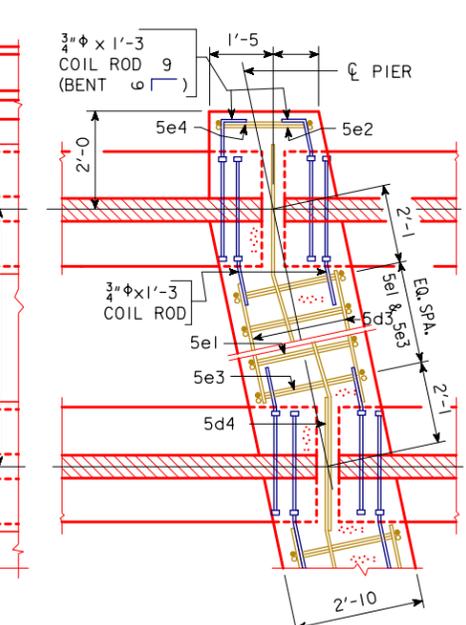


SECTION A-A

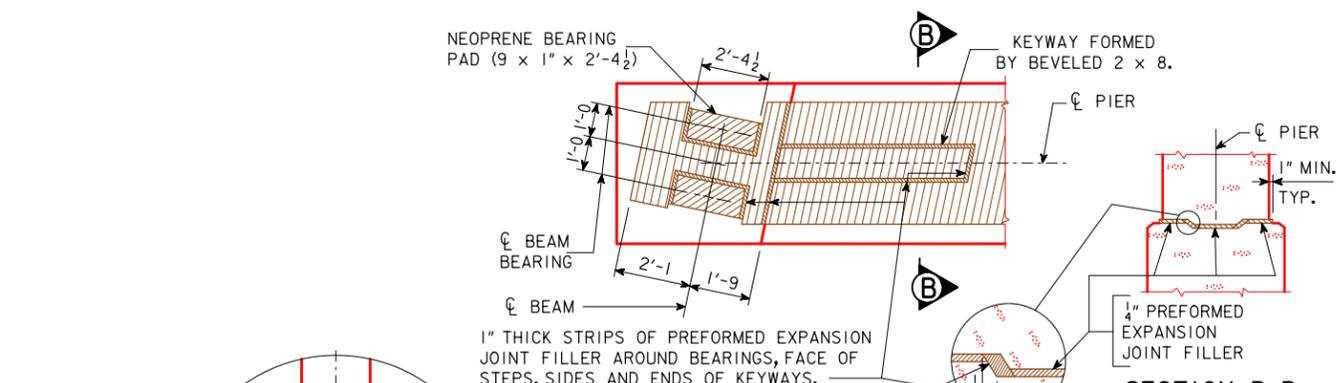
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



PART PLAN

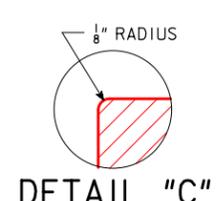


PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)

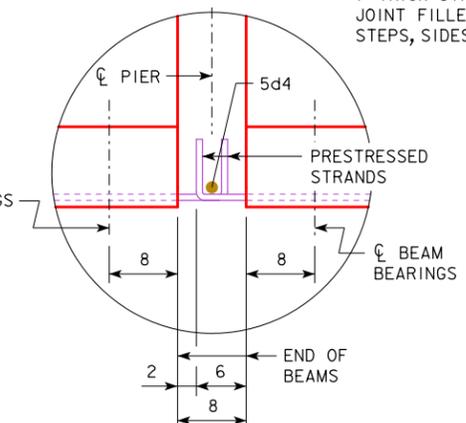


PART PLAN

TOP OF PIER DETAILS



DETAIL "C"

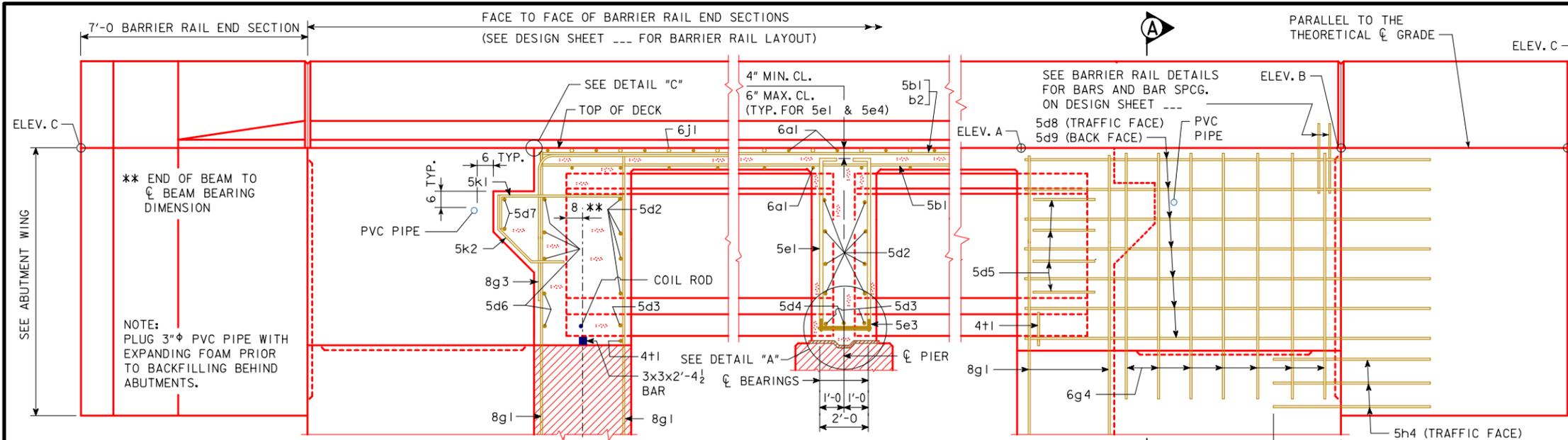


DETAIL "A"

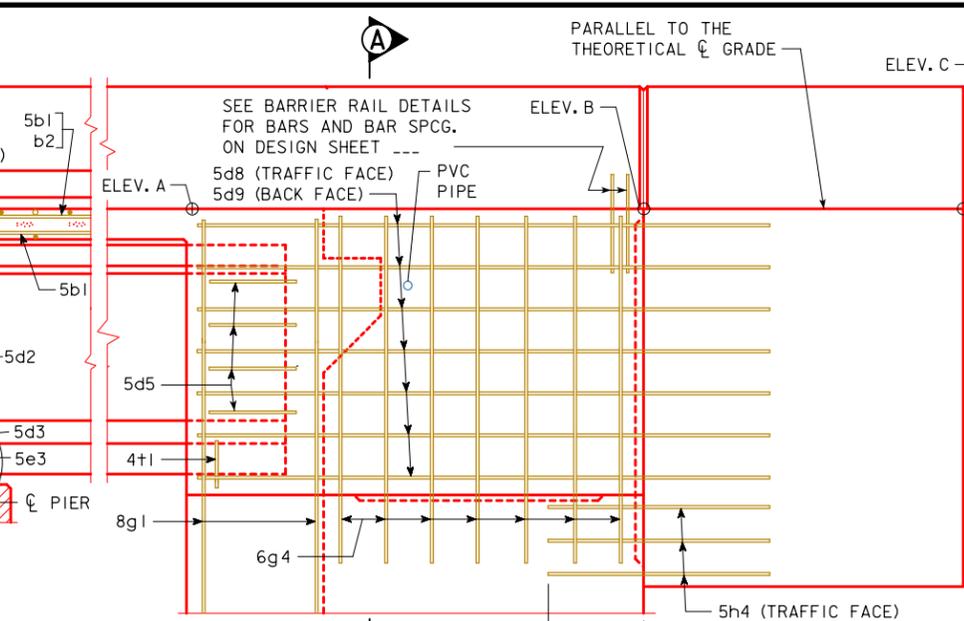
ABUT. & PIER DIAPHRAGM DETAILS

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

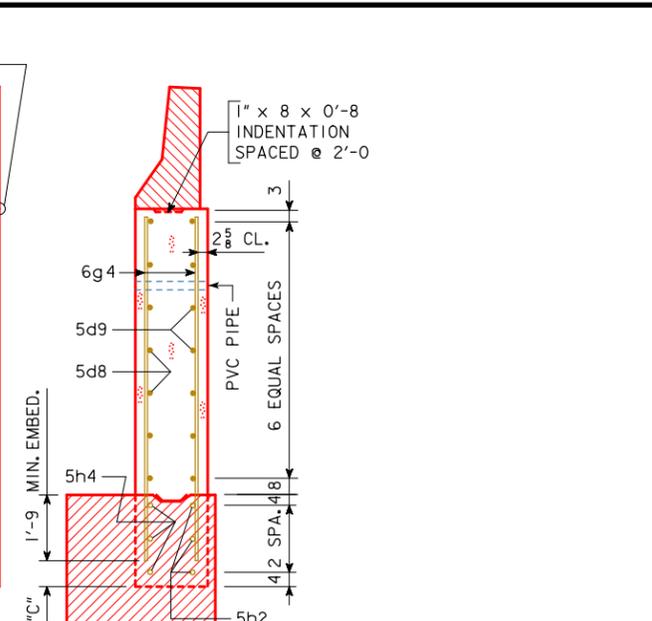
REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4512-BTE - THIS SHEET ISSUED 02-08.



PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ---)



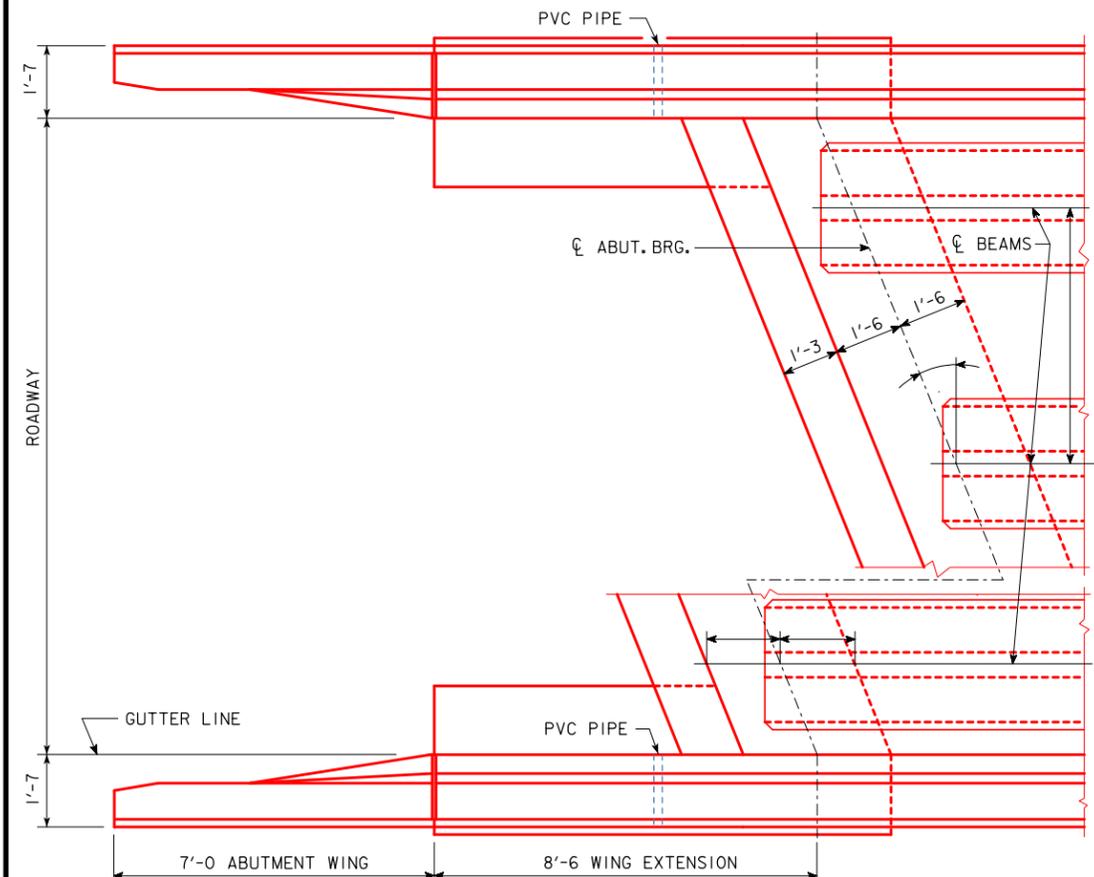
PART END VIEW AT ABUTMENT



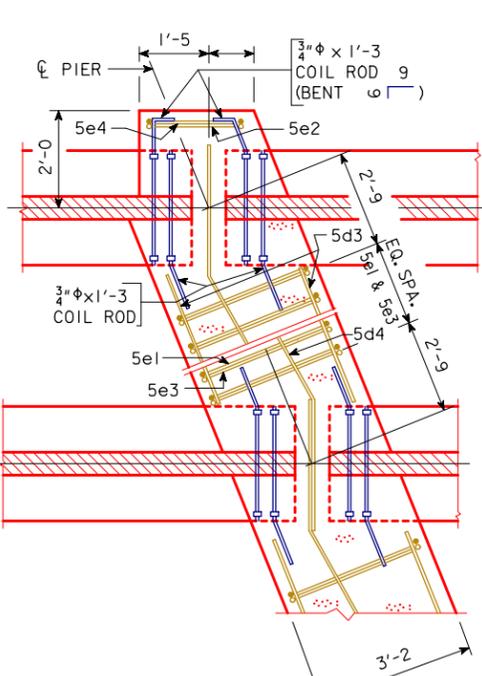
SECTION A-A

TABLE OF WINGWALL ELEVATIONS

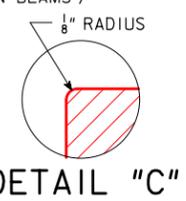
LOCATION	DIM "C"	ELEV. A	ELEV. B	ELEV. C
S.W. CORNER				
N.W. CORNER				
S.E. CORNER				
N.E. CORNER				



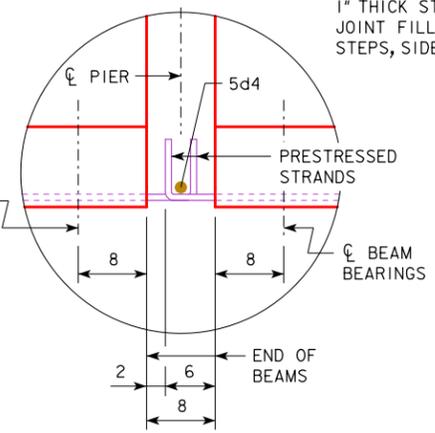
PART PLAN



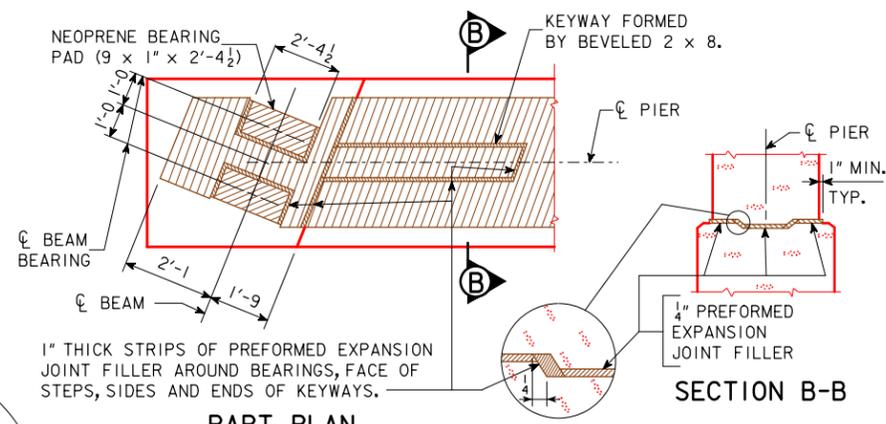
PART SECTION AT PIER
(SEE CROSS SECTION THRU DECK FOR NUMBER OF DIAPHRAGM HOOP BARS BETWEEN BEAMS)



DETAIL "C"



DETAIL "A"



PART PLAN

SECTION B-B

TOP OF PIER DETAILS

ABUT. & PIER DIAPHRAGM DETAILS

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

REVISED 01-12 - ADDED FIELD BEND 5h4 BAR TO AVOID PILE IN ABUTMENT WING NOTE. ENGLISHBTINTEGRALBRIDGES.DGN - 4513-BTE - THIS SHEET ISSUED 02-08.

